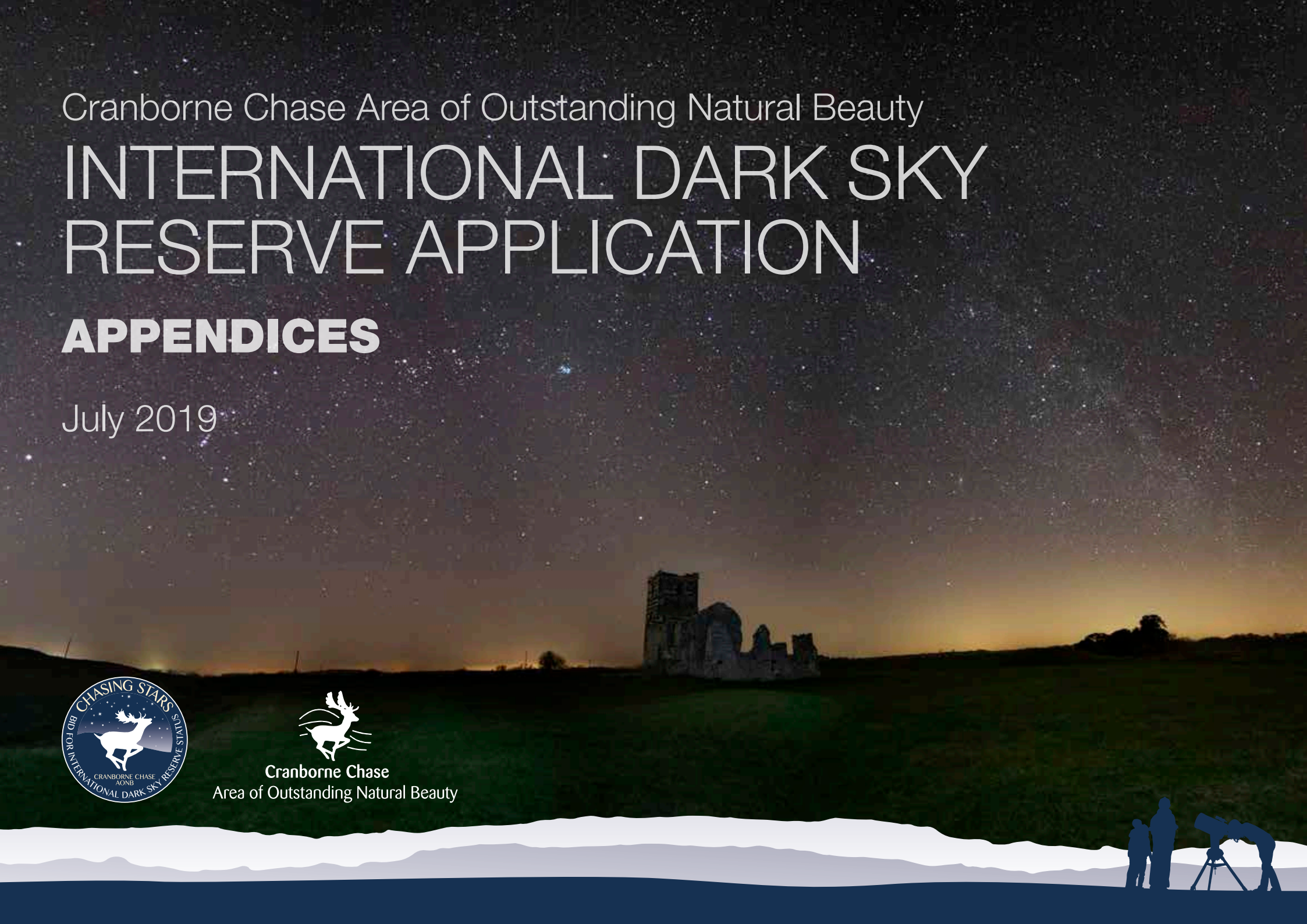
Cranborne Chase Area of Outstanding Natural Beauty

INTERNATIONAL DARK SKY RESERVE APPLICATION

APPENDICES

July 2019



Hundreds of people have taken part in our dark sky celebration events!

CONTENTS

Statutory designation of Areas of Outstanding Natural Beauty

An Area of Outstanding Natural Beauty (AONB) is one of the nation's finest landscapes. It is of high scenic quality that has statutory protection in order to conserve and enhance the natural beauty of its landscape. Designation is under the National Parks and Access to the Countryside Act 1949. The intent is to secure AONBs' permanent protection against any change or development that would damage their special qualities.

The Countryside and Rights of Way (CRoW) Act 2000 brought in new measures to help protect AONBs further and, through a Ministerial Statement that year, the Government confirmed that the landscape qualities of National Parks and AONBs are equivalent. The protection given to both types of area by the land use planning system should therefore also be equivalent. There are currently 46 AONBs in the UK. In all, AONB designation covers approximately 18% of the land area of the UK.

Designation of the Cranborne Chase AONB was in 1981 and it extends over 983 square kilometres. The AONB is the sixth largest and is one of thirteen AONBs in the South West of the UK. In the South West, the family of protected areas (including Exmoor and Dartmoor National Parks) covers some 38% of the countryside.

Primary purpose of designation

The primary purpose of AONB designation is 'conserving and enhancing the natural beauty of the area'. In 1991, the Countryside Commission stated some secondary objectives: 'In pursuing the primary purpose of designation, account should be taken of the needs of agriculture, forestry and other rural industries and of the economic and social needs of local communities. Particular regard should be paid to promoting sustainable forms of economic and social development that in themselves conserve and enhance the environment.

'Recreation is not an objective of designation, but the demand for recreation should be met so far as this is consistent with the conservation of natural beauty and the needs of agriculture, forestry and other uses.'[1]

What is natural beauty?

The primary purpose of AONB designation is rooted in 'natural beauty'. The term was enshrined in the 1949 Act when a romantic idea of scenic value prevailed. Over the years, qualification and amendment to the legislation has made it clear that natural beauty includes considerations such as wildlife, geological features and cultural heritage[2]. There is a useful definition in government guidance to AONB partnerships. 'Natural Beauty' is not just the look of the landscape, but includes landform and geology, plants and animals, landscape features and the rich history of human settlement over the centuries'[3]. The Natural Environment and Rural Communities Act 2006 clarified that land is not prevented from being treated as of natural beauty by the fact that it is used for agriculture, or woodlands, or as a park or that its physiographical features are partly the product of human intervention in the landscape[4].

This AONB is a cultural, living landscape by virtue of both the species and habitats within it but also due to its special qualities that human activity maintains. The natural beauty of the AONB is a blend

[1] Countryside Commission Policy Statement on Areas of Outstanding Natural Beauty 1991
[2] A draft statement on natural beauty, The University of Sheffield, January 2006
[3] Areas of Outstanding Natural Beauty: A guide for AONB Partnership members, Countryside Commission, CA24, November 2001, p.6.
[4] Natural Environment and Rural Communities Act 2006: Section 99

of its rich natural, historic and cultural heritage. The AONB Partnership believes that the presence of the expansive, open downlands, the many historic and literary associations, high levels of tranquillity, and the vast dark night skies comprise important elements of the natural beauty of the AONB. Those who manage the land are central to the future of this landscape. It is inevitable that this cultural landscape will continue to evolve but this needs to be in ways that conserve and enhance its special qualities.

International context

IUCN Protected Landscape

An AONB landscape is also of international importance. The International Union for the Conservation of Nature (IUCN) recognises it as a Category V Protected Landscape[5]. This is also the case for National Parks (such as Exmoor and South Downs); National Parks and AONBs therefore have an equivalent status. In 2013, the IUCN UK Committee reaffirmed the Category V status of all AONBs, confirming the significant contribution they make to conserve the UK's biodiversity.

European Landscape Convention

The European Landscape Convention (ELC) is a Treaty devoted exclusively to the protection, management and planning of all landscapes in Europe. Crucially, the Convention encourages the integration of landscape matters into all relevant areas of national and local policy, including cultural, economic and social policies. The ELC defines landscape as 'An area, as perceived by people, whose character is the result of the action and interaction of natural and / or human factors' (Council of Europe 2000).

There is a particular emphasis on the need for co-operation in undertaking programmes of landscape work that cross administrative and national boundaries. This AONB is in a prime position to showcase the UK's commitment to the Convention.

Fig. A.1.1: View from Win Green

[5] An IUCN Category V Protected Landscape is a protected area where the interaction of people and nature over time has produced an area of distinct character with significant ecological, biological, cultural and scenic value, and where safeguarding the integrity of this interaction is vital to protecting and sustaining the area and its associated nature conservation and other values.

Fig. A.1.2: Fontmell Down

What makes Cranborne Chase AONB special?

Forming part of the extensive belt of chalkland that stretches across southern central England from London to the Dorset coast, the Cranborne Chase AONB is a landscape of national significance. Its special qualities flow from the historical interaction of humans and the land. They include its diversity, distinctiveness, sense of history and remoteness, dark night skies, tranquillity, and its overwhelmingly rural character. With mists slowly forming over expansive downlands, it can be a moody, evocative landscape. The sights and sounds of bygone times are never far away. It is an unspoilt and aesthetically pleasing landscape.

The landscape

All landscapes have character. However, that character is more substantial, obvious, and extensive in the nationally important Areas of Outstanding Natural Beauty. We use characteristics and qualities to describe and assess those cherished landscapes.

Special characteristics and qualities that make this AONB special, as a whole, with regards to landscape:

- A peaceful, tranquil, deeply rural area; largely unspoilt and maintained as a living agricultural landscape.
- The scale of the landscape is often grand and dramatic with the intensity of landscape character almost palpable.
- The open downland offers wide expansive skies, dominant skylines, dramatic escarpments and panoramic views.
- Unity of the underlying chalk is expressed in the distinctive and sometimes dramatically sculpted landforms, open vistas, escarpments and coombes.
- A rich land use history with many ancient hilltop forts and barrows.
- A bountiful mosaic of habitats playing host to a myriad of wildlife.
- Overlain by a woodland mosaic, including the eye-catching hilltop copses, veteran parkland trees and avenues, extensive areas of wooded downland and ancient forest, together with more recent game coverts. (Ancient woodland in the UK is defined as having been in existence from before 1600.)
- Three major chalk river valleys with their individual distinctiveness.
- Distinctive settlement pattern along the valleys and vales, and small mediaeval villages along the scarp spring line.
- Local vernacular building styles include the patterns of knapped flint, brick, cob, clunch, clay tiles and straw thatch.
- Strong sense of place and local distinctiveness represented by the use of local building materials and small-scale vernacular features such as the sunken lanes and distinctive black and white signposts.
- Strong sense of remoteness.
- Expanse of dark night skies and ability to see the Milky Way.

The natural environment

A rich diversity and abundance of wildlife thrives across the AONB.

Special characteristics and qualities that makes this AONB special, as a whole, with regards to the natural environment:

- Main geological features are extensive, wide, and gently rolling chalk ridges with escarpments and dip slopes, clay caps with flint deposits and valleys, both dry and occupied by rivers and streams. The central clay vale has areas of hard rock and a stone quarry. The cultivated flat Greensand Terraces contrast with the undulations of the more wooded Greensand Hills.
- Rich ecological character expressed in the diversity of habitats including the distinctive species-rich chalk downland, clear fast-

flowing chalk streams and rivers, ancient and calcareous woodlands and rare chalk heath and water meadows.
- An abundance of emblematic wildlife species and those suffering decline such as the Greater horseshoe bat, Adonis blue and Duke of Burgundy butterflies, Tree sparrow and Skylark.
- Clear streams and rivers supporting Wild trout, Grayling, Dace and Chub, together with the fast disappearing Water vole and aquatic species that rely on high quality water such as the White-clawed crayfish, seriously threatened by the introduction of non-native crayfish.
- Extensive tracts of arable land supporting the six most nationally threatened farmland birds; the Grey partridge, Lapwing, Turtle dove, Yellow wagtail, Tree sparrow and Corn bunting and rare arable plants, such as the Prickly poppy and Pheasant's-eye.
- Cranborne Chase is particularly notable for its unusually high proportion of ancient woodland within a chalk landscape. This is largely due to its historic status as a royal hunting area.
- Ancient woods and woodland still under active coppicing management.

Biodiversity designations

Within the AONB boundary are a number of reserves and sites designated under various pieces of legislation (see also Fig. A10, Section A).

***Special Areas of Conservation*:** Special Areas of Conservation (SACs) are internationally important, strictly protected sites designated under the European Commission Habitats Directive. They are intended to protect European species and habitats of particular importance. There are **five SACs** within the AONB. They include chalk grassland sites with associated important plant species, the River Avon (Hampshire) and Chilmark Quarries which are considered particularly favourable for the survival of the following bat species: Greater and Lesser horseshoe, Barbastrelle, and Bechtein's.

***National Nature Reserves*:** National Nature Reserves (NNRs) were established to protect some of the UK's most important habitats, species and geology, and to provide 'outdoor laboratories' for research. Most NNRs offer great opportunities to schools, specialist interest groups and the public to experience wildlife at first hand and to learn more about nature conservation. In England and Wales, NNRs are declared by the statutory conservation agencies under the National Parks and Access to the Countryside Act 1949 and the Wildlife and Countryside Act 1981. There are **three NNRs** within the AONB boundary: Martin Down (one of our top ten stargazing sites), Prescombe Down and Wylye Down.

***Sites of Special Scientific Interest*:** Sites of Special Scientific Interest (SSSIs) have been developed since 1949 as a suite of sites providing statutory protection for the best examples of the UK's flora, fauna, or geological or physiographical features. These sites are also used to underpin other national and international nature conservation designations. Most SSSIs are privately-owned or managed; others are owned or managed by public bodies or non-government organisations. Improved provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000. There are **57 SSSIs** within Cranborne Chase AONB.

***Sites of Nature Conservation Importance*:** Sites of Nature Conservation Importance (SNCIs) are also known as Local Wildlife Sites. These are valuable wildlife areas that exist outside of the protected National Nature Reserves and Sites of Special Scientific Interest. These pockets of undisturbed habitat, which are often found on farms and private land, form a valuable reservoir of wildlife which can provide important links to the larger but often fragmented SSSIs. There are around **520 sites** of local importance for wildlife, comprising just over 9% of the AONB.

Key habitats

***Ancient woodland*:** A significant proportion of the AONB's woodland is of ancient origin. These woodlands contain some of the best aggregations of ancient trees in Europe, supporting internationally rare species of invertebrate and fungi. In total there are 7201.5 hectares of ancient woodland within the AONB. Larger woodlands of note include Cranborne Chase, of which 451 hectares is SSSI, Grovely Wood to the west of Salisbury and Great Ridge Wood to the north. Remnants of traditional coppice woodland remain.

***Calcareous grassland*:** Chalk grassland describes a semi-natural habitat created by centuries of grazing on infertile, thin chalk soils producing a short turf (or 'sward') rich in herbs, flowers and grasses. In 1994, Professor David Bellamy described it as "the European equivalent of tropical rain forest" due to the richness of species – up to 40 plant species per square metre.

The AONB has some of the best, last remaining and unimproved chalk grasslands in Europe. They are very important for a wide range of species, particularly: vascular plants; breeding birds; and butterflies. There are also a number of nationally rare and scarce beetles, flies and bees.

***Chalk rivers and streams*:** The chalk rivers and streams that flow through the AONB are biologically rich and also support an established sport fishing industry. In conservation terms, the River Avon is one of the most important river systems in the UK, supporting internationally and nationally important assemblages of both habitats and species.

The historic environment

The way the land has been used over the centuries has influenced the character of the landscapes we see around us today. The remnants and artefacts of working life, together with the layout of settlements, routeways, and buildings, contribute to the historic character of an area. This includes buried archaeology, buildings, designed landscapes and cultural features.

Special characteristics and qualities that makes this AONB special, as a whole, with regards to the historic and cultural environment include:

- A landscape etched with the imprint of the past - visible archaeological features including prehistoric earthworks, settlements, field systems, water meadows and former settlements.
- The former mediaeval hunting areas of Selwood Forest, Grovely Forest, and the Cranborne Chase.
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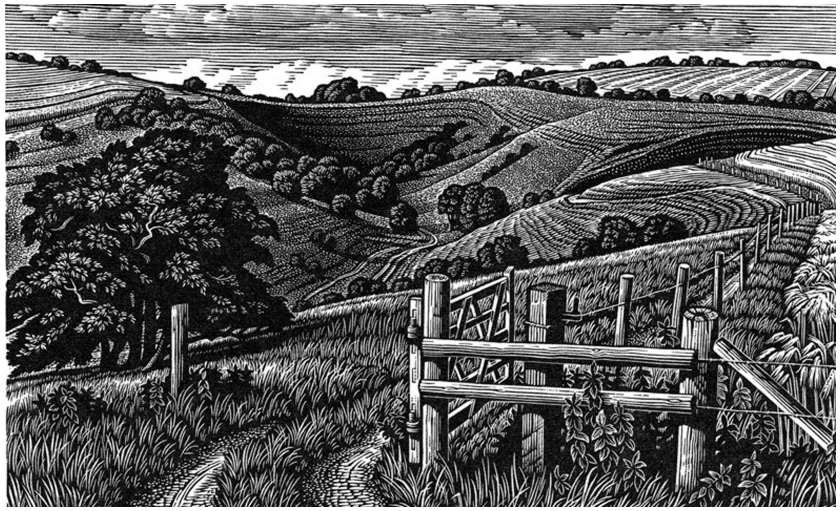


Fig. A.2.1: Wood engraving of Malacombe Bottom (© Howard Phipps)

A rich legacy of landscape-scale prehistoric archaeological features such as the Neolithic Dorset Cursus, as well as later historic features including the Saxon Bokerley Dyke.
- Historic borderlands, with important Saxon and even Roman roots, once marginal land and often subject to late enclosure.
- A rich land use history, with areas that have a concentration of ancient enclosure, ancient woodland, and former common land.
- An historic settlement pattern (pre-1750), which has seen minimal infilling, associated with a dense concentration of historic listed buildings.
- A concentration of historic parklands, estates, and manor houses together with Historic Parks and Gardens of national and county importance.
- Literary, artistic and historic connections of national and international distinction.

In historic terms, the landscapes of the AONB today are extraordinarily rich. Evidence of successive eras of human activity and settlements can often be lost, but not in this AONB. The landscapes offer up evidence of the imprint of man, carved out over the centuries: a continuous timeline throughout British history. Prehistoric monuments of national importance, historic borderlands, ancient field systems, droves and routeways all have stories to tell. The pioneering excavations and findings of General Pitt-Rivers, of the present day Rushmore Estate in Cranborne Chase, led to him being known as the 'father of modern archaeology'.

Eight thousand years ago, Neolithic peoples first started to change and manage this land. They built burial mounds and mysterious constructions, with many still seen today. The Bronze and Iron Ages saw the creation of large areas of pasture and arable farmland. The pastures on the downs date from this period. During the Anglo Saxon period, large landholdings began to change rural society. This was already a royal hunting area when the Normans invaded. They imposed forest law on the area then known as Cranborne Chase. However, agricultural expansion continued outside the Chase and, by the fifteenth century, hedges and walls divided the land into large blocks. This trend continued as sheep production became very profitable and the wealthy built large houses with extensive parks. Forest law persisted in the Chase until 1829, leading to the retention of a high proportion of woodlands.

Since then, agriculture has changed rapidly but the settlement patterns are very similar to those that existed in the eighteenth century.

Scheduled monuments

A scheduled monument is a historic building or site of national importance that is included in the Schedule of Monuments kept by the Secretary of State for Digital, Culture, Media and Sport. The regime is set out in the Ancient Monuments and Archaeological Areas Act 1979. There are more than **550 Scheduled Monuments** across the AONB.

Listed buildings

A listed building is a building considered by the Secretary of State (for Digital, Culture, Media and Sport) to be of special architectural or historic interest under the Planning (Listed Buildings and Conservation Areas) Act 1990. The protection covers both the interior and exterior of the property. There are **over 2000 listed buildings in the AONB.**

Registered parks and gardens

The Historic Buildings and Ancient Monuments Act 1953 authorises Historic England to compile a register of 'gardens and other land' situated in England that appear to be of 'special historic interest'. The register aims to 'celebrate designed landscapes of note, and encourage appropriate protection', so safeguarding the features and qualities of key landscapes for the future. There are 17 registered parks and gardens within the AONB.

Cultural environment

Celebrated by artists, archaeologists, scholars and writers, the name ‘Cranborne Chase’ evokes an ancient landscape with a rich patina of interrelated natural, built and cultural assets. This is a dramatic, distinctive and historic chalk landscape where ‘voices in the landscape’ can still be heard. Along with a sense of remoteness and undeveloped rural character, Cranborne Chase offers a deep sense of place.

Both local communities and visitors hold the immense cultural, historic and ecological riches in high esteem. The many diverse cultural associations include inspirational artists, writers, sculptors, poets, photographers and musicians. To name but a few, Heywood Sumner, Thomas Hardy, Desmond Hawkins, Cecil Beaton, Lucian Freud and Elisabeth Frink[1] all took inspiration from Cranborne Chase and its hinterland. Cultural associations offer a greater awareness, understanding and appreciation of these evocative landscapes.

These aesthetic assets, together with panoramic views, dark skies awash with stars, the wealth of wildlife, plethora of historic sites, ancient droves and route ways, all offer opportunities for exploration, relaxation, walking and cycling. Residents and visitors alike turn to the landscapes and scenic beauty of the AONB to refresh the spirit as well as enhancing health and well-being. As sustainable rural tourism evolves, it offers growing support to this deeply rural economy.

[1] Heywood Sumner (1853 to 1940), painter and craftsman, who wrote about the archaeology and folklore of Cranborne Chase; Thomas Hardy (1840 to 1928), poet and novelist; Desmond Hawkins (1908 to 1999), writer and broadcaster, founding member of what became the BBC’s Natural History Unit; Cecil Beaton (1904 to 1980), photographer and designer; Lucian Freud (1922 to 2011), painter; Elisabeth Frink (1930 to 1993), sculptor and printmaker.

The eight landscape character types of Cranborne Chase AONB

Introduction

The characteristics and qualities of the landscapes of this AONB are the primary justification for the designation of the area to conserve and enhance its natural beauty for the nation.

Their description is by broad landscape **character type,** and specific landscape **character area** (i.e. areas that represent each landscape character type). The **key characteristics** of the landscape types are set out here to provide an understanding of the scope, range, and scale of these landscape qualities.

Landscape type 1: Chalk Escarpments

This Landscape Type comprises the following Landscape Areas:
Character Area 1A - Melbury to Blandford Chalk Escarpment
Character Area 1B - West Wiltshire Downs Chalk Escarpment
Character Area 1C - Fovant and Chalke Chalk Escarpment

- Dramatic chalk escarpments eroded into spurs and deep coombes, with a generally sharp transition from the associated downlands.
- Underlying geology of Lower, Middle and Upper Chalk giving rise to predominantly thin calcareous soils.
- Areas of unimproved chalk grassland of international importance, traditionally maintained by livestock grazing.
- Steepness of slope leads to an absence of farmsteads and settlements.
- Field systems on lower slopes, including strip lynchets (earth terraces, a feature of ancient farming in Britain).
- Mediaeval villages sited along the spring line.
- Improved pasture and arable fields occupy the shallower, more accessible slopes where straight-sided fields represent late 18th / early 19th century enclosures.
- Cross dykes and Bronze Age features on the escarpment edge.
- Hanging woodland and sunken lanes are features of the steep, enclosing chalk coombes.
- Tracks and bridleways typically follow diagonal routes across the steep slopes.
- Panoramic views over adjacent landscapes.

Landscape type 2: Open Chalk Downland

This Landscape Type comprises the following Landscape Areas:
Character Area 2A West Wiltshire Downs
Character Area 2B Southern Downland Belt

- Large-scale landform of broad rolling hills interspersed by wide valleys, some with high quality chalk rivers whilst others are seasonal or dry.
- Dominated by Upper Chalk geology with drift clay and flint capping, with associated woodland and eye-catching tree clumps, on higher ground.
- A predominantly arable landscape divided into large, rectangular units with straight-sided fields representing late 18th / early 19th century enclosure from extensive open grazing areas.
- Remnant chalk grassland, ancient broad-leaved woodland, and yew woodland are important habitats.
- Large blocks of woodland and coppice contrast with the open arable fields.
- Main roads cut across the undulating landscape, linking major settlements on either side of the AONB.
- Ancient route ways follow east-west ridges.

- Large open skies and extensive panoramic views.
- Low density scattered settlement of farmsteads and the occasional downland village.
- Numerous Neolithic burial and ritual monuments and Bronze Age barrows.
- Later prehistoric and Romano-British ditches and defensive 'castle' earthworks.

Landscape type 3: Wooded Chalk Downland

This Landscape Type comprises the following Landscape Area:
Character Area 3A Cranborne Chase

- An elevated downland landscape with dramatic intersecting coombe valleys and rounded upstanding ridges.
- Dominated by an Upper Chalk geology with drift clay with flints capping higher ground.
- A well wooded landscape with large woods, shelter belts, copses and clumps creating a series of enclosed spaces or 'rooms' surrounded by trees.
- Beech lined lanes and tracks criss-cross the downland.
- Mosaic of unenclosed downland, improved grassland and arable fields, often dating from 19th century enclosure, between the woodland.
- Chalk grassland, ancient woodland, and coppice provide important nature conservation habitats.
- Typically low-density, scattered settlement of individual farmsteads with the occasional downland village or mediaeval hunting lodge.
- Visible archaeological features including Neolithic long barrows, Bronze Age round barrows, prehistoric to Romano-British earthworks and field systems.
- Panoramic views from upstanding chalk ridges to adjacent ridges and into valleys / coombes.

Landscape type 4: Downland Hills

This Landscape Type comprises the following Landscape Area:
Character Area 4A Martin - Whitsbury Downland Hills

- A series of small scale but prominent hills and knolls.
- Dominated by Upper Chalk geology giving rise to argyllic brown earths.
- Land cover is slightly more arable than grassland, with improved pasture on lower ground towards the river valleys.
- Dominated by a pattern of medium to large Parliamentary enclosure type fields (enclosures following legislation).
- Deciduous and coniferous woodland, clothing the crests of the slopes, silhouetted against the skyline.
- Low density, dispersed settlement pattern of scattered farmsteads.
- The absence of major roads contributes to the feeling of remoteness and tranquillity.
- A number of ancient woodlands including Burwood, Ashwood Copse and Boulsbury Wood.
- Neolithic and Bronze Age burial monuments, prehistoric and Romano-British enclosures, settlements, field systems and hill forts contribute to the plethora of visible, historic features of the landscape.
- Panoramic views from hill tops.

Landscape type 5: Chalk River Valleys

This Landscape Type comprises the following Landscape Areas:
Character Area 5A Wylye Chalk River Valley
Character Area 5B Ebble Chalk River Valley
Character Area 5C Stour and Avon Tributary Valleys

- Strongly enclosing valley sides, frequently eroded to form dry valleys, but in some places quite wide (e.g. Ebble).
- The steepest valley slopes have retained their semi-natural chalk grassland or are clothed in 'hanging' woodland, while the shallow valley sides have been exploited for cultivation.
- The clear, fast-flowing chalk rivers are a key habitat.
- The floodplains support water meadows, cress beds and damp pasture.
- The valleys typically provide convenient transport corridors, with the Wylye valley containing a trunk road and railway.
- The rural landscapes are sometimes interrupted by the large volumes of traffic that use the valleys as transport corridors to organised events.
- Straight-sided fields represent late 18th /early 19th century Parliamentary enclosure, with large-scale fields resulting from 20th century boundary loss.
- Field boundaries and footpaths often reflect the tracks, droves and hollow ways that took livestock from and to the downs in the mediaeval period.
- A series of linear spring line villages typically lie at the foot of the valley slopes.
- Isolated Neolithic long barrows, Bronze Age round barrows and water meadow channels on the valley floor contribute to visible archaeology.

Landscape type 6: Greensand Terrace

This Landscape Type comprises the following Landscape Areas:
Character Area 6A Fovant Greensand Terrace
Character Area 6B Kilmington Greensand Terrace

- Flat aprons of land from which the dramatic chalk escarpments and greensand hills rise.
- Dominated by arable fields of Parliamentary enclosure.
- Large, geometric fields and open skies contrast with the smaller scale, enclosed landscape of the adjacent Greensand Hills.
- Upper Greensand geology giving rise to rich brown earth soils that have a high agricultural value.
- Land use is predominantly agricultural, including cereal cropping, grass rotations, dairy farming and stock rearing.
- Mixed woodland runs in discontinuous belts along the base of the chalk escarpment.
- Coniferous belts shelter dispersed and isolated farmsteads.
- Settlements tend to be at the interface with, or within, the Greensand Hills.
- General absence of prehistoric earthworks.
- Long views which are also the setting of views from the escarpments and hills.

Landscape type 7: Greensand Hills

This Landscape Type comprises the following Landscape Areas:
Character Area 7A Donhead - Fovant Hills
Character Area 7B Penselwood - Longleat Hills

- Upper Greensand is exposed as a band between the older clays and younger chalk between Mere and Wilton; elsewhere the hills overlook the Greensand Terraces.
- The Greensand typically forms upstanding ridges and hills that have been eroded by tributaries of the major rivers into a series of rounded knolls and deep valleys
- Hills and ridges support a large proportion of woodland, both deciduous and coniferous.
- Extensive woodlands 'hide' recreational development.
- Country houses and estates, some very large and spreading across the Greensand Terraces, are set within landscaped parkland, and contribute to the scenic beauty of the area.

Fig. A.3.1: A landscape of greensand hills

- Distinctive patterns of settlement include villages hidden in the shelter of the deep valleys.
- Fortifications are strategically located on the hilltops.
- Ancient, narrow sunken lanes wind their way through the hills.
- Small and irregular fields characterise areas of agricultural land use.
- Meadows and wet woodland are typical of the valley floors.

Landscape type 8: Rolling Clay Vales

This Landscape Type comprises the following Landscape Area:
Character Area 8A The Vale of Wardour

- Predominantly clay vale occupying a series of eroded anticlinal axes between the chalk downlands.
- Varied underlying geology with many different geological exposures leading to outcrops of hard rock.
- A mixed agricultural landscape with small-scale fields of lush improved pasture and arable with water meadows on the valley floor.
- Wooded character, with broadleaf and mixed woodland and copses (some of ancient origin) scattered across the Vale, reinforced by bushy hedgerows bounding most fields.
- Layout of fields, farms and villages illustrate the pattern of mediaeval settlement, clearance and farming.
- A predominantly enclosed landscape, with close views limited by hedges, and frequent ups and downs resulting from the varied geology.
- Narrow, twisty lanes.
- Rivers and their tributaries meander through the vale.
- A further sense of enclosure is provided by the surrounding upland landscapes.
- Villages dispersed over the floor of the vale.

Planning in the AONB: the statutory planning process and dark night skies

Planning authorities and AONBs

1. Appendix A.1 (Statutory designation of Areas of Outstanding Natural Beauty) describes the statutory background to the establishment of Areas of Outstanding Natural Beauty. This Appendix describes the statutory planning framework within which an AONB operates.

2. AONBs are not planning authorities. The local authorities that operate within an AONB boundary are responsible for planning policies and decisions (i.e. they are the local planning authorities (LPAs)), with the AONB being a consultee. In the case of Cranborne Chase AONB, this meant working with nine different local authorities until 31 March 2019, and seven thereafter. These are:

Unitary authority[1]	
Wiltshire Council	
County Councils	**District Councils**
Dorset[2]	East Dorset
	North Dorset
Hampshire	New Forest
Somerset	Mendip
	South Somerset

3. These local authorities are members of the AONB's Partnership Board. As such, they share responsibility for adopting[3] the AONB's five-year management plan. In 2005, they adopted a Planning Protocol which sets out the consultation arrangements with the AONB on policy formulation and planning applications. This Protocol was refined in 2006, and has been in operation since then.

4. Parish or town councils operate at the level below district (or unitary) authorities. These will be invited to comment on planning applications in their local area by their LPA. They also contribute to the preparation of Neighbourhood Development Plans (NDPs), which give communities direct power to develop a shared vision for their neighbourhood and shape the development and growth of their local area. The NDPs can be used to set planning policies that are relevant when determining planning applications. Neighbourhood planning is not a legal requirement but a right that communities in England can choose to use[4]. In Cranborne Chase AONB, seven parish councils have to date formulated NDPs, though some require approval via a local referendum.

[1] Many parts of England have two tiers of local government: county councils, and district, borough or city councils. In other parts of the country, there is just a single unitary tier of local government which provides all local services. County councils are responsible for education, transport, planning, fire and public safety, social care, libraries, waste management, and trading standards. District councils are responsible for refuse collection, recycling, council tax collections, housing, and planning. Unitary authorities are responsible for all of these functions.

[2] Dorset Council became a unitary authority on 1 April 2019, taking on the functions of East and North Dorset District Councils.

[3] Under UK legislation (The Countryside and Rights of Way Act 2000), the AONB Management Plan is considered to constitute the partner local authorities' policies for the AONB.

[4] NDPs are subject to a formal consultation process, and are subject to examination by an Independent Examiner. A Referendum of the local community is also undertaken, after which the NDP is 'made' by the relevant LPA.

The seven parishes are Bourton, Broad Chalke, Fontmell Magna, Hindon, Motcombe, Pimperne and Tisbury. A further two parishes that lie mostly outside but are on the edge of the AONB – Shaftesbury and Blandford – are also preparing NDPs.

The statutory planning process

5. This AONB works in partnership with its LPAs. In particular, the AONB team can contribute positively to landscape matters and the statutory role of 'conserving and enhancing natural beauty'. In this way, the AONB inputs on issues related to the conservation, management and enhancement of the protected landscape, which the LPAs do not have the staff capacity to provide. It does so at both the policy formation and the development management stages. The AONB does not have an enforcement role.

