

NeighbourhoodPlanning

From: Burden, Richard [REDACTED]
Sent: 24 May 2023 15:54
To: NeighbourhoodPlanning
Cc: Nunn, Linda
Subject: RE: Blandford + Neighbourhood Plan Review - Regulation 16 Consultation
Attachments: 2023 05 23 Response to Blandford + NP Reg 16.docx

Hello and thank you for consulting this AONB on the Reviewed Blandford + Neighbourhood Plan.

Please find attached this AONB's response.

Regards Richard

Richard Burden BSc DipCons MSc MCMI(rtd) MCIPD FLI PPLI
Chartered Landscape Architect

Principal Landscape & Planning Officer [REDACTED]
Cranborne Chase Area of Outstanding Natural Beauty

Cranborne Chase AONB Office, [REDACTED]

Tel: [REDACTED]
Hosted by Wiltshire Council

Click to get our web site and [AONB Management Plan](#)
14th International Dark Sky Reserve in the World; [Dark Night Skies](#)

From: NeighbourhoodPlanning <NeighbourhoodPlanning@dorsetcouncil.gov.uk>
Sent: 11 April 2023 13:55
To: NeighbourhoodPlanning <NeighbourhoodPlanning@dorsetcouncil.gov.uk>
Subject: Blandford + Neighbourhood Plan Review - Regulation 16 Consultation

You don't often get email from neighbourhoodplanning@dorsetcouncil.gov.uk. [Learn why this is important](#)

Dear Sir/Madam,

I am writing to let you know that the Blandford + Neighbourhood Plan Review has been submitted to Dorset Council for examination.

Dorset Council, as the local planning authority, is required to carry out a consultation on the submitted modified plan. The consultation will commence on **Friday 14th April 2023** and will run until the end of **Friday 26th May 2023**. This will give individuals and organisations the opportunity to comment on the modified plan. An independent examiner will be appointed and any comments received will be passed to him/her for consideration as part of the examination process.

The submission documents, including the plan itself, and the other associated documents relating to the consultation will be available to view online via the following link: <https://www.dorsetcouncil.gov.uk/blandford-neighbourhood-plan>

Kind regards,

Community Planning Team
Spatial Planning
Dorset Council

[01258 484201](tel:01258484201)







Cranborne Chase Area of Outstanding Natural Beauty



AONB Office, [REDACTED]
Tel: [REDACTED] www.cranbornechase.org.uk

Community Planning Team
Spatial Planning
Dorset Council
County Hall
Dorchester DT1 1XJ

By email: NeighbourhoodPlanning@dorsetcouncil.gov.uk

23rd May 2023

Dear Community Planning Team

Blandford + NEIGHBOURHOOD PLAN - Review / Modification– Regulation 16 Consultation

Thank you for consulting the Cranborne Chase AONB Partnership on the Review / Modification of the Blandford + Neighbourhood Plan.

1. I read in the Foreword that all policies are reviewed in the light of changes to local and national planning policies, and that policy B6 [health] is being updated, policies B10, 11, and 12 [design] are being merged into a new B10, and that a new B11 – heritage assets – is being added. Policy B10 introduces a major, 120+ pages, set of design guides. However, NPPF paragraph references in the Review document relate to earlier versions of the NPPF than the current, 2021, version so it appears that the Review fails in its main aim to be up to date.
2. It therefore appears necessary to remind both the NP group and Dorset Council of the status and significance of AONBs, and particularly this one, as reinforced by the NPPF and PPG since the NP was 'made'.
3. The Cranborne Chase and West Wiltshire Downs AONB is nationally important. It has been designated under the National Parks and Access to the Countryside Act 1949 to conserve and enhance the outstanding natural beauty of this area which straddles one County, three county scale Unitary, and one District councils. It is clear from the Act, subsequent government sponsored reports, and the Countryside and Rights of Way Act 2000 that natural beauty includes wildlife, scientific, and cultural heritage.

International Dark Sky Reserve 2019

4. It is also recognised that in relation to their landscape characteristics and quality, National Parks and Areas of Outstanding Natural Beauty are equally important aspects of the nation's heritage assets and environmental capital.
5. Local government (including planning authorities and parishes), Ministers of the Crown, individual councillors, any public body and their employees, statutory undertakers, and holders of public office also have a statutory duty in section 85 of the CRoW Act to have regard to the purposes of AONB designation, namely conserving and enhancing natural beauty, in exercising or performing any functions in relation to, or so as to affect, land in an AONB. That 'so as to affect' clearly refers to land in the setting of an AONB.
6. This [AONB's Management Plan](#) is a statutory document that is approved by the Secretary of State and is adopted by the constituent councils. It sets out the Local Authorities' Objectives and Policies for this nationally significant area, as required by section 89 (2) of the CRoW Act. The national Planning Practice Guidance [Natural Environment paragraph 040, (21.07.2019)] confirms that the AONB and its Management Plan are material considerations in planning.
7. The National Planning Policy Framework (July 2021) is clear that the 'presumption in favour of sustainable development' does not automatically apply within AONBs, as confirmed by paragraph 11 footnote 7, due to other policies relating to AONBs elsewhere within the Framework. Paragraph 11 (b) indicates that for plan-making being in an AONB 'provides a strong reason for restricting the overall scale, type or distribution of development.' It also indicates in 11 (d) that for decision-making the application of policies in the NPPF that protect areas such as AONBs 'provides a clear reason for refusing the development proposed.'
8. NPPF paragraph 174 states that planning policies and decisions should contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes, which include AONBs, in a manner commensurate with their statutory status. AONBs, along with National Parks, have the highest level of national protection.
9. Paragraph 175 explains that plans should distinguish between the hierarchy of international, national and local sites whilst taking a strategic approach to enhancing habitats and green infrastructure, and planning for the enhancement of natural capital across local authority boundaries.
10. It is explicit (paragraph 176) that great weight should be given to conserving and enhancing landscape and scenic beauty in AONBs, which have the highest status of protection in relation to landscape and scenic beauty. The conservation and enhancement of wildlife and cultural heritage are important considerations in these areas. Furthermore, the scale and extent of development within all these designated areas should be limited. In addition, development within their setting

should be sensitively located and designed to avoid or minimise impacts on the designated areas.

11. Paragraph 177 is clear that when considering applications for development planning permission should be refused for major development, other than in exceptional, public interest, circumstances. Footnote 60 also provides for the decision maker to regard development less than the threshold defined in the NPPF glossary as 'major' in the context of an AONB or National Park.
12. The Planning Practice Guidance, updated 21.07.2019, helpfully includes landscapes, environmental gain, Areas of Outstanding Natural Beauty, and their settings in the Natural Environment section. In particular, paragraph 042 highlights the importance of settings, their contributions to natural beauty, and the harm that can be done by poorly located or designed development especially where long views from or to the AONB are identified. Paragraph 041 is clear that NPPF policies for protecting AONBs may mean that it is not possible to meet objectively assessed needs for development, and any development in an AONB will need to be located and designed in a way that reflects its status as a landscape of the highest quality.
13. More detailed information in connection with AONB matters can be found on the AONB [website](#) where there is not only the adopted AONB Management Plan but also Position Statements and Good Practice Notes ([Planning Related Publications](#)). In particular when considering construction within the AONB I would draw attention to our [Good Practice Note on Colour in the Countryside](#).
14. This AONB is, as I expect you know, in one of the darkest parts of Southern England and hence the visibility of stars, and the Milky Way, is a key attribute of this AONB. In October 2019 it was designated the 14th International Dark Sky Reserve in the world. The AONB Partnership is, therefore, very concerned about light pollution. Development that could contribute to light pollution, and hence impact adversely on those dark night skies, has to be modified so that such impacts are eliminated. Building designs, especially those with extensive areas of glazing, may need to be amended. Any external lighting should be explicitly approved by the Local Planning Authority and comply with the [AONB's Position Statement on Light Pollution](#) and the more recent [Good Practice Notes on Good External Lighting](#) and [Paper by Bob Mizon on Light Fittings](#).
15. Greater details of the landscape, buildings and settlement characteristics can be found in the [Landscape Character Assessment 2003](#) and the [Cranborne Chase and Chalke Valley LCA 2018](#). Those documents are available and can be viewed in full on our [website](#).
16. On the 30th May 2022 the Cranborne Chase Area of Outstanding Natural Beauty Board endorsed a Position Statement on Biodiversity Net Gain, and the Board looks to that guidance having immediate effect. That means that each property

should have at least one bird box, one bat box, and one bee brick incorporated into the structure. That level of provision is, nevertheless, fairly basic but is seen by our Board as making an immediate contribution to environmental net gain rather than waiting for the outcome of Government's consultations on national guidance. Our Board's position is that this Area of Outstanding Natural Beauty should, without delay, make a contribution to environmental net gain whenever there is development approved, at whatever scale, within this AONB.

17. The AONB Partnership is very concerned that the NP Review is being pushed forward hastily without the necessary attention to detail. For example, the factual errors / wrong paragraph references pointed out in this AONB's response [1 2 2023] to the earlier consultation, and recommended that those should be changed by the NP group's planning consultant, still persist in this Regulation 16 version. In addition, there are typographic / grammatical errors that should have been ironed out by this stage, eg on pages 4&5.

18. Whilst I may not have identified all those errors, it is also extremely worrying that the NP group appears to be taking forward a Review without a full understanding of national guidance in the NPPF 2021. It is particularly worrying when incorrect references are given to the NPPF in the text immediately supporting policies [chapter 5 of the Reviewed NP]. Some examples of errors, inaccuracies, and partial reference are:

- a. Para 3.3 only refers to NPPF 174-176; is not 177 also relevant when major development is proposed?
- b. Para 3.17 reference to NPPF 2018 seems well out of date.
- c. The reference to NPPF 14b in para 3.21 omits to note that NPPF 11d(i) applies.
- d. NPPF 172 in para 3.22 relates to coastal management, so clearly something wrong there.
- e. The Pupil Place Planning Statement, para 3.23, appears to be four years out of date and to relate to the previous NP.
- f. Para 3.28, relating to AONBs, demonstrates a lack of understanding of the section 85 duty of regard to the purposes of AONB designation as it does not mention that it relates to decisions in connection with land within and within the setting of AONBs. There is no indication that the NP group has referred to or referenced either of the DEFRA and NE guidance documents on the topic.
- g. The reference to NPPF 172 on coastal management in para 5.16 is nonsensical.
- h. Para 5.56 refers incorrectly to NPPF 99 & 100 in connection with Local Green Space.

19. This AONB Partnership is also very concerned that the Reviewed NP covers the same limited area of 3 parishes, and excludes Blandford Camp despite referencing it as a major employment location, with a primary school, for Blandford. The

Reviewed NP does, therefore, miss the opportunity to provide a more realistic appraisal of Blandford and its hinterland.

20. It should, of course, be made clear to any reader [or Examiner] of the Reviewed NP that within an AONB great weight has to be given to conserving and enhancing landscape and scenic beauty, and that Planning Practice Guidance indicates that the AONB designation means it may not be feasible to accommodate all the objectively assessed housing requirement.
21. The AONB Partnership is particularly disappointed that the NP group has not taken the opportunity to take on board dark night skies and the reduction of light pollution that comes with this AONB's status as an International Dark Sky Reserve. That designation does not mean no lighting, the AONB's focus is on good lighting that does not contribute to light pollution. It is perhaps appropriate to explain that the IDSR designation puts an obligation on the AONB Partners, and that includes Dorset Council, to reduce light pollution year on year and not simply minimise the increase in light pollution. The statement in para 5.24 is not sufficiently robust for a location where the criteria for Environmental Lighting Zone E1 [Institute of Lighting Professionals 2021] apply. Blandford Town Council have expressed support to our Dark Skies Advisor. We have model policies [attached], recently discussed with a number of your colleagues, that could easily be incorporated into the Reviewed NP, and this AONB recommends that is done.
22. You will, doubtless, not be surprised that this AONB is very disappointed that the Reviewed NP retains major development allocations within this AONB and its setting. It is all the more disappointing that no provision is made for compensation to the AONB Partnership for that development from the developers. Clearly the proposed development cannot avoid adverse impacts on the AONB so compensation to a nationally important asset from local development is the appropriate course of action [NPPF 32].
23. It should be made clear in the Reviewed NP, so that it does comply with current national guidance, that regardless of allocations in the NP any major development proposals in the AONB would need to be considered in the light of NPPF 177. That means at the application stage major development would normally be refused, and to be considered for approval both exceptional circumstances and the public interest would need to be satisfactorily demonstrated. Merely providing housing and commercial premises does not constitute 'public interest', and Dorset Council's overall lack of a five year housing land supply does not constitute exceptional circumstances or override policies protecting the environment.
24. Whilst the Reviewed NP presumes its allocations are sustainable, the fact that it is proposing development that will have adverse impacts on the AONB – turning fields into built development – means that in reality those proposed developments in this AONB and its setting are not sustainable.

25. The supporting text for policies is contradictory. For example, in relation to policy B2 land north and east, the argument is put forward that there is a current need for a new primary school. If that is the case, it is more than a little strange that the education authority has not been independently pursuing the construction of that school. That could be progressed without the other commercial and housing development. To describe the policy B2 as ‘an enabling policy’ in paras 5.12 and 5.25 confuses land use policy with commercial arrangements with the landowners. The provision of a school could exist without the commercial and housing development. Indeed, it seems that the education authority’s wish for a new school is being put forward to enable the commercial and housing development; the opposite of what is written.
26. Policies B1 – development boundary, B2 – land north and east, B3 – extension of Sunrise Business Park, and B10 – design codes impact on land in this AONB or land that is the setting of this AONB. Whilst the principle of a design guide is welcomed, the design guidance for the ‘Edge of the Town’ character areas is misleading for a number of reasons. It includes land at Tin Pot Lane with the land north and east of Blandford, but not land south east, south, or south west. Only the land at Tin Pot Lane has any development. Whilst acknowledging there are few buildings in the three identified areas, p 36, the assessment and guidance then concentrates on those few buildings rather than the agricultural and wildlife reserve character of the vast majority [over 80%] of the character area. It is, therefore, fallacious to suggest there is an urban design character to follow on the land to the north and east.
27. Unfortunately, neither the NP group nor their consultants engaged with the AONB team in preparing the documents for the NP Review. The Design Code associated with policy B10 is, therefore, far too vague in relation to street lighting and external lighting, pp 68 & 69. There is no recognition of the IDSR or the need to achieve the criteria for a specified Environmental Lighting Zone. There is no mention that light pollution needs to be reduced year on year, and that the emission of upward light has to be avoided. The escape of light from rooflights / lantern lights, and floor to ceiling and floor to gable glazing, can contribute significantly to light pollution. Architecturally those features should be designed out of proposed buildings, and the Design Code should be amended to emphasise that. Simply copying from this AONB’s suite of good lighting guides would have provided clearer and more specific guidance. This AONB strongly recommends that the lighting section of the Design Guide is made more holistic and specific to align with human health, wildlife, and IDSR criteria.
28. Whilst an argument has been made for the Waste Management Centre south of Sunrise Business Park meeting both the exceptional circumstances and public interest criteria, neither apply to the adjacent land being put forward within this AONB as employment land in policy B3. This AONB Partnership is also aware that part of that land is required as landscape mitigation for the WMC. It would,

therefore, be inappropriate to include a further extension of Sunrise Business Park into this AONB.

29. The 2021 NPPF 176 is quite clear, and it is a clarification from the previous version of NPPF used for the 'made' NP, that 'The scale and extent of development within all these designated areas should be limited, while development within their [AONB & NP] setting should be sensitively located and designed to avoid or minimise adverse impacts on the designated areas.' The proposed allocations in policy B2 are not limited, especially when taking account of the extensive development that has previously been permitted on the inside of the Blandford bypass and within this AONB. The proposed development allocation within the setting of this AONB is not sensitively located and will not avoid adverse impacts on the AONB and the appreciation of it. The AONB Partnership objects to policy B2.
30. The redrawing of the settlement boundary, policy B1, is simply a mechanism to seek to justify the development proposals in policy B2.
31. This AONB Partnership is mindful that NPPF 2021 clearly indicates, whatever the NP group may feel it has agreed with Dorset Council, that the scope and scale of policy B2 is for major development and self-evidently strategic. NPPF 21 obviously does not regard neighbourhood plans as strategic when it refers to 'neighbourhood plans or other non-strategic policies'. Policy B2 is, therefore, not compliant with NPPF 2021.
32. Furthermore, in the section on reviewing plans, NPPF 32 indicates that where unavoidable significant adverse impacts occur compensatory measures should be considered [as I have indicated above]. Converting productive agricultural land to built development, both commercial and domestic, is obviously a significant adverse change – and particularly so in relation to one of the nation's finest designated landscapes – therefore for the Reviewed NP to progress with its policies it needs to set out arrangements for compensation to this AONB. NPPF 34 expects plans to set out the contributions from development to green infrastructure and the AONB is a significant element of green infrastructure.
33. The Cranborne Chase Area of Outstanding Natural Beauty Partnership is disappointed by the lack of engagement by the NP group and the scale of typographic, grammatical, and reference errors and issues in a Regulation 16 document. Numerous recommendations and suggestions have been made above which this AONB Partnership believes are necessary if the Reviewed NP is to progress to the next stage; currently it has to advise you that it is not good enough to do so. Nevertheless, the Partnership objects to the allocations within this AONB and the setting of this AONB, policies B2 and B3, and also policy B1 which is simply a post-rationalisation. The Reviewed NP does not comply fully with NPPF 2021, despite the comments in the Foreword, and therefore the Reviewed NP should be fully, and independently, re-examined and not simply 'waved through' by Dorset Council.

I hope these comments are helpful to you.

Yours sincerely

[REDACTED]

Richard Burden BSc DipCons MSc MCMI(rtd) MCIPD FLI PPLI

Chartered Landscape Architect

Principal Landscape and Planning Officer [REDACTED]

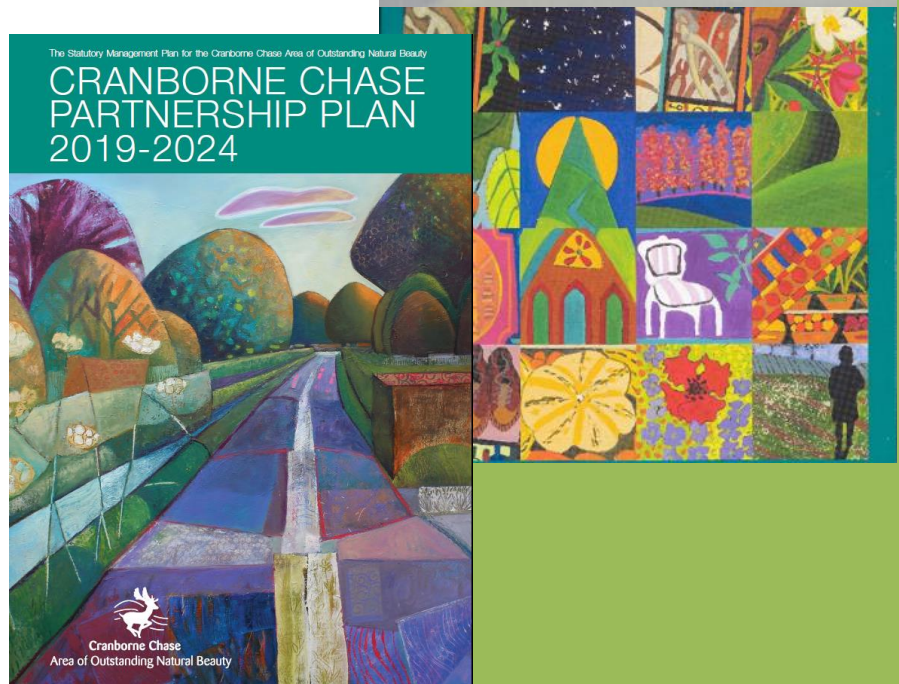
For and on behalf of the Cranborne Chase AONB Partnership Board

[REDACTED]

Attached: Dark Night Skies and Cranborne Chase AONB – policies.

