

Sustainability Appraisal

for the

Bournemouth, Dorset and Poole Draft Mineral Sites Plan

July 2015

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1. Introduction

Bournemouth, Dorset and Poole Mineral Sites Plan

- 1.1. Dorset County Council, Bournemouth Borough Council and Poole Council are Mineral Planning Authorities (MPAs), jointly responsible for producing local minerals planning policy documents. In May 2014 the Bournemouth, Dorset and Poole Minerals Strategy was adopted. This set out the vision, objectives and policies for meeting Bournemouth, Dorset and Poole's mineral needs. It included strategies for provision of stone, sand and gravel, ball clay and other minerals, including the policies and criteria used for considering planning applications for mineral developments, but was not site specific.
- 1.2. The Mineral Sites Plan will designate the specific sites required to deliver the component mineral strategies of the Minerals Strategy. It will also include additional policies to facilitate the supply of minerals and restoration of sites, including an aggregates Area of Search, a Puddletown Road site management and restoration policy and development of the Minerals Strategy approach to safeguarding of mineral sites and infrastructure.
- 1.3. Sustainability appraisal is a key assessment that must be undertaken and this document comprises the Sustainability Appraisal of the Draft Mineral Sites Plan. All of the site nominations have been assessed against a series of sustainability objectives to identify potential impacts.
- 1.4. Summary versions of the results of each of the site assessments are presented in Table 1 below as the Non-Technical Summary. It should be noted that for virtually all sites there are benefits such as contribution to supply of minerals and economic benefits which are not recorded in each case. Similarly, there are impacts in most cases such as use of the road network, climate change and sustainable transport that are not recorded in each case.

Need for Sites

- 1.5. At the end of December 2013, reserves of sand and gravel with planning permission for extraction amounted to 16.4 million tonnes. If production were to continue at the average rate of the past 10 years, these reserves would run out somewhere around 2024. A lower average based on the past 3 years of production, giving greater weight to the recent economic downturn, would only extend this date to around 2025. Existing reserves of sand and gravel will run out before the end of the Minerals Strategy plan period (to 2028) if no new sites are identified and permitted, so business as usual – continuing without identification of new sites - is not an option.
- 1.6. National minerals planning policy requires that the Mineral Planning Authorities ensure an adequate supply of aggregates is planned for. Maintaining a supply of aggregates is essential for the construction industry and to Bournemouth, Dorset and Poole's economic prosperity and social wellbeing. The Minerals Strategy identifies, where appropriate, the amounts of minerals that need to be provided for and in some cases the general areas in Dorset where the new quarries will be located. The emerging Mineral Sites Plan will identify the specific sites for the quarries. This sustainability appraisal considers the potential impacts of the nominated sites as part of the site selection process.

Legal Requirements

- 1.7. Section 39 of the Planning and Compulsory Purchase Act 2004 requires Local Development Documents (including Minerals and Waste Development Documents) to be prepared with the objective of contributing to the achievement of sustainable development. Sustainable development will ensure a better quality of life for present and future generations.
- 1.8. Section 19 (5) of the Act requires Local Planning Authorities to carry out an appraisal of the sustainability of the proposals in each document and prepare a report of findings of the appraisal. Sustainability appraisal is integral to document preparation as a means of assessing their potential social, environmental and economic effects. It is a positive tool for developing policies to ensure that they reflect sustainable development principles. The appraisal should take place in parallel with the formulation of policies.
- 1.9. The European Strategic Environment Assessment Directive 2001/42/EC requires an environmental assessment of plans and programmes prepared by public authorities that are likely to have

significant effect upon the environment. This process is referred to commonly as “Strategic Environmental Assessment” (SEA), and covers relevant plans and programmes whose preparation began after 21 July 2004. A key requirement of the SEA process is the production of an environmental report describing the likely significant effects of implementation of the plan and alternative options which were considered when producing the plan. This Sustainability Appraisal incorporates the requirements of the SEA Directive.

- 1.10. This sustainability appraisal (SA), incorporating the requirements of strategic environmental assessment (SEA), discusses the key sustainability issues relevant to each of the site nominations. The recommendations made by this SA in response to the issues identified will inform the subsequent phases of producing the Bournemouth, Dorset and Poole Mineral Sites Plan.

Previous sustainability appraisal work

- 1.11. A sustainability appraisal was prepared in support of the Minerals Strategy, assessing the options and strategies considered as part of preparation of the Minerals Strategy. It was submitted as evidence as part of the Examination of the Minerals Strategy in 2013¹. The sustainability appraisal of the Mineral Sites Plan does not re-visit these higher-level issues and focuses on appraisal of the mineral site nominations.

Non-Technical Summary

- 1.12. Summaries of the separate site assessments have been prepared and are presented as **Table 1** and **Table 2** below.

¹ See: <https://www.dorsetforyou.com/mcs>

Table 1 – Non-Technical Summary of Results of Site Assessments – Sites being taken forward through the Plan

Site Reference	Summary of Impacts Assessment		Recommendation
	Impacts and Mitigation	Cumulative Impacts	
<p>1. AS-01 Binnegar Quarry, Wareham. (Aggregates)</p>	<p>Key impacts of developing this extension of an existing quarry are expected to be on biodiversity, heritage and amenity.</p> <p>It is expected that these can be satisfactorily mitigated through measures such as stand-offs and bunding, and species/habitat translocation.</p>	<p>As an extension, with no new development proposed in the vicinity, direct impacts are expected to be limited and not requiring any specific mitigation.</p>	<p>Site is suitable to be taken forward in the Draft Mineral Sites Plan.</p>
<p>2. AS-06 Great Plantation, Puddletown Road. (Aggregates)</p>	<p>Developing this site has potentially significant impacts, including on hydrology/hydrogeology, landscape/visual, archaeology and access.</p> <p>Mitigation may be possible through various means, but primarily a reduction in the area of the site limiting it to a reduced area in the north of the current site nomination, adjacent to the current Hyde Pit.</p>	<p>The adjacent site has not been worked recently so resumption of working at and extension to Great Plantation could have an impact, depending on whether other sites in the vicinity have been completed.</p> <p>As designated Open Access Land, working this site could lead to direct impacts, with significant recreational displacement onto surrounding land, including European designations.</p>	<p>Site may be suitable to remain in the Mineral Sites Plan, but only following re-assessment and significant reduction in size.</p>
<p>3. AS-09 Hurn Court Farm Extension, Hurn. (Aggregates)</p>	<p>Key impacts of developing this extension of an existing quarry are expected to be on amenity and historic buildings, loss of agricultural land, hydrology and possible flooding, and impacts on the airport.</p> <p>It is expected that these can be satisfactorily mitigated through measures such as stand-offs and bunding, and careful planning to minimise standing water on the site. Site is expected to be partly restored to agricultural land.</p>	<p>As an extension to an adjacent site, direct impacts are expected to be limited and not requiring any specific mitigation.</p>	<p>Site is suitable to be taken forward in the Draft Mineral Sites Plan. A planning application for this site has been submitted and is under consideration.</p>

Site Reference	Summary of Impacts Assessment		Recommendation
	Impacts and Mitigation	Cumulative Impacts	
<p>4. AS-13 Roeshot, Christchurch.</p> <p>(Aggregates)</p>	<p>This site will be developed as an extension of quarrying to the east in Hampshire. Key impacts of developing this extension of an existing quarry are expected to be on hydrology/hydrogeology, loss of agricultural land, and traffic.</p> <p>It is expected that these can be satisfactorily mitigated through measures such as hydrological assessment and appropriate stand-offs from the Mude, bunding/screening and preparation of a Transport Assessment with identified mitigation.</p>	<p>As an extension to an adjacent site, direct impacts are expected to be limited and not requiring any further, specific mitigation. Site access will be in Hampshire.</p>	<p>Site is suitable to be taken forward in the Draft Mineral Sites Plan.</p>
<p>5. AS-15 Tatchells Quarry Extension, Wareham.</p> <p>(Aggregates)</p>	<p>This is a relatively small site, an extension of an existing (though not currently operational) site.</p> <p>No specific impacts are identified that cannot be satisfactorily mitigated.</p>	<p>As Tatchells is not currently working, developing this site could lead to cumulative traffic impacts. These are considered to be capable of mitigation.</p>	<p>Site is suitable to be taken forward in the Draft Mineral Sites Plan.</p>
<p>6. AS-19 Woodsford Quarry, Woodsford.</p> <p>(Aggregates)</p>	<p>This is an extension of a currently permitted quarry. Impacts are likely to include archaeological/historic environment, some landscape/visual, some local amenity and recreational (footpath).</p> <p>There are significant benefits in taking land out of intensive agriculture and reducing flows of nitrates into the Frome.</p>	<p>As an extension, no cumulative transport impacts are expected. Working adjacent to AS-26 Hurst Farm could lead to cumulative amenity impacts. These will require mitigation, e.g. providing stand-offs, phasing.</p>	<p>Site is suitable to be taken forward in the Draft Mineral Sites Plan.</p>
<p>7. AS-22 Trigon Hill, Trigon, Wareham</p> <p>(Aggregates)</p>	<p>This is an extension of a currently permitted quarry. Key impacts are expected to be on ecology (nearby European and national designations, Annex 1 birds, protected species), landscape/visual impacts and surface/groundwater. Further assessment will be required to gain a better understanding of what the impacts might be and how best to mitigate.</p> <p>It is expected that impacts can be satisfactorily mitigated. Landscape/visual issues have been identified</p>	<p>As an extension to an adjacent site, direct impacts are expected to be limited and not requiring any further, specific mitigation.</p>	<p>Site is suitable to be taken forward in the Draft Mineral Sites Plan.</p>

Site Reference	Summary of Impacts Assessment		Recommendation
	Impacts and Mitigation	Cumulative Impacts	
	as a key impact although it is expected that this can be mitigated.		
8. AS-25 Station Road, Moreton. (Aggregates)	<p>This is a new site proposal, on land that is predominantly agricultural. Key impacts are expected to be on loss (temporarily) of agricultural land, landscape capacity and local amenity. As a large site it is considered that these issues can be satisfactorily mitigated.</p> <p>Further assessment into issues such as hydrology/hydrogeology and archaeology/heritage are required, but it is expected that mitigation of any identified issues will be possible.</p>	As a new site, this proposal will cause some cumulative impacts, particularly traffic related. The Traffic Assessment appendix of this sustainability appraisal indicates that impacts will not be unacceptable. This site is not expected to begin until Warmwell Quarry has finished.	Site is suitable to be taken forward in the Draft Mineral Sites Plan.
9. AS-26 Hurst Farm, Moreton. (Aggregates)	<p>This is a new site proposal, on land that is predominantly agricultural. Key impacts are expected to be on hydrology/hydrogeology (close to Source Protection Zone 1), loss (temporarily) of agricultural land, landscape capacity and local amenity. As a large site it is considered that these issues can be satisfactorily mitigated.</p> <p>There are significant benefits in taking land out of intensive agriculture and reducing flows of nitrates into the Frome.</p> <p>Further assessment into issues such as hydrology/hydrogeology and archaeology/heritage are required, but it is expected that mitigation of any identified issues will be possible.</p>	As a new site, this proposal will cause some cumulative impacts, particularly traffic related. The Traffic Assessment appendix of this sustainability appraisal indicates that impacts will not be unacceptable. This site is not expected to begin until Warmwell Quarry has finished.	Site is suitable to be taken forward in the Draft Mineral Sites Plan.
11. PK-16 Swanworth Quarry Extension, Worth Matravers. (Crushed Rock)	This is a proposed extension to an existing Purbeck Stone quarry, primarily producing crushed rock but also some dimension stone and rock armour. Key impacts are expected to be archaeological/historic landscapes; landscape capacity and impact on designated landscapes and impacts on recreational uses and rights of way.	As an extension to an existing site, no intensification is proposed and no cumulative impacts are expected – unless it is judged that the proposed extension constitutes an	Further assessment is required before deciding whether this site proposal should be progressed through the Plan.

Site Reference	Summary of Impacts Assessment		Recommendation
	Impacts and Mitigation	Cumulative Impacts	
<p>Site included for information, not yet proposed for allocation.</p>	<p>Further assessment is required, particularly on landscape/visual impacts, before a view can be reached on whether this site proposal should be included in the Mineral Sites Plan.</p>	<p>intensification of visual impacts.</p>	
<p>13. RA-01 Whites Pit, Canford</p> <p>(Recycled Aggregates)</p>	<p>This proposal is for the combination of two existing operations onto a single existing site. No specific impacts are expected.</p>	<p>No new, cumulative impacts are expected.</p>	<p>Site is suitable to be taken forward in the Draft Mineral Sites Plan.</p>
<p>15. BC-04 Trigon Hill Extension, Wareham.</p> <p>(Ball Clay)</p>	<p>This is an extension of a currently permitted quarry. Key impacts are expected to be on ecology (nearby European and national designations, Annex 1 birds, protected species), landscape/visual impacts and surface/groundwater. Further assessment will be required to gain a better understanding of what the impacts might be and how best to mitigate.</p> <p>It is expected that impacts can be satisfactorily mitigated. Landscape/visual issues have been identified as a key impact although it is expected that this can be mitigated.</p>	<p>As an extension to an adjacent site, direct impacts are expected to be limited and not requiring any further, specific mitigation.</p>	<p>Site is suitable to be taken forward in the Draft Mineral Sites Plan.</p>
<p>17. PK-02 Blacklands Quarry Extension, Langton Matravers.</p> <p>(Purbeck Stone)</p>	<p>This is an extension of a current quarry, not to begin working until the current operation is completed. Relatively few impacts are expected, with the key impacts being on Priests Way to the north. Mitigation will be required. Further assessment of potential archaeological/historic landscapes impacts will be required. It is expected that impacts will be capable of</p>	<p>As an extension to an adjacent site, direct impacts are expected to be limited and not requiring any further, specific mitigation.</p>	<p>Site is suitable to be taken forward in the Draft Mineral Sites Plan.</p>

Site Reference	Summary of Impacts Assessment		Recommendation
	Impacts and Mitigation	Cumulative Impacts	
	satisfactory mitigation.		
18. PK08 Quarr Farm, Harmans Cross (Purbeck Stone)	<p>This site can be considered to be a new site proposal – it was worked previously (1950s?) but has not been worked recently therefore will seem like a new site.</p> <p>Assessment has flagged up archaeology, landscape/visual impact, local amenity impacts and access as key issues to be addressed as part of working this site. Further assessment will be required at planning application stage to identify satisfactory mitigation and to identify if there are any additional impacts that will require mitigation.</p> <p>To the south of, and immediately adjacent to, the nominated site are two Wessex Water reservoirs. Water mains are connected to these reservoirs. Development of this site must ensure that there are no impacts on these reservoirs and mains. Development of this site will require liaison with Wessex Water.</p> <p>Traffic access and likely impacts on Haycraft's Lane and the road verges are particularly important. Unless it can be demonstrated to the satisfaction of the Mineral Planning Authority further work is carried out to demonstrate that Haycrafts Lane can be used with no negative impacts, it appears that some alternative route will be required.</p> <p>If an alternative access route can be identified, then it is likely that the site has the potential to be worked. The site will be included in the Draft Mineral Sites Plan for the purposes of consultation, subject to alternative and suitable access being found.</p>	As a 'new' site, traffic generated and visual and amenity impacts would be cumulative in adding to existing impacts.	<p>If an alternative access to Haycrafts Lane can be identified, then the site could be taken forward through the Plan.</p> <p>If an alternative access cannot be identified, the site is not considered suitable for development.</p>
19. PK10 Southard Quarry, near	This site is an extension of an existing operation and not expected to begin operation until the current site is completed. No intensification is expected. Potential	As an extension to an adjacent site, direct impacts are expected	Site is suitable to be taken forward in the

Site Reference	Summary of Impacts Assessment		Recommendation
	Impacts and Mitigation	Cumulative Impacts	
Swanage (Purbeck Stone)	<p>impacts are relatively few, including archaeology (further assessment required), landscape capacity and amenity (individual residences and Swanage).</p> <p>Mitigation, such as screening, may be required. It is expected that any impacts can be satisfactorily mitigated.</p>	to be limited and not requiring any further, specific mitigation.	Draft Mineral Sites Plan.
20. PK15 Downs Quarry Extension (Purbeck Stone)	<p>This site is an extension of an existing operation and not expected to begin operation until current working is completed. No intensification is expected. Potential impacts are relatively few, including landscape capacity (as the site is on the northern slope of the limestone plateau) and amenity (impacts, particularly cumulative impacts) on residences in the area.</p> <p>Mitigation, such as screening and restoration of other sites, will be required. It is expected that any impacts can be satisfactorily mitigated.</p>	<p>The site is an extension to existing workings and not expected to generate additional traffic. However, it is an addition to an area with a number of quarries already, and could contribute to a synergistic cumulative impact.</p> <p>Where possible other sites should be completed/restored before this one is begun.</p>	Site is suitable to be taken forward in the Draft Mineral Sites Plan.
21. PK17 Home Field, Langton Matravers (Purbeck Stone)	<p>This site is a field, owned by the National Trust, within which there will be a number of small quarries. There are currently two quarries on the site.</p> <p>Site nomination is a field within which there will be small-scale Purbeck Stone extraction. Site is owned by the National Trust who require small-scale and low impact working. Site is in an area where there are a number of other Purbeck Stone workings. There are already two 1 ha quarries at Home Field and provided the working does not intensify, no cumulative impacts are expected.</p> <p>Key issues for consideration are need for further hydrological assessment, given that springs rise in the vicinity; need for archaeological assessment, given that there is a Scheduled Ancient Monument in the vicinity;</p>	Could give rise to cumulative impacts, depending on how many smaller quarries are active within the area.	Site is suitable to be taken forward in the Draft Mineral Sites Plan.

Site Reference	Summary of Impacts Assessment		Recommendation
	Impacts and Mitigation	Cumulative Impacts	
	<p>visual impact assessment, given that the field is on the edge of the Purbeck Stone area of search; part of the field (south-western corner) will need to be removed as it lies outside the area of search; there is a bridleway to the north of the site, generally screened, and amenity as there are residences in the vicinity, and Acton is to the north.</p> <p>It is expected that, given the proposal and the approach of the National Trust of low impact quarrying, it will be possible to mitigate impacts.</p>		
<p>22. Extension to Quarry 4, Acton</p> <p>(Purbeck Stone)</p>	<p>This is an extension of a current quarry, not to begin working until the current operation is completed. Relatively few impacts are expected, with the key impacts being on Priests Way to the north, and on local amenity for residences in the vicinity. Mitigation will be required.</p> <p>Further assessment of potential archaeological/historic landscapes impacts will be required. It is expected that impacts will be capable of satisfactory mitigation.</p>	<p>As an extension to an adjacent site, direct impacts are expected to be limited and not requiring any further, specific mitigation.</p> <p>Cumulative impacts on the users of Priests Way to the north are an issue, and screening may be required.</p>	<p>Site is suitable to be taken forward in the Draft Mineral Sites Plan.</p>
<p>23. PK19 Broadmead Field, Langton Matravers</p> <p>(Purbeck Stone)</p>	<p>This site is a field, owned by the National Trust, within which there will be a number of small quarries.</p> <p>Site nomination is a field within which there will be small-scale Purbeck Stone extraction. Site is owned by the National Trust who require small-scale and low impact working. Site is in an area where there are a number of other Purbeck Stone workings. There are already two 1 ha quarries at Home Field and provided the working does not intensify, no cumulative impacts are expected.</p> <p>Key issues for consideration are need for further hydrological assessment, given that springs rise in the vicinity; need for archaeological assessment, given that</p>	<p>Could give rise to cumulative impacts, depending on how many other quarries are active within the area.</p>	<p>Site is suitable to be taken forward in the Draft Mineral Sites Plan.</p>

Site Reference	Summary of Impacts Assessment		Recommendation
	Impacts and Mitigation	Cumulative Impacts	
	<p>there is a Scheduled Ancient Monument in the vicinity; visual impact assessment, given that the field is on the edge of the Purbeck Stone area of search; part of the field (south-western corner) will need to be removed as it lies outside the area of search; there is a bridleway to the north of the site, generally screened, and amenity as there are residences in the vicinity, and Acton is to the north.</p> <p>It is expected that, given the proposal and the approach of the National Trust of low impact quarrying, it will be possible to mitigate impacts.</p>		
<p>24. PK 21 Gallows' Gore, Langton Matravers</p> <p>(Purbeck Stone)</p>	<p>Assessment already carried out has flagged up biodiversity, archaeology, landscape, local amenity and access as key issues to be addressed as part of working the land within this site nomination.</p> <p>Further assessment will be required at planning application stage to identify satisfactory mitigation and to identify if there are any additional impacts that will require mitigation.</p> <p>It is expected that all impacts will be capable of mitigation, provided that Haycrafts Lane is not proposed to be used for the access.</p>	<p>As a new site this will give rise to cumulative traffic impacts, and possibly other impacts such as amenity and landscape. It is expected that all impacts will be capable of successful mitigation.</p>	<p>Site is suitable to be taken forward in the Draft Mineral Sites Plan – provided that an alternative access to Haycrafts Lane is used.</p>
<p>25. PS01 Bower's Mine, Weston, Portland</p> <p>(Portland Stone)</p>	<p>Assessment already carried out has flagged up local amenity (in the sense of perceived impacts of mining under graves), archaeology/historic buildings and traffic as the key issues to be addressed as part of working land within this site nomination. Further assessment will be required at planning application stage to identify satisfactory mitigation and to identify if there are any additional impacts that will require mitigation.</p>	<p>As an extension, no cumulative impacts are expected.</p>	<p>Site is suitable to be taken forward in the Draft Mineral Sites Plan.</p>

Site Reference	Summary of Impacts Assessment		Recommendation
	Impacts and Mitigation	Cumulative Impacts	
	As the site is an extension of an existing site, it is expected that any impacts should be capable of satisfactory mitigation. As far as possible impacts on Isle of Portland SSSI through delays in site restoration must be avoided.		
26. BS02 Marnhull Quarry, Whiteways Lane, Marnhull (Other Building Stone)	<p>The site is an extension of an existing quarry and no intensification or cumulative impacts would be expected. The proposal would assist in securing a supply of local stone and would provide a benefit to the local economy.</p> <p>Assessment already carried out has flagged up archaeology, landscape, hydrology and access as issues requiring further assessment at planning application stage to identify satisfactory mitigation. Further assessment also required to identify if there are any additional impacts that will require mitigation.</p>	As an extension, no cumulative impacts are expected.	Site is suitable to be taken forward in the Draft Mineral Sites Plan.
27. BS04 Frogden Quarry, north-east of Sherborne (Other Building Stone)	<p>The site is an extension of an existing quarry and no intensification or cumulative impacts would be expected. The proposal would assist in securing a supply of local stone and would provide a benefit to the local economy.</p> <p>Assessment already carried out has flagged up archaeology, landscape, hydrology and amenity as issues requiring further assessment at planning application stage to identify satisfactory mitigation. Further assessment also required to identify if there are any additional impacts that will require mitigation.</p>	As an extension, no cumulative impacts are expected.	Site is suitable to be taken forward in the Draft Mineral Sites Plan.
28. BS05 Whithill Quarry	The site is an extension of an existing quarry and no intensification or cumulative impacts would be expected. The proposal would assist in securing a supply of local stone and would provide a benefit to the	As an extension, no cumulative impacts are expected.	Site is suitable to be taken forward in the Draft Mineral Sites Plan.

Site Reference	Summary of Impacts Assessment		Recommendation
	Impacts and Mitigation	Cumulative Impacts	
(Other Building Stone)	<p>local economy.</p> <p>Assessment already carried out has flagged up archaeology (need for a watching brief at development), hydrology, landscape capacity and local amenity as issues requiring further assessment at planning application stage to identify satisfactory mitigation. Further assessment also required to identify if there are any additional impacts that will require mitigation.</p>		

Table 2 – Non-Technical Summary of Results of Site Assessments – Sites not being taken forward through the Plan

Site Reference	Summary of Impacts Assessment		Recommendation
	Impacts and Mitigation	Cumulative Impacts	
<p>1. AS10 Moreton Plantation, Moreton</p> <p>(Aggregates)</p>	<p>This is a relatively large site which has strong nature conservation interest, local landscape value and historic environment importance. It provides open access and is well used. Water flows through the site to feed designated European wetlands, which could be affected by development of this site. Impacts during actual working, and appropriate mitigation, are not known at this time. Historic environment impacts may be mitigated by appropriate standoffs. The potential impacts on hydrology are unknown at this stage.</p>	<p>As a new site there would be cumulative impacts associated with its development. However, it is expected that Warmwell Quarry would cease production before this site came into production, and this site would act to replace Warmwell.</p>	<p>The benefits of developing this site are not considered to outweigh the impacts of working here. At this time other sites are considered to be more appropriate options for supplying aggregate.</p> <p>It is recommended that this site should not be included in the emerging Mineral Sites Plan</p>
<p>2. AS11 Parley Court, Parley.</p>	<p>This site, if developed, would be a new site. Its development could to hydrological and ecological impacts on the Stour; further assessment is required.</p>	<p>As a new site there will be cumulative impacts, particularly related to traffic levels, which will</p>	<p>The benefits of developing this site are not considered to outweigh the impacts of</p>

Site Reference	Summary of Impacts Assessment		Recommendation
	Impacts and Mitigation	Cumulative Impacts	
(Aggregates)	<p>The fact that there will be a significant buffer along the river edge minimises potential impacts.</p> <p>There will be time-limited local visual impacts, particularly on some of the housing in Muscliff to the south and also from users of the path running along the south side of the Stour. These are difficult/impossible to mitigate as the land on the south side of the river is raised above the level of the site and no bunding will be allowed in the floodplain.</p>	<p>need to be addressed if the site is working at the same time as the Hurn Court Farm site to the east.</p>	<p>working here. At this time other sites are considered to be more appropriate options for supplying aggregate.</p> <p>It is recommended that this site should not be included in the emerging Mineral Sites Plan</p>
<p>3. AS12 Philliols Farm, Bere Heath, Bere Regis</p> <p>(Aggregates)</p>	<p>This is a new site which would be worked and the mineral transported through Philliols Heath to the C7 road to be processed at Tatchells, near Wareham. There are a number of potential impacts associated with the development of this site. These include biodiversity (particularly the haul road and possible impacts on European Designations in Wareham Forest), hydrology/hydrogeology, archaeology, landscape capacity, loss of BMV land, amenity (impacts on residences in the vicinity) and transport issues.</p>	<p>As a new site there will be cumulative impacts, particularly on traffic going north or south on the C7.</p>	<p>The benefits of developing this site are not considered to outweigh the impacts of working here. At this time other sites are considered to be more appropriate options for supplying aggregate.</p> <p>It is recommended that this site should not be included in the emerging Mineral Sites Plan</p>
<p>4. AS14 Henbury Farm, Sturminster Marshall</p> <p>(Aggregates)</p>	<p>This site, if developed, would be a new site.</p> <p>A range of potential impacts are associated with this site, including: Potential impacts on biodiversity; potentially significant hydrological/hydrogeological impacts, on River Stour and the Corfe Mullen Public Water Supply; significant transport impacts relating to gaining satisfactory access to site, and from site to A31; possible impacts on archaeology; potential impacts on amenity, including residences and the village of Sturminster Marshall, but site is large enough</p>	<p>This is a new site and its development would lead to cumulative impacts, particularly regarding access to the A31..</p>	<p>The benefits of developing this site are not considered to outweigh the impacts of working here. At this time other sites are considered to be more appropriate options for supplying aggregate.</p> <p>It is recommended that this site should not be included</p>

Site Reference	Summary of Impacts Assessment		Recommendation
	Impacts and Mitigation	Cumulative Impacts	
	that visual impacts on surrounding properties are expected to be capable of mitigation; impacts on access – the Wareham Forest Way crosses the site.		in the emerging Mineral Sites Plan
5. AS21 Came Home Farm, Dorchester. (Aggregates)	<p>This site, if developed, would be a new site.</p> <p>A range of potential impacts are associated with this site, including: visual impacts, from the adjacent AONB and from the footpath going up a hill to the south of the site; further detail required on how the proposed restoration will be achieved; a number of hydrological and nature conservation related impacts have been identified, from impacts on wildlife to impacts on the winterbourne flow to hydrological impacts. Further work, including a year's worth of groundwater monitoring, will be required.</p> <p>There are potentially serious transportation constraints, with safety issues for vehicles entering and leaving the site. Further work required to determine possible mitigation.</p> <p>There are impacts on landscape, both in terms of impacts on the AONB and the capacity of the local landscape to absorb the significant changes proposed.</p> <p>Potential heritage issues, including archaeology, historic landscapes and historic buildings.</p>	As a new site, there would be cumulative issues, particularly for transport.	<p>The benefits of developing this site are not considered to outweigh the impacts of working here. At this time other sites are considered to be more appropriate options for supplying aggregate.</p> <p>It is recommended that this site should not be included in the emerging Mineral Sites Plan</p>
6. AS23 Gore Heath, Sandford (Aggregates)	<p>This site, if developed, would be a new site.</p> <p>There are a number of impacts that are likely to be associated with the working of this site, including biodiversity and European designations; impacts of recreational displacement, if this site was developed; hydrology/hydrogeology, archaeology and historic landscapes; landscape capacity; transport/access impacts; impacts on amenity, recreational use.</p>	As a new site, there would be cumulative issues, particularly for transport.	<p>The benefits of developing this site are not considered to outweigh the impacts of working here. At this time other sites are considered to be more appropriate options for supplying aggregate.</p> <p>It is recommended that this</p>

Site Reference	Summary of Impacts Assessment		Recommendation
	Impacts and Mitigation	Cumulative Impacts	
			site should not be included in the emerging Mineral Sites Plan
7. AS24 – Purple Haze (South), Verwood. (Aggregates)	<p>This is a large site, adjacent to another area that has already been allocated by Hampshire County Council.</p> <p>There are a number of issues and uncertainties that justify its exclusion from the Mineral Sites Plan at this time, while awaiting provision of further information. It is also not clear when this site might be expected to be developed.</p> <p>Impacts and/or further assessment is needed for: potential archaeological impacts; impacts on use of the site and area for recreational uses, with likely closures of parts of the site during working. Restoration has the potential to restore/improve opportunities for recreation and open access in the area. Transport impacts could potentially be significant, but it is likely that the site is large enough that access will be provided in an area that minimises impacts. Impacts on surface and groundwater are not yet known, and detailed assessment will be required. It is likely that there will be some landscape impacts but it is expected that these will be capable of mitigation.</p> <p>Nature conservation impacts are of key importance, given the site's proximity to Natura 2000 sites, the bird and other species found on the site and in the vicinity and the provision of recreational opportunities provided by the site. Further assessment, including Appropriate Assessment, is required and it is not known yet what mitigation will be required.</p>	<p>It is expected that this site would follow on from the Hampshire site, therefore there would be no cumulative impacts expected.</p>	<p>The benefits of developing this site are not considered to outweigh the impacts of working here. At this time other sites are considered to be more appropriate options for supplying aggregate.</p> <p>It is recommended that this site should not be included in the emerging Mineral Sites Plan</p>
8. BS01 Manor Farm Quarry	<p>This proposal is for an extension to an existing limestone quarry. The assessment has identified potentially significant impacts from the working of this site, including landscape, historic environment and</p>	<p>As an extension to an existing quarry, no cumulative impacts are expected.</p>	<p>The site has been withdrawn by the nominees.</p>

Site Reference	Summary of Impacts Assessment		Recommendation
	Impacts and Mitigation	Cumulative Impacts	
(Other Building Stone)	<p>amenity issues. It is not clear at this stage whether these can be satisfactorily mitigated and further assessment will be required.</p> <p>Key issues/impacts are hydrology/hydrogeology, archaeology and historic landscapes, landscape and visual impacts and impacts on designated landscape, amenity (particularly on nearby residences) and rights of way/access.</p> <p>In addition, the site has been withdrawn by the site nominees from the Mineral Sites Plan site allocation process and therefore will not be taken forward.</p>		
9. BC05 Doreys – Holme Heath (Ball Clay)	<p>This proposal is for a ball clay quarry that may be an extension or may be worked simultaneously with another quarry nearby. Impacts identified include: significant ecological impacts, including impacts on European designations; significant effects expected on hydrology, especially hydrogeology, as water flows through site to feed downstream designations; archaeological impacts possible, but not known until assessment; possible limited landscape impacts; site access and mineral transport will be by road – further assessment required to establish likely impacts and identify possible mitigation. Impacts on adjacent bridleway, to be mitigated by screening.</p>	<p>Possibility of cumulative impacts if the site is worked simultaneously with other in the vicinity.</p>	<p>Further information is required, given the sensitive nature of this site and particularly potential impacts on hydrology/hydrogeology, before it could be included in the Mineral Sites Plan. Until such information is made available, the site will not be included.</p>
10. PS02 Perryfield Quarry Extension, Portland (Portland Stone)	<p>This site is a proposed surface quarry, an extension to an existing quarry. Impacts are expected to include amenity/impacts of quarrying, visual impacts, heritage impacts (historic landscape and buildings) and non-compliance with the Minerals Strategy.</p>	<p>As an extension no cumulative impacts are expected.</p>	<p>The benefits of developing this site are not considered to outweigh the impacts of working here. At this time other sites are considered to be more appropriate options for supplying</p>

Site Reference	Summary of Impacts Assessment		Recommendation
	Impacts and Mitigation	Cumulative Impacts	
			Portland Stone. It is recommended that this site should not be included in the emerging Mineral Sites Plan
11. PK11 St Aldhelms Quarry Extension, Purbeck (Purbeck Stone)	This site has received planning permission.		No need for the site to be included.
12. PK20 Crack Lane, Langton Matravers (Purbeck Stone)	<p>This is a new site, proposed for the extraction of Purbeck Marble. Working would be sporadic, but the site is relatively small, the stone is deep, there is a footpath crossing the site, it is adjacent to one of the main roads into Swanage, a stream runs adjacent to the site and there are visual/landscape impacts.</p> <p>Although there are important benefits to be realised from developing a source of Purbeck Marble, it appears that the site will have significant landscape impacts. There will also be impacts on biodiversity, hydrology/hydrogeology, potentially archaeology and rights of way/access. In the absence of further information, particularly regarding the specific need for Purbeck Marble and more detail on how the site might be worked, how often it might be worked and how it would be restored/left between working, it is considered that the site is not at this stage appropriate for inclusion in the emerging Mineral Sites Plan.</p>	This is a new site and would lead to some cumulative impacts.	<p>The benefits of developing this site are not considered to outweigh the impacts of working here. At this time other sites are considered to be more appropriate options for supplying Purbeck Stone/Marble.</p> <p>It is recommended that this site should not be included in the emerging Mineral Sites Plan</p>

2. Sustainability Appraisal

Scoping the Sustainability Issues

- 2.1. Sustainability appraisal begins with the scoping process, designed to identify the sustainability objectives which will comprise the SA Framework. The sustainability objectives are the basis for the assessment of the site nominations. The scoping process was originally carried out in June 2010. It was revised, updated and broadened to include waste issues, then re-published in March 2015 to ensure that the SA process covers the current sustainability issues relevant to minerals and waste planning in Bournemouth, Dorset and Poole. The full Scoping Report is available online².
- 2.2. The main part of the scoping report has been organised by topics identified in European Directive 2001/42/EC 'on the assessment of the effects of certain plans and programmes on the environment' (commonly referred to as the SEA Directive) plus social and economic topics to fulfil the requirements of Government guidance on sustainability appraisal and the Planning and Compulsory Purchase Act 2004. Each topic was explored and analysed using the tasks suggested in the guidance. Relevant plans, programmes and policies were identified and reviewed, and their implications for the minerals development plan documents (DPDs) considered. Initial baseline information, often in the form of maps, was collected and included in the report.
- 2.3. Sustainability issues were then identified and their implications assessed for waste planning and the baseline information to be collected. Objectives were developed to address these sustainability issues, as well as reflecting international, national, regional and local objectives. Indicators were then developed to measure how well the emerging policies and strategies would perform and help to achieve sustainability objectives. These objectives cover a full range of environmental issues, including those specified in the SEA Directive. The sustainability objectives also include a broad range of social and economic issues.
- 2.4. Each sustainability objective has associated indicators, specific questions which assist in determining how and to what extent the objective could potentially be affected by the development of the nominated sites. Tables 2.1, 2.2 and 2.3 set out the sustainability objectives with relevant indicators and a column indicating how the sustainability objectives relate to the SEA topics in the SEA Directive.

Table 3 - SA Framework - Environmental Objectives/Indicators

Sustainability Appraisal Objectives	Indicators <i>To what extent does the strategy or policy...</i>	Related SEA Directive Topics
1. To move waste management up the waste hierarchy and promote net self-sufficiency	<ul style="list-style-type: none"> • Assist in driving waste up the waste hierarchy? • Make provision for waste management facilities commensurate with the waste hierarchy? • Enable waste to be diverted from landfill? • Enable increased recycling or treatment of organic waste? • Enable waste to be managed locally, particularly within the local authority boundary 	Human health; Population; Social Considerations
2. To maintain, conserve and enhance biodiversity	<ul style="list-style-type: none"> • Conserve, enhance or create natural and semi-natural habitats of recognised ecological value and/or the green corridors that link them? • Directly or indirectly affect internationally or nationally designated or recognised sites or UK BAP 	Biodiversity; Fauna; Flora; Soil

² See: <https://www.dorsetforyou.com/354652>

Sustainability Appraisal Objectives	Indicators <i>To what extent does the strategy or policy...</i>	Related SEA Directive Topics
	habitats? <ul style="list-style-type: none"> • Conserve or enhance species diversity and avoid harm to internationally and nationally protected, scarce and rare species (including UK BAP species)? • Provide for positive management of existing habitats? • Assist species to adapt to the anticipated effects of climate change (i.e. through connecting habitats and/or providing greenspace)? • Reflect the South West Nature Map? • Expand the spatial extent of BAP priority habitat within Dorset? • Contribute to an adverse cumulative impact of development on biodiversity? 	
3. To maintain, conserve and enhance geodiversity.	<ul style="list-style-type: none"> • Conserve or enhance the World Heritage Site and its setting? • Conserve or enhance geological SSSIs? • Create, extend or enhance Local Geological Sites? • Allow access to geodiversity resources for study? 	Material Assets;
4. To maintain, conserve and enhance the quality of ground, surface and sea waters and manage the consumption of water in a sustainable way.	<ul style="list-style-type: none"> • Protect or enhance the quantity and quality of ground, surface and sea waters? • Avoid adverse effects on existing patterns of groundwater flow and/or surface water flow? • Maintain water consumption within local carrying limits? 	Water; Human Health; Biodiversity; Climatic Factors
5. To reduce flood risk and improve flood management.	<ul style="list-style-type: none"> • Minimise the risks and impacts of flooding having taken into account climate change? • Minimise the numbers of people and property at risk from flooding? 	Water; Human Health; Climatic Factors;
6. To maintain, conserve and enhance the historic environment (including conservation areas, historic parks and gardens and other locally distinctive features and their settings).	<ul style="list-style-type: none"> • Cause a loss of, or harm to, the character and/or setting of historic assets? • Cause harm to the historic landscape? • Provide for the maintenance of the historic environment? • archaeological sites, historic buildings, • Provide new information on the historic environment, or improve education about and/or interpretation of the historic environment? 	Cultural Heritage (Architectural and Archaeological Heritage)

Sustainability Appraisal Objectives	Indicators <i>To what extent does the strategy or policy...</i>	Related SEA Directive Topics
7. To maintain, conserve and enhance the landscape, including townscape, seascape and the coast.	<ul style="list-style-type: none"> • Conserve and enhance landscape character, quality and distinctiveness, paying particular regard to AONB and other designated areas of high landscape and/or historic sensitivity or value? • Minimise the landscape and visual intrusion of waste facilities on sensitive and/or distinctive landscapes? • Contribute to an adverse cumulative impact of development on protected landscapes? • Encourage development of land which is not sympathetic to the identified landscape character of that location? • Provide for the restoration of land to an appropriate after-use and landscape character through Landscape Restoration Strategies. • Protect the open character of the South East Dorset Green Belt from inappropriate development 	Landscape;
8. To protect and improve air quality and reduce the impacts of noise	<ul style="list-style-type: none"> • Adversely affect air quality, including through transportation, particularly in Air Quality Management Areas? • Increase the likelihood of higher levels of dust in the air? • Increase the likelihood of higher levels of noise and vibration and impact on sensitive receptors? • Increase the likelihood of higher levels of odour on sensitive receptors? 	Air; Human Health; Biodiversity; Flora; Fauna.
9. To maintain, conserve and enhance soil quality	<ul style="list-style-type: none"> • Reduce the quantity or quality of the best and most versatile agricultural land? • Encourage the de-contamination and/or re-use of soils? • Conserve or enhance soil quality? • Reduce the capacity of the soil to hold carbon? • Increase land contamination? 	Soil; Flora; Fauna; Biodiversity;

Table 4 - SA Framework - Economic Objectives/Indicators

Sustainability Appraisal Objectives	Indicators <i>To what extent does the strategy or policy...</i>	Related SEA Directive Topics
10. To conserve and safeguard mineral resources.	<ul style="list-style-type: none"> • Safeguard mineral resources from loss by permanent sterilisation? • Encourage/promote the most efficient use of mineral 	Material Assets;

Sustainability Appraisal Objectives	Indicators <i>To what extent does the strategy or policy...</i>	Related SEA Directive Topics
	resources?	
11. To promote the use of alternative materials.	<ul style="list-style-type: none"> Encourage/promote the production and/or use of recycled or secondary aggregates? 	Material Assets;
12. To provide an adequate supply of minerals to meet society's needs.	<ul style="list-style-type: none"> Contribute, in a sustainable way, to the supply of materials for new built development, or repair of existing built development, or to meet other needs for the mineral concerned? Contribute to the provision of a sustainable supply of minerals? 	Material Assets; Social Considerations; Human Health
13. To encourage sustainable economic growth.	<ul style="list-style-type: none"> Provide for waste management facilities in the county at an acceptable cost? Maintain or increase employment? Maintain and enhance skills levels, particularly through the provision of highly skilled jobs? Ensure that waste facilities and mineral sites, including the transportation of materials, do not prejudice the development of the local economy in Dorset? 	Social Considerations; Human Health;

Table 5 - SA Framework - Social Objectives and Indicators

Sustainability Appraisal Objectives	Indicators <i>To what extent does the strategy or policy...</i>	Related SEA Directive Topics
14. To adapt to and mitigate the impacts of climate change.	<ul style="list-style-type: none"> Ensure new development minimises vulnerability and provides resilience to climate change? Minimise emissions of greenhouse gases from operations, ensuring the efficient use of energy, and maximising opportunities for the generation of renewable energy? 	Climatic Factors; Human Health; Social Considerations.
15. To minimise the negative impacts of waste and minerals transport on the transport network, mitigating any residual impacts.	<ul style="list-style-type: none"> Reduce the negative impacts associated with minerals and waste transportation on the transport network as a whole? Reduce the impact of road traffic, in particular HGV trips, on local communities? Reduce the vehicle kilometres travelled for the transportation of minerals and waste? Support and encourage the use of sustainable modes of transport? Support and encourage the use of low emission vehicles for the transportation of waste and minerals? Support the carbon reduction targets set at the 	Climatic Factors; Human Health; Social Considerations.

Sustainability Appraisal Objectives	Indicators <i>To what extent does the strategy or policy...</i>	Related SEA Directive Topics
	international, national and local level? <ul style="list-style-type: none"> Support the road casualty reduction indicators set at the international, national and local level? 	
16. To support and encourage the use of sustainable transport modes, imposing no unmitigated negative impacts on them.	<ul style="list-style-type: none"> Facilitate the use of rail or waterborne freight for the purpose of transporting waste and minerals? Accommodate the efficient movement of people, goods and services thus supporting sustainable economic growth in the Bournemouth, Poole and Dorset area? 	Population; Material Assets; Human Health; Climatic Factors; Air
17. To sustain the health and quality of life of the population	<ul style="list-style-type: none"> Contribute to quality of life through the provision of a network of accessible facilities to move waste up the hierarchy? Ensure access for all to public facilities? Impact on the quality of life of local communities (including through factors such as noise, artificial light, odour and vermin)? Cause a cumulative impact on certain communities (i.e. through permitting further development in an area, or extending the life of an existing permission)? 	Human Health;
18. To enable safe access to countryside and open spaces.	<ul style="list-style-type: none"> Promote linkages between open spaces, and enable/improve access to the countryside ? Provide an opportunity for Suitable Alternative Natural Greenspace? Reduce impacts on recreational and open spaces, Green Infrastructure and other land take issues including through the use of previously developed land? 	Human Health; Social Considerations

Sustainability Objectives and Site Assessment Criteria

- 2.5. Having identified the sustainability objectives, the sustainability appraisal would normally be carried out by assessing each site nomination against all the objectives. This includes taking into account timescales, considering the short, medium and long term impacts or in mineral planning terms, possible impacts/benefits at the site preparation, working and restoration/aftercare stages.
- 2.6. However, in order to make the SA process more relevant to mineral site assessment and selection, the MPA has prepared a series of site selection criteria which are based on the sustainability objectives and can be applied to any nominated site.
- 2.7. The criteria, along with commentary on their use and application, are set out in Appendix 1 of the Bournemouth, Dorset and Poole Minerals Strategy 2014. The criteria relate directly to both the SEA Directive Issues and the sustainability objectives. They provide a standardised approach to assessing mineral site nominations and a clear audit trail to demonstrate how assessments have been undertaken.
- 2.8. They include both a subjective assessment of likely impacts and according to the level of impact, the assignment of a colour. The results of the criteria assessment provide a visual impression of the suitability of any site nomination. If there is a predominance of red/orange scores for any site

assessment, this indicates that if the site is to progress it will likely need a higher level of mitigation than another site that records more greens.

Table 6 - Site Selection Criteria

Relevant SEA Directive Issues	Site Selection Criteria
<ul style="list-style-type: none"> • Biodiversity/Geodiversity • Fauna • Flora 	Site Selection Criterion C1: Does the proposal have any impact on international/European nature conservation designations?
	Site Selection Criterion C2: Does the proposal have an impact on areas used by Annex 1 Bird Species?
	Site Selection Criterion C3: Does the proposal have any impact on national designations for nature conservation?
	Site Selection Criterion C4: Does the proposal have any impact on protected species?
	Site Selection Criterion C5: Does the proposal have any impact on local recognitions/designations, including ancient woodland and veteran trees?
	Site Selection Criterion C6: Does the proposal have any impact on geodiversity?
<ul style="list-style-type: none"> • Landscape • Cultural heritage, including architectural and archaeological heritage 	Site Selection Criterion C7: Does the proposal have any impact on designated landscapes?
	Site Selection Criterion C8: What is the landscape capacity to accommodate the site?
	Site Selection Criterion C9: Does the proposal have any impact on historic landscapes?
<ul style="list-style-type: none"> • Cultural heritage, including architectural and archaeological heritage 	Site Selection Criterion C10: Does the proposal have any impact on historic buildings?
	Site Selection Criterion C11: Does the proposal have any impact on archaeology?
<ul style="list-style-type: none"> • Water • Human Health • Biodiversity, Fauna, Flora 	Site Selection Criterion C12: Does the proposal have any impact on hydrogeology or groundwater?
	Site Selection Criterion C13: Does the proposal have any impact on surface waters?
	Site Selection Criterion C14: Does the proposal have any impact on flooding or coastal stability?

<ul style="list-style-type: none"> Air Climatic Factors Human Health 	<p>Site Selection Criterion C16: Does the proposal have any impact on Air Quality Management Areas (AQMAs)?</p>
<ul style="list-style-type: none"> Material Assets 	<p>Site Selection Criterion C17: What are the relevant economic considerations?</p>
<ul style="list-style-type: none"> Human Health Population 	<p>Site Selection Criterion C18: Does the proposal have any impact on Sensitive Human Receptors?</p>
	<p>Site Selection Criterion C19: Does the proposal have any impact on existing settlements?</p>
	<p>Site Selection Criterion C20: Does the proposal have any impact on airport safety?</p>
<ul style="list-style-type: none"> All 	<p>Site Selection Criterion C21: Does the proposal have any effect on cumulative impacts?</p>
<ul style="list-style-type: none"> Air Climatic Factors Human Health/Population Biodiversity 	<p>Site Selection Criterion C22: Does the proposal have any impact on carbon emissions?</p>
<ul style="list-style-type: none"> Human Health Population Biodiversity Air/Climatic Factors 	<p>Site Selection Criterion C23: Does the proposal have any impact on recreational land?</p>
	<p>Site Selection Criterion C24: Does the proposal have any impact on public rights of way?</p>
	<p>Site Selection Criterion C25: Are the access proposals acceptable?</p>

2.9. Table 7 shows the relationship between SEA Directive Issues, the sustainability objectives and the site criteria, demonstrating the level of inter-relationship between them.

Table 7 - Relationship between SEA Directive Issues, Sustainability Appraisal Objectives and Site Selection Criteria

SEA Directive Issues ³	Sustainability Objectives ⁴	Site Selection Criteria
Biodiversity	Objective 2	C1; C2; C3; C4; C5; C12; C13; C21;
Population	Objective 17	C7; C14; C17; C18; C19; C21; C24; C25
Human health	Objectives 1 and 17	C14; C18; C19; C20; C21; C22;

³ From SI 2004 No. 1633 The Environmental Assessment of Plans and Programmes Regulations 2004

⁴ From Waste & Minerals Sustainability Appraisal Scoping Report 2014 (Bournemouth, Dorset and Poole Councils, March 2014). See Tables 2.1, 2.2 and 2.3 above.

SEA Directive Issues³	Sustainability Objectives⁴	Site Selection Criteria
		C23; C24; C25
<i>Social Considerations</i>	Objectives 14, 15, 16, 17, 18	C7; C17; C24;
Fauna	Objective 2	C1; C2; C3; C4; C5; C12; C13; C21;
Flora	Objective 2	C1; C2; C3; C4; C5; C12; C13; C21;
Soil	Objective 9	C15; C21;
Water	Objectives 4&5	C12; C13; C14; C21;
Air	Objective 8	C16; C21;
Climatic factors	Objective 14	C16; C21; C22;
Material assets	Objective 3, 10, 11 and 12	C6;
Cultural heritage, including architectural and archaeological heritage	Objective 6	C6; C7; C9; C10; C11; C18;
Landscape	Objective 7	C7; C8; C9

3. The Sustainability Appraisal – Options, Policies and Sites

Background

3.1 The sustainability appraisal has considered and appraised:

- **Options** for site selection – in terms of numbers of sites to include in the Plan;
- **Policies** (apart from site allocation policies) included in the Mineral Sites Plan, and;
- **Sites** considered for inclusion in the Plan, both those proposed for inclusion and those rejected as inappropriate, with reasons included in the Plan and the reasons have been carried out in two stages:

Options Appraisal

3.2 The sustainability appraisal for the Minerals Strategy⁵ assessed a series of options as part of identifying and setting out the strategy for the provision of minerals in Bournemouth, Dorset and Poole. For the Mineral Sites Plan, the assessment of options is related specifically to options for the number of sites that should be identified in the Plan.

3.3 Consideration of options for the purposes of the SA/Plan have focussed around:

- i. The **numbers** of sites and
- ii. The **locations** of sites.

3.4 In terms of location, options for the location of mineral sites are restricted since minerals can only be worked where they are found. In addition, mineral sites are only progressed through the Plan if they have a willing promoter/backer which further restricts the potential location of sites. Appraisal of location has taken place through the separate assessment of each site nomination that has been carried out and the results of these assessments are presented in Appendix A (see p.60). If the site assessment indicates that the location is unacceptable, then it is unlikely to progress. Sites not selected to progress through the Plan are set out in Appendix B (see p. 266).

3.5 In terms of options, the numbers of sites to be identified in the Plan are more relevant to minerals planning and options assessment. Consideration of numbers of sites essentially equates to the level of provision of various minerals to be identified through the Plan.

3.6 Of all the mineral types considered through the Plan - aggregates (both sand and gravel and potentially crushed rock), ball clay, Purbeck Stone, Portland Stone and other building stone (not Purbeck Stone or Portland Stone) - sand and gravel and Purbeck Stone have had the greatest number of site nominations. The other mineral types have had far fewer.

3.7 It was decided, in the interest of ensuring adequate provision of minerals, that all the site nominations for ball clay, crushed rock and other building stone should be included, provided that the separate site assessments did not identify any impacts that made them unsuitable for inclusion in the Mineral Sites Plan.

3.8 Sand and gravel and Purbeck Stone were different, given the number of site nominations received for these minerals. Sand and gravel sites are generally, of the minerals produced in Dorset, the largest sites and as such are likely to generally have greater impacts. Sand and gravel and Purbeck Stone are the only minerals where there is an annual production figure, even if only a guideline figure.

Purbeck Stone

3.9 The Minerals Strategy, through Policy PK1, commits to providing for the production of some 20,000 tonnes per annum (tpa) of saleable stone. A number of Purbeck Stone sites have been nominated and the Mineral Planning Authority had to decide how many of these should be included in the Plan.

3.10 Unlike sand and gravel, it is more difficult to assess with any certainty the amount of saleable Purbeck Stone contained within a site nomination. Furthermore, there is a much greater range of types (beds) of Purbeck Stone that can be found within any given site, and not every site will necessarily have a full range of beds/types. However, since the market demands a full range of Purbeck Stone types, operators/site nominees will ideally want access to a range of sites to provide

⁵ See: <https://www.dorsetforyou.com/mcs>

a range of stone types.

3.11 In addition, Purbeck Stone quarries are generally quite small with lower impacts. For these reasons, a decision has been taken to include all site nominations provided the individual site assessment has not identified any impacts not capable of mitigation. Therefore, there has been no assessment of options for Purbeck Stone.

Sand and gravel

3.12 For sand and gravel, the current planned provision annual figure is around 1.6 million tonnes per annum (mtpa). The number of sites that have been nominated would, if all were to be developed, potentially provide in excess of the required annual amount. To avoid this, the Mineral Planning Authority need to identify the optimum number of sites to ensure adequate annual provision of sand and gravel over the life of the Plan, without a risk of under-provision (which could lead to the Plan being found unsound) or over-provision (which could lead to increased impacts on amenity and the environment).

3.13 To achieve this, for sand and gravel only, the Mineral Planning Authority has assessed three separate options in Table 8 below.

- **Option 1** is to identify a number of sites that will allow the Mineral Planning Authority to provide for aggregate production at or below the annual provision figure – reducing impacts but risking the Plan being found unsound on grounds of insufficient provision of aggregate.
- **Option 2** is to identify a number of sites that will allow the Mineral Planning Authority to provide for aggregate production at or above the annual provision figure – reducing the risk that the Plan could be found unsound for inadequate provision of aggregate, but potentially increasing impacts on amenity and the environment.
- **Option 3** is in effect a combination, identifying less sites (as in Option 1) in combination with the Area of Search proposed under Policy MS-2. The Area of Search is an area in which landscape/visual/biodiversity impacts are expected to be less and where sites which are not identified in the Plan are facilitated and encouraged, provided certain criteria are met. Sites within the Area of Search are expected to have less impact on amenity/environment, and/or to provide significant environmental benefits.

The intention under this Option is that less sites will be specifically identified through the Plan, with the expectation that other sites will come forward from areas of less impact within the Area of Search during the lifetime of the Plan, contributing to the supply of sand and gravel.

Results of assessment of Options for sand and gravel sites.

3.14 For each of the sustainability objectives, impacts and benefits have been considered. Option 3, identifying less sites in conjunction with the designation of an Area of Search, has been shown to offer more benefits and less impacts than either Option 1 or Option 2. The Plan has therefore takes this approach in identification of aggregate sites, under Policy MS-1.

Table 8 - Sustainability Appraisal of Options for Site Allocation

Based on options for provision of a greater number of sites which will meet/exceed the level of annual provision (Option 1); fewer sites, at or just below the level of annual provision (Option 2); and fewer sites but with the addition of an area of search (Option 3)

	Option 1	Option 2	Option 3			
Sustainability Objectives	More Sites	Less Sites	Less Sites but with Area of Search			
1. To move waste management up the waste hierarchy and promote net self sufficiency	Not relevant to this Option					
2. To maintain, conserve and enhance biodiversity	<ul style="list-style-type: none"> All site options can be expected to have some level of impact, and the greater the number of sites identified, the greater the level of impact that can be expected across the Plan area. 	—	<ul style="list-style-type: none"> All options can be expected to have some level of impact, and the less the number of sites identified, the less the level of impact that can be expected across the Plan area. 	+	<ul style="list-style-type: none"> The combination of identified sites and an Area of Search is expected to facilitate the development of sites in less sensitive and most appropriate areas, contributing to additional sites coming through under appropriate conditions, to assist in meeting need. 	+
	<ul style="list-style-type: none"> Identifying more sites will reduce the risk that the Plan will be found unsound for inadequate provision for aggregates. 	+	<ul style="list-style-type: none"> Identifying less sites will increase the risk that the Plan will be found unsound for inadequate provision for aggregates. 	—	<ul style="list-style-type: none"> Reduces the risk of the Plan being found unsound in not providing for adequate levels of aggregates production. 	+
3. To maintain, conserve and enhance	Geodiversity benefits of developing aggregates sites are expected to be limited, and are not a key factor in considering how many aggregates sites the Plan should identify.					

	Option 1		Option 2		Option 3	
Sustainability Objectives	More Sites		Less Sites		Less Sites but with Area of Search	
geodiversity.						
4. To maintain, conserve and enhance the quality of ground, surface and sea waters and manage the consumption of water in a sustainable way.	<ul style="list-style-type: none"> All options can be expected to have some level of impact, and the greater the number of sites identified, the greater the level of impact that can be expected across the Plan area. 	—	<ul style="list-style-type: none"> All options can be expected to have some level of impact, and the less the number of sites identified, the less the level of impact that can be expected across the Plan area. 	+	<ul style="list-style-type: none"> The combination of identified sites and an Area of Search is expected to facilitate the development of sites in less sensitive and most appropriate areas, to assist in meeting need. 	+
	<ul style="list-style-type: none"> Identifying more sites will reduce the risk that the Plan will be found unsound for inadequate provision for aggregates. 	+	<ul style="list-style-type: none"> Identifying less sites will increase the risk that the Plan will be found unsound for inadequate provision for aggregates. 	—	<ul style="list-style-type: none"> The combination of identified sites and an Area of Search is expected to facilitate the development of sites in less sensitive and most appropriate areas, reducing the risk of the Plan being found unsound in not providing for adequate levels of aggregates production. 	+
5. To reduce flood risk and improve flood management.	<ul style="list-style-type: none"> It is not expected that development of aggregates quarries will particularly affect flood risk/flood management, making it either worse or better . The Environment Agency provides professional advice on these matters at the plan preparation and planning application stage, to ensure that flood risk is kept to a minimum. 					

	Option 1		Option 2		Option 3	
Sustainability Objectives	More Sites		Less Sites		Less Sites but with Area of Search	
6. To maintain, conserve and enhance the historic environment (including archaeological sites, historic buildings, conservation areas, historic parks and gardens and other locally distinctive features and their settings).	<ul style="list-style-type: none"> The greater the number of sites identified, the greater the likelihood that there will be some impacts across the Plan area. 	—	<ul style="list-style-type: none"> The less the number of sites identified, the less the likelihood that there will be some impacts across the Plan area. 	+	<p>Additional inclusion of the Area of Search is expected to facilitate additional sites coming through in areas where impacts are expected to be less, to assist in meeting need.</p>	+
	<ul style="list-style-type: none"> The greater the number of sites identified, the less the risk that the Plan will be found unsound for inadequate provision for aggregates. 	+	<ul style="list-style-type: none"> The lower the number of sites identified, the greater the risk that the Plan will be found unsound for inadequate provision for aggregates. 	—	<p>Reduces the risk of the Plan being found unsound in not providing for adequate levels of aggregates production.</p>	+
7. To maintain, conserve and enhance the landscape, including townscape, seascape and the	<ul style="list-style-type: none"> All site proposals are likely to have some landscape/visual impacts, and the greater the number of sites identified, the greater the level of expected impact across the Plan area. 	—	<ul style="list-style-type: none"> All site proposals are likely to have some landscape/visual impacts. If fewer sites are identified, this could be expected to lead to a reduced impact across the Plan area. 	+	<ul style="list-style-type: none"> All site proposals are likely to have some landscape/visual impacts. If fewer sites are identified, this could be expected to lead to a reduced impact across the Plan area. 	+

	Option 1		Option 2		Option 3	
Sustainability Objectives	More Sites		Less Sites		Less Sites but with Area of Search	
coast.	<ul style="list-style-type: none"> Identifying potentially more sites that might actually be needed is expected to reduce the risk that the Plan will be found unsound on grounds of inadequate provision for aggregates supply. 	+	<ul style="list-style-type: none"> Identifying less sites than might actually be needed could increase the risk that the Plan will be found unsound in not providing for adequate aggregates provision. 	—	<ul style="list-style-type: none"> Additional inclusion of the Area of Search is expected to facilitate additional sites coming through in areas where impacts are expected to be less, to assist in meeting need. Reduces the risk of the Plan being found unsound in not providing for adequate levels of aggregates production. 	+
8. To protect and improve air quality and reduce the impacts of noise.	<ul style="list-style-type: none"> Quarrying aggregates is likely to have some impacts on air quality, and will result in some noise. The greater the number of sites identified, the greater the level of expected impact across the Plan area. 	—	<ul style="list-style-type: none"> Quarrying aggregates is likely to have some impacts on air quality, and will result in some noise. The less the number of sites identified, the less the level of expected impact across the Plan area. 	+	<ul style="list-style-type: none"> Quarrying aggregates is likely to have some impacts on air quality, and will result in some noise. The less the number of sites identified, the less the level of expected impact across the Plan area. 	+

	Option 1		Option 2		Option 3	
Sustainability Objectives	More Sites		Less Sites		Less Sites but with Area of Search	
	<ul style="list-style-type: none"> Identifying potentially more sites that might actually be needed is expected to reduce the risk that the Plan will be found unsound on grounds of inadequate provision for aggregates supply. 	+	<ul style="list-style-type: none"> Identifying potentially fewer sites that might actually be needed is expected to increase the risk that the Plan will be found unsound on grounds of inadequate provision for aggregates supply. 	—	<ul style="list-style-type: none"> Additional inclusion of the Area of Search is expected to facilitate additional sites coming through in areas where impacts are expected to be less, to assist in meeting need. Reduces the risk of the Plan being found unsound in not providing for adequate levels of aggregates production. 	+
9. To maintain, conserve and enhance soil quality.	<ul style="list-style-type: none"> Although soils can be removed prior to quarrying and re-spread later, it is expected that there will be some impacts, even if only temporary. The greater the number of quarries identified and developed, the greater the impacts on soils/soil quality. 	—	<ul style="list-style-type: none"> The less the number of quarries identified and developed, the less the likely impacts on soils/soil quality across the Plan area. 	+	<ul style="list-style-type: none"> Identifying/developing fewer quarries is expected to lead to reduced impacts on soils/soil quality across the Plan area. 	+
	<ul style="list-style-type: none"> Identifying potentially more sites that might actually be needed is expected to reduce the risk that the Plan will be found unsound on grounds of inadequate provision for aggregates supply. 	+	<ul style="list-style-type: none"> Identifying fewer site increases the risks that the Plan will be found unsound on grounds of inadequate provision for aggregates supply. 	—	<ul style="list-style-type: none"> Additional inclusion of the Area of Search is expected to facilitate additional sites coming through in areas where impacts are expected to be less, to assist in meeting need. Reduces the risk of the Plan being found unsound in not 	+

	Option 1		Option 2		Option 3	
Sustainability Objectives	More Sites		Less Sites		Less Sites but with Area of Search	
					providing for adequate levels of aggregates production.	
10. To conserve and safeguard mineral resources.	<ul style="list-style-type: none"> Identifying and allocating more sites will ensure the protection and safeguarding of more mineral. Identifying potentially more sites that might actually be needed is expected to reduce the risk that the Plan will be found unsound on grounds of inadequate provision for aggregates supply. 	+	<ul style="list-style-type: none"> Identifying less sites will secure/protect less mineral. Identifying fewer site increases the risks that the Plan will be found unsound on grounds of inadequate provision for aggregates supply. 	—	<ul style="list-style-type: none"> The Area of Search on its own will not necessarily conserve or safeguard mineral resources – but in conjunction with identification of fewer sites will reduce the risk that the Plan will be found unsound on grounds of inadequate provision for aggregates supply. This is considered a more efficient use of mineral resources. 	?
	<ul style="list-style-type: none"> However the more sites that are developed, the greater the level of impacts which could be experienced across the Plan area. 	—	<ul style="list-style-type: none"> The fewer the number of sites identified, the less the level of impacts that could be experienced across the Plan area. 	+	<ul style="list-style-type: none"> The fewer the number of sites identified, the less the level of impacts that could be experienced across the Plan area. 	+
11. To promote the use of alternative materials.	<ul style="list-style-type: none"> The development of an aggregates quarry does not in itself increase the production/use of alternative materials, and the production of land-won aggregate would be expected to reduce the demand for alternative materials. The decision regarding how many aggregates quarries should be identified is not significantly affected by whether the sites will promote greater use of alternative materials. This criterion is not considered relevant to this assessment. 					

	Option 1		Option 2		Option 3	
Sustainability Objectives	More Sites		Less Sites		Less Sites but with Area of Search	
12. To provide an adequate supply of minerals to meet society's needs.	<ul style="list-style-type: none"> Identifying a higher number of sites will contribute to ensuring an adequate supply of minerals. It will also reduce the risk that the Plan will be found unsound on grounds of inadequate provision for aggregates supply. 	+	<ul style="list-style-type: none"> Identifying a fewer number of sites could make the adequate supply of minerals less certain. It would also increase the risks that the Plan will be found unsound on grounds of inadequate provision for aggregates supply. 	-	<ul style="list-style-type: none"> Identifying fewer sites in conjunction with an Area of Search is expected to provide for an adequate supply of aggregates for society's needs. This approach is also expected to reduce the risk of the Plan being found unsound on grounds of inadequate provision for aggregates supply. 	+
	<ul style="list-style-type: none"> However the more sites that are developed, the greater the level of impacts which could be experienced across the Plan area. 	-	<ul style="list-style-type: none"> The fewer the number of sites identified, the less the level of impacts that could be experienced across the Plan area. 	+	<ul style="list-style-type: none"> The fewer the number of sites identified, the less the level of impacts that could be experienced across the Plan area. 	+
13. To encourage sustainable economic growth	<ul style="list-style-type: none"> It is expected that identifying more aggregates sites will benefit the economy, encouraging sustainable economic growth. Identifying potentially more sites that might actually be needed is expected to reduce the risk that the Plan will be found unsound on 	+	<ul style="list-style-type: none"> A lower supply of aggregate could have a constraining effect on economic growth, but it is unlikely that production would be so low as to significantly limit the economy – this would trigger a review of the Minerals Strategy. The less the number of sites 	+	<ul style="list-style-type: none"> A lower supply of aggregate could have a constraining effect on economic growth, but it is unlikely that production would be so low as to significantly limit the economy – this would trigger a review of the 	+

	Option 1		Option 2		Option 3	
Sustainability Objectives	More Sites		Less Sites		Less Sites but with Area of Search	
	grounds of inadequate provision for aggregates supply.		identified, the less the level of expected impact across the Plan area.		Minerals Strategy. <ul style="list-style-type: none"> The less the number of sites identified, the less the level of expected impact across the Plan area. Additional inclusion of the Area of Search is expected to facilitate additional sites coming through in areas where impacts are expected to be less, to assist in meeting need. 	
	<ul style="list-style-type: none"> However, the greater the number of aggregates sites developed, the greater the impact on environment and amenity. 	—	<ul style="list-style-type: none"> However, having less sites identified in the Plan could possibly make it less responsive to sudden increases in demand. Identifying fewer site increases the risks that the Plan will be found unsound on grounds of inadequate provision for aggregates supply. 	—	<ul style="list-style-type: none"> Addition of an Area of Search is expected to reduce the risk of the Plan being found unsound in not providing for adequate levels of aggregates production. 	+
14. To adapt to and mitigate the impacts of climate change.	<ul style="list-style-type: none"> Identifying more sites could cumulatively increase production of greenhouse gases, although the levels would be relatively small. The greater the number of aggregates sites developed, the greater the impact on environment and amenity. 	—	<ul style="list-style-type: none"> Identifying less sites could reduce production of greenhouse gases, although the levels would be relatively small. The less the number of sites identified, the less the level of expected impact across the Plan area. 	+	<ul style="list-style-type: none"> Identifying less sites, with additional sites being developed through an Area of Search could have the effect of reducing greenhouse gases, although the amount would be minimal. Additional inclusion of the Area of Search is expected to 	+

	Option 1		Option 2		Option 3	
Sustainability Objectives	More Sites		Less Sites		Less Sites but with Area of Search	
					facilitate additional sites coming through in areas where impacts are expected to be less, to assist in meeting need.	
	<ul style="list-style-type: none"> Identifying potentially more sites that might actually be needed is expected to reduce the risk that the Plan will be found unsound on grounds of inadequate provision for aggregates supply. 	+	<ul style="list-style-type: none"> Identifying fewer site increases the risks that the Plan will be found unsound on grounds of inadequate provision for aggregates supply. 	-	<ul style="list-style-type: none"> Addition of an Area of Search is expected to reduce the risk of the Plan being found unsound in not providing for adequate levels of aggregates production. 	+
15. To minimise the negative impacts of waste and minerals development on the transport network, mitigating any residual impacts.	<ul style="list-style-type: none"> Identifying a greater number of sites is likely to have the effect of increasing impacts on the transport network. Mitigation would reduce this to some extent. The greater the number of aggregates sites developed, the greater the impact on environment and amenity. 	-	<ul style="list-style-type: none"> Identifying fewer sites is likely to have the effect of reducing impacts on the transport network. The fewer the number of aggregates sites developed, the less the impact on environment and amenity. 	+	<ul style="list-style-type: none"> Identifying less sites, with additional sites potentially being developed through an Area of Search, could have the effect of limiting impacts on the transport network – but this would depend on how many sites came forward within the Area of Search and where they were. Impacts are not clear. 	?
	<ul style="list-style-type: none"> Identifying potentially more sites that might actually be needed is expected to reduce the risk that the Plan will be found unsound on grounds of inadequate provision for aggregates supply. 	+	<ul style="list-style-type: none"> Identifying fewer site increases the risks that the Plan will be found unsound on grounds of inadequate provision for aggregates supply. 	-	<ul style="list-style-type: none"> Addition of an Area of Search is expected to reduce the risk of the Plan being found unsound in not providing for adequate levels of aggregates production. 	+

	Option 1	Option 2	Option 3			
Sustainability Objectives	More Sites	Less Sites	Less Sites but with Area of Search			
16. To support and encourage the use of sustainable transport modes, imposing no unmitigated negative impacts on them.	<ul style="list-style-type: none"> The relative numbers of sites identified/developed is not expected to have an effect on the use of sustainable transport modes. This criterion is not considered relevant to this assessment. 					
17. To sustain the health and quality of life of the population.	<ul style="list-style-type: none"> A higher number of sites is likely to have greater impacts on local communities and the environment. 	—	<ul style="list-style-type: none"> Identifying/developing fewer sites is likely to have less impact on local communities and the environment. 	+	<ul style="list-style-type: none"> Identifying/developing fewer sites is likely to have less impact on local communities and the environment. Additional inclusion of the Area of Search is expected to facilitate additional sites coming through although these will not necessarily be in areas where the impact on local communities and amenity is reduced. 	+ ?
	<ul style="list-style-type: none"> Identifying potentially more sites that might actually be needed is expected to reduce the risk that the Plan will be found unsound on grounds of inadequate provision for aggregates supply. 	+	<ul style="list-style-type: none"> Identifying fewer site increases the risks that the Plan will be found unsound on grounds of inadequate provision for aggregates supply. 	—	<ul style="list-style-type: none"> Addition of an Area of Search is expected to reduce the risk of the Plan being found unsound in not providing for adequate levels of aggregates production. 	+

	Option 1		Option 2		Option 3	
Sustainability Objectives	More Sites		Less Sites		Less Sites but with Area of Search	
18. To enable safe access to countryside and open spaces.	<ul style="list-style-type: none"> The development of aggregate sites, particularly when worked and restored, has the potential to improve access to the countryside. The greater the number of sites developed, potentially the greater the benefits that may be received. Identifying potentially more sites that might actually be needed is expected to reduce the risk that the Plan will be found unsound on grounds of inadequate provision for aggregates supply. 	+	<ul style="list-style-type: none"> Developing fewer sites could result in less benefits being realised. Identifying fewer site increases the risks that the Plan will be found unsound on grounds of inadequate provision for aggregates supply. 	—	<ul style="list-style-type: none"> Developing fewer sites could result in fewer benefits being realised. Additional sites developed through the Area of Search could increase the benefits, but there is no certainty where the sites will be located, whether there will be any benefits or the extent of the benefits. 	?
	<ul style="list-style-type: none"> However, greater numbers of sites can lead to greater impacts on communities and the environment, while sites are being worked and restored. 	—		<ul style="list-style-type: none"> Addition of an Area of Search is expected to reduce the risk of the Plan being found unsound in not providing for adequate levels of aggregates production. 	+	

Policy Appraisal

Background.

- 3.15 There are 9 policies in the Plan, numbered MS-1 through MS-9. Policies MS-1 through MS-7 relate to the provision of mineral sites. Since individual sustainability appraisal assessments have been carried out for all the site nominations, the separate site allocation policies have not been appraised at this stage.
- 3.16 Policy MS-2 is an exception to this in that it does not specifically allocate individual sites, but instead allocates an aggregates area of search where aggregate sites not formally allocated could be permitted provided certain criteria are met. It is assessed below.
- 3.17 Policy MS-8 covers the designation of the Puddletown Road Area, an area incorporating the Puddletown Road and surrounding areas. It is intended to facilitate heathland restoration and coherent and long-term site development, management and restoration, with benefits to the environment and to local amenity.
- 3.18 Policy MS-9 relates to safeguarding of mineral sites and infrastructure, developing the provisions of the safeguarding policies in the Minerals Strategy and requiring District/Borough authorities to consult Dorset County Council as Mineral Planning Authority if mineral sites/infrastructure might be threatened by encroaching built development. It is intended to maintain an adequate and appropriate separation between minerals development and built development, and minimise impacts due to encroachment.
- 3.19 These policies are assessed using the 16 sustainability objectives identified through the Sustainability Appraisal Scoping Report and set out in Tables 3, 4 and 5 of this report. The Policies are worded as follows:

Policy MS-2: Sand and Gravel Area of Search

An Area of Search, as shown in Figure 3 and on the Policies Map, is designated with the intention of facilitating the development of sand and gravel sites and maintaining appropriate levels of supply. Proposals for the development of unallocated sites from within the Area of Search will be permitted if:

- i) there is a demonstrable shortfall in the supply of sand and gravel, or
- ii) the development of an unallocated site offers net environmental benefits that would justify its development, and
- iii) in the case of i. and ii. above,
 - a. they would not delay or otherwise prejudice the development of allocated site(s), and
 - b. they would not add unacceptable cumulative impacts to the development of allocated or permitted sites.

Applications for the development of non-allocated sites within the designated Area of Search must demonstrate that the proposals quantify the extent of all relevant development considerations and that any adverse impacts will be mitigated to the satisfaction of the Mineral Planning Authority.

Sites will only be considered where it has been demonstrated that possible effects (including those related to hydrology, displacement of recreation, species, proximity, land management and restoration) that might arise from their development would not adversely affect the integrity of the Dorset Heaths SAC, Dorset Heathlands SPA and Dorset Heathland Ramsar site either alone or in combination with other plans or projects.

Policy MS-8: Puddletown Road Area Policy

Within the Puddletown Road Area as shown on the Policies Map and in Figure 11 the Mineral Planning Authority will work with operators, landowners, Natural England and the Local Nature Partnership to secure a consistent and coordinated approach to the development, working and restoration of land permitted for mineral development.

This consistent and coordinated approach will support the management objectives of the Heath/Forest Mosaic Landscape Type and will also:

- iv) avoid or minimise adverse transport, environmental or amenity impacts arising from mineral workings;
- v) maximise opportunities for biodiversity gains, including through effective and timely restoration of lowland heath and associated habitats, thereby helping to deliver (i) and linking restored sites with areas of nature conservation interest;
- vi) secure cost-effective and long-term aftercare and management;
- vii) meet environmental and compatible recreational objectives in the area.

Management activities will only be undertaken where it can be demonstrated that any possible effects that might result will not adversely affect the integrity of the Dorset Heaths SAC, Dorset Heathlands SPA and Dorset Heathland Ramsar sites either alone or in combination with other plans or projects.

Policy MS-9: Safeguarding Minerals Sites and Infrastructure

Local planning authorities will be expected to consult the Mineral Planning Authority on proposals for non-minerals development that could prejudice the implementation or continued use of minerals sites or infrastructure safeguarded by Policy SG3 of the Minerals Strategy.

Result of Assessment

3.20 The appraisal is set out in Table 9 below. It indicates that all three of these policies perform well against the sustainability objectives and it is expected that these policies will be fit for purpose. No changes are currently considered necessary.

Table 9 - Sustainability appraisal of Policies MS-2, MS-8 and MS-9.

Sustainability Objectives	Policy MS-2: Sand and Gravel Area of Search	Policy MS-8: Puddletown Road Area Policy	Policy MS-9: Safeguarding Minerals Sites and Infrastructure
1. To move waste management up the waste hierarchy and promote net self sufficiency	Not relevant to this policy.	Not relevant to this policy.	Not relevant to this policy.
2. To maintain, conserve and enhance biodiversity	Positive – the Area of Search has been selected to minimise impacts on biodiversity.	Positive – the policy is specifically intended to benefit biodiversity, through effective site management and restoration.	Neutral – this policy not specifically relevant to this Objective.
3. To maintain, conserve and enhance geodiversity.	Neutral – sand and gravel quarries not particularly beneficial to geodiversity..	Neutral/Positive – although this policy is not specifically intended to affect geodiversity, there could be benefits through improved management of the wider area.	Neutral – this policy not specifically relevant to this Objective.
4. To maintain, conserve and enhance the quality of ground, surface and sea waters and manage the consumption of water in a sustainable way.	Neutral – development of additional sites, as facilitated by this policy, is expected to be carried out in such a way that impacts on the water environment will be fully mitigated.	Positive – through improved water management from longer-term site development, management and restoration.	Neutral – this policy not specifically relevant to this Objective.
5. To reduce flood risk and improve flood management.	Neutral – flood risk and flood management . No specific benefits are expected from the development of additional sand and gravel sites.	Positive – through improved management and restoration, which could affect the flow of water off the Puddletown Road ridge and into the Piddle and the Frome.	Neutral – this policy not specifically relevant to this Objective.

Sustainability Objectives	Policy MS-2: Sand and Gravel Area of Search	Policy MS-8: Puddletown Road Area Policy	Policy MS-9: Safeguarding Minerals Sites and Infrastructure
6. To maintain, conserve and enhance the historic environment (including archaeological sites, historic buildings, conservation areas, historic parks and gardens and other locally distinctive features and their settings).	Neutral – Minerals development facilitated by this policy would go through the normal assessments to ensure no unacceptable impacts on the historic environment.	Positive – policy is not intended to directly affect the historic environment, but there are likely to be benefits to the historic environment (e.g. historic landscapes) from its application.	Neutral – this policy not specifically relevant to this Objective.
7. To maintain, conserve and enhance the landscape, including townscape, seascape and the coast.	Positive – the Area of Search has been selected to minimise impacts on landscape/visual impacts.	Positive – through improved management and restoration, which is expected to have a benefit on the landscape.	Neutral – this policy not specifically relevant to this Objective.
8. To protect and improve air quality and reduce the impacts of noise.	Neutral – Minerals development facilitated by this policy would go through the normal assessments to ensure no unacceptable impacts on air quality or local amenity.	Neutral – policy is not intended to directly affect air quality/noise, but there could be benefits through improved management.	Positive – this policy offers increased control over the separation between built development and mineral sites and therefore can minimise air quality and noise impacts.
9. To maintain, conserve and enhance soil quality.	Neutral – Minerals development facilitated by this policy would go through the normal assessments to ensure no unacceptable impacts on soil quality.	Neutral – policy is not intended to directly affect soil quality, but there could be benefits.	Neutral – this policy not specifically relevant to this Objective.

Sustainability Objectives	Policy MS-2: Sand and Gravel Area of Search	Policy MS-8: Puddletown Road Area Policy	Policy MS-9: Safeguarding Minerals Sites and Infrastructure
10. To conserve and safeguard mineral resources.	Negative – this policy facilitates further development of the sand and gravel resource.	Neutral/Positive – considering the wider Puddletown Road area holistically is expected to lead to improved management and conservation of existing resources.	Positive – this policy will improve the safeguarding of mineral sites and infrastructure, contributing to the conservation and safeguarding of the mineral resource.
11. To promote the use of alternative materials.	Negative – this policy facilitates further development of the sand and gravel resource.	Neutral/Negative - It is unlikely that this policy will promote the use of alternative materials.	Neutral – this policy not specifically relevant to this Objective.
12. To provide an adequate supply of minerals to meet society's needs.	Positive – this policy will facilitate the provision of aggregates and help to ensure an adequate supply.	Positive – this policy is intended to improve the planning and management of the Puddletown Road area, which will include future mineral provision.	Positive – this policy will safeguard mineral sites and infrastructure, which is a key factor in ensuring future supply of minerals.
13. To encourage sustainable economic growth	Positive – this policy is intended to facilitate the development of aggregates quarries, with associated economic benefits, in locations of least biodiversity/landscape impact and where additional benefits environmental benefits will be realised.	Positive – the policy seeks to secure a consistent and coordinated approach to site working and development, intended to improve site development and benefit the economy.	Positive – this policy is intended to minimise threats to on-going mineral production that could result from encroachment by built development. This should encourage both mineral development and built development to grow in a mutually sustainable manner.
14. To adapt to and mitigate the impacts of climate change.	Neutral/Negative – this policy facilitates new sand and gravel sites and these will produce additional greenhouse gases – although the amount that could be produced will be relatively small. Policy CC1 requires that developers include a report on how climate change impacts have been considered and mitigated against.	Positive – working and restoration both have an influence on climate change. This is particularly true for restoration, where the environment created/re-created after working can provide for adaptation or mitigation of impacts of climate change e.g. through opportunities for water storage and management, flood water storage, the creation of new areas of vegetation and habitats to absorb carbon and the provision of green spaces.	Neutral – this policy not specifically relevant to this Objective.

Sustainability Objectives	Policy MS-2: Sand and Gravel Area of Search	Policy MS-8: Puddletown Road Area Policy	Policy MS-9: Safeguarding Minerals Sites and Infrastructure
15. To minimise the negative impacts of waste and minerals development on the transport network, mitigating any residual impacts.	Negative – this policy facilitates new sand and gravel sites and these will have impacts on the transport network.	Neutral – policy is not intended to directly affect transport issues and mitigate impacts, but there could be benefits depending on how the site is developed and managed.	Neutral – this policy not specifically relevant to this Objective.
16. To support and encourage the use of sustainable transport modes, imposing no unmitigated negative impacts on them.	Neutral – this policy not specifically relevant to this Objective.	Neutral - it is unlikely that this policy will affect transport arrangements associated with site development.	Neutral – this policy not specifically relevant to this Objective.
17. To sustain the health and quality of life of the population.	Positive – although not specifically focussed on this Objective, locating new quarries in areas of less visual impacts will contribute to quality of life.	Positive – this policy is intended to improve the development, management and restoration of sites, all of which could benefit health and quality of life, particularly through approaches to restoration and the provision/improvement of access/recreational facilities during/after working.	Positive – this policy is intended to ensure that an appropriate separation remains between built development and minerals development – to the benefit of people living and working in areas where there is minerals development.
18. To enable safe access to countryside and open spaces.	Positive – site development and restoration can have the effect of improving access to the countryside. The more sites developed, potentially the greater the benefits resulting	Positive – this policy is intended to improve recreational opportunities, through appropriate site development, management and restoration. Taking a coordinated approach to site development/management/restoration could offer improved opportunities for access during working and restoration.	Positive – this policy is intended to maintain appropriate open space around minerals sites – this open space can be used to maintain/provide public access to countryside, especially if the minerals development is close to the edge of urban areas.

Sustainability Objectives	Policy MS-2: Sand and Gravel Area of Search	Policy MS-8: Puddletown Road Area Policy	Policy MS-9: Safeguarding Minerals Sites and Infrastructure
<p>Conclusion:</p>	<p>This policy is intended to facilitate the development of aggregates quarries in areas of less landscape/visual/biodiversity impact, supplementing the provision of aggregates from sites formally designated in the Plan.</p> <p>It performs well against the sustainability objectives, concluding that impacts will be predominantly positive or neutral (assuming that impacts of new sites are satisfactorily mitigated at planning application stage).</p> <p>No changes are considered necessary.</p>	<p>This policy is expected to provide a range of benefits during site development and restoration.</p> <p>No changes are considered necessary.</p>	<p>This policy is expected to strengthen existing safeguarding provision and to provide a range of benefits through maintaining an appropriate separation between minerals development and built development.</p> <p>No changes are considered necessary.</p>

Sites Appraisal

Background

3.21 Paragraphs 2.5 to 2.8 have described the application of the criteria set out in Appendix 1 of the Minerals Strategy in assessing the site nominations. The sustainability appraisal takes the assessment further, using the data and outcomes of the criteria-based assessment and applying the sustainability objectives in a further assessment of each site nomination. This provides a two stage exercise, where...

Stage 1 is a preliminary technical exercise, assessing all the site proposals through applying the site selection criteria set out in the Minerals Strategy, followed by...

Stage 2 which is an assessment of each site against the sustainability objectives and based on the results of the Stage 1 assessment as described above, with commentary on identified impacts or benefits over specified timescales and a recommendation regarding inclusion or exclusion of the site.

3.22 The results of the Stage 1 assessments are available online at:

http://consult.dorsetforyou.com/portal/draft_minerals_plan?tab=files

3.23 The results of the Stage 2 assessments are presented separately in Appendix A (for sites being taken forward) and Appendix B (for sites not being taken forward) and summarised in Tables 1 and 2 of this Report.

Secondary, cumulative and synergistic effects

3.24 The SEA Directive requires the assessment of effects including secondary, cumulative and synergistic effects. These are defined as follows:

- i. Secondary or indirect effects are those that are not as a direct result of the Minerals Core Strategy, but occur at a distance from the original effect or as a result of a complex pathway.
- ii. Cumulative effects are those effects which, though they may be small in relation to one policy, may combine across the plan (or in association with other plans) to produce an overall effect which is more significant.
- iii. Synergistic effects are those where the combined effect of a number of policies is greater than the sum of individual effects.

3.25 Minerals can only be worked where they are found, which limits options for development of new sites and can make it more likely that mineral sites will be identified in clusters/discrete areas. This approach is more likely to result in cumulative impacts.

3.26 For mineral sites, key cumulative impacts are usually transport or visual related, or impacts on local amenity. Given the need to work minerals where they are found, site-specific mitigation may be applied at the planning application stage, to be relied on to address many of the specific impacts.

3.27 Cumulative impacts have been considered as follows:

- i. Site Selection Criteria 21 of Appendix A of the Minerals Strategy assesses whether the proposal/site nomination has any effects on cumulative impacts. Every site nomination has been assessed against this criterion, taking into consideration both mineral and non-minerals development and the outcomes are reported in the site assessments (the **Stage 1** assessments referred to above) for all the sites⁶.
- ii. The information from the site assessments has been taken forward into the sustainability appraisal site assessments (the **Stage 2** assessments) that have been carried out and cumulative impacts are considered in more detail for each site nomination (see Appendix A of this Report). None of the sites identified as being suitable to be taken forward are considered to contribute to cumulative impacts that cannot be mitigated. If there are any issues/impacts it is considered that these can satisfactorily be dealt with at the planning application stage.

⁶ See: http://consult.dorsetforyou.com/portal/draft_minerals_plan?tab=files

iii. In addition to the separate site assessments, cumulative impacts have been considered for clusters of sites – particularly regarding traffic/transport impacts. Further assessment of cumulative traffic impacts has been carried out for the sand and gravel site nominations and is set out below. No unacceptable cumulative issues were identified. Of the other mineral types, only Purbeck Stone sites are proposed in a cluster and these are not expected to produce unacceptable transport-related cumulative impacts.

3.28 Traffic/transport impacts are often the key impact associated with mineral sites, and cumulative impacts relating to transport are of particular importance. Of the range of mineral types/site nominations, some - ball clay, Portland Stone, other building stone and recycled aggregate production – comprise limited numbers of small-scale sites, some of which are extensions of existing sites, and it is not considered that these will generate cumulative impacts.

3.29 There are a number of proposals for Purbeck Stone quarries, typically small in scale and the extraction rates are low and sporadic for most and, while there may be specific issues with individual sites, it is not considered that there will be a measurable cumulative impact on the road network. There has not therefore been a cumulative assessment of these sites.

3.30 Sand and gravel sites are larger and are worked in an intensive fashion and have greater potential to generate cumulative traffic impacts. An assessment of the cumulative impacts related to transport, primarily for sand and gravel sites, has been carried out and is presented below. Groups of proposed sites that had significant levels of trip generation were produced and are shown in Table 10 below.

Table 10 - Groups of identified sand and gravel sites for cumulative impact assessment

Group	Sites	Site Code	Predicted traffic (two-way HGVs per day)
A	Roeshot and Extraction sites in Hampshire	AS13	100 combined
B	Tatchells Extension	AS15	40
	Trigon Hill Extension	AS22/BC04	20/55
C	Binnegar	AS01	80
	Great Plantation	AS06	120
D	Hurst Farm	AS26	80
	Station Road	AS25	80
	Woodsford (NE Extension)	AS19	100

3.31 The location of each site within a group has been plotted on a map indicating their relative location in relation to the highway network. Likely HGV trip generation and distribution has then been identified on key points on the network. Vehicle impact has been described in terms of two-way trips per day. Typical minerals sites will generate a steady flow of vehicles throughout the day and will thus have a lower impact on congestion in the a.m. and p.m. peaks than other types of development.

3.32 Traffic was distributed using assumptions relating to the likely routes of vehicles to the strategic road network and on a consideration of the location of the site in relation to large urban areas such as the

Poole and Bournemouth conurbation. The strategic network will be used to transport material to wider markets outside of the immediate areas and large urban areas, especially where they are expanding or developing, will generate a demand for much of the mineral extracted.