6. The LPAs of the AONB have adopted their Core Strategies / Local Plans and are currently embarking upon reviews of their housing strategies in response to the UK Government's concerns about the availability of dwellings. These Core Strategies / Local Plans are the primary planning policy documents for the coming 10 to 15 years. Therefore, it is important that these policies address AONB topics clearly and appropriately, including those pertaining to preserving dark night skies and preventing light pollution.

7. The *National Planning Policy Framework* (NPPF) became the primary governmental planning policy guidance in March 2012[5] (subsequently revised in 2018 and again in 2019 – see paragraph 8 below). The Framework makes clear there is a general presumption in favour of sustainable development, but policies that are more restrictive apply to AONBs. There is clear support for the protection of AONBs, and great weight should be given to conserving landscape and scenic beauty. Furthermore, the guidance is to refuse planning permission for major developments in AONBs except in exceptional circumstances; and where there is a clear demonstration that they are in the public interest.

The planning system and dark night skies

8. On 24th July 2018, and again on 19th February 2019, the Government issued a revised version of the NPPF[6]. The revised NPPF includes the following paragraph (paragraph 180):

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

This represents a strengthening of the statement in the 2012 NPPF (paragraph 125), which stated:

> *By encouraging good design, planning policies and decisions should limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.*

[5] Department for Communities and Local Government, National Planning Policy Framework, HMSO, March 2012

[6] Ministry of Housing, Communities and Local Government National Planning Policy Framework, HMSO, July 2018

9. The revised NPPF also gave greater weight to 'conserving and enhancing landscape and scenic beauty in National Parks…and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to these issues.' While not giving greater specific emphasis to light pollution or tranquillity when compared with the 2012 version, governmental policy has remained consistent in emphasising the protected status of AONBs and National Parks.

10. Although National Parks and AONBs have equal protected status, the former are local planning authorities, while AONBs are not. This simplifies planning processes for National Parks in comparison with AONBs.

11. Locally, the Partnership Board of Cranborne Chase AONB endorses Planning Position Statements so that the likely view of the AONB on a subject is readily available. The AONB's professional staff provide Good Practice Notes. Both groups of documents help inform planning policy and decisions taken by the LPAs, or can be used by parish councils in commenting on planning applications or in considering their own NDPs. In this context, Cranborne Chase AONB has considered light pollution and dark night skies for over ten years. After commissioning a report from Entec UK Limited, *Dark Skies and Light Pollution Study*, published in 2007, a Position Statement on Light Pollution was produced, followed by Good Practice Notes (see below). Seminars were also held for planning staff, councillors, and local community groups, in parallel with a significant emphasis on public engagement (see Section G of this application).

12. The following are the position statements and good practice guidance produced by the AONB with reference to controlling light pollution and good lighting advice, and they are also attached as annexes to this appendix (publication month and year in brackets):

    Position Statement Number 1: Light Pollution (April 2008)

    Good Practice Note Number 7: Good External Lighting (January 2016)

    Good Practice Note 7a: Recommendations for Dark-sky compliant lighting on new builds and refurbishments – a developers' guide (April 2018)

    Good Practice Note 7b: Examples of Dark-sky type compliant lighting units for use on new builds and refurbishments, in and around the AONB area

AONB five-year management plan

13. Local authorities that have an AONB within their area must prepare and publish a management plan. This plan 'formulates their policy for the management of their area of outstanding natural beauty and for the carrying out of their functions in relation to it'[7], and is therefore relevant to the framework for planning policy and decisions. The relevant local authorities have chosen to prepare a single Management Plan for Cranborne Chase AONB, rather than each formulating a separate one, which is why the Board is referred to as the AONB Partnership Board. The Management Plan is reviewed every five years. Its implementation is steered by the AONB Partnership Board. The Partnership was an alliance of the nine LPAs until 31 March 2019 (i.e. those with a statutory duty to prepare the Plan), and representatives of other national and local organisations. From 1 April 2019, there are seven LPAs on the Board, as Dorset Council has become a unitary authority, taking responsibility for functions previously

[7] Countryside and Rights of Way Act 2000

operated by East and North Dorset District Councils.

14. Cranborne Chase AONB's Management Plan was first published in 2004, and ran from 2004 to 2009. It was reviewed in 2008 (running from 2009 to 2014), in 2013 (running from 2014 to 2019), and has recently undergone its third review, which will run from 2019 to 2024.

15. The contribution of dark night skies to the tranquillity and beauty of the AONB's landscape was recognised explicitly in the *2004–2009 Management Plan*. A stated objective was to '*support the protection of rural tranquillity, remoteness and dark night skies*'. It was also noted that '*Lighting associated with development already has an impact on the expanse of dark skies*'. *Position Statement Number 1* on Light Pollution was published during this period, in 2008. The AONB also commissioned a report from Entec UK Limited, published in 2007: *Dark Skies and Light Pollution Study*.

16. The *2009–2014 Management Plan* again recognised the '*dark night skies and tranquillity*' of Cranborne Chase AONB, as well as the continuing threats from development pressures. It however expanded upon this by referring to the specific effects of light pollution, with contributory factors cited as street and highway lighting, and the sideways and upward dispersion of light from a variety of sources.

17. In the *2014–2019 Management Plan*, the AONB clearly set out its intention to apply to become an International Dark Sky Reserve, stating that:

> *Tranquillity is important for our mental and physical well-being. It improves our quality of life. Power lines, masts, cars, roads, light pollution and building developments can erode the tranquillity that means so much to all of us. We want to ensure the dark starry skies of much of the AONB continue to exist and are appreciated. Security lights, floodlights and some street lighting can break into the darkness, lighting up the surrounding area. Some of this light is necessary in order to keep people safe. However, inappropriate lighting can waste energy and reduce landscape quality.*

18. As the Management Plan is approved and adopted by the AONB Partnership, this intention was supported and endorsed by the LPAs. The stated objective was that '*Dark Night Sky status is secured for the AONB*'. The associated policy was to '*Actively promote the benefits that Dark Night Sky status would bring to the AONB and surrounds to partners and communities, to encourage support for an application to the International Dark-Sky Association by end of 2016*'. The application was not made at the end of 2016, as the AONB decided to spend more time engaging local communities through events and education.

19. The *2019–2024 Management Plan* includes a chapter dedicated to Dark Night Skies, informed by the CPRE 'Night Blight' maps (which the AONB supported financially), and which is attached as a separate Appendix (H.1). This Management Plan, now adopted, is the policy of the partner local authorities. The chapter sets out the background and issues, the importance of Cranborne Chase's dark night skies to its special character, and our objectives for the next five years. All these objectives will be promoted and acted upon, irrespective of gaining International Dark Sky Reserve status. This is because we consider the quality of our night skies to be as much a part of our protected landscape as are its history, scenery and culture.

Annex: AONB planning protocols and position statements / good practice notes relevant to dark night skies

1. Planning Protocol
2. Position Statement Number 1: Light Pollution
3. Good Practice Note Number 7: Good External Lighting
4. Good Practice Note Number 7a: Good External Lighting. Recommendations for Dark-Sky compliant lighting on new builds 7 refurbishments in and around the AONB area
5. Good Practice Note 7b: Examples of Dark-sky type compliant lighting units for use on new builds and refurbishments, in and around the AONB area

Planning Protocol for the Cranborne Chase and West Wiltshire Downs Area of Outstanding Natural Beauty (AONB)

1.1 Purpose

This Protocol sets out how the AONB Partnership and local authorities will consider planning matters affecting the AONB.

1.2 Background

The Cranborne Chase and West Wiltshire Downs AONB Partnership's primary task is taking forward the objective of conserving the natural beauty of the landscape. AONB's are regarded as equivalent to National Parks in terms of their landscape quality, scenic beauty and their planning status. All public bodies and statutory undertakers must have regard to the purposes of AONBs in performing their statutory functions.

In 2004 the AONB Partnership produced a Management Plan for the AONB which sets out the overall vision, objectives and action plans for the area up to 2009. The Planning Protocol should be implemented having regard to the objectives and policies of the Management Plan.

1.3 Local Authority Planning Responsibilities

In summary the planning responsibilities of the local authorities are as follow;

County Councils

1. Preparation of Minerals and Waste Local Development Frameworks
2. Preparation of Structure Plans under the transitional arrangements of the Planning and Compulsory Purchase Act.
3. Determining planning applications for mineral extraction and related development, waste management.
4. Determining planning applications for the County Council's own development (e.g. roads, schools etc).
5. Provision of monitoring and survey information and advice to the Regional Planning Body on strategic issues and the conformity of Local Development Documents with the Regional Spatial Strategy.

County Councils are also responsible for the preparation of Local Transport Plans.

District Councils

1. Establishing planning policies and strategies through the preparation of Local Development Frameworks and supporting documents
2. Determination of the majority of planning applications for

- House extensions and alterations
- Residential development
- Employment, leisure and shopping development
- Engineering operations
- Telecommunication and energy schemes
- Agricultural buildings
- Change of use of land or a building

3. Raising objection/no objection on circular 18/84 applications (Crown Lands - includes Duchy of Cornwall development).
4. Also determining whether prior notification of design and siting is required for:
    - Telecommunication schemes under part 24 of the GPDO;
    - Agricultural buildings under part 6 of the GPDO.

1.4 The Planning Authority's role

The planning authority will

1. Invite comments or contributions in respect of all consultations on relevant planning policy documents which impact on the AONB. This will include inviting an appropriate representative of the AONB Partnership to be involved in relevant consultation events or Forum meetings which may be arranged. A list of planning policy documents is included within Appendix A1.
2. Make available a copy of the weekly planning application list for the AONB Manager within 7 days of publication.
3. Send a standard consultation to the AONB Manager inviting comments on all major[1] applications within the AONB or those which are likely to impact significantly on the AONB landscape character. A schedule of major applications is provided in Appendix A1.
4. Where appropriate, will consult the AONB team during pre-application discussions or in the preparation of development briefs.
5. Tale account of AONB matters and, where appropriate, will liaise with the AONB team regarding Planning Appeals and seek contributions on significant planning matters affecting the AONB.

1.5 The AONB Partnership's role

The AONB Partnership will;

1. Review and consider consultation documents prepared as part of the Local Development Framework preparation and other relevant documents. Where appropriate undertake further

[1] As defined in the General Development Procedure Order 1995.

consultation with relevant Local Authority and AONB officers and prepare and submit written comments to the Local Planning Authority within the given timescales.

2. Scan weekly planning applications lists and identify any relevant applications for comments. Where the AONB Partnership wish to comment on an application, such request should be made to the local authority within 7 days of the weekly list becoming available.

3. In consultation with appropriate case officers, landscape architects and urban designers, arrange site visits and submit comments on planning applications or consultations received from Planning Authorities that may have a significant impact on the character of the AONB within 21 days of the date of consultation (unless otherwise specified or agreed with the Local Planning Authority). The AONB Partnership understand that where responses are not submitted to the local authority within the specified time limit then they may not be taken account of in determining the planning application.

4. Where appropriate, will provide contributions towards Planning Appeals, where there are significant planning issues for the AONB.

5. Operate a scheme of delegation for providing comments on planning matters as set out in Appendix A2.

6. Work with local planning authorities to raise the profile of the AONB and develop tools which will aid policy formulation and decision making, such as landscape sensitivity/capacity, policy statements, and design guidance .

1.6 AONB Criteria

In considering planning matters the AONB Partnership will ensure that the primary concern of responses to the local authorities is the purpose of statutory designation of the AONB - the conservation and enhancement of the natural beauty of the landscape. In forming a view it will, however, also take account of the economic and social needs of local communities, where these are compatible with the conservation and enhancement of the landscape.

The Partnership will only concern itself with applications, or aspects of applications, which it considers are likely to raise significant planning issues for the AONB as set out above. These will mainly relate to major applications or those which would set an unacceptable precedent within the AONB.

The AONB unit will not generally respond to requests by members of the public or other organisations to comment on minor applications, unless they raise significant planning issues for the AONB.

The Cranborne Chase and West Wiltshire Downs AONB Partnership comprises a wide range of agencies from private sector to local government. As such, whilst comments made on behalf of the AONB Partnership are representative of the Partnership's views as a whole, the comments made will not necessarily be consistent with the views of individual organisations represented on the Partnership. Any individual organisation on the AONB Partnership may reserve the right to disassociate themselves from any particular comments put forward on behalf of the AONB Partnership from time to time, subject to their declared interests.

1.7 Agreement

This Protocol has been endorsed by the AONB Partnership Panel on 11th May 2005 and minor amendments agreed by the Planning Topic Group on 7th October 2005.

Signed on behalf of the constituent Authorities:

- Wiltshire County Council
- Dorset County Council
- Hampshire County Council
- Somerset County Council
- Salisbury District Council
- West Wiltshire District Council
- East Dorset District Council
- North Dorset District Council
- New Forest District Council
- Mendip District Council
- South Somerset District Council

Appendix A.1

Scope of consultations

Planning Policy

A. The protocol includes the following documents prepared in relation to Local Development Frameworks

Development Plan documents including;

- Core strategies
- Proposals Maps
- Generic Policies
- Area Action Plans
- Other topic based Development Plan Documents
- Structure Plans/Local Plans and modifications relating to them (prepared under the transitional arrangements)

Supplementary Planning Documents where these provide guidance relevant to part or all of the AONB (e.g. rural design)

Statements of Community Involvement

Sustainability Appraisals/Strategic Environmental Assessments (where there is considered by the local authority to be significant issues relating to the AONB)

B. The protocol covers related planning policy documents

- Landscape Character Assessments
- Village Design Statements
- Planning Concept Statements and Development Briefs
- Other Planning guidance produced which is of relevance to the AONB.
- Local Transport Plans

Planning Applications

The protocol will cover the following types of "major" planning applications received by local authorities;

- **Residential Development** - applications involving 10 or more dwellings (or where the number of dwellings is not indicated) or where the site is more than 0.5 Ha.
- **Other Development -** where the floorspace proposed is more than 1000 square metres or where the site is more than 1 Ha.
- **Minerals and Waste Management**: All applications involving new or extended mineral extraction areas, or the restoration of old or existing sites, or any site used for the management of waste (including Review of Mineral Permissions (ROMPs))

- Consultation should also take place on other applications which are likely to have a significant impact on the AONB Landscape Character.

Appendix A.2

Scheme of Delegation

The AONB Partnership Forum delegates to the AONB Team

- Responsibility for deciding whether a consultation warrants a response on behalf of the Partnership.
- Responsibility for deciding if a consultation should be referred to the Planning Topic Working Group. In general only consultations which give rise to significant issue(s) of principle or policy for the AONB or have a significant impact on the landscape character of the AONB should be referred.
- Responsibility for providing a response on consultations not referred to the Planning Topic Working Group

Cranborne Chase and West Wiltshire Downs
Area of Outstanding Natural Beauty

PLANNING & TRANSPORTATION TOPIC GROUP
19th September 2006
Paper A

The Planning Protocol: Review and Refinement

1. **Purpose:** To review and refine the operation of the Planning Protocol.

Review

2. **Background:** The initial eight months of operation of the Protocol was discussed at the June 2006 Topic Group meeting. The Protocol was circulated, after endorsement by the Partnership Panel, for formal signature by the individual Planning Authorities on 18th October 2005. All have been returned signed except those from North Dorset, South Somerset, and Mendip District Councils.

3. **Activity to Date:** After an initial batch of Transportation policy documents and Statements of Community Involvement much of the activity has related to planning applications. There have, however, been substantial policy documents relating to Minerals and Waste strategies and development control policies to digest and provide responses during the past three months. That has also coincided with a review and response to the South West Draft Regional Spatial Strategy, both jointly with the South West Protected Landscapes Forum on matters relating to all protected landscapes and separately on matters that appear to be specific to this AONB. Time constraints have meant that I have had to rely on a generic response from the South East AONBs Planning Officers Meeting as our input to the South East Draft RSS. In addition, a couple of the constituent LPAs have put forward Local Development Documents for consideration, I have been invited to contribute to a policy review for a particular locality, and I have recently received a draft development brief to comment upon. The planning policy administrative arrangements mean that generally there is an acknowledgement of a contribution / response, and often that includes an invitation to a discussion / forum session.

4. **Planning Applications:** A small number are identified from weekly lists and newspaper advertisements whilst most of the major ones are sent directly from the DC teams. Some of the proposals sent through fall well below the threshold but in most of these cases I sense the Case Officer is seeking landscape information, guidance, and comment to assist with the assessment of a proposal that is not quite as straight forward as it might initially appear. There have been a couple of significant applications that have been picked up from weekly lists, however only one LPA regularly forwards the weekly list by e-mail so others may have been missed. In discussions with individual Case

Officers there is a general awareness of the AONB but knowledge of the details of the Protocol is relatively sparse.

5. Requests for comments on applications are almost invariably open-ended with no indication whether or not there are specific areas or topics where the Case Officer would particularly like some assistance or AONB view, assessment, or opinion.

6. Responses to applications are frequently discussed within the AONB team, particularly to ensure wider Management Plan matters are not overlooked. Nevertheless, consultation responses generally focus on landscape issues and tend to fall into four categories:
   i. Matters for the case officer to consider
   ii. Suggesting that the application needs professional landscape input
   iii. Specific advice in relation to AONB or landscape matters
   iv. Recommendations

7. Although many of the responses offer advice regarding additional information to aid the decision making process or potential conditions to help improve the integration of the development in the local environment there are occasions when refusal has been unequivocally recommended. Some applications have been supported where, on balance, a use or development meets aims of the AONB Management Plan and does not prejudice the reasons for the AONB designation. Possibly the most taxing applications are those on the borders or in the setting of the AONB.

8. **Feedback:** Where a Case Officer has passed the AONB comments to the applicant there have generally been two responses:
   i. commissioning of a landscape appraisal
   ii. office / site meeting

   Generally, however, there is no indication to what extent the response has been helpful or incorporated in the decision on the application. The assumption that all comments have been taken on board is unlikely to be well founded! Only one notification of the decision has been received. The team is, therefore, unable to assess the usefulness or effectiveness of its contributions.

9. Matters that are of particular concern to the AONB team are the lack of acknowledgement or response to
   i. a specific recommendation [eg to seek specified amendments to a scheme, to require landscape assessments and proposals prior to making a decision, to impose conditions, or to refuse the application as submitted]
   ii. an offer / request to put the AONB view to the Planning Committee.

   In the latter situation the AONB seems not to have been afforded the opportunity to address the Committee given to applicants and other third parties.

10. Furthermore, there has been no reference back to the AONB team when the Case Officer has advised the Planning Committee / Chief Officer contrary to

the AONB position / recommendation. In this context the authority could be perceived to be in breach of its duty under section 85 of the Countryside and Rights of Way Act 2000: “In exercising or performing any functions in relation to, or so as to effect, land in an area of outstanding natural beauty, a relevant authority shall have regard to the purpose of conserving and enhancing the natural beauty of the area of outstanding natural beauty.”

11. There has also been a case where the local Planning Committee went against the Case Officer’s advice [which included the AONB advice against approval on a number of grounds], but as the AONB were not made aware of the Committee date we were not able to present the AONB position in person in support of the Case Officer.

Refinement

12. Established policy consultation procedures appear to be working effectively. However, in connection with planning applications there seem to be a number of areas where the parties could undertake mutually beneficial actions:
    i. provision of information
    ii. greater focus on areas of uncertainty or concern
    iii. interaction immediately prior to the decision making

13. **AONB actions:** The AONB team can provide the following to Case Officers / Development Control Team administrators:
    i. individual copies of the Protocol
    ii. individual copies of ‘Sustaining Landscape Character’
    iii. a mail back card to show comments have been received by the Case Officer and the target date for the decision

14. The responses from the AONB could be structured to reflect the differing levels of importance from the AONB point of view:
    i. observations on matters that the Case Officer may or may not be already aware of
    ii. relevant information [eg in relation to landscape character, the appropriateness of landscape treatments, etc]
    iii. advice on specific issues and topics relating the AONB or the AONB staff expertise
    iv. recommendations from the AONB or the special professional experience of the AONB staff

15. **LPA actions:** The Local Planning Authorities could provide:
    i. an AONB tick box on application forms, application descriptions, and the planning register [in the way that is done for applications in Conservation Areas]
    ii. an indication on application descriptions and reports that the AONB has provided comments and / or recommendations
    iii. quarterly lists of Planning Committee dates, times, and meeting places to the AONB office
    iv. e-mail weekly lists of applications to the AONB office

v. copies of decision notices on applications where the AONB has provided comments

16. Applications sent to the AONB could identify the matters where the Case Officer would most appreciate information, advice, and [if appropriate] recommendations.

17. On the occasions when the Case Officer is inclined not to adopt the AONB advice and recommendations contact is made with the AONB team prior to finalising the report to Chief Officer / Committee to seek to obtain a shared understanding.

18. The LPAs afford the AONB a 'right to be heard' at planning committees in connection with applications where the AONB has provided a written or e-mail response.

Conclusions

There are a number of relatively simply refinements to the Protocol that can make the operation of it, particularly in relation to Development Control, much more focussed and effective.

19. **Recommendation:** The Topic Group endorses the review and the refinement proposals to enhance the operation of the Protocol in connection with development control matters.

Richard Burden
Landscape and Planning Advisor
11 9 06

Cranborne Chase and West Wiltshire Downs

Area of Outstanding Natural Beauty

Position Statement Number 1

Light Pollution

The Cranborne Chase and West Wiltshire Downs Area of Outstanding Natural Beauty derives much of its beauty from its qualities of tranquillity, remoteness and cultural heritage. Light pollution has the potential to erode and destroy that tranquillity and sense of remoteness.

It is, therefore, considered appropriate that all artificial external lighting within its borders, or within the setting of the AONB, should be muted, screened, and the minimum required.

To accord with this aim, no external lights should be erected or installed in, or within the setting of, the AONB unless:

(a) They can be shown to be essential for security or safety, and the minimum necessary to achieve it;

(b) They are directed downwards and designed or shielded to prevent upward, sideways, and outward spillage;

(c) They give a light whose colour and intensity are appropriate for the wider setting;

(d) They do not highlight a structure or feature that would have an adverse visual impact on the surrounding landscape; and

(e) They utilize the most energy- and pollution-efficient equipment that is reasonably available.

In order to meet these aims where existing lighting is identified as having an adverse effect on the character of the AONB, the AONB Partnership will encourage and facilitate the removal or modification of the lighting units.

Modifying and installing external lighting that meets the above criteria will help to ensure that the AONB's special character and attractive environment will not be spoilt by sky glow or intrusive light.

At its meeting on 7th February 2008 the AONB Partnership Panel endorsed the following:

> The Partnership Panel encourages all Local Authorities to make use of the Statement when dealing with matters concerning lighting within the AONB.

RFB 7 11 07 / 23 4 08

Cranborne Chase
Area of Outstanding Natural Beauty

FACT SHEETS & GOOD PRACTICE NOTES

Number 7

GOOD PRACTICE NOTE

GOOD EXTERNAL LIGHTING

Background

This AONB Partnership has been concerned about avoiding and reducing light pollution for a considerable period of time. The first Position Statement produced by the AONB Partnership focussed on control of light pollution through the prevention of upward and sideways escape of light from external lights.

This AONB is keen to achieve International Dark Sky Status. It is also well aware that good lighting does not create light pollution and can frequently provide better illumination than poorly designed schemes.

Good Lighting

Good lighting delivers the right amount of light, where it is needed, and when it is needed. In many cases lighting does not need to be on constantly. Significant economies can be made by fitting motion sensors so that lights only come on when activity likely to need light is sensed. Simple 'curfew' periods when lights are switched off, such as very late evening and early morning, can reduce amounts of wasted light. In areas where some lighting is appropriate, a programme of dimming lights can operate at periods where there is minimal use of the location. All these arrangements help reduce the potential for light pollution, reduce the harmful effects of extended periods of 'daylight' on wildlife and humans, and not only reduce costs but also save energy.

Common Issues

Lighting that is in the public domain has been receiving close attention in recent years. Many highway lighting authorities have taken considerable steps to install flat glass units, parallel with the surface to be lit, which have internal optics designed to illuminate the street or highway without emissions above the horizontal or excessive stray light around the column. This makes the light source itself invisible other than at very close quarters.

External domestic lighting tends to be chosen for security purposes, although it is often too bright for the lighting task, left on constantly and directed so that it can dazzle potential witnesses to any misdemeanour while providing the criminal with useful shadows to hide in. Unfortunately, such lighting usually involves the simple and cheap floodlights available in DIY stores, which also cause light nuisance into neighbouring properties, glare into the eyes of walkers and car drivers and add to pollution of the night sky.

Farmyard lighting is often a larger-scale version of domestic 'security' lighting. However, the light output of the lanterns should be proportionate to the task and it is better to install multiple, flat glass asymmetric lower lumen lanterns around the yard than try to blast the area with a single, high power lantern from one end. In addition there is light pollution from skylights in the roofs of large farm buildings.

Between the private and public domain lighting there is the substantial area of retail and shopping car park lighting. Much of their negative effects would be negated by using the latest lighting fittings that do not allow upwards or sideways dispersion of light.

Domestic / local scale

Good lighting at a domestic scale is clearly covered in the 'Guidance Notes for the Reduction of Obtrusive Light'* published by the Institution of Lighting Professionals (ILP). The importance of aiming lights so that they light only the areas intended to be illuminated is emphasised.

When considering lighting schemes the manufacturers can provide contour diagrams of light intensity which demonstrate the capabilities of a particular light fitting. As has already been mentioned, flat glass, sometimes asymmetric fittings are the most appropriate for lighting entrances, driveways, and routes. They are also likely to be effective, as smaller scale units, for 'security' lighting.

Units that are liable to cause pollution are simple and traditional bulkhead and lantern style lights that emit light in all directions. Similarly wall lighters, that are currently popular with designers, have their place when they direct light downwards and illuminate a surface, for example a path to the door of a hotel or restaurant. However, when they point light sideways and upwards, creating significant light pollution, not only is there the danger of glare to people using the area but there may be dark shadows on the ground beneath, which creates a hazard.

Sports lighting

Sports lighting is gradually taking over from road lighting as the most significant source of light waste and skyglow in the United Kingdom. Like other kinds of lighting it can cause skyglow, light intrusion, glare, and unnecessary sideways light dispersion. It is comparatively easy to direct sports lighting onto the area to be lit using the technical capabilities of lighting units. Correct angling and

shielding are vital if pollution, light nuisance and waste are to be avoided, and for small areas such as tennis courts or a single football pitch flat glass units are necessary.

Good design and effective implementation are both important. A good example of an unobtrusive sports lighting scheme in a rural area, almost invisible from any distance away, is that at Ringwood Football Club; unfortunately many other clubs demonstrate bad lighting.

A key point to note with sports lighting is that higher levels of performance have higher standards of illumination. It would not, therefore, be sensible or cost effective to apply the standard for a Premier League stadium to a school football pitch.

Effectiveness

The probability is that cheaper lighting units will not perform as well and energy is likely to be wasted. Not only should a scheme be demonstrated to be effective at the planning stage but it also needs to be checked after installation to ensure that replacement, less effective, units have not been used or that the correct units have not been installed incorrectly.

Correctly installed good lighting simply means that the light is directed where it is needed rather than being dissipated and wasted. Walls lights and bollards are other examples where correct internal fittings directing light downwards can not only provide safe lighting on steps and walkways but also provide pleasing aesthetic effects. Without the correct fittings glare and dazzle can occur, which puts the users of the areas at risk.

Types of light

Technology is moving from tungsten lighting to halogen lighting and onwards to LED lighting. LED lighting is particularly attractive because of its low energy use, low cost, longevity and other positive factors. However, there are some complications relating to the type of light that is emitted. Often the light is described by its light temperature, which is measured in degrees Kelvin. Lights which are described as ‘daylight’ are often in the 5000-6000 degrees Kelvin range which is blue-rich, and often too bright for the task; there are concerns that not only does the excessive light bounce from the ground and from vegetation, and therefore dissipate upwards causing pollution, but also has negative effects on wildlife. A ‘warm white’ light in the region of 3000 degrees Kelvin is currently regarded as the most user friendly light, moving away from the orange tinge of traditional tungsten lights but not having the problems of blue/white lights of the so-called ‘daylight’ bulbs. There is, however, a technical issue because the daylight bulbs appear to be rather easier to produce and therefore there is a tendency to use them because of their lower cost.

Lighting schemes should not be based entirely around the cost savings of conversion to LED. Consideration should be given to the benefits of using the

more appropriate light spectrum of the warm white lights in the 3000 degree Kelvin bracket.

Greater detail on light fittings can be found in Bob Mizon's paper 'Lighting: types, qualities, and impacts March 2016'.

AONB Recommendations

This AONB **recommends,** in order to avoid light pollution, that all external lights are explicitly authorised by the local planning authority and that the authorisation should comply with the AONB Position Statement on Light Pollution. This Good Practice Note provides greater detail and elaborates on how to achieve good lighting, good security, and minimal light pollution.

As the range and availability of light fittings is continuously evolving, the AONB team advises that an internet search of the major manufacturers is made when a lighting scheme is being considered. Reputable manufacturers and suppliers will provide plans of light contours, so that the likely light distribution pattern can be assessed.

This AONB also recommends that:

- All old-fashioned 'security' lights should be phased out and all new ones should be of the horizontally mounted flat glass asymmetric type. Old ones should be renewed at the earliest opportunity.
- Lighting should illuminate only the area or premises to be lit, and nowhere else.
- Bulkhead and lantern style lights should have internal baffles and/or external shields fitted to avoid upwards and sideways displacement of light, or alternative, well-directed types of units should be fitted.
- All planning applications that involve lighting should identify the lighting layout and the type in their submitted documents.
- If a development does require lighting and the appropriate details are not provided then the planning authority should require these details before making a decision on the proposal.

RFB 25 01 16

* www.theilp.org.uk/documents/obtrusive-light

Cranborne Chase
Area of Outstanding Natural Beauty

FACT SHEETS & GOOD PRACTICE NOTES

Supplement to
GOOD PRACTICE NOTE: GOOD EXTERNAL LIGHTING

Number 7a

Recommendations for Dark-Sky compliant lighting on new builds & refurbishments, in and around the AONB area

DEVELOPERS' GUIDE

Introduction

In order to obtain and retain Dark-Sky status with the International Dark-Sky Association (IDA), compliance with their requirements for the control of upward light is essential for both public and private lighting, including domestic fittings. Correct lighting choices for new builds will therefore aid the AONB's situation and be part of its ongoing Light Management Plan (LMP).

Requirements for public street lighting are dealt with via separate specific Planning & Highway consents. The objective is to eliminate upward and sideways dispersion of light that causes light pollution. In and around this Area of Outstanding Natural Beauty the aim is to achieve the standards of environmental lighting zone E1. The 'domestic' situation is covered below.

Basics

Any manufacturer's or supplier's reference to fittings being 'Dark-Sky friendly', or similar wording, shall **not** be taken as an assumption of acceptability, unless in full compliance with the following requirements.

The rules are based on two characteristics of light sources, namely :-

1) Colour temperature, measured in degrees Kelvin (K).

> **The maximum permitted colour temperature of light sources shall be 3000K.** (This is similar to the warm-white look of a conventional tungsten lamp). Lamps marketed as 'daylight' or 'cool white' are very blue-rich (around 5000K to 6000K) and may appear more obtrusive as well as being poor for human health and wildlife. They are, therefore, not acceptable.

2) Light output measured in Lumens (Lm).

If fitted with light source(s) above ***500Lm*** in total:-

Exterior lighting fittings must be fully shielded
(i.e. emit no direct light whatsoever above the horizontal).

If ***500Lm*** total or less, shielding is not essential, but for the spirit of the LMP, shielding is recommended in whole or in part.

Light Sources

In terms of modern light sources, LED types are assumed to be the norm. They will be of high efficacy compared with older lamp types. For example, the equivalent light output of an 'old fashioned' 40 watt bulb is in the order of 450 lumens. A modern LED lamp with a similar light output consumes around 4 – 6 watts. However, the stated lumen output shall be the limiting factor, not reference to low wattage.

Light switching should be via Passive Infra-Red (PIR) detectors with daylight sensing.

On the basis of the above, potentially suitable types are:-

A) ***<= 500lm total light output***

Porch Lights (& similar easily accessible fittings, from ground level to 2.5m)

- Lamp fitted within the canopy, cap uppermost
- Clear glazing (Not translucent or diffusing as this can scatter light upwards)
- Downward emitting light source wherever possible

There are many manufacturers of domestic type fittings and probably thousands of designs / styles readily available in the UK. Some manufacturers / importers appear to provide very similar models to a variety of DIY and wholesale outlets.

The following information does not identify or recommend any particular supplier or source, but shows some elements of lighting equipment considered essential for Dark-Sky locations and their immediate surroundings.

Traditional / decorative styles

The pendant style is preferred. This means the lampholder is mounted at the top of the fitting within the canopy. With LED type light sources this permits more options for use of downward emitting light sources, especially if a GU10 'downlighter' type lamp & lampholder can be used. There are very many design styles within this general arrangement.

Options for installing supplementary screening rings are also simplified.

