

# Reviewing the Plan for Purbeck's future

Purbeck Local Plan Partial Review  
Strategic Flood Risk Assessment, 2016



Thriving communities in balance  
with the natural environment

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## **Introduction**

This Strategic Flood Risk Assessment (SFRA) has been carried out by Purbeck District Council with additional guidance from the Environment Agency. It covers all of Purbeck except for Swanage, which is subject to separate SFRAs at Level 1 and Level 2 (being prepared by consultants). This SFRA is published alongside the Purbeck Local Plan Partial Review Preferred Options consultation document.

It is a 'Level 1' SFRA for Purbeck (excluding Swanage), which is a basic level SFRA. This is because there are no current or future proposals to build outside of Flood Zone 1, the area at lowest flood risk or develop and increase flooding elsewhere. The partial review Preferred Options consultation document includes a preferred option and alternative options for development. The options include specific sites which have been subject to a detailed assessment through the Strategic Housing Land Availability Assessment (SHLAA). This assessment has included consideration of flood risk as set out below.

## Background to SFRA for Partial Review Options (2016)

### National Planning Practice Guidance on Flood Risk

The National Planning Policy Framework states that Local Authorities should assess flood risk and avoid flood risk. The main guidance on flood risk (and SFRA) is found in Planning Practice Guidance: 'Flood Risk and Coastal Change' at the link below:

<http://planningguidance.communities.gov.uk/blog/guidance/flood-risk-and-coastal-change/>

**To assess flood risk:** Local Authorities should undertake a Strategic Flood Risk Assessment to fully understand the flood risk in the area to inform Local Plan preparation.

**To avoid flood risk:** Local Authorities should apply a sequential approach to site selection so that development is, as far as reasonably possible, located where the risk of flooding from all sources is lowest, taking account of climate change and the vulnerability of future uses to flood risk. In plan-making this involves applying the 'Sequential Test', and, if needed, the 'Exception Test' to Local Plans.

### Flood Risk Management Authorities in Dorset (including Purbeck)

The Flood and Water Management Act 2010 sets out the organisations that are 'Flood Risk Management Authorities' that have a duty to share information and work in partnership with each other to exercise flood and coastal risk management functions.

Within Dorset, Dorset County Council is the Lead Local Flood Authority (LLFA) for the administrative area of Dorset. Bournemouth Borough Council and Borough of Poole are the LLFAs for their own administrative areas. Dorset County Council has produced the 'Dorset Local Flood Risk Management Strategy' (2014) (FRMS) (<https://www.dorsetforyou.com/localfloodrisk>) which sets out the roles of the Risk Management Authorities within Dorset as (paragraph 1.1.1):

- **Lead Local Flood Authority (LLFA):** Dorset County Council is responsible for investigating flooding from 'ordinary watercourses', surface water and groundwater. Bournemouth Borough Council and Borough of Poole, as unitary authorities, are the LLFA's for their own administrative areas;
- **District Councils:** Christchurch Borough Council, East Dorset District Council, North Dorset District Council, Purbeck District Council (PDC), West Dorset District Council and Weymouth and Portland Borough Council are flood RMA's.

- **The Environment Agency:** Within Dorset the local office is part of the Wessex Area, based in Blandford Forum. They are responsible for managing the risk of flooding from the sea and main rivers, and also for regulating the safety of reservoirs. Where there is an interface between the sea and main rivers with local flood risk sources (for example, tide locking) it is the responsibility of the LLFA to consider the impacts, consequences and agree who will lead.
- **Water companies:** The majority of Dorset is serviced by Wessex Water plc, there is a small area to the West of the county which is covered by South West Water plc, and a small area to the East which is covered by Sembcorp Bournemouth Water. The Water Companies are responsible for sewer flooding and systems they manage;
- **Highways Authorities:** The Highways Agency manages the A31, A35 and A303 trunk roads and Dorset County Council manages all other public highways in Dorset. They are responsible for the management of surface water from rainfall on the highway.

The roles and responsibilities for the FRMAs in relation to flood sources are set out in Table 1 of the Strategy (DCC, 2014) as follows:

Flood Source	Environment Agency	Lead Local Flood Authority (DCC)	District Council (PDC)	Water Company***	Highways Authority
Main river*	✓				
Ordinary watercourse**		✓			
Surface water		✓			
Surface water on highway					✓
Sewer flooding				✓	
The sea	✓		✓		
Groundwater		✓			
Reservoirs	✓				

\* A Main River is a river that has been designated as such by the Environment Agency. These tend to be the larger arterial watercourses that are considered to pose a significant flood risk.

\*\*Ordinary watercourses include all rivers and streams not designated as a Main River and all ditches, drains, cuts, culverts, sluices, sewers (other than public sewers) and passages, through which water flows.

\*\*\* Highways authorities include the Highways Agency and Dorset County Council Highways team.

## What is Flood Risk?

Flood risk is a ‘combination of the probability and the potential consequences of flooding from all sources – including from rivers and the sea, directly from rainfall on the ground surface and rising groundwater, overwhelmed sewers and drainage systems, and from reservoirs, canals and lakes and other artificial sources’ (Para 2 of planning guidance ‘Flood Risk and Coastal Change’).

## What is a Level 1 Strategic Flood Risk Assessment (SFRA)?

A Strategic Flood Risk Assessment assesses ‘the risk to an area from flooding from all sources, now and in the future, taking account of the impacts of climate change, and ... the impact that land use changes and development in the area will have on flood risk’ (Para 9 of planning guidance ‘Flood Risk and Coastal Change’). A Level 1 assessment is a basic assessment where flooding is not a major issue.

## Why are there two SFRA areas in Purbeck?

We have produced SFRA’s for two separate areas within Purbeck as follows:

- (i) SFRA Level 1 for Swanage Parish accompanied by SFRA Level 2 for specific development sites (currently being prepared);
- (ii) SFRA Level 1 for the rest of Purbeck District.

This is because a separate Level 1 SFRA has been produced in support of the emerging Swanage Local Plan (<https://www.dorsetforyou.com/swanage-local-plan>). However, a number of policy proposals included in the Swanage Local Plan would result in development within areas of flood risk. As a result, further work is being undertaken by consultants to produce a SFRA Level 2 for the specific development sites at risk of flooding, taking into account wider catchment areas and potential climate change impacts.

## How should a Strategic Flood Risk Assessment be used in plan making?

Para 10 of ‘Flood Risk and Coastal Change’ states that the SFRA ‘will be used to refine information on river and sea flooding risk shown on the Environment Agency’s Flood Map’. It also lists six ways in which the SFRA should be used, as follows:

<b>Local planning authorities should use this SFRA to:</b>	<b>Where in the SFRA / related documents?</b>
Determine the variations in risk from all sources of flooding across their areas, and also the risks to and from surrounding areas in the same flood catchment	Information on flooding in Purbeck Information on flooding by area
Inform the sustainability appraisal of the Local Plan, so that flood risk is fully taken into account when considering allocation options and in the preparation of plan policies, including	Addressing flood risk in the Partial Review Options document



policies for flood risk management to ensure that flood risk is not increased	Addressing flood risk in the Sustainability Appraisal of the Partial Review Options document
Apply the Sequential Test and, where necessary, the Exception Test when determining land use allocations	Addressing flood risk in the Partial Review Options document
Identify the requirements for site-specific flood risk assessments in particular locations, including those at risk from sources other than river and sea flooding	Information on flooding in Purbeck Information on flooding by area
Determine the acceptability of flood risk in relation to emergency planning capability	Adequacy of escape routes from SHLAA sites.
Consider opportunities to reduce flood risk to existing communities and developments through better management of surface water, provision for conveyance and of storage for flood water	Appendices 1, 2, 3 & 4 SHLAA report Options consultation document 2016

### What is a Sequential Test?

'The Sequential Test ensures that a sequential approach is followed to steer new development to areas with the lowest probability of flooding. The flood zones as refined in the Strategic Flood Risk Assessment for the area provide the basis for applying the test. The aim is to steer new development to Flood Zone 1 (areas with a low probability of river or sea flooding). Where there are no reasonably available sites in Flood Zone 1, local planning authorities in their decision making should take into account the flood risk vulnerability of land uses and consider reasonably available sites in Flood Zone 2 (areas with a medium probability of river or sea flooding), applying the Exception Test if required'

(Para 19 of planning guidance 'Flood risk and Coastal Change'.)

Within each flood zone, surface water and other sources of flooding also need to be taken into account in applying the sequential approach to the location of development.

## **Flood Maps and Data**

### **Flood Maps and Data provided by Environment Agency**

The map accompanying this SFRA includes fluvial and tidal flooding and surface water flooding, all provided by the Environment Agency. We have not mapped very localized flooding but instead describe incidents and areas in this report.

The Environment Agency flood map shows areas at risk of flooding. Flood Zone 1 is the area of lowest risk, less than 1 in 1000 years. Flood Zone 2 is the area of medium risk between 1 in 100 years and 1 in 1000 years. Flood Zone 3 is the area at highest risk greater than 1 in 100 years. The flood map shows the situation today and not the situation in 100 years' time. The EA's map can therefore only be a guide and if a proposed development is located close to the flood zone today, further assessment work will be required to assess impact in 100 years time and include climate change allowances. The EA's map does not show flood zones in catchment areas less than 3 km square. However, these areas are mapped on Dorset Explorer (<http://explorer.geowessex.com/>) for the 1 in 30 year, 1 in 100 year and 1 in 1000 year events. The surface water flood zones for these small catchments should be considered in the same way as flood zones 1, 2 & 3 relate to larger catchments and the policy should be inclusive of these areas.

The Environment Agency also produces surface water flooding maps. The map shows all their surface water flooding records, including the most severe events (1 in 1,000 year events).

However, the EA flood zones do not take flood defences into consideration, as these can be breached. Nor do they take into account other sources of flooding, such as surface water drainage: [www.environment-agency.gov.uk/floodrisk](http://www.environment-agency.gov.uk/floodrisk).

Because the EA flood map is updated quarterly, it is worth checking it to be absolutely sure that our own maps have the most up-to-date information. This information can be viewed at: <http://maps.environment-agency.gov.uk/wiyby/wiybyController?ep=maptopics&lang=e>

### **Risk of Flooding from Reservoirs**

According to the Environment Agency website (see above), reservoir flooding is extremely unlikely to happen. It states: 'The shading on the map shows the area that could be flooded if a large reservoir were to fail and release the water it holds. A large reservoir is one that holds over 25,000 cubic metres of water, equivalent to approximately 10 Olympic sized swimming pools. Since this is a worst case scenario, it's unlikely that any actual flood would be this large'. The link above brings up the option to search for risk of flooding from reservoirs.

## **Climate Change**

Climate change is expected to have a major influence on future flood risk. For the purpose of a Level 1 SFRA, the following assumptions have been made:

2050: Functional flood plain/Flood Corridor	currently Flood Zone 3
2050: Flood Zone 3	currently Flood Zone 2

In other words, an area that is currently in Flood Zone 2 is likely to be in Flood Zone 3 by the end of the development's design life. An area that is currently in Flood Zone 3 is likely to be in the functional flood plain/flood corridor by the end of the development's design life.