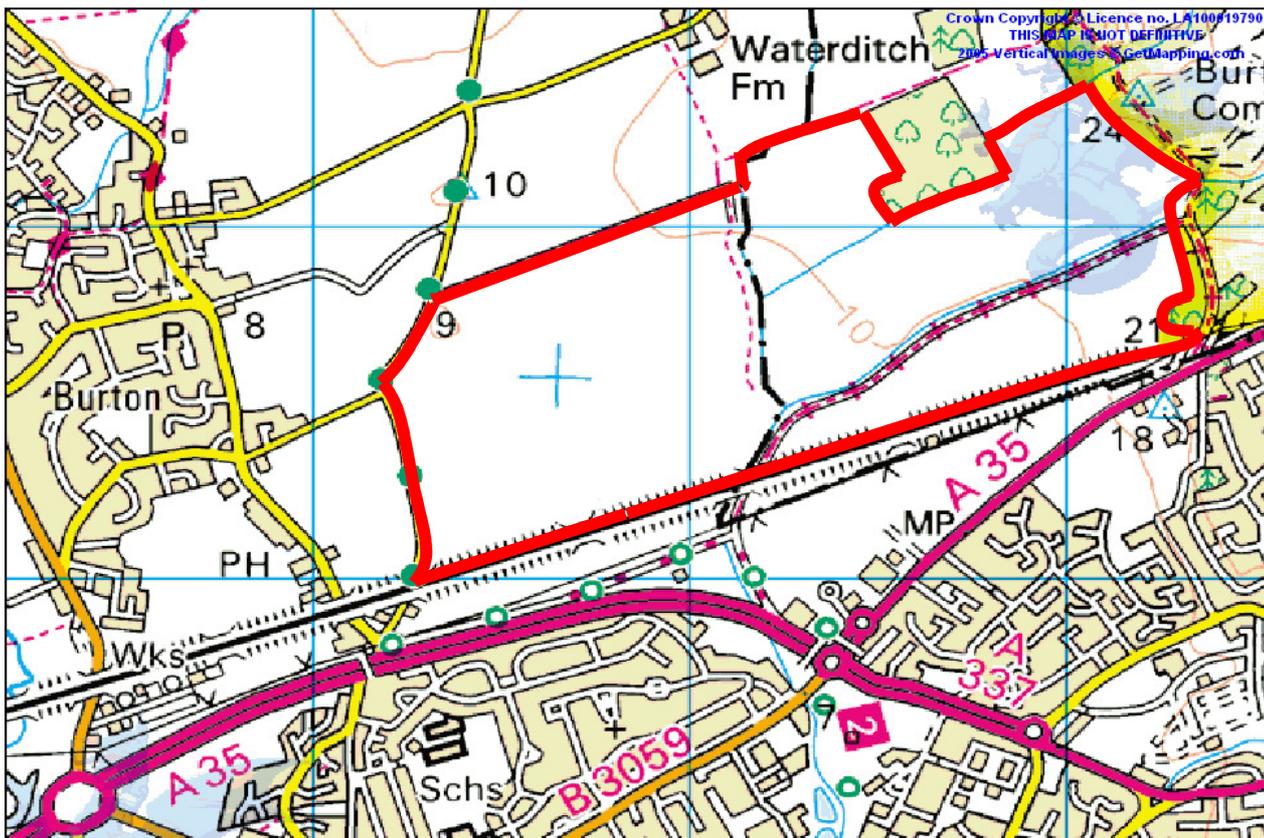
- 3.33 It should be remembered that there are several factors relating to the commencement and operation of mineral extraction sites which make assessing the cumulative impact accurately very difficult. Market demand is a key issue and has a great impact on traffic generation. It is impacted upon by the general economy and the amount of building taking place and by competition from other sources including overseas. It is often demand that will limit what is produced by a site as opposed to limits imposed on operations as a result of planning permissions.
- 3.34 The time at which a site comes into operation is also unpredictable. This assessment has used the most recent information available in relation to the relative delivery times of sites and the timing of extraction on extensions to existing sites.

Cumulative Group A

- 3.35 This is mainly the single site, Roeshot, which straddles the Dorset and Hampshire border although there is other extraction taking place locally in Hampshire at New Milton. As there is no proposed intensification of extraction at the New Milton site, this section deals only with the impact of traffic generated by the Roeshot site.

Figure 1 - Group A location plan

N.B. Only the western part, west of the Mude River, of this site is in Dorset – the eastern part is already allocated in the Hampshire Minerals and Waste Plan, and a planning application is expected for the Hampshire side of this site shortly.



- 3.36 While this site is on the very edge of Dorset, the principal market for sand and gravel from them is likely to be in South East Dorset. The Strategic Traffic and Transport Assessment of the Hampshire Minerals and Waste Plan confirms this and shows 80% of the HGV movements travelling west on the A35 into the Poole, Bournemouth and Christchurch conurbation and the rest of Dorset.
- 3.37 The A35 is one of the busiest roads in Dorset with over 27,200 vehicles a day (12hr) using the section between Somerford Roundabout and Stony Lane Roundabout of which 750 (3%) are HGVs. The expectation is that the site could generate 100 two-way HGV movements per day meaning that an additional 80 HGVs could be expected on the A35 corridor. This constitutes an 11% increase in

HGV traffic.

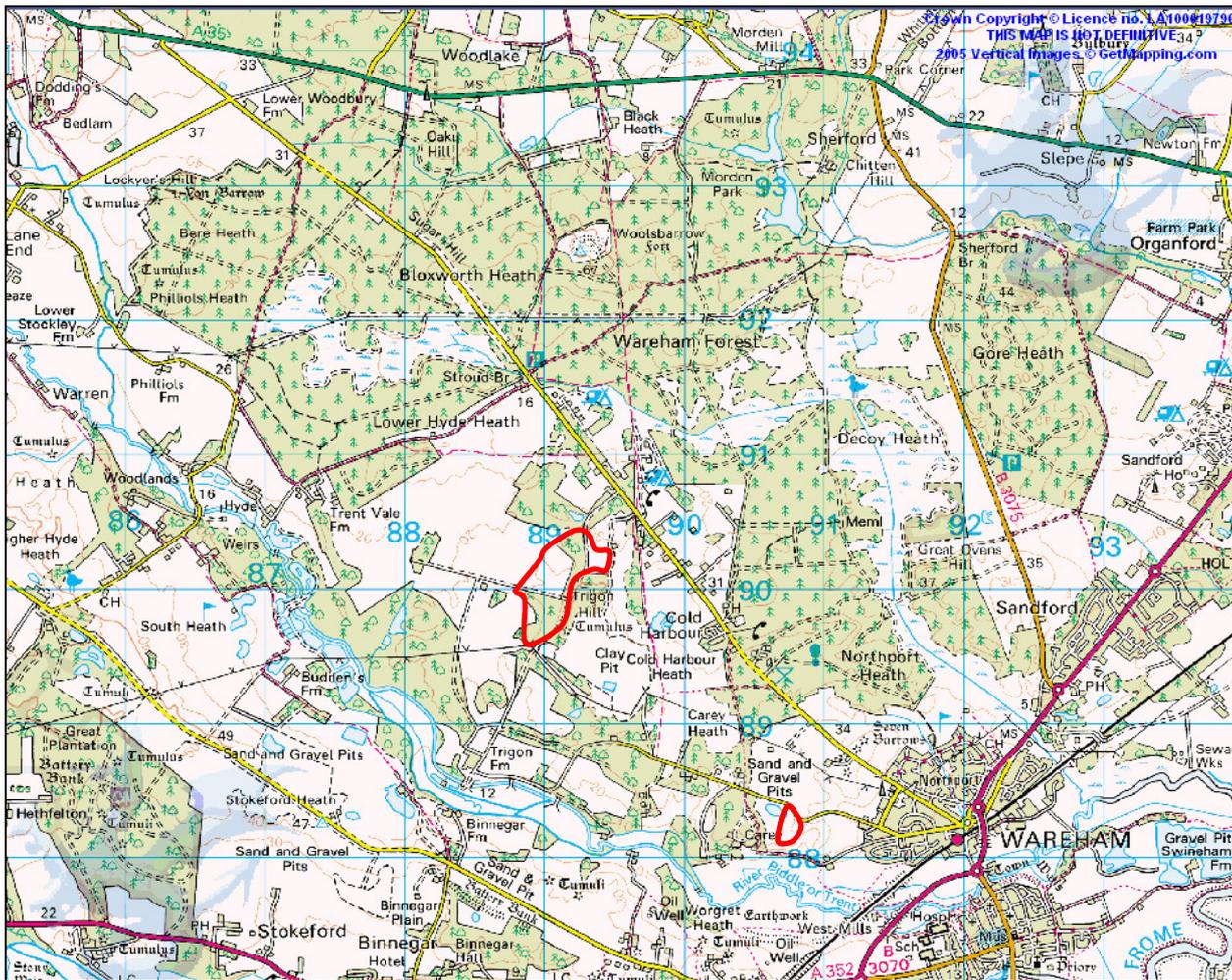
3.38 This route already operates at capacity in peak periods. It would therefore be necessary to ensure that vehicles do not enter and exit the site at peak hours as far as possible. Given that this mineral extraction will generate a substantial increase in HGV movements on the westbound A35 through Christchurch, Dorset County Council will seek contributions from quarry operators for the implementation of measures to mitigate the effects of HGVs on the Dorset network.

3.39 There are other potential schemes being developed in the area at both Stony Lane Roundabout and Fountains Roundabout. Any Transport Assessment will need to include an updated position on these locations which can be obtained along with full scoping agreement from the Transport Development Management Team.

Cumulative Group B

3.40 This group comprises extensions of existing sites at Tatchells Quarry and Trigon Quarry. These sites will impact upon the C7 Sugar Hill and the A35 or A351.

Figure 2 - Group B location plan



3.41 Trips from Tatchells Quarry are considered to be new to the network as there has been no extraction from this site for some time. While there is no current sand and gravel extraction at Trigon Quarry it has been operating at levels significantly exceeding what is proposed as recently as 2013. Trips from the proposed extension of sand and gravel extraction at this site will not therefore be considered as new to the network. There is also a proposal to extract ball clay from the Trigon site and trips from this have been taken into account.

3.42 The likely vehicle distribution has been determined for each site. Trips from Tatchells, at the southern end of Sugar Hill have been distributed evenly between northbound and southbound. The Ball Clay coming out of Trigon goes to Furzebrook for processing and the trips have therefore been distributed to and from the south.

Table 11 - Group B estimated traffic generation and distribution

Site	HGV trips (two-way)	North (two-way)	South (two-way)
Tatchells	40 – sand and gravel	20 (50%)	20 (50%)
Trigon	c. 60 – Aggregates and Ball Clay	5 (8%)	55 (92%)
	Total	25	75

Accident data

- 3.43 Trips from sites within group C will principally impact upon the C7 and on its junctions with the A35 to the north and the A351 to the south. Accident data from the most recent 3 years has been looked at for these locations.
- 3.44 There were only three, slight injury, accidents recorded for the whole corridor over this period and there was no noticeable pattern of cause or location. It is therefore unlikely that trips to and from the proposed minerals sites will exacerbate any existing accident problems.

Sensitive receptors

- 3.45 There are several camping and caravan sites along the C7 all of which have suitable entrances. Towards the south of the C7 there are a significant number of dwelling houses but these are within the 30 mph zone and, as described above, there are no existing accident problems.

Traffic Impact

- 3.46 The junction between the C7 and A35 at the northern end of Sugar Hill has no existing accident or capacity problem. The proposed minerals extraction sites along Sugar Hill could reasonably add 25 two-way trips (12/13 in each direction) through this junction over the course of a typical day. This is in the order of two trips per hour and would not be considered to cause any unacceptable problem at the junction.
- 3.47 The proposed sites could create an additional 75 trips per day at the southern end of the C7. Over the course of a typical day this would be in the region of an additional 8-10 trips per hour (4-5 in each direction). There are no existing traffic counts for this section of road but it is not thought that the increase will cause any capacity or safety problems.
- 3.48 A proportion of traffic travelling south on the C7 will continue to travel north on the A351 towards the Bakers Arms roundabout. Trips from Trigon to Furzebrook would turn south down the A351 but the processed product would in turn be transport further afield on the northern section of the A351.
- 3.49 This route carries around 16,700 vehicles including 650 HGVs (June 2008). An increase of around 80 two-way HGV trips would constitute a 12% increase. There are high levels of peak hour congestion and the impact of these vehicles should be examined in any Transport Assessment submitted.

Cumulative Group C

- 3.50 This group includes a proposed extension to Binnegar Quarry and a new site at Great Plantation. Both sites access onto the C80 Puddletown Road which runs from the C6 in the west to the A352, Worgret Hill in the east.
- 3.51 Trips associated with the extension to Binnegar are not expected to be new to the network as this site will follow work at other, exhausted, parts of the site. While the Great Plantation site is described as an extension, the Hyde Pit has been inactive for some time and any traffic will be considered as new to the network.
- 3.52 It has been assumed that traffic from the Great Plantation site will split approximately 70% north and 30% south although in reality this would vary over time depending on the market being served. The majority of this traffic travelling north would be likely to continue north on the C6 with a small proportion possibly turning south towards the A351 or travelling further west on the C80 towards Crossways.

Figure 3 - Group C location plan

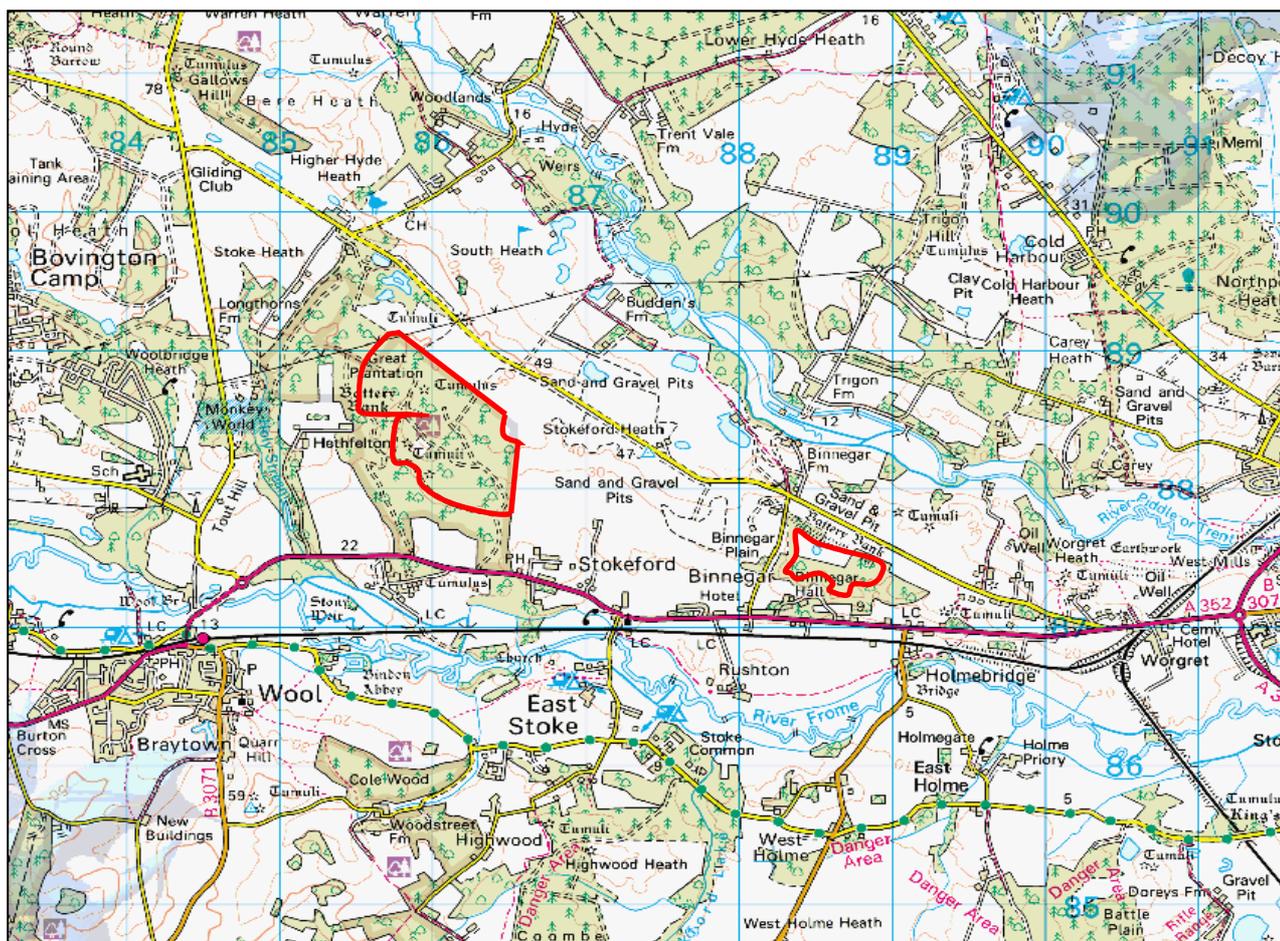


Table 12 - Group C estimated traffic generation and distribution

Site	HGV trips (two-way)	West (two-way)	East (two-way)
Binnegar	No new trips – extension to existing operation	0	0
Great Plantation	c. 120 (?)	84	36

Accident data

- 3.53 There has been one serious injury accident along Puddletown Road in the most recent three year period and one, fatal, accident at the junction with Puddletown Road and the A351 Worgret Road. The serious injury accident involved a car avoiding a deer in the road. The initial collision in the fatal accident was between two cars although there was a secondary impact with a stationary HGV.
- 3.54 There is no cluster or pattern of accidents which would be made materially worse by the proposed minerals extraction or which would require mitigation.

Sensitive receptors

- 3.55 The main sensitive receptor for traffic to and from minerals extraction sites on Puddletown Road is the existing first school on the east side of the C6 Rye Hill in Bere Regis. It should be noted that there is a possibility that the existing first school will be moved to a new site and enlarged to form a primary school (Purbeck Local Plan – Part 1 November 2012). This would potentially remove the school from the route taken by HGV’s to the A31/A35.
- 3.56 The school is within the 30mph zone. There are advanced warning signs, including flashing lights,

and 'slow' markings on the road as well as a zebra crossing serving the school.

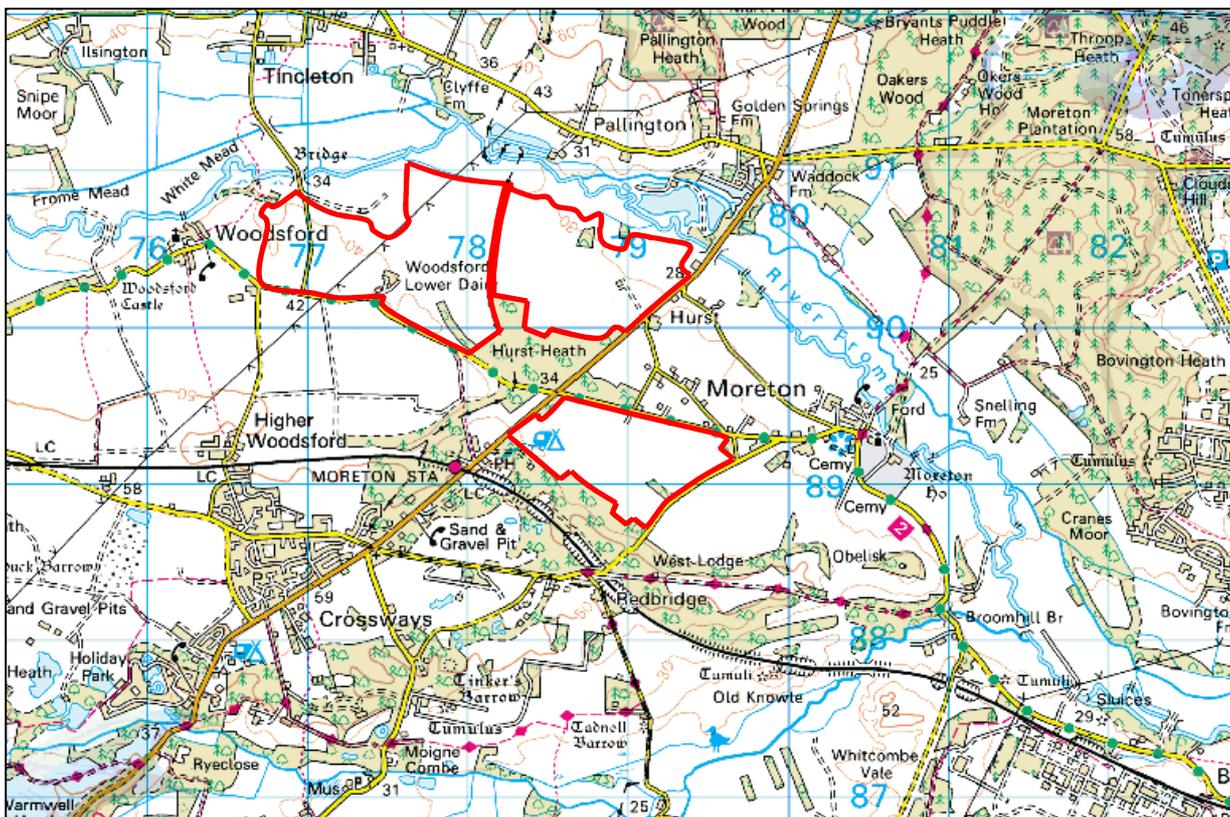
Traffic Impact

- 3.57 The existing road network should be able to accommodate the additional traffic along the C80 Puddletown Road and at its junction with the C6. Despite the recent fatal accident, the junction between the C80 and the A351 shows no clear capacity problems or accident patterns. Any significant applications that come forward will be required to undertake an updated accident analysis to see if there has been any change in this regard.
- 3.58 A traffic survey undertaken in 2013 recorded 7130 vehicles on the C6 Rye Hill which included 696 (13%) heavy vehicles. Due to the type of count this figure includes long wheelbase vans as well as HGVs. The proposals on Puddletown Road could generate an additional 80 HGV two-way trips on Rye Hill per day which equates to a 12% increase in large vehicles and a 1% increase in overall traffic. This traffic is spread out over the course of a typical day it is unlikely that it would cause an unacceptable impact on Rye Hill.

Cumulative Group D

- 3.59 This group includes two proposed sites in Moreton, on either side of the B3390, along with a proposed extension to the existing Woodsford Quarry. The location of the sites can be seen on the map below.

Figure 4 - Group D location plan



- 3.60 The Woodsford site is an extension to existing extraction to the south of the identified area and should not result in an increase in overall traffic. The mineral will be conveyed to the existing processing plant and distributed via the D21322. It is expected that some of the mineral will go towards the B3309 and some towards the A35 at Dorchester.
- 3.61 The Moreton Plantation site is not expected to be developed and this, in conjunction with the completion of Warmwell, will see a decline in traffic levels along the B3390 north of Crossways.
- 3.62 It is possible that the extraction at Hurst Farm will at some point run simultaneously with Woodsford, although working will be phased to minimise impacts on businesses/residences on the other side of the Frome. As noted above, some of the mineral will be distributed via the B3390.
- 3.63 The impact of this range of sites has been assessed at two locations, the B3390 including the Hurst

Bridges and the C6, Rye Hill, through Bere Regis. A summary of the impact at these two locations is provided in the two tables below.

Table 13 - Group D estimated traffic impact on B3390 between Waddock Cross and Crossways.

B3390	
Assumptions;	
<ul style="list-style-type: none"> • Extraction from Woodsford does not intensify as a result of the extension. • Warmwell Quarry will cease before any of these sites come on stream • Moreton Plantation will not be developed • Hurst Farm may operate in tandem with Woodsford. 	
Warmwell Quarry ends production.	- 80 two-way trips
Hurst Farm	+ c. 60 trips
Woodsford	Neutral
Station Road	+ c. 60 two-way trips
Total	+40 two-way trips per day

Table 14 - Group D estimated traffic impact on C6, Rye Hill, Bere Regis

C6 – Rye Hill	
Assumptions:	
<ul style="list-style-type: none"> • Extraction from Woodsford does not intensify as a result of the extension. • Warmwell Quarry will cease before any of these sites come on stream • Moreton Plantation will not be developed • Hurst Farm may operate in tandem with Woodsford. 	
Warmwell ceases	- c. 80 two-way trips
Hurst Farm	+ c. 50 two-way trips
Woodsford	Neutral as will follow existing operations on this site
Station Road	+ c. 50 two-way trips
Total	+ c. 20 two-way trips per day

Sensitive receptors.

- 3.64 There are two potentially sensitive sites on the highway network that need to be considered. These are the Hurst Bridges and the junction between the C80 and B3390 at Waddock Cross.
- 3.65 Hurst Bridges are two narrow bridges on the B3390 just to the north of the Hurst Farm site. There has previously been an accident problem at this location and some concern has been raised over the impact of proposed minerals sites. The bridges are within a de-restricted (60mph) speed limit and there are vertical and horizontal alignment issues on the approaches.
- 3.66 The Waddock Cross junction is at the top of a small rise and there was some concern with visibility problems due to the vertical alignment of the carriageway.
- 3.67 There is also the existing first school on the east side of the C6 Rye Hill in Bere Regis. It should be noted that there is a possibility that the existing first school will be moved to a new site and enlarged to form a primary school (Purbeck Local Plan – Part 1 November 2012). This would potentially remove the school from the route taken by HGV's to the A31/A35.
- 3.68 The school is within the 30mph zone. There are advanced warning signs, including flashing lights,

and 'slow' markings on the road as well as a zebra crossing serving the school.

Accident data.

- 3.69 There has been a single recorded, slight injury, accident between Waddock Cross and Crossways village in the last 3 years. This was on the edge of Crossways and involved a cyclist and a turning car. There are no recorded accidents at the Hurst Bridges in the last three years. If the timescale is extended to five years then three, minor injury, accidents occurred. These were principally rear-end-shunts with drivers failing to notice that somebody had stopped at the narrow bridges.
- 3.70 There have been two slight injury and one serious injury accident at Waddock Cross in the last three years. Two of these involved vehicles overshooting the give way line or failing to give way. The third was attributed to a failure to look properly but could be a reflection of the visibility available at the junction.

Traffic Impact.

- 3.71 While the sites in this group are all large and capable of generating significant numbers of HGV trips, their planned timing and management means that the overall impact on the road network will be relatively small. Provided that the timing and management is as stated, then the overall impact is unlikely to be any more than 50 to 80 two-way HGV trips at any point on the network.
- 3.72 The signage and lining at Hurst Bridges has been improved in the last five years and the accident statistics show that there have been no reported injury accidents here in the last three years. Advice from Traffic Management suggests that there is ample advanced warning to motorists of the narrow bridges and that there is no further suitable action that can be taken at this location. The cumulative impact of the proposed mineral sites, if managed correctly, could be expected to result in an additional 30 to 50 HGV movements per day along this section of the B3390. Given the accident record and level of traffic management at Hurst Bridges this would not be unacceptable.
- 3.73 Visibility at the Waddock Cross junction has been accurately measured from the point of view of an HGV driver, whose eye level is considerably higher than a driver in a car or van. The results showed that there was ample visibility for vehicles turning into or out of the C80. Accidents at this location were mainly as a result of cars ignoring or not noticing the give way with only one citing visibility as an issue. No accidents involving HGV's or other large vehicles were recorded. The proposed increase in traffic here is therefore not thought to present a problem in highway safety or capacity.
- 3.74 A traffic survey undertaken in 2013 recorded 7130 vehicles on the C6 Rye Hill which included 696 (13%) heavy vehicles. Due to the type of count this figure includes long wheelbase vans as well as HGVs. The proposals in and around Crossways and Moreton could generate an additional 50 HGV two-way trips on Rye Hill per day which equates to a 7% increase in large vehicles and a 1% increase in overall traffic. This traffic is spread out over the course of a typical day it is unlikely that it would cause an unacceptable impact on Rye Hill.
- 3.75 The above traffic impact review assumes that the delivery, timeline and management of these sites will be as described by the Planning Policy Team. Should this situation change in any way then the cumulative impacts of these sites should be revisited.

Cumulative Group C and D combined

- 3.76 Groups C and D both have the potential to impact upon the C6 Rye Hill, through Bere Regis. The total combined impact of the two groups could be in the region of up to an extra 130 two-way (65 each way) HGV trips per day on this route. This averages up to 7/8 trips each way per hour.
- 3.77 There is an appropriate 30mph speed limit along this route and there is suitable advanced warning of the existing first school to the east of Rye Hill and a zebra crossing serving the school. The accident analysis showed no accidents involving HGV's over the last five years and no pattern to any accidents in this period.
- 3.78 While this increase of Heavy Goods Vehicles may impact upon amenity, there is no reason to suggest that it could not be safely accommodated on the existing highway network or that it would impact on the capacity of the network. Of these vehicles, a proportion will be likely to emerge onto the A35/A31 roundabout. The Highways Agency is responsible for these roads and will be consulted on the potential impact.

Appendix A: Individual Site Assessments – Sites Being Taken Forward

Aggregates: AS01 Binnegar

Site Name/Location: AS01 Binnegar Mineral Type: Sand	Nominee/Agent: Raymond Brown Local Authority: Purbeck District Council	Site Area: approximately 15 ha Production/reserve: 250,000 tpa; approximately 5 mt
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Impact Assessment Scoring

--	Strong Negative Impact	-	Minor Negative Impact	+	Minor Positive Impact	++	Strong Positive Impact	0	Negligible or No Effect	?	Uncertain
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Timescales for effects:

P/W: Preparation and Working

R/A: Restoration and Afteruse

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
1. To move waste management up the waste hierarchy and promote net self-sufficiency	N/A	N/A	<ul style="list-style-type: none"> This Objective is not relevant to this site nomination 	<ul style="list-style-type: none"> N/A
2. To maintain, conserve and enhance biodiversity	0	0	European/International Designations <ul style="list-style-type: none"> Dorset Heathlands SPA/SAC 300m to SE and 350m to NW. No impacts on European designations expected during working. Restoration to heathland and/or public open space to mitigate human pressures elsewhere would both offer benefits post-extraction. 	<ul style="list-style-type: none"> Ecological surveys and hydrological reports. Heathland restoration or public open space or both.
	0	+		
	0	0	Impact on National Designations <ul style="list-style-type: none"> No impacts expected . 	<ul style="list-style-type: none"> No action required.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	0	0	<p>Other protected species</p> <ul style="list-style-type: none"> The site, and the wider area, is known to support a large population of the plant species Pennyroyal, fully protected under Schedule 8 of the Wildlife & Countryside Act. In reality the presence of the plant is unlikely to prevent mineral working, but its population will need to be carefully managed to preserve and enhance it in the area. At the moment there are no known populations of other protected species, but the site could support bat roosts in trees, and reptiles in more open areas, most likely all capable of satisfactory mitigation. Restoration, or translocation to new areas, could offer enhanced habitats 	<ul style="list-style-type: none"> Ecological surveys and hydrological reports. Careful assessment of possible risks to the Pennyroyal population and any other relevant species. Appropriate strategy for translocation, including preparation of alternate locations for the plant.
	0	0	<p>Impact on local recognitions/designations, including ancient woodland and veteran trees.</p> <ul style="list-style-type: none"> No impacts expected 	<ul style="list-style-type: none"> No action required.
3. To maintain, conserve and enhance geodiversity.	+	0	<ul style="list-style-type: none"> Exposures resulting from working may be of interest. Benefits are only expected during working, and are likely to be obscured or covered as part of restoration. 	<ul style="list-style-type: none"> Operator to be asked to permit visits to view exposures as required.
4. To maintain, conserve and enhance the quality of ground, surface and sea waters and manage the consumption of water in a sustainable way.	0	0	<p>Groundwater</p> <ul style="list-style-type: none"> The site does not affect Source Protection Zones and sits on a Secondary Aquifer. It is not known at this stage whether there are any licensed/unlicensed supplies in the vicinity. Further information will be required but these are not considered to be such serious issues as to preclude further consideration of this site. 	<ul style="list-style-type: none"> Further assessment on possible impacts on water supplies and appropriate mitigation if potential impacts identified. Where necessary mitigating measures should be installed to maintain groundwater levels and/or monitor private water supplies. Alternative arrangements should be in place in case of a reduction in supply. Appropriate arrangements should be put in place to ensure that the water leaving the site and entering the rivers/watercourses is of an acceptable quality. Any fuel on site should be properly stored to avoid contamination in case of spillage.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	-	0	<p>Surface Water</p> <ul style="list-style-type: none"> There are two ponds in the north-west of the site. It is feasible that these ponds and associated species can be successfully relocated, subject to relevant assessments being carried out. There will be an impact on these habitats, but it is expected that in the longer term impacts will be benefits. 	<ul style="list-style-type: none"> Appropriate arrangements should be installed for surface water and silt collection and fuel storage to prevent contamination of groundwater resources. Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse. Ponds to be assessed and, as appropriate, relocated.
5. To reduce flood risk and improve flood management.	0	0	<p>Flooding/Coastal Stability</p> <ul style="list-style-type: none"> The site is in Flood Risk Zone 1 and working is not considered to constitute, or exacerbate an existing, a flood risk. Negligible/No impact, during working and restoration. 	<ul style="list-style-type: none"> Flood Risk Assessment (FRA) will be required.
6. To maintain, conserve and enhance the historic environment (including archaeological sites, historic buildings, conservation areas, historic parks and gardens and other locally distinctive features and their settings).	-	+	<p>Archaeology</p> <ul style="list-style-type: none"> Much of the site's northern boundary is defined by the line of an historic earthwork known as Battery Bank, a Scheduled Monument (1016273). This monument was probably a boundary in itself, most likely of Iron Age or Roman date, and possibly a division between grazing units. Damage to this Monument needs to be avoided and impact of any works on its setting needs to be carefully assessed. A Scheduled Monument lies to the south-east of the site – 'Two Bowl Barrows on South Heath, 290m and 370m East of Binnegar Hall' (1016276). The impact of any works on its setting needs to be carefully assessed. There is archaeological potential for human burials beyond the scheduled areas, although for much of the site the potential may be low since people would have used the heaths for grazing whilst living elsewhere. Potentially the impact of the development would be 'Significant Adverse Impact' without appropriate mitigation, and 'Less Significant Adverse Impact' with it. Since the monuments were likely originally set in an open heathland landscape, restoration of the site to open space/heathland, depending on detail of design, would offer Mild/Strong benefits to the Monuments and their settings 	<ul style="list-style-type: none"> Archaeological survey to determine nature and significance of non-designated remains. Adequate provision to be made for preservation, excavation or recording, as appropriate. Monuments, particularly Battery Bank, to be properly and appropriately protected during preparation/working. Settings of the Monuments to be established prior to working and not to be compromised during working. Restoration to heathland could benefit the settings of the Monuments.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	-	+	<p>Historic Landscapes</p> <ul style="list-style-type: none"> The site is likely to have been heathland since the Bronze Age. This would have formed the context for the scheduled barrows and perhaps Battery Bank. Potentially the impact of the development would be 'Significant Adverse Impact' without appropriate mitigation, and 'Less Significant Adverse Impact' with it. Restoration to heathland would provide Mild/Strong benefits, particularly in contributing to setting of the Monuments. 	<ul style="list-style-type: none"> Restoration to heathland to benefit the settings of the Monuments.
	0	0	<p>Historic Buildings</p> <ul style="list-style-type: none"> No expected impact on Listed Buildings 	<ul style="list-style-type: none"> No action required.
7. To maintain, conserve and enhance the landscape, including townscape, seascape and the coast.	0	+	<p>Landscape Capacity</p> <ul style="list-style-type: none"> Site is currently well screened by woodland and provided sufficient vegetation is retained to maintain this screening during preparation/working, impacts are expected to be negligible. Restoration to open heathland has already been identified as beneficial to the historic environment. 	<ul style="list-style-type: none"> Appropriate restoration proposals in line with Landscape Management Guidelines referred to in Minerals Strategy. Maintain screening woodland around edges of site.
	0	0	<p>Designated Landscapes</p> <ul style="list-style-type: none"> Dorset AONB lies approximately 200m south of site, but site is heavily screened. Negligible impacts on designated landscapes during and after working. 	<ul style="list-style-type: none"> Maintain screening woodland around edges of site.
8. To protect and improve air quality and reduce the impacts of noise.	0	0	<ul style="list-style-type: none"> Impacts on air quality expected to be negligible. No AQMAs will be affected by the working of this site proposal. Any dust resulting from working will be controlled through normal dust-suppression measures. Noise mitigation will be addressed at the planning application stage, with appropriate mitigation to be included in the development of the site. 	<ul style="list-style-type: none"> Environmental protection measures to reduce dust and ensure noise is appropriately mitigated.
9. To maintain, conserve and enhance soil quality.	0	0	<ul style="list-style-type: none"> The site comprises primarily grassland and woodland cover. The area is a former heathland area and so would be expected to have relatively poor, acidic soils. If the site is worked and restored to heathland this will require reinstatement/retention of acidic soils. 	<ul style="list-style-type: none"> Soil is poor quality in agricultural terms but valuable in terms of potential for heathland restoration. Heathland restoration has already been identified as important after use.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
10. To conserve and safeguard mineral resources.	+	0	<ul style="list-style-type: none"> In terms of encouraging the most efficient use of resources, this site is considered to provide a mild/strong positive impact as it constitutes an extension of an existing working. Impacts of developing this extension are expected to be relatively limited with no intensification. The site would make an important contribution to aggregate supply in Bournemouth, Dorset and Poole. 	<ul style="list-style-type: none"> No specific action required; site development to take into consideration and mitigate where appropriate relevant impacts.
11. To promote the use of alternative materials.	++	0	<ul style="list-style-type: none"> In order to achieve desired restoration levels it may be necessary to install an inert waste material recycling facility. If this is done then this will provide a strong positive benefit during working. It is expected that the recycling facility would finish when or soon after the quarry is completed and restored, giving a negligible impact during afteruse. 	<ul style="list-style-type: none"> Developing an inert waste recycling facility will promote the use of alternative materials on-site and elsewhere.
12. To provide an adequate and affordable supply of minerals to meet society's needs.	++	0	<ul style="list-style-type: none"> Development of this site will provide a strong benefit in terms of contributing to the provision of a supply of minerals to meet society's needs. Ensuring a sustainable supply will depend on the development and management of the site. Providing site development takes into account relevant principles of sustainable development it is expected this will contribute to complying with this objective. 	<ul style="list-style-type: none"> Ensure principles of sustainable development are incorporated into the development of this site.
13. To promote and encourage sustainable economic growth	++	0	<ul style="list-style-type: none"> This site proposal is expected to contribute to economic development on two levels – directly through the maintenance of current employment at the minerals site adjacent to the proposed development and indirectly through the provision of aggregate minerals required for the maintenance of built environment and for new built development. Both levels are expected to maintain employment, skilled and unskilled. Restoration to commercial forestry could provide direct and on-going economic benefits. However, the biodiversity benefits of restoration to heathland in this area have already been noted. If open access is available on the restored land, some limited benefits due to recreational attraction and use in the wider area (i.e. walking, bird watching) may be realised. 	<ul style="list-style-type: none"> Restoration to forestry could provide on-going economic benefits; however, restoration to open access heathland is considered preferable in biodiversity terms and could provide limited economic benefits.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
14. To adapt to and mitigate the impacts of climate change.	0	0	<ul style="list-style-type: none"> Developing land as a quarry is expected to have some minimal negative impacts regarding climate change, due primarily to machinery used and transportation of mineral away from site. However, these will in relative terms be negligible. The Bournemouth, Dorset and Poole Minerals Strategy seeks to address and minimise such impacts through Policy CC1 which requires operators to take into consideration climate change impacts and their possible mitigation for any proposed minerals development. The development management policies, e.g. DM 1, also address and seek to minimise the issue of sustainable development and climate change. Restoration to some form of vegetated environment will offer benefits in the form of minimal climate change mitigation, but again these will be negligible. 	<ul style="list-style-type: none"> Use energy efficient plant and machinery. Implement restoration which provides appropriate habitats to help to increase resilience of flora/fauna.
15. To minimise the negative impacts of waste and minerals transport on the transport network, mitigating any residual impacts.	-	+	<ul style="list-style-type: none"> The proposal is an extension of an existing quarry – no intensification or other change in road transport is expected but the proposed extension will extend the life of the existing development. This can be expected to produce a mild negative impact on the transport network. The processing plant may be moved nearer to the quarry extension itself – if this happens, this will reduce impacts as lorries won't be crossing Puddletown Road to get to the existing plant site. Policies DM1 and DM 8 actively address this issue of minimising impacts on the transportation network. Restoration to open countryside will be positive benefit to the local environment. 	<ul style="list-style-type: none"> Processing plant to be moved nearer to proposed extension. Transport Assessment to be carried, identifying opportunities for reducing impacts on the transport network.
16. To support and encourage the use of sustainable transport modes, imposing no unmitigated negative impacts on them.	-	0	<ul style="list-style-type: none"> The proposed extension can only realistically be accessed by means of road transport, resulting in a negative impact under this Objective during development and working. As far as reasonably possible negative impacts resulting from access and transport will be mitigated, as required by Policies DM1 and DM8 of the Minerals Strategy. 	<ul style="list-style-type: none"> Mitigate impacts where identified and appropriate.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
17. To sustain the health and quality of life of the population	0	0	Impact on Sensitive Human Receptors <ul style="list-style-type: none"> • Nearest property is Binnegar Hall, just over 100m to the south of the site. Site is heavily screened and downwind in prevailing winds. It is also higher in elevation. Possible impacts considered to be negligible to mild during preparation and working. • Other properties within 250m of site. • Retaining screening vegetation and use of noise attenuation bunds will minimise impacts on these receptors. • No impacts during Restoration/Afteruse. 	<ul style="list-style-type: none"> • Retain screening vegetation, particularly along southern boundary of site. • Construct noise attenuation bunds along southern boundary of site.
	–	0		
	0	0	Impact on Existing Settlements <ul style="list-style-type: none"> • Properties along A352; Wareham lies approximately 1km to the east. All are screened by vegetation/trees. Visual/noise impacts expected to be negligible with mitigation, during working. • Possible transport impacts are covered above. 	<ul style="list-style-type: none"> • Retain screening vegetation, particularly along southern boundary of site. • Construct noise attenuation bunds along southern boundary of site. • Dust minimisation as required. • Transport assessment to minimise potential impacts.
	0	0	Impact on Airport Safety <ul style="list-style-type: none"> • No impacts expected. 	<ul style="list-style-type: none"> • No action required.
18. To enable safe access to countryside and open spaces.	0	0	Impact on Recreational Land <ul style="list-style-type: none"> • Site is private land and has no recreational use. No impacts. • Restoration to open space with public access could be an important benefit in Restoration/Afteruse. • However, restoration to open space with public access could conflict with possible nature conservation uses. 	<ul style="list-style-type: none"> • No action required for working. • Restoration to open space with public access should be considered for its benefits, but could conflict with nature conservation aspirations.
	0	+		
	0	0	Impact on Public Rights of Way <ul style="list-style-type: none"> • Development of this site does not affect any rights of way. No impacts. 	<ul style="list-style-type: none"> • No action required.

Preliminary Hydrological Risk Assessment

Controlled Waters	Issues/Risks	Mitigation	Further information/approval required
<ul style="list-style-type: none"> • Watercourses • Ponds/lakes, including wet habitats • Groundwater 	<ul style="list-style-type: none"> • The site is located north of the Frome and south of the Piddle, and would drain towards the Frome. The River Basin Management Plan South West River Basin District identifies the Frome and the Piddle as being of 'Poor' environmental quality in this area. There is some potential for contamination from runoff from site. • Potential for contamination of controlled waters through spillage or seepage of pollutants such as fuel, or silt in water. • Contamination of water supplies or reduction in amount of water available for licenses supplies. • Impacts on or removal of surface water features. 	<ul style="list-style-type: none"> • Appropriate arrangements to be made for ensuring that runoff from the site does not enter the Frome or groundwater unless any silt has first been removed. • Fuel stored on site to be appropriately banded and sealed to prevent any spillage from entering ground or surface waters. • On-going monitoring during development and working of the site. • Relocation of surface water features, provided this is feasible. • Need to consider compliance to the Restoration Plan for the River Frome and its floodplain. 	<ul style="list-style-type: none"> • Full hydrogeological risk assessment will be required as part of a planning application. • Flood Risk Assessment • Water Framework Assessment • Further assessment of potential impacts on water quality and levels, particularly for groundwater, is required prior to development. • Assessment of the feasibility of relocating surface water features and associated habitats and species. • Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.

Cumulative Impacts

This proposal is an extension to an existing site in an area where there is other mineral working (along the Puddletown road). However, the site would not be worked until current quarrying operations at Binnegar are complete. There would be no increase in the intensity of the operation but there would be an extension of time for mineral extraction/restoration.

The proposal is within 5Km (by road) of a site allocated in the Purbeck Local Plan Part 1 (adopted Nov 2012) (Policy CEN) for development of 200 dwellings and community facilities, off Worgret Road, Wareham. Traffic arising from the new residential development will add to general traffic levels in Wareham and on the A352.

Cumulative impacts are expected to be minimal and no specific mitigation is required.

Summary.

Key impacts and benefits are expected to include, but are not necessarily limited to, the following.

Potential Benefits	Potential Impacts
<ul style="list-style-type: none">• Provision of aggregates required for maintenance and construction of the built environment, with accompanying benefits to the economy.• Provision of employment, to the benefit of local economy.• If inert waste is imported and processed on-site to assist in restoration, this will contribute to supply of recycled aggregate.• Improved public access may be possible as a part of site restoration. This could lead to reduced visitor pressure on designated heathland sites in the vicinity.• The proposed development is an extension to an existing quarry and as such would not lead to an intensification of development.	<ul style="list-style-type: none">• Impacts on Scheduled Ancient Monuments adjacent or in vicinity. Impacts to be fully assessed and mitigated, but expected to be capable of mitigation.• Impacts on Pennyroyal plant on site. It is expected that these can be mitigated through translocation of affected plants.• Impacts on ponds on the site, but these can also be moved as required.• There will be some impacts associated with traffic serving the site – further assessment will be required.• Binnegar Hall and associated buildings lies to the south of the proposed site and could be impacted by noise or visual impacts. Such impacts are expected to be capable of mitigation.

Overall Recommendation:

Key impacts are expected to be on the cultural heritage (Boundary Bank to the north and barrows to the south/east); ecology (the Pennyroyal plant and ponds on the site); and possibly of Binnegar Hall to the south. It is expected that these can be overcome through appropriate mitigation.

Further assessment will be required to gain a better understanding of what the impacts might be and how best to mitigate. Should this site ultimately be developed, it is expected that detailed assessment of impacts and required mitigation will be covered through the required Environmental Impact Assessment.

As an extension, development of the site is not expected to lead to intensification of impacts, but the time period of the impacts will be extended. If the processing plant is ultimately located at the site, some of these impacts (i.e. vehicles crossing the Puddletown Road) will be removed.

On balance, it appears reasonable on the basis of evidence available that the impacts identified in this sustainability appraisal are capable of satisfactory mitigation and the site nomination can reasonably be included in the Draft Bournemouth, Dorset and Poole Mineral Sites Plan.

Aggregates: AS06 Great Plantation

Site Name/Location: AS06 Great Plantation		Nominee/Agent: Hanson UK	
Mineral Type: Sand/Gravel		Local Authority: Purbeck District Council	
Site Area (as nominated): c. 75 ha	Production (as nominated): 300,000 tpa	Reserve: c. 5.5 million tonnes	

Impact Assessment Scoring

--	Strong Negative Impact	-	Minor Negative Impact	+	Minor Positive Impact	++	Strong Positive Impact	0	Negligible or No Effect	?	Uncertain
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N.B. This assessment has been carried out on, and the results reported for, the area originally nominated to the Mineral Planning Authority.

This area is to be re-assessed and reduced in size.

Timescales for effects:

P/W: Preparation and Working

R/A: Restoration and Afteruse

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
1. To move waste management up the waste hierarchy	N/A	N/A	<ul style="list-style-type: none"> This Objective is not relevant to this site nomination 	<ul style="list-style-type: none"> N/A
2. To maintain, conserve and enhance biodiversity	-	0	<p>European/International Designations</p> <ul style="list-style-type: none"> Proposed area supports Annex 1 birds and may be functionally linked to Dorset Heathlands SPA. Area is used as recreation site contributing to the network of areas which help to reduce human recreational pressure on designated heathlands, although the contribution of Great Plantation is probably small given its relative isolation from Wool and Wareham. Working this area could lead to significant risk of adverse effects on European sites. At the moment the area includes a small parts of the Dorset Heaths SAC, Dorset heathlands SPA and Dorset Heathlands Ramsar; these areas must be removed from the possible allocation to have any chance of being taken forward otherwise a conclusion of adverse effects on integrity of the sites is inevitable. Restoration to heathland/forestry with open access has the potential to restore these benefits. 	<ul style="list-style-type: none"> Ecological surveys and hydrological reports required, with appropriate mitigation. Heathland restoration and public access to be created. Nature conservation designations to be removed from proposed development area, with appropriate boundary established.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	—	0	Annex 1 Bird Species <ul style="list-style-type: none"> Area supports Annex 1 birds as part of the existing forestry crop rotation. Clearance of trees would result in heathland regeneration and the open habitat would rapidly become suitable for more Annex 1 birds. The site has the potential to be included in a revision to the Heathland SPA boundary. 	<ul style="list-style-type: none"> Ecological surveys and hydrological reports required, with appropriate mitigation. Heathland restoration and public access to be created. Nature conservation designations to be removed from proposed development area, with appropriate boundary established.
	?	+		
	—	0	National Designations <ul style="list-style-type: none"> Area likely to support rich invertebrate assemblage in existing rides contributing to maintenance of species within SSSI. At the moment the area includes small parts of the Stokeford Heaths SSSI; these areas must be removed from the possible allocation to have any chance of being taken forward as there is no case for directly damaging a nationally important site to extract sand and gravel. Restoration should include appropriate habitats to support invertebrates. 	<ul style="list-style-type: none"> Ecological surveys required, with appropriate mitigation. Restoration to include creation of invertebrate habitat. Areas of designation to be removed from working area, with appropriate buffer established.
	---	+		
	—	0	Protected species <ul style="list-style-type: none"> Existing rides support significant populations of European protected species, Sand Lizard and Smooth Snake, and common protected reptiles, and populations of reptiles in the small areas of SAC / SSSI within the area are likely to be functionally dependent on the existing rides and open areas in the plantation. Depending on population sizes it may be difficult to mitigate fully for effects on these species and there is a risk that disturbance licences could be refused by NE. 	<ul style="list-style-type: none"> Ecological surveys required, with appropriate mitigation identified. Restoration to include appropriate habitats for these species. Further investigation into likelihood of grant of disturbance licences.
	---	0		
	_/?	0	Local recognitions/designations, including ancient woodland and veteran trees <ul style="list-style-type: none"> There are possible adverse implications for the Stokeford Heaths SNCI to the north of the proposed area, although through assessment it should be possible to avoid adverse effects on the SNCI. 	<ul style="list-style-type: none"> Ecological surveys required, with appropriate mitigation identified. Restoration to include consideration of possible benefits for the SNCI.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
3. To maintain, conserve and enhance geodiversity.	+	0	<ul style="list-style-type: none"> Exposures resulting from working may be of interest. Benefits are only expected during working, and are likely to be obscured or covered as part of restoration. 	<ul style="list-style-type: none"> Operator to be asked to permit visits to view exposures as required.
4. To maintain, conserve and enhance the quality of ground, surface and sea waters and manage the consumption of water in a sustainable way.	-	0	<p>Groundwater</p> <ul style="list-style-type: none"> Stream rises within the north-western part of the proposal area. Assessment required to determine possible impacts on hydrogeology and effects on the stream. Impacts to be appropriately mitigated. No impacts on Source Protection Zones. Site overlies secondary aquifer. 	<ul style="list-style-type: none"> Hydrological assessment required to determine possible impacts, on ground and surface waters, with appropriate mitigation to be implemented. Further assessment on possible impacts on water supplies and appropriate mitigation if potential impacts identified. Where necessary mitigating measures should be installed to maintain groundwater levels and/or monitor private water supplies. Alternative arrangements should be in place in case of a reduction in supply. Appropriate arrangements should be put in place to ensure that the water leaving the site and entering the rivers/watercourses is of an acceptable quality. Any fuel on site should be properly stored to avoid contamination in case of spillage. Appropriate arrangements should be installed for surface water and silt collection and fuel storage to prevent contamination of groundwater resources. Land Drainage Consent to be obtained from Dorset County Council is works may affect flow of an ordinary watercourse.
	---	0	<p>Surface Water</p> <ul style="list-style-type: none"> Watercourse(s) within the proposed site. 	
5. To reduce flood risk and improve flood management.	0	0	<p>Flooding/Coastal Stability</p> <ul style="list-style-type: none"> The site is in Flood Risk Zone 1 and working is not considered to constitute, or exacerbate an existing, a flood risk. Negligible/No impact, during working and restoration. 	<ul style="list-style-type: none"> Flood Risk Assessment (FRA) will be required.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
6. To maintain, conserve and enhance the historic environment (including archaeological sites, historic buildings, conservation areas, historic parks and gardens and other locally distinctive features and their settings).	-	0	<p>Archaeology</p> <ul style="list-style-type: none"> Four scheduled monuments lie within the boundary of the proposed site. They are located approximately in a line that is oriented north to south. From the north they are SM28379 (a bowl barrow), SM28382 (a section of Battery Bank), SM28380 (a bowl barrow) and SM28381 (another bowl barrow). The three barrows are set on the ridge that runs to the east of Baker's Well Valley. It is assumed that they would have been deliberately placed in these prominent positions at a time when the land cover would have been heathland rather than woodland. The barrows would have been clearly visible from the valley as well as other vantage points in the wider landscape. There is also a water course that runs through the valley and it is likely that the barrows would have been deliberately placed overlooking this. To the east of the barrows, the land is level with no clear edge to the ridge. Since a major part of the setting of the barrows essentially comprises the ridge and the valley to the west, it is important to preserve these landscape elements A section of Battery Bank is also present within the valley. Whilst the section to the east of the track appears well-preserved, the section to the west appears to have been lost. Battery Bank is thought to have consisted of sections historically to act as markers separating the Frome Valley from land to the north. It is unclear whether this section of Battery Bank was placed alongside the barrows deliberately or not. The level of protection afforded to the Scheduled Monuments and their setting could lead to much or possibly all of the site being excluded from quarrying. Serious consideration needs to be given to whether any quarrying here is feasible – through assessment and evaluation that considers the Scheduled Monuments and their settings and also the impact on other below-ground archaeology. Continuing dialogue with English Heritage is also important. It may be possible to come to a compromise that allows quarrying on part of the site. Restoration to open heathland could improve the settings of the Monuments. 	<ul style="list-style-type: none"> Archaeological survey to assess Monuments and establish their settings and how these can best be protected during working. Archaeological survey to assess possible presence and significance of non-designated remains. Adequate provision to be made for preservation, excavation or recording, as appropriate. Settings of the Monuments to be established prior to working and not to be compromised during working.
	---	+	<p>Historic Landscapes</p> <ul style="list-style-type: none"> Much of the site, with the possible exception of the lower part of Baker's Well Valley, would have been heathland before the woodland was planted. This heathland formed part of the setting of the 	

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	---		<p>Scheduled Monuments on the site.</p> <ul style="list-style-type: none"> Unsympathetic extraction and quarrying could have a significant negative impact on the setting of these Monuments, but there is the potential for an improvement in that setting through restoration to heathland. 	<p>these can best be protected during working.</p> <ul style="list-style-type: none"> Restoration to heathland to benefit Monuments and their settings.
	-	+	<p>Historic Buildings</p> <ul style="list-style-type: none"> The nearest listed building which may have views of part of the site across fields is Heath View Maintenance/build-up of vegetation around the edge of the site will increase screening and restrict views in. If views into the site are still possible, restoration of the site should restore landscape texture and qualities thus the impact is time limited on this building. 	<ul style="list-style-type: none"> Strengthen screening of the site where possible. Restoration to open space/heathland will improve views into site area.
7. To maintain, conserve and enhance the landscape, including townscape, seascape and the coast.	---	0	<p>Landscape Capacity</p> <ul style="list-style-type: none"> There may be an issue regarding cumulative landscape and visual impacts in relation to the existing workings in the area and in this well used and sensitive part of the AONB. The site is enclosed by woodland on all sides apart from its eastern edge. Development would not significantly affect the local landscape and visual context (outside the site), but would affect views from the Purbeck Hills; it would extend the extent of quarrying onto the south facing side of the ridge of land running along Puddletown Road, extending the potential visibility of quarries in this area to a wide area of landscape to the south, including the AONB. If the developer can provide modified proposals that do not cause significant harm to views from the Purbeck Hills, and evidence to demonstrate the effects on these views, the capacity of this site could potentially be increased. 	<ul style="list-style-type: none"> Landscape and visual impact assessment to identify impacts; adequate mitigation of such impacts before and during working. If mitigation is not possible, a view will have to be taken as to whether a time-limited impact would be acceptable. Appropriate restoration proposals in line with Landscape Management Guidelines referred to in Minerals Strategy. Maintain screening woodland around edges of site. Restoration to enhance landscape for views into site.
	---	0	<p>Designated Landscapes</p> <ul style="list-style-type: none"> Potential for significant adverse impact during working, through views into the site from the Purbeck Hills. 	
8. To protect and improve air quality and reduce the impacts of noise.	0	0	<ul style="list-style-type: none"> Impacts on air quality expected to be negligible. No AQMAs will be affected by the working of this site proposal. Any dust resulting from working will be controlled through normal dust-suppression measures. Noise mitigation will be addressed at the planning application stage, with appropriate mitigation to be 	<ul style="list-style-type: none"> Environmental protection measures to reduce dust and ensure noise is appropriately mitigated.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			included in the development of the site.	
9. To maintain, conserve and enhance soil quality.	-	0	<ul style="list-style-type: none"> The site comprises primarily heathland, grassland and woodland cover. The area is a former heathland area and so would be expected to have relatively poor, acidic soils. Site preparation/working would require stripping and storage of the soils, with some impacts on them. If the site is worked and restored to heathland this will require reinstatement/retention of acidic soils. 	<ul style="list-style-type: none"> Soil is poor quality in agricultural terms but valuable in terms of potential for heathland restoration. Soils to be stored/protected during preparation and working and properly reinstated during restoration.
10. To conserve and safeguard mineral resources.	+	0	<ul style="list-style-type: none"> In terms of encouraging the most efficient use of resources, this site is considered to provide a mild/strong positive impact as it constitutes an extension of an existing working and would make an important contribution to aggregate supply in Bournemouth, Dorset and Poole. 	<ul style="list-style-type: none"> No specific action required; site development to take into consideration and mitigate where appropriate relevant impacts.
11. To promote the use of alternative materials.	0	0	<ul style="list-style-type: none"> This proposal does not at present promote the use of alternative materials. 	<ul style="list-style-type: none"> No action required.
12. To provide an adequate and affordable supply of minerals to meet society's needs.	++	0	<ul style="list-style-type: none"> Development of this site will provide a strong benefit in terms of contributing to the provision of a supply of minerals to meet society's needs. Ensuring a sustainable supply will depend on the development and management of the site. Providing site development takes into account relevant principles of sustainable development it is expected this will contribute to complying with this objective. 	<ul style="list-style-type: none"> Ensure principles of sustainable development are incorporated into the development of this site.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
13. To promote and encourage sustainable economic growth	+	0/?	<ul style="list-style-type: none"> This site proposal is expected to contribute to economic development on two levels – directly through the provision of employment at the site to be developed and indirectly through the provision of aggregate minerals required for the maintenance of built environment and for new built development. Both levels are expected to maintain employment, skilled and unskilled. It is considered that this proposal will provide a strong benefit during site working. Restoration to commercial forestry could provide direct and on-going economic benefits. However, the biodiversity benefits of restoration to heathland in this area have already been noted. 	<ul style="list-style-type: none"> Restoration to forestry could provide on-going economic benefits; however, restoration to open access heathland is considered preferable in biodiversity terms and could provide limited economic benefits. Some combination of the two may be most appropriate.
14. To adapt to and mitigate the impacts of climate change.	–	0	<ul style="list-style-type: none"> Developing land as a quarry is expected to have some negative impacts regarding climate change, due primarily to machinery used and transportation of mineral away from site. However, these will in relative terms be negligible. The Bournemouth, Dorset and Poole Minerals Strategy seeks to address and minimise such impacts through Policy CC1 which requires operators to take into consideration climate change impacts and their possible mitigation for any proposed minerals development. The development management policies, e.g. DM 1, also address and seek to minimise the issue of sustainable development and climate change. Restoration to some form of vegetated environment will offer benefits in the form of climate change mitigation, including provision of habitat for wildlife, but again these will be relatively small. 	<ul style="list-style-type: none"> Use energy efficient plant and machinery. Implement restoration which provides appropriate habitats to help to increase resilience of flora/fauna.
15. To minimise the negative impacts of waste and minerals transport on the transport network, mitigating any residual impacts.	–	0	<ul style="list-style-type: none"> This proposal is for a large extension to an existing operation south of Puddletown Road. It is expected that an existing access would be used although it may be possible to provide a new access as long as it met the required visibility, geometry and surfacing requirements. Although the proposal is adjacent to and will comprise an extension of an existing quarry, that quarry is not currently operational. This proposal will therefore result in an increase in the number of vehicles on the Puddletown Road, gaining access to the strategic network via the C6 and Bere Regis to the west or via the A352 and A351 to the East. If the proposed site comes into operation after other works cease, there would be a 'Less Significant 	<ul style="list-style-type: none"> Transport Assessment to be carried out, identifying opportunities for reducing impacts on the transport network.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			<p>Adverse Impact' impact. However, should the site come forward in parallel with current operations, there will be 'Significant Adverse' impact. When the site comes forward, detailed traffic information will need to include vehicle routing and a consideration of impact along those routes.</p> <ul style="list-style-type: none"> • Policies DM1 and DM 8 actively address this issue of minimising impacts on the transportation network. 	
16. To support and encourage the use of sustainable transport modes, imposing no unmitigated negative impacts on them.	—	0	<ul style="list-style-type: none"> • The proposed extension can only realistically be accessed by means of road transport, resulting in a negative impact under this Objective during development and working. • As far as reasonably possible negative impacts resulting from access and transport will be mitigated, as required by Policies DM1 and DM8 of the Minerals Strategy. 	<ul style="list-style-type: none"> • Mitigate impacts where identified and appropriate.
17. To sustain the health and quality of life of the population	0	0	<p>Impact on Sensitive Human Receptors</p> <ul style="list-style-type: none"> • Closest residences are approximately 200m to the west, others within 250-500 m buffers around site, including Hethfelton House. • Site is relatively isolated from residences and has the potential to be well screened. With further mitigation (noise attenuation and visual screening bunds) impacts on surroundings should be minimal. • Dust should not be an issue, and lorry traffic will not have any particular impact on these properties. 	<ul style="list-style-type: none"> • Retain screening vegetation where appropriate and provide other mitigation as required, such as noise attenuation bunds.
	—			
	0	0	<p>Impact on Airport Safety</p> <ul style="list-style-type: none"> • No impacts expected. 	<ul style="list-style-type: none"> • No action required.
18. To enable safe access to countryside and open spaces.	---	0	<p>Impact on Recreational Land</p> <ul style="list-style-type: none"> • Although there are no formal rights of way or formal recreational uses on the site, as Forestry Commission land the site is available for public access. 	<ul style="list-style-type: none"> • No action required for working, apart from closing the area to public access. • Restoration to open space with public access should be considered for its benefits, but

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			<ul style="list-style-type: none"> This would change during working but after restoration the site could be open to public access again. 	could conflict with nature conservation aspirations.
	--	0	<p>Impact on Public Rights of Way</p> <ul style="list-style-type: none"> There are no public rights of way over or adjacent to the site, but site is open access land. Although there are no statutory rights of way, there is public access which serves to reduce pressure on areas of European designated heathland. This will be lost during preparation/working. Restoration allowing public access will restore this function of the land. 	<ul style="list-style-type: none"> Restoration to open access land following working.

Preliminary Hydrological Risk Assessment

Controlled Waters	Issues/Risks	Mitigation	Further information/approval required
<ul style="list-style-type: none"> • Watercourses • Ponds/lakes, including wet habitats • Groundwater 	<ul style="list-style-type: none"> • The River Basin Management Plan South West River Basin District identifies the Frome as being of 'poor' environmental quality. Potential for contamination from runoff from site. • Potential for contamination of controlled waters through spillage or seepage of pollutants such as fuel, or silt in water. • Contamination of water supplies or reduction in amount of water available for licensed supplies. • Reduction in amount of ground water supplying the stream that rises in Bakers Well Valley. 	<ul style="list-style-type: none"> • Appropriate arrangements to be made for ensuring that runoff from the site does not enter the Frome or groundwater unless any silt has first been removed. • Fuel stored on site to be appropriately bunded and sealed to prevent any spillage from entering ground or surface waters. • On-going monitoring during development and working of the site. • Ensure no impacts on stream in Bakers Well Valley. 	<ul style="list-style-type: none"> • Full hydrogeological risk assessment will be required as part of a planning application. • Flood Risk Assessment • Water Framework Assessment • Further assessment of potential impacts on water quality and levels, particularly for groundwater, is required prior to development. • Assessment of the feasibility of relocating surface water features and associated habitats and species. • Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.

Cumulative Impacts

This proposal is essentially a new development in an area where there is other mineral working (along the Puddletown road). There will be transport related impacts, which could be rated 'Significant Adverse' or 'Less Significant Adverse' depending on whether the site is worked during or after neighbouring site.

Developing the Great Plantation site, which would reduce the amount of public access land available, could lead to increased impacts on surrounding areas.

The proposal is within 5Km (by road) of a site allocated in the Purbeck Local Plan Part 1 (adopted Nov 2012) (Policy CEN) for development of 200 dwellings and community facilities, off Worgret Road, Wareham. Traffic arising from the new residential development will add to general traffic levels in Wareham and on the A352.

Summary.

Potential Benefits	Potential Impacts
<ul style="list-style-type: none"> • Restoration to heathland would provide habitat for protected species and improve linkages between other heathland in the area. • Provision of aggregates required for maintenance and construction. • Restoration to heathland could benefit Scheduled Monuments and their settings and provide a link to the historic landscape that would have previously characterised the area around this site. • The site is relatively remote and well screened visually by existing vegetation. With mitigation such as noise attenuation bunds and visual screening along the southern boundary of the site particularly the impacts during preparation and working will be reduced. 	<ul style="list-style-type: none"> • Site preparation and working will have potentially very significant impacts on the Scheduled Monuments and their settings. Mitigation to be identified and implemented. • Possible impacts on hydrology/hydrogeology, requiring further investigation. • There will also be potentially very significant be impacts on the heathland habitats on the site and on the reptiles and Annex 1 birds supported. • Visual impacts on designated landscapes to the south. • Transport impacts. • Temporary loss of open access land and possible recreational displacement to designated sites.

Overall Recommendation:

A relatively large area has been nominated for consideration. It has high biodiversity and landscape importance, and potentially significant impacts could result from its working. It is open access land and removal of this access opportunity could lead to impacts on other designations in the area.

The site has the potential to make a contribution to the supply of aggregates in Bournemouth, Dorset and Poole. It is largely relatively well screened site which would be a follow-on from an area that has been previously worked. It is expected that processing plant will be located on the site.

The importance in terms of biodiversity and access opportunity, archaeological and landscape impacts indicates that the development of the whole site, even in phases, would be unacceptable. Although the principle of some working on the site is accepted, the area to be worked needs to be significantly reduced in area, to leave an area in the northern part of the site adjacent to previous workings that would be acceptable. If the site is reduced in area and the remaining area justified, it should be possible to see some aggregate working on this site.

On balance, it appears that the development of the whole of the nominated site would lead to unacceptable impacts, in terms of biodiversity, access, impacts on other ecological sites in the vicinity, archaeology and landscape impacts.

Some reduced area may be appropriate for working, provided a clear justification is given. This assessment accepts that some working is likely to be acceptable, with appropriate mitigation, and the site nominee will be invited to submit revised proposals showing such a reduced area.

The site is allocated in the Plan but must be re-assessed by the site-nominee and a reduced area submitted for further consideration.

Aggregates: AS08 Hurn Court Farm Extension

Site Name/Location: AS08 Hurn Court Farm Extension		Nominee/Agent: New Milton Sand & Ballast	
Mineral Type: Sand and gravel		Local Authority: Christchurch District Council	
Site Area: approximately 15 ha	Production: approximately 150,000 tpa	Reserve: approximately 600,000 t	

Impact Assessment Scoring

--	Strong Negative Impact	-	Minor Negative Impact	+	Minor Positive Impact	++	Strong Positive Impact	0	Negligible or No Effect	?	Uncertain
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Timescales for effects:

P/W: Preparation and Working

R/A: Restoration and Afteruse

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
1. To move waste management up the waste hierarchy and promote net self-sufficiency	N/A	N/A	<ul style="list-style-type: none"> This Objective is not relevant to this site nomination 	<ul style="list-style-type: none"> N/A
2. To maintain, conserve and enhance biodiversity	0	0	European/International Designations <ul style="list-style-type: none"> Not relevant to this site nomination. 	<ul style="list-style-type: none"> No action required.
	0	0	Annex 1 Bird Species <ul style="list-style-type: none"> Not relevant to this site nomination. 	<ul style="list-style-type: none"> No action required.
	0	0	National Designations <ul style="list-style-type: none"> Not relevant to this site nomination. 	<ul style="list-style-type: none"> No action required.
	0	0	Protected species <ul style="list-style-type: none"> It is possible that common protected reptiles are present in the margins of the proposed area. If this is the case, mitigation would not be expected to be a problem. 	<ul style="list-style-type: none"> Ecological surveys required, with appropriate mitigation identified.
	0	0	Local recognitions/designations, including ancient woodland and veteran trees <ul style="list-style-type: none"> Not relevant to this site nomination. 	<ul style="list-style-type: none"> No action required.

Sustainability Objectives	Effects		Commentary	Mitigation	
	P/W	R/A			
3. To maintain, conserve and enhance geodiversity.	+	+	<ul style="list-style-type: none"> Exposures resulting from working may be of interest. Benefits are only expected during working, and are likely to be obscured or covered as part of restoration. 	<ul style="list-style-type: none"> Operator to be asked to permit visits to view exposures as required. 	
4. To maintain, conserve and enhance the quality of ground, surface and sea waters and manage the consumption of water in a sustainable way.	-	0	<p>Groundwater</p> <ul style="list-style-type: none"> Site overlies a secondary aquifer. There are water features – pond, watercourse - within 100m of site boundary which could be impacted by development of the site. Assessment required to determine possible impacts on hydrogeology. Impacts to be appropriately mitigated. 	<ul style="list-style-type: none"> Hydrological assessment required to determine possible impacts, on ground and surface waters, with appropriate mitigation to be implemented. Where necessary mitigating measures should be installed to maintain groundwater levels. Appropriate arrangements should be put in place to ensure that the water leaving the site and entering the rivers/watercourses is of an acceptable quality. Any fuel on site should be properly stored to avoid contamination in case of spillage. Appropriate arrangements should be installed for surface water and silt collection and fuel storage to prevent contamination of groundwater resources. Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse. 	
	?		0		<p>Surface Water</p> <ul style="list-style-type: none"> Watercourse/pond within 100m of site boundary. Site drains to Leaden Stour and on into Stour. Assessment required to determine possible impacts on hydrogeology. Impacts to be appropriately mitigated.
	-	0			<p>Flooding/Coastal Stability</p> <ul style="list-style-type: none"> Site is located entirely within FZ1, although it is adjacent to FZ2/3. It is an extension to an aggregate site, and will utilise exist plant located within FZ1. Working is not considered to constitute, or exacerbate an existing, a flood risk provided all necessary mitigation is implemented.
	?				
5. To reduce flood risk and improve flood management.	0	0	<p>Flooding/Coastal Stability</p> <ul style="list-style-type: none"> Site is located entirely within FZ1, although it is adjacent to FZ2/3. It is an extension to an aggregate site, and will utilise exist plant located within FZ1. Working is not considered to constitute, or exacerbate an existing, a flood risk provided all necessary mitigation is implemented. 	<ul style="list-style-type: none"> Flood Risk Assessment (FRA) will be required, identifying possible risks and all necessary mitigation. 	
6. To maintain, conserve and enhance the historic environment (including archaeological sites, historic buildings,	?	0	<p>Archaeology</p> <ul style="list-style-type: none"> As previous archaeological work has demonstrated, sites on the Stour valley gravels have archaeological potential in general, particularly for prehistoric material. There is also the potential for the presence of earthworks and structures 	<ul style="list-style-type: none"> Survey to assess possible presence and significance of non-designated remains. Adequate provision to be made for preservation, excavation or recording, as appropriate. 	

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
conservation areas, historic parks and gardens and other locally distinctive features and their settings).			<p>associated with previous water management.</p> <ul style="list-style-type: none"> Archaeological assessment and evaluation will be required. When these have been undertaken archaeological impacts, if any, will be better understood. 	
	?	0	<p>Historic Landscapes</p> <ul style="list-style-type: none"> The site lies in the Stour valley, and archaeological investigation of gravel sites within the valley has shown that the rich resources of the valley were exploited throughout prehistory. Further evaluation will be required. When this has been undertaken possible impacts, if any, will be better understood. 	
	-	0	<p>Historic Buildings</p> <ul style="list-style-type: none"> The proposed site forms an extension to the existing Hurn Court Farm quarry. The southern boundary of the site as identified abuts the boundary of the garden of the Grade II listed building known as Dales House. If the proposed site does not have a sufficiently broad buffer zone, Dales House and its setting will be adversely impacted by the extraction. However, if a buffer zone of sufficient breadth is planned into the final scheme, then it is considered that the impact would be reduced. It is expected that the proposed extraction would take place in phases throughout the area, with quick restoration at a lower level behind each phase. Any impact on the setting of the listed building would therefore be temporary. Two other listed buildings, the Farmhouse and Barn at Merritown Farm to the west of the proposed site are not considered to be at risk of any detrimental impact. 	
7. To maintain, conserve and enhance the landscape, including townscape, seascape and the coast.	0	+	<p>Landscape Capacity</p> <ul style="list-style-type: none"> Important to maintain and enhance existing hedgerows around site and to control heights of storage tips. Opportunities to increase informal recreation/public open space in the Stour Valley and to create 	<ul style="list-style-type: none"> Assessment of potential visual impacts required. Restoration to include increasing public access/informal recreation in the Stour Valley.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			links to existing public rights of way (The Green Infrastructure initiative) should be explored on restoration.	
	0	0	Designated Landscapes • No impacts expected.	• No action required.
8. To protect and improve air quality and reduce the impacts of noise.	0	0	<ul style="list-style-type: none"> Impacts on air quality expected to be negligible. No AQMAs will be affected by the working of this site proposal. Any dust resulting from working will be controlled through normal dust-suppression measures. Noise mitigation will be addressed at the planning application stage, with appropriate mitigation to be included in the development of the site. 	• Environmental protection measures to reduce dust and ensure noise is appropriately mitigated.
9. To maintain, conserve and enhance soil quality.	-	0	<ul style="list-style-type: none"> Site contains/comprises very good quality agricultural land. Working the site will have impacts on this soil. Restoration is expected to return the land to, or near to, original ground levels, and to restore the quality of the land. 	<ul style="list-style-type: none"> Soil to be properly stripped and stored prior to working; protected during working; and re-spread on site after working. Restoration to include high quality agricultural land.
10. To conserve and safeguard mineral resources.	+	0	<ul style="list-style-type: none"> In terms of encouraging the most efficient use of resources, this site is considered to provide a mild/strong positive impact as it constitutes an extension of an existing working. Impacts of developing this extension are expected to be relatively limited with no intensification. 	• No specific action required; site development to take into consideration and mitigate where appropriate relevant impacts.
11. To promote the use of alternative materials.	++	0	<ul style="list-style-type: none"> In order to achieve desired restoration levels it may be necessary to install an inert waste material recycling facility. If this is done then this will provide a strong positive benefit during working. It is expected that the recycling facility would finish when or soon after the quarry is completed and restored, giving a negligible impact during afteruse. 	• Developing an inert waste recycling facility will promote the use of alternative materials on-site and elsewhere.
12. To provide an adequate and	+	0	• Development of this site will provide a benefit in terms of	• Ensure principles of sustainable development are incorporated into

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
affordable supply of minerals to meet society's needs.			<p>contributing to the provision of a supply of minerals to meet society's needs.</p> <ul style="list-style-type: none"> Ensuring a sustainable supply will depend on the development and management of the site. Providing site development takes into account relevant principles of sustainable development it is expected this will contribute to complying with this objective. 	the development of this site.
13. To promote and encourage sustainable economic growth	+	0 +	<ul style="list-style-type: none"> This site proposal is expected to contribute to economic development on two levels – directly through the provision of employment at the site to be developed and indirectly through the provision of aggregate minerals required for the maintenance of built environment and for new built development. Both levels are expected to maintain employment, skilled and unskilled. However given the expected size of the reserve this is likely to be a limited benefit. Restoration to agriculture with some element of public access will, if achieved, offer some economic benefits through both the agriculture and the recreational attraction and use in the wider area (i.e. riding, walking). 	<ul style="list-style-type: none"> Further assessment required to form a view as to what the most appropriate restoration could be.
14. To adapt to and mitigate the impacts of climate change.	-	0	<ul style="list-style-type: none"> Developing land as a quarry is expected to have some negative impacts regarding climate change, due primarily to machinery used and transportation of mineral away from site. However, these will in relative terms be negligible. The Bournemouth, Dorset and Poole Minerals Strategy seeks to address and minimise such impacts through Policy CC1 which requires operators to take into consideration climate change impacts and their possible mitigation for any proposed minerals development. The development management policies, e.g. DM 1, also address 	<ul style="list-style-type: none"> Use energy efficient plant and machinery. Implement restoration which provides appropriate habitats to help to increase resilience of flora/fauna.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			<p>and seek to minimise the issue of sustainable development and climate change.</p> <ul style="list-style-type: none"> Restoration to some form of vegetated environment will offer benefits in the form of climate change mitigation, including provision of habitat for wildlife, but again these will be relatively small. 	
15. To minimise the negative impacts of waste and minerals transport on the transport network, mitigating any residual impacts.	0	0	<ul style="list-style-type: none"> This proposal is to extend an existing operation on the south side of the B3073 Parley Lane. The traffic generation of this site has been estimated at around 60 trips per day for a period of 4 years. Access is gained via an existing signalised junction that also serves as the main access to Bournemouth Airport. Access to the strategic network is approximately 2 km to the east at the junction with the A338 Bournemouth Spur Road. The B3073 Parley Lane is subject to high levels of congestion at certain times of the day and there are significant other housing and business site allocations that will impact upon it. Overall, with mitigation towards improvements to Parley Lane, there are good connections with the strategic network and potentially little impact on existing settlements. The proposed extension will extend the life of the existing development. Impacts directly resulting from this proposal are expected to be minimal. Policies DM1 and DM 8 actively address this issue of minimising impacts on the transportation network. 	<ul style="list-style-type: none"> Transport Assessment to be carried out, identifying opportunities for reducing impacts on the transport network. This could include selected vehicle routing, avoiding trips through residential areas of Ferndown to the west of the site where possible.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
16. To support and encourage the use of sustainable transport modes, imposing no unmitigated negative impacts on them.	-	0	<ul style="list-style-type: none"> The proposed extension can only realistically be accessed by means of road transport, resulting in a negative impact under this Objective during development and working. As far as reasonably possible negative impacts resulting from access and transport will be mitigated, as required by Policies DM1 and DM8 of the Minerals Strategy. 	<ul style="list-style-type: none"> Mitigate impacts where identified and appropriate.
17. To sustain the health and quality of life of the population	-	0	Impact on Sensitive Human Receptors <ul style="list-style-type: none"> Site is immediately adjacent to residential properties, with other residences and businesses within 100m. Development would involve mitigation (visual and noise attenuation bunding, standoffs) to limit impacts. 	<ul style="list-style-type: none"> Provision of appropriate mitigation, following assessment of likely impacts.
	--		Impact on Existing Settlements <ul style="list-style-type: none"> The nearest settlements are Throop/Muscliffe to the south (>1km distant) and East Parley at over 1km to the north-west and Hurn to the south-east. No visual or noise impacts will affect these settlements, nor will there be an intensification of traffic along the B3073. However existing traffic levels generated by the current operation will continue for a longer period of time. 	
	-	0	Impact on Airport Safety <ul style="list-style-type: none"> Site is immediately adjacent to airport, but is an extension of a site that is worked satisfactorily without any negative impacts on aircraft safety. The extension would be worked the same way, and restored dry. 	<ul style="list-style-type: none"> Airport to be consulted on all aspects of the site development and restoration. All necessary mitigation to be implemented.
	0		0	

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	?	0	<p>Impact on Public Rights of Way</p> <ul style="list-style-type: none"> There are no rights of way across the site, although one passes close to the western tip of the site. Screening would be required, although the impact would be relatively small. 	<ul style="list-style-type: none"> Assessment of impacts, with appropriate mitigation identified. Restoration to improve public access in the area.

Preliminary Hydrological Risk Assessment

Controlled Waters	Issues/Risks	Mitigation	Further information/approval required
<ul style="list-style-type: none"> Watercourses Ponds/lakes, including wet habitats Groundwater 	<ul style="list-style-type: none"> The River Basin Management Plan South West River Basin District identifies the Stour, the closest main river, as being of 'poor' environmental quality. Potential for contamination from runoff from site. Potential for contamination of controlled waters through spillage or seepage of pollutants such as fuel, or silt in water. Contamination of water supplies or reduction in amount of water available for licensed supplies. 	<ul style="list-style-type: none"> Appropriate arrangements to be made for ensuring that runoff from the site does not enter the Leaden Stour and Stour or groundwater unless any silt has first been removed. Fuel stored on site to be appropriately bunded and sealed to prevent any spillage from entering ground or surface waters. On-going monitoring during development and working of the site. Relocation of surface water features, provided this is feasible. 	<ul style="list-style-type: none"> Full hydrogeological risk assessment will be required as part of a planning application. Flood Risk Assessment Water Framework Assessment Further assessment of potential impacts on water quality and levels, particularly for groundwater, is required prior to development. Assessment of the feasibility of relocating surface water features and associated habitats and species. Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.

Cumulative Impacts

Proposed site is an extension to an existing site. Although there is no other mineral working in the vicinity currently, there are aggregate deposits in the area and proposals for future working. There are existing waste management facilities in the area and the potential for future development at the Airport.

If the site comes into operation in parallel with the existing extraction here, and thus increases the overall impact on Parley Lane, the Highway Authority will seek to secure contributions towards a package of schemes proposed to ease existing and expected congestion. However, no intensification of operation is expected and cumulative impacts are expected to be minimal or non-existent and no specific mitigation is required.

The proposal lies within 5km of a site allocated for development in the Christchurch and East Dorset Consolidated Plan⁷ May 2013, Policy BA2 Bournemouth Airport – Northern Business Parks – 60 Ha employment land. Traffic from this development will add to traffic levels on the B3073.

⁷ The Consolidated Plan is an amalgamation of the Christchurch and East Dorset Core Strategy Pre submission draft April 2012 and the Christchurch and East Dorset Schedule of Proposed Changes November 2012.

Summary.

Key impacts and benefits are expected to include, but are not necessarily limited to, the following.

Potential Benefits	Potential Impacts
<ul style="list-style-type: none">• Provision of aggregates required for maintenance and construction of the built environment, with accompanying benefits to the economy.• Provision of employment, to the benefit of local economy.• If inert waste is imported and processed on-site to assist in restoration, this will contribute to supply of recycled aggregate.• Improved public access may be possible as a part of site restoration. This could lead to reduced visitor pressure on designated heathland sites in the vicinity.• Nature conservation benefits may be achieved as part of restoration.• The proposed development is an extension to an existing quarry and as such is not expected to lead to an intensifications of development.	<ul style="list-style-type: none">• Time-limited impacts on adjacent properties, particularly a listed building south of the site. Impacts to be fully assessed and appropriately mitigated.• Potential impacts on hydrology/flooding, requiring further assessment.• Potential impact on adjacent airport, through birdstrike risk. Proposed development to be designed, worked and restored in a way that will not cause unacceptable impacts.• Site is high quality agricultural land, and development will have an impact on this use. It is expected that the site can be restored to an agricultural use.• Parley Lane has high traffic levels. However, the proposed site would be worked as an extension and no intensification is expected. A Transport Assessment would be carried out, identifying opportunities to reduce traffic impacts.

Overall Recommendation:

Site is currently in intensive agriculture with no public access. It would be operated as an extension of an existing, adjacent quarry with mineral taken to existing plant to be processed. Current site is well run and no intensification of working is expected.

Key impacts are expected to be on the airport operation (risk of birdstrike) and adjacent properties (residences and businesses), which include a listed building. Full assessment of possible impacts will be required, and it is expected that these can be overcome through appropriate mitigation.

Should this site ultimately be developed, it is expected that detailed assessment of impacts and required mitigation will be covered through the required Environmental Impact Assessment.

As an extension, development of the site is not expected to lead to intensification of impacts, but the time period of the impacts will be extended.

Opportunities for improved public access and nature conservation benefits are to be considered as part of restoration of the site.

On balance, it appears reasonable on the basis of evidence available that the impacts identified in this sustainability appraisal are capable of satisfactory mitigation and the site nomination can reasonably be included in the Draft Bournemouth, Dorset and Poole Mineral Sites Plan.