1)

	**Typical decorative fitting, originally designed for 60w max. tungsten lamp, and now often found with Compact Fluorescent (CFL) types. Both dispersed light upwards and sideways.** **More recently used with LED source, which can be specified to have a downward light output.** **The relatively large canopy allows a screened lampholder to be fitted within it & creates potential for LED light source with control of upward light.**

2)

	**Another common decorative design.** **As shown, the fitting would <u>not</u> be acceptable.** **The smaller canopy is of little use for upward light control, but the top lampholder position facilitates adaptation.** **With a 'downlighter' GU10 type lamp, this could provide predominantly downward light output. Additional screening could further improve this.**

Note:
There are versions with **<u>bottom</u>** mounting brackets, but their upward pointing lampholders & lamps severely limit any light control options.
<u>These are **not recommended** at the present time.</u>

3)

	**Another common decorative design** **Typically only in the pendant style.** **Unacceptable with tungsten or CFL light sources.** **Adapted for a downward projecting LED light source and use of additional screening might make this option acceptable.**

Note:
There are variation of decorative styles 1 & 2 which are 'half' fittings with a metal backplate which mounts directly onto the wall, without the top fixing bracket. In general, with a top mounted lampholder / lamp and suitably sized canopy these may provide useful control of upward light.

'Bulkhead' Styles: Not Recommended!

4)

	**Common 'Bulkhead' style fittings scatter light in all directions.** **Very difficult to properly control light output, due to design and variety of possible installation positions.** **<u>Not permissible for new installations</u>**

Note: Painting the top section of glazing on these fitting types is not considered to be legitimate screening!

Contemporary / modern styles

5)

	**Contemporary design with LED downlight source provide well controlled lighting.** **Note: Commonly available 'Up & Down' lighting versions of this type of fitting are <u>not</u> compliant**

Note:
No fitting of this or similar type, which points upward is acceptable, even if fitted with a light source <= 500Lm.

For domestic fittings, light sources < 500Lm should normally be adequate.

B) ***> 500LM***

<u>Fully shielded fittings</u> with no direct upward light output are mandatory.

This applies to all types as indicated in section A above.

<u>All Floodlight fittings must:-</u>

- Be fully shielded.
- Be mounted horizontally in accordance with the manufacturer's requirements
- Have a fixing arrangement which is incapable of being tilted upwards.

6)

	**Modern LED 'Flat Glass' floodlight.** **Mounting arrangement is such that there can be no upward tilt & there is no direct light emitted above the horizontal in any direction.** **May be wall mounted, with a bracket arrangement which complies with above.**

The same requirements apply to any fitting which is of a 'street lighting' type, where used for private area lighting, i.e. it must:-

- Be of the 'Flat glass type'
- Be Mounted horizontally
- Emit no light above the horizontal

In the context of this and IDA documents, shielding generally refers to the light control of the lamp & fitting combined, which maximizes downward rather than all-round emission of light.

In the case of a floodlight, as above, the inherent design of light source, reflectors and enclosure, together with zero tilt, provides a fully shielded fitting, i.e. one emitting no direct light above the horizontal, in any direction.

Symbols used in text for Lumen limits:-

<=	less than or equal to
>	greater than

V2c 19.04.2018 - MRM / RB / MRM / RB

Cranborne Chase
Area of Outstanding Natural Beauty

FACT SHEETS & GOOD PRACTICE NOTES

Second supplement to
GOOD PRACTICE NOTE: GOOD EXTERNAL LIGHTING

Number 7b

Examples of Dark-Sky type compliant lighting units for use on new builds and refurbishments, in and around the AONB area

Introduction

In the UK, although there are various guidelines and recommendations concerning the provision of adequate light control, there is no official scheme of approval for 'Dark Sky Friendly' (DSF) or 'compliant' lighting fittings. This AONB's own Good Practice Notes (numbers 7 and 7a) are examples of guidelines.

The International Dark-Sky Association (IDA), based in the USA, identifies a few DSF fittings fully compliant with its requirements, but none appear to be available in the UK. Examples of their acceptable fittings are shown in Appendix 2. This AONB, alongside other dark sky areas of the UK, adopts the IDA criteria for DSF light fittings.

The IDA philosophy and criteria

- If there is no need for lighting, it should not be installed!

    1. Where lighting is provided, it should be sufficient to meet the local needs and no more. The light intensity, illumination levels provided and operation times must be determined by the requirements of the task and the nature of the landscape.
    2. Any lighting fixtures with an output above 500 lumens must be fully shielded, to ensure all light is emitted downwards and none above the horizontal (90 deg.).
    3. Unshielded fittings with small light sources below 500 lumens may be permitted in special circumstances, but proper upward light control is always best.
    4. The light source colour temperature must not exceeding 3000K (similar to the warm-white appearance of a domestic tungsten lamp).

- Switching controls can avoid permanent intrusion and light presence dusk-dawn. This is also a great energy saver. Proper switching is a requirement, incorporating one or more of the following:

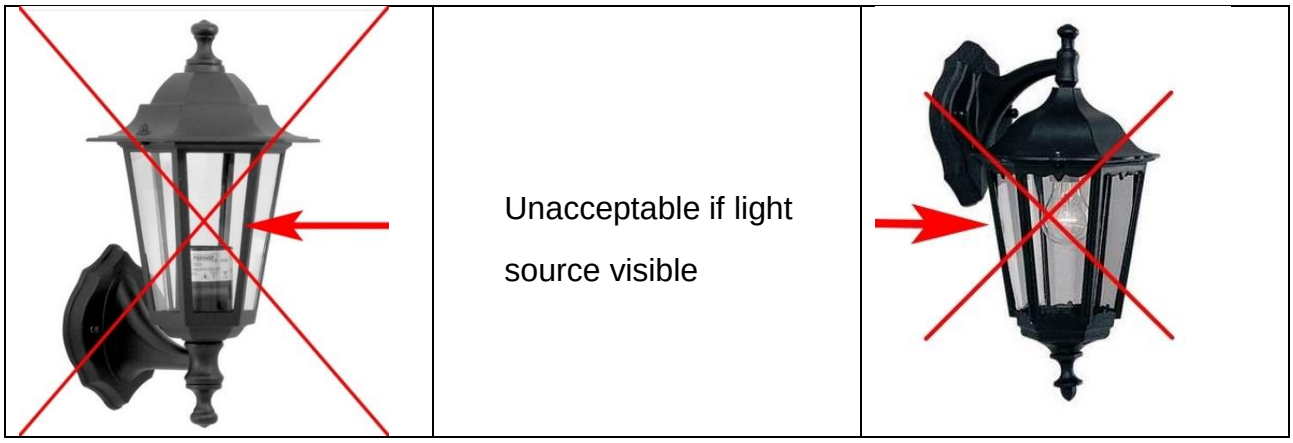
a) Passive infra-red (PIR) switching with integrated daylight sensing. This activates the light for a pre-set time only when the nearby presence of a person or animal is detected after dark. This is often a feature of porch / door lights and floodlights.

b) Using timer control to ensure lights are off unless needed, sometimes linked with dimming systems. (This is frequently done with street lighting nowadays.)

Switching may be built-in to fittings, or be done by separate control units for one or more lights.

Widely available light fittings: sorting the better from the unacceptable

- **Modern style fittings** abound, but very few are designed to throw light downwards only. A variety of compliant styles t are illustrated in Annex 1.
- **Heritage / decorative styles** are problematic in most cases because in the popular 'Coach' style, the lamp usually points upwards. This is illustrated in the example given below. (There are examples of some newer versions being developed, with the light source fitted in the canopy, but no fully compliant version has yet been found.)



- Pendant / top-fixed designs, with the lampholder in the canopy and the lamp pointing downwards potentially have better light control, but are no improvement on the coach style if fitted with a standard Tungsten or Compact Fluorescent lamp. By using a directional light source, such as a low power, wide-beam downward-pointing LED light source these can be potentially compliant. Fittings with 'downlight' GU10 LED lamps in the canopy could be compliant. (see the illustrated examples, page 7).
- Some **solar-powered lights** are available, but need to be carefully evaluated for light output and battery capacity / operation time. They still need proper light control to meet the criteria (<500ln or shielded or light directed downwards).
- **Bollards** can be useful, but require proper upward light control. Many designs do not employ adequate shielding and may use highly reflective metallic posts which become secondary sources of light.
- **Bulkhead lights** are frequently used on domestic and private dwellings, as a cost-effective option. However, the lamps used are often too bright, and diffusers cause light to be emitted above the horizontal.

- Over-bright fittings with poor optics lights are not dark-sky-friendly although their impacts can be mitigated by use of motion-sensitive switching.
- **Floodlights** are a huge problem. The vast majority of domestic and industrial fittings are of an unacceptable 'point and shoot' design. This is frequently exacerbated by poor installation, with units pointing across, rather than on to, the areas to be lit. Two examples are illustrated below.

Tungsten Halogen or LED versions of this type of area floodlight, whether with PIR control or not, are NOT suitable for new installations. They are typically tilted up, emitting significant amounts of light skywards

Turning this style of fitting down – dipping – so that no light is emitted above the horizontal is a way of mitigating existing lights.

- Floodlight fittings with the correct optics to be dark-sky-friendly are of the **flat-glass double-asymmetric** type and are available from major manufacturers. (Confusingly, some manufacturers use the term 'asymmetric' to mean the same thing.) Such units are designed for the glass face to be set horizontally, with the optics throwing the light beam forwards. Fittings such as this may still use high-intensity discharge lamps, but LED types are now widely available.
- Appropriate use of flat-glass asymmetric / double asymmetric fittings, mounted horizontally, must be the standard for modern, properly designed, domestic security, public area, and sports lighting.
- Commonly, floodlights use LEDs of 4000K 'neutral white' colour. There is further scope for confusion in use of the 'cool white' and 'daylight' terminology, which typically relates to lights >5000K. Some manufacturers can supply fittings with 'warm white' 3000K LEDs, but rarely seem to make this very clear in their advertising or technical data. **3000K** is the maximum for Dark Sky areas.
- Security lights should be **PIR controlled** and always need correct installation.

Manufacturers and suppliers

There are a large number of lighting manufacturers in the UK, and more in Europe and worldwide. Many global manufacturers nowadays have production facilities in China, and large quantities of generic units come into the UK from there. Fittings may be supplied direct from the manufacturers, but are often distributed by a wide range of secondary suppliers and wholesalers. Sometimes virtually identical fittings appear under different names.

Overall, relatively few seem to provide DSF light control and lamp power. Some however do show potential to be very dark-sky friendly, even if not fully compliant.

Appendix 1 to this note lists companies currently producing some DSF domestic-type and industrial fittings.

Light fitting examples

The following illustrations are of a variety of types of light fitting, based on data available in various catalogues and on websites, in order to guide developers to specific examples.

Illustrations are given of:

- Modern styles
- Heritage / decorative fittings
- Solar powered possibilities
- Bollards
- Floodlights

These are intended to be examples only, and have not been critically tested by the AONB, so are not recommendations.

More will be added as they are identified, in order to maintain an updated list of examples. The intention is to illustrate the principles of DSF fittings, so that other versions and styles may be identified and evaluated relative to the needs of individual projects, small or large.

In the case of new area and sports lighting proposals, it is AONB policy that they be competently designed to meet the requirements of Dark Skies and all other environmental considerations. Such situations will typically have high-output lamps or LED light sources. Specific lamp types and fittings are not included here, as they require proper selection and design by specialized lighting designers.

Examples of dark-sky-friendly light fittings
List updated 19/2/19

Modern style wall-mounted lights

		
Fleet GU10 Square	**Zinc Leto Adjustable (Aim Down)**	**Philips myGarden Virga LED**
	Black, S-Steel	Black, chrome
GU10 35w Max. Tungsten or	GU10 35w Max. Tungsten or	LED 3w
Toolstation	Toolstation	Homebase

		
Nordlux Tin Maxi	**Radius 9w LED Round**	**Antar GU10 Egg**
Black, Alum., S-Steel	Graphite	Black
GU10 Lamp Tungsten or LED	3 x LED	GU10 lamp Max. 25w Tungsten 10w LED
Homebase	Homebase, YESSS	Homebase

		
Integral-LED Pathlux Brick 3w	**Lumenlights Pema LED**	**Integral-LED Pathlux Step**
Dark-grey, White	Anthracite, Silver-grey, White	Dark-grey, White
LED 3w 150Lm 3000K IP65	LED 3.3w 120Lm 3000K	LED 2.2w 90Lm 3000K IP65
Homebase, Integral-LED	Lumenlights Ltd,	Integral-LED,

		
Firstlight Colt PIR	**Lumenlights Pema LED Wall Light**	**Lutec Spril Medium**
S-Steel	Anthracite, Silver-grey, White	Anthracite
	LED 3.3w 120Lm 3000K	CREE LED 8x3w
	CEF	Lutec

		
Luceco LED Exterior Wall Light	**Gemini 20w LED PIR**	**Slip LED Aluminium Brick Light**
Grey	Graphite	Silver
3w LED 120Lm 3000K	LED 20w PIR (16 LED)	LED 3w
Luceco	Homebase	Screwfix

	
Nordlux Scorpius	**Nordlux Scorpius Maxi**
Black, Galvanized, Copper	Black, Galvanized, Copper
40w Max. E14 cap Tungsten or LED	60w Max. E27 cap Tungsten or LED
Homebase, Nordlux	Nordlux

Heritage-style wall lights

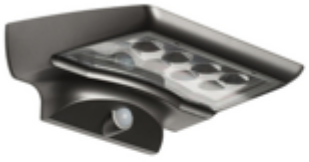
(All require suitable 'downward reflector-type lamp or LED COB light source)

These examples would only be DSF when fitted with light source as illustrated. The lamp / source should be top-mounted, therefore providing a downward light source, and/or be appropriately shielded (as in the USA examples illustrated in Appendix 2).

		
GU10 type lamp	**Reflector style lamp**	**Chip on Board (COB) LED source**
LED preferred	LED preferred	COB LEDs have the emitter chip and driver electronics as a single unit
Under 500Lm output 3000K	Under 500Lm output 3000K	
Wide beam best	Wide beam best	

		
Pendant style, option 1	**Pendant style, option 2**	**Pendant style, option 3**
Existing styles would need adaptation to meet dark skies criteria. The canopy should be deep enough to fully shield LED COB type light sources, or be fitted with a suitable lampholder to allow use of GU10 'downlight' lamp or reflector type. Fittings designed for a GU10 lamp would allow easy replacement. A flat LED COB source would allow for full shielding within the canopy.		

Solar-powered wall lights

	
Luceco LED 4.5w Solar Wall Light	**Snape LED Solar Flood with PIR**
	Matt black
LED 4.5w 40Lm PIR? 5000K	LED 400Lm
Homebase	Screwfix

Bollards

	
Spril 16 LED 22w Bollard	**Collingwood Bol LED Mains WW**
Black	Iroko Wood
LED 16 22w	LED 3x1w Warm White
Homebase	Collingwood Lighting

Floodlights

All fittings should be mounted horizontally, with the asymmetric / double asymmetric optical distribution throwing the light forwards, without any need for upward tilt.


Whitecroft Levanter
Graphite, Siver-grey
LED 35w 3045Lm 4000K Post / wall
Whitecroft

		
Thorn LED Fit Small	**Tamlite Explorer 40w**	**Whitecroft Euroflood MidiLED**
Light Grey	Grey	Grey
LED 45w 4500Lm 4000K Asmmetric	LED 40w 4800Lm 4000K	LED 52w 6000Lm 4000K
Thorn	Tamlite	Whitecroft

The above 3 units are all designed to be mounted flat, not upright as illustrated.

7c 2/4/19 – AS / RB / MM

Appendix 1

Examples of companies producing some DSF domestic-type and industrial fittings

The following companies produce DSF light fittings. Wholesalers, distributors and retail businesses are also included. Other producers and suppliers are available: this list is not exhaustive, and will be updated as necessary.

Producers / manufacturers

Collingwood Lighting Ltd
Firstlight Ltd
Integral-LED Ltd
Luceco Ltd
Nordlux Lighting
Philips Lighting plc
Searchlight Ltd
Tamlite Lighting Ltd
Thorn Lighting Ltd
Whitecroft Lighting Ltd

Wholesalers / Distributors / DIY outlets include

B & Q
City Electrical Factors (CEF) Ltd
Edmunson Electrical Ltd
Homebase
Screwfix
Toolstation
YESSS Electrical Ltd

IDA-approved fitting types available in the USA are shown below

Home Depot

Category: Store > Search by Retailer > Home Depot

View as: **Grid** List

8106-A138 Kirkham™ Post Mount

8106-A138-L Kirkham™ Post Mount LED

Aged Bronze Bell Shaped Dark Sky Outdoor Wall Lantern

Hampton Bay Essen Antique Copper Outdoor Wall Lantern

Hampton Bay Essen Antique Copper Outdoor Wall Lantern

LED Dark Sky Outdoor Wall Mount Light

Rio Champagne

Sky quality meter readings

Total readings, showing IDA quality level, Bortle class and title, and Cranborne Chase AONB landscape character type

Reading (arcmag sec^2)	IDA level	Bortle Class	Bortle Title	Landscape Character Type
21.1	Silver	4	Rural/suburban	1 Chalk Escarpments
20.86	Bronze	4	Rural/suburban	1 Chalk Escarpments
20.76	Bronze	4	Rural/suburban	1 Chalk Escarpments
20.96	Bronze	4	Rural/suburban	1 Chalk Escarpments
20.88	Bronze	4	Rural/suburban	1 Chalk Escarpments
20.9	Bronze	4	Rural/suburban	1 Chalk Escarpments
20.94	Bronze	4	Rural/suburban	1 Chalk Escarpments
21.2	Silver	4	Rural/suburban	1 Chalk Escarpments
21.18	Silver	4	Rural/suburban	1 Chalk Escarpments
21.18	Silver	4	Rural/suburban	1 Chalk Escarpments
21.15	Silver	4	Rural/suburban	1 Chalk Escarpments
20.84	Bronze	4	Rural/suburban	1 Chalk Escarpments
20.83	Bronze	4	Rural/suburban	1 Chalk Escarpments
21.89	Gold	1	Excellent Dark Sky Site	1 Chalk Escarpments
20.88	Bronze	4	Rural/suburban	2 Open Chalk Downland
20.93	Bronze	4	Rural/suburban	2 Open Chalk Downland
20.91	Bronze	4	Rural/suburban	2 Open Chalk Downland
21.03	Silver	4	Rural/suburban	2 Open Chalk Downland
20.98	Bronze	4	Rural/suburban	2 Open Chalk Downland
21.02	Silver	4	Rural/suburban	2 Open Chalk Downland
21.04	Silver	4	Rural/suburban	2 Open Chalk Downland
21.03	Silver	4	Rural/suburban	2 Open Chalk Downland
21.07	Silver	4	Rural/suburban	2 Open Chalk Downland
20.96	Bronze	4	Rural/suburban	2 Open Chalk Downland
20.93	Bronze	4	Rural/suburban	2 Open Chalk Downland

Reading (arcmag sec^2)	IDA status	Bortle Class	Bortle Title	Landscape Character Type
21.02	Silver	4	Rural/suburban	2 Open Chalk Downland
21.03	Silver	4	Rural/suburban	2 Open Chalk Downland
20.97	Bronze	4	Rural/suburban	2 Open Chalk Downland
20.91	Bronze	4	Rural/suburban	2 Open Chalk Downland
20.92	Bronze	4	Rural/suburban	2 Open Chalk Downland
21.05	Silver	4	Rural/suburban	2 Open Chalk Downland
20.78	Bronze	4	Rural/suburban	2 Open Chalk Downland
21.01	Silver	4	Rural/suburban	2 Open Chalk Downland
21.06	Silver	4	Rural/suburban	2 Open Chalk Downland
21.1	Silver	4	Rural/suburban	2 Open Chalk Downland
21.15	Silver	4	Rural/suburban	2 Open Chalk Downland
21.07	Silver	4	Rural/suburban	2 Open Chalk Downland
21.3	Silver	3	Rural Sky	2 Open Chalk Downland
21.31	Silver	3	Rural Sky	2 Open Chalk Downland
21.4	Silver	3	Rural Sky	2 Open Chalk Downland
21.37	Silver	3	Rural Sky	2 Open Chalk Downland
21.75	Gold	1	Excellent Dark Sky Site	2 Open Chalk Downland
20.9	Bronze	4	Rural/suburban	2 Open Chalk Downland
20.81	Bronze	4	Rural/suburban	2 Open Chalk Downland
21.05	Silver	4	Rural/suburban	2 Open Chalk Downland
20.9	Bronze	4	Rural/suburban	2 Open Chalk Downland
20.67	Bronze	4	Rural/suburban	2 Open Chalk Downland
20.73	Bronze	4	Rural/suburban	2 Open Chalk Downland
20.83	Bronze	4	Rural/suburban	2 Open Chalk Downland
20.72	Bronze	4	Rural/suburban	2 Open Chalk Downland
20.78	Bronze	4	Rural/suburban	2 Open Chalk Downland
20.67	Bronze	4	Rural/suburban	2 Open Chalk Downland
20.63	Bronze	4	Rural/suburban	2 Open Chalk Downland

Reading (arcmag sec^2)	IDA status	Bortle Class	Bortle Title	Landscape Character Type
20.73	Bronze	4	Rural/suburban	2 Open Chalk Downland
20.86	Bronze	4	Rural/suburban	2 Open Chalk Downland
20.86	Bronze	4	Rural/suburban	2 Open Chalk Downland
20.9	Bronze	4	Rural/suburban	2 Open Chalk Downland
21.02	Silver	4	Rural/suburban	2 Open Chalk Downland
21.15	Silver	4	Rural/suburban	2 Open Chalk Downland
21.19	Silver	4	Rural/suburban	2 Open Chalk Downland
21.18	Silver	4	Rural/suburban	2 Open Chalk Downland
21.27	Silver	4	Rural/suburban	2 Open Chalk Downland
21.1	Silver	4	Rural/suburban	2 Open Chalk Downland
21.02	Silver	4	Rural/suburban	2 Open Chalk Downland
20.91	Bronze	4	Rural/suburban	2 Open Chalk Downland
20.99	Bronze	4	Rural/suburban	2 Open Chalk Downland
21.02	Silver	4	Rural/suburban	2 Open Chalk Downland
20.94	Bronze	4	Rural/suburban	2 Open Chalk Downland
20.88	Bronze	4	Rural/suburban	2 Open Chalk Downland
18.62	Below min	6	Bright Suburban Sky	2 Open Chalk Downland
20.7	Bronze	4	Rural/suburban	2 Open Chalk Downland
21.09	Silver	4	Rural/suburban	2 Open Chalk Downland
20.92	Bronze	4	Rural/suburban	2 Open Chalk Downland
20.9	Bronze	4	Rural/suburban	2 Open Chalk Downland
21	Silver	4	Rural/suburban	2 Open Chalk Downland
20.78	Bronze	4	Rural/suburban	2 Open Chalk Downland
20.88	Bronze	4	Rural/suburban	2 Open Chalk Downland
21.01	Silver	4	Rural/suburban	2 Open Chalk Downland
21	Silver	4	Rural/suburban	2 Open Chalk Downland
21.08	Silver	4	Rural/suburban	2 Open Chalk Downland
20.96	Bronze	4	Rural/suburban	2 Open Chalk Downland

Reading (arcmag sec^2)	IDA status	Bortle Class	Bortle Title	Landscape Character Type
20.96	Bronze	4	Rural/suburban	2 Open Chalk Downland
20.93	Bronze	4	Rural/suburban	2 Open Chalk Downland
20.94	Bronze	4	Rural/suburban	2 Open Chalk Downland
20.95	Bronze	4	Rural/suburban	2 Open Chalk Downland
21.01	Silver	4	Rural/suburban	2 Open Chalk Downland
20.91	Bronze	4	Rural/suburban	2 Open Chalk Downland
20.97	Bronze	4	Rural/suburban	2 Open Chalk Downland
21.03	Silver	4	Rural/suburban	2 Open Chalk Downland
21.19	Silver	4	Rural/suburban	2 Open Chalk Downland
21.12	Silver	4	Rural/suburban	2 Open Chalk Downland
21.12	Silver	4	Rural/suburban	2 Open Chalk Downland
21.09	Silver	4	Rural/suburban	2 Open Chalk Downland
21.08	Silver	4	Rural/suburban	2 Open Chalk Downland
21.19	Silver	4	Rural/suburban	2 Open Chalk Downland
21	Silver	4	Rural/suburban	2 Open Chalk Downland
21.16	Silver	4	Rural/suburban	2 Open Chalk Downland
21.15	Silver	4	Rural/suburban	2 Open Chalk Downland
20.82	Bronze	4	Rural/suburban	2 Open Chalk Downland
20.89	Bronze	4	Rural/suburban	2 Open Chalk Downland
20.96	Bronze	4	Rural/suburban	2 Open Chalk Downland
20.81	Bronze	4	Rural/suburban	2 Open Chalk Downland
21	Silver	4	Rural/suburban	2 Open Chalk Downland
21.37	Silver	3	Rural Sky	2 Open Chalk Downland
21.05	Silver	4	Rural/suburban	2 Open Chalk Downland
21.06	Silver	4	Rural/suburban	2 Open Chalk Downland
21.06	Silver	4	Rural/suburban	2 Open Chalk Downland
21.06	Silver	4	Rural/suburban	2 Open Chalk Downland
21.08	Silver	4	Rural/suburban	2 Open Chalk Downland

Reading (arcmag sec^2)	IDA status	Bortle Class	Bortle Title	Landscape Character Type
20.79	Bronze	4	Rural/suburban	2 Open Chalk Downland
21.69	Silver	2	Typical Truly Dark Site	2 Open Chalk Downland
20.86	Bronze	4	Rural/suburban	2 Open Chalk Downland
20.96	Bronze	4	Rural/suburban	2 Open Chalk Downland
21.02	Silver	4	Rural/suburban	2 Open Chalk Downland
20.72	Bronze	4	Rural/suburban	2 Open Chalk Downland
21.01	Silver	4	Rural/suburban	2 Open Chalk Downland
21.05	Silver	4	Rural/suburban	2 Open Chalk Downland
20.89	Bronze	4	Rural/suburban	2 Open Chalk Downland
21.09	Silver	4	Rural/suburban	2 Open Chalk Downland
21.08	Silver	4	Rural/suburban	2 Open Chalk Downland
21.18	Silver	4	Rural/suburban	2 Open Chalk Downland
21.16	Silver	4	Rural/suburban	2 Open Chalk Downland
20.76	Bronze	4	Rural/suburban	2 Open Chalk Downland
21.03	Silver	4	Rural/suburban	2 Open Chalk Downland
20.89	Bronze	4	Rural/suburban	2 Open Chalk Downland
20.54	Bronze	4	Rural/suburban	2 Open Chalk Downland
20.6	Bronze	4	Rural/suburban	2 Open Chalk Downland
20.18	Bronze	5	Suburban Sky	2 Open Chalk Downland
20.27	Bronze	5	Suburban Sky	2 Open Chalk Downland
20.62	Bronze	4	Rural/suburban	2 Open Chalk Downland
20.8	Bronze	4	Rural/suburban	2 Open Chalk Downland
20.96	Bronze	4	Rural/suburban	2 Open Chalk Downland
20	Bronze	5	Suburban Sky	2 Open Chalk Downland
20.97	Bronze	4	Rural/suburban	2 Open Chalk Downland
21.23	Silver	4	Rural/suburban	2 Open Chalk Downland
21.07	Silver	4	Rural/suburban	2 Open Chalk Downland
21.57	Silver	2	Typical Truly Dark Site	2 Open Chalk Downland

Reading (arcmag sec^2)	IDA status	Bortle Class	Bortle Title	Landscape Character Type
19.71	Below min	5	Suburban Sky	2 Open Chalk Downland
21.07	Silver	4	Rural/suburban	3 Wooded Chalk Downland
21.07	Silver	4	Rural/suburban	3 Wooded Chalk Downland
21.23	Silver	4	Rural/suburban	3 Wooded Chalk Downland
21.17	Silver	4	Rural/suburban	3 Wooded Chalk Downland
20.93	Bronze	4	Rural/suburban	3 Wooded Chalk Downland
21.53	Silver	2	Typical Truly Dark Site	3 Wooded Chalk Downland
20.99	Bronze	4	Rural/suburban	3 Wooded Chalk Downland
20.93	Bronze	4	Rural/suburban	3 Wooded Chalk Downland
20.98	Bronze	4	Rural/suburban	3 Wooded Chalk Downland
20.98	Bronze	4	Rural/suburban	3 Wooded Chalk Downland
20.99	Bronze	4	Rural/suburban	3 Wooded Chalk Downland
21	Silver	4	Rural/suburban	3 Wooded Chalk Downland
21	Silver	4	Rural/suburban	3 Wooded Chalk Downland
21.24	Silver	4	Rural/suburban	3 Wooded Chalk Downland
21.28	Silver	4	Rural/suburban	3 Wooded Chalk Downland
21.28	Silver	4	Rural/suburban	3 Wooded Chalk Downland
21.36	Silver	3	Rural Sky	3 Wooded Chalk Downland
21.34	Silver	3	Rural Sky	3 Wooded Chalk Downland
21.34	Silver	3	Rural Sky	3 Wooded Chalk Downland
21.36	Silver	3	Rural Sky	3 Wooded Chalk Downland
21.28	Silver	4	Rural/suburban	3 Wooded Chalk Downland
21.23	Silver	4	Rural/suburban	3 Wooded Chalk Downland
21.17	Silver	4	Rural/suburban	3 Wooded Chalk Downland
21.18	Silver	4	Rural/suburban	3 Wooded Chalk Downland
21.18	Silver	4	Rural/suburban	3 Wooded Chalk Downland
21.17	Silver	4	Rural/suburban	3 Wooded Chalk Downland
21.22	Silver	4	Rural/suburban	3 Wooded Chalk Downland

Reading (arcmag sec^2)	IDA status	Bortle Class	Bortle Title	Landscape Character Type
21.12	Silver	4	Rural/suburban	3 Wooded Chalk Downland
21.2	Silver	4	Rural/suburban	3 Wooded Chalk Downland
21.16	Silver	4	Rural/suburban	3 Wooded Chalk Downland
21.21	Silver	4	Rural/suburban	3 Wooded Chalk Downland
21.1	Silver	4	Rural/suburban	3 Wooded Chalk Downland
20.91	Bronze	4	Rural/suburban	3 Wooded Chalk Downland
21.22	Silver	4	Rural/suburban	3 Wooded Chalk Downland
21.14	Silver	4	Rural/suburban	3 Wooded Chalk Downland
21.22	Silver	4	Rural/suburban	3 Wooded Chalk Downland
20.99	Bronze	4	Rural/suburban	3 Wooded Chalk Downland
20.97	Bronze	4	Rural/suburban	3 Wooded Chalk Downland
21.17	Silver	4	Rural/suburban	3 Wooded Chalk Downland
21.04	Silver	4	Rural/suburban	3 Wooded Chalk Downland
21.1	Silver	4	Rural/suburban	3 Wooded Chalk Downland
21.08	Silver	4	Rural/suburban	3 Wooded Chalk Downland
21	Silver	4	Rural/suburban	3 Wooded Chalk Downland
21	Silver	4	Rural/suburban	3 Wooded Chalk Downland
21.02	Silver	4	Rural/suburban	3 Wooded Chalk Downland
20.98	Bronze	4	Rural/suburban	3 Wooded Chalk Downland
21	Silver	4	Rural/suburban	3 Wooded Chalk Downland
21.36	Silver	3	Rural Sky	4 Downland Hills
20.73	Bronze	4	Rural/suburban	4 Downland Hills
20.72	Bronze	4	Rural/suburban	4 Downland Hills
20.79	Bronze	4	Rural/suburban	4 Downland Hills
20.81	Bronze	4	Rural/suburban	4 Downland Hills
20.82	Bronze	4	Rural/suburban	4 Downland Hills
20.32	Bronze	5	Suburban Sky	4 Downland Hills
20.62	Bronze	4	Rural/suburban	4 Downland Hills

Reading (arcmag sec^2)	IDA status	Bortle Class	Bortle Title	Landscape Character Type
20.76	Bronze	4	Rural/suburban	4 Downland Hills
20.76	Bronze	4	Rural/suburban	4 Downland Hills
20.81	Bronze	4	Rural/suburban	4 Downland Hills
20.76	Bronze	4	Rural/suburban	4 Downland Hills
20.9	Bronze	4	Rural/suburban	4 Downland Hills
20.9	Bronze	4	Rural/suburban	4 Downland Hills
20.93	Bronze	4	Rural/suburban	4 Downland Hills
20.98	Bronze	4	Rural/suburban	5 Chalk River Valleys
20.96	Bronze	4	Rural/suburban	5 Chalk River Valleys
21.03	Silver	4	Rural/suburban	5 Chalk River Valleys
20.96	Bronze	4	Rural/suburban	5 Chalk River Valleys
20.85	Bronze	4	Rural/suburban	5 Chalk River Valleys
20.72	Bronze	4	Rural/suburban	5 Chalk River Valleys
20.91	Bronze	4	Rural/suburban	5 Chalk River Valleys
20.96	Bronze	4	Rural/suburban	5 Chalk River Valleys
20.98	Bronze	4	Rural/suburban	5 Chalk River Valleys
21.03	Silver	4	Rural/suburban	5 Chalk River Valleys
20.98	Bronze	4	Rural/suburban	5 Chalk River Valleys
21.13	Silver	4	Rural/suburban	5 Chalk River Valleys
21.08	Silver	4	Rural/suburban	5 Chalk River Valleys
21.02	Silver	4	Rural/suburban	5 Chalk River Valleys
21.1	Silver	4	Rural/suburban	5 Chalk River Valleys
21.11	Silver	4	Rural/suburban	5 Chalk River Valleys
20.83	Bronze	4	Rural/suburban	5 Chalk River Valleys
20.89	Bronze	4	Rural/suburban	5 Chalk River Valleys
20.91	Bronze	4	Rural/suburban	5 Chalk River Valleys
20.9	Bronze	4	Rural/suburban	5 Chalk River Valleys
21.18	Silver	4	Rural/suburban	5 Chalk River Valleys