## **Tidal Inundation**

Areas within 6m of the coast may be at risk of tidal inundation. We have not mapped this, but it is a factor to be taken into account when planning development in coastal areas of the district.

## **Risk Management Strategy**

Dorset County Council is currently working on a Risk Management Strategy so that 'communities are resilient and prepared for flooding'. This strategy (see link below) is a source of information on local flooding incidents across the district, which complements the EA flood map. <https://www.dorsetforyou.com/flood-strategy> .

## **General information on flooding in Purbeck**

### **Fluvial Flooding**

The Frome and Piddle catchment has a long history of fluvial, tidal, surface water and groundwater flooding. Flooding as a result of lower order events can be frequently seen in certain areas of the catchment. Widespread flooding has occurred during more significant flood events, some of them in recent years such as in the winter of 2000 and 2001.

### **Surface Water Flooding**

Surface water flooding is experienced when soils are saturated and therefore their natural capacity to absorb rainfall is prevented leading to overland flow, or when rain falls upon paved surfaces with low absorption causing water to run-off. This impact may be exacerbated if falling upon hard/paved surfaces and/or steeply sloping surfaces.

Surface water flooding can occur frequently after periods of short intense rainfall. It is often a short lived event after heavy downpours or thunderstorms, and quantities of flood water are not normally on the scale of those associated with flooding from large rivers. However, in more extreme cases, flooding to properties, commercial premises and infrastructure can result. The flooding of main roads is often seen, which can cause major inconveniences to the transport network.

Surface water flooding can also be through other mechanisms such as rainfall intensities exceeding the natural infiltration rate (often summer floods).

Significant localized flooding in Purbeck is frequently caused by the inadequate capacity of watercourses to cater for severe events and a lack of flood routes through urbanized areas. The latter problem is due to the fact that surface water drainage systems are designed to a standard that renders them unable to cope with higher return events. Highway drains, for example, used to be built to less than a 1 in 5 year standard and surface water sewers to perhaps a standard or around 1 in 20 to 30 years – whereas the design standards for new domestic property is 1 in 100 years plus a 30% allowance for climate change to the year 2115.

The requirement in the Building Regulations for surface water drainage is that it should be adequate and the adequacy of any system should be dependent on its location. The standards suggested in the Building Regulations approved document may not be sufficient to consider the broader flooding problems. The implications of the system failing or overflowing and the effect on neighbouring property and property at the lower level in the catchment should be taken into consideration and should be set out in the site specific FRA.

In existing urban areas of the district, the number of vehicle hardstands and paved areas for recreational use has been increasing. Most of these have been constructed without providing any drainage facility and, as a result, the rate and amount of surface water run-off has increased.

Additional development can cause an increase in run off from hard surfaces in areas which previously provided areas of drainage or flood flow routes. Incremental development in Purbeck has sometimes resulted in the loss of such areas (see detailed descriptions of each location).

When existing roads are re-surfaced the top layer is not necessarily removed, thus the level of the road is continually raised. This causes some nearby dwellings to be lower than the road and more vulnerable to flooding from run-off from the road in heavy rain. This is more common in rural areas.

### **Coastal Flooding**

Coastal flooding is becoming a major issue along the Dorset coastline, in particular from predicted increases in sea level rise from climate change. Deeper water near the coast could result in larger waves with greater energy, causing an increased rate of erosion or causing flooding due to overtopping of defences.

### **Tidal Flooding**

The Environment Agency maps of tidal flooding only relate to still water levels. As a consequence, wave overtopping also needs to be taken into account. The District Engineer will be involved in any allocations/applications that are at risk of tidal flooding.

### **Groundwater Flooding**

The Environment Agency's Catchment Flood Management Plan for the Frome and Piddle provides additional information on flooding in the catchment, including maps of areas vulnerable to groundwater flooding.

## **Catchment Flood Management Plan**

The Environment Agency has produced a Catchment Flood Management Plan for the Frome and Piddle. This document contains additional maps, for example, on groundwater flooding (see Chapter 16) which assist in building up a picture of the overall catchment and in setting the context for Purbeck.

For Purbeck the relevant CFMP policies are:

### **Policy 1: General Coastline**

Areas of little or no flood risk where the EA will continue to monitor and advise. This policy will tend to be applied in those areas where there are very few properties at risk of flooding. It reflects a commitment to work with the natural flood processes as far as possible.

### **Policy 4: Wareham and Swanage**

Areas of low, moderate or high flood risk where the EA are already managing the flood risk effectively but where it may be necessary to take further actions to keep pace with climate change. This policy will tend to be applied where the risks are currently deemed to be appropriately managed, but where the risk of flooding is expected to significantly rise in the future. In this case we would need to do more in the future to contain what would otherwise be an increasing risk. Taking further action to reduce risk will require further appraisal to assess whether there are socially and environmentally sustainable, technically viable and economically justified options.

### **Policy 6: The River Frome Corridor, Wareham Forest and the Chalklands**

Areas of low to moderate flood risk where the EA will take action with others to store water or manage run-off in locations that provide overall flood risk reduction or environmental benefits. This policy will tend to be applied where there may be opportunities in some locations to reduce flood risk locally or more widely in a catchment by storing water or managing run-off. This policy has been applied to an area (where the potential to apply the policy exists), but would only be implemented in specific locations within the area after more detailed appraisal and consultation.

## **General information on flooding by area**

### **Bere Regis**

The Bere Stream is the continuation of the stream running through Milborne St Andrew, (which is not in Purbeck) where there are a number of flooding problems. Most flooding in the vicinity of Bere Regis has been around the Shitterton area between the culvert under the by-pass and Shitterton Bridge. Shitterton Bridge itself is too small to cater for extreme events and as such the flow has to cross the road, leading to the flooding of some properties around the bridge. Dorset County Council is considering replacing the invert to this bridge, and suggestions have been made about increasing the capacity.

The open land downstream of Shitterton Bridge is not suitable for development as there is a defined flood corridor through it. The more recent development of the 1990s has been set at a definitive height above the stream bed level.

Further downstream at Snatford Bridge, Dorset County Council has replaced the invert to this bridge to avoid scour. This bridge is under capacity for carrying extreme flows and flooding of the nearby highway might result.

### **Corfe Castle**

Properties adjacent to the Byle Brook have been affected on a number of occasions by the stream overtopping its banks. However, the principal problem in this area is associated with the flooding event in 1990 when properties upstream and downstream of the bridge at the millpond were flooded. This was due to two factors: 1: The sluice gates to the millpond were in a dilapidated condition and were not capable of being opened fully. These became blocked and the millpond overflowed. 2: Upstream, although there was a raised bank behind the properties, it was not continuous with the railway embankment and water flowed around the back of the raised bank. Subsequently permission was sought to link the bank with the railway embankment. This has reduced the flood risk to these properties.

The tributary which runs to the north of the Castle principally affects the road. A study was carried out by Ian Howick Associates following the 1990 flooding, and the conclusion was that the two bridges under and adjacent to the A351 near the Castle were too small to cope with the 1990 event.

A particular problem with one of the inputs into the river comes from the Halves Cottages area. This route, partly in pipe and culvert and partly open watercourse, is routed along West Street. The system is not capable of coping with extreme events and there is no satisfactory overland route for water to reach the lower ground. As a result some properties in West Street are at significant risk of flooding. However, some improvements have been made to this system in association with recent development and this has significantly reduced the flood risk.

## **East Lulworth**

East Lulworth has localized highways flooding and some overtopping of the watercourse and roadside ditches, which has caused flooding to some properties. This watercourse discharges into Luckford Lake at East Holme.

## **East Morden**

There are flooding problems associated with the stream alongside the road in East Morden which has insufficient capacity to cope with extreme events. Development near the Cock and Bottle was specifically raised to mitigate flood risk.

## **Langton Matravers and Acton**

There have been localised flooding events in Langton Matravers and Acton from the watercourse which discharges into Swanage. Properties in The Hyde have been particularly affected in recent years.

## **Lytchett Matravers**

The soils in Lytchett Matravers are clayey and may be unsuitable for standard soakaways. Any discharge to a watercourse in Lytchett Matravers may need to be attenuated due to downstream flooding problems for example at the Bakers Arms roundabout. In some developments in the 1980s and 1990s, surface water attenuation tanks were used. This has reduced the risk of flooding to downstream properties.

## **Studland**

Flooding of the highways in Studland occurs in heavy rain due to surface water run-off. This particularly affects the road near the toilets at Watery Lane and the road.

## **Upton and Lytchett Minster**

Upton suffers from a lack of adequate watercourses and surface water sewers. Some parts are low-lying, and the natural overland route for surface water to discharge to the harbour has been cut off in some places, due to filling in of the harbour and raising the level of the land. As a result, localized flooding occurs, in particular in Upton, around Sandy Lane, Watery Lane, and Dorchester Rd, as well as in Old Watery Lane in Lytchett Minster. Some areas are also at risk of tidal flooding.



## **Wareham and Stoborough**

The Rivers Frome and Piddle both discharge into Poole Harbour at Wareham. The extent of tidal influence on the River Piddle is cited as being from the railway line downstream, and on the River Frome from Holme Bridge downstream. The river flooding which occurs in Wareham, and Stoborough is exacerbated by the tidal influence.

The principal flood risk in Wareham and Stoborough is flooding from the Rivers Frome and Piddle, combined with tidal flooding. The problem is exacerbated due to the inadequate size of the flap valves through the tide banks and the height of the road and footway at South Causeway and the lack of culverts under the road. There are risks to properties near to these rivers.

If the River Frome overtops its banks further upstream towards the Wareham Bypass, the water flows across the water meadows between Wareham and Stoborough and the only out-let is through the tide flap at Red Cliff. This tide flap does not have sufficient capacity to take extreme flows and as a result the water meadows can still be flooded even though the tide has receded.

The low land between the Frome and Piddle is predominantly agricultural and is artificially defended by raised banks against tidal flooding. The Wareham Tidal Banks Strategy (currently in its early stages) is considering the removal of these banks to allow natural flooding of the floodplain, which may reduce flooding in Wareham itself.

## **West Lulworth**

Much of the road through West Lulworth down to the Cove acts as a flood channel during severe rainfall events. As a consequence properties at or very near to road level may be at risk of flooding. The flood route runs through a system bypassing Hambury Farm and flows through the Weld Estate car park and down to the Cove. Development adjacent to the car park has been protected by flood gates and a specific flood route was retained when the heritage centre was constructed. Unfortunately modifications to the roundabout next to the heritage centre did not give adequate consideration to the need for the flood route down the road and has exacerbated the problem.