Aggregates: AS13 Roeshot

Site Name/Location: AS13 Roeshot		Nominee/Agent: Meyrick Estate/D K Symes	
Mineral Type: Sand and gravel		Local Authority: Christchurch Borough Council	
Site Area: approximately 72 ha	Production: 200,000-250,000 tpa	Reserve: approximately 3.5 mt	

Impact Assessment Scoring

--	Strong Negative Impact	-	Minor Negative Impact	+	Minor Positive Impact	++	Strong Positive Impact	0	Negligible or No Effect	?	Uncertain
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Timescales for effects:

P/W: Preparation and Working

R/A: Restoration and Afteruse

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
1. To move waste management up the waste hierarchy	N/A	N/A	<ul style="list-style-type: none"> This Objective is not relevant to this site nomination. 	<ul style="list-style-type: none"> N/A
2. To maintain, conserve and enhance biodiversity	0	+	<p>European/International Designations</p> <ul style="list-style-type: none"> Extraction from this site could facilitate restoration to open ground including public open space for informal recreation to mitigate against effects of human pressures on the heaths. 	<ul style="list-style-type: none"> Ensure that part of the site is designated as a SANG
	0	0	<p>Annex 1 Bird Species</p> <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.
	0	0	<p>National Designations</p> <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.
	0	+	<p>Protected species</p> <ul style="list-style-type: none"> It is possible that there are common protected reptile populations around the existing field margins. Mitigation would likely be straightforward. 	<ul style="list-style-type: none"> Ecological surveys required, with appropriate mitigation identified. Restoration to include appropriate habitats for these species.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	0	0	<p>Local recognitions/designations, including ancient woodland and veteran trees</p> <ul style="list-style-type: none"> There are records of Southern Damselfly from the Mude River on the eastern boundary of the site and the effects of extraction on this rare species would need to be understood. It is expected that any effects should be avoided through providing for a suitable stand-off from the river. 	<ul style="list-style-type: none"> Ecological surveys required, with appropriate mitigation identified. Restoration to include appropriate habitats for these species. Appropriate buffer around Mude to be left to protect Damselfly habitat.
3. To maintain, conserve and enhance geodiversity.	+	0	<ul style="list-style-type: none"> Exposures resulting from working may be of interest. Benefits are only expected during working, and are likely to be obscured or covered as part of restoration. 	<ul style="list-style-type: none"> Operator to be asked to permit visits to view exposures as required.
4. To maintain, conserve and enhance the quality of ground, surface and sea waters and manage the consumption of water in a sustainable way.	—	0	<p>Groundwater</p> <ul style="list-style-type: none"> EA designated main river adjacent to site and presumably receives groundwater discharge derived from the site. Site overlies secondary aquifers. Not within any Source Protection Zone designation. Licensed extraction within 500m. Assessment required to determine possible impacts on hydrogeology. Impacts to be appropriately mitigated. 	<ul style="list-style-type: none"> Further assessment on possible impacts on water supplies and appropriate mitigation if potential impacts identified. Where necessary mitigating measures should be installed to maintain groundwater levels and/or monitor private water supplies. Alternative arrangements should be in place in case of a reduction in supply. Hydrological assessment required to determine possible impacts, on ground and surface waters, with appropriate mitigation to be implemented. River Corridor Buffer Zone to be required. Appropriate arrangements should be put in place to ensure that the water leaving the site and entering the rivers/watercourses is of an acceptable quality. Any fuel on site should be properly stored to avoid contamination in case of spillage. Appropriate arrangements should be installed for surface water and silt collection and fuel storage to prevent contamination of groundwater resources. Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.
	—		0	

5. To reduce flood risk and improve flood management.	0	0	Flooding/Coastal Stability <ul style="list-style-type: none"> FRZ 2 and 3 on part of site, majority within FRZ 1. Site is sand and gravel site, with extraction allowed within functional floodplain. Flood Risk Assessment to be carried out and any necessary mitigation implemented. 	<ul style="list-style-type: none"> Flood Risk Assessment (FRA) will be required. All necessary mitigation to be implemented.
6. To maintain, conserve and enhance the historic environment (including archaeological sites, historic buildings, conservation areas, historic parks and gardens and other locally distinctive features and their settings).	-	?	Archaeology <ul style="list-style-type: none"> Staple Cross (Dorset M828) lies to the south of the proposed site. This is a roadside cross that is thought to be of post-Medieval date, although many of the type date from the Middle Ages. The railway line running on an embankment shields the site from this Monument therefore its setting is not affected by the proposal. There is likely to be high archaeological potential at this site. Archaeological assessment and evaluation would be required before an informed planning decision could be made. Only when these have been undertaken would the archaeological impact be understood – at present it could be anywhere from Very Significant to No Significant impact Archaeological assessment and evaluation will be required. When these have been undertaken archaeological impacts, if any, will be better understood. 	<ul style="list-style-type: none"> Full archaeological survey of the area required to assess possible presence and significance of non-designated remains and how these should be protected/treated during working. All necessary mitigation, including actions such as restoration of hedgerows, to be implemented. Adequate provision to be made for preservation, excavation or recording, as appropriate.
	--	?	Historic Landscapes <ul style="list-style-type: none"> The site lies within the broad flat agricultural landscape between the river Avon on the west and the somewhat higher ground of the New Forest to the east. There are distant views to St. Catherine's Hill, while views towards the historic centre of Christchurch are impeded by the railway line. Impacts could range between Significant to Less Significant. Further evaluation will be required. When this has been undertaken possible impacts, if any, will be better understood. 	
	?	0	Historic Buildings <ul style="list-style-type: none"> The extraction of mineral at this site would have no significant impact on any of the nearby listed buildings because the lie of the land and the size of the hedgerows screens it from them. 	
7. To maintain, conserve and enhance the landscape, including townscape, seascape and	-	+	Landscape Capacity <ul style="list-style-type: none"> The site is not directly overlooked by any properties but there are more distant views from the edge of Burton Village and from adjacent lanes. Retention and management of existing hedgerows, appropriate new planting and 	<ul style="list-style-type: none"> Assessment of potential visual impacts required. All appropriate mitigation to be included. Restoration to include increasing public access/informal recreation,

the coast.			<ul style="list-style-type: none"> bund screening is recommended to reduce any residual impacts. Potential visual impacts also exist on the New Forest National Park, the railway line and from users of the area for recreational purposes. 	<ul style="list-style-type: none"> through provision of SANG. Restoration to include nature conservation interests.
	0	0	<p>Designated Landscapes</p> <ul style="list-style-type: none"> Less significant adverse impact 	<ul style="list-style-type: none"> No action required.
8. To protect and improve air quality and reduce the impacts of noise.	0	0	<ul style="list-style-type: none"> Impacts on air quality expected to be negligible. No AQMAs will be affected by the working of this site proposal. Any dust resulting from working will be controlled through normal dust-suppression measures. Noise mitigation will be addressed at the planning application stage, with appropriate mitigation to be included in the development of the site. 	<ul style="list-style-type: none"> Environmental protection measures to reduce dust and ensure noise is appropriately mitigated.
9. To maintain, conserve and enhance soil quality.	-	0	<ul style="list-style-type: none"> Site is very good agricultural land and working the site will have impacts on this soil. Proposed restoration is to part agricultural part nature conservation. Soils can be protected and used to restore at least part of the site to its agricultural use . 	<ul style="list-style-type: none"> Soil to be properly stripped and stored prior to working; protected during working; and re-spread on site after working. Restoration to include high quality agricultural land.
10. To conserve and safeguard mineral resources.	+	0	<ul style="list-style-type: none"> The site would make an important contribution to aggregate supply in Bournemouth, Dorset and Poole. In terms of encouraging the most efficient use of resources, this site is considered to provide a mild/strong positive impact as it constitutes an extension of an existing working. Impacts of developing this extension are expected to be relatively limited with no intensification. 	<ul style="list-style-type: none"> No specific action required; site development to take into consideration relevant impacts and mitigate where appropriate.
11. To promote the use of alternative materials.	++	0	<ul style="list-style-type: none"> In order to achieve desired restoration levels it may be necessary to install an inert waste material recycling facility. If this is done then this will provide a strong positive benefit during working. It is expected that the recycling facility would finish when or soon after the quarry is completed and restored, giving a negligible impact during afteruse. 	<ul style="list-style-type: none"> Developing an inert waste recycling facility will promote the use of alternative materials on-site and elsewhere.
12. To provide an adequate and affordable supply of minerals to meet society's	+	0	<ul style="list-style-type: none"> Development of this site will provide a benefit in terms of contributing to the provision of a supply of minerals to meet society's needs. Ensuring a sustainable supply will depend on the development and management of the site. Providing site development takes into account 	<ul style="list-style-type: none"> Ensure principles of sustainable development are incorporated into the development of this site.

needs.			relevant principles of sustainable development it is expected this will contribute to complying with this objective.	
13. To promote and encourage sustainable economic growth	+	0	<ul style="list-style-type: none"> This site proposal is expected to contribute to economic development on two levels – directly through the provision of employment at the site to be developed and indirectly through the provision of aggregate minerals required for the maintenance of built environment and for new built development. Both levels are expected to maintain employment, skilled and unskilled. However given the expected size of the reserve this is likely to be a limited benefit. Restoration to agriculture with some element of public access will, if achieved, offer some economic benefits through both the agriculture and the recreational attraction and use in the wider area (i.e. riding, walking). 	<ul style="list-style-type: none"> Further assessment required to form a view as to what the most appropriate restoration could be.
14. To adapt to and mitigate the impacts of climate change.	-	0	<ul style="list-style-type: none"> Developing land as a quarry is expected to have some negative impacts regarding climate change, due primarily to machinery used and transportation of mineral away from site. However, these will in relative terms be negligible. The Bournemouth, Dorset and Poole Minerals Strategy seeks to address and minimise such impacts through Policy CC1 which requires operators to take into consideration climate change impacts and their possible mitigation for any proposed minerals development. The development management policies, e.g. DM 1, also address and seek to minimise the issue of sustainable development and climate change. Restoration to some form of vegetated environment will offer benefits in the form of climate change mitigation, including provision of habitat for wildlife, but again these will be relatively small. 	<ul style="list-style-type: none"> Use energy efficient plant and machinery. Implement restoration which provides appropriate habitats to help to increase resilience of flora/fauna.
15. To minimise the negative impacts of waste and minerals transport on the transport network, mitigating any residual impacts.	-	0	<ul style="list-style-type: none"> While this large site is within Dorset, it is expected that the traffic from it will access the highway network on the A35 Lyndhurst Road from within Hampshire. A portion of the traffic will turn south from that access and enter Dorset on the A35 which will need to be assessed as part of any Transport Assessment. Roads to the west of the site are narrow, residential and unsuitable for the high level of traffic that this site would generate. In the case of Hawthorne Road and Summers Lane they may also be undergoing significant change as part of 	<ul style="list-style-type: none"> Any proposal for this site will need to be accompanied by a Transport Assessment which will need to provide access details and consider vehicle routing. The TA should be scoped with the Transport Development Management Team. Transport Assessment to be carried out, identifying opportunities for reducing impacts on the transport network.

			<p>the urban extension site at Roeshot Hill being proposed within the Christchurch and East Dorset Local Plan.</p> <ul style="list-style-type: none"> • Provided that the site has a suitable access onto the A35 Lyndhurst Road (to be determined by Hampshire County Council), the site has direct access to the strategic network and is considered to have negligible or no significant impacts. • Policies DM1 and DM 8 of the Minerals Strategy actively address this issue of minimising impacts on the transportation network. 	<ul style="list-style-type: none"> • Site to use access to highway network on the Hampshire side of the site.
16. To support and encourage the use of sustainable transport modes, imposing no unmitigated negative impacts on them.	-	0	<ul style="list-style-type: none"> • The proposed extension can only realistically be accessed by means of road transport, resulting in a negative impact under this Objective during development and working. • As far as reasonably possible negative impacts resulting from access and transport will be mitigated, as required by Policies DM1 and DM8 of the Minerals Strategy. 	<ul style="list-style-type: none"> • Mitigate impacts where identified and appropriate.
17. To sustain the health and quality of life of the population	-	0	<p>Impact on Sensitive Human Receptors</p> <ul style="list-style-type: none"> • Waterditch Farm to north and Burton Village to west, both with 300m; properties to the south screened by railway embankment. • Development would likely require appropriate mitigation (such as visual and noise attenuation bunding, standoffs) to limit impacts. 	<ul style="list-style-type: none"> • Provision of appropriate mitigation, following assessment of likely impacts. • Restoration to improve landscape of site where possible; and to seek to increase public access.
	-	0	<p>Impact on Existing Settlements</p> <ul style="list-style-type: none"> • Burton Village to west; properties to the south screened by railway embankment. Noise attenuation and visual screening expected to mitigate impacts. • Development would involve appropriate mitigation (such as visual and noise attenuation bunding, standoffs) to limit impacts. 	<ul style="list-style-type: none"> • Screening/bunding/standoffs will mitigate impacts. • Transport Assessment to be carried out, identifying possible impacts and opportunities for reducing impacts on the transport network.
	0	0	<p>Impact on Airport Safety</p> <ul style="list-style-type: none"> • Site is some 6km from airport and may feature wetland restoration. • It will be developed, worked and restored in a way that will avoid any birdstrike or other hazards. 	<ul style="list-style-type: none"> • Airport to be consulted on all aspects of the site development and restoration. • All necessary mitigation to be implemented.

18. To enable safe access to countryside and open spaces.	0	++	Impact on Recreational Land <ul style="list-style-type: none"> Site is agricultural land and has no formal or informal recreation use. Part of the site may be used as Suitable Alternative Natural Greenspace to provide public access to countryside, primarily for the benefit of the housing proposed to the south. 	<ul style="list-style-type: none"> No action required.
	-	++	Impact on Public Rights of Way <ul style="list-style-type: none"> Footpath runs along eastern edge of site - this may need to be diverted during working of the site. Screening likely to be required, although the impact would be relatively small. 	<ul style="list-style-type: none"> Assessment of impacts, with appropriate mitigation identified.

Preliminary Hydrological Risk Assessment

Controlled Waters	Issues/Risks	Mitigation	Further information/approval required
<ul style="list-style-type: none"> Watercourses Ponds/lakes, including wet habitats Groundwater 	<ul style="list-style-type: none"> The River Basin Management Plan South West River Basin District identifies the River Mude as being of 'Moderate' environmental quality. Potential exists for contamination of river from runoff from site. Potential for contamination of controlled waters through spillage or seepage of pollutants such as fuel, or silt in water. Contamination of water supplies or reduction in amount of water available for licenses supplies. Impacts on or removal of surface water features. 	<ul style="list-style-type: none"> Appropriate arrangements to be made for ensuring that runoff from the site does not enter the Mude or groundwater unless any silt has first been removed. Fuel stored on site to be appropriately bunded and sealed to prevent any spillage from entering ground or surface waters. On-going monitoring during development and working of the site. Relocation of surface water features, provided this is feasible. 	<ul style="list-style-type: none"> Full hydrogeological risk assessment will be required as part of a planning application. Flood Risk Assessment Water Framework Assessment Further assessment of potential impacts on water quality and levels, particularly for groundwater, is required prior to development. Assessment of the feasibility of relocating or re-creating surface water features and associated habitats and species. Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.

Cumulative Impacts

Site is immediately adjacent to and will comprise an extension of a sand and gravel site in Hampshire. There are other sand and gravel sites in south Hampshire, south of the New Forest, that generate lorry travel into Dorset.

It is adjacent to, although separated by a railway embankment, the site allocated for development in the Christchurch and East Dorset Consolidated Plan⁸ May 2013, Policy CN1 Christchurch Urban Extension – 950 dwellings. Traffic from this development will add to traffic levels on the A35 and B3347.

It is expected that the Dorset part of the site will be developed as an extension to the Hampshire side, after the Hampshire side is partly or fully worked, so in this sense it will not be a cumulative impact .

Summary.

Potential Benefits	Potential Impacts
<ul style="list-style-type: none"> • Site is primarily agricultural land and its development will have minimal impact on nature conservation interests. • Restoration will include increased and improved public access through provision of land for SANG. • This also provides benefits to other nature conservation designations by absorbing recreational pressures. • Provision of aggregates required for maintenance and construction of the built environment. May include production of recycled aggregates • Restoration will include benefits for nature conservation, through restoration to combination of agricultural and nature conservation. 	<ul style="list-style-type: none"> • Nature conservation impacts – possible impacts on Southern Damselfly along Mude. To be assessed and should be capable of mitigation, through various means including leaving a river corridor untouched. • Possible impacts on ground/surface water – to be fully assessed and expected to be mitigable. • Possible impacts on archaeology – to be fully assessed and not expected to restrict development. All necessary mitigation to be implemented. • Possible impacts on airport to be considered and site to be developed and restored in a way that does not have any impact on airport. • Transport impacts to be assessed, but any impacts expected to be mitigable. • Site is large enough that visual impacts on surrounding properties are expected to be capable of mitigation.

Overall Recommendation:

It is expected that this site will be worked as an extension of an existing quarry – the contiguous land to the east of the site in Hampshire is allocated in the Hampshire Minerals and Waste Plan and a planning application will be submitted shortly. The site will be accessed from the Hampshire side, and no intensification is expected and any likely impacts are expected to be capable of mitigation. Mineral processing will be carried out on the Hampshire side of the site.

On balance, it appears reasonable on the basis of evidence available that the impacts identified in this sustainability appraisal are capable of satisfactory mitigation and the site nomination can reasonably be included in the Draft Bournemouth, Dorset and Poole Mineral Sites Plan.

⁸ The Consolidated Plan is an amalgamation of the Christchurch and East Dorset Core Strategy Pre submission draft April 2012 and the Christchurch and East Dorset Schedule of Proposed Changes November 2012.

Aggregates: AS15 Tatchells

Site Name/Location: AS15 Tatchells		Nominee/Agent: Aggregate Industries	
Mineral Type: Sand and gravel		Local Authority: Purbeck District Council	
Site Area: 2.5 ha	Production: approximately 100,000 tpa;	Reserve: approximately 380,000 tonnes	

Impact Assessment Scoring

--	Strong Negative Impact	-	Minor Negative Impact	+	Minor Positive Impact	++	Strong Positive Impact	0	Negligible or No Effect	?	Uncertain
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Timescales for effects:

P/W: Preparation and Working

R/A: Restoration and Afteruse

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
1. To move waste management up the waste hierarchy	N/A	N/A	<ul style="list-style-type: none"> This Objective is not relevant to this site nomination 	<ul style="list-style-type: none"> N/A
2. To maintain, conserve and enhance biodiversity	0	0	European/International Designations <ul style="list-style-type: none"> Not relevant to this site nomination. 	<ul style="list-style-type: none"> No action required.
	0	0	Annex 1 Bird Species <ul style="list-style-type: none"> Not relevant to this site nomination. 	<ul style="list-style-type: none"> No action required.
	0	0	National Designations <ul style="list-style-type: none"> Not relevant to this site nomination. 	<ul style="list-style-type: none"> No action required.
	0	0	Protected species <ul style="list-style-type: none"> It is possible that there are common protected reptile populations around the existing field margins. If any of these populations would be affected, mitigation would likely be straightforward. 	<ul style="list-style-type: none"> Ecological surveys required, with appropriate mitigation identified. Restoration to include appropriate habitats for these species.
	0	0	Local recognitions/designations, including ancient woodland and veteran trees <ul style="list-style-type: none"> Not relevant to this site nomination. 	<ul style="list-style-type: none"> No action required.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
3. To maintain, conserve and enhance geodiversity.	+	0	<ul style="list-style-type: none"> Exposures resulting from working may be of interest. Benefits are only expected during working, and are likely to be obscured or covered as part of restoration. 	<ul style="list-style-type: none"> Operator to be asked to permit visits to view exposures as required.
4. To maintain, conserve and enhance the quality of ground, surface and sea waters and manage the consumption of water in a sustainable way.	0	0	<p>Groundwater</p> <ul style="list-style-type: none"> Site overlies secondary aquifer. Not within any Source Protection Zone designation. Licensed extraction within 500m. Assessment required to determine possible impacts on hydrogeology. Impacts to be appropriately mitigated. 	<ul style="list-style-type: none"> Further assessment on possible impacts on water supplies and appropriate mitigation if potential impacts identified. Where necessary mitigating measures should be installed to maintain groundwater levels and/or monitor private water supplies. Alternative arrangements should be in place in case of a reduction in supply. Hydrological assessment required to determine possible impacts, on ground and surface waters, with appropriate mitigation to be implemented. Detailed pollution prevention management plan detailing best practices to minimise pollution incidents, as well as measures that will be taken should a pollution event occur. Appropriate arrangements should be put in place to ensure that the water leaving the site and entering the rivers/watercourses is of an acceptable quality. Any fuel on site should be properly stored to avoid contamination in case of spillage. Appropriate arrangements should be installed for surface water and silt collection and fuel storage to prevent contamination of groundwater resources. Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.
	?	0	<p>Surface Water</p> <ul style="list-style-type: none"> Pond within 50m of site in existing quarry to west of site. River Piddle within 250m of the site boundary. Assessment required to determine possible impacts on hydrogeology. Impacts to be appropriately mitigated. 	

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
5. To reduce flood risk and improve flood management.	0	0	Flooding/Coastal Stability <ul style="list-style-type: none"> Entire site is within Flood Risk Zone 1, no expected risk of flooding or contributing to flooding. 	<ul style="list-style-type: none"> Flood Risk Assessment (FRA) will be required. All necessary mitigation to be implemented.
6. To maintain, conserve and enhance the historic environment (including archaeological sites, historic buildings, conservation areas, historic parks and gardens and other locally distinctive features and their settings).	?	0	Archaeology <ul style="list-style-type: none"> Assuming the site was heathland until relatively recently, its archaeological potential is likely to be low. However, the Dorset Historic Environment Record records the presence of 19th century quarries on and around the site, so it would be appropriate for an assessment to check whether there are any remains of industrial archaeological significance of or associated with this quarrying on the site. If such remains were present, then provided that appropriate recording took place before development, this would be a 'Less Significant' impact. Archaeological assessment and evaluation will be required. When these have been undertaken archaeological impacts, if any, will be better understood. 	<ul style="list-style-type: none"> Archaeological survey of the area required to assess possible presence and significance of non-designated remains and to assess whether/how these should be protected during working. All necessary mitigation to be implemented. Adequate provision to be made for preservation, excavation or recording, as appropriate. Further consideration to be given to restoration proposals, in terms of historic landscapes.
	?	0	Historic Landscapes <ul style="list-style-type: none"> The site is currently under agriculture, and historically it was presumably heathland. There is map evidence of quarrying here (undoubtedly on a much smaller scale) from the 19th century. 	
	0	0	Historic Buildings <ul style="list-style-type: none"> The nearest listed building, Carey House, is hidden from the site by wooded areas so there is no significant effect on the listed building. No significant impact. 	
7. To maintain, conserve and enhance the landscape, including townscape, seascape and the coast.	0	0	Landscape Capacity <ul style="list-style-type: none"> The site is considered unlikely to be visually intrusive being screened from the residential areas of Wareham and Northport by a ridge of high land. Appropriate mitigation will be required along the boundaries of the site. 	<ul style="list-style-type: none"> Landscape and visual impact assessment to identify impacts; adequate mitigation of such impacts before and during working. Appropriate restoration proposals in line with Landscape Management Guidelines referred to in Minerals Strategy.
	0	0	Designated Landscapes <ul style="list-style-type: none"> No significant impact/negligible. 	

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
8. To protect and improve air quality and reduce the impacts of noise.	0	0	<ul style="list-style-type: none"> Impacts on air quality expected to be negligible. No AQMAs will be affected by the working of this site proposal. Any dust resulting from working will be controlled through normal dust-suppression measures. Noise mitigation will be addressed at the planning application stage, with appropriate mitigation to be included in the development of the site. 	<ul style="list-style-type: none"> Environmental protection measures to reduce dust and ensure noise is appropriately mitigated.
9. To maintain, conserve and enhance soil quality.	0	0	<ul style="list-style-type: none"> Site is poor quality agricultural land. Site preparation/working would require stripping and storage of the soils, with some impacts on them. 	<ul style="list-style-type: none"> Soils to be stored/protected during preparation and working and properly reinstated during restoration.
10. To conserve and safeguard mineral resources.	+	0	<ul style="list-style-type: none"> The site would make an important contribution to aggregate supply in Bournemouth, Dorset and Poole. 	<ul style="list-style-type: none"> No specific action required; site development to take into consideration relevant impacts and mitigate where appropriate.
11. To promote the use of alternative materials.	0	0	<ul style="list-style-type: none"> This proposal does not at present promote the use of alternative materials. 	<ul style="list-style-type: none"> No action required.
12. To provide an adequate and affordable supply of minerals to meet society's needs.	+	0	<ul style="list-style-type: none"> Development of this site would provide a benefit in terms of contributing to the provision of a supply of minerals to meet society's needs. Ensuring a sustainable supply will depend on the development and management of the site. Providing site development takes into account relevant principles of sustainable development it is expected this will contribute to complying with this objective. 	<ul style="list-style-type: none"> Ensure principles of sustainable development are incorporated into the development of this site.
13. To promote and encourage sustainable economic growth	+	0	<ul style="list-style-type: none"> This site proposal is expected to contribute to economic development on two levels – directly through the provision of employment at the site to be developed and indirectly through the provision of aggregate minerals required for the maintenance of built environment and for new built development. Both levels are expected to maintain employment, skilled and unskilled. However given the expected size of the reserve this is likely to be a limited benefit. Restoration to agriculture will, if achieved, offer some on-going economic benefits. 	<ul style="list-style-type: none"> Further assessment required to form a view as to what the most appropriate restoration could be.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
14. To adapt to and mitigate the impacts of climate change.	—	0	<ul style="list-style-type: none"> Developing land as a quarry is expected to have some negative impacts regarding climate change, due primarily to machinery used and transportation of mineral away from site. However, these will in relative terms be negligible. The Bournemouth, Dorset and Poole Minerals Strategy seeks to address and minimise such impacts through Policy CC1 which requires operators to take into consideration climate change impacts and their possible mitigation for any proposed minerals development. The development management policies, e.g. DM 1, also address and seek to minimise the issue of sustainable development and climate change. Restoration to some form of vegetated environment will offer benefits in the form of climate change mitigation, including provision of habitat for wildlife, but again these will be relatively small. 	<ul style="list-style-type: none"> Use energy efficient plant and machinery. Implement restoration which provides appropriate habitats to help to increase resilience of flora/fauna.
15. To minimise the negative impacts of waste and minerals transport on the transport network, mitigating any residual impacts.	—	0	<ul style="list-style-type: none"> This proposal is for an extension to existing extraction at Tatchells Quarry. This is an established site with a good access onto Wareham Forest Road. Access from here to the strategic network is gained via the A35 to the north and the A351 to the east. The extension site could be expected to generate 40 trips per day although it is thought that the site would follow the cessation of other extraction at Tatchells rather than operating in parallel to it. The site has therefore been given a 'Less Significant Adverse Impact' rating. Should the site intensify movements to Tatchells any Transport Statement should consider vehicle routing and any impact on the A351 to the east which experiences high levels of congestion. Policies DM1 and DM 8 actively address this issue of minimising impacts on the transportation network. 	<ul style="list-style-type: none"> Transport Assessment to be carried out, identifying opportunities for reducing impacts on the transport network.
16. To support and encourage the use of sustainable transport modes, imposing no unmitigated negative impacts on them.	—	0	<ul style="list-style-type: none"> The proposed extension can only realistically be accessed by means of road transport, resulting in a negative impact under this Objective during development and working. As far as reasonably possible negative impacts resulting from access and transport will be mitigated, as required by Policies DM1 and DM8 of the Minerals Strategy. 	<ul style="list-style-type: none"> Mitigate impacts where identified and appropriate.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
17. To sustain the health and quality of life of the population	-	0	Impact on Sensitive Human Receptors <ul style="list-style-type: none"> Residences within 300m. Development would likely require appropriate mitigation (such as visual and noise attenuation bunding, standoffs) to limit impacts. 	<ul style="list-style-type: none"> Provision of appropriate mitigation, following assessment of likely impacts. Restoration to improve landscape of site where possible; and to seek to facilitate public access. Screening, bunding, standoffs will mitigate impacts.
	-	0	Impact on Existing Settlements <ul style="list-style-type: none"> Wareham is the closest settlement, to the east of the site and approximately 450m at its closest. Screening (visual and noise attenuation bunding) would significantly limit the impact of the site working. 	
	0	0	Impact on Airport Safety <ul style="list-style-type: none"> Site is approximately 22 km from airport and proposed for dry working and restoration. No impacts expected 	<ul style="list-style-type: none"> No action required.
18. To enable safe access to countryside and open spaces.	0	+	Impact on Recreational Land <ul style="list-style-type: none"> Site is currently agricultural land and does not contain any recreational use, either formal or informal. No impacts expected 	<ul style="list-style-type: none"> No action required prior to working. Possible impacts to be assessed, with appropriate mitigation identified. Restoration has potential to improve public access in the area, possibly through allowing the footpath to be moved to the other side of the hedge, out of the road.
	-	+	Impact on Public Rights of Way <ul style="list-style-type: none"> Footpath runs adjacent to the northern edge of the site. It runs in the road, hedge offers some screening. Further mitigation may be required. 	

Preliminary Hydrological Risk Assessment

Controlled Waters	Issues/Risks	Mitigation	Further information/approval required
<ul style="list-style-type: none"> • Watercourses • Ponds/lakes, including wet habitats • Groundwater 	<ul style="list-style-type: none"> • The River Basin Management Plan South West River Basin District identifies the Piddle as being of 'Poor' environmental quality. Potential for contamination from runoff from site. • Potential for contamination of controlled waters through spillage or seepage of pollutants such as fuel, or silt in water. • Contamination of water supplies or reduction in amount of water available for licenses supplies. • Impacts on or removal of surface water features. 	<ul style="list-style-type: none"> • Appropriate arrangements to be made for ensuring that runoff from the site does not enter the Piddle or groundwater unless any silt has first been removed. • Fuel stored on site to be appropriately banded and sealed to prevent any spillage from entering ground or surface waters. • On-going monitoring during development and working of the site. • Relocation of surface water features, provided this is feasible. 	<ul style="list-style-type: none"> • Full hydrogeological risk assessment will be required as part of a planning application. • Flood Risk Assessment • Water Framework Assessment • Further assessment of potential impacts on water quality and levels, particularly for groundwater, is required prior to development. • Assessment of the feasibility of relocating surface water features and associated habitats and species. • Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.

Cumulative Impacts

There is other mineral working in the vicinity, both existing and proposed as well as waste management. The proposed site is an extension to existing mineral working/waste disposal.

The proposal is within 5Km (by road) of a site allocated in the Purbeck Local Plan Part 1 (adopted Nov 2012) (Policy CEN) for development of 200 dwellings and community facilities, off Worgret Road, Wareham. Traffic arising from the new residential development will also add to general traffic levels in / around Wareham.

As Tatchells is not currently operational, developing this site would result in new traffic generation and cumulative impacts. It is expected that these can be satisfactorily mitigated.

Summary.

Key impacts and benefits are expected to include, but are not necessarily limited to, the following.

Potential Benefits	Potential Impacts
<ul style="list-style-type: none">• Provision of aggregates required for maintenance and construction of the built environment, with accompanying benefits to the economy.• Restoration could contribute to improved countryside access.• Provision of employment, to the benefit of local economy.• Improved public access may be possible as a part of site restoration. This could lead to reduced visitor pressure on designated heathland sites in the vicinity.• Nature conservation benefits may be achieved as part of restoration.• Restoration has the potential to improve public access, moving the existing footpath adjacent to the site out of the road and onto the site.	<ul style="list-style-type: none">• Possible impacts on archaeology – to be fully assessed and not expected to restrict development. All necessary mitigation to be implemented.• The site will be accessed by road. A transport assessment will be required.• Site is agricultural land, and development will have an impact on this use. It is expected that the site can be restored to an agricultural use.

Overall Recommendation:

This is a small and relatively uncontentious site with limited impacts, which are expected to be capable of mitigation.

Further assessment will be required to gain a better understanding of what the impacts might be and how best to mitigate. Should this site ultimately be developed, it is expected that detailed assessment of impacts and required mitigation will be covered through the required Environmental Impact Assessment.

On balance, it appears reasonable on the basis of evidence available that the impacts identified in this sustainability appraisal are capable of satisfactory mitigation and the site nomination can reasonably be included in the Draft Bournemouth, Dorset and Poole Mineral Sites Plan.

Aggregates: AS19 Woodsford NE Extension

Site Name/Location: AS19 Woodsford NE Extension		Nominee/Agent: Woodsford Farms / D K Symes
Mineral Type: Sand and gravel		Local Authority: West Dorset District Council
Site Area: approximately 90 ha	Production: 200,000 – 250,000 tpa;	Reserve: approximately 2.1 mt

Impact Assessment Scoring

--	Strong Negative Impact	-	Minor Negative Impact	+	Minor Positive Impact	++	Strong Positive Impact	0	Negligible or No Effect	?	Uncertain
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Timescales for effects:

P/W: Preparation and Working

R/A: Restoration and Afteruse

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
1. To move waste management up the waste hierarchy	N/A	N/A	<ul style="list-style-type: none"> This Objective is not relevant to this site nomination 	<ul style="list-style-type: none"> N/A
2. To maintain, conserve and enhance biodiversity	++	+	<p>European/International Designations</p> <ul style="list-style-type: none"> The permanent change from intensive agriculture to mineral extraction restored to extensive grassland and water bodies would be likely to result in a significant reduction in nitrate levels in receiving waters of the R. Frome, groundwater and Poole Harbour (SPA and Ramsar). If this can be secured there would be strategic nature conservation gain. In addition, reduction in intensive agricultural management of the fields between the proposed extraction area and the R. Frome would be an additional significant gain, preventing more direct runoff of fertiliser into the river and onward to Poole Harbour. These benefits will be realised from the time that the fields are taken out of agricultural production. 	<ul style="list-style-type: none"> Minimise the area returned to intensive agriculture after working and maintain an area of land between the proposed site and the Frome as non-agricultural use land.
	0	0	<p>Annex 1 Bird Species</p> <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.
	++	+	<p>National Designations</p> <ul style="list-style-type: none"> Comments made under European/International designations (above) apply to national designations as well 	<ul style="list-style-type: none"> Minimise the area returned to intensive agriculture after working and maintain the fields between site and Frome as non-agricultural use land.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	0	0	Protected species <ul style="list-style-type: none"> Water voles and other protected species (including otter) may be present in watercourses contained within the proposed site. If they are present, mitigation should not be difficult. 	<ul style="list-style-type: none"> Ecological surveys required, with appropriate mitigation identified.
	0	0	Local recognitions/designations, including ancient woodland and veteran trees <ul style="list-style-type: none"> No impacts expected 	<ul style="list-style-type: none"> No action required.
3. To maintain, conserve and enhance geodiversity.	+	0	<ul style="list-style-type: none"> Exposures resulting from working may be of interest. Benefits are only expected during working, and are likely to be obscured or covered as part of restoration. 	<ul style="list-style-type: none"> Operator to be asked to permit visits to view exposures as required.
4. To maintain, conserve and enhance the quality of ground, surface and sea waters and manage the consumption of water in a sustainable way.	++	+	Groundwater <ul style="list-style-type: none"> Site is within 250 m of licensed water supplies. Overlies secondary aquifer, but does not affect any Source Protection Zone. Assessment required to determine possible impacts on hydrogeology. Impacts to be appropriately mitigated. Proposal will reduce nitrate contamination of groundwater from agricultural fertiliser. 	<ul style="list-style-type: none"> Hydrological assessment required to determine possible impacts, on ground and surface waters, with appropriate mitigation to be implemented. Where necessary mitigating measures should be installed to maintain groundwater levels. Appropriate arrangements should be put in place to ensure that the water leaving the site and entering the rivers/watercourses is of an acceptable quality. Any fuel on site should be properly stored to avoid contamination in case of spillage. Appropriate arrangements should be installed for surface water and silt collection and fuel storage to prevent contamination of groundwater resources. Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.
	++	+	Surface Water <ul style="list-style-type: none"> River Frome runs north of the site boundary, and there are many other watercourses within and near the site. Restoration proposals should incorporate gain of wetland features which will contribute to the aspirations of the England Biodiversity Strategy. Ensure no impacts from this development and no increased sedimentation. Proposal will reduce nitrate contamination of surface water from agricultural fertiliser. 	

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
5. To reduce flood risk and improve flood management.	0	0	Flooding/Coastal Stability <ul style="list-style-type: none"> Small area of northern part of the site is within FRZ 2/3, most of site within FRZ 1. Site is proposed for sand and gravel extraction, which is permitted within the functional floodplain. Processing plant far removed and on FRZ 1. 	<ul style="list-style-type: none"> Flood Risk Assessment (FRA) will be required. All necessary mitigation to be implemented.
6. To maintain, conserve and enhance the historic environment (including archaeological sites, historic buildings, conservation areas, historic parks and gardens and other locally distinctive features and their settings).	?	0	Archaeology <ul style="list-style-type: none"> Significant prehistoric and Roman material has been found in the vicinity. Possible medieval/prehistoric settlement in western part of site. Frome Bridge, which is protected as a Scheduled Monument, lies to the north-west. There is potential for surviving earthworks and structures associated with the management of watermeadow systems. The presence of below-ground archaeological remains and the other features mentioned above needs to be assessed and evaluated before an informed planning decision could be made. Only when these have been undertaken would the archaeological impact be understood – at present it could be anywhere from Very Significant to No Significant impact. 	<ul style="list-style-type: none"> Full archaeological survey of the area required to assess possible presence and significance of non-designated remains and to assess whether/how these should be protected during working. All necessary mitigation to be implemented. Adequate provision to be made for preservation, excavation or recording, as appropriate. Further consideration to be given to restoration proposals, in terms of historic landscapes.
	?	0	Historic Landscapes <ul style="list-style-type: none"> The site lies in the broad lower section of the valley of the river Frome. Historically some of the land here was heathland, other parts being wooded and under arable cultivation. On the flat lands close to the river itself, extensive systems of watermeadows were constructed from the 18th century onwards. The impact on the watermeadow systems in particular needs to be assessed and evaluated, as noted above. Only when this has happened would the impact on the historic landscape be understood. The Hardy associations of this landscape are discussed below. 	
	0	0	Historic Buildings <ul style="list-style-type: none"> A cluster of listed buildings, all Grade II, are located to the west of the proposed site. However it is considered that the field located between the historic buildings and the site will create a buffer sufficient that there will be no impact from site to the buildings. The restoration proposals are sufficient to conform with the literary associations of this part of Dorset, in particular the Valley of the Dairies character created by Thomas Hardy. If the management of the water meadow land 	

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			alongside the river can be appropriately managed and enhanced this will enhance the historic environment of this proposal.	
7. To maintain, conserve and enhance the landscape, including townscape, seascape and the coast.	-	0	<p>Landscape Capacity</p> <ul style="list-style-type: none"> The landscape is open and agricultural in character and development has the potential to impact on the openness of this landscape. Existing and new hedgerows and blocks of woodland provide an element of natural screening which would assist in the mitigation of any quarry development. 	<ul style="list-style-type: none"> Assessment of potential visual impacts required and all appropriate mitigation to be included. Restoration could include increasing public access/informal recreation and including appropriate nature conservation interests. Advance planting to be carried out to prepare site for working.
	0	0	<p>Designated Landscapes</p> <ul style="list-style-type: none"> No significant impact expected. 	<ul style="list-style-type: none"> No action required.
8. To protect and improve air quality and reduce the impacts of noise.	0	0	<ul style="list-style-type: none"> Impacts on air quality expected to be negligible. No AQMAs will be affected by the working of this site proposal. Any dust resulting from working will be controlled through normal dust-suppression measures. Noise mitigation will be addressed at the planning application stage, with appropriate mitigation to be included in the development of the site. 	<ul style="list-style-type: none"> Environmental protection measures to reduce dust and ensure noise is appropriately mitigated.
9. To maintain, conserve and enhance soil quality.	-	0	<ul style="list-style-type: none"> Site contains/comprises very good quality agricultural land. Working the site will have impacts on this soil. Restoration will return the land to original ground levels, and will restore the quality of the land. 	<ul style="list-style-type: none"> Soil to be properly stripped and stored prior to working; protected during working; and re-spread on site after working. Restoration to include high quality agricultural land.
10. To conserve and safeguard mineral resources.	++	0	<ul style="list-style-type: none"> The site would make an important contribution to aggregate supply in Bournemouth, Dorset and Poole. 	<ul style="list-style-type: none"> No specific action required; site development to take into consideration relevant impacts and mitigate where appropriate.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
11. To promote the use of alternative materials.	-	0	<ul style="list-style-type: none"> This proposal does not at present promote the use of alternative materials. It is possible that treated inert waste will be used in restoration of the site, but this will not directly promote the use of alternative materials. 	<ul style="list-style-type: none"> No action required.
12. To provide an adequate and affordable supply of minerals to meet society's needs.	+	0	<ul style="list-style-type: none"> Development of this site would provide a benefit in terms of contributing to the provision of a supply of minerals to meet society's needs. Ensuring a sustainable supply will depend on the development and management of the site. Providing site development takes into account relevant principles of sustainable development it is expected this will contribute to complying with this objective. 	<ul style="list-style-type: none"> Ensure principles of sustainable development are incorporated into the development of this site.
13. To promote and encourage sustainable economic growth	+	0	<ul style="list-style-type: none"> This site proposal is expected to contribute to economic development on two levels – directly through the provision of employment at the site to be developed and indirectly through the provision of aggregate minerals required for the maintenance of built environment and for new built development. Both levels are expected to maintain employment, skilled and unskilled. Restoration to agriculture with some element of public access will, if achieved, offer some economic benefits through both the agriculture and the recreational attraction and use in the wider area (i.e. riding, walking). 	<ul style="list-style-type: none"> Further assessment required to form a view as to what the most appropriate restoration could be.
14. To adapt to and mitigate the impacts of climate change.	-	0	<ul style="list-style-type: none"> Developing the site as a quarry is expected to have some negative impacts regarding climate change, due primarily to machinery used and transportation of mineral away from site. However, these will in relative terms be negligible. The Bournemouth, Dorset and Poole Minerals Strategy seeks to address and minimise such impacts through Policy CC1 which requires operators to take into consideration climate change impacts and their possible mitigation for any proposed minerals development. The development management policies, e.g. DM 1, also address and seek to minimise the issue of sustainable development and climate change. Restoration to some form of vegetated environment will offer benefits in the form of climate change mitigation, including provision of habitat for wildlife, but again these will be relatively small. 	<ul style="list-style-type: none"> Use energy efficient plant and machinery. Implement restoration which provides appropriate habitats to help to increase resilience of flora/fauna.
15. To minimise the negative impacts of	0	0	<ul style="list-style-type: none"> This is a large site of approximately 90 hectares located to the north of the C33 road through Woodsford. While no estimation of vehicular trips 	<ul style="list-style-type: none"> Transport Assessment to be carried out, identifying

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
waste and minerals transport on the transport network, mitigating any residual impacts.			<p>were given, the estimated annual output of 200,000 to 250,000 tonnes could reasonably generate 100 trips or more per day.</p> <ul style="list-style-type: none"> The surrounding highway network is narrow and torturous in nature with few passing areas and limited forward visibility. There would be likely to be a strong highway objection to this scheme if it proposed to use any of these local roads. However, mineral extracted will be conveyed to the existing Hills' site, with access immediately west of the level crossing on the D21322. This site would require a full Transport Assessment were it to be submitted as a planning application. Any TA should initially be scoped with the Transport Development Management Team. It would also need to consider the Highways Agency concerns with regards to movements to the A35T. Policies DM1 and DM 8 actively address this issue of minimising impacts on the transportation network. 	<p>opportunities for reducing impacts on the transport network.</p> <ul style="list-style-type: none"> Mineral to be conveyed by internal haul routes or conveyors to existing Hills plant site for processing and export.
16. To support and encourage the use of sustainable transport modes, imposing no unmitigated negative impacts on them.	-	0	<ul style="list-style-type: none"> The proposed extension can only realistically be accessed by means of road transport, resulting in a negative impact during development and working. However, the site may utilise internal conveyors to transport mineral for processing. As far as reasonably possible negative impacts resulting from access and transport will be mitigated, as required by Policies DM1 and DM8 of the Minerals Strategy. 	<ul style="list-style-type: none"> Mitigate impacts where identified and appropriate.
17. To sustain the health and quality of life of the population	-	0	<p>Impact on Sensitive Human Receptors</p> <ul style="list-style-type: none"> Residences and businesses within 250-500m. The site is large enough that it should be possible to screen these residences satisfactorily. Development would likely require appropriate mitigation (such as visual and noise attenuation bunding, standoffs) to limit impacts. 	<ul style="list-style-type: none"> Provision of appropriate mitigation, following assessment of likely impacts. Restoration to improve landscape of site where possible; and to seek to increase public access. Screening, bunding, standoffs will mitigate impacts to some extent. Cumulative impacts on surroundings of working along with the adjacent Hurst Farm proposed site to be
	0	0	<p>Impact on Existing Settlements</p> <ul style="list-style-type: none"> Crossways is approximately 1.3km to the south and Higher Woodsford some 900m. East Woodsford is within 500m to the east, Tincleton some 700m to the north. Site is well screened by existing hedges/trees. The site is large enough that where necessary it should be possible to screen any negative impacts satisfactorily, using mitigation such as visual and noise attenuation bunds. 	

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			<ul style="list-style-type: none"> Site is relatively isolated and unlikely to impact any of these sites visually or through increased traffic. 	taken into consideration and mitigated against.
	0	0	Impact on Airport Safety <ul style="list-style-type: none"> The site is some 35 km from the airport and not considered to be a threat. 	<ul style="list-style-type: none"> No action required.
18. To enable safe access to countryside and open spaces.	0	0	Impact on Recreational Land <ul style="list-style-type: none"> Site is agricultural land – it does not include any formal/informal recreational land, apart from footpath crossing it. Restoration could include some aspect of improved public access. 	<ul style="list-style-type: none"> No action required for working. Consider including some aspect of public access as part of restoration.
		+		
	-	0	Impact on Public Rights of Way <ul style="list-style-type: none"> Footpath crosses the site and will need temporary/permanent diversion. Opportunities for increased public access following restoration, to be considered. 	<ul style="list-style-type: none"> Assessment of impacts, with appropriate mitigation identified. Restoration to improve public access in the area.
		+		

Preliminary Hydrological Risk Assessment

Controlled Waters	Issues/Risks	Mitigation	Further information/approval required
<ul style="list-style-type: none"> • Watercourses • Ponds/lakes, including wet habitats • Groundwater 	<ul style="list-style-type: none"> • The River Basin Management Plan South West River Basin District identifies the Frome as being of 'Poor' environmental quality in this area. Potential for contamination from runoff from site. • Potential for contamination of controlled waters through spillage or seepage of pollutants such as fuel, or silt in water. • Contamination of water supplies or reduction in amount of water available for licenses supplies. • Impacts on or removal of surface water features. 	<ul style="list-style-type: none"> • Appropriate arrangements to be made for ensuring that runoff from the site does not enter the Frome or groundwater unless any silt has first been removed. • Fuel stored on site to be appropriately bunded and sealed to prevent any spillage from entering ground or surface waters. • On-going monitoring during development and working of the site. • Relocation of surface water features, provided this is feasible. • Need to consider compliance to the Restoration Plan for the River Frome and its floodplain. 	<ul style="list-style-type: none"> • Full hydrogeological risk assessment will be required as part of a planning application. • Flood Risk Assessment • Water Framework Assessment • Further assessment of potential impacts on water quality and levels, particularly for groundwater, is required prior to development. • Assessment of the feasibility of relocating or re-creating surface water features and associated habitats and species. • Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.

Cumulative Impacts

The site is an extension to a current aggregates quarry, in an area where there is other aggregate working both existing and proposed. As an extension, no intensification leading to cumulative impacts is expected.

The proposal is within 5Km of a site to the south of Crossways village allocated in the Pre -Submission draft West Dorset, Weymouth and Portland Local Plan (June 2012) as amended by Proposed Modifications (June 2013), (Policy CRS1) for residential (500 dwellings) and employment (3.5Ha) development. Traffic arising from this new development will add to general traffic levels on the B3390.

This site is immediately adjacent to (west of) another sand and gravel site nomination, AS25 Hurst Farm, Moreton. In terms of access there are unlikely to be cumulative impacts as the two sites would be accessed via different roads. Hurst Farm would add some additional traffic onto the B3390.

The main cumulative impact would occur if this site proposal was to be worked simultaneously with the proposed Woodsford Extension, immediately to the west. This could lead to disturbance to properties on the north side of the Frome. The working of these sites will be phased to ensure that they do not work in adjacent areas simultaneously. The northern boundary of the site will be pulled back to provide a greater buffer.

The existing Warmwell Quarry, to the west of Crossways, is due to finish production in 1-2 years. When this happens the level of quarry traffic on local roads will be reduced.

Summary.

Potential Benefits	Potential Impacts
<ul style="list-style-type: none"> • Provision of aggregates required for maintenance and construction of the built environment. • Restoration could include some increased and improved public access. • Working the site will provide significant benefits to nature conservation, ground and surface water and European and national nature conservation designations, through removing then limiting the flow of nitrates into ground and surface waters. • Restoration could include nature conservation benefits through management of the northern part of the site as wetland and reducing the land under intensive agriculture. 	<ul style="list-style-type: none"> • There may be heritage/archaeological impacts but it is expected, particularly given the size of the site, that these can be satisfactorily mitigated. • Possible impacts on the carrying capacity of the landscape, advanced planting should address this issue. • The land is good quality agricultural land. Working the site for minerals will impact on this use and on the soil on the site. However the soils can be adequately protected and together with the agricultural use, restored or partly restored after working. • Although relatively remote and mostly visually screened, working this site could have visual and noise impacts for properties/businesses to the north of the site, on the other side of the river. All appropriate mitigation to be put in place to minimise such impacts. • A relatively small section of footpath crosses the western part of the site – this can be either temporarily or permanently diverted or screened and avoided. • As an extension, site is not expected to cause intensification of impacts but will increase the time period that impacts are experienced e.g. transport impacts.

Overall Recommendation:

This site is an extension of an existing quarry. No intensification of working is expected and any likely impacts are expected to be capable of mitigation. Site access and mineral processing will be via the existing operation. The proposal offers the strong benefit of reducing the flow of agricultural fertilisers into the groundwater, the Frome and ultimately into Poole Harbour. Depending on the final restoration of the site, nitrate flow could be reduced permanently.

Although well screened, it is possible that when the northern part of this site is worked there could be impacts on the amenity of residences/businesses across the river. To avoid this, mitigation will be required, including pulling the northern boundary of the site back. In addition, phasing of the working of this site and of the proposed site to the east, AS26 Hurst Farm, will be arranged in such a way that the northern sections of the two sites are not being worked adjacently and simultaneously.

The issue of cumulative impact must be carefully addressed. The proposed site is immediately adjacent to the proposed Hurst Farm site and adjacent areas of these two sites should not be worked simultaneously, particularly in the northern parts of each site, to minimise impacts on residences and businesses across the river.

Pulling the northern boundary back and leaving an area of unworked land to be managed as wetland will both assist in reducing nitrate flows to the river and reducing impacts on surrounding receptors.

On balance, it appears reasonable on the basis of evidence available that the impacts identified in this sustainability appraisal are capable of satisfactory mitigation and the site nomination can reasonably be included in the Draft Bournemouth, Dorset and Poole Mineral Sites Plan.

Aggregates: AS22 Trigon Hill Extension

Site Name/Location: AS22 Trigon Hill Extension		Nominee/Agent: Imerys	
Mineral Type: Sand/Gravel (overlying Ball Clay)		Local Authority: Purbeck District Council	
Site Area: approximately 27 ha	Production: up to 50,000 tpa;	Reserve: approximately 260,000 tonnes	

Impact Assessment Scoring

--	Strong Negative Impact	-	Minor Negative Impact	+	Minor Positive Impact	++	Strong Positive Impact	0	Negligible or No Effect	?	Uncertain
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Timescales for effects:

P/W: Preparation and Working

R/A: Restoration and Afteruse

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
1. To move waste management up the waste hierarchy	N/A	N/A	<ul style="list-style-type: none"> This Objective is not relevant to this site nomination 	<ul style="list-style-type: none"> N/A
2. To maintain, conserve and enhance biodiversity	?	0	<p>European/International Designations</p> <ul style="list-style-type: none"> Proposed area lies just to the south of an area of European heathland. At this stage, without detailed analysis of possible impacts, it is not clear whether there would be any likely significant effect of mineral working on the designated area. In order to be acceptable the development proposal would have to pass the tests in the Habitats Regulations. In principle it should be possible to avoid effects on the designated sites through an appropriate stand-off from the development. 	<ul style="list-style-type: none"> Ecological surveys and hydrological reports required, with appropriate mitigation. Appropriate assessment under the Habitat Regulations will be required. Heathland restoration and public access to be created.
	?	0	<p>Annex 1 Bird Species</p> <ul style="list-style-type: none"> Area could support Annex 1 birds as part of the existing forestry crop rotation. Clearance of trees would be likely to result in heathland regeneration and the open habitat would rapidly become suitable for more Annex 1 birds. The site has the potential to be included in a revision to the heathland SPA boundary. Risk based approach essential here. 	<ul style="list-style-type: none"> Ecological surveys and hydrological reports required, with appropriate mitigation. Appropriate assessment under the Habitat Regulations will be required. Heathland restoration and public access to be created.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	?	0	<p>National Designations</p> <ul style="list-style-type: none"> Proposed area lies just to the south of an area of Morden Bog and Hyde Heath SSSI. At this stage, without detailed analysis of possible impacts, it is not clear whether there would be any likely significant effect of mineral working on the designated area. In principle it should be possible to avoid effects on the designated sites through an appropriate stand-off from the development. 	<ul style="list-style-type: none"> Ecological surveys required, with appropriate mitigation. Restoration to include creation of invertebrate habitat.
	?	0	<p>Protected species</p> <ul style="list-style-type: none"> There are numerous bat records from Trigon Hill Plantation suggesting the plantation or trees in the area may provide important roosting habitats; assessment will be required to understand the implications of removal of the plantation on bats. A large badger sett is also known in the plantation and the effects of working on this species would also require assessment. It is difficult to assess whether mitigation on bats or badger would be acceptable without detailed study on population sizes and locations. 	<ul style="list-style-type: none"> Ecological surveys required, with appropriate mitigation identified. Restoration to include appropriate habitats for these species. Further investigation into likelihood of grant of disturbance licences.
	0	0	<p>Local recognitions/designations, including ancient woodland and veteran trees</p> <ul style="list-style-type: none"> No likely effects identified. 	<ul style="list-style-type: none"> No action required.
3. To maintain, conserve and enhance geodiversity.	+	0	<ul style="list-style-type: none"> Exposures resulting from working may be of interest. Benefits are only expected during working, and are likely to be obscured or covered as part of restoration. 	<ul style="list-style-type: none"> Operator to be asked to permit visits to view exposures as required.
4. To maintain, conserve and enhance the quality of ground, surface and sea waters and manage the consumption of water in a sustainable way.	?	0	<p>Groundwater</p> <ul style="list-style-type: none"> No impact on any Source Protection Zones. Site overlies a Secondary Aquifer. Possible implications of adjacent landfill, including leachate migration to be considered/assessed. Assessment required to determine possible impacts on hydrogeology. Impacts to be appropriately mitigated 	<ul style="list-style-type: none"> Hydrological assessment required to determine possible impacts, on ground and surface waters, with appropriate mitigation to be implemented. Where necessary mitigating measures should be installed to maintain groundwater levels. Appropriate arrangements should be put in place to ensure that the water leaving the site and entering the rivers/watercourses is of an acceptable quality. Any fuel on site should be properly stored to avoid contamination in case of
	-	0	<p>Surface Water</p> <ul style="list-style-type: none"> Watercourse within the site boundary. There appears to be a pond close to the northern edge of the site and other ponds in vicinity. Assessment required to determine 	

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			possible impacts on hydrogeology. Impacts to be appropriately mitigated	<p>spillage.</p> <ul style="list-style-type: none"> Appropriate arrangements should be installed for surface water and silt collection and fuel storage to prevent contamination of groundwater resources. Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.
5. To reduce flood risk and improve flood management.	0	0	<p>Flooding/Coastal Stability</p> <ul style="list-style-type: none"> Entire site is within Flood Risk Zone 1, no expected risk of flooding or contributing to flooding. 	<ul style="list-style-type: none"> Flood Risk Assessment (FRA) will be required. All necessary mitigation to be implemented.
6. To maintain, conserve and enhance the historic environment (including archaeological sites, historic buildings, conservation areas, historic parks and gardens and other locally distinctive features and their settings).	?	0	<p>Archaeology</p> <ul style="list-style-type: none"> The number of prehistoric barrows in the area in particular indicates that the site has archaeological potential. Archaeological assessment and evaluation is required. Only when these have been undertaken would the archaeological impact be understood – at present it could be anywhere from Very Significant to No Significant impact. 	<ul style="list-style-type: none"> Full archaeological survey of the area required to assess possible presence and significance of non-designated remains and to assess whether/how these should be protected during working. All necessary mitigation to be implemented. Adequate provision to be made for preservation, excavation or recording, as appropriate. Further consideration to be given to restoration proposals, in terms of historic landscapes.
	?	0	<p>Historic Landscapes</p> <ul style="list-style-type: none"> Historically much or all of this site would have been heathland. This heathland formed part of the setting of the barrows in the area. Unsympathetic extraction and quarrying could have a negative impact on the setting of these Monuments, but there is the potential for an improvement in that setting through restoration to heathland. Further evaluation will be required. When this has been undertaken possible impacts, if any, will be better understood. 	
	0	0	<p>Historic Buildings</p> <ul style="list-style-type: none"> Belts of trees separate Trigon House, which is the nearest listed building to the site. Therefore the site has negligible impact on the listed buildings. 	

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
7. To maintain, conserve and enhance the landscape, including townscape, seascape and the coast.	-	0	<p>Landscape Capacity</p> <ul style="list-style-type: none"> Potential to impact adversely on the open access land to the west and north west. Due to its position on the west slopes of the hillside its sensitivity is increased and its capacity to absorb development is significantly reduced. 	<ul style="list-style-type: none"> Assessment of potential visual impacts required. All appropriate mitigation to be included. Restoration to consider increasing public access/informal recreation and to include nature conservation interests. Appropriate restoration proposals in line with Landscape Management Guidelines referred to in Minerals Strategy.
	--			
8. To protect and improve air quality and reduce the impacts of noise.	0	0	<ul style="list-style-type: none"> Impacts on air quality expected to be negligible. No AQMAs will be affected by the working of this site proposal. Any dust resulting from working will be controlled through normal dust-suppression measures. Noise mitigation will be addressed at the planning application stage, with appropriate mitigation to be included in the development of the site. 	<ul style="list-style-type: none"> Environmental protection measures to reduce dust and ensure noise is appropriately mitigated.
9. To maintain, conserve and enhance soil quality.	-	0	<ul style="list-style-type: none"> The site comprises primarily heathland, grassland and woodland cover. The area is a former heathland area and so would be expected to have relatively poor, acidic soils. Site preparation/working would require stripping and storage of the soils, with some impacts on them. If the site is worked and restored to heathland this will require reinstatement/retention of acidic soils with their seedbank. 	<ul style="list-style-type: none"> Soil is poor quality in agricultural terms but valuable in terms of potential for heathland restoration. Soils to be stored/protected during preparation and working and properly reinstated during restoration.
10. To conserve and safeguard mineral resources.	+	0	<ul style="list-style-type: none"> The site would make an important contribution to aggregate supply in Bournemouth, Dorset and Poole. 	<ul style="list-style-type: none"> No specific action required; site development to take into consideration relevant impacts and mitigate where appropriate.
11. To promote the use of alternative materials.	-	0	<ul style="list-style-type: none"> This proposal does not at present promote the use of alternative materials. 	<ul style="list-style-type: none"> No action required.
12. To provide an adequate and	+	0	<ul style="list-style-type: none"> Development of this site would provide a benefit in terms of contributing to the provision of a supply of 	<ul style="list-style-type: none"> Ensure principles of sustainable

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
affordable supply of minerals to meet society's needs.			<p>minerals to meet society's needs.</p> <ul style="list-style-type: none"> Ensuring a sustainable supply will depend on the development and management of the site. Providing site development takes into account relevant principles of sustainable development it is expected this will contribute to complying with this objective. 	development are incorporated into the development of this site.
13. To promote and encourage sustainable economic growth	+	0	<ul style="list-style-type: none"> This site proposal is expected to contribute to economic development on two levels – directly through the provision of employment at the site to be developed and indirectly through the provision of ball clay and aggregate minerals required for the maintenance of built environment and for new built development and for commercial/industrial uses. Both levels are expected to maintain employment, skilled and unskilled. However given the expected size of the reserve this is likely to be a limited benefit. Proposed restoration is to heathland/agriculture, both of which offer economic benefits. 	<ul style="list-style-type: none"> Further assessment required to consider restoration options.
14. To adapt to and mitigate the impacts of climate change.	-	0	<ul style="list-style-type: none"> Developing land as a quarry is expected to have some negative impacts regarding climate change, due primarily to machinery used and transportation of mineral away from site. However, these will in relative terms be negligible. The Bournemouth, Dorset and Poole Minerals Strategy seeks to address and minimise such impacts through Policy CC1 which requires operators to take into consideration climate change impacts and their possible mitigation for any proposed minerals development. The development management policies, e.g. DM 1, also address and seek to minimise the issue of sustainable development and climate change. Restoration to some form of vegetated environment will offer benefits in the form of climate change mitigation, including provision of habitat for wildlife, but again these will be relatively small. 	<ul style="list-style-type: none"> Use energy efficient plant and machinery. Implement restoration which provides appropriate habitats to help to increase resilience of flora/fauna.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
15. To minimise the negative impacts of waste and minerals transport on the transport network, mitigating any residual impacts.	–	0	<ul style="list-style-type: none"> This proposal is for an extension to existing extraction at Trigon Hill. This is an established site with a good access onto Wareham Forest Road. Access from here to the strategic network is gained via the A35 to the north and the A351 to the east. The extension site is estimated to generate 20 trips per day although it is thought that the site would follow the cessation of other extraction at Trigon rather than operating in parallel to it. The site has therefore been given a ‘Less Significant Adverse Impact’ rating. Should the site intensify movements to Trigon Hill any Transport Statement should consider vehicle routing and any impact on the A351 to the east which experiences high levels of congestion. Policies DM1 and DM 8 actively address this issue of minimising impacts on the transportation network. 	<ul style="list-style-type: none"> Any proposal for this site would need to be accompanied by a Transport Assessment which will need to provide access details and consider vehicle routing. The TA should be scoped with the Transport Development Management Team. Transport Assessment to be carried out, identifying opportunities for reducing impacts on the transport network.
16. To support and encourage the use of sustainable transport modes, imposing no unmitigated negative impacts on them.	–	0	<ul style="list-style-type: none"> The proposed extension can only realistically be accessed by means of road transport, resulting in a negative impact under this Objective during development and working. As far as reasonably possible negative impacts resulting from access and transport will be mitigated, as required by Policies DM1 and DM8 of the Minerals Strategy. 	<ul style="list-style-type: none"> Mitigate impacts where identified and appropriate.
17. To sustain the health and quality of life of the population	?	0	<p>Impact on Sensitive Human Receptors</p> <ul style="list-style-type: none"> Cold Harbour properties some 380 m to the east, other residential uses further to the north. Development will require appropriate mitigation (such as visual and noise attenuation bunding, standoffs) to limit impacts. Adequate scope to screen works, using mitigation such as visual and noise attenuation bunds. 	<ul style="list-style-type: none"> Provision of appropriate mitigation, following assessment of likely impacts. Restoration to improve landscape of site where possible; and to seek to increase public

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	?	0	Impact on Existing Settlements <ul style="list-style-type: none"> • Cold Harbour is closest settlement to the east along with other properties along the C7. • Screening (visual and noise attenuation bunding) would significantly limit the impact of the site working, but there will be impacts of lorries entering/leaving the site. This is an extension and should not result in intensification of any impacts. 	access. <ul style="list-style-type: none"> • Transport Assessment to be carried out, identifying opportunities for reducing impacts on the transport network where appropriate.
	0	0	Impact on Airport Safety <ul style="list-style-type: none"> • Site is approximately 23 km from airport and proposed for dry working and restoration. • No impacts expected 	<ul style="list-style-type: none"> • No action required.
18. To enable safe access to countryside and open spaces.	0	?	Impact on Recreational Land <ul style="list-style-type: none"> • Site is agricultural land and forestry, private land with no public access. No formal or informal recreational use. • No impacts expected. Restoration to consider options for improving public access in the area. 	<ul style="list-style-type: none"> • No action required for working. • Restoration to improve public access in the area.
		+		
	0	0	Impact on Public Rights of Way <ul style="list-style-type: none"> • No rights of way across the site or adjacent to it. • No impacts expected 	

Preliminary Hydrological Risk Assessment

Controlled Waters	Issues/Risks	Mitigation	Further information/approval required
<ul style="list-style-type: none"> • Watercourses • Ponds/lakes, including wet habitats • Groundwater 	<ul style="list-style-type: none"> • The River Basin Management Plan South West River Basin District identifies the Piddle (the closest main river, some 900m distant) as being of 'Poor' environmental quality. Potential for contamination from runoff from site. • Potential for contamination of controlled waters through spillage or seepage of pollutants such as fuel, or silt in water. • Potential impacts on existing surface water features. 	<ul style="list-style-type: none"> • Appropriate arrangements to be made for ensuring that runoff from the site does not enter the Piddle or groundwater unless any silt has first been removed. • Fuel stored on site to be appropriately bunded and sealed to prevent any spillage from entering ground or surface waters. • On-going monitoring during development and working of the site. • Ground water recharge if considered necessary. 	<ul style="list-style-type: none"> • Full hydrogeological risk assessment will be required as part of a planning application. • Flood Risk Assessment • Water Framework Assessment • Further assessment of potential impacts on water quality and levels, particularly for groundwater, is required prior to development. • Assessment of the feasibility of relocating or re-creating surface water features and associated habitats and species. • Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.

Cumulative Impacts

There is other mineral working in the vicinity, both existing and proposed as well as waste management. The proposed site is an extension to existing mineral working/waste disposal. As an extension site, there will be no cumulative impact but this would represent an extension of time of working.

The proposal is within 5Km (by road) of a site allocated in the Purbeck Local Plan Part 1 (adopted Nov 2012) (Policy GEN) for development of 200 dwellings and community facilities, off Worgret Road, Wareham. Traffic arising from the new residential development will also add to general traffic levels in / around Wareham.

Summary.

Key impacts and benefits are expected to include, but are not necessarily limited to, the following.

Potential Benefits	Potential Impacts
<ul style="list-style-type: none"> • Provision of aggregates required for maintenance and construction of the built environment, with accompanying benefits to the economy. • Restoration could contribute to improved countryside access. • Provision of employment, to the benefit of local economy. • Improved public access to be considered as a part of site restoration. This could lead to reduced visitor pressure on designated heathland sites in the vicinity. • Nature conservation benefits to be considered as part of restoration. 	<ul style="list-style-type: none"> • Site is close to European designated heathland; contains Annex 1 birds and could be designated as a Special Protection Area; there are possible impacts on national designations (SSSI nearby) and protected species on/around the site. Further assessment, including Appropriate Assessment, will be required to better understand these impacts and to determine whether/how they can be satisfactorily mitigated. • Ground and surface water – further assessment required to determine possible impacts, but these expected to be capable of mitigation. • Heritage/archaeology – assessment required to determine likely impacts, but impacts expected to be mitigable. • Significant visual impacts, when site is opened up, with views through site from open access land to south-west. Further assessment including landscape and visual assessment will be required, with appropriate mitigation provided. • The site will be accessed by road.

Overall Recommendation:

This is a relatively small site which is primarily intended for the production of ball clay. Sand/gravel will be removed as part of the excavation of the ball clay. There are a number of issues regarding this site and further assessment will be required, including Appropriate Assessment under the Habitat Regulations.

Key impacts are expected to be on ecology (nearby European and national designations, Annex 1 birds, protected species), landscape/visual impacts and surface/groundwater. Further assessment will be required to gain a better understanding of what the impacts might be and how best to mitigate. Should this site ultimately be developed, it is expected that detailed assessment of impacts and required mitigation will be covered through the required Environmental Impact Assessment.

As an extension, development of the site is not expected to lead to intensification of impacts, but the time period of the impacts will be extended.

On balance, it appears reasonable on the basis of evidence available that the impacts identified in this sustainability appraisal are capable of satisfactory mitigation and the site nomination can reasonably be included in the Draft Bournemouth, Dorset and Poole Mineral Sites Plan.

Aggregates: AS25 Station Road, Moreton

Site Name/Location: AS25 Station Road, Moreton		Nominee/Agent: Moreton Estate / Halletc Environmental	
Mineral Type: Sand and gravel		Local Authority: Purbeck District Council	
Site Area: approximately 59 ha	Production: approximately 200,000 tpa	Reserve: approximately 2.4 million tonnes	

Impact Assessment Scoring

--	Strong Negative Impact	-	Minor Negative Impact	+	Minor Positive Impact	++	Strong Positive Impact	0	Negligible or No Effect	?	Uncertain
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Timescales for effects:

P/W: Preparation and Working

R/A: Restoration and Afteruse

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
1. To move waste management up the waste hierarchy	N/A	N/A	<ul style="list-style-type: none"> This Objective is not relevant to this site nomination 	<ul style="list-style-type: none"> N/A
2. To maintain, conserve and enhance biodiversity	+	+	European/International Designations <ul style="list-style-type: none"> No impacts expected Site working and restoration has the potential to reduce the flow of nitrates into the groundwater, the Frome and ultimately Poole Harbour 	<ul style="list-style-type: none"> No action required for working. Consider restoration that will include some areas for nature conservation and not to be used for agriculture.
	0	0	Annex 1 Bird Species <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.
	+	+	National Designations <ul style="list-style-type: none"> No impacts expected during working. Site working and restoration has the potential to reduce flow of nitrates into the groundwater, the Frome and ultimately Poole Harbour 	<ul style="list-style-type: none"> No action required for working. Consider restoration that will include some areas for nature conservation and not to be used for agriculture.
	0	0	Protected species <ul style="list-style-type: none"> No impacts expected 	<ul style="list-style-type: none"> No action required.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	0	0		
3. To maintain, conserve and enhance geodiversity.	+	0	<ul style="list-style-type: none"> The extraction of tertiary deposits and created exposures are of on-going interest to Tertiary and Quaternary geo-scientists as potential, if not active, research sites. Benefits are only expected during working, and are likely to be obscured or covered as part of restoration. 	<ul style="list-style-type: none"> Operator to be asked to permit visits to view exposures as required.
4. To maintain, conserve and enhance the quality of ground, surface and sea waters and manage the consumption of water in a sustainable way.	-	0	<p>Groundwater</p> <ul style="list-style-type: none"> Licensed abstraction within 500 m. Does not affect any Source Protection Zones. Overlies Secondary aquifer. Proposals would need to be supported with a hydrogeological risk assessment. Site working and restoration has the potential to reduce flow of nitrates into the groundwater, the Frome and ultimately Poole Harbour 	<ul style="list-style-type: none"> Hydrological assessment required at planning application stage to determine possible impacts on ground and surface waters, with appropriate mitigation to be implemented. Where necessary mitigating measures should be installed to maintain groundwater levels. Appropriate arrangements should be put in place to ensure that the water leaving the site and entering the rivers/watercourses is of an acceptable quality. Any fuel on site should be properly stored to avoid contamination in case of spillage. Appropriate arrangements should be installed for surface water and silt collection and fuel storage to prevent contamination of groundwater resources. Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse. Consider restoration that will include some areas for nature conservation and not to be used for agriculture.
	+		-	
5. To reduce flood risk and improve flood management.	0	0	<p>Flooding/Coastal Stability</p> <ul style="list-style-type: none"> No Environment Agency objection with regard to flood risk issues for this site. Site is entirely within Flood Risk Zone 1. 	<ul style="list-style-type: none"> Flood Risk Assessment (FRA) will be required. All necessary mitigation to be

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			<ul style="list-style-type: none"> As the site is greater than 1 hectare, a site specific Flood Risk Assessment (FRA) will be required in support of any future planning application. 	implemented.
6. To maintain, conserve and enhance the historic environment (including archaeological sites, historic buildings, conservation areas, historic parks and gardens and other locally distinctive features and their settings).	?	0	Archaeology <ul style="list-style-type: none"> The size of the site and the presence of known historic features in the vicinity (notably those in and around the village of Moreton) indicate that the site has a high archaeological potential. The potential impact on below-ground archaeological remains needs to be assessed and evaluated before an informed planning decision can be made. Only when these have been undertaken would the archaeological impact be understood – at present it could be anywhere from Very Significant Impact to No Significant/Negligible Impact. 	<ul style="list-style-type: none"> Archaeological survey of the area will be required to assess possible presence and significance of non-designated remains and to assess whether/how these should be protected during working. All necessary mitigation to be implemented. Adequate provision to be made for preservation, excavation or recording, as appropriate.
	?	0	Historic Landscapes <ul style="list-style-type: none"> The site lies in the broad lower section of the valley of the River Frome. Historically some of the land here was heathland, other parts being wooded and under arable cultivation. Assessment of the age and importance of the present land use and field pattern would be needed for an informed planning decision to be made. Impact could be anywhere between Significant Adverse and No Significant /Negligible, depending on the results of this assessment and the development's working and restoration methods. 	<ul style="list-style-type: none"> Assessment to include consideration of current land use and field pattern. Further consideration to be given to restoration proposals, in terms of historic landscapes.
		0	0	Historic Buildings <ul style="list-style-type: none"> Station Road is lined on both sides with an informal avenue of trees and shrubs. The two closest listed buildings are sited to face along the road rather than across it at the site therefore provided that the avenue of trees is retained there will be no significant impact on these buildings or their settings.
7. To maintain, conserve and enhance the landscape, including townscape,	-	0	Landscape Capacity <ul style="list-style-type: none"> Less significant landscape impact. Landscape capacity to accommodate the site is medium. The main impacts for the site will be from the B3390, Station Rd and Redbridge Rd as there are no rights of way through or near the site. 	<ul style="list-style-type: none"> Assessment of potential visual impacts required and all appropriate mitigation to be included.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
seascape and the coast.		+	<ul style="list-style-type: none"> Development will create a medium adverse impact on the openness of the river valley pasture landscape and a significant adverse impact on the pattern of field boundary hedgerows/trees and copses. 	<ul style="list-style-type: none"> Restoration could include increasing public access/informal recreation and including appropriate nature conservation interests. Advance planting to be carried out to prepare site for working.
	0	0	<p>Designated Landscapes</p> <ul style="list-style-type: none"> No impact on designated landscapes or their setting. 	
8. To protect and improve air quality and reduce the impacts of noise.	0	0	<ul style="list-style-type: none"> Impacts on air quality expected to be negligible. No AQMAs will be affected by the working of this site proposal. Any dust resulting from working will be controlled through normal dust-suppression measures. Noise mitigation will be addressed at the planning application stage, with appropriate mitigation to be included in the development of the site. 	<ul style="list-style-type: none"> Environmental protection measures to reduce dust and ensure noise is appropriately mitigated.
9. To maintain, conserve and enhance soil quality.	-	0	<ul style="list-style-type: none"> Site contains/comprises good to moderate quality agricultural land. Working the site will have impacts on this soil. Soils will be stripped and removed to be stored and. Restoration will return the land to original ground levels, and will restore the quality of the land. 	<ul style="list-style-type: none"> Soil to be properly stripped and stored prior to working; protected during working; and returned as part of restoration. Restoration to include high quality agricultural land.
10. To conserve and safeguard mineral resources.	++	0	<ul style="list-style-type: none"> The site would make an important contribution to aggregate supply in Bournemouth, Dorset and Poole. 	<ul style="list-style-type: none"> No specific action required. Site development to take into consideration relevant impacts and mitigate where appropriate.
11. To promote the use of alternative materials.	0	0	<ul style="list-style-type: none"> This proposal does not at present promote the use of alternative materials. It is possible that treated inert waste will be used in restoration of the site, but this will not directly promote the use of alternative materials. 	<ul style="list-style-type: none"> No action required.
12. To provide an adequate and affordable supply of minerals to meet society's needs.	+	0	<ul style="list-style-type: none"> Development of this site would provide a benefit in terms of contributing to the provision of a supply of minerals to meet society's needs. Ensuring a sustainable supply will depend on the development and management of the site. Providing site development takes into account relevant principles of sustainable development it is expected this will contribute to complying with 	<ul style="list-style-type: none"> Ensure principles of sustainable development are incorporated into the development of this site.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			this objective.	
13. To promote and encourage sustainable economic growth	+	0	<ul style="list-style-type: none"> This site proposal is expected to contribute to economic development on two levels – directly through the provision of employment at the site to be developed and indirectly through the provision of aggregate minerals required for the maintenance of built environment and for new built development. Both levels are expected to maintain employment, skilled and unskilled. Restoration to agriculture with some element of public access will, if achieved, offer some economic benefits through both the agriculture and the recreational attraction and use in the wider area (i.e. riding, walking). 	<ul style="list-style-type: none"> Further assessment required to form a view as to what the most appropriate restoration could be.
14. To adapt to and mitigate the impacts of climate change.	-	0	<ul style="list-style-type: none"> Developing the site as a quarry is expected to have some negative impacts regarding climate change, due primarily to machinery used and transportation of mineral away from site. However, these will in relative terms be negligible. The Bournemouth, Dorset and Poole Minerals Strategy seeks to address and minimise such impacts through Policy CC1 which requires operators to take into consideration climate change impacts and their possible mitigation for any proposed minerals development. The development management policies, e.g. DM 1, also address and seek to minimise the issue of sustainable development and climate change. Restoration to some form of vegetated environment will offer benefits in the form of climate change mitigation, including provision of habitat for wildlife, but again these will be relatively small. 	<ul style="list-style-type: none"> Use energy efficient plant and machinery. Implement restoration which provides appropriate habitats to help to increase resilience of flora/fauna.
15. To minimise the negative impacts of waste and minerals transport on the transport network, mitigating any residual impacts.	-	0	<ul style="list-style-type: none"> This site has an estimated 200,000 tonnes annual output and approximately 80 vehicle trips per day (40 in and 40 out). Access to the site is proposed from the B3390. This is a straight road at this point with hedgerows on either side and some large trees along the roadside edge. It should be possible to find a suitable access point along the site frontage, avoiding significant trees. Visibility splays suitable for 60 mph will be needed for this access and some hedgerow loss or relocation may be necessary to achieve this. Access should not be via the C33, Station Road that runs along the northern boundary of the site and forms part of National Cycle Network route 2 (NCN2). This site would require a full Transport 	<ul style="list-style-type: none"> Transport Assessment to be carried out, identifying opportunities for reducing impacts on the transport network.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			<p>Assessment were it to be submitted as a planning application. Any TA should initially be scoped with the Transport Development Management Team. It may also need to consider Highways Agency concerns with regards to movements to the A35T.</p> <ul style="list-style-type: none"> Due to the direct access from this site onto the B3390, and the reasonable possibility of an acceptable access provision, this site has been given a D (No Significant/Negligible Impact) rating. Policies DM1 and DM 8 of the 2014 Minerals Plan actively address this issue of minimising impacts on the transportation network. 	
16. To support and encourage the use of sustainable transport modes, imposing no unmitigated negative impacts on them.	–	0	<ul style="list-style-type: none"> The proposed extension can only realistically be accessed by means of road transport, resulting in a negative impact during development and working. As far as reasonably possible negative impacts resulting from access and transport will be mitigated, as required by Policies DM1 and DM8 of the Minerals Strategy. 	<ul style="list-style-type: none"> Mitigate impacts where identified and appropriate.
17. To sustain the health and quality of life of the population	–	0 +	<p>Impact on Sensitive Human Receptors</p> <ul style="list-style-type: none"> Residential properties adjacent to site and in vicinity of site. Site is large enough to include appropriate mitigation to adequately screen surrounding properties from visual/noise impacts. Impact will be somewhere between 'Significant' and 'Less Significant', given size of site and levels of screening existing and to be created. Development is likely to require appropriate mitigation (such as visual and noise attenuation bunding, standoffs) to limit impacts. 	<ul style="list-style-type: none"> Provision of appropriate mitigation, following assessment of likely impacts. Restoration to improve landscape of site where possible; and to seek to increase public access. Screening, bunding, standoffs will mitigate impacts to some

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	-	0	Impact on Existing Settlements <ul style="list-style-type: none"> Moreton village itself is adjacent to the eastern end of the proposed site. Again, the size of the site and the level of existing tree screening should make it possible to effectively screen the workings from the village. No quarry traffic would enter the village. Crossways is approximately 1 km away but completely screened. Villages along the B3390 may be affected by site traffic, depending on where the site is accessed. Transport issues/impacts are addressed separately. 	extent.
		+		
	0	0	Impact on Airport Safety <ul style="list-style-type: none"> The site is some 35 km from the airport and not considered to be a threat. 	
18. To enable safe access to countryside and open spaces.	0	+/?	Impact on Recreational Land <ul style="list-style-type: none"> Site is agricultural land and does not appear to include any formal or informal recreational facilities. Restoration could include some element of public access. 	<ul style="list-style-type: none"> No action required for working. Consider including some aspect of public access as part of restoration.
	0	+/?	Impact on Public Rights of Way <ul style="list-style-type: none"> Site is agricultural land and there are no public rights of way on, adjacent to or visible from the land. Opportunities for increased public access following restoration to be considered. 	<ul style="list-style-type: none"> Consideration to be given to opportunities for improving public access in the area through restoration.

Preliminary Hydrological Risk Assessment

Controlled Waters	Issues/Risks	Mitigation	Further information/approval required
<ul style="list-style-type: none"> • Watercourses • Ponds/lakes, including wet habitats • Groundwater 	<ul style="list-style-type: none"> • The River Basin Management Plan South West River Basin District identifies the Frome as being of 'Poor' environmental quality in this area. Potential for contamination from runoff from site. • Potential for contamination of controlled waters through spillage or seepage of pollutants such as fuel, or silt in water. • Contamination of water supplies or reduction in amount of water available for licenses supplies. • Impacts on or removal of surface water features. 	<ul style="list-style-type: none"> • Appropriate arrangements to be made for ensuring that runoff from the site does not enter the Frome or groundwater unless any silt has first been removed. • Fuel stored on site to be appropriately bunded and sealed to prevent any spillage from entering ground or surface waters. • On-going monitoring during development and working of the site. • Relocation of surface water features, provided this is feasible. • Need to consider compliance to the Restoration Plan for the River Frome and its floodplain. 	<ul style="list-style-type: none"> • Full hydrogeological risk assessment will be required as part of a planning application. • Flood Risk Assessment • Water Framework Assessment • Further assessment of potential impacts on water quality and levels, particularly for groundwater, is required prior to development. • Assessment of the feasibility of relocating surface water features and associated habitats and species. • Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.

Cumulative Impacts

This site is a new proposal in an area where there is already mineral working. Depending on when it might start and what other sites are operating in the area, there could be an increased level of traffic on local roads, including the B3390. However, when the current Warmwell Quarry is finished the level of traffic on the B3390 will be reduced.

There are no sites allocated for major development in the Purbeck Local Plan Part 1 (adopted Nov 2012) within 5 km of the proposal.

Further information on cumulative traffic impacts is given in the Transport Appendix to this sustainability appraisal. It is considered that any cumulative impacts can be satisfactorily mitigated.

Summary.

Potential Benefits	Potential Impacts
<ul style="list-style-type: none">• Provision of aggregate to support the local and wider economy, with accompanying benefits to the economy.• Improved public access may be possible as a part of site restoration.• Reduction of nitrates entering the ground and surface waters and the Frome, possibly on a long-term basis, with benefits to water quality and to nature conservation designations in Poole Harbour.	<ul style="list-style-type: none">• Further information will be required on hydrogeology at planning application stage.• Surface drains flow across the surface and any impacts on these will need to be appropriately mitigated.• Development of this site could have significant impacts on archaeology or landscape. Further assessment is required but it is expected that any impacts will be capable of mitigation.• All soils to be properly removed, stored and used in restoration, to minimise impacts on soils.• A Transport Assessment will be required and there may be some transport-related impacts, but it is expected that these will be capable of mitigation.• Development of this site could lead to impacts on neighbouring properties and the village of Moreton. However, all impacts will be required to be appropriately mitigated and it is expected that this will be possible, particularly given the size of the site.

Overall Recommendation:

This is a new site proposal. Further assessment is required to identify all potential impacts along with required mitigation. The proposal offers the strong benefit of reducing the flow of agricultural fertilisers into the groundwater, the Frome and ultimately into Poole Harbour. It is also removed from the protected heathland designations. As a large site it is expected that impacts on amenity can be satisfactorily mitigated.

On balance, it appears reasonable on the basis of evidence available that the impacts identified in this sustainability appraisal are capable of satisfactory mitigation and the site nomination can reasonably be included in the Draft Bournemouth, Dorset and Poole Mineral Sites Plan.

Aggregates: AS26 Hurst Farm, Moreton

Site Name/Location: AS26 Hurst Farm, Moreton		Nominee/Agent: Moreton Estate / Halletec Environmental	
Mineral Type: Sand and gravel		Local Authority: Purbeck District Council	
Site Area: approximately 72 ha	Production: approximately 200,000 tpa	Reserve: approximately 2.5 mt	

Impact Assessment Scoring

--	Strong Negative Impact	-	Minor Negative Impact	+	Minor Positive Impact	++	Strong Positive Impact	0	Negligible or No Effect	?	Uncertain
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Timescales for effects:

P/W: Preparation and Working

R/A: Restoration and Afteruse

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
1. To move waste management up the waste hierarchy	N/A	N/A	<ul style="list-style-type: none"> This Objective is not relevant to this site nomination 	<ul style="list-style-type: none"> N/A
2. To maintain, conserve and enhance biodiversity	++	+	<p>European/International Designations</p> <ul style="list-style-type: none"> The permanent change from intensive agriculture to mineral extraction restored to extensive grassland and water bodies would be likely to result in a significant reduction in nitrate levels in receiving waters of the R. Frome, groundwater and Poole Harbour (SPA and Ramsar). If this can be secured there would be strategic nature conservation gain. In addition, reduction in intensive agricultural management of the fields between the proposed extraction area and the R. Frome would be an additional significant gain, preventing more direct runoff of fertiliser into the river and onward to Poole Harbour. These benefits will be realised from the time that the fields are taken out of agricultural production. 	<ul style="list-style-type: none"> Minimise the area returned to intensive agriculture after working and maintain an area of land between the proposed site and the Frome as non-agricultural use land.
	0	0	<p>Annex 1 Bird Species</p> <ul style="list-style-type: none"> No significant impacts expected 	<ul style="list-style-type: none"> No action required.
	++	+	<p>National Designations</p> <ul style="list-style-type: none"> Comments made under European/International designations (above) apply to national designations as well 	<ul style="list-style-type: none"> Minimise the area returned to intensive agriculture after working and maintain the fields between

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
				site and Frome as non-agricultural use land.
	0	0	Protected species <ul style="list-style-type: none"> No significant impacts expected 	<ul style="list-style-type: none"> No action required.
	+	+	Local recognitions/designations, including ancient woodland and veteran trees <ul style="list-style-type: none"> Site has potential to contribute to Water Framework Directive (WFD) targets and reduce nitrate enrichment within downstream water bodies if restored to partial wetland. 	<ul style="list-style-type: none"> Further consideration to be given to restoration options and contributing to WFD targets.
3. To maintain, conserve and enhance geodiversity.	+	0	<ul style="list-style-type: none"> The extraction of tertiary deposits and created exposures are of on-going interest to Tertiary and Quaternary geo-scientists as potential, if not active, research sites. No specific scientific gains or geodiversity enhancements are likely but the exposures may be of interest to the quaternary and tertiary research associations. Provision should be made so that it will be possible to arrange such visits on request. 	<ul style="list-style-type: none"> Operator to be asked to permit visits to view exposures as required.
4. To maintain, conserve and enhance the quality of ground, surface and sea waters and manage the consumption of water in a sustainable way.	?	0	Groundwater <ul style="list-style-type: none"> Site boundary is within 100 m of a groundwater SPZ1 and there is a licensed abstraction within 250m. The proposed development will need to be supported with a hydrogeological risk assessment at the planning application stage as Hurst Farm is on the border with a groundwater Source Protection Zone 1 (SPZ1) and a licensed abstraction. Development has the potential to reduce the level of nitrate entering the groundwater and affecting the Frome and Poole Harbour. 	<ul style="list-style-type: none"> Hydrological assessment required at planning application stage to determine possible impacts on ground and surface waters, with appropriate mitigation to be implemented. Where necessary mitigating measures should be installed to maintain groundwater levels. Appropriate arrangements should be put in place to ensure that the water leaving the site and entering the rivers/watercourses is of an acceptable quality.
	++		Surface Water <ul style="list-style-type: none"> There are watercourses shown running within the proposed site and River Frome runs north of the site boundary. It will need to be proved that the minerals 	
	?	+		

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	++		<p>proposals will not have an adverse effect on the natural hydrology and water quality.</p> <ul style="list-style-type: none"> Restoration proposals should incorporate gain of wetland features which will contribute to the aspirations of the England Biodiversity Strategy. Ensure no impacts from this development and no increased sedimentation. Development has the potential to reduce the level of nitrate entering the Frome and Poole Harbour. 	<p>surface water and silt collection and fuel storage to prevent contamination of groundwater resources.</p> <ul style="list-style-type: none"> Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.
5. To reduce flood risk and improve flood management.	0	0	<p>Flooding/Coastal Stability</p> <ul style="list-style-type: none"> Since part of the site (approximately 10 hectares) lies within Flood Zones 2 and 3, should the actual working area encroach within the floodplain (Flood Zones 2 & 3) there is a requirement to demonstrate application of the Sequential Test. Processing plant and ancillary infrastructure will be sited outside of Flood Zones 2 & 3 and will not constitute a flood risk. There will be no storage of materials within the flood plain. A site specific Flood Risk Assessment (FRA) will be required in support of any future planning application. 	<ul style="list-style-type: none"> Flood Risk Assessment (FRA) will be required. All necessary mitigation to be implemented.
6. To maintain, conserve and enhance the historic environment (including archaeological sites, historic buildings, conservation areas, historic parks and gardens and other locally distinctive features and their settings).	?	0	<p>Archaeology</p> <ul style="list-style-type: none"> There is possibly a watermeadow system on part of the site. The Dorset Historic Environment Record mentions a find of prehistoric flint within the site, and the Scheduled Monument of Hurst Bridge (1002422) lies not far to the east. The presence (or not) of features associated with the watermeadow systems needs to be determined, then the impact on them, and on the setting of Hurst Bridge and other historic features and on below-ground archaeology needs to be assessed and evaluated before an informed planning decision could be made. Only when these have been undertaken would the archaeological impact be understood – at present it could be anywhere from a ‘Very Significant Adverse Impact’ to ‘No Significant or Negligible Adverse Impacts’. 	<ul style="list-style-type: none"> Archaeological survey of the area will be required to assess possible presence and significance of non-designated remains and to assess whether/how these should be protected during working. All necessary mitigation to be implemented. Adequate provision to be made for preservation, excavation or recording, as appropriate.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	?	0	<p>Historic Landscapes</p> <ul style="list-style-type: none"> The site lies in the broad lower section of the valley of the river Frome. Historically some of the land here was heathland, other parts being wooded and under arable cultivation. On the flat lands close to the river itself, extensive systems of watermeadows were constructed from the 18th century onwards. Map evidence suggests that there may well be remains of a watermeadow system on the northern part of this site The impact on the watermeadow systems in particular needs to be assessed and evaluated. Only when this has happened would the impact on the historic landscape be understood – at present it could be anywhere from a ‘Very Significant Adverse Impact’ to ‘No Significant or Negligible Adverse Impacts’. 	<ul style="list-style-type: none"> Assessment to include consideration of current land use and field pattern. Further consideration to be given to restoration proposals, in terms of historic landscapes.
	0	0	<p>Historic Buildings</p> <ul style="list-style-type: none"> The two closest historic buildings look away from the site and are screened from it by hedges and trees. There is therefore no significant impact on these buildings or their settings. 	<ul style="list-style-type: none"> Any assessment required to be carried out, with appropriate mitigation implemented as required.
7. To maintain, conserve and enhance the landscape, including townscape, seascape and the coast.	–	0	<p>Landscape Capacity</p> <ul style="list-style-type: none"> Less significant landscape impact. Landscape capacity to accommodate the site is medium. The main impacts for the site will be from the B3390 as there are no rights of way through or near the site. Development will create a medium adverse impact on the openness of the river valley pasture landscape and a significant adverse impact on the pattern of field boundary hedgerows. 	<ul style="list-style-type: none"> Assessment of potential visual impacts required and all appropriate mitigation to be included. Restoration could include increasing public access/informal recreation and including appropriate nature conservation interests. Advance planting to be carried out to prepare site for working.
	0	0	<p>Designated Landscapes</p> <ul style="list-style-type: none"> No impact on designated landscapes or their setting. 	
8. To protect and improve air quality and reduce the impacts of noise.	0	0	<ul style="list-style-type: none"> Impacts on air quality expected to be negligible. No AQMAs will be affected by the working of this site proposal. Any dust resulting from working will be controlled through normal dust-suppression measures. Noise mitigation will be addressed at the planning application stage, with appropriate mitigation to be included in the development of the site. 	<ul style="list-style-type: none"> Environmental protection measures to reduce dust and ensure noise is appropriately mitigated.
9. To maintain,	–	0	<ul style="list-style-type: none"> Site contains/comprises good to moderate quality 	<ul style="list-style-type: none"> Soil to be properly

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
conserve and enhance soil quality.			<p>agricultural land. Working the site will have impacts on this soil.</p> <ul style="list-style-type: none"> • Soils will be stripped and removed to be stored and. • Restoration will return the land to original ground levels, and will restore the quality of the land. 	stripped and stored prior to working; protected during working; and returned as part of restoration.
10. To conserve and safeguard mineral resources.	++	0	<ul style="list-style-type: none"> • The site would make an important contribution to aggregate supply in Bournemouth, Dorset and Poole. 	<ul style="list-style-type: none"> • No specific action required. • Site development to take into consideration relevant impacts and mitigate where appropriate.
11. To promote the use of alternative materials.	0	0	<ul style="list-style-type: none"> • This proposal does not at present promote the use of alternative materials. • It is possible that treated inert waste will be used in restoration of the site, but this will not directly promote the use of alternative materials. 	<ul style="list-style-type: none"> • No action required.
12. To provide an adequate and affordable supply of minerals to meet society's needs.	+	0	<ul style="list-style-type: none"> • Development of this site would provide a benefit in terms of contributing to the provision of a supply of minerals to meet society's needs. • Ensuring a sustainable supply will depend on the development and management of the site. Providing site development takes into account relevant principles of sustainable development it is expected this will contribute to complying with this objective. 	<ul style="list-style-type: none"> • Ensure principles of sustainable development are incorporated into the development of this site.
13. To promote and encourage sustainable economic growth	+	0	<ul style="list-style-type: none"> • This site proposal is expected to contribute to economic development on two levels – directly through the provision of employment at the site to be developed and indirectly through the provision of aggregate minerals required for the maintenance of built environment and for new built development. Both levels are expected to maintain employment, skilled and unskilled. • Restoration to agriculture with some element of public access will, if achieved, offer some economic benefits through both the agriculture and the recreational attraction and use in the wider area (i.e. riding, walking). 	<ul style="list-style-type: none"> • Further assessment required to form a view as to what the most appropriate restoration could be.
14. To adapt to and mitigate the impacts of climate change.	-	0	<ul style="list-style-type: none"> • Developing the site as a quarry is expected to have some negative impacts regarding climate change, due primarily to machinery used and transportation of mineral away from site. However, these will in relative terms be negligible. • The Bournemouth, Dorset and Poole Minerals Strategy seeks to address and minimise such 	<ul style="list-style-type: none"> • Use energy efficient plant and machinery. • Implement restoration which provides appropriate habitats

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			<p>impacts through Policy CC1 which requires operators to take into consideration climate change impacts and their possible mitigation for any proposed minerals development.</p> <ul style="list-style-type: none"> The development management policies, e.g. DM 1, also address and seek to minimise the issue of sustainable development and climate change. Restoration to some form of vegetated environment will offer benefits in the form of climate change mitigation, including provision of habitat for wildlife, but again these will be relatively small. 	to help to increase resilience of flora/fauna.
15. To minimise the negative impacts of waste and minerals transport on the transport network, mitigating any residual impacts.	- ?	0	<ul style="list-style-type: none"> This site has an estimated 200,000 tonnes annual output and approximately 80 vehicle trips per day (40 in and 40 out). Access to the site is proposed via an existing large farm access to the B3390. Visibility for 60 mph would need to be secured but is achievable from this access. The specific geometry of the access will need to be checked and it may be necessary to provide some localised widening to ensure that vehicles can enter and leave at the same time and pass on the farm access road. These details would be covered by a full Transport Assessment which would be required were this site to be submitted as a planning application. Any TA should initially be scoped with the Transport Development Management Team. It may also need to consider Highways Agency concerns with regards to movements to the A35T. Due to the direct access from this site onto the B3390, and the reasonable possibility of an acceptable access provision, this site has been given a “No Significant or Negligible Adverse Impacts” rating. 	<ul style="list-style-type: none"> Transport Assessment to be carried out, identifying opportunities for reducing impacts on the transport network.
16. To support and encourage the use of sustainable transport modes, imposing no unmitigated negative impacts on them.	-	0	<ul style="list-style-type: none"> The proposed extension can only realistically be accessed by means of road transport, resulting in a negative impact during development and working. As far as reasonably possible negative impacts resulting from access and transport will be mitigated, as required by Policies DM1 and DM8 of the Minerals Strategy. 	<ul style="list-style-type: none"> Mitigate impacts where identified and appropriate.
17. To sustain the health and quality of life of the population	-	0	<p>Impact on Sensitive Human Receptors</p> <ul style="list-style-type: none"> There are residential properties within site, adjacent to site and in vicinity of site, including properties and businesses on the other side of the river. Site is large enough to include appropriate 	<ul style="list-style-type: none"> Provision of appropriate mitigation, following assessment of likely impacts. Restoration to improve landscape of

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			<p>mitigation to adequately screen properties from visual/noise impacts.</p> <ul style="list-style-type: none"> Impact will be somewhere between 'Significant' and 'Less Significant', given size of site and levels of screening existing and to be created. 	<p>site where possible; and to seek to increase public access.</p> <ul style="list-style-type: none"> Mitigation such as screening, bunding and standoffs are expected to be able to adequately address any impacts. Cumulative impacts on surroundings of working along with the adjacent Woodsford Extension to be taken into consideration and mitigated against.
		0	<p>Impact on Existing Settlements</p> <ul style="list-style-type: none"> Closest settlements include Moreton, Tincleton and Crossways. All are screened by existing trees/woodlands. Villages along the B3390 may be affected by site traffic, depending on where the site is accessed. Impact will be somewhere between 'Significant' and 'Less Significant', given size of site and levels of screening existing and to be created. 	
	0	0	<p>Impact on Airport Safety</p> <ul style="list-style-type: none"> The site is some 35 km from the airport and not considered to be a threat. 	
18. To enable safe access to countryside and open spaces.	0	+?	<p>Impact on Recreational Land</p> <ul style="list-style-type: none"> Site is agricultural land and does not appear to include any formal or informal recreational facilities. Restoration could include some element of public access. 	<ul style="list-style-type: none"> No action required for working. Consider including some aspect of public access as part of restoration.
	0	+ ?	<p>Impact on Public Rights of Way</p> <ul style="list-style-type: none"> Site is agricultural land and there are no public rights of way on, adjacent to or visible from the land. Restoration could include some element of public access. 	<ul style="list-style-type: none"> Consideration to be given to opportunities for improving public access in the area through restoration.