Reading (arcmag sec^2)	IDA status	Bortle Class	Bortle Title	Landscape Character Type
20.92	Bronze	4	Rural/suburban	5 Chalk River Valleys
20.94	Bronze	4	Rural/suburban	5 Chalk River Valleys
20.79	Bronze	4	Rural/suburban	5 Chalk River Valleys
20.64	Bronze	4	Rural/suburban	5 Chalk River Valleys
21.04	Silver	4	Rural/suburban	5 Chalk River Valleys
20.81	Bronze	4	Rural/suburban	5 Chalk River Valleys
20.77	Bronze	4	Rural/suburban	5 Chalk River Valleys
21.02	Silver	4	Rural/suburban	5 Chalk River Valleys
21.83	Gold	1	Excellent Dark Sky Site	5 Chalk River Valleys
20.13	Bronze	5	Suburban Sky	5 Chalk River Valleys
21.62	Silver	2	Typical Truly Dark Site	5 Chalk River Valleys
21.74	Silver	1	Excellent Dark Sky Site	5 Chalk River Valleys
20.73	Bronze	4	Rural/suburban	5 Chalk River Valleys
20.68	Bronze	4	Rural/suburban	5 Chalk River Valleys
21.23	Silver	4	Rural/suburban	5 Chalk River Valleys
21.41	Silver	3	Rural Sky	5 Chalk River Valleys
20.94	Bronze	4	Rural/suburban	5 Chalk River Valleys
21.19	Silver	4	Rural/suburban	5 Chalk River Valleys
21.21	Silver	4	Rural/suburban	5 Chalk River Valleys
21.2	Silver	4	Rural/suburban	5 Chalk River Valleys
21.16	Silver	4	Rural/suburban	5 Chalk River Valleys
21.24	Silver	4	Rural/suburban	5 Chalk River Valleys
21.26	Silver	4	Rural/suburban	5 Chalk River Valleys
21.3	Silver	3	Rural Sky	5 Chalk River Valleys
21.37	Silver	3	Rural Sky	5 Chalk River Valleys
21.46	Silver	3	Rural Sky	5 Chalk River Valleys
20.96	Bronze	4	Rural/suburban	5 Chalk River Valleys
20.62	Bronze	4	Rural/suburban	5 Chalk River Valleys

Reading (arcmag sec^2)	IDA status	Bortle Class	Bortle Title	Landscape Character Type
21.09	Silver	4	Rural/suburban	5 Chalk River Valleys
21.03	Silver	4	Rural/suburban	5 Chalk River Valleys
20.85	Bronze	4	Rural/suburban	5 Chalk River Valleys
21	Silver	4	Rural/suburban	5 Chalk River Valleys
21.18	Silver	4	Rural/suburban	5 Chalk River Valleys
20.9	Bronze	4	Rural/suburban	5 Chalk River Valleys
21	Silver	4	Rural/suburban	5 Chalk River Valleys
20.98	Bronze	4	Rural/suburban	5 Chalk River Valleys
20.97	Bronze	4	Rural/suburban	5 Chalk River Valleys
20.99	Bronze	4	Rural/suburban	5 Chalk River Valleys
21.1	Silver	4	Rural/suburban	5 Chalk River Valleys
21	Silver	4	Rural/suburban	5 Chalk River Valleys
21.22	Silver	4	Rural/suburban	5 Chalk River Valleys
21.14	Silver	4	Rural/suburban	5 Chalk River Valleys
20.7	Bronze	4	Rural/suburban	5 Chalk River Valleys
21.02	Silver	4	Rural/suburban	5 Chalk River Valleys
20.86	Bronze	4	Rural/suburban	5 Chalk River Valleys
21.24	Silver	4	Rural/suburban	5 Chalk River Valleys
21.4	Silver	3	Rural Sky	5 Chalk River Valleys
21.47	Silver	3	Rural Sky	5 Chalk River Valleys
21.79	Gold	1	Excellent Dark Sky Site	5 Chalk River Valleys
21.13	Silver	4	Rural/suburban	5 Chalk River Valleys
21.04	Silver	4	Rural/suburban	5 Chalk River Valleys
21.1	Silver	4	Rural/suburban	5 Chalk River Valleys
20.99	Bronze	4	Rural/suburban	5 Chalk River Valleys
20.71	Bronze	4	Rural/suburban	5 Chalk River Valleys
20.72	Bronze	4	Rural/suburban	5 Chalk River Valleys
20.73	Bronze	4	Rural/suburban	5 Chalk River Valleys

Reading (arcmag sec^2)	IDA status	Bortle Class	Bortle Title	Landscape Character Type
20.79	Bronze	4	Rural/suburban	5 Chalk River Valleys
20.83	Bronze	4	Rural/suburban	5 Chalk River Valleys
21	Silver	4	Rural/suburban	5 Chalk River Valleys
20.35	Bronze	5	Suburban Sky	5 Chalk River Valleys
20.42	Bronze	4	Rural/suburban	5 Chalk River Valleys
20.53	Bronze	4	Rural/suburban	5 Chalk River Valleys
20.52	Bronze	4	Rural/suburban	5 Chalk River Valleys
20.64	Bronze	4	Rural/suburban	5 Chalk River Valleys
20.78	Bronze	4	Rural/suburban	5 Chalk River Valleys
21.15	Silver	4	Rural/suburban	5 Chalk River Valleys
21.15	Silver	4	Rural/suburban	5 Chalk River Valleys
21.11	Silver	4	Rural/suburban	5 Chalk River Valleys
21.13	Silver	4	Rural/suburban	5 Chalk River Valleys
20.73	Bronze	4	Rural/suburban	5 Chalk River Valleys
20.51	Bronze	4	Rural/suburban	5 Chalk River Valleys
20.6	Bronze	4	Rural/suburban	5 Chalk River Valleys
20.53	Bronze	4	Rural/suburban	5 Chalk River Valleys
19.62	Below min	5	Suburban Sky	5 Chalk River Valleys
20.42	Bronze	4	Rural/suburban	5 Chalk River Valleys
20.69	Bronze	4	Rural/suburban	5 Chalk River Valleys
20.55	Bronze	4	Rural/suburban	5 Chalk River Valleys
20.98	Bronze	4	Rural/suburban	6 Greensands Terrace
21	Silver	4	Rural/suburban	6 Greensands Terrace
21.05	Silver	4	Rural/suburban	6 Greensands Terrace
21.03	Silver	4	Rural/suburban	6 Greensands Terrace
20.98	Bronze	4	Rural/suburban	6 Greensands Terrace
20.92	Bronze	4	Rural/suburban	6 Greensands Terrace
20.89	Bronze	4	Rural/suburban	6 Greensands Terrace

Reading (arcmag sec^2)	IDA status	Bortle Class	Bortle Title	Landscape Character Type
20.87	Bronze	4	Rural/suburban	6 Greensands Terrace
20.89	Bronze	4	Rural/suburban	6 Greensands Terrace
20.62	Bronze	4	Rural/suburban	6 Greensands Terrace
21.15	Silver	4	Rural/suburban	6 Greensands Terrace
21.2	Silver	4	Rural/suburban	6 Greensands Terrace
21.1	Silver	4	Rural/suburban	6 Greensands Terrace
20.82	Bronze	4	Rural/suburban	6 Greensands Terrace
21	Silver	4	Rural/suburban	6 Greensands Terrace
20.52	Bronze	4	Rural/suburban	6 Greensands Terrace
20.85	Bronze	4	Rural/suburban	6 Greensands Terrace
21.02	Silver	4	Rural/suburban	6 Greensands Terrace
20.72	Bronze	4	Rural/suburban	6 Greensands Terrace
20.92	Bronze	4	Rural/suburban	6 Greensands Terrace
20.84	Bronze	4	Rural/suburban	6 Greensands Terrace
21	Silver	4	Rural/suburban	6 Greensands Terrace
20.93	Bronze	4	Rural/suburban	6 Greensands Terrace
20.99	Bronze	4	Rural/suburban	6 Greensands Terrace
20.93	Bronze	4	Rural/suburban	6 Greensands Terrace
21.33	Silver	3	Rural Sky	6 Greensands Terrace
21.24	Silver	4	Rural/suburban	6 Greensands Terrace
21.3	Silver	3	Rural Sky	6 Greensands Terrace
21.22	Silver	4	Rural/suburban	6 Greensands Terrace
21.19	Silver	4	Rural/suburban	6 Greensands Terrace
21.22	Silver	4	Rural/suburban	6 Greensands Terrace
21.19	Silver	4	Rural/suburban	6 Greensands Terrace
21.18	Silver	4	Rural/suburban	6 Greensands Terrace
21.3	Silver	3	Rural Sky	6 Greensands Terrace
20.81	Bronze	4	Rural/suburban	6 Greensands Terrace

Reading (arcmag sec^2)	IDA status	Bortle Class	Bortle Title	Landscape Character Type
22	Gold	1	Excellent Dark Sky Site	6 Greensands Terrace
20.67	Bronze	4	Rural/suburban	6 Greensands Terrace
20.97	Bronze	4	Rural/suburban	6 Greensands Terrace
21	Silver	4	Rural/suburban	6 Greensands Terrace
21.27	Silver	4	Rural/suburban	6 Greensands Terrace
21.31	Silver	3	Rural Sky	6 Greensands Terrace
21.35	Silver	3	Rural Sky	6 Greensands Terrace
21.28	Silver	4	Rural/suburban	6 Greensands Terrace
20.81	Bronze	4	Rural/suburban	6 Greensands Terrace
20.81	Bronze	4	Rural/suburban	6 Greensands Terrace
20.76	Bronze	4	Rural/suburban	6 Greensands Terrace
20.51	Bronze	4	Rural/suburban	6 Greensands Terrace
20.91	Bronze	4	Rural/suburban	6 Greensands Terrace
20.92	Bronze	4	Rural/suburban	6 Greensands Terrace
21.02	Silver	4	Rural/suburban	6 Greensands Terrace
20.8	Bronze	4	Rural/suburban	6 Greensands Terrace
21.05	Silver	4	Rural/suburban	7 Greensands Hills
20.9	Bronze	4	Rural/suburban	7 Greensands Hills
21.11	Silver	4	Rural/suburban	7 Greensands Hills
21.15	Silver	4	Rural/suburban	7 Greensands Hills
21.01	Silver	4	Rural/suburban	7 Greensands Hills
21.4	Silver	3	Rural Sky	7 Greensands Hills
20.81	Bronze	4	Rural/suburban	7 Greensands Hills
21.34	Silver	3	Rural Sky	7 Greensands Hills
20.83	Bronze	4	Rural/suburban	7 Greensands Hills
20.76	Bronze	4	Rural/suburban	7 Greensands Hills
20.55	Bronze	4	Rural/suburban	7 Greensands Hills
20.82	Bronze	4	Rural/suburban	7 Greensands Hills

Reading (arcmag sec^2)	IDA status	Bortle Class	Bortle Title	Landscape Character Type
21.02	Silver	4	Rural/suburban	7 Greensands Hills
21.43	Silver	3	Rural Sky	7 Greensands Hills
20.82	Bronze	4	Rural/suburban	7 Greensands Hills
20.81	Bronze	4	Rural/suburban	7 Greensands Hills
21.11	Silver	4	Rural/suburban	7 Greensands Hills
20.96	Bronze	4	Rural/suburban	7 Greensands Hills
20.76	Bronze	4	Rural/suburban	7 Greensands Hills
20.8	Bronze	4	Rural/suburban	7 Greensands Hills
21.38	Silver	3	Rural Sky	7 Greensands Hills
21.48	Silver	3	Rural Sky	7 Greensands Hills
21.22	Silver	4	Rural/suburban	7 Greensands Hills
21.29	Silver	4	Rural/suburban	7 Greensands Hills
21.33	Silver	3	Rural Sky	7 Greensands Hills
21.44	Silver	3	Rural Sky	7 Greensands Hills
21.39	Silver	3	Rural Sky	7 Greensands Hills
21.59	Silver	2	Typical Truly Dark Site	7 Greensands Hills
21.54	Silver	2	Typical Truly Dark Site	7 Greensands Hills
21.33	Silver	3	Rural Sky	7 Greensands Hills
20.63	Bronze	4	Rural/suburban	7 Greensands Hills
20.74	Bronze	4	Rural/suburban	7 Greensands Hills
20.75	Bronze	4	Rural/suburban	7 Greensands Hills
20.68	Bronze	4	Rural/suburban	7 Greensands Hills
21.04	Silver	4	Rural/suburban	7 Greensands Hills
21.06	Silver	4	Rural/suburban	7 Greensands Hills
21.05	Silver	4	Rural/suburban	7 Greensands Hills
21	Silver	4	Rural/suburban	8 Rolling Clay Vales
21.06	Silver	4	Rural/suburban	8 Rolling Clay Vales
21.05	Silver	4	Rural/suburban	8 Rolling Clay Vales

Reading (arcmag sec^2)	IDA status	Bortle Class	Bortle Title	Landscape Character Type
21	Silver	4	Rural/suburban	8 Rolling Clay Vales
21.01	Silver	4	Rural/suburban	8 Rolling Clay Vales
20.73	Bronze	4	Rural/suburban	8 Rolling Clay Vales
20.86	Bronze	4	Rural/suburban	8 Rolling Clay Vales
21	Silver	4	Rural/suburban	8 Rolling Clay Vales
21.09	Silver	4	Rural/suburban	8 Rolling Clay Vales
20.51	Bronze	4	Rural/suburban	8 Rolling Clay Vales
21.12	Silver	4	Rural/suburban	8 Rolling Clay Vales
20.99	Bronze	4	Rural/suburban	8 Rolling Clay Vales
21.28	Silver	4	Rural/suburban	8 Rolling Clay Vales
20.74	Bronze	4	Rural/suburban	8 Rolling Clay Vales
20.89	Bronze	4	Rural/suburban	8 Rolling Clay Vales
20.95	Bronze	4	Rural/suburban	8 Rolling Clay Vales
20.77	Bronze	4	Rural/suburban	8 Rolling Clay Vales
20.89	Bronze	4	Rural/suburban	8 Rolling Clay Vales
20.98	Bronze	4	Rural/suburban	8 Rolling Clay Vales
20.96	Bronze	4	Rural/suburban	8 Rolling Clay Vales
21.01	Silver	4	Rural/suburban	8 Rolling Clay Vales
20.99	Bronze	4	Rural/suburban	8 Rolling Clay Vales
20.97	Bronze	4	Rural/suburban	8 Rolling Clay Vales
20.65	Bronze	4	Rural/suburban	8 Rolling Clay Vales
20.97	Bronze	4	Rural/suburban	8 Rolling Clay Vales
20.98	Bronze	4	Rural/suburban	8 Rolling Clay Vales
21.06	Silver	4	Rural/suburban	8 Rolling Clay Vales
21.05	Silver	4	Rural/suburban	8 Rolling Clay Vales
21.03	Silver	4	Rural/suburban	8 Rolling Clay Vales
20.93	Bronze	4	Rural/suburban	8 Rolling Clay Vales
20.97	Bronze	4	Rural/suburban	Unclassified

Reading (arcmag sec^2)	IDA status	Bortle Class	Bortle Title	Landscape Character Type
20.76	Bronze	4	Rural/suburban	Unclassified
20.47	Bronze	4	Rural/suburban	Unclassified
20.88	Bronze	4	Rural/suburban	Unclassified
20.99	Bronze	4	Rural/suburban	Unclassified
21.08	Silver	4	Rural/suburban	Unclassified
21.48	Silver	3	Rural Sky	Unclassified
21.54	Silver	2	Typical Truly Dark Site	Unclassified
21.16	Silver	4	Rural/suburban	Unclassified
19.56	Below min	5	Suburban Sky	Unclassified
20.44	Bronze	4	Rural/suburban	Unclassified

External lighting audit methodology

Prior to conducting an audit of external lighting across the AONB, we agreed a sampling methodology with the IDA, the content of which is reproduced as follows.

Bid to be an International Dark Sky Reserve: proposed methodology for audit of external domestic lighting

This note outlines the Cranborne Chase AONB's proposal for conducting and analysing its audit of external lighting in the proposed IDSR area. The IDA's comments are sought to ensure it is fit for purpose.

We have prepared the proposal after discussion with the South Downs National Park. Our sampling and analysis proposal is based on that submitted in the South Downs application. This was a useful approach and acceptable to the IDA at the time of the South Downs application. In our case, we have not used exactly the same methodology, though it is similar. This is because we have adapted it to take account of the particular characteristics of the AONB, such as landscape and settlement types.

1. Sampling

The AONB landscape encompasses eight different landscape character types (Chalk Escarpments, Open Chalk Downland, Wooded Chalk Downland, Downland Hills, Chalk River Valleys, Greensand Terrace, Greensand Hills, and Rolling Clay Vales). Most settlements within the AONB boundary are villages, with Tisbury the largest (at c. 2,250 inhabitants) but the majority considerably smaller. We will sample one village per character type, and additionally two or three extra where we think it would add value (e.g. villages on the cusp of two character types). We will also select the sample villages to provide a cross-section of smaller and larger villages, and representative geographical coverage in terms of location within our boundaries.

A few years ago, the AONB conducted a tranquillity survey, which included some ground truthing in fixed survey squares across its area, and included some high-level assessment of access to good quality dark skies. Where possible, our sample villages will also be selected on the basis of proximity to these earlier survey squares, as it will be useful to compare results.

2. Survey method

We have engaged an experienced professional lighting engineer to conduct and prepare the lighting audit and lightscape management plan, and he is currently undertaking a roadside survey of external light fittings in the sample villages. Fittings are being logged according to the information on the attached spreadsheet.
This method yields results for light fittings that are visible from the survey point. In order to validate data, we propose a similar method to that used by South Downs (see next section).

3. Comparative data

In order to calculate and validate the average number of light fittings per dwelling, based on our survey results, we propose to use the comparative dataset derived from the lighting census survey of South Downs staff (agreed with the National Park Authority). The housing types would be broadly similar, so we consider these data would be valid. (We have much smaller staff numbers than South Downs, so a comparable survey of our own would be more difficult – though not impossible – to do.)

4. Analysis

We have extracted data from the 2011 Census (a census of the UK population is conducted by the Government every 10 years; 2011 is the most recent). This data gives us the number of households by parish (parish boundaries are administrative, and there are about 100 within the AONB boundary). Each parish contains at least one village, sometimes a small group of villages, and outlying dwellings within the parish boundary (e.g. farmhouses). We propose to calculate from our data the estimated lumen footprint per parish. This has the advantage of being a reasonably comprehensive estimate. We would need to account for the following:

- Although the majority of dwellings are occupied by a single household, a small number are divided into apartments (so the number of households from the Census data would slightly overestimate the actual number of dwellings). The number is small enough that we consider it would be accounted for within our error margin, but we will check this during the analysis.

- Each lumen footprint, because it covers the whole parish, would not take account of variations in housing intensity within each parish (i.e. village versus surrounding countryside/farmland). However, most of the potential lumen footprint would relate to villages, and we will demonstrate this in our sample villages using sky quality meter readings to show the variation.

- In a small number of cases, 2011 Census parish data is unavailable. This is where the village within the parish is small enough that anonymity could not be preserved, so the Census database has combined the results into a neighbouring parish (but with no information as to which one). Again, we consider the numbers are small enough that it would be accounted for within the error margin.

Given the above considerations, we would calculate the data to an error margin of ±10%. We would also present the data alongside analysis of the sky quality readings, AONB topography, and distances from road routes (the latter to highlight the less inhabited, and therefore darker areas).

Attachment: Blank survey form

Parish :
Village / area :

Road / location	Property type / use							Mounted on						Task					Domestic fittings					Other types			Special		Floodlights					Street Lights				Optical / lm						
	Domestic	Shop / Office	Industrial	Farm	Sport	School / Church	Other (see notes)	Dwelling	Garage	Shed / Building	low wall/post/bolla	Column	Other (see notes)	Porch / door / step	Pathway	Garden / Yard	Parking area	Other (see notes)	Porch downlight	Dec. / Heritage	Std. / Small Bulkhe	Wellglass	Globe / Modern	Square / Rectang	Round	Eyelid	LED strip	Sign Illumination	Largel area fitting	large (500w)	Med.	Small	PIR?	Column Height	Bowl	Shallow	Flat	Tilt angle	Est / calc. Lumen	Adaptable Y/N?	**Fully shielded ?**	**< 500 Lm ?**	**Compliant?**	Notes
Totals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0		0	0	0	0	0	

Wiltshire street lighting policy

Wiltshire Council's current policy documentation, published in 2014, relates to its 'part-night' operation.

Street lighting - saving energy money and carbon

Background

Wiltshire Council has over 40,000 streetlights. Most of these are on all night whether they are needed or not.

The Council needs to save money and reduce its carbon footprint by reducing energy usage. Rising energy costs, carbon tax and budget restraints make it necessary to change the way we light our streets.

The Scheme

About half of the street lights will be converted to operate for part of the night. Generally they will be off between midnight and 5.30 am.

Lights at junctions, pedestrian crossings and where required for safety will remain on all night.

Where suitable the lighting levels of some street lights will be dimmed so they operate at lower output when traffic flows and pedestrian movements are reduced.

Lighting where there are CCTV systems, in town centres, and in areas where crime is a problem will remain on and at normal lighting levels.

A few lights may be removed permanently where they are no longer required.

The operation of the scheme will be monitored and changes will be made as necessary in the event of problems.

Why the changes are needed

The Council's energy budget for street lighting is over £1.2 million, and energy costs will increase in the future, especially with the introduction of the carbon tax. Budgets are constrained and it is necessary for Council's to reduce expenditure.

Street lighting accounts for 12% of the Council's carbon footprint. The Council has an aspiration to reduce its carbon footprint and to achieve a 50% reduction by 2020.

Over 1,300 street lights have already been converted to part night lighting following the recent Area Board community based projects, and the Council has already converted its illuminated bollards to low energy units.

Other Councils have successfully implemented similar schemes without adverse impacts, and are making large savings.

What happens next

Over the next twelve months alterations will be made to the lighting equipment to enable the lights to be individually controlled. The operation of the lighting will then be changed to operate as described above.

After six months the operation of the lighting will be reviewed and views of the relevant Town and Parish Councils will be sought before the Council considered whether any further changes are required.

Frequently asked questions

1. **When will lighting be turned off?**

   Selected lighting units will be turned off from about midnight until 5.30 am. They will come back on at about 5.30 am if it is still dark. The times of operation may vary by a few minutes depending on the type of switching used. From dusk until midnight and on dark mornings after 5.30 am they will operate as usual. This is when our streets are busiest.

2. **What does dimming lights mean?**

   Some of the more modern lighting units can have their power levels adjusted so that lighting levels can be reduced to more suitable levels when traffic flows are low or at off peak times. They can be turned up to full power when needed. The dimming saves energy.

3. **Which lights will be converted to operate for part of the night?**

   An assessment will be undertaken of every area where the changes are proposed. Where necessary some lights will be left on all night.

   The lights to be left on will generally be:-

   - Main traffic routes with substantial pedestrian movements, or potential conflict areas such as junctions and roundabouts.
   - Units near to minor residential road junctions
   - Areas with above average night time pedestrian activity such as town centres or near 24 hour or early morning facilities.
   - Areas with 24 hour operational emergency services sites such as hospitals and fire stations.
   - Street lights near uncontrolled pedestrian crossings (zebra crossings or informal crossings) and within subways, stairways and ramps, enclosed footpaths and alleyways.
   - Street lights close to potential hazards on the highway (such as roundabouts, central carriageway islands, build-outs and speed-humps).

4. **Which lights will be turned out permanently?**

A few lights which were installed many years ago are no longer required. Modern standards would not require lighting to be provided at these locations. These are generally in rural areas or in other locations where there are no houses fronting onto the roads, or where lighting levels exceed current standards.

5. **Why cannot all of the lights be dimmed instead of turned off?**

To dim a street light both the lamp in the lantern and the control gear that operates it needs to be capable of dimming. The majority of street lighting equipment is of an older generation and cannot be dimmed. The upgrading of large numbers of street lights is prohibitively expensive. Also dimmed lighting continues to consume energy and does not maximise energy savings.

6. **Could one in three lights be turned off permanently instead?**

The intention of the scheme is to develop a safe and sustainable method of reducing energy consumption. Turning off lights permanently would result in uneven lighting levels for all road users during the hours of darkness. It is considered that turning lights off for part of the night would have less adverse impact on the public and road users.

7. **Could the lighting have new technology such as motion sensing?**

Motion-sensing switches, such as those which operate security lights, have been considered, but most of the street lighting in use today requires a warm-up period of several minutes to reach full output and is not suitable for this type of switching. There are also concerns about potential uneven lighting for drivers and disturbance for residents.

8. **Could solar powered lighting be used instead?**

At present there are issues with the use of solar power for public street lighting. The cost of conversion, battery life and the number of panels required mean that costs are much higher than conventional units. In the future the technology may develop and it could become viable.

9. **Could LED lighting units be used instead?**

Converting all the existing lights to LED (Light Emitting Diode) lighting would be much more expensive, but on new developments and new lighting installations this type of lighting will be used where appropriate and cost effective.

10. **Can the Council legally turn off street lights?**

Yes. There is no statutory requirement on local authorities in the UK to provide street lighting. The Highways Act empowers local authorities to light roads but does not place a duty to do so. However, the Council does have a duty to ensure that lighting units are kept in safe condition.

11. **What about road safety?**

The lights at major junctions, roundabouts, pedestrian crossings and obstructions in the road will be kept on. These are the areas which would benefit most from being lit. All street lighting will be on at peak travel periods during the hours of darkness as at present. The accident data will continue to be monitored regularly, and if problem sites are identified changes to the lighting regimes will be made.

12. **What about crime?**

The lighting in town centres and any identified high crime areas will remain on. Where there is CCTV the lighting will also remain on as necessary. Wiltshire is a safe county, but it is appreciated that there is a fear of crime, and there are concerns that reducing street lighting could increase anti-social behaviour and vandalism at night. The situation will be monitored and where necessary changes will be made so that the lighting remains on at key sites where justified.

13. **What about cars parked on the street at night?**

The lights in residential areas where cars are likely to be parked over night are only likely to be turned off between midnight and 5.30 am when traffic flows are low. If you do park your vehicle over night on the road you should be aware of the Highway Code requirements, especially regarding not parking at night facing against the direction of traffic and displaying parking lights on roads with a speed limit greater than 30 mph. Please refer to the Highway Code for details.

14. **Will 30 mph speed limits be affected if lights are switched off**?

No. A 30 mph speed limit automatically applies to any road containing a system of street lights placed not more than 200 yards apart, unless signposted with a different speed limit. There is no current law stating that these lights have to be switched on all night to be applicable. Therefore, motorists should be aware that the usual 30 mph speed limits will apply.

15. **Will there be a reduction in my Council tax?**

No. The Council needs to reduce its spending and the money saved by the changes will help keep Council Tax down. Reducing expenditure on street

lighting was an area identified for savings during the consultations on the Council's budget.

16. **Will my insurance premium go up?**

Councils do not have a statutory requirement to provide public lighting. All street lighting is in place to light areas of the highway as a duty of care to road users. Lighting is not provided to protect private properties. Street lighting within the vicinity of your property is not usually an element that insurance companies take into account when developing home insurance or property policies.

17. **If I become a victim of crime or have an accident can I claim against the Council?**

There is no statutory requirement for local authorities in the UK to provide public lighting and you are unlikely to be able to claim as a result of the proposed changes to the street lighting. If crime or safety does become an issue, changes will be made to the lighting in that area as necessary.

18. **What are other Councils doing?**

Many other authorities have introduced similar part night lighting schemes successfully, without adverse effects and have made significant savings. The proposed changes in Wiltshire are not as large as those some authorities have made, which have turned off lighting permanently. With rising energy costs and reduced budgets these types of changes to street lighting are becoming more common.

19. **What savings will this make?**

It is anticipated that savings of over £300,000 could be made annually at current energy prices. Even with moderate energy cost increases of 3% annually the proposals would be expected to save over £12 million over 25 years.

20. **Would Town and Parish Councils be able to pay to keep all the lighting on all night?**

Each case will be considered on its merits, but keeping the lights on would not help the Council meet its carbon reduction target, and will become increasingly expensive for the Councils in the future.

21. **Why haven't the Council written to every resident?**

It would cost a significant amount of money to write to every individual household in the county. Instead the Council has consulted with the Area Boards and Town and Parish Councils, and individuals were welcome to comment on the proposals.

22. **What consultation took place?**

The opportunity was provided for the views of the Police, other public bodies and those affected by the proposals to be considered. The consultation was announced at the Area Board meetings, and local Town and Parish Councils were invited to comment. The consultation documents were available on the Council's website, and this was announced in the August and September Parish Newsletters in 2012. The consultation received substantial local press coverage, including reports on a number of local radio stations. The results of the consultation were reported to the Cabinet before the decision was made.

23. **What was the result of the consultations?**

The consultation closed on 30 September 2012. There were 246 responses via the on-line questionnaire, and 18 by letter and e-mail. The majority of those responding were generally in favour of changes to the street lighting. In response to the on-line questionnaire 73.2% thought that many or some of the lights should be turned off permanently, 86.2% thought that many or some should be turned off between midnight and 5.30 a.m., and 91.1% thought that many or some of the street lights should be dimmed. The responses not in favour of the proposals were mainly concerned about public safety issues.

24. **Were the Police and other organisations consulted?**

The Wiltshire Community Safety Partnership Executive Board, whose members include Wiltshire Police, Wiltshire Fire and Rescue Service, the Probation service, the Youth Offending Team and Wiltshire Council, considered the matter at their October meeting, and advised that they support the street lighting reduction proposed.

25. **When will it be implemented?**

The changes will be introduced during 2014 when the necessary alterations to the equipment will be made on an area by area basis.

26. **Can changes be made to the scheme after it is implemented?**

Yes. The Council will be introducing a central control system so that the majority of the county's street lights can be controlled remotely. This will allow alterations to the lighting to be made in response to circumstances. The scheme will be reviewed after six months and the views of the relevant Town and Parish Councils will be sought before considering whether any further changes to the operation of the street lighting are required.

Dorset street lighting policy

In 2017, Dorset County Council completed a programme, begun in 2012, to replace 75% of its street lighting stock to equipment compliant with their new lighting policy. In particular, the policy specified flat glass lanterns in rural areas of the AONB, and no lights in the AONB outside villages, other than on key roads and junctions.

The following pages set out the Dorset street lighting policy (Dorset Street Lighting and Illuminated Signs Policy).

Dorset County Council
Street Lighting and Illuminated Signs Policy

1.0 Introduction

This policy sets out the requirements and standards for all new or replacement external public highway lighting, as adopted by the County Council. It is written in order to assist the County Council meet its Corporate Aims. The County Council will be guided by the requirements set out in this document but in some cases it will not be practicable or desirable to meet all of the current national standards and policy requirements.

Dorset County Council, as Highway Authority, is automatically a Lighting Authority. District, Borough, Town and Parish Councils can also be Lighting Authorities as well as those Social Housing Groups – previously part of District or Borough Councils – with powers to provide lighting on the highway with the consent of the Highway Authority.

2.0 Street Lighting Objectives

The aim of this policy is to assist in ensuring that the following Street Lighting Objectives, listed in no particular order, are met:

- To improve the night-time safety of road users and members of the community.
- To reduce crime and the fear of crime during the hours of darkness.
- To provide public lighting that is cost effective, taking into account energy conservation and sustainability.
- To minimise the adverse effect on the environment whilst still enhancing the night-time ambience.
- To maintain the lighting asset so as to prevent premature structural failures

In conjunction with this policy the Street Lighting Specification, as included in the County Council's own Highway Guidance for Estate Roads, sets out the detailed requirements for developers to meet the standards of this Policy.

This document incorporates, wherever practicable, all relevant codes of practice and legislation, together with good industry practices and the national policies from the Institution of Lighting Engineers and UK Lighting Board.

3.0 Lighting Provision

There are a number of environmental factors that need to be considered when contemplating installing exterior highway lighting schemes. Firstly, whether there a real need to install lighting at all. If there is, then the energy usage and

light pollution have to be taken into consideration (with sensitivity, if practicable, toward the daytime appearance of equipment).

For the purposes of determining whether or not lighting should be provided at a particular location, or on a particular length of highway, the county is divided into an environmental zoning system. This comprises four different categories which are also used to define the standards and type of lights to be used. These are listed below with a brief indication of the approach to lighting provision in each case:

Environmental Zone 1
World Heritage site, Areas of Outstanding Natural Beauty, Sites of Special Scientific Importance and other Dark Areas - these are areas that currently have very low population densities and no, or intermittent, lighting.

Villages and settlements within this zone will generally only be provided with lighting when it is requested and funded by the Town or Parish Council, with support from the residents and interest groups. Such lighting will be limited to strategic locations such as telephone boxes, bus stops etc.

Apart from designated traffic routes all other lights may be operational for just part of the night, when levels of highway use are at their highest. Statutory and safety requirements may require that some lights remain in operation all night.

Lighting will generally only be installed outside of villages and settlements where there is a night-time safety issue that cannot be resolved by other means.

Careful design will ensure that, where possible, rural locations are not urbanised by the provision of a lighting scheme. Luminaries should be well controlled and restrict the upward light ratio to 0%.

Environmental Zone 2
Areas of Low District Brightness (Rural locations outside Zone 1), these are areas that have low / medium population densities and some roads already lit.

Villages and settlements within this zone may not currently be lit and if they are, may not be lit to the current or an historic standard. Any new lighting schemes will be provided in accordance with the relevant current minimum standard applicable to the type and use of the highway.

Apart from designated traffic routes all other lights may be operational for just part of the night, when levels of highway use are at their highest. Statutory and safety requirements may require that some lights remain in operation all night.

Roads between villages and settlements in this zone will generally only be provided with lighting where there is a known safety issue during the hours of darkness that cannot be solved by other means.