## **Winfrith Newburgh, East Stoke and East Chaldon (River Win)**

The villages of Winfrith, East Stoke and East Chaldon are in the catchment of the River Win which has a history of flooding. The underlying geology of the Win is permeable. However, when the land is saturated, flash flooding can occur. The most significant event was on 5 June 1983. This affected all the villages. One of the problems was the gauging station at Winfrith Newburgh, the purpose of which was to measure low flows for water resource purposes. However, as no bypass route had been provided, the structure caused a significant obstruction to flood flows. As the gauging station was in place prior to the adjacent development being built, it only became a

problem after the area was developed in the 1980s. Winfrith Newburgh has also suffered from groundwater flooding. In addition, the bridges through the village are of insufficient size to cater for extreme flows and in such situations water will be held back and cause flooding.

The area around the Red Lion Pub floods and affects the pub. This situation was exacerbated when the A352 was improved by adjusting and raising the road levels.

The river passes through a culvert under the A352. Immediately down-stream it passes under a bridge giving access to a development at Gatmore Rd constructed in the 1990s and which was the subject of a planning appeal. The National Rivers Authority (now the Environment Agency) allowed a bridge to be built, provided that it would be free-spanning. However, for practical reasons, the bridge could not be free spanning. To facilitate its construction, the roadside bank was removed. This resulted in the flooding and evacuation of two cottages on the opposite side of the road and flooding of the farm house further down Gatmore Rd. The bridge has caused a problem and has been the subject of a great deal of correspondence over the years. This problem is still not resolved but the downstream channel has been enlarged and the access bridge to the Red Lion replaced with a larger bridge, both of which have improved the situation.

East Chaldon has experienced run-off from saturated fields used in agriculture and resulted in mud and slurry being discharged into the road and properties.

### **Wool, East Burton and Bovington**

Part of this area is in the flood zone of the River Frome. A culvert near the BT Exchange in Wool has led to some localized flooding, while the watercourse at Spring St and Duck St occasionally overtops its banks and causes some flooding to property due to a lack of hydraulic capacity. The area to the west side of Lulworth Road going out of the village suffers ground water flooding and a lake sometimes forms. In Bovington, a watercourse running behind properties in Cologne Road has caused some flooding in the area.

A bridge over the River Win at East Burton crossroads is of adequate capacity, but the downstream channel is restricted. One particular restriction is the sheep wash. A scheme was proposed to bypass this but the owner's agreement could not be obtained. Although some work was subsequently carried out, it was not to an adequate standard. However, the flood risk has been reduced, but the watercourse still represents a significant flood risk. The area was severely flooded in 1983, affecting several properties.

## **Planning for the Partial Review**

This SFRA steers the Partial Review towards considering only allocations in Flood Zone 1. Allocations in Flood Zones 2 and 3 should not be considered.

### **Strategic Housing Land Availability Assessment (SHLAA) sites**

The Council has published its Strategic Housing Land Availability Assessment (SHLAA) alongside the Partial Review Options consultation. The SHLAA undertakes a detailed assessment of 268 sites that have been submitted to the Council for potential development. The assessment includes an initial site sift, and identifies sites which should be 'included' or 'excluded' from further consideration on the basis of high level constraints (including flood risk) and site size. It then undertakes a more detailed assessment of remaining sites to identify those that would be suitable for potential allocation through the Partial Review. This more detailed assessment draws on the comments of the District Engineer in relation to localized flood risk.

### **SHLAA sites within flood zones**

In the first instance, sites are only 'excluded' from consideration in the SHLAA on grounds of flood risk if all or the majority of the site is within a flood zone. However, this does not mean that sites which haven't been excluded will be developed. It simply means that the Council may consider allocation of all or parts of the non-excluded sites through the Local Plan process.

### **SHLAA sites that could exacerbate flooding elsewhere**

The more detailed site assessment included in the SHLAA also takes into consideration as to whether development of a site would exacerbate flooding elsewhere. This assessment has been undertaken in consultation with the District Engineer.

### **Adequacy of escape routes from SHLAA sites**

The more detailed site assessment included in the SHLAA also takes into consideration the adequacy of escape routes from sites. Sites may be excluded from further consideration if it is demonstrated that there is no adequate escape route from a site in case of flooding, for example if the road(s) around the site are prone to flooding and there is no other access.

## Addressing Flood Risk in the Partial Review Options document

The Partial Review Options consultation document includes a preferred option and alternative options for development. Each of the sites included in the options has been subject to suitability assessment through the Strategic Housing Land Availability Assessment which included consultation on potential flood risk with the District Engineer, DCC Flood Risk Management Team and Environment Agency. Sites that have been assessed as being at risk of flooding have not been included in the preferred or alternative options. Nor have any proposed development sites that would exacerbate flooding elsewhere if it appears that this could not be satisfactorily mitigated. Climate change has also been taken into account, as set out in Part 1 of this report.

The Options document also includes a policy on sustainable drainage systems (Policy SUDS), including where they would not be appropriate, in accordance with Planning Practice Guidance. In addition, the Options document proposes changes to Purbeck Local Plan Policy FR: Flood Risk to ensure that the policy conforms to updated national guidance. The key changes proposed include clarification that development should seek to mitigate the effects of surface water and ground water flooding. Flexibility has also been added so that development could occur in areas at risk of flooding, subject to certain criteria. Full details can be found in the Revised Policies Background Paper. The proposed amended policy is as follows:

### Policy FR: Flood Risk

The impact of flooding will be managed by locating development in accordance with Purbeck's Strategic Flood Risk Assessment (SFRA).

#### Flood Risk Assessments (FRA)

In Flood Zone 1, an FRA will be required for planning applications with a site area under 1 hectare that:

- Will alter the natural rate of surface water run-off; or
- Are located in areas where there is known to be a localised flooding, or drainage problem as set out in the SFRA maps; or
- Are located in areas below 3.55 metres above ordnance datum; or
- Are located in areas below 6 metres above ordnance datum and are within 50 metres of the coast (defined as back edge of beach or coast protection line).

An FRA will not normally be required for householder development in Flood Zone 1. Exceptional circumstances will need to be agreed with the Council on a site by site basis.

All FRAs should include topographic survey with levels reduced to ordnance datum

Finished Floor levels must be set at an agreed level above ordnance datum which should include 600 millimetres freeboard.

Where appropriate, sustainable drainage systems (SuDS) should be incorporated into the design of the development.

New development, or the intensification of existing uses, should be planned to avoid risk of flooding (from surface water run-off, groundwater, fluvial and coastal sources), where possible. The risk of flooding will be minimised by:

- i) steering development towards the areas of lowest risk and avoiding inappropriate development in the higher flood risk zones; and
- ii) ensuring development will not generate flooding through surface water runoff or ground water flooding and/or exacerbate flooding elsewhere.

In assessing proposals for development in an area with a risk of flooding, the Council will need to be satisfied that:

iii) there are no reasonably available alternative sites with a lower probability of flooding (where a site has been allocated, this test will have been satisfied) adequate measures will be taken to mitigate the risk and ensure that potential occupants will be safe, including measures to ensure the development is appropriately flood resilient, flood resistant and 'future proofed' against the effects of climate change; and

iv) safe access and escape routes are provided where required.

In the case of major development on unallocated sites, wider sustainability benefits should not remove the need to consider flood risk or surface water management, or the need to mitigate accordingly.

Development will not be permitted where it would adversely impact on the future maintenance, upgrading or replacement of a flood defence scheme.

Where an applicant can provide robust justification to the Council, historic buildings and sites may be exempt from this policy, if measures would harm their character or increase the risk of long-term deterioration to fabric or fitting.

The District Engineer, DCC Flood Risk Management Team and Environment Agency have, and will continue to be involved at all stages of the plan preparation and consultation process, in particular to provide detailed knowledge on specific and very localized issues related to flood risk and escape routes.

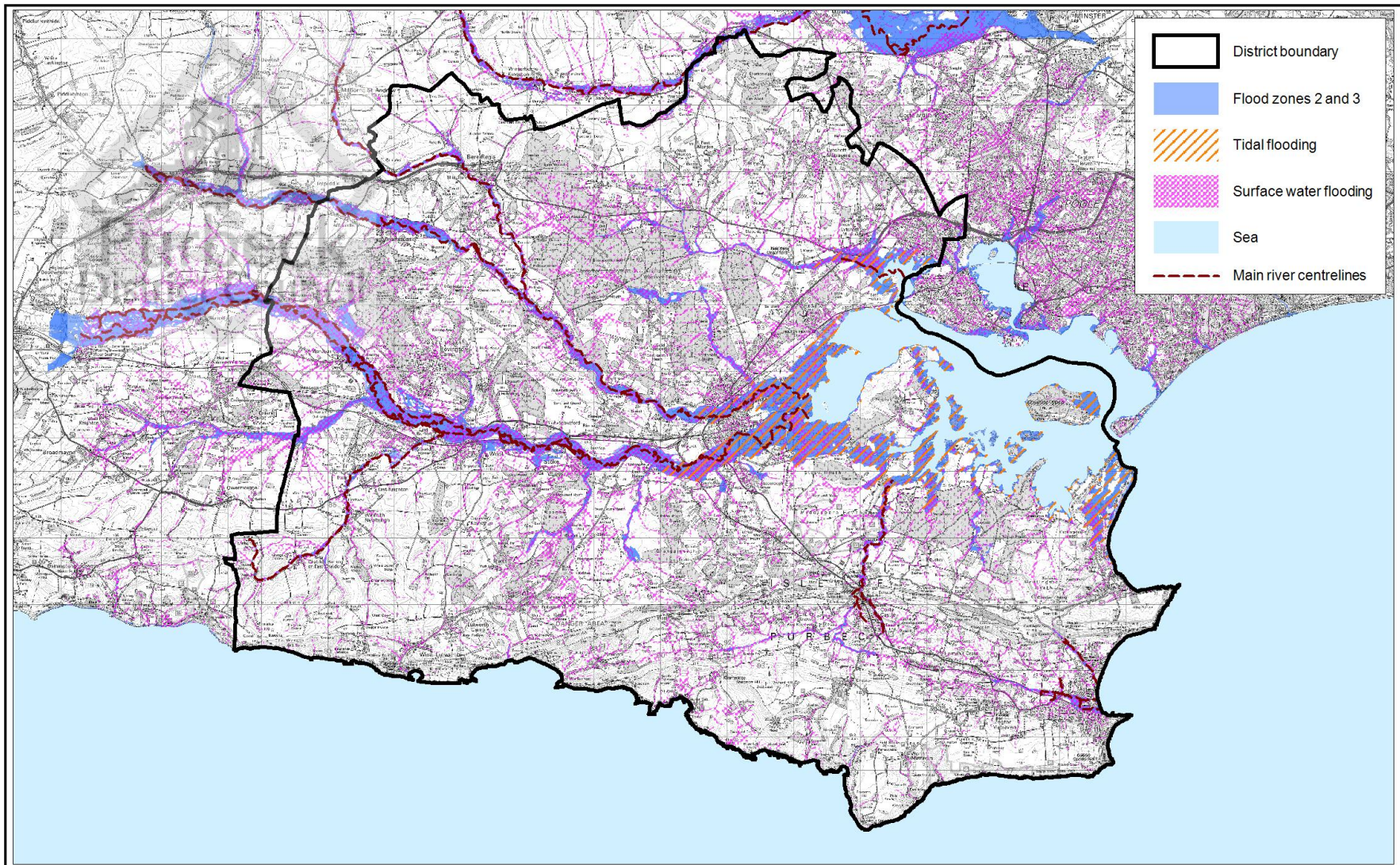
## **Addressing Flood Risk in the Sustainability Appraisal of the Partial Review Preferred Options document**

A sustainability appraisal has been published alongside the Partial Review Options consultation document. The sustainability appraisal refers to all types of flooding (e.g. fluvial flooding, surface water flooding) and takes into account whether development of a site would exacerbate flooding elsewhere and the adequacy of escape routes. The District Engineer has been consulted to provide detailed knowledge on specific issues related to flood risk and escape routes for sites being assessed. The sustainability appraisal also takes climate change into account when assessing sites.

