North York Moors Local Plan

Topic Paper

A Sense of Tranquillity, A Strong Feeling of Remoteness and Dark Night Skies

This document sets out the background and evidence regarding proposed policies for conserving and enhancing three of the North York Moor’s National Park’s Special Qualities - Tranquillity, A Strong Feeling of Remoteness and Dark Night Skies.

April 2019
## Contents

1. Introduction ......................................................................................................................... 4
2. Policy context ......................................................................................................................... 4
3. Why introduce new policies? ................................................................................................. 5
4. Tranquillity ............................................................................................................................. 6
5. A strong feeling of remoteness ............................................................................................. 10
6. Dark night skies ..................................................................................................................... 17

Appendix 1: CPRE National Tranquillity Map ........................................................................ 21
Appendix 2: CPRE ‘Night Blight’ Map of Light Pollution and Dark Skies ................................. 22
Appendix 3: Extract from ILP Guidance Notes for the Reduction of Obtrusive Light .......... 23
A Sense of Tranquillity, A Strong Feeling of Remoteness and Dark Night Skies

“Yet it is just because this is a densely populated and highly industrial country that the need for National Parks is so pressing. Four-fifths of the population dwell in urban areas, many of them in the smoke-laden atmosphere and amid the ceaseless traffic and bustle of our industrial towns and larger cities. They need the refreshment which is obtainable from the beauty and quietness of the unspoilt country.”

The 1947 Hobhouse Report which led to the creation of National Parks in England.

1. Introduction

1.1 All national parks in England, Wales and Scotland share a statutory purpose to promote understanding and enjoyment of the ‘special qualities’ of their area. For the North York Moors, twenty eight special qualities have been identified and are set out in the National Park Authority’s Management Plan1. Three of the most highly valued qualities are to do with attributes that affect the way people experience the National Park:

- Tranquillity
- A Strong Feeling of Remoteness
- Dark Skies at Night

1.2 As part of the preparation for the new Local Plan we asked people what they value about the National Park through a public consultation in September 2016. Conserving special qualities for future generations was one of the main themes that came out of the consultation - protecting the beauty and tranquillity of the countryside and its dark night skies were all mentioned as important for the new Local Plan. A further consultation on specific policies to protect these special qualities took place in December 2017 and responses to this consultation have also been taken into account in drawing up our proposed approach.

1.3 This paper has been produced to support the ‘Pre-Submission draft’ consultation on the new Local Plan and is intended as a resource for anyone who requires more information on how and why we have developed the proposed policies relating to tranquillity, remoteness and dark night skies.

1.4 Consultation on the Pre Submission draft document is an important stage in the preparation of the new Local Plan and policy proposals contained in this paper may be subject to change. No weight can therefore be applied to this document in decision making.

2. Policy context

2.1 The English National Parks Government Vision and Circular 2010 charged National Park Authorities and their key partners with having a renewed focus on achieving National Park purposes. Paragraph 21 said that ‘in developing and implementing policies for the planning and management of their areas, Authorities should document and clearly express the special qualities of the Park and the status and condition of these qualities’. Its discussion of how Authorities should identify and promote public enjoyment of the special qualities of national parks referred to qualities including those associated with cultural heritage, wide open spaces, coastlines, the sense of relative wildness and tranquillity and the dark night skies that Parks offer. The value of dark night skies as a draw for visitors and a boost to the local economy is highlighted in the 8-Point Plan for England’s National Parks 2016 where

1 North York Moors National Park Management Plan 2012 (updated 2016)
the Northumberland International Dark Sky Park is given as a successful example of the positive benefits of protecting the dark skies found in National Parks.

2.2 The National Planning Policy Framework (2019) refers to tranquillity in Paragraph 180, saying that planning policies and decisions should aim to “identify and protect areas of tranquillity which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason”. It is up to individual planning authorities to decide how to identify and protect tranquil areas. The importance of controlling light pollution is covered in Paragraph 180 which says that planning policies and decisions should “limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.”

2.3 Conserving and enhancing the North York Moors’ special qualities are a key part of the vision for the National Park set out in the North York Moors National Park Management Plan. One of the Plan’s aims is that the North York Moors will continue to be a place of tranquillity, remoteness and dark night skies, providing opportunities for spiritual refreshment. The Plan has six policies that are designed to deliver this aim, three of which depend on supporting planning policies for their implementation:

- E19: Existing tranquil areas will be protected and expanded where possible.
- E20: Dark skies will be protected and improved. New development in the National Park will not cause unacceptable light or noise pollution.
- E24: The impacts of traffic on the tranquillity of the National Park will be minimised and alternatives to the private car will be promoted.