Luminaries should be well controlled and restrict the upward light ratio to 0%. Consideration may also be given to part night operation in appropriate cases.

Environmental Zone 3
Areas of Medium District Brightness (Urban Location), these are areas that have medium / high population densities with most roads already lit.

Generally within an urban location all highways will be lit in accordance with the current or an historic standard, applicable to the type and category of the highway.

Apart from designated traffic routes all other lights may be operational for just part of the night, when levels of highway use are at their highest. Statutory and safety requirements may require that some lights remain in operation all night.

In areas of special environmental interest, dark landscape and ecologically sensitive areas such as parks and woodlands, individual assessments will be carried out.

Luminaries should be well controlled and restrict the upward light ratio to a maximum of 2.5%.

Environmental Zone 4
Areas of High Brightness (Urban centres with high usage during the hours of darkness), these are areas that have high population densities where all roads should be lit to a current or an historic lighting standard, applicable to the type and category of the highway.

In urban centres with high vehicle or pedestrian use during hours of darkness, carefully designed lighting will not only provide adequate illumination for the motorist but also provide an interesting and attractive ambience for pedestrians. Luminaries should normally be well controlled and restrict the upward light ratio to a maximum of 15%, whilst also allowing illumination of building facades.

4.0 Obtrusive Light

Obtrusive light is light which falls outside of the area to be illuminated or causes annoyance, discomfort and distraction to the public. In extreme cases it reduces the ability to see. Obtrusive light can be divided into three categories:

Skyglow – caused by luminaries emitting light upwards or at high angles of elevation. This light is then scattered by dust particles and water droplets resulting in the familiar orange glow above urban areas.

Glare – an intense blinding light, usually seen against a dark background, which reduces a person's visual performance. Poorly designed, installed and maintained lighting can cause glare that affects the vision of pedestrians, cyclists and drivers, creating a hazard rather than increasing safety.

Light Trespass - light that falls where it is not needed or wanted e.g. light shining into bedrooms hinders sleep and reduces privacy.

Although it is not possible to negate obtrusive light, designs will try to minimise or mitigate their effects, where possible, in accordance with the environmental zoning system.

5.0. Light sources

The type of light source has a significant effect on the night-time scene due to the different colour appearances produced and is one of the key elements in assisting the highway user. The following is a description of highway types and the light sources to be used in lighting them. The term colour rendering (Ra) is used, this is an indexed scale of colour accuracy where 100 is the ideal true appearance of colours e.g. in daylight; and 0 is where colours cannot be identified e.g. in moonlight:

Residential roads, footpaths and cycleways
These are lit using a near white light source which gives a good compromise of colour rendering over efficiency. This allows facial recognition at a distance to help reduce the fear of crime. The priority here is pedestrian movements, assisting and encouraging night time use by residents. Light sources with a reasonable colour rendering minimum of 60 Ra will be used, unless crime figures are higher than normal, in which case the minimum colour rendering shall be increased to 80 Ra.

Traffic routes, roundabouts and high speed roads
These are lit using the most efficient sources, which have low running cost but provide only low colour rendering. The priority is the uniformity of road surfaces which allows objects to be seen in silhouette by drivers. This helps to improve night time road safety. Light sources with a minimum colour rendering of 20 Ra will be used.

High Streets, Social Concentrates in Town centres
Here, higher lighting levels and very good colour rendering are important. Lighting provids a means of highlighting objects and areas such as pedestrian crossings and assists use of CCTV systems. A mixture of pedestrians and vehicles creates a complex environment. Light sources with a minimum colour rendering (Ra) of 80 will be used.

6.0 Road Safety

At night, traffic levels in Dorset reduce significantly when compared to daytime levels. However, a significant proportion of Dorset accidents occur during the hours of darkness. National research indicates that street lighting helps to reduce the number of these accidents but design guidance now requires a safety vs. lifetime cost evaluation to justify new or replacement lighting outside of urban areas. This may result in some rural highways having their lighting systems removed, instead of replaced.

7.0 Crime Reduction and Community Safety

The Crime and Disorder Act places an obligation on the local authority to develop and implement safer community strategies. The provision of modern public lighting, designed to the appropriate standard, is a tangible way in which the Authority's commitment to the provision of a safer and more attractive community can be demonstrated. This includes for an improvement in:

Personal Security - Lighting in areas of high pedestrian use helps reduce the risk of crime against the person.

Assisting the use of closed circuit television - Installing lighting with good colour rendering increases the efficiency of the cameras in identifying suspects, colour of clothing and vehicles.

Crime against property, including car crime - Well-lit industrial, domestic and commercial areas aid the police in carrying out their duties and deterring the criminal.

Reduction of vandalism - Vandals are less likely to cause damage when they can be seen.

Increased ' feel good' factor (perception of safety) - Good lighting that creates the right ambience, increases the feel good factor and also the perception of safety. This, in turn, facilitates improved pedestrian use of our towns during the hours of darkness.

To further assist these improvements the community sometimes request additional areas of the highway receive lighting and, if supported by their local Town, Parish or Borough Council, the County Council will try to oblige. A small annual budget has been made available to fund such requests. An assessment procedure, which uses data on recorded crime and accidents and takes account of the environment and level of local support, is used to produce an annual list of prioritised schemes, to best direct this resource.

8.0 Energy

Energy is supplied via a competitively won contract. Both this tender process and continuing industry research into more energy efficient equipment, ensure best value in terms of energy consumption. In procuring energy the County Council considers the potential to use semi-green, green or renewable energy, if available and cost effective, for street lighting and illuminated signs within the County.

A term contract is in place with an external supplier to provide energy for street lighting assemblies, illuminated signs, lit bollards, beacons, subways, traffic signals, bus stop information displays and speed cameras.

9.0 Street lighting Maintenance

This Street Lighting Policy and its related specification standards seeks to comply with recommendations set out in the Code of Practice for Highways Lighting Management “Well-lit Highways”.

To ensure that street lights and illuminated signs are maintained to a satisfactory standard the County Council employs a service provider via a Private Finance Initiative (PFI) contract, let in 2006. In general, this contract covers all aspects of the service including areas such as routine maintenance, electrical testing, night scouting, non routine repair, random repairs, new works, structural maintenance and emergency cover.

A small team of County Council staff to administer the contract, assists and advises local people, local parish and town councils, housing associations, district councils and also deals with enquiries made by our own members and MPs.

To maintain a high standard of service provision across the County every streetlight and illuminated sign is cleaned, serviced and inspected in accordance with its designed parameters and good industry practice.

Electrical testing of each unit is undertaken on a six yearly cycle in line with national regulations.

To identify faulty lights, night inspections are carried out at 2 weekly intervals.

Dependant upon the situation there is a defined target response time for the service provider to repair any fault, including where the replacement of equipment is necessary. In general emergency calls are attended within 2 hours with almost all straightforward repairs carried out within 5 working days. If a fault is due to a power failure or unit replacement then this could take up to three weeks to rectify.

10.0 Street Lighting Replacement

The expected life of mild steel and Concrete Street lighting columns varies between 16 and 40 years. Prior to the PFI contract, columns made of these materials represented 93% of all columns installed in Dorset and approximately 11% of these exceeded their design life with a steep increase in this figure forecast. The condition of these older units had been exacerbated by very limited budgets for maintenance. In consequence the condition of much of this equipment represented a significant liability for Dorset County Council.

There had also been numerous failures of steel columns and brackets due to both internal and external corrosion, leading to columns or parts of them falling from height. Fortunately none of these failures caused personal injury although damage to property occurred. This situation led to the procurement of the PFI contract which apportions inherent risks to the service provider who is best placed to manage and control them.

The contract is for twenty five years and during the first five years it requires the replacement of nearly 28,000 units with a further limited replacement program from year sixteen, resulting in nearly all of our asset stock being replaced prior

to the end of the contract. The replaced units have a design life of at least 50 years, with minimal routine maintenance required to achieve this target.

Where replacements are required designs are carried out by the service provider, who seeks to achieve a British Standard for Lighting which is appropriate to the highway use and the County Council's own environmental policy. This results in the alteration of some historic column positions, where efficiencies in the design process have been achieved or additional positions are required to meet modern standards. Most residential roads and traffic routes also see an increase in column height, further increasing efficiency and minimising the number of additional positions required to meet today's lighting standards.

Advances in technology mean that lanterns designed today can be more energy efficient and better reduce light pollution. The installation of more modern equipment assists in reducing energy consumption because, although the PFI is forecast to add 15% to the overall asset stock by 2011, the total consumed energy is also forecast to be 15% lower, compared to consumption in 2006.

Lantern replacements are carried out at the same time as column replacements. Lanterns on units not being replaced are also replaced under maintenance. The type of light source and lantern shall be in line with this policy.

11.0 Design

The Policy for design and approval of lighting schemes is based on the principles listed in Section 2.0. In this way the County Council's Street Lighting Policy is having a positive direct impact on the nature of Dorset's local environment.

The consequence of designing street lighting to produce zero upward light pollution will usually result in additional units being installed with subsequent increases in the energy consumed and future maintenance costs if the applicable lighting standards are to still be met. A careful balance is therefore being struck between using minimal resources, both locally and globally, and achieving minimal light pollution.

In addition to a quality-based maintenance programme the County Council also has a policy to take a proactive lead role in providing guidance to local developers, parish and town councils and housing associations to ensure high quality design for new or replacement street lighting. In order to ensure the appropriate lighting standard, relevant to the "Zone" the County Council designs most of the new street lighting itself using national design standards. It also checks all third party designs, offering advice to ensure that the County Council's own Street Lighting Policy and Specification are met.

In new developments, lanterns can be affixed to buildings, particularly where footways are narrow and subject to considerable pedestrian traffic. Wayleave Agreements will be required in these circumstances.

To ensure that public funds are used to best effect the County Council also requires a commuted sum to cover all additional costs of non-standard street lighting furniture installed by developers. Only if approved in terms of its design and suitability shall such equipment then be authorized for subsequent installation. The commuted sum shall cover the full cost of both installation and subsequent maintenance, the latter including for any additional energy related running costs over the costs for a standard unit.

12.0 Attachments on Street Lighting Columns

Existing lighting columns, other than those installed in most recent years, are not designed to take additional loading from any type of attachment. Given the age of many columns an attachment could result in damage or structural failure, therefore any proposed attachment must first receive written authority from the Street Lighting Principal Engineer. Each and every application is considered with public safety in mind and weighed against any potential merits put forward for such an attachment.

If any third party wishes to attach a sign, festive light or advertising etc to a street column it may be possible provided that the column has been specially designed to safely hold the required sign. Alternatively, a replacement street lighting unit to an appropriate standard may be erected at no cost to the County Council.

No cross road spans of catenary lights or bunting are to be fixed to lighting columns, as it is not usually possible to achieve the minimum 5.8m (7.5m on abnormal load routes) height clearance in the middle of the span due to cable sag.

A considerable number of lighting columns already have traffic signs attached to them even though they have not been specially designed. This has largely come about through past pressures to keep the highway environment as uncluttered as possible by utilising lighting columns as sign posts. Although, in future, it will be permissible to fix smaller traffic signs to lamp columns that have been specially designed to withstand the additional loading, fixing signs totalling more than 0.6 sq. metres to standard columns will no longer be permitted. The Street Lighting Specification, for standard columns, allows for the attachment of signs at 2.1m from the ground and up to a total of 0.6 sq. metres installed per lighting column.

If the written authority of the Street Lighting Principal Engineer is obtained a license, to erect equipment within the highway, must also be obtained from the relevant highway authority and permission to attach the load obtained from the street lighting service provider. As all risk in the asset rest with them, this permission will be dependant upon the agreed detail of loads, fixings, insurances, use of approved contractors etc and can only be obtained from the service provider.

Some types of attachments may involve planning issues, with the impact on the environment may be seen to be detrimental, in such cases approval from the local planning authority must first be obtained.

13.0 Public Interface and Complaints Procedure

The PFI contract covers all aspects of the service, including service user's contacts and complaints. The service provider is required to consider these concerns within 5 working days and act in a reasonable manner to resolve them.

During the Core Investment Period the service provider is required to prepare a programme of column replacements, design new lighting schemes, consult with elected representatives of local councils, other stakeholder groups and inform local residents in advance of carrying out the works.

Residents are informed of the start of works by a letter drop approximately two weeks prior to commencement. This letter gives contact details if they have any concerns. Residents are not individually consulted upon the final positions of lighting columns in their road, their interests having being served by their local Town and Parish Councils and Elected Members.

There is limited flexibility to adjust column spacing whilst achieving uniform lighting levels. This does mean that new column positions may be different from the previous layout and this often leads to concerns over the loss of amenity lighting to areas outside the highway.

Where concerns relate to backward light spill into bedroom windows the service provider has an established procedure for determining whether a shield can and should be fitted at no cost to the resident.

Queries relating to the County Council's policy and additional lighting requests are dealt with by the in-house Dorset County Council team.

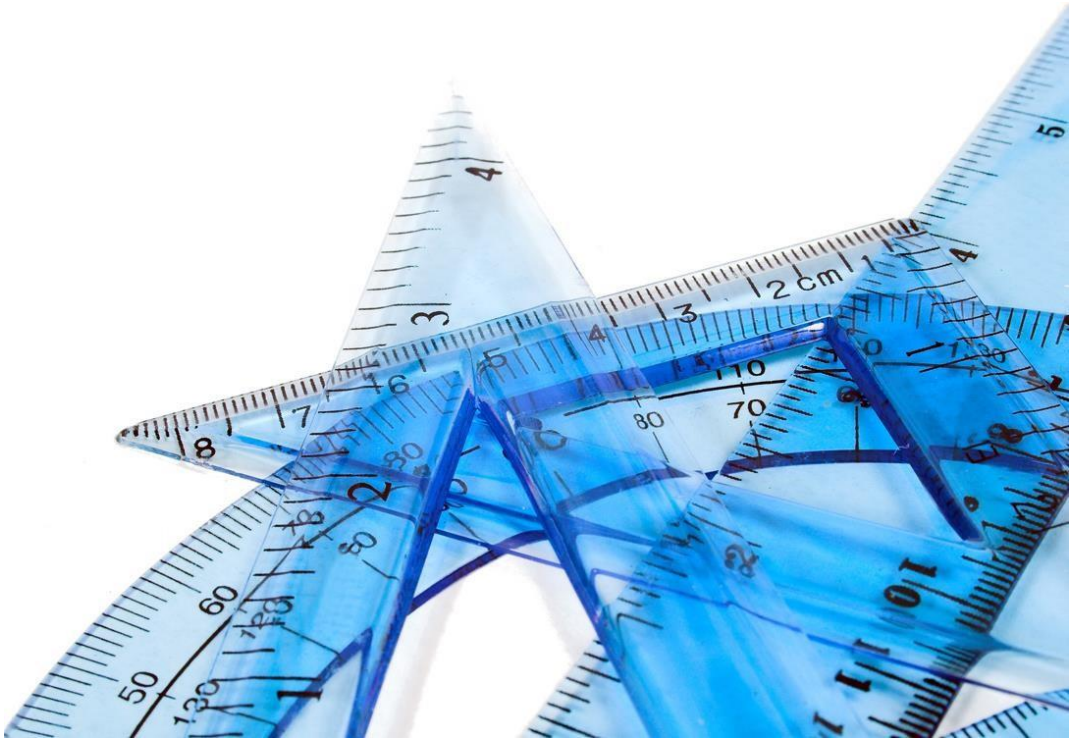
Hampshire street lighting policy

Hampshire County Council's published documentation is in the form of a specification document (Street Lighting Design Guide and Department Standard Specification 2010) for their current street lighting maintenance contract. The document was updated in 2016, and that version (the sixth edition) is attached.

Hampshire operates no street lighting within the AONB.

Street Lighting Design Guide and Department Standard Specification

6th Edition



Southern Electric Contracting working with Hampshire County Council

1. Introduction

This is the sixth edition of the Street Lighting Design Guide (formerly entitled "Guidelines for Siting and Design of Illuminated Street Furniture in the Public Highway".

The document is the 2nd in a suite of documents consisting of:

The Street Lighting Maintenance Management Plan (SLMMP)
Street Lighting Design Guide and Development Standard
Specification Standard Detail Drawings (Series L) Manual for Streets.

It is intended that this document be read in conjunction with these other publications.

2. Design Guidance

General guidance on whether lighting should, or should not, be installed can be found in the The Street Lighting Maintenance Management Plan (SLMMP)

.

SSE Contracting offers design and installation facilities to developers (at a charge to the developer) as an option, but developers also have the option to commission independent parties to undertake this work. The Authority retains the ability to review all designs.

If the developer chooses not to use the SSE Contracting to carry out the design, a check for compliance is required prior to acceptance. This check will be carried out by SSE Contracting and charged to the Authority. The Authority will charge the developer for this expense.

Lighting to Class S1 – S6

Designs are required to meet the minimum point value of illuminance for the lighting class, and values should be kept as near to the minimum as possible. However the requirement to meet the minimum level set for average illumination (Eave) is to be disregarded. (Eave min is considered a needless restriction on a lighting scheme's uniformity). It is Hampshire County Council's proposal to continue to conform to the requirements of Eave max to ensure uniformity does not fall below levels calculated by Emin / Eave max. This fixes a worst case uniformity, as shown by table below:

Note: Where the Ra value is ≥ 60, the minimum values may be adjusted according to the S/P ratio of the lamp, as detailed in Table 1 of the ILP document 'PLG03 – Lighting for Subsidiary Roads: Using White Light Sources to Balance Energy and Efficiency and Visual Amenity.

Table 2.1 – Lighting requirements for Class S1-S6 (BS 5489-2013)

Lighting Class	Eave min(Disregarded)	Eave x1.5 =Eave max	E min	E min / Eave max = Worst uniformity
S1	15	22.5	3	13.33%
S2	10	15	2	13.33%
S3	7.5	11.25	1.5	13.33%
S4	5	7.5	1	13.33%
S5	3	4.5	0.6	13.33%
S6	2	3	0.6	13.33%

Conflict Areas

Every area of conflict has to be considered on an individual basis by the designer. However Hampshire considers the area of the conflict should be limited to the actual conflict area and the immediate surrounding area. For instance, at a pedestrian crossing the conflict area is the crossing carpet and the area where the pedestrian might enter from. It is also considered to cover a 2 metres strip either side of the crossing where the pedestrian may stray. Extending the area to include the stopping distance of cars is considered not necessary. For such areas as roundabouts and complex junctions, the design should be broken down into the relevant distinct sections. The conflict area should be limited to the area of conflict ahead of the driver, and the area the conflicting body might approach from.

Tables 2.2 – 2.4, below, indicate the lighting levels to be achieved in Zones E2-4.

Table 2.2 E1 - Intrinsically Dark, e.g. National Parks & E2 - Low District Brightness e.g. Rural or Small Villages					
Type of Road	**Lighting class**	**Minimum Ra Value**	**Part-Night dimming in K.Lumens % reduction**	**Column Height (max)**	**Maximum Bracket length (metres)/Luminaire inclination (degrees)**
A35 Redbridge Causeway/Totton By Pass high mast lighting scheme – traffic flow >15,000	Me2	20	25	25m	0/0
Strategic Route ('A' & All Dual Carriageways) – traffic flow >15,000	ME3a	20	25	10m	0.5/0
Main Distributor (Other 'A') – traffic flow >15,000	ME3a	20	25	10m	0.5/0
Secondary Distributor ('B' & 'C' Class)	ME3b	20	25	8m	0.5/0
Road linking main and secondary roads	ME5	20	25	6m	0/0
Subsidiary Roads – high crime & high traffic flow	S6	60	25	6m	0/0
Subsidiary Roads – high crime & normal traffic flow	S6	60	25	6m	0/0
Subsidiary Roads – high crime & low traffic flow	S6	60	25	6m	0/0
Footpaths/ Cycle paths – high crime	S6	60	25	6m	0/0
Village Centres	CE4	60	25	6m	0/0
All low crime roads and Un-adopted-Parish/District Lighting	S7	80	25	5m	0/0

Table 2.3 E3 - Medium District Brightness e.g. Small Towns/Urban Centres					
Type of Road	**Lighting class**	**Minimum Ra Value**	**Part-Night dimming in K.Lumens % reduction**	**Column Height (max)**	**Maximum Bracket length (metres)/Luminaire inclination (degrees)**
Strategic Route ('A' & All Dual Carriageways) – traffic flow>15,000	ME2	20	25	12m	0.5/5
Main Distributor (Other 'A') – traffic flow <15,000	ME3a	20	25	10m	0.5/5
Secondary Distributor ('B' & 'C' Class)	ME3b	20	25	10m	0.5/5
Link roads, generally 'C' roads	ME3c/S2	20	25	8m	0.5/5
Subsidiary Roads – high crime & high traffic flow	S3	60	25	8m	0.5/5
Subsidiary Roads – high crime & normal traffic flow	S4	60	25	6m	0/5
Subsidiary Roads – high crime & low traffic flow	S6	60	25	6m	0/5
Footpaths/ Cycle paths –high crime	S6	60	25	6m	0/5
Village Centres	CE2	60	25	8m	0.5/5
All Low Crime Roads and Un-adopted Parish/District Lighting	S7	80	25	6m	0/5

Table 2.4 E4 – High District Brightness, e.g. Town/City Centres of High Activity					
Type of Road	**Lighting class**	**Minimum Ra Value**	**Part-Night dimming in K.Lumens % reduction**	**Column Height (max)**	**Bracket/Luminaire inclination %**
Strategic Route (‘A’ & All Dual Carriageways) – traffic flow>15,000	ME2	20	25	12 to 30m	0.5/5
Main Distributor (Other ‘A’) – traffic flow <15,000	ME3a	20	25	10m	0.5/5
Secondary Distributor (‘B’ & ‘C’ Class)	ME3c	20	25	10m	0.5/5
Link Roads generally ‘C’ Class	ME3c/S1	20	25	10m	0.5/5
Subsidiary Roads – high crime & high traffic flow	S2	60	25	8m	0.5/5
Subsidiary Roads – high crime & normal traffic flow	S3	60	25	6m	0/5
Subsidiary Roads – high crime & low traffic flow	S4	60	25	6m	0/5
Footway/Cycleway – high crime	S4	60	25	6m	0/5
City/Town Centre	CE1	60	25	10m	0.5/5
Subways shall lit utilising a light source with a Ra>=80	Day Eave	Day Emin	Night Eave	Night Emin	
	350	150	100	50	
Basingstoke Churchill Way Underpass	As set out in Appendix 4				

Notes:

1. All bracket/ lantern combinations where the column is 8m or higher then the lantern shall be flat glass for Environmental Zones E1 & E2; low Profile for Zones E3 & E4.
2. For column heights below 8m in Environmental Zones E1 & E2 then the Lantern bowl shall be dished with the maximum depth of 50mm between the bottom of the bowl and the edge of the Lantern or internal reflector shield.
3. For column heights below 8m in Environmental Zones E3 & E4 then the Lantern bowl shall be dished with the maximum depth of 82mm between the bottom of the bowl and the edge of the Lantern or internal reflector shield.

5 All Control Gear supplied shall be electronic which can run:

(i) at full power;

(ii) be dimmed and restored to full power at specific times during the night excluding School Crossing Patrol Warning Signs, Variable Message Signs, Illuminated Pedestrian Refuge Beacons, Illuminated Traffic Signs and Illuminated Traffic Bollards; and

(iii) Similarly switched off and on at specific times during the night. The dimming facility must be capable of being provided by all electronic ballasts supplied under this contract.

6 Lighting Class S7 for is deemed to be an indicator of a One for One replacement of columns unless otherwise specified.

7 All industrial estates will be lit utilising columns heights of 8m or above and have a minimum lighting level of S3.

8 For the avoidance of doubt, where an Ra value of greater than Ra60 is specified for S class lighting category the tables above have already taken into account any reduction in lighting class and the Designer shall design to the lighting class as set out in the table, 9 Remote Monitoring and Management Systems (RMMS) shall not be fitted to any item of Apparatus which has a metered supply.

10 All lighting classes, where dimmed, shall be dimmed from midnight to dawn unless instructed by the Authority otherwise.

Table 2.5 gives the minimum desirable clearances from edge of carriageway to face of the column:

Design speed Mp/h	Clearance M
30	0.8
50	absolute minimum 1.0 (recommended minimum 1.5)
60	Absolute minimum 1.5 (recommended minimum 2.0m)
70	Absolute minimum 1.5 (recommended minimum 2.0m)

Table 2.5

Development Standard for Highway Lighting

Residential Roads S5 - S6

Lighting columns - 6m straight shaft (no outreach bracket), polymer coated (12B21).
Lanterns - *WRTL 'Libra Performer' with 24/36W PLL lamp and dimming ballast HF-R DALI, fitted with Mayflower six-pin NEMA socket, post-top mounted (maximum tilt 5 degrees).
Switch controls - Mayflower Intelligent Management System (MIMS) remote monitoring Node to plug into six-pin NEMA socket in each lantern.

Every lighting scheme is required to install one Mayflower Mobitex GPRS Sub-master unit to control Nodes and link to central control system.

Residential Distributor Roads S4

Lighting columns - 6m straight shaft (no outreach bracket), polymer coated (12B21).
Lanterns - *WRTL 'Libra Performer' with 36/55W PLL lamp and dimming ballast HF-R DALI, or WRTL 'Arc 80' with 60W Cosmopolis lamp and dimming ballast DynaVision DALI Xtreme; fitted with Mayflower six-pin NEMA socket, post-top mounted (maximum tilt 5 degrees).
Switch controls - Mayflower Intelligent Management System (MIMS) remote monitoring Node to plug into six-pin NEMA socket in each lantern.

Every lighting scheme is required to install one Mayflower Mobitex GPRS Sub-master unit to control Nodes and link to central control system.

Main Roads ME5 to ME2 and CE Classes

Lighting columns - 8/10/12m straight shaft (no bracket), polymer coated (12B21).
Lanterns - *PHILIPS 'Iridium 253/254' flat glass with 100-250W SON/T or 90-140W Cosmopolis lamp, and dimming ballast DynaVision DALI Xtreme; fitted with Mayflower six-pin NEMA socket, posttop mounted (maximum tilt 5 degrees).
Switch controls - Mayflower Intelligent Management System (MIMS) remote monitoring Node to plug into six-pin NEMA socket in each lantern.

Every lighting scheme is required to install one Mayflower Mobitex GPRS Sub-master unit to control Nodes and link to central control system.

Note The **S**, **ME** and **CE** Lighting Classes appropriate to the various categories of Road, are as defined in **BS5489-1:2013** : 'Code of practice for the design of road lighting'. Hampshire County Council will advise the relevant Class(es) on receipt of scheme details.

*Where appropriate, LED lanterns from the Philips –WRTL Luma and Mini Luma range may be proposed as an alternative.

Column Types / Manufacturers:

A standard straight would be appropriate from any of the manufacturers listed below.

Mallatite.
Stainton.

Ballasts - all to be electronic and fully dimmable, using "DALI" protocol.
Switch controls - Mayflower Intelligent Management System (MIMS) remote monitoring Node in each lantern.

Every lighting scheme is required to install one Mayflower Mobitex GPRS Sub-master unit to control Nodes and link to central control system.

Note The **S**, **ME** and **CE** Lighting Classes appropriate to the various categories of Road, are as defined in **BS5489-1:2013** : 'Code of practice for the design of road lighting'. Hampshire County Council will advise the relevant Class(es) on receipt of scheme details.

Contemporary/Decorative Lighting Equipment in addition to Development Standard for Highway Lighting when appropriate (all subject to a higher rate of commuted sum).

Lantern Types:

Philips – City Soul

DW Windsor – Dover

Column Types / Manufacturers:

A Contemporary style straight or tapered column would be appropriate from any of the manufacturers listed below. (subject to a higher rate of commuted sum).

Mallatite
Stainton

Ballasts - all to be electronic and fully dimmable, using "DALI" protocol.
Switch controls - Mayflower Intelligent Management System (MIMS) remote monitoring Node in each lantern.

Every lighting scheme is required to install one Mayflower Mobitex GPRS Sub-master unit to control Nodes and link to central control system.

Note The **S**, **ME** and **CE** Lighting Classes appropriate to the various categories of Road, are as defined in **BS5489-1:2013** : 'Code of practice for the design of road lighting'. Hampshire County Council will advise the relevant Class(es) on receipt of scheme details.

Heritage/Historic Lighting Equipment in addition to Development Standard for Highway Lighting when appropriate (subject to a higher rate of commuted sum).

Lantern Types:

Metcraft – Victoria, Cromwell, Gladstone

Columns:

Metcraft – Constable (subject to a higher rate of commuted sum).

Ballasts - all to be electronic and fully dimmable, using "DALI" protocol.
Switch controls - Mayflower Intelligent Management System (MIMS) remote monitoring Node in each lantern.

Every lighting scheme is required to install one Mayflower Mobitex GPRS Sub-master unit to control Nodes and link to central control system.

Note The **S**, **ME** and **CE** Lighting Classes appropriate to the various categories of Road, are as defined in **BS5489-1:20013** : 'Code of practice for the design of road lighting'. Hampshire County Council will advise the relevant Class(es) on receipt of scheme details.

3. Obstructions to Avoid

a. Trees
b. Bushes/hedges
c. Overhead lines (electrical)
d. Overhead lines (other)
e. Vehicular accesses / gateways
f. Bedroom windows

Of course this list isn't intended to be exhaustive so there may be others that are not mentioned. It should, however, be clearly noted that all columns must be located in the Highway unless a Wayleave or Deed of Grant has been signed by the landowner.

a. Trees

Trees, both large and small are a constant problem when it comes to installing lighting columns. The following observations must be adhered to by scheme designers and maintenance operatives when considering column locations:

1. The scheme shall be designed so that columns are sited mid way between trees even if the design criteria are exceeded. The anticipated maximum extent of growth of the canopy, must be at least 5M away from any lighting column.

2. Where there an alternative location, away from the tree, then utilise this location and reconfigure the design accordingly.

3. It may be possible to locate a column underneath the tree canopy but it must be at least 1m clear above the lantern and the designer must be sure that this space will not be encroached upon at a later date.

b. Bushes/Hedges

Column must not be planted in bushes.

c. Overhead Lines

Scottish and Southern Energy plc (SSE) publish guidelines for the placing of columns near LV or HV overhead lines. Please refer to the latest G39 publication, and to the ILE/HSE document: 'Safety during the Installation and Removal of Lighting Columns and similar Street Furniture in Proximity to High Voltage Overhead Lines.

d. Overhead Lines (other)

Wherever possible columns should be positioned to avoid conflict with overhead lines, such as BT cables etc. Where such conflict is unavoidable there must be sufficient clearance to enable an operative to gain access to the lantern via a vehicle mounted lift (MEWP) or hoist.

e. Vehicular accesses / gateways

Columns must never be positioned in a manner that blocks access, gateways or any other form of access to property. Normally (but not always) locating columns on property party lines will avoid this. However, in any case, columns must not obstruct site lines for vehicles entering onto the highway.

f. Bedroom windows

Light intrusion into properties should be avoided as much as possible.

g. Footpaths (narrow & wide)

Where columns are being located on footpaths the choice of column position will depend on the width of the footpath and any verge area available.

4. Fold Down (Raising and Lowering or Mid-hinged) Columns

Fold down columns are designed for installation in locations where the lantern and control gear etc cannot be reached by means of a vehicle mounted lift (MEWP). There are, however, considerations that must be taken into account to ensure their effective use.

Because of their design care must be taken to ensure there is sufficient clearance to enable the column to be lowered, and raised again, without obstruction. When in the lowered position the column shaft should not obstruct pedestrians (i.e. it should not have to lie across a footpath or cycleway). There should be sufficient room for an operative to work safely away from buildings, steep slopes, traffic routes or bodies of water.

5. Column Colours

The required colours for street lighting columns within the County are based on BS 4800 and generally are as follows:-

- 12 B 21 "Lovat Green" (Valspar colour name)
- 00 E 53 "Black" (Valspar colour name)

6. Checks of Designs at Design Approval and on Completion

All lighting designs must be submitted to the Authority for approval. Failure to gain approval could result in the installation being rejected at time of offering it for adoption.

SSE Contracting will carry out a thorough inspection of each item of relevant Apparatus to be Accrued at the Authority's cost. The inspection shall include a visual check (for painting quality etc.) as well as ensuring that the electrical, structural and optical integrity of the Apparatus meets the Accrual Required Standards. The inspections will include the checking of:

a) Positions of Apparatus relative to the agreed design
b) Records of Private Cable Networks
c) Apparatus conformity
d) Electrical test certificates
e) Evidence of planned maintenance

Evidence from the developer must be provided that the Apparatus has been appropriately maintained in accordance with Good Industry Practice and has been fitted with a new Lamp no longer than six (6) Months prior to the date of Accrual.