### **Use of development contributions**

The Environment Agency wondered if the SFRA could set out how to remedy some of the issues listed through new development, such as contributions towards flood protection infrastructure. This is currently being explored at Lytchett Minster, however, in the majority of cases development contributions are very limited, and largely earmarked for transport projects and heathland mitigation.

**Appendix 1 Strategic Flood Risk Assessment Map (overleaf)**



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 Ordnance Survey LA100022058

**Strategic Flood Risk Assessment**  
 For Identification Purposes Only



Scale: Not to scale



## Appendix 2 Flood risk assessment of SHLAA sites included in the Options document

The table below includes a summary of SHLAA sites that are included in the Options document, as either part of the Preferred Option or an alternative option. The Options document and the full SHLAA which includes additional SHLAA sites, excluded sites and site maps can be viewed at <https://www.dorsetforyou.com/Purbeck-partial-review>. Site maps also follow the table below.

SHLAA Reference	Site Address	Consulted on in Partial Review Issues and Options document?	Is Option Site in Flood Zone 1?	Potential flood risk issues (as identified in the SHLAA assessment & based on original site areas)	Site specific comments made by Environment Agency	Recommendations
<b>South West Spatial Area</b>						
6/17/1307	Moreton Pit, Redbridge Road, Moreton	Yes Option 4e	Yes	There are numerous areas of the site that are at risk of surface water flooding. However, this can be mitigated, in theory. A capacity appraisal would be required to confirm network improvements for a development of this scale.	No comments	Drainage Capacity Appraisal and Flood Risk Assessment required.
6/17/1308	Land to north of Moreton Station	Yes Option 4e	Yes	The north, as well as some small patches along the southern edge of the site, are at risk of surface water flooding. However, this can be mitigated, in theory. A capacity appraisal would be required to confirm network improvements for a development of this	No comments	Drainage Capacity Appraisal and Flood Risk Assessment required.

SHLAA Reference	Site Address	Consulted on in Partial Review Issues and Options document?	Is Option Site in Flood Zone 1?	Potential flood risk issues (as identified in the SHLAA assessment & based on original site areas)	Site specific comments made by Environment Agency	Recommendations
				scale.		
6/27/0241	South of Dorchester Road, Wool	Yes Option 4f	Yes	There are some very small patches, mostly to the north of the site, that are at risk of surface water flooding. However, this can be mitigated, in theory. Surface water flows to the land drainage system.	No comments	Drainage Capacity Appraisal and Flood Risk Assessment required.
6/27/0242	Land to west of Purbeck Gate, Wool	Yes Option 4f	Yes	There is a drainage ditch to the north. There is an area to the north west of the site that is at risk of surface water flooding. However, this can be mitigated, in theory. There is limited capacity available in the local foul water system. There are no recorded public surface water systems. Surface water flows to the land drainage system.	No comments	Drainage Capacity Appraisal and Flood Risk Assessment required.
6/27/0246	Land off Sandhills	Yes Option 4f	Yes	None.	No comments	Flood Risk Assessment

SHLAA Reference	Site Address	Consulted on in Partial Review Issues and Options document?	Is Option Site in Flood Zone 1?	Potential flood risk issues (as identified in the SHLAA assessment & based on original site areas)	Site specific comments made by Environment Agency	Recommendations
	Crescent, East Burton, Wool					required.
6/27/0248	Land at Giddy Green, East Burton	Yes Option 4f	Yes	Small area of the north west corner in the flood zone. Drainage ditch to the south. There are strips running north to south and east to west, plus an area to the north east, that are at risk of surface water flooding. However, this can be mitigated, in theory. Surface water flows to the land drainage system.	No comments	Drainage Capacity Appraisal and Flood Risk Assessment required.
6/27/0249	Land adjoining Winfrith Technology Centre	Yes Option 4f	Yes	Area of flood risk to the north. There is an area towards the north west of the site that is at risk of surface water flooding. However, this can be mitigated, in theory. Surface water flows to the land drainage system.	No comments	Drainage Capacity Appraisal and Flood Risk Assessment required.
6/27/0254	Site South of	Yes	Yes	The north eastern part of	No comments	Flood Risk

<b>SHLAA Reference</b>	<b>Site Address</b>	<b>Consulted on in Partial Review Issues and Options document?</b>	<b>Is Option Site in Flood Zone 1?</b>	<b>Potential flood risk issues (as identified in the SHLAA assessment &amp; based on original site areas)</b>	<b>Site specific comments made by Environment Agency</b>	<b>Recommendations</b>
	Wool	Option 4f		the site is in the flood zone. An area to the east is at risk of surface water flooding.		Assessment required.
6/27/0258	Lower Hillside, Wool	Yes Option 4f	Yes	None.	No comments	Flood Risk Assessment required.
6/27/0546	Land off the A352, Wool	Yes Option 4f	Yes	There is a small patch to the north of the site that is at risk of surface water flooding. However, this can be mitigated, in theory. Surface water flows to the land drainage system.	No comments	Drainage Capacity Appraisal and Flood Risk Assessment required.
6/27/1309	Land adjacent Portland House, Wool	Yes Option 4f	Yes	There is an area towards the centre and north of the site that is at risk of surface water flooding. Surface water flows to the land drainage system.	No comments	Drainage Capacity Appraisal and Flood Risk Assessment required.
<b>North East Spatial Area</b>						
6/14/0268	Field off Burbidge Close, Lytchett Matravers	No	Yes	There is a small strip to the east of the site that is at risk of surface water flooding. However, this	No comments	Drainage Capacity Appraisal and Flood Risk Assessment required.

SHLAA Reference	Site Address	Consulted on in Partial Review Issues and Options document?	Is Option Site in Flood Zone 1?	Potential flood risk issues (as identified in the SHLAA assessment & based on original site areas)	Site specific comments made by Environment Agency	Recommendations
				can be mitigated, in theory. Surface water flows to land drainage system. There are no public surface water systems at this location.		
6/14/0269	Land at Blaney's Corner, Lytchett Matravers	No	Yes	There is a small strip to the south east of the site that is at risk of surface water flooding. However, this can be mitigated, in theory. There is limited capacity at a downstream foul water pumping station. There are no surface water public sewer systems recorded. Surface water flows to land drainage system. A capacity appraisal is necessary.	No comments	Drainage Capacity Appraisal and Flood Risk Assessment required.
6/14/0270	Land at Flowers Drove, Lytchett Matravers	No	Yes	There is a small strip to the west of the site that is at risk of surface water flooding. However, this can be mitigated, in theory.	No comments	Drainage Capacity Appraisal and Flood Risk Assessment required.

SHLAA Reference	Site Address	Consulted on in Partial Review Issues and Options document?	Is Option Site in Flood Zone 1?	Potential flood risk issues (as identified in the SHLAA assessment & based on original site areas)	Site specific comments made by Environment Agency	Recommendations
				There is limited capacity in local foul water sewers. There are no surface water public sewer systems recorded. Surface water flows to land drainage system.		
6/14/0271	Land to east of Wareham Road, Lytchett Matravers	No	Yes	There is a small strip to the east of the site that is at risk of surface water flooding. However, this can be mitigated, in theory. There is limited capacity at the downstream foul water pumping station. There are no surface water public sewer systems recorded. Surface water flows to the land drainage system. A capacity appraisal is necessary.	No comments	Drainage Capacity Appraisal and Flood Risk Assessment required.
6/14/0272	Land at Foxhills Cottage, Lytchett Matravers	No	Yes	There is limited capacity in local foul water sewers. Surface water flows to the land drainage system. There are no public surface	No comments	Drainage Capacity Appraisal and Flood Risk Assessment required.

<b>SHLAA Reference</b>	<b>Site Address</b>	<b>Consulted on in Partial Review Issues and Options document?</b>	<b>Is Option Site in Flood Zone 1?</b>	<b>Potential flood risk issues (as identified in the SHLAA assessment &amp; based on original site areas)</b>	<b>Site specific comments made by Environment Agency</b>	<b>Recommendations</b>
				water systems at this location.		
6/14/0273	Land adjacent 47 Wareham Road, Lytchett Matravers	No	Yes	None.	No comments	
6/14/0274	Adjacent to Peach Cottage, Foxhills Lane, Lytchett Matravers	No	Yes	There is a small strip to the south west of the site that is at risk of surface water flooding. However, this can be mitigated, in theory. There is limited capacity in local foul water sewers. Surface water flows to the land drainage system. There are no public surface water systems at this location.	No comments	Drainage Capacity Appraisal and Flood Risk Assessment required.
6/14/0276	Land adjacent The Rectory, Jenny's Lane, Lytchett Matravers	No	Yes	There is a small patch to the north of the site that is at risk of surface water flooding. However, this can be mitigated, in theory. There are no surface water public sewer systems recorded. Surface water flows to the land drainage	No comments	Drainage Capacity Appraisal and Flood Risk Assessment required.