[Cranborne Chase AONB Dark-Sky Policy Document June 2022 rev Jan 2023](#)

Dark Night Skies & Cranborne Chase AONB
Proposed Planning Policy for the
Planning Authorities' Local Plan Reviews &
Interim Policy for
Development Management Purposes



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Preface

*Cranborne Chase is the only AONB to have achieved the privilege of being designated as an **International Dark-Sky Reserve**, [IDSR]. This was achieved in 2019, after a rigorous assessment process, but it has to be remembered that the designation was 'provisional' only, pending improvement in meeting the high standards of being a Reserve, by reducing the amount of spilled light, which has such a detrimental impact on the darkness of the observed sky and the wellbeing of nocturnal fauna and human health.*

The international assessors of the IDSR require that 67% of all domestic and business outside lighting must meet Dark-Sky criteria. Sadly, the current level is estimated to be between 15-20%. Unless this can be addressed as a priority over the next 18 months, the area could well lose its Reserve status. The Cranborne Chase IDSR is therefore under real threat of losing this important status. The designation covers the whole of the AONB and the area's Management Plan makes reference to Dark-Sky with broad policies, together with information leaflets helping to convey the importance of limiting the brightness of outdoor lighting in particular. Actions needed involve; the screening of indoor lighting; low level outside lights, appropriate shielding, the use of Passive Infrared sensors [PIRs] and other measures, all aimed at minimising the impact of 'stray' or 'spilled' light.

It is important to emphasise that the benefit of the Dark-Sky is not just the ability to see the night sky and stars on clear nights. There is strong evidence to demonstrate that artificial light at night (ALAN) also has an adverse effect on human health, wildlife, and biodiversity. It is ironic that the introduction of LED lighting which is low energy and therefore beneficial in terms of energy usage, also results in these lights being generally installed with a far higher

brightness than is actually necessary and much brighter than traditional incandescent bulb lighting.

Whilst the AONB team was instrumental in driving forward the bid for designation, it has to be remembered that all seven of the local authorities not only supported the bid, but gave a commitment to ensuring that its objectives were achieved. The only way that this can be progressed and delivered is through the controls that can be imposed by the constituent local planning authorities through the following measures:

- *The inclusion of appropriate a Dark-Sky policy within their Local Plan Reviews*
- *The inclusion of lighting as a subject to discussion and negotiations at 'pre-application' stage, and the need for a lighting strategy to be submitted, especially for larger scale developments within or close to the AONB and Dark-Sky Reserve boundary.*
- *During the consideration of planning applications, addressing lighting and Dark-Sky requirements, as a material consideration, in the same way that design, materials and landscaping are addressed.*
- *As part of the decision-making process, the need for imposing planning conditions to restrict the number of lighting units, set limits on light levels, time periods for lighting, and/or requiring applications to be submitted for new lighting schemes and other associated matters.*
- *The enforcement of any contraventions of lighting conditions.*

The commitment of the local authorities that was made in 2019 therefore now needs to be translated into coordinated and firm action if the IDSR assessors are to be satisfied that tangible progress is being made towards achieving the 67% target. Such action will also help meet the authorities' climate change, biodiversity, sustainability and tourism objectives.

In order to assist in achieving this objective the AONB Team has commissioned an independent planning consultant to prepare a report, setting out the issues associated with the dark-sky reserve and that proposes a Dark-Sky Reserve planning policy, for inclusion in all of the Local Plan Reviews, notably for Dorset and Wiltshire, within which the majority of the AONB is located.

It is considered essential that all Local Plans that administer the AONB have the same Dark-Sky policy so that there is clarity and certainty for planning applicants, Parish and Town Councils and the general public. Pending the progression and final adoption of the Local Plan reviews, it is proposed that the policy be approved by all seven authorities, as Interim Planning Policy for Development Management Purposes.

Dark Night Skies & Cranborne Chase AONB

Proposed Planning Policy for the Planning Authorities' Local Plan Reviews & 'Interim Policy for Development Management Purposes'

1 Introduction

1.1 Cranborne Chase AONB was designated the world's 14th International Dark-Sky Reserve in October 2019. All seven local authorities whose area falls partly within the Cranborne Chase AONB gave a firm commitment to reducing light pollution/having compliant lighting in the successful bid submitted to the International Dark-Sky Association (IDA) in 2019. There is, therefore, an obligation for all the authorities to continue to respect this *international* designation, and help control and reduce light pollution associated with new development as a primary means of conserving and enhancing the dark night skies.

1.2 The seven Local Planning Authorities that have an interest in the Cranborne Chase AONB are as follows:

- Wiltshire Council.
- Dorset Council.
- Hampshire County Council.
- Somerset County Council.
- New Forest District Council.
- Mendip District Council.
- South Somerset District Council.

In addition, Natural England is the key statutory consultee for AONB matters.

1.3 Cranborne Chase AONB has the darkest night skies in central southern England. The awe-inspiring Milky Way can be readily viewed here; something that over 90% of the UK population can rarely see due to light pollution. Unlike ancient historic settlements, rivers, soils, wildlife, and our outstanding landscapes, the night sky has no legal protection, which explains why in just six years light pollution has increased by 24% across the UK as a whole.

1.4 The characteristics and qualities that make this AONB special, as a whole, with regards to dark night skies are as follows:

- Cranborne Chase AONB is one of the darkest places in England.
- Dark night skies with a myriad of visible stars have always been an outstanding, memorable, and remarkable feature of this AONB.
- A topography that facilitates stargazing with open, elevated downland, wide panoramic, unobstructed views all with relatively easy public access.
- Lack of major towns and a low AONB population limits the incidence of light pollution and sky glow.

1.5 Further information about Dark-Sky in the AONB can be seen at this weblink, which is the relevant section from the AONB Management Plan:

<https://cranbornechase.org.uk/wp-content/uploads/2020/10/11.-Dark-Night-Skies.pdf>

The AONB ‘Dark Night Sky Charter’ is included as **Appendix 1**.

1.6 As a result of the Dark-Sky designation, residents and visitors to the AONB, together with the area’s biodiversity, are able to experience benefits, which may include the following:

- An improvement in the overall quality of the area’s environment and sense of night-time tranquillity; a key feature on the AONB.
- Less harmful impacts on the area’s nocturnal wildlife arising from a reduction of stray artificial light.
- The potential for the local economy to be improved as Cranborne Chase has a natural ‘attraction’ for visitors to the area throughout the year, thereby supporting tourism-related businesses.

1.7 The local authorities have, of course, also all adopted the AONB Management Plan and its policies that refer to Dark-Sky issues and the control of light pollution. This current planning document now proposes to take matters a stage further, by promoting a specific **policy** that are recommended for inclusion within Local Plan Reviews, so that there is a more robust and statutory mechanism for controlling potentially light polluting developments. It is also clearly important that all seven authorities adopt a consistent approach to this issue and associated policies within their respective parts of the AONB, otherwise this will cause confusion for planning applicants, Parish Councils, and the general public.

1.8 This, of course, does not mean that there can be no new lighting, but it does mean that the aim should be to provide ***the right light in the right place at the right time***. In the simplest of terms this usually means downward facing lights of sufficient strength to provide the illumination required, but with the light only being on for the period of time when it is needed.

Further technical details are included in **Appendix 2**.

1.9 The Cranborne Chase AONB is the only AONB in the UK which has been designated as an International Dark-Sky Reserve in its entirety, with the others being within National Parks, that include Brecon Beacons, Exmoor, and Snowdonia.

1.10 Concern about Dark-Sky has been a longstanding issue in Cranborne Chase and, indeed, the AONB Partnership set out its policy on Light Pollution as far back as 2008, and has provided a suite of Good Practice Guides to encourage and enable the installation of Dark-Sky compliant lighting. Highway lighting teams of the partner authorities have also provided examples of dark night sky compliant highway lighting, that is also energy efficient and economical, which has been most helpful.

1.11 Nevertheless, lighting associated with new domestic and business developments does not automatically comply with dark night sky criteria. A key aim of this policy document is to encourage and enable those proposing new developments to consider and plan for dark night sky compliant lighting from the outset.

1.12 It also sets out a policy for Local Planning Authorities to consider including with their Local Plan Review documents and, in the meantime, to approve the policies as an ***'Interim Policy for Development Management Purposes'***, until such time as they are formally incorporated into and adopted in the Local Plan Reviews.

1.13 Whilst respective Local Plans may already make some reference to Dark-Sky as an issue, clearly if the subject is to be given the greater status that it deserves, it is important that a consistent approach is taken to applying policy in all areas of the AONB within each authority area. It is important to emphasise that this policy is only intended to apply for those parts of

the AONB within each authority area, but clearly the authorities are free to apply them more widely if they consider it necessary and appropriate.

2 National Planning Policy Guidance (NPPF) 2021

2.1 The NPPF paragraph 185 clearly indicates that conserving dark night skies is a national priority. The Cranborne Chase AONB Management Plan, which constitutes the policies of the partner authorities for this AONB, also indicates that good, Dark-Sky compliant lighting, is an objective for this AONB.

2.2 It is important for all the partner authorities to recognise that there is an obligation to adhere to and help implement this national NPPF planning policy. It is therefore most appropriate that respective Local Plan Reviews take forward this general national policy and apply it to their local situation. This document therefore provides the authorities with the policy basis and reasoned justification for undertaking this task.

2.3 NPPF Section 185 states as follows:

Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:

a) mitigate, and reduce to a minimum, potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life,

b) identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason, and

c) limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.

3 Lighting & Design

Avoiding Light Pollution

3.1 The **Institute of Lighting Professionals** has published an useful guide to this issue entitled '*The Reduction of Obtrusive Light*' [ILP GN 01/2021] see:

<https://theilp.org.uk/publication/guidance-note-1-for-the-reduction-of-obtrusive-light-2021/>

3.2 Essentially there are two ways of avoiding light pollution in new developments.

Firstly, at the design stage, features that have the capacity to contribute to light pollution are either not included or 'designed out' of the scheme at an early stage, or are effectively mitigated. Secondly, any required lighting follows the '*right light, right place, right time*' philosophy.

Avoiding Light Polluting Features at the Design Stage

3.3 Any elements of design that allow light to be emitted above or near the horizontal have the capacity to contribute to light pollution. That means that windows need effective curtains or blinds, and internal light units that are lower than the top of windows need to be appropriately shaded. Those 'windows' that are angled upwards, such as roof lights and lantern lights, either need to be designed out of the structures or to have integral blinds or louvres that can be closed at night to prevent light pollution.

3.4 In some situations, extensive floor to ceiling or floor to gable glazing, which can be common in some modern dwelling designs, may be proposed. Whilst passive energy gain can be beneficial, extensive areas of floor to ceiling glazing also clearly have the capacity to emit a considerable amount of light at night above the horizontal, which is not acceptable in this International Dark-Sky Reserve. Therefore, for buildings on the edge of villages or in relatively isolated locations, large areas of extensive glazing can detract significantly, and arguably disproportionately, from the International Dark-Sky Reserve's objectives.

3.5 In addition, when lantern and roof lights are proposed in relatively inaccessible positions, this makes the manual operation of blinds or louvres impracticable. In these

situations, the blinds or louvres should be automatically operated by light sensitive switches to close at dusk.

3.6 The key message therefore is that 'designing out' is avoiding the problem, which is the preferable solution, whilst the provision of blinds or louvres is 'mitigation'.

'Right Light, Right Place, Right Time'

3.7 As advised by the Institute of Lighting Professionals, good lighting practice is the provision of the right light, at the right time, in the right place, controlled by the right system. The application of artificial light in the external environment has done much to safeguard and enhance our night-time environment but, if not properly controlled, obtrusive light (sometimes referred to as light pollution) can present serious physiological and ecological problems.

3.8 **Obtrusive Light**, whether it keeps you awake through a bedroom window, impedes your view of the night sky, or adversely affects the performance of an adjacent lighting installation, is a form of pollution. It may also be a nuisance in law and can be substantially mitigated without detriment to the requirements of the task.

3.9 **Obtrusive light** can take several forms:

- **Sky Glow:** the brightening of the night sky.
- **Glare:** the uncomfortable brightness of a light source when viewed against a darker background.
- **Light Spill:** the spilling of light beyond the boundary of the area being lit.
- **Light Intrusion:** the presence of light from sources outside the affected person's property.
- **Light Presence:** sources of light in otherwise dark views.

These are all forms of obtrusive light, which may cause nuisance to others, or adversely affect fauna & flora as well as waste money and energy.

3.10 External lighting can therefore be polluting, waste energy, and provide dazzle and harsh shadows that in practice even counteract the security benefits of good lighting. This applies not only to business and public lighting, but also external domestic lighting which can, if not properly considered at the design stage, contribute significantly to light pollution. This is especially the case if the property is in a more remote, or countryside location, where the impact on 'Dark-Sky' and the associated tranquillity can be significant.

3.11 These effects are not only features of so called 'security lighting' but also the bulkhead and 'welcome' lights at front and back doors. If problems are to be avoided, only those that direct light downwards and with a limited light output should be provided and a low colour temperature, also known as "warm white", should be provided. See **Appendix 2** for explanation of technical terms.

3.12 In both the interests of ensuring compliance with dark night sky criteria and compliance with electrical regulations, it is better for developers to provide these lights rather than householders retrofitting them. It is important therefore that within the Cranborne Chase AONB, planning authorities raise these issues either at Pre-Application stage or include it as a requirement on the checklist that is used as part of the validation and registration of planning applications, so that the issue of lighting becomes a standard and integral part of the planning application process.

3.13 By raising this issue at the outset, it will save both time and money by ensuring that light pollution is planned out of development schemes, rather than trying to impose requirements and changes after the application has been approved or worse still, trying to secure changes after development has been completed. There is no reason why the provision of dark night sky sensitive units should be more costly than others. It is simply a case of selecting the most appropriate units for the particular situation and environment.

3.14 For larger scale developments, it will be necessary for planning authorities to require that a lighting strategy and a specification is included within applications, to demonstrate that schemes would be Dark-Sky compliant, once implemented. The design and lighting criteria should also apply to smaller and householder planning applications, including self-build

constructions as well as extensions and additions, although a lighting unit specification would be sufficient in such cases.

3.15 Internally and externally illuminated signs also need to ensure light is not emitted above the horizontal, either directly or by reflection, and that light outputs are within limits. Externally, use should be made of passive infrared [PIR] motion sensitive light switches, unless particular safety or other circumstances dictate otherwise, and any signs should not be illuminated unnecessarily, such as outside opening hours.

3.16 Furthermore, for all applications within the AONB where lighting may potentially be required in future, there is potential to impose a planning condition requiring applications to be submitted for new lighting schemes, so that the Local Planning Authority has the opportunity to evaluate any proposals for additional lighting and to ensure that they are Dark-Sky compliant.

4 Current International Dark-Sky Lighting Criteria & AONB Policies

4.1 The current International Dark-Sky Association criteria consist of Five Principles for Responsible Outdoor Lighting (this implicitly includes indoor lighting that illuminates the outside).

1. All light should have a clear purpose. This purpose should be identified before a light is installed or replaced. Consider the impact of the light on wildlife and the environment, and consider the use of reflective or luminous markers for signs, curbs and steps.
2. All light should be targeted. Use shielding and careful orientation so that light does not spill beyond where it is needed.
3. Light should be no brighter than necessary. Use the lowest light level required and consider whether the lit surfaces will reflect light into the sky. Use dimmers if different light levels are needed.
4. Light should be used only when it is useful. Use timers and motion detectors (e.g. PIRs) to ensure that light is available when it is needed and is turned off at other times. Lights should turn off a maximum of 5 minutes after motion ceases.
5. Use the warmest colour with the lowest *Correlated Colour Temperature* [CCT] possible. In practice, this means having a maximum of 2700K (2200K preferred).

See **Appendix 2** for further explanation of technical terms.

The Cranborne Chase AONB Management Plan Policies

4.2 The Cranborne Chase Management Plan has been approved, not only by the AONB Board but also has been formally adopted by all the seven Local Planning Authorities. The AONB Management Plan therefore constitutes the Local Planning Authorities' Planning Policy for the Area. It is therefore an important Material Planning Consideration when determining all planning applications within the respective parts of the AONB.

Management Plan Dark Night Skies Policies

4.3 These are general statements rather than planning policies that can be readily used by local planning authorities to help in the assessment of planning applications. None the less they explain the objective for the AONB. The Management Plan's Dark-Sky policies are to:

DNS1 Actively promote the benefits of IDSR status to all partners and communities to elicit appropriate action and support for the application to IDA.

DNS2 Work with all LPA partners to:

- Retain IDSR status through continuous improvements to lighting/retrofitting schemes.
- Embed good practice lighting guidance within their Local/Development Plans.
- Ensure substantial lighting schemes, such as those for schools, businesses and sports areas, are competently designed and meet DNS and other environmental criteria.
- Submit an annual report of activities to maintain the IDSR status.

DNS3 Support parish councils in promoting good practice lighting to their residents and businesses, offering Dark-Sky Friendly Parish Award.

DNS4 Investigate the potential for sponsorship/provision of low-cost good practice outside light fittings within the AONB.

DNS5 Work with other UK ‘Dark-Sky Places’ and related organisations to improve awareness and understanding across the country of the need to reduce light pollution.

DNS6 Develop a Dark-Sky Friendly Accreditation Scheme for local tourism and allied businesses.

DNS7 Determine a potential location, design criteria and funding requirements necessary to establish an AONB Observatory within the timeframe of this Plan.

4.4 Whilst these Management Plan policies set out broad objectives and guidance, they do not provide the precise level of detail required for a Local Plan Policy, against which planning applications can be assessed for decision making. The following section and policies therefore address this issue.

5 Proposed Reasoned Justification and Dark-Sky Policy for inclusion in Local Plan Reviews

Reasoned Justification

5.1 The reasoned justification for a Local Plan Review Policy is included within, and can be drawn from, the accompanying text above. This explains the background, purpose, and basis for the policies and together with the proposed policy below, provides the necessary information for including appropriate text and policy statement within the Planning Authorities’ Local Plan Reviews.

5.2 As noted above the NPPF 185c states:

“(c) limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.”

This, together with the policies in the Cranborne Chase Management Plan, therefore, provides the statutory framework for Local Plan Review Dark-Sky Policies.

5.3 The principles in this Policy Statement therefore include the following:

- In the Cranborne Chase AONB, development should be designed to conserve and enhance the intrinsic quality of dark night skies. Lighting which is proposed to be installed should meet or exceed the level of protection appropriate to the Environmental Zone (as defined by the Institution of Lighting Professionals in its Guidance Note 01/2021) in which it is installed.
- In the International Dark-Sky Reserve, that is 'Zone E0'. That means external lighting should be fully shielded and not exceed a 'Correlated Colour Temperature (CCT) of 2700K, with 3000K reserved for purposes for which 2700K or lower lights are not available.

5.4 In practice, all outdoor lighting, or indoor lighting that shines outside, in the AONB must meet the requirements of ILP GN 01/2021 (or its current updates) Environmental Zone E0 (Core) or E1 (Buffer), and the current requirements for an International Dark-Sky Reserve as specified by the International Dark-Sky Association. The difference between E0 and E1 is primarily in the permitted effects of spill light, glare, illuminated signage, and reflected light from surfaces. Tables 3, 4, 7 & 8 in ILP GN 01/2021 provide further guidance. The map in **Appendix 3** shows the core and peripheral/buffer areas within the Cranborne Chase AONB.