All sites will be subjected to an inspection the lighting installation upon request for adoption, checks will include but not be limited to the following:

Visual Inspection Checklist

	Item	Description of Inspection	Tolerances	Comments
1	Planting depth	Remove door and measure from the bottom of aperture to finished ground level	Manufacturers specification +/- 25mm	Visual and tape measure
2	Reinstatement	Check quality final reinstatement	Visual	Does tarmac have straight edge? Have blocks or grass been cut neatly and laid level?
3	Column / post alignment	Is the pole upright and plumb?	Spirit level bubble touching line	Use spirit level
4	Bracket alignment	Is the bracket installed as designed?	Visual	
5	Bracket outreach	Is the bracket outreach as designed?	None	
6	Column / bracket protective system	Is colour / finish correct and undamaged?	Minor scratches not through to galvanising	
7	Numbering	Is unit numbered correctly and in correct place with logo?	Height +/- 25mm	Visual and tape measure
8	Location of unit	Check for compliance with design	+/- 500mm longitudinal +/- 50mm across	Installation must still comply with output specification
9	Locking device	Check that the lock operates correctly and the door fits securely.	None	Anti-Vandal Design
10	Column watershed	Check that correct watershed has been installed.	None	
11	Lighting column height	Check that the height is as per agreed design.	None	
12	Internal wiring	Check the correct cable has been used, wiring is neat, insulation at terminals is maintained and that all terminations and earth bonds are tight. Check that all electrical equipment is securely attached to the backboard.	None	Cables to be clipped to back board

	Item	Description of Inspection	Tolerances	Comments
13	Illuminated signs	Check the sign face type, post location, orientation and door position.		
14	Illuminated bollards	Check the shell type, base to the correct depth and base opens in the correct direction.	None	
15	Electrical test certificate	Check that a test certificate is provided and complete	None	
16	Protection device	Check that the protection device is correctly installed and rated.	None	
17	Lantern	Correct type, wattage and alignment	None	
18	Lighting design – trees and other vegetation	Check that the effect of trees and other vegetation has been adequately accommodated in the design and positioning of the columns.	None	
19	General - Condition	Check for any signs of damage to any item of apparatus.	None	All attachments to have neoprene strip under stainless steel banding

Inventory Data:

Unit Number
Road Name
Town
County
Unit Location (i.e. outside house 24)
DNO
Supply Point (if applicable)
GIS Easting (or shown on map)
GIS Northing (or shown on map)
Traffic Management (Yes/No)

Date installed
Last lamp replacement date
Electrical test date
Lamp Quantity
Number of Luminaires
Lantern Manufacturer/Model
Lamp Type/Wattage
Column Manufacturer
Column Height
Column finish
Bracket Type (double/single arm)
Bracket projection

DFT Risk Data

Ground Conditions
Salting
Road ENV
Environment Situation
Wind Exposure
Design for Fatigue
Traffic Flow
Traffic Speed
Bridge
Traffic Disruption
Pedestrian Density
Number of Brackets
Number of Attachments
Attachment Size
Date of Coating
Traffic Sign Cat
Protective Coating
Number of Circuits at Supply Point
Column Fixing
Cross Section
Column Material
Root Protection

Somerset street lighting policy

Somerset operates no street lighting within the AONB. The policy reproduced below relates to their scheme 'Reduction of Street lighting in Somerset'. It was accessed from their website in April 2019 (http://www.somerset.gov.uk/policies-and-plans/schemes-and-initiatives/reduction-of-street-lighting-in-somerset/).

Reduction of street lighting in Somerset

We know that we need to reduce the environmental impact of street lighting in Somerset.

Our street lighting reduction project aims to reduce the number of street lights we leave on during the hours of darkness, when vehicles and pedestrians are least likely to be present.

How will we do this?

We have consulted with a group of Parishes across Somerset to agree some test areas for the project, and will take the following approaches to reduce street lighting in Somerset:

- Part night lighting, which means switching off the lights in identified areas between 12 midnight and 5.30am
- Light dimming, which means that we reduce light levels in identified areas by 50 percent
- Converting lamps to LED, which provides more efficient direct lighting.

How will we fund this project?

We have won external funding from the South West Improvement and Efficiency Partnership, which will fund the conversion of street lamps to part night operation in selected parishes.

This project will help us to:

1. Reduce our carbon footprint

The Council operates 48,000 street lamps and 6,000 illuminated bollards and signs. This equates to approximately 12,000 tonnes of CO2.

2. Reduce light pollution

Satellite data indicates that light pollution increased by 20% in Somerset between 1993 and 2000, showing that light pollution is on the rise. The impacts of light pollution in addition to wasting energy include:

- Harming people's quality of life. For example, sleep disturbance when the light shines into homes;
- Interference with our view of the night sky
- Impacts on the ecology and wildlife of an area, affecting the behavioural patterns of plants and animals

General advice

Street lighting in the following areas will not be affected by part night lighting:

- Most main traffic routes (although some lights may be dimmed)
- Location with a significant night-time road traffic accident record
- Areas with above average record of crime

- Areas provided with CCTV local authority/ police surveillance equipment
- Areas with 24 hr operational emergency services sites including hospitals
- Formal pedestrian crossings, subways, and enclosed footpaths and alleyways where one end links to a street that is lit all night
- Where there are potential hazards on the highway (roundabouts, central carriageway islands, chicanes, speed humps)

Under what circumstances will full time night lighting be reinstated?

We will monitor the effects of part-night lighting and review whether any lights may need to be switched back to full time lighting at night. The most likely reasons for changing lights will be:

- If the police consider there is an unacceptable increase in crime or anti-social activity in the area over a 6 month period after the change and part night lighting is identified as the cause;
- If there is an unacceptable increase in traffic incidents after the change and part night lighting is identified as the cause;

Monitoring will continue after this period to ensure that any problems are identified and appropriate action is taken.

Full-time night lighting will not be re-instated in the following cases:

- Fear if increased crime
- To provide increased lighting to aid recreational or social activities.

Domestic light fittings and light distributions – improvement options

This Appendix gives some more detailed information on options explored for improving light control through lamp adaptation, based on a typical fitting style in widespread use. This expands on the consideration outlined in Section F (Lightscape Management Plan). In considering upgrades to existing domestic lighting, a simple and cost-effective option is the most likely to find favour with the public, hence the possibility of using adaptors, if they can be made electrically safe. This is something we will consider and explore further. If practical solutions are viable, then we can consider them as part of a medium to longer term strategy when considering lighting options with householders and businesses, in the context of improvements to encourage compliant lighting over our five- and ten-year programme. We hope it may provide solutions that can be discussed and shared with other dark sky areas in the UK.

1. **Canopy-mounted light sources** (images for each bulb type illustrate the unlit bulb [left]; the lit bulb [middle]; and the lit bulb with cover fitted [right]).

	Unlit bulb in holder	Lit bulb in holder	Lit bulb with cover fitted	Notes on visual effects
Fig. F.5.1: 40 W LED 400 Lm GLS style.				The poor distribution due to the lamp globe is worsened slightly by reflections from the glazing and the base of the fitting.
Fig. F.5.2: LED 'candle' style.				Similar result to the GLS style (Fig. F.5.1), but the upward light seems to have a slightly better cut-off.
F.5.3: 60 W Tungsten Reflector style.				Significant downward light throw, but this worsens the interior reflections. Silvering of neck incomplete, adding to upward component (brightness affected the exposure slightly).

Fig. F.5.4: 50 W TH GU10 in adapter.

Direct light from lamp neck, due to limited silvering there, similar to F.5.3. Strong downward throw from lamp again increases reflections from the base.

Fig. F.5.5: 5 W LED 345 Lm GU10 in adapter.

All light directed downwards, with good horizontal cut-off, but some upward reflections still noticeable.

2. Light sources in base-mounted lamp holder

Fig. F.5.6: 40 W LED 400 Lm GLS style.

Fig. F.5.7: LED 'candle' style.

Fig. F.5.8: LED reflector type lamp.

Fig. F.5.9: 50 W TH GU10 in adapter.

Fig. F.5.10: 5 W LED 345 Lm GU10 in adapter.

As expected, the lower, upward-pointing lamp holder position worsens the overall light output control.

Reflector type lamps would not normally be an option for this orientation, but were checked to assess whether, for retrofits, there might be options to use a reflector in the canopy (none were fitted in these examples). However, it appears unlikely that all direct upward light could be eliminated, even with lamps having very tight beams, so we do not intend to pursue this.

Overall, canopy-mounted light sources are clearly the best option. Adaptations using GU10 type lamps look viable, as do LED COB sources in the canopy.

In some cases, a deeper canopy may have benefits, as using a shielded lamp or shielding the source are critical to achieving Dark Skies requirements. This would entail a revision of basic designs from suppliers / manufacturers, so is not a short-term solution.

Littledown, Shaftesbury (housing development) – lighting strategy

In Section F, we refer to a housing development of 171 dwellings, currently being considered for planning approval by Dorset Council. The development is situated near Shaftesbury, and is mostly within the AONB. The proposed lighting for this site is compliant with IDA criteria (with the exception of those elements that are subject to highways regulations – relating to street lighting where the site is accessed to and from the main road - and are therefore excluded from the IDA criteria). This has resulted from direct discussions between the AONB and developer, so that the proposed lighting scheme is designed to be IDA-compliant prior to being submitted for approval by the local planning authority. As well as discussing the road lighting, we also specifically discussed with the developer the specification for wall-mounted lighting on the dwellings. Ensuring compliant domestic lighting as part of the initial specification minimises the risks of householders fitting their own, non-compliant external lighting.

A copy of the lighting strategy for the development is attached.

We have been increasingly realising the value of this style of approach, in which we discuss lighting aspects of new major developments directly with the developer. This means we can aim to agree an IDA-compliant design in the early design stages, which can then be discussed with the local planning and highways authority as part of the development package of proposals.

MMA LIGHTING CONSULTANCY
Exterior Lighting Design Specialists

Littledown, Shaftesbury

Lighting Strategy

MMA Project Number: 15099

Date: 17/05/2019

Produced by: Aimie Loveday

Revision: R4

Issued by: -
MMA Lighting Consultancy Ltd
Summer Field House
99 Old Bath Road, Charvil, Reading, Berkshire, RG10 9QN
Tel: +44 (0) 0118 321 5636
Fax: +44 (0) 0118 321 5636
www.mma-consultancy.co.uk
info@mma-consultancy.co.uk

CONTENTS

LITTLEDOWN, SHAFTESBURY

LIGHTING STRATEGY

1.0 INTRODUCTION

1.1 This lighting strategy document has been prepared on behalf of Redrow Homes. for the proposed development located off Littledown, which is situated in Shaftesbury, Dorset. This location is based within Cranborne Chase Area of Outstanding Natural Beauty (AONB) that covers 380 sq miles of countryside overlapping the boundaries of Wiltshire, Dorset, Hampshire and Somerset.

1.2 The report has been prepared to assess, in terms of artificial lighting, the likely effects of the proposed development. The lighting assessment includes information on the baseline lighting conditions within the area and considers possible mitigation measures to reduce potential light spill into neighbouring properties and ecology receptors, upward light (which can create sky glow) and visual source intensity (glare). Lighting class proposals will be included as part of this assessment.

1.3 This new development will require external adoptable & private lighting for all areas of the development. The safety of the pedestrians and vehicles within this new development should be considered as one of the priorities along with minimising the impact of the artificial lighting on the 'Dark Skies' and the local wildlife. As such a good quality sustainable external lighting solution will be required to ensure the safety and security of users whilst very carefully considering the AONB, ecological restraints and local residents.

1.4 The lighting design of this site should be carried out by a competent person governed by the Institution of Lighting Professionals.

1.5 The report has been prepared by MMA Lighting Consultancy Ltd to the best of our knowledge using information provided by Redrow Homes.

2.0 SITE DESCRIPTION

Existing site

2.1 Shaftesbury is a town and civil parish in Dorset which is located within Cranborne Chase AONB. The site, which extends to an area of approximately 9.5 ha in size and comprises predominantly large open fields and parcels of mature woodland. The below plan shows the site location.

Proposed Development

2.2 The proposed development will comprise of 170 dwellings. Development layout shown below.

3.0 POLICY & GUIDANCE

Environmental Protection Act 1990 / Clean Neighbourhoods and Environment Act 2005

3.1 Light pollution was introduced within the Clean Neighbourhoods and Environment Act (2005) as a form of statutory nuisance under the Environmental Protection Act (the 'EPA', 1990), states: "artificial light emitted from premises so as to be prejudicial to health or nuisance."

National Planning Policy Framework

3.2 The National Planning Policy Framework (NPPF), published in July 2018, sets out the governments planning policies for England and how they are expected to be applied and provides a framework for local plans. 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:

- Mitigate and reduce to a minimum potential adverse impact resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life.

- Identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason.

- Limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.

3.3 Cranborne Chase and West Wiltshire Downs Area of Outstanding Natural Beauty **Position Statement Number 1 Light** Pollution:

The Cranborne Chase and West Wiltshire Downs Area of Outstanding Natural Beauty derives much of its beauty from its qualities of tranquillity, remoteness and cultural heritage. Light pollution has the potential to erode and destroy that tranquillity and sense of remoteness.

It is, therefore, considered appropriate that all artificial external lighting within its borders, or within the setting of the AONB, should be muted, screened, and the minimum required.

To accord with this aim, no external lights should be erected or installed in, or within the setting of, the AONB unless:

- They can be shown to be essential for security or safety, and the minimum necessary to achieve it

- They are directed downwards and designed or shielded to prevent upward, sideways, and outward spillage

- They give a light whose colour and intensity are appropriate for the wider setting

- They do not highlight a structure or feature that would have an adverse visual impact on the surrounding landscape

- They utilize the most energy- and pollution-efficient equipment that is reasonably available. In order to meet these aims where existing lighting is identified as having an adverse effect on the character of the AONB, the AONB Partnership will encourage and facilitate the removal or modification of the lighting units. Modifying and installing external lighting that meets the above criteria will help to ensure that the AONB's special character and attractive environment will not be spoilt by sky glow or intrusive light.

3.4 Cranborne Chase and West Wiltshire Downs Area of Outstanding Natural Beauty have a management plan in place that presents objectives and policies that partners can apply to help conserve and enhance this nationally important landscape. The Plan also contains priorities that their team intends to lead or carry out with others.

3.5 The Management Plan 2014 - 2019, is approved by the AONB Council of Partners and relevant local authorities.

3.6 Lighting policies PT12, PT13 & LAN8 are most relevant to this scheme. To access the management plan, go to http://www.ccwwdaonb.org.uk/publications/aonb-management-plan/

Relevant British Standards

3.7 The most applicable British Standards for lighting that relates to the proposed development are:

- BS5489-1:2013 Code of practice for the design of road lighting Part 1: Lighting of roads and public amenity areas
- BS EN 13201 2015 – Road Lighting. Performance Lighting
- BS 12464-2:2014 – Light and Lighting. Lighting of Work Places. Outdoor Lighting.

Institution of Lighting Professionals, Bat Conservation Trust Lighting Guidance (August 2018)

3.8 The Bat Conservation Trust and the ILP produced a paper in 2018, "Bats and Lighting in the UK", discussing the appropriate lighting levels, types of lamps, colour temperatures etc. which are suitable for lighting areas adjacent to bat houses.

Bat Conservation Trust 2014 Interim Guidance

3.9 The Bat Conservation Trust 2014 interim guidance provides recommendation to help minimise the impact of artificial lighting.

Guidance Notes for the Reduction of Obtrusive Light; 2011 Institution of Lighting Professionals (ILP)

3.10 Guidance notes produced by the Institution of Lighting Professionals are among the most commonly referenced guidance notes for good practice within the lighting design industry.

3.11 Obtrusive light (or sometimes referred to as light pollution) refers to any light emitted in a direction in which it is not required or wanted and as such is

detrimental to other users. The assessment has been carried out in accordance with the published guidance documents from the ILP.

3.12 Light intrusion refers to the spilling of light beyond the boundary of the area to be lit. This includes the intrusion of light into bedroom windows.

3.13 Sky glow refers to the brightening of the sky above towns cause by direct or reflected upward light.

3.14 Glare refers to the uncomfortable brightness of a light source when viewed against a dark background. **Figure 1** illustrates the different types of obtrusive light.

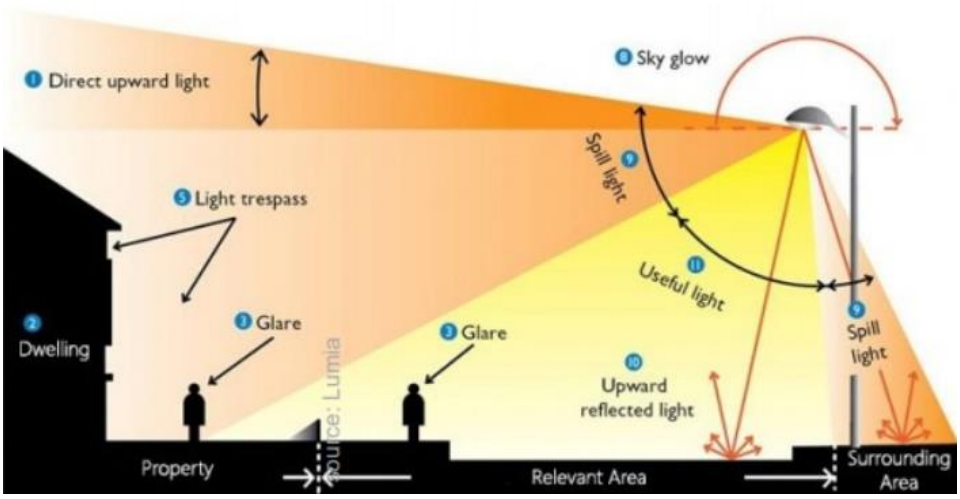


Figure 1: Light Obtrusion characteristics

4.0 ASSESSMENT METHODOLOGY

4.1 A desk-top study has been undertaken to identify relevant legislation, planning policy and good practice guidance in relation to lighting. The methodology takes guidance from the Institution of Lighting Professionals PLG 04 document "Guidance on Undertaking Environmental Lighting Impact Assessments". This sets out good practice which was followed during the assessment.

4.2 The scope of the assessment shall cover the effects of artificial lighting as a result of the proposed development. The assessment will consider the following:

- Assess the existing baseline lighting conditions on the immediate surroundings.
- To limit light pollution and sky glow
- To limit obtrusive light, spill light and glare to neighbouring land and properties.
- To limit potential light spill to vegetation and wildlife.

5.0 BASELINE CONDITIONS

5.1 The assessment site for the proposed development currently comprises predominantly of agricultural fields. Littledown is situated in Shaftesbury which is a town and civil parish in Dorset.

5.2 There is one proposed access point on Littledown into the new development. Littledown is maintained by Dorset County Council and is currently lit near the proposed access with Philips Iridium Cosmopolis lanterns mounted on 8m street lighting columns. **Upgrades to the existing lighting may be required but this would be subject to a design brief from DCC.**

Littledown

5.3 The application site is in a town and civil parish in Dorset. There are a number of existing residential and commercial properties close by. The proposed development site is mainly abutted by open fields with hedgerows and trees surrounding it. The new lighting installation shall consider all aspects of the surrounding area and environment and shall comply with BS5489-1:2013, BS EN 13201:2015 & BS EN 12464: 2014.

5.4 The development site is situated in Cranborne Chase AONB and therefore the environment surrounding the application site is defined as an Intrinsically dark area categorised in BS5489-1:2013 as an 'E1 Environmental Zone' in accordance with the ILP Guidance Notes. There are some areas where exterior lighting is visible from the application site; however, these light sources are not significant enough to affect the Environmental Zone.

6.0 DESIGN PROPOSALS

6.1 Littledown, Shaftesbury proposals shall be designed in accordance with BS5489-1:2013 & BS EN 13201-2:2015 & BS 12464-2:2014 and designed to ensure that external lighting is focused in the appropriate areas, preventing upward light and reducing unnecessary light pollution, energy consumption and nuisance to neighbouring properties. Selected luminaires shall prevent upward light spill and a colour rendering index (Ra) greater than or equal to 60Ra. Colour rendering index relates to the accuracy of colours perceived, relative to daylight.

6.2 Artificial lighting will be required as part of amenity, safe passage, security and health and safety requirements during periods of darkness. The associated potential obtrusive light effects toward surrounding light-sensitive receptors would be minimised through the controlled application of lighting in accordance with current best practice.

6.3 The indicative lighting criteria adopted for the purposes of this assessment are taken from relevant British Standards and recognised national guidance documentation. All criteria adopted for the final scheme of lighting shall be subject to appropriate risk assessment.

6.4 Littledown development shall be classed as a "P Class" in accordance with BS5489-1:2013, GN01: 2011 Table 1 - Environmental Zone and the ILP 'Guidance Notes for the Reduction of Obtrusive Light' GN01.

6.5 The initial proposed lighting class for this area shall be 'P6' with required illuminance lux levels of an Eave (Average) 2.00 lux to 3.00 lux and a maintained Emin (Minimum) of 0.40 lux. Luminaires such as the Philips 'Luma Micro' should be considered for the development as they fall in line with the Local Authorities standard specification. Luminaires shall have integrated louvres to reduce light spill and shall be post top mounted on low level 6m standard street lighting columns to Dorset County Council specification.

6.6 The use of a lower 5m columns have been considered for this development, however using a lower level lighting column would result in the use of more lighting columns within the design. We do not believe that this is an appropriate approach to a street lighting design in such a light sensitive area.

6.7 Guidelines for the environmental zones published by the Institution of Lighting Professionals, provides Guidance Notes for the Reduction of Obtrusive Light (GN01). The environmental zone for Littledown, Shaftesbury is considered to be an E1 Zone, see table below:

GN01:2011 Table 1 - Environmental Zones			
Zone	Surrounding	Lighting Environment	Examples
E0	Protected	Dark	UNESCO Starlight Reserves, IDA Dark Sky Parks
E1	Natural	Intrinsically dark	National Parks, Areas of Outstanding Natural Beauty etc.
E2	Rural	Low district brightness	Village or relatively dark outer suburban locations
E3	Suburban	Medium district brightness	Small town centres or suburban locations
E4	Urban	High district brightness	Town/city centres

Figure 3: Environmental Zone Table

6.8 Based on an Environmental Zone classification of E1, the likely effects of the proposals are as follows:

- A slight increase in sky glow, in the absence of avoidance or mitigation measures, such as any lighting exclusion zones or luminance design this may result in the alteration of wildlife patterns in the area.

- A possible increase in the light 'glare' which may have an effect on the visual comfort of local residents.

6.9 The specified lantern for use is the Philips Luma Micro LED.

Figure 4 Philips Luma Micro

6.10 The Philips Luma Micro offers a Ra value of ≥70, the correlated colour temperature arrays from 3000 to 4000 Kelvin and has an IP rating of IP66. Luminaires will be post top mounted on low level 6m columns.

6.11 The luminaire has a range of optics, for this development optic DW50 BL1 is appropriate for this scheme due to the optic having a narrow beam to cover the area. The correlated colour temperature is 3000 kelvin warm white LED and has integrated louvres to limit light spill into neighbouring properties and open fields. The chosen optic shall have an acceptable glare rating of G3 or above, thus minimising the spread of light above horizontal. All luminaires are to have dimmable electronic control gear, which could be controlled for part-night dimming regimes to limit sky glow in the AONB and minimise any potential impact on surrounding wildlife.

6.12 The Philips Micro Luma lantern has good light control and cut off angles to reduce light spillage. Where possible luminaires are orientated towards the site, away from the land outside the site to make them less intrusive.

6.13 Central Management Systems will also be considered for the development site so that any installed lighting in sensitive areas can be significantly reduced during the hours of darkness or lights switched off entirely. This type of solution, if considered acceptable for this area, could further assist with minimising the potential impact of any proposed lighting on the Dark Night Skies and local wildlife in the surrounding area to the development site.

7.0 PROPOSED LIGHTING LEVELS

7.1 **Littledown, Shaftesbury** development has been assessed under BS5489:2013 to require a lighting level of P6 for a LED light source. This lighting class shall cover the main residential roadway areas throughout the development. The traffic flow rates on site have been assessed as "quiet". The environmental zone for the area has been assessed as being E1 and this helps derive the below lighting class taken from table A.6 from within BS 5489: 2013. Please note this is an assessment and Dorset County Council prefers to issue design briefs with the lighting classifications they require. Details of our assessment are below: -

Table A.6 **Lighting classes for subsidiary roads with mainly slow-moving vehicles, cyclists and pedestrians**

Traffic flow	Lighting class	
	Ambient luminance: very low (E1) or low (E2)	Ambient luminance: moderate (E3) or high (E4)
Busy [A)]	S4 or P4	S4 or P4
Normal [B)]	S5 or P5	S5 or P5
Quiet [C)]	S6 or P6	S6 or P6

NOTE 1 If facial recognition is important then an ES lighting class from BS EN 13201-2:2003, Table 5, or an E_{sc} lighting class from CIE 115:2010 [N1], Table 7, can be selected as an additional criterion. Good colour rendering contributes to a better facial recognition. (The ES lighting class in BS EN 13201-2:2003 is expected to be replaced by SC upon publication of the revised edition.)

NOTE 2 To ensure adequate uniformity, the actual value of the maintained average illuminance is not to exceed 1.5 times the value indicated for the class.

NOTE 3 It is recommended that the actual overall uniformity of illuminance U_o be as high as reasonably practicable.

NOTE 4 Grey highlighting indicates situations that would not usually occur in the UK.

NOTE 5 The ambient luminance descriptions E1 to E4 refer to the environmental zone as defined in ILP GN01 [N5].

A) Busy traffic flow refers to areas where the traffic usage is high and can be associated with local amenities such as clubs, shopping facilities, public houses, etc.

B) Normal traffic flow refers to areas where the traffic usage is of a level equivalent to a housing estate access road.

C) Quiet traffic flow refers to areas where the traffic usage is of a level equivalent to a residential road and mainly associated with the adjacent properties or properties on other equivalent roads accessed from this road.

Figure 5 Table A.6 from BS 5489:2013

7.2 We would recommend that luminaires should be part-night dimmed to reduce the potential impact of any proposed lighting on the Dark Night Skies and local wildlife in the surrounding area to the development site.

7.3 As part of this lighting assessment a street lighting plan has been provided as an appendix A, which indicates the lighting levels and Iso Lux contours to show the spread of light. The street lighting layout shows the adoptable and private lighting so that the overall impact of all street lighting on the development can be assessed as one.

8.0 ECOLOGY

8.1 MMA Lighting Consultancy Ltd has taken ecology into consideration for this development site and considers sensitive receptors to any proposed lighting to be extremely important. Maintaining flight paths, feeding patterns, nesting and mating areas should also be considered when proposing any street lighting to ensure that wildlife continues to flourish in this area.

8.2 Within the development it is proposed that LED lighting with a correlated colour temperature of 3000 kelvin is used. LED light sources contain no UV wavelengths and warmer colour temperatures reduce the light emitted beyond the 550 manometer wavelengths. These requirements are consistent with current research on the impact of artificial lighting on bats, as published by the Bat Conservation Trust and is a requirement of Cranborne Chase AONB good practice of external lighting statement.

8.3 Light spill has the potential to affect both flora (plants etc) and fauna (from insects through to bats. Light spill can disrupt feeding patterns and force ecological receptors to leave their habitat. The lighting strategy will seek to avoid and mitigate light spill where there are potential ecological receptors that could be adversely affected. This will be sought through guidance provided by the ILP for the reduction of obtrusive light.

8.4 In order to minimise the impact of light spill onto the site boundary and any sensitive areas, rear light shields should be specified on lighting units proposed for the development.

8.5 All lighting calculations provided with this report have the lantern light output modelled with a rear shield already fitted to the lantern.

8.6 Due to the site being located within Cranborne Chase Area of Outstanding Natural Beauty, it is extremely important that the lighting impact can be minimised by using accepted methods of lighting control, essentially limiting illuminance and controlling light spill. It is proposed that the external lighting shall be installed on low level 6m street lighting columns. Generally lighting shall be selected to provide safety and security without polluting the boundary site.

9.0 IMPACTS

During Construction

9.1 During construction phase, it is likely that the site will be affected through the use of temporary site lighting either for health and safety purposes, site security, or both. It is assumed that the main impacts will be spill light and luminous intensity. These levels relate to residential areas.

9.2 Lighting for health and safety will be needed where work is required to take place during the hours of diminishing ambient lighting levels which is likely to occur if the construction works are carried out in the winter months or if night-time working is required. Security lighting is often required to deter crime in both compounds and in areas where plans and materials are stored overnight.

Post Construction

9.3 The site is classified as Environmental Zone E1, with the proposed lighting for the site being assessed in accordance with the limiting criteria for that zone, **figure 7** illustrates GN01:2011 Table 2 – Obtrusive light limitations for exterior installations

GN01:2011 Table 2 – Obtrusive Light Limitations for Exterior Lighting Installations – General Observers						
Environmental Zone	Sky Glow ULR [Max %](1)	Light Intrusion (into Windows) Ev [lux]		Luminaire Intensity I [candelas]		Building Luminance Pre-curfew (4)
		Pre - curfew	Post - curfew	Pre – curfew	Post – curfew	
E0	0	0	0	0	0	0
E1	0	2	0 (1*)	2,500	0	0
E2	2.5	5	1	7,500	500	5
E3	5.0	10	2	10,000	1,000	10
E4	15	25	5	25,000	2,500	15

Figure 7 GN01:2011 Table 2 – Obtrusive light limitations for exterior installations

9.4 Notes to table:

- ULR (Upward Light Ratio) is the maximum permitted percentage of luminaire flux that goes directly into the sky.
- Ev is Vertical illuminance in Lux measured flat on the glazing at the centre of the window.
- I is Light Intensity in Candelas.
- L is Luminance in Candelas per square metre.
- Curfew = the time after which stricter requirements (for the control of obtrusive light) will apply subject to the conditions of the local planning authority.

9.5 The effect of artificial light associated with the site is predicted to have a minor adverse effect on the environment. Modern lighting luminaires, when mounted with 0° tilts, do not typically produce significant upward light, therefore the effects of upward light/ULR (upward light ratio) are predicted to be negligible.

10.0 MITIGATION MEASURES

During Construction

10.1 Mitigation of the effects of the lighting installation during construction phase will include the following:

- Specifying working hours, use of lighting, location of temporary floodlights in the construction compound and agreeing these with the local council. Lighting to be switched off when not required specifically for construction activities or required health and safety or security.

- Adhere to best practice measures as recommended by the Institution of Lighting Professionals (ILP), Health & Safety Executive (HSE) and CIE (International Commission on Illumination) guidance. Lighting solutions will be selected to reduce light pollution.

- Specifically, designed luminaires will be selected to minimise upward spread of light. The optics in the lanterns will control the distribution of light to avoid overspill, sky glow and glare.

- Glare will be kept to a minimum by ensuring the main beam angle of all lights directed towards any potential observer is not more than 70°. Higher mounting heights allow lower main beam angles, which can assist in reducing glare.

- Restrict lighting to the task area using horizontal cut-off optics and zero tilts.

- Operate curfew and minimise the duration of any lighting (switch off or part-night dimming). Dimming, preferably using a centralised management system (CMS), is one way of reducing unnecessary illumination. In the past, dimming was generally achieved by simply switching off a fraction of the lights. This saves energy, but the lack of uniformity within a group of lamps can be hazardous because dangers may not be seen in the dark regions. The dimming technologies now available for lights other than low-pressure sodium avoid this problem. Depending on the method employed, dimming can also reduce energy demand by 40% and maintenance costs by 50%.

Post Construction

10.2 The detailed lighting design will be designed to use current best practice and technology. The impacts of external lighting will be minimised by the installation of lighting to the minimum specification required to provide a safe night time environment for residents, whilst having regard to the AONB and ecological constraints. Therefore, lighting will be designed to comply with the minimum illuminance levels given within the appropriate guidance.

10.3 Care should be taken to minimise glare from all luminaires installed, by ensuring the correct luminaires are selected and installed correctly, in line with the recommendations within the ILP Guidance Notes for the Reduction of Obtrusive Light.

10.4 Lighting would need to be provided in the form of column mounted lanterns. Where possible, lanterns would need to be pointed into the development and away from the adjacent sites. The optics in the lanterns would need to be specified to control the distribution of light avoiding overspill, sky glow and glare. Back shields shall be fitted to columns where appropriate.

11.0 CUMULATIVE EFFECT AND RESIDUAL EFFECTS

Cumulative

11.1 The appearance of sky glow was considered as part of the assessment of the external lighting conditions. During the lighting assessment, it was noted that the site is partially surrounded by an existing lit environment. The adjacent lit areas are Homefield, Littledown and Wincombe Business Park. It is noted that Homefield is lit with a 70w SON post top mounted on 6m columns and Littledown & Wimcombe Business Park are lit with 150W SON on 8m columns.

11.2 The increase with sky glow associated with the proposed development is considered to be negligible.

Residual during construction

11.3 It is considered that following the implementation of the mitigation measures outlined in Section 10.0, overall there will be minor adverse residual effect of lighting during the construction phase of the development site on sensitive habitats for wildlife. Subject to sensitive lighting design the effects on key areas of wildlife habitat is expected to be negligible. The development site is assumed to currently fall into Environmental Zone E1 in accordance with a natural location, intrinsically dark area.

Residual post construction

11.4 It is considered that there will be overall minor negative effects from the lighting of the proposed scheme on residential receptors and road users. The use of well located, modern light fittings, will minimise glare, light spill and reduce sky glow contributions to the existing sky glow above Shaftesbury. Subject to sensitive lighting design, including positioning and design of luminaires and use of remote monitoring systems, the effects on key areas of wildlife habitat is expected to be negligible. It is advised that all luminaires proposed for this development should be switched off after mid-night and a remote monitoring system should be installed, so that lighting can be dimmed to 50% (or less) after eight o'clock in the evening in order to further minimise the effect on the Dark Night Skies and any surrounding affected wildlife.

12.0 CONCLUSION AND SUMMARY

12.1 In conclusion, subject to implementation of the above proposals, a compliant lighting scheme can be designed and installed and an acceptably low impact on the residential properties, wildlife and on the wider landscape, which includes the AONB can be achieved.

12.2 During the construction phase, the lighting impacts are likely to be associated with the requirements for temporary lighting to illuminate the contractor's compound and work areas. Installed lighting will involve the use of well located, modern light fittings which are directionally controlled and will be in accordance with current best practice standards. Overall, where an effect arises, the effect on sensitive receptors during the construction phase will be short term and temporary in nature and considered to be of minor negative significance. However, as lighting would be temporary and mobile, units can and should be relocated if recognised as having a negative impact on sensitive receptors.