SHLAA Reference	Site Address	Consulted on in Partial Review Issues and Options document?	Is Option Site in Flood Zone 1?	Potential flood risk issues (as identified in the SHLAA assessment & based on original site areas)	Site specific comments made by Environment Agency	Recommendations
				system.		
6/14/0345	Adjacent Sunnyside Farm, Wimborne Road, Lytchett Matravers	No	Yes	There are no surface water public sewer systems recorded. Surface water flows to the land drainage system.	No comments	Drainage Capacity Appraisal and Flood Risk Assessment required.
6/14/0375	Adjacent Middle Road, Lytchett Matravers	No	Yes	There is a small strip running along the east and south of the site that is at risk of surface water flooding. However, this can be mitigated, in theory. There is limited capacity in local foul water sewers. Surface water flows to the land drainage system. There are no public surface water systems at this location.	No comments	Drainage Capacity Appraisal and Flood Risk Assessment required.
6/14/0540	Land behind 36 & 38 Wareham Road, Lytchett Matravers	No	Yes	Surface water flows to the land drainage system. There are no public surface water systems at this location.	No comments	Drainage Capacity Appraisal and Flood Risk Assessment required.
6/14/1355	Land adjacent Primary School,	No	Yes	None.	No comments	



SHLAA Reference	Site Address	Consulted on in Partial Review Issues and Options document?	Is Option Site in Flood Zone 1?	Potential flood risk issues (as identified in the SHLAA assessment & based on original site areas)	Site specific comments made by Environment Agency	Recommendations
	Lytchett Matravers					
6/14/1370	Land adjacent Willowbrook, Lytchett Matravers	No	Yes	None.	No comments	
6/15/1316	Land to west of Lytchett Minster	Yes Option 4d	Yes	Areas to the south of the site fall within the flood zone and there is a strip along the centre of the site, as well as other areas to the east, west and particularly to the south, that are at risk of surface water flooding. However, this can be mitigated, in theory. Wessex Water says that a capacity appraisal is required to confirm network improvements for a development of this scale.	Whilst the majority of all 3 sites may be appropriate for development, and hence inclusion within the SHLAA, we advise the Council to ascertain, using the information submitted to them and by their own investigation, which specific areas of all 3 sites they consider <i>not</i> suitable for development after taking account of <i>all</i> sources of flooding.  Applying the criteria set out in the Council's Level 1 SFRA in respect of the 3.55 metre AOD contour is	Drainage Capacity Appraisal and Flood Risk Assessment required. Investigate suitability of all areas of site for development, taking into account flood risk, in further detail with District Engineer.

SHLAA Reference	Site Address	Consulted on in Partial Review Issues and Options document?	Is Option Site in Flood Zone 1?	Potential flood risk issues (as identified in the SHLAA assessment & based on original site areas)	Site specific comments made by Environment Agency	Recommendations
					<p>fine for consideration of flood risk from the sea in the future, but this does not necessarily mean all land above this contour is suitable for development. Other local sources of flooding may impinge on the proposed sites (e.g. groundwater, surface water, etc.) and as such we advise this be investigated in more detail with your Authority's drainage engineer before deciding which areas of the 3 proposed sites are deemed acceptable in terms of flood risk.</p>	
6/15/1318	Land to South East of Lytchett Minster School	Yes Option 4d	Majority – small area in zones 2 & 3	A flood zone lies to the east of the site. The west of the site is at risk of surface water flooding. However, this can be mitigated, in theory. Access would likely be via Dorchester Road, as	Whilst the majority of all 3 sites may be appropriate for development, and hence inclusion within the SHLAA, we advise the Council to ascertain, using the	Drainage Capacity Appraisal and Flood Risk Assessment required. Investigate suitability of all areas of site for development, taking into account flood

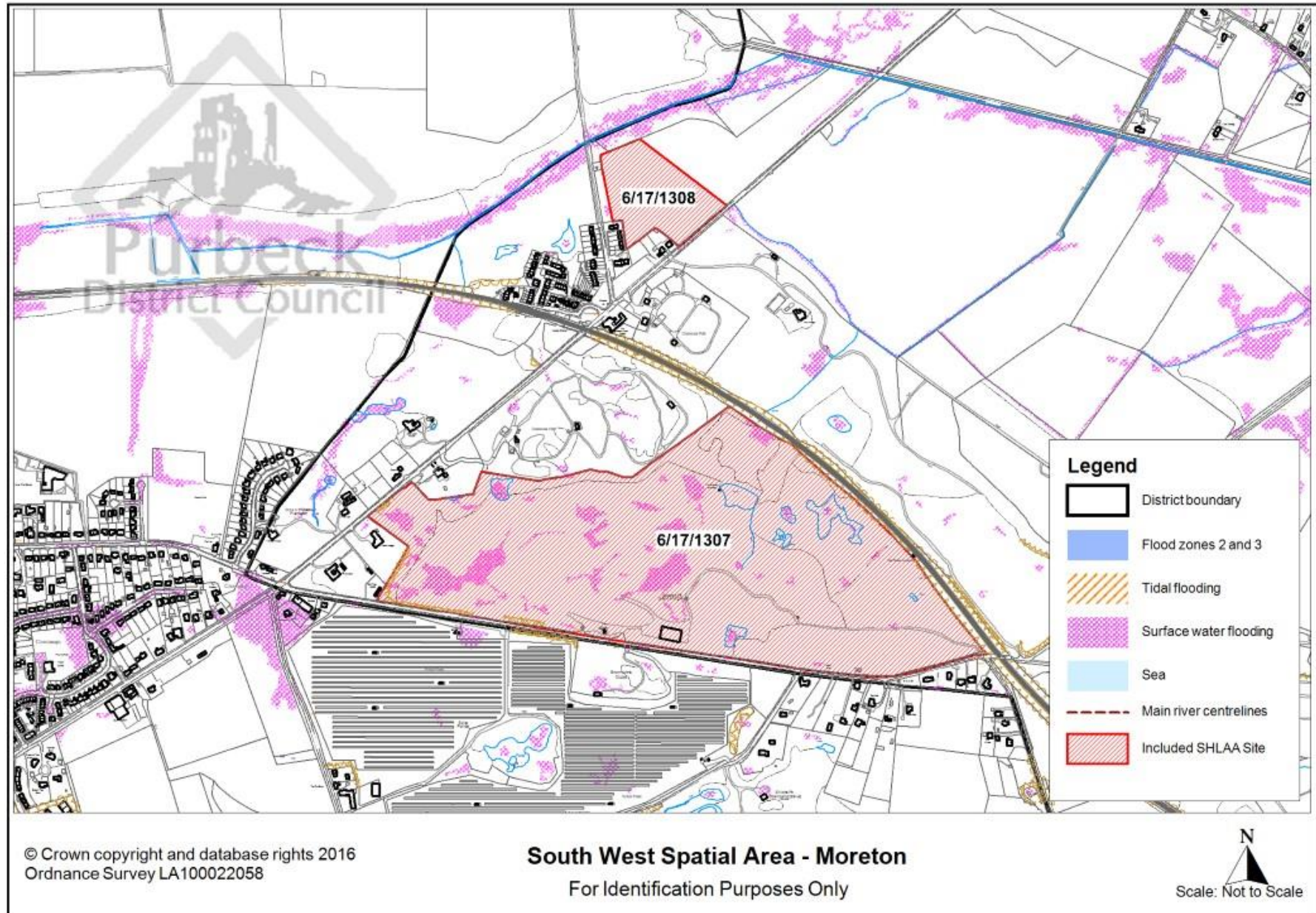
SHLAA Reference	Site Address	Consulted on in Partial Review Issues and Options document?	Is Option Site in Flood Zone 1?	Potential flood risk issues (as identified in the SHLAA assessment & based on original site areas)	Site specific comments made by Environment Agency	Recommendations
				<p>Watery Lane is prone to flooding. There is limited capacity in local foul water systems. Surface water flows to the land drainage system.</p>	<p>information submitted to them and by their own investigation, which specific areas of all 3 sites they consider <i>not</i> suitable for development after taking account of <i>all</i> sources of flooding.</p> <p>Applying the criteria set out in the Council's Level 1 SFRA in respect of the 3.55 metre AOD contour is fine for consideration of flood risk from the sea in the future, but this does not necessarily mean all land above this contour is suitable for development. Other local sources of flooding may impinge on the proposed sites (e.g. groundwater, surface water, etc.) and as such we advise this be investigated in</p>	<p>risk, in further detail with District Engineer.</p>

SHLAA Reference	Site Address	Consulted on in Partial Review Issues and Options document?	Is Option Site in Flood Zone 1?	Potential flood risk issues (as identified in the SHLAA assessment & based on original site areas)	Site specific comments made by Environment Agency	Recommendations
					more detail with your Authority's drainage engineer before deciding which areas of the 3 proposed sites are deemed acceptable in terms of flood risk.	
6/15/1320	Land at Policeman's Lane, Upton	No	Yes	The east of the site is at risk of surface water flooding. However, this can be mitigated, in theory. There is limited capacity at the downstream foul water pumping station. There is no surface water public sewer system recorded. Surface water flows to the land drainage system. A capacity appraisal is necessary to confirm the scope and scale of network improvements. A flood risk assessment should look at areas that fall outside of the flood zone but are prone to surface water drainage	Whilst the majority of all 3 sites may be appropriate for development, and hence inclusion within the SHLAA, we advise the Council to ascertain, using the information submitted to them and by their own investigation, which specific areas of all 3 sites they consider <i>not</i> suitable for development after taking account of <i>all</i> sources of flooding.  Applying the criteria set out in the Council's Level 1 SFRA in respect of the 3.55	Drainage Capacity Appraisal and Flood Risk Assessment required. Investigate suitability of all areas of site for development, taking into account flood risk, in further detail with District Engineer.