3. Why introduce new policies?

3.1 The National Park’s special qualities are currently protected in Core Policy A, ‘Delivering National Park purposes and Sustainable Development’ of the 2008 Core Strategy and Development Policies Document. The policy gives priority to ‘Providing a scale of development and level of activity that will not have an unacceptable impact on the wider landscape or the quiet enjoyment, peace and tranquillity of the Park, nor detract from the quality of life of local residents or the experience of visitors’. The Authority does not have specific Tranquillity, Remoteness or Dark Skies development management policies but protection of these qualities is covered by DP1, ‘Environmental Protection’ which seeks to conserve and enhance the special qualities of the National Park by permitting development only where there will not be unacceptable adverse impacts, including unacceptable levels of noise, vibration, activity or light pollution.

3.2 In recent years conserving the North York Moors’ special qualities has become increasingly challenging. The Authority has had to consider how best to deal with proposals for large scale industrial development, substantial tourism schemes and pressures for housing development in Helmsley and the larger villages of the National Park. Such developments bring increased levels of noise and light pollution as well as disturbance from traffic and general activity levels, all of which threaten the National Park’s tranquillity, sense of remoteness and dark night skies. Changing farming methods lead to demand for larger scale agricultural buildings which can alter the character of a moorland valley and pressures to intensify grouse and pheasant shooting activities can also change the character of open moorland areas. Further pressures come from the demand for windfarms outside but close to the National Park and from shale gas exploitation. Within the National Park, the increase in visitor numbers needs to be managed with care to avoid spoiling the special qualities of the North York Moors which draw visitors in the first place. Some places are under particular threat, for example, areas around tourism ‘honeypot’ locations such as Goathland, Rosedale Abbey and Dalby Forest. The coastal strip could also be a vulnerable area if there is pressure for further development in connection with the new Woodsmith Mine and the push for economic growth in Scarborough and Teesside.
3.3 In order to deal effectively with these challenges, the Authority wishes to strengthen its policy position and introduce specific policies in the new Local Plan covering the three special qualities that affect the way people experience the National Park. The new Local Plan must find ways to support appropriate development that will enable local communities and the local economy to thrive while at the same time conserving the environment and the special sense of place that was the reason for the National Park designation. More detailed policies covering tranquillity, the sense of remoteness and dark skies at night would:

- Conserve and, where possible, enhance these qualities to ensure their retention for future generations;
- Support and deliver the policies in the Management Plan by giving clear control over potentially harmful development;
- Raise awareness of the value of these special qualities and ensure that they are specifically assessed and given appropriate weight as part of the development management process.

4. **Tranquillity**

4.1 *Defining tranquillity:* Tranquillity can be defined as a state of peace and calm which is influenced by what people see and experience around them. It is most often found in places dominated by natural habitats which are free from human structures and the disturbances of traffic and busy daily activities. However, villages and groups of buildings can also be tranquil, especially where the built environment is pleasing and activity levels are low. Tranquil places usually include natural elements such as trees, grass or water. Such places foster a sense of ‘belonging’ and being connected to nature and history and are important to people’s wellbeing. Places where people feel tranquil are increasingly rare in the modern world and are highly valued. National Parks have an important role to play in looking after tranquil places so the conservation and enhancement of tranquillity in the North York Moors is an important objective for the new Local Plan.

4.2 *Tranquillity in the North York Moors:* Discussions of tranquillity generally refer to positive factors which contribute to tranquillity and negative ones which detract from it (often the opposite of a positive factor). When considering attributes which contribute to tranquillity in the North York Moors, officers considered that the following were important:

- Openness or remoteness
- Presence of natural or semi-natural habitats
- Extensive/high quality views
- Dark night skies
- Absence of disturbance from noise and activity
- Absence of major built features including roads, overhead electricity cables, industrial structures
- Natural sounds such as birdsong, water, waves or breezes.

4.3 *CPRE Tranquillity mapping:* The Campaign to Protect Rural England (CPRE) carried out the first national tranquillity mapping exercise in 1996 and this was updated by Northumbria University to produce CPRE’s 2007 Tranquillity Map, reproduced at Appendix 1. The map covers the whole of England and shows ‘relative’ tranquillity for 500m x500m grid squares with green areas being the most tranquil, yellow less tranquil and red the least tranquil. The tranquillity scores for individual squares were generated by a modelling process which assessed and gave weightings to a range of factors based on what could be heard and seen at each location. Positive factors included attributes such as remote and wild landscapes, rivers and native trees; negative factors included attributes such as urban development, powerlines and traffic noise.

4.4 The map showed that that the North York Moors is one of the most tranquil areas in England, even compared to other National Parks. Almost 90% of the North York Moors
National Park could be classed as relatively tranquil. Figure 1 shows how tranquillity is graded across the area with the most tranquil areas being the moorland and dales and less tranquil areas broadly correlated to the road network and the fringes of the Park which are close to urban areas. The presence of native trees and woodland, particularly in the south of the National Park, contributes to the sense of tranquillity in these locations.