5.5 As stated in the Preface, all seven of the local authorities not only supported the bid, but also gave a commitment to ensuring that its objectives were achieved and a summary of the commitments made at that time by each authority, is included in **Appendix 4**. In order for a meaningful and consistent approach to be taken by all seven Local Planning Authorities, the following actions are proposed:

- The inclusion of appropriate Dark-Sky policies within their Local Plan Reviews
- The inclusion of lighting as a subject for discussion and negotiations at 'pre-application' stage, and the need for a lighting strategy to be submitted, especially for larger scale developments within or close to the AONB and Dark-Sky Reserve boundary.
- During the consideration of planning applications, addressing lighting and Dark-Sky requirements, as a material consideration, in the same way that design, materials and landscaping are addressed.
- As part of the decision-making process, the need for imposing planning conditions to restrict the number of lighting units, set limits on light levels and *and/or requiring applications to be submitted for new lighting schemes and other associated matters.*

- The enforcement of any contraventions of lighting conditions.

5.6 The commitment of the local authorities that was made in 2019 therefore now needs to be translated into coordinated and firm action if the IDSR assessors are to be satisfied that tangible progress is being made towards achieving the 67% target, which will also help meet the authorities' climate change, biodiversity, sustainability, and tourism objectives.

Proposed Local Plan Review Policy

Policy IDSR 1

Within those parts of the Local Authority Area that fall within the Cranborne Chase Area of Outstanding Natural Beauty:

- a) To prevent light pollution and ensure compliance with IDSR criteria, all planning applications for development over 2 dwellings or for other developments over 100 square metres that involve the provision of external lighting, shall be accompanied by a lighting strategy, with detailed specification of any proposed lighting units and demonstrating how consideration has been given to maintaining and enhancing the Dark-Sky within the AONB.***
- b) All lighting units provided must be: downward facing and shielded to prevent upward emission of light; be no brighter than the minimum required for the lighting task; and be fitted with PIR sensors.***
- c) All ground-based lighting units to mark pedestrian paths and similar areas shall be located no higher than 1 metre above ground level and all wall mounted lighting units shall be located as low as practicable and shielded to prevent upward emission of light.***
- d) Any proposals and designs that include roof lights, lantern lights, and/or floor to eaves and floor to gable glazing, will not be supported in new build, refurbishment, and extension projects, unless integral blinds or louvres or external 'brise soleil' fixed louvres, are provided as mitigation.***
- e) All such blinds and/or louvered units that are not easily accessible, must be provided with automatically operated, light sensor systems, to ensure closure at dusk.***

Policy IDSR 2

In order to control the installation of lighting after new development has been implemented, all planning consents within the AONB will include a condition that requires applications to be submitted for any future installation of external lighting, within the IDSR and its setting.

5.6 The reason for this policy is to protect the International Dark-Sky designation within the Cranborne Chase AONB and prevent light pollution adversely affecting the

Dark-Sky and their appreciation and for the benefit of human health, wildlife, and biodiversity.

6 Recommendation to the Local Planning Authorities

6.1 In the light of the above considerations, it is recommended that:

1 A section, with associated planning policy and reasoned justification, relating to the International Dark-Sky Reserve within the Cranborne Chase Area of Outstanding Natural Beauty, be included within all the current and emerging Local Plan Reviews, providing the background and justification for the Dark-Sky policies.

2 The proposed Local Plan Policy be approved for inclusion in all Local Plan Reviews, as an integral part of the Plans.

3 Pending the adoption of the Local Plan Reviews, this document and this Dark-Sky Policy be approved by each Local Planning Authority as ***'Interim Policy for Development Management Purposes'*** to be applied to planning applications within the Cranborne Chase AONB.

Cranborne Chase AONB Partnership

June 2022

**A CHARTER FOR PRESERVING AND ENHANCING THE DARK NIGHT SKY OF
THE CRANBORNE CHASE
AONB INTERNATIONAL DARK-SKY RESERVE**

This Charter sets out the principles to be followed by any organisation or individual who signs up for the Dark-Sky Friendly Scheme. It will be a fundamental document for initiating and coordinating action related to our status as an International Dark-Sky Reserve.

DARK NIGHT SKY CHARTER

In 2019, the International Dark-Sky Association granted us the prestigious designation of International Dark-Sky Reserve (IDSR). As part of the conditions of this designation, we must reduce light pollution in the night sky above the IDSR. Those who sign up to this Charter value the quality of the Dark-Sky that already exists and undertake to act to preserve and enhance this quality. Signatories will implement and/or promote the following:

- Shielding lights, so that they do not emit any light above the horizontal, to reduce *skyglow* and the *adverse effects of light on flying fauna*.
- Shielding lights, so that they do not shine off the property, to reduce *light intrusion* and *glare*.
- Using light of a correlated colour temperature of 2700K or lower (“warm white” light) to reduce *glare, skyglow from light scatter*, and the *adverse effects of light on nocturnal fauna*.
- Have exterior lights on motion sensors (PIRs) with a maximum “on” time of 5 minutes to reduce their effect on all aspects of the night-time environment, especially *skyglow from light scatter and reflection* and the *adverse effects on flora and nocturnal fauna*.
- Using lights with the minimum brightness necessary for their intended task, to reduce their effect on all aspects of the night-time environment, especially *skyglow from light scatter and reflection* and the *adverse effects on flora and nocturnal fauna*.
- In the case of tourist accommodation providers, promote the Dark-Sky environment by providing binoculars or telescopes, star charts, red-light torches, etc, for loan to guests, and making provision for late breakfasts and late returns in the night after astronomy activities.

- **Respect and raise awareness the IDSR generally by promoting, in person, on social media, or on own websites, Dark-Sky events such as stargazing evenings, and talks on light pollution and its consequences and remedies.**

Appendix 2 - Technical Lighting Information - Correlated Colour Temperature

Modern LED lighting now comes with an indication of its **“Correlated Colour Temperature”** (CCT), which is an indication of the temperature to which a glowing filament would need to be raised in order to produce a similar quality of white light. It is measured in Kelvin (K) which is the international standard unit for temperature.

Paradoxically, the cooler the colour temperature, the warmer the light appears. Light with a CCT of 5000K or more appears harsh, bright, and cold; light with a CCT of 3000K or less appears soft and warm. (The glowing filament analogy is that red hot is cooler than white hot.)

The higher the CCT, the more blue light will be in the spectrum. This is important for several reasons:

- Blue light is scattered more by the atmosphere. This not only means that it contributes more to skyglow, but it also exacerbates the other harmful effects.
- Insects are more attracted to blue-rich light than to “cooler” colours. When this happens, they are not foraging, reproducing, or pollinating, and are more likely to be predated upon. Fruit flies (*drosophila*) left exposed to blue light for 24 hours will simply die.
- The effect on insects has a knock-on effect on insectivores; it modifies their behaviour.
- The presence of blue-rich light causes levels melatonin (the “sleep hormone”) to plummet, disturbing sleep and causing a variety of health problems in many vertebrates, including humans.

There are misconceptions that a low CCT means poor colour rendition. This was once true, but is no longer the case: colour rendition is related to a property called the Colour Rendering Index (CRI). LEDs with a CCT as low as 2200K can have a CRI in excess of 80, which is considered to be “very good”.

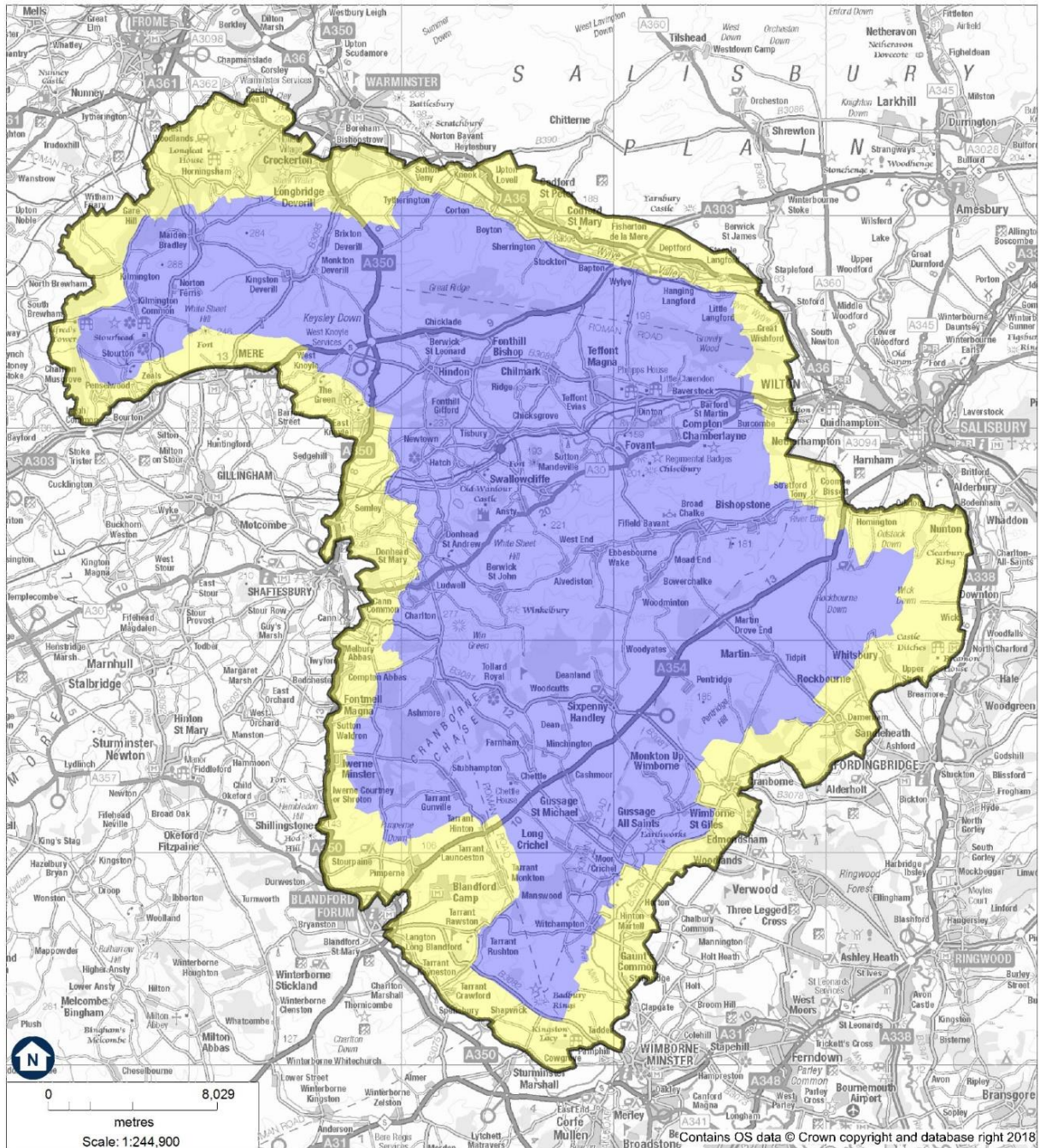
For these reasons, in the International Dark-Sky Reserve the CCT of external lighting should be limited to 2700K, with 2200K preferred. 3000K should be reserved for purposes for which 2700K or lower lights are not available. Anything in excess of 3000K should be used only in exceptional, very limited, circumstances with full mitigation (shielding, duration-control) being implemented.

Appendix 3 – Map of Core and Peripheral International Dark-Sky

Reserve Areas and Boundaries within the AONB

Purple - Core Area Yellow - Buffer or Peripheral Area

Cranborne Chase Area of Outstanding Natural Beauty International Dark Sky Reserve – Core and Periphery Boundaries



Appendix 4 – Summary & Extracts of Local Authority Commitments - 2019

Wiltshire Council

I am pleased to confirm Wiltshire Council's strong support for Cranborne Chase AONB Partnership's application to become an International Dark Sky Reserve. As the host authority for the AONB Partnership and geographically the largest local authority by area (approximately 60%) within the AONB, Wiltshire Council supports this objective within the AONB Management Plans for 2014 – 2019 and the draft for 2019-2024 as a partner and signatory to the plans.

We also hope that our own actions will help to influence and enable us to work alongside the other local authorities within the AONB and its settings to achieve dark skies.

Corporate Director – Growth, Investment and Place

Dorset Council

I am writing to confirm our support for Cranborne Chase AONB's application to be an International Dark Sky Reserve. We recognise the many benefits of encouraging better lighting and reducing light pollution, both for people and wildlife. It will also create opportunities for enhancing the local economy through promoting the AONB and Dorset as a destination for visitors keen to see dark night skies.

Chief Executive

Hampshire County Council

I am writing to confirm Hampshire County Council's support for Cranborne Chase AONB's application to be an International Dark Sky Reserve. The Council values its protected landscapes, the benefits these bring to Hampshire communities and environment, and the importance of dark night skies to the natural beauty of these outstanding areas.

This authority is keen to support the creation of best practice lighting policies and practice where astronomers, local planning authorities and local residents work together to preserve existing dark night skies. Designation of the AONB as a Dark Sky Reserve will create

opportunities for enhancing the local rural economy through the promotion of the AONB and Hampshire as a destination for visitors keen to see amazing dark night skies.

Director – Economy, Transport and Environment

Somerset County Council

Somerset County Council is pleased to support the AONB's application to be granted International Dark Sky Reserve (IDSR) status, to become one of only a handful of destinations that can prove they have an outstanding quality of night sky.

This objective was included in the AONB's Management Plan 2014 to 2019, which has been adopted by Somerset County Council. We note that the objective is also included in the 2019 to 2024 Management Plan, which is currently in the closing stages of consultation.

Chief Executive

South Somerset District Council

South Somerset District Council recognises the importance of the Cranborne Chase AONB in providing residents and visitors with a green and diverse landscape in which to work, live and spend recreational time in. AONBs are important for the health and well-being of residents as accessible green landscapes are proven to aid physical and mental health.

South Somerset District Council supports Cranborne Chase AONB's application to become an International Dark Sky Reserve. The issues that street lighting cause are documented globally and SSDC welcomes the application from the AONB.

Chief Executive

Dark Night Skies & Cranborne Chase AONB Proposed Planning Policy for the Planning Authorities' Local Plan Reviews & Interim Policy for Development Management Purposes

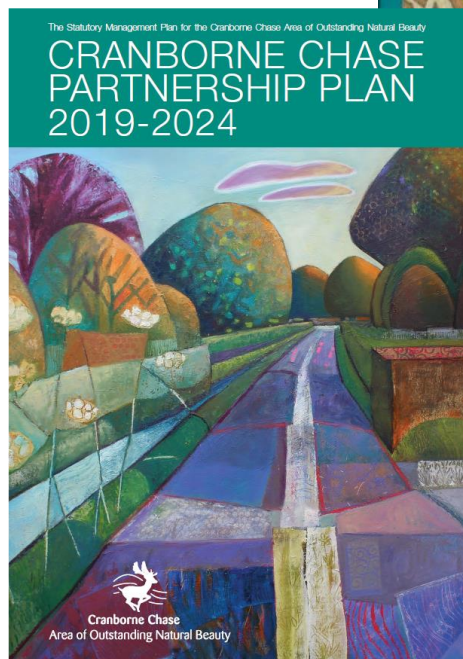
to the area, especially in the winter months when the night
astronomers.

Chief Executive

Cranborne Chase AONB Partnership

June 2022

International Dark Sky Reser



Cranborne Chase

Area of Outstanding Natural Beauty Partnership

International Dark Sky Reserve 2019

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Preface

*Cranborne Chase is the only AONB to have achieved the privilege of being designated as an **International Dark-Sky Reserve**, [IDSR]. This was achieved in 2019, after a rigorous assessment process, but it has to be remembered that the designation was 'provisional' only, pending improvement in meeting the high standards of being a Reserve, by reducing the amount of spilled light, which has such a detrimental impact on the darkness of the observed sky and the wellbeing of nocturnal fauna and human health.*

The international assessors of the IDSR require that 67% of all domestic and business outside lighting must meet Dark-Sky criteria. Sadly, the current level is estimated to be between 15-20%. Unless this can be addressed as a priority over the next 18 months, the area could well lose its Reserve status. The Cranborne Chase IDSR is therefore under real threat of losing this important status. The designation covers the whole of the AONB and the area's Management Plan makes reference to Dark-Sky with broad policies, together with information leaflets helping to convey the importance of limiting the brightness of outdoor lighting in particular. Actions needed involve; the screening of indoor lighting; low level outside lights, appropriate shielding, the use of Passive Infrared sensors [PIRs] and other measures, all aimed at minimising the impact of 'stray' or 'spilled' light.

It is important to emphasise that the benefit of the Dark-Sky is not just the ability to see the night sky and stars on clear nights. There is strong evidence to demonstrate that artificial light at night (ALAN) also has an adverse effect on human health, wildlife, and biodiversity. It is ironic that the introduction of LED lighting which is low energy and therefore beneficial in terms of energy usage, also results in these lights being generally installed with a far higher

brightness than is actually necessary and much brighter than traditional incandescent bulb lighting.

Whilst the AONB team was instrumental in driving forward the bid for designation, it has to be remembered that all seven of the local authorities not only supported the bid, but gave a commitment to ensuring that its objectives were achieved. The only way that this can be progressed and delivered is through the controls that can be imposed by the constituent local planning authorities through the following measures:

- The inclusion of appropriate a Dark-Sky policy within their Local Plan Reviews*
- The inclusion of lighting as a subject to discussion and negotiations at 'pre-application' stage, and the need for a lighting strategy to be submitted, especially for larger scale developments within or close to the AONB and Dark-Sky Reserve boundary.*
- During the consideration of planning applications, addressing lighting and Dark-Sky requirements, as a material consideration, in the same way that design, materials and landscaping are addressed.*
- As part of the decision-making process, the need for imposing planning conditions to restrict the number of lighting units, set limits on light levels, time periods for lighting, and/or requiring applications to be submitted for new lighting schemes and other associated matters.*
- The enforcement of any contraventions of lighting conditions.*

The commitment of the local authorities that was made in 2019 therefore now needs to be translated into coordinated and firm action if the IDSR assessors are to be satisfied that tangible progress is being made towards achieving the 67% target. Such action will also help meet the authorities' climate change, biodiversity, sustainability and tourism objectives.

In order to assist in achieving this objective the AONB Team has commissioned an independent planning consultant to prepare a report, setting out the issues associated with the dark-sky reserve and that proposes a Dark-Sky Reserve planning policy, for inclusion in all of the Local Plan Reviews, notably for Dorset and Wiltshire, within which the majority of the AONB is located.

It is considered essential that all Local Plans that administer the AONB have the same Dark-Sky policy so that there is clarity and certainty for planning applicants, Parish and Town Councils and the general public. Pending the progression and final adoption of the Local Plan reviews, it is proposed that the policy be approved by all seven authorities, as Interim Planning Policy for Development Management Purposes.

Dark Night Skies & Cranborne Chase AONB

Proposed Planning Policy for the Planning Authorities' Local Plan Reviews & 'Interim Policy for Development Management Purposes'

1 Introduction

1.1 Cranborne Chase AONB was designated the world's 14th International Dark-Sky Reserve in October 2019. All seven local authorities whose area falls partly within the Cranborne Chase AONB gave a firm commitment to reducing light pollution/having compliant lighting in the successful bid submitted to the International Dark-Sky Association (IDA) in 2019. There is, therefore, an obligation for all the authorities to continue to respect this *international* designation, and help control and reduce light pollution associated with new development as a primary means of conserving and enhancing the dark night skies.

1.2 The seven Local Planning Authorities that have an interest in the Cranborne Chase AONB are as follows:

- Wiltshire Council.
- Dorset Council.
- Hampshire County Council.
- Somerset County Council.
- New Forest District Council.
- Mendip District Council.
- South Somerset District Council.

In addition, Natural England is the key statutory consultee for AONB matters.