Preliminary Hydrological Risk Assessment

Controlled Waters	Issues/Risks	Mitigation	Further information/approval required
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<ul style="list-style-type: none"> • Watercourses • Ponds/lakes, including wet habitats • Groundwater 	<ul style="list-style-type: none"> • The River Basin Management Plan South West River Basin District identifies the Frome as being of 'Poor' environmental quality in this area. Potential for contamination from runoff from site. • Potential for contamination of controlled waters through spillage or seepage of pollutants such as fuel, or silt in water. • Contamination of water supplies or reduction in amount of water available for licenses supplies. • Impacts on or removal of surface water features. 	<ul style="list-style-type: none"> • Appropriate arrangements to be made for ensuring that runoff from the site does not enter the Frome or groundwater unless any silt has first been removed. • Fuel stored on site to be appropriately bunded and sealed to prevent any spillage from entering ground or surface waters. • On-going monitoring during development and working of the site. • Relocation of surface water features, provided this is feasible. • Need to consider compliance to the Restoration Plan for the River Frome and its floodplain. 	<ul style="list-style-type: none"> • Full hydrogeological risk assessment will be required as part of a planning application. • Flood Risk Assessment • Water Framework Assessment • Further assessment of potential impacts on water quality and levels, particularly for groundwater, is required prior to development. • Assessment of the feasibility of relocating surface water features and associated habitats and species. • Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.
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Cumulative Impacts

There are no sites allocated for major development in the Purbeck Local Plan Part 1 (adopted Nov 2012) within 5 km of the proposal.

This site is a new proposal in an area where there is already mineral working. It could lead to additional traffic on the B3390, but it is expected that work will not begin before the current Warmwell quarry is finished, which will reduce traffic on the B3390. It is considered that any cumulative impacts can be satisfactorily mitigated.

The main cumulative impact would occur if this site proposal was to be worked simultaneously with the proposed Woodsford Extension, immediately to the west. This could lead to disturbance to properties on the north side of the Frome. The working of these sites will be timed to ensure that they do not work in adjacent areas simultaneously. The northern boundary of the site will be pulled back to provide a greater buffer.

Summary.

Potential Benefits	Potential Impacts
<ul style="list-style-type: none">• Provision of aggregates required for maintenance and construction of the built environment.• Provision of aggregate to support the local and wider economy, with accompanying benefits to the economy.• Restoration could include some increased and improved public access.• Working the site will provide significant benefits to nature conservation, ground and surface water and European and national nature conservation designations, through removing then limiting the flow of nitrates into ground and surface waters.• Restoration to offer nature conservation benefits through management of the northern part of the site as wetland and reducing the land under intensive agriculture.• Restoration to offer improved public access.	<ul style="list-style-type: none">• Further information is required on hydrogeology, as the site is close to a Source Protection Zone 1.• No storage of material within Flood Zones 2 and 3.• Surface drains flow across the surface, and these will need to be appropriately dealt with.• Development of this site could have significant impacts on archaeology, historic landscapes and landscape capacity. Further assessment is required, with appropriate mitigation to be identified and implemented.• Soils to be appropriately managed and protected.• A full Transport Assessment with impacts and mitigation identified will be required.• There are likely to be impacts on neighbouring properties and businesses, particularly if this site and Woodsford Extension were to be worked simultaneously. Appropriate mitigation to be identified and implemented – this will include phasing of working to reduce impacts and pulling northern boundary back

Overall Recommendation:

This is a new site proposal. Further assessment is required to identify all potential impacts along with required mitigation. The proposal offers the strong benefit of reducing the flow of agricultural fertilisers into the groundwater, the Frome and ultimately into Poole Harbour. It is also removed from the protected heathland designations. As a large site it is expected that impacts on amenity can be satisfactorily mitigated.

Working this site will have impacts, but it is expected that these can be overcome through appropriate mitigation. Further assessment will be required to gain a better understanding of what the impacts might be and how best to mitigate.

The issue of cumulative impact must be carefully addressed. The proposed site is immediately adjacent to the proposed Woodsford Extension and adjacent areas of these two sites should not be worked simultaneously, particularly in the northern parts of each site, to minimise impacts on residences and businesses across the river.

Pulling the northern boundary back and leaving an area of unworked land to be managed as wetland will assist in both reducing nitrate flows to the river and reducing impacts on surrounding receptors.

On balance, it appears reasonable on the basis of evidence available that the impacts identified in this sustainability appraisal are capable of satisfactory mitigation and the site nomination can reasonably be included in the Draft Bournemouth, Dorset and Poole Mineral Sites Plan.

Crushed Rock: PK16 Swanworth Quarry Extension

N.B.: This site is included for information only – it is not a proposed allocation at this time.

Site Name/Location: PK16 Swanworth Quarry Extension	Nominee/Agent: Suttle Stone Quarries/Quarryplan Ltd	Site Area: c. 14 ha
Mineral Type: Limestone (primarily for crushing)	Local Authority: Purbeck District Council	Production: c. 120,000 tpa
		Reserve: c. 2.0 million tonnes

Impact Assessment Scoring

--	Strong Negative Impact	-	Minor Negative Impact	+	Minor Positive Impact	++	Strong Positive Impact	0	Negligible or No Effect	?	Uncertain
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Timescales for effects:

P/W: Preparation and Working

R/A: Restoration and Afteruse

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
1. To move waste management up the waste hierarchy	N/A	N/A	<ul style="list-style-type: none"> This Objective is not relevant to this site nomination 	<ul style="list-style-type: none"> N/A
2. To maintain, conserve and enhance biodiversity	0	++	European/International Designations <ul style="list-style-type: none"> A sufficient stand-off from the Isle of Portland to Studland Cliffs SAC to the south would be required to ensure the long term stability of the SAC. Beyond that, restoration would offer significant habitat gain over the current intensive agricultural land use. 	<ul style="list-style-type: none"> Ensure appropriate stand-off is included.
	0	0	Annex 1 Bird Species <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.
	0	0	National Designations <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.
	0	0	Protected species <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.
	0	0	Local recognitions/designations, including ancient woodland and veteran trees <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
3. To maintain, conserve and enhance geodiversity.	+	0	<ul style="list-style-type: none"> The Purbeck limestone group has an important association with the geology of the Jurassic Coast World Heritage Site. Working quarries in Purbeck have been known to yield important fossils, including dinosaur footprints. They are also of on-going interest for the study of early Cretaceous stratigraphy. These interests should be acknowledged with the assumption that geologists and the Jurassic Coast Team hosted by DCC will respond positively to any opportunities to recover fossils or record and study unusual features if they are discovered. In terms of geodiversity there is a presumption in favour of an appropriate level of quarrying activity continuing in order to sustain these on-going interests. 	<ul style="list-style-type: none"> Note potential for quarries to yield fossils or other material of geodiversity interest. Visits or other investigation of working sites may be requested. Investigate potential and/or benefits of leaving quarried face open after restoration.
4. To maintain, conserve and enhance the quality of ground, surface and sea waters and manage the consumption of water in a sustainable way.	?	0	<p>Groundwater</p> <ul style="list-style-type: none"> Site overlies Principal Aquifer. A Hydrogeological Risk No impact on Source Protection Zones. No licenced supplies. Assessment should be completed to assess the impact on the water resource and on down gradient licenced springs and receiving water course. 	<ul style="list-style-type: none"> Hydrological assessment required to determine possible impacts, on ground and surface waters, with appropriate mitigation to be implemented. Appropriate arrangements should be put in place to ensure that the water leaving the site and entering the watercourses or groundwater is of an acceptable quality. Any fuel on site should be properly stored to avoid contamination in case of spillage. Appropriate arrangements should be installed for surface water and silt collection and fuel storage to prevent contamination of groundwater resources. The combined impacts of Purbeck Limestone Quarries should be assessed where a number of sites affect the same water resource or receiving water course.
	0	0	<p>Surface Water</p> <ul style="list-style-type: none"> No watercourses within 500m. 	
5. To reduce flood risk and improve flood management.	0	0	<p>Flooding/Coastal Stability</p> <ul style="list-style-type: none"> Site is entirely in Flood Risk Zone 1, no risk of flooding. 	<ul style="list-style-type: none"> No action required.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
6. To maintain, conserve and enhance the historic environment (including archaeological sites, historic buildings, conservation areas, historic parks and gardens and other locally distinctive features and their settings).	—	?	<p>Archaeology</p> <ul style="list-style-type: none"> • A barrow that is protected as a Scheduled Monument (Dorset M161 – ‘Barrow 1000yds (910m) SE of Kingston Barn) is a major constraint to quarrying here. It occupies a location just west of the centre of the site. Theoretically, extraction that destroyed this nationally important feature would constitute a ‘Very Significant Adverse Impact’, but the protection afforded the monument and its setting means that much or possibly all the site should be excluded from such quarrying. • <i>The original proposal has been amended and will be fully re- evaluated. English Heritage have considered the current proposal and have indicated that the western barrow is the key Scheduled Monument to be affected by these proposals and that it should be possible to identify and avoid the setting of this, and other, Monuments.</i> • In my opinion, serious consideration needs to be given to whether any quarrying here is feasible – through assessment and evaluation that considers the relationship of this barrow to others around Combe Bottom as well as other setting issues and the impact on other below-ground archaeology (the ‘Bing Maps’ aerial view of the site seems to show cropmarks of ancient field boundaries), and also through early discussion with English Heritage. • If a compromise can be determined that allows some quarrying within a fraction of this site, the impact could perhaps drop to a ‘Less Significant Adverse Impact’. 	<ul style="list-style-type: none"> • Full archaeological survey of the area required to assess possible presence and significance of non-designated remains and to assess Monuments and establish their settings and determine how these can be fully protected during working. • Settings of the Monuments to be established prior to working and not to be compromised during working. • All necessary mitigation to be implemented prior to working. • Adequate provision to be made for preservation, excavation or recording, as appropriate.
	—	?	<p>Historic Landscapes</p> <ul style="list-style-type: none"> • The presence of the Monument and associated constraints have been discussed above. • As well as being part of a landscape where quarrying has taken part in the past, the site appears to be one of a number of relatively flat locations around Combe Bottom that were chosen as locations for Bronze Age barrows. • Impacts range from ‘Very Significant Adverse Impact’ to ‘Less Significant Adverse Impact’. 	<ul style="list-style-type: none"> • Further consideration to be given to restoration proposals, in terms of historic landscapes.
	0	0	<p>Historic Buildings</p> <ul style="list-style-type: none"> • This is a quarry set in a quarrying landscape and the nearest listed buildings are too far away to be affected. • No significant impact expected. 	<ul style="list-style-type: none"> • No action required.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
7. To maintain, conserve and enhance the landscape, including townscape, seascape and the coast.	_ ?	?	<p>Landscape Capacity</p> <ul style="list-style-type: none"> The southern and eastern sides of the area are very sensitive as they slope down from the plateau and therefore have a very low capacity to accommodate development. The rest of the upper plateau is less sensitive but the margin between the two areas needs to be carefully designed with a significant buffer provided. Development of this site, assuming access would be from the existing Swanworth Quarry, would create significant adverse landscape and visual impacts. It would adversely impact on the secluded, wooded character, integrity and continuity of the steeply sided coombe which the Purbeck Way passes through 'breaking' across its access to the other side of this valley. The earthworks required would also create significant adverse impacts on the open and sloping sides of the valley above the wooded edges and actively impact on the setting of the adjacent tumuli. Therefore, despite the upper western area being in the 'Zone of Least Landscape and Visual Impact' it is felt access to this area in terms of the impact on the coombe, the rest of the eastern facing slopes and the Purbeck Way means at this scale it is not appropriate for landscape and visual reasons. 	<ul style="list-style-type: none"> More detailed landscape and visual impact assessment to identify possible mitigation of identified impacts. If mitigation is not possible, a view will have to be taken as to whether a time-limited impact would be acceptable. Appropriate restoration proposals in line with Landscape Management Guidelines referred to in Minerals Strategy.
	_ _ ?	?		
	_ _	?		
8. To protect and improve air quality and reduce the impacts of noise.	0	0	<ul style="list-style-type: none"> Impacts on air quality expected to be negligible. No AQMAs will be affected by the working of this site proposal. Any dust resulting from working will be controlled through normal dust-suppression measures. Noise mitigation will be addressed at the planning application stage, with appropriate mitigation to be included in the development of the site. 	<ul style="list-style-type: none"> Environmental protection measures to reduce dust and ensure noise is appropriately mitigated.
9. To maintain, conserve and enhance soil quality.	_	0	<ul style="list-style-type: none"> Site is 'Good to Moderate' agricultural land. Soils will be stripped and protected during preparation and working and reused on site as part of restoration. 	<ul style="list-style-type: none"> Soil to be properly stripped and stored prior to working; protected during working; and re-spread on site after working.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
10. To conserve and safeguard mineral resources.	++	0	<ul style="list-style-type: none"> The current site provides both dimension stone (from the Portland beds) for construction or sea defence uses as well as crushed rock sold as construction aggregate. This is the only source of crushed rock outside of Portland. The proposed extension would make an important contribution to the supply of block stone and crushed rock, primarily for local markets. It would serve to reduce the need for gravel extraction elsewhere in the county. 	<ul style="list-style-type: none"> No specific action required; site development to take into consideration relevant impacts and mitigate where appropriate and/or possible.
11. To promote the use of alternative materials.	-	0	<ul style="list-style-type: none"> Although the current site does include a recycled aggregates production facility, it is not expected that the proposed extension will also produce recycled aggregates. 	<ul style="list-style-type: none"> No action required.
12. To provide an adequate and affordable supply of minerals to meet society's needs.	+	0	<ul style="list-style-type: none"> Development of this site would provide a benefit in terms of contributing to the provision of a supply of minerals to meet society's needs. Ensuring a sustainable supply will depend on the development and management of the site. Providing site development takes into account relevant principles of sustainable development it is expected this will contribute to complying with this objective. 	<ul style="list-style-type: none"> Ensure principles of sustainable development are incorporated into the development of this site.
13. To promote and encourage sustainable economic growth	+	0	<ul style="list-style-type: none"> This site proposal is expected to contribute to economic development on two levels – directly through the provision of employment at the site to be developed and indirectly through the provision of crushed rock and dimension stone required for construction and other purposes. Both levels are expected to maintain employment, skilled and unskilled. Restoration to agriculture will offer some economic benefits through both the agriculture itself and the recreational attraction and use in the wider area (i.e. riding, walking). 	<ul style="list-style-type: none"> No action required.
14. To adapt to and mitigate the impacts of climate change.	-	0	<ul style="list-style-type: none"> Developing land as a quarry is expected to have some negative impacts regarding climate change, due primarily to machinery used and transportation of mineral away from site. However, these will in relative terms be negligible. The Bournemouth, Dorset and Poole Minerals Strategy seeks to address and minimise such impacts through Policy CC1 which requires operators to take into consideration climate change impacts and their possible mitigation for any proposed minerals development. The development management policies, e.g. DM 1, also address and seek to minimise the issue of sustainable development and climate change. 	<ul style="list-style-type: none"> Use energy efficient plant and machinery. Implement restoration which provides appropriate habitats to help to increase resilience of flora/fauna.
15. To minimise the negative	-	0	<ul style="list-style-type: none"> Access proposed is via the adequate existing Swanworth Quarry access onto the C135. From 	<ul style="list-style-type: none"> Any proposal for this site would need to be

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
impacts of waste and minerals transport on the transport network, mitigating any residual impacts.			<p>here vehicles will travel a short distance north onto the B3069 and onward to the A351 through Kingston.</p> <ul style="list-style-type: none"> While the trip numbers are relatively high at around 60 movements per day, the extension is not expected to be worked concurrently with the existing Swanworth Quarry operations. Therefore there will be little increase in traffic over the current situation. The route passes a small number of properties on the edge of Kingston but by-passes the main part of the settlement on the B3069. This site has therefore considered to have a 'Less Significant Adverse Impact'. Policies DM1 and DM 8 of the Minerals Strategy actively address this issue of minimising impacts on the transportation network. 	<p>accompanied by a Transport Assessment which will need to provide access details and consider vehicle routing. The TA should be scoped with the Transport Development Management Team.</p> <ul style="list-style-type: none"> Transport Assessment will identify opportunities for reducing impacts on the transport network.
16. To support and encourage the use of sustainable transport modes, imposing no unmitigated negative impacts on them.	–	0	<ul style="list-style-type: none"> The proposed extension can only realistically be accessed by means of road transport, resulting in a negative impact under this Objective during development and working. As far as reasonably possible negative impacts resulting from access and transport will be mitigated, as required by Policies DM1 and DM8 of the Minerals Strategy. 	<ul style="list-style-type: none"> Mitigate impacts where identified and appropriate.
17. To sustain the health and quality of life of the population	?	0	<p>Impact on Sensitive Human Receptors</p> <ul style="list-style-type: none"> Closest property approximately 500m to north; other >500m to south, Kingston Village approximately 1km to north-west. Possibility of some visibility from the north – further assessment will be required, with mitigation through screening if necessary. 	<ul style="list-style-type: none"> Provision of appropriate mitigation, following assessment of likely impacts. Restoration to improve landscape of site where possible; and to seek to facilitate public access. Screening, bunding, standoffs will be used to mitigate impacts where considered necessary. Transport impacts to be considered through Transport Assessment, as considered above.
	0	0	<p>Impact on Existing Settlements</p> <ul style="list-style-type: none"> Kingston Village approximately 1km to north west, Worth Matravers approximately 1km to south east. Limited if any visibility from the north, limited if any visibility from the south at Worth Matravers – site would be visible from the C135 north of Worth Matravers. Access and vehicle number would not change in intensity. 	

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	0	0	Impact on Airport Safety <ul style="list-style-type: none"> Site is approximately 23 km from airport, with no wet working or restoration. No impacts expected. 	<ul style="list-style-type: none"> No action required.
18. To enable safe access to countryside and open spaces.	—	?	Impact on Recreational Land <ul style="list-style-type: none"> Majority of the site is agricultural land, no formal/informal recreational use. Southern part of the site (the dry coombe) appears to have informal access routes, along with a bridleway. This area links the extension to the main quarry and is unlikely to be worked, but will need to be crossed. 	<ul style="list-style-type: none"> Assessment of potential impacts, with appropriate mitigation identified. This must address impacts on the bridleway. Restoration to include considering how it might be possible to improve public access in the area.
	—	?	Impact on Public Rights of Way <ul style="list-style-type: none"> Southern part of the site appears to have informal access routes, along with a bridleway (SE11/83). This area links the extension to the main quarry and is unlikely to be worked, but will need to be crossed. Bridleway will be significantly affected by the proposed development. 	

Preliminary Hydrological Risk Assessment

Controlled Waters	Issues/Risks	Mitigation	Further information/approval required
<ul style="list-style-type: none"> • Watercourses • Ponds/lakes, including wet habitats • Groundwater 	<ul style="list-style-type: none"> • Potential for contamination of controlled waters (groundwater) through spillage or seepage of pollutants such as fuel. • Contamination of water supplies or reduction in amount of water available for licenced supplies. 	<ul style="list-style-type: none"> • Appropriate arrangements to be made for ensuring that runoff from the site does not enter the groundwater unless any silt or other pollutant has first been removed. • Fuel stored on site to be appropriately bunded and sealed to prevent any spillage from entering ground or surface waters. • On-going monitoring during development and working of the site. 	<ul style="list-style-type: none"> • Full hydrogeological risk assessment will be required as part of a planning application. • Flood Risk Assessment • Water Framework Assessment • Further assessment of potential impacts on water quality and levels, particularly for groundwater, is required prior to development. • Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.

Cumulative Impacts

Site nomination comprises an extension of an existing quarry in an area where there is a concentration and long history of mineral extraction. The site is an extension of an existing quarry and will not be developed until the existing operation is completed. No traffic related impacts are expected, but in landscape terms the impact of the proposed extension could be an intensification over the existing operation. Further assessment is on-going to determine whether impacts can be mitigated.

There are no sites allocated for major development in the Purbeck Local Plan Part 1 (adopted Nov 2012) within 5 km of the proposal.

The combined impacts of Purbeck Limestone Quarries should be assessed where a number of sites affect the same water resource or receiving water course.

Summary.

Potential Benefits	Potential Impacts
<ul style="list-style-type: none">• Provision of dimension stone and armour stone – latter has benefits in coastal protection.• Reduction in impacts of agriculture on the SAC to the south. Other benefits to biodiversity from removing the land from agriculture and creating dry coombe.• Geodiversity benefits, through exposures created and fossils found.• Restoration to offer improved public access.• Provision of crushed rock aggregates – in a location away from Portland - required for maintenance and construction of the built environment.• Provision of aggregate to support the local and wider economy, with accompanying benefits to the economy.	<ul style="list-style-type: none">• Significant impacts on the Scheduled Monument(s) and settings and on other archaeological features – full assessment of impacts required, with all necessary mitigation identified. English Heritage to agree proposed mitigation.• Significant landscape issues, through impacts on the dry coombe, views from south/west and on Area of Outstanding Natural Beauty. Full assessment of impacts required, with all necessary mitigation identified.• Significant impacts on bridleway south and east of site. Further assessment required to consider how this can be mitigated.• A full Transport Assessment with impacts and mitigation identified will be required.• Assessment of possible impacts on surrounding sensitive receptors (residences, settlements) with full mitigation identified.

Overall Recommendation:

No overall recommendation is made on this site proposal at this time, as it is currently under revision and further information is awaited from promoters.

It has been included for information purposes, and to seek any further comments that consultees may wish to make.

Recycled Aggregates: RA01 Whites Pit, Poole

Site Name/Location: RA01 Whites Pit, Poole Proposed development: Consolidation of two aggregate recycling operations.	Nominee/Agent: Land and Mineral Management Local Authority: Borough of Poole
Site Area: approximately 6 ha	Capacity: up to 250,000 tpa;

Impact Assessment Scoring

--	Strong Negative Impact	-	Minor Negative Impact	+	Minor Positive Impact	++	Strong Positive Impact	0	Negligible or No Effect	?	Uncertain
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Timescales for effects:

P/W: Preparation and Working

R/A: Restoration and Afteruse

N.B. the proposal seeks a permanent or long-term approval for recycled aggregate production, so restoration/afteruse is not considered at this stage.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
1. To move waste management up the waste hierarchy	++	N/A	<ul style="list-style-type: none"> Use of a washing plant permits the recycled product to be applied to higher specification uses and reduces the amount of material ultimately requiring landfill. 	<ul style="list-style-type: none"> No action required.
2. To maintain, conserve and enhance biodiversity	0	N/A	European/International Designations <ul style="list-style-type: none"> No likely effects identified. 	<ul style="list-style-type: none"> No action required.
	0	N/A	Annex 1 Bird Species <ul style="list-style-type: none"> Probably no significant impact, but more information is required to determine the effect on Annex 1 Nightjar who are known to forage north from Canford Heath towards the Stour River and may cross this site. 	<ul style="list-style-type: none"> Further assessment required, along with any mitigation that may be necessary. Aggregate recycling operation is currently in operation on the site, so unlikely to be significant effects identified.
	0	N/A	National Designations <ul style="list-style-type: none"> No likely effects identified. 	<ul style="list-style-type: none"> No action required.
	0	N/A	Protected species <ul style="list-style-type: none"> No likely effects identified. 	<ul style="list-style-type: none"> No action required.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	0	N/A	Local recognitions/designations, including ancient woodland and veteran trees <ul style="list-style-type: none"> No likely effects identified. 	<ul style="list-style-type: none"> No action required.
3. To maintain, conserve and enhance geodiversity.	0	N/A	<ul style="list-style-type: none"> No likely effects identified. 	<ul style="list-style-type: none"> No action required.
4. To maintain, conserve and enhance the quality of ground, surface and sea waters and manage the consumption of water in a sustainable way.	_ ?	N/A	Groundwater <ul style="list-style-type: none"> Site overlies secondary aquifer. Not within any Source Protection Zone designation. Licensed abstraction sites in proximity, any possible impacts to be appropriately mitigated. 	<ul style="list-style-type: none"> Further assessment on possible impacts on water supplies and appropriate mitigation if potential impacts identified. Detailed pollution prevention management plan detailing best practices to minimise pollution incidents, as well as measures that will be taken should a pollution event occur. Appropriate arrangements should be put in place to ensure that the water leaving the site is of an acceptable quality. Appropriate arrangements should be installed for surface water and silt collection and fuel storage to prevent contamination of groundwater resources. Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse. An appropriate surface water management scheme would need to be provided at the planning application stage. This must consider both surface water flow within and off the site, and also take into account water quality issues by incorporating appropriate pollution prevention measures.
	0	N/A	Surface Water <ul style="list-style-type: none"> Water quality issues may arise from the contaminated land beneath the site, or from the construction/ operation of the recycling centre. All these issues must be considered in the design and management of the proposed development. 	
5. To reduce flood risk and improve flood management.	0	N/A	Flooding/Coastal Stability <ul style="list-style-type: none"> Entire site is within Flood Risk Zone 1, no expected risk of flooding or contributing to flooding. 	<ul style="list-style-type: none"> Flood Risk Assessment (FRA) will be required. All necessary mitigation to be implemented.
6. To maintain, conserve and enhance the historic environment (including archaeological sites, historic buildings, conservation	0	N/A	Archaeology <ul style="list-style-type: none"> Since this area has been quarried and landfilled in restoration, provided that works only take place within the existing worked/restored area, there should not be a significant impact. The only way there could be significant archaeological impact would be if there were associated works outside the previously-quarried areas, or if the works had a significant visual impact on several Bronze Age barrows if the 	<ul style="list-style-type: none"> No further action required at this stage, tumuli referred to are unlikely to be affected by the proposed development. Site is already an existing aggregate recycling operation.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
areas, historic parks and gardens and other locally distinctive features and their settings).			vicinity that are protected as Scheduled Monuments.	
	0	N/A	Historic Landscapes <ul style="list-style-type: none"> Since this area has been quarried and landfilled in restoration, provided that works only take place within the existing worked/restored area, there should not be a significant impact. 	<ul style="list-style-type: none"> No action required.
	0	N/A	Historic Buildings <ul style="list-style-type: none"> No impacts on any listed buildings or settings of any listed buildings. 	<ul style="list-style-type: none"> No action required.
7. To maintain, conserve and enhance the landscape, including townscape, seascape and the coast.	0	N/A	Landscape Capacity <ul style="list-style-type: none"> Landscape capacity to accommodate the development is high, provided it is co-ordinated and designed in with the restoration of the remainder of the area. 	<ul style="list-style-type: none"> Given the fact that the site is currently operating as an aggregate recycling operation, no impacts are expected and no further actions required at this stage.
	0	N/A	Designated Landscapes <ul style="list-style-type: none"> No impact on any designated landscapes. 	
8. To protect and improve air quality and reduce the impacts of noise.	0	0	<ul style="list-style-type: none"> Impacts on air quality expected to be negligible. No AQMAs will be affected by the working of this site proposal. Any dust resulting from working will be controlled through normal dust-suppression measures. Noise mitigation will be addressed at the planning application stage, with appropriate mitigation to be included in the development of the site. 	<ul style="list-style-type: none"> Environmental protection measures to reduce dust and ensure noise is appropriately mitigated.
9. To maintain, conserve and enhance soil quality.	0	N/A	<ul style="list-style-type: none"> Site is an existing aggregate recycling operation, located on land previously quarried and landfilled in restoration. No further impacts on soil quality are expected. 	<ul style="list-style-type: none"> No action required.
10. To conserve and safeguard mineral resources.	++	N/A	<ul style="list-style-type: none"> Site is an existing aggregate recycling operation, located on land previously quarried and landfilled in restoration. There are no further mineral resources in the ground to protect. As a producer of recycled aggregates, this site will serve to conserve resources of primary aggregates elsewhere and reduce the need to quarry these aggregates. 	<ul style="list-style-type: none"> No action required.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
11. To promote the use of alternative materials.	++	N/A	<ul style="list-style-type: none"> When amalgamated with the nearby recycling operation including washing plant, site will be the largest recycled aggregate production site in Bournemouth, Dorset and Poole. It will produce washed/recycled aggregate, making it a more flexible product capable of substitution in a wider range of uses. 	<ul style="list-style-type: none"> No action required.
12. To provide an adequate and affordable supply of minerals to meet society's needs.	++	N/A	<ul style="list-style-type: none"> Development of this site would provide a benefit in making an important contribution to the provision of a supply of recycled aggregate to meet society's needs for aggregate and delay the rate of quarrying of primary aggregate. This contribution to a sustainable supply will depend on the development and management of the site. Providing site development takes into account relevant principles of sustainable development it is expected this will contribute to complying with this objective. 	<ul style="list-style-type: none"> Ensure principles of sustainable development are incorporated into the development of this site.
13. To promote and encourage sustainable economic growth	+	N/A	<ul style="list-style-type: none"> This site proposal is expected to contribute to economic development in two main ways – directly through the provision of employment at the site to be developed and indirectly through the provision of (recycled) aggregate minerals required for the maintenance of built environment and for new built development. Both are expected to maintain/provide employment, skilled and unskilled. Given the expected level of production from this site expected size of the reserve this is likely to be a limited benefit. 	<ul style="list-style-type: none"> Ensure principles of sustainable development are incorporated into the development of this site.
14. To adapt to and mitigate the impacts of climate change.	+	N/A	<ul style="list-style-type: none"> The further development and continued operation of this site is expected to have some negative impacts regarding climate change, due primarily to machinery used and transportation of mineral away from site. However, these will in relative terms be negligible. The Bournemouth, Dorset and Poole Minerals Strategy seeks to address and minimise such impacts through Policy CC1 which requires operators to take into consideration climate change impacts and their possible mitigation for any proposed minerals development. The development management policies, e.g. DM 1, also address and seek to minimise the issue of sustainable development and climate change. There will be benefits in reducing the amount of new quarrying of land needed. 	<ul style="list-style-type: none"> The use of energy efficient plant and machinery will assist in reducing climate change impacts.
15. To minimise the negative	0	N/A	<ul style="list-style-type: none"> The site is an existing aggregate recycling operation and the proposed development, already with a 7 year 	<ul style="list-style-type: none"> No further action required at this

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
impacts of waste and minerals transport on the transport network, mitigating any residual impacts.			<p>temporary permission, is to amalgamate another aggregate recycling operation within the nearby complex into the current site.</p> <ul style="list-style-type: none"> Access is from an A-Road via signalised junction and private haul road. Congestion occurs at both Gravel Hill Junctions and Bear Cross Roundabout. Additional LGV traffic would have a disproportionate effect on queuing in peak periods, but the proposal is not expected to generate additional traffic. Both the currently separate sites have the same access onto the public road system, and no increase or decrease in traffic levels bringing materials in and taking product away is expected following amalgamation. Policies DM1 and DM 8 actively address this issue of minimising impacts on the transportation network. 	stage.
16. To support and encourage the use of sustainable transport modes, imposing no unmitigated negative impacts on them.	–	N/A	<ul style="list-style-type: none"> The proposed extension can only realistically be accessed by means of road transport, resulting in a negative impact under this Objective during development and working. As far as reasonably possible negative impacts resulting from access and transport will be mitigated, as required by Policies DM1 and DM8 of the Minerals Strategy. 	<ul style="list-style-type: none"> Mitigate impacts where identified and appropriate.
17. To sustain the health and quality of life of the population	0	N/A	<p>Impact on Sensitive Human Receptors</p> <ul style="list-style-type: none"> Site is existing aggregate recycling site, well screened by existing landform and existing trees. No visual impacts expected, or noise/dust impacts. No increase in levels of traffic using the site expected and no new access proposed. 	<ul style="list-style-type: none"> No further action required at this time. No further action required at this time.
	0	N/A	<p>Impact on Existing Settlements</p> <ul style="list-style-type: none"> Site is existing aggregate recycling site, well screened by existing landform and existing trees. No visual impacts expected, or noise/dust impacts. No increase in levels of traffic using the site expected and no new access proposed. 	
	0	N/A	<p>Impact on Airport Safety</p> <ul style="list-style-type: none"> Site is approximately 7 km from the airport, but there will be no wet working or restoration. No negative impacts expected. 	
18. To enable safe access to countryside	0	N/A	<p>Impact on Recreational Land</p> <ul style="list-style-type: none"> Site is currently used for recycled aggregate production and does not include any land used for 	<ul style="list-style-type: none"> No further action required at this time.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
and open spaces.			recreational purposes. No impacts expected.	
	0	N/A	Impact on Public Rights of Way <ul style="list-style-type: none"> No public rights of way cross the site or run near the site. No impacts expected. 	<ul style="list-style-type: none"> No further action required at this time.

Preliminary Hydrological Risk Assessment

It is noted that the proposed already has a temporary permission and thus the comments made below may not be relevant at this time. The site is some 1.75km from the Stour and drains into the Stour.

The Environment Agency notes that an appropriate surface water management scheme would need to be provided at the planning application stage. This must consider both surface water flow within and off the site, and also take into account water quality issues by incorporating appropriate pollution prevention measures. These water quality issues may arise from the contaminated land beneath the site, or from the construction/ operation of the recycling centre. Therefore all aspects must be considered in the design and management.

Controlled Waters	Issues/Risks	Mitigation	Further information/approval required
<ul style="list-style-type: none"> Watercourses Ponds/lakes, including wet habitats Groundwater 	<ul style="list-style-type: none"> The River Basin Management Plan South West River Basin District identifies the Stour as being of 'poor' environmental quality in this area. Potential for contamination from runoff from site. Potential for contamination of controlled waters through spillage or seepage of pollutants such as fuel, or silt in water. Contamination of water supplies or reduction in amount of water available for licenses supplies. Impacts on or removal of surface water features. 	<ul style="list-style-type: none"> Appropriate arrangements to be made for ensuring that runoff from the site does not enter the Stour or groundwater unless any silt has first been removed. Fuel stored on site to be appropriately bunded and sealed to prevent any spillage from entering ground or surface waters. On-going monitoring during development and working of the site. 	<ul style="list-style-type: none"> Prior written Land Drainage Consent may be required from the Lead Local Flood Authority (LLFA), Dorset County Council in this case) for works that could affect the flow of any ordinary watercourse. Full hydrogeological risk assessment will be required as part of a planning application. Flood Risk Assessment Water Framework Assessment Further assessment of potential impacts on water quality and levels, particularly for groundwater, is required prior to development. Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.

Cumulative Impacts

In itself, the proposed development is not expected to cause any additional/cumulative impacts and as noted already the development already has a time-limited permission.

The proposal is within 5Km (by road) of Kinson District Centre, Bournemouth where housing, employment and retail development (supermarket and small retail units) will be permitted in accordance with Policies CS9 and CS10 of the Bournemouth Local Plan: Core Strategy (adopted October 2012) (Site details not available). Traffic arising from the new development will add to general traffic levels on the A341.

Summary.

Potential Benefits	Potential Impacts
<ul style="list-style-type: none"> • Provision of washed/graded recycled aggregates, offering an alternative to the quarrying/use of primary aggregates. • Use of a washing plant allows the recycle to be specified for higher end-uses. • Production and use of recycled aggregate has benefits in limiting the amount of land-won aggregate that has to be produced. What is produced can be used in the most appropriate ways/uses. • No intensification of traffic is expected. Traffic movements between the currently separate operations will be reduced. 	<ul style="list-style-type: none"> • The main impacts expected are the use of equipment of site, and transportation of material to/from the site, contribution to climate change impacts. These are expected to be minimal.

Overall Recommendation:

The proposed development, is for the consolidation of two separate but associated aggregate recycling operations. No intensification of use or additional impacts are expected.

Proposed development site is already an aggregate recycling site, with a time-limited planning permission, and is located in an area previously quarried and restored by landfill. It is well screened and no additional impacts are expected.

The proposed development offers many benefits and has limited impacts.

On balance, it appears reasonable on the basis of evidence available that the impacts identified in this sustainability appraisal are capable of satisfactory mitigation and the site proposed for the location of this consolidation of two separate operations can reasonably be included in the Draft Bournemouth, Dorset and Poole Mineral Sites Plan.

Ball Clay: BC04 Trigon Hill Extension

Site Name/Location: BC04 Trigon Hill Extension		Nominee/Agent: Imerys	
Mineral Type: Ball Clay		Local Authority: Purbeck District Council	
Site Area: approximately 27 ha	Production: c. 79,000 tpa;	Reserve: approximately 440,000 tonnes	

Impact Assessment Scoring

--	Strong Negative Impact	-	Minor Negative Impact	+	Minor Positive Impact	++	Strong Positive Impact	0	Negligible or No Effect	?	Uncertain
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Timescales for effects:

P/W: Preparation and Working

R/A: Restoration and Afteruse

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
1. To move waste management up the waste hierarchy	N/A	N/A	<ul style="list-style-type: none"> This Objective is not relevant to this site nomination 	<ul style="list-style-type: none"> N/A
2. To maintain, conserve and enhance biodiversity	?	0	<p>European/International Designations</p> <ul style="list-style-type: none"> Proposed area lies just to the south of an area of European heathland. At this stage, without detailed analysis of possible impacts, it is not clear whether there would be any likely significant effect of mineral working on the designated area. In order to be acceptable the development proposal would have to pass the tests in the Habitats Regulations. In principle it should be possible to avoid effects on the designated sites through an appropriate stand-off from the development. 	<ul style="list-style-type: none"> Ecological surveys and hydrological reports required, with appropriate mitigation. Appropriate assessment under the Habitat Regulations will be required. Heathland restoration and public access could be created following working.
	?	0	<p>Annex 1 Bird Species</p> <ul style="list-style-type: none"> Area could support Annex 1 birds as part of the existing forestry crop rotation. Clearance of trees would be likely to result in heathland regeneration and the open habitat would rapidly become suitable for more Annex 1 birds. The site has the potential to be included in a revision to the heathland SPA boundary. Risk based approach essential here. 	<ul style="list-style-type: none"> Ecological surveys and hydrological reports required, with appropriate mitigation. Appropriate assessment under the Habitat Regulations will be required. Heathland restoration and public access to be created.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	?	0	<p>National Designations</p> <ul style="list-style-type: none"> Proposed area lies just to the south of an area of Morden Bog and Hyde Heath SSSI. At this stage, without detailed analysis of possible impacts, it is not clear whether there would be any likely significant effect of mineral working on the designated area. In principle it should be possible to avoid effects on the designated sites through an appropriate stand-off from the development. 	<ul style="list-style-type: none"> Ecological surveys required, with appropriate mitigation. Restoration to include creation of invertebrate habitat.
	?	0	<p>Protected species</p> <ul style="list-style-type: none"> There are numerous bat records from Trigon Hill Plantation suggesting the plantation or trees in the area may provide important roosting habitats; assessment will be required to understand the implications of removal of the plantation on bats. A large badger sett is also known in the plantation and the effects of working on this species would also require assessment. It is difficult to assess whether mitigation on bats or badger would be acceptable without detailed study on population sizes and locations. 	<ul style="list-style-type: none"> Ecological surveys required, with appropriate mitigation identified. Restoration to include appropriate habitats for these species. Further investigation into likelihood of grant of disturbance licences.
	0	0	<p>Local recognitions/designations, including ancient woodland and veteran trees</p> <ul style="list-style-type: none"> No likely effects identified. 	<ul style="list-style-type: none"> No action required.
3. To maintain, conserve and enhance geodiversity.	+	0	<ul style="list-style-type: none"> Exposures resulting from working may be of interest. Benefits are only expected during working, and are likely to be obscured or covered as part of restoration. 	<ul style="list-style-type: none"> Operator to be asked to permit visits to view exposures as required.
4. To maintain, conserve and enhance the quality of ground, surface and sea waters and manage the consumption of water in a sustainable way.	?	0	<p>Groundwater</p> <ul style="list-style-type: none"> No impact on any Source Protection Zones. Site overlies a Secondary Aquifer. Possible implications of adjacent landfill, including leachate migration to be considered/assessed. Assessment required to determine possible impacts on hydrogeology, including considering possible hydraulic links with adjacent nature conservation designations. Impacts to be appropriately mitigated 	<ul style="list-style-type: none"> Hydrological assessment required to determine possible impacts, on ground and surface waters, with appropriate mitigation to be implemented. Where necessary mitigating measures should be installed to maintain groundwater levels. Appropriate arrangements should be put in place to ensure that the water leaving the site and entering the rivers/watercourses is of an acceptable quality.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	-	0	<p>Surface Water</p> <ul style="list-style-type: none"> Watercourse within the site boundary. There appears to be a pond close to the northern edge of the site and other ponds in vicinity. Assessment required to determine possible impacts on hydrogeology. Impacts to be appropriately mitigated 	<ul style="list-style-type: none"> Any fuel on site should be properly stored to avoid contamination in case of spillage. Appropriate arrangements should be installed for surface water and silt collection and fuel storage to prevent contamination of groundwater resources. Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.
5. To reduce flood risk and improve flood management.	0	0	<p>Flooding/Coastal Stability</p> <ul style="list-style-type: none"> Entire site is within Flood Risk Zone 1, no expected risk of flooding or contributing to flooding. 	<ul style="list-style-type: none"> Flood Risk Assessment (FRA) will be required. All necessary mitigation to be implemented.
6. To maintain, conserve and enhance the historic environment (including archaeological sites, historic buildings, conservation areas, historic parks and gardens and other locally distinctive features and their settings).	?	0	<p>Archaeology</p> <ul style="list-style-type: none"> The number of prehistoric barrows in the area in particular indicates that the site has archaeological potential. Archaeological assessment and evaluation is required. Only when these have been undertaken would the archaeological impact be understood – at present it could be anywhere from Very Significant to No Significant impact. 	<ul style="list-style-type: none"> Full archaeological survey of the area required to assess possible presence and significance of non-designated remains and to assess whether/how these should be protected during working.
	?	0	<p>Historic Landscapes</p> <ul style="list-style-type: none"> Historically much or all of this site would have been heathland. This heathland formed part of the setting of the barrows in the area. Unsympathetic extraction and quarrying could have a negative impact on the setting of these Monuments, but there is the potential for an improvement in that setting through restoration to heathland. Further evaluation will be required. When this has been undertaken possible impacts, if any, will be better understood. 	<ul style="list-style-type: none"> All necessary mitigation to be implemented. Adequate provision to be made for preservation, excavation or recording, as appropriate. Further consideration to be given to restoration proposals, in terms of historic landscapes.
	0	0	<p>Historic Buildings</p> <ul style="list-style-type: none"> Belts of trees separate Trigon House, which is the nearest listed building to the site. Therefore the site has negligible impact on the listed buildings. 	<ul style="list-style-type: none"> No action required.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
7. To maintain, conserve and enhance the landscape, including townscape, seascape and the coast.	—	0	<p>Landscape Capacity</p> <ul style="list-style-type: none"> Potential to impact adversely on the open access land to the west and north west. Due to its position on the west slopes of the hillside its sensitivity is increased and its capacity to absorb development is significantly reduced. 	<ul style="list-style-type: none"> Assessment of potential visual impacts required. All appropriate mitigation to be included. Restoration to consider increasing public access/informal recreation and to include nature conservation interests. Appropriate restoration proposals in line with Landscape Management Guidelines referred to in Minerals Strategy.

1. To protect and improve air quality and reduce the impacts of noise.	—	0	<ul style="list-style-type: none"> Impacts on air quality at/around the site expected to be negligible. No AQMAs will be directly affected by the working of this site proposal. Any dust resulting from working will be controlled through normal dust-suppression measures. Ball clay traffic travelling to/from Devon along the A35 would have some impact on the Chideock AQMA. Any impacts due to noise resulting from mineral working would be expected to be satisfactorily minimised through normal noise mitigation measures, imposed at the planning application stage. 	<ul style="list-style-type: none"> Environmental protection measures to be put in place to reduce dust and noise impacts. Existing measures to address air quality in Chideock AQMA would minimise impacts due to ball clay transport.
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8. To maintain, conserve and enhance soil quality.	—	0	<ul style="list-style-type: none"> The site comprises primarily heathland, grassland and woodland cover. The area is a former heathland area and so would be expected to have relatively poor, acidic soils. Site preparation/working would require stripping and storage of the soils, with some impacts on them. If the site is worked and restored to heathland this will require reinstatement/retention of acidic soils with their seedbank. 	<ul style="list-style-type: none"> Soil is poor quality in agricultural terms but valuable in terms of potential for heathland restoration. Soils to be stored/protected during preparation and working and properly reinstated during restoration.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
9. To conserve and safeguard mineral resources.	+	0	<ul style="list-style-type: none"> The site would make an important contribution to the supply of ball clay. 	<ul style="list-style-type: none"> No specific action required; site development to take into consideration relevant impacts and mitigate where appropriate.
10. To promote the use of alternative materials.	0	0	<ul style="list-style-type: none"> This proposal does not at present promote the use of alternative materials. 	<ul style="list-style-type: none"> No action required.
11. To provide an adequate and affordable supply of minerals to meet society's needs.	+	0	<ul style="list-style-type: none"> Development of this site would provide a benefit in terms of contributing to the provision of a supply of minerals to meet society's needs. Ensuring a sustainable supply will depend on the development and management of the site. Providing site development takes into account relevant principles of sustainable development it is expected this will contribute to complying with this objective. 	<ul style="list-style-type: none"> Ensure principles of sustainable development are incorporated into the development of this site.
12. To promote and encourage sustainable economic growth	+	0	<ul style="list-style-type: none"> This site proposal is expected to contribute to economic development on two levels – directly through the provision of employment at the site to be developed and indirectly through the provision of ball clay and aggregate minerals required for the maintenance of built environment and for new built development and for commercial/industrial uses. Both levels are expected to maintain employment, skilled and unskilled. However given the expected size of the reserve this is likely to be a limited benefit. Proposed restoration is to heathland/agriculture, both of which offer economic benefits. 	<ul style="list-style-type: none"> Further assessment required to consider restoration options.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
13. To adapt to and mitigate the impacts of climate change.	—	0	<ul style="list-style-type: none"> Developing land as a quarry is expected to have some negative impacts regarding climate change, due primarily to machinery used and transportation of mineral away from site. However, these will in relative terms be negligible. The Bournemouth, Dorset and Poole Minerals Strategy seeks to address and minimise such impacts through Policy CC1 which requires operators to take into consideration climate change impacts and their possible mitigation for any proposed minerals development. The development management policies, e.g. DM 1, also address and seek to minimise the issue of sustainable development and climate change. Restoration to some form of vegetated environment will offer benefits in the form of climate change mitigation, including provision of habitat for wildlife, but again these will be relatively small. 	<ul style="list-style-type: none"> Use energy efficient plant and machinery. Implement restoration which provides appropriate habitats to help to increase resilience of flora/fauna.
14. To minimise the negative impacts of waste and minerals transport on the transport network, mitigating any residual impacts.	—	0	<ul style="list-style-type: none"> This proposal is for an extension to existing ball clay extraction at Trigon Hill. This is an established site with a good access onto Wareham Forest Road. Access from here to the strategic network is gained via the A35 to the north and the A351 to the east. The extension site could be expected to generate 55 trips per day although it is thought that the site would follow the cessation of other extraction at Trigon rather than operating in parallel to it. The site has therefore been given a 'Less Significant Adverse Impact' rating. Should the site intensify movements to Trigon Hill any Transport Statement should consider vehicle routing and any impact on the A351 to the east which experiences high levels of congestion. Policies DM1 and DM 8 actively address this issue of minimising impacts on the transportation network. 	<ul style="list-style-type: none"> Any proposal for this site would need to be accompanied by a Transport Assessment which will need to provide access details and consider vehicle routing. The TA should be scoped with the Transport Development Management Team. Transport Assessment to be carried out, identifying opportunities for reducing impacts on the transport network. Alternative options to be investigated.
15. To support and encourage the use of sustainable transport	—	0	<ul style="list-style-type: none"> The proposed extension can only realistically be accessed by means of road transport, resulting in a negative impact under this Objective during development and working. As far as reasonably possible negative impacts resulting from access and transport will be 	<ul style="list-style-type: none"> Mitigate impacts where identified and appropriate.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
modes, imposing no unmitigated negative impacts on them.	---		mitigated, as required by Policies DM1 and DM8 of the Minerals Strategy.	
16. To sustain the health and quality of life of the population	?	0	Impact on Sensitive Human Receptors <ul style="list-style-type: none"> Cold Harbour properties some 380 m to the east, other residential uses further to the north. Development would likely require appropriate mitigation (such as visual and noise attenuation bunding, standoffs) to limit impacts. Adequate scope to screen works, using mitigation such as visual and noise attenuation bunds. 	<ul style="list-style-type: none"> Provision of appropriate mitigation, following assessment of likely impacts. Restoration to improve landscape of site where possible; and to seek to increase public access. Transport Assessment to be carried out, identifying opportunities for reducing impacts on the transport network where appropriate.
	?	0	Impact on Existing Settlements <ul style="list-style-type: none"> Cold Harbour is closest settlement to the east along with other properties along the C7. Screening (visual and noise attenuation bunding) would significantly limit the impact of the site working, but there will be impacts of lorries entering/leaving the site. This is an extension and should not result in intensification of any impacts. 	
	0	0	Impact on Airport Safety <ul style="list-style-type: none"> Site is approximately 23 km from airport and proposed for dry working and restoration. No impacts expected 	
17. To enable safe access to countryside and open spaces.	0	?	Impact on Recreational Land <ul style="list-style-type: none"> Site is agricultural land and forestry, private land with no public access. No formal or informal recreational use. No impacts expected. Restoration to consider options for improving public access in the area. 	<ul style="list-style-type: none"> No action required for working. Restoration to improve public access in the area.
	0	0	Impact on Public Rights of Way <ul style="list-style-type: none"> No rights of way across the site or adjacent to it. No impacts expected 	

Preliminary Hydrological Risk Assessment

Controlled Waters	Issues/Risks	Mitigation	Further information/approval required
<ul style="list-style-type: none"> • Watercourses • Ponds/lakes, including wet habitats • Groundwater 	<ul style="list-style-type: none"> • The River Basin Management Plan South West River Basin District identifies the Piddle (the closest main river, some 900m distant) as being of 'Poor' environmental quality. Potential for contamination from runoff from site. • Potential for contamination of controlled waters through spillage or seepage of pollutants such as fuel, or silt in water. • Potential impacts on existing surface water features. 	<ul style="list-style-type: none"> • Appropriate arrangements to be made for ensuring that runoff from the site does not enter the Piddle or groundwater unless any silt has first been removed. • Fuel stored on site to be appropriately bunded and sealed to prevent any spillage from entering ground or surface waters. • On-going monitoring during development and working of the site. • Ground water recharge if considered necessary. 	<ul style="list-style-type: none"> • Full hydrogeological risk assessment will be required as part of a planning application. • Flood Risk Assessment • Water Framework Assessment • Further assessment of potential impacts on water quality and levels, particularly for groundwater, is required prior to development. • Assessment of the feasibility of relocating ponds and associated habitats and species. • Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.

Cumulative Impacts

There is other mineral working in the vicinity, both existing and proposed as well as waste management. The proposed site is an extension to existing mineral working/waste disposal. As an extension site, there will be no cumulative impact but this would represent an extension of time of working.

The proposal is within 5Km (by road) of a site allocated in the Purbeck Local Plan Part 1 (adopted Nov 2012) (Policy CEN) for development of 200 dwellings and community facilities, off Worgret Road, Wareham. Traffic arising from the new residential development will also add to general traffic levels in / around Wareham.

Summary.

Potential Benefits	Potential Impacts
<ul style="list-style-type: none">• Provision of ball clay, considered a nationally important mineral.• Economic benefits of mineral production.• Restoration could include some increased and improved public access.	<ul style="list-style-type: none">• Site is close to European designated heathland; contains Annex 1 birds and could be designated as a Special Protection Area; there are possible impacts on national designations (SSSI nearby) and possible threats to protected species on/around the site. Further assessment, including Appropriate Assessment, will be required to better understand these impacts and to determine whether they can be satisfactorily mitigated.• Ground and surface water – further assessment required to determine possible impacts of quarrying on hydrology and hydrogeology, but these expected to be capable of mitigation.• Archaeology and historic landscapes – potential impacts on both of these, further assessment required to determine likely impacts, but any impacts expected to be mitigable.• Landscape capacity and visual impacts are a key issue and impacts must be assessed and appropriately mitigated. Landscape and visual assessment will be required.

Overall Recommendation:

This is a relatively small site which is primarily intended for the production of ball clay. Sand/gravel lying above the ball clay will be removed first, and then the clay will be removed.

Assessment already carried out has flagged up biodiversity, hydrology/hydrogeology, archaeology and landscape/visual impacts as the key issues to be addressed as part of working this site. Further assessment, including Appropriate Assessment under the Habitat Regulations, is required to identify satisfactory mitigation and to identify if there are any additional impacts that will require mitigation.

Subject to the completion of all necessary assessments and providing that any impacts are capable of satisfactory mitigation, it appears reasonable on the basis of evidence available that the site nomination can reasonably be included in the Draft Bournemouth, Dorset and Poole Mineral Sites Plan.

Purbeck Stone : PK02 Blacklands Quarry, Acton

Site Name/Location: PK02 Blacklands Quarry, Acton	Nominee/Agent: National Trust Local Authority: Purbeck District Council Mineral Type: Purbeck Stone	Site Area: approximately 1.34 ha Production: approx. 2,000 tpa Reserve: approx. 52,000 tonnes
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Impact Assessment Scoring

--	Strong Negative Impact	-	Minor Negative Impact	+	Minor Positive Impact	++	Strong Positive Impact	0	Negligible or No Effect	?	Uncertain
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Timescales for effects:

P/W: Preparation and Working

R/A: Restoration and Afteruse

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
1. To move waste management up the waste hierarchy	N/A	N/A	<ul style="list-style-type: none"> This Objective is not relevant to this site nomination 	<ul style="list-style-type: none"> N/A
2. To maintain, conserve and enhance biodiversity	0	0	European/International Designations <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.
	0	0	Annex 1 Bird Species <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.
	0	0	National Designations <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.
	0	0	Protected species <ul style="list-style-type: none"> Great Crested Newt is known to breed in a pond within 500m of the proposed site. However, the current land use of improved agricultural grazing land is unlikely to provide any habitat of importance to the species, and the likely effect of mineral extraction on GCN is probably insignificant. 	<ul style="list-style-type: none"> Ecological surveys required, with appropriate mitigation if required.
	0	0	Local recognitions/designations, including ancient woodland and veteran trees <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
3. To maintain, conserve and enhance geodiversity.	+	0	<ul style="list-style-type: none"> The Purbeck limestone group has an important association with the geology of the Jurassic Coast World Heritage Site. Working quarries in Purbeck have been known to yield important fossils, including dinosaur footprints. They are also of ongoing interest for the study of early Cretaceous stratigraphy. These interests should be acknowledged with the assumption that geologists and the Jurassic Coast Team hosted by DCC will respond positively to any opportunities to recover fossils or record and study unusual features if they are discovered. In terms of geodiversity there is a presumption in favour of an appropriate level of quarrying activity continuing in order to sustain the ongoing interests. 	<ul style="list-style-type: none"> Note potential for quarries to yield fossils or other material of geodiversity interest. Visits or other investigation of working sites may be requested. Investigate potential and/or benefits of leaving quarried face open after restoration.
4. To maintain, conserve and enhance the quality of ground, surface and sea waters and manage the consumption of water in a sustainable way.	0	0	<p>Groundwater</p> <ul style="list-style-type: none"> Site overlies Secondary aquifers. No impact on Source Protection Zones. No licenced supplies. 	<ul style="list-style-type: none"> Simple hydrological assessment required to determine possible impacts, on ground and surface waters, with appropriate mitigation to be implemented. Appropriate arrangements should be put in place to ensure that the water leaving the site and entering the watercourses or groundwater is of an acceptable quality. Any fuel on site should be properly stored to avoid contamination in case of spillage. Appropriate arrangements should be installed for surface water and silt collection and fuel storage to prevent contamination of groundwater resources. The combined impacts of Purbeck Limestone Quarries should be assessed where a number of sites affect the same water resource or receiving water course.
	0	0	<p>Surface Water</p> <ul style="list-style-type: none"> Watercourses approximately 460m to the west of the site, but no significant water interests in the vicinity. 	
5. To reduce flood risk and improve flood management.	0	0	<p>Flooding/Coastal Stability</p> <ul style="list-style-type: none"> Site is entirely in Flood Risk Zone 1, no risk of flooding. 	<ul style="list-style-type: none"> No action required.
6. To maintain, conserve and enhance the historic environment (including archaeological sites, historic buildings,	?	0	<p>Archaeology</p> <ul style="list-style-type: none"> The discovery of Iron Age and Roman period remains at the Blacklands site to the west and north of the proposal site indicates the present site's high potential for below-ground archaeology. There is also potential for industrial archaeological evidence of early quarrying. Archaeological assessment and evaluation would be required before an informed planning decision 	<ul style="list-style-type: none"> Archaeological survey of the area required <u>as part of planning application</u> to assess possible presence and significance of non-designated remains and to assess whether/how

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
conservation areas, historic parks and gardens and other locally distinctive features and their settings).			could be made. Only when these have been undertaken would the archaeological impact be understood – at present it could be anywhere from ‘Very Significant’ to ‘No Significant’ impacts.	these should be protected during working – <u>no further work required at site allocation stage.</u>
	?	0	Historic Landscapes <ul style="list-style-type: none"> The local landscape bears the imprint of previous quarrying dating from the Roman period onwards. It could be argued that the present site would be a continuation of the process, and if the site is to be restored afterwards the impact would be limited in time anyway. Further evaluation will be required. When this has been undertaken possible impacts, if any, will be better understood. 	<ul style="list-style-type: none"> All necessary mitigation to be implemented prior to working. Adequate provision to be made for preservation, excavation or recording, as appropriate. Further consideration to be given to restoration proposals, in terms of historic landscapes.
	0	0	Historic Buildings <ul style="list-style-type: none"> This is a quarry set in a quarrying landscape and the nearest listed buildings are too far away to be affected. No significant impact expected. 	<ul style="list-style-type: none"> No action required.
7. To maintain, conserve and enhance the landscape, including townscape, seascape and the coast.	–	0	Landscape Capacity <ul style="list-style-type: none"> The major issue is potential cumulative adverse impacts on the amenity of users of Priests Way. Restoration of adjacent quarries recommended to help avoid any cumulative landscape and visual impact. 	<ul style="list-style-type: none"> Assessment of potential visual impacts will be required <u>at planning application stage.</u> All appropriate mitigation to be included. Appropriate restoration proposals in line with Landscape Management Guidelines referred to in Minerals Strategy.
	0	0	Designated Landscapes <ul style="list-style-type: none"> Less significant adverse impact. 	
8. To protect and improve air quality and reduce the impacts of noise.	0	0	<ul style="list-style-type: none"> Impacts on air quality expected to be negligible. No AQMAs will be affected by the working of this site proposal. Any dust resulting from working will be controlled through normal dust-suppression measures. Noise mitigation will be addressed at the planning application stage, with appropriate mitigation to be included in the development of the site. 	<ul style="list-style-type: none"> Environmental protection measures to reduce dust and ensure noise is appropriately mitigated.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
9. To maintain, conserve and enhance soil quality.	-	0	<ul style="list-style-type: none"> Site is 'Good to Moderate' agricultural land. Soils will be stripped and protected during preparation and working and reused on site as part of restoration. 	<ul style="list-style-type: none"> Soil to be properly stripped and stored prior to working; protected during working; and re-spread on site after working.
10. To conserve and safeguard mineral resources.	++	0	<ul style="list-style-type: none"> The site would make an important contribution to the supply of Purbeck Stone for Bournemouth, Dorset and Poole and all other potential markets. 	<ul style="list-style-type: none"> No specific action required; site development to take into consideration relevant impacts and mitigate where appropriate.
11. To promote the use of alternative materials.	-	0	<ul style="list-style-type: none"> This proposal does not promote the use of alternative materials. 	<ul style="list-style-type: none"> No action required.
12. To provide an adequate and affordable supply of minerals to meet society's needs.	+	0	<ul style="list-style-type: none"> Development of this site would provide a benefit in terms of contributing to the provision of a supply of minerals to meet society's needs. Ensuring a sustainable supply will depend on the development and management of the site. Providing site development takes into account relevant principles of sustainable development it is expected this will contribute to complying with this objective. 	<ul style="list-style-type: none"> Ensure principles of sustainable development are incorporated into the development of this site.
13. To promote and encourage sustainable economic growth	+	+	<ul style="list-style-type: none"> This site proposal is expected to contribute to economic development on two levels – directly through the provision of employment at the site to be developed and indirectly through the provision of Purbeck Stone required for new build, repairs and maintenance, decorative and monument work and landscaping work. Both levels are expected to maintain employment, skilled and unskilled. Restoration to agriculture will offer some economic benefits through both the agriculture itself and the recreational attraction and use in the wider area (i.e. riding, walking). 	<ul style="list-style-type: none"> No action required.
14. To adapt to and mitigate the impacts of climate change.	-	0	<ul style="list-style-type: none"> Developing land as a quarry is expected to have some negative impacts regarding climate change, due primarily to machinery used and transportation of mineral away from site. However, these will in relative terms be negligible. The Bournemouth, Dorset and Poole Minerals Strategy seeks to address and minimise such impacts through Policy CC1 which requires operators to take into consideration climate change impacts and their possible mitigation for any proposed minerals development. 	<ul style="list-style-type: none"> Use energy efficient plant and machinery. Implement restoration which provides appropriate habitats to help to increase resilience of flora/fauna.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			<ul style="list-style-type: none"> The development management policies, e.g. DM 1, also address and seek to minimise the issue of sustainable development and climate change. 	
15. To minimise the negative impacts of waste and minerals transport on the transport network, mitigating any residual impacts.	–	0	<ul style="list-style-type: none"> Access proposed is onto the B3069 via the existing Acton quarry access and a short section of the C135. The access and the junctions in the immediate vicinity are suitable for the small number of proposed movements to this site (c. 4 trips per week). Onward movements to the strategic network would be via the B3069 to the A351, either through Kingston or Langton Matravers. Policies DM1 and DM 8 of the Minerals Strategy actively address this issue of minimising impacts on the transportation network. 	<ul style="list-style-type: none"> Any proposal for this site would need to be accompanied by a Transport Assessment which will need to provide access details and consider vehicle routing. The TA should be scoped with the Transport Development Management Team. Transport Assessment will identify opportunities for reducing impacts on the transport network.
16. To support and encourage the use of sustainable transport modes, imposing no unmitigated negative impacts on them.	–	0	<ul style="list-style-type: none"> The proposed extension can only realistically be accessed by means of road transport, resulting in a negative impact under this Objective during development and working. As far as reasonably possible negative impacts resulting from access and transport will be mitigated, as required by Policies DM1 and DM8 of the Minerals Strategy. 	<ul style="list-style-type: none"> Mitigate impacts where identified and appropriate.
17. To sustain the health and quality of life of the population	–	0	<p>Impact on Sensitive Human Receptors</p> <ul style="list-style-type: none"> Number of residential properties within 350m and within 500m. Row of cottages just north of Priest's Way. Site is an extension of existing quarry in an area with a long history of quarrying. Impacts could be either 'Less Significant' or 'Not Significant', given the context of the site. 	<ul style="list-style-type: none"> Provision of appropriate mitigation, following assessment of likely impacts. Restoration to improve landscape of site where possible; and to seek to facilitate public access. Screening, bunding, standoffs will be used to mitigate impacts where considered necessary.
	0			
	0	0	<p>Impact on Existing Settlements</p> <ul style="list-style-type: none"> Nearest settlement is Acton, some 300m north of the proposed extension. Site extension not visible from Acton. Long history of stone quarrying in the area. Visual or noise impacts are not expected to affect these settlements, nor will there be any intensification of traffic generated by the proposed extension. However existing traffic levels 	<ul style="list-style-type: none"> Transport Assessment to be carried out, identifying possible impacts and opportunities for reducing impacts on the transport network.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			generated by the current operation will continue for a longer period of time.	
	0	0	Impact on Airport Safety <ul style="list-style-type: none"> Site is approximately 23 km from airport, with no wet working or restoration. No impacts expected. 	<ul style="list-style-type: none"> No action required.
18. To enable safe access to countryside and open spaces.	0	+ ?	Impact on Recreational Land <ul style="list-style-type: none"> Site is agricultural land, with no formal/informal recreation use. There may be an opportunity to provide access following working. 	<ul style="list-style-type: none"> Assessment of impacts, with appropriate mitigation identified. Restoration to include considering how it might be possible to improve public access in the area.
	- ?	0	Impact on Public Rights of Way <ul style="list-style-type: none"> No rights of way cross the site, but Priests Way runs close to the northern boundary. Screening unlikely to be required and impacts should be minimal but further assessment required. 	

Preliminary Hydrological Risk Assessment

Controlled Waters	Issues/Risks	Mitigation	Further information/approval required
<ul style="list-style-type: none"> • Watercourses • Ponds/lakes, including wet habitats • Groundwater 	<ul style="list-style-type: none"> • Potential for contamination of controlled waters (groundwater) through spillage or seepage of pollutants such as fuel. • Contamination of water supplies or reduction in amount of water available for licenced supplies. 	<ul style="list-style-type: none"> • Appropriate arrangements to be made for ensuring that runoff from the site does not enter the groundwater unless any silt or other pollutant has first been removed. • Fuel stored on site to be appropriately bunded and sealed to prevent any spillage from entering ground or surface waters. • On-going monitoring during development and working of the site. 	<ul style="list-style-type: none"> • Water Framework Assessment required. • Simple hydrological risk assessment required. • Further assessment of potential impacts on water quality and levels, particularly for groundwater, is required prior to development. • Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.

Cumulative Impacts

Site is proposed extension of existing site, in an area of both existing and proposed mineral development. It is inevitable that there will be other mineral working in the vicinity as this is the area of Dorset where the Purbeck Stone is sourced. Since the proposal comprises the extension of an existing site and will not be begun until the current site is completed, there will be no cumulative impacts from its development. However, the period of time during which the site is generating site traffic will be extended.

Site nomination comprises an extension to an existing quarry in an area where there is a high concentration and long history of mineral extraction. The cumulative effect of the number of quarries operating in this area should be taken into consideration, and as far as possible no new quarry areas should be opened unless others have been restored.

The proposal is within 5Km (by road) of a town (Swanage) where allocations for the development of 200 dwellings, employment and retail facilities have been made in the Purbeck Local Plan Part 1 (adopted Nov 2012) (Policy SE). (Site details not yet available). Traffic arising from the new residential development will add to general traffic levels in / around Swanage and on the A351.

Summary.

Potential Benefits	Potential Impacts
<ul style="list-style-type: none">• Provision of Purbeck Stone.• Support for the Purbeck Stone industry and employment, both locally and wherever Purbeck Stone is exported and used.• Use of the stone for heritage building works/repairs, and for new buildings.• Geodiversity benefits, through exposures created and fossils found.• Possibility of improved public access	<ul style="list-style-type: none">• Landscape capacity is one of the biggest potential impacts, especially given the proximity of the site to the Priest's Way footpath. However the proposal is an extension and the current site should be restored before moving to the extension.• Assessment of potential heritage impacts required, but these are expected to be capable of mitigation.• Access is not expected to be an issue. Possible impacts on footpaths to be assessed and mitigated as needed.

Overall Recommendation:

Assessment already carried out has flagged up archaeology, landscape/visual impact and access (including impacts on nearby right of way) as the key issues to be addressed as part of working this site. Further assessment will be required at planning application stage to identify satisfactory mitigation and to identify if there are any additional impacts that will require mitigation.

As the site is an extension of an existing site, it is expected that any impacts should be capable of satisfactory mitigation.

Subject to the completion of all necessary assessments and providing that any impacts are capable of satisfactory mitigation, it appears reasonable on the basis of evidence available that the site nomination can reasonably be included in the Draft Bournemouth, Dorset and Poole Mineral Sites Plan.

Purbeck Stone: PK08 Quarr Farm, Harmans Cross

Site Name/Location: PK08 Quarr Farm, Harman's Cross	Nominee/Agent: Symonds and Sampson	Site Area: approximately 3.3 ha
	Local Authority: Purbeck District Council	Production: approximately 2,000 tpa
	Mineral Type: Purbeck Stone	Reserve: approximately 96,000 tonnes

Impact Assessment Scoring

--	Strong Negative Impact	-	Minor Negative Impact	+	Minor Positive Impact	++	Strong Positive Impact	0	Negligible or No Effect	?	Uncertain
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Timescales for effects:

P/W: Preparation and Working

R/A: Restoration and Afteruse

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
1. To move waste management up the waste hierarchy	N/A	N/A	<ul style="list-style-type: none"> This Objective is not relevant to this site nomination 	<ul style="list-style-type: none"> N/A
2. To maintain, conserve and enhance biodiversity	0	0	European/International Designations <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.
	0	0	Annex 1 Bird Species <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.
	0	0	National Designations <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.
	0	0	Protected species <ul style="list-style-type: none"> Greater Horseshoe Bat is known to inhabit the area close to the proposed site. Whilst it is unlikely there would be any effect on GHB which would result from quarrying at this location, information would be needed to support the allocation to demonstrate no likely significant effect. 	<ul style="list-style-type: none"> Ecological surveys required, with appropriate mitigation to be implemented.
	-	0	Local recognitions/designations, including ancient woodland and veteran trees <ul style="list-style-type: none"> If access from the main road would be via Haycraft Lane, which is recognised as a narrow lane with flower-rich verges. Consideration of the possible effects of vehicle movements, and any appropriate mitigation, would be required to ensure the verges are protected. 	<ul style="list-style-type: none"> Further assessment required, including consideration of alternatives to Haycraft Lane for access and options for mitigation for any potential impacts.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
3. To maintain, conserve and enhance geodiversity.	+	+	<ul style="list-style-type: none"> The Purbeck limestone group has an important association with the geology of the Jurassic Coast World Heritage Site. Working quarries in Purbeck have been known to yield important fossils, including dinosaur footprints. They are also of ongoing interest for the study of early Cretaceous stratigraphy. These interests should be acknowledged with the assumption that geologists and the Jurassic Coast Team hosted by DCC will respond positively to any opportunities to recover fossils or record and study unusual features if they are discovered. In terms of geodiversity there is a presumption in favour of an appropriate level of quarrying activity continuing in order to sustain these ongoing interests. 	<ul style="list-style-type: none"> Note potential for quarries to yield fossils or other material of geodiversity interest. Visits or other investigation of working sites may be requested. Investigate potential and/or benefits of leaving quarried face open after restoration.
4. To maintain, conserve and enhance the quality of ground, surface and sea waters and manage the consumption of water in a sustainable way.	0	0	<p>Groundwater</p> <ul style="list-style-type: none"> Site overlies Secondary aquifers. No impact on Source Protection Zones. No licenced supplies. 	<ul style="list-style-type: none"> Simple hydrological assessment required to determine possible impacts, on ground and surface waters, with appropriate mitigation to be implemented. Appropriate arrangements should be put in place to ensure that the water leaving the site and entering the watercourses or groundwater is of an acceptable quality. Any fuel on site should be properly stored to avoid contamination in case of spillage. Appropriate arrangements should be installed for surface water and silt collection and fuel storage to prevent contamination of groundwater resources. The combined impacts of Purbeck Limestone Quarries should be assessed where a number of sites affect the same water resource or receiving water course.
	0	0	<p>Surface Water</p> <ul style="list-style-type: none"> Spring within 500m of site. No impacts expected on this. 	
5. To reduce flood risk and improve flood management.	0	0	<p>Flooding/Coastal Stability</p> <ul style="list-style-type: none"> Site is entirely in Flood Risk Zone 1, no risk of flooding. 	<ul style="list-style-type: none"> No action required.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
6. To maintain, conserve and enhance the historic environment (including archaeological sites, historic buildings, conservation areas, historic parks and gardens and other locally distinctive features and their settings).	?	?	Archaeology <ul style="list-style-type: none"> It is considered that the site has high potential for below-ground archaeology and possibly industrial archaeological evidence of early quarrying. Archaeological assessment and evaluation would be required before an informed planning decision could be made. Only when these have been undertaken would the archaeological impact be understood – at present it could be anywhere from ‘Very Significant’ to ‘No Significant’ impacts. 	<ul style="list-style-type: none"> Archaeological survey of the area required <u>as part of planning application</u> to assess possible presence and significance of non-designated remains and to assess whether/how these should be protected during working – <u>no further work required at site allocation stage</u>. All necessary mitigation to be implemented prior to working. Adequate provision to be made for preservation, excavation or recording, as appropriate. Further consideration to be given to restoration proposals, in terms of historic landscapes.
	0	0	Historic Landscapes <ul style="list-style-type: none"> The local landscape bears the imprint of previous quarrying dating from the Roman period onwards. It could be argued that the present site would be a continuation of the process, and if the site is to be restored afterwards the impact would be limited in time anyway. 	
	0	0	Historic Buildings <ul style="list-style-type: none"> This is a quarry set in a quarrying landscape and the nearest listed buildings are too far away to be affected. No significant impact expected. 	
7. To maintain, conserve and enhance the landscape, including townscape, seascape and the coast.	– ?	0	Landscape Capacity <ul style="list-style-type: none"> This site proposal is just within the area of least landscape and visual sensitivity. The capacity of the landscape to absorb the site is moderate and it is important to ensure the northern boundary is sensitively designed e.g. relating to stockpiles to reduce impacts from across the valley side. 	<ul style="list-style-type: none"> Assessment of potential visual impacts will be required <u>at planning application stage</u> and all appropriate mitigation to be included. Northern boundary of site to be sensitively and carefully designed and worked. Appropriate restoration proposals in line with Landscape Management Guidelines referred to in Minerals Strategy.
	– ?	0	Designated Landscapes <ul style="list-style-type: none"> Site proposal is expected to have a less significant adverse impact. 	
8. To protect and improve air quality and reduce the impacts of noise.	0	0	<ul style="list-style-type: none"> Impacts on air quality expected to be negligible. No AQMAs will be affected by the working of this site proposal. Any dust resulting from working will be controlled through normal dust-suppression measures. Noise mitigation will be addressed at the planning application stage, with appropriate mitigation to be included in the development of the site. 	<ul style="list-style-type: none"> Environmental protection measures to reduce dust and ensure noise is appropriately mitigated.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
9. To maintain, conserve and enhance soil quality.	-	0	<ul style="list-style-type: none"> Soils are somewhere between good to moderate to very poor. Any soil removed will be protected during working and either re-used on site or taken elsewhere to be used. Further assessment may be required to determine soil quality. 	<ul style="list-style-type: none"> Soil to be properly stripped and stored prior to working; protected during working; and re-spread on site after working.
10. To conserve and safeguard mineral resources.	+	0	<ul style="list-style-type: none"> The site would make an important contribution to the supply of Purbeck Stone for Bournemouth, Dorset and Poole and all other potential markets. 	<ul style="list-style-type: none"> No specific action required; site development to take into consideration relevant impacts and mitigate where appropriate.
11. To promote the use of alternative materials.	-	0	<ul style="list-style-type: none"> This proposal does not promote the use of alternative materials. 	<ul style="list-style-type: none"> No action required.
12. To provide an adequate and affordable supply of minerals to meet society's needs.	+	0	<ul style="list-style-type: none"> Development of this site would provide a benefit in terms of contributing to the provision of a supply of minerals to meet society's needs. Ensuring a sustainable supply will depend on the development and management of the site. Providing site development takes into account relevant principles of sustainable development it is expected this will contribute to complying with this objective. 	<ul style="list-style-type: none"> Ensure principles of sustainable development are incorporated into the development of this site.
13. To promote and encourage sustainable economic growth	+	0	<ul style="list-style-type: none"> This site proposal is expected to contribute to economic development on two levels – directly through the provision of employment at the site to be developed and indirectly through the provision of Purbeck Stone required for new build, repairs and maintenance, decorative and monument work and landscaping work. Both levels are expected to maintain employment, skilled and unskilled. Restoration to agriculture will offer some further economic benefits through both the agriculture itself and the recreational attraction and use in the wider area (i.e. riding, walking). 	<ul style="list-style-type: none"> No action required.
14. To adapt to and mitigate the impacts of climate change.	-	0	<ul style="list-style-type: none"> Developing land as a quarry is expected to have some negative impacts regarding climate change, due primarily to machinery used and transportation of mineral away from site. However, these will in relative terms be negligible. The Bournemouth, Dorset and Poole Minerals Strategy seeks to address and minimise such impacts through Policy CC1 which requires operators to take into consideration climate change impacts and their possible mitigation for any proposed minerals 	<ul style="list-style-type: none"> Use energy efficient plant and machinery. Implement restoration which provides appropriate habitats to help to increase resilience of flora/fauna.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			<p>development.</p> <ul style="list-style-type: none"> The development management policies, e.g. DM 1, also address and seek to minimise the issue of sustainable development and climate change. 	
15. To minimise the negative impacts of waste and minerals transport on the transport network, mitigating any residual impacts.	---	0	<ul style="list-style-type: none"> If the site is accessed via Haycraft's Lane, taking vehicles to the B3069, approximately 400m to the south or to the A351 approximately 1km to the north, this would be expected to have a 'Significant Adverse Impact'. Access onto Haycraft's Lane, presumed to be via the same access that serves Avalon, is narrow and does not have suitable geometry to accommodate HGVs. This is compounded by the very narrow nature of Haycraft's Lane at this point. The remainder of Haycraft's Lane, to the north and south, is very narrow, has limited passing opportunity and has poor forward visibility. To be acceptable in highway terms any proposal for this site would need to limit trips to and from the site to the very low levels that could reasonably be expected from the existing agricultural use of the land. Any proposal would also need to provide an acceptable access from the site onto Haycraft's Lane. If the site is limited to a very small number of trips as detailed above it can be assumed to have a 'Significant Adverse Impact' rating due to the poor nature of Haycraft's Lane. If the site is accessed southwards over adjacent land directly to the B3069, this would be expected to have much less impact and is the preferred access route. Policies DM1 and DM 8 of the Minerals Strategy actively address this issue of minimising impacts on the transportation network. 	<ul style="list-style-type: none"> Any proposal for this site would need to be accompanied by a Transport Assessment which will need to provide access details and consider vehicle routing. However, on the basis of these comments it appears unlikely that the proposed route will be suitable for use as a quarry access. The TA should be scoped with the Transport Development Management Team and is intended to identify opportunities for reducing impacts on the transport network.
16. To support and encourage the use of sustainable transport modes, imposing no unmitigated negative impacts on them.	-	0	<ul style="list-style-type: none"> The proposed site can only realistically be accessed by means of road transport, resulting in a negative impact under this Objective during development and working. As far as reasonably possible negative impacts resulting from access and transport will be mitigated, as required by Policies DM1 and DM8 of the Minerals Strategy. 	<ul style="list-style-type: none"> Mitigate impacts where identified and appropriate.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
17. To sustain the health and quality of life of the population	--	0	<p>Impact on Sensitive Human Receptors</p> <ul style="list-style-type: none"> Site has residential properties immediately adjacent to it, within 50m and further out. Screening will be required. Although this site has been worked in the past, this has not been for many years and its development would make it seem like a new site. It is in close proximity to a number of residences. 	<ul style="list-style-type: none"> Provision of appropriate mitigation, following assessment of likely impacts. Restoration to improve landscape of site where possible; and to seek to facilitate public access. Screening, bunding, standoffs will be used to mitigate impacts where considered necessary.
	-	0	<p>Impact on Existing Settlements</p> <ul style="list-style-type: none"> Closest settlements are Acton at approximately 600m south east and Langton Matravers at around 700m south/west. Site is not visible from these settlements. Harman's Cross lies to the north, in the valley. The site will be potentially more visible from the north, which will require sensitive treatment and proper screening of the northern edge of the site. Traffic impacts are expected to be minimal. 	<ul style="list-style-type: none"> Transport Assessment to be carried out, identifying possible impacts and opportunities for reducing impacts on the transport network. Visual impact assessment will also be required, as referred to above.
	0	0	<p>Impact on Airport Safety</p> <ul style="list-style-type: none"> Site is approximately 22 km from airport, with no wet working or restoration. No impacts expected. 	<ul style="list-style-type: none"> No action required.
18. To enable safe access to countryside and open spaces.	0	0	<p>Impact on Recreational Land</p> <ul style="list-style-type: none"> Site is fenced agricultural land, used for livery purposes. No informal or formal recreational use, apart from horses. 	<ul style="list-style-type: none"> Assessment of impacts, with appropriate mitigation identified. Restoration to include considering how it might be possible to improve public access in the area.
	0	0	<p>Impact on Public Rights of Way</p> <ul style="list-style-type: none"> No rights of way cross the site or run adjacent to it. 	

Preliminary Hydrological Risk Assessment

Controlled Waters	Issues/Risks	Mitigation	Further information/approval required
<ul style="list-style-type: none"> • Watercourses • Ponds/lakes, including wet habitats • Groundwater 	<ul style="list-style-type: none"> • Potential for contamination of controlled waters (groundwater) through spillage or seepage of pollutants such as fuel. • Contamination of water supplies or reduction in amount of water available for licenced supplies. 	<ul style="list-style-type: none"> • Appropriate arrangements to be made for ensuring that runoff from the site does not enter the groundwater unless any silt or other pollutant has first been removed. • Fuel stored on site to be appropriately bunded and sealed to prevent any spillage from entering ground or surface waters. • On-going monitoring during development and working of the site. 	<ul style="list-style-type: none"> • Full hydrogeological risk assessment will be required as part of a planning application. • Flood Risk Assessment • Water Framework Assessment • Further assessment of potential impacts on water quality and levels, particularly for groundwater, is required prior to development. • Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.

Cumulative Impacts

Site is an extension to an existing quarry in an area where there is a high concentration and long history of mineral extraction.

The proposal is within 5Km (by road) of a town (Swanage) where allocations for the development of 200 dwellings, employment and retail facilities have been made in the Purbeck Local Plan Part 1 (adopted Nov 2012) (Policy SE). (Site details not yet available). Traffic arising from the new residential development will add to general traffic levels in / around Swanage and on the A351.

Summary.

Potential Benefits	Potential Impacts
<ul style="list-style-type: none"> • Provision of Purbeck Stone. • Support for the Purbeck Stone industry and employment, both locally and wherever Purbeck Stone is exported and used, with associated economic benefits. • Use of the stone for heritage building works/repairs, and for new buildings. • Geodiversity benefits, through exposures created and fossils found. • Possibility of improved public access. 	<ul style="list-style-type: none"> • There are residences in close proximity, as well as further afield. Assessment of likely impacts will be required, along with appropriate mitigation. • Access and traffic impacts are key issues, given that Haycraft's Lane is very narrow and has flower rich verges. An alternative access route is likely to be the only way forward, although none is currently proposed. • Assessment is required to consider whether the local landscape capacity can accommodate the development and what mitigation will be required. • The northern edge of the site will require careful assessment, to identify how any visual impacts on the downslope area and across on the other side of the valley can be fully screened/mitigated. • Assessment is required to determine whether there will be any archaeology or other heritage issues, and what mitigation will be required.

Overall Recommendation:

Assessment has flagged up archaeology, landscape/visual impact, local amenity impacts and access as key issues to be addressed as part of working this site. Further assessment will be required at planning application stage to identify satisfactory mitigation and to identify if there are any additional impacts that will require mitigation.

To the south of, and immediately adjacent to, the nominated site are two Wessex Water reservoirs. Water mains are connected to these reservoirs. Development of this site must ensure that there are no impacts on these reservoirs and mains. Development of this site will require liaison with Wessex Water.

Traffic access and likely impacts on Haycraft's Lane and the road verges are particularly important. Unless it can be demonstrated to the satisfaction of the Mineral Planning Authority further work is carried out to demonstrate that Haycrafts Lane can be used with no negative impacts, it appears that some alternative route will be required.

If an alternative access route can be identified, then it is likely that the site has the potential to be worked. The site will be included in the Draft Mineral Sites Plan for the purposes of consultation, subject to alternative and suitable access being found.

The site nomination will be included in the Draft Mineral Sites Plan for the current consultation, subject to the completion of all necessary assessments and the identification of an alternative access route, and providing that any other identified impacts are capable of satisfactory mitigation.

If no alternative access route can be identified, the site is unlikely to be included in the final version of the Mineral Sites Plan.