**Figure 1 - Relative Tranquillity in the North York Moors National Park (CPRE)**

![Image of tranquillity map]

Source: National Tranquillity Mapping Data 2007 developed for Campaign to Protect Rural England and Natural England by Northumbria University. OS Licence number 1000018881

4.5 **Should the CPRE Tranquillity map be updated?** As part of the preparatory work for the Local Plan the Authority considered whether to commission an updated tranquillity map for the North York Moors. Other organisations have undertaken such exercises either updating the 2007 CPRE map or preparing new versions for their area using different mapping approaches\(^2\). The mapping options considered by the Authority were:

a) **Option 1**: Commission consultants to update the Tranquillity Map using the same techniques that were used for the 2007 CPRE map. This would be a major exercise covering the whole of the National Park with outside consultants brought in to agree the range of positive and negative tranquillity factors and carry out the modelling.

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\(^2\) South Downs National Park Authority Tranquillity Study 2017; New Forest Tranquil Areas Map 2015; Scottish Natural Heritage Map of Wild Land Areas 2014.
The main reservation with this option was how useful a base for policy the updated map would be. The CPRE approach produces relative rather than absolute scores and the method works best across a wide geographical area. This is seen in the map at Appendix 1 which shows that the North York Moors as a whole is very tranquil compared to elsewhere in the country. It is less useful at a smaller geographical scale, in effect simply showing that there is a split of tranquil and very tranquil areas in the North York Moors.

b) **Option 2:** Undertake a ‘ground truthing’ exercise, with volunteers or consultants assessing and giving weightings to various tranquillity criteria in an ‘on the ground’ survey in a variety of locations across the National Park. This would also be a time consuming and potentially expensive option although the resultant map would provide a robust and up-to-date evidence base for tranquillity in the National Park. However, given the general absence of major roads, airfields, towns and large-scale infrastructure across the area, there is a danger that it could simply confirm what is already known i.e. that the North York Moors is a tranquil area generally with relatively little variation between places.

c) **Option 3:** Carry out a public or visitor survey asking people which places they consider to be the most tranquil. This was rejected as being too subjective an approach. Perceptions of tranquillity are relative and depend on what people value and how their experience of the National Park compares with the place where they spend most time. A visitor from a major city may see one of the North York Moors tourism hotspots as tranquil compared to home and may not have an accurate view of relative tranquillity across the whole of the National Park.

d) **Option 4:** Map tranquillity ‘factors’ in house using the Authority’s Geographic Information System (GIS). This option was explored in some detail and a preliminary Tranquillity Indicators Map was prepared. The exercise involved identifying a series of features which either contribute to or detract from people’s experience of tranquillity for which spatial data were available on the Authority’s GIS mapping facility including moorland, woodland, roads and railway lines. This produced a map of tranquillity indicators rather than tranquillity per se and it was not taken any further because it was not considered to be sufficiently robust to use in connection with any proposed new policy.

4.6 It is clear that any attempt to make a detailed spatial representation of tranquillity is complex. Many different elements, some positive, some negative combine to determine whether a particular place is perceived as tranquil and since tranquillity is a quality experienced by people, different people will have different views of the kind of places they find tranquil. This makes any objective assessment of tranquillity complicated. After some deliberation and discussion of the ways in which a tranquillity policy may be framed, it was decided that the cost and time involved in producing an updated tranquillity map were not justified particularly since a map-based approach was not the preferred way forward for a new tranquillity policy (see paras 4.10–4.12 below).

4.7 **Developing a policy to conserve tranquillity:** The Authority’s consideration of how to frame a new policy is based on the principle that tranquillity is an asset worth protecting wherever it occurs. The most striking feature of the CPRE tranquillity map is that, in comparison with areas beyond the Park boundary, the whole of the National Park is relatively tranquil. The new policy should not just protect the most tranquil places but should conserve and where possible enhance tranquillity throughout the National Park.

4.8 It is recognised that some of the strongest detractors from tranquillity are beyond the control of the planning system, for example the noise from motorbikes travelling through the Park and military aircraft carrying out low-flying training or practice exercises. However, planning does have a role to play. Most existing tranquil areas are already protected by policies which do not allow development in open countryside except in certain specific
circumstances and by strict environmental regulations if they are areas of protected habitats. It seems counter-intuitive to suggest that any form of development could enhance or extend tranquil areas and where new development is concerned, the focus is likely to be on minimising features which would have a harmful impact on tranquillity (noise, activity levels, obtrusive structures, external lighting) and requiring mitigating measures to offset the impact of the development on tranquillity in the surrounding area. Nevertheless, good design and a careful approach to landscaping and planting can enhance tranquillity, particularly if it improves an existing untidy area.