1.3 Cranborne Chase AONB has the darkest night skies in central southern England. The awe-inspiring Milky Way can be readily viewed here; something that over 90% of the UK population can rarely see due to light pollution. Unlike ancient historic settlements, rivers, soils, wildlife, and our outstanding landscapes, the night sky has no legal protection, which explains why in just six years light pollution has increased by 24% across the UK as a whole.

1.4 The characteristics and qualities that make this AONB special, as a whole, with regards to dark night skies are as follows:

- Cranborne Chase AONB is one of the darkest places in England.
- Dark night skies with a myriad of visible stars have always been an outstanding, memorable, and remarkable feature of this AONB.
- A topography that facilitates stargazing with open, elevated downland, wide panoramic, unobstructed views all with relatively easy public access.
- Lack of major towns and a low AONB population limits the incidence of light pollution and sky glow.

1.5 Further information about Dark-Sky in the AONB can be seen at this weblink, which is the relevant section from the AONB Management Plan:

<https://cranbornechase.org.uk/wp-content/uploads/2020/10/11.-Dark-Night-Skies.pdf>

The AONB 'Dark Night Sky Charter' is included as **Appendix 1**.

1.6 As a result of the Dark-Sky designation, residents and visitors to the AONB, together with the area's biodiversity, are able to experience benefits, which may include the following:

- An improvement in the overall quality of the area's environment and sense of night-time tranquillity; a key feature on the AONB.
- Less harmful impacts on the area's nocturnal wildlife arising from a reduction of stray artificial light.
- The potential for the local economy to be improved as Cranborne Chase has a natural 'attraction' for visitors to the area throughout the year, thereby supporting tourism-related businesses.

1.7 The local authorities have, of course, also all adopted the AONB Management Plan and its policies that refer to Dark-Sky issues and the control of light pollution. This current planning document now proposes to take matters a stage further, by promoting a specific **policy** that are recommended for inclusion within Local Plan Reviews, so that there is a more robust and statutory mechanism for controlling potentially light polluting developments. It is also clearly important that all seven authorities adopt a consistent approach to this issue and associated policies within their respective parts of the AONB, otherwise this will cause confusion for planning applicants, Parish Councils, and the general public.

1.8 This, of course, does not mean that there can be no new lighting, but it does mean that the aim should be to provide ***the right light in the right place at the right time***. In the simplest of terms this usually means downward facing lights of sufficient strength to provide the illumination required, but with the light only being on for the period of time when it is needed.

Further technical details are included in **Appendix 2**.

1.9 The Cranborne Chase AONB is the only AONB in the UK which has been designated as an International Dark-Sky Reserve in its entirety, with the others being within National Parks, that include Brecon Beacons, Exmoor, and Snowdonia.

1.10 Concern about Dark-Sky has been a longstanding issue in Cranborne Chase and, indeed, the AONB Partnership set out its policy on Light Pollution as far back as 2008, and has provided a suite of Good Practice Guides to encourage and enable the installation of Dark-Sky compliant lighting. Highway lighting teams of the partner authorities have also provided examples of dark night sky compliant highway lighting, that is also energy efficient and economical, which has been most helpful.

1.11 Nevertheless, lighting associated with new domestic and business developments does not automatically comply with dark night sky criteria. A key aim of this policy document is to encourage and enable those proposing new developments to consider and plan for dark night sky compliant lighting from the outset.

1.12 It also sets out a policy for Local Planning Authorities to consider including with their Local Plan Review documents and, in the meantime, to approve the policies as an ***'Interim Policy for Development Management Purposes'***, until such time as they are formally incorporated into and adopted in the Local Plan Reviews.

1.13 Whilst respective Local Plans may already make some reference to Dark-Sky as an issue, clearly if the subject is to be given the greater status that it deserves, it is important that a consistent approach is taken to applying policy in all areas of the AONB within each authority area. It is important to emphasise that this policy is only intended to apply for those parts of

the AONB within each authority area, but clearly the authorities are free to apply them more widely if they consider it necessary and appropriate.

2 National Planning Policy Guidance (NPPF) 2021

2.1 The NPPF paragraph 185 clearly indicates that conserving dark night skies is a national priority. The Cranborne Chase AONB Management Plan, which constitutes the policies of the partner authorities for this AONB, also indicates that good, Dark-Sky compliant lighting, is an objective for this AONB.

2.2 It is important for all the partner authorities to recognise that there is an obligation to adhere to and help implement this national NPPF planning policy. It is therefore most appropriate that respective Local Plan Reviews take forward this general national policy and apply it to their local situation. This document therefore provides the authorities with the policy basis and reasoned justification for undertaking this task.

2.3 NPPF Section 185 states as follows:

Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:

a) mitigate, and reduce to a minimum, potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life,

b) identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason, and

c) limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.

3 Lighting & Design

Avoiding Light Pollution

3.1 The **Institute of Lighting Professionals** has published an useful guide to this issue entitled '*The Reduction of Obtrusive Light*' [ILP GN 01/2021] see:

<https://theilp.org.uk/publication/guidance-note-1-for-the-reduction-of-obtrusive-light-2021/>

3.2 Essentially there are two ways of avoiding light pollution in new developments.

Firstly, at the design stage, features that have the capacity to contribute to light pollution are either not included or 'designed out' of the scheme at an early stage, or are effectively mitigated. Secondly, any required lighting follows the '*right light, right place, right time*' philosophy.

Avoiding Light Polluting Features at the Design Stage

3.3 Any elements of design that allow light to be emitted above or near the horizontal have the capacity to contribute to light pollution. That means that windows need effective curtains or blinds, and internal light units that are lower than the top of windows need to be appropriately shaded. Those 'windows' that are angled upwards, such as roof lights and lantern lights, either need to be designed out of the structures or to have integral blinds or louvres that can be closed at night to prevent light pollution.

3.4 In some situations, extensive floor to ceiling or floor to gable glazing, which can be common in some modern dwelling designs, may be proposed. Whilst passive energy gain can be beneficial, extensive areas of floor to ceiling glazing also clearly have the capacity to emit a considerable amount of light at night above the horizontal, which is not acceptable in this International Dark-Sky Reserve. Therefore, for buildings on the edge of villages or in relatively isolated locations, large areas of extensive glazing can detract significantly, and arguably disproportionately, from the International Dark-Sky Reserve's objectives.

3.5 In addition, when lantern and roof lights are proposed in relatively inaccessible positions, this makes the manual operation of blinds or louvres impracticable. In these

situations, the blinds or louvres should be automatically operated by light sensitive switches to close at dusk.

3.6 The key message therefore is that 'designing out' is avoiding the problem, which is the preferable solution, whilst the provision of blinds or louvres is 'mitigation'.

'Right Light, Right Place, Right Time'

3.7 As advised by the Institute of Lighting Professionals, good lighting practice is the provision of the right light, at the right time, in the right place, controlled by the right system. The application of artificial light in the external environment has done much to safeguard and enhance our night-time environment but, if not properly controlled, obtrusive light (sometimes referred to as light pollution) can present serious physiological and ecological problems.

3.8 **Obtrusive Light**, whether it keeps you awake through a bedroom window, impedes your view of the night sky, or adversely affects the performance of an adjacent lighting installation, is a form of pollution. It may also be a nuisance in law and can be substantially mitigated without detriment to the requirements of the task.

3.9 **Obtrusive light** can take several forms:

- **Sky Glow:** the brightening of the night sky.
- **Glare:** the uncomfortable brightness of a light source when viewed against a darker background.
- **Light Spill:** the spilling of light beyond the boundary of the area being lit.
- **Light Intrusion:** the presence of light from sources outside the affected person's property.
- **Light Presence:** sources of light in otherwise dark views.

These are all forms of obtrusive light, which may cause nuisance to others, or adversely affect fauna & flora as well as waste money and energy.

3.10 External lighting can therefore be polluting, waste energy, and provide dazzle and harsh shadows that in practice even counteract the security benefits of good lighting. This applies not only to business and public lighting, but also external domestic lighting which can, if not properly considered at the design stage, contribute significantly to light pollution. This is especially the case if the property is in a more remote, or countryside location, where the impact on 'Dark-Sky' and the associated tranquillity can be significant.

3.11 These effects are not only features of so called 'security lighting' but also the bulkhead and 'welcome' lights at front and back doors. If problems are to be avoided, only those that direct light downwards and with a limited light output should be provided and a low colour temperature, also known as "warm white", should be provided. See **Appendix 2** for explanation of technical terms.

3.12 In both the interests of ensuring compliance with dark night sky criteria and compliance with electrical regulations, it is better for developers to provide these lights rather than householders retrofitting them. It is important therefore that within the Cranborne Chase AONB, planning authorities raise these issues either at Pre-Application stage or include it as a requirement on the checklist that is used as part of the validation and registration of planning applications, so that the issue of lighting becomes a standard and integral part of the planning application process.

3.13 By raising this issue at the outset, it will save both time and money by ensuring that light pollution is planned out of development schemes, rather than trying to impose requirements and changes after the application has been approved or worse still, trying to secure changes after development has been completed. There is no reason why the provision of dark night sky sensitive units should be more costly than others. It is simply a case of selecting the most appropriate units for the particular situation and environment.

3.14 For larger scale developments, it will be necessary for planning authorities to require that a lighting strategy and a specification is included within applications, to demonstrate that schemes would be Dark-Sky compliant, once implemented. The design and lighting criteria should also apply to smaller and householder planning applications, including self-build

constructions as well as extensions and additions, although a lighting unit specification would be sufficient in such cases.

3.15 Internally and externally illuminated signs also need to ensure light is not emitted above the horizontal, either directly or by reflection, and that light outputs are within limits. Externally, use should be made of passive infrared [PIR] motion sensitive light switches, unless particular safety or other circumstances dictate otherwise, and any signs should not be illuminated unnecessarily, such as outside opening hours.

3.16 Furthermore, for all applications within the AONB where lighting may potentially be required in future, there is potential to impose a planning condition requiring applications to be submitted for new lighting schemes, so that the Local Planning Authority has the opportunity to evaluate any proposals for additional lighting and to ensure that they are Dark-Sky compliant.

4 Current International Dark-Sky Lighting Criteria & AONB Policies

4.1 The current International Dark-Sky Association criteria consist of Five Principles for Responsible Outdoor Lighting (this implicitly includes indoor lighting that illuminates the outside).

6. All light should have a clear purpose. This purpose should be identified before a light is installed or replaced. Consider the impact of the light on wildlife and the environment, and consider the use of reflective or luminous markers for signs, curbs and steps.
7. All light should be targeted. Use shielding and careful orientation so that light does not spill beyond where it is needed.
8. Light should be no brighter than necessary. Use the lowest light level required and consider whether the lit surfaces will reflect light into the sky. Use dimmers if different light levels are needed.
9. Light should be used only when it is useful. Use timers and motion detectors (e.g. PIRs) to ensure that light is available when it is needed and is turned off at other times. Lights should turn off a maximum of 5 minutes after motion ceases.
10. Use the warmest colour with the lowest *Correlated Colour Temperature* [CCT] possible. In practice, this means having a maximum of 2700K (2200K preferred).

See **Appendix 2** for further explanation of technical terms.

The Cranborne Chase AONB Management Plan Policies

4.2 The Cranborne Chase Management Plan has been approved, not only by the AONB Board but also has been formally adopted by all the seven Local Planning Authorities. The AONB Management Plan therefore constitutes the Local Planning Authorities' Planning Policy for the Area. It is therefore an important Material Planning Consideration when determining all planning applications within the respective parts of the AONB.

Management Plan Dark Night Skies Policies

4.3 These are general statements rather than planning policies that can be readily used by local planning authorities to help in the assessment of planning applications. None the less they explain the objective for the AONB. The Management Plan's Dark-Sky policies are to:

DNS1 Actively promote the benefits of IDSR status to all partners and communities to elicit appropriate action and support for the application to IDA.

DNS2 Work with all LPA partners to:

- Retain IDSR status through continuous improvements to lighting/retrofitting schemes.
- Embed good practice lighting guidance within their Local/Development Plans.
- Ensure substantial lighting schemes, such as those for schools, businesses and sports areas, are competently designed and meet DNS and other environmental criteria.
- Submit an annual report of activities to maintain the IDSR status.

DNS3 Support parish councils in promoting good practice lighting to their residents and businesses, offering Dark-Sky Friendly Parish Award.

DNS4 Investigate the potential for sponsorship/provision of low-cost good practice outside light fittings within the AONB.

DNS5 Work with other UK ‘Dark-Sky Places’ and related organisations to improve awareness and understanding across the country of the need to reduce light pollution.

DNS6 Develop a Dark-Sky Friendly Accreditation Scheme for local tourism and allied businesses.

DNS7 Determine a potential location, design criteria and funding requirements necessary to establish an AONB Observatory within the timeframe of this Plan.

4.4 Whilst these Management Plan policies set out broad objectives and guidance, they do not provide the precise level of detail required for a Local Plan Policy, against which planning applications can be assessed for decision making. The following section and policies therefore address this issue.

5 Proposed Reasoned Justification and Dark-Sky Policy for inclusion in Local Plan Reviews

Reasoned Justification

5.1 The reasoned justification for a Local Plan Review Policy is included within, and can be drawn from, the accompanying text above. This explains the background, purpose, and basis for the policies and together with the proposed policy below, provides the necessary information for including appropriate text and policy statement within the Planning Authorities’ Local Plan Reviews.

5.2 As noted above the NPPF 185c states:

“(c) limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.”

This, together with the policies in the Cranborne Chase Management Plan, therefore, provides the statutory framework for Local Plan Review Dark-Sky Policies.

5.3 The principles in this Policy Statement therefore include the following:

- In the Cranborne Chase AONB, development should be designed to conserve and enhance the intrinsic quality of dark night skies. Lighting which is proposed to be installed should meet or exceed the level of protection appropriate to the Environmental Zone (as defined by the Institution of Lighting Professionals in its Guidance Note 01/2021) in which it is installed.
- In the International Dark-Sky Reserve, that is 'Zone E0'. That means external lighting should be fully shielded and not exceed a 'Correlated Colour Temperature (CCT) of 2700K, with 3000K reserved for purposes for which 2700K or lower lights are not available.

5.4 In practice, all outdoor lighting, or indoor lighting that shines outside, in the AONB must meet the requirements of ILP GN 01/2021 (or its current updates) Environmental Zone E0 (Core) or E1 (Buffer), and the current requirements for an International Dark-Sky Reserve as specified by the International Dark-Sky Association. The difference between E0 and E1 is primarily in the permitted effects of spill light, glare, illuminated signage, and reflected light from surfaces. Tables 3, 4, 7 & 8 in ILP GN 01/2021 provide further guidance. The map in **Appendix 3** shows the core and peripheral/buffer areas within the Cranborne Chase AONB.

5.5 As stated in the Preface, all seven of the local authorities not only supported the bid, but also gave a commitment to ensuring that its objectives were achieved and a summary of the commitments made at that time by each authority, is included in **Appendix 4**. In order for a meaningful and consistent approach to be taken by all seven Local Planning Authorities, the following actions are proposed:

- The inclusion of appropriate Dark-Sky policies within their Local Plan Reviews
- The inclusion of lighting as a subject for discussion and negotiations at 'pre-application' stage, and the need for a lighting strategy to be submitted, especially for larger scale developments within or close to the AONB and Dark-Sky Reserve boundary.
- During the consideration of planning applications, addressing lighting and Dark-Sky requirements, as a material consideration, in the same way that design, materials and landscaping are addressed.
- As part of the decision-making process, the need for imposing planning conditions to restrict the number of lighting units, set limits on light levels and *and/or requiring applications to be submitted for new lighting schemes and other associated matters.*

- The enforcement of any contraventions of lighting conditions.

5.6 The commitment of the local authorities that was made in 2019 therefore now needs to be translated into coordinated and firm action if the IDSR assessors are to be satisfied that tangible progress is being made towards achieving the 67% target, which will also help meet the authorities' climate change, biodiversity, sustainability, and tourism objectives.

Proposed Local Plan Review Policy

Policy IDSR 1

Within those parts of the Local Authority Area that fall within the Cranborne Chase Area of Outstanding Natural Beauty:

- f) To prevent light pollution and ensure compliance with IDSR criteria, all planning applications for development over 2 dwellings or for other developments over 100 square metres that involve the provision of external lighting, shall be accompanied by a lighting strategy, with detailed specification of any proposed lighting units and demonstrating how consideration has been given to maintaining and enhancing the Dark-Sky within the AONB.***
- g) All lighting units provided must be: downward facing and shielded to prevent upward emission of light; be no brighter than the minimum required for the lighting task; and be fitted with PIR sensors.***
- h) All ground-based lighting units to mark pedestrian paths and similar areas shall be located no higher than 1 metre above ground level and all wall mounted lighting units shall be located as low as practicable and shielded to prevent upward emission of light.***
- i) Any proposals and designs that include roof lights, lantern lights, and/or floor to eaves and floor to gable glazing, will not be supported in new build, refurbishment, and extension projects, unless integral blinds or louvres or external 'brise soleil' fixed louvres, are provided as mitigation.***
- j) All such blinds and/or louvered units that are not easily accessible, must be provided with automatically operated, light sensor systems, to ensure closure at dusk.***

Policy IDSR 2

In order to control the installation of lighting after new development has been implemented, all planning consents within the AONB will include a condition that requires applications to be submitted for any future installation of external lighting, within the IDSR and its setting.

5.6 The reason for this policy is to protect the International Dark-Sky designation within the Cranborne Chase AONB and prevent light pollution adversely affecting the

Dark-Sky and their appreciation and for the benefit of human health, wildlife, and biodiversity.

6 Recommendation to the Local Planning Authorities

6.1 In the light of the above considerations, it is recommended that:

1 A section, with associated planning policy and reasoned justification, relating to the International Dark-Sky Reserve within the Cranborne Chase Area of Outstanding Natural Beauty, be included within all the current and emerging Local Plan Reviews, providing the background and justification for the Dark-Sky policies.

2 The proposed Local Plan Policy be approved for inclusion in all Local Plan Reviews, as an integral part of the Plans.

3 Pending the adoption of the Local Plan Reviews, this document and this Dark-Sky Policy be approved by each Local Planning Authority as ***'Interim Policy for Development Management Purposes'*** to be applied to planning applications within the Cranborne Chase AONB.

Cranborne Chase AONB Partnership

June 2022

**A CHARTER FOR PRESERVING AND ENHANCING THE DARK NIGHT SKY OF
THE CRANBORNE CHASE
AONB INTERNATIONAL DARK-SKY RESERVE**

This Charter sets out the principles to be followed by any organisation or individual who signs up for the Dark-Sky Friendly Scheme. It will be a fundamental document for initiating and coordinating action related to our status as an International Dark-Sky Reserve.

DARK NIGHT SKY CHARTER

In 2019, the International Dark-Sky Association granted us the prestigious designation of International Dark-Sky Reserve (IDSR). As part of the conditions of this designation, we must reduce light pollution in the night sky above the IDSR. Those who sign up to this Charter value the quality of the Dark-Sky that already exists and undertake to act to preserve and enhance this quality. Signatories will implement and/or promote the following:

- Shielding lights, so that they do not emit any light above the horizontal, to reduce *skyglow* and the *adverse effects of light on flying fauna*.
- Shielding lights, so that they do not shine off the property, to reduce *light intrusion* and *glare*.
- Using light of a correlated colour temperature of 2700K or lower (“warm white” light) to reduce *glare*, *skyglow from light scatter*, and the *adverse effects of light on nocturnal fauna*.
- Have exterior lights on motion sensors (PIRs) with a maximum “on” time of 5 minutes to reduce their effect on all aspects of the night-time environment, especially *skyglow from light scatter and reflection* and the *adverse effects on flora and nocturnal fauna*.
- Using lights with the minimum brightness necessary for their intended task, to reduce their effect on all aspects of the night-time environment, especially *skyglow from light scatter and reflection* and the *adverse effects on flora and nocturnal fauna*.
- In the case of tourist accommodation providers, promote the Dark-Sky environment by providing binoculars or telescopes, star charts, red-light torches, etc, for loan to guests, and making provision for late breakfasts and late returns in the night after astronomy activities.