12.3 During the operational phase, the likely impacts include the introduction of artificial light sources as part of the proposed development, which will result in changes to the current baseline conditions. The proposed lighting scheme will comply with all relevant British Standards and the Institution of Lighting Professionals lighting guidelines and will serve to ensure that the safety and security of all areas of the development can be effectively maintained.

12.4 The effects on sensitive receptors will be mitigated through the implementation of a stringent lighting design, which will include the use of low light pollution fittings which retain light spill within the development area, minimising the loss of light to the night sky and glare discomfort to on-site or neighbouring receptors.

12.5 In our considered opinion, if the measures detailed above are undertaken then we anticipate the proposed development will not have a negative impact on the immediate environment with respect to light pollution. The likely cumulative effect of artificial lighting may be a slight increase in sky glow. However, as the street lighting installed surrounding the development does not utilise dark sky technology, the visual glow of the existing estate would be greater than the proposed development site.

12.6 This report has been prepared to the best of our knowledge, any lighting designs proposed shall be carried out by a competent lighting consultant in accordance with BS 5489: 2013, BS EN 12464: 2014 and Dorset County Council standard street lighting specification.

Prepared By: -

Aimie Loveday 17th May 2019

…… (Signed) …… (Print Name) …… (Date)

Reviewed By: -

Mark Chandler 17th May 2019

…… (Signed) …… (Print Name) …… (Date)

Letters of support for our application

So far, we have received letters of support from the following for our application to be an IDSR (attached in the following order):

National Organisations

The Astronomer Royal
Campaign to Protect Rural England
The British Astronomical Association's Commission for Dark Skies
The National Association for Areas of Outstanding Natural Beauty

Local Members of Parliament

Simon Hoare, Member of Parliament for North Dorset
The Rt Hon Sir Desmond Swayne, Member of Parliament for New Forest West

Astronomical Societies

Wessex Astronomical Society (also letter nominating AONB's Director and Dark Skies Advisor honorary membership)
Fordingbridge Astronomers
Weymouth Astronomy Club
Southern Area Group of Astronomical Societies

Local Planning Authorities

Wiltshire Council
Hampshire County Council
Somerset County Council
Dorset County Council
Mendip District Council
South Somerset District Council
Dorset Council (representing North Dorset District Council)
East Dorset District Council
New Forest District Council

Parish Councils

Ansty
Chilmark
Coombe Bissett
Damerham
Fontmell Magna
Heytesbury, Imber and Knook
Iwerne Minster
Longbridge Deverill
Swallowcliffe
The Stours
Trudoxhill
West Knoyle
Wylye

Educational establishments

Queen Elizabeth's School, Wimborne
Bournemouth University

Individuals

Mr. R Greening

From: PROFESSOR MARTIN REES
LORD REES OF LUDLOW

TRINITY COLLEGE
CAMBRIDGE
CB2 1TQ

Linda Nunn,
Cranborne Chase Area of Outstanding Natural Beauty,
Shears Building,
Stone Lane Industrial Estate,
Wimborne,
Dorset BH21 1HD

Dear Ms Nunn

I was delighted to learn from Bob Mizon, the moving spirit behind the Commission for Dark Skies in British Astronomical Association), about the initiative to secure Dark Sky status for the Cranborne Chase Area of Outstanding Natural Beauty.

As Astronomer Royal, I am writing to support this aim. Although the impetus for these campaigns often comes from astronomers, I'd like to emphasise that they benefit a far wider community. Indeed a starry sky is part of our environmenet, and it's a sad deprivation that a diminishing number of young people have the chance to see the stars as clearly as earlier generations did. It would be great if those in Dorset continued to have this benefit – and if others could be encouraged to visit to enjoy Dorset's skyscape as well as its landscapes!.

I therefore wish your campaign every success

Yours sincerely

Martin Rees

Astronomer Royal

Tel: +44 (0)1223 338412 (Direct) +44 (0)1223 338595 (Secretary)
Fax: +44 (0)1223 338500 Email: mjr36@cam.ac.uk

Campaign to Protect Rural England
Standing up for your countryside

Amanda Scott
Dark Sky Advisor
Cranborne Chase AONB
Shears Building
Stone Lane Industrial
Estate
Wimborne
Dorset BH21 1HD

10 December 2018

To whom it may concern,

Cranborne Chase application for *International Dark Sky Reserve* status.

On behalf of the Campaign to Protect Rural England (CPRE), I am writing to support Cranborne Chase AONB's initiative to secure protected dark sky status for 380 square miles of spectacular countryside.

CPRE exists to promote the beauty, tranquillity and diversity of rural England by encouraging the sustainable use of land and other natural resources in town and country. Formed in 1926, we are one of the longest established and most respected environmental groups in England. A registered charity, we have almost 60,000 members and supporters living in our cities, towns, villages and the countryside. CPRE is a network of over 200 district groups; there is a branch of CPRE in every county, a group in every region, as well as a national office in London.

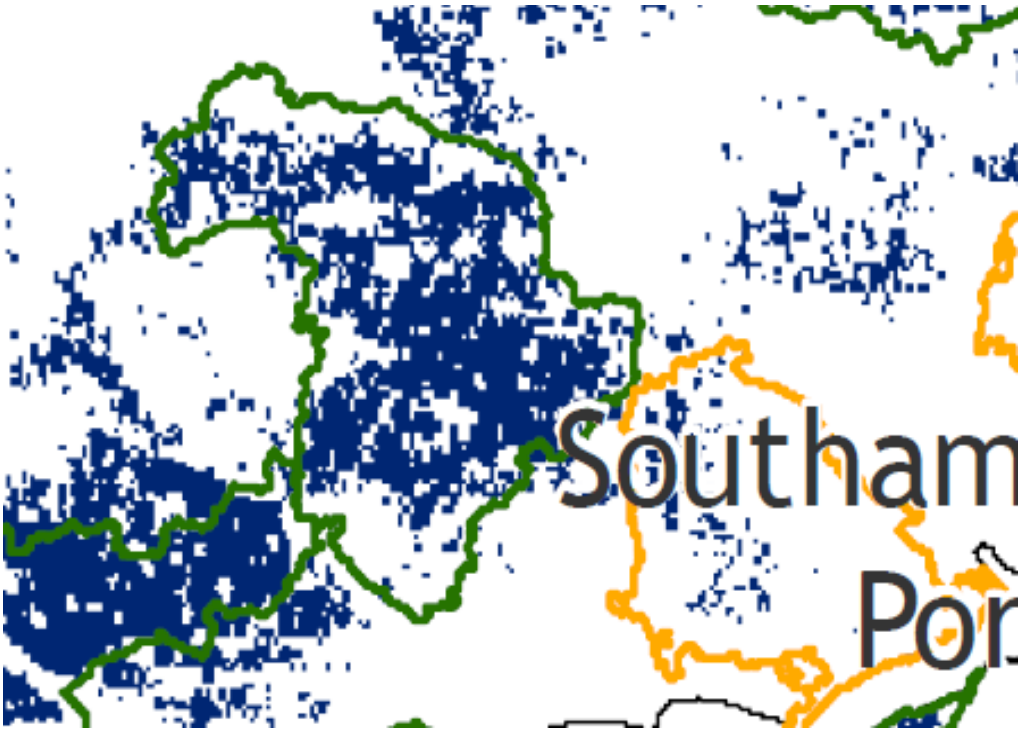
CPRE welcomes the International Dark-Sky Association's Dark Skies Programme and the opportunities it brings to recognise and protect the darkest skies across the United Kingdom and the rest of the world. We believe that darkness at night is one of the key characteristics of the countryside and makes it so different from towns and cities. A moonlit rural landscape and the chance to appreciate a star-filled sky, free of the intrusion of artificial lighting, are precious and increasingly endangered things.

In 2016, CPRE published interactive *Night Blight* maps[1]. These are the most detailed ever of Britain's night skies and are based on satellite data captured at 1.30am throughout September 2015. Detailed maps were created for all English counties, districts, National Parks and AONBs, showing the percentage of each area that falls under nine brightness categories. The mapping revealed that only 22% of England has pristine night skies, free of any light pollution. By comparison, 51.8% of the skies above Cranborne Chase AONB fall in this category, with the next darkest category making this 92% of the AONB (see Annex 1).

[1] The *Night Blight* interactive map can be viewed: https://www.nightblight.cpre.org.uk/

Our mapping found that 53% of England's pristine night skies, free of light pollution, are above National Parks and AONBs. When this map[2] is focused on the area around Cranborne Chase, it shows a large area of pristine night skies above the AONB (fig 1). This illustrates the extraordinary quality of dark skies in the area and suitability for Dark Sky designation.

Fig 1: Pristine night skies map focused on Cranborne Chase AONB



CPRE would like to take this opportunity to place on record our full support for Cranborne Chase AONB to attain International Dark Sky Reserve status. The designation of this area would help ensure that these remarkable dark skies will remain protected for future generations to enjoy.

If you would like further information, please do get in touch.

With best wishes,

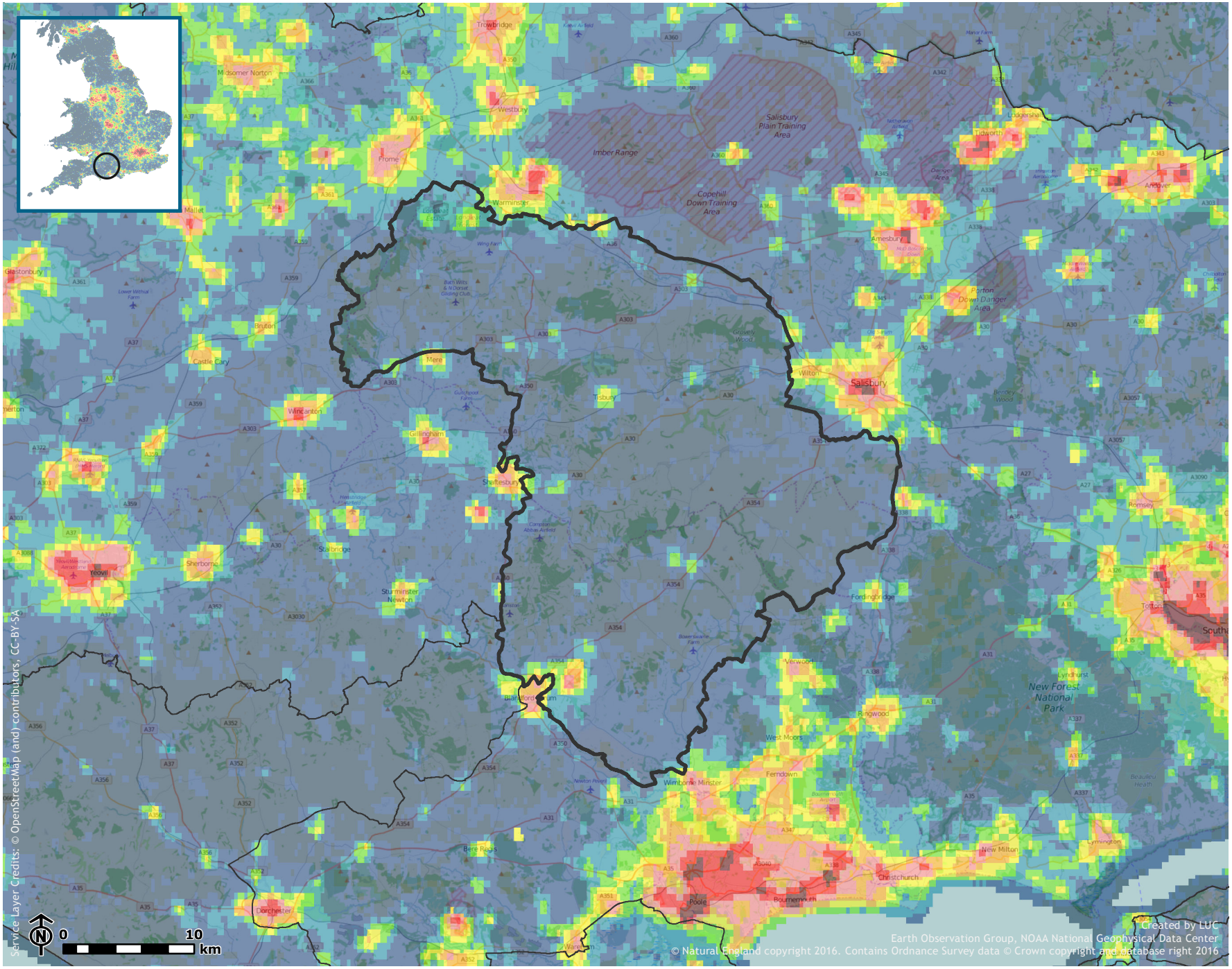
Emma Marrington
Senior Rural Policy Campaigner
CPRE national office

[2] The *Night Blight* maps were created by LUC. The full map of England's darkest skies and designated landscapes can be viewed on page 9 of their 'Background report and methodology': http://nightblight.cpre.org.uk/images/resources/Englands_Light_Pollution_and_Dark_Skies_LUC_Report.pdf

England's Light Pollution and Dark Skies

www.cpre.org.uk

Cranborne Chase AONB



Key

Cranborne Chase AONB

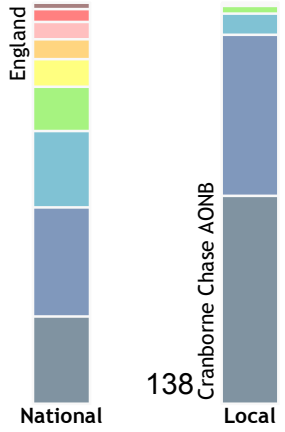
Night Lights

(NanoWatts / cm^2 / sr)

0%	>32	Brightest
0%	16 - 32	
0.1%	8 - 16	
0.2%	4 - 8	Brighter
0.6%	2 - 4	
1.8%	1 - 2	
5.4%	0.5 - 1	
40.2%	0.25 - 0.5	
51.8%	< 0.25	Darkest

Each pixel shows the level of radiance (night light) shining up into the night sky. These have been categorised into colour bands to distinguish between different light levels. The percentage of pixels that fall within each band is shown as a % in the chart above.

Proportion of land covered by each Night Lights category at various extents



The British Astronomical Association's Commission for Dark Skies -
working towards star-quality lighting

www.britastro.org/dark-skies

Bob Mizon MBE FRAS
CfDS Co-ordinator
38 The Vineries, Colehill
Wimborne, Dorset BH21 2PX

01202 887084
e-mail: bob.mizon@yahoo.co.uk

Ms Amanda Scott
Cranborne Chase Area of Outstanding Natural Beauty
Shears Building
Stone Lane Industrial Estate
Wimborne
Dorset BH21 1HD

October 31 2018

Dear Ms Scott,

The British Astronomical Association, and especially its Commission for Dark Skies section (CfDS), is particularly interested in the progress of the dark-sky initiative in the Cranborne Chase Area of Outstanding Natural Beauty, with a view to the possibility of the area securing Dark-Sky status within the IDA scheme.

We have worked on similar dark-sky preservation projects with Exmoor, Galloway Forest Park, Brecon Beacons, the Elan Valley, the South Downs National Park and the island of Sark, and we are pleased to be collaborating with the AONB in its bid. The CfDS believes that, while pursuing its aim to secure the optimum night sky for all Britons, wherever

they live, it is also important to foster centres of excellence where astronomers, authorities and local residents work together to preserve existing very dark night skies. We know from direct experience that the night sky over the AONB is and will remain a precious natural resource for all who live in and around it.

We therefore wish you and your colleagues all success in your aim to secure Dark-Sky status. Please let us know if and when we can help further.

Yours sincerely,

Bob Mizon Coordinator BAA CfDS
p.p. CfDS committee:

Dr Chris Baddiley (British Astronomical Association, physicist, author *Towards Understanding Skyglow*)
Dr Darren Baskill (British Astronomical Association, X-Ray astronomy University of Sussex, Greenwich Planetarium),
Ms Carolyn Bedwell (British Astronomical Association , Leicester Astronomical Society)
Mr Graham Bryant (British Astronomical Association, Hampshire Astronomical Group)
Mr Howard Lawrence (British Astronomical Association, Member of Institution of Mechanical Engineers, Institution of Lighting Professionals)
Mr Martin Male (British Astronomical Association, Flamsteed Society)
Dr John Mason (British Astronomical Association, physicist and broadcaster, South Downs Planetarium)
Ms Catherine Maryon (CfDS website coordinator)
Professor Martin Morgan-Taylor (International Dark-Sky Association, British Astronomical Association, Law Department of de Montfort University)
Mr Daniel Nixon (British Astronomical Association)
Mr David Paul (British Astronomical Association)
Mr Mike Tabb (British Astronomical Association, Bath Astronomers, Herschel Society, Institution of Lighting Professionals)
Mr Nick White (British Astronomical Association)

04.12.18

Dear Amanda

International Dark Sky Reserve – Cranborne Chase AONB

I write to commit the National Association for AONB's full support for your bid to the International Dark-Sky Association to be an International Dark Sky Reserve.

Areas of Outstanding Natural Beauty are designated not just for their local landscape value but their national importance. Our purpose, to conserve and enhance natural beauty, is often based on the effective management of the special qualities of these landscapes. Historically this has focused on the more typical natural and cultural elements of a landscape such as habitats, topographical features and buildings. More recently, however, focus has expanded to capture tranquility and the impact of dark night skies.

As light pollution in rural areas becomes an increasing problem we are starting to better understand the physical, mental and spiritual value of dark skies. With this understanding has come a realisation that our sky is as much a landscape component as are hills, valleys, rivers and woodlands.

With this in mind, we fully support Cranborne Chase AONB's bid for Dark Sky status. I am aware that the AONB team has done much work to promote dark skies, but this status would give the area the accreditation it deserves and help to highlight the importance of dark skies over our most cherished landscapes.

Yours sincerely

Howard Davies
Chief Executive

SIMON HOARE MP
NORTH DORSET

HOUSE OF COMMONS
LONDON, SW1A 0AA

Ms Amanda Scott
Dark Sky Advisor
Cranborne Chase AONB
AONB Office
Shears Building
Stone Lane Industrial Estate
Wimborne BH21 1HD

18 December 2018

Dear Ms. Scott

Many thanks for your letter concerning the Cranborne Chase AONB's application to become an International Dark Sky Reserve.

The Cranborne Chase, in my mind, is a location completely deserving of this title and I am absolutely delighted to support its application. The area is home to an eclectic mix of wildlife, some of which suffer from light pollution and would benefit infinitely from this change of status. In addition, IDSRs are a wonderful way of helping to reduce energy consumption in the local area. We must all be conscious of doing our bit to help tackle environmental issues; what better way than by returning the sky to its natural splendour?

What a pleasure it is to have the opportunity to escape the constant orange glow of a city or the backlight of a smartphone and lose yourself in the natural wonders around you. Not only will local residents be able to enjoy this space, but it would no doubt be a huge attraction for tourists visiting this beautiful part of our country.

I have no hesitation in adding my name to the vast number of supporters across the local and wider community.

Yours sincerely

Simon Hoare
Member of Parliament for North Dorset

Working Hard for North Dorset
Westminster: 020 7219 2787
Constituency: 01258 452585
Email: simon.hoare.mp@parliament.uk

HOUSE OF COMMONS
LONDON SW1A 0AA

Ms Amanda Scott
Dark Sky Advisor
AONB Office
Shears Building
Stone Lane Industrial Estate
Wimborne
BH21 1HD

12th November 2018

Dear Amanda,

Thank you for your letter of 8th November.

I am so glad that the Cranborne Chase AONB which falls within my constituency of New Forest West is applying to be an International Dark Sky Reserve.

I am very much in support of your initiative in making this application. I believe that reducing light pollution is an important priority for wildlife, our own health, and reducing wastage of energy.

I wish you every success with the application.

Yours sincerely,

Rt Hon Sir Desmond Swayne TD MP
Member of Parliament for New Forest West
swayned@parliament.uk

WESSEX ASTRONOMICAL SOCIETY

11

Bob Mizon MBE, FRAS
Committee member,
Wessex Astronomical Society
38 The Vineries, Colehill
Wimborne, Dorset BH21 2PX

01202 887084
e-mail: bob.mizon@yahoo.co.uk

Ms Amanda Scott
Cranborne Chase Area of Outstanding Natural Beauty
Shears Building
Stone Lane Industrial Estate
Wimborne
Dorset BH21 1HD

October 31 2018

Dear Amanda,

The Wessex Astronomical Society, many of whose members have already enjoyed working with the AONB in the context of its IDA dark-sky initiative, is pleased to express its continuing support for its bid to achieve the status of an International Dark-Sky Park.

The Society is heartened by the prospect of having the night sky over such a large local tract of land protected, given the superb quality of the starry sky over much of it. We are looking forward to the continuation of its joint public awareness and education work with AONB staff.

It is important to support the creation of centres of excellence where astronomers, authorities and local residents work together to preserve existing dark night skies.

We therefore wish the Cranborne Chase Area of Outstanding Natural Beauty all success in its aim to secure dark-sky status. Please let us know whenever we can help in any way.

Yours sincerely,

Bob Mizon MBE FRAS

Wessex Astronomical Society www.wessex-astro.org.uk

Registered Charity number 1123856

WESSEX ASTRONOMICAL SOCIETY

Honorary Secretary –
Bruce Longstaff
Correspondence address:
50 Crane Drive, Verwood,
Dorset BH31 6QB
Tel: 01202 829212
wessexastro@gmail.com

The Director
The Cranborne Chase and West Wiltshire Downs AONB
Stone Lane Industrial Estate
Shears Building
Wimborne BH21 1HD

12 October 2018

Dear Linda,

HONORARY MEMBERSHIP, WESSEX ASTRONOMICAL SOCIETY

Wessex Astronomical Society is working closely with the Cranborne Chase and West Wiltshire Downs AONB in its campaign for Dark Sky Reserve status and is felt by the W. A. S. Committee that a freer relationship would improve contact and understanding between the two organisations. Thus many more W. A. S. members would get to know and appreciate what we are jointly trying to achieve.

The Society has resolved that an invitation be extended to both you as Director, and to Amanda Scott, Dark Night Skies Advisor, to become *ex officio* honorary members of the Society.

This would give you two, as officers of the AONB, and your successors, unrestricted access to the regular meetings of the Society and its public astronomy events.

The Society wishes that this proposal has immediate effect.

Bruce Longstaff
Hon Sec, Wessex Astronomical Society

3rd November 2018

Letter of Support for Application for Dark Sky Reserve Status for Cranborne Chase

Fordingbridge Astronomers is a fast-growing group of enthusiastic amateur astronomers based in and around the small town of Fordingbridge on the Dorset/Hampshire/Wiltshire border. Since our formation five years ago we have grown to have approximately forty members and have regular meetings both indoors for astronomy-related talks and outdoors for observing.

We have a strong mission of outreach to the local community to educate and inform of the wonders of the night sky, particularly for young people, and inspire a lifelong interest and understanding of science.

We fully support Cranborne Chase AONB's application to be an International Dark Sky Reserve: "The night conceals the world but reveals the universe". We owe it to future generations to give them the opportunity to be inspired by the beauty of a clear, dark night sky.

Duncan Reavell MA (Cantab)

Chairman, Fordingbridge Astronomers

WEYMOUTH ASTRONOMY

John Macdonald
Chairman
Weymouth Astronomy Club
10 Lorne Road
Dorchester
DT 1 2LQ
02/11/18

Ms Amanda Scott
Cranborne Chase Area of Outstanding Natural Beauty
Shears Building
Stone Lane Industrial Estate
Wimborne
Dorset BH21 1HD

Dear Amanda,

Weymouth Astronomy Club fully supports your bid to achieve the status of an International Dark-Sky Park within the Cranborne Chase Area of Outstanding Natural Beauty.

Members of the Club are well aware of the loss of splendour of the night sky caused by light pollution and never cease to be overawed when the stars and planets can be observed in truly dark conditions.

We therefore wish the Cranborne Chase Area of Outstanding Natural Beauty all success in its aim to secure dark-sky status. Please let us know whenever we can help in any way.

Yours sincerely,

J. C. Macdonald

John Macdonald
Weymouth Astronomy Club

SAGAS Southern Area Group of Astronomical Societies

Ms Amanda Scott
Cranborne Chase Area of Outstanding Natural Beauty
Shears Building
Stone Lane Industrial Estate
Wimborne
Dorset BH21 1HD

17 November 2018

Dear Amanda,

SAGAS is a group of astronomical societies which provides a forum where astronomical societies across the South of England can meet. At present there are 23 member societies. Several member societies are adjacent to the Cranborne Chase Area.

For all astronomers, dark skies are essential for our hobby or profession. Our societies run many outreach events, from which it is clear that the same is true for much of the population at large.

The Cranborne Chase Area of Outstanding Natural Beauty is blessed with having some very dark skies. We believe most strongly that this is a resource for all people to enjoy, and that we should strive to make and keep it available.

We support wholeheartedly its initiative to secure Dark-Sky status.

Yours sincerely,

James Fradgley (Chairman, SAGAS)
c/o The White House
Merley Park Rd
Ashington
Wimborne
BH21 3DB
Email: helice@btinternet.com

29 January 2019

Rights of Way & Countryside
Waste and Environment
County Hall
Bythesea Road
Trowbridge
Wiltshire
BA14
8JN

Amanda Scott
Dark Sky Advisor
Cranborne Chase AONB
Shears Building
Stone Lane Industrial Estate
Wimborne
Dorset BH21 2HD

Your ref:

Our ref: RB /CCAONB /IDSR

Dear Amanda

Re: International Dark Sky Reserve application

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. Our support is evidenced not least by the council's recent commitment to new and replacement highway lighting of a design to significantly reduce light pollution and, as a unitary council and thus the local planning authority, to embed dark-sky friendly principles in our planning decisions.

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.

Yours sincerely

Yours sincerely,

Alistair Cunningham
Corporate Director – Growth, Investment and Place

Tel: 01225 713203

Email: alistair.cunningham@wiltshire.gov.uk

Amanda Scott
Dark Sky Advisor
Cranborne Chase AONB
Shears Building
Stone Lane Industrial Estate
Wimborne, Dorset
BH21 1HD

Economy, Transport and Environment Department
Elizabeth II Court West, The Castle
Winchester, Hampshire SO23 8UD

Tel: 0845 603 5638 (General Enquiries)
0845 603 5633 (Roads and Transport)
0845 603 5634 (Recycling Waste & Planning)
Textphone 0845 603 5625
Fax 01962 847055
www.hants.gov.uk

Enquiries to	Garry King	*My reference*	CCAONBDSRLetter1
Direct Line	01962 667946	*Your reference*	
Date	30 April 2019	*Email*	Garry.king@hants.gov.uk

Dear Amanda

Cranborne Chase AONB: International Dark Sky Reserve Application

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.

The Council recognises the considerable work that has been undertaken in developing this application to date and the many benefits of encouraging better lighting and reducing light pollution, both for people and wildlife.

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.

I wish you every success with the application.

Yours sincerely

Stuart Jarvis
Director – Economy, Transport and Environment

WWW.SOMERSET.GOV.UK

Patrick Flaherty
Chief Executive
Somerset County Council

Amanda Scott
Dark Sky Advisor
Cranborne Chase AONB
Shears Building
Stone Lane Industrial Estate
Wimborne
Dorset BH21 1HD

please ask for
Patrick Flaherty

direct dial
01823 359022

my reference
PF/ks

your reference

Email
PFlaherty@somerset.gov.uk

05 February 2019

Dear Amanda,

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.

Yours sincerely

Patrick Flaherty
Chief Executive

Official

County Hall, Colliton Park
Dorchester
Dorset, DT1 1XJ

Telephone: 01305 224195
We welcome calls via text Relay

Email: m.j.harries@dorsetcc.gov.uk
Website: www.dorsetforyou.gov.uk

Date: 4 February 2019

Ms Amanda Scott
Dark Sky Advisor
Cranborne Chase AONB
Shears Building
Stone Lane Industrial Estate
Wimborne
Dorset
BH21 1HD

Dear Amanda

I write to confirm that Dorset County Council are supportive of the Cranborne Chase AONB Partnership's aim to become an International Dark Sky Reserve (IDSR) and we are committed to working with you and in respect of our own contribution through, for example, reduced light pollution and part-night use of street lighting where appropriate.

We recognise that this designation presents both environmental enhancement and economic opportunity for North East Dorset, and wish you all the best with your application to be granted IDSR status.

Yours sincerely

Mike Harries
Chief Executive

MENDIP DISTRICT COUNCIL

Customer Services
Cannards Grave Road, Shepton Mallet, Somerset BA4 5BT
Telephone: 0300 303 8588 Fax: 01749 344050
Email: customerservices@mendip.gov.uk
www.mendip.gov.uk

FAO Amanda Scott [via email]
AmandaScott@cranbornechase.org.uk

Date: 05 February 2019

Cranborne Chase AONB: International Dark Sky Reserve Application

Dear Amanda

Thank you for your email dated 23 January 2019 with regards to the Cranborne Chase AONB Partnership's intention to apply for the AONB to become an International Dark Sky Reserve (IDSR).

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.

I trust this letter confirms our support for the proposals, should you wish to discuss further please do not hesitate to contact me.

Yours sincerely

Stuart Brown
Chief Executive
Mendip District Council

Amanda Scott
Dark Sky Advisor
Cranborne Chase AONB
Shears Building
Stone Lane Industrial Estate
Wimborne
Dorset BH21 1HD

Date : 2 April 2019
Your Ref :
Our Ref : ap.sn
Ask for : Alex Parmley
Direct Line : 01935 462101
email : alex.parmley@southsomerset.gov.uk

Dear Ms Scott

International Dark Sky Reserve Application

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.

Yours sincerely

Alex Parmley
Chief Executive

Service name
South Walks House, South Walks Road,
Dorchester, Dorset DT1 1UZ
01305 251010
www.dorsetcouncil.gov.uk

Amanda Scott
Dark Sky Advisor
Cranborne Chase AONB
Shears Building
Stone Lane Industrial Estate
Wimborne
Dorset BH21 1HD

Date: 5th April 2019
Ref:
Officer: Matt Prosser, Chief Executive
01305 252202 / 224195
matt.prosser@dorsetcouncil.gov.uk

Dear Amanda

Cranborne Chase AONB: International Dark Sky Reserve Application

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.

I wish you every success with the application.

Yours sincerely

Matt Prosser
Chief Executive

Christchurch and East Dorset Councils
delivering services together

Community and Leisure
Civic Offices
Bridge Street
Christchurch
Dorset BH23 1AZ

Date: 28th January 2019
Contact:
Our Ref: CED/DM/MJE
Your Ref:
Phone: 01202795000
Email: communityandrecreation@christchurchandeastdorset.gov.uk
SMS:

Amanda Scott
Dark Sky Advisor
Cranborne Chase AONB
Shears Building
Stone Lane Industrial Estate
Wimborne
Dorset BH21 1HD

Dear Amanda,

Cranborne Chase AONB Partnership Programme
International Dark Sky Reserve Bid

We are extremely excited about the opportunities the Cranborne Chase and Chalke Valley Landscape Partnership programme is creating for local people, communities and businesses in the southwest of England. To this end the 2019-2024 CC AONB Management Plan sets out a commitment from the nine local authorities to the further development and integration of our dark sky sites and the establishment of an International Dark Sky Reserve (IDS Reserve).

We believe the Reserve will make a significant contribution to the engagement of our local communities and increase both social value as well as monetary investment in the area. It will also help preserve and protect our dark sky sites and enhance the natural and cultural heritage across North and East Dorset, West Hampshire and South Wiltshire. To this end, we continue to work with our partners under the programme to create opportunities for our communities and people of all ages and persuasions to connect, preserve and protect the AONB through responsible policies, including lighting, as well as public engagement and education.

Finally, the International Dark Sky Reserve is pivotal to our own effort to improve the health and wellbeing of people in our communities and central to the overall preservation and protection of the Cranborne Chase AONB. East Dorset is therefore committed to support the Cranborne Chase AONB Partnership Bid to become an International Dark Sky Reserve.

Yours sincerely,

David McIntosh
Chief Executive

New Forest DISTRICT COUNCIL

Policy and Strategy

Service Manager: Louise Evans

Amanda Scott
Dark Sky Advisor
Cranborne Chase AONB
Shears Building
Stone Lane Industrial Estate
Wimborne
Dorset BH21 1HD

My Ref:
Your Ref:

Date: 07 February 2019

Dear Amanda,

Cranborne Chase AONB: International Dark Sky Reserve application

Thank you for your e-mail of 24th January 2019 to Bob Jackson, Chief Executive, New Forest District Council.

I am pleased to confirm that New Forest District Council supports the application for the Cranborne Chase Area of Outstanding Natural Beauty to be designated as an International Dark Sky Reserve.

Yours sincerely

Louise Evans

Louise Evans
Service Manager
Policy and Strategy
Tel: 023 8028 5588 /5345
Email louise.evans@nfdc.gov.uk

Ansty Parish Council
C/O Bridge House
Station Road
Tisbury
Wiltshire
SP3 6JT

9 December 2018

Dear Amanda

International Dark Skies Initiative

I write on behalf of Ansty Parish Council to express our support for the International Dark Skies Initiative currently being pursued by Cranborne Chase AONB.

Your talk at our Parish Council meeting on 12 November 2018 inspired us to think and do more to promote and protect our dark skies. Since that meeting we have circulated the attached note to all our villagers together with your pamphlets "Chasing Stars in our Outstanding Night Skies" and "Getting Light Right".

Thank you for being such an inspiration to us and we wish you every success with your Dark Skies bid.

Yours sincerely

Tim Martin
Chair Ansty Parish Council

Dark Skies in Ansty

We are fortunate to have one of the darkest night skies in the country with starry nights of exceptional quality. This is the reason why Cranborne Chase AONB is making a bid for International Dark Sky status.