4.9 It is also important to recognise that the aim to conserve and enhance tranquillity may be in conflict with other objectives in the draft Local Plan, for instance those which encourage new employment opportunities or support the installation of better communications infrastructure. As with all planning decisions there will be a balance to be struck between competing objectives.

4.10 Tranquillity policy – Several alternative options were considered at the preferred options stage of the Local Plan. The Authority’s preferred option was to introduce a criteria-based policy that would apply throughout the National Park. This policy, now a draft policy ENV2, states that development proposals will only be permitted where there will not be unacceptable harm to the tranquillity of the surrounding area. Under the draft policy, all proposals would be assessed in relation to their impact on tranquillity and the criteria to be considered are listed in the policy: visual intrusion, noise and activity levels, traffic generation, presence of natural and semi-natural habitats and presence of historic assets. Development management staff will consider the potential harm or benefits to tranquillity in the surrounding area, taking into account direct, indirect and cumulative effects and use professional judgement to assess the impacts. Development proposals at the edge of a settlement would require particular care to ensure that changes do not harm the tranquillity of the surrounding countryside. It is not suggested that applicants would be required to submit additional ‘tranquillity’ documentation on a routine basis but, depending on the proposal, information on noise levels or anticipated traffic movements may be needed.

4.11 Alternative policy approaches considered by the Authority are set out in the following table:

<table>
<thead>
<tr>
<th>Draft Policy ENV2</th>
<th>Pros/Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>A criteria based tranquillity policy that applies throughout the National Park.</td>
<td>Straightforward approach that ensures specific assessment of tranquillity is made in relation to all development proposals and recognises that the whole of the National Park is tranquil in comparison with areas beyond its boundary.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Alternative approaches at preferred options stage</th>
<th>Pros/Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keep the existing approach as contained in Core Policy A and do not introduce a specific tranquillity policy.</td>
<td>Would not raise the profile of tranquillity in the development management process nor strengthen the policy position for the future.</td>
</tr>
<tr>
<td>Introduce a spatial tranquillity policy based on zones identified within an updated Tranquillity Map of the National Park, setting out a different approach to development in different zones.</td>
<td>Practical difficulties updating Tranquillity Map. Concern that policy based on Tranquillity zones implies some areas of the National Park are more highly valued than others. Would lead to pressures on areas identified as least tranquil. Any</td>
</tr>
</tbody>
</table>
5. **A strong feeling of remoteness**

5.1 Remote undeveloped areas of open moorland and woodland are among the most tranquil places in the North York Moors and, without the intrusion of man-made structures, they have a quality of ‘wildness’ not found in the farmed countryside and urban areas outside the National Park boundary. A strong feeling of remoteness is a special quality of the National Park and is an important feature of the North York Moors because of the extensive tracts of moorland and forest and the patchwork of very small and dispersed settlements. These remote locations generate a sense of getting away from the stresses of modern life and feeling close to nature. They are a finite resource which, once lost, cannot be regained and the Authority considers it appropriate for them to be protected.

5.2 The Authority’s consideration of remoteness flowed from discussions about the practical difficulties of mapping tranquillity and the search for an alternative way to give a spatial dimension to the ‘perceptual’ qualities of the National Park. The characteristics associated with tranquillity - presence of natural or semi-natural habitats, lack of noise, activities and man-made structures – are found to a high degree in remote areas but tranquillity and remoteness are distinct qualities and they are separate planning interests. Remoteness is also distinct from the natural beauty of the landscape which is recognised in the National Park’s Section 3 map.\(^3\)

5.3 The type of development proposal that might come forward in remote areas would be works to roads, tracks, overhead cables, masts, car parks or facilities requested by the Forestry Commission or moorland estate owners. The intensification of grouse shooting in recent years has led to demands for improvements to tracks and huts in open moorland. There are also potential future development large scale development pressures which by their nature may need remote locations e.g. reservoir creation, mining or other mineral extraction or exploration activity, energy proposals or military structures or uses. It is important that the new Local Plan should provide an appropriate policy framework for considering such development proposals.

5.4 *Defining remoteness:* Remoteness can be defined as *the state of being located far away from everyone or everything else* and can be objectively measured as distance away from places where people live and work. It is therefore simpler to produce a spatial representation of remoteness that would be sufficiently robust to be used in a new policy.

5.5 The Authority considered three alternative ways of mapping remote areas within the National Park at the preferred options stage of the Local Plan:

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\(^3\) Section 3 of the Wildlife and Countryside (Amendment) Act 1985 gives National Park Authorities a responsibility to prepare a map showing areas of mountain, moor, heath, woodland, down, cliff or foreshore which it considers particularly important to conserve because of their natural beauty.
a) Defining remote areas as places at least 1km away from the nearest postal address point or A or B class road;
b) Defining remote areas as places at least 1km away from settlements with more than 5 address points;
c) Using graduated shading to represent remoteness.