- **Respect and raise awareness the IDSR generally by promoting, in person, on social media, or on own websites, Dark-Sky events such as stargazing evenings, and talks on light pollution and its consequences and remedies.**

Appendix 2 - Technical Lighting Information - Correlated Colour Temperature

Modern LED lighting now comes with an indication of its “**Correlated Colour Temperature**” (CCT), which is an indication of the temperature to which a glowing filament would need to be raised in order to produce a similar quality of white light. It is measured in Kelvin (K) which is the international standard unit for temperature.

Paradoxically, the cooler the colour temperature, the warmer the light appears. Light with a CCT of 5000K or more appears harsh, bright, and cold; light with a CCT of 3000K or less appears soft and warm. (The glowing filament analogy is that red hot is cooler than white hot.)

The higher the CCT, the more blue light will be in the spectrum. This is important for several reasons:

- Blue light is scattered more by the atmosphere. This not only means that it contributes more to skyglow, but it also exacerbates the other harmful effects.
- Insects are more attracted to blue-rich light than to “cooler” colours. When this happens, they are not foraging, reproducing, or pollinating, and are more likely to be predated upon. Fruit flies (*drosophila*) left exposed to blue light for 24 hours will simply die.
- The effect on insects has a knock-on effect on insectivores; it modifies their behaviour.
- The presence of blue-rich light causes levels melatonin (the “sleep hormone”) to plummet, disturbing sleep and causing a variety of health problems in many vertebrates, including humans.

There are misconceptions that a low CCT means poor colour rendition. This was once true, but is no longer the case: colour rendition is related to a property called the Colour Rendering Index (CRI). LEDs with a CCT as low as 2200K can have a CRI in excess of 80, which is considered to be “very good”.

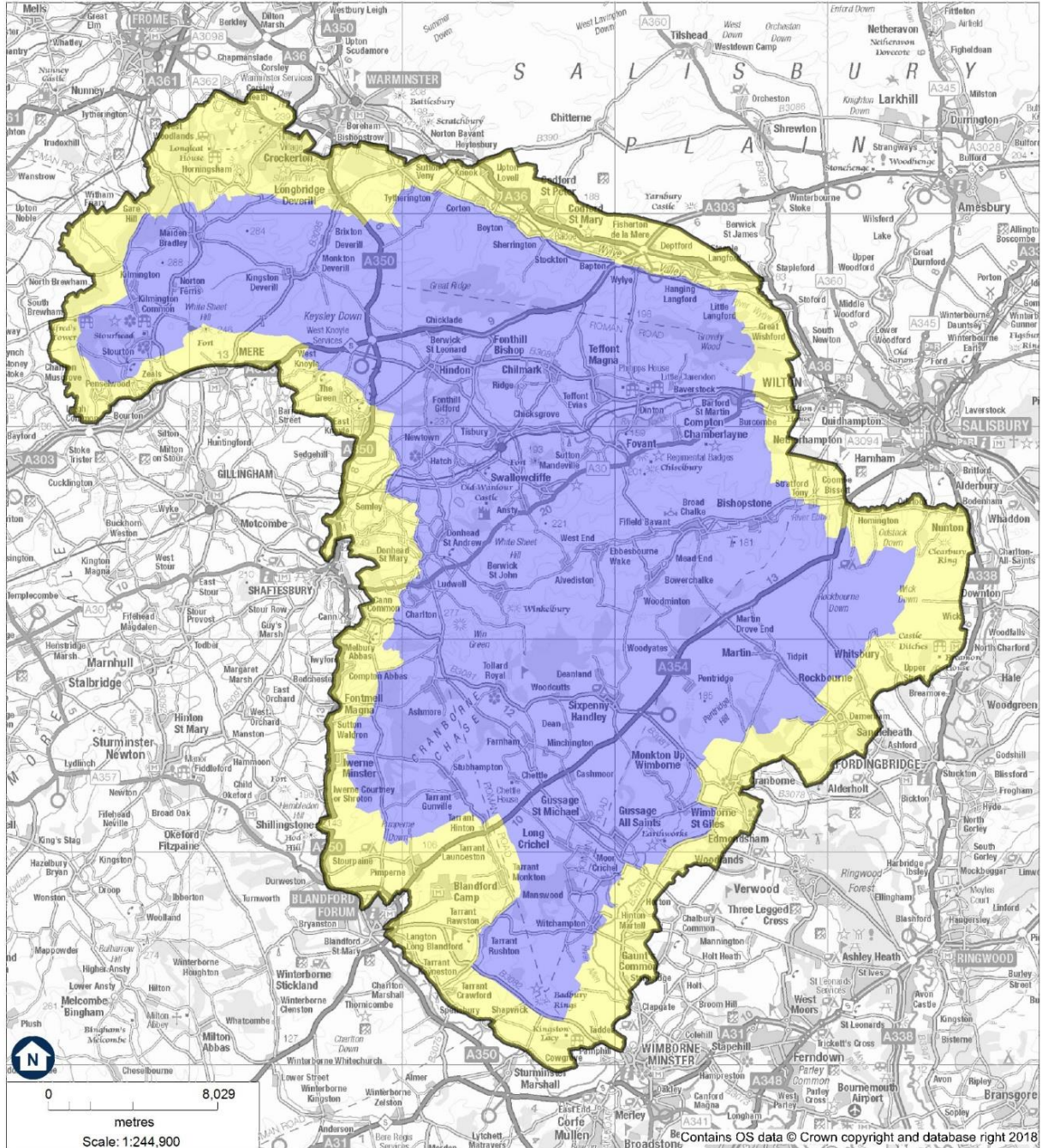
For these reasons, in the International Dark-Sky Reserve the CCT of external lighting should be limited to 2700K, with 2200K preferred. 3000K should be reserved for purposes for which 2700K or lower lights are not available. Anything in excess of 3000K should be used only in exceptional, very limited, circumstances with full mitigation (shielding, duration-control) being implemented.

Appendix 3 – Map of Core and Peripheral International Dark-Sky

Reserve Areas and Boundaries within the AONB

Purple - Core Area Yellow - Buffer or Peripheral Area

Cranborne Chase Area of Outstanding Natural Beauty International Dark Sky Reserve – Core and Periphery Boundaries



International Dark Sky Reserve 2019

Appendix 4 – Summary & Extracts of Local Authority Commitments - 2019

Wiltshire Council

I am pleased to confirm Wiltshire Council's strong support for Cranborne Chase AONB Partnership's application to become an International Dark Sky Reserve. As the host authority for the AONB Partnership and geographically the largest local authority by area (approximately 60%) within the AONB, Wiltshire Council supports this objective within the AONB Management Plans for 2014 – 2019 and the draft for 2019-2024 as a partner and signatory to the plans.

We also hope that our own actions will help to influence and enable us to work alongside the other local authorities within the AONB and its settings to achieve dark skies.

Corporate Director – Growth, Investment and Place

Dorset Council

I am writing to confirm our support for Cranborne Chase AONB's application to be an International Dark Sky Reserve. We recognise the many benefits of encouraging better lighting and reducing light pollution, both for people and wildlife. It will also create opportunities for enhancing the local economy through promoting the AONB and Dorset as a destination for visitors keen to see dark night skies.

Chief Executive

Hampshire County Council

I am writing to confirm Hampshire County Council's support for Cranborne Chase AONB's application to be an International Dark Sky Reserve. The Council values its protected landscapes, the benefits these bring to Hampshire communities and environment, and the importance of dark night skies to the natural beauty of these outstanding areas.

This authority is keen to support the creation of best practice lighting policies and practice where astronomers, local planning authorities and local residents work together to preserve existing dark night skies. Designation of the AONB as a Dark Sky Reserve will create

opportunities for enhancing the local rural economy through the promotion of the AONB and Hampshire as a destination for visitors keen to see amazing dark night skies.

Director – Economy, Transport and Environment

Somerset County Council

Somerset County Council is pleased to support the AONB's application to be granted International Dark Sky Reserve (IDSR) status, to become one of only a handful of destinations that can prove they have an outstanding quality of night sky.

This objective was included in the AONB's Management Plan 2014 to 2019, which has been adopted by Somerset County Council. We note that the objective is also included in the 2019 to 2024 Management Plan, which is currently in the closing stages of consultation.

Chief Executive

South Somerset District Council

South Somerset District Council recognises the importance of the Cranborne Chase AONB in providing residents and visitors with a green and diverse landscape in which to work, live and spend recreational time in. AONBs are important for the health and well-being of residents as accessible green landscapes are proven to aid physical and mental health.

South Somerset District Council supports Cranborne Chase AONB's application to become an International Dark Sky Reserve. The issues that street lighting cause are documented globally and SSDC welcomes the application from the AONB.

Chief Executive

Dark Night Skies & Cranborne Chase AONB Proposed Planning Policy for the Planning Authorities' Local Plan Reviews & Interim Policy for Development Management Purposes

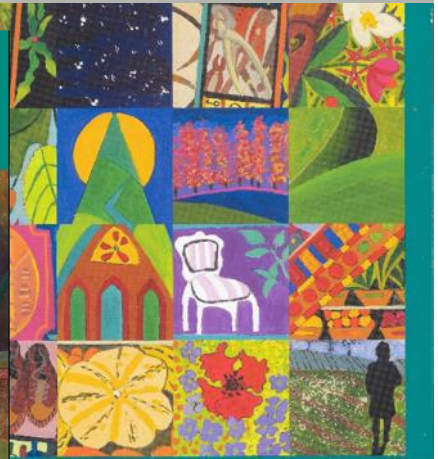
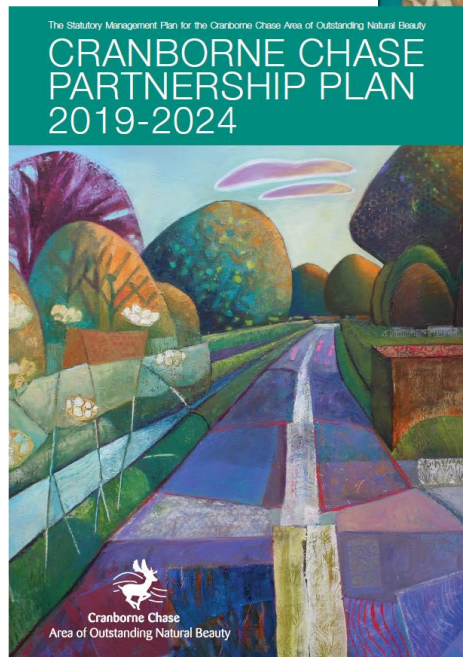
to the area, especially in the winter months when the night
astronomers.

Chief Executive

Cranborne Chase AONB Partnership

June 2022

International Dark Sky Reser



Cranborne Chase

Area of Outstanding Natural Beauty Partnership

International Dark Sky Reserve 2019

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Preface

*Cranborne Chase is the only AONB to have achieved the privilege of being designated as an **International Dark-Sky Reserve**, [IDSR]. This was achieved in 2019, after a rigorous assessment process, but it has to be remembered that the designation was 'provisional' only, pending improvement in meeting the high standards of being a Reserve, by reducing the amount of spilled light, which has such a detrimental impact on the darkness of the observed sky and the wellbeing of nocturnal fauna and human health.*

The international assessors of the IDSR require that 67% of all domestic and business outside lighting must meet Dark-Sky criteria. Sadly, the current level is estimated to be between 15-20%. Unless this can be addressed as a priority over the next 18 months, the area could well lose its Reserve status. The Cranborne Chase IDSR is therefore under real threat of losing this important status. The designation covers the whole of the AONB and the area's Management Plan makes reference to Dark-Sky with broad policies, together with information leaflets helping to convey the importance of limiting the brightness of outdoor lighting in particular. Actions needed involve; the screening of indoor lighting; low level outside lights, appropriate shielding, the use of Passive Infrared sensors [PIRs] and other measures, all aimed at minimising the impact of 'stray' or 'spilled' light.

It is important to emphasise that the benefit of the Dark-Sky is not just the ability to see the night sky and stars on clear nights. There is strong evidence to demonstrate that artificial light at night (ALAN) also has an adverse effect on human health, wildlife, and biodiversity. It is ironic that the introduction of LED lighting which is low energy and therefore beneficial in terms of energy usage, also results in these lights being generally installed with a far higher

brightness than is actually necessary and much brighter than traditional incandescent bulb lighting.

Whilst the AONB team was instrumental in driving forward the bid for designation, it has to be remembered that all seven of the local authorities not only supported the bid, but gave a commitment to ensuring that its objectives were achieved. The only way that this can be progressed and delivered is through the controls that can be imposed by the constituent local planning authorities through the following measures:

- *The inclusion of appropriate a Dark-Sky policy within their Local Plan Reviews*
- *The inclusion of lighting as a subject to discussion and negotiations at 'pre-application' stage, and the need for a lighting strategy to be submitted, especially for larger scale developments within or close to the AONB and Dark-Sky Reserve boundary.*
- *During the consideration of planning applications, addressing lighting and Dark-Sky requirements, as a material consideration, in the same way that design, materials and landscaping are addressed.*
- *As part of the decision-making process, the need for imposing planning conditions to restrict the number of lighting units, set limits on light levels, time periods for lighting, and/or requiring applications to be submitted for new lighting schemes and other associated matters.*
- *The enforcement of any contraventions of lighting conditions.*

The commitment of the local authorities that was made in 2019 therefore now needs to be translated into coordinated and firm action if the IDSR assessors are to be satisfied that tangible progress is being made towards achieving the 67% target. Such action will also help meet the authorities' climate change, biodiversity, sustainability and tourism objectives.

In order to assist in achieving this objective the AONB Team has commissioned an independent planning consultant to prepare a report, setting out the issues associated with the dark-sky reserve and that proposes a Dark-Sky Reserve planning policy, for inclusion in all of the Local Plan Reviews, notably for Dorset and Wiltshire, within which the majority of the AONB is located.

It is considered essential that all Local Plans that administer the AONB have the same Dark-Sky policy so that there is clarity and certainty for planning applicants, Parish and Town Councils and the general public. Pending the progression and final adoption of the Local Plan reviews, it is proposed that the policy be approved by all seven authorities, as Interim Planning Policy for Development Management Purposes.

Dark Night Skies & Cranborne Chase AONB

Proposed Planning Policy for the Planning Authorities' Local Plan Reviews & 'Interim Policy for Development Management Purposes'

1 Introduction

1.1 Cranborne Chase AONB was designated the world's 14th International Dark-Sky Reserve in October 2019. All seven local authorities whose area falls partly within the Cranborne Chase AONB gave a firm commitment to reducing light pollution/having compliant lighting in the successful bid submitted to the International Dark-Sky Association (IDA) in 2019. There is, therefore, an obligation for all the authorities to continue to respect this *international* designation, and help control and reduce light pollution associated with new development as a primary means of conserving and enhancing the dark night skies.

1.2 The seven Local Planning Authorities that have an interest in the Cranborne Chase AONB are as follows:

- Wiltshire Council.
- Dorset Council.
- Hampshire County Council.
- Somerset County Council.
- New Forest District Council.
- Mendip District Council.
- South Somerset District Council.

In addition, Natural England is the key statutory consultee for AONB matters.

1.3 Cranborne Chase AONB has the darkest night skies in central southern England. The awe-inspiring Milky Way can be readily viewed here; something that over 90% of the UK population can rarely see due to light pollution. Unlike ancient historic settlements, rivers, soils, wildlife, and our outstanding landscapes, the night sky has no legal protection, which explains why in just six years light pollution has increased by 24% across the UK as a whole.

1.4 The characteristics and qualities that make this AONB special, as a whole, with regards to dark night skies are as follows:

- Cranborne Chase AONB is one of the darkest places in England.
- Dark night skies with a myriad of visible stars have always been an outstanding, memorable, and remarkable feature of this AONB.
- A topography that facilitates stargazing with open, elevated downland, wide panoramic, unobstructed views all with relatively easy public access.
- Lack of major towns and a low AONB population limits the incidence of light pollution and sky glow.

1.5 Further information about Dark-Sky in the AONB can be seen at this weblink, which is the relevant section from the AONB Management Plan:

<https://cranbornechase.org.uk/wp-content/uploads/2020/10/11.-Dark-Night-Skies.pdf>

The AONB ‘Dark Night Sky Charter’ is included as **Appendix 1**.

1.6 As a result of the Dark-Sky designation, residents and visitors to the AONB, together with the area’s biodiversity, are able to experience benefits, which may include the following:

- An improvement in the overall quality of the area’s environment and sense of night-time tranquillity; a key feature on the AONB.
- Less harmful impacts on the area’s nocturnal wildlife arising from a reduction of stray artificial light.
- The potential for the local economy to be improved as Cranborne Chase has a natural ‘attraction’ for visitors to the area throughout the year, thereby supporting tourism-related businesses.

1.7 The local authorities have, of course, also all adopted the AONB Management Plan and its policies that refer to Dark-Sky issues and the control of light pollution. This current planning document now proposes to take matters a stage further, by promoting a specific **policy** that are recommended for inclusion within Local Plan Reviews, so that there is a more robust and statutory mechanism for controlling potentially light polluting developments. It is also clearly important that all seven authorities adopt a consistent approach to this issue and associated policies within their respective parts of the AONB, otherwise this will cause confusion for planning applicants, Parish Councils, and the general public.

1.8 This, of course, does not mean that there can be no new lighting, but it does mean that the aim should be to provide ***the right light in the right place at the right time***. In the simplest of terms this usually means downward facing lights of sufficient strength to provide the illumination required, but with the light only being on for the period of time when it is needed.

Further technical details are included in **Appendix 2**.

1.9 The Cranborne Chase AONB is the only AONB in the UK which has been designated as an International Dark-Sky Reserve in its entirety, with the others being within National Parks, that include Brecon Beacons, Exmoor, and Snowdonia.

1.10 Concern about Dark-Sky has been a longstanding issue in Cranborne Chase and, indeed, the AONB Partnership set out its policy on Light Pollution as far back as 2008, and has provided a suite of Good Practice Guides to encourage and enable the installation of Dark-Sky compliant lighting. Highway lighting teams of the partner authorities have also provided examples of dark night sky compliant highway lighting, that is also energy efficient and economical, which has been most helpful.

1.11 Nevertheless, lighting associated with new domestic and business developments does not automatically comply with dark night sky criteria. A key aim of this policy document is to encourage and enable those proposing new developments to consider and plan for dark night sky compliant lighting from the outset.

1.12 It also sets out a policy for Local Planning Authorities to consider including with their Local Plan Review documents and, in the meantime, to approve the policies as an ***'Interim Policy for Development Management Purposes'***, until such time as they are formally incorporated into and adopted in the Local Plan Reviews.

1.13 Whilst respective Local Plans may already make some reference to Dark-Sky as an issue, clearly if the subject is to be given the greater status that it deserves, it is important that a consistent approach is taken to applying policy in all areas of the AONB within each authority area. It is important to emphasise that this policy is only intended to apply for those parts of

the AONB within each authority area, but clearly the authorities are free to apply them more widely if they consider it necessary and appropriate.

2 National Planning Policy Guidance (NPPF) 2021

2.1 The NPPF paragraph 185 clearly indicates that conserving dark night skies is a national priority. The Cranborne Chase AONB Management Plan, which constitutes the policies of the partner authorities for this AONB, also indicates that good, Dark-Sky compliant lighting, is an objective for this AONB.

2.2 It is important for all the partner authorities to recognise that there is an obligation to adhere to and help implement this national NPPF planning policy. It is therefore most appropriate that respective Local Plan Reviews take forward this general national policy and apply it to their local situation. This document therefore provides the authorities with the policy basis and reasoned justification for undertaking this task.