This was the subject of a talk on Dark Skies by Amanda Scott from Cranborne Chase AONB at our parish council meeting on Monday 12 November 2018.

Our Ansty Parish Councillors are supporting this Dark Skies bid and have attached for you two leaflets. The first is "Chasing Stars in our Outstanding Night Skies", which tells us about dark skies, the adverse effects of too much light at night, how you can help preserve dark skies with your lighting and where you can enjoy some amazing star gazing.

The second leaflet "Getting Light Right" gives tips on the best floodlighting for you and for the environment.

So enjoy the dark night skies in and around Ansty and if you are considering the installation of external lighting or possibly the replacement of existing fittings, please consider our dark sky and the advice in these leaflets.

Happy star gazing

Ansty Parish Council

View our Ansty village website at www.anstywiltspc.org.uk

Dear Amanda,

Chilmark Parish Council support the aim to preserve the quality of dark skies in the AONB and deter unnecessary light pollution. I would be grateful if you would send me a short article which we could print in the local magazine to publicise this.

Kind regards

Jenny MacDougall
Clerk to Chilmark Parish Council

Amanda Scott

From: Deborah James <parishclerkcoombebissett@gmail.com>
Sent: 13 September 2018 14:06
To: Amanda Scott
Subject: Support for dark sky reserve status [Scanned]

To whom it may concern:

Coombe Bissett Parish Council unanimously support Cranborne Chase AONB becoming a Dark Sky Reserve and achieving Dark Sky Reserve status. The Parish Council is very much aware of avoiding light pollution and preserving the quality and beauty of dark skies.

An initiative in the village which is being considered is to replace the sodium street lights on the A354 in the centre of the village, with LED down lights.

A feature on the Coombe Bissett village website has been recently uploaded to demonstrate the Parish Council's enthusiasm.

Hopefully there will be an article in our village magazine.

Good luck and best wishes,

Deborah.

Mrs Deborah James
Parish Clerk
Coombe Bissett Parish Council
Applegarth
Shutts Lane
Coombe Bissett
Salisbury SP5 4LU
01722 718850
parishclerkcoombebissett@gmail.com

DAMERHAM PARISH COUNCIL

Office address: Gorran House, 6 Butlers Lane, Ringwood BH24 1UB
Tel: 07929-379646 Email: clerk@damerham.net Website: www.damerham.net

Amanda Scott
Dark Sky Advisor
Cranborne Chase AONB
Shears Building
Stone Lane Industrial Estate
Wimborne
Dorset BH21 1HD

28 November 2018

Dear Amanda,

On behalf of the Parish Council, I would like to express our sincere thanks for coming along to our Parish Council meeting on 19th November and sharing Cranborne Chase AONB's plans regarding International Dark Sky status.

It was very interesting and enlightening to hear your presentation, and the Parish Council are very keen to support your bid to become and International Dark Sky Reserve, to encourage all to preserve the quality of dark skies in our area, reduce unnecessary light pollution and minimise impact on our wildlife.

I look forward to hearing an update from you in due course on the status of your bid.

Yours sincerely,

Natasha Mackenzie
Clerk to Damerham Parish Council

Dear Amanda

Further to your email below I have been asked to write to you on behalf of Fontmell Magna Parish Council to confirm the Parish Council's support for Cranbourne Chase AONB's bid to be an International Dark Sky Reserve. As per your email below Fontmell Magna Parish Council are keen to preserve the character and tranquility of the area, including its night skies and do not want any unnecessary light pollution.

Best wishes

Marianne

Marianne Wheatley
Clerk - Fontmell Magna Parish Council
Tel: 01305 873838

Heytesbury, Imber and Knook Parish Council
Parish Clerk : Heather Parks FSLCC
2(B) Prestbury Drive Warminster BA12 9LB
01985 212340/07970780424
parishclerk@heytesburyparish.co.uk
www.heytesburyparish.co.uk

29th October 2018

Amanda Scott
Cranborne Chase AONB
Shears Building
Stone Lane Industrial Estate
Wimborne
Dorset BH21 1HD

By Email

Dear Amanda

Thank you for taking the time to attend our recent Parish Council meeting on Tuesday 23rd November 2018. The members were delighted with your presentation which enabled them to consider their response to the proposed bid for the Cranborne Chase AONB to become a Dark Sky Reserve.
I am happy to advise you that members were in support of preserving the quality of Cranborne Chase AONBs's dark skies and avoiding unnecessary light pollution.

We wish you every success in the bid.

Yours sincerely

H Parks

Heather Parks FSLCC
Parish Clerk
Heytesbury, Imber and Knook Parish Council.

Amanda Scott

From: Kerry O'Connor <kloc.design@virgin.net>
Sent: 01 October 2018 15:01
To: Amanda Scott
Subject: Iwerne Minster Parish Council [Scanned]

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Amanda,
Thank you for getting in touch with the Iwerne Minster Parish Council. We would like to express our support for the Dark Skies project and several of us have already filled in the survey. You mentioned in your email about being happy to come and share a few words with us about the project. We would really like that and wonder if you happen to be free on the 5th November to come to our next PC meeting? If not no problem and our next one would be on the first Monday in December.
Please let me know your thoughts.
All the best
Kerry O'Connor
01747811155

Longbridge Deverill Parish Council
Camberley House
Clay Street
Crockerton
Warminster
BA12 8AG

Mobile: 07986 880164
Email: longbridgedeverillpc@gmail.com
Web: www.crockertonlongbridgeandhilldeverill.co.uk

18th February 2019

Cranborne Chase AONB
Shears Building
Stone Lane Industrial Estate
Wimborne
Dorset
BH21 1HD

Dear Sirs

Longbridge Deverill Parish Council support Cranborne Chase AONB application to become an International Dark Sky Reserve.

Our Parish is fortunate to have very limited street lighting, along the main A350 road only, with the rest of the three villages, Crockerton, Hill and Longbridge Deverill that make up the Parish, having no street lighting.

We will consider dark skies when responding to consultee planning applications and endeavour to encourage and support residents.

Kind regards

Nikki Spreadbury-Clews
Parish Clerk
Longbridge Deverill Parish Council

SWALLOWCLIFFE PARISH COUNCIL

Chairman: Cllr Stephen Banas
Parish Clerk: Simon Pritchard
Email: swallowcliffepc1@gmail.com

Amanda Scott
Cranborne Chase AONB
Shears Building
Stone Lane Insustrial Estate
Wimborne
Dorset BH21 1HD

16th November 2018

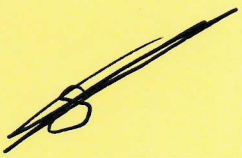
Dear Amanda

Re Bid for Dark Sky Reserve Status

This is just a short letter to inform you that Swallowcliffe Parish Council supports the Cranborne Chase AONB initiative to become a dark sky reserve.

I would be interested in any copy that you could email to me to place in the Village magazine.

Yours Sincerely



Simon Pritchard
Parish Clerk
For and on the behalf of
Swallowcliffe Parish Council

THE STOURS PARISH COUNCIL

East Stour Stour Provost Todber West Stour

Clerk: Mrs M Cox, Swallows Rise, West Stour, Gillingham, Dorset. SP8 5RL

Telephone 01747 838367 E-mail – stours@dorset-aptc.gov.uk

Amanda Scott
Dark Sky Advisor
Cranborne Chase AONB
Shears Building
Stone Lane Industrial Estate
Wimborne
Dorset
BH21 1HD

Dear Ms Scott

The Stours Parish Council at their meeting, held 13th September, fully supported the Cranborne Chase AONB's bid to become a Dark Sky Reserve.

By becoming a Dark Sky Reserve will help to preserve the quality of the Cranborne Chase.

There is a great need to avoid unnecessary light pollution in the countryside. Light pollution is having a negative impact of the wellbeing of our countryside, wildlife and people.

Yours sincerely

M Cox

Mrs M Cox
Clerk to the Council

24 SEP 2018

Trudoxhill Parish Council
c/o 14 Everlanes Close
Milborne Port
Sherborne
Dorset
DT9 5FT

clerk@trudoxhill.org.uk

Amanda Scott
Dark Sky Advisor
Cranborne Chase AONB
Shears Building
Stone Lane Industrial Estate
Wimborne
Dorset
BH21 1HD

4th October 2018

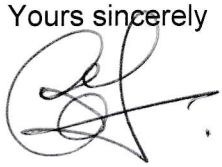
Dear Amanda,

Thank you for your email dated 5th September 2018 which was considered at the Trudoxhill Parish Council meeting this evening.

Whilst Trudoxhill does not lie within the AONB it lies close to the boundary and the Parish Council would like to state how much they value their view of the night sky and are very pleased to support your bid for the AONB to become an International Dark Sky Reserve.

We would like to take this opportunity to invite you to submit a short article for our November newsletter. Please submit the article to the email address above.

Yours sincerely



Mr Chris Galpin
Chairman of Trudoxhill Parish Council

West Knoyle Parish Council

Parish Clerk – Mrs. Lindsey Wood

Correspondence address: Duchy Manor, Springfield Road, Mere, Wiltshire. BA12 6EW Tel: 01747 860701
email: lindseywood@merewilts.org

Amanda Scott
Dark Sky Advisor
Cranborne Chase AONB
Shears Building
Stone Lane Industrial Estate
Wimborne
Dorset BH21 1HD

9th October 2018

Dear Amanda,

Re: Bid for Dark Sky Reserve Status

With reference to your email of 5th September, I copy of which I presented to the Parish Council at their last meeting, I can confirm that the Parish Council has instructed me to send a letter of support for becoming a Dark Sky Reserve. West Knoyle has no street lights and has, in the past, objected to proposals within planning applications that may result in light pollution at night.

We would like to wish you success with your bid.

Yours sincerely,

Lindsey Wood
Parish Clerk, West Knoyle
Tel: 01747 860701

Dear Amanda,

Wylye Parish Council support the aim to preserve the quality of dark skies in the AONB and deter unnecessary light pollution.

Kind regards

Jenny MacDougall
Clerk to Wylye Parish Council

Wimborne Minster, Dorset, BH21 4DT
T 01202 885233
E office@qe.dorset.sch.uk
W www.qe.dorset.sch.uk

Queen Elizabeth's School

Our Ref: MPM/jd

9th October 2018

Amanda Scott
Dark Sky Advisor (Monday to Wednesday)
Cranborne Chase AONB
Shears Building
Stone Lane Industrial Estate
Wimborne
Dorset BH21 1HD

Dear Amanda

I am delighted to confirm that Queen Elizabeth's School, Wimborne fully supports the bid by Cranborne Chase AONB to become a designated IDSR.

Queen Elizabeth's School is dedicated to developing STEM opportunities for all students and in partnership with Cranborne AONB we can easily see the potential for enhanced learning opportunities for students of all ages if this bid were to be successful. In addition, Queen Elizabeth's School is a Science Learning Partnership Lead School and through our network of schools across the South West region we can are enormously excited about the potential of engaging teachers and students across the south-west region in this project.

Wishing you every success in your bid!

Yours sincerely

Martin McLeman
Headteacher

Bournemouth University

Head of Regional Community Partnerships
Office of the Vice Chancellor
Bournemouth University
Talbot Campus
Fern Barrow
Poole
Dorset
BH12 5BB

Amanda Scott
Dark Sky Advisor (Monday to Wednesday)
Cranborne Chase AONB

Dear Amanda,

I am writing this letter in support of the Cranborne Chase Area of Outstanding Natural Beauty's application for Dark Skies Accreditation. It is quite amazing that 50% of the 380 square miles of the AONB still has the lowest levels of light pollution in England, and that the rest of the Chase is not far behind. This makes it a very special place that warrants support.

Bournemouth University is striving to create a world-class learning community and central to this is public engagement which ensures the benefits of higher education extend far beyond our institutional walls. We see our evolving research as an excellent means to deliver our commitment to high quality public engagement. The Cranborne Chase project will enable the University to share with the wider community the skills and expertise of our staff and students and to help support the creation of new learning experiences for local people who engage with this project. By engaging with this project we hope to also learn from the community about how we can make our expertise and research more accessible and relevant to them.

There is growing awareness that such activities not only support the natural environment but also bring health and wellbeing benefits to participating volunteers which is a growing area of research interest to academics. As a university we are very keen to continue to explore with the AONB various aspects of the area's dark night skies. There is so much that we can potentially learn and disseminate to others nationally and internationally. There are opportunities in terms of human well-being and health, benefits to the natural environment, sustainability in terms of reducing light pollution and the development of associated technology. There are also potential benefits to the region in terms of tourism and leisure, and I know that you have been working with my colleague Sean Beer on this and the other aspects indicated above. We look forward to continuing and growing this work in the future and fully support your application.

Yours faithfully,

Ian Jones
Head of Regional Community Partnerships

22ND October 2018

Dear Ms. Scott.

I would like to support your cause for Cranborne Chase to qualify as an International Dark Sky Reserve.

Five months ago we moved to Chilmark specifical to live in an area with dark skies.

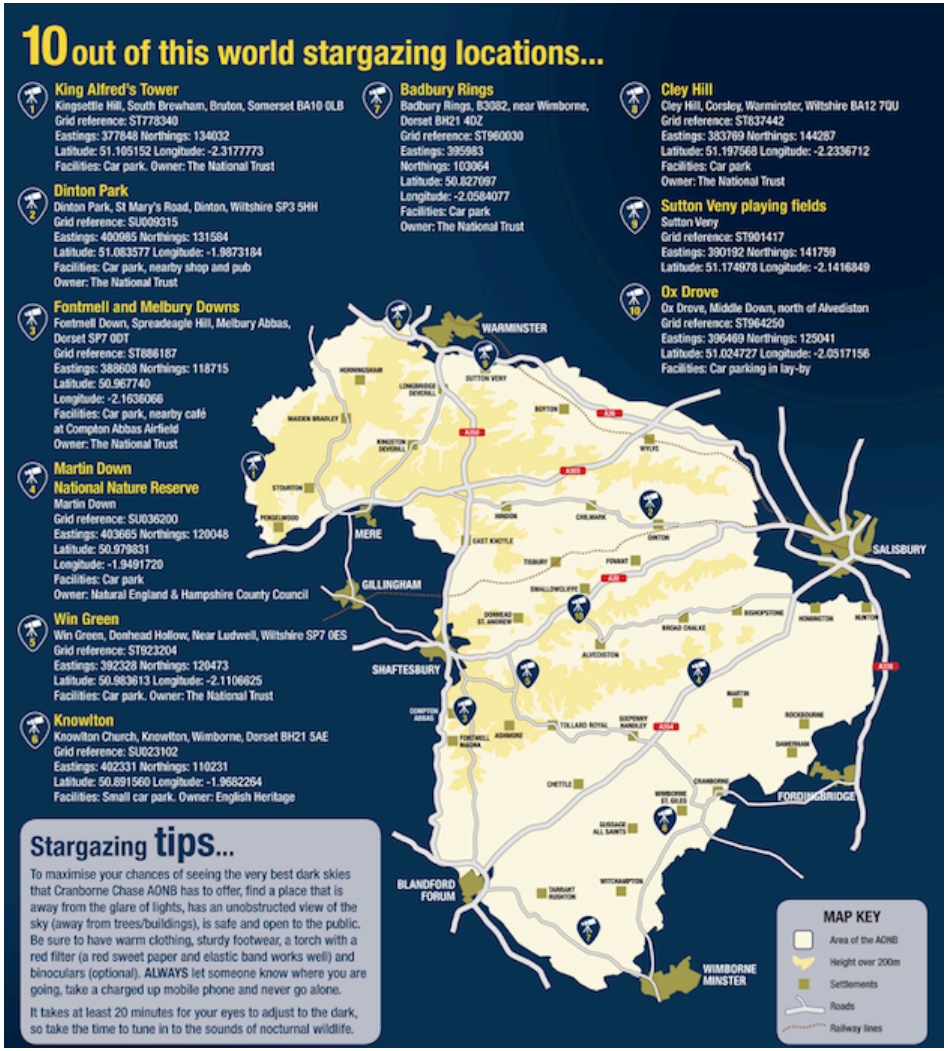
Being a keen amatiure astronomer for more than 60 years I checked the light pollution map of the U.K. and noticed that Cranborne Chase was one of the darker areas. There are not many places where one can see the Milky Way distictly, this being one.

I would also like to support any cause that would prevent the incorrect installation of security lights in villages as set out in the 2006 act regarding them.

Yours Sincerely

Rod. Greening

Cranborne Chase's top ten stargazing sites



Cranborne Chase AONB has identified and promotes a 'top ten' of stargazing sites across its landscape. These are all accessible to the public. We have negotiated designation as a stargazing site for each location with the landowners.

King Alfred's Tower
Dinton Park
Fontmell and Melbury Downs
Martin Down National Nature Reserve
Win Green
Knowlton
Badbury Rings
Cley Hill
Sutton Veny playing fields
Ox Drove

In promoting them, we set out not only their value for stargazing, but also how they link to the long and rich cultural history of Cranborne Chase. This is because we want to actively promote our dark night skies in the context of their place within the Chase's wide and varied landscape. This history ranges from King Alfred massing his troops against the Vikings, to prehistoric ceremonial landscapes, to ancient cattle droveways, to stately homes of England. Apparently, Cley Hill is even a favourite with Britain's UFO spotters.


(© Carolyn White)

King Alfred's Tower
Kingsettle Hill, South Brewham, Bruton, Somerset

King Alfred's Tower is a striking 160ft (49m) folly, built in 1772 for Henry Hoare II, known as Henry the Magnificent, the designer of the iconic Stourhead gardens. It is believed to mark the site where King Alfred the Great rallied his troops in 878. The tower commemorates the accession of George III to the throne in 1760 and the end of the Seven Years War in Europe. Henry would surely have appreciated the majesty of the night sky as much as his own creations, and this site provides a perfect spot from which to admire the beauty above.


(© Elizabeth Forbes)

Dinton Park
St Mary's Road, Dinton, Wiltshire

Perfectly described by the National Trust as 'far-reaching rolling parkland with tranquil views in the grounds of a Neo-Grecian house'. This park is one of Wiltshire's best kept secrets and boasts substantial views - even Salisbury Cathedral can be seen from the highest point. Just like the night sky, the house is strikingly simple, deliberately conservative and grand, making it a fantastic backdrop for night time photography.


(© Helen Gibson)

Fontmell and Melbury Downs
Spreadeagle Hill, Melbury Abbas, Dorset

At 263m, the summit of Melbury Hill is one of the highest points in Dorset. An Armada beacon sited here in 1588 formed part of the chain of signal beacons stretching between London and Plymouth. What better place to witness the other navigational tools used by sea-farers worldwide – the mystical constellations. This site offers superb panoramic views which, along with Win Green, are unparalleled in the AONB.


(© CCWWDAONB)

Martin Down National Nature Reserve
Martin, Hampshire

This 336 ha reserve is home to an exceptional collection of plants and animals associated with chalk downland and scrub habitats, including a number of rare or threatened species. It also offers an exceptional view of our night skies. Visitors can savour this ancient landscape where our prehistoric ancestors would have relied heavily on the night sky for navigation, planning their year and their religious and associated rituals.


(© Roger Hopkins)

Win Green
Donhead Hollow, Near Ludwell, Wiltshire

One of the best known and most iconic sites in the Cranborne Chase AONB, Win Green is its highest point as well as a Site of Special Scientific Interest. It contains chalk grassland, a habitat that has been seriously eroded in the UK and offers extensive views, with Bournemouth, the Isle of Wight, Salisbury, Glastonbury Tor, the Mendips, the Quantocks and Milk Hill all visible when clear.


(© Paul Howell / Pictor Images)

Knowlton
Knowlton, Wimborne, Dorset

The ruins of the mediaeval church stand at the heart of a major pagan ceremonial site, once taken over by Christian worship, but now returned to nature. Surrounding the site is the largest concentration of pre-historic barrows and henges found anywhere in the UK. Read up on the constellation myths created by our ancestors that tell of gods and monsters, heroes and villains and other legends using only the stars in the night sky, and then witness the incredible theatrical display for yourself. The backdrop of the stunning church also makes for fantastic astrophotography.

(© T Rich)

Badbury Rings
Near Wimborne, Dorset

Badbury Rings is an Iron Age hill fort in the territory of the Durotriges, a tribe of ancient Britain. In the Roman era, soldiers built a temple nearby which was used by the people of Vindocladia, a small local settlement. Back then, when there was little light pollution, our ancestors would have visited Badbury Rings and witnessed the full majestic view of our galaxy and beyond.


(© Carolyn White)

Cley Hill
Corsley, Warminster, Wiltshire

Although a bracing walk to the top of this ancient hillfort, at the summit visitors will be on top of one of the UK's UFO hotspots. For almost 40 years this site has drawn UFO spotters who are keen to see if the talk of lights, flying objects and other unidentifiable oddities are true. Nearby Warminster has a designated National Reporting Centre for UFOs - so spotters won't have to go far to record their sightings. The site offers 360 degree views of the surrounding hills.


(© Tony Braime)

Sutton Veny playing fields

This small picturesque village not far from Warminster is home to the Starquest Astronomy Club, a successful group made up of novices and more experienced astronomers. They meet once a month for talks and training in all things astronomy and also set up their telescopes on Sutton Veny playing fields for observation sessions. Residents and visitors looking to find out more about the AONB's night skies and astronomy will find a welcome at this club.


(© Tracy Adams)

Ox Drove
Middle Down, north of Alvediston

Retrace the steps of our ancestors as they drove their cattle along this ancient track and take a journey of your own exploring the night sky. This site is near the locations of some our darkest dark sky (SQM) readings. Standing here, on a clear night, you will still be one of the lucky 10% living in this country who are able to witness pristine skies, including the majestic Milky Way.

Extract from the AONB Management Plan 2019 to 2024: Dark Night Skies

The following pages reproduce sections of the AONB's Management Plan 2019 to 2024:

Chapter 11: Dark Night Skies

Appendix 10: Dark Night Skies

11. Dark Night Skies

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.

11.1. Special characteristics and qualities that makes this AONB special, as a whole, with regards to dark night skies:

- Cranborne Chase AONB is one of the darkest places in England[42]
- 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

Knowlton Church at Night - Paul Howell

42 The most detailed ever satellite maps of England's light pollution and dark skies, were released by the Campaign to Protect Rural England (CPRE) in 2016. They showed that 52% of Cranborne Chase AONB is in Band 1, which is the darkest category and 40% of the AONB is in the next category. See CPRE (June 2016) Night Blight: Mapping England's light pollution and dark skies.

Ambition

11.2. The Partnership aims to achieve International Dark Sky Reserve[43] status during 2019, continuing to reduce light pollution into the future to enhance further the night-time environment for the benefit of human health and wildlife. It will also reduce expenditure and carbon emissions from unnecessary lighting, and offering new opportunities for education and rural tourism.

Key achievements

- A **Light Pollution Position Statement** endorsed by AONB Partnership in 2008
- An objective to seek International Dark Sky Reserve (IDSR) status was adopted by Partnership local authorities in the 2014-19 AONB Management Plan
- The prevention and avoidance of light pollution has been consistently inputted to national and local planning policy consultations and detailed development management advice since 2008
- The first specialist, dark night skies and good lighting **AONB Planning Seminar** was held in 2014, another in 2018 whilst an AONB Annual Forum was held in association with the coordinator for the BAA's Commission for Dark Skies (CfDS).
- **Good Lighting Guides** were provided by the AONB and CfDS in 2016, plus a Developers' Guide to Good Lighting in 2018
- Partnerships have been established with the British Astronomical Association (BAA) and Wessex Astronomical Society to record sky darkness, facilitate events, and promote good lighting practice. The Head of the British Astronomical Association's Commission for Dark Skies is giving wide ranging expert advice and support.
    - **10 public stargazing sites** have been negotiated with landowners and promoted through this 'Chasing Stars' initiative.
    - **Sky Quality Meter** (SQM) readings have been taken throughout the AONB since 2015 and on a more systematic square kilometre grid basis during 2017 to map the darkest areas of the AONB.
    - Numerous public stargazing evenings have been held together with 'Space Detectives' workshops delivered to schools.
    - Some LPAs now regularly place conditions on planning approvals that ensure new lighting complies with this AONB's guidance, which echoes CfDS and International Dark-sky Association (IDA) best practice.
    - A dedicated **Dark Sky Advisor** post from August 2018 will focus on the task of attaining Reserve status.

43 An IDA International Dark Sky Reserve protects an area possessing exceptional starry nights and nocturnal environment for its scientific, natural, educational, cultural, heritage and/or public enjoyment. Reserves consist of a core area meeting minimum criteria for sky quality and natural darkness, and a peripheral area that supports dark sky preservation in the core. Formation of reserves is through partnerships that recognize the value of the natural night time environment through regulations and long-term planning – after International Dark Sky association, see http://darksky.org/idsp/reserves/

Key issues

1. Exposure to artificial light at night presents significant risks to human health. Humans evolved with the rhythms of the natural light-dark cycle of day and night. Natural light helps set our clocks to Earth's 24-hour day-night cycle. Exposure to artificial light at night disrupts this process, increasing our risks for cancers and other potentially deadly diseases. Glare from poorly shielded outdoor lighting limits our ability to see. Aging eyes are especially affected[44].
2. Outdoor lighting impacts wildlife, especially in or near sensitive habitats. Bad lighting policies can have lethal consequences for wildlife but good policies can maintain healthy ecosystems. Nocturnal habitats do not receive the same attention as daytime habitats.
3. Producing artificial light consumes energy. Promoting dark skies can reduce energy consumption and promote efficient outdoor lighting technologies. There is a need to influence the types and levels of outdoor lighting installed in the AONB.
4. Poorly designed and/or installed outdoor lighting is a hazard to motorists, bicyclists and pedestrians in transit at night. The same policies that keep night-time skies dark reduce glare and put the right amount of light in the right place and at the right time to ensure the safety of all.
5. Over-lighting outdoor spaces at night can create favourable conditions for crimes of opportunity. Bright flood lighting creates shadows that can mask a crime. Policies that protect dark skies enhance security by reducing glare and preserving night-sight.
6. Dazzle, glare and light spilling in all directions reduces the visibility of the stars and hence the opportunities to perceive a special part of the universe.
7. Awareness and understanding of the implications of seeking IDSR status needs to be raised. People living and working in the AONB need to be a part of this initiative. Although large parts of the area remain free from light pollution, the gradual encroachment of street, house and security lights means that starlight, which may have travelled for hundreds or even millions of years to reach our eyes, is stolen at the last moment - by sky-glow. The ongoing information and engagement programme aims to reach a consensus for limits and controls on outside lighting.
8. An absence of detailed lighting policies within current Local/Development Plans can be a barrier for LPAs implementing good lighting practice when determining planning applications. However, some lighting issues (Permitted Development / installation of blinds) fall outside planning control.
9. Planning consultants and developers need to adopt good lighting practices as standard.
10. The significant potential to attract and increase additional astro-tourism visitors to this AONB, particularly in the 'shoulder' and winter months, is not fully appreciated

44 American Medical Association, see also R Chepesiuk (2009) Missing the Dark: Health Effects of Light Pollution in Environmental Health Perspectives V.117(1) A20-A27

11.3. Whilst awareness and understanding of the multiple benefits of IDSR status is increasing, the potential improvements to human health, an enhanced environment for nocturnal wildlife, financial savings, carbon emission reductions and a much enhanced tourism offer requires ongoing promotion.

11.4. The advent of LEDs, which offer welcome and considerable cost and energy savings to domestic and business users, emit a harsh, bright white light that can often dazzle onlookers, and if fixtures are incorrectly fitted, emit this unnecessary light upwards and sideways

11.5. Some of the LPAs are including conditions regarding lighting issues in line with the AONBs policies on lighting and others have yet to put this in motion. The Local/Development Plans for the seven Local Authorities cover different time periods. This means some may be willing to consider adding specific lighting policies relatively quickly whilst others suggest they are not in a position to do so for some time.

11.6. The highway authorities in Dorset, Hampshire and Wiltshire each operate light dimming schemes. Dorset has a highway policy of no lights in rural areas except in special situations (for example, at major traffic junctions) and a policy that restricts upwards and sideways emission of light.

11.7. Many planning consultants and developers are unaware of the light pollution caused through ill-designed lighting schemes. The Institution of Lighting Professionals has developed guidance dedicated solely to excellence in lighting that requires promotion that is more comprehensive.

11.8. Plans for new developments frequently comprise floor to ceiling glass ‘walls’, and roof lights are not automatically fitted with blinds or louvres; understanding of the need for these to prevent night-time emission of light needs to be increased.

11.9. IDA requires <500 lumens (equating roughly to a 60W bulb), or fully shielded fittings preferably incorporating an infra-red motion sensor to limit sideways and upwards light spill in a Dark Sky Reserve. Much of the outside, security lighting utilised on both domestic and business premises is not currently IDA compliant, with many unshielded fittings and lamps/bulbs emitting higher than the required 500 lumens.

11.10. Another factor contributing to unwanted light spill can be the inappropriate installation of light fixtures. They should be angled downwards to only light the area to be illuminated. This requires fixtures to only shine light below the horizontal. The AONB is developing a ‘Big Dipper’ type campaign to turn downwards existing light units and to encourage correct installation of light fixtures.

Objectives and Policies

OBJECTIVE		POLICIES	
DNS A	International Dark-Sky Reserve (IDSR) status is secured for the AONB during 2019.	**DNS1**	Actively promote the benefits of IDSR status to all partners and communities to elicit appropriate action and support for the application to IDA.
DNS B	The IDSR status is retained through evidencing annual reductions in light pollution across the AONB.	**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
DNS C	The multiple benefits of dark night skies are understood, valued and enjoyed by all.	**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
DNS D	The AONB, tourism and related businesses jointly promote, and benefit from, the AONB as a prime destination for stargazing holidays.	**DNS6**	Develop a Dark-Sky Friendly Accreditation Scheme for local tourism and allied businesses.
DNS E	An AONB observatory offers regular stargazing activities together with educational and study opportunities for residents, visitors and schools.	**DNS7**	Determine a potential location, design criteria and funding requirements necessary to establish an AONB Observatory within the timeframe of this Plan.

(Additional Information: Dark Skies Appendix 10)

Starry, starry nights project plan: Landscape Partnership Scheme

The AONB has very recently (end March 2019) been successful in securing approval and funding for a Landscape Partnership Scheme (LPS)[1]. The Heritage Lottery has offered a grant of £1,676,000. Together with secured match funding and match-in-kind, this equates to a total input of £2,675,000 over five years. A sum of £6,800 of this is targeted at dark sky related initiatives supporting volunteers to become Dark Sky Champions, and to act in determining their own local stargazing sites, and promote messages about dark-sky-friendly lighting. There will also be input from local astronomy groups, and astrotourism and education experts. The LPS does not cover the whole AONB, but the dark sky related plans will work alongside and support the whole-AONB plans set out in this IDSR application. The LPS plans include astrotourism training for businesses, school workshops and input to uniformed groups (e.g. scouts and guides) in achieving astronomy-related badges.

This Appendix reproduces the chapter relating to dark skies initiatives in the LPS.

[1] A Heritage Lottery grant programme for the conservation and enjoyment of areas of distinctive landscape character. The Landscape Partnership programme seeks to conserve the landscape heritage – both natural and cultural – in distinctive landscapes, at the same time delivering benefits for people within and beyond the areas covered by the scheme, in particular in terms of the way people understand, perceive and relate to the landscapes they live or work in, or visit. In so doing, LPSs create a holistic and balanced approach to the management of landscape heritage at a landscape scale, and help people to connect with it, thereby leading to continued activity and a lasting legacy.

NL4 - **Starry, Starry Nights**

DELIVERY	LEAD ORGANISATION	PRIMARY CONTACT	SECONDARY CONTACT	RESPONSIBLE OFFICER
CCCV LP team, AONB team, consultants, British Astronomical Associations' Commission for Dark Skies, Wessex Astronomical Society.	AONB team	L Nunn	Conservation Volunteer Co-ordiantor	Programme Manager

CONTACT DETAILS	TIMESCALE
01725 517417/07801 531205 lindanunn@cranbornechase.org.uk	October 2019 to March 2023

PROJECT BENEFITS AND HLF OUTCOMES

BETTER MANAGED

BETTER CONDITION

IDENTIFIED & RECORDED

VOLUNTEERED TIME

LEARNT ABOUT HERITAGE

DEVELOPED SKILLS

ENVIRONMENTAL IMPACTS REDUCED

MORE PEOPLE ENGAGED

BETTER PLACE TO LIVE, WORK & VISIT

PROJECT AIMS

To encourage and support community enjoyment and learning about the exceptionally dark skies of the LPS area. To increasing knowledge about dark night skies and the skills to share that knowledge with others of all ages. To encourage and support community learning and involvement in minimising light pollution within the area. To specifically enthuse youngsters to wonder at, learn about and enjoy the starry skies. To encourage and support tourism related businesses to add value to their offer, through increasing their capacity and confidence to share knowledge and their enthusiasm for stargazing with visitors and taking all steps to be 'dark sky friendly' businesses.

LEGACY

Trained Dark Sky Champions continue to offer stargazing evenings locally using their Discovery Sites and continue to offer advice on the most appropriate domestic/business lighting options to local communities both in the area and beyond. Lighting is kept at a minimum within CCCV LP area and promoted as Dark Sky area to residents and tourists through social media, the CCCV LP web site and local newsletters/media. Businesses confirm an ongoing uplift in footfall (pubs/shops) and overnight stays (B&Bs/campsites) from visitors from outside the area coming to see the dark skies.

The AONB will continue to promote the area to stargazers through its 'Chasing Stars' programme of events and potentially as a key area in a future International Dark-Sky Reserve. The AONB will continue to give guidance on dark sky friendly lighting and offer support and funding advice to any business wishing to set up its own stargazing facilities.

BUDGET SUMMARY