Purbeck Stone : PK10 Southard Quarry, near Swanage

Site Name/Location: PK10 Southard Quarry, near Swanage	Nominee/Agent: WJ Haysom & Son	Site Area: approximately 0.5 ha
Mineral Type: Purbeck Stone	Local Authority: Purbeck District Council	Production: 500 tpa
		Reserve: approximately 107,500 tonnes

Impact Assessment Scoring

--	Strong Negative Impact	-	Minor Negative Impact	+	Minor Positive Impact	++	Strong Positive Impact	0	Negligible or No Effect	?	Uncertain
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Timescales for effects:

P/W: Preparation and Working

R/A: Restoration and Afteruse

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
1. To move waste management up the waste hierarchy	N/A	N/A	<ul style="list-style-type: none"> This Objective is not relevant to this site nomination 	<ul style="list-style-type: none"> N/A
2. To maintain, conserve and enhance biodiversity	0	0	European/International Designations <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.
	0	0	Annex 1 Bird Species <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.
	0	0	National Designations <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.
	0	0	Protected species <ul style="list-style-type: none"> No impacts expected 	<ul style="list-style-type: none"> No action required.
	0	0	Local recognitions/designations, including ancient woodland and veteran trees <ul style="list-style-type: none"> No impacts expected 	<ul style="list-style-type: none"> No action required.
3. To maintain, conserve and enhance geodiversity.	+	+	<ul style="list-style-type: none"> The Purbeck limestone group has an important association with the geology of the Jurassic Coast World Heritage Site. Working quarries in Purbeck have been known to yield important fossils, including dinosaur footprints. They are also of ongoing interest for the study of early Cretaceous stratigraphy. These interests should be acknowledged with the assumption that geologists and the Jurassic Coast 	<ul style="list-style-type: none"> Note potential for quarries to yield fossils or other material of geodiversity interest. Visits or other investigation of working sites may be

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			Team hosted by DCC will respond positively to any opportunities to recover fossils or record and study unusual features if they are discovered. In terms of geodiversity there is a presumption in favour of an appropriate level of quarrying activity continuing in order to sustain these ongoing interests.	<p>requested.</p> <ul style="list-style-type: none"> Investigate potential and/or benefits of leaving quarried face open after restoration.
4. To maintain, conserve and enhance the quality of ground, surface and sea waters and manage the consumption of water in a sustainable way.	0	0	<p>Groundwater</p> <ul style="list-style-type: none"> Site overlies Secondary aquifers. No impact on Source Protection Zones. No licenced supplies. 	<ul style="list-style-type: none"> Hydrological assessment required to determine possible impacts, on ground and surface waters, with appropriate mitigation to be implemented. Appropriate arrangements should be put in place to ensure that the water leaving the site and entering the watercourses or groundwater is of an acceptable quality. Any fuel on site should be properly stored to avoid contamination in case of spillage. Appropriate arrangements should be installed for surface water and silt collection and fuel storage to prevent contamination of groundwater resources. The combined impacts of Purbeck Limestone Quarries should be assessed where a number of sites affect the same water resource or receiving water course.
	0	0	<p>Surface Water</p> <ul style="list-style-type: none"> Spring within 500m of site. No impacts expected on this. 	
5. To reduce flood risk and improve flood management.	0	0	<p>Flooding/Coastal Stability</p> <ul style="list-style-type: none"> Site is entirely in Flood Risk Zone 1, no risk of flooding. 	<ul style="list-style-type: none"> No action required.
6. To maintain, conserve and enhance the historic environment (including archaeological sites, historic buildings, conservation areas, historic parks and gardens and other locally	?	?	<p>Archaeology</p> <ul style="list-style-type: none"> It is considered that the site has high potential for below-ground archaeology and possibly industrial archaeological evidence of early quarrying. Archaeological assessment and evaluation would be required before an informed planning decision could be made. Only when these have been undertaken would the archaeological impact be understood – at present it could be anywhere from 'Very Significant' to 'No Significant' impacts. 	<ul style="list-style-type: none"> Archaeological survey of the area required <u>as part of planning application</u> to assess possible presence and significance of non-designated remains and to assess whether/how these should be protected during working – <u>no further work required at site allocation stage.</u> All necessary mitigation to be implemented prior to

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
distinctive features and their settings).	0	0	Historic Landscapes <ul style="list-style-type: none"> The local landscape bears the imprint of previous quarrying dating from the Roman period onwards. It could be argued that the present site would be a continuation of the process, and if the site is to be restored afterwards the impact would be limited in time anyway. 	working. <ul style="list-style-type: none"> Adequate provision to be made for preservation, excavation or recording, as appropriate. Further consideration to be given to restoration proposals, in terms of historic landscapes.
	0	0	Historic Buildings <ul style="list-style-type: none"> This site extends a quarry away from its nearest listed building and the site as a whole is part of a quarrying landscape. This means there is minimal impact on the historic building. No significant impacts expected 	<ul style="list-style-type: none"> No action required.
7. To maintain, conserve and enhance the landscape, including townscape, seascape and the coast.	?	0	Landscape Capacity <ul style="list-style-type: none"> There may be an issue of cumulative landscape & visual impact; before this site is consented it is recommended that other quarries in the area are restored. Potential for an adverse impact on the amenity of the footpath users. Mitigation measures must limit height of stock piles. 	<ul style="list-style-type: none"> Assessment of potential visual impacts will be required <u>at planning application stage</u>. All appropriate mitigation to be included, including restoration of other sites in the vicinity, as appropriate. Appropriate restoration proposals in line with Landscape Management Guidelines referred to in Minerals Strategy.
	?	0	Designated Landscapes <ul style="list-style-type: none"> Site proposal has a Category C (Less Significant Adverse Impact) rating. 	
8. To protect and improve air quality and reduce the impacts of noise.	0	0	<ul style="list-style-type: none"> Impacts on air quality expected to be negligible. No AQMAs will be affected by the working of this site proposal. Any dust resulting from working will be controlled through normal dust-suppression measures. Noise mitigation will be addressed at the planning application stage, with appropriate mitigation to be included in the development of the site. 	<ul style="list-style-type: none"> Environmental protection measures to reduce dust and ensure noise is appropriately mitigated.
9. To maintain, conserve and enhance soil quality.	—	0	<ul style="list-style-type: none"> Soils are good to moderate in quality. Any soil removed will be protected during working and either re-used on site or taken elsewhere to be used. Further assessment may be required to determine soil quality. 	<ul style="list-style-type: none"> Soil to be properly stripped and stored prior to working; protected during working; and re-spread on site after working.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
10. To conserve and safeguard mineral resources.	+	0	<ul style="list-style-type: none"> The site would make an important contribution to the supply of Purbeck Stone for Bournemouth, Dorset and Poole and all other potential markets. 	<ul style="list-style-type: none"> No specific action required; site development to take into consideration relevant impacts and mitigate where appropriate.
11. To promote the use of alternative materials.	-	0	<ul style="list-style-type: none"> This proposal does not promote the use of alternative materials. 	<ul style="list-style-type: none"> No action required.
12. To provide an adequate and affordable supply of minerals to meet society's needs.	+	0	<ul style="list-style-type: none"> Development of this site would provide a benefit in terms of contributing to the provision of a supply of minerals to meet society's needs. Ensuring a sustainable supply will depend on the development and management of the site. Providing site development takes into account relevant principles of sustainable development it is expected this will contribute to complying with this objective. 	<ul style="list-style-type: none"> Ensure principles of sustainable development are incorporated into the development of this site.
13. To promote and encourage sustainable economic growth	+	0	<ul style="list-style-type: none"> This site proposal is expected to contribute to economic development on two levels – directly through the provision of employment at the site to be developed and indirectly through the provision of Purbeck Stone required for new build, repairs and maintenance, decorative and monument work and landscaping work. Both levels are expected to maintain employment, skilled and unskilled. Restoration to agriculture will offer some further economic benefits through both the agriculture itself and the recreational attraction and use in the wider area (i.e. riding, walking). 	<ul style="list-style-type: none"> No action required.
14. To adapt to and mitigate the impacts of climate change.	-	0	<ul style="list-style-type: none"> Developing land as a quarry is expected to have some negative impacts regarding climate change, due primarily to machinery used and transportation of mineral away from site. However, these will in relative terms be negligible. The Bournemouth, Dorset and Poole Minerals Strategy seeks to address and minimise such impacts through Policy CC1 which requires operators to take into consideration climate change impacts and their possible mitigation for any proposed minerals development. The development management policies, e.g. DM 1, also address and seek to minimise the issue of sustainable development and climate change. 	<ul style="list-style-type: none"> Use energy efficient plant and machinery. Implement restoration which provides appropriate habitats to help to increase resilience of flora/fauna.
15. To minimise the negative impacts of	-	0	<ul style="list-style-type: none"> Access proposed is via an existing permitted route through the edge of Swanage to the A351. While the roads used are residential and not ideal for 	<ul style="list-style-type: none"> Any proposal for this site would need to be accompanied by a

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
waste and minerals transport on the transport network, mitigating any residual impacts.			<p>quarry related traffic there is little alternative for this and other local small scale extraction.</p> <ul style="list-style-type: none"> The level of trips to and from this site by HGVs is likely to be low and sporadic, being linked to specific extraction campaigns and market demand. The stipulated assessment criteria mean that this site has been given a 'Significant Adverse Impact' rating as the site necessarily means that HGVs will pass through relatively narrow roads within the existing settlement. However, extraction at this site has been operational for some time and there is no indication that there will be any significant increase in extraction. Provided that HGV traffic continues to use agreed routes through the residential area to the north there is little adverse impact and the site could be considered to have a 'Less Significant Adverse Impact' rating. Policies DM1 and DM 8 of the Minerals Strategy actively address this issue of minimising impacts on the transportation network. 	<p>Transport Assessment which will need to provide access details and consider vehicle routing.</p> <ul style="list-style-type: none"> The TA should be scoped with the Transport Development Management Team and is intended to identify opportunities for reducing impacts on the transport network.
16. To support and encourage the use of sustainable transport modes, imposing no unmitigated negative impacts on them.	—	0	<ul style="list-style-type: none"> The proposed site can only realistically be accessed by means of road transport, resulting in a negative impact under this Objective during development and working. As far as reasonably possible negative impacts resulting from access and transport will be mitigated, as required by Policies DM1 and DM8 of the Minerals Strategy. 	<ul style="list-style-type: none"> Mitigate impacts where identified and appropriate.
17. To sustain the health and quality of life of the population	?	0	<p>Impact on Sensitive Human Receptors</p> <ul style="list-style-type: none"> No properties within 250m, closest property is approximately 290m, other properties within 500m and on to Swanage. Site likely to be screened from closest properties, more distant views into site. Site screening may be required. 	<ul style="list-style-type: none"> Provision of appropriate mitigation, following assessment of likely impacts. Restoration to improve landscape of site where possible; and to seek to facilitate public access. Screening, bunding, standoffs will be used to mitigate impacts where considered necessary.
	—	0	<p>Impact on Existing Settlements</p> <ul style="list-style-type: none"> Closest settlement is Swanage, to the north and north-east, at around 480-500m distant at the closest. Visually, site is likely to be screened from closest properties. Possibility of more distant views into site and site screening may be required. Context of the site is area of mineral working and waste 	<ul style="list-style-type: none"> Transport Assessment to be carried out, identifying possible impacts and opportunities for reducing impacts on the transport network. Visual impact

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			<p>management.</p> <ul style="list-style-type: none"> Traffic/transport impacts are covered under Objective 15 above. 	assessment will also be required, as referred to above.
	0	0	<p>Impact on Airport Safety</p> <ul style="list-style-type: none"> Site is approximately 22 km from airport, with no wet working or restoration. No impacts expected. 	<ul style="list-style-type: none"> No action required.
18. To enable safe access to countryside and open spaces.	0	+ ?	<p>Impact on Recreational Land</p> <ul style="list-style-type: none"> Site is agricultural land, with no formal/informal recreation use. 	<ul style="list-style-type: none"> Assessment of impacts, with appropriate mitigation identified. Restoration to include considering how it might be possible to improve public access in the area.
	0	0	<p>Impact on Public Rights of Way</p> <ul style="list-style-type: none"> No rights of way cross the site or run adjacent to its boundary. 	

Preliminary Hydrological Risk Assessment

Controlled Waters	Issues/Risks	Mitigation	Further information/approval required
<ul style="list-style-type: none"> • Watercourses • Ponds/lakes, including wet habitats • Groundwater 	<ul style="list-style-type: none"> • Potential for contamination of controlled waters (groundwater) through spillage or seepage of pollutants such as fuel. • Contamination of water supplies or reduction in amount of water available for licenced supplies. 	<ul style="list-style-type: none"> • Appropriate arrangements to be made for ensuring that runoff from the site does not enter the groundwater unless any silt or other pollutant has first been removed. • Fuel stored on site to be appropriately bunded and sealed to prevent any spillage from entering ground or surface waters. • On-going monitoring during development and working of the site. 	<ul style="list-style-type: none"> • Full hydrogeological risk assessment will be required as part of a planning application. • Flood Risk Assessment • Water Framework Assessment • Further assessment of potential impacts on water quality and levels, particularly for groundwater, is required prior to development. • Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.

Cumulative Impacts

Site is an extension to an existing quarry in an area where there is a high concentration and long history of mineral extraction. As an extension, it is not expected that there will be any cumulative impacts for traffic.

In terms of other impacts – further assessment may be necessary, along with other works such as restoration of other quarries in the vicinity and minimising the height of stockpiles.

The proposal is within 5Km (by road) of a town (Swanage) where allocations for the development of 200 dwellings, employment and retail facilities have been made in the Purbeck Local Plan Part 1 (adopted Nov 2012) (Policy SE). (Site details not yet available). Traffic arising from the new residential development will add to general traffic levels in / around Swanage and on the A351.

Summary.

Potential Benefits	Potential Impacts
<ul style="list-style-type: none">• Provision of Purbeck Stone.• Support for the Purbeck Stone industry and employment, both locally and wherever Purbeck Stone is exported and used, with associated economic benefits.• Use of the stone for heritage building works/repairs, and for new buildings.• Geodiversity benefits, through exposures created and fossils found.• Possibility of improved public access	<ul style="list-style-type: none">• Transport impacts to be considered through detailed Transport Assessment at planning permission stage. No intensification of development is expected.• Potential landscape/visual impacts. Further assessment will be required to assess whether the local landscape can accommodate the development and to identify and implement appropriate mitigation.• Further assessment is required to determine whether there will be any archaeology or other heritage impacts, but these are expected to be capable of mitigation.

Overall Recommendation:

Assessment already carried out has flagged up archaeology, landscape/visual impact and access as the key issues to be addressed as part of working this site. Further assessment will be required at planning application stage to identify satisfactory mitigation and to identify if there are any additional impacts that will require mitigation.

As the site is an extension of an existing site, it is expected that any impacts should be capable of satisfactory mitigation.

Subject to the completion of all necessary assessments and providing that any impacts are capable of satisfactory mitigation, it appears reasonable on the basis of evidence available that the site nomination can reasonably be included in the Draft Bournemouth, Dorset and Poole Mineral Sites Plan.

Purbeck Stone: PK15 Downs Quarry Extension

Site Name/Location: PK15 Downs Quarry Extension	Nominee: Lovell Purbeck Ltd	Site Area: approximately 0.67 ha Production: 2,500 tpa Reserve: approximately 17,000 – 22,000 tonnes
	Agent: Land and Mineral Management	
	Local Authority: Purbeck District Council	
	Mineral Type: Purbeck Stone	

Impact Assessment Scoring

--	Strong Negative Impact	-	Minor Negative Impact	+	Minor Positive Impact	++	Strong Positive Impact	0	Negligible or No Effect	?	Uncertain
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Timescales for effects:

P/W: Preparation and Working

R/A: Restoration and Afteruse

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
1. To move waste management up the waste hierarchy	N/A	N/A	<ul style="list-style-type: none"> This Objective is not relevant to this site nomination 	<ul style="list-style-type: none"> N/A
2. To maintain, conserve and enhance biodiversity	0	0	European/International Designations <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.
	0	0	Annex 1 Bird Species <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.
	0	0	National Designations <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.
	0	0	Protected species <ul style="list-style-type: none"> Greater Horseshoe Bat is known to inhabit the area close to the proposed site. Whilst it is unlikely there would be any effect on GHB which would result from quarrying at this location, information would be needed to support the allocation to demonstrate no likely significant effect. 	<ul style="list-style-type: none"> Ecological surveys required, with appropriate mitigation to be implemented.
	0	0	Local recognitions/designations, including ancient woodland and veteran trees <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
3. To maintain, conserve and enhance geodiversity.	+	0	<ul style="list-style-type: none"> The Purbeck limestone group has an important association with the geology of the Jurassic Coast World Heritage Site. Working quarries in Purbeck have been known to yield important fossils, including dinosaur footprints. They are also of on-going interest for the study of early Cretaceous stratigraphy. These interests should be acknowledged with the assumption that geologists and the Jurassic Coast Team hosted by DCC will respond positively to any opportunities to recover fossils or record and study unusual features if they are discovered. In terms of geodiversity there is a presumption in favour of an appropriate level of quarrying activity continuing in order to sustain these on-going interests. 	<ul style="list-style-type: none"> Note potential for quarries to yield fossils or other material of geodiversity interest. Visits or other investigation of working sites may be requested. Investigate potential and/or benefits of leaving quarried face open after restoration.
4. To maintain, conserve and enhance the quality of ground, surface and sea waters and manage the consumption of water in a sustainable way.	0	0	<p>Groundwater</p> <ul style="list-style-type: none"> Site overlies Secondary aquifers. No impact on Source Protection Zones. No licenced supplies. 	<ul style="list-style-type: none"> Simple hydrological assessment required to determine possible impacts, on ground and surface waters, with appropriate mitigation to be implemented. Appropriate arrangements should be put in place to ensure that the water leaving the site and entering the watercourses or groundwater is of an acceptable quality. Any fuel on site should be properly stored to avoid contamination in case of spillage. Appropriate arrangements should be installed for surface water and silt collection and fuel storage to prevent contamination of groundwater resources. The combined impacts of Purbeck Limestone Quarries should be assessed where a number of sites affect the same water resource or receiving water course.
	0	0	<p>Surface Water</p> <ul style="list-style-type: none"> Site is within 500m of a watercourse. 	
5. To reduce flood risk and improve flood management.	0	0	<p>Flooding/Coastal Stability</p> <ul style="list-style-type: none"> Site is entirely in Flood Risk Zone 1, no risk of flooding. 	<ul style="list-style-type: none"> No action required.
6. To maintain, conserve and enhance the historic environment (including archaeological sites, historic buildings,	0	0	<p>Archaeology</p> <ul style="list-style-type: none"> An archaeological evaluation of this site has been undertaken already (Thames Valley Archaeological Services report dated August 2010 and with site code DQLM10/64). The results were effectively negative with regard to below-ground archaeology, and no above-ground historic features are known at the site. 	<ul style="list-style-type: none"> Should any archaeological remains be discovered, adequate provision to be made for preservation, excavation or recording, as

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
conservation areas, historic parks and gardens and other locally distinctive features and their settings).	0	0	Historic Landscapes <ul style="list-style-type: none"> The local landscape bears the imprint of previous quarrying dating from the Roman period onwards. It could be argued that the present site would be a continuation of the process, and if the site is to be restored afterwards the impact would be limited in time anyway. 	<p>appropriate.</p> <ul style="list-style-type: none"> Further consideration to be given to restoration proposals, in terms of historic landscapes.
	0	0	Historic Buildings <ul style="list-style-type: none"> This is a quarry set in a quarrying landscape and the nearest listed buildings are too far away to be affected. No significant impact expected. 	<ul style="list-style-type: none"> No action required.
7. To maintain, conserve and enhance the landscape, including townscape, seascape and the coast.	-	0	Landscape Capacity <ul style="list-style-type: none"> There may be an issue with cumulative impact on residential amenity. This proposal is only satisfactory if other quarries in immediate vicinity have been restored prior to its development. 	<ul style="list-style-type: none"> Assessment of potential visual impacts will be required <u>at planning application stage</u>. All appropriate mitigation to be carried out, including prior restoration of other quarries as stated. Appropriate restoration proposals in line with Landscape Management Guidelines referred to in Minerals Strategy.
	0	0	Designated Landscapes <ul style="list-style-type: none"> Less significant adverse impact. 	
8. To protect and improve air quality and reduce the impacts of noise.	0	0	<ul style="list-style-type: none"> Impacts on air quality expected to be negligible. No AQMAs will be affected by the working of this site proposal. Any dust resulting from working will be controlled through normal dust-suppression measures. Noise mitigation will be addressed at the planning application stage, with appropriate mitigation to be included in the development of the site. 	<ul style="list-style-type: none"> Environmental protection measures to reduce dust and ensure noise is appropriately mitigated.
9. To maintain, conserve and enhance soil quality.	-	0	<ul style="list-style-type: none"> Site is 'Good to Moderate' agricultural land. Soils will be stripped and protected during preparation and working and reused on site as part of restoration. 	<ul style="list-style-type: none"> Soil to be properly stripped and stored prior to working; protected during working; and re-spread on site after working.
10. To conserve and safeguard mineral resources.	++	0	<ul style="list-style-type: none"> The site would make an important contribution to the supply of Purbeck Stone for Bournemouth, Dorset and Poole and all other potential markets. 	<ul style="list-style-type: none"> No specific action required; site development to take into consideration relevant impacts and mitigate where appropriate.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
11. To promote the use of alternative materials.	-	0	<ul style="list-style-type: none"> This proposal does not promote the use of alternative materials. 	<ul style="list-style-type: none"> No action required.
12. To provide an adequate and affordable supply of minerals to meet society's needs.	+	0	<ul style="list-style-type: none"> Development of this site would provide a benefit in terms of contributing to the provision of a supply of minerals to meet society's needs. Ensuring a sustainable supply will depend on the development and management of the site. Providing site development takes into account relevant principles of sustainable development it is expected this will contribute to complying with this objective. 	<ul style="list-style-type: none"> Ensure principles of sustainable development are incorporated into the development of this site.
13. To promote and encourage sustainable economic growth	+	0	<ul style="list-style-type: none"> This site proposal is expected to contribute to economic development on two levels – directly through the provision of employment at the site to be developed and indirectly through the provision of Purbeck Stone required for new build, repairs and maintenance, decorative and monument work and landscaping work. Both levels are expected to maintain employment, skilled and unskilled. Restoration to agriculture will offer some economic benefits through both the agriculture itself and the recreational attraction and use in the wider area (i.e. riding, walking). 	<ul style="list-style-type: none"> No action required.
14. To adapt to and mitigate the impacts of climate change.	-	0	<ul style="list-style-type: none"> Developing land as a quarry is expected to have some negative impacts regarding climate change, due primarily to machinery used and transportation of mineral away from site. However, these will in relative terms be negligible. The Bournemouth, Dorset and Poole Minerals Strategy seeks to address and minimise such impacts through Policy CC1 which requires operators to take into consideration climate change impacts and their possible mitigation for any proposed minerals development. The development management policies, e.g. DM 1, also address and seek to minimise the issue of sustainable development and climate change. 	<ul style="list-style-type: none"> Use energy efficient plant and machinery. Implement restoration which provides appropriate habitats to help to increase resilience of flora/fauna.
15. To minimise the negative impacts of waste and minerals transport on the transport network, mitigating any residual impacts.	-	0	<ul style="list-style-type: none"> Access proposed is via the existing Downs Quarry to the south of the identified site. This in turn has a suitable access directly onto the B3069. The trip generation of the proposed site is not great (4 to 16 movements per day) and is likely to follow reduced extraction within the existing site as existing resources become exhausted. While routes from the site to the A351 will go through either Langton Matravers or Kingston, the route is via a B class road and the number of trips is relatively low. Provided that there is little 	<ul style="list-style-type: none"> Any proposal for this site would need to be accompanied by a Transport Assessment which will need to provide access details and consider vehicle routing. The TA should be scoped with the Transport Development

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			<p>increase in HGV traffic over the existing operation, there is little adverse impact and the site is considered to have a 'Less Significant Adverse Impact'.</p> <ul style="list-style-type: none"> Policies DM1 and DM 8 of the Minerals Strategy actively address this issue of minimising impacts on the transportation network. 	<p>Management Team.</p> <ul style="list-style-type: none"> Transport Assessment will identify opportunities for reducing impacts on the transport network.
16. To support and encourage the use of sustainable transport modes, imposing no unmitigated negative impacts on them.	-	0	<ul style="list-style-type: none"> The proposed extension can only realistically be accessed by means of road transport, resulting in a negative impact under this Objective during development and working. As far as reasonably possible negative impacts resulting from access and transport will be mitigated, as required by Policies DM1 and DM8 of the Minerals Strategy. 	<ul style="list-style-type: none"> Mitigate impacts where identified and appropriate.
17. To sustain the health and quality of life of the population	-	0	<p>Impact on Sensitive Human Receptors</p> <ul style="list-style-type: none"> Site is an extension of existing quarry in an area with a long history of quarrying. Closest property approximately 50m to the east, others within 250m to east/north/south. However, the context of the site is of stone quarrying and other properties in the area are very close to quarries/service yards. Impacts could be 'Less Significant', given the context of the site. 	<ul style="list-style-type: none"> Provision of appropriate mitigation, following assessment of likely impacts. Restoration to improve landscape of site where possible; and to seek to facilitate public access. Screening, bunding, standoffs will be used to mitigate impacts where considered necessary. Transport impacts to be considered through Transport Assessment, as considered above.
	---		<p>Impact on Existing Settlements</p> <ul style="list-style-type: none"> Harman's Cross 850m to the north, Acton and Langton Matravers around 1km to west/south west. Site is completely screened from latter two. Harman's Cross might have partial views up to the site, depending on screening to be implemented. It is assumed that this site will not be developed until other locations have been completed; therefore there will not be any intensification of existing traffic levels generated by the proposed extension. However existing traffic levels generated by the current operation will continue for a longer period of time. 	
	- ?	0		

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	0	0	Impact on Airport Safety <ul style="list-style-type: none"> Site is approximately 23 km from airport, with no wet working or restoration. No impacts expected. 	<ul style="list-style-type: none"> No action required.
18. To enable safe access to countryside and open spaces.	0	0	Impact on Recreational Land <ul style="list-style-type: none"> Site is agricultural land, with no formal/informal recreation use. 	<ul style="list-style-type: none"> Assessment of potential impacts, with appropriate mitigation identified. Restoration to include considering how it might be possible to improve public access in the area.
	0	0	Impact on Public Rights of Way <ul style="list-style-type: none"> No rights of way cross the site or run adjacent to its boundary. 	

Preliminary Hydrological Risk Assessment

Controlled Waters	Issues/Risks	Mitigation	Further information/approval required
<ul style="list-style-type: none"> • Watercourses • Ponds/lakes, including wet habitats • Groundwater 	<ul style="list-style-type: none"> • Potential for contamination of controlled waters (groundwater) through spillage or seepage of pollutants such as fuel. • Contamination of water supplies or reduction in amount of water available for licenced supplies. 	<ul style="list-style-type: none"> • Appropriate arrangements to be made for ensuring that runoff from the site does not enter the groundwater unless any silt or other pollutant has first been removed. • Fuel stored on site to be appropriately bunded and sealed to prevent any spillage from entering ground or surface waters. • On-going monitoring during development and working of the site. 	<ul style="list-style-type: none"> • Full hydrogeological risk assessment will be required as part of a planning application. • Flood Risk Assessment • Water Framework Assessment • Further assessment of potential impacts on water quality and levels, particularly for groundwater, is required prior to development. • Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.

Cumulative Impacts

Site is an extension to an existing quarry in an area where there is a high concentration and long history of mineral extraction. As an extension, it is not expected that there will be any cumulative impacts for traffic.

The proposal is within 5Km (by road) of a town (Swanage) where allocations for the development of 200 dwellings, employment and retail facilities have been made in the Purbeck Local Plan Part 1 (adopted Nov 2012) (Policy SE). (Site details not yet available). Traffic arising from the new residential development will add to general traffic levels in / around Swanage and on the A351.

The combined impacts of Purbeck Limestone Quarries should be assessed where a number of sites affect the same water resource or receiving water course. To reduce cumulative impacts of quarry development, other quarries in the control of the developer should be restored, and stockpiles reduced if necessary/appropriate, before this site is developed.

It is expected that these impacts are capable of mitigation.

Summary.

Potential Benefits	Potential Impacts
<ul style="list-style-type: none">• Provision of Purbeck Stone.• Support for the Purbeck Stone industry and employment, both locally and wherever Purbeck Stone is exported and used, with associated economic benefits.• Use of the stone for heritage building works/repairs, and for new buildings.• Geodiversity benefits, through exposures created and fossils found.• Possibility of improved public access	<ul style="list-style-type: none">• Ensure no impacts from working this site on Greater Horseshoe Bats.• No new or intensified transport impacts expected; detailed Transport Assessment required at planning permission stage to consider impacts and identify appropriate mitigation.• Assessment of impacts on landscape capacity and of visual impacts required, with relevant mitigation identified.• Potentially significant impacts on local amenity, particularly neighbouring properties. Full assessment of possible impacts will be required, with relevant mitigation identified.• Further assessment is required to determine whether there will be any archaeology or other heritage issues, with relevant mitigation identified.

Overall Recommendation:

Assessment already carried out has flagged up archaeology, landscape/visual impact and local amenity as the key issues to be addressed as part of working this site. Further assessment will be required to identify satisfactory mitigation and to identify if there are any additional impacts that will require mitigation.

As the site is an extension of an existing site, it is expected that any impacts should be capable of satisfactory mitigation.

Subject to the completion of all necessary assessments and providing that any impacts are capable of satisfactory mitigation, it appears reasonable on the basis of evidence available that the site nomination can reasonably be included in the Draft Bournemouth, Dorset and Poole Mineral Sites Plan.

Purbeck Stone: PK17 Home Field, Langton Matravers

Site Name/Location: PK17 Home Field, Langton Matravers	Nominee: National Trust	Site Area: approximately 10.5 ha Production: 2,000 tpa Reserve: approximately 340,000 tonnes
	Agent: Land and Mineral Management	
	Local Authority: Purbeck District Council	
	Mineral Type: Purbeck Stone	

Impact Assessment Scoring

--	Strong Negative Impact	-	Minor Negative Impact	+	Minor Positive Impact	++	Strong Positive Impact	0	Negligible or No Effect	?	Uncertain
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Timescales for effects:

P/W: Preparation and Working

R/A: Restoration and Afteruse

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
1. To move waste management up the waste hierarchy	N/A	N/A	<ul style="list-style-type: none"> This Objective is not relevant to this site nomination 	<ul style="list-style-type: none"> N/A
2. To maintain, conserve and enhance biodiversity	0	0	European/International Designations <ul style="list-style-type: none"> No impacts expected. Suitable stand-off to protect the SAC grassland immediately to the west will be required. 	<ul style="list-style-type: none"> Ensure appropriate stand-off is included.
	0	0	Annex 1 Bird Species <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.
	0	0	National Designations <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.
	0	0	Protected species <ul style="list-style-type: none"> No impacts expected 	<ul style="list-style-type: none"> No action required.
	0	0	Local recognitions/designations, including ancient woodland and veteran trees <ul style="list-style-type: none"> No impacts expected 	<ul style="list-style-type: none"> No action required.
3. To maintain, conserve and enhance geodiversity.	+	+ ?	<ul style="list-style-type: none"> The Purbeck limestone group has an important association with the geology of the Jurassic Coast World Heritage Site. Working quarries in Purbeck have been known to yield important fossils, including dinosaur footprints. They are also of ongoing interest for the study of early Cretaceous stratigraphy. These interests should be acknowledged with the assumption that geologists and the Jurassic Coast 	<ul style="list-style-type: none"> Note potential for quarries to yield fossils or other material of geodiversity interest. Visits or other investigation of working sites may be

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			Team hosted by DCC will respond positively to any opportunities to recover fossils or record and study unusual features if they are discovered. In terms of geodiversity there is a presumption in favour of an appropriate level of quarrying activity continuing in order to sustain these ongoing interests.	<p>requested.</p> <ul style="list-style-type: none"> Investigate potential and/or benefits of leaving quarried face open after restoration.
4. To maintain, conserve and enhance the quality of ground, surface and sea waters and manage the consumption of water in a sustainable way.	—	0	<p>Groundwater</p> <ul style="list-style-type: none"> Impact would vary from 'Less Significant Adverse Impact' to 'Significant Adverse Impact' depending on determined impact for the groundwater spring issues rising 80 m to the west of the site. These springs must be protected. Site overlies Secondary aquifers. No impact on Source Protection Zones. No licenced supplies. 	<ul style="list-style-type: none"> Hydrological assessment required to determine possible impacts, on ground and surface waters, with appropriate mitigation to be implemented. Appropriate arrangements should be put in place to ensure that the water leaving the site and entering the watercourses or groundwater is of an acceptable quality. Any fuel on site should be properly stored to avoid contamination in case of spillage. Appropriate arrangements should be installed for surface water and silt collection and fuel storage to prevent contamination of groundwater resources. The combined impacts of Purbeck Limestone Quarries should be assessed where a number of sites affect the same water resource or receiving water course.
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5. To reduce flood risk and improve flood management.	0	0	<p>Flooding/Coastal Stability</p> <ul style="list-style-type: none"> Site is entirely in Flood Risk Zone 1, no risk of flooding. 	<ul style="list-style-type: none"> No action required.
6. To maintain, conserve and enhance the historic environment (including archaeological sites, historic buildings, conservation areas, historic parks and gardens and other locally distinctive features and	— ?	0	<p>Archaeology</p> <ul style="list-style-type: none"> There is a Scheduled Monument to the west of the site (SM33164 – 'Pillow mound 145m south east of Eastington Farm'). The discovery of Iron Age and Roman period remains at the Blacklands site to the east and north-east of the site indicates the present site's high potential for below-ground archaeology. There is also potential for industrial archaeological evidence of early quarrying. Archaeological assessment (including of the impact on the setting of SM33164 and other Scheduled Monuments in the area) and evaluation would be required before an informed planning decision could be made. 	<ul style="list-style-type: none"> Archaeological survey of the area required <u>as part of planning application</u> to assess possible presence and significance of non-designated remains and to assess whether/how these should be protected during working – <u>no further work required at site allocation stage</u>. All necessary mitigation to be implemented prior to

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
their settings).			<ul style="list-style-type: none"> Archaeological assessment and evaluation would be required before an informed planning decision could be made. Only when these have been undertaken would the archaeological impact be understood – at present it could be anywhere from 'Very Significant' to 'No Significant' impact. 	<ul style="list-style-type: none"> working. Adequate provision to be made for preservation, excavation or recording, as appropriate. Further consideration to be given to restoration proposals, in terms of historic landscapes.
	0	0	<p>Historic Landscapes</p> <ul style="list-style-type: none"> The local landscape bears the imprint of previous quarrying dating from the Roman period onwards. It could be argued that the present site would be a continuation of the process, and if the site is to be restored afterwards the impact would be limited in time anyway. 	
	0	0	<p>Historic Buildings</p> <ul style="list-style-type: none"> This site is part of a characterful landscape of which the quarrying activities help to form its character. Buildings are not immediately adjacent to the site but derive character from the overall landscape. The quarry will have no significant impact on the listed buildings. 	<ul style="list-style-type: none"> No action required.
7. To maintain, conserve and enhance the landscape, including townscape, seascape and the coast.	–	0	<p>Landscape Capacity</p> <ul style="list-style-type: none"> This site is primarily within the zone of least landscape and visual impact so it will be how the area is worked which will determine its capacity. Small areas, quantities, progressive restoration and in short campaigns with low stockpiles is recommended. 	<ul style="list-style-type: none"> Site to be developed as suggested to minimise impacts. Site boundary to be amended to remove the area outside the zone of least landscape and visual impact.
	–	0	<p>Designated Landscapes</p> <ul style="list-style-type: none"> This site is primarily within the zone of least landscape and visual impact, resulting is a less significant adverse impact for most of the proposed site. However, the south-western corner of the site is outside the zone of least landscape and visual impact and the boundary therefore needs to be amended to remove the area outside the zone. 	
8. To protect and improve air quality and reduce the impacts of noise.	0	0	<ul style="list-style-type: none"> Impacts on air quality expected to be negligible. No AQMAs will be affected by the working of this site proposal. Any dust resulting from working will be controlled through normal dust-suppression measures. Noise mitigation will be addressed at the planning application stage, with appropriate mitigation to be included in the development of the site. 	<ul style="list-style-type: none"> Environmental protection measures to reduce dust and ensure noise is appropriately mitigated.
9. To maintain, conserve and	–	0	<ul style="list-style-type: none"> Soils are somewhere between good to moderate to very poor. Any soil removed will be protected 	<ul style="list-style-type: none"> Soil to be properly stripped and stored

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
enhance soil quality.			during working and either re-used on site or taken elsewhere to be used. Further assessment may be required to determine soil quality.	prior to working; protected during working; and re-spread on site after working.
10. To conserve and safeguard mineral resources.	++	0	<ul style="list-style-type: none"> The site would make an important contribution to the supply of Purbeck Stone for Bournemouth, Dorset and Poole and all other potential markets. 	<ul style="list-style-type: none"> No specific action required; site development to take into consideration relevant impacts and mitigate where appropriate.
11. To promote the use of alternative materials.	-	0	<ul style="list-style-type: none"> This proposal does not promote the use of alternative materials. 	<ul style="list-style-type: none"> No action required.
12. To provide an adequate and affordable supply of minerals to meet society's needs.	+	0	<ul style="list-style-type: none"> Development of this site would provide a benefit in terms of contributing to the provision of a supply of minerals to meet society's needs. Ensuring a sustainable supply will depend on the development and management of the site. Providing site development takes into account relevant principles of sustainable development it is expected this will contribute to complying with this objective. 	<ul style="list-style-type: none"> Ensure principles of sustainable development are incorporated into the development of this site.
13. To promote and encourage sustainable economic growth	+	0	<ul style="list-style-type: none"> This site proposal is expected to contribute to economic development on two levels – directly through the provision of employment at the site to be developed and indirectly through the provision of Purbeck Stone required for new build, repairs and maintenance, decorative and monument work and landscaping work. Both levels are expected to maintain employment, skilled and unskilled. Restoration to agriculture will offer some economic benefits through both the agriculture itself and the recreational attraction and use in the wider area (i.e. riding, walking). 	<ul style="list-style-type: none"> No action required.
14. To adapt to and mitigate the impacts of climate change.	-	0	<ul style="list-style-type: none"> Developing land as a quarry is expected to have some negative impacts regarding climate change, due primarily to machinery used and transportation of mineral away from site. However, these will in relative terms be negligible. The Bournemouth, Dorset and Poole Minerals Strategy seeks to address and minimise such impacts through Policy CC1 which requires operators to take into consideration climate change impacts and their possible mitigation for any proposed minerals development. The development management policies, e.g. DM 1, also address and seek to minimise the issue of sustainable development and climate change. 	<ul style="list-style-type: none"> Use energy efficient plant and machinery. Implement restoration which provides appropriate habitats to help to increase resilience of flora/fauna.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
15. To minimise the negative impacts of waste and minerals transport on the transport network, mitigating any residual impacts.	–	0	<ul style="list-style-type: none"> Access is proposed via the existing service area and the C135 to the B3069. From here vehicles will travel to the A351 either west, past Kingston, or east, through Langton Matravers. Vehicle movements here are expected to be low and will not exceed that which currently exists. While access to the strategic network will involve travel through existing settlements, the low number of trips plus the B class of the road used means that there will be limited impact. Therefore the site is considered to have a 'Less Significant Adverse Impact'. Policies DM 1 and DM 8 of the Minerals Strategy actively address this issue of minimising impacts on the transportation network. 	<ul style="list-style-type: none"> Any proposal for this site would need to be accompanied by a Transport Assessment which will need to provide access details and consider vehicle routing. The TA should be scoped with the Transport Development Management Team and is intended to identify opportunities for reducing impacts on the transport network.
16. To support and encourage the use of sustainable transport modes, imposing no unmitigated negative impacts on them.	–	0	<ul style="list-style-type: none"> Sites which may be developed in this field can only realistically be accessed by means of road transport, resulting in a negative impact under this Objective during development and working. As far as reasonably possible negative impacts resulting from access and transport will be mitigated, as required by Policies DM1 and DM8 of the Minerals Strategy. 	<ul style="list-style-type: none"> Mitigate impacts where identified and appropriate.
17. To sustain the health and quality of life of the population	–	0	<p>Impact on Sensitive Human Receptors</p> <ul style="list-style-type: none"> There are properties within 100 m to north-west; 250 m to west and approximately 300 m to the north. Campsites at approximately 400 m and 600 m to north/north west. Context is small quarries in an area with a long history of Purbeck Stone quarrying. National Trust will control rate of quarrying. Only small areas within the overall field will be quarried – exact sites not known yet. Appropriate mitigation (screening) to be determined. 	<ul style="list-style-type: none"> Provision of appropriate mitigation, following assessment of likely impacts. Restoration to improve landscape of site where possible; and to seek to facilitate public access. Screening, bunding, standoffs will be used to mitigate impacts where considered necessary. Transport impacts to be considered through Transport Assessment, as noted above.
	–	0	<p>Impact on Existing Settlements</p> <ul style="list-style-type: none"> Acton is approximately 300 m to the north; Langton Matravers is approximately 750 m to north-west. Impacts are expected to be minimal, given the rate of quarrying and context of the site proposals. There are already two permitted and working quarries within the overall site. The National Trust, as landowners, will control the rate at which the site is worked to minimize impacts and maintain the appearance of a range of smaller 	

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			quarries on their land. <ul style="list-style-type: none"> Transport issues are considered above. 	
	0	0	Impact on Airport Safety <ul style="list-style-type: none"> Site is approximately 23 km from airport, with no wet working or restoration. No impacts expected. 	<ul style="list-style-type: none"> No action required.
18. To enable safe access to countryside and open spaces.	0	0	Impact on Recreational Land <ul style="list-style-type: none"> Site is agricultural land, not use for formal/informal agricultural purposes. 	<ul style="list-style-type: none"> Assessment of impacts, with appropriate mitigation identified. Restoration to include considering how it might be possible to improve public access in the area.
	-	0	Impact on Public Rights of Way <ul style="list-style-type: none"> Bridleway runs along northern edge of site nomination. Given the context of the site there is no need for realignment of the route and probably no need for special screening. Further assessment required of possible impacts and appropriate screening. 	

Preliminary Hydrological Risk Assessment

Controlled Waters	Issues/Risks	Mitigation	Further information/approval required
<ul style="list-style-type: none"> Watercourses Ponds/lakes, including wet habitats Groundwater 	<ul style="list-style-type: none"> Potential for contamination of controlled waters (groundwater) through spillage or seepage of pollutants such as fuel. Contamination of water supplies or reduction in amount of water available for licenced supplies. 	<ul style="list-style-type: none"> Appropriate arrangements to be made for ensuring that runoff from the site does not enter the groundwater unless any silt or other pollutant has first been removed. Fuel stored on site to be appropriately bunded and sealed to prevent any spillage from entering ground or surface waters. On-going monitoring during development and working of the site. 	<ul style="list-style-type: none"> Full hydrogeological risk assessment will be required as part of a planning application. Flood Risk Assessment Water Framework Assessment Further assessment of potential impacts on water quality and levels, particularly for groundwater, is required prior to development. Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.

Cumulative Impacts

The combined impacts of Purbeck Limestone Quarries should be assessed where a number of sites affect the same water resource or receiving water course.

Site nomination is a field within which there will be small-scale Purbeck Stone extraction. Site is owned by the National Trust who require small-scale and low impact working. Site is in an area where there are a number of other Purbeck Stone workings. There are already two 1 ha quarries at Home Field and provided the working does not intensify, no cumulative impacts are expected.

Key issues for consideration are need for further hydrological assessment, given that springs rise in the vicinity; need for archaeological assessment, given that there is a Scheduled Ancient Monument in the vicinity; visual impact assessment, given that the field is on the edge of the Purbeck Stone area of search; part of the field (south-western corner) will need to be removed as it lies outside the area of search; there is a bridleway to the north of the site, generally screened, and amenity as there are residences in the vicinity, and Acton is to the north.

It is expected that, given the proposal and the approach of the National Trust of low impact quarrying, it will be possible to possible to mitigate impacts.

It is not clear exactly how access would be gained to this site. Depending on the route taken it may be just within or just outside 5 km from a town (Swanage) where allocations for the development of 200 dwellings, employment and retail facilities have been made in the Purbeck Local Plan Part 1 (adopted Nov 2012) (Policy SE). (Site details not yet available).

Traffic arising from the new residential development will add to general traffic levels in / around Swanage and on the A351.

Summary.

Potential Benefits	Potential Impacts on...
<ul style="list-style-type: none">• Provision of Purbeck Stone.• Support for the Purbeck Stone industry and employment, both locally and wherever Purbeck Stone is exported and used, with associated economic benefits.• Use of the stone for heritage building works/repairs, and for new buildings.• Geodiversity benefits, through exposures created and fossils found.• Possibility of improved public access.	<ul style="list-style-type: none">• Bridleway to the north. Further assessment required, mitigation expected to be possible.• Residents and settlements. Site is relatively close to some dwellings, and to settlements. In the context of the Purbeck plateau with its long history of quarrying, this is not expected to be a problem and should be capable of satisfactory mitigation.• Transport Assessment will be required at planning application stage, but traffic impacts are expected to be capable of mitigation.• The south-western corner of the site is outside the zone of least landscape and visual impact. Mitigation will be achieved through removing the area that falls outside the zone.• Scheduled monument to the west of the site. Not expected to suffer any impacts, provided the setting is considered carefully. Assessment is required to determine whether there will be any archaeology or other heritage issues, and what mitigation will be required.• Groundwater and surface water both have the potential to be impacted and will require a hydrological assessment to determine what mitigation will be required.

Overall Recommendation:

Assessment already carried out has flagged up hydrogeology, archaeology and landscape/visual impact as key issues to be addressed as part of working this site. Further assessment will be required to identify satisfactory mitigation and to identify if there are any additional impacts that will require mitigation.

As National Trust land, only small parts of the site will be worked at any one time and will be restored before other areas are worked, thereby minimising impacts.

Subject to the completion of all necessary assessments and providing that any impacts are capable of satisfactory mitigation, it appears reasonable on the basis of evidence available that the site nomination can reasonably be included in the Draft Bournemouth, Dorset and Poole Mineral Sites Plan.

Purbeck Stone: PK 18 Extension to Quarry 4, Acton

Site Name/Location: Extension to Quarry 4, Acton	Nominee: National Trust	Site Area: approximately 1.3 ha Production: 2,000 tpa Reserve: approximately 40,000 tonnes
	Agent: Land and Mineral Management	
	Local Authority: Purbeck District Council	
	Mineral Type: Purbeck Stone	

Impact Assessment Scoring

--	Strong Negative Impact	-	Minor Negative Impact	+	Minor Positive Impact	++	Strong Positive Impact	0	Negligible or No Effect	?	Uncertain
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Timescales for effects:

P/W: Preparation and Working

R/A: Restoration and Afteruse

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
1. To move waste management up the waste hierarchy	N/A	N/A	<ul style="list-style-type: none"> This Objective is not relevant to this site nomination 	<ul style="list-style-type: none"> N/A
2. To maintain, conserve and enhance biodiversity	0	0	European/International Designations <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.
	0	0	Annex 1 Bird Species <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.
	0	0	National Designations <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.
	0	0	Protected species <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.
	0	0	Local recognitions/designations, including ancient woodland and veteran trees <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.
3. To maintain, conserve and enhance geodiversity.	+	+	<ul style="list-style-type: none"> The Purbeck limestone group has an important association with the geology of the Jurassic Coast World Heritage Site. Working quarries in Purbeck have been known to yield important fossils, including dinosaur footprints. They are also of on-going interest for the study of early Cretaceous 	<ul style="list-style-type: none"> Note potential for quarries to yield fossils or other material of geodiversity interest.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
		0	<p>stratigraphy.</p> <ul style="list-style-type: none"> These interests should be acknowledged with the assumption that geologists and the Jurassic Coast Team hosted by DCC will respond positively to any opportunities to recover fossils or record and study unusual features if they are discovered. In terms of geodiversity there is a presumption in favour of an appropriate level of quarrying activity continuing in order to sustain these on-going interests. 	<ul style="list-style-type: none"> Visits or other investigation of working sites may be requested. Investigate potential and/or benefits of leaving quarried face open after restoration.
4. To maintain, conserve and enhance the quality of ground, surface and sea waters and manage the consumption of water in a sustainable way.	_?	0	<p>Groundwater</p> <ul style="list-style-type: none"> Site overlies Secondary Aquifer. Private or local water interests identified within 250 m of the site. No impact on source protection zones. Impact ranges from 'Significant Adverse Impact' to 'Less Significant Adverse Impact'. 	<ul style="list-style-type: none"> Simple hydrological assessment required to determine possible impacts, on ground and surface waters, with appropriate mitigation to be implemented. Appropriate arrangements should be put in place to ensure that the water leaving the site and entering the watercourses or groundwater is of an acceptable quality. Any fuel on site should be properly stored to avoid contamination in case of spillage. Appropriate arrangements should be installed for surface water and silt collection and fuel storage to prevent contamination of groundwater resources. The combined impacts of Purbeck Limestone Quarries should be assessed where a number of sites affect the same water resource or receiving water course.
	0	0	<p>Surface Water</p> <ul style="list-style-type: none"> No watercourses within 500 m. 	
5. To reduce flood risk and improve flood management.	0	0	<p>Flooding/Coastal Stability</p> <ul style="list-style-type: none"> Site is entirely in Flood Risk Zone 1, no risk of flooding. 	<ul style="list-style-type: none"> No action required.
6. To maintain, conserve and enhance the historic environment (including archaeological sites, historic buildings, conservation areas, historic parks and	?	0	<p>Archaeology</p> <ul style="list-style-type: none"> It is considered that the site has high potential for below-ground archaeology and possibly industrial archaeological evidence of early quarrying. Archaeological assessment and evaluation would be required before an informed planning decision could be made. Only when these have been undertaken would the archaeological impact be understood – at present it could be anywhere from 'Very Significant' 	<ul style="list-style-type: none"> Archaeological survey of the area required <u>as part of planning application</u> to assess possible presence and significance of non-designated remains and to assess whether/how these should be protected during working – <u>no further work required at site allocation stage</u>. All necessary mitigation to be implemented prior to working.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
gardens and other locally distinctive features and their settings).			to 'No Significant' impacts.	<ul style="list-style-type: none"> Adequate provision to be made for preservation, excavation or recording, as appropriate. Further consideration to be given to restoration proposals, in terms of historic landscapes.
	0	0	Historic Landscapes <ul style="list-style-type: none"> The local landscape bears the imprint of previous quarrying dating from the Roman period onwards. It could be argued that the present site would be a continuation of the process, and if the site is to be restored afterwards the impact would be limited in time anyway. 	
	0	0	Historic Buildings <ul style="list-style-type: none"> This site is part of a characterful landscape of which the quarrying activities help to form its character. Buildings are not immediately adjacent to the site but derive character from the overall landscape. The quarry will have no significant impact on the listed buildings. 	<ul style="list-style-type: none"> No action required.
7. To maintain, conserve and enhance the landscape, including townscape, seascape and the coast.	-	0	Landscape Capacity <ul style="list-style-type: none"> The key issue is the potential cumulative adverse impacts on the amenity of users of Priests Way. 	<ul style="list-style-type: none"> Assessment of potential visual impacts will be required <u>at planning application stage</u>. All appropriate mitigation to be included, including restoration of other sites in the vicinity, as appropriate. Appropriate restoration proposals in line with Landscape Management Guidelines referred to in Minerals Strategy.
	0	0	Designated Landscapes <ul style="list-style-type: none"> 'Less Significant Adverse Impact' on designated landscapes from this proposal. 	
8. To protect and improve air quality and reduce the impacts of noise.	0	0	<ul style="list-style-type: none"> Impacts on air quality expected to be negligible. No AQMAs will be affected by the working of this site proposal. Any dust resulting from working will be controlled through normal dust-suppression measures. Noise mitigation will be addressed at the planning application stage, with appropriate mitigation to be included in the development of the site. 	<ul style="list-style-type: none"> Environmental protection measures to reduce dust and ensure noise is appropriately mitigated.
9. To maintain, conserve and enhance soil quality.	-	0	<ul style="list-style-type: none"> Soils are good to moderate in quality. Any soil removed will be protected during working and either re-used on site or taken elsewhere to be used. Further assessment may be required to determine soil quality. 	<ul style="list-style-type: none"> Soil to be properly stripped and stored prior to working; protected during working; and re-spread on site after working.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
10. To conserve and safeguard mineral resources.	++	0	<ul style="list-style-type: none"> The site would make an important contribution to the supply of Purbeck Stone for Bournemouth, Dorset and Poole and all other potential markets. 	<ul style="list-style-type: none"> No specific action required; site development to take into consideration relevant impacts and mitigate where appropriate.
11. To promote the use of alternative materials.	-	0	<ul style="list-style-type: none"> This proposal does not promote the use of alternative materials. 	<ul style="list-style-type: none"> No action required.
12. To provide an adequate and affordable supply of minerals to meet society's needs.	+	0	<ul style="list-style-type: none"> Development of this site would provide a benefit in terms of contributing to the provision of a supply of minerals to meet society's needs. Ensuring a sustainable supply will depend on the development and management of the site. Providing site development takes into account relevant principles of sustainable development it is expected this will contribute to complying with this objective. 	<ul style="list-style-type: none"> Ensure principles of sustainable development are incorporated into the development of this site.
13. To promote and encourage sustainable economic growth	+	0	<ul style="list-style-type: none"> This site proposal is expected to contribute to economic development on two levels – directly through the provision of employment at the site to be developed and indirectly through the provision of Purbeck Stone required for new build, repairs and maintenance, decorative and monument work and landscaping work. Both levels are expected to maintain employment, skilled and unskilled. Restoration to agriculture will offer some further economic benefits through both the agriculture itself and the recreational attraction and use in the wider area (i.e. riding, walking). 	<ul style="list-style-type: none"> No action required.
14. To adapt to and mitigate the impacts of climate change.	-	0	<ul style="list-style-type: none"> Developing land as a quarry is expected to have some negative impacts regarding climate change, due primarily to machinery used and transportation of mineral away from site. However, these will in relative terms be negligible. The Bournemouth, Dorset and Poole Minerals Strategy seeks to address and minimise such impacts through Policy CC1 which requires operators to take into consideration climate change impacts and their possible mitigation for any proposed minerals development. The development management policies, e.g. DM 1, also address and seek to minimise the issue of sustainable development and climate change. 	<ul style="list-style-type: none"> Use energy efficient plant and machinery. Implement restoration which provides appropriate habitats to help to increase resilience of flora/fauna.
15. To minimise the negative impacts of	-	0	<ul style="list-style-type: none"> Access is proposed via the existing quarry and the C135 to the B3069. From here vehicles will travel to the A351 either west, past Kingston, or east, 	<ul style="list-style-type: none"> Any proposal for this site would need to be accompanied by a

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
waste and minerals transport on the transport network, mitigating any residual impacts.			<p>through Langton Matravers.</p> <ul style="list-style-type: none"> Vehicle movements here are expected to be low and will not exceed that which currently exists. While access to the strategic network will involve travel through existing settlements, the low number of trips plus the B class of the road used means that there will be limited impact. Site is considered to have a 'Less Significant Adverse Impact'. Policies DM 1 and DM 8 of the Minerals Strategy actively address this issue of minimising impacts on the transportation network. 	<p>Transport Assessment which will need to provide access details and consider vehicle routing. The TA should be scoped with the Transport Development Management Team.</p> <ul style="list-style-type: none"> Transport Assessment will identify opportunities for reducing impacts on the transport network.
16. To support and encourage the use of sustainable transport modes, imposing no unmitigated negative impacts on them.	-	0	<ul style="list-style-type: none"> The proposed extension can only realistically be accessed by means of road transport, resulting in a negative impact under this Objective during development and working. As far as reasonably possible negative impacts resulting from access and transport will be mitigated, as required by Policies DM 1 and DM 8 of the Minerals Strategy. 	<ul style="list-style-type: none"> Mitigate impacts where identified and appropriate.
17. To sustain the health and quality of life of the population	-	0	<p>Impact on Sensitive Human Receptors</p> <ul style="list-style-type: none"> Properties within 100 m to north west and 500 m to the north. Campsites within 500 m to north/north west. Context is small quarries in an area with a long history of Purbeck Stone quarrying. National Trust will control rate of quarrying. Appropriate screening to be determined. 	<ul style="list-style-type: none"> Provision of appropriate mitigation, following assessment of likely impacts. Restoration to improve landscape of site where possible; and to seek to facilitate public access. Screening, bunding, standoffs will be used to mitigate impacts where considered necessary. Transport impacts to be considered through Transport Assessment, as noted above.
			<p>Impact on Existing Settlements</p> <ul style="list-style-type: none"> Acton is approximately 380 m to the north; Langton Matravers is approximately 650 m to north east. Minimal impacts expected, given rate of quarrying and context of the site proposals. Transport issues considered above. 	
	0	0	<p>Impact on Airport Safety</p> <ul style="list-style-type: none"> Site is approximately 23 km from airport, with no wet working or restoration. No impacts expected. 	<ul style="list-style-type: none"> No action required.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
18. To enable safe access to countryside and open spaces.	0	0	Impact on Recreational Land <ul style="list-style-type: none"> Site is agricultural land, not used for formal/informal recreational purposes. 	<ul style="list-style-type: none"> Assessment of impacts, with appropriate mitigation identified. Restoration to include considering how it might be possible to improve public access in the area.
	-	0	Impact on Public Rights of Way <ul style="list-style-type: none"> Bridleway (Priest's Way) runs approximately 40 m north of the northern edge of site nomination. Further assessment required of possible impacts and appropriate screening. 	

Preliminary Hydrological Risk Assessment

Controlled Waters	Issues/Risks	Mitigation	Further information/approval required
<ul style="list-style-type: none"> • Watercourses • Ponds/lakes, including wet habitats • Groundwater 	<ul style="list-style-type: none"> • Potential for contamination of controlled waters (groundwater) through spillage or seepage of pollutants such as fuel. • Contamination of water supplies or reduction in amount of water available for licenced supplies. 	<ul style="list-style-type: none"> • Appropriate arrangements to be made for ensuring that runoff from the site does not enter the groundwater unless any silt or other pollutant has first been removed. • Fuel stored on site to be appropriately bunded and sealed to prevent any spillage from entering ground or surface waters. • On-going monitoring during development and working of the site. 	<ul style="list-style-type: none"> • Full hydrogeological risk assessment will be required as part of a planning application. • Flood Risk Assessment • Water Framework Assessment • Further assessment of potential impacts on water quality and levels, particularly for groundwater, is required prior to development. • Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.

Cumulative Impacts

The combined impacts of Purbeck Limestone Quarries should be assessed where a number of sites affect the same water resource or receiving water course.

Site nomination comprises an extension to an existing quarry in an area where there is a high concentration and long history of mineral extraction. The cumulative effect of the number of quarries operating in this area should be taken into consideration, and as far as possible no new quarry areas should be opened unless others have been restored.

The proposal is within 5 km (by road) of a town (Swanage) where allocations for the development of 200 dwellings, employment and retail facilities have been made in the Purbeck Local Plan Part 1 (adopted Nov 2012) (Policy SE). (Site details not yet available). Traffic arising from the new residential development will add to general traffic levels in / around Swanage and on the A351.

Summary.

Potential Benefits	Potential Impacts on...
<ul style="list-style-type: none">• Provision of Purbeck Stone.• Support for the Purbeck Stone industry and employment, both locally and wherever Purbeck Stone is exported and used, with associated economic benefits.• Use of the stone for heritage building works/repairs, and for new buildings.• Geodiversity benefits, through exposures created and fossils found.	<ul style="list-style-type: none">• Intensification of impacts on bridleway (Priests Way) to the north, and potentially also on properties to the north. Further assessment required, with appropriate mitigation identified.• Archaeological assessment required to identify possible impacts and any required mitigation.• Transport Assessment will be required at planning application stage, but generally traffic impacts are not expected to cause a problem. As an extension, new traffic levels should not exceed current levels.• Potential for groundwater impacts on water interests will require a hydrological assessment to determine impacts and what mitigation might be required.

Overall Recommendation:

Assessment already carried out has flagged up archaeology and local amenity (including impacts on Priest's Way, residential properties and campsites) as the key issues to be addressed as part of working this site. Further assessment will be required to identify satisfactory mitigation and to identify if there are any additional impacts that will require mitigation.

As the site is an extension of an existing site, it is expected that any impacts should be capable of satisfactory mitigation.

Subject to the completion of all necessary assessments and providing that any impacts are capable of satisfactory mitigation, it appears reasonable on the basis of evidence available that the site nomination can reasonably be included in the Draft Bournemouth, Dorset and Poole Mineral Sites Plan.

Purbeck Stone: PK19 Broadmead Field, Langton Matravers

Site Name/Location: PK19 Broadmead Field, Langton Matravers	Nominee: National Trust	Site Area: approximately 12.6 ha Production: 2,000 tpa Reserve: approximately 440,000 tonnes
	Agent: Land and Mineral Management	
	Local Authority: Purbeck District Council	
	Mineral Type: Purbeck Stone	

Impact Assessment Scoring

--	Strong Negative Impact	-	Minor Negative Impact	+	Minor Positive Impact	++	Strong Positive Impact	0	Negligible or No Effect	?	Uncertain
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Timescales for effects:

P/W: Preparation and Working

R/A: Restoration and Afteruse

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
1. To move waste management up the waste hierarchy	N/A	N/A	<ul style="list-style-type: none"> This Objective is not relevant to this site nomination 	<ul style="list-style-type: none"> N/A
2. To maintain, conserve and enhance biodiversity	0	0	European/International Designations <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.
	0	0	Annex 1 Bird Species <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.
	0	0	National Designations <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.
	?	0	Protected species <ul style="list-style-type: none"> Greater Horseshoe Bat has been recorded from the area immediately adjacent to this site. Without further investigation the implications of quarrying on this rare species are not known, although it is likely that appropriate mitigation could be put in place if necessary. 	<ul style="list-style-type: none"> Ecological surveys required, with appropriate mitigation if required.
	0	0	Local recognitions/designations, including ancient woodland and veteran trees <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.
3. To maintain, conserve and enhance geodiversity.	+	0	<ul style="list-style-type: none"> The Purbeck limestone group has an important association with the geology of the Jurassic Coast World Heritage Site. Working quarries in Purbeck have been known to yield important fossils, including dinosaur footprints. They are also of on-going interest for the study of early 	<ul style="list-style-type: none"> Note potential for quarries to yield fossils or other material of geodiversity interest. Visits or other

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			<p>Cretaceous stratigraphy.</p> <ul style="list-style-type: none"> These interests should be acknowledged with the assumption that geologists and the Jurassic Coast Team hosted by DCC will respond positively to any opportunities to recover fossils or record and study unusual features if they are discovered. In terms of geodiversity there is a presumption in favour of an appropriate level of quarrying activity continuing in order to sustain these on-going interests. 	<ul style="list-style-type: none"> investigation of working sites may be requested. Investigate potential and/or benefits of leaving quarried face open after restoration.
4. To maintain, conserve and enhance the quality of ground, surface and sea waters and manage the consumption of water in a sustainable way.	?	0	<p>Groundwater</p> <ul style="list-style-type: none"> Groundwater spring rises 240m from the site. Impacts on this spring could vary from 'Less Significant Adverse Impact' to 'Significant Adverse Impact' – further assessment required. The combined impacts of Purbeck Limestone Quarries should be assessed where a number of sites affect the same water resource or receiving water course. Site overlies Secondary aquifers. No impact on Source Protection Zones. No licenced supplies. 	<ul style="list-style-type: none"> Simple hydrological assessment required to determine possible impacts, on ground and surface waters, with appropriate mitigation to be implemented. Appropriate arrangements should be put in place to ensure that the water leaving the site and entering the watercourses or groundwater is of an acceptable quality. Any fuel on site should be properly stored to avoid contamination in case of spillage. Appropriate arrangements should be installed for surface water and silt collection and fuel storage to prevent contamination of groundwater resources. The combined impacts of Purbeck Limestone Quarries should be assessed where a number of sites affect the same water resource or receiving water course.
	?	0	<p>Surface Water</p> <ul style="list-style-type: none"> There is a watercourse approximately 240m from the site. Proposed development could have Significant Impact, further assessment required. 	
5. To reduce flood risk and improve flood management.	0	0	<p>Flooding/Coastal Stability</p> <ul style="list-style-type: none"> Site is entirely in Flood Risk Zone 1, no risk of flooding. 	<ul style="list-style-type: none"> No action required.
6. To maintain, conserve and enhance the historic environment (including archaeological sites, historic buildings, conservation areas, historic parks and	?	0	<p>Archaeology</p> <ul style="list-style-type: none"> There are various archaeological sites in the area, most notably an Iron Age and Roman period settlement and shale-working site just to the north-west. There is also potential for industrial archaeological evidence of early quarrying. Archaeological assessment and evaluation would be required before an informed planning decision could be made. Only when these have been undertaken would the archaeological impact be understood – 	<ul style="list-style-type: none"> Archaeological survey of the area required <u>as part of planning application</u> to assess possible presence and significance of non-designated remains and to assess whether/how these should be protected during working – <u>no further work required at site allocation stage</u>. All necessary mitigation to

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
gardens and other locally distinctive features and their settings).			at present it could be anywhere from 'Very Significant' to 'No Significant' impact.	<ul style="list-style-type: none"> be implemented prior to working. Adequate provision to be made for preservation, excavation or recording, as appropriate. Further consideration to be given to restoration proposals, in terms of historic landscapes.
	0	0	Historic Landscapes <ul style="list-style-type: none"> The local landscape bears the imprint of previous quarrying dating from the Roman period onwards. It could be argued that the present site would be a continuation of the process, and if the site is to be restored afterwards the impact would be limited in time anyway. 	
	– ?	0	Historic Buildings <ul style="list-style-type: none"> Listed building adjacent to site proposal, further assessment will be required to determine potential impacts. 	
7. To maintain, conserve and enhance the landscape, including townscape, seascape and the coast.	0	0	Landscape Capacity <ul style="list-style-type: none"> Site is in the zone of least landscape and visual impact so it will be how the area is worked which will determine its capacity. Small areas, quantities, progressive restoration and in short campaigns with low stockpiles is recommended. 	<ul style="list-style-type: none"> Site to be developed as suggested, to minimise impacts. No action required.
	0	0	Designated Landscapes <ul style="list-style-type: none"> Less significant adverse impact. 	
8. To protect and improve air quality and reduce the impacts of noise.	0	0	<ul style="list-style-type: none"> Impacts on air quality expected to be negligible. No AQMAs will be affected by the working of this site proposal. Any dust resulting from working will be controlled through normal dust-suppression measures. Noise mitigation will be addressed at the planning application stage, with appropriate mitigation to be included in the development of the site. 	<ul style="list-style-type: none"> Environmental protection measures to reduce dust and ensure noise is appropriately mitigated.
9. To maintain, conserve and enhance soil quality.	–	0	<ul style="list-style-type: none"> Soils are good to moderate. Any soil removed will be protected during working and either re-used on site or taken elsewhere to be used. Further assessment may be required to determine soil quality. 	<ul style="list-style-type: none"> Soil to be properly stripped and stored prior to working; protected during working; and re-spread on site after working.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
10. To conserve and safeguard mineral resources.	++	0	<ul style="list-style-type: none"> The site would make an important contribution to the supply of Purbeck Stone for Bournemouth, Dorset and Poole and all other potential markets. 	<ul style="list-style-type: none"> No specific action required; site development to take into consideration relevant impacts and mitigate where appropriate.
11. To promote the use of alternative materials.	-	0	<ul style="list-style-type: none"> This proposal does not promote the use of alternative materials. 	<ul style="list-style-type: none"> No action required.
12. To provide an adequate and affordable supply of minerals to meet society's needs.	+	0	<ul style="list-style-type: none"> Development of this site would provide a benefit in terms of contributing to the provision of a supply of minerals to meet society's needs. Ensuring a sustainable supply will depend on the development and management of the site. Providing site development takes into account relevant principles of sustainable development it is expected this will contribute to complying with this objective. 	<ul style="list-style-type: none"> Ensure principles of sustainable development are incorporated into the development of this site.
13. To promote and encourage sustainable economic growth	+	0	<ul style="list-style-type: none"> This site proposal is expected to contribute to economic development on two levels – directly through the provision of employment at the site to be developed and indirectly through the provision of Purbeck Stone required for new build, repairs and maintenance, decorative and monument work and landscaping work. Both levels are expected to maintain employment, skilled and unskilled. Restoration to agriculture will offer some economic benefits through both the agriculture itself and the recreational attraction and use in the wider area (i.e. riding, walking). 	<ul style="list-style-type: none"> No action required.
14. To adapt to and mitigate the impacts of climate change.	-	0	<ul style="list-style-type: none"> Developing land as a quarry is expected to have some negative impacts regarding climate change, due primarily to machinery used and transportation of mineral away from site. However, these will in relative terms be negligible. The Bournemouth, Dorset and Poole Minerals Strategy seeks to address and minimise such impacts through Policy CC1 which requires operators to take into consideration climate change impacts and their possible mitigation for any proposed minerals development. The development management policies, e.g. DM 1, also address and seek to minimise the issue of sustainable development and climate change. 	<ul style="list-style-type: none"> Use energy efficient plant and machinery. Implement restoration which provides appropriate habitats to help to increase resilience of flora/fauna.
15. To minimise the negative	-	0	<ul style="list-style-type: none"> Details of the exact point of access from this site on the highway network will be required. It is 	<ul style="list-style-type: none"> Any proposal for this site would need to be

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
impacts of waste and minerals transport on the transport network, mitigating any residual impacts.			<p>expected that access will be gained on the southern side of the site. Any proposal would need to provide details of the access including visibility, geometry and surfacing.</p> <ul style="list-style-type: none"> While routes from the site to the A351 will go through either Langton Matravers or Kingston, the route is via a B class road and the number of trips will be low. Provided that trip numbers are low, as expected, there will be little adverse impact and the site is considered to have a 'Less Significant Impact' rating. Policies DM 1 and DM 8 of the Minerals Strategy actively address this issue of minimising impacts on the transportation network. 	<p>accompanied by a Transport Assessment which will need to provide access details and consider vehicle routing.</p> <ul style="list-style-type: none"> The TA should be scoped with the Transport Development Management Team and is intended to identify opportunities for reducing impacts on the transport network.
16. To support and encourage the use of sustainable transport modes, imposing no unmitigated negative impacts on them.	–	0	<ul style="list-style-type: none"> Sites which may be developed in this field can only realistically be accessed by means of road transport, resulting in a negative impact under this Objective during development and working. As far as reasonably possible negative impacts resulting from access and transport will be mitigated, as required by Policies DM1 and DM8 of the Minerals Strategy. 	<ul style="list-style-type: none"> Mitigate impacts where identified and appropriate.
17. To sustain the health and quality of life of the population	?	0	<p>Impact on Sensitive Human Receptors</p> <ul style="list-style-type: none"> Residential properties adjacent, within 250m and 500m. The local context is small quarries in an area with a long history of Purbeck Stone quarrying. The National Trust as landowner will control rate of quarrying. Only small areas within the overall field will be quarried – exact sites not known yet. Appropriate screening to be determined. 	<ul style="list-style-type: none"> Provision of appropriate mitigation, following assessment of likely impacts. Restoration to improve landscape of site where possible; and to seek to facilitate public access. Screening, bunding, standoffs will be used to mitigate impacts where considered necessary. Transport impacts to be considered through Transport Assessment, as noted above.
	?	0	<p>Impact on Existing Settlements</p> <ul style="list-style-type: none"> Acton approximately 250m to east; Langton Matravers within 750m further east. Sites will be relatively low impact. Limited visibility towards the east. With appropriate screening, visual impacts would be further reduced. The National Trust, as landowners, will control the rate at which the site is worked to minimize impacts and maintain the appearance of a range of smaller quarries on their land. Transport issues are considered above. 	

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	0	0	Impact on Airport Safety <ul style="list-style-type: none"> Site is approximately 23 km from airport, with no wet working or restoration. No impacts expected. 	<ul style="list-style-type: none"> No action required.
18. To enable safe access to countryside and open spaces.	0	0	Impact on Recreational Land <ul style="list-style-type: none"> Site is agricultural land, not use for formal/informal agricultural purposes. No impacts expected. 	<ul style="list-style-type: none"> Assessment of impacts, with appropriate mitigation identified. Restoration to include considering how it might be possible to improve public access in the area.
	—	0/+	Impact on Public Rights of Way <ul style="list-style-type: none"> Statutory right of way crosses nominated field. Since whole field will not be worked, statutory right of way may not need to be diverted. Further assessment required of possible impacts and appropriate mitigation. 	

Preliminary Hydrological Risk Assessment

Controlled Waters	Issues/Risks	Mitigation	Further information/approval required
<ul style="list-style-type: none"> Watercourses Ponds/lakes, including wet habitats Groundwater 	<ul style="list-style-type: none"> Potential for contamination of controlled waters (groundwater) through spillage or seepage of pollutants such as fuel. Contamination of water supplies or reduction in amount of water available for licenced supplies. 	<ul style="list-style-type: none"> Appropriate arrangements to be made for ensuring that runoff from the site does not enter the groundwater unless any silt or other pollutant has first been removed. Fuel stored on site to be appropriately bunded and sealed to prevent any spillage from entering ground or surface waters. On-going monitoring during development and working of the site. 	<ul style="list-style-type: none"> Full hydrogeological risk assessment will be required as part of a planning application. Flood Risk Assessment Water Framework Assessment Further assessment of potential impacts on water quality and levels, particularly for groundwater, is required prior to development. Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.

Cumulative Impacts

The combined impacts of Purbeck Limestone Quarries should be assessed where a number of sites affect the same water resource or receiving water course.

Site nomination is a field within which there will be small-scale Purbeck Stone extraction. Site is owned by the National Trust who require small-scale and low impact working. Site is in an area where there are a number of other Purbeck Stone workings.

Key issues for consideration are need to ensure no impacts on Greater Horseshoe Bats in the vicinity; need for further archaeological and hydrological assessment; and amenity impacts on residences in the vicinity and users of the footpath that crosses the field.

It is expected that, given the proposal and the approach of the National Trust of low impact quarrying, it will be possible to possible to mitigate impacts.

Site nomination comprises a new proposal in an area where there is a high concentration and long history of mineral extraction.

The proposal is within 5Km (by road) of a town (Swanage) where allocations for the development of 200 dwellings, employment and retail facilities have been made in the Purbeck Local Plan Part 1 (adopted Nov 2012) (Policy SE). (Site details not yet available). Traffic arising from the new residential development will add to general traffic levels in / around Swanage and on the A351.

Traffic arising from the new residential development will add to general traffic levels in / around Swanage and on the A351. Output from this site will be managed through the requirements of the landowners, the National Trust, and it is not expected that the site will lead to visual or road transport related cumulative effects.

Summary.

Potential Benefits	Potential Impacts on...
<ul style="list-style-type: none"> • Provision of Purbeck Stone. • Support for the Purbeck Stone industry and employment, both locally and wherever Purbeck Stone is exported and used, with associated economic benefits. • Use of the stone for heritage building works/repairs, and for new buildings. • Geodiversity benefits, through exposures created and fossils found. • Possibility of improved public access. 	<ul style="list-style-type: none"> • Ensure no impacts from working this site on Greater Horseshoe Bats. • Right of way passing through site area. Further assessment required, mitigation expected to be possible. • Potential impact on landscape capacity of the site. Recommended working approach is small areas, quantities, progressive restoration and in short campaigns with low stockpiles. • Nominated site is relatively close to residential properties, with potential impacts on local amenity. In the context of the Purbeck plateau with its long history of quarrying, this is not expected to be a problem and should be capable of satisfactory mitigation. Assessment of possible impacts required with appropriate mitigation identified. • Transport Assessment will be required at planning application stage, with appropriate mitigation identified. • Groundwater and surface water both have the potential to be impacted and will require a hydrological assessment to determine what mitigation will be required. • Potential archaeological impacts and impacts on Listed Building, further assessment to be carried out at appropriate stage.

Overall Recommendation:

Assessment already carried out has flagged up archaeology, hydrology, landscape, local amenity and access (including impacts on right of way over site) as the key issues to be addressed as part of working land within this site nomination. Further assessment will be required at planning application stage to identify satisfactory mitigation and to identify if there are any additional impacts that will require mitigation.

As the site is an extension of an existing site, it is expected that any impacts should be capable of satisfactory mitigation.

Subject to the completion of all necessary assessments and providing that any impacts are capable of satisfactory mitigation, it appears reasonable on the basis of evidence available that the site nomination can reasonably be included in the Draft Bournemouth, Dorset and Poole Mineral Sites Plan.

Purbeck Stone: PK 21 Gallows' Gore, Langton Matravers

Site Name/Location: PK 21 Gallows' Gore, Langton Matravers	Agent: A J Monro/Symonds and Sampson Local Authority: Purbeck District Council Mineral Type: Purbeck Stone	Site Area: approximately 5.2 ha Production: To be confirmed... Reserve: To be confirmed...
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Impact Assessment Scoring

--	Strong Negative Impact	-	Minor Negative Impact	+	Minor Positive Impact	++	Strong Positive Impact	0	Negligible or No Effect	?	Uncertain
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Timescales for effects:

P/W: Preparation and Working

R/A: Restoration and Afteruse

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
1. To move waste management up the waste hierarchy	N/A	N/A	<ul style="list-style-type: none"> This Objective is not relevant to this site nomination 	<ul style="list-style-type: none"> N/A
2. To maintain, conserve and enhance biodiversity	0	0	European/International Designations <ul style="list-style-type: none"> No significant impacts expected 	<ul style="list-style-type: none"> No action required.
	0	0	Annex 1 Bird Species <ul style="list-style-type: none"> No significant impacts expected 	<ul style="list-style-type: none"> No action required.
	0	0	National Designations <ul style="list-style-type: none"> No significant impacts expected 	<ul style="list-style-type: none"> No action required.
	0	0	Protected species <ul style="list-style-type: none"> The small area of rough grassland at the south east corner of the site has potential to support uncommon UK priority BAP species such as the grizzled skipper and dingy skipper. This area should be omitted from the site boundary/working area. Adjacent, similar areas of rough grassland provide habitat for several species of European Protected bats, for which the whole area is nationally important. 	<ul style="list-style-type: none"> Site boundary to be amended as suggested, to minimise impacts on biodiversity. Previously worked areas to south east and any other adjacent rough grassland around the site to be left untouched and protected from any operations, or impacts from such operations,

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	0	0	<p>Local recognitions/designations, including ancient woodland and veteran trees</p> <ul style="list-style-type: none"> The small area of rough grassland at the south east corner of the site has potential to support uncommon UK priority BAP species such as the grizzled skipper and dingy skipper. This area should be omitted from the site boundary/working area. Adjacent, similar areas of rough grassland provide habitat for several species of European Protected bats, for which the whole area is nationally important. 	<p>on rest of site.</p> <ul style="list-style-type: none"> Site to be surveyed to identify further possible impacts and any appropriate mitigation to be undertaken.
3. To maintain, conserve and enhance geodiversity.	+	+ ?	<ul style="list-style-type: none"> The Purbeck limestone group has an important association with the geology of the Jurassic Coast World Heritage Site. Working quarries in Purbeck have been known to yield important fossils, including dinosaur footprints. They are also of on-going interest for the study of early Cretaceous stratigraphy. These interests should be acknowledged with the assumption that geologists and the Jurassic Coast Team hosted by DCC will respond positively to any opportunities to recover fossils or record and study unusual features if they are discovered. In terms of geodiversity there is a presumption in favour of an appropriate level of quarrying activity continuing in order to sustain these on-going interests. 	<ul style="list-style-type: none"> Note potential for quarries to yield fossils or other material of geodiversity interest. Visits or other investigation of working sites may be requested. Investigate potential and/or benefits of leaving quarried face open after restoration.
4. To maintain, conserve and enhance the quality of ground, surface and sea waters and manage the consumption of water in a sustainable way.	0	0	<p>Groundwater</p> <ul style="list-style-type: none"> Site overlies Secondary aquifer. No impact on Source Protection Zones. No licenced supplies. 	<ul style="list-style-type: none"> Hydrological assessment required at planning application stage to determine possible impacts, on ground and surface waters, with appropriate mitigation to be implemented. Appropriate arrangements should be put in place to ensure that the water leaving the site and entering the watercourses or groundwater is of an acceptable quality. Any fuel on site should be properly stored to avoid contamination in case of spillage. Appropriate arrangements should be installed for surface water and silt collection and fuel storage to prevent contamination of groundwater resources. The combined impacts of Purbeck Limestone Quarries should be assessed where a number of sites affect the same water resource or receiving water course.
	0	0	<p>Surface Water</p> <ul style="list-style-type: none"> Spring within 500 m of site. No impacts expected on this. 	

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
5. To reduce flood risk and improve flood management.	0	0	Flooding/Coastal Stability <ul style="list-style-type: none"> Site is entirely in Flood Risk Zone 1, no risk of flooding. Although the site is not at risk of flooding, 	<ul style="list-style-type: none"> No action required.
6. To maintain, conserve and enhance the historic environment (including archaeological sites, historic buildings, conservation areas, historic parks and gardens and other locally distinctive features and their settings).	?	0	Archaeology <ul style="list-style-type: none"> The discovery of Iron Age and Roman period settlement remains at a site to the south-west of the proposal site indicates the present site's high potential for below-ground archaeology. There is also potential for industrial archaeological evidence of early quarrying. Archaeological assessment and evaluation would be required before an informed planning decision could be made. Only when these have been undertaken would the archaeological impact be understood – at present it could be anywhere from 'Very Significant' to 'No Significant' impact. 	<ul style="list-style-type: none"> Archaeological survey of the area required as part of planning application to assess possible presence and significance of non-designated remains and to assess whether/how these should be protected during working – <u>no further work required at site allocation stage</u>. All necessary mitigation to be implemented prior to working. Adequate provision to be made for preservation, excavation or recording, as appropriate. Further consideration to be given to restoration proposals, in terms of historic landscapes.
	0	0	Historic Landscapes <ul style="list-style-type: none"> The local landscape bears the imprint of previous quarrying dating from the Roman period onwards. It could be argued that the present site would be a continuation of the process, and if the site is to be restored afterwards the impact would be limited in time anyway. 	
	0	0	Historic Buildings <ul style="list-style-type: none"> This is a quarry set in a quarrying landscape and the nearest listed buildings are too far away to be affected. No significant impact expected. 	
7. To maintain, conserve and enhance the landscape, including townscape, seascape and the coast.	–	0	Landscape Capacity <ul style="list-style-type: none"> This site proposal is within the area of least landscape and visual sensitivity. Landscape capacity to accommodate the development is medium. It would be higher if the surrounding existing quarries had been completely restored or where prior to any new quarry opening. 	<ul style="list-style-type: none"> Assessment of potential visual impacts will be required <u>at planning application stage</u>. All appropriate mitigation to be included. Appropriate restoration proposals in line with Landscape Management Guidelines referred to in Minerals
	0	0	Designated Landscapes <ul style="list-style-type: none"> Site proposal is expected to have a less significant adverse impact. 	

Sustainability Objectives	Effects		Commentary	Mitigation Strategy.
	P/W	R/A		
8. To protect and improve air quality and reduce the impacts of noise.	0	0	<ul style="list-style-type: none"> Impacts on air quality expected to be negligible. No AQMAs will be affected by the working of this site proposal. Any dust resulting from working will be controlled through normal dust-suppression measures. Noise mitigation will be addressed at the planning application stage, with appropriate mitigation to be included in the development of the site. 	<ul style="list-style-type: none"> Environmental protection measures to reduce dust and ensure noise is appropriately mitigated.
9. To maintain, conserve and enhance soil quality.	-	0	<ul style="list-style-type: none"> The site is currently an area of pasture and soils are either good to moderate or poor in quality. Any soil removed will be protected during working and either re-used on site or taken elsewhere to be used. Further assessment may be required to determine soil quality. 	<ul style="list-style-type: none"> Soil to be properly stripped and stored prior to working; protected during working; and re-spread on site after working.
10. To conserve and safeguard mineral resources.	++	0	<ul style="list-style-type: none"> The site would make an important contribution to the supply of Purbeck Stone for Bournemouth, Dorset and Poole and any other markets. 	<ul style="list-style-type: none"> No specific action required; site development to take into consideration relevant impacts and mitigate where appropriate.
11. To promote the use of alternative materials.	-	0	<ul style="list-style-type: none"> This proposal does not promote the use of alternative materials. 	<ul style="list-style-type: none"> No action required.
12. To provide an adequate and affordable supply of minerals to meet society's needs.	+	0	<ul style="list-style-type: none"> Development of this site would provide a benefit in terms of contributing to the provision of a supply of minerals to meet society's needs. Ensuring a sustainable supply will depend on the development and management of the site. Providing site development takes into account relevant principles of sustainable development it is expected this will contribute to complying with this objective. 	<ul style="list-style-type: none"> Ensure principles of sustainable development are incorporated into the development of this site.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
13. To promote and encourage sustainable economic growth	+	0	<ul style="list-style-type: none"> This site proposal is expected to contribute to economic development on two levels – directly through the provision of employment at the site to be developed and indirectly through the provision of Purbeck Stone required for new build, repairs and maintenance, decorative and monument work and landscaping work. Both levels are expected to maintain employment, skilled and unskilled. Restoration to agriculture will offer some further economic benefits through both the agriculture itself and the recreational attraction and use in the wider area (i.e. riding, walking). 	<ul style="list-style-type: none"> No action required.
14. To adapt to and mitigate the impacts of climate change.	–	0	<ul style="list-style-type: none"> Developing land as a quarry is expected to have some negative impacts regarding climate change, due primarily to machinery used and transportation of mineral away from site. However, these will in relative terms be negligible. The Bournemouth, Dorset and Poole Minerals Strategy seeks to address and minimise such impacts through Policy CC1 which requires operators to take into consideration climate change impacts and their possible mitigation for any proposed minerals development. The development management policies, e.g. DM 1, also address and seek to minimise the issue of sustainable development and climate change. 	<ul style="list-style-type: none"> Use energy efficient plant and machinery. Implement restoration which provides appropriate habitats to help to increase resilience of flora/fauna.
15. To minimise the negative impacts of waste and minerals transport on the transport network, mitigating any residual impacts.	---	0	<ul style="list-style-type: none"> If the site is accessed via Haycraft's Lane, taking vehicles to the B3069, approximately 400m to the south or to the A351 approximately 1km to the north, this would be expected to have a 'Significant Adverse Impact'. Access onto Haycraft's Lane, presumed to be via the same access that serves Avalon, is narrow and does not have suitable geometry to accommodate HGVs. This is compounded by the very narrow nature of Haycraft's Lane at this point. The remainder of Haycraft's Lane, to the north and south, is very narrow, has limited passing opportunity and has poor forward visibility. To be acceptable in highway terms any proposal for this site would need to limit trips to and from the site to the very low levels 	<ul style="list-style-type: none"> Any proposal for this site would need to be accompanied by a Transport Assessment which will need to provide access details and consider vehicle routing. However, on the basis of these comments it appears unlikely that the proposed

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	?		<p>that could reasonably be expected from the existing agricultural use of the land. Any proposal would also need to provide an acceptable access from the site onto Haycraft's Lane.</p> <ul style="list-style-type: none"> If the site is limited to a very small number of trips as detailed above it can be assumed to have a 'Significant Adverse Impact' rating due to the poor nature of Haycraft's Lane. If the site is accessed southwards over adjacent land directly to the B3069, this would be expected to have much less impact and is the preferred access route. Policies DM1 and DM 8 of the Minerals Strategy actively address this issue of minimising impacts on the transportation network. 	<p>route will be suitable for use as a quarry access.</p> <ul style="list-style-type: none"> The TA should be scoped with the Transport Development Management Team and is intended to identify opportunities for reducing impacts on the transport network.
16. To support and encourage the use of sustainable transport modes, imposing no unmitigated negative impacts on them.	-	0	<ul style="list-style-type: none"> The proposed site can only realistically be accessed by means of road transport, resulting in a negative impact under this Objective during development and working. As far as reasonably possible negative impacts resulting from access and transport will be mitigated, as required by Policies DM1 and DM8 of the Minerals Strategy. 	<ul style="list-style-type: none"> Mitigate impacts where identified and appropriate.
17. To sustain the health and quality of life of the population	---	0	<p>Impact on Sensitive Human Receptors</p> <ul style="list-style-type: none"> Site has residential properties immediately adjacent to it, within 50m and further out. Mitigation/screening will be required. Although this site has been worked in the past, this was many years ago and further development would make it seem like a new site. It is in close proximity to a number of residences. 	<ul style="list-style-type: none"> Provision of appropriate mitigation, following assessment of likely impacts. Restoration to improve landscape of site where possible; and to seek to facilitate public access. Screening, bunding, standoffs will be used to mitigate impacts where considered necessary.
		0	0	<p>Impact on Existing Settlements</p> <ul style="list-style-type: none"> Closest settlements are Acton at approximately 600m south east and Langton Matravers at around 700m south/west. Site is not visible from these settlements. Harman's Cross lies to the north, in the valley. The site will be potentially more visible from the north, which will require sensitive treatment and proper screening of the northern edge of the site. Traffic impacts are expected to be minimal.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	0	0	Impact on Airport Safety <ul style="list-style-type: none"> Site is approximately 22 km from airport, with no wet working or restoration. No impacts expected. 	<ul style="list-style-type: none"> No action required.
18. To enable safe access to countryside and open spaces.	0	0	Impact on Recreational Land <ul style="list-style-type: none"> Site is agricultural land. No informal or formal recreational uses noted. 	<ul style="list-style-type: none"> Assessment of impacts, with appropriate mitigation identified. Restoration to include considering how it might be possible to improve public access in the area.
	0	0	Impact on Public Rights of Way <ul style="list-style-type: none"> No rights of way cross the site or run adjacent to it. Closest right of way is a footpath which ends some 30m from north-eastern boundary of site. 	

Preliminary Hydrological Risk Assessment

Controlled Waters	Issues/Risks	Mitigation	Further information/approval required
<ul style="list-style-type: none"> Watercourses Ponds/lakes, including wet habitats Groundwater 	<ul style="list-style-type: none"> Potential for contamination of controlled waters (groundwater) through spillage or seepage of pollutants such as fuel. Contamination of water supplies or reduction in amount of water available for licenced supplies. Potential for water flowing off the site to flood land to the north, downslope from the proposal site 	<ul style="list-style-type: none"> Appropriate arrangements to be made for ensuring that runoff from the site does not enter the groundwater unless any silt or other pollutant has first been removed. Fuel stored on site to be appropriately bunded and sealed to prevent any spillage from entering ground or surface waters. On-going monitoring during development and working of the site. 	<ul style="list-style-type: none"> Full hydrogeological risk assessment will be required as part of a planning application. Flood Risk Assessment Water Framework Assessment Further assessment of potential impacts on water quality and levels, particularly for groundwater, is required prior to development. Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.

Cumulative Impacts

Site is a new mineral extraction in an area where there are other areas of mineral extraction. Site has been historically quarried.

The site nomination comprises an extension to an existing quarry in an area where there is a high concentration and long history of mineral extraction. The cumulative effect of the number of quarries operating in this area should be taken into consideration, and as far as possible no new quarry areas should be opened unless others have been restored. The proposed site is adjacent to another proposed site, Quarr Farm to the north. Both are new sites, and vehicles servicing them would have a cumulative impact on existing traffic levels.

The proposal is within 5 km (by road) of a town (Swanage) where allocations for the development of 200 dwellings, employment and retail facilities have been made in the Purbeck Local Plan Part 1 (adopted Nov 2012) (Policy SE). (Site details not yet available). Traffic arising from the new residential development will add to general traffic levels in / around Swanage and on the A351.

Summary.