5.6 With the first alternative the remote area would include areas of open moor, woodland and other landscape types, mostly in the central part of the Park, where by definition there are no villages or scattered farmsteads. Figure 2 below shows the areas that would be identified, with Section 3 moorland and woodland areas also shown for comparison. With this alternative, the remote area covers 290 kms² or 20% of the National Park.

5.7 One comment on this approach was that dale head areas, which often have a strong sense of remoteness, would not be included within the remote areas boundary because they have a scattering of isolated farmsteads. The second alternative was put forward to overcome this concern by including isolated farmsteads and very small groups of buildings in the remote area. Figure 3 below shows this approach which would result in a large proportion of National Park - 982 kms² or 68% - being included with the remote area designation.

5.8 The third alternative would represent remoteness by graduated shading rather than as a designated area within a defined line. A map would show greater and lesser degrees of remoteness across the whole of the National Park. Figure 4 below shows how remoteness would be represented across the National Park using this approach.

5.9 Larger scale version of all the maps can be seen on the Authority’s website at:

www.northyorkmoors.org.uk/localplanspecialqualities
Figure 2 – North York Moors Remote Areas using definition that excludes isolated farmsteads
Figure 3 – North York Moors Remote Areas using definition that includes isolated farmsteads
Figure 4 – North York Moors – Remoteness represented by graduated shading.
5.14 **Developing a policy to conserve remoteness:** The different approaches considered at the preferred options stage to mapping remote areas have different implications for the way a policy to conserve remoteness would be framed. The advantage of the first alternative (defining remote areas as places at least 1km away from the nearest postal address point or A or B class road) is that a restrictive approach to development that would protect the area could be consistently applied within it. There could be a clear policy wording limiting development to that which is essential for environmental conservation or agricultural or forestry purposes and legitimate development proposals that may be needed to sustain existing families and small farm businesses would not be affected.

5.16 With the second alternative, exceptions to a restrictive policy approach would need to be made in order to continue to support those living and working in farmsteads within the remote area. The policy wording would limit development to essential environmental conservation or agricultural or forestry purposes *except for cases where development is required to meet the essential needs of existing households, farms or businesses.* This would give those living or working in the designated area access to policies that apply more generally in open countryside locations, permitting development such as new agricultural buildings, changes of use, house extensions or small camp sites which may be requested as a farm diversification proposal.

5.17 With the third alternative the policy wording would be more general, saying that all development proposals would be considered in relation to their impact on the character of remote areas, taking into account the scale, nature and location of the proposal.

5.18 It is important to note that introducing a remote areas designation would not change the position of these places in the settlement hierarchy - remote areas would still be regarded as open countryside but with an additional level of policy protection recognising their remoteness as a public interest. Also, all Section 3 areas, whether or not they were within the remote area boundary, would be protected for their natural beauty through landscape policy and for their habitats through the wildlife and biodiversity policy. This recognises the fact that not all remote areas are moorland and not all Section 3 moorland is remote.

5.19 **Remoteness policy – preferred option and alternative approaches:** The Authority’s preferred option was to introduce a draft policy that development will only be permitted in remote areas where it is essential for environmental conservation, agricultural or forestry management purposes with remote areas defined as places at least 1km away from the nearest postal address point or A or B class road. Applicants would also have to demonstrate that there were no suitable alternative locations outside the remote area and that appropriate mitigation measures would be taken to minimise any harmful impact on tranquillity. This preferred option has been carried forward as draft policy ENV3.

5.20 The following table shows how different types of development would be treated under the proposed draft policy, unless any specific material planning considerations of the particular case outweighed the policy position.

<table>
<thead>
<tr>
<th>Development proposal</th>
<th>Open countryside within Remote Area boundary</th>
<th>Open countryside outside Remote Area boundary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communications mast</td>
<td>Refuse</td>
<td>Support if appropriate</td>
</tr>
<tr>
<td>Overhead cable</td>
<td>Refuse</td>
<td>Support if appropriate</td>
</tr>
<tr>
<td>Development proposal</td>
<td>Open countryside within Remote Area boundary</td>
<td>Open countryside outside Remote Area boundary</td>
</tr>
<tr>
<td>----------------------------------------------------------</td>
<td>---------------------------------------------</td>
<td>----------------------------------------------</td>
</tr>
<tr>
<td>Livestock handling pen (where permission is needed)</td>
<td>Support if essential and small scale</td>
<td>Supported if appropriate</td>
</tr>
<tr>
<td>New agricultural or forestry track</td>
<td>Refuse</td>
<td>Support if essential</td>
</tr>
<tr>
<td>Improvement to existing agricultural or forestry track</td>
<td>Support if essential and appropriate</td>
<td>Support if essential and appropriate</td>
</tr>
<tr>
<td>Public art(^4)</td>
<td>Refuse</td>
<td>Support if appropriate</td>
</tr>
<tr>
<td>Recreational or business development</td>
<td>Refuse</td>
<td>Support if appropriate</td>
</tr>
</tbody>
</table>