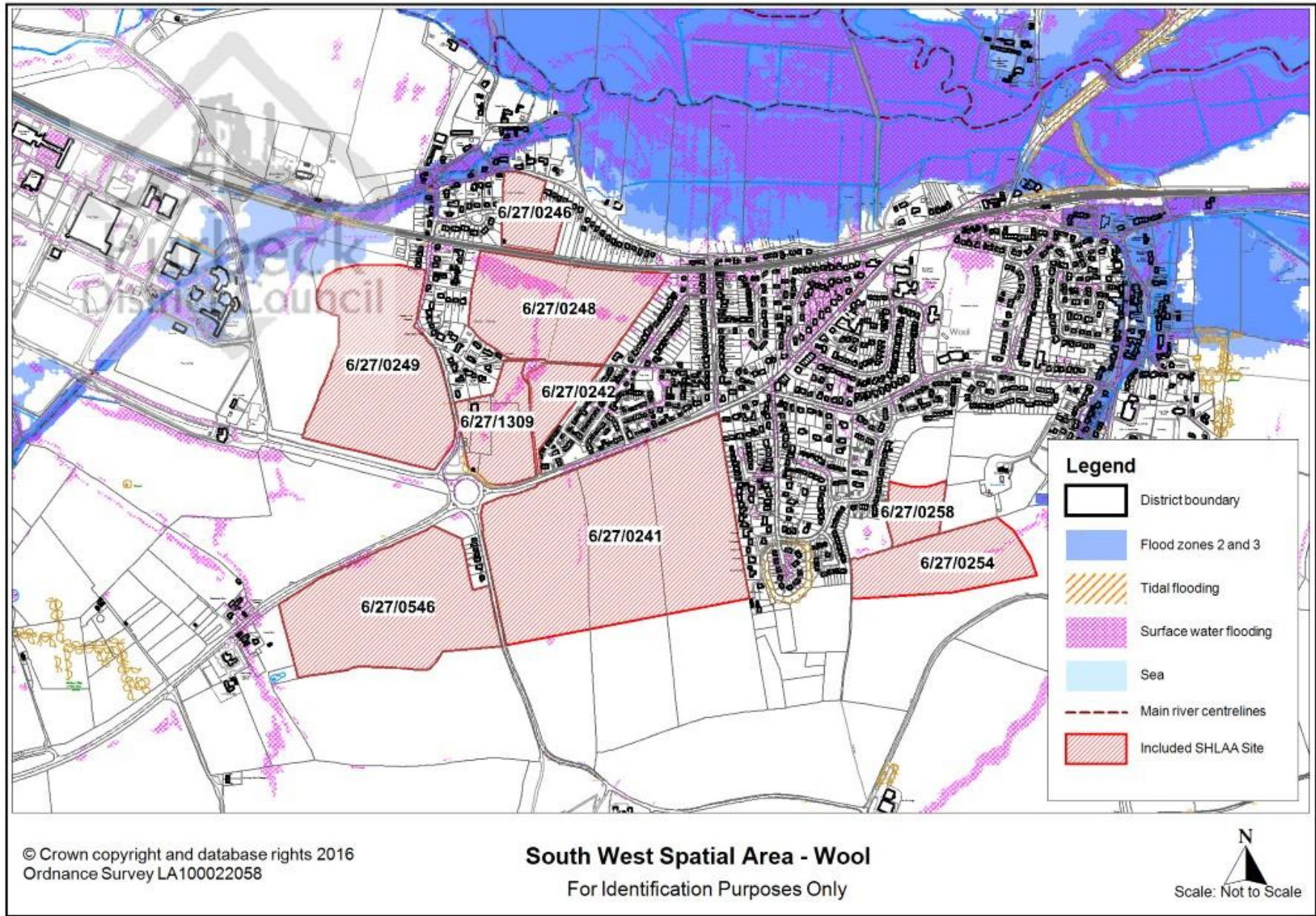
SHLAA Reference	Site Address	Consulted on in Partial Review Issues and Options document?	Is Option Site in Flood Zone 1?	Potential flood risk issues (as identified in the SHLAA assessment & based on original site areas)	Site specific comments made by Environment Agency	Recommendations
				problems.	metre AOD contour is fine for consideration of flood risk from the sea in the future, but this does not necessarily mean all land above this contour is suitable for development. Other local sources of flooding may impinge on the proposed sites (e.g. groundwater, surface water, etc.) and as such we advise this be investigated in more detail with your Authority's drainage engineer before deciding which areas of the 3 proposed sites are deemed acceptable in terms of flood risk.	
<b>South East Spatial Area</b>						
6/13/0356	Land adjacent Durnford Drove, Langton Matravers	No	Yes	Surface water flows to land drainage system.	No comments	Drainage Capacity Appraisal and Flood Risk Assessment required.
6/28/1368	Land rear of	No	Yes	There are small areas to	No comments	Drainage Capacity

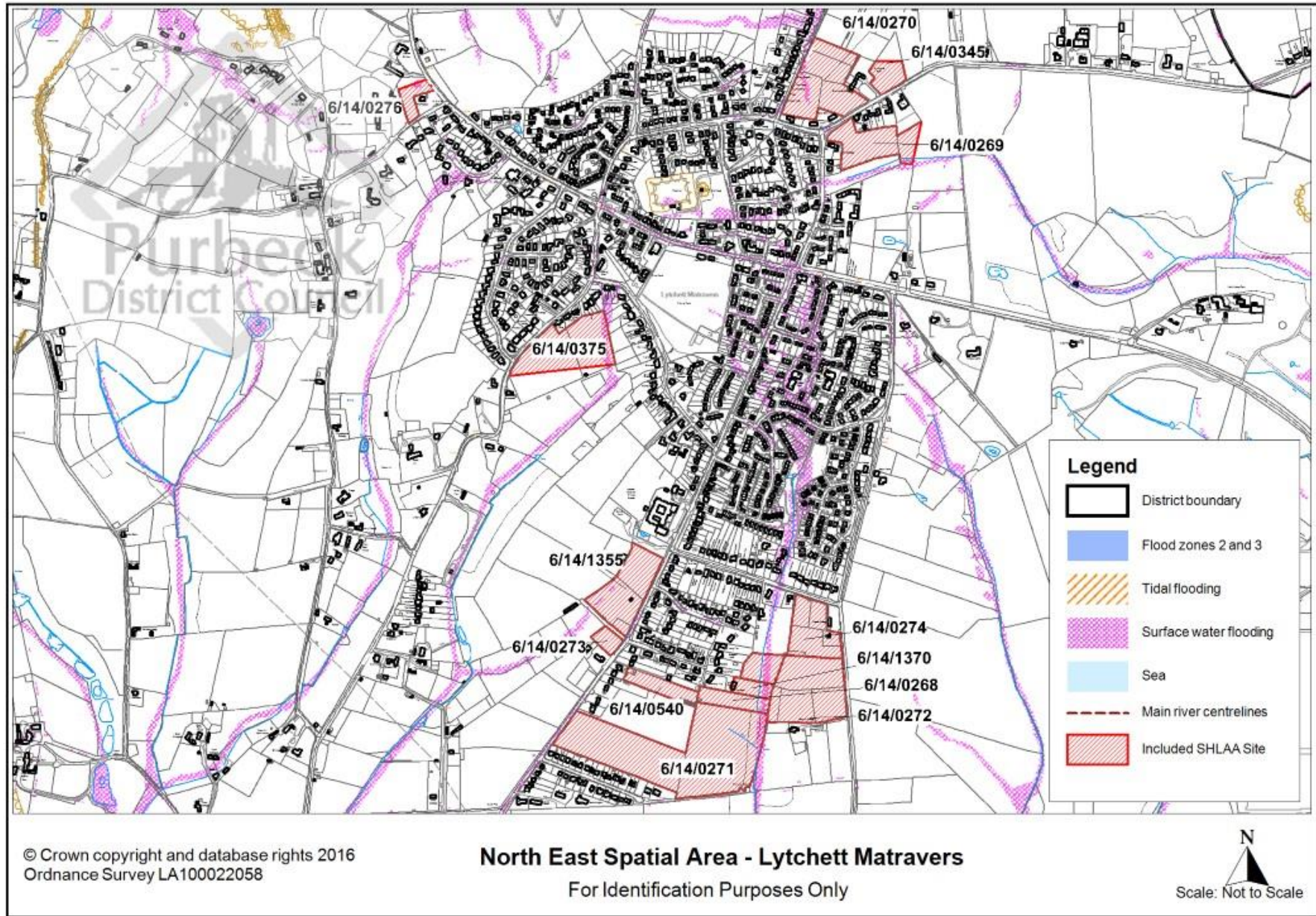
SHLAA Reference	Site Address	Consulted on in Partial Review Issues and Options document?	Is Option Site in Flood Zone 1?	Potential flood risk issues (as identified in the SHLAA assessment & based on original site areas)	Site specific comments made by Environment Agency	Recommendations
	Eventide, Harman's Cross			the north and west of the site that are at risk of surface water flooding. However, this can be mitigated, in theory. A drainage assessment would likely be required.		Appraisal and Flood Risk Assessment required.
6/13/0559	South of the Hyde, Langton Matravers	No	Yes	Surface water flows to land drainage system.	No comments	Drainage Capacity Appraisal and Flood Risk Assessment required.
<b>Central Spatial Area</b>						
6/02/0170	Land at Worgret Manor, Worgret, Wareham	Yes Option 4b	Yes	Majority of site in Flood Zone 1. Parts of the southern area of the site, particularly to the south east, are in the flood zone. Residential development would have to avoid flood zones, but some employment might be possible. Surface water drainage problems will require mitigation.	No comments	Flood Risk Assessment required.
6/23/0166	Land adjacent Tantinoby Farm, North Wareham	Yes Option 4a	Yes	There is an area to the north east of the site that is at risk of surface water flooding. However, this	No comments	Drainage Capacity Appraisal and Flood Risk Assessment required.

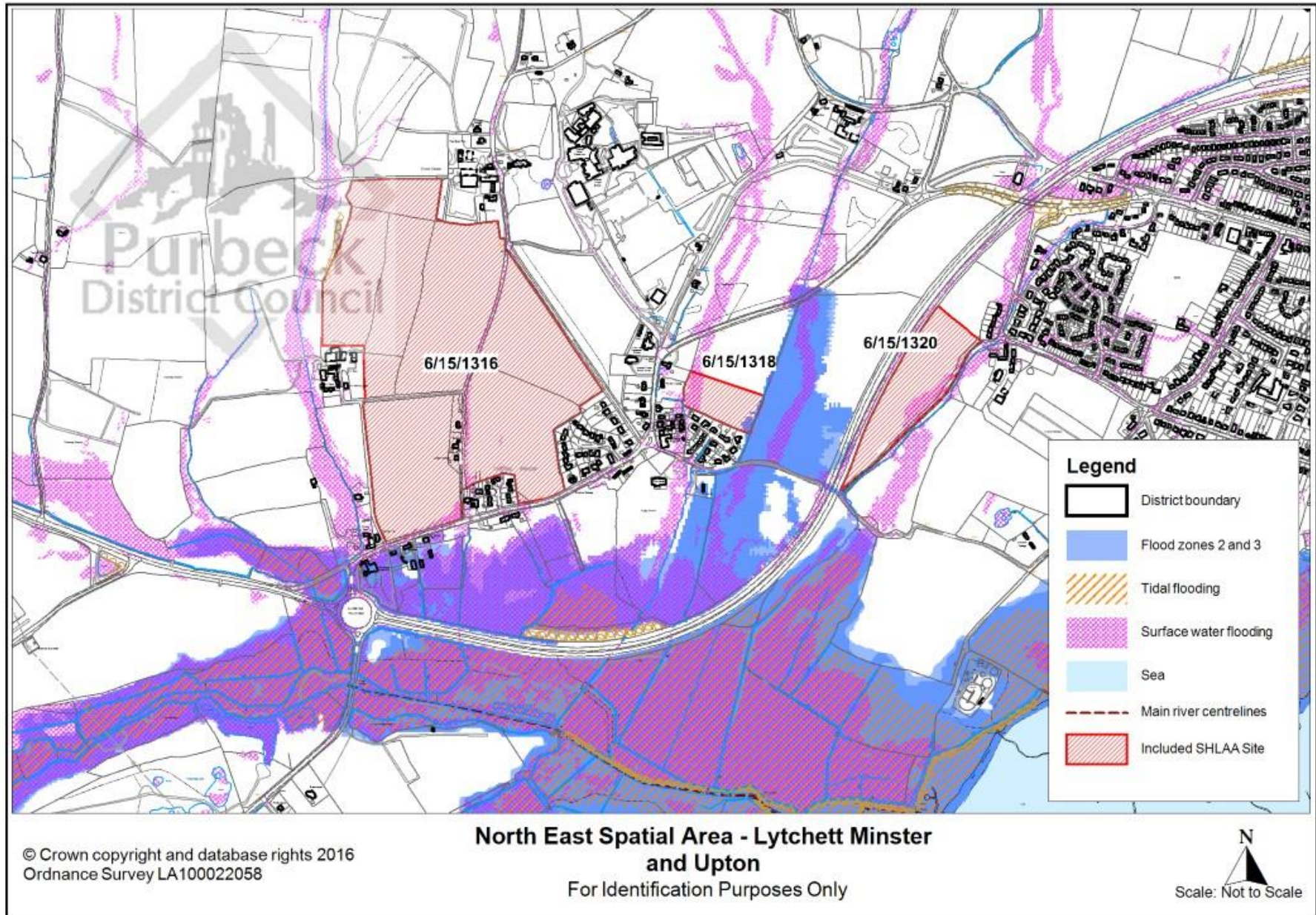
<b>SHLAA Reference</b>	<b>Site Address</b>	<b>Consulted on in Partial Review Issues and Options document?</b>	<b>Is Option Site in Flood Zone 1?</b>	<b>Potential flood risk issues (as identified in the SHLAA assessment &amp; based on original site areas)</b>	<b>Site specific comments made by Environment Agency</b>	<b>Recommendations</b>
				can be mitigated, in theory. There is limited capacity available in the local foul water system. There are no local surface water sewers.		
6/23/1314	Land west of Westminster Industrial Estate, Bere Regis Road	Yes Option 4a	Yes	There is an area to the south of the site that is at risk of surface water flooding. However, this can be mitigated, in theory.	No comments	Drainage Capacity Appraisal and Flood Risk Assessment required.