2.3 NPPF Section 185 states as follows:

Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:

a) mitigate, and reduce to a minimum, potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life,

b) identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason, and

c) limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.

3 Lighting & Design

Avoiding Light Pollution

3.1 The **Institute of Lighting Professionals** has published an useful guide to this issue entitled '*The Reduction of Obtrusive Light*' [ILP GN 01/2021] see:

<https://theilp.org.uk/publication/guidance-note-1-for-the-reduction-of-obtrusive-light-2021/>

3.2 Essentially there are two ways of avoiding light pollution in new developments.

Firstly, at the design stage, features that have the capacity to contribute to light pollution are either not included or 'designed out' of the scheme at an early stage, or are effectively mitigated. Secondly, any required lighting follows the '*right light, right place, right time*' philosophy.

Avoiding Light Polluting Features at the Design Stage

3.3 Any elements of design that allow light to be emitted above or near the horizontal have the capacity to contribute to light pollution. That means that windows need effective curtains or blinds, and internal light units that are lower than the top of windows need to be appropriately shaded. Those 'windows' that are angled upwards, such as roof lights and lantern lights, either need to be designed out of the structures or to have integral blinds or louvres that can be closed at night to prevent light pollution.

3.4 In some situations, extensive floor to ceiling or floor to gable glazing, which can be common in some modern dwelling designs, may be proposed. Whilst passive energy gain can be beneficial, extensive areas of floor to ceiling glazing also clearly have the capacity to emit a considerable amount of light at night above the horizontal, which is not acceptable in this International Dark-Sky Reserve. Therefore, for buildings on the edge of villages or in relatively isolated locations, large areas of extensive glazing can detract significantly, and arguably disproportionately, from the International Dark-Sky Reserve's objectives.

3.5 In addition, when lantern and roof lights are proposed in relatively inaccessible positions, this makes the manual operation of blinds or louvres impracticable. In these

situations, the blinds or louvres should be automatically operated by light sensitive switches to close at dusk.

3.6 The key message therefore is that 'designing out' is avoiding the problem, which is the preferable solution, whilst the provision of blinds or louvres is 'mitigation'.

'Right Light, Right Place, Right Time'

3.7 As advised by the Institute of Lighting Professionals, good lighting practice is the provision of the right light, at the right time, in the right place, controlled by the right system. The application of artificial light in the external environment has done much to safeguard and enhance our night-time environment but, if not properly controlled, obtrusive light (sometimes referred to as light pollution) can present serious physiological and ecological problems.

3.8 **Obtrusive Light**, whether it keeps you awake through a bedroom window, impedes your view of the night sky, or adversely affects the performance of an adjacent lighting installation, is a form of pollution. It may also be a nuisance in law and can be substantially mitigated without detriment to the requirements of the task.

3.9 **Obtrusive light** can take several forms:

- **Sky Glow**: the brightening of the night sky.
- **Glare**: the uncomfortable brightness of a light source when viewed against a darker background.
- **Light Spill**: the spilling of light beyond the boundary of the area being lit.
- **Light Intrusion**: the presence of light from sources outside the affected person's property.
- **Light Presence**: sources of light in otherwise dark views.

These are all forms of obtrusive light, which may cause nuisance to others, or adversely affect fauna & flora as well as waste money and energy.

3.10 External lighting can therefore be polluting, waste energy, and provide dazzle and harsh shadows that in practice even counteract the security benefits of good lighting. This applies not only to business and public lighting, but also external domestic lighting which can, if not properly considered at the design stage, contribute significantly to light pollution. This is especially the case if the property is in a more remote, or countryside location, where the impact on 'Dark-Sky' and the associated tranquillity can be significant.

3.11 These effects are not only features of so called 'security lighting' but also the bulkhead and 'welcome' lights at front and back doors. If problems are to be avoided, only those that direct light downwards and with a limited light output should be provided and a low colour temperature, also known as "warm white", should be provided. See **Appendix 2** for explanation of technical terms.

3.12 In both the interests of ensuring compliance with dark night sky criteria and compliance with electrical regulations, it is better for developers to provide these lights rather than householders retrofitting them. It is important therefore that within the Cranborne Chase AONB, planning authorities raise these issues either at Pre-Application stage or include it as a requirement on the checklist that is used as part of the validation and registration of planning applications, so that the issue of lighting becomes a standard and integral part of the planning application process.

3.13 By raising this issue at the outset, it will save both time and money by ensuring that light pollution is planned out of development schemes, rather than trying to impose requirements and changes after the application has been approved or worse still, trying to secure changes after development has been completed. There is no reason why the provision of dark night sky sensitive units should be more costly than others. It is simply a case of selecting the most appropriate units for the particular situation and environment.

3.14 For larger scale developments, it will be necessary for planning authorities to require that a lighting strategy and a specification is included within applications, to demonstrate that schemes would be Dark-Sky compliant, once implemented. The design and lighting criteria should also apply to smaller and householder planning applications, including self-build

constructions as well as extensions and additions, although a lighting unit specification would be sufficient in such cases.

3.15 Internally and externally illuminated signs also need to ensure light is not emitted above the horizontal, either directly or by reflection, and that light outputs are within limits. Externally, use should be made of passive infrared [PIR] motion sensitive light switches, unless particular safety or other circumstances dictate otherwise, and any signs should not be illuminated unnecessarily, such as outside opening hours.

3.16 Furthermore, for all applications within the AONB where lighting may potentially be required in future, there is potential to impose a planning condition requiring applications to be submitted for new lighting schemes, so that the Local Planning Authority has the opportunity to evaluate any proposals for additional lighting and to ensure that they are Dark-Sky compliant.

4 Current International Dark-Sky Lighting Criteria & AONB Policies

4.1 The current International Dark-Sky Association criteria consist of Five Principles for Responsible Outdoor Lighting (this implicitly includes indoor lighting that illuminates the outside).

11. All light should have a clear purpose. This purpose should be identified before a light is installed or replaced. Consider the impact of the light on wildlife and the environment, and consider the use of reflective or luminous markers for signs, curbs and steps.
12. All light should be targeted. Use shielding and careful orientation so that light does not spill beyond where it is needed.
13. Light should be no brighter than necessary. Use the lowest light level required and consider whether the lit surfaces will reflect light into the sky. Use dimmers if different light levels are needed.
14. Light should be used only when it is useful. Use timers and motion detectors (e.g. PIRs) to ensure that light is available when it is needed and is turned off at other times. Lights should turn off a maximum of 5 minutes after motion ceases.
15. Use the warmest colour with the lowest *Correlated Colour Temperature* [CCT] possible. In practice, this means having a maximum of 2700K (2200K preferred).

See **Appendix 2** for further explanation of technical terms.

The Cranborne Chase AONB Management Plan Policies

4.2 The Cranborne Chase Management Plan has been approved, not only by the AONB Board but also has been formally adopted by all the seven Local Planning Authorities. The AONB Management Plan therefore constitutes the Local Planning Authorities' Planning Policy for the Area. It is therefore an important Material Planning Consideration when determining all planning applications within the respective parts of the AONB.

Management Plan Dark Night Skies Policies

4.3 These are general statements rather than planning policies that can be readily used by local planning authorities to help in the assessment of planning applications. None the less they explain the objective for the AONB. The Management Plan's Dark-Sky policies are to:

DNS1 Actively promote the benefits of IDSR status to all partners and communities to elicit appropriate action and support for the application to IDA.

DNS2 Work with all LPA partners to:

- Retain IDSR status through continuous improvements to lighting/retrofitting schemes.
- Embed good practice lighting guidance within their Local/Development Plans.
- Ensure substantial lighting schemes, such as those for schools, businesses and sports areas, are competently designed and meet DNS and other environmental criteria.
- Submit an annual report of activities to maintain the IDSR status.

DNS3 Support parish councils in promoting good practice lighting to their residents and businesses, offering Dark-Sky Friendly Parish Award.

DNS4 Investigate the potential for sponsorship/provision of low-cost good practice outside light fittings within the AONB.

DNS5 Work with other UK ‘Dark-Sky Places’ and related organisations to improve awareness and understanding across the country of the need to reduce light pollution.

DNS6 Develop a Dark-Sky Friendly Accreditation Scheme for local tourism and allied businesses.

DNS7 Determine a potential location, design criteria and funding requirements necessary to establish an AONB Observatory within the timeframe of this Plan.

4.4 Whilst these Management Plan policies set out broad objectives and guidance, they do not provide the precise level of detail required for a Local Plan Policy, against which planning applications can be assessed for decision making. The following section and policies therefore address this issue.

5 Proposed Reasoned Justification and Dark-Sky Policy for inclusion in Local Plan Reviews

Reasoned Justification

5.1 The reasoned justification for a Local Plan Review Policy is included within, and can be drawn from, the accompanying text above. This explains the background, purpose, and basis for the policies and together with the proposed policy below, provides the necessary information for including appropriate text and policy statement within the Planning Authorities’ Local Plan Reviews.

5.2 As noted above the NPPF 185c states:

“(c) limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.”

This, together with the policies in the Cranborne Chase Management Plan, therefore, provides the statutory framework for Local Plan Review Dark-Sky Policies.

5.3 The principles in this Policy Statement therefore include the following:

- In the Cranborne Chase AONB, development should be designed to conserve and enhance the intrinsic quality of dark night skies. Lighting which is proposed to be installed should meet or exceed the level of protection appropriate to the Environmental Zone (as defined by the Institution of Lighting Professionals in its Guidance Note 01/2021) in which it is installed.
- In the International Dark-Sky Reserve, that is 'Zone E0'. That means external lighting should be fully shielded and not exceed a 'Correlated Colour Temperature (CCT) of 2700K, with 3000K reserved for purposes for which 2700K or lower lights are not available.

5.4 In practice, all outdoor lighting, or indoor lighting that shines outside, in the AONB must meet the requirements of ILP GN 01/2021 (or its current updates) Environmental Zone E0 (Core) or E1 (Buffer), and the current requirements for an International Dark-Sky Reserve as specified by the International Dark-Sky Association. The difference between E0 and E1 is primarily in the permitted effects of spill light, glare, illuminated signage, and reflected light from surfaces. Tables 3, 4, 7 & 8 in ILP GN 01/2021 provide further guidance. The map in **Appendix 3** shows the core and peripheral/buffer areas within the Cranborne Chase AONB.

5.5 As stated in the Preface, all seven of the local authorities not only supported the bid, but also gave a commitment to ensuring that its objectives were achieved and a summary of the commitments made at that time by each authority, is included in **Appendix 4**. In order for a meaningful and consistent approach to be taken by all seven Local Planning Authorities, the following actions are proposed:

- The inclusion of appropriate Dark-Sky policies within their Local Plan Reviews
- The inclusion of lighting as a subject for discussion and negotiations at 'pre-application' stage, and the need for a lighting strategy to be submitted, especially for larger scale developments within or close to the AONB and Dark-Sky Reserve boundary.
- During the consideration of planning applications, addressing lighting and Dark-Sky requirements, as a material consideration, in the same way that design, materials and landscaping are addressed.
- As part of the decision-making process, the need for imposing planning conditions to restrict the number of lighting units, set limits on light levels and *and/or requiring applications to be submitted for new lighting schemes and other associated matters.*

- The enforcement of any contraventions of lighting conditions.

5.6 The commitment of the local authorities that was made in 2019 therefore now needs to be translated into coordinated and firm action if the IDSR assessors are to be satisfied that tangible progress is being made towards achieving the 67% target, which will also help meet the authorities' climate change, biodiversity, sustainability, and tourism objectives.

Proposed Local Plan Review Policy

Policy IDSR 1

Within those parts of the Local Authority Area that fall within the Cranborne Chase Area of Outstanding Natural Beauty:

- k) To prevent light pollution and ensure compliance with IDSR criteria, all planning applications for development over 2 dwellings or for other developments over 100 square metres that involve the provision of external lighting, shall be accompanied by a lighting strategy, with detailed specification of any proposed lighting units and demonstrating how consideration has been given to maintaining and enhancing the Dark-Sky within the AONB.***
- l) All lighting units provided must be: downward facing and shielded to prevent upward emission of light; be no brighter than the minimum required for the lighting task; and be fitted with PIR sensors.***
- m) All ground-based lighting units to mark pedestrian paths and similar areas shall be located no higher than 1 metre above ground level and all wall mounted lighting units shall be located as low as practicable and shielded to prevent upward emission of light.***
- n) Any proposals and designs that include roof lights, lantern lights, and/or floor to eaves and floor to gable glazing, will not be supported in new build, refurbishment, and extension projects, unless integral blinds or louvres or external 'brise soleil' fixed louvres, are provided as mitigation.***
- o) All such blinds and/or louvered units that are not easily accessible, must be provided with automatically operated, light sensor systems, to ensure closure at dusk.***

Policy IDSR 2

In order to control the installation of lighting after new development has been implemented, all planning consents within the AONB will include a condition that requires applications to be submitted for any future installation of external lighting, within the IDSR and its setting.

5.6 The reason for this policy is to protect the International Dark-Sky designation within the Cranborne Chase AONB and prevent light pollution adversely affecting the

Dark-Sky and their appreciation and for the benefit of human health, wildlife, and biodiversity.

6 Recommendation to the Local Planning Authorities

6.1 In the light of the above considerations, it is recommended that:

1 A section, with associated planning policy and reasoned justification, relating to the International Dark-Sky Reserve within the Cranborne Chase Area of Outstanding Natural Beauty, be included within all the current and emerging Local Plan Reviews, providing the background and justification for the Dark-Sky policies.

2 The proposed Local Plan Policy be approved for inclusion in all Local Plan Reviews, as an integral part of the Plans.

3 Pending the adoption of the Local Plan Reviews, this document and this Dark-Sky Policy be approved by each Local Planning Authority as ***'Interim Policy for Development Management Purposes'*** to be applied to planning applications within the Cranborne Chase AONB.

Cranborne Chase AONB Partnership

June 2022

**A CHARTER FOR PRESERVING AND ENHANCING THE DARK NIGHT SKY OF
THE CRANBORNE CHASE
AONB INTERNATIONAL DARK-SKY RESERVE**

This Charter sets out the principles to be followed by any organisation or individual who signs up for the Dark-Sky Friendly Scheme. It will be a fundamental document for initiating and coordinating action related to our status as an International Dark-Sky Reserve.

DARK NIGHT SKY CHARTER

In 2019, the International Dark-Sky Association granted us the prestigious designation of International Dark-Sky Reserve (IDSR). As part of the conditions of this designation, we must reduce light pollution in the night sky above the IDSR. Those who sign up to this Charter value the quality of the Dark-Sky that already exists and undertake to act to preserve and enhance this quality. Signatories will implement and/or promote the following:

- *Shielding lights, so that they do not emit any light above the horizontal, to reduce skyglow and the adverse effects of light on flying fauna.*
- *Shielding lights, so that they do not shine off the property, to reduce light intrusion and glare.*
- *Using light of a correlated colour temperature of 2700K or lower (“warm white” light) to reduce glare, skyglow from light scatter, and the adverse effects of light on nocturnal fauna.*
- *Have exterior lights on motion sensors (PIRs) with a maximum “on” time of 5 minutes to reduce their effect on all aspects of the night-time environment, especially skyglow from light scatter and reflection and the adverse effects on flora and nocturnal fauna.*
- *Using lights with the minimum brightness necessary for their intended task, to reduce their effect on all aspects of the night-time environment, especially skyglow from light scatter and reflection and the adverse effects on flora and nocturnal fauna.*
- *In the case of tourist accommodation providers, promote the Dark-Sky environment by providing binoculars or telescopes, star charts, red-light torches, etc, for loan to guests, and making provision for late breakfasts and late returns in the night after astronomy activities.*

- **Respect and raise awareness the IDSR generally by promoting, in person, on social media, or on own websites, Dark-Sky events such as stargazing evenings, and talks on light pollution and its consequences and remedies.**

Appendix 2 - Technical Lighting Information - Correlated Colour Temperature

Modern LED lighting now comes with an indication of its “**Correlated Colour Temperature**” (CCT), which is an indication of the temperature to which a glowing filament would need to be raised in order to produce a similar quality of white light. It is measured in Kelvin (K) which is the international standard unit for temperature.

Paradoxically, the cooler the colour temperature, the warmer the light appears. Light with a CCT of 5000K or more appears harsh, bright, and cold; light with a CCT of 3000K or less appears soft and warm. (The glowing filament analogy is that red hot is cooler than white hot.)

The higher the CCT, the more blue light will be in the spectrum. This is important for several reasons:

- Blue light is scattered more by the atmosphere. This not only means that it contributes more to skyglow, but it also exacerbates the other harmful effects.
- Insects are more attracted to blue-rich light than to “cooler” colours. When this happens, they are not foraging, reproducing, or pollinating, and are more likely to be predated upon. Fruit flies (*drosophila*) left exposed to blue light for 24 hours will simply die.
- The effect on insects has a knock-on effect on insectivores; it modifies their behaviour.
- The presence of blue-rich light causes levels melatonin (the “sleep hormone”) to plummet, disturbing sleep and causing a variety of health problems in many vertebrates, including humans.

There are misconceptions that a low CCT means poor colour rendition. This was once true, but is no longer the case: colour rendition is related to a property called the Colour Rendering Index (CRI). LEDs with a CCT as low as 2200K can have a CRI in excess of 80, which is considered to be “very good”.

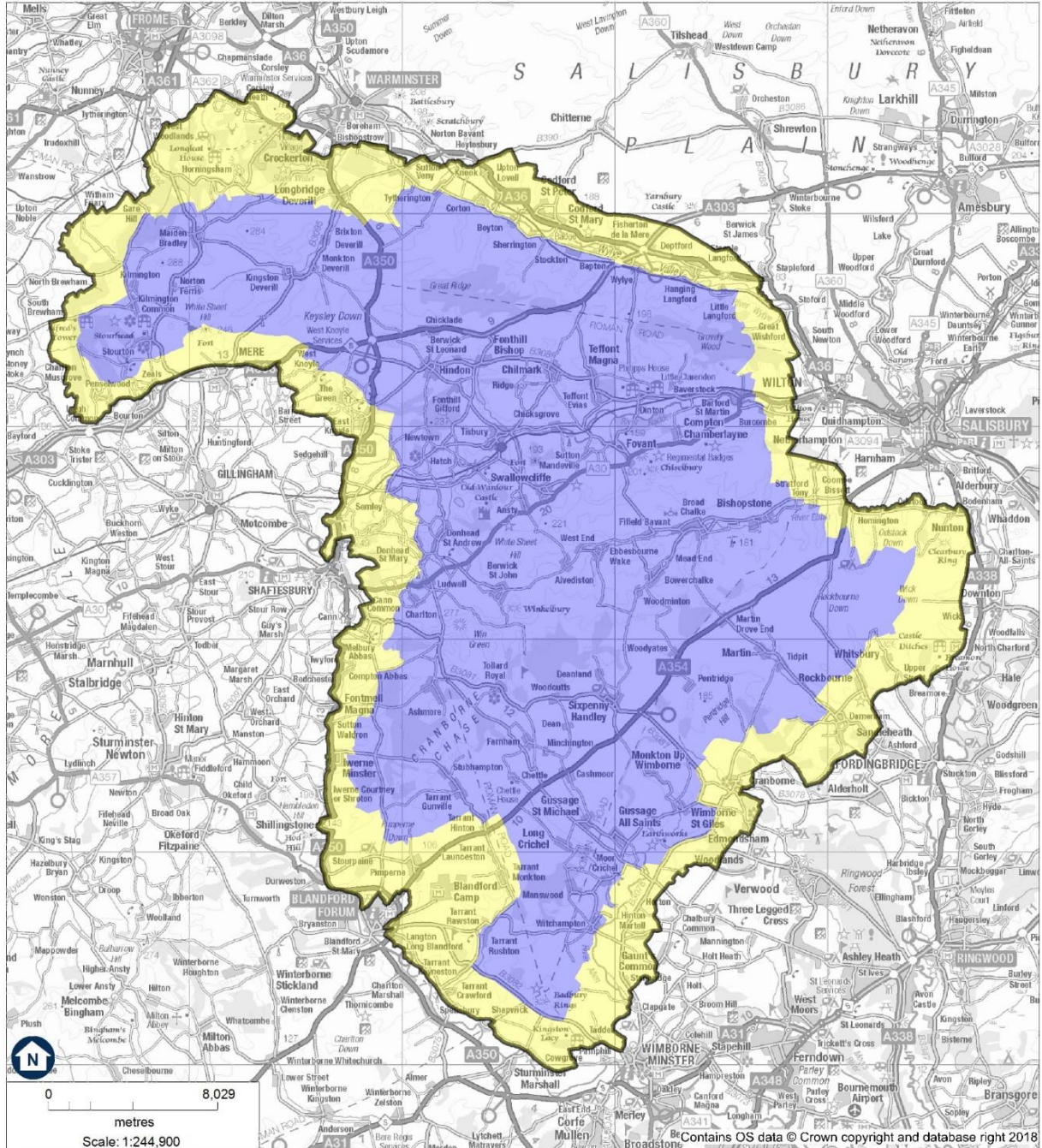
For these reasons, in the International Dark-Sky Reserve the CCT of external lighting should be limited to 2700K, with 2200K preferred. 3000K should be reserved for purposes for which 2700K or lower lights are not available. Anything in excess of 3000K should be used only in exceptional, very limited, circumstances with full mitigation (shielding, duration-control) being implemented.