5.21 The advantages and disadvantages of the preferred option as well as the alternative policy approaches that the Authority has considered are summarised below:

<table>
<thead>
<tr>
<th>Draft policy ENV3</th>
<th>Pros/Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduce a policy permitting development in remote areas where it is essential for environmental conservation, agricultural or forestry purposes. Mapping definition of remote areas to <em>exclude</em> isolated farmsteads (Figure 2).</td>
<td>Strong protection for remote areas which can be consistently applied in a clearly defined area.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Alternative approaches at preferred options stage</th>
<th>Pros/Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keep the existing approach as contained in Core Policy A and do not introduce a specific remote areas policy.</td>
<td>Would not recognise the specific value of remote areas within the National Park.</td>
</tr>
<tr>
<td>Introduce a policy that development will only be permitted in remote areas where it is essential for environmental conservation, agricultural or forestry purposes. Mapping definition of remote areas to <em>include</em> isolated farmsteads (Figure 3).</td>
<td>Includes dale heads in remote areas designation. The need to allow exceptions to restrictive approach to development (particularly for essential agricultural uses) undermines the policy and indeed the very concept of “remoteness” – little difference between policy applied to remote areas and wider open countryside.</td>
</tr>
<tr>
<td>Introduce a policy that all development proposals would be considered in relation to their impact on the character of remote areas – based on map which uses graduated shading to represent</td>
<td>More flexibility regarding how restrictive an approach to development should be taken in individual cases, based on the location and specific circumstances of the proposal.</td>
</tr>
</tbody>
</table>

\(^4\) The ‘Seated Figure’ at Castleton Rigg is c. 0.3 km from a farm (there are seven farms and three houses within one kilometre) and 1.7 km from Westerdale.
6. **Dark night skies**

6.1 Dark skies at night are increasingly rare in modern Britain and the protected landscapes of national parks where external light levels are low are therefore an important national resource. Dark skies are a particular feature of the North York Moors because of the large areas of open countryside with little or very sparse settlement and low levels of air pollution. The ability to experience dark skies is enhanced by the open nature of the moorland skyline, the presence of several large forest plantations within the Park and the dark expanse of the North Sea to the east of the moorland plateau. These natural characteristics combine so that it is possible to experience dark and starry skies from many locations within the National Park.

6.2 As well as being an intrinsic part of the quality of the National Park landscape, dark skies at night are important for many wildlife species e.g. bats, moths and nightjar and help maintain biodiversity within the National Park. They are also important for recreation – there is a growing interest in star gazing which in turn has benefits for local communities and the local tourism economy. There are now three ‘Dark Sky Discovery’ sites in the National Park at Sutton Bank, Dalby Forest and the Moors National Park Centre at Danby.

6.3 **Studies into light pollution and dark night skies**: The Campaign to Protect Rural England (CPRE) has been at the forefront of campaigns to reduce light pollution and protect and enhance dark night skies. CPRE published satellite maps in 1993 and 2000 which showed that light pollution had increased by 26% in England over that period. In 2009 a Royal Commission on Environmental Pollution report, Artificial Light in the Environment defined light pollution as the experience of light in the wrong place or at the wrong time and identified five types of light pollution:

- Glare: The excessive contrast between bright and dark areas in one’s field of view;
- Light trespass: Unwanted light, for example from adjacent properties and activities;
- Light clutter: The excessive grouping of lights, for example in roadside advertising;
- Light profligacy: Over-illumination which wastes energy and money;
- Sky glow: A combination of reflected and refracted light from the atmosphere. This is the most pervasive form of light pollution and can affect areas many miles from the original light source.

It recommended that there should be explicit consideration of light in planning policy and that Authorities responsible for managing protected areas should try to eliminate unnecessary outdoor light and have better design and management of light which cannot be eliminated.

6.4 More recently, CPRE has published the ‘Night Blight’ report which includes a new map based on satellite images collected in September 2015. The map shows the different amounts of light spilling up into the night sky across the country and is available on line on an ‘OpenStreetMap’ base. The national map at Appendix 2 shows that the North York Moors was one of the areas in the country that was most free of light pollution with 92% of the skies in the two darkest categories. Teesside is a major source of light pollution on the northwest escarpment and areas close to urban centres just beyond the National Park boundary, for example Whitby.