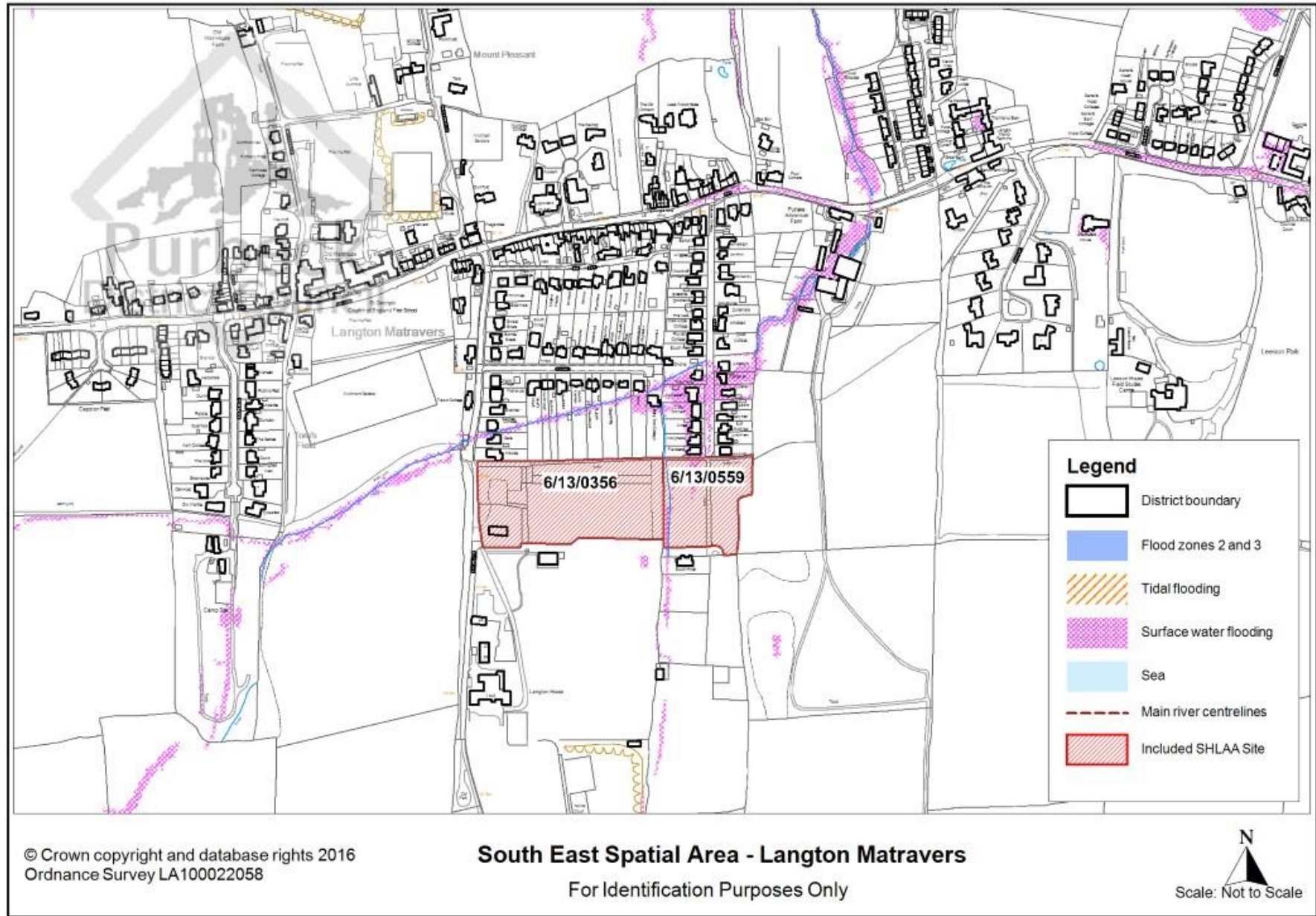


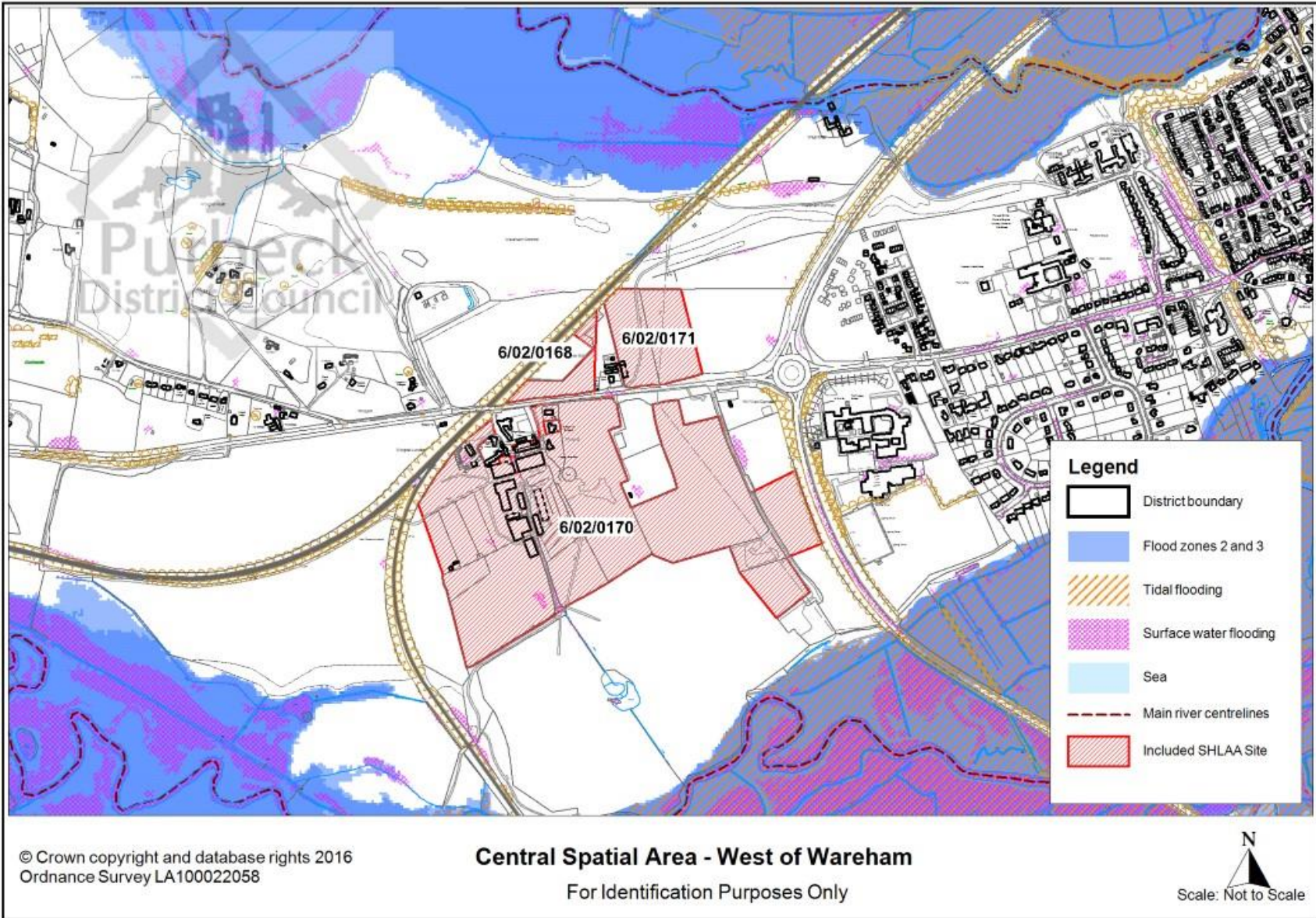




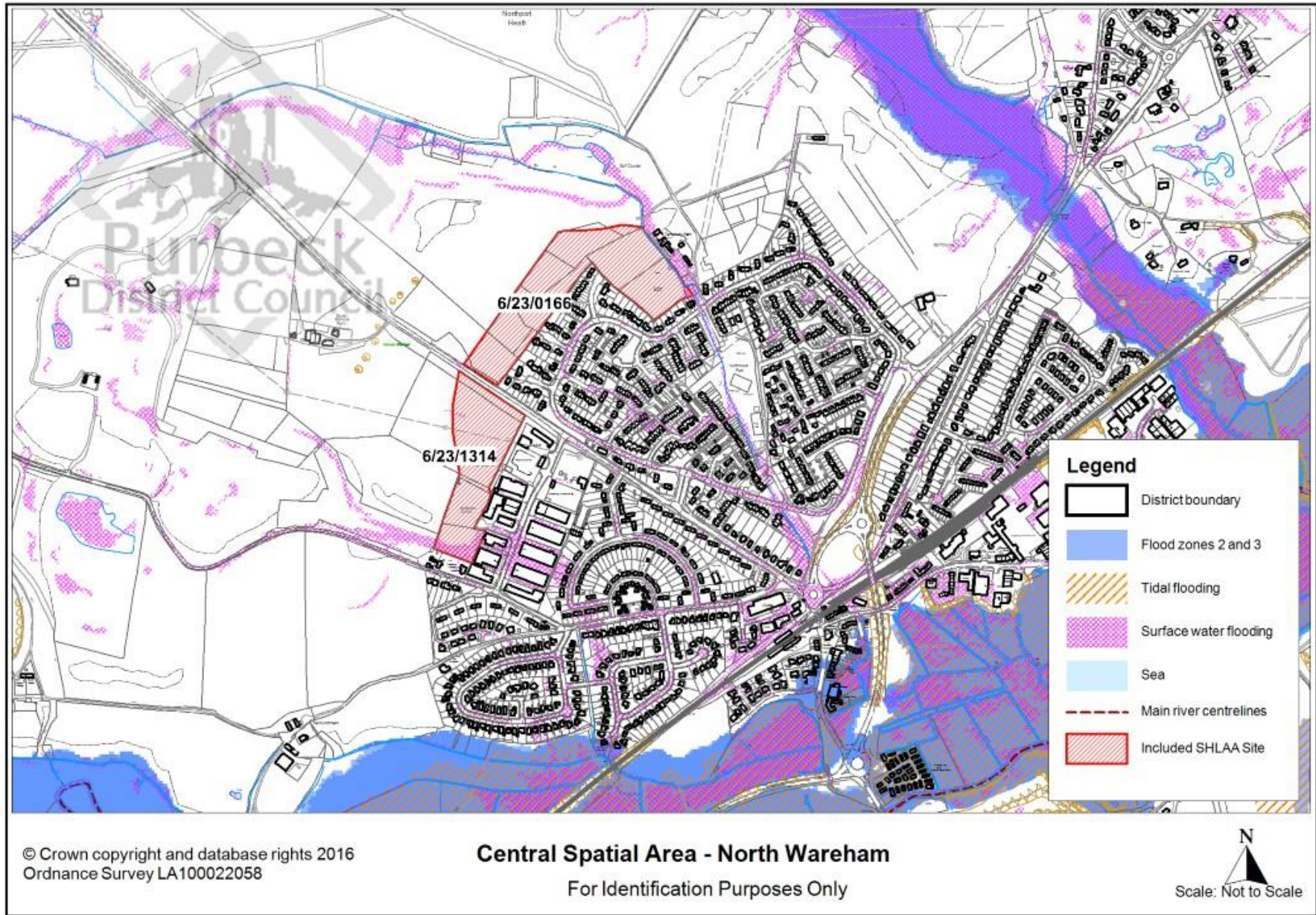








NB. Sites 6/02/0168 and 6/02/0171 are 'included sites' within the SHLAA but are not included as site options within the Options document.



## Appendix 3      Flood risk assessment of all other development sites / locations included in the Options document

### Employment Sites – Preferred Option 4

The Council has already identified significant employment land through the Purbeck Local Plan Part 1. However, to ensure that we are planning positively to maximize economic growth, the Council has identified further employment land through the Options document. Preferred Option 4 of the Options document which includes site maps can be viewed at <https://www.dorsetforyou.com/Purbeck-partial-review>.

Site Address	Consulted on in Partial Review Issues and Options document?	Is Option Site in Flood Zone 1?	Potential flood risk issues (as identified in the SELAA)	Site specific comments made by Environment Agency	Recommendations
Holton Heath	Yes	Yes	None	Will be seeking views of EA on specific site through Options consultation.	Drainage Capacity Appraisal and Flood Risk Assessment required.
Sandford Lane	Yes	Partly – some areas in Flood Zones 2 & 3	Yes – further detailed assessment will be required.	Will be seeking views of EA on specific site through Options consultation.	Drainage Capacity Appraisal and Flood Risk Assessment required.
Corfe Castle	Yes	Majority of site in Flood Zone 1 – some areas in Flood Zones 2 & 3	The area promoted includes some very steeply sloping ground and much of the site is subject to significant flood risk. Further detailed assessment will therefore be required.	Will be seeking views of EA on specific site through Options consultation.	Drainage Capacity Appraisal and Flood Risk Assessment required.

Site Address	Consulted on in Partial Review Issues and Options document?	Is Option Site in Flood Zone 1?	Potential flood risk issues (as identified in the SELAA)	Site specific comments made by Environment Agency	Recommendations
Bovington Middle School	Yes	Yes	None	Will be seeking views of EA on specific site through Options consultation.	Drainage Capacity Appraisal and Flood Risk Assessment required.
Dorset Green	Yes	Majority – some areas in Flood Zones 2 & 3	None	Will be seeking views of EA on specific site through Options consultation.	Drainage Capacity Appraisal and Flood Risk Assessment required.
French's Farm, Upton	Yes	Yes	There is some identified flood risk and further detailed site assessment will be required.	Will be seeking views of EA on specific site through Options consultation.	Drainage Capacity Appraisal and Flood Risk Assessment required.

### Retail Sites – Preferred Option 5

The Poole and Purbeck Retail Study (2015) indicates that the Council may need to deliver an additional 600sqm (net) of food retail floor space, over and above the need identified in the Purbeck Local Plan Part 1. Preferred Option 5 of the Options document (<https://www.dorsetforyou.com/Purbeck-partial-review>) sets out that this need should be met through the provision of small scale local shop(s) of around 200sqm across the three larger development sites at Wool, Lytchett Minster and West of Wareham. Each of the individual sites making up the larger areas proposed for development have already been assessed for flood risk through the SHLAA as set out in Appendix 1 above.

### Herston Fields, Swanage

The Council's SHLAA shows that there is suitable land being promoted at Herston Fields on the edge of Swanage. This land is currently the subject of an undetermined village green application. Depending on the result of this application, the Council could add this site as an



option to be included in the Partial Review. As with the other SHLAA sites included in Appendix 1 above, this site has also been subject to an assessment of flood risk as part of the Swanage Local Plan Strategic Flood Risk Assessment which identifies some localized flooding and drainage issues. The SFRA and site selection background paper which contain further information can be found at <https://www.dorsetforyou.com/swanage-local-plan>.

### **Care Home Sites – Preferred Option 9**

Preferred Option 9 of the Options document (<https://www.dorsetforyou.com/Purbeck-partial-review>) aims to address identified need for a residential care home of 50 bed spaces and proposes options at Bovington Middle School, Keyworth Drive and Camp Farm, Sandford (site maps included in the options document). The sites have been assessed for flood risk through the SHLAA and all sites are located in Flood Zone 1 and outside areas of flood risk.

### **Morden Park Corner – Preferred Option 11**

Preferred Option 11 of the Options document (<https://www.dorsetforyou.com/Purbeck-partial-review>) allocates land at Morden for public open space and around 80-100 holiday chalets. This is subject to agreement of a delivery mechanism for a strategic Suitable Alternative Natural Greenspace by opening part of the land to the public. Within the Morden Park Corner site area there are areas of floodzones, including lakes, rivers and wetland. However, the overall size of the site would enable forest lodge areas to be provided in Flood Zone 1 and outside areas of flood risk (see site map included in the options document).

### **Norden Park and Ride – Preferred Option 7**

The Options document includes Preferred Option 7 to support the expansion of Norden Park and ride subject to more detailed assessment to identify which parts of the site are suitable for car parking. The site is located within Flood Zone 1 and outside areas of flood risk as shown on the site map included in the document at <https://www.dorsetforyou.com/Purbeck-partial-review>.