Potential Benefits	Potential Impacts
<ul style="list-style-type: none"> • Provision of Purbeck Stone. • Support for the Purbeck Stone industry and employment, both locally and wherever Purbeck Stone is exported and used, with associated economic benefits. • Use of the stone for heritage building works/repairs, and for new buildings. • Geodiversity benefits, through exposures created and fossils found. • Possibility of improved public access. 	<ul style="list-style-type: none"> • Impacts on biodiversity, specifically due to inclusion of areas of rough grassland, an area of previously quarried land, in the south east corner of the site. Mitigation can be achieved through removing this area from the proposed site boundary and ensuring that this area is protected during working. • Impacts on local amenity, as there are residences in close proximity, as well as further afield, including Harman's Cross to the north. Mitigation, such as standoffs and bunding, will be required. • Access is a key issue, given how narrow Haycraft's Lane is and the importance of its flower rich verges. It is not clear at this point whether mitigation which could make the use of Haycraft's Lane acceptable will be possible. An alternative access route may be the only way forward. • Potential landscape/visual impacts, particularly regarding the capacity of the landscape to accommodate this proposed development. Assessment of possible impacts required, with appropriate mitigation identified, including restoration of quarries in vicinity as far as possible. • Assessment is required to determine whether there will be any archaeology or other heritage impacts, and what mitigation is required.

Overall Recommendation:

Assessment already carried out has flagged up biodiversity, archaeology, landscape, local amenity and access as key issues to be addressed as part of working the land within this site nomination. Further assessment will be required at planning application stage to identify satisfactory mitigation and to identify if there are any additional impacts that will require mitigation.

Subject to the completion of all necessary assessments and providing that any impacts are capable of satisfactory mitigation, it appears reasonable on the basis of evidence available that the site nomination can reasonably be included in the Draft Bournemouth, Dorset and Poole Mineral Sites Plan.

Portland Stone: PS01 Bower's Mine, Weston, Portland

-Site Name/Location: PS01 Bower's Mine, Weston, Portland	Nominee: Albion Stone plc	Site Area: approximately 2.6 ha
	Local Authority: Weymouth and Portland Borough Council	Production: up to 6,800 tonnes per annum
	Mineral Type: Portland Stone	Reserve: up to 45,000 tonnes

Impact Assessment Scoring

--	Strong Negative Impact	-	Minor Negative Impact	+	Minor Positive Impact	++	Strong Positive Impact	0	Negligible or No Effect	?	Uncertain
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Timescales for effects:

P/W: Preparation and Working

R/A: Restoration and Afteruse

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
1. To move waste management up the waste hierarchy	N/A	N/A	<ul style="list-style-type: none"> This Objective is not relevant to this site nomination 	<ul style="list-style-type: none"> N/A
2. To maintain, conserve and enhance biodiversity	0	0	European/International Designations <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.
	0	0	Annex 1 Bird Species <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.
	?	0	National Designations <ul style="list-style-type: none"> The only issue for the Isle of Portland SSSI designation is the potential delay in restoration of Bowers Quarry. 	<ul style="list-style-type: none"> As far as possible minimise delays to restoration of Bowers Quarry. Identify whether additional benefits for SSSI can be achieved through this proposed development.
	0	0	Protected species <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.
	0	0	Local recognitions/designations, including ancient woodland and veteran trees <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
3. To maintain, conserve and enhance geodiversity.	0	0	<ul style="list-style-type: none"> Underground mining on Portland is in keeping with the conservation of the Jurassic Coast and its setting. Geodiversity interests are expected to be limited, as compared to quarrying. 	<ul style="list-style-type: none"> Visits or other investigation of working sites may be requested.
4. To maintain, conserve and enhance the quality of ground, surface and sea waters and manage the consumption of water in a sustainable way.	?	0	<p>Groundwater</p> <ul style="list-style-type: none"> No impacts expected, but assessment required to ensure no impacts on/from cemetery above. No impacts on any Source Protection Zone. Environment Agency indicate Hydrological Risk Assessment and Flood Risk Assessment will be required. 	<ul style="list-style-type: none"> Simple hydrological assessment required to determine possible impacts, on ground and surface waters, with appropriate mitigation to be implemented. Appropriate arrangements should be put in place to ensure that the water leaving the site and entering the watercourses or groundwater is of an acceptable quality. Any fuel on site should be properly stored to avoid contamination in case of spillage. Appropriate arrangements should be installed for surface water and silt collection and fuel storage to prevent contamination of groundwater resources.
	0	0	<p>Surface Water</p> <ul style="list-style-type: none"> No impacts expected 	
5. To reduce flood risk and improve flood management.	0	0	<p>Flooding/Coastal Stability</p> <ul style="list-style-type: none"> Site is entirely in Flood Risk Zone 1, no risk of flooding. 	<ul style="list-style-type: none"> No action required.
6. To maintain, conserve and enhance the historic environment (including archaeological sites, historic buildings, conservation areas, historic parks and gardens and other locally distinctive features and their settings).	?	0	<p>Archaeology</p> <ul style="list-style-type: none"> The ground above is a churchyard and cemetery. Clearly disturbance of human remains is an issue that needs to be considered, even if the recent burials in particular are not considered 'archaeological' in most people's opinion. If disturbance of burials can be avoided, the impact would be D ('No Significant or Negligible Adverse Impacts') but if it is not clear that this would be the case, archaeological assessment and evaluation may be one way of providing information on the likely impact. 	<ul style="list-style-type: none"> Further assessment required to assess/ensure mining of the stone under the cemetery would have no impacts on the burials above. Development will be subject to the normal controls, established at the planning application stage, to ensure there is no risk of surface impacts or subsidence during or after working.
	0	0	<p>Historic Landscapes</p> <ul style="list-style-type: none"> Quarrying is a historic activity on Portland and has done much to shape its landscape. A first impression is that underground working would not have a visible impact on this landscape, but there may be impact from associated 	

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			infrastructure and possibly from subsidence.	
	0	0	Historic Buildings <ul style="list-style-type: none"> If engineers can confirm that the depth of the mine beneath the surface is sufficient that neither the cemetery walls, the graveyard burials and tombstones nor the Church of St George would have their stability affected by this then the impact will be negligible as they already stand in a quarry landscape. 	<ul style="list-style-type: none"> Full assessment required to ensure no stability issues.
7. To maintain, conserve and enhance the landscape, including townscape, seascape and the coast.	0	0	Landscape Capacity <ul style="list-style-type: none"> No landscape and visual issues apart from the potential for this to delay the restoration of the rest of the Bowers areas. 	<ul style="list-style-type: none"> No action required, apart from, as far as possible, minimising delays to the restoration of Bowers Quarry.
	0	0	Designated Landscapes <ul style="list-style-type: none"> No significant/negligible impacts. 	
8. To protect and improve air quality and reduce the impacts of noise.	0	0	<ul style="list-style-type: none"> Impacts on air quality expected to be negligible. No AQMAs will be affected by the working of this site proposal. Any dust resulting from working will be controlled through normal dust-suppression measures. Noise mitigation will be addressed at the planning application stage, with appropriate mitigation to be included in the development of the site. 	<ul style="list-style-type: none"> Environmental protection measures to reduce dust and ensure noise is appropriately mitigated.
9. To maintain, conserve and enhance soil quality.	0	0	<ul style="list-style-type: none"> No impacts expected 	<ul style="list-style-type: none"> No action required.
10. To conserve and safeguard mineral resources.	++	0	<ul style="list-style-type: none"> The site would make an important contribution to the supply of Portland Stone to all potential markets. 	<ul style="list-style-type: none"> No specific action required. Site development to take into consideration relevant impacts and mitigate where appropriate.
11. To promote the use of alternative materials.	-	0	<ul style="list-style-type: none"> This proposal does not promote the use of alternative materials. 	<ul style="list-style-type: none"> No action required.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
12. To provide an adequate and affordable supply of minerals to meet society's needs.	+	0	<ul style="list-style-type: none"> Development of this site would provide a benefit in terms of contributing to the provision of a supply of minerals to meet society's needs. Ensuring a sustainable supply will depend on the development and management of the site. Providing site development takes into account relevant principles of sustainable development it is expected this will contribute to complying with this objective. 	<ul style="list-style-type: none"> Ensure principles of sustainable development are incorporated into the development of this site.
13. To promote and encourage sustainable economic growth	+	0	<ul style="list-style-type: none"> This site proposal is expected to contribute to economic development on two levels – directly through the provision of employment at the site to be developed and indirectly through the provision of Portland Stone required for new build, repairs and maintenance and decorative/monument work. Both levels are expected to maintain employment, skilled and unskilled. 	<ul style="list-style-type: none"> No action required.
14. To adapt to and mitigate the impacts of climate change.	–	0	<ul style="list-style-type: none"> Developing the proposed mine is expected to have some negative impacts regarding climate change, due primarily to machinery used and transportation of mineral away from site. However, these will in relative terms be negligible. The Bournemouth, Dorset and Poole Minerals Strategy seeks to address and minimise such impacts through Policy CC1 which requires operators to take into consideration climate change impacts and their possible mitigation for any proposed minerals development. The development management policies, e.g. DM 1, also address and seek to minimise the issue of sustainable development and climate change. 	<ul style="list-style-type: none"> Use energy efficient plant and machinery.
15. To minimise the negative impacts of waste and minerals transport on the transport network, mitigating any residual impacts.	–	0	<ul style="list-style-type: none"> This proposal is for an extension to the existing Bower's Mine site. Traffic is not expected to increase and the existing, adequate, access will be used. The A354 is accessed a short distance from the site. To exit the local area this road passes through Fortuneswell and Weymouth to the north. Access to this site does impact upon existing settlements; however, as there is not expected to be any increase over the existing operation, the site has been given a C ('Less Significant Adverse Impact') rating. Policies DM 1 and DM 8 of the Minerals Strategy actively address this issue of minimising impacts on the transportation 	<ul style="list-style-type: none"> Any proposal for this site would need to be accompanied by a Transport Assessment which will need to provide access details and consider vehicle routing. The TA should be scoped with the Transport Development Management Team. The Transport Assessment will identify opportunities for reducing impacts on the transport network.

Sustainability Objectives	Effects		Commentary	Mitigation		
	P/W	R/A				
			network.			
16. To support and encourage the use of sustainable transport modes, imposing no unmitigated negative impacts on them.	-	0	<ul style="list-style-type: none"> The proposed extension can only realistically be accessed by means of road transport, resulting in a negative impact under this Objective during development and working. As far as reasonably possible negative impacts resulting from access and transport will be mitigated, as required by Policies DM 1 and DM 8 of the Minerals Strategy. 	<ul style="list-style-type: none"> Mitigate impacts where identified and appropriate. 		
17. To sustain the health and quality of life of the population	?	0	Impact on Sensitive Human Receptors <ul style="list-style-type: none"> Site proposal is for mining, accessed from existing quarry. Site boundary is approximately 60m from residential properties and adjacent to listed church building. However as a mine impacts on these are expected to be minimal. Most significant receptor is the cemetery under which the proposal lies. No physical impact is anticipated as the roof of the mine will be metres below the depth of the graves. More relevant will be the perceived impact of mining under a cemetery and also the views of the Church as to whether there will be possible issues with consecrated ground. More research is required to determine the extent of possible impact. Rating could vary between A ('Very Significant Adverse Impact') and D ('No Significant or Negligible Adverse Impacts'), depending on the outcome of further investigations. 	<ul style="list-style-type: none"> The Church of England have indicated that there is no problem mining under the cemetery, provided there is no impact on the burials. Full assessment will be required to ensure no impacts on burials or structures. Any required mitigation to be implemented. 		
			0		0	Impact on Existing Settlements <ul style="list-style-type: none"> No impacts expected, apart from traffic impacts. These are addressed elsewhere in this report.
			0		0	Impact on Airport Safety <ul style="list-style-type: none"> No impacts expected
18. To enable safe access to countryside and open spaces.	0	0	Impact on Recreational Land <ul style="list-style-type: none"> No impacts expected 	<ul style="list-style-type: none"> No action required. 		
	0	0	Impact on Public Rights of Way <ul style="list-style-type: none"> No impacts expected 			

Preliminary Hydrological Risk Assessment

Controlled Waters	Issues/Risks	Mitigation	Further information/approval required
<ul style="list-style-type: none"> • Watercourses • Ponds/lakes, including wet habitats • Groundwater 	<ul style="list-style-type: none"> • Potential for contamination through spillage or seepage of pollutants such as fuel or silt in water. 	<ul style="list-style-type: none"> • Appropriate arrangements to be made for ensuring that runoff from the site does not enter the groundwater unless any silt has first been removed. • Fuel stored on site to be appropriately bunded and sealed to prevent any spillage from entering ground or surface waters. • On-going monitoring during development and working of the site. 	<ul style="list-style-type: none"> • Full hydrogeological risk assessment will be required as part of a planning application. • Flood Risk Assessment • Water Framework Assessment

Cumulative Impacts

Site proposal is an extension of a mining operation in an area with a long history of quarrying. As an extension it is not expected to lead to cumulative impacts.

The proposal is within 5Km of land allocated for major employment development (8.6Ha) at Osprey Quay, Portland (Policy PORT 1) and for residential development (380 dwellings) at the Former Hardy Complex, Portland (Policy PORT2) in the Pre -Submission draft West Dorset, Weymouth and Portland Local Plan (June 2012) as amended by Proposed Modifications (June 2013). Traffic arising from the new development will add to general traffic levels on the A354.

Summary.

Potential Benefits	Potential Impacts on...
<ul style="list-style-type: none">• Provision of Portland Stone.• Support for the Portland Stone industry and employment, both locally and wherever the stone is exported and used, with associated economic benefits.• Use of the stone for heritage building works/repairs, and for new buildings.	<ul style="list-style-type: none">• Expected impact on Portland SSSI, through delaying restoration of Bowers Quarry.• Mining under the cemetery, and under the buildings/structures could have both physical and perceived impacts. Full assessment required to ensure there will be no impacts on burials or structures.• Water/water quality could be impacted and a hydrological assessment to determine possible impacts/mitigation will be required.• Transport impacts on settlements are expected, but as an extension no intensification is expected. A Transport Assessment will be required at planning application stage, with appropriate mitigation identified.

Overall Recommendation:

Assessment already carried out has flagged up local amenity (in the sense of perceived impacts of mining under graves), archaeology/historic buildings and traffic as the key issues to be addressed as part of working land within this site nomination. Further assessment will be required at planning application stage to identify satisfactory mitigation and to identify if there are any additional impacts that will require mitigation.

As the site is an extension of an existing site, it is expected that any impacts should be capable of satisfactory mitigation.

Subject to the completion of all necessary assessments and providing that any impacts are capable of satisfactory mitigation, it appears reasonable on the basis of evidence available that the site nomination can reasonably be included in the Draft Bournemouth, Dorset and Poole Mineral Sites Plan.

Other Building Stone: BS02 Marnhull Quarry, Whiteways Lane, Marnhull

Site Name/Location: BS02 Marnhull Quarry, Whiteways Lane, Marnhull	Nominee/Agent: Marnhull Stone Limited	Site Area: 2.02 ha
	Local Authority: North Dorset District Council	Production: approximately 1,500 tpa
	Mineral Type: Limestone	Reserve: approximately 25,000 tonnes

Impact Assessment Scoring

--	Strong Negative Impact	-	Minor Negative Impact	+	Minor Positive Impact	++	Strong Positive Impact	0	Negligible or No Effect	?	Uncertain
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Timescales for effects:

P/W: Preparation and Working

R/A: Restoration and Afteruse

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
1. To move waste management up the waste hierarchy and promote net self sufficiency	N/A	N/A	<ul style="list-style-type: none"> This Objective is not relevant to this site nomination 	<ul style="list-style-type: none"> N/A
2. To maintain, conserve and enhance biodiversity	0	0	European/International Designations <ul style="list-style-type: none"> No impacts expected 	<ul style="list-style-type: none"> No action required.
	0	0	Annex 1 Bird Species <ul style="list-style-type: none"> No impacts expected 	<ul style="list-style-type: none"> No action required.
	0	0	National Designations <ul style="list-style-type: none"> No impacts expected 	<ul style="list-style-type: none"> No action required.
	0	0	Protected species <ul style="list-style-type: none"> No impacts expected 	<ul style="list-style-type: none"> No action required.
	0	0	Local recognitions/designations, including ancient woodland and veteran trees <ul style="list-style-type: none"> No impacts expected 	<ul style="list-style-type: none"> No action required.
3. To maintain, conserve and enhance geodiversity.	+	+	<ul style="list-style-type: none"> This extension would continue an existing exposure of the Clavellata Beds of the Corallian Group. This should be considered an enhancement to an existing Local Geological Site at this site. 	<ul style="list-style-type: none"> Operator to be asked to permit visits/access to view exposures where possible during working. Opportunities to leave faces exposed when working is finished to be considered.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
4. To maintain, conserve and enhance the quality of ground, surface and sea waters and manage the consumption of water in a sustainable way.	0	0	<p>Groundwater</p> <ul style="list-style-type: none"> No impact on Source Protection Zones and no licensed abstraction points within 500m. Site is within a Secondary Aquifer. Environment Agency advise a Hydrogeological Risk Assessment will be required. 	<ul style="list-style-type: none"> Hydrological assessment required to determine possible impacts, on ground and surface waters, with appropriate mitigation to be implemented. Appropriate arrangements should be put in place to ensure that the water leaving the site and entering the watercourses or groundwater is of an acceptable quality. Any fuel on site should be properly stored to avoid contamination in case of spillage. Appropriate arrangements should be installed for surface water and silt collection and fuel storage to prevent contamination of groundwater resources. Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.
	0 (?)	0	<p>Surface Water</p> <ul style="list-style-type: none"> Site boundary is within 250m of watercourse - Chivrick's Brook. Assessment required to determine possible impacts on hydrogeology. Impacts to be appropriately mitigated. 	
5. To reduce flood risk and improve flood management.	0	0	<p>Flooding/Coastal Stability</p> <ul style="list-style-type: none"> Entire site is within Flood Risk Zone 1, no expected risk of flooding or contributing to flooding. 	<ul style="list-style-type: none"> Flood Risk Assessment (FRA) will be required. All necessary mitigation to be implemented.
6. To maintain, conserve and enhance the historic environment (including archaeological sites, historic buildings, conservation areas, historic parks and gardens and other locally distinctive features and their settings).	?	?	<p>Archaeology</p> <ul style="list-style-type: none"> According to the Dorset Historic Environment Record, human remains were found nearby during quarrying about 200 years ago. From the description, they sound like part of a Christian cemetery of an indeterminate period. Archaeological evaluation would be appropriate before determination of a planning application to indicate the likely archaeological impact of quarrying and the appropriate mitigation. Potentially the impact could be anywhere from 'Very Significant Adverse Impact' to 'No Significant or Negligible Adverse Impacts'. 	<ul style="list-style-type: none"> Archaeological survey of the area required <u>as part of planning application</u> to assess possible presence and significance of non-designated remains and to assess whether/how these should be protected during working – <u>no further work required at site allocation stage</u>. All necessary mitigation to be implemented prior to working. Adequate provision to be made for preservation, excavation or recording, as appropriate. Further consideration to be given to restoration proposals, in terms of historic landscapes.
	0	0	<p>Historic Landscapes</p> <ul style="list-style-type: none"> The site lies in the Blackmore Vale. Seemingly much of the Vale remained wooded until the Middle Ages, and so the field system on and around the site may well be Medieval in origin. The Mineral Planning Authority is not aware of anything particularly significant about 	

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			these fields, hence 'Less Significant Adverse Impact' category seems appropriate.	
	0	0	Historic Buildings <ul style="list-style-type: none"> Listed buildings are too far away to be affected. No significant impacts expected. 	<ul style="list-style-type: none"> No action required.
7. To maintain, conserve and enhance the landscape, including townscape, seascape and the coast.	-	0	Landscape Capacity <ul style="list-style-type: none"> May be some adverse impacts but if mitigation designed to be sympathetic these can be minimised to cause no significant adverse effects. 	<ul style="list-style-type: none"> Assessment of potential visual impacts will be required <u>at planning application stage</u>. All appropriate mitigation to be included. Appropriate restoration proposals in line with Landscape Management Guidelines referred to in Minerals Strategy.
	0	0	Designated Landscapes <ul style="list-style-type: none"> No significant/negligible impacts expected. 	
8. To protect and improve air quality and reduce the impacts of noise.	0	0	<ul style="list-style-type: none"> Impacts on air quality expected to be negligible. No AQMAs will be affected by the working of this site proposal. Any dust resulting from working will be controlled through normal dust-suppression measures. Any impacts due to noise resulting from mineral working would be expected to be satisfactorily minimised through normal noise mitigation measures, imposed at the planning application stage. 	<ul style="list-style-type: none"> Environmental protection measures to be put in place to reduce dust and noise impacts.
9. To maintain, conserve and enhance soil quality.	-	0	<ul style="list-style-type: none"> Site is 'Good to Moderate' agricultural land. Soils will be stripped and protected during preparation and working and reused on site as part of restoration. 	<ul style="list-style-type: none"> Soil to be properly stripped and stored prior to working; protected during working; and re-spread on site after working.
10. To conserve and safeguard mineral resources.	+	0	<ul style="list-style-type: none"> The site would make an important contribution to the supply of building stone. 	<ul style="list-style-type: none"> No specific action required Site development to take into consideration relevant impacts and mitigate where appropriate.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
11. To promote the use of alternative materials.	–	0	<ul style="list-style-type: none"> This proposal does not promote the use of alternative materials. 	<ul style="list-style-type: none"> No action required.
12. To provide an adequate and affordable supply of minerals to meet society's needs.	+	0	<ul style="list-style-type: none"> Development of this site would provide a benefit in terms of contributing to the provision of a supply of minerals to meet society's needs. Ensuring a sustainable supply will depend on the development and management of the site. Providing site development takes into account relevant principles of sustainable development it is expected this will contribute to complying with this objective. 	<ul style="list-style-type: none"> Ensure principles of sustainable development are incorporated into the development of this site.
13. To promote and encourage sustainable economic growth	+	0	<ul style="list-style-type: none"> This site proposal is expected to contribute to economic development on two levels – directly through the provision of employment at the proposed extension and indirectly through the provision of building stone required for new build, repairs and maintenance, decorative and landscaping work. Both levels are expected to maintain employment, skilled and unskilled. Restoration to agriculture will offer some further economic benefits. Further benefits may be available if improved public access can be achieved, through the recreational attraction and use in the wider area (i.e. riding, walking). 	<ul style="list-style-type: none"> Seek further benefits, such as improved public access, where appropriate.
14. To adapt to and mitigate the impacts of climate change.	–	0	<ul style="list-style-type: none"> Developing land as a quarry is expected to have some negative impacts regarding climate change, due primarily to machinery used and transportation of mineral away from site. However, given the size of the proposed quarry these will in relative terms be negligible. The Bournemouth, Dorset and Poole Minerals Strategy seeks to address and minimise such impacts through Policy CC1 which requires operators to take into consideration climate change impacts and their possible mitigation for any proposed minerals development. The development management policies, e.g. DM 1, also address and seek to minimise the issue of sustainable development and climate change. 	<ul style="list-style-type: none"> Use energy efficient plant and machinery. Implement restoration which provides appropriate habitats to help to increase resilience of flora/fauna.
15. To minimise the negative impacts of waste and minerals transport on the transport network,	–	0	<ul style="list-style-type: none"> Entrance to the site will be gained via an existing, suitable, access onto Whiteways Lane. From here vehicles will use the local rural road network to access the B3092. While this road does pass through some local settlements, the very low numbers of predicted movements, less than one a day, 	<ul style="list-style-type: none"> Any proposal for this site would need to be accompanied by a Transport Assessment which will need to provide access details and consider vehicle routing. The TA should be scoped with the Transport Development

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
mitigating any residual impacts.			<p>mean that the site has been given a 'Less Significant Adverse Impact' rating.</p> <ul style="list-style-type: none"> Policies DM1 and DM 8 of the Minerals Strategy actively address this issue of minimising impacts on the transportation network. 	<p>Management Team.</p> <ul style="list-style-type: none"> The Transport Assessment should identify opportunities for reducing impacts on the transport network.
16. To support and encourage the use of sustainable transport modes, imposing no unmitigated negative impacts on them.	—	0	<ul style="list-style-type: none"> The proposed extension can only realistically be accessed by means of road transport, resulting in a negative impact under this Objective during development and working. As far as reasonably possible negative impacts resulting from access and transport will be mitigated, as required by Policies DM1 and DM8 of the Minerals Strategy. 	<ul style="list-style-type: none"> Mitigate impacts where identified and appropriate.
17. To sustain the health and quality of life of the population	0	0	<p>Impact on Sensitive Human Receptors</p> <ul style="list-style-type: none"> Closest property is Toogoods farm, just over 500m to the north east. Mitigation measures such as visual and noise attenuation bunds can be used as needed – further assessment will be required to determine what is needed. 	<ul style="list-style-type: none"> Provision of appropriate mitigation, following assessment of likely impacts. Restoration to improve landscape of site where possible; and to seek to increase public access. Transport Assessment to be carried out, identifying opportunities for reducing impacts on the transport network where appropriate.
	0	0	<p>Impact on Existing Settlements</p> <ul style="list-style-type: none"> Nearest settlement is Marnhull, at approximately 800m to north west. It is likely that there will be impacts of lorries accessing the site. This is an extension and should not result in intensification of any impacts. Mitigation measures such as visual and noise attenuation bunds can be used as needed – further assessment will be required to determine what is needed. 	
	0	0	<p>Impact on Airport Safety</p> <ul style="list-style-type: none"> Site is approximately 37 km from Bournemouth airport and approximately 24 km from Yeovilton, with no wet working or restoration. 	
18. To enable safe access to countryside and open	0	0	<p>Impact on Recreational Land</p> <ul style="list-style-type: none"> Site is agricultural land, no formal or informal recreational use. 	<ul style="list-style-type: none"> Assessment of impacts, with appropriate mitigation identified.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
spaces.	-	0	<p>Impact on Public Rights of Way</p> <ul style="list-style-type: none"> No rights of way on or immediately adjacent to site, but bridleway passes close to eastern edge. Assessment required to determine what mitigation might be needed to protect bridleway – to be screened as may be required. Opportunities for improvements to public access to be considered. 	<ul style="list-style-type: none"> Restoration to include considering how it might be possible to improve public access in the area.

Preliminary Hydrological Risk Assessment

Controlled Waters	Issues/Risks	Mitigation	Further information or approval that may be required
<ul style="list-style-type: none"> • Watercourses • Ponds/lakes, including wet habitats • Groundwater 	<ul style="list-style-type: none"> • The Stour is the closest main river, some 2.5 km distant, and the River Basin Management Plan South West River Basin District identifies it being of 'Poor' environmental quality in this area. • The Chiswick Brook is approximately 250 m from the site. • There is potential for contamination from runoff from site along with potential for contamination of controlled waters through spillage or seepage of pollutants such as fuel, or silt in water. 	<ul style="list-style-type: none"> • Appropriate arrangements to be made for ensuring that runoff from the site does not enter the surface or groundwater drainage unless any silt has first been removed. • Fuel stored on site to be appropriately bunded and sealed to prevent any spillage from entering ground or surface waters. • On-going monitoring during development and working of the site. 	<ul style="list-style-type: none"> • Water Framework Assessment may be required. • Hydrological risk assessment to consider possible impacts of working this site and any required mitigation. • Further assessment of potential impacts on water quality and levels, particularly for groundwater, is required prior to development. • Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse. • Flood Risk Assessment

Cumulative Impacts

Site proposal is an extension to an existing site in an area where there is other mineral working - a building stone quarry approximately 1.5km to the north at Todber – but the amounts of traffic generated are relatively small. In terms of cumulative impacts for mineral working, rating of 'Less Significant Adverse Impact' is justified.

The proposal is within 5km of sites allocated in Sturminster Newton for residential development (380 dwellings in the town in total) in the Pre -Submission draft North Dorset Local Plan Nov 2013. Traffic arising from the new development will add to general traffic levels on the B3092.

Summary.

Potential Benefits	Potential Impacts
<ul style="list-style-type: none">• Provision of building stone.• Support for the local economy and provision of employment, through employment in quarrying and the construction industry.• Development of site is expected to provide economic benefits, both directly at the site and in the local area where the stone is expected to be used.• Use of the stone for heritage building works/repairs, and for new buildings.• Geodiversity benefits, through exposures created and fossils found.• Possibility of improved public access.	<ul style="list-style-type: none">• No ecological impacts expected.• Possible hydrological impacts, requiring further assessment, but no significant impacts expected.• Potential for archaeological impacts, and further assessment will be required. However, any identified impacts expected to be capable of mitigation.• Possible limited landscape impacts, but expected to be capable of satisfactory mitigation.• Site is agricultural land, which will be lost for a period of time. However, expected to be restored to current use, and is a relatively small area.• Limited climate change impacts would be expected, but site is small in scale and intensity of working is low.• Developing the site will have transport related impacts. However, the level of vehicle movements is low and the site will be worked as an extension, so there will be no intensification of working or cumulative impacts.• No expected issues regarding airfield proximity – no wet working or restoration.• There will be some impacts on the bridleway to the east, but it is expected that these can be mitigated.

Overall Recommendation:

The site is an extension of an existing quarry and no intensification or cumulative impacts would be expected. The proposal would assist in securing a supply of local stone and would provide a benefit to the local economy.

Assessment already carried out has flagged up archaeology, landscape, hydrology and access as issues requiring further assessment at planning application stage to identify satisfactory mitigation. Further assessment also required to identify if there are any additional impacts that will require mitigation.

Subject to the completion of all necessary assessments and providing that any impacts are capable of satisfactory mitigation, it appears reasonable on the basis of evidence available that the site nomination can reasonably be included in the Draft Bournemouth, Dorset and Poole Mineral Sites Plan.

Other Building Stone: BS04 Frogden Quarry, north-east of Sherborne

Site Name/Location: BS04 Frogden Quarry, north-east of Sherborne		Nominee/Agent: Sherborne Castle Estate	
Mineral Type: Limestone		Local Authority: North Dorset District Council	
Site Area: 3 ha	Production: 2500 tonnes building stone 1000 tonnes agricultural aggregate		Reserve: c. 100,000 tonnes

Impact Assessment Scoring

--	Strong Negative Impact	-	Minor Negative Impact	+	Minor Positive Impact	++	Strong Positive Impact	0	Negligible or No Effect	?	Uncertain
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Timescales for effects:

P/W: Preparation and Working

R/A: Restoration and Afteruse

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
1. To move waste management up the waste hierarchy and promote net self sufficiency	N/A	N/A	<ul style="list-style-type: none"> This Objective is not relevant to this site nomination 	<ul style="list-style-type: none"> N/A
2. To maintain, conserve and enhance biodiversity	0	0	European/International Designations <ul style="list-style-type: none"> No impacts expected 	<ul style="list-style-type: none"> No action required.
	0	0	Annex 1 Bird Species <ul style="list-style-type: none"> No impacts expected 	<ul style="list-style-type: none"> No action required.
	0	0	National Designations <ul style="list-style-type: none"> No impacts expected 	<ul style="list-style-type: none"> No action required.
	0	0	Protected species <ul style="list-style-type: none"> No impacts expected 	<ul style="list-style-type: none"> No action required.
	0	0	Local recognitions/designations, including ancient woodland and veteran trees <ul style="list-style-type: none"> No impacts expected 	<ul style="list-style-type: none"> No action required.
3. To maintain, conserve and enhance geodiversity.	++	+	<ul style="list-style-type: none"> There is a geological Site of Special Scientific Interest (SSSI) at ST648183. However, the proposed extension is south of this, with the current permitted quarry coming between the two. It is not expected that there will be any impact cause by the proposed extension. The inferior Oolite is the subject of on-going paleontological research. The nature of inferior 	<ul style="list-style-type: none"> Operator to facilitate access to the exposures where possible during working. Faces to be left exposed when working is finished, where

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			<p>Oolite stratigraphy, and of the paleontological interest, means that any opportunity to study fresh sites and exposures are potentially of great value.</p> <ul style="list-style-type: none"> Access must be provided to researchers and specifically a nominated Inferior Oolite expert (contact details available on request) with the assumption that important specimens will be retained for research purposes. At the point of restoration the retention of geological exposures may be desirable and this must be planned for. 	<p>possible.</p> <ul style="list-style-type: none"> Existing geological SSSI to be appropriately protected.
4. To maintain, conserve and enhance the quality of ground, surface and sea waters and manage the consumption of water in a sustainable way.	0	0	<p>Groundwater</p> <ul style="list-style-type: none"> Site is on a Principal Aquifer and is not within any Source Protection Zone area. Not known whether there are any licensed extraction facilities in the vicinity. Environment Agency advise a Hydrogeological Risk Assessment will be required. 	<ul style="list-style-type: none"> Hydrological assessment required to determine possible impacts, on ground and surface waters, with appropriate mitigation to be implemented. Appropriate arrangements should be put in place to ensure that the water leaving the site and entering the watercourses or groundwater is of an acceptable quality. Any fuel on site should be properly stored to avoid contamination in case of spillage. Appropriate arrangements should be installed for surface water and silt collection and fuel storage to prevent contamination of groundwater resources. Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.
	0	0	<p>Surface Water</p> <ul style="list-style-type: none"> There is a watercourse approximately 430m from the site. Assessment required to determine possible impacts on hydrogeology. Impacts to be appropriately mitigated 	
5. To reduce flood risk and improve flood management.	0	0	<p>Flooding/Coastal Stability</p> <ul style="list-style-type: none"> Entire site is within Flood Risk Zone 1, no expected risk of flooding or contributing to flooding. 	<ul style="list-style-type: none"> Flood Risk Assessment (FRA) will be required. Any necessary mitigation to be implemented.
6. To maintain, conserve and enhance the historic environment (including archaeological sites, historic buildings, conservation	0	0	<p>Archaeology</p> <ul style="list-style-type: none"> There are no indications of likely archaeological impacts, and the proposal could be rated 'No Significant or Negligible Adverse Impacts'. 	<ul style="list-style-type: none"> Survey/assessment of the area to be carried out as part of planning application, to further investigate possible archaeological and historic landscape impacts. Any necessary mitigation to be identified and implemented prior to

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
areas, historic parks and gardens and other locally distinctive features and their settings).	0	0	Historic Landscapes <ul style="list-style-type: none"> There are no indications that the location has any particular historic significance, although it might form part of the view from locations such as Sherborne New Castle and its grounds. 	<ul style="list-style-type: none"> working. Further consideration to be given to restoration proposals, in terms of historic landscapes.
	0	0	Historic Buildings <ul style="list-style-type: none"> The nearest listed buildings are within a settlement and the current quarry lies between them and the proposed extension. There are other listed buildings some 500 m to the south east. It is not expected that the proposed extension will have unacceptable impacts on the listed buildings. 	<ul style="list-style-type: none"> Further assessment of potential impacts required, with any necessary mitigation to be identified and implemented prior to working.
7. To maintain, conserve and enhance the landscape, including townscape, seascape and the coast.	?	0	Landscape Capacity <ul style="list-style-type: none"> The potential exists that there could be an impact on the amenity of users of the adjacent footpaths but apart from that the landscape and visual impacts will be limited. It is recommended that the scale of development is minimised where possible and that extraction takes the form of short campaigns and progressive restoration. Stockpiles and other infrastructure must not be placed on skyline which must be protected. 	<ul style="list-style-type: none"> Full assessment of potential visual impacts will be required at planning application stage. All appropriate mitigation to be identified and implemented. Appropriate restoration proposals in line with Landscape Management Guidelines referred to in Minerals Strategy.
	0	0	Designated Landscapes <ul style="list-style-type: none"> Less significant adverse impact. 	<ul style="list-style-type: none"> No action required.
8. To protect and improve air quality and reduce the impacts of noise.	0	0	<ul style="list-style-type: none"> Impacts on air quality expected to be negligible. No AQMAs will be affected by the working of this site proposal. Any dust resulting from working will be controlled through normal dust-suppression measures. Any impacts due to noise resulting from mineral working would be expected to be satisfactorily minimised through normal noise mitigation measures, imposed at the planning application stage. 	<ul style="list-style-type: none"> Environmental protection measures to be put in place to reduce dust and noise impacts.
9. To maintain,	—	0	<ul style="list-style-type: none"> Soil appears to be good to moderate quality 	<ul style="list-style-type: none"> Soil to be properly

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
conserve and enhance soil quality.			<p>agricultural land.</p> <ul style="list-style-type: none"> Soils will be protected during working and restoration could bring the land back into agricultural production. 	<p>stripped and stored prior to working; protected during working; and re-spread on site after working.</p>
10. To conserve and safeguard mineral resources.	+	0	<ul style="list-style-type: none"> The site would make an important contribution to the supply of building stone. 	<ul style="list-style-type: none"> No specific action required Site development to take into consideration relevant impacts and mitigate where appropriate.
11. To promote the use of alternative materials.	-	0	<ul style="list-style-type: none"> This proposal does not promote the use of alternative materials. 	<ul style="list-style-type: none"> No action required.
12. To provide an adequate and affordable supply of minerals to meet society's needs.	+	0	<ul style="list-style-type: none"> Development of this site would provide a benefit in terms of contributing to the provision of a supply of minerals to meet society's needs. Ensuring a sustainable supply will depend on the development and management of the site. Providing site development takes into account relevant principles of sustainable development it is expected this will contribute to complying with this objective. 	<ul style="list-style-type: none"> Ensure principles of sustainable development are incorporated into the development of this site.
13. To promote and encourage sustainable economic growth	+	0	<ul style="list-style-type: none"> This site proposal is expected to contribute to economic development on two levels – directly through the provision of employment at the proposed extension and indirectly through the provision of building stone required for new build, repairs and maintenance, decorative and landscaping work. Both levels are expected to maintain employment, skilled and unskilled. Restoration to agriculture will offer some further economic benefits. Further benefits may be available if improved public access can be achieved, through the recreational attraction and use in the wider area (i.e. riding, walking). 	<ul style="list-style-type: none"> Seek further benefits, such as improved public access, where appropriate.
14. To adapt to and mitigate the impacts of climate change.	-	0	<ul style="list-style-type: none"> Developing land as a quarry is expected to have some negative impacts regarding climate change, due primarily to machinery used and transportation of mineral away from site. However, given the size of the proposed quarry these will in relative terms be negligible. The Bournemouth, Dorset and Poole Minerals Strategy seeks to address and minimise such impacts through Policy CC1 which requires operators to take into consideration climate change impacts and their possible mitigation for any proposed minerals development. The development management policies, e.g. DM 	<ul style="list-style-type: none"> Use energy efficient plant and machinery. Implement restoration which provides appropriate habitats to help to increase resilience of flora/fauna.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			1, also address and seek to minimise the issue of sustainable development and climate change.	
15. To minimise the negative impacts of waste and minerals transport on the transport network, mitigating any residual impacts.	0	0	<ul style="list-style-type: none"> Access will be gained via the existing route along Brick Kiln Lane onto Castle Town Way. From here vehicles can access the strategic network a short distance to the south on the A30. Due to the very low extraction rates, which are not expected to increase above current levels, and the proximity to the strategic network, the site has been given a 'No Significant or Negligible Adverse Impacts' rating. Policies DM1 and DM 8 of the Minerals Strategy actively address this issue of minimising impacts on the transportation network. 	<ul style="list-style-type: none"> Any proposal for this site would need to be accompanied by a Transport Assessment which will need to provide access details and consider vehicle routing. TA to be scoped with the Transport Development Management Team. The Transport Assessment should identify opportunities for reducing impacts on the transport network.
16. To support and encourage the use of sustainable transport modes, imposing no unmitigated negative impacts on them.	-	0	<ul style="list-style-type: none"> The proposed extension can only realistically be accessed by means of road transport, resulting in a negative impact under this Objective during development and working. As far as reasonably possible negative impacts resulting from access and transport will be mitigated, as required by Policies DM1 and DM8 of the Minerals Strategy. 	<ul style="list-style-type: none"> Mitigate impacts where identified and appropriate.
17. To sustain the health and quality of life of the population	?	0	<p>Impact on Sensitive Human Receptors</p> <ul style="list-style-type: none"> Closest properties are approximately 430m, to edge of Sherborne. The Gryphon School is also approximately 430m at edge of Sherborne. Blackmarsh Farm to south east is approximately 500+m and Osborne to north/east is approximately 600m. Rising ground screens views of the existing site. Further assessment will be required to accurately assess potential impacts from the proposed extension and can be undertaken at the appropriate stage. Site will be screened as required. Site may be worked on a campaign basis, to limit impacts. 	<ul style="list-style-type: none"> Provision of appropriate mitigation, following assessment of likely impacts. Restoration to improve landscape of site where possible; and to seek to increase public access. Transport Assessment to be carried out, identifying opportunities for reducing impacts on the transport network where appropriate.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	?	0	Impact on Existing Settlements <ul style="list-style-type: none"> Sherborne is closest settlement, within 500m. Although impacts are expected to be minimal, further assessment will be carried out as required. Site traffic will be required to use Castle Town Way and could have an impact on Sherborne but amount of traffic expected to be low. Site will be screened as required. Site may be worked on a campaign basis, to limit impacts. As an extension, there would be no intensification. 	
	0	0	Impact on Airport Safety <ul style="list-style-type: none"> Site is approximately 33 km from Bournemouth airport, and approximately 10 km from Yeovilton with no wet working or restoration. No impacts expected. 	
18. To enable safe access to countryside and open spaces.	0	0	Impact on Recreational Land <ul style="list-style-type: none"> Site is agricultural land/former quarry and does not appear to be used for recreational purposes. Restoration could seek to improve public access. 	<ul style="list-style-type: none"> Assessment of impacts, particularly on bridleway, with appropriate mitigation identified. Restoration to include consideration of opportunities to improve public access in the area.
	?	0	Impact on Public Rights of Way <ul style="list-style-type: none"> No rights of way cross the site. A bridleway (N7/17) touches the south western corner. Restoration could seek to improve access, to/from this route. 	

Preliminary Hydrological Risk Assessment

Controlled Waters	Issues/Risks	Mitigation	Further information or approval that may be required
<ul style="list-style-type: none"> • Watercourses • Ponds/lakes, including wet habitats • Groundwater 	<ul style="list-style-type: none"> • The River Yeo is the closest Main River. Other watercourses approximately 470m distant, that site would drain into. • The River Basin Management Plan South West River Basin District identifies the Yeo as being of 'Poor' environmental quality in this area. • There is potential for contamination from runoff from site and for contamination of controlled waters through spillage or seepage of pollutants such as fuel, or silt in water. • Contamination of water supplies or reduction in amount of water available for licenses supplies. • Impacts on or removal of surface water features. 	<ul style="list-style-type: none"> • Appropriate arrangements to be made for ensuring that runoff from the site does not enter surface waters or groundwater unless any silt has first been removed. • Fuel stored on site to be appropriately bunded and sealed to prevent any spillage from entering ground or surface waters. • On-going monitoring during development and working of the site. • Relocation of surface water features, provided this is feasible. 	<ul style="list-style-type: none"> • Hydrogeological risk assessment may be required at planning application stage. • Flood Risk Assessment • Water Framework Assessment • Further assessment of potential impacts on water quality and levels, particularly for groundwater, is required prior to development. • Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.

Cumulative Impacts

Proposal is for an extension to an existing site and no intensification is expected. There is limited additional mineral working proposed or existing in vicinity of site. Cumulative impacts directly caused by this proposed extension are expected to be minimal.

The proposal is within 5Km of sites allocated for mixed residential (279 dwellings) and employment development at Barton Farm, Sherborne (Policy SHER1) and for employment development (2.2Ha) at Sherborne Hotel, Sherborne, as set out in Policy SHER3 in the Pre -Submission draft West Dorset, Weymouth and Portland Local Plan (June 2012) as amended by Proposed Modifications (June 2013).

Traffic arising from the new development will also add to general traffic levels on the A 30. (NB The Barton Farm site does now have planning permission but is retained as an allocation in the Plan.)

Summary.

Potential Benefits	Potential Impacts
<ul style="list-style-type: none">• Exposure of geological faces, during and possibly after working, expected to provide significant geodiversity benefits.• Development of site is expected to provide economic benefits, both directly at the site and in the local area where the stone is primarily expected to be used.• Development of the site secures a source of building stone, primarily for the benefit of the local area/economy.• By-products are crushed to be used on the Estate, providing a limited source of alternative materials.• Restoration could offer limited improvements to public access.	<ul style="list-style-type: none">• No ecological impacts expected.• Hydrological investigation will be required at planning application stage, but no significant impacts expected. No flooding risk.• Possibly limited potential for archaeological impacts, but further assessment will be required. Any identified impacts would be expected to be capable of mitigation.• Listed building impacts not expected, but assessment will determine what mitigation if any may be required.• Possible limited landscape impacts, but expected to be capable of satisfactory mitigation. Method of site working will contribute to limiting impacts• Site is agricultural land, which will be lost for a period of time. However, expected to be restored to current use, and is a relatively small area.• Limited climate change impacts would be expected, but site is small in scale and intensity of working is low.• Developing the site will have limited transport related impacts, through extending the time the site is worked. However, the level of vehicle movements is low and the site will be worked as an extension, so there will be no intensification of working or cumulative impacts.• Impacts on sensitive human receptors and local settlements are expected to be limited, but will be assessed – expected to be capable of mitigation.• No expected issues regarding airfield proximity – no wet working or restoration.• There will be some impacts on the adjacent bridleway to the east, but it is expected that these can be satisfactorily mitigated.

Overall Recommendation:

The site is an extension of an existing quarry and no intensification or cumulative impacts would be expected. The proposal would assist in securing a supply of local stone and would provide a benefit to the local economy.

Assessment already carried out has flagged up archaeology, landscape, hydrology and amenity as issues requiring further assessment at planning application stage to identify satisfactory mitigation. Further assessment also required to identify if there are any additional impacts that will require mitigation.

Subject to the completion of all necessary assessments and providing that any impacts are capable of satisfactory mitigation, it appears reasonable on the basis of evidence available that the site nomination can reasonably be included in the Draft Bournemouth, Dorset and Poole Mineral Sites Plan.

Other Building Stone: BS05 Whithill Quarry

Site Name/Location: BS05 Whithill Quarry On D20518 approximately 1.5 km south-west of junction with A352		Nominee/Agent: Sherborne Castle Estates Land and Mineral Management Ltd	
Mineral Type: Forest Marble (Limestone)		Local Authority: West Dorset District Council	
Site Area: c. 6.25 ha	Production (annual): 1000 tonnes building stone 500 tonnes agricultural aggregate		Reserve: Not known.

Impact Assessment Scoring

--	Strong Negative Impact	-	Minor Negative Impact	+	Minor Positive Impact	++	Strong Positive Impact	0	Negligible or No Effect	?	Uncertain
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Timescales for effects:

P/W: Preparation and Working

R/A: Restoration and Afteruse

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
1. To move waste management up the waste hierarchy and promote net self sufficiency	N/A	N/A	<ul style="list-style-type: none"> This Objective is not relevant to this site nomination 	<ul style="list-style-type: none"> N/A
2. To maintain, conserve and enhance biodiversity	0	0	European/International Designations <ul style="list-style-type: none"> No impacts expected 	<ul style="list-style-type: none"> No action required.
	0	0	Annex 1 Bird Species <ul style="list-style-type: none"> No impacts expected 	<ul style="list-style-type: none"> No action required.
	0	0	National Designations <ul style="list-style-type: none"> No impacts expected 	<ul style="list-style-type: none"> No action required.
	0	0	Protected species <ul style="list-style-type: none"> No impacts expected 	<ul style="list-style-type: none"> No action required.
	0	0	Local recognitions/designations, including ancient woodland and veteran trees <ul style="list-style-type: none"> No impacts expected 	<ul style="list-style-type: none"> No action required.
3. To maintain, conserve and enhance geodiversity.	+	+	<ul style="list-style-type: none"> The Forest Marble Formation was traditionally quarried extensively in Dorset. There are several old workings that have been designated as Local Geological Sites and new and fresh exposures retain a level of interest for study and potential retention of better exposures. It is recommended that if development proceeds 	<ul style="list-style-type: none"> Operator to be asked to permit visits/access to view exposures where possible during working. Opportunities to leave faces exposed when

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			the applicants be requested to allow access to geologists. Leaving exposed faces after working is completed can also be investigated.	working is finished to be considered.
4. To maintain, conserve and enhance the quality of ground, surface and sea waters and manage the consumption of water in a sustainable way.	0	0	Groundwater <ul style="list-style-type: none"> Site is on a Secondary Aquifer and is not within any Source Protection Zone area. Not known whether there are any licensed extraction facilities in the vicinity. Environment Agency advise a Hydrogeological Risk Assessment will be required. Environment Agency had no objection to proposed extension of current quarry, provided depth of extraction was controlled 	<ul style="list-style-type: none"> Hydrological assessment required to determine possible impacts, on ground and surface waters, with appropriate mitigation to be implemented. Appropriate arrangements should be put in place to ensure that the water leaving the site and entering the watercourses or groundwater is of an acceptable quality. Any fuel on site should be properly stored to avoid contamination in case of spillage. Appropriate arrangements should be installed for surface water and silt collection and fuel storage to prevent contamination of groundwater resources. Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.
	?	0	Surface Water <ul style="list-style-type: none"> Watercourse within 50m from the site and assessment required to consider possible impacts on this stream. This site lies uphill and immediately across the road from springs feeding tributaries of the River Wriggle. It should be confirmed whether the proposed allocation would affect the headwaters in terms of quality or quantity. Assessment required to determine possible impacts on hydrogeology. Impacts to be appropriately mitigated 	
5. To reduce flood risk and improve flood management.	0	0	Flooding/Coastal Stability <ul style="list-style-type: none"> Entire site is within Flood Risk Zone 1, no expected risk of flooding or contributing to flooding. 	<ul style="list-style-type: none"> Flood Risk Assessment (FRA) will be required. Any necessary mitigation to be implemented.
6. To maintain, conserve and enhance the historic environment (including archaeological sites, historic buildings, conservation areas, historic parks and	0	0	Archaeology <ul style="list-style-type: none"> Human burials were found in the adjacent existing quarry a few years ago, and were recorded by Bournemouth Archaeology. Bournemouth Archaeology have undertaken a further archaeological evaluation of this site in support of the recent planning application. Their view is that putting in place an archaeological watching brief for future development of the site would be adequate to mitigate damage to known and potential 	<ul style="list-style-type: none"> Further survey/assessment of the area likely to be required for further development, and subsequent development to include archaeological watching brief, to mitigation archaeological

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
gardens and other locally distinctive features and their settings).			deposits.	<p>impacts.</p> <ul style="list-style-type: none"> Any other necessary mitigation to be identified and implemented prior to working. Further consideration to be given to restoration proposals, in terms of historic landscapes.
	0	0	<p>Historic Landscapes</p> <ul style="list-style-type: none"> The site is on the north-eastern end of Lillington Hill, which is also known at Knighton Hill at the opposite end by Knighton village, on the western side of the Blackmore Vale. Seemingly much of the Vale remained wooded until the Middle Ages, and so the field system on and around the site may well be Medieval in origin. The Mineral Planning Authority is not aware of anything particularly significant about these fields, resulting in a 'Less Significant Adverse Impact'. 	
	0	0	<p>Historic Buildings</p> <ul style="list-style-type: none"> Listed buildings are too far away to be affected. No significant impacts expected. 	<ul style="list-style-type: none"> No action required.
7. To maintain, conserve and enhance the landscape, including townscape, seascape and the coast.	_/?	0	<p>Landscape Capacity</p> <ul style="list-style-type: none"> The proposed development may be open to expansive views in this rural landscape so mitigation measures will be critical to its integration. It is recommended that the scale of development is minimised where possible through measures such as small scale campaigns with progressive restoration. 	<ul style="list-style-type: none"> Full assessment of potential visual impacts will be required at planning application stage. All appropriate mitigation to be identified and implemented. Appropriate restoration proposals in line with Landscape Management Guidelines referred to in Minerals Strategy.
	0	0	<p>Designated Landscapes</p> <ul style="list-style-type: none"> No significant impact/negligible. 	
8. To protect and improve air quality and reduce the impacts of noise.	0	0	<ul style="list-style-type: none"> Impacts on air quality expected to be negligible. No AQMAs will be affected by the working of this site proposal. Any dust resulting from working will be controlled through normal dust-suppression measures. Any impacts due to noise resulting from mineral working would be expected to be satisfactorily minimised through normal noise mitigation measures, imposed at the planning application 	<ul style="list-style-type: none"> Environmental protection measures to be put in place to reduce dust and noise impacts.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			stage.	
9. To maintain, conserve and enhance soil quality.	-	0	<ul style="list-style-type: none"> Soil appears to be good to moderate quality agricultural land. Soils will be protected during working and restoration could bring the land back into agricultural production. 	<ul style="list-style-type: none"> Soil to be properly stripped and stored prior to working; protected during working; and re-spread on site after working.
10. To conserve and safeguard mineral resources.	+	0	<ul style="list-style-type: none"> The site would make an important contribution to the supply of building stone. 	<ul style="list-style-type: none"> No specific action required Site development to take into consideration relevant impacts and mitigate where appropriate.
11. To promote the use of alternative materials.	-	0	<ul style="list-style-type: none"> This proposal does not promote the use of alternative materials. 	<ul style="list-style-type: none"> No action required.
12. To provide an adequate and affordable supply of minerals to meet society's needs.	+	0	<ul style="list-style-type: none"> Development of this site would provide a benefit in terms of contributing to the provision of a supply of minerals to meet society's needs. Ensuring a sustainable supply will depend on the development and management of the site. Providing site development takes into account relevant principles of sustainable development it is expected this will contribute to complying with this objective. 	<ul style="list-style-type: none"> Ensure principles of sustainable development are incorporated into the development of this site.
13. To promote and encourage sustainable economic growth	+	0	<ul style="list-style-type: none"> This site proposal is expected to contribute to economic development on two levels – directly through the provision of employment at the proposed extension and indirectly through the provision of building stone required for new build, repairs and maintenance, decorative and landscaping work. Both levels are expected to maintain employment, skilled and unskilled. Restoration to agriculture will offer some further economic benefits. Further benefits may be available if improved public access can be achieved, to benefit the recreational attraction and use of the wider area (i.e. riding, walking). 	<ul style="list-style-type: none"> Seek further benefits, such as improved public access, where appropriate.
14. To adapt to and mitigate the impacts of climate change.	-	0	<ul style="list-style-type: none"> Developing land as a quarry is expected to have some negative impacts regarding climate change, due primarily to machinery used and transportation of mineral away from site. However, given the size of the proposed quarry these will in relative terms be negligible. The Bournemouth, Dorset and Poole Minerals Strategy seeks to address and minimise such impacts through Policy CC1 which requires operators to take into consideration climate change impacts and their possible mitigation for 	<ul style="list-style-type: none"> Use energy efficient plant and machinery. Implement restoration which provides appropriate habitats to help to increase resilience of flora/fauna.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			<p>any proposed minerals development.</p> <ul style="list-style-type: none"> The development management policies, e.g. DM 1, also address and seek to minimise the issue of sustainable development and climate change. 	
15. To minimise the negative impacts of waste and minerals transport on the transport network, mitigating any residual impacts.	—	0	<ul style="list-style-type: none"> Entry will be via the existing adequate access onto the local rural network. Access to the strategic network at the A352 is approximately 1.5km north of the site access. Trip generation will be low and no greater than that currently permitted at the site. Due to the low traffic generation, the close proximity of the strategic network, and the lack of impact on local settlements between the site and the strategic network, this site is considered to cause 'No Significant or Negligible Adverse Impacts'. Policies DM1 and DM 8 of the Minerals Strategy actively address this issue of minimising impacts on the transportation network. 	<ul style="list-style-type: none"> Any proposal for this site would need to be accompanied by a Transport Assessment which will need to provide access details and consider vehicle routing. TA to be scoped with the Transport Development Management Team. The TA should identify opportunities for reducing impacts on the transport network.
16. To support and encourage the use of sustainable transport modes, imposing no unmitigated negative impacts on them.	—	0	<ul style="list-style-type: none"> The proposed extension can only realistically be accessed by means of road transport, resulting in a negative impact under this Objective during development and working. As far as reasonably possible negative impacts resulting from access and transport will be mitigated, as required by Policies DM1 and DM8 of the Minerals Strategy. 	<ul style="list-style-type: none"> Mitigate impacts where identified and appropriate.
17. To sustain the health and quality of life of the population	?	0	<p>Impact on Sensitive Human Receptors</p> <ul style="list-style-type: none"> Residential properties within 500m. School approximately 1km away, to south/east. Site is screened by hedges and by the topography. Traffic levels expected to be as at present. Site will be screened as required and worked on a campaign basis to limit impacts. Further assessment likely to be required to accurately assess potential impacts from the proposed extension and can be undertaken at the appropriate stage. 	<ul style="list-style-type: none"> Provision of appropriate mitigation, following assessment of likely impacts. Restoration to improve landscape of site where possible; and to seek to increase public access. Transport Assessment to be carried out, identifying opportunities

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	?	0	Impact on Existing Settlements <ul style="list-style-type: none"> Lillington approximately 500m to south, Longburton approximately 1.5 km south east, Thornford approximately 2km to south west. No visible impacts. Longburton likely to get traffic impacts, if mineral is taken to A352 for distribution. Traffic levels expected to be as at present. Site will be screened as required. Site likely to be worked on a campaign basis, to limit impacts. As an extension, there would be no intensification. 	for reducing impacts on the transport network where appropriate.
	0	0	Impact on Airport Safety <ul style="list-style-type: none"> Site is approximately 33 km from Bournemouth airport, and 11 km from Yeovilton with no wet working or restoration. No impacts expected. 	<ul style="list-style-type: none"> No action required.
18. To enable safe access to countryside and open spaces.	0	0	Impact on Recreational Land <ul style="list-style-type: none"> Site is agricultural land/former quarry and does not appear to be used for recreational purposes. Restoration could seek to improve public access. 	<ul style="list-style-type: none"> Assessment of impacts, with appropriate mitigation identified. Restoration to include considering how it might be possible to improve public access in the area.
	0	?	Impact on Public Rights of Way <ul style="list-style-type: none"> No rights of way cross the site. Restoration could seek to improve access in the area. 	

Preliminary Hydrological Risk Assessment

Controlled Waters	Issues/Risks	Mitigation	Further information or approval that may be required
<ul style="list-style-type: none"> • Watercourses • Ponds/lakes, including wet habitats • Groundwater 	<ul style="list-style-type: none"> • This site lies uphill and immediately across the road from springs feeding tributaries of the Wriggle River, the closest Main River. It should be confirmed whether the proposed allocation would affect the headwaters in terms of quality or quantity. • The Wriggle joins the Yeo, and the River Basin Management Plan South West River Basin District identifies the Yeo as being of 'Poor' environmental quality in this area. The Wriggle is 'Bad'. • There is potential for contamination from runoff from site and for contamination of controlled waters through spillage or seepage of pollutants such as fuel, or silt in water. • Contamination of water supplies or reduction in amount of water available for licenses supplies. • Impacts on or removal of surface water features. 	<ul style="list-style-type: none"> • Appropriate arrangements to be made for ensuring that runoff from the site does not enter surface waters or groundwater unless any silt has first been removed. • Fuel stored on site to be appropriately bunded and sealed to prevent any spillage from entering ground or surface waters. • On-going monitoring during development and working of the site. 	<ul style="list-style-type: none"> • Hydrogeological risk assessment may be required at planning application stage. • Flood Risk Assessment • Water Framework Assessment • Further assessment of potential impacts on water quality and levels, particularly for groundwater, is required prior to development. • Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.

Cumulative Impacts

Proposed site is an extension to existing site. There is another existing and proposed site, just over 5km away. Both sites would have relatively low traffic levels, impacts expected to be low.

Both are proposed extensions and therefore no intensification of traffic levels is expected.

The proposal is within 5Km of land allocated for major residential (279 dwellings) and associated development at Barton Farm, Sherborne (Policy SHER1) and for employment development (2.2Ha) at Sherborne Hotel, Sherborne (Policy SHER3) in the Pre -Submission draft West Dorset, Weymouth and Portland Local Plan (June 2012) as amended by Proposed Modifications (June 2013). Traffic arising from the new development will add to general traffic levels on the A30 and through the town. (NB The Barton Farm site does now have planning permission but is retained as an allocation in the Plan.)

Summary.

Potential Benefits	Potential Impacts
<ul style="list-style-type: none">• Exposure of geological faces, during and possibly after working, could provide geodiversity benefits.• Development of site is expected to provide economic benefits, both directly at the site and in the local area where the stone is primarily expected to be used.• Development of the site secures a source of building stone, primarily for the benefit of the local area/economy.• By-products are crushed to be used on the Estate, providing a limited source of alternative materials.• Restoration could offer limited improvements to public access.	<ul style="list-style-type: none">• No ecological impacts expected.• Hydrological investigation may be required at planning application stage, but no significant impacts expected. No flooding risk.• Potential for archaeological impacts, further assessment will be required. Use of an archaeological watching brief will be expected to mitigate impacts.• No listed building or significant historic landscape impacts expected.• Possible limited landscape impacts, but expected to be capable of satisfactory mitigation. Method of site working will contribute to limiting impacts• Site is agricultural land, which will be lost for a period of time. However, expected to be restored to current use, and is a relatively small area.• Limited climate change impacts would be expected, but site is small in scale and intensity of working is low.• Developing the site will have limited transport related impacts, through extending the time the site is worked. However, the level of vehicle movements is low and the site will be worked as an extension, so there will be no intensification of working or cumulative impacts.• Impacts on sensitive human receptors and local settlements are expected to be limited, but will be assessed – expected to be capable of mitigation.• No expected issues regarding airfield proximity – no wet working or restoration.• No impacts on public access – restoration may offer opportunity to improve access.

Overall Recommendation:

The site is an extension of an existing quarry and no intensification or cumulative impacts would be expected. The proposal would assist in securing a supply of local stone and would provide a benefit to the local economy.

Assessment already carried out has flagged up archaeology (need for a watching brief at development), hydrology, landscape capacity and local amenity as issues requiring further assessment at planning application stage to identify satisfactory mitigation. Further assessment also required to identify if there are any additional impacts that will require mitigation.

Subject to the completion of all necessary assessments and providing that any impacts are capable of satisfactory mitigation, it appears reasonable on the basis of evidence available that the site nomination can reasonably be included in the Draft Bournemouth, Dorset and Poole Mineral Sites Plan.

Appendix B: Individual Site Assessments - Sites Not Being Taken Forward

Aggregates: AS10 Moreton Plantation

Site Name/Location: AS10 Moreton Plantation		Nominee/Agent: Aggregate Industries	
Mineral Type: Sand/Gravel		Local Authority: Purbeck District Council	
Site Area: approximately 194 ha	Production: 500,000 tpa;	Reserve: approximately 6-7 mt	

Impact Assessment Scoring

--	Strong Negative Impact	-	Minor Negative Impact	+	Minor Positive Impact	++	Strong Positive Impact	0	Negligible or No Effect	?	Uncertain
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Timescales for effects:

P/W: Preparation and Working

R/A: Restoration and Afteruse

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
1. To move waste management up the waste hierarchy	N/A	N/A	<ul style="list-style-type: none"> This Objective is not relevant to this site nomination. 	<ul style="list-style-type: none"> N/A
2. To maintain, conserve and enhance biodiversity	--	?	<p>European/International Designations</p> <ul style="list-style-type: none"> Proposed area supports Annex 1 birds which may be functionally linked to Dorset Heathlands SPA and area is well used as recreation site contributing to the network of areas which help to reduce human recreational pressure on designated heathlands. There are possible hydrological effects of working the area for mineral on the European wet heaths to the south. Working this area could lead to significant risk of adverse effects on European sites. At the moment the area includes significant parts of the Dorset Heaths SAC, Dorset Heathlands SPA and Dorset Heathlands Ramsar; these areas must be removed from the possible allocation to have any chance of being taken forward otherwise a conclusion of adverse effects on integrity of the sites is inevitable. Restoration to heathland/forestry with open access has the potential to restore these benefits. 	<ul style="list-style-type: none"> Ecological surveys and hydrological reports required, with appropriate mitigation. Heathland restoration and public access to be created. Nature conservation designations to be removed from proposed development area, with appropriate boundary established.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	-	+	<p>Annex 1 Bird Species</p> <ul style="list-style-type: none"> Area supports Annex 1 birds as part of the existing forestry crop rotation. Clearance of trees would result in heathland regeneration and the open habitat would rapidly become suitable for more Annex 1 birds. The site has the potential to be included in a revision to the heathland SPA boundary. Risk based approach essential here. 	<ul style="list-style-type: none"> Ecological surveys and hydrological reports required, with appropriate mitigation. Heathland restoration and public access to be created. Nature conservation designations to be removed from proposed development area, with appropriate boundary established.
	-	+	<p>National Designations</p> <ul style="list-style-type: none"> In addition to comments made above, the area is likely to support rich invertebrate assemblage in existing rides contributing to maintenance of species within SSSI. At the moment the area includes parts of the Turnerspuddle Heaths SSSI; these areas must be removed from the possible allocation to have any chance of being taken forward as there is no case for directly damaging a nationally important site to extract sand and gravel. Restoration should include appropriate habitats to support invertebrates. 	<ul style="list-style-type: none"> Ecological surveys required, with appropriate mitigation. Restoration to include creation of invertebrate habitat. Areas of designation to be removed from working area, with appropriate boundary established.
	-	?	<p>Protected species</p> <ul style="list-style-type: none"> Existing rides support significant populations of European protected species, Sand Lizard and Smooth Snake, and common protected reptiles. Depending on population sizes it may be difficult to mitigate fully for effects on EPS and there is a risk that disturbance licences could be refused by NE. Within the proposed area is a population of the fully protected Ladybird Spider; it is extremely unlikely that permission could ever be granted that would be shown to effect the population of this great rarity. Depending on population sizes it may be difficult to mitigate fully for effects on these species and there is a risk that disturbance licences could be refused by NE. 	<ul style="list-style-type: none"> Ecological surveys required, with appropriate mitigation identified. Restoration to include appropriate habitats for these species. Further investigation into likelihood of grant of disturbance licences. Ladybird Spider and its habitat not to be affected by any development.
	0	0	<p>Local recognitions/designations, including ancient woodland and veteran trees</p> <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
3. To maintain, conserve and enhance geodiversity.	+	0	<ul style="list-style-type: none"> Exposures resulting from working may be of interest. Benefits are only expected during working, and are likely to be obscured or covered as part of restoration. 	<ul style="list-style-type: none"> Operator to be asked to permit visits to view exposures as required.
4. To maintain, conserve and enhance the quality of ground, surface and sea waters and manage the consumption of water in a sustainable way.	---	?	<p>Groundwater</p> <ul style="list-style-type: none"> Potential to impact on wet habitats in Turners Puddle Heath Site of Special Scientific Interest. No impact on Source Protection Zones. Overlies secondary aquifers. EA concern over possible impacts of extraction on groundwater flow patterns within the site and down towards the Frome. 	<ul style="list-style-type: none"> Hydrological assessment required to determine possible impacts, on ground and surface waters, with appropriate mitigation to be implemented. Appropriate arrangements should be put in place to ensure that the water leaving the site and entering the rivers/watercourses is of an acceptable quality. Any fuel on site should be properly stored to avoid contamination in case of spillage. Appropriate arrangements should be installed for surface water and silt collection and fuel storage to prevent contamination of groundwater resources. Land Drainage Consent to be obtained from Dorset County Council is works may affect flow of an ordinary watercourse.
	---	?	<p>Surface Water</p> <ul style="list-style-type: none"> There are ditches/drainage/watercourses within and around the site boundary which would be impacted by development of the site. EA concern over impacts of extraction on surface water flow through the site and down towards the Frome. 	
5. To reduce flood risk and improve flood management.	0	0	<p>Flooding/Coastal Stability</p> <ul style="list-style-type: none"> Majority of site in FRZ 1, plant proposed to be located on high ground, approximately 1 km from FRZ 2/3. Working is not considered to constitute, or exacerbate an existing, a flood risk. Negligible/No impact, during working and restoration. 	<ul style="list-style-type: none"> Flood Risk Assessment (FRA) will be required.
6. To maintain, conserve and enhance the historic environment (including archaeological sites, historic buildings, conservation areas, historic parks and gardens)	-	+	<p>Archaeology</p> <ul style="list-style-type: none"> A Scheduled Monument consisting of two bowl barrows on Cloud's Hill (SM33172) is situated on the north-eastern boundary of the proposed site. The setting of the monument comprises the low hill/natural mound on which the barrows are situated and the surrounding lowland area which they overlook. This area would have been heathland for much of the life of the barrow. Part of this area has already been returned to heathland and is not proposed for extraction, thereby protecting this element. The eastern area proposed for extraction lies south of this. It is my view that in order to visually protect 	<ul style="list-style-type: none"> Archaeological survey to assess Monuments and establish their settings and how these can best be protected during working, as well as to assess possible presence and significance of non-designated remains. Adequate provision to be made for preservation, excavation or

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
and other locally distinctive features and their settings).			<p>the setting in its entirety this extraction area should be pulled back so as not to cross over the existing track. Overall the potential impact on the setting of the monument would be temporary, for a period of approximately one year. During this time there would be extraction activity and lorry movements south of the Scheduled Monument.</p> <ul style="list-style-type: none"> The eastern block is proposed to be restored to heathland at a slightly lower level than existing ground levels. The permanent removal of conifers would therefore have a positive impact on the setting of Cloud's Hill. Positive management of the scheduled barrows could be part of the mitigation for the development. Archaeological potential for the remainder of the site is likely to be low since people would have used the heaths for grazing whilst living elsewhere. 	<p>recording, as appropriate.</p> <ul style="list-style-type: none"> Settings of the Monuments to be established prior to working and not to be compromised during working. If the boundary for the eastern area is pulled back as suggested, the impacts of the development would be reduced. Otherwise, the proposal would be considered to have a significant adverse impact.
	–	+	<p>Historic Landscapes</p> <ul style="list-style-type: none"> The heathland of the site forms a major element of the setting of the scheduled barrows as discussed above. Unsympathetic extraction and quarrying could have a significant negative impact on the setting of these barrows, but there is the potential for an improvement in that setting through pulling back the quarry boundary and restoration to heathland. Archaeological assessment and evaluation will be required. When these have been undertaken archaeological impacts will be better understood. 	<ul style="list-style-type: none"> Survey to assess possible presence and significance of non-designated remains. Adequate provision to be made for preservation, excavation or recording, as appropriate.
	–	0	<p>Historic Buildings</p> <ul style="list-style-type: none"> Lawrence of Arabia's 19th century cottage, which is Grade II listed, is located to the north-east of the proposed site. However the presence of Cloud's Hill and an area of protected heathland between the site and the listed building means that the site would not impact on the setting of the cottage. Oaker's Wood Cottage, which is also Grade II listed, lies to the north of the site on the Waddock Cross-Bovington Road. This is a thatched cottage, probably of 18th century date, set within a wooded landscape. The cottage is currently undergoing restoration and extension and the new owners have surrounded the site with a quick growing evergreen dense hedge. This has changed the character of the setting of the listed building. However skyward views of being within a woodland should remain as part of the historic character of the surrounding environment of the building. The proposed site would involve extraction of sand 	<ul style="list-style-type: none"> Further assessment required to ensure adequate and appropriate screening is in place, prior to working. Strengthen screening of the site where needed and appropriate. Screening to include bunds to reduce noise impacts, where necessary.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			and gravel to the south of Oaker's Wood Cottage, on the other side of the road. Restoration would be at a lower level and would comprise some large bodies of water, shallow lake margins islands and reedbed over silt ponds. Due to the presence of the dense hedge and a tree belt that would be retained along the northern border of the proposed site, there would be little impact on the immediate setting of the listed building. However, thickening of the tree belt is likely to be required to ensure that the feeling of being within a wooded landscape is not lost and to ensure that any noise disturbance is minimal.	
7. To maintain, conserve and enhance the landscape, including townscape, seascape and the coast.	---	?	<p>Landscape Capacity</p> <ul style="list-style-type: none"> There are major concerns regarding the significant negative landscape & visual impacts this proposal would have on well used public rights of way and rural lanes as well as on the SPA/SSSIs. Parts of the area are tranquil and sensitive from a landscape and visual perspective. Cumulative impact may also be an issue especially when viewed from Moreton Village and other areas to the south in association with the Ministry of Defence operations. The integrity of the distinctive mosaic landscape is important in an area well used for recreation. There may be limited opportunity in smaller forested areas which can result in restoration to heathland to help reduce fragmentation of this habitat. 	<ul style="list-style-type: none"> Landscape and visual impact assessment required, to identify impacts; adequate mitigation of such impacts before and during working. If mitigation is not possible, a view will have to be taken as to whether a time-limited impact might be acceptable. Appropriate restoration proposals in line with Landscape Management Guidelines referred to in Minerals Strategy.
	0	0	<p>Designated Landscapes</p> <ul style="list-style-type: none"> No expected impacts on designated landscapes. 	<ul style="list-style-type: none"> Maintain screening woodland around edges of site.
8. To protect and improve air quality and reduce the impacts of noise.	0	0	<ul style="list-style-type: none"> Impacts on air quality expected to be negligible. No AQMAs will be affected by the working of this site proposal. Any dust resulting from working will be controlled through normal dust-suppression measures. Noise mitigation will be addressed at the planning application stage, with appropriate mitigation to be included in the development of the site. 	<ul style="list-style-type: none"> Environmental protection measures to reduce dust and ensure noise is appropriately mitigated.
9. To maintain, conserve and enhance soil quality.	-	0	<ul style="list-style-type: none"> The site comprises primarily heathland, grassland and woodland cover. The area is a former heathland area and so would be expected to have relatively poor, acidic soils. Site preparation/working would require stripping and storage of the soils, with some impacts on them. If the site is worked and restored to heathland this 	<ul style="list-style-type: none"> Soil is poor quality in agricultural terms but valuable in terms of potential for heathland restoration. Soils to be stored/protected during preparation and

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			will require reinstatement/retention of acidic soils.	working and properly reinstated during restoration.
10. To conserve and safeguard mineral resources.	+	0	<ul style="list-style-type: none"> The site would make an important contribution to aggregate supply in Bournemouth, Dorset and Poole. 	<ul style="list-style-type: none"> No specific action required; site development to take into consideration and mitigate where appropriate relevant impacts.
11. To promote the use of alternative materials.	0	0	<ul style="list-style-type: none"> This proposal does not at present promote the use of alternative materials. It is possible that treated inert waste will be used in restoration of the site, but this will not directly promote the use of alternative materials. 	<ul style="list-style-type: none"> No action required.
12. To provide an adequate and affordable supply of minerals to meet society's needs.	++	0	<ul style="list-style-type: none"> Development of this site will provide a strong benefit in terms of contributing to the provision of a supply of minerals to meet society's needs. Ensuring a sustainable supply will depend on the development and management of the site. Providing site development takes into account relevant principles of sustainable development it is expected this will contribute to complying with this objective. 	<ul style="list-style-type: none"> Ensure principles of sustainable development are incorporated into the development of this site.
13. To promote and encourage sustainable economic growth	+	0	<ul style="list-style-type: none"> This site proposal is expected to contribute to economic development on two levels – directly through the provision of employment at the site to be developed and indirectly through the provision of aggregate minerals required for the maintenance of built environment and for new built development. Both levels are expected to maintain employment, skilled and unskilled. It is considered that this proposal will provide a strong benefit during site working. Restoration to commercial forestry could provide direct and on-going economic benefits. However, the biodiversity benefits of restoration to heathland in this area have already been noted. If open access is available on the restored land, some limited benefits due to recreational attraction and use in the wider area (i.e. walking, bird watching) may be realised. 	<ul style="list-style-type: none"> Restoration to forestry could provide on-going economic benefits; however, restoration to open access heathland is considered preferable in biodiversity terms and could provide limited economic benefits. Some combination of the two may be most appropriate.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
14. To adapt to and mitigate the impacts of climate change.	-	0	<ul style="list-style-type: none"> Developing land as a quarry is expected to have some negative impacts regarding climate change, due primarily to machinery used and transportation of mineral away from site and loss of vegetation. However, these will in relative terms be negligible. The Bournemouth, Dorset and Poole Minerals Strategy seeks to address and minimise such impacts through Policy CC1 which requires operators to take into consideration climate change impacts and their possible mitigation for any proposed minerals development. The development management policies, e.g. DM 1, also address and seek to minimise the issue of sustainable development and climate change. Restoration to some form of vegetated environment will offer benefits in the form of climate change mitigation, including provision of habitat for wildlife, but again these will be relatively small. 	<ul style="list-style-type: none"> Use energy efficient plant and machinery. Implement restoration which provides appropriate habitats to help to increase resilience of flora/fauna.
15. To minimise the negative impacts of waste and minerals transport on the transport network, mitigating any residual impacts.	-	0	<ul style="list-style-type: none"> This is a very large new site that proposes to output 0.5 million tonnes per annum. It has been estimated that this could generate 200 trips per day. No access details have been provided but the only real option is to access the C80 that abuts the northern site boundary. There are visibility issues with providing an access on the C80 due to its vertical and horizontal alignment but there does appear to be a straight section of road where the required standards could be met. Any proposals would need to provide full details of the proposed access. It is expected that the site will act as a successor to the existing and past operations at Warmwell to the south although the traffic distribution is likely to be different. Traffic from the current site at Warmwell disperses to the north and south along the B3390, and to the west and east along the West Stafford by-pass and the A352. The new site would be expected to follow a similar pattern with the exception of movements to the north and east beyond the immediate area. For these movements the likely route for the new site would be the C6 rather than the B3390. This is made more likely by the poor junction layout at Waddock Cross (B3390/C80) which has limited forward visibility. There is therefore potential for increased traffic on the C6 and through Bere Regis that should be addressed in detail within any Transport Assessment. An alternative option may be to provide a haul route on the north side of the C80 to enable HGV traffic to enter the B3390 on the straight section of road north of Waddock Cross. There is therefore potential for this site to come forward although there are some issues with regards to the suitability of local junctions 	<ul style="list-style-type: none"> Transport Assessment to be carried out, identifying opportunities for reducing impacts on the transport network.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			<p>and routes to cater for the levels of HGV traffic predicted.</p> <ul style="list-style-type: none"> • Even with this mitigation there are issues with this site access and significant negative impacts are expected. • Policies DM1 and DM 8 actively address this issue of minimising impacts on the transportation network. 	
16. To support and encourage the use of sustainable transport modes, imposing no unmitigated negative impacts on them.	<p>—</p> <p>---</p>	0	<ul style="list-style-type: none"> • The proposed extension can only realistically be accessed by means of road transport, resulting in a negative impact under this Objective during development and working. • As far as reasonably possible negative impacts resulting from access and transport will be mitigated, as required by Policies DM1 and DM8 of the Minerals Strategy. 	<ul style="list-style-type: none"> • Mitigate impacts where identified and appropriate.
17. To sustain the health and quality of life of the population	—	0	<p>Impact on Sensitive Human Receptors</p> <ul style="list-style-type: none"> • There are properties within 50m; others within 250m. • However, it is considered that the site is large enough that the properties around the edges can be appropriately protected and screened. • Development would involve mitigation (visual and noise attenuation bunding, standoffs) to limit impacts. 	<ul style="list-style-type: none"> • Provision of appropriate mitigation, following assessment of likely impacts.
	—	0	<p>Impact on Existing Settlements</p> <ul style="list-style-type: none"> • Moreton lies across Frome valley, approximately 600m to south-west; Bovington Camp is approximately 250 m to the south/east. • Site is large enough that working can be screened from surrounding settlements. • Settlements along the B3390 will experience some impacts from lorry traffic. However this site proposal would not come on stream until Warmwell is finished, reducing cumulative impacts. • There may also be an impact on Bere Regis. 	<ul style="list-style-type: none"> • Transport Assessment to be carried, identifying possible impacts and opportunities for reducing impacts on the transport network.
	0	0	<p>Impact on Airport Safety</p> <ul style="list-style-type: none"> • Site is approximately 30km from Hurn Airport and is proposed to be restored to wetland. No impacts are expected. 	<ul style="list-style-type: none"> • No action required.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
18. To enable safe access to countryside and open spaces.	--	+	<p>Impact on Recreational Land</p> <ul style="list-style-type: none"> • Site comprises dedicated access land, as part of Forestry Commission holdings. Site is very well used by the public for recreational purposes. • This would change during working but after restoration the site could be open to public access again. Public will be excluded during working, public access may be possible following restoration. • There is an issue in that users of this site might turn to European and national designated sites for recreational purposes, which this site is worked. 	<ul style="list-style-type: none"> • Restoration to open access land following working and improvement of access where possible and where appropriate. • Provision of areas for recreational use while various parts of the site are worked.
	--	+	<p>Impact on Public Rights of Way</p> <ul style="list-style-type: none"> • Statutory rights of way cross the site and will need to be diverted during working. Restoration will need to re-establish and where appropriate improve these statutory rights of way. 	<ul style="list-style-type: none"> • Restoration and where appropriate improvement of statutory rights of way following working.

Preliminary Hydrological Risk Assessment

Controlled Waters	Issues/Risks	Mitigation	Further information/approval required
<ul style="list-style-type: none"> • Watercourses • Ponds/lakes, including wet habitats • Groundwater 	<ul style="list-style-type: none"> • The site lies between the Frome and the Piddle, and drains into the Frome. The River Basin Management Plan South West River Basin District identifies both these rivers as being of 'poor' environmental quality. Potential for contamination from runoff from site. • Potential for contamination of controlled waters through spillage or seepage of pollutants such as fuel, or silt in water. • Impacts on or removal of surface water features. Water flowing over/through the site flows into European designated wet heaths to the south and on into the Frome. This flow could be altered by working of the site. Detailed assessment needed. 	<ul style="list-style-type: none"> • Appropriate arrangements to be made for ensuring that runoff from the site does not enter the Frome or groundwater unless any silt has first been removed. • Fuel stored on site to be appropriately bunded and sealed to prevent any spillage from entering ground or surface waters. • On-going monitoring during development and working of the site. • 	<ul style="list-style-type: none"> • Full hydrogeological risk assessment • Flood Risk Assessment • Water Framework Assessment • Further assessment of potential impacts on water quality and levels, particularly for groundwater, is required prior to development. • Assessment of the feasibility of relocating ponds and associated habitats and species. • Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.

Comments: working of this site has the potential to significantly alter the flow of water through and over this site. This could have significant impacts on the designated wet heaths/valley mires to the south. Full hydrogeological assessment will be required.

Cumulative Impacts

This site proposal is a new site, although it is likely to replace Warmwell quarry and so not represent intensification. There is other mineral working, both existing and proposed, in the area.

The proposal is within 5Km (by track/ road) of a site allocated in the Purbeck Local Plan Part 1 (adopted Nov 2012) for 20 Ha of employment development at Dorset Green Technology Park. (Policy ELS). Traffic arising from the new employment development will also add to general traffic levels on the B3390 and A352.

In addition, traffic from the site accessing the A35 or A31 via Bere Regis would contribute to cumulative impacts in Bere Regis. Alternatively, traffic using the B3390 could contribute to cumulative effects if either of the Moreton Estate sites (AS25 and AS26) were operating simultaneously with Moreton Plantation.

Summary.

Potential Benefits	Potential Impacts
<ul style="list-style-type: none"> • Restoration to heathland would provide habitat for protected species and improve linkages between other heathland in the area. • Provision of aggregates required for maintenance and construction. • Restoration to heathland will benefit Scheduled Monuments and their settings and provide a link to the historic landscape that would have previously characterised the area around this site. • Possible improvement of public access, following working. 	<ul style="list-style-type: none"> • Site is a popular public recreation/access area and this will be lost or significantly reduced/affected during working, and altered afterwards. • Significant impacts on local landscape. • Potential impacts on historic environment, if no reduction in land to be worked to protect monuments and their settings. • Significant impacts on hydrology and hydrogeology. • Significant impacts on nature conservation interests. • Noise/visual impacts on properties in the vicinity.

Overall Recommendation:

This is a relatively large site which has strong nature conservation interest, local landscape value and historic environment importance. It provides open access and is well used. Water flows through the site to feed designated European wetlands and this could be affected by development of this site. Impacts during actual working are unknown and whether these can be fully offset is also unknown. Historic environment impacts may be mitigated by appropriate standoffs. The potential impacts on hydrology are unknown at this stage.

The site would make an important contribution to the supply of aggregate in Bournemouth, Dorset and Poole. Restoration to heathland with public access should restore at least some amenity and nature conservation benefits

Further information regarding this development has been requested. Until this is provided it is impossible to give a definitive view on this site. However, it is considered that the potential impacts and the level of uncertainty are such that this site should not be relied on as a future source of aggregate for Dorset.

The benefits of developing this site are not considered to outweigh the impacts of working here. **At this time** other sites are considered to be more appropriate options for supplying aggregate.