Appendix 3 – Map of Core and Peripheral International Dark-Sky

Reserve Areas and Boundaries within the AONB

Purple - Core Area Yellow - Buffer or Peripheral Area

Cranborne Chase Area of Outstanding Natural Beauty International Dark Sky Reserve – Core and Periphery Boundaries



Appendix 4 – Summary & Extracts of Local Authority Commitments - 2019

Wiltshire Council

I am pleased to confirm Wiltshire Council's strong support for Cranborne Chase AONB Partnership's application to become an International Dark Sky Reserve. As the host authority for the AONB Partnership and geographically the largest local authority by area (approximately 60%) within the AONB, Wiltshire Council supports this objective within the AONB Management Plans for 2014 – 2019 and the draft for 2019-2024 as a partner and signatory to the plans.

We also hope that our own actions will help to influence and enable us to work alongside the other local authorities within the AONB and its settings to achieve dark skies.

Corporate Director – Growth, Investment and Place

Dorset Council

I am writing to confirm our support for Cranborne Chase AONB's application to be an International Dark Sky Reserve. We recognise the many benefits of encouraging better lighting and reducing light pollution, both for people and wildlife. It will also create opportunities for enhancing the local economy through promoting the AONB and Dorset as a destination for visitors keen to see dark night skies.

Chief Executive

Hampshire County Council

I am writing to confirm Hampshire County Council's support for Cranborne Chase AONB's application to be an International Dark Sky Reserve. The Council values its protected landscapes, the benefits these bring to Hampshire communities and environment, and the importance of dark night skies to the natural beauty of these outstanding areas.

This authority is keen to support the creation of best practice lighting policies and practice where astronomers, local planning authorities and local residents work together to preserve existing dark night skies. Designation of the AONB as a Dark Sky Reserve will create

opportunities for enhancing the local rural economy through the promotion of the AONB and Hampshire as a destination for visitors keen to see amazing dark night skies.

Director – Economy, Transport and Environment

Somerset County Council

Somerset County Council is pleased to support the AONB's application to be granted International Dark Sky Reserve (IDSR) status, to become one of only a handful of destinations that can prove they have an outstanding quality of night sky.

This objective was included in the AONB's Management Plan 2014 to 2019, which has been adopted by Somerset County Council. We note that the objective is also included in the 2019 to 2024 Management Plan, which is currently in the closing stages of consultation.

Chief Executive

South Somerset District Council

South Somerset District Council recognises the importance of the Cranborne Chase AONB in providing residents and visitors with a green and diverse landscape in which to work, live and spend recreational time in. AONBs are important for the health and well-being of residents as accessible green landscapes are proven to aid physical and mental health.

South Somerset District Council supports Cranborne Chase AONB's application to become an International Dark Sky Reserve. The issues that street lighting cause are documented globally and SSDC welcomes the application from the AONB.

Chief Executive

Dark Night Skies & Cranborne Chase AONB Proposed Planning Policy for the Planning Authorities' Local Plan Reviews & Interim Policy for Development Management Purposes

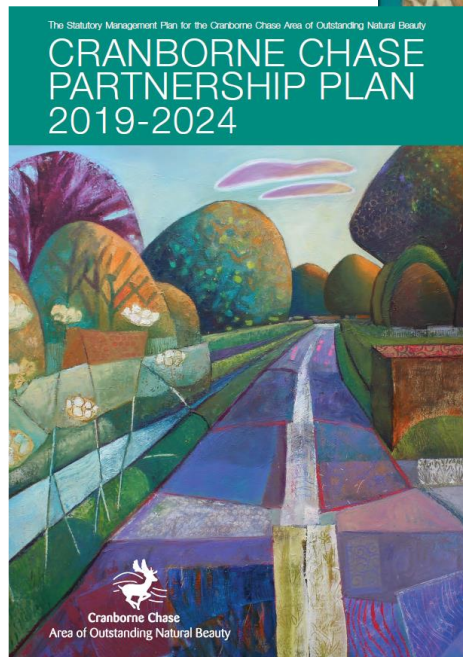
to the area, especially in the winter months when the night
astronomers.

Chief Executive

Cranborne Chase AONB Partnership

June 2022

International Dark Sky Reser



Cranborne Chase

Area of Outstanding Natural Beauty Partnership

International Dark Sky Reserve 2019

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Preface

*Cranborne Chase is the only AONB to have achieved the privilege of being designated as an **International Dark-Sky Reserve**, [IDSR]. This was achieved in 2019, after a rigorous assessment process, but it has to be remembered that the designation was 'provisional' only, pending improvement in meeting the high standards of being a Reserve, by reducing the amount of spilled light, which has such a detrimental impact on the darkness of the observed sky and the wellbeing of nocturnal fauna and human health.*

The international assessors of the IDSR require that 67% of all domestic and business outside lighting must meet Dark-Sky criteria. Sadly, the current level is estimated to be between 15-20%. Unless this can be addressed as a priority over the next 18 months, the area could well lose its Reserve status. The Cranborne Chase IDSR is therefore under real threat of losing this important status. The designation covers the whole of the AONB and the area's Management Plan makes reference to Dark-Sky with broad policies, together with information leaflets helping to convey the importance of limiting the brightness of outdoor lighting in particular. Actions needed involve; the screening of indoor lighting; low level outside lights, appropriate shielding, the use of Passive Infrared sensors [PIRs] and other measures, all aimed at minimising the impact of 'stray' or 'spilled' light.

It is important to emphasise that the benefit of the Dark-Sky is not just the ability to see the night sky and stars on clear nights. There is strong evidence to demonstrate that artificial light at night (ALAN) also has an adverse effect on human health, wildlife, and biodiversity. It is ironic that the introduction of LED lighting which is low energy and therefore beneficial in terms of energy usage, also results in these lights being generally installed with a far higher

brightness than is actually necessary and much brighter than traditional incandescent bulb lighting.

Whilst the AONB team was instrumental in driving forward the bid for designation, it has to be remembered that all seven of the local authorities not only supported the bid, but gave a commitment to ensuring that its objectives were achieved. The only way that this can be progressed and delivered is through the controls that can be imposed by the constituent local planning authorities through the following measures:

- *The inclusion of appropriate a Dark-Sky policy within their Local Plan Reviews*
- *The inclusion of lighting as a subject to discussion and negotiations at 'pre-application' stage, and the need for a lighting strategy to be submitted, especially for larger scale developments within or close to the AONB and Dark-Sky Reserve boundary.*
- *During the consideration of planning applications, addressing lighting and Dark-Sky requirements, as a material consideration, in the same way that design, materials and landscaping are addressed.*
- *As part of the decision-making process, the need for imposing planning conditions to restrict the number of lighting units, set limits on light levels, time periods for lighting, and/or requiring applications to be submitted for new lighting schemes and other associated matters.*
- *The enforcement of any contraventions of lighting conditions.*

The commitment of the local authorities that was made in 2019 therefore now needs to be translated into coordinated and firm action if the IDSR assessors are to be satisfied that tangible progress is being made towards achieving the 67% target. Such action will also help meet the authorities' climate change, biodiversity, sustainability and tourism objectives.

In order to assist in achieving this objective the AONB Team has commissioned an independent planning consultant to prepare a report, setting out the issues associated with the dark-sky reserve and that proposes a Dark-Sky Reserve planning policy, for inclusion in all of the Local Plan Reviews, notably for Dorset and Wiltshire, within which the majority of the AONB is located.

It is considered essential that all Local Plans that administer the AONB have the same Dark-Sky policy so that there is clarity and certainty for planning applicants, Parish and Town Councils and the general public. Pending the progression and final adoption of the Local Plan reviews, it is proposed that the policy be approved by all seven authorities, as Interim Planning Policy for Development Management Purposes.

Dark Night Skies & Cranborne Chase AONB

Proposed Planning Policy for the Planning Authorities' Local Plan Reviews & 'Interim Policy for Development Management Purposes'

1 Introduction

1.1 Cranborne Chase AONB was designated the world's 14th International Dark-Sky Reserve in October 2019. All seven local authorities whose area falls partly within the Cranborne Chase AONB gave a firm commitment to reducing light pollution/having compliant lighting in the successful bid submitted to the International Dark-Sky Association (IDA) in 2019. There is, therefore, an obligation for all the authorities to continue to respect this *international* designation, and help control and reduce light pollution associated with new development as a primary means of conserving and enhancing the dark night skies.

1.2 The seven Local Planning Authorities that have an interest in the Cranborne Chase AONB are as follows:

- Wiltshire Council.
- Dorset Council.
- Hampshire County Council.
- Somerset County Council.
- New Forest District Council.
- Mendip District Council.
- South Somerset District Council.

In addition, Natural England is the key statutory consultee for AONB matters.

1.3 Cranborne Chase AONB has the darkest night skies in central southern England. The awe-inspiring Milky Way can be readily viewed here; something that over 90% of the UK population can rarely see due to light pollution. Unlike ancient historic settlements, rivers, soils, wildlife, and our outstanding landscapes, the night sky has no legal protection, which explains why in just six years light pollution has increased by 24% across the UK as a whole.

1.4 The characteristics and qualities that make this AONB special, as a whole, with regards to dark night skies are as follows:

- Cranborne Chase AONB is one of the darkest places in England.
- Dark night skies with a myriad of visible stars have always been an outstanding, memorable, and remarkable feature of this AONB.
- A topography that facilitates stargazing with open, elevated downland, wide panoramic, unobstructed views all with relatively easy public access.
- Lack of major towns and a low AONB population limits the incidence of light pollution and sky glow.

1.5 Further information about Dark-Sky in the AONB can be seen at this weblink, which is the relevant section from the AONB Management Plan:

<https://cranbornechase.org.uk/wp-content/uploads/2020/10/11.-Dark-Night-Skies.pdf>

The AONB 'Dark Night Sky Charter' is included as **Appendix 1**.

1.6 As a result of the Dark-Sky designation, residents and visitors to the AONB, together with the area's biodiversity, are able to experience benefits, which may include the following:

- An improvement in the overall quality of the area's environment and sense of night-time tranquillity; a key feature on the AONB.
- Less harmful impacts on the area's nocturnal wildlife arising from a reduction of stray artificial light.
- The potential for the local economy to be improved as Cranborne Chase has a natural 'attraction' for visitors to the area throughout the year, thereby supporting tourism-related businesses.

1.7 The local authorities have, of course, also all adopted the AONB Management Plan and its policies that refer to Dark-Sky issues and the control of light pollution. This current planning document now proposes to take matters a stage further, by promoting a specific **policy** that are recommended for inclusion within Local Plan Reviews, so that there is a more robust and statutory mechanism for controlling potentially light polluting developments. It is also clearly important that all seven authorities adopt a consistent approach to this issue and associated policies within their respective parts of the AONB, otherwise this will cause confusion for planning applicants, Parish Councils, and the general public.

1.8 This, of course, does not mean that there can be no new lighting, but it does mean that the aim should be to provide ***the right light in the right place at the right time***. In the simplest of terms this usually means downward facing lights of sufficient strength to provide the illumination required, but with the light only being on for the period of time when it is needed.

Further technical details are included in **Appendix 2**.

1.9 The Cranborne Chase AONB is the only AONB in the UK which has been designated as an International Dark-Sky Reserve in its entirety, with the others being within National Parks, that include Brecon Beacons, Exmoor, and Snowdonia.

1.10 Concern about Dark-Sky has been a longstanding issue in Cranborne Chase and, indeed, the AONB Partnership set out its policy on Light Pollution as far back as 2008, and has provided a suite of Good Practice Guides to encourage and enable the installation of Dark-Sky compliant lighting. Highway lighting teams of the partner authorities have also provided examples of dark night sky compliant highway lighting, that is also energy efficient and economical, which has been most helpful.

1.11 Nevertheless, lighting associated with new domestic and business developments does not automatically comply with dark night sky criteria. A key aim of this policy document is to encourage and enable those proposing new developments to consider and plan for dark night sky compliant lighting from the outset.

1.12 It also sets out a policy for Local Planning Authorities to consider including with their Local Plan Review documents and, in the meantime, to approve the policies as an ***'Interim Policy for Development Management Purposes'***, until such time as they are formally incorporated into and adopted in the Local Plan Reviews.

1.13 Whilst respective Local Plans may already make some reference to Dark-Sky as an issue, clearly if the subject is to be given the greater status that it deserves, it is important that a consistent approach is taken to applying policy in all areas of the AONB within each authority area. It is important to emphasise that this policy is only intended to apply for those parts of

the AONB within each authority area, but clearly the authorities are free to apply them more widely if they consider it necessary and appropriate.

2 National Planning Policy Guidance (NPPF) 2021

2.1 The NPPF paragraph 185 clearly indicates that conserving dark night skies is a national priority. The Cranborne Chase AONB Management Plan, which constitutes the policies of the partner authorities for this AONB, also indicates that good, Dark-Sky compliant lighting, is an objective for this AONB.

2.2 It is important for all the partner authorities to recognise that there is an obligation to adhere to and help implement this national NPPF planning policy. It is therefore most appropriate that respective Local Plan Reviews take forward this general national policy and apply it to their local situation. This document therefore provides the authorities with the policy basis and reasoned justification for undertaking this task.

2.3 NPPF Section 185 states as follows:

Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:

a) mitigate, and reduce to a minimum, potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life,

b) identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason, and

c) limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.

3 Lighting & Design

Avoiding Light Pollution

3.1 The **Institute of Lighting Professionals** has published an useful guide to this issue entitled '*The Reduction of Obtrusive Light*' [ILP GN 01/2021] see:

<https://theilp.org.uk/publication/guidance-note-1-for-the-reduction-of-obtrusive-light-2021/>

3.2 Essentially there are two ways of avoiding light pollution in new developments.

Firstly, at the design stage, features that have the capacity to contribute to light pollution are either not included or 'designed out' of the scheme at an early stage, or are effectively mitigated. Secondly, any required lighting follows the '*right light, right place, right time*' philosophy.

Avoiding Light Polluting Features at the Design Stage

3.3 Any elements of design that allow light to be emitted above or near the horizontal have the capacity to contribute to light pollution. That means that windows need effective curtains or blinds, and internal light units that are lower than the top of windows need to be appropriately shaded. Those 'windows' that are angled upwards, such as roof lights and lantern lights, either need to be designed out of the structures or to have integral blinds or louvres that can be closed at night to prevent light pollution.

3.4 In some situations, extensive floor to ceiling or floor to gable glazing, which can be common in some modern dwelling designs, may be proposed. Whilst passive energy gain can be beneficial, extensive areas of floor to ceiling glazing also clearly have the capacity to emit a considerable amount of light at night above the horizontal, which is not acceptable in this International Dark-Sky Reserve. Therefore, for buildings on the edge of villages or in relatively isolated locations, large areas of extensive glazing can detract significantly, and arguably disproportionately, from the International Dark-Sky Reserve's objectives.

3.5 In addition, when lantern and roof lights are proposed in relatively inaccessible positions, this makes the manual operation of blinds or louvres impracticable. In these

situations, the blinds or louvres should be automatically operated by light sensitive switches to close at dusk.

3.6 The key message therefore is that 'designing out' is avoiding the problem, which is the preferable solution, whilst the provision of blinds or louvres is 'mitigation'.

'Right Light, Right Place, Right Time'

3.7 As advised by the Institute of Lighting Professionals, good lighting practice is the provision of the right light, at the right time, in the right place, controlled by the right system. The application of artificial light in the external environment has done much to safeguard and enhance our night-time environment but, if not properly controlled, obtrusive light (sometimes referred to as light pollution) can present serious physiological and ecological problems.

3.8 **Obtrusive Light**, whether it keeps you awake through a bedroom window, impedes your view of the night sky, or adversely affects the performance of an adjacent lighting installation, is a form of pollution. It may also be a nuisance in law and can be substantially mitigated without detriment to the requirements of the task.

3.9 **Obtrusive light** can take several forms:

- **Sky Glow:** the brightening of the night sky.
- **Glare:** the uncomfortable brightness of a light source when viewed against a darker background.
- **Light Spill:** the spilling of light beyond the boundary of the area being lit.
- **Light Intrusion:** the presence of light from sources outside the affected person's property.
- **Light Presence:** sources of light in otherwise dark views.

These are all forms of obtrusive light, which may cause nuisance to others, or adversely affect fauna & flora as well as waste money and energy.

3.10 External lighting can therefore be polluting, waste energy, and provide dazzle and harsh shadows that in practice even counteract the security benefits of good lighting. This applies not only to business and public lighting, but also external domestic lighting which can, if not properly considered at the design stage, contribute significantly to light pollution. This is especially the case if the property is in a more remote, or countryside location, where the impact on 'Dark-Sky' and the associated tranquillity can be significant.

3.11 These effects are not only features of so called 'security lighting' but also the bulkhead and 'welcome' lights at front and back doors. If problems are to be avoided, only those that direct light downwards and with a limited light output should be provided and a low colour temperature, also known as "warm white", should be provided. See **Appendix 2** for explanation of technical terms.

3.12 In both the interests of ensuring compliance with dark night sky criteria and compliance with electrical regulations, it is better for developers to provide these lights rather than householders retrofitting them. It is important therefore that within the Cranborne Chase AONB, planning authorities raise these issues either at Pre-Application stage or include it as a requirement on the checklist that is used as part of the validation and registration of planning applications, so that the issue of lighting becomes a standard and integral part of the planning application process.

3.13 By raising this issue at the outset, it will save both time and money by ensuring that light pollution is planned out of development schemes, rather than trying to impose requirements and changes after the application has been approved or worse still, trying to secure changes after development has been completed. There is no reason why the provision of dark night sky sensitive units should be more costly than others. It is simply a case of selecting the most appropriate units for the particular situation and environment.

3.14 For larger scale developments, it will be necessary for planning authorities to require that a lighting strategy and a specification is included within applications, to demonstrate that schemes would be Dark-Sky compliant, once implemented. The design and lighting criteria should also apply to smaller and householder planning applications, including self-build

constructions as well as extensions and additions, although a lighting unit specification would be sufficient in such cases.