## Appendix 4 Addressing Environment Agency (EA) concerns raised during Issues and Options and SHLAA consultations

EA Comment	How addressed in Preferred Options document
<p>You must ensure that any plans / developments brought forward do not compromise the aspirations for coastal change management within your Authority area. This is particularly important in areas where there are existing raised defences that may in the future be managed differently. It may be that the land behind these defences will need to be managed for the international important habitats of Poole Harbour, and therefore it may not be appropriate to identify these areas of floodplain as open space (or SANGS) in the plan. This is particularly relevant around Wareham, and may also need to be considered around Lychett Minster.</p>	<p>The Council is aware of this issue and will work with the EA and developers to ensure that developments comply with the Council's emerging CCMA policy.</p>
<p>Once you have fully assessed the potential impacts of flooding at the proposed locations you will be in a position to satisfy the National Planning Policy Framework Sequential Test. This may be through ensuring that the new development is located outside of the flood risk areas as proposed in your current local plan. If you cannot locate all the new development outside of the flood risk areas then you will need to undertake further Sequential Testing as part of the Local Plan review.</p>	<p>All sites included in the Preferred Options document can be developed outside areas of flood risk, satisfying the NPPF Sequential Test.</p>
<p>Surface Water Drainage has been identified to be an issue around parts of your Authority area, especially near Lychett Minster. The use of the Flood Map for Surface Water indicates some of the locations that this may be an issue. You should note that it has been identified in the flood and coastal risk management strategy that there is the potential that increased sea level rises may increase the surface water issues, potentially through tide locking. There is already a need for improvements required to local drainage system around Lychett Minster, and you should speak to your local authority engineers regarding this area and how it links</p>	<p>The Council is in discussions with the EA and developer of the Lychett Minster site to ascertain the flooding issues at this location and how they could be addressed.</p>

<p>to future coastal change management.</p>	
<p><b>Stoborough</b>  Based on the information submitted, in accordance with the Council's Level 1 SFRA, the northern site (SHLAA reference 6/02/0221) should fail the flood risk Sequential Test. Hence, we agree that the site should not be included within the SHLAA.</p> <p>The LPA is advised to be mindful that there may be other local sources of flooding, for example surface water run-off, which may impact on the southern site (SHLAA reference 6/02/0218) proposed to be included in the SHLAA for Stoborough. Where appropriate, details of the sources of local flood risk should be investigated and the results used to inform the site allocation process.</p>	<p>Site 6/02/0221 has been excluded in the SHLAA assessment based on grounds of flood risk.</p> <p>Further assessment has resulted in a reduced site size (6/02/0218) included in the SHLAA. However, this site is not included as part of the preferred option or alternative options for development in the consultation document.</p> <p>The Arne Neighbourhood Plan is considering potential sites for housing allocations.</p>
<p><b>Lytchett / Upton</b>  Whilst the majority of all 3 sites (6/15/1316, 6/15/1318, 6/15/1320) may be appropriate for development, and hence inclusion within the SHLAA, we advise the Council to ascertain, using the information submitted to them and by their own investigation, which specific areas of all 3 sites they consider <i>not</i> suitable for development after taking account of <i>all</i> sources of flooding.</p> <p>Applying the criteria set out in the Council's Level 1 SFRA in respect of the 3.55 metre AOD contour is fine for consideration of flood risk from the sea in the future, but this does not necessarily mean all land above this contour is suitable for development. Other local sources of flooding may impinge on the proposed sites (e.g. groundwater, surface water, etc.) and as such we advise this be investigated in more detail with your Authority's drainage engineer before deciding which areas of the 3 proposed sites are deemed acceptable in terms of flood risk.</p>	<p>Further liaison has taken place with the District Engineer. The three sites (6/15/1316, 6/15/1318, 6/15/1320) are included within the consultation document although a Flood Risk Assessment would be required to be undertaken for each by the developer.</p>

In accordance with the Council's Level 1 SFRA, we agree that all land, within the proposed SHLAA sites, with a ground level below the 3.55 metre AOD contour should fail the flood risk Sequential Test and therefore excluded from built development. This does not mean that the land below this level cannot be identified for water compatible uses ancillary to the built development (e.g. Suitably Alternative Natural Green spaces - SANGs)

Further on site assessment of the contour level has taken place and any sites and / or site areas with a ground level below the 3.55 metre AOD contour have been excluded from the SHLAA for development.