It is **recommended** that this site should not be included in the emerging Mineral Sites Plan

Aggregates: AS11 Parley Court, West Parley

Site Name/Location: AS11 Parley Court, West Parley	Nominee/Agent: Raymond Brown Group Ltd	Site Area: approximately 71 ha
Mineral Type: sand and gravel	Local Authority: Christchurch Borough Council	Production: 150,000 tpa; Reserve: approximately 1.3 mt

Impact Assessment Scoring

--	Strong Negative Impact	-	Minor Negative Impact	+	Minor Positive Impact	++	Strong Positive Impact	0	Negligible or No Effect	?	Uncertain
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Timescales for effects:

P/W: Preparation and Working

R/A: Restoration and Afteruse

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
1. To move waste management up the waste hierarchy	N/A	N/A	<ul style="list-style-type: none"> This Objective is not relevant to this site nomination 	<ul style="list-style-type: none"> N/A
2. To maintain, conserve and enhance biodiversity		0	<p>European/International Designations</p> <ul style="list-style-type: none"> Some of the land on the south side of the river, including the riverside path, is intended to alleviate public access pressure on other areas of European designated land in Bournemouth. Further assessment required to consider how this land and its use by the public could be affected by the proposed development and what appropriate mitigation might be. Development of this site could have negative impacts (including visual and noise) on the use of the Stour Valley Local Nature Reserve (LNR) on the other side of the river. This forms an essential part of the Stour Masterplan Project and is a key Sustainable Alternative Natural Greenspace (SANG) for heathland mitigation purposes. It contributes to deflecting pressure away from nearby heathland Special Protection Areas (SPA) and there is a concern that gravel extraction so close to the LNR/SANG will discourage public use which could put additional pressure back on the heaths. 	<ul style="list-style-type: none"> Assessment to determine possible impacts and whether mitigation will be possible, and what mitigation will be needed. This might include advance planting that would serve to screen the proposed development.
	0	0	<p>Annex 1 Bird Species</p> <ul style="list-style-type: none"> Not relevant to this site nomination. 	<ul style="list-style-type: none"> No action required.
	0	0	<p>National Designations</p> <ul style="list-style-type: none"> Not relevant to this site nomination. 	<ul style="list-style-type: none"> No action required.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	?	+	<p>Protected species</p> <ul style="list-style-type: none"> • Otter has been recorded from within the proposed area and an assessment will need to be made of the implications of the development for otter, although the presence of this species is unlikely to be a serious constraint on development, and restoration proposals should be able to build in opportunities for better habitat for this species. • Common protected reptiles may be present in the margins of the proposed area, but mitigation for such populations would be straightforward. 	<ul style="list-style-type: none"> • Ecological surveys required, with appropriate mitigation identified. • Restoration to include appropriate habitats for these species. • Further investigation into likelihood of grant of disturbance licences.
	0	0	<p>Local recognitions/designations, including ancient woodland and veteran trees</p> <ul style="list-style-type: none"> • Not relevant to this site nomination. 	<ul style="list-style-type: none"> • No action required.
3. To maintain, conserve and enhance geodiversity.	+	0	<ul style="list-style-type: none"> • Exposures resulting from working may be of interest. Benefits are only expected during working, and are likely to be obscured or covered as part of restoration. 	<ul style="list-style-type: none"> • Operator to be asked to permit visits to view exposures as required.
4. To maintain, conserve and enhance the quality of ground, surface and sea waters and manage the consumption of water in a sustainable way.	<p>–</p> <p>---</p>	?	<p>Groundwater</p> <ul style="list-style-type: none"> • Adjacent to River Stour and watercourses run through site. Environment Agency has objected, regarding significant concerns relating to biodiversity and flood risk, as this site could have a direct impact on a significant stretch of the River Stour relating to both flood risk and biodiversity issues. • Site is not within any Source Protection Zone and overlies secondary aquifers. • Two licensed supplies within 500m. <p>Surface Water</p> <ul style="list-style-type: none"> • Adjacent to River Stour and watercourses run through site. Environment Agency has objected, regarding significant concerns relating to biodiversity and flood risk, as this site could have a direct impact on a significant stretch of the River Stour relating to both flood risk and biodiversity issues. • Adjacent to River Stour and watercourses run through site. 	<ul style="list-style-type: none"> • Hydrological/hydrogeological assessment required to determine possible impacts, on ground and surface waters, with appropriate mitigation to be implemented. • Where necessary mitigating measures should be installed to maintain groundwater levels. • Appropriate arrangements should be put in place to ensure that the water leaving the site and entering the Stour is of an acceptable quality. • Any fuel on site should be properly stored to avoid contamination in case of spillage. • Appropriate arrangements should be installed for surface water and silt collection and fuel storage to prevent contamination of groundwater resources. • Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse. • Any proposals would need to consider compliance to the Water Framework Directive. • Also need consider compliance with

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
				the Moors River and Lower Stour Restoration Plan (and its floodplain), which is in development.
5. To reduce flood risk and improve flood management.	?	?	Flooding/Coastal Stability <ul style="list-style-type: none"> The majority of the site is within FRZ 2/3, but the processing plant will be within FRZ 1. Site is proposed for sand and gravel extraction, with extraction allowed within functional floodplain. 	<ul style="list-style-type: none"> Flood Risk Assessment (FRA) will be required. All necessary mitigation to be implemented.
6. To maintain, conserve and enhance the historic environment (including archaeological sites, historic buildings, conservation areas, historic parks and gardens and other locally distinctive features and their settings).	?	0	Archaeology <ul style="list-style-type: none"> As previous archaeological work has demonstrated, sites on the Stour valley gravels have archaeological potential in general, particularly for prehistoric material. There is also the potential for the presence of earthworks and structures associated with previous water management. Archaeological assessment and evaluation is required before an informed planning decision can be made. When these have been undertaken possible archaeological impacts will be understood. 	<ul style="list-style-type: none"> Survey to assess possible presence and significance of non-designated remains. Adequate provision to be made for preservation, excavation or recording, as appropriate. Maintain/protect riverside landscape along southern edge of site. Strengthen screening of the site where needed and appropriate.
	?	0	Historic Landscapes <ul style="list-style-type: none"> The site lies in the Stour valley, and archaeological investigation of gravel sites within the valley has shown that the rich resources of the valley were exploited throughout prehistory. Impact could be anywhere between B and D depending on working and restoration methods. To the southern sector of the site, there are no listed buildings which would be impacted by the proposed extraction. However, the river landscape along this stretch of the Stour is reminiscent of 'Constable country', with vistas through willows and other trees towards the meadows. The historic pattern of drains and tree planting and boundaries is poorly understood but has created a visual result of quality. Retention of the tree hedges would be necessary to protect the historic landscape in the long-term. 	
	0		Historic Buildings <ul style="list-style-type: none"> The cluster of buildings which comprises Parley Court is dominated by the Parley Court Farmhouse, a Grade II listed country house. Associated with this is the now converted barn, which has lost much of its original character, and the adjacent thatched cottage. Both are also Grade II listed. The land surrounding the manor house has been created as a wedding garden area and adds to its character, creating a wide open aspect. The proposed site abuts the northern edge of the gardens surrounding Parley Court. Garden planting to the south-west of the group of buildings provides 	
	-	+		<ul style="list-style-type: none"> Plant to be appropriately located/screened to protect Parley Court listed buildings. Access to be kept away from the listed buildings. Further assessment required to ensure adequate and appropriate screening is in place, prior to working. Strengthen screening of

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			<p>some screening from the northern lobe of the site. If this part of the site was for extraction only, there would be minimal impact and the site would be assessed as having 'no significant or negligible impact' but this could potentially move to a higher rating 'less significant impact' depending on noise levels.</p> <ul style="list-style-type: none"> If the processing plant is to be located to the north of the site area, the height would create a detrimental impact (visual and audible) to the listed buildings and their setting. The Parley Court buildings are screened from the north-eastern lobe of the site by trees and garden planting. The proposed access directly from the B3073 would be essential to protect the approach to the Parley Court buildings. 	<p>the site where needed and appropriate.</p> <ul style="list-style-type: none"> Restoration to improve setting of the listed buildings where appropriate.
7. To maintain, conserve and enhance the landscape, including townscape, seascape and the coast.	<p>—</p> <p>—</p>	<p>+</p>	<p>Landscape Capacity</p> <ul style="list-style-type: none"> Much of the site is screened by trees along the river side although there are gaps which will allow views into the site from the opposite side of the river. Further assessment is required to consider the extent of these impacts on surrounding land, including the adjacent housing areas to the south and the Stour Valley Way, and options for minimising these impacts to an acceptable level. This may mean the provision of a wide buffer zone along the river corridor. It is important to ensure that restoration maximises opportunities to increase informal recreation/public space in the Stour Valley and to create links to existing public rights of way. 	<ul style="list-style-type: none"> Full assessment of landscape and visual impacts required. Identified impacts to be mitigated in most appropriate manner. Restoration to seek to increase public access/informal recreation in the Stour Valley.
	0	0	<p>Designated Landscapes</p> <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.
8. To protect and improve air quality and reduce the impacts of noise.	0	0	<ul style="list-style-type: none"> Impacts on air quality expected to be negligible. No AQMAs will be affected by the working of this site proposal. Any dust resulting from working will be controlled through normal dust-suppression measures. Noise mitigation will be addressed at the planning application stage, with appropriate mitigation to be included in the development of the site. 	<ul style="list-style-type: none"> Environmental protection measures to reduce dust and ensure noise is appropriately mitigated.
9. To maintain, conserve and enhance soil quality.	—	0	<ul style="list-style-type: none"> Majority of the land to be worked is identified as poor, although there is some very good land to the north. Working the site will have impacts on this soil. The site is proposed for restoration to agriculture, and existing soils will be protected and reused. Restoration will return the land to original ground levels, and will restore the quality of the land. 	<ul style="list-style-type: none"> Soil to be properly stripped and stored prior to working; protected during working; and re-spread on site after working. Restoration to include agricultural land and to

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
				seek some public access as well.
10. To conserve and safeguard mineral resources.	+	0	<ul style="list-style-type: none"> The site would make an important contribution to aggregate supply in Bournemouth, Dorset and Poole. However there are a number of issues to be addressed in the working/restoration of the site. 	<ul style="list-style-type: none"> No specific action required; site development to take into consideration and mitigate where appropriate relevant impacts.
11. To promote the use of alternative materials.	++	0	<ul style="list-style-type: none"> In order to achieve desired restoration levels it may be necessary to install an inert waste material recycling facility. If this is done then this will provide a strong positive benefit during working. It is expected that the recycling facility would finish when or soon after the quarry is completed and restored, giving a negligible impact during afteruse. 	<ul style="list-style-type: none"> Developing an inert waste recycling facility will promote the use of alternative materials on-site and elsewhere.
12. To provide an adequate and affordable supply of minerals to meet society's needs.	+	0	<ul style="list-style-type: none"> Development of this site will provide a benefit in terms of contributing to the provision of a supply of minerals to meet society's needs. Ensuring a sustainable supply will depend on the development and management of the site. Providing site development takes into account relevant principles of sustainable development it is expected this will contribute to complying with this objective. 	<ul style="list-style-type: none"> Ensure principles of sustainable development are incorporated into the development of this site.
13. To promote and encourage sustainable economic growth	+	0	<ul style="list-style-type: none"> This site proposal is expected to contribute to economic development on two levels – directly through the provision of employment at the site to be developed and indirectly through the provision of aggregate minerals required for the maintenance of built environment and for new built development. Both levels are expected to maintain employment, skilled and unskilled. However given the expected size of the reserve this is likely to be a limited benefit. Restoration to agriculture with some element of public access will, if achieved, offer some economic benefits through both the agriculture and the recreational attraction and use in the wider area (i.e. riding, walking). 	<ul style="list-style-type: none"> Further assessment required to form a view as to what the most appropriate restoration could be.
14. To adapt to and mitigate the impacts of climate change.	-	0	<ul style="list-style-type: none"> Developing land as a quarry is expected to have some negative impacts regarding climate change, due primarily to machinery used and transportation of mineral away from site. However, these will in relative terms be negligible. The Bournemouth, Dorset and Poole Minerals Strategy seeks to address and minimise such impacts through Policy CC1 which requires operators to take into consideration climate change 	<ul style="list-style-type: none"> Use energy efficient plant and machinery. Ensure flood water is able to flow onto the site. Implement restoration which provides appropriate habitats to help to increase

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	+		<p>impacts and their possible mitigation for any proposed minerals development.</p> <ul style="list-style-type: none"> The development management policies, e.g. DM 1, also address and seek to minimise the issue of sustainable development and climate change. The majority of the site floods during times of sustained rainfall, giving the flood waters a place to run on to and slowing the speed of the water run-off. When excavated, these benefits will continue and will be increased, assisting in mitigating climate change impacts. 	resilience of flora/fauna.
15. To minimise the negative impacts of waste and minerals transport on the transport network, mitigating any residual impacts.	-		<ul style="list-style-type: none"> This is a large new site and traffic estimations have been given as 63 trips per day rising to 150 later in the life of the site. No details of intended points of access have been provided however, there is only one existing option along Parley Green Lane which emerges onto the B3073 at two points. To the north of the site Parley Green Lane emerges onto the Parley Lane at a point directly opposite the entrance to Portfield School. There is an obvious conflict of movement here, especially given the high traffic flow along Parley Lane. To the east of the site Parley Green Lane emerges on Parley Lane to the south of Bournemouth Airport. While there is no conflict with other junctions here, there are a large number of other users on this section of Parley Green Lane with the golf course, manor house and equestrian centre. The existing junction here is a simple priority junction and has no right turn lane and has significant numbers of accidents related to turning movements. Neither access option is suitable for the proposed use in its current form. Given the conflict of movements with the school at the northern access it may be that an improvement of the existing junction to the south of the Airport is a better option. Any Transport Assessment submitted along with this proposal must deal with these access issues and propose suitable junction improvements to cater for the proposed quarry traffic. The B3073 Parley Lane is also subject to high levels of congestion at certain times of the day and there are significant other housing and business site allocations that will impact upon it. This site will impact upon the capacity and operation of Parley Lane and the Highway Authority will seek to secure contributions towards a package of schemes proposed to ease existing and expected congestion. Any proposal will also need to look at vehicle routing, avoiding trips through residential areas of Ferndown to the west of the site where possible. There is currently no suitable access for the proposed 	<ul style="list-style-type: none"> Any proposal for this site would need to be accompanied by a Transport Assessment which will need to provide access details and consider vehicle routing. The TA should be scoped with the Transport Development Management Team. Transport Assessment will identify opportunities for reducing impacts on the transport network. Acceptable access onto B3073, with relevant mitigation/improvement, to be identified.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			<p>extraction site which emerges directly onto a road which has significant congestion problems. The site has therefore been given a 'significant adverse impact' rating. Should a suitable access and mitigation towards improvements to Parley Lane be provided, there are good connections with the strategic network and potentially little impact on existing settlements. The site could therefore achieve a 'less significant adverse impact' rating.</p> <ul style="list-style-type: none"> • Policies DM1 and DM 8 actively address this issue of minimising impacts on the transportation network. 	
16. To support and encourage the use of sustainable transport modes, imposing no unmitigated negative impacts on them.	<p>—</p> <p>---</p>	0	<ul style="list-style-type: none"> • The proposed extension can only realistically be accessed by means of road transport, resulting in a negative impact under this Objective during development and working. • As far as reasonably possible negative impacts resulting from access and transport will be mitigated, as required by Policies DM1 and DM8 of the Minerals Strategy. 	<ul style="list-style-type: none"> • Mitigate impacts where identified and appropriate.
17. To sustain the health and quality of life of the population	<p>—</p> <p>---</p>	+	<p>Impact on Sensitive Human Receptors</p> <ul style="list-style-type: none"> • Commercial and residential properties adjacent and within 50m to the north – these are already screened and can be screened further. • Properties in Muscliffe and other areas within 100m and beyond to the south. Part of site is overlooked by properties in Granby Road, Muscliffe. • Views through screening trees of the site from path along river. • Restoration to improve landscape of site where possible; and to seek to increase public access. 	<ul style="list-style-type: none"> • Assessment and provision of appropriate mitigation, such as further tree planting, where possible; no bunding will be permitted in floodplain.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			<ul style="list-style-type: none"> Potential impacts on users of the Local Nature Reserve across the river from the site. 	
	–		<p>Impact on Existing Settlements</p> <ul style="list-style-type: none"> Muscliffe to the south is the closest settlement, adjacent and across the river. Mostly screened, or partly screened – although some properties overlook the south-western part off the site. Parley Cross lies to north-west and East Parley to the north. No visual impacts are expected on these sites. There will be some level of traffic impacts from site traffic. This is discussed further above. 	<ul style="list-style-type: none"> Transport Assessment to be carried out, identifying possible impacts and opportunities for reducing impacts on the transport network. Visual impacts assessment will identify potential impacts and necessary mitigation. Bunding will not be possible in the flood plain, and housing in Muscliffe is raised up above level of the site, making screening difficult to achieve.
	–	+		
	?	0	<p>Impact on Airport Safety</p> <ul style="list-style-type: none"> Site is very close to airport. It will need to be developed, worked and restored in a way that will avoid any birdstrike or other hazards and the airport will be consulted on air safety issues. 	<ul style="list-style-type: none"> Airport to be consulted on all aspects of the site development and restoration. All necessary mitigation to be implemented.
18. To enable safe access to countryside and open spaces.	–	+	<p>Impact on Recreational Land</p> <ul style="list-style-type: none"> Site is private land, used for agriculture, horse grazing and other recreational use such as shooting. There is no public access onto the land. Development for minerals will impact on these uses, although this will only be temporary. These uses can be restored after mineral working. No formal/informal recreation on the site. Potential impacts on users of the Local Nature Reserve across the river from the site. 	<ul style="list-style-type: none"> No action required for working. Restoration to include some aspect of public access.
	–	+	<p>Impact on Public Rights of Way</p> <ul style="list-style-type: none"> No rights of way across site, rights of way adjacent to site boundary at two points. May require screening. Potential impacts on users of the Local Nature Reserve across the river from the site. 	<ul style="list-style-type: none"> Assessment of impacts, with appropriate mitigation identified. Restoration to improve public access in the area.

Preliminary Hydrological Risk Assessment

Controlled Waters	Issues/Risks	Mitigation	Further information/approval required
<ul style="list-style-type: none"> Watercourses Ponds/lakes, including wet habitats Groundwater 	<ul style="list-style-type: none"> The River Basin Management Plan South West River Basin District identifies the Stour as being of 'poor' environmental quality. Potential for contamination from runoff from site. Potential for contamination of controlled waters through spillage or seepage of pollutants such as fuel, or silt in water. Contamination of water supplies or reduction in amount of water available for licenses supplies. Site is adjacent to the Stour. Assessment is required to demonstrate no hydrogeological connectivity with the Stour. 	<ul style="list-style-type: none"> Appropriate arrangements to be made for ensuring that runoff from the site does not enter the Stour or groundwater unless any silt has first been removed. Fuel stored on site to be appropriately banded and sealed to prevent any spillage from entering ground or surface waters. On-going monitoring during development and working of the site. 	<ul style="list-style-type: none"> Full hydrogeological risk assessment Flood Risk Assessment Water Framework Assessment Further assessment of potential impacts on water quality and levels, particularly for groundwater, is required prior to development. Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.

Cumulative Impacts

Proposed site is a new site and depending on the timing of its development could represent an intensification. There is an existing quarry in close proximity along with aggregate deposits in the area and further proposals for future working.

There are existing waste management facilities in the area and the potential for future development at the Airport. If the site comes into operation in parallel with the existing extraction here, and thus increases the overall impact on Parley Lane, the Highway Authority will seek to secure contributions towards a package of schemes proposed to ease existing and expected congestion.

The proposal lies within 5Km of a site allocated for development in the Christchurch and East Dorset Consolidated Plan⁹ May 2013, Policy BA2 Bournemouth Airport – Northern Business Parks – 60 Ha employment land. Traffic from this development will add to traffic levels on the B3073.

Summary.

⁹ The Consolidated Plan is an amalgamation of the Christchurch and East Dorset Core Strategy Pre submission draft April 2012 and the Christchurch and East Dorset Schedule of Proposed Changes November 2012.

Potential Benefits	Potential Impacts
<ul style="list-style-type: none"> • Provision of aggregates required for maintenance and construction. • If public access can be improved this would provide public benefits. • There is potential for this land to offset pressures on Natura 2000 land elsewhere. 	<ul style="list-style-type: none"> • Noise/visual impacts on properties in the vicinity, particularly properties to the south in Muscliffe. • Potential impacts on users of the Local Nature Reserve across the river from the site, with resultant reduction in effectiveness of the Sustainable Alternative Natural Greenspace • Increased traffic/new junction on B3073, possible cumulative impacts with other sites in vicinity. • Potential impacts on Stour – hydrology, hydrogeology and biodiversity. • Potential impacts on airport.

Overall Recommendation:

This site, if developed, would be a new site. It offers the benefits of contributing to the aggregate supply for Bournemouth, Dorset and Poole and its restoration may offer benefits of increased public access in the Stour valley.

However its development may lead to hydrological and ecological impacts on the Stour; further assessment is required. The fact that there will be a significant buffer along the river edge minimises potential impacts.

There will be time-limited local visual impacts, particularly on some of the housing in Muscliff to the south and also from users of the path running along the south side of the Stour. These are difficult/impossible to mitigate as the land on the south side of the river is raised above the level of the site and no bunding will be allowed in the floodplain.

Cumulative impacts, particularly related to traffic levels, will need to be addressed if the site is working at the same time as the Hurn Court Farm site to the east.

The benefits of developing this site are not considered to outweigh the impacts of working here. **At this time** other sites are considered to be more appropriate options for supplying aggregate.

It is **recommended** that this site should not be included in the emerging Mineral Sites Plan

Aggregates: AS12 Philliols Farm

Site Name/Location: AS12 Philliols Farm	Nominee: Aggregate Industries/Drax Estate	Site Area: approximately 67 ha
Mineral Type: Sand and gravel	Local Authority: Purbeck District Council	Production: 250,000 tpa:
		Reserve: approximately 1.5 mt

Impact Assessment Scoring

--	Strong Negative Impact	-	Minor Negative Impact	+	Minor Positive Impact	++	Strong Positive Impact	0	Negligible or No Effect	?	Uncertain
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Timescales for effects:

P/W: Preparation and Working

R/A: Restoration and Afteruse

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
1. To move waste management up the waste hierarchy	N/A	N/A	<ul style="list-style-type: none"> This Objective is not relevant to this site nomination 	<ul style="list-style-type: none"> N/A
2. To maintain, conserve and enhance biodiversity	--	0	<p>European/International Designations</p> <ul style="list-style-type: none"> There are possible indirect effects on European heathland sites as the extraction area lies adjacent along part of the northern boundary, the mineral haul route is currently unspecified but likely to be through Wareham Forest so could pass close to the designated areas. The haul route is likely to pass through forestry areas which support Annex 1 birds which may be functionally linked to Dorset Heathlands SPA and the plantation is well used as recreation site contributing to the network of areas which help to reduce human recreational pressure on designated heathlands. Without the detail of proposed working there is a risk of adverse effects on European sites but this risk could almost certainly be removed through careful planning. 	<ul style="list-style-type: none"> Ecological surveys, visitor surveys and hydrological reports required, with appropriate mitigation to be identified and implemented.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	--	0	<p>Annex 1 Bird Species</p> <ul style="list-style-type: none"> Area through which the haul route is likely to pass supports Annex 1 birds as part of the existing forestry crop rotation. Clearance of trees would result in heathland regeneration and the open habitat would rapidly become suitable for more Annex 1 birds. The site has the potential to be included in a revision to the heathland SPA boundary. Risk based approach essential here. Without the detail of proposed working there is a risk of adverse effects to Annex 1 birds but this risk could almost certainly be removed through careful planning. 	<ul style="list-style-type: none"> Ecological surveys, visitor surveys and hydrological reports required, with appropriate mitigation to be identified and implemented.
	0			
	--	0	<p>National Designations</p> <ul style="list-style-type: none"> The Morden Bog and Hyde Heath SSSI lies adjacent to the proposed area, and the mineral haul route may run close to the SSSI. The possibility of indirect effects exists. Without the detail of proposed working there is a risk of adverse effects to the SSSI but this risk could almost certainly be removed through careful planning. 	<ul style="list-style-type: none"> Ecological surveys and hydrological reports required, with appropriate mitigation to be identified and implemented.
	0			
	--	0	<p>Protected species</p> <ul style="list-style-type: none"> Existing rides support significant populations of European protected species, Sand Lizard and Smooth Snake, and common protected reptiles. Depending on the alignment of the haul route, mitigation for effects on reptiles may be necessary. If so, it seems likely NE would be able to issue a disturbance licence if required. There are records of Fairy Shrimp from a pond at Philliols Farm; this is a fully protected species under the Wildlife & Countryside Act and assessment of the implications of the development for this species will need to be fully assessed, especially as the species is known to flourish in temporary pools and mineral extraction would be likely to affect local hydrology. It is possible Dormouse lives in the hedgerows within the proposed area; mitigation should be possible. Protected species to be protected during working and their habitats 	<ul style="list-style-type: none"> Ecological surveys required, with appropriate mitigation identified. Restoration to include appropriate habitats for these species. Fairy Shrimp and its habitat not to be affected by any development – hydrological study required to demonstrate that.
	0			

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			enhanced during restoration where possible.	
	?	+	<p>Local recognitions/designations, including ancient woodland and veteran trees</p> <ul style="list-style-type: none"> • There are a number of old boundary trees, mainly oak, within the proposed area and the implications for the biodiversity and longevity of these trees must be assessed. • Trees to be protected during working and their habitats enhanced during restoration where possible. 	<ul style="list-style-type: none"> • Ecological surveys required, with appropriate mitigation identified.
3. To maintain, conserve and enhance geodiversity.	+	0	<ul style="list-style-type: none"> • Exposures resulting from working may be of interest. Benefits are only expected during working, and are likely to be obscured or covered as part of restoration. 	<ul style="list-style-type: none"> • Operator to be asked to permit visits to view exposures as required.
4. To maintain, conserve and enhance the quality of ground, surface and sea waters and manage the consumption of water in a sustainable way.	-	0	<p>Groundwater</p> <ul style="list-style-type: none"> • Ditches in proximity to site, which are presumably groundwater fed. No Source Protection Zones are affected by the site. • Site overlies secondary aquifer. • Environment Agency concerns over effects of extraction on groundwater feeding ephemeral pond supporting Fairy Shrimp. 	<ul style="list-style-type: none"> • Further assessment on possible impacts on water supplies and appropriate mitigation if potential impacts identified. • Where necessary mitigating measures should be installed to maintain groundwater levels and/or monitor private water supplies. • Alternative arrangements should be in place in case of a reduction in supply. • Hydrological assessment required to determine possible impacts, on ground and surface waters, with appropriate mitigation to be implemented. • Appropriate arrangements should be put in place to ensure that the

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	—	0	<p>Surface Water</p> <ul style="list-style-type: none"> Ditches in proximity to site, which are presumably groundwater fed. Site is adjacent to Bere Stream and close to River Piddle. Ponds on site. 	<p>water leaving the site and entering the rivers/watercourses is of an acceptable quality.</p> <ul style="list-style-type: none"> Any fuel on site should be properly stored to avoid contamination in case of spillage. Appropriate arrangements should be installed for surface water and silt collection and fuel storage to prevent contamination of groundwater resources. Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.
	--			
5. To reduce flood risk and improve flood management.	0	0	<p>Flooding/Coastal Stability</p> <ul style="list-style-type: none"> Site is FRZ 1 but is adjacent to FRZ 2 and 3. Site is sand and gravel site, with extraction allowed within functional floodplain. Flood Risk Assessment to be carried out and any necessary mitigation implemented. 	<ul style="list-style-type: none"> Flood Risk Assessment (FRA) will be required. All necessary mitigation to be implemented.
6. To maintain, conserve and enhance the historic environment (including archaeological sites, historic buildings, conservation areas, historic parks and gardens and other locally distinctive features and their settings).	?	0	<p>Archaeology</p> <ul style="list-style-type: none"> An archaeological evaluation consisting of the excavation of trial trenches was undertaken on parts of this site in 2005 by Thames Valley Archaeological Services. Little was found in many of the trenches, but evidence of Roman settlement was found in the southernmost part of the site. Thus, unless the area of Roman remains is excluded from quarrying, the development is likely to have a significant impact on archaeological remains. The fields that were not included in the 2005 evaluation still need to be evaluated before a fully-informed planning decision can be made, and the results could possibly show further very significant archaeological impacts. The impact on the setting of nearby barrows that are protected as Scheduled Monuments also needs to be assessed. 	<ul style="list-style-type: none"> Full archaeological survey of the area required to assess possible presence and significance of non-designated remains and to assess Monuments and establish their settings and how these can best be protected during working. All necessary mitigation, including actions such as restoration of hedgerows, to be implemented. Adequate provision to be made for preservation, excavation or recording, as appropriate. Settings of the Monuments to be established prior to working and not to be compromised during working.
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Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	—	0	<p>Historic Landscapes</p> <ul style="list-style-type: none"> The site is currently under agriculture, and its restoration to the same use could have a neutral impact if properly mitigated through restoration of hedgerows and the like. 	
	—	+	<p>Historic Buildings</p> <ul style="list-style-type: none"> There are two Grade II listed buildings located within the centre of the proposed site at Philliols Farm. The first is a 1748 brick built barn with later attached out-buildings, a corrugated iron roof with coped gables and a projecting hipped cart porch on the south side. The second is a detached two-storey granary dating from the 18th century having a tiled roof with stone eaves courses and moulded coped gables which was formerly listed as a pigeon house at Philliols Farm. The buildings are set within a farmstead (although the original farmhouse doesn't survive) within a flat farmed landscape. Both buildings, although most notably the granary, are in some state of disrepair. The proposed extraction would take place in phases around the central farm, with restoration to agriculture at a lower level behind each phase. There would be no processing of materials on site. There is no significant visual or noise impacts on the listed buildings because they are not inhabited by people. On completion the whole farmstead will sit on an island of raised ground however this would not compromise the setting of the buildings. There is an opportunity for improving the condition of both listed buildings through repair and stabilisation of the structure by means of planning conditions. 	<ul style="list-style-type: none"> Further assessment of the buildings prior to working to ensure they will not be damaged by changing ground conditions. Restoration to include improvement of the listed buildings.
7. To maintain, conserve and enhance the landscape, including townscape, seascape and	—	?	<p>Landscape Capacity</p> <ul style="list-style-type: none"> This is considered to be an intimate and sensitive part of the Heath Forest Mosaic. Development would affect the existing rural character and views from close proximity sensitive visual receptors 	<ul style="list-style-type: none"> Landscape and visual impact assessment to identify impacts; adequate mitigation of such impacts before and during working. If mitigation is not possible, a view will have to be taken as to

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
the coast.	--	0	<p>(residential and bridleway). It would introduce a new obtrusive use into this landscape.</p> <ul style="list-style-type: none"> The capacity to 'absorb' this proposed development is low without mitigation and medium/low with mitigation. 	<p>whether a time-limited impact would be acceptable.</p> <ul style="list-style-type: none"> Appropriate restoration proposals in line with Landscape Management Guidelines referred to in Minerals Strategy. Maintain screening woodland around edges of site.
	0	0	<p>Designated Landscapes</p> <ul style="list-style-type: none"> No impacts expected. 	
8. To protect and improve air quality and reduce the impacts of noise.	0	0	<ul style="list-style-type: none"> Impacts on air quality expected to be negligible. No AQMAs will be affected by the working of this site proposal. Any dust resulting from working will be controlled through normal dust-suppression measures. Noise mitigation will be addressed at the planning application stage, with appropriate mitigation to be included in the development of the site. 	<ul style="list-style-type: none"> Environmental protection measures to reduce dust and ensure noise is appropriately mitigated.
9. To maintain, conserve and enhance soil quality.	--	0	<ul style="list-style-type: none"> Some 75% of the site is identified as 'Best and Most Versatile' (BMV) agricultural land. Working the site will have impacts on this soil. Soils will be protected during working and restoration could bring BMV land back into agricultural production. Alternatively, or in conjunction with this, areas of the site could be restored to a nature conservation use possibly with some public access. 	<ul style="list-style-type: none"> Soil to be properly stripped and stored prior to working; protected during working; and re-spread on site after working. Restoration to include high quality agricultural land, possibly with other uses as well.
10. To conserve and safeguard mineral resources.	+	0	<ul style="list-style-type: none"> The site would make an important contribution to aggregate supply in Bournemouth, Dorset and Poole. However there are a number of issues to be addressed in the working of the site. 	<ul style="list-style-type: none"> No specific action required; site development to take into consideration and mitigate where appropriate relevant impacts.
11. To promote the use of alternative materials.	0	0	<ul style="list-style-type: none"> This proposal does not at present promote the use of alternative materials. It is possible that treated inert waste will be used in restoration of the site, but this will not directly promote the use of alternative materials. 	<ul style="list-style-type: none"> No action required.
12. To provide an adequate and affordable	+	0	<ul style="list-style-type: none"> Development of this site will provide a benefit in terms of contributing to the provision of a supply of minerals to meet 	<ul style="list-style-type: none"> Ensure principles of sustainable development are incorporated into the development of this site.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
supply of minerals to meet society's needs.			<p>society's needs.</p> <ul style="list-style-type: none"> Ensuring a sustainable supply will depend on the development and management of the site. Providing site development takes into account relevant principles of sustainable development it is expected this will contribute to complying with this objective. 	
13. To promote and encourage sustainable economic growth	+	0	<ul style="list-style-type: none"> This site proposal is expected to contribute to economic development on two levels – directly through the provision of employment at the site to be developed and indirectly through the provision of aggregate minerals required for the maintenance of built environment and for new built development. Both levels are expected to maintain employment, skilled and unskilled. However given the expected size of the reserve this is likely to be a limited benefit. Restoration to agriculture with some element of public access will, if achieved, offer some economic benefits through both the agriculture and the recreational attraction and use in the wider area (i.e. riding, walking). 	<ul style="list-style-type: none"> Further assessment required to form a view as to what the most appropriate restoration could be.
14. To adapt to and mitigate the impacts of climate change.	-	0	<ul style="list-style-type: none"> Developing land as a quarry is expected to have some negative impacts regarding climate change, due primarily to machinery used and transportation of mineral away from site. However, these will in relative terms be negligible. The Bournemouth, Dorset and Poole Minerals Strategy seeks to address and minimise such impacts through Policy CC1 which requires operators to take into consideration climate change impacts and their possible mitigation for any proposed minerals development. The development management policies, e.g. DM 1, also address and seek to minimise the issue of sustainable development and climate change. Inclusion of some form of vegetated environment in the final restoration will offer benefits in the form of climate change mitigation, including provision of habitat for wildlife, but again these will be relatively small. 	<ul style="list-style-type: none"> Use energy efficient plant and machinery. Implement restoration which includes appropriate habitats to help to increase resilience of flora/fauna.
15. To minimise the negative impacts of	-	0	<ul style="list-style-type: none"> This is a large, new, sand and gravel extraction site. Estimated trip rates have been given at about 100 per day. The 	<ul style="list-style-type: none"> Any proposal for this site will need to be accompanied by a Transport Assessment which will

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
waste and minerals transport on the transport network, mitigating any residual impacts.			<p>local road network to the south and west of the site is unable to cater for this level of heavy traffic. The proposed use of these roads would be objected to by the Highway Authority.</p> <ul style="list-style-type: none"> • Instead, access is proposed across Philliols Heath, using existing forestry tracks, to the C7 at Sugar Hill. It should be possible to upgrade an existing access or provide a new access onto Sugar Hill that meets with the requirements for visibility and geometry necessary to serve this proposal. Once vehicles are on the C7 they can access the strategic network via the A35 to the north at Woodbury Cross. • Policies DM1 and DM 8 of the Minerals Strategy actively address this issue of minimising impacts on the transportation network. 	<p>need to provide access details and consider vehicle routing. The TA should be scoped with the Transport Development Management Team.</p> <ul style="list-style-type: none"> • Transport Assessment to be carried out, identifying opportunities for reducing impacts on the transport network.
16. To support and encourage the use of sustainable transport modes, imposing no unmitigated negative impacts on them.	—	0	<ul style="list-style-type: none"> • The proposed extension can only realistically be accessed by means of road transport, resulting in a negative impact under this Objective during development and working. • As far as reasonably possible negative impacts resulting from access and transport will be mitigated, as required by Policies DM1 and DM8 of the Minerals Strategy. 	<ul style="list-style-type: none"> • Mitigate impacts where identified and appropriate.
17. To sustain the health and quality of life of the population	--	0	<p>Impact on Sensitive Human Receptors</p> <ul style="list-style-type: none"> • Residences adjacent to/within 50m of the site; other residences in vicinity of site. • Development would involve appropriate mitigation (such as visual and noise attenuation bunding, standoffs) to limit impacts. 	<ul style="list-style-type: none"> • Provision of appropriate mitigation, following assessment of likely impacts. • Restoration to improve landscape of site where possible; and to seek to increase public access. • Screening/bunding/standoffs will mitigate impacts to some extent. • Transport Assessment to be carried out, identifying possible impacts and opportunities for reducing impacts on the transport network.
	—	0	<p>Impact on Existing Settlements</p> <ul style="list-style-type: none"> • Nearest settlement is Bere Regis, approximately 2.7 km away. No visual or noise impacts will affect these settlements, but there may be transport related impacts. 	

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	0	0	Impact on Airport Safety <ul style="list-style-type: none"> Site is approximately 25 km from Hurn Airport, with possibly some wet/wetland restoration. 	<ul style="list-style-type: none"> No impacts expected.
18. To enable safe access to countryside and open spaces.	0	+	Impact on Recreational Land <ul style="list-style-type: none"> Site is in agricultural use, with no formal/informal recreation on the site. 	<ul style="list-style-type: none"> No action required for working. Restoration to include some aspect of public access.
	–	0	Impact on Public Rights of Way <ul style="list-style-type: none"> There are no rights of way across the site, although a bridleway runs adjacent to section of site boundary and will require screening. Impact likely to be relatively small. 	<ul style="list-style-type: none"> Assessment of impacts, with appropriate mitigation identified. Restoration to improve public access in the area.

Preliminary Hydrological Risk Assessment

Controlled Waters	Issues/Risks	Mitigation	Further information/approval required
<ul style="list-style-type: none"> • Watercourses • Ponds/lakes, including wet habitats • Groundwater 	<ul style="list-style-type: none"> • Site is adjacent to River Piddle and Bere Stream. The River Basin Management Plan South West River Basin District identifies the Piddle as being of 'poor' environmental quality. • Potential for contamination from runoff from site. Reduced agricultural runoff for a temporary period is a benefit. • Potential for contamination of controlled waters through spillage or seepage of pollutants such as fuel, or silt in water. • Contamination of water supplies or reduction in amount of water available for licensed supplies. • Impacts on or removal of surface water features, particularly with ecological implications. 	<ul style="list-style-type: none"> • Appropriate arrangements to be made for ensuring that runoff from the site does not enter the Piddle or groundwater unless any silt has first been removed. • Fuel stored on site to be appropriately bunded and sealed to prevent any spillage from entering ground or surface waters. • On-going monitoring during development and working of the site. 	<ul style="list-style-type: none"> • Full hydrogeological risk assessment • Flood Risk Assessment • Water Framework Assessment • Further assessment of potential impacts on water quality and levels, particularly for groundwater, is required prior to development. • Assessment of the feasibility of relocating ponds and associated habitats and species. • Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.

Cumulative Impacts

There are both existing and proposed mineral workings in the locality. This is a new, greenfield site proposal and would represent an intensification of development in this part of Dorset, depending on its start date.

The proposal is within 5Km of Bere Regis, a "Key Service Centre" where new development of 50 dwellings is allocated in the Purbeck Local Plan Part 1 (Adopted Nov 2013) (Policy NW). Traffic development from the residential development will have a minor impact on surrounding roads.

Traffic travelling north-west to access the trunk road system at Bere Regis or southwards to access at Wareham will both have some impact on the road system.

Summary.

Potential Benefits	Potential Impacts
<ul style="list-style-type: none">• Restoration could include some increased public access.• Provision of aggregates required for maintenance and construction of the built environment.• Restoration could include benefits for nature conservation.• Restoration and improvements for the historic buildings at Philliols Farm	<ul style="list-style-type: none">• Impacts on biodiversity, particularly through construction/use of the haul road through the forest – including possible impacts on European designations and Annex 1 birds.• Hydrogeological impacts, including on water levels in the ephemeral ponds supporting the Fairy Shrimp.• Noise/visual impacts on properties in the vicinity.• Potential archaeological impacts – details not known until further assessment carried out.• Impacts on landscape carrying capacity.• Impacts on Best and Most Versatile agricultural land.• Possible cumulative transport impacts – further assessment required.

Overall Recommendation:

This is a new site which would be worked and the mineral transported through Philliols Heath to the C7 road to be processed at Tatchells, near Wareham. It offers the benefits of contributing to the aggregate supply for Bournemouth, Dorset and Poole but there are a number of potential impacts associated with the development of this site. These include biodiversity (particularly the haul road and possible impacts on European Designations in Wareham Forest), hydrology/hydrogeology, archaeology, landscape capacity, loss of BMV land, amenity (impacts on residences in the vicinity) and transport issues.

The benefits of developing this site are not considered to outweigh the impacts of working here. **At this time** other sites are considered to be more appropriate options for supplying aggregate.

It is **recommended** that this site should not be included in the emerging Mineral Sites Plan

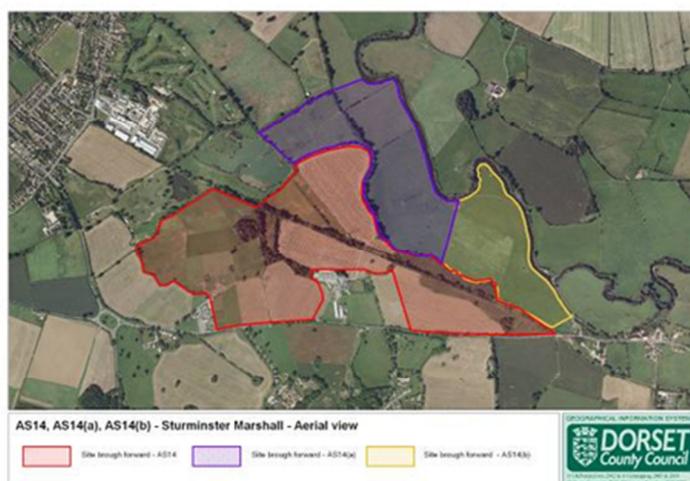
Aggregates: AS14 Sturminster Marshall

Site Name/Location: AS14 Sturminster Marshall Mineral Type: Sand and gravel	Nominee/Agent: None Local Authority: East Dorset District Council
Site Area: approximately 70 ha	Production: 200,000 tpa; Reserve: approximately 3 mt

Impact Assessment Scoring

--	Strong Negative Impact	-	Minor Negative Impact	+	Minor Positive Impact	++	Strong Positive Impact	0	Negligible or No Effect	?	Uncertain
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N.B.: For information, this Sustainability Appraisal covers the entire area shown in the map below. Smaller areas have also more recently been nominated for consideration, but have not been separately assessed.



Timescales for effects:

P/W: Preparation and Working

R/A: Restoration and Afteruse

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
1. To move waste management up the waste hierarchy	N/A	N/A	<ul style="list-style-type: none"> This Objective is not relevant to this site nomination 	<ul style="list-style-type: none"> N/A
2. To maintain, conserve and enhance biodiversity	0	++	<p>European/International Designations</p> <ul style="list-style-type: none"> Extraction from this site could facilitate restoration to open ground including public open space for informal recreation to mitigate against effects of human pressures on the heaths. 	<ul style="list-style-type: none"> If site is developed ensure that restoration includes land for public access/recreation.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	0	0	Annex 1 Bird Species <ul style="list-style-type: none"> No impacts expected . 	<ul style="list-style-type: none"> No action required.
	0	0	National Designations <ul style="list-style-type: none"> No impacts expected . 	<ul style="list-style-type: none"> No action required.
	-	0	Protected species <ul style="list-style-type: none"> It is possible that there are common protected reptile populations around the existing field margins and along the old railway line, and possibly also Dormouse in hedgerows and the SNCI. If any of these populations would be affected, mitigation would likely be straightforward. 	<ul style="list-style-type: none"> Ecological surveys required, with appropriate mitigation identified. Restoration to include appropriate habitats for these species.
	-	+	Local recognitions/designations, including ancient woodland and veteran trees <ul style="list-style-type: none"> Henbury Farm Wood SNCI falls within AS14; this woodland is included within the ancient woodland inventory and its conservation within any development would be a high priority. There are likely to be other features of ecological interest, including veteran trees and species-rich hedgerows, within the larger area proposed for extraction which would require investigation and impact assessment. 	<ul style="list-style-type: none"> All necessary surveys and assessment to be carried out with negative impacts mitigated as appropriate. Restoration to include creation/re-creation of habitat, where appropriate.
3. To maintain, conserve and enhance geodiversity.	+	0	<ul style="list-style-type: none"> Exposures resulting from working may be of interest. Benefits are only expected during working, and are likely to be obscured or covered as part of restoration. 	<ul style="list-style-type: none"> Operator to be asked to permit visits to view exposures as required.
4. To maintain, conserve and enhance the quality of ground, surface and sea waters and manage the consumption of water in a sustainable	0	0	Groundwater <ul style="list-style-type: none"> Approximately 50% of site is within Source Protection Zone 1. Environment Agency has objected to the site regarding possible groundwater impacts – they also have concerns in relation to water resources and flood risk issues. Any proposals would need to comply with the Water Framework Directive. Environment Agency notes that as the 	<ul style="list-style-type: none"> Further assessment on possible impacts on water supplies and appropriate mitigation if potential impacts identified. Where necessary mitigating measures should be installed to maintain groundwater levels and/or monitor private water supplies. Alternative arrangements should be in place in case of a reduction in supply.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
way.	--		<p>site is within SPZ1 they will normally object in principle to any planning application for a development that may physically disturb an aquifer.</p> <ul style="list-style-type: none"> The site is situated on alluvial deposits of sands, gravels and clays, overlying chalk bedrock. The alluvial deposits are classified as a Secondary Aquifer whilst the chalk is classified as a Principal Aquifer. Half of the site is located within Source Protection Zone 1 (SPZ1) for the Corfe Mullen Public Water Supply (PWS) source. Given the sensitivity of this site it is imperative that any proposed development is subject to suitable risk assessment. Any development would therefore need to demonstrate hydrogeological separation from the public supply. This proposal potentially constitutes a very significant adverse impact, but this could be improved if it can be demonstrated that the site is hydraulically separate from the aquifer supplying the boreholes. 	<ul style="list-style-type: none"> Hydrological assessment required to determine possible impacts, on ground and surface waters, with appropriate mitigation to be implemented. Detailed pollution prevention management plan detailing best practices to minimise pollution incidents, as well as measures that will be taken should a pollution event occur. Appropriate arrangements should be put in place to ensure that the water leaving the site and entering the rivers/watercourses is of an acceptable quality. Any fuel on site should be properly stored to avoid contamination in case of spillage. Appropriate arrangements should be installed for surface water and silt collection and fuel storage to prevent contamination of groundwater resources.
	-	0	<p>Surface Water</p> <ul style="list-style-type: none"> Ponds on/near site. Need to consider compliance to the Moors River and Lower Stour Restoration Plan (and its floodplain). 	<ul style="list-style-type: none"> Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.
5. To reduce flood risk and improve flood management.	0	0	<p>Flooding/Coastal Stability</p> <ul style="list-style-type: none"> Part of original site and all of extension within FRZs 2&3. Significant area within which to site plant, in FRZ 1. Site is prone to flooding. 	<ul style="list-style-type: none"> Flood Risk Assessment (FRA) will be required. All necessary mitigation to be implemented.
6. To maintain, conserve and enhance the historic environment (including archaeological sites, historic buildings, conservation areas, historic parks and gardens and other locally	?	+	<p>Archaeology</p> <ul style="list-style-type: none"> Various archaeological finds have been recorded on and around the site, indicating a high potential for below-ground archaeological remains. There is also potential for earthworks and structures associated with watermeadow systems and for industrial archaeological remains relating to the former railway line that crossed the site. The presence of below-ground archaeological remains and the other features mentioned above needs to be assessed and evaluated before an informed planning decision could be made. Only when these have been undertaken would the archaeological impact be understood – at present it 	<ul style="list-style-type: none"> Full archaeological survey of the area required to assess possible presence and significance of non-designated remains and to assess whether/how these should be protected during working.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
distinctive features and their settings).			<p>could be anywhere from Very Significant to No Significant impact</p> <ul style="list-style-type: none"> Archaeological assessment and evaluation will be required. When these have been undertaken archaeological impacts, if any, will be better understood. 	<ul style="list-style-type: none"> All necessary mitigation to be implemented. Adequate provision to be made for preservation, excavation or recording, as appropriate. Further consideration to be given to restoration proposals, in terms of historic landscapes. Development not to impact on White Mill Bridge and other buildings.
	-	+	<p>Historic Landscapes</p> <ul style="list-style-type: none"> The site lies in the valley of the river Stour, which is relatively broad and flat-bottomed in this area. Such a location was formerly favoured for watermeadow systems. Archaeological assessment, as described above, is required to properly understand potential impacts on such remains and to determine what mitigation may be required. 	
	0	0	<p>Historic Buildings</p> <ul style="list-style-type: none"> Henbury Hall is well screened from the proposed site. The position of the treatment plant is close to the landscape associated with the Hall but would be well screened by a large clump of trees in front of the Hall. The Hall does not have a recognised park or garden of historic value but does have an immediate landscape similar to planned parkland landscapes of the late 18th century and an offset approach avenue of reasonably mature trees. The setting of this building is not adversely impacted by the proposals. The Sturminster Marshall conservation area and all the listed buildings in Sturminster Marshall are well screened from the proposed site and therefore their setting is not adversely affected by the proposals. <p><u>AS14 (a) Sturminster Marshall northern extension:</u></p> <ul style="list-style-type: none"> The original proposal was to extract aggregate to a point close to and fully visible from White Mill Bridge. This has been revised and proposed extraction pulled away to a point where it is not visible from the bridge, removing this impact. The proposals for the restoration of the original site have a very artificial quality and would benefit from either professional landscape advice and or the input of a creative artist specialising in land-forming artwork. 	

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
7. To maintain, conserve and enhance the landscape, including townscape, seascape and the coast.	-	+	<p>Landscape Capacity</p> <ul style="list-style-type: none"> Retention and management of existing landscape features is important. It is considered that this area has important potential as future accessible open land associated with the Stour Valley Green Infrastructure initiative. If site is developed, restoration can contribute to this end. 	<ul style="list-style-type: none"> Landscape and visual impact assessment to identify impacts; adequate mitigation of such impacts before and during working. If mitigation is not possible, a view will have to be taken as to whether a time-limited impact would be acceptable. Appropriate restoration proposals in line with Landscape Management Guidelines referred to in Minerals Strategy. Maintain screening woodland around edges of site.
	0	0	<p>Designated Landscapes</p> <ul style="list-style-type: none"> No significant impact/negligible. 	
8. To protect and improve air quality and reduce the impacts of noise.	0	0	<ul style="list-style-type: none"> Impacts on air quality expected to be negligible. No AQMAs will be affected by the working of this site proposal. Any dust resulting from working will be controlled through normal dust-suppression measures. Noise mitigation will be addressed at the planning application stage, with appropriate mitigation to be included in the development of the site. 	<ul style="list-style-type: none"> Environmental protection measures to reduce dust and ensure noise is appropriately mitigated.
9. To maintain, conserve and enhance soil quality.	-	0	<ul style="list-style-type: none"> Soil quality ranges from poor to very good. Working the site will have impacts on this soil. Proposed restoration is to wetland/lakes. Any soil removed will be protected during working and either re-used on site or taken elsewhere to be used. Soils will be protected during working and restoration could bring agricultural land back into production. 	<ul style="list-style-type: none"> Soil to be properly stripped and stored prior to working; protected during working; and re-spread on site after working.
10. To conserve and safeguard mineral resources.	+	0	<ul style="list-style-type: none"> The site would make an important contribution to aggregate supply in Bournemouth, Dorset and Poole. 	<ul style="list-style-type: none"> No specific action required; site development to take into consideration relevant impacts and mitigate where appropriate.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
11. To promote the use of alternative materials.	0	0	<ul style="list-style-type: none"> This proposal does not at present promote the use of alternative materials and given the sensitivities associated with the nearby borehole extraction, waste is unlikely to be used in restoration. 	<ul style="list-style-type: none"> No action required.
12. To provide an adequate and affordable supply of minerals to meet society's needs.	+	0	<ul style="list-style-type: none"> Development of this site would provide a benefit in terms of contributing to the provision of a supply of minerals to meet society's needs. Ensuring a sustainable supply will depend on the development and management of the site. Providing site development takes into account relevant principles of sustainable development it is expected this will contribute to complying with this objective. 	<ul style="list-style-type: none"> Ensure principles of sustainable development are incorporated into the development of this site.
13. To promote and encourage sustainable economic growth	+	0	<ul style="list-style-type: none"> This site proposal is expected to contribute to economic development on two levels – directly through the provision of employment at the site to be developed and indirectly through the provision of aggregate minerals required for the maintenance of built environment and for new built development. Both levels are expected to maintain employment, skilled and unskilled. However given the expected size of the reserve this is likely to be a limited benefit. Restoration to agriculture with some element of public access will, if achieved, offer some economic benefits through both the agriculture and the recreational attraction and use in the wider area (i.e. riding, walking). 	<ul style="list-style-type: none"> Further assessment required to form a view as to what the most appropriate restoration could be.
14. To adapt to and mitigate the impacts of climate change.	-	0	<ul style="list-style-type: none"> Developing land as a quarry is expected to have some negative impacts regarding climate change, due primarily to machinery used and transportation of mineral away from site. However, these will in relative terms be negligible. The Bournemouth, Dorset and Poole Minerals Strategy seeks to address and minimise such impacts through Policy CC1 which requires operators to take into consideration climate change impacts and their possible mitigation for any proposed minerals development. The development management policies, e.g. DM 1, also address and seek to minimise the issue of sustainable development and climate change. Restoration to some form of vegetated environment will offer benefits in the form of climate change mitigation, including provision of habitat for wildlife, but again these will be relatively small. 	<ul style="list-style-type: none"> Use energy efficient plant and machinery. Implement restoration which provides appropriate habitats to help to increase resilience of flora/fauna.
15. To minimise	--	0	<ul style="list-style-type: none"> This is a large site on the north side of the A31T 	<ul style="list-style-type: none"> Any proposal for this

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
the negative impacts of waste and minerals transport on the transport network, mitigating any residual impacts.			<p>with an estimated annual output of 200,000 tonnes. While no estimation of HGV trip rates has been given it could be in the region of 80 per day. No details have been given regarding the point of access to the site although it does have a long frontage with the A31T.</p> <ul style="list-style-type: none"> The Highways Agency have previously raised significant concerns over this proposal both in safety terms and with regards to impact on the A31/A350 roundabout. Any access along this section of the A31T is unlikely to be acceptable for safety reasons due to the alignment of the road and traffic volumes. The Highways Agency will need to be consulted regarding any proposals at this site. The only other adjacent carriageway is Moor Lane which travels northbound to Sturminster Marshall. Moor Lane itself is very narrow, has few passing places and serves some dwellings close to its junction with the High Street. The High Street itself is narrow and has significant numbers of parked cars. The main entrance to the local first school is also just south of the junction of Moor Lane and the High Street. Vehicles would then also have to pass along Station Road, a residential street with many parked cars and a well-used local shop. This route is therefore not considered to be suitable for the large numbers of heavy vehicles and any proposal along those lines would be strongly objected to by the Highway Authority. The only other option would be to create a haul route to the A350 north of the A31 roundabout. There is however, no indication that this is achievable and the Highways Agency may still have issues at the A31 roundabout to the south. For the above reasons the site has been given a 'Very Significant Adverse Impact'. Policies DM1 and DM 8 of the Minerals Strategy actively address this issue of minimising impacts on the transportation network, but it is not clear how they could overcome these issues raised. 	<p>site would need to be accompanied by a Transport Assessment which will need to provide access details and consider vehicle routing. The TA should be scoped with the Transport Development Management Team.</p> <ul style="list-style-type: none"> Transport Assessment to be carried out, identifying opportunities for reducing impacts on the transport network. Even with all the required assessment it is not clear how the objections could be overcome.
16. To support and encourage the use of sustainable transport modes, imposing no unmitigated negative impacts on	—	0	<ul style="list-style-type: none"> The proposed extension can only realistically be accessed by means of road transport, resulting in a negative impact under this Objective during development and working. As far as reasonably possible negative impacts resulting from access and transport will be mitigated, as required by Policies DM1 and DM8 of the Minerals Strategy. 	<ul style="list-style-type: none"> Mitigate impacts where identified and appropriate.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
them.				
17. To sustain the health and quality of life of the population	–	0	Impact on Sensitive Human Receptors <ul style="list-style-type: none"> A number of residences/businesses in close proximity to proposed development; village of Sturminster Marshall within 500m, industrial estate even closer. Development would likely require appropriate mitigation (such as visual and noise attenuation bunding, standoffs) to limit impacts. 	<ul style="list-style-type: none"> Provision of appropriate mitigation, following assessment of likely impacts. Restoration to improve landscape of site where possible; and to seek to increase public access. Screening, bunding, standoffs will mitigate impacts to some extent.
	–	0	Impact on Existing Settlements <ul style="list-style-type: none"> Village of Sturminster Marshall within 500m, industrial estate even closer. Mitigation will be required – visual/noise attenuation bunds. Development would likely require appropriate mitigation (such as visual and noise attenuation bunding, standoffs) to limit impacts. 	
	0	0	Impact on Airport Safety <ul style="list-style-type: none"> Site is approximately 13km from airport and proposed for wetland restoration. It will be developed, worked and restored in a way that will avoid any birdstrike or other hazards. 	
18. To enable safe access to countryside and open spaces.	0	+	Impact on Recreational Land <ul style="list-style-type: none"> No formal/informal recreation within the site; fishing lakes and golf course adjacent to site. 	<ul style="list-style-type: none"> No action required for working. Restoration to include public access, preferably improved levels of public access.
	– –	+	Impact on Public Rights of Way <ul style="list-style-type: none"> The Wareham Forest Way, a way-marked long distance path, crosses the site. Removing this link permanently would be a significant impact. Removing it temporarily would also constitute an impact, albeit time-limited. Proposed restoration includes maintaining this link as well as adding further public access across restored land, a positive benefit. 	

Preliminary Hydrological Risk Assessment

Controlled Waters	Issues/Risks	Mitigation	Further information/approval required
<ul style="list-style-type: none"> • Watercourses • Ponds/lakes, including wet habitats • Groundwater 	<ul style="list-style-type: none"> • The River Basin Management Plan South West River Basin District identifies the Stour as being of 'Moderate' environmental quality in this area. Potential for contamination from runoff from site. • Potential for contamination or some other impact on nearby borehole extraction point. • Potential for contamination of controlled waters through spillage or seepage of pollutants such as fuel, or silt in water. • Contamination of water supplies or reduction in amount of water available for licenses supplies. • Impacts on or removal of surface water features. 	<ul style="list-style-type: none"> • Appropriate arrangements to be made for ensuring that runoff from the site does not enter the Stour or groundwater unless any silt has first been removed. • Fuel stored on site to be appropriately banded and sealed to prevent any spillage from entering ground or surface waters. • On-going monitoring during development and working of the site. 	<ul style="list-style-type: none"> • Full hydrogeological risk assessment, including risk assessment on potential impacts on borehole. • Flood Risk Assessment • Water Framework Assessment • Further assessment of potential impacts on water quality and levels, particularly for groundwater, is required prior to development. • Assessment of the feasibility of relocating ponds and associated habitats and species. • Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.

Cumulative Impacts

- Site is a new proposal in an area where there is other mineral working.
- The proposal lies within 5Km of a site allocated for development in the Christchurch and East Dorset Consolidated Plan¹⁰ May 2013, Policy CM1 Lockyer's School, Corfe Mullen – 250 dwellings. Traffic from this development will add to traffic levels on the A31.

¹⁰ The Consolidated Plan is an amalgamation of the Christchurch and East Dorset Core Strategy Pre submission draft April 2012 and the Christchurch and East Dorset Schedule of Proposed Changes November 2012.

Summary.

Potential Benefits	Potential Impacts
<ul style="list-style-type: none"> • Provision of aggregates required for maintenance and construction of the built environment. • Restoration could include some increased public access. • Restoration could include benefits for nature conservation, including reducing visitor impacts on designated heathlands. 	<ul style="list-style-type: none"> • Potential impacts on biodiversity. To be assessed but should be capable of mitigation. • Potentially significant hydrological/hydrogeological impacts, on River Stour and the Corfe Mullen Public Water Supply. • Significant transport impacts relating to gaining satisfactory access to site, and from site to A31. Full Transport Assessment required. • Possible impacts on archaeology – to be fully assessed and not expected to restrict development. All necessary mitigation to be implemented. • Possible impacts on airport to be considered and site to be developed and restored in a way that does not have any impact on airport. • Site is large enough that visual impacts on surrounding properties are expected to be capable of mitigation. • Potential impacts on amenity, including residences and the village of Sturminster Marshall. • Impacts on access – the Wareham Forest Way crosses the site.

Overall Recommendation:

Having considered the likely positive and negative impacts as indicated by the sustainability appraisal, it is considered that there are currently two key impacts that may not be capable of mitigation, or mitigation includes unacceptable risks. These are:

- i. The issue of gaining satisfactory access to the site for lorries.
- ii. The issue of potential risk/threat to the Corfe Mullen Public Water Supply source would require the development to demonstrate hydrogeological separation from the public supply. A detailed hydrogeological study with risk assessment would be required. Although it may be possible to demonstrate hydrogeological separation, the risk of an event causing contamination of the public water supply still exists and is considered at this time to be unacceptable.

On the basis of the evidence available the nominated site appears to be subject to significant constraints not currently capable of satisfactory mitigation and cannot be included in the Draft Bournemouth, Dorset and Poole Mineral Sites Plan at the present time unless exceptional circumstances (not currently present) arise.

The benefits of developing this site are not considered to outweigh the impacts of working here. **At this time** other sites are considered to be more appropriate options for supplying aggregate.

It is **recommended** that this site should not be included in the emerging Mineral Sites Plan

Aggregates: AS20 Came Home Farm

Site Name/Location: AS20 Came Home Farm Mineral Type: Sand and gravel		Nominee/Agent: Came Estate / Land and Mineral Management Local Authority: West Dorset District Council
Site Area: approximately 10 ha	Production: 50,000 tpa;	Reserve: approximately 400,000 tonnes

Impact Assessment Scoring

--	Strong Negative Impact	-	Minor Negative Impact	+	Minor Positive Impact	++	Strong Positive Impact	0	Negligible or No Effect	?	Uncertain
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Timescales for effects:

P/W: Preparation and Working

R/A: Restoration and Afteruse

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
1. To move waste management up the waste hierarchy	N/A	N/A	<ul style="list-style-type: none"> This Objective is not relevant to this site nomination 	<ul style="list-style-type: none"> N/A
2. To maintain, conserve and enhance biodiversity	0	0	European/International Designations <ul style="list-style-type: none"> No likely effects identified. 	<ul style="list-style-type: none"> No action required.
	0	0	Annex 1 Bird Species <ul style="list-style-type: none"> No likely effects identified. 	<ul style="list-style-type: none"> No action required.
	0	0	National Designations <ul style="list-style-type: none"> No likely effects identified. 	<ul style="list-style-type: none"> No action required.
	?	0	Protected species <ul style="list-style-type: none"> South Winterbourne known to support significant population of Water Vole. Assessment of effects of extraction on this species will be necessary. Otter likely to use river valley as well. Mitigation for presence of these species is very likely to be achievable. 	<ul style="list-style-type: none"> Ecological surveys required, with appropriate mitigation identified.
	?	0	Local recognitions/designations, including ancient woodland and veteran trees <ul style="list-style-type: none"> Winterbournes are rare chalk streams which are groundwater fed and only flow at certain times of year as groundwater levels in the aquifer fluctuate. They support a range of specialist wildlife adapted to this unusual flow regime, including a number of rare or scarce invertebrates, otter and water vole. 	<ul style="list-style-type: none"> All necessary surveys and assessment to be carried out with negative impacts to be identified and mitigated as appropriate. Restoration to include creation/re-creation of habitat, where

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			<ul style="list-style-type: none"> Invertebrate sampling carried out confirmed the site has supported <i>Paraleptophlebia weneri</i>, a rare mayfly which is a Red Data Book 3 species. <i>Simulium latipes</i>, a regionally notable blackfly species, was also recorded. This stretch of winterbourne had a high conservation value. The South Winterbourne is a priority habitat (Rivers/chalkstreams) under the European Habitats Directive and UK Biodiversity Action Plan. The South Winterbourne within the proposed area has been subject to significant biodiversity enhancement works. Extraction could adversely affect the public and private investment in biodiversity gain. Any loss to this gain would need to be fully compensated elsewhere along the South Winterbourne. Adjacent SNCI recognised for lichen interest on parkland trees. Assessment of peripheral trees around proposed area for lichen and bryophyte interest would be required. Consider establishment of parkland type landscape within restoration plans. 	appropriate.
3. To maintain, conserve and enhance geodiversity.	+	0	<ul style="list-style-type: none"> Exposures resulting from working may be of interest. Benefits are only expected during working, and are likely to be obscured or covered as part of restoration. 	<ul style="list-style-type: none"> Operator to be asked to permit visits to view exposures as required.
4. To maintain, conserve and enhance the quality of ground, surface and sea waters and manage the consumption of water in a sustainable way.	-	?	<p>Groundwater</p> <ul style="list-style-type: none"> Potential to impact on South Winterbourne Stream. Site is in a groundwater Source Protection Zone 2. Site overlies a Principal (Bedrock) Aquifer. Hydrological Risk Assessment would be required. 	<ul style="list-style-type: none"> Further assessment on possible impacts on water supplies and appropriate mitigation if potential impacts identified. Where necessary mitigating measures should be installed to maintain groundwater levels. Hydrological assessment required to determine possible impacts, on ground and

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	---			<p>surface waters, with appropriate mitigation to be implemented.</p> <ul style="list-style-type: none"> Detailed pollution prevention management plan detailing best practices to minimise pollution incidents, as well as measures that will be taken should a pollution event occur. Appropriate arrangements should be put in place to ensure that the water leaving the site and entering the winterbourne is of an acceptable quality.
	-	?	<p>Surface Water</p> <ul style="list-style-type: none"> Winterbourne running through and adjacent to site, other drains on site. Environment Agency has concerns over the proximity of the South Winterbourne to the proposed works. Particular concern over this section as it is a losing reach and works may exacerbate this leading to increased disconnection from the River Frome. Secondary concerns over increased sedimentation. 	<ul style="list-style-type: none"> Appropriate arrangements should be installed for surface water and silt collection and fuel storage to prevent contamination of groundwater resources. Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.
5. To reduce flood risk and improve flood management.	0	0	<p>Flooding/Coastal Stability</p> <ul style="list-style-type: none"> A significant proportion of the site falls within Flood Zone 2 and 3. Site is proposed for sand and gravel extraction, which is permitted in the functional floodplain. Processing plant far removed and on FRZ 1. 	<ul style="list-style-type: none"> Flood Risk Assessment (FRA) will be required. All necessary mitigation to be implemented.
6. To maintain, conserve and enhance the historic environment (including archaeological sites, historic buildings, conservation areas, historic parks and gardens and other locally distinctive features and their settings).	?	0	<p>Archaeology</p> <ul style="list-style-type: none"> Aerial photographic evidence in the Dorset Historic Environment Record showed, at one time, a complex of earthworks of a watermeadow system on the site. However, although the ground surface in the area of the site is somewhat uneven, there are no clear traces of watermeadow earthworks. This is probably the result of ploughing at some time, which has largely or wholly obliterated the features recorded in the Dorset Historic Environment Record in this area. Archaeological assessment and evaluation will be required to indicate potential impacts on this system and on any other below-ground archaeological remains. 	<ul style="list-style-type: none"> Full archaeological survey of the area required to assess possible presence and significance of non-designated remains and to assess whether/how these should be protected during working. All necessary mitigation to be implemented. Adequate provision to be made for

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			<ul style="list-style-type: none"> When these have been undertaken archaeological impacts, if any, will be better understood. 	<ul style="list-style-type: none"> preservation, excavation or recording, as appropriate. Further consideration to be given to restoration proposals, in terms of historic landscapes.
	?	0	<p>Historic Landscapes</p> <ul style="list-style-type: none"> The site lies in the bottom of the valley of the south Winterbourne, a tributary of the river Frome, which it joins nearby at West Stafford. This section of the south Winterbourne, like much of the Frome in this vicinity, contains an extensive series of watermeadow earthworks. These probably date from the 18th and 19th centuries, and were a method of fertilising the land and enabling an earlier growth of grass that allowed stock to graze much earlier in the year. Assessment and evaluation will be required and when these have been undertaken impacts on the historic landscape, if any, will be better understood. The impact will vary depending on the quality and extent of survival of these earthworks. 	
	—	0	<p>Historic Buildings</p> <ul style="list-style-type: none"> With respect to Came Home Farm AS20 the minerals extraction itself is not significant but the proposal to potentially route lorries through the gateway adjacent to the Grade II listed Lodge Gate to Came Park is much more significant having an effect on the setting of a group of listed buildings including the Grade I Came House, Grade I Parish Church of St Peter, Grade II Barnes Monument in Came Churchyard, Grade II Old Came Rectory and the Grade II stables building. Came House, the church and the stables together with the Barnes monument all sit within Came Park whose entrance is through the traditional gate and Lodge Gatehouse. The Park also includes a deserted village which is a scheduled monument. The quiet countrified access through the Lodge Gate has historical value as part of the setting of these monuments but also for its association with the Dorset dialect poet William Barnes. He was rector of Came Church, lived in Came Rectory and famously walked along the road into the Park to deliver Services every Sunday. The impact on this countrified, semi-idyllic assembled group of related structures would be significant and adverse losing a quality of relationship that has been there for a very long 	<ul style="list-style-type: none"> Any assessment required to be carried out, with appropriate mitigation implemented as required. Routing for lorries leaving the site and wanting to turn right not to include the option of crossing the road and turning left past the Lodge.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			<p>time.</p> <ul style="list-style-type: none"> There would be a Significant Adverse Impact if lorries are routed out of Came Farm, through the Park and out past the Lodge . If a way of dealing with the traffic that does not involve spoiling the setting of this Lodge and thus of the related structures can be identified then the impact would be significantly reduced. 	
7. To maintain, conserve and enhance the landscape, including townscape, seascape and the coast.	---	?	<p>Landscape Capacity</p> <ul style="list-style-type: none"> Open rural countryside where development would have a significant adverse impact on the estate landscape and visual character as well as on the amenity of road, footpath/bridleway users. Restoration to primarily open water would be a new feature to the local landscape which does not have any ponds/lakes. 	<ul style="list-style-type: none"> Landscape and visual impact assessment to identify impacts and to assess whether these impacts are capable of appropriate and satisfactory mitigation, before and during working. If mitigation is not possible, a view will have to be taken as to whether a time-limited impact would be acceptable. If the site is developed, appropriate restoration proposals in line with Landscape Management Guidelines referred to in Minerals Strategy will be required.
	—	?	<p>Designated Landscapes</p> <ul style="list-style-type: none"> Adjacent to the Dorset AONB boundary so will impact on its setting. Further assessment required to assess extent of impact and options for mitigation. 	
8. To protect and improve air quality and reduce the impacts of noise.	0	0	<ul style="list-style-type: none"> Impacts on air quality expected to be negligible. No AQMAs will be affected by the working of this site proposal. Any dust resulting from working will be controlled through normal dust-suppression measures. Noise mitigation will be addressed at the planning application stage, with appropriate mitigation to be included in the development of the site. 	<ul style="list-style-type: none"> Environmental protection measures to reduce dust and ensure noise is appropriately mitigated.
9. To maintain, conserve and enhance soil quality.	—	0	<ul style="list-style-type: none"> Agricultural soils are good to moderate and working the site will have impacts on this soil. Soils will be protected during working. Proposed restoration is primarily to open water as a fishing/nature conservation lake. Soils to be protected and either re-used on site or used elsewhere. 	<ul style="list-style-type: none"> Soil to be properly stripped and stored prior to working; protected during working; and re-spread on site or elsewhere after working.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
10. To conserve and safeguard mineral resources.	+	0	<ul style="list-style-type: none"> The site would make an important contribution to aggregate supply in Bournemouth, Dorset and Poole. 	<ul style="list-style-type: none"> No specific action required; site development to take into consideration relevant impacts and mitigate where appropriate.
11. To promote the use of alternative materials.	-	0	<ul style="list-style-type: none"> This proposal does not promote the use of alternative materials. 	<ul style="list-style-type: none"> No action required.
12. To provide an adequate and affordable supply of minerals to meet society's needs.	+	0	<ul style="list-style-type: none"> Development of this site would provide a benefit in terms of contributing to the provision of a supply of minerals to meet society's needs. Ensuring a sustainable supply will depend on the development and management of the site. Providing site development takes into account relevant principles of sustainable development it is expected this will contribute to complying with this objective. 	<ul style="list-style-type: none"> Ensure principles of sustainable development are incorporated into the development of this site.
13. To promote and encourage sustainable economic growth	+	0	<ul style="list-style-type: none"> This site proposal is expected to contribute to economic development on two levels – directly through the provision of employment at the site to be developed and indirectly through the provision of aggregate minerals required for the maintenance of built environment and for new built development. Both levels are expected to maintain employment, skilled and unskilled. However given the expected size of the reserve this is likely to be a limited benefit. Restoration to a recreational use (fishing lake) will, if achieved, offer on-going economic benefits through the recreational attraction. 	<ul style="list-style-type: none"> Further assessment required regarding the suitability of a fishing lake/water body restoration in this location.
14. To adapt to and mitigate the impacts of climate change.	-	0	<ul style="list-style-type: none"> Developing the site as a quarry is expected to have some negative impacts regarding climate change, due primarily to machinery used and transportation of mineral away from site. However, these will in relative terms be negligible. The Bournemouth, Dorset and Poole Minerals Strategy seeks to address and minimise such impacts through Policy CC1 which requires operators to take into consideration climate change impacts and their possible mitigation for any proposed minerals development. The development management policies, e.g. DM 1, also address and seek to minimise the issue of sustainable development and climate change. Restoration to some form of vegetated 	<ul style="list-style-type: none"> Use energy efficient plant and machinery. Implement restoration which provides appropriate habitats to help to increase resilience of flora/fauna.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			environment will offer benefits in the form of climate change mitigation, including provision of habitat for wildlife, but again these will be relatively small.	
15. To minimise the negative impacts of waste and minerals transport on the transport network, mitigating any residual impacts.	—	0	<ul style="list-style-type: none"> While the site abuts the A352, there would be likely to be strong highway objections to any access here due to the horizontal and vertical alignment of the carriageway at this point. However, if the workings were accessed from the West Stafford Bypass, there may be a solution subject to any required improvements to that access. The Transport Development Management Team should be contacted to discuss any Transport Assessment prior to submission of a planning application. This document should also consider Highways Agency concerns with regards to movements to the A35T. As access possibilities onto the A352 are very restricted the site, as proposed, has been given a rating of 'Very Significant Adverse Impact'. However, should the alternative access identified above (or some other acceptable option) be provided then the rating would be 'Less Significant Adverse Impact'. This site would require a full Transport Assessment were it to be submitted as a planning application. Any TA should initially be scoped with the Transport Development Management Team. It would also need to consider the Highways Agency concerns with regards to movements to the A35T. Policies DM1 and DM 8 actively address this issue of minimising impacts on the transportation network. 	<ul style="list-style-type: none"> Any proposal for this site would need to be accompanied by a Transport Assessment which will need to provide access details and consider vehicle routing. The TA should be scoped with the Transport Development Management Team. Transport Assessment to be carried out, identifying opportunities for reducing impacts on the transport network. Alternative options to be investigated.
16. To support and encourage the use of sustainable transport modes, imposing no unmitigated negative impacts on them.	—	0	<ul style="list-style-type: none"> The proposed extension can only realistically be accessed by means of road transport, resulting in a negative impact under this Objective during development and working. As far as reasonably possible negative impacts resulting from access and transport will be mitigated, as required by Policies DM1 and DM8 of the Minerals Strategy. 	<ul style="list-style-type: none"> Mitigate impacts where identified and appropriate.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
17. To sustain the health and quality of life of the population	0	0	Impact on Sensitive Human Receptors <ul style="list-style-type: none"> • Came Home Farm lies within 100m. However, the site is screened from the farm, and the screening can be increased. • Other properties within 500m. Site is already screened, and further screening (visual and noise attenuation bunding) would significantly limit the impact of the site working. • Development would likely require appropriate mitigation (such as visual and noise attenuation bunding, standoffs) to limit impacts. 	<ul style="list-style-type: none"> • Provision of appropriate mitigation, following assessment of likely impacts. • Restoration to improve landscape of site where possible; and to seek to increase public access. • Transport Assessment to be carried out, identifying opportunities for reducing impacts on the transport network with specific reference to traffic impacts on Broadmayne.
	–	0	Impact on Existing Settlements <ul style="list-style-type: none"> • Dorchester approximately 800m to north west, West Stafford approximately 900m to north. No intervisibility, the site is on the valley bottom and well screened. • Potential for more of an impact on Broadmayne if lorries turn left out of the site to take material to Masters Pit on Puddletown Road for processing. 	
	?			
	0	0	Impact on Airport Safety <ul style="list-style-type: none"> • Site is approximately 40km from the airport, no impact expected. 	<ul style="list-style-type: none"> • No action required.
18. To enable safe access to countryside and open spaces.	0	?	Impact on Recreational Land <ul style="list-style-type: none"> • Site is agricultural land and not used for formal/informal recreation. • Restoration will be to a recreational use, a commercial fishing lake. 	<ul style="list-style-type: none"> • Further assessment required regarding the impacts, visual and otherwise, of including a fishing lake in this area. • Assessment of impacts required, with appropriate mitigation identified – including whether it is acceptable for the time-limited impacts on the footpath of quarrying followed by creation of a fishing lake. • Restoration to improve public access in the area.
	–	0	Impact on Public Rights of Way <ul style="list-style-type: none"> • No rights of way cross the site, but footpath runs along south eastern boundary and another one touches eastern corner of site. • Footpath to south of site overlooks the site and as it ascends hill cannot realistically be screened. 	

Controlled Waters	Issues/Risks	Mitigation	Further information/approval required
<ul style="list-style-type: none"> • Watercourses • Ponds/lakes, including wet habitats • Groundwater 	<ul style="list-style-type: none"> • There is a potential for contamination of the Winterbourne, and therefore the Frome, from runoff from site. The River Basin Management Plan South West River Basin District identifies the Frome as being of 'Poor' environmental quality in this area. • Potential for contamination of controlled waters through spillage or seepage of pollutants such as fuel, or silt in water. • Impacts on or removal of surface water features. 	<ul style="list-style-type: none"> • Appropriate arrangements to be made for ensuring that runoff from the site does not enter the Winterbourne or the Frome or groundwater unless any silt has first been removed. • Fuel stored on site to be appropriately bunded and sealed to prevent any spillage from entering ground or surface waters. • On-going monitoring during development and working of the site. 	<ul style="list-style-type: none"> • Full hydrogeological risk assessment • Flood Risk Assessment • Water Framework Assessment • Further assessment of potential impacts on water quality and levels, particularly for groundwater, is required prior to development. • Assessment of the feasibility of relocating ponds and associated habitats and species. • Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.

Cumulative Impacts

Site is a new development in an area where there is already mineral development. Visually there will not be any cumulative impacts, but lorries will have impacts particularly where they turn left and head towards Broadmayne.

The proposal is within 5Km of sites of St Georges Road, Dorchester allocated in the Pre -Submission draft West Dorset, Weymouth and Portland Local Plan (June 2012) as amended by Proposed Modifications (June 2013), (Policies DOR 7, DOR 8 and DOR 9) for residential (approx 150 dwellings in total) and /or employment development. Traffic arising from the new development will also add to general traffic levels in Dorchester and on the A352.

Summary.

Potential Benefits	Potential Impacts
<ul style="list-style-type: none">• Provision of aggregates required for maintenance and construction of the built environment.• Restoration could include some increased and improved public access and will include a fishing lake.	<ul style="list-style-type: none">• Visual impacts, from the adjacent AONB and from the footpath going up a hill to the south of the site. Since the site is at the bottom of a valley it is lower than both these viewpoints and lower than the road that runs west and south of it. It is not clear how these impacts will be mitigated.• It is not clear how the proposed restoration will be achieved.• A number of hydrological and nature conservation related impacts have been identified, from impacts on wildlife to impacts on the winterbourne flow to hydrological impacts. Further work, including a year's worth of groundwater monitoring, will be required.• There are potentially serious transportation constraints, with safety issues for vehicles entering and leaving the site. Further work required to determine possible mitigation.• There are impacts on landscape, both in terms of impacts on the AONB and the capacity of the local landscape to absorb the significant changes proposed.• Potential heritage issues, including archaeology, historic landscapes and historic buildings.

Overall Recommendation:

This is a relatively small site which presents a series of potential impacts for which, in some cases, no mitigation has currently been identified.

On the basis of the evidence available it does not appear that there is sufficient certainty that the impacts identified in this sustainability appraisal are currently capable of satisfactory mitigation. The site remains part of the mineral resource of Bournemouth, Dorset and Poole but is not at this time included in the Draft Bournemouth, Dorset and Poole Mineral Sites Plan.

The benefits of developing this site are not considered to outweigh the impacts of working here. **At this time** other sites are considered to be more appropriate options for supplying aggregate.

It is **recommended** that this site should not be included in the emerging Mineral Sites Plan

Aggregates: AS23 Gore Heath, Sandford

Site Name/Location: AS23 Gore Heath		Nominee/Agent: Veolia Environmental Services	
Mineral Type: Sand and gravel		Local Authority: Purbeck District Council	
Site Area: approximately 145 ha	Production: approximately 200,000 to 250,000 tpa (to be confirmed);	Reserve: approximately 11 mt	

Impact Assessment Scoring

--	Strong Negative Impact	-	Minor Negative Impact	+	Minor Positive Impact	++	Strong Positive Impact	0	Negligible or No Effect	?	Uncertain
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Timescales for effects: P/W: Preparation and Working R/A: Restoration and Afteruse

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
1. To move waste management up the waste hierarchy	N/A	N/A	<ul style="list-style-type: none"> This Objective is not relevant to this site nomination 	<ul style="list-style-type: none"> N/A
2. To maintain, conserve and enhance biodiversity	?	0	<p>European/International Designations</p> <ul style="list-style-type: none"> Proposed area supports Annex 1 birds which may be functionally linked to Dorset Heathlands SPA. The area is well used as recreation site contributing to the network of areas which help to reduce human recreational pressure on designated heathlands. Site is adjacent to Morden Bog and Hyde Heath SSSI, which is a component of the Dorset Heaths SAC, Dorset Heathland SPA/Ramsar. Working this area could lead to significant risk of adverse effects on European sites. At the moment the area includes a small part of the Dorset Heaths SAC and Dorset Heathlands Ramsar along the eastern boundary; this area must be removed from the possible allocation to have any chance of being taken forward otherwise a conclusion of adverse effects on integrity of the sites is inevitable. In order to be acceptable the development proposal would have to pass the tests in the Habitats Regulations. 	<ul style="list-style-type: none"> Ecological surveys and hydrological reports required, with appropriate mitigation. Appropriate assessment under the Habitat Regulations will be required. Heathland restoration and public access to be created.
	?	0	<p>Annex 1 Bird Species</p> <ul style="list-style-type: none"> Area supports Annex 1 birds as part of the existing forestry crop rotation. Clearance of trees would result in heathland regeneration and the open habitat would rapidly become suitable for more Annex 1 birds. The site has the potential to be included in a 	<ul style="list-style-type: none"> Ecological surveys and hydrological reports required, with appropriate mitigation. Appropriate assessment under the Habitat Regulations will

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			revision to the heathland SPA boundary. Risk based approach essential here.	<ul style="list-style-type: none"> be required. Heathland restoration and public access to be created.
	?	0	<p>National Designations</p> <ul style="list-style-type: none"> In addition to the comments on European/International Designations above, the area is likely to support a rich invertebrate assemblage in existing rides contributing to maintenance of species within SSSI. At the moment the area includes a small part of the Morden Bog and Hyde Heath SSSI along the eastern boundary; this area must be removed from the possible allocation to have any chance of being taken forward as there is no case for directly damaging a nationally important site to extract sand and gravel. 	<ul style="list-style-type: none"> Ecological surveys required, with appropriate mitigation. Restoration to include creation of invertebrate habitat.
	?	0	<p>Protected species</p> <ul style="list-style-type: none"> Existing rides support significant populations of European protected species, Sand Lizard and Smooth Snake, and common protected reptiles. Depending on population sizes it may be difficult to mitigate fully for effects on EPS and there is a risk that disturbance licences could be refused by Natural England. 	<ul style="list-style-type: none"> Ecological surveys required, with appropriate mitigation identified. Restoration to include appropriate habitats for these species. Further investigation into likelihood of grant of disturbance licences.
	?	0	<p>Local recognitions/designations, including ancient woodland and veteran trees</p> <ul style="list-style-type: none"> There are possible adverse implications for the Sherford River SNCI to the north of the proposed area, although through assessment it should be possible to avoid adverse effects on the SNCI. 	<ul style="list-style-type: none"> Ecological surveys required, with appropriate mitigation identified.
3. To maintain, conserve and enhance geodiversity.	+	0	<ul style="list-style-type: none"> Exposures resulting from working may be of interest. Benefits are only expected during working, and are likely to be obscured or covered as part of restoration. 	<ul style="list-style-type: none"> Operator to be asked to permit visits to view exposures as required.
4. To maintain, conserve and enhance the quality of ground, surface and sea waters and manage the consumption	? / -	0	<p>Groundwater</p> <ul style="list-style-type: none"> Site not within a Source Protection Zone. Overlies Secondary Aquifers. Extraction proposals would be potentially removing a large area of unsaturated zone so potential impacts on water features. Assessment required to determine possible impacts on hydrogeology. Impacts to be appropriately mitigated 	<ul style="list-style-type: none"> Hydrological assessment required to determine possible impacts, on ground and surface waters, with appropriate mitigation to be implemented. Where necessary mitigating measures should be installed to maintain

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
of water in a sustainable way.	? / _	0	<p>Surface Water</p> <ul style="list-style-type: none"> Sherford River runs 50m to north of site boundary. Pond on north-eastern boundary of site. Other drains and ponds in vicinity of site. Development needs to protect and enhance any water features in site. Stream within 50m of the northern boundary. The Sherford River and Sherford Bog Area are very sensitive. Any silt escape would be harmful to the protected area. 	<p>groundwater levels.</p> <ul style="list-style-type: none"> Appropriate arrangements should be put in place to ensure that the water leaving the site and entering the rivers/watercourses is of an acceptable quality. Any fuel on site should be properly stored to avoid contamination in case of spillage. Restoration proposals should incorporate wetland features which will contribute to the aspirations of the Biodiversity Strategy. Appropriate arrangements should be installed for surface water and silt collection and fuel storage to prevent contamination of groundwater resources. Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.
5. To reduce flood risk and improve flood management.	0	0	<p>Flooding/Coastal Stability</p> <ul style="list-style-type: none"> Site is within FRZ 1. 	<ul style="list-style-type: none"> Flood Risk Assessment (FRA) will be required. All necessary mitigation to be implemented.
6. To maintain, conserve and enhance the historic environment (including archaeological sites, historic buildings, conservation areas, historic parks and gardens and other locally distinctive features and	?	0	<p>Archaeology</p> <ul style="list-style-type: none"> The Dorset Historic Environment Record has no records of archaeological sites, features or finds within the site (although a milestone on the road on the west side is recorded). Nevertheless, considering the size of the site the potential for below-ground archaeological remains and other earthworks and other above-ground features needs to be assessed and if necessary evaluated before an informed planning decision can be made. Only when the relevant works have been undertaken would the archaeological impact be understood – at present it could be anywhere from Very Significant to No Significant impact. 	<ul style="list-style-type: none"> Full archaeological survey of the area required to assess possible presence and significance of non-designated remains and to assess whether/how these should be protected during working. All necessary mitigation to be implemented. Adequate provision to be made for

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
their settings).	--	+	Historic Landscapes <ul style="list-style-type: none"> The site was presumably heathland before being brought into its present use. So, the restoration of some of it to heathland could be a positive impact from an historical viewpoint. Further evaluation will be required. When this has been undertaken possible impacts, if any, will be better understood. 	<p>preservation, excavation or recording, as appropriate.</p> <ul style="list-style-type: none"> Further consideration to be given to restoration proposals, in terms of historic landscapes.
	0	0	Historic Buildings <ul style="list-style-type: none"> There are no historic buildings affected by this proposal. 	<ul style="list-style-type: none"> No action required.
7. To maintain, conserve and enhance the landscape, including townscape, seascape and the coast.	--	?	Landscape Capacity <ul style="list-style-type: none"> A very significant adverse impact on landscape character, visual and recreational amenity and a loss of an important open space facility for local and visitor users within close proximity to the urban edge. Assessment required to consider whether working of any scale could be possible. 	<ul style="list-style-type: none"> Landscape and visual impact assessment to identify impacts; consider whether adequate mitigation of such impacts before and during working is possible. If mitigation is not possible, a view will have to be taken as to whether a time-limited impact would be acceptable. Appropriate restoration proposals in line with Landscape Management Guidelines referred to in Minerals Strategy. Maintain screening woodland around edges of site.
	0	0	Designated Landscapes <ul style="list-style-type: none"> Less significant adverse impact. 	<ul style="list-style-type: none"> No action required.
8. To protect and improve air quality and reduce the impacts of noise.	0	0	<ul style="list-style-type: none"> Impacts on air quality expected to be negligible. No AQMAs will be affected by the working of this site proposal. Any dust resulting from working will be controlled through normal dust-suppression measures. Noise mitigation will be addressed at the planning application stage, with appropriate mitigation to be included in the development of the site. 	<ul style="list-style-type: none"> Environmental protection measures to reduce dust and ensure noise is appropriately mitigated.
9. To maintain, conserve and enhance soil quality.	-	0	<ul style="list-style-type: none"> The site comprises primarily heathland, grassland and woodland cover. The area is a former heathland area and so would be expected to have relatively poor, acidic soils. Site preparation/working would require stripping and storage of the soils, with some impacts on 	<ul style="list-style-type: none"> Soil is poor quality in agricultural terms but valuable in terms of potential for heathland restoration. Soils to be

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			<p>them.</p> <ul style="list-style-type: none"> If the site is worked and restored to heathland this will require reinstatement/retention of acidic soils with their seedbank. 	stored/protected during preparation and working and properly reinstated during restoration.
10. To conserve and safeguard mineral resources.	+	0	<ul style="list-style-type: none"> The site would make an important contribution to aggregate supply in Bournemouth, Dorset and Poole. 	<ul style="list-style-type: none"> No specific action required; site development to take into consideration relevant impacts and mitigate where appropriate.
11. To promote the use of alternative materials.	0	0	<ul style="list-style-type: none"> This proposal does not at present promote the use of alternative materials. 	<ul style="list-style-type: none"> No action required.
12. To provide an adequate and affordable supply of minerals to meet society's needs.	+	0	<ul style="list-style-type: none"> Development of this site would provide a benefit in terms of contributing to the provision of a supply of minerals to meet society's needs. Ensuring a sustainable supply will depend on the development and management of the site. Providing site development takes into account relevant principles of sustainable development it is expected this will contribute to complying with this objective. 	<ul style="list-style-type: none"> Ensure principles of sustainable development are incorporated into the development of this site.
13. To promote and encourage sustainable economic growth	+	0	<ul style="list-style-type: none"> This site proposal is expected to contribute to economic development on two levels – directly through the provision of employment at the site to be developed and indirectly through the provision of ball clay and aggregate minerals required for the maintenance of built environment and for new built development and for commercial/industrial uses. Both levels are expected to maintain employment, skilled and unskilled. However given the expected size of the reserve this is likely to be a limited benefit. Proposed restoration is to heathland/nature conservation and woodland/forestry, both of which offer economic benefits. 	<ul style="list-style-type: none"> Further assessment required to consider restoration options.
14. To adapt to and mitigate the impacts of climate change.	-	0	<ul style="list-style-type: none"> Developing land as a quarry is expected to have some negative impacts regarding climate change, due primarily to machinery used and transportation of mineral away from site. However, these will in relative terms be negligible. The Bournemouth, Dorset and Poole Minerals Strategy seeks to address and minimise such impacts through Policy CC1 which requires operators to take into consideration climate change impacts and their possible mitigation for any 	<ul style="list-style-type: none"> Use energy efficient plant and machinery. Implement restoration which provides appropriate habitats to help to increase resilience of flora/fauna.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			<p>proposed minerals development.</p> <ul style="list-style-type: none"> The development management policies, e.g. DM 1, also address and seek to minimise the issue of sustainable development and climate change. Restoration to some form of vegetated environment will offer benefits in the form of climate change mitigation, including provision of habitat for wildlife, but again these will be relatively small. 	
15. To minimise the negative impacts of waste and minerals transport on the transport network, mitigating any residual impacts.	---	?	<ul style="list-style-type: none"> This proposal covers a large site to the east of the B3075 Morden Road. Traffic data has not been supplied but is assumed to be in the region of 50 to 75 trips per day. Access could be achieved onto Morden Road although details indicating the necessary visibility and geometry would need to be supplied. Once on Morden Road, vehicles would either travel north to the A35 at Morden Park Corner or south to the A351 at Sandford. The existing junction at Morden Park Corner has significant accident problems and any attempt to access this proposal using the junction in its current form would receive the strongest objection from the Highway Authority on highway safety grounds. There is little that can be done to improve Morden Park Corner within the existing highway land. Any improvement would require significant land take. A previous scheme proposed to realign the northern part of Morden Road further to the east, providing a bigger stagger between the two arms of the crossroads and extended right turn lanes. It also proposed to realign a sharp bend to the east of Morden Park Corner on the A35. The cost for this scheme, or another like it, would be significant. To the south vehicles could access the A351. This road goes through Sandford, has severe congestion problems and a high accident rate. Any proposal that placed large numbers of HGVs on this road would therefore also be likely to be resisted by the Highway Authority. For the above reasons this site has been given a 'Very Significant Adverse Impact' rating. Policies DM1 and DM 8 of the Minerals Strategy actively address this issue of minimising impacts on the transportation network, but addressing the identified issues is likely to be generally beyond the scope of these policies. 	<ul style="list-style-type: none"> Any proposal for this site would need to be accompanied by a Transport Assessment which will need to provide access details and consider vehicle routing. The TA should be scoped with the Transport Development Management Team. Transport Assessment to be carried out, identifying opportunities for reducing impacts on the transport network. Alternative options to be investigated.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
16. To support and encourage the use of sustainable transport modes, imposing no unmitigated negative impacts on them.	-	0	<ul style="list-style-type: none"> The proposed extension can only realistically be accessed by means of road transport, resulting in a negative impact under this Objective during development and working. As far as reasonably possible negative impacts resulting from access and transport will be mitigated, as required by Policies DM1 and DM8 of the Minerals Strategy. 	<ul style="list-style-type: none"> Mitigate impacts where identified and appropriate.
17. To sustain the health and quality of life of the population	-	0	Impact on Sensitive Human Receptors <ul style="list-style-type: none"> Closest residence is Sherford Farm at approximately 350 m to the north-west. Other properties in the vicinity, including Sandford to south and south-east, Home Farm buildings to the east. The site is large enough that it should be possible to screen these residences satisfactorily, using mitigation such as visual and noise attenuation bunds. Development would likely require appropriate mitigation (such as visual and noise attenuation bunding, standoffs) to limit impacts. 	<ul style="list-style-type: none"> Provision of appropriate mitigation, following assessment of likely impacts. Restoration to improve landscape of site where possible; and to seek to increase public access. Transport Assessment to be carried out, identifying opportunities for reducing impacts on the transport network where appropriate.
			Impact on Existing Settlements <ul style="list-style-type: none"> Sandford is within 500m – size of site would permit appropriate screening (visual and noise). Lorries turning left out of the site, or delivering material to Wareham/Purbeck, would have an impact on Sandford/Wareham. 	
	0	0	Impact on Airport Safety <ul style="list-style-type: none"> Site is approximately 19km from Hurn Airport. Wet working not proposed, restoration will be at a lower level and may include wetland areas. No impacts expected. 	
18. To enable safe access to countryside and open spaces.	--	+/?	Impact on Recreational Land <ul style="list-style-type: none"> Site currently enjoys open access and there are a number of tracks/paths across it. It is extensively used for informal recreation. There will be very significant impacts on users of the site during working. Restoration offers the opportunity to restore/improve such access. The issue of displacement of existing users onto international designations around the site must be addressed. 	<ul style="list-style-type: none"> Restoration to open access land following working and improvement of access where possible and where appropriate. Consider phased working and restoration, to provide alternative options for recreational use while various parts of the site are worked.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	0	0	<p>Impact on Public Rights of Way</p> <ul style="list-style-type: none"> Statutory rights of way along the northern and eastern edges of the site. Site is large enough that these can be appropriately screened during working. 	<ul style="list-style-type: none"> Assessment of impacts, with appropriate mitigation identified. Restoration to improve public access in the area.