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6 ‘Night Blight: Mapping England’s Light Pollution and Dark Skies’ CPRE 2016
7 http://nightblight.cpre.org.uk/
Scarborough and Pickering are also affected by light pollution. There is just one significant source of light pollution within the central area of the National Park at RAF Flylingdales. The North York Moors section of the map is reproduced in Figure 5 below.

Figure 5 – North York Moors – CPRE Light Pollution and Dark Skies Mapping.

6.5 Developing a policy to conserve dark night skies: In developing a new policy, the Authority is recognising dark night skies as an amenity worth protecting. Many aspects of the Authority’s work play a part in conserving and enhancing dark skies but planning is a key area which can influence the quality of night skies. It can do this by:

a) Refusing development in inappropriate locations – the darkest skies are found in open countryside and existing policies already protect such areas from new development unless there are exceptional circumstances;

b) Controlling the amount and type of external lighting on new developments to ensure that light is only provided when and where it is essential for safety and security. Where it is needed, certain types and standards of fitting, e.g. ‘fully shielded’ luminaries, can be required which minimise upward light spill and planning conditions can be imposed to control the timing of external lighting;

c) Liaising with the highway authority to ensure that street lighting associated with new developments is appropriate;

d) Ensuring that the design of new buildings avoids light spill from internal areas;

e) When applications come in for works to existing buildings, encouraging applicants to improve any existing external lighting by signposting them to relevant advice and, if available, grant funding;

f) Being aware of indirect impacts of new development, e.g. lights from traffic accessing a building at night;
g) Ensuring that neighbouring planning authorities are aware of the potentially harmful impact of external lighting from developments just beyond the National Park boundary.

6.6 Requiring external lighting to meet appropriate standards is central to any new policy. Although the UK has no regulatory body overseeing external lighting, professional institutions provide advice and recommendations. In 1993 the Institution of Lighting Professionals (ILP) produced guidelines which identified different environmental zones based on night-time ambient light.

<table>
<thead>
<tr>
<th>ILP Environmental Zones</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zone</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>E0</td>
</tr>
<tr>
<td>E1</td>
</tr>
<tr>
<td>E2</td>
</tr>
<tr>
<td>E3</td>
</tr>
<tr>
<td>E4</td>
</tr>
</tbody>
</table>

The guidelines recommend differing degrees of ‘stray’ light control for each of the classified zones. All National Parks are placed in Environmental Zone E1.

6.7 The ILP guidelines are well established and provide a clear set of standards that could be used to assess external lighting on proposed new developments. However, the Authority is also preparing a Dark Skies Audit and Management Plan as part of a proposal to apply for the North York Moors to be recognised by the international Dark Sky Places programme. This would set out specific standards for external lighting within the National Park and, once adopted, could be incorporated into a new dark skies planning policy as an alternative to the ILP guidelines.

6.8 The Authority has considered at preferred options stage whether to apply specific requirements for external lighting throughout the National Park or only in those locations where skies are currently darkest. Setting standards across the whole of the National Park would recognise that light spill can travel a considerable distance and the widest possible control of external lighting is needed to protect existing dark sky locations. However, a spatial approach could offer more flexibility and allow for more strict controls in the most sensitive locations in open countryside. The North York Moors does not have an identified dark sky ‘core’ area but the CPRE map shows that there is a considerable overlap between the darkest parts of the National Park and the proposed remote areas described in section 5 above. It would therefore be possible to adopt a spatial approach which distinguished between remote areas, open countryside and locations within settlements.

6.9 **Dark night skies policy – preferred option and alternative approaches**: The Authority’s preferred option was to introduce a draft policy requiring all development proposals to minimise light spillage through good design and lighting management. No external lighting would be

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permitted in remote areas and in open countryside locations applicants would need to demonstrate that new external lighting is essential for safety or security reasons. In village locations, applicants would need to demonstrate that it is essential for safety, security or community reasons. All lighting installations associated with new development would need to meet the Authority's adopted standards (initially the ILP guidelines for outdoor lighting in Environmental Zone 1 as set out in Appendix 3). Where proposals involve works to an existing building, applicants would be encouraged to bring existing lighting installations up to the same standard. This preferred option has been carried forward as policy ENV4 of the draft Local Plan.