3.15 Internally and externally illuminated signs also need to ensure light is not emitted above the horizontal, either directly or by reflection, and that light outputs are within limits. Externally, use should be made of passive infrared [PIR] motion sensitive light switches, unless particular safety or other circumstances dictate otherwise, and any signs should not be illuminated unnecessarily, such as outside opening hours.

3.16 Furthermore, for all applications within the AONB where lighting may potentially be required in future, there is potential to impose a planning condition requiring applications to be submitted for new lighting schemes, so that the Local Planning Authority has the opportunity to evaluate any proposals for additional lighting and to ensure that they are Dark-Sky compliant.

4 Current International Dark-Sky Lighting Criteria & AONB Policies

4.1 The current International Dark-Sky Association criteria consist of Five Principles for Responsible Outdoor Lighting (this implicitly includes indoor lighting that illuminates the outside).

16. All light should have a clear purpose. This purpose should be identified before a light is installed or replaced. Consider the impact of the light on wildlife and the environment, and consider the use of reflective or luminous markers for signs, curbs and steps.

17. All light should be targeted. Use shielding and careful orientation so that light does not spill beyond where it is needed.

18. Light should be no brighter than necessary. Use the lowest light level required and consider whether the lit surfaces will reflect light into the sky. Use dimmers if different light levels are needed.

19. Light should be used only when it is useful. Use timers and motion detectors (e.g. PIRs) to ensure that light is available when it is needed and is turned off at other times. Lights should turn off a maximum of 5 minutes after motion ceases.

20. Use the warmest colour with the lowest *Correlated Colour Temperature* [CCT] possible. In practice, this means having a maximum of 2700K (2200K preferred).

See **Appendix 2** for further explanation of technical terms.

The Cranborne Chase AONB Management Plan Policies

4.2 The Cranborne Chase Management Plan has been approved, not only by the AONB Board but also has been formally adopted by all the seven Local Planning Authorities. The AONB Management Plan therefore constitutes the Local Planning Authorities' Planning Policy for the Area. It is therefore an important Material Planning Consideration when determining all planning applications within the respective parts of the AONB.

Management Plan Dark Night Skies Policies

4.3 These are general statements rather than planning policies that can be readily used by local planning authorities to help in the assessment of planning applications. None the less they explain the objective for the AONB. The Management Plan's Dark-Sky policies are to:

DNS1 Actively promote the benefits of IDSR status to all partners and communities to elicit appropriate action and support for the application to IDA.

DNS2 Work with all LPA partners to:

- Retain IDSR status through continuous improvements to lighting/retrofitting schemes.
- Embed good practice lighting guidance within their Local/Development Plans.
- Ensure substantial lighting schemes, such as those for schools, businesses and sports areas, are competently designed and meet DNS and other environmental criteria.
- Submit an annual report of activities to maintain the IDSR status.

DNS3 Support parish councils in promoting good practice lighting to their residents and businesses, offering Dark-Sky Friendly Parish Award.

DNS4 Investigate the potential for sponsorship/provision of low-cost good practice outside light fittings within the AONB.

DNS5 Work with other UK ‘Dark-Sky Places’ and related organisations to improve awareness and understanding across the country of the need to reduce light pollution.

DNS6 Develop a Dark-Sky Friendly Accreditation Scheme for local tourism and allied businesses.

DNS7 Determine a potential location, design criteria and funding requirements necessary to establish an AONB Observatory within the timeframe of this Plan.

4.4 Whilst these Management Plan policies set out broad objectives and guidance, they do not provide the precise level of detail required for a Local Plan Policy, against which planning applications can be assessed for decision making. The following section and policies therefore address this issue.

5 Proposed Reasoned Justification and Dark-Sky Policy for inclusion in Local Plan Reviews

Reasoned Justification

5.1 The reasoned justification for a Local Plan Review Policy is included within, and can be drawn from, the accompanying text above. This explains the background, purpose, and basis for the policies and together with the proposed policy below, provides the necessary information for including appropriate text and policy statement within the Planning Authorities’ Local Plan Reviews.

5.2 As noted above the NPPF 185c states:

“(c) limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.”

This, together with the policies in the Cranborne Chase Management Plan, therefore, provides the statutory framework for Local Plan Review Dark-Sky Policies.

5.3 The principles in this Policy Statement therefore include the following:

- In the Cranborne Chase AONB, development should be designed to conserve and enhance the intrinsic quality of dark night skies. Lighting which is proposed to be installed should meet or exceed the level of protection appropriate to the Environmental Zone (as defined by the Institution of Lighting Professionals in its Guidance Note 01/2021) in which it is installed.
- In the International Dark-Sky Reserve, that is 'Zone E0'. That means external lighting should be fully shielded and not exceed a 'Correlated Colour Temperature (CCT) of 2700K, with 3000K reserved for purposes for which 2700K or lower lights are not available.

5.4 In practice, all outdoor lighting, or indoor lighting that shines outside, in the AONB must meet the requirements of ILP GN 01/2021 (or its current updates) Environmental Zone E0 (Core) or E1 (Buffer), and the current requirements for an International Dark-Sky Reserve as specified by the International Dark-Sky Association. The difference between E0 and E1 is primarily in the permitted effects of spill light, glare, illuminated signage, and reflected light from surfaces. Tables 3, 4, 7 & 8 in ILP GN 01/2021 provide further guidance. The map in **Appendix 3** shows the core and peripheral/buffer areas within the Cranborne Chase AONB.

5.5 As stated in the Preface, all seven of the local authorities not only supported the bid, but also gave a commitment to ensuring that its objectives were achieved and a summary of the commitments made at that time by each authority, is included in **Appendix 4**. In order for a meaningful and consistent approach to be taken by all seven Local Planning Authorities, the following actions are proposed:

- The inclusion of appropriate Dark-Sky policies within their Local Plan Reviews
- The inclusion of lighting as a subject for discussion and negotiations at 'pre-application' stage, and the need for a lighting strategy to be submitted, especially for larger scale developments within or close to the AONB and Dark-Sky Reserve boundary.
- During the consideration of planning applications, addressing lighting and Dark-Sky requirements, as a material consideration, in the same way that design, materials and landscaping are addressed.
- As part of the decision-making process, the need for imposing planning conditions to restrict the number of lighting units, set limits on light levels and *and/or requiring applications to be submitted for new lighting schemes and other associated matters.*

- The enforcement of any contraventions of lighting conditions.

5.6 The commitment of the local authorities that was made in 2019 therefore now needs to be translated into coordinated and firm action if the IDSR assessors are to be satisfied that tangible progress is being made towards achieving the 67% target, which will also help meet the authorities' climate change, biodiversity, sustainability, and tourism objectives.

Proposed Local Plan Review Policy

Policy IDSR 1

Within those parts of the Local Authority Area that fall within the Cranborne Chase Area of Outstanding Natural Beauty:

- p) To prevent light pollution and ensure compliance with IDSR criteria, all planning applications for development over 2 dwellings or for other developments over 100 square metres that involve the provision of external lighting, shall be accompanied by a lighting strategy, with detailed specification of any proposed lighting units and demonstrating how consideration has been given to maintaining and enhancing the Dark-Sky within the AONB.***
- q) All lighting units provided must be: downward facing and shielded to prevent upward emission of light; be no brighter than the minimum required for the lighting task; and be fitted with PIR sensors.***
- r) All ground-based lighting units to mark pedestrian paths and similar areas shall be located no higher than 1 metre above ground level and all wall mounted lighting units shall be located as low as practicable and shielded to prevent upward emission of light.***
- s) Any proposals and designs that include roof lights, lantern lights, and/or floor to eaves and floor to gable glazing, will not be supported in new build, refurbishment, and extension projects, unless integral blinds or louvres or external 'brise soleil' fixed louvres, are provided as mitigation.***
- t) All such blinds and/or louvered units that are not easily accessible, must be provided with automatically operated, light sensor systems, to ensure closure at dusk.***

Policy IDSR 2

In order to control the installation of lighting after new development has been implemented, all planning consents within the AONB will include a condition that requires applications to be submitted for any future installation of external lighting, within the IDSR and its setting.

5.6 The reason for this policy is to protect the International Dark-Sky designation within the Cranborne Chase AONB and prevent light pollution adversely affecting the

Dark-Sky and their appreciation and for the benefit of human health, wildlife, and biodiversity.

6 Recommendation to the Local Planning Authorities

6.1 In the light of the above considerations, it is recommended that:

1 A section, with associated planning policy and reasoned justification, relating to the International Dark-Sky Reserve within the Cranborne Chase Area of Outstanding Natural Beauty, be included within all the current and emerging Local Plan Reviews, providing the background and justification for the Dark-Sky policies.

2 The proposed Local Plan Policy be approved for inclusion in all Local Plan Reviews, as an integral part of the Plans.

3 Pending the adoption of the Local Plan Reviews, this document and this Dark-Sky Policy be approved by each Local Planning Authority as ***'Interim Policy for Development Management Purposes'*** to be applied to planning applications within the Cranborne Chase AONB.

Cranborne Chase AONB Partnership

June 2022

**A CHARTER FOR PRESERVING AND ENHANCING THE DARK NIGHT SKY OF
THE CRANBORNE CHASE
AONB INTERNATIONAL DARK-SKY RESERVE**

This Charter sets out the principles to be followed by any organisation or individual who signs up for the Dark-Sky Friendly Scheme. It will be a fundamental document for initiating and coordinating action related to our status as an International Dark-Sky Reserve.

DARK NIGHT SKY CHARTER

In 2019, the International Dark-Sky Association granted us the prestigious designation of International Dark-Sky Reserve (IDSR). As part of the conditions of this designation, we must reduce light pollution in the night sky above the IDSR. Those who sign up to this Charter value the quality of the Dark-Sky that already exists and undertake to act to preserve and enhance this quality. Signatories will implement and/or promote the following:

- Shielding lights, so that they do not emit any light above the horizontal, to reduce *skyglow* and the *adverse effects of light on flying fauna*.
- Shielding lights, so that they do not shine off the property, to reduce *light intrusion* and *glare*.
- Using light of a correlated colour temperature of 2700K or lower (“warm white” light) to reduce *glare, skyglow from light scatter*, and the *adverse effects of light on nocturnal fauna*.
- Have exterior lights on motion sensors (PIRs) with a maximum “on” time of 5 minutes to reduce their effect on all aspects of the night-time environment, especially *skyglow from light scatter and reflection* and the *adverse effects on flora and nocturnal fauna*.
- Using lights with the minimum brightness necessary for their intended task, to reduce their effect on all aspects of the night-time environment, especially *skyglow from light scatter and reflection* and the *adverse effects on flora and nocturnal fauna*.
- In the case of tourist accommodation providers, promote the Dark-Sky environment by providing binoculars or telescopes, star charts, red-light torches, etc, for loan to guests, and making provision for late breakfasts and late returns in the night after astronomy activities.

- **Respect and raise awareness the IDSR generally by promoting, in person, on social media, or on own websites, Dark-Sky events such as stargazing evenings, and talks on light pollution and its consequences and remedies.**

Appendix 2 - Technical Lighting Information - Correlated Colour Temperature

Modern LED lighting now comes with an indication of its “**Correlated Colour Temperature**” (CCT), which is an indication of the temperature to which a glowing filament would need to be raised in order to produce a similar quality of white light. It is measured in Kelvin (K) which is the international standard unit for temperature.

Paradoxically, the cooler the colour temperature, the warmer the light appears. Light with a CCT of 5000K or more appears harsh, bright, and cold; light with a CCT of 3000K or less appears soft and warm. (The glowing filament analogy is that red hot is cooler than white hot.)

The higher the CCT, the more blue light will be in the spectrum. This is important for several reasons:

- Blue light is scattered more by the atmosphere. This not only means that it contributes more to skyglow, but it also exacerbates the other harmful effects.
- Insects are more attracted to blue-rich light than to “cooler” colours. When this happens, they are not foraging, reproducing, or pollinating, and are more likely to be predated upon. Fruit flies (*drosophila*) left exposed to blue light for 24 hours will simply die.
- The effect on insects has a knock-on effect on insectivores; it modifies their behaviour.
- The presence of blue-rich light causes levels melatonin (the “sleep hormone”) to plummet, disturbing sleep and causing a variety of health problems in many vertebrates, including humans.

There are misconceptions that a low CCT means poor colour rendition. This was once true, but is no longer the case: colour rendition is related to a property called the Colour Rendering Index (CRI). LEDs with a CCT as low as 2200K can have a CRI in excess of 80, which is considered to be “very good”.

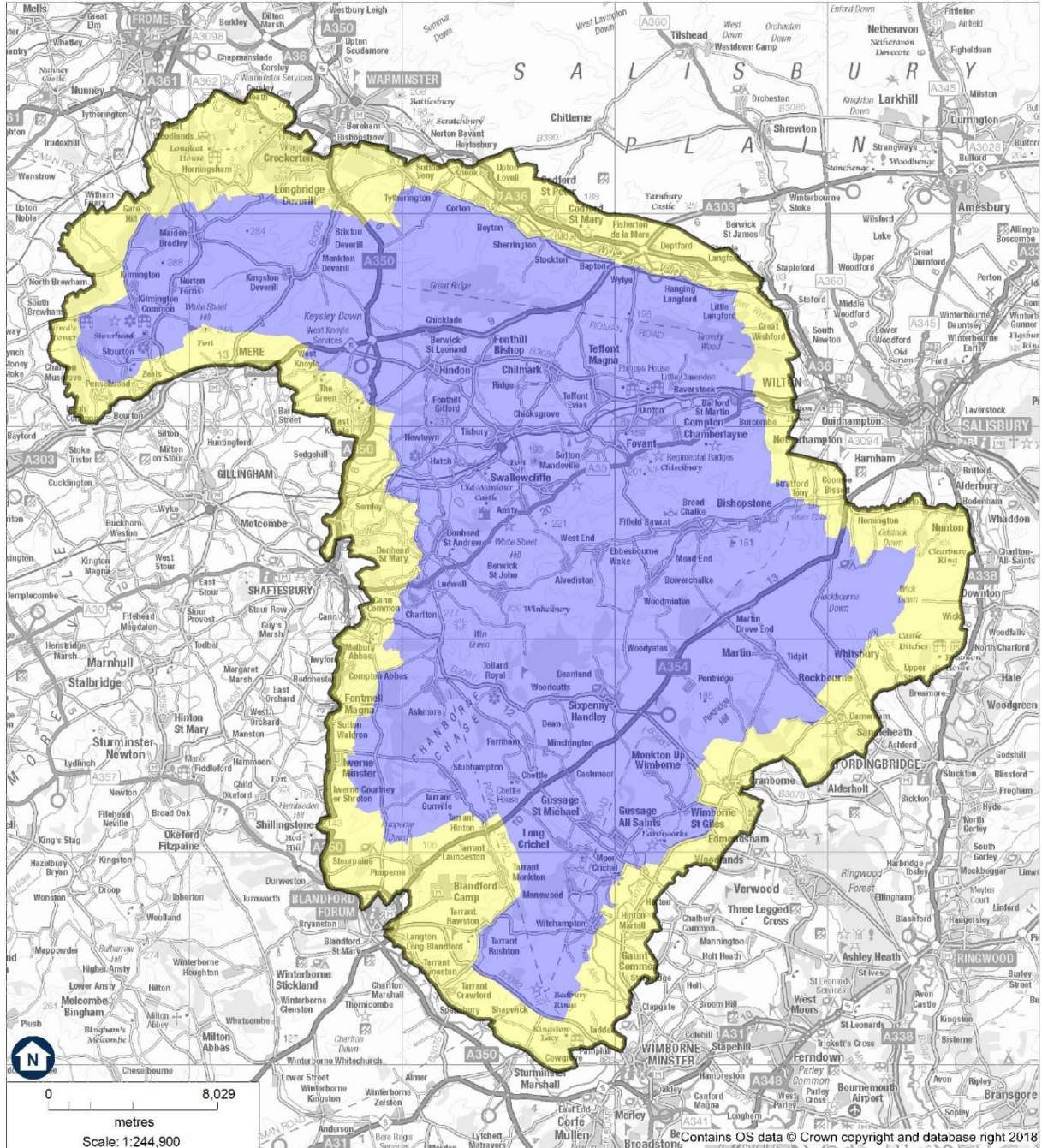
For these reasons, in the International Dark-Sky Reserve the CCT of external lighting should be limited to 2700K, with 2200K preferred. 3000K should be reserved for purposes for which 2700K or lower lights are not available. Anything in excess of 3000K should be used only in exceptional, very limited, circumstances with full mitigation (shielding, duration-control) being implemented.

Appendix 3 – Map of Core and Peripheral International Dark-Sky

Reserve Areas and Boundaries within the AONB

Purple - Core Area Yellow - Buffer or Peripheral Area

Cranborne Chase Area of Outstanding Natural Beauty International Dark Sky Reserve – Core and Periphery Boundaries



International Dark Sky Reserve 2019

Appendix 4 – Summary & Extracts of Local Authority Commitments - 2019

Wiltshire Council

I am pleased to confirm Wiltshire Council's strong support for Cranborne Chase AONB Partnership's application to become an International Dark Sky Reserve. As the host authority for the AONB Partnership and geographically the largest local authority by area (approximately 60%) within the AONB, Wiltshire Council supports this objective within the AONB Management Plans for 2014 – 2019 and the draft for 2019-2024 as a partner and signatory to the plans.

We also hope that our own actions will help to influence and enable us to work alongside the other local authorities within the AONB and its settings to achieve dark skies.

Corporate Director – Growth, Investment and Place

Dorset Council

I am writing to confirm our support for Cranborne Chase AONB's application to be an International Dark Sky Reserve. We recognise the many benefits of encouraging better lighting and reducing light pollution, both for people and wildlife. It will also create opportunities for enhancing the local economy through promoting the AONB and Dorset as a destination for visitors keen to see dark night skies.

Chief Executive

Hampshire County Council

I am writing to confirm Hampshire County Council's support for Cranborne Chase AONB's application to be an International Dark Sky Reserve. The Council values its protected landscapes, the benefits these bring to Hampshire communities and environment, and the importance of dark night skies to the natural beauty of these outstanding areas.

This authority is keen to support the creation of best practice lighting policies and practice where astronomers, local planning authorities and local residents work together to preserve existing dark night skies. Designation of the AONB as a Dark Sky Reserve will create

opportunities for enhancing the local rural economy through the promotion of the AONB and Hampshire as a destination for visitors keen to see amazing dark night skies.

Director – Economy, Transport and Environment

Somerset County Council

Somerset County Council is pleased to support the AONB's application to be granted International Dark Sky Reserve (IDSR) status, to become one of only a handful of destinations that can prove they have an outstanding quality of night sky.

This objective was included in the AONB's Management Plan 2014 to 2019, which has been adopted by Somerset County Council. We note that the objective is also included in the 2019 to 2024 Management Plan, which is currently in the closing stages of consultation.

Chief Executive

South Somerset District Council

South Somerset District Council recognises the importance of the Cranborne Chase AONB in providing residents and visitors with a green and diverse landscape in which to work, live and spend recreational time in. AONBs are important for the health and well-being of residents as accessible green landscapes are proven to aid physical and mental health.

South Somerset District Council supports Cranborne Chase AONB's application to become an International Dark Sky Reserve. The issues that street lighting cause are documented globally and SSDC welcomes the application from the AONB.

Chief Executive

Mendip District Council

This is an exciting opportunity and we are happy to support the approach being championed by the Partnership to secure IDSR status. We are keen to encourage the better use of lighting through the planning process and understanding its impact on the night sky and local wildlife, particularly in our rural areas.

It is hoped that should the application be successful, this will also help increase visitors to the area, especially in the winter months when the night sky is at its best for astronomers.

Chief Executive

Cranborne Chase AONB Partnership

June 2022