Preliminary Hydrological Risk Assessment

Controlled Waters	Issues/Risks	Mitigation	Further information/approval required
<ul style="list-style-type: none"> • Watercourses • Ponds/lakes, including wet habitats • Groundwater 	<ul style="list-style-type: none"> • The River Basin Management Plan South West River Basin District identifies the Sherford River as being of 'Moderate' environmental quality. Potential for contamination from runoff from site. • Environment Agency notes that the Sherford River and Sherford Bog Area are very sensitive. Any silt escape would be harmful to the protected area. • Potential for contamination of controlled waters through spillage or seepage of pollutants such as fuel, or silt in water. • Impacts on or removal of surface water features. 	<ul style="list-style-type: none"> • Appropriate arrangements to be made for ensuring that runoff from the site does not enter the Sherford River or groundwater unless any silt has first been removed. • Fuel stored on site to be appropriately bunded and sealed to prevent any spillage from entering ground or surface waters. • On-going monitoring during development and working of the site. 	<ul style="list-style-type: none"> • Full hydrogeological risk assessment • Flood Risk Assessment • Water Framework Assessment • Further assessment of potential impacts on water quality and levels, particularly for groundwater, is required prior to development. • Assessment of the feasibility of relocating ponds and associated habitats and species. • Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.

Cumulative Impacts

Proposal is a new site in an area where there is other mineral working existing/proposed. There will be cumulative impacts arising if this site is developed.

The proposal is within 5Km (by road) of a site allocated in the Purbeck Local Plan Part 1 (adopted Nov 2012) (Policy CEN) for development of 200 dwellings and community facilities, off Worgret Road, Wareham. Traffic arising from the new residential development will also add to general traffic levels in Wareham and to a lesser extent the B3075 adjacent to the proposal.

Summary.

Potential Benefits	Potential Impacts
<ul style="list-style-type: none"> Provision of significant amount of aggregates required for maintenance and construction of the built environment, making an important contribution to Bournemouth, Dorset and Poole's supply options. 	<ul style="list-style-type: none"> Site is close to/includes European designated heathland; contains Annex 1 birds and could be designated as a Special Protection Area; there are likely impacts on national designations (SSSI) and possible threats to protected species on/around the site. Further assessment required, including Appropriate Assessment, to establish impacts and whether these can be satisfactorily addressed. Recreational displacement will be an issue if this site is developed. Further assessment, including Appropriate Assessment, will be required to better understand these impacts and to determine whether they can be satisfactorily mitigated. Ground and surface water – further assessment required to determine possible impacts, but these expected to be capable of mitigation. Heritage/archaeology – assessment required to determine likely impacts, but any impacts expected to be mitigable. Very significant landscape capacity and visual impacts. Further assessment including landscape and visual assessment will be required, not clear at this stage whether impacts can be mitigated. Very significant impacts on recreational land use and users. Can be mitigated to some extent by phased working and restoration but will still be impacts. Significant transport impact for lorries travelling to/from site, either to north or south.

Overall Recommendation:

There are a number of impacts that are likely to be associated with the working of this site, including biodiversity and European designations; impacts of recreational displacement, if this site was developed; hydrology/hydrogeology, archaeology and historic landscapes; landscape capacity; transport/access impacts; impacts on amenity, recreational use. Some are capable of mitigation but it appears that a number are unlikely to be capable of satisfactory mitigation.

Further information has been requested regarding this site, but on the basis of the evidence available the nominated site appears to be subject to significant constraints not currently capable of satisfactory mitigation and cannot be included in the Draft Bournemouth, Dorset and Poole Mineral Sites Plan at the present time unless exceptional circumstances (not currently present) arise. The site remains part of the mineral resource of Bournemouth, Dorset and Poole but is not at this time included in the Draft Bournemouth, Dorset and Poole Mineral Sites Plan.

The benefits of developing this site are not considered to outweigh the impacts of working here. **At this time** other sites are considered to be more appropriate options for supplying aggregate.

It is **recommended** that this site should not be included in the emerging Mineral Sites Plan

Aggregates: AS24 Purple Haze South

Site Name/Location: AS24 Purple Haze South Mineral Type: Sand and gravel	Nominee/Agent: Somerley Estate (Landowner) and Carter Jonas Local Authority: East Dorset District Council
Site Area: approximately 43 ha Production: (information awaited)... tpa; Reserve: approximately (information awaited) ... mt	

Impact Assessment Scoring

--	Strong Negative Impact	-	Minor Negative Impact	+	Minor Positive Impact	++	Strong Positive Impact	0	Negligible or No Effect	?	Uncertain
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Timescales for effects:

P/W: Preparation and Working

R/A: Restoration and Afteruse

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
1. To move waste management up the waste hierarchy	N/A	N/A	<ul style="list-style-type: none"> This Objective is not relevant to this site nomination 	<ul style="list-style-type: none"> N/A
2. To maintain, conserve and enhance biodiversity	?	+	<p>European/International Designations</p> <ul style="list-style-type: none"> Proposed area is likely to support Annex 1 birds as part of the forestry crop rotation; the populations of these birds may be functionally linked to Dorset Heathlands SPA. The forestry plantation is well used as recreation site contributing to the network of areas which help to reduce human recreational pressure on designated heathlands. There are possible in-combination effects of mineral working proposals in Hampshire within Ringwood Forest. Working this area has the potential to lead to significant risk of adverse effects on European sites. 	<ul style="list-style-type: none"> Ecological surveys and hydrological reports required. Appropriate assessment under the Habitat Regulations will be required. Restoration to include heathland restoration and public access/recreational facilities.
	?	0	<p>Annex 1 Bird Species</p> <ul style="list-style-type: none"> Area supports Annex 1 birds as part of the existing forestry crop rotation. Clearance of trees would result in heathland regeneration and the open habitat would rapidly become suitable for more Annex 1 birds. The site has the potential to be included in a revision to the heathland SPA boundary. Risk based approach essential here. 	<ul style="list-style-type: none"> Ecological surveys and hydrological reports required, with appropriate mitigation. Appropriate assessment under the Habitat Regulations will be required. Heathland restoration and public access to

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
				be created.
	?	+	<p>National Designations</p> <ul style="list-style-type: none"> No additional points to be raised beyond what is mentioned in European/International Decisions above. 	<ul style="list-style-type: none"> Ecological surveys and hydrological reports required. Appropriate assessment under the Habitat Regulations will be required. Restoration to include heathland restoration and public access/recreational facilities.
	?	0	<p>Protected species</p> <ul style="list-style-type: none"> Existing rides may support populations of European protected species, Sand Lizard and Smooth Snake, and common protected reptiles. Mitigation for effects on reptiles may be necessary. If so, it seems likely Natural England would be able to issue a disturbance licence if required. 	<ul style="list-style-type: none"> Ecological surveys required, with appropriate mitigation. Restoration to include creation of appropriate habitat.
	0	0	<p>Local recognitions/designations, including ancient woodland and veteran trees</p> <ul style="list-style-type: none"> No impacts expected 	<ul style="list-style-type: none"> No action required.
3. To maintain, conserve and enhance geodiversity.	+	0	<ul style="list-style-type: none"> Exposures resulting from working may be of interest. Benefits are only expected during working, and are likely to be obscured or covered as part of restoration. 	<ul style="list-style-type: none"> Operator to be asked to permit visits to view exposures as required.
4. To maintain, conserve and enhance the quality of ground, surface and sea waters and manage the consumption of water in a sustainable way.	?	0	<p>Groundwater</p> <ul style="list-style-type: none"> Site overlies a secondary aquifer. A stream which drains the sands (SU 12176 05789) lies within 250m of the site western boundary. There are drains to the East flowing into the Avon SSSI/SAC. The impacts of the development on these flows should be assessed. No impact on SPZs. Assessment required to determine possible impacts on hydrogeology. Impacts to be appropriately mitigated. 	<ul style="list-style-type: none"> Hydrological assessment required to determine possible impacts, on ground and surface waters, with appropriate mitigation to be implemented. Where necessary mitigating measures should be installed to maintain groundwater levels. Appropriate arrangements should be put in place to ensure that the water leaving the site and entering the rivers/watercourses is of an acceptable quality.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	?	0	<p>Surface Water</p> <ul style="list-style-type: none"> Site is approximately 120m from a drain, with other drains in the vicinity. Site is on a ridge between the River Crane on the west and the Avon to the east. Approximately 750m from the Avon. Assessment required to determine possible impacts on hydrogeology. Impacts to be appropriately mitigated 	<ul style="list-style-type: none"> Any fuel on site should be properly stored to avoid contamination in case of spillage. Appropriate arrangements should be installed for surface water and silt collection and fuel storage to prevent contamination of groundwater resources. Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.
5. To reduce flood risk and improve flood management.	0	0	<p>Flooding/Coastal Stability</p> <ul style="list-style-type: none"> Entire site is within Flood Risk Zone 1, no expected risk of flooding or contributing to flooding. 	<ul style="list-style-type: none"> Flood Risk Assessment (FRA) will be required. All necessary mitigation to be implemented.
6. To maintain, conserve and enhance the historic environment (including archaeological sites, historic buildings, conservation areas, historic parks and gardens and other locally distinctive features and their settings).	-	0	<p>Archaeology</p> <ul style="list-style-type: none"> A barrow that is protected as a Scheduled Monument (SM31911 – ‘Bowl barrow on the eastern part of Ashley Heath, 660m north west of Ashley Lodge’) occupies a relatively central location within the site. Several other barrows that are also protected as Scheduled Monuments lie close to the site. The barrow within the site in particular is a major constraint, and theoretically, extraction that destroyed this nationally-important feature would be a ‘Very Significant Adverse Impact’. However, the protection afforded the monument makes this unlikely to happen. One way to address this issue could be the removal of some of the site from the extraction area. An archaeological assessment and if necessary an evaluation of the site that considers all the barrows mentioned above and their settings, as well as other possible archaeological material on the site, should help in making a decision on this, as well as in understanding the wider archaeological impact of the extraction on this site. Early discussion with English Heritage should also be helpful in the making of this decision. If a compromise can be determined that allows some quarrying within a fraction of this site, the impact could perhaps drop to a ‘Less Significant Adverse Impact’. 	<ul style="list-style-type: none"> Full archaeological survey of the area required to assess possible presence and significance of non-designated remains and to assess Monuments and establish their settings and how these can best be protected during working. All necessary mitigation, including actions such as restoration of hedgerows, to be implemented. Adequate provision to be made for preservation, excavation or recording, as appropriate. Settings of the Monuments to be established prior to working and not to be compromised during

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	0	+	Historic Landscapes <ul style="list-style-type: none"> The site is occupied by conifer plantation and must have been heathland before. Further evaluation will be required. When this has been undertaken possible impacts will be better understood. Restoration is yet to be finalised, but could include heathland restoration/recreation, giving a positive benefit. 	<ul style="list-style-type: none"> working. Further consideration to be given to restoration proposals, in terms of historic landscapes.
	0	0	Historic Buildings <ul style="list-style-type: none"> The nearest listed building is Ashley Lodge but if the woodland cover is maintained between the building and the site then there should be no adverse impact. No impacts expected. 	<ul style="list-style-type: none"> No action required.
7. To maintain, conserve and enhance the landscape, including townscape, seascape and the coast.	-	+	Landscape Capacity <ul style="list-style-type: none"> Potential impact on the amenity of footpath users and on the on the amenity of forest track users. Also a potential impact on the character of the Heath Forest Mosaic. Potential to restore the land as Sustainable Alternative Natural Greenspace after extraction as it is within the SE Dorset Green Infrastructure area. Further consideration needed. 	<ul style="list-style-type: none"> Assessment of potential visual impacts required. All appropriate mitigation to be included. Restoration to consider increasing public access/informal recreation and to include nature conservation interests. Appropriate restoration proposals in line with Landscape Management Guidelines referred to in Minerals Strategy.
	0	0	Designated Landscapes <ul style="list-style-type: none"> Negligible, no significant impacts expected. 	<ul style="list-style-type: none"> No action required.
8. To protect and improve air quality and reduce the impacts of noise.	0	0	<ul style="list-style-type: none"> Impacts on air quality expected to be negligible. No AQMAs will be affected by the working of this site proposal. Any dust resulting from working will be controlled through normal dust-suppression measures. Noise mitigation will be addressed at the planning application stage, with appropriate mitigation to be included in the development of the site. 	<ul style="list-style-type: none"> Environmental protection measures to reduce dust and ensure noise is appropriately mitigated.
9. To maintain, conserve and enhance soil quality.	-	0	<ul style="list-style-type: none"> The site comprises primarily woodland cover but is a former heathland area and so would be expected to have relatively poor, acidic soils. Site preparation/working would require stripping and storage of the soils, with some impacts on them. If the site is worked and restored to heathland this will require reinstatement/retention of acidic 	<ul style="list-style-type: none"> Soil is poor quality in agricultural terms but valuable in terms of potential for heathland restoration. Soils to be stored/protected during preparation and working

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			soils with their seedbank.	and properly reinstated during restoration.
10. To conserve and safeguard mineral resources.	+	0	<ul style="list-style-type: none"> The site would make an important contribution to aggregate supply in Bournemouth, Dorset and Poole and beyond. 	<ul style="list-style-type: none"> No specific action required; site development to take into consideration relevant impacts and mitigate where appropriate.
11. To promote the use of alternative materials.	-	0	<ul style="list-style-type: none"> This proposal does not at present promote the use of alternative materials. 	<ul style="list-style-type: none"> No action required.
12. To provide an adequate and affordable supply of minerals to meet society's needs.	+	0	<ul style="list-style-type: none"> Development of this site would provide a benefit in terms of contributing to the provision of a supply of minerals to meet society's needs. Ensuring a sustainable supply will depend on the development and management of the site. Providing site development takes into account relevant principles of sustainable development it is expected this will contribute to complying with this objective. 	<ul style="list-style-type: none"> Ensure principles of sustainable development are incorporated into the development of this site.
13. To promote and encourage sustainable economic growth	+	0	<ul style="list-style-type: none"> This site proposal is expected to contribute to economic development on two levels – directly through the provision of employment at the site to be developed and indirectly through the provision of aggregate minerals required for the maintenance of built environment and for new built development and for commercial/industrial uses. Both levels are expected to maintain employment, skilled and unskilled. Proposed restoration is to forestry possibly with some heathland restoration, both of which offer economic benefits. 	<ul style="list-style-type: none"> Further assessment required to consider restoration options.
14. To adapt to and mitigate the impacts of climate change.	-	0	<ul style="list-style-type: none"> Developing land as a quarry is expected to have some negative impacts regarding climate change, due primarily to machinery used and transportation of mineral away from site. However, these will in relative terms be negligible. The Bournemouth, Dorset and Poole Minerals Strategy seeks to address and minimise such impacts through Policy CC1 which requires operators to take into consideration climate change impacts and their possible mitigation for any proposed minerals development. The development management policies, e.g. DM 1, also address and seek to minimise the issue of sustainable development and climate change. Restoration to some form of vegetated environment 	<ul style="list-style-type: none"> Use energy efficient plant and machinery. Implement restoration which provides appropriate habitats to help to increase resilience of flora/fauna.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			will offer benefits in the form of climate change mitigation, including provision of habitat for wildlife, but again these will be relatively small.	
15. To minimise the negative impacts of waste and minerals transport on the transport network, mitigating any residual impacts.	---	0	<ul style="list-style-type: none"> It is assumed that estimated HGV trips for this site could be 100 per day. Direct access onto the site would necessarily be onto the B3081. Adjacent to the site is the existing Baker's Hanging junction, between the B3081 and Alderholt Road. This junction and the access to a walkers car park opposite have a poor accident history. This is partly due to the geometry of the road, with a restrictively acute angle to be negotiated for any vehicles that may wish to turn left into Alderholt Road from the B3081, and partly due to restricted forward visibility and speed. Any access onto the B3081 would need to be to the north of the Baker's Hanging junction. There are issues of vertical alignment and visibility on this section of the B3081 and a Transport Assessment would need to demonstrate that a junction with sufficient visibility and geometry could be provided. In addition to this a TA would need to consider the movements of HGVs leaving and arriving at the site and any interaction with mineral sites over the border in Hampshire. Vehicle routing will be key and any left turning vehicles into Alderholt Road or other significant impact at Baker's Hanging junction without significant mitigation will be strongly resisted. The option also exists for the landowner to make additional land available, not for quarrying, but directly onto the B3081 south of the Baker's Hanging junction. Due to issues of direct access onto the B3081 and safety concerns at the Baker's Hanging junction this site has been rated as having a 'Very Significant Adverse Impact' . If a promoter could adequately demonstrate that there is a safe access location and safe vehicle routing then the site could be given a 'No Significant or Negligible Adverse Impacts' rating due to the direct access to the strategic road network. Policies DM1 and DM 8 actively address this issue of minimising impacts on the transportation network. 	<ul style="list-style-type: none"> Any proposal for this site would need to be accompanied by a Transport Assessment which will need to provide access details and consider vehicle routing. The TA should be scoped with the Transport Development Management Team. Transport Assessment to be carried out, identifying opportunities for reducing impacts on the transport network. Alternative options to be investigated.
	?			

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
16. To support and encourage the use of sustainable transport modes, imposing no unmitigated negative impacts on them.	-	0	<ul style="list-style-type: none"> The proposed extension can only realistically be accessed by means of road transport, resulting in a negative impact under this Objective during development and working. It may be possible to use conveyor belts to transport mineral across the site. As far as reasonably possible negative impacts resulting from access and transport will be mitigated, as required by Policies DM1 and DM8 of the Minerals Strategy. 	<ul style="list-style-type: none"> Mitigate impacts where identified and appropriate.
17. To sustain the health and quality of life of the population	-	0	<p>Impact on Sensitive Human Receptors</p> <ul style="list-style-type: none"> Two residential properties at approximately 260m; Ashley Heath to south/west at just over 750m. The site is large enough that it should be possible to screen these residences satisfactorily, using mitigation such as visual and noise attenuation bunds. Site is used for recreational/walking/cycling purposes, or is adjacent to land used for such purposes; there will be impacts on these users of the land . 	<ul style="list-style-type: none"> Provision of appropriate mitigation, following assessment of likely impacts. Restoration to improve landscape of site where possible; and to seek to increase and improve public access.
	-	0	<p>Impact on Existing Settlements</p> <ul style="list-style-type: none"> Ashley Heath to south/west at just over 750m. Verwood almost 2km to north west. The site is large enough that it should be possible to screen the workings satisfactorily, using mitigation such as visual and noise attenuation bunds. Transport related impacts are addressed under Objective 15 above. 	<ul style="list-style-type: none"> Transport Assessment to be carried out, identifying opportunities for reducing impacts on the transport network where appropriate.
	0	0	<p>Impact on Airport Safety</p> <ul style="list-style-type: none"> Site is approximately 8km from airport. Site not expected to be worked or restored wet. No impacts expected 	<ul style="list-style-type: none"> No action required.
18. To enable safe access to countryside and open spaces.	--	+/?	<p>Impact on Recreational Land</p> <ul style="list-style-type: none"> Site currently enjoys open access and there are tracks/paths across it. It is well used for informal recreation. There will be significant impacts on users of the site, and surroundings, during working. Restoration offers the opportunity to restore/improve such access. The issue of displacement of existing users onto international designations around the site must be addressed. 	<ul style="list-style-type: none"> Restoration to open access land following working and improvement of access where possible and where appropriate. Consider phased working and restoration, to provide alternative options for recreational use while various parts of the site are worked.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	--	+	<p>Impact on Public Rights of Way</p> <ul style="list-style-type: none"> • A statutory right of way (a bridleway) crosses the site and will need to be diverted during working. • Restoration will need to re-establish and where appropriate improve these statutory rights of way. Further assessment of what is needed is required. 	<ul style="list-style-type: none"> • Restoration and where appropriate improvement of statutory rights of way following working.

Preliminary Hydrological Risk Assessment

Controlled Waters	Issues/Risks	Mitigation	Further information/approval required
<ul style="list-style-type: none"> • Watercourses • Ponds/lakes, including wet habitats • Groundwater 	<ul style="list-style-type: none"> • The River Basin Management Plan South West River Basin District identifies the Avon as being of 'poor' environmental quality. In addition, the River Crane is of 'good' ecological quality. • Potential for contamination from runoff from site. • Potential for contamination of controlled waters through spillage or seepage of pollutants such as fuel, or silt in water. • Contamination of water supplies or reduction in amount of water available for licenses supplies. • Impacts on or removal of surface water features. 	<ul style="list-style-type: none"> • Appropriate arrangements to be made for ensuring that runoff from the site does not enter the Avon or the Crane or groundwater unless any silt has first been removed. • Fuel stored on site to be appropriately banded and sealed to prevent any spillage from entering ground or surface waters. • On-going monitoring during development and working of the site. 	<ul style="list-style-type: none"> • Full hydrogeological risk assessment • Flood Risk Assessment • Water Framework Assessment • Further assessment of potential impacts on water quality and levels, particularly for groundwater, is required prior to development. • Assessment of the feasibility of relocating ponds and associated habitats and species, as may be necessary. • Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.

Cumulative Impacts

Site is likely to be worked as an extension to a quarry in Hampshire. Other proposed and existing mineral development in the vicinity.

The Hampshire site is likely to be developed first and in that way the Dorset side, if developed, will not constitute a cumulative impact but rather the extension of an existing site.

There is no land allocated for major development in the Christchurch and East Dorset Consolidated Plan, or in the New Forest District Sites and Development Management DPD Jan 2012 (as amended by Proposed modifications Sept 2013) within 5Km of the proposal.

Summary.

Potential Benefits	Potential Impacts
<ul style="list-style-type: none"> • <u>It is likely</u> that the site will be able to provide a significant amount of aggregates required for maintenance and construction of the built environment, making an important contribution to Bournemouth, Dorset and Poole's (and other Mineral Planning Authorities) supply options. However, no details on the size/quality of the mineral resource has yet been received. • Restoration has the potential to restore/recreate heathland and also improve public access/recreation facilities in the area. 	<ul style="list-style-type: none"> • Further assessment required to determine potential archaeological impacts; they are likely to be capable of mitigation, but this may take the form of a reduction in the size of the site. • There will be significant impacts on use of the site and area for recreational uses, with likely closures of parts of the site during working . However the site is big enough to maintain parts open while other parts are shut. Restoration has the potential to restore/improve opportunities for recreation and open access in the area. • Transport impacts could potentially be significant, but it is likely that the site is large enough that access will be provided in an area that minimises impacts. Further assessment required. • Impacts on surface and groundwater are not yet known, and detailed assessment will be required. Mitigation, if required, not yet known. • It is likely that there will be some landscape impacts but it is expected that these will be capable of mitigation. • Nature conservation impacts are of key importance, given the site's proximity to Natura 2000 sites, the bird and other species found on the site and in the vicinity and the provision of recreational opportunities provided by the site. Further assessment, including Appropriate Assessment, is required and it is not known yet what mitigation will be required.

Overall Recommendation:

This is a large site, adjacent to another area that has already been included in Hampshire County Council's adopted Minerals and Waste Plan.

As a free –standing site there are a number of issues and uncertainties that justify its exclusion from the Mineral Sites Plan at this time, while awaiting provision of further information. It is also not clear when this site might be expected to be developed, which may not be in the proposed Mineral Sites Plan period.

On the basis of the evidence available the nominated site appears to be subject to significant constraints and it is not clear whether these may be capable of satisfactory mitigation. The site is not considered suitable for inclusion in the Draft Bournemouth, Dorset and Poole Mineral Sites Plan at the present time unless exceptional circumstances (not currently present) arise. The site remains part of the mineral resource of Bournemouth, Dorset and Poole but is not at this time included in the Draft Bournemouth, Dorset and Poole Mineral Sites Plan.

The benefits of developing this site are not considered to outweigh the impacts of working here. **At this time** other sites are considered to be more appropriate options for supplying aggregate.

It is **recommended** that this site should not be included in the emerging Mineral Sites Plan

Other Building Stone: BS01 Manor Farm Quarry

Site Name: BS01 Manor Farm Quarry		Nominee: Mr & Mrs Johnson (Quarry Farm)	
Location: West of Manor Farm, Melbury Abbas		Agent: Land and Mineral Management	
Mineral Type: Shaftsbury Green Sandstone		Local Authority: North Dorset District Council	
Site Area: 4 ha	Production: c. 2,000 tpa	Reserve: c. 25,000 tonnes	

Impact Assessment Scoring

--	Strong Negative Impact	-	Minor Negative Impact	+	Minor Positive Impact	++	Strong Positive Impact	0	Negligible or No Effect	?	Uncertain
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Timescales for effects:

P/W: Preparation and Working

R/A: Restoration and Afteruse

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
1. To move waste management up the waste hierarchy and promote net self sufficiency	N/A	N/A	<ul style="list-style-type: none"> This Objective is not relevant to this site nomination 	<ul style="list-style-type: none"> N/A
2. To maintain, conserve and enhance biodiversity	0	0	European/International Designations <ul style="list-style-type: none"> No impacts expected 	<ul style="list-style-type: none"> No action required.
	0	0	Annex 1 Bird Species <ul style="list-style-type: none"> No impacts expected 	<ul style="list-style-type: none"> No action required.
	0	0	National Designations <ul style="list-style-type: none"> No impacts expected 	<ul style="list-style-type: none"> No action required.
	0	0	Protected species <ul style="list-style-type: none"> No impacts expected 	<ul style="list-style-type: none"> No action required.
	0	0	Local recognitions/designations, including ancient woodland and veteran trees <ul style="list-style-type: none"> No impacts expected 	<ul style="list-style-type: none"> No action required.
3. To maintain, conserve and enhance geodiversity.	+	?	<ul style="list-style-type: none"> Large exposures in the upper greensand are uncommon inland from the coast in Dorset. There would be a benefit in allowing geologists access to recording any new exposures here. Retaining exposures could be considered but only if appropriate. 	<ul style="list-style-type: none"> Operator to be asked to permit visits/access to view exposures where possible during working. Opportunities to leave faces exposed when working is finished to be considered.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
4. To maintain, conserve and enhance the quality of ground, surface and sea waters and manage the consumption of water in a sustainable way.	?	0	<p>Groundwater</p> <ul style="list-style-type: none"> Site is on a Principal Aquifer. No impact on any Source Protection Zones. One licensed abstraction site within 250m. Environment Agency advise a Hydrogeological Risk Assessment will be required. 	<ul style="list-style-type: none"> Hydrological assessment required to determine possible impacts, on ground and surface waters, with appropriate mitigation to be implemented. Appropriate arrangements should be put in place to ensure that the water leaving the site and entering the watercourses or groundwater is of an acceptable quality. Any fuel on site should be properly stored to avoid contamination in case of spillage. Appropriate arrangements should be installed for surface water and silt collection and fuel storage to prevent contamination of groundwater resources. Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.
	?	0	<p>Surface Water</p> <ul style="list-style-type: none"> Spring and watercourse within 250m of the site boundary. Ponds within 500m. Assessment required to determine possible impacts on hydrogeology. Impacts to be appropriately mitigated 	
5. To reduce flood risk and improve flood management.	0	0	<p>Flooding/Coastal Stability</p> <ul style="list-style-type: none"> Entire site is within Flood Risk Zone 1, no expected risk of flooding or contributing to flooding. 	<ul style="list-style-type: none"> Flood Risk Assessment (FRA) will be required. Any necessary mitigation to be implemented.
6. To maintain, conserve and enhance the historic environment (including archaeological sites, historic buildings, conservation areas, historic parks and gardens and other locally distinctive features and their settings).	?	0	<p>Archaeology</p> <ul style="list-style-type: none"> The presence of two Scheduled Monuments to the south of the proposal site (1016893 – ‘Beacon and circular enclosure on Melbury Hill’ and 1016894 – ‘Cross dyke and linear boundary on Melbury Hill and Compton Down, Melbury Abbas’), the discovery of a Bronze Age cemetery on a quarry site just to the east, and the prominent location all indicate the site’s high archaeological potential. The impact on the setting of the Scheduled Monuments and on below-ground archaeological remains needs to be assessed and if necessary evaluated before an informed planning decision could be made. Only when these exercises have been undertaken would the archaeological impact be understood – at present it could be anywhere from ‘Very Significant’ to ‘No Significant’ impacts. 	<ul style="list-style-type: none"> Archaeological survey of the area required <u>as part of planning application</u> to assess possible presence and significance of non-designated remains and to assess whether/how these should be protected during working – <u>no further work required at site allocation stage</u>. All necessary mitigation to be implemented prior to working. Adequate provision to be made for

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	?	0	Historic Landscapes <ul style="list-style-type: none"> The site is on the side of a hill that is a prominent landmark that can be seen from much of the Blackmore Vale in particular. Impact would depend on the extent of restoration and could be lessened if relatively small areas are quarried at a time and restored soon after. 	<p>preservation, excavation or recording, as appropriate.</p> <ul style="list-style-type: none"> Further consideration to be given to restoration proposals, in terms of historic landscapes.
	0	0	Historic Buildings <ul style="list-style-type: none"> Listed buildings too far away to be affected. 	<ul style="list-style-type: none"> No action required.
7. To maintain, conserve and enhance the landscape, including townscape, seascape and the coast.	---	?	Landscape Capacity <ul style="list-style-type: none"> Major in principle concern regarding the significant negative cumulative landscape, visual & amenity impacts this will have on the Area of Outstanding Natural Beauty and in particular, from the well-used paths in the area such as those on Melbury Hill. 	<ul style="list-style-type: none"> Full assessment of potential visual impacts will be required at planning application stage. All appropriate mitigation to be included. Appropriate restoration proposals in line with Landscape Management Guidelines referred to in Minerals Strategy.
	---	?	Designated Landscapes <ul style="list-style-type: none"> Very Significant adverse impact. 	
8. To protect and improve air quality and reduce the impacts of noise.	0	0	<ul style="list-style-type: none"> Impacts on air quality expected to be negligible. No AQMAs will be affected by the working of this site proposal. Any dust resulting from working will be controlled through normal dust-suppression measures. Any impacts due to noise resulting from mineral working would be expected to be satisfactorily minimised through normal noise mitigation measures, imposed at the planning application stage. 	<ul style="list-style-type: none"> Environmental protection measures to be put in place to reduce dust and noise impacts.
9. To maintain, conserve and enhance soil quality.	-	0	<ul style="list-style-type: none"> Soil appears to be good to moderate quality agricultural land. Soils will be protected during working and restoration could bring the land back into agricultural production. 	<ul style="list-style-type: none"> Soil to be properly stripped and stored prior to working; protected during working; and re-spread on site after working.
10. To conserve and safeguard mineral resources.	+	0	<ul style="list-style-type: none"> The site would make an important contribution to the supply of building stone. 	<ul style="list-style-type: none"> No specific action required Site development to take into consideration relevant impacts and mitigate where appropriate.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
11. To promote the use of alternative materials.	-	0	<ul style="list-style-type: none"> This proposal does not promote the use of alternative materials. 	<ul style="list-style-type: none"> No action required.
12. To provide an adequate and affordable supply of minerals to meet society's needs.	+	0	<ul style="list-style-type: none"> Development of this site would provide a benefit in terms of contributing to the provision of a supply of minerals to meet society's needs. Ensuring a sustainable supply will depend on the development and management of the site. Providing site development takes into account relevant principles of sustainable development it is expected this will contribute to complying with this objective. 	<ul style="list-style-type: none"> Ensure principles of sustainable development are incorporated into the development of this site.
13. To promote and encourage sustainable economic growth	+	0	<ul style="list-style-type: none"> This site proposal is expected to contribute to economic development on two levels – directly through the provision of employment at the proposed extension and indirectly through the provision of building stone required for new build, repairs and maintenance, decorative and landscaping work. Both levels are expected to maintain employment, skilled and unskilled. Restoration to agriculture will offer some further economic benefits. Further benefits may be available if improved public access can be achieved, through the recreational attraction and use in the wider area (i.e. riding, walking). 	<ul style="list-style-type: none"> Seek further benefits, such as improved public access, where appropriate.
14. To adapt to and mitigate the impacts of climate change.	-	0	<ul style="list-style-type: none"> Developing land as a quarry is expected to have some negative impacts regarding climate change, due primarily to machinery used and transportation of mineral away from site. However, given the size of the proposed quarry these will in relative terms be negligible. The Bournemouth, Dorset and Poole Minerals Strategy seeks to address and minimise such impacts through Policy CC1 which requires operators to take into consideration climate change impacts and their possible mitigation for any proposed minerals development. The development management policies, e.g. DM 1, also address and seek to minimise the issue of sustainable development and climate change. 	<ul style="list-style-type: none"> Use energy efficient plant and machinery. Implement restoration which provides appropriate habitats to help to increase resilience of flora/fauna.
15. To minimise the negative impacts of waste and minerals transport on the transport	- / ?	0	<ul style="list-style-type: none"> Previous extraction of Shaftesbury Green Sandstone to the east of the proposed area has established the principle of mineral extraction in this locality. No access location onto Quarry Lane has been specified but there are points where an access would be acceptable provided it is of suitable 	<ul style="list-style-type: none"> Any proposal for this site would need to be accompanied by a Transport Assessment which will need to provide access details and consider vehicle

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
network, mitigating any residual impacts.			<p>construction and size. Details of this would need to be provided at the time of any planning application.</p> <ul style="list-style-type: none"> Access to the strategic network is likely to be gained via West Lane onto the A350 a short distance from the proposed site. While no estimated trip rates have been provided it is likely that they will be very low and sporadic, hence the site has been given a C rating. Policies DM1 and DM 8 of the Minerals Strategy actively address this issue of minimising impacts on the transportation network. 	<p>routing.</p> <ul style="list-style-type: none"> TA to be scoped with the Transport Development Management Team. The Transport Assessment should identify opportunities for reducing impacts on the transport network.
16. To support and encourage the use of sustainable transport modes, imposing no unmitigated negative impacts on them.	—	0	<ul style="list-style-type: none"> The proposed extension can only realistically be accessed by means of road transport, resulting in a negative impact under this Objective during development and working. As far as reasonably possible negative impacts resulting from access and transport will be mitigated, as required by Policies DM1 and DM8 of the Minerals Strategy. 	<ul style="list-style-type: none"> Mitigate impacts where identified and appropriate.
17. To sustain the health and quality of life of the population	—	?	<p>Impact on Sensitive Human Receptors</p> <ul style="list-style-type: none"> Closest properties are residences to north west, within 50m. There are a number of other properties within 500m. Site will be screened as required. Site will be worked on a campaign basis, which will limit impacts. 	<ul style="list-style-type: none"> Provision of appropriate mitigation, following assessment of likely impacts. Restoration to improve landscape of site where possible; and to seek to increase public access.
	—		<p>Impact on Existing Settlements</p> <ul style="list-style-type: none"> Closest settlement is West Melbury, within 50m. Melbury Abbas is some 600m distant. Site will be screened as required. Site will be worked on a campaign basis, which will limit impacts. 	
	0	0	<p>Impact on Airport Safety</p> <ul style="list-style-type: none"> Site is approximately 37 km from Bournemouth airport and approximately 31 km from Yeovilton, with no wet working or restoration. 	<ul style="list-style-type: none"> No impacts expected and no action required.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
18. To enable safe access to countryside and open spaces.	0	+(?)	<p>Impact on Recreational Land</p> <ul style="list-style-type: none"> Site is agricultural land and not used for informal recreation. Although no right of way exists on the land, a public path crosses the site. Restoration could seek to formalise or improve this access. 	<ul style="list-style-type: none"> Assessment of impacts, with appropriate mitigation identified. Realignment of current 'desire lines' as required. Restoration to include considering how it might be possible to improve public access in the area.
	—	+(?)	<p>Impact on Public Rights of Way</p> <ul style="list-style-type: none"> Public right of way exists adjacent to (west of) the site, and the route actually used crosses the western side of site. N.B. – this section over the site does not appear to be part of the statutory route. An informal route also crosses the eastern side of the site. During working these routes will not be available. An alternative for the statutory route to the west will be required and may need to be screened. Restoration and possibly improvement of the path(s) when working is complete may be possible. 	

Preliminary Hydrological Risk Assessment

Controlled Waters	Issues/Risks	Mitigation	Further information or approval that may be required
<ul style="list-style-type: none"> • Watercourses • Ponds/lakes, including wet habitats • Groundwater 	<ul style="list-style-type: none"> • The Stour is the closest main river. The site drains into it by other water courses, including the Manston Brook. • The River Basin Management Plan South West River Basin District identifies the Stour as being of 'Moderate' environmental quality where site runoff would join it. • There is potential for contamination from runoff from site along with potential for contamination of controlled waters through spillage or seepage of pollutants such as fuel, or silt in water. • Contamination of water supplies or reduction in amount of water available for licenses supplies. 	<ul style="list-style-type: none"> • Appropriate arrangements to be made for ensuring that runoff from the site does not enter the surface or groundwater drainage unless any silt has first been removed. • Fuel stored on site to be appropriately bunded and sealed to prevent any spillage from entering ground or surface waters. • On-going monitoring during development and working of the site. 	<ul style="list-style-type: none"> • Water Framework Assessment may be required. • Hydrological risk assessment to consider possible impacts of working this site and any required mitigation. • Further assessment of potential impacts on water quality and levels, particularly for groundwater, is required prior to development. • Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse. • Flood Risk Assessment

Cumulative Impacts

Site is an extension to existing quarry. No other mineral working in the vicinity.

The proposal is within 5Km of sites allocated in Shaftesbury for residential development (1140 dwellings in the town in total) and employment development (7.0Ha) to the south of the A30, in the Pre -Submission draft North Dorset Local Plan Nov 2013. Traffic arising from the new development will add to general traffic levels on the A30 and A350.

Summary.

Potential Benefits	Potential Impacts
<ul style="list-style-type: none">• Exposure of geological faces, during and possibly after working, expected to provide geodiversity benefits.• Development of site is expected to provide economic benefits, both directly at the site and in the local area where the stone is expected to be used.• Development of the site will provide a source of building stone, primarily for the benefit of the local area/economy.	<ul style="list-style-type: none">• No ecological impacts expected.• Hydrological investigation required, but no significant impacts expected.• Potential for significant archaeological impacts, and further assessment will be required. However, identified impacts may be capable of mitigation but this will not be known until further assessment carried out.• Significant landscape impacts and it is not clear whether these will be capable of mitigation. Further assessment will be required and the scale and method of working to be taken into consideration.• Site is agricultural land, which will be lost for a period of time. However, expected to be restored to current use, and is a relatively small area.• Limited climate change impacts would be expected, but site is small in scale and intensity of working is low.• Developing the site will have transport related impacts. However, the level of vehicle movements is low and the site will be worked as an extension, so there will be no intensification of working or cumulative impacts.• No expected issues regarding airfield proximity – no wet working or restoration.• There will be public access impacts as the statutory footpath deviates from its line and crosses the western part of the site. Another path, non-statutory, crosses the eastern part of the site. These will need to be re-routed and the western path may need to be screened. Restoration may make it possible to improve/formalise access across the site.

Overall Recommendation:

The assessment has identified potentially significant impacts from the working of this site, including landscape, historic environment and amenity issues. It is not clear at this stage whether these can be satisfactorily mitigated and further assessment will be required.

Key issues/impacts are hydrology/hydrogeology, archaeology and historic landscapes, landscape and visual impacts and impacts on designated landscape, amenity (particularly on nearby residences) and rights of way/access.

In addition, the site has been withdrawn by the site nominees from the Mineral Sites Plan site allocation process and therefore will not be taken forward.

The benefits of developing this site are not considered to outweigh the impacts of working here. **At this time** other sites are considered to be more appropriate options for supplying other building stone.

It is **recommended** that this site should not be included in the emerging Mineral Sites Plan

Ball Clay: BC05 Doreys – Holme Heath

Site Name/Location: BC05 Doreys – Holme Heath		Nominee/Agent: Imerys	
Mineral Type: Ball Clay		Local Authority: Purbeck District Council	
Site Area: approximately 27 ha	Production: c. 79,000 tpa;	Reserve: approximately 440,000 tonnes	

Impact Assessment Scoring

--	Strong Negative Impact	-	Minor Negative Impact	+	Minor Positive Impact	++	Strong Positive Impact	0	Negligible or No Effect	?	Uncertain
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Timescales for effects:

P/W: Preparation and Working

R/A: Restoration and Afteruse

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
2. To move waste management up the waste hierarchy and promote net self sufficiency	N/A	N/A	<ul style="list-style-type: none"> This Objective is not relevant to this site nomination 	<ul style="list-style-type: none"> N/A
3. To maintain, conserve and enhance biodiversity	-	?	<p>European/International Designations</p> <ul style="list-style-type: none"> With European designated heathland almost entirely surrounding the proposed area it is difficult without any further information to come to any other conclusion than mineral extraction would be likely to have adverse effects on the designated areas. The existing field is currently acidic grassland and almost certainly contributes to supporting Annex 1 birds in the neighbouring designated areas. Further, the field drains from the south-east downslope to the north-west corner, where it feeds the mire system within the designated area; it would be almost impossible to adequately mitigate hydrological effects of extensive working in the field, and certainly impossible to recreate the complex natural topography which the field currently exhibits. Following detailed study, it might be possible to demonstrate no adverse effect on integrity of very limited working in the easternmost part of the field, where the land slopes to the east and water drains away from the mire. 	<ul style="list-style-type: none"> Ecological surveys and hydrological reports required, identifying likely impacts together with possible mitigation for any impacts. Appropriate assessment under the Habitat Regulations will be required.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	—	?	<p>Annex 1 Bird Species</p> <ul style="list-style-type: none"> • With European designated heathland almost entirely surrounding the proposed area it is difficult without any further information to come to any other conclusion than mineral extraction would be likely to have adverse effects on the designated areas. • The existing field is currently acidic grassland and almost certainly contributes to supporting Annex 1 birds in the neighbouring designated areas. Further, the field drains from the south-east downslope to the north-west corner, where it feeds the mire system within the designated area; it would be almost impossible to adequately mitigate hydrological effects of extensive working in the field, and certainly impossible to recreate the complex natural topography which the field currently exhibits. • Following detailed study, it might be possible to demonstrate no adverse effect on integrity of very limited working in the easternmost part of the field, where the land slopes to the east and water drains away from the mire. 	<ul style="list-style-type: none"> • Ecological surveys and hydrological reports required, identifying likely impacts together with possible mitigation for any impacts. • Appropriate assessment under the Habitat Regulations will be required.
	—	?	<p>National Designations</p> <ul style="list-style-type: none"> • With European designated heathland almost entirely surrounding the proposed area it is difficult without any further information to come to any other conclusion than mineral extraction would be likely to have adverse effects on the designated areas. • A rich invertebrate assemblage is likely to be present in the field which helps to support the adjacent SSSI. • The existing field is currently acidic grassland and almost certainly contributes to supporting Annex 1 birds in the neighbouring designated areas. Further, the field drains from the south-east downslope to the north-west corner, where it feeds the mire system within the designated area; it would be almost impossible to adequately mitigate hydrological effects of extensive working in the field, and certainly impossible to recreate the complex natural topography which the field currently exhibits. • Following detailed study, it might be possible to demonstrate no adverse effect on integrity of very limited working in the easternmost part of the field, where the land slopes to the east and water drains away from the mire. 	<ul style="list-style-type: none"> • Ecological surveys and hydrological reports required, identifying likely impacts together with possible mitigation for any impacts. • Appropriate assessment under the Habitat Regulations will be required.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	—	?	<p>Protected species</p> <ul style="list-style-type: none"> The field is likely to support common protected reptiles throughout and may support European protected reptiles, Sand Lizard and Smooth Snake. The size of the population will determine how easy or difficult it is to achieve adequate mitigation and a disturbance licence from NE if required. 	<ul style="list-style-type: none"> Ecological surveys and hydrological reports required, identifying likely impacts together with possible mitigation for any impacts. Appropriate assessment under the Habitat Regulations will be required.
	0	0	<p>Local recognitions/designations, including ancient woodland and veteran trees</p> <ul style="list-style-type: none"> No likely impacts expected. 	<ul style="list-style-type: none"> No action required.
4. To maintain, conserve and enhance geodiversity.	+	0	<ul style="list-style-type: none"> Exposures resulting from working may be of interest to the quaternary and tertiary research associations. Benefits are only expected during working, and are likely to be obscured or covered as part of restoration. 	<ul style="list-style-type: none"> Provision should be made so that it will be possible to arrange visits on request.
5. To maintain, conserve and enhance the quality of ground, surface and sea waters and manage the consumption of water in a sustainable way.	?	?	<p>Groundwater</p> <ul style="list-style-type: none"> Licensed water supply site 500m to north west. No impact on SPZs. Site overlies a secondary aquifer and is in proximity to conservation designations and any associated water features. It is stated under Sustainability Objective 1 above that the field drains from the south-east downslope to the north-west corner, where it feeds the mire system within the designated area; it would be almost impossible to adequately mitigate hydrological effects of extensive working in the field, and certainly impossible to recreate the complex natural topography which the field currently exhibits. Following detailed study, it might be possible to demonstrate no adverse effect on integrity of very limited working in the easternmost part of the field, where the land slopes to the east and water drains away from the mire. 	<ul style="list-style-type: none"> Hydrological assessment required to determine possible impacts on ground and surface waters and on any wet heath / mires that might exist in adjacent designated sites, with appropriate mitigation to be identified/implemented. Where necessary mitigating measures should be installed to maintain groundwater levels. Appropriate arrangements should be put in place to ensure that the water leaving the site and entering the rivers/watercourses is of an acceptable quality. Any fuel on site should be properly stored to avoid contamination in case of spillage. Appropriate arrangements should be installed for surface water and silt collection and fuel storage to prevent contamination of groundwater resources. Land Drainage Consent to be
	?	?	<p>Surface Water</p> <ul style="list-style-type: none"> There are ponds within 250m of the site. Assessment required to determine possible impacts on hydrogeology. Impacts to be appropriately mitigated. 	

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
				obtained from Dorset County Council if works may affect flow of an ordinary watercourse.
6. To reduce flood risk and improve flood management.	0	0	Flooding/Coastal Stability <ul style="list-style-type: none"> Entire site is within Flood Risk Zone 1, no expected risk of flooding or contributing to flooding. 	<ul style="list-style-type: none"> Flood Risk Assessment (FRA) will be required. All necessary mitigation to be implemented.
7. To maintain, conserve and enhance the historic environment (including archaeological sites, historic buildings, conservation areas, historic parks and gardens and other locally distinctive features and their settings).	?	?	Archaeology <ul style="list-style-type: none"> The Squirrels Cottage barrows to the north-west are protected as a Scheduled Monument. The impact on their setting and on any below-ground archaeology on the site needs to be assessed and evaluated before an informed planning decision can be made. Archaeological assessment and evaluation is required. Only when these have been undertaken would the archaeological impact be understood – at present it could be anywhere from Very Significant to No Significant Impact. 	<ul style="list-style-type: none"> Full archaeological survey of the area required to assess possible presence and significance of non-designated remains and to assess whether/how these should be protected during working. All necessary mitigation to be implemented. Adequate provision to be made for preservation, excavation or recording, as appropriate. Further consideration to be given to restoration proposals, in terms of historic landscapes.
	?	?	Historic Landscapes <ul style="list-style-type: none"> Historically the site was heathland. This forms part of the setting of the scheduled Squirrels Cottage barrows. Sympathetic restoration to heathland would be rated as No Significant Impact – a lack of this would be Significant Adverse Impact. 	
	0	0	Historic Buildings <ul style="list-style-type: none"> Listed buildings too far away to be affected, therefore the site considered to have negligible impact on the listed buildings. 	
8. To maintain, conserve and enhance the landscape, including townscape, seascape and the coast.	–	0	Landscape Capacity <ul style="list-style-type: none"> Visually relatively remote and inaccessible despite being adjacent to open access land. There may therefore be some opportunity for extraction, based on this aspect of the assessment, particularly in the lower lying less visible north western section of the site. Planning of ball clay extraction would therefore need to consider the merits of 	<ul style="list-style-type: none"> Assessment of potential visual impacts required. All appropriate mitigation to be included. Restoration to consider increasing public access/informal recreation and to include nature conservation interests. Appropriate restoration proposals in line with

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			these landscape issues in association with the key ecological issues.	Landscape Management Guidelines referred to in Minerals Strategy.
	0	0	Designated Landscapes <ul style="list-style-type: none"> Less significant adverse impact 	<ul style="list-style-type: none"> No action required.
9. To protect and improve air quality and reduce the impacts of noise.	0	0	<ul style="list-style-type: none"> Impacts on air quality at/around the site expected to be negligible. No AQMAs will be directly affected by the working of this site proposal. Any dust resulting from working will be controlled through normal dust-suppression measures. Ball clay traffic travelling to/from Devon along the A35 would have some impact on the Chideock AQMA. Any impacts due to noise resulting from mineral working would be expected to be satisfactorily minimised through normal noise mitigation measures, imposed at the planning application stage. 	<ul style="list-style-type: none"> Environmental protection measures to be put in place to reduce dust and noise impacts. Existing measures to address air quality in Chideock AQMA would minimise impacts due to ball clay transport.
10. To maintain, conserve and enhance soil quality.	-	0	<ul style="list-style-type: none"> The site comprises primarily heathland, grassland and woodland cover. The area is a former heathland area and so would be expected to have relatively poor, acidic soils. Site preparation/working would require stripping and storage of the soils, with some impacts on them. If the site is worked and restored to heathland this will require reinstatement/retention of acidic soils with their seedbank. 	<ul style="list-style-type: none"> Soil is poor quality in agricultural terms but valuable in terms of potential for heathland restoration. Soils to be stored/protected during preparation and working and properly reinstated during restoration.
11. To conserve and safeguard mineral resources.	+	0	<ul style="list-style-type: none"> The site would make an important contribution to the supply of ball clay. 	<ul style="list-style-type: none"> No specific action required; site development to take into consideration relevant impacts and mitigate where appropriate.
12. To promote the use of alternative materials.	0	0	<ul style="list-style-type: none"> This proposal does not at present promote the use of alternative materials. 	<ul style="list-style-type: none"> No action required.
13. To provide an adequate and affordable supply of minerals to meet society's needs.	+	0	<ul style="list-style-type: none"> Development of this site would provide a benefit in terms of contributing to the provision of a supply of minerals to meet society's needs. Ensuring a sustainable supply will depend on the development and management of the site. Providing site development takes into account relevant principles of sustainable development it is expected this will contribute to complying with this 	<ul style="list-style-type: none"> Ensure principles of sustainable development are incorporated into the development of this site.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			objective.	
14. To promote and encourage sustainable economic growth	+	0	<ul style="list-style-type: none"> This site proposal is expected to contribute to economic development on two levels – directly through the provision of employment at the site to be developed and indirectly through the provision of ball clay and aggregate minerals required for the maintenance of built environment and for new built development and for commercial/industrial uses. Both levels are expected to maintain employment, skilled and unskilled. However given the expected size of the reserve this is likely to be a limited benefit. Proposed restoration is to heathland/agriculture, both of which offer economic benefits. 	<ul style="list-style-type: none"> Further assessment required to consider restoration options.
15. To adapt to and mitigate the impacts of climate change.	-	0	<ul style="list-style-type: none"> Developing land as a quarry is expected to have some negative impacts regarding climate change, due primarily to machinery used and transportation of mineral away from site. However, these will in relative terms be negligible. The Bournemouth, Dorset and Poole Minerals Strategy seeks to address and minimise such impacts through Policy CC1 which requires operators to take into consideration climate change impacts and their possible mitigation for any proposed minerals development. The development management policies, e.g. DM 1, also address and seek to minimise the issue of sustainable development and climate change. Restoration to some form of vegetated environment will offer benefits in the form of climate change mitigation, including provision of habitat for wildlife, but again these will be relatively small. 	<ul style="list-style-type: none"> Use energy efficient plant and machinery. Implement restoration which provides appropriate habitats to help to increase resilience of flora/fauna.
16. To minimise the negative impacts of waste and minerals transport on the transport network, mitigating any residual impacts.	-	0	<ul style="list-style-type: none"> This proposed site is a small working close to the current Doreys site and is accessed via an existing, adequate, entry onto Holme Lane. Access to the A351 is gained a short distance to the east via Holme Lane and West Lane. The site details show a traffic generation of 20 to 25 vehicles per day. However, if this site comes into operation it is thought that it would follow the cessation of extraction at this and other local pits. There would therefore not be an overall increase in traffic. If it is in operation simultaneously with other sites, could give rise to cumulative impacts, the impacts of which would need to be addressed. As the site is not expected to come forward in 	<ul style="list-style-type: none"> Any proposal for this site would need to be accompanied by a Transport Assessment which will need to provide access details and consider vehicle routing. The TA should be scoped with the Transport Development Management Team. Transport Assessment to be carried out, identifying opportunities for reducing impacts on the transport network.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			<p>parallel with the existing operations at this pit, and there are relatively good links with the strategic network, there is unlikely to be any noticeable increase in traffic and it has been given a 'Less Significant Adverse Impact' to 'No Significant Adverse Impact' rating. If the site were to come forward earlier, then consideration would need to be given to the routing of vehicles between the site, any processing facility and the A351.</p> <ul style="list-style-type: none"> • Policies DM1 and DM 8 actively address this issue of minimising impacts on the transportation network. 	<ul style="list-style-type: none"> • Alternative options to be investigated.
17. To support and encourage the use of sustainable transport modes, imposing no unmitigated negative impacts on them.	–	0	<ul style="list-style-type: none"> • The proposed extension can only realistically be accessed by means of road transport, resulting in a negative impact under this Objective during development and working. • As far as reasonably possible negative impacts resulting from access and transport will be mitigated, as required by Policies DM1 and DM8 of the Minerals Strategy. 	<ul style="list-style-type: none"> • Mitigate impacts where identified and where appropriate.
18. To sustain the health and quality of life of the population	?	0	<p>Impact on Sensitive Human Receptors</p> <ul style="list-style-type: none"> • Closest residences within 400-800m. Site is well screened and not visible from residences. • Proposed site is immediately adjacent to rifle range. • Lorry traffic would have impacts on some settlements. This issue is mentioned under Objective 15 above. • Policies DM1 and DM 8 actively address this issue of minimising impacts on the transportation network. Other mitigation can be implemented as considered necessary. • Development would likely require appropriate mitigation (such as visual and noise attenuation bunding, standoffs) to limit impacts. Adequate scope to screen works, using mitigation such as visual and noise attenuation bunds. 	<ul style="list-style-type: none"> • Appropriate mitigation to be implemented, following assessment of likely impacts – visual, transport or other. • Restoration to improve landscape of site where possible; and to seek to increase public access. • Transport Assessment to be carried out, identifying opportunities for reducing impacts on the transport network where appropriate.
	–	0	<p>Impact on Existing Settlements</p> <ul style="list-style-type: none"> • Stoborough Heath is closest settlement at approximately 800m, site is well screened and would not be visible. • Lorry traffic would have impacts on some settlements. This issue is mentioned under Objective 15 above. • Policies DM1 and DM 8 actively address this issue of minimising impacts on the transportation network. Other mitigation can be implemented as considered 	

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			necessary.	
	0	0	Impact on Airport Safety <ul style="list-style-type: none"> Site is approximately 24 km from the airport and not proposed for wet working or wet restoration. Not expected to have an impact on the airport. 	<ul style="list-style-type: none"> No action required.
19. To enable safe access to countryside and open spaces.	0	0	Impact on Recreational Land <ul style="list-style-type: none"> Site is private land with no public access. No formal or informal recreational use. 	<ul style="list-style-type: none"> No action required
	—	0	Impact on Public Rights of Way <ul style="list-style-type: none"> Bridleway runs adjacent to eastern edge of site. It can be screened as required. 	<ul style="list-style-type: none"> Appropriate mitigation, such as visual screen bunding, to be provided as required.

Preliminary Hydrological Risk Assessment

Controlled Waters	Issues/Risks	Mitigation	Further information or approval that may be required
<ul style="list-style-type: none"> • Watercourses • Ponds/lakes, including wet habitats • Groundwater 	<ul style="list-style-type: none"> • The River Basin Management Plan South West River Basin District identifies the Frome (the closest main river, some 850m distant) as being of 'Poor' environmental quality. Potential for contamination from runoff from site. • Potential for contamination of controlled waters through spillage or seepage of pollutants such as fuel, or silt in water. • Potential impacts on existing surface water or ground water features – water flows through site to feed downstream designations. 	<ul style="list-style-type: none"> • Appropriate arrangements to be made for ensuring that runoff from the site does not enter the surface or groundwater drainage unless any silt has first been removed. • Fuel stored on site to be appropriately bunded and sealed to prevent any spillage from entering ground or surface waters. • On-going monitoring during development and working of the site. • Ground water recharge if considered necessary. 	<ul style="list-style-type: none"> • Full hydrogeological assessment to consider possible impacts of working this site and any required mitigation. • Flood Risk Assessment • Water Framework Assessment • Further assessment of potential impacts on water quality and levels, particularly for groundwater, is required prior to development. • Assessment of the feasibility of relocating ponds and associated habitats and species. • Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.

Cumulative Impacts

There is other mineral working in the vicinity, both existing and proposed. The proposed site is an extension, although not directly adjacent, to an existing ball clay quarry. It is not clear at this stage when this site could commence working and whether it might operate at the same time as the current quarry. If that was to happen, this proposed site would have cumulative impacts, which would need to be addressed.

The proposal is within 5Km (by road) of a site allocated in the Purbeck Local Plan Part 1 (adopted Nov 2012) (Policy CEN) for development of 200 dwellings and community facilities, off Worgret Road, Wareham. Traffic arising from the new residential development will also add to general traffic levels in / around Wareham.

Summary.

Potential Benefits	Potential Impacts
<ul style="list-style-type: none"> Contributions to the supply of ball clay, a nationally important mineral. Economic benefits at local and wider levels. 	<ul style="list-style-type: none"> Potentially significant ecological impacts – it is expected that full Appropriate Assessment will be required, identifying impacts and required mitigation. Significant effects expected on hydrology, especially hydrogeology, as water flows through site to feed downstream designations – full assessment and mitigation will be required. Will be related to ecological assessment. Archaeological impacts possible, but not known until assessment – appropriate mitigation to be identified and applied. Possible limited landscape impacts, further assessment required. Site access and mineral transport will be by road – further assessment required to establish likely impacts and identify possible mitigation. Possibility of cumulative impacts if the site is worked simultaneously with other in the vicinity. Impacts on adjacent bridleway, to be mitigated by screening.

Overall Recommendation:

On the basis of the evidence available it does not appear that there is sufficient certainty that the impacts identified in this sustainability appraisal are currently capable of satisfactory mitigation. Further information will be required to determine likely impacts and whether these can be satisfactorily mitigated.

The site remains part of the mineral resource of Bournemouth, Dorset and Poole but is not at this time included in the Draft Bournemouth, Dorset and Poole Mineral Sites Plan.

The benefits of developing this site are not considered to outweigh the impacts of working here. **At this time** other sites are considered to be more appropriate options for supplying aggregate.

It is **recommended** that this site should not be included in the emerging Mineral Sites Plan

Portland Stone: PS02 Perryfield Quarry Extension, Portland

Site Name/Location: PS02 Perryfield Quarry Extension, Portland	Nominee: Stone Firms Ltd	Site Area: Production Reserve:
	Agent:	
	Local Authority: Weymouth and Portland Mineral Type: Portland Stone	

Impact Assessment Scoring

--	Strong Negative Impact	-	Minor Negative Impact	+	Minor Positive Impact	++	Strong Positive Impact	0	Negligible or No Effect	?	Uncertain
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Timescales for effects:

P/W: Preparation and Working

R/A: Restoration and Afteruse

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
1. To move waste management up the waste hierarchy	N/A	N/A	<ul style="list-style-type: none"> This Objective is not relevant to this site nomination 	<ul style="list-style-type: none"> N/A
2. To maintain, conserve and enhance biodiversity	0	0	European/International Designations <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.
	0	0	Annex 1 Bird Species <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.
	0	0	National Designations <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.
	0	0	Protected species <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.
	0	0	Local recognitions/designations, including ancient woodland and veteran trees <ul style="list-style-type: none"> Providing that the over- and inter-burden from quarrying can be stored away from SNCIs such as Bottomcoombe SNCI and other areas supporting calcareous grassland habitat then any effects are likely to be insignificant. 	<ul style="list-style-type: none"> No action required.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
3. To maintain, conserve and enhance geodiversity.	+	0	<ul style="list-style-type: none"> Existing interests and access requirements for scientific or educational study remain. 	<ul style="list-style-type: none"> Permit access to site where appropriate. Retain geological face after working if possible and if appropriate.
4. To maintain, conserve and enhance the quality of ground, surface and sea waters and manage the consumption of water in a sustainable way.	0	0	Groundwater <ul style="list-style-type: none"> Criteria classification “Less Significant Adverse Impact” as on a Secondary Aquifer. No impact on Source Protection Zones. 	<ul style="list-style-type: none"> No impacts expected and no action required.
	0	0	Surface Water <ul style="list-style-type: none"> Criteria classification “No Significant or Negligible Adverse Impacts” as there are no watercourses within 500m. 	
5. To reduce flood risk and improve flood management.	0	0	Flooding/Coastal Stability <ul style="list-style-type: none"> Entire site is within Flood Risk Zone 1. No impact on coastal stability. 	<ul style="list-style-type: none"> No action required.
6. To maintain, conserve and enhance the historic environment (including archaeological sites, historic buildings, conservation areas, historic parks and gardens and other locally distinctive features and their settings).	?	0	Archaeology <ul style="list-style-type: none"> Unquarried areas of Portland are recognised as having high archaeological potential, and the lawnsheeds are mentioned below. Archaeological assessment and evaluation would be required before an informed planning decision could be made. Only when these have been undertaken would the archaeological impact be understood – at present it could be anywhere from at present it could be anywhere from ‘Very Significant’ to ‘No Significant’ impacts. 	<ul style="list-style-type: none"> Further assessment of possible impacts and appropriate mitigation will be required. All necessary mitigation to be implemented.
	- ?	-	Historic Landscapes <ul style="list-style-type: none"> Lawnsheeds are a distinctive feature of the Portland landscape. These are strip fields, probably of Medieval date, which were often in individual ownerships. The site is within an area of such lawnsheeds, and although they have been adversely affected by various developments, several original boundaries survive. The impact of quarrying on these would depend upon how the working and restoration methods employed. 	

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	0	0	Historic Buildings <ul style="list-style-type: none"> There is no significant impact on the nearest listed building (the windmill) or its setting. The building has been stabilised in the past though having a keep out sign on it. The quarrying is far enough away not to affect the foundations and the before and after settings should be very similar if not exactly the same. Assessment D ('No Significant Impact') therefore. 	<ul style="list-style-type: none"> No action required.
7. To maintain, conserve and enhance the landscape, including townscape, seascape and the coast.	--	?	Landscape Capacity <ul style="list-style-type: none"> Further open quarrying would be inappropriate in particular due to the site's contribution to the current intactness of the whole area as a unified and undeveloped area of open space close to and overlooked by residential properties and rights of way. Despite some visually detracting features, further quarrying would negatively impact on key characteristics and its amenity, recreational and historic value and its value as an open undeveloped buffer and setting for adjacent properties and the adjacent conservation area. It is viewed by 'sensitive receptors' i.e. people in residential properties and those engaged in the landscape for recreational/amenity benefits. 	<ul style="list-style-type: none"> Further assessment required to consider whether any mitigation is possible, and what it should be. If mitigation is possible, all appropriate mitigation to be implemented as and when needed.
	0	0	Designated Landscapes <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.
8. To protect and improve air quality and reduce the impacts of noise.	0	0	<ul style="list-style-type: none"> Impacts on air quality expected to be negligible. No AQMAs will be affected by the working of this site proposal. Any dust resulting from working will be controlled through normal dust-suppression measures. Noise mitigation will be addressed at the planning application stage, with appropriate mitigation to be included in the development of the site. 	<ul style="list-style-type: none"> Environmental protection measures to reduce dust and ensure noise is appropriately mitigated.
9. To maintain, conserve and enhance soil quality.	-	0	<ul style="list-style-type: none"> Site is 'Good to Moderate' agricultural land. Soils will be stripped and protected during preparation and working and reused on site as part of restoration. 	<ul style="list-style-type: none"> Soil to be properly stripped and stored prior to working; protected during working; and re-spread on site after working.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
10. To conserve and safeguard mineral resources.	++	0	<ul style="list-style-type: none"> The site would make an important contribution to the supply of Portland Stone for Bournemouth, Dorset and Poole and all other potential markets. 	<ul style="list-style-type: none"> No specific action required; site development to take into consideration relevant impacts and mitigate where appropriate.
11. To promote the use of alternative materials.	-	0	<ul style="list-style-type: none"> This proposal does not promote the use of alternative materials. 	<ul style="list-style-type: none"> No action required.
12. To provide an adequate and affordable supply of minerals to meet society's needs.	+	0	<ul style="list-style-type: none"> Development of this site would provide a benefit in terms of contributing to the provision of a supply of minerals to meet society's needs. Ensuring a sustainable supply will depend on the development and management of the site. Providing site development takes into account relevant principles of sustainable development it is expected this will contribute to complying with this objective. 	<ul style="list-style-type: none"> Ensure principles of sustainable development are incorporated into the development of this site.
13. To promote and encourage sustainable economic growth	+	0	<ul style="list-style-type: none"> This site proposal is expected to contribute to economic development on two levels – directly through the provision of employment at the site to be developed and indirectly through the provision of Portland Stone required for new build, repairs and maintenance, decorative and monument work and landscaping work. Both levels are expected to maintain employment, skilled and unskilled. 	<ul style="list-style-type: none"> No further action required.
14. To adapt to and mitigate the impacts of climate change.	-	0	<ul style="list-style-type: none"> Developing land as a quarry is expected to have some negative impacts regarding climate change, due primarily to machinery used and transportation of mineral away from site. However, these will in relative terms be negligible. The Bournemouth, Dorset and Poole Minerals Strategy seeks to address and minimise such impacts through Policy CC1 which requires operators to take into consideration climate change impacts and their possible mitigation for any proposed minerals development. The development management policies, e.g. DM 1, also address and seek to minimise the issue of sustainable development and climate change. 	<ul style="list-style-type: none"> Use energy efficient plant and machinery. Implement restoration which provides appropriate habitats to help to increase resilience of flora/fauna.
15. To minimise	-	0	<ul style="list-style-type: none"> This proposal is for an extension to the 	<ul style="list-style-type: none"> Any proposal for this

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
the negative impacts of waste and minerals transport on the transport network, mitigating any residual impacts.			<p>existing Perryfield Quarry. Traffic is not expected to increase over the current levels and the existing, adequate, access will be used.</p> <ul style="list-style-type: none"> The A354 is accessed a short distance from the site. To exit the local area this road passes through Fortuneswell and Weymouth to the north. Access to this site does impact upon existing settlements, however, as there is not expected to be any increase over the existing operation, the site has been given a C ('Less Significant Adverse Impact') rating. Policies DM1 and DM 8 of the Minerals Strategy actively address this issue of minimising impacts on the transportation network. 	<p>site would need to be accompanied by a Transport Assessment which will need to provide access details and consider vehicle routing. The TA should be scoped with the Transport Development Management Team.</p> <ul style="list-style-type: none"> Transport Assessment will identify opportunities for reducing impacts on the transport network.
16. To support and encourage the use of sustainable transport modes, imposing no unmitigated negative impacts on them.	—	0	<ul style="list-style-type: none"> The proposed extension can only realistically be accessed by means of road transport, resulting in a negative impact under this Objective during development and working. As far as reasonably possible negative impacts resulting from access and transport will be mitigated, as required by Policies DM1 and DM8 of the Minerals Strategy. 	<ul style="list-style-type: none"> Mitigate impacts where identified and appropriate. Transport Assessment to be carried out, identifying possible impacts and opportunities for reducing impacts on the transport network.
17. To sustain the health and quality of life of the population	---	0	<p>Impact on Sensitive Human Receptors</p> <ul style="list-style-type: none"> Residential properties within 50m to the south; adjacent to existing housing at Shortlands to the north and within 300m to the west. Further assessment and information required regarding screening and stand-offs. 	<ul style="list-style-type: none"> Further assessment required to consider whether this development may be possible. If it goes ahead, appropriate mitigation to be provided following assessment of likely impacts. Screening, bunding, standoffs will be used to mitigate impacts where considered necessary.
	---	0	<p>Impact on Existing Settlements</p> <ul style="list-style-type: none"> Site is surrounded by settlements of Easton and Weston, being adjacent to existing properties to the north. The existence of the Important Open Gap identified in the Weymouth and Portland Adopted Local Plan 2005 must be taken into consideration. 	
	0	0	<p>Impact on Airport Safety</p> <ul style="list-style-type: none"> Site is far removed (approximately 50km) from airport. No impacts expected. 	<ul style="list-style-type: none"> No action required.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
18. To enable safe access to countryside and open spaces.	-	+	Impact on Recreational Land <ul style="list-style-type: none"> No formal recreational use; land shows signs of pathways indicating informal use for walking. 	<ul style="list-style-type: none"> If development goes ahead, opportunities for restoration to improve landscape of site where possible to be considered; and to seek to facilitate public access. Any impacts on rights of way to be mitigated.
	--	+	Impact on Public Rights of Way <ul style="list-style-type: none"> Footpaths to west, east and north of site. Footpath to north of site is adjacent to site boundary. Further assessment on screening required. 	

Preliminary Hydrological Risk Assessment

Controlled Waters	Issues/Risks	Mitigation	Further information/approval required
<ul style="list-style-type: none"> Watercourses Ponds/lakes, including wet habitats Groundwater 	<ul style="list-style-type: none"> Potential for contamination through spillage or seepage of pollutants such as fuel, or silt in water. 	<ul style="list-style-type: none"> Appropriate arrangements to be made for ensuring that runoff from the site does not enter the groundwater unless any silt has first been removed. Fuel stored on site to be appropriately bunded and sealed to prevent any spillage from entering ground or surface waters. On-going monitoring during development and working of the site. 	<ul style="list-style-type: none"> Full hydrogeological risk assessment will be required as part of a planning application. Flood Risk Assessment Water Framework Assessment Further assessment of potential impacts on water quality and levels, particularly for groundwater, is required prior to development. Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.

Cumulative Impacts

Site nomination comprises a new proposal in an area where there is a high concentration and long history of mineral extraction.

The proposal is within 5Km of land allocated for major employment development (8.6Ha) at Osprey Quay, Portland (Policy PORT 1) and for residential development (380dwellings) at the Former Hardy Complex, Portland (Policy PORT2) in the Pre -Submission draft West Dorset, Weymouth and Portland Local Plan (June 2012) as amended by Proposed Modifications (June 2013). Traffic arising from the new development will add to general traffic levels on the A354.

Summary.

Potential Benefits	Potential Impacts on...
<ul style="list-style-type: none"> • Provision of Portland Stone. • Support for the local stone industry and employment, both locally and wherever Portland Stone is exported and used, with associated economic benefits. • Use of the stone for heritage building works/repairs, and for new buildings. • Geodiversity benefits, through exposures created and fossils found. • Possibility of improved public access. 	<ul style="list-style-type: none"> • Archaeology – impacts could be significant, further assessment required to determine whether mitigation is possible. • Landscape Capacity and Historic Landscapes – significant impacts are expected, further assessment required to determine whether mitigation is possible. • Amenity - significant impacts are expected, further assessment required to determine whether mitigation is possible. • Recreation/Access - further assessment required to determine whether mitigation is possible.

Overall Recommendation:

Assessment already carried out has flagged up archaeology/heritage, landscape, local amenity and access as key issues to be addressed as part of working this site nomination. Further assessment will be required to identify satisfactory mitigation and to identify if there are any additional impacts that will require mitigation.

At this stage it is considered likely that the benefits of developing this site do not outweigh the impacts of working.

In addition, no information has been submitted to indicate that this proposal does not conflict with Policy PD2 – Surface Quarrying of Portland Stone - of the Bournemouth, Dorset and Poole Minerals Strategy. This policy prevents future surface quarrying on Portland unless certain criteria are met.

The benefits of developing this site are not considered to outweigh the impacts of working here. **At this time** other sites are considered to be more appropriate options for supplying Portland Stone.

It is **recommended** that this site should not be included in the emerging Mineral Sites Plan

Purbeck Stone: PK11 St Aldhelms Quarry Extension, Purbeck

Planning permission for this proposed site extension was granted on 1 April 2015 and therefore this site nomination is no longer under consideration. Details of this permission are as follows:

PLANNING APPLICATION: 6/2013/0055

LOCATION: St Aldhelms Quarry, Worth Matravers, Swanage, Dorset. BH19 3LN

DEVELOPMENT PROPOSED: The extension of St Aldhelm's Quarry by 0.58ha in a south-westerly direction, the continued operation of the quarry, including the importation of stone until 2046, the crushing of waste stone and the restoration of the site to calcareous species rich grassland and the retention of faces of geological interest.

No sustainability appraisal or further assessment is required.

Purbeck Stone: PK20 Crack Lane, Langton Matravers

Site Name/Location: Crack Lane, north of Langton Matravers	Nominee: W Haysom and Sons
Mineral Type: Purbeck Stone (Purbeck Marble)	Local Authority: Purbeck District Council
Site Area: approximately 0.5 ha	
Production: Likely to be worked in summer campaigns, 900 tonnes/campaign	
Reserve: up to approximately 32,000 tonnes, but only some 16,000 reasonably recoverable	

Impact Assessment Scoring

--	Strong Negative Impact	-	Minor Negative Impact	+	Minor Positive Impact	++	Strong Positive Impact	0	Negligible or No Effect	?	Uncertain
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Timescales for effects:

P/W: Preparation and Working

R/A: Restoration and Afteruse

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
1. To move waste management up the waste hierarchy	N/A	N/A	<ul style="list-style-type: none"> This Objective is not relevant to this site nomination 	<ul style="list-style-type: none"> N/A
2. To maintain, conserve and enhance biodiversity	0	0	European/International Designations <ul style="list-style-type: none"> No impacts expected. 	<ul style="list-style-type: none"> No action required.
	0	0	Annex 1 Bird Species <ul style="list-style-type: none"> No impacts expected 	<ul style="list-style-type: none"> No action required.
	0	0	National Designations <ul style="list-style-type: none"> No impacts expected 	<ul style="list-style-type: none"> No action required.
	0	0	Protected species <ul style="list-style-type: none"> The site has water vole (protected under Schedule 9 of the Wildlife and Countryside Act) and also provides foraging habitat for adjacent populations of European protected bats (Brown long eared, Bechsteins and Natterers). These species would all be significantly 	<ul style="list-style-type: none"> It is noted that this site would be worked intermittently and in limited campaigns. However, no information has been provided about how this low level of

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	---	0	<p>affected by the loss of this site. This impact would have to be demonstrated to be capable of mitigation for this site proposal to progress.</p> <p>Local recognitions/designations, including ancient woodland and veteran trees</p> <ul style="list-style-type: none"> Site is adjacent to two SNCI's and forms an important linking habitat between them. The functionality of the SNCI's would be significantly affected by the loss of this habitat area. This impact would have to be demonstrated to be capable of mitigation for this site proposal to progress. 	<p>working could be achieved with acceptable mitigation of impacts.</p> <ul style="list-style-type: none"> Further assessment required to demonstrate that acceptable mitigation is possible, and how this might be achieved. Also, the potential for restoration to improve the site for the benefit of these species/designations needs to be considered.
	---	0		
3. To maintain, conserve and enhance geodiversity.	+	+	<ul style="list-style-type: none"> This site is adjacent to an existing Local Geological Site (Landscape Guidelines). Any excavation at this location has the potential to create fresh exposures that will compliment or enhance those that already exist at the Crack Lane Local Geological Site. Retaining permanent exposures for geological conservation at this site would be desirable. In addition the extraction of Purbeck Marble for use in building is a valuable link between geological and human heritage and is considered to benefit geological conservation. 	<ul style="list-style-type: none"> Note potential for quarries to yield fossils or other material of geodiversity interest. Visits or other investigation of working sites may be requested. Investigate potential and/or benefits of leaving quarried face open after restoration.
4. To maintain, conserve and enhance the quality of ground, surface and sea waters and manage the consumption of water in a sustainable way.	-	0	<p>Groundwater</p> <ul style="list-style-type: none"> Site overlies Secondary aquifer. No impact on Source Protection Zones. Not known if there are any licenced supplies. 	<ul style="list-style-type: none"> Simple hydrological assessment required to determine possible impacts, on ground and surface waters, with appropriate mitigation to be implemented. Appropriate arrangements should be put in place to ensure that the water leaving the site and entering the watercourses or groundwater is of an acceptable quality. Any fuel on site should be properly stored to avoid contamination in case of spillage. Appropriate arrangements should be installed for surface water and silt collection and fuel storage to prevent contamination of groundwater resources. The combined impacts of Purbeck Limestone Quarries should be assessed where a number of sites affect the same water resource or receiving water
	---	0	<p>Surface Water</p> <ul style="list-style-type: none"> Watercourse forms northern boundary of the site and there is another watercourse on the other side of Crack Lane. 	

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
				course.
5. To reduce flood risk and improve flood management.	0	0	Flooding/Coastal Stability <ul style="list-style-type: none"> Site is entirely in Flood Risk Zone 1, no risk of flooding. 	<ul style="list-style-type: none"> No action required.
6. To maintain, conserve and enhance the historic environment (including archaeological sites, historic buildings, conservation areas, historic parks and gardens and other locally distinctive features and their settings).	?	0/+	Archaeology <ul style="list-style-type: none"> The site is expected to have high potential for both industrial archaeological evidence of early quarrying and perhaps other below-ground archaeology. Archaeological assessment and evaluation would be required before an informed planning decision could be made. Only when these have been undertaken would the archaeological impact be understood – at present it could be anywhere from 'Very Significant' to 'No Significant' impact. 	<ul style="list-style-type: none"> Archaeological survey of the area required <u>as part of planning application</u> to assess possible presence and significance of non-designated remains and to assess whether/how these should be protected during working – <u>no further work required at site allocation stage</u>. All necessary mitigation to be implemented prior to working.
	0	0	Historic Landscapes <ul style="list-style-type: none"> The local landscape bears the imprint of previous quarrying dating from the Roman period onwards. It could be argued that the present site would be a continuation of the process, and if the site is to be restored afterwards the impact would be limited in time anyway. 	<ul style="list-style-type: none"> Adequate provision to be made for preservation, excavation or recording, as appropriate. Further consideration to be given to restoration proposals, in terms of historic landscapes.
	+	0	Historic Buildings <ul style="list-style-type: none"> There are no historic buildings in close proximity to this site therefore there is no impact on historic buildings here except the beneficial effect of releasing stone to repair old buildings or build new ones in sympathy with the Local environment. This therefore qualifies as positive impact. 	<ul style="list-style-type: none"> No action required.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
7. To maintain, conserve and enhance the landscape, including townscape, seascape and the coast.	---	0?	Landscape Capacity <ul style="list-style-type: none"> Significant adverse impact. The landscape capacity to accommodate the site is between low and medium. The site is on a prominent corner of a busy and well used tourist route (the A351) and a quiet lane (Crack Lane) and a public footpath runs right through the site. Although the site will be seen when passing by on these routes development will create an adverse impact on the amenity of users of the AONB, on the intimate character of the clay valley landscape and on the existing site features such as trees, copses and water courses. Further assessment will be required to determine whether mitigation will be possible. 	<ul style="list-style-type: none"> Visual impacts assessment required to understand more of the potential impacts and what might be needed to mitigate these. Mitigation – primarily screening – may be possible but it is not known at this stage what would be needed to make this effective.
	---	0?	Designated Landscapes <ul style="list-style-type: none"> Significant adverse impact. The site is likely to impact adversely on the Dorset AONB. Further assessment will be required to determine whether mitigation will be possible. 	
8. To protect and improve air quality.	0	0	<ul style="list-style-type: none"> Impacts on air quality expected to be negligible. No AQMAs will be affected by the working of this site proposal. Any dust resulting from working will be controlled through normal dust-suppression measures. 	<ul style="list-style-type: none"> Environmental protection measures to reduce dust.
9. To maintain, conserve and enhance soil quality.	-	0	<ul style="list-style-type: none"> The site is currently an area of pasture and soils are either good to moderate or poor in quality. Any soil removed will be protected during working and either re-used on site or taken elsewhere to be used. Further assessment may be required to determine soil quality. 	<ul style="list-style-type: none"> Soil to be properly stripped and stored prior to working; protected during working; and re-spread on site after working.
10. To conserve and safeguard mineral resources.	++	0	<ul style="list-style-type: none"> The site would make an important contribution to the supply of Purbeck Stone, specifically Purbeck Marble, for Bournemouth, Dorset and Poole and all other potential markets. 	<ul style="list-style-type: none"> No specific action required; site development to take into consideration relevant impacts and mitigate where appropriate.
11. To promote the use of alternative materials.	-	0	<ul style="list-style-type: none"> This proposal does not promote the use of alternative materials. 	<ul style="list-style-type: none"> No action required.
12. To provide an adequate and affordable supply of minerals to meet society's needs.	+	0	<ul style="list-style-type: none"> Development of this site would provide a benefit in terms of contributing to the provision of a supply of minerals to meet society's needs. Ensuring a sustainable supply will depend on the development and management of the site. Providing site development takes into account relevant principles of sustainable development 	<ul style="list-style-type: none"> Ensure principles of sustainable development are incorporated into the development of this site.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			it is expected this will contribute to complying with this objective.	
13. To promote and encourage sustainable economic growth	+	0	<ul style="list-style-type: none"> This site proposal is expected to contribute to economic development on two levels – directly through the provision of employment at the site to be developed and indirectly through the provision of Purbeck Stone required for new build, repairs and maintenance, decorative and monument work and landscaping work. Both levels are expected to maintain employment, skilled and unskilled. The relative rarity of Purbeck Marble adds benefit to this proposal and contributes to maintaining the various skills-bases associated with its preparation and use. 	<ul style="list-style-type: none"> No action required.
14. To adapt to and mitigate the impacts of climate change.	-	0	<ul style="list-style-type: none"> Developing land as a quarry is expected to have some negative impacts regarding climate change, due primarily to machinery used and transportation of mineral away from site. However, these will in relative terms be negligible. The Bournemouth, Dorset and Poole Minerals Strategy seeks to address and minimise such impacts through Policy CC1 which requires operators to take into consideration climate change impacts and their possible mitigation for any proposed minerals development. The development management policies, e.g. DM 1, also address and seek to minimise the issue of sustainable development and climate change. 	<ul style="list-style-type: none"> Use energy efficient plant and machinery. Implement restoration which provides appropriate habitats to help to increase resilience of flora/fauna.
15. To minimise the negative impacts of waste and minerals transport on the transport network, mitigating any residual impacts.	-?	0	<ul style="list-style-type: none"> It is expected that this site would be worked in summer campaigns, with approximately 900 tonnes per annum being produced during those years it is worked. It is not expected that the site would be worked annually. This would equate to a total of about 60 trips over the course of the campaign. The site access is proposed to be from Crack Lane, a short distance from its junction with the A351. An acceptable access onto Crack Lane to accommodate this low number of trips would be achievable. It is proposed that trips from the site will go to the Lander's Quarry Yard located to the west of B3069 Langton Matravers. A Transport Statement would be needed with the site to look at potential routes between the two sites. The site is considered to have a 'Less Significant Adverse Impact'. Policies DM 1 and DM 8 of the Minerals Strategy actively address this issue of minimising impacts 	<ul style="list-style-type: none"> Any proposal for this site would need to be accompanied by a Transport Assessment which will need to provide access details and consider vehicle routing. The TA should be scoped with the Transport Development Management Team and is intended to identify opportunities for reducing impacts on the transport network.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
			on the transportation network.	
16. To support and encourage the use of sustainable transport modes, imposing no unmitigated negative impacts on them.	—	0	<ul style="list-style-type: none"> The proposed site can only realistically be accessed by means of road transport, resulting in a negative impact under this Objective during development and working. As far as reasonably possible negative impacts resulting from access and transport will be mitigated, as required by Policies DM1 and DM8 of the Minerals Strategy. 	<ul style="list-style-type: none"> Mitigate impacts where identified and appropriate.
17. To sustain the health and quality of life of the population	0	0	Impact on Sensitive Human Receptors <ul style="list-style-type: none"> Site is very well screened from receptors. Cemetery approximately 130m to the south but woodland in-between. Impacts are considered to be negligible. 	<ul style="list-style-type: none"> No action required.
	—	0	Impact on Existing Settlements <ul style="list-style-type: none"> Langton Matravers is approximately 350m to the south, but site is well screened and there is no inter-visibility. Quarried stone has to be transported to Landers Service Yard. The route has not yet been finalised, but could pass through Langton Matravers. Rating of this site could vary between 'Significant Adverse Impact' and 'No Significant or Negligible Adverse Impacts', depending on the outcome of the Transport Assessment. 	<ul style="list-style-type: none"> Provision of appropriate mitigation, should any be required, following assessment of likely impacts. Restoration to improve landscape of site where possible; and to seek to facilitate public access. Screening, bunding, standoffs will be used to mitigate impacts where considered necessary. Transport impacts to be considered through Transport Assessment, as noted above.
	0	0	Impact on Airport Safety <ul style="list-style-type: none"> Site is over 20km from airport and will be worked and restored dry. No impacts expected. 	<ul style="list-style-type: none"> No action required.
18. To enable safe access to countryside and open spaces.	—	0	Impact on Recreational Land <ul style="list-style-type: none"> Site is a small area of pasture-land, crossed by a public footpath. Apart from this footpath, the site does not appear to be used for any other formal/informal recreational purposes. 	<ul style="list-style-type: none"> Assessment of potential impacts, with appropriate mitigation identified. This must address impacts on the footpath.

Sustainability Objectives	Effects		Commentary	Mitigation
	P/W	R/A		
	---	0	<p>Impact on Public Rights of Way</p> <ul style="list-style-type: none"> • Site is crossed by a public footpath and there are other footpaths in the vicinity. • This path will be significantly impacted by this proposal and will need to be diverted appropriately during working campaigns. 	<ul style="list-style-type: none"> • Restoration to include considering how it might be possible to improve public access in the area.

Preliminary Hydrological Risk Assessment

Controlled Waters	Issues/Risks	Mitigation	Further information/approval required
<ul style="list-style-type: none"> • Watercourses • Ponds/lakes, including wet habitats • Groundwater 	<ul style="list-style-type: none"> • Impacts on surface water features - the site drains through various streams/drains through Swanage and then to the sea, some 3.5 km to the east. • Potential for contamination of drains/streams/sea through spillage or seepage of pollutants such as fuel, or silt in water. 	<ul style="list-style-type: none"> • Appropriate arrangements to be made for ensuring that runoff from the site does not enter the streams/drains or groundwater unless any silt has first been removed. • Fuel stored on site to be appropriately bunded and sealed to prevent any spillage from entering ground or surface waters. • On-going monitoring during development and working of the site. 	<ul style="list-style-type: none"> • Further assessment of potential impacts on water quality and levels, particularly for groundwater, is required prior to development – scope to • Flood Risk Assessment and Water Framework Assessment • Assessment of the feasibility of relocating ponds and associated habitats and species. • Land Drainage Consent to be obtained from Dorset County Council if works may affect flow of an ordinary watercourse.

Cumulative Impacts

The proposal is within 5km (by road) of a town (Swanage) where allocations for the development of 200 dwellings, employment and retail facilities have been made in the Purbeck Local Plan Part 1 (adopted Nov 2012) (Policy SE). (Site details not yet available). Traffic arising from the new residential development will add to general traffic levels in / around Swanage and on the A351.

Site is a new mineral extraction in an area where there are other areas of mineral extraction. Stone from this site will be extracted in time-limited campaigns.

Summary.

Potential Benefits	Potential Impacts
<ul style="list-style-type: none">• Geodiversity – exposing the Purbeck Marble will have geodiversity interest/benefit. However, the exposure will be temporary, only during campaigns.• A source of Purbeck Marble to be used in the construction of new buildings and maintenance of existing structures will be a benefit. It will also assist in providing employment and skills maintenance.• Possible benefits through exposure/interpretation of historic quarries/quarrying in the locality.	<ul style="list-style-type: none">• The proposed development could have impacts on protected species and local nature conservation designations. It is not known at this stage whether and how these impacts can be mitigated.• There is a stream adjacent to the site boundary and although this is not expected to prevent development of this site, potential impacts on runoff and groundwater must be very carefully assessed and monitored to ensure that there will not be any impacts on these.• The proposed development is expected to have severe impacts on both the capacity of the local landscape to satisfactorily absorb the development and the surrounding designated landscape. Further assessment will be required to see if the impacts can be mitigated in any way.• There will be impacts on users of the footpath which crosses the site, as it will have to be diverted. Further assessment is required to consider impacts and options for diversion.• The preliminary transport assessment indicates that quarry traffic will be relatively low and easily able to gain access to public roads. A more detailed assessment is required to consider impacts of transporting stone to where it will be processed/sold, and whether this will have any impacts on Langton Matravers or any other settlements.

Overall Recommendation:

Although there are important benefits to be realised from developing a source of Purbeck Marble, it appears that the site will have significant landscape impacts. There will also be impacts on biodiversity, hydrology/hydrogeology, potentially archaeology and rights of way/access. In the absence of further information, particularly regarding the specific need for Purbeck Marble and more detail on how the site might be worked, how often it might be worked and how it would be restored/left between working, it is considered that the site is not at this stage appropriate for inclusion in the emerging Mineral Sites Plan.

On the basis of the evidence available it does not appear that there is sufficient certainty that the impacts identified in this sustainability appraisal are currently capable of satisfactory mitigation. The site remains part of the mineral resource of Bournemouth, Dorset and Poole but is not at this time included in the Draft Bournemouth, Dorset and Poole Mineral Sites Plan.