6.10 The advantages and disadvantages of the draft policy as well as the alternative policy approaches that the Authority has considered are summarised below:

<table>
<thead>
<tr>
<th>Draft policy ENV4</th>
<th>Pros/Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>A spatial policy with no external lighting permitted in remote areas. In open</td>
<td>Sets a recognised standard for all new external lighting installations throughout the National Park.</td>
</tr>
<tr>
<td>countryside new external lighting must be essential for safety or security reasons.</td>
<td>Gives extra protection to remote areas where the darkest skies are experienced.</td>
</tr>
<tr>
<td>In settlements new external lighting must be essential for safety, security or community reasons.</td>
<td>Recognises there may be community needs for external lighting within villages.</td>
</tr>
<tr>
<td>All installations to meet ILP Guidelines for Environmental Zone E1.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Alternative approaches considered at preferred options stage</th>
<th>Pros/Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keep the existing approach as contained in Core Policy A and do</td>
<td>Would not promote conservation and enhancement of dark night skies in the National Park nor strengthen the policy position for the future.</td>
</tr>
<tr>
<td>not introduce a specific dark night skies policy.</td>
<td></td>
</tr>
<tr>
<td>Introduce a non-spatial policy which would permit external</td>
<td>A simpler approach but would not give additional protection to areas where the darkest skies are experienced. Not consistent with aim for the National Park to be recognised under Dark Sky Places programme.</td>
</tr>
<tr>
<td>lighting in all locations where required for safety, security or community reasons provided it meets the ILP Guidelines for Environmental Zone E1.</td>
<td></td>
</tr>
</tbody>
</table>
Appendix 1: CPRE National Tranquillity Map.


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Appendix 2: CPRE ‘Night Blight’ Map of Light Pollution and Dark Skies

Earth Observation Group, NOAA National Geophysical Data Center. Developed by LUC
Appendix 3: Extract from ILP Guidance Notes for the Reduction of Obtrusive Light

DESIGN GUIDANCE

The following limitations may be supplemented or replaced by a LPA’s own planning guidance for exterior lighting installations. As lighting design is not as simple as it may seem, you are advised to consult and/or work with a professional lighting designer before installing any exterior lighting.

Table 2 – Obtrusive Light Limitations for Exterior Lighting Installations – General Observers

<table>
<thead>
<tr>
<th>Environmental Zone</th>
<th>Sky Glow ULR <a href="1">%</a></th>
<th>Light Intrusion (into Windows) Ev [lux] (2)</th>
<th>Luminaire Intensity I [candelas] (3)</th>
<th>Building Luminance Pre-curfew (4)</th>
<th>Average, L [cd/m²]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Pre-curfew</td>
<td>Post-curfew</td>
<td>Pre-curfew</td>
<td>Post-curfew</td>
</tr>
<tr>
<td>E0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>E1</td>
<td>0</td>
<td>2</td>
<td>0 (1*)</td>
<td>2,500</td>
<td>0</td>
</tr>
<tr>
<td>E2</td>
<td>2.5</td>
<td>5</td>
<td>1</td>
<td>7,500</td>
<td>500</td>
</tr>
<tr>
<td>E3</td>
<td>5.0</td>
<td>10</td>
<td>2</td>
<td>10,000</td>
<td>1,000</td>
</tr>
<tr>
<td>E4</td>
<td>15</td>
<td>25</td>
<td>5</td>
<td>25,000</td>
<td>2,500</td>
</tr>
</tbody>
</table>

ULR = Upward Light Ratio of the Installation is the maximum permitted percentage of luminaire flux that goes directly into the sky. Ev = Vertical Illuminance in Lux - measured flat on the glazing at the centre of the window. I = Light Intensity in Candelas (cd) L = Luminance in Candelas per Square Metre (cd/m²) Curfew = the time after which stricter requirements (for the control of obtrusive light) will apply; often a condition of use of lighting applied by the local planning authority. If not otherwise stated - 23.00hrs is suggested. * = Permitted only from Public road lighting installations

1) Upward Light Ratio – Some lighting schemes will require the deliberate and careful use of upward light, e.g. ground recessed luminaires, ground mounted floodlights, festive lighting, to which these limits cannot apply. However, care should always be taken to minimise any upward waste light by the proper application of suitably directional luminaires and light controlling attachments.

2) Light Intrusion (into Windows) – These values are suggested maxima and need to take account of existing light intrusion at the point of measurement. In the case of road lighting on public highways where building facades are adjacent to the lit highway, these levels may not be obtainable. In such cases where a specific complaint has been received, the Highway Authority should endeavour to reduce the light intrusion into the window down to the post curfew value by fitting a shield, replacing the luminaire, or by varying the lighting level.

3) Luminaire Intensity – This applies to each luminaire in the potentially obtrusive direction, outside of the area being lit. The figures given are for general guidance only and for some sports lighting applications with limited mounting heights, may be difficult to achieve.

4) Building Luminance – This should be limited to avoid over lighting, and related to the general district brightness. In this reference building luminance is applicable to buildings directly illuminated as a night-time feature as against the illumination of a building caused by spill light from adjacent luminaires or luminaires fixed to the building but used to light an adjacent area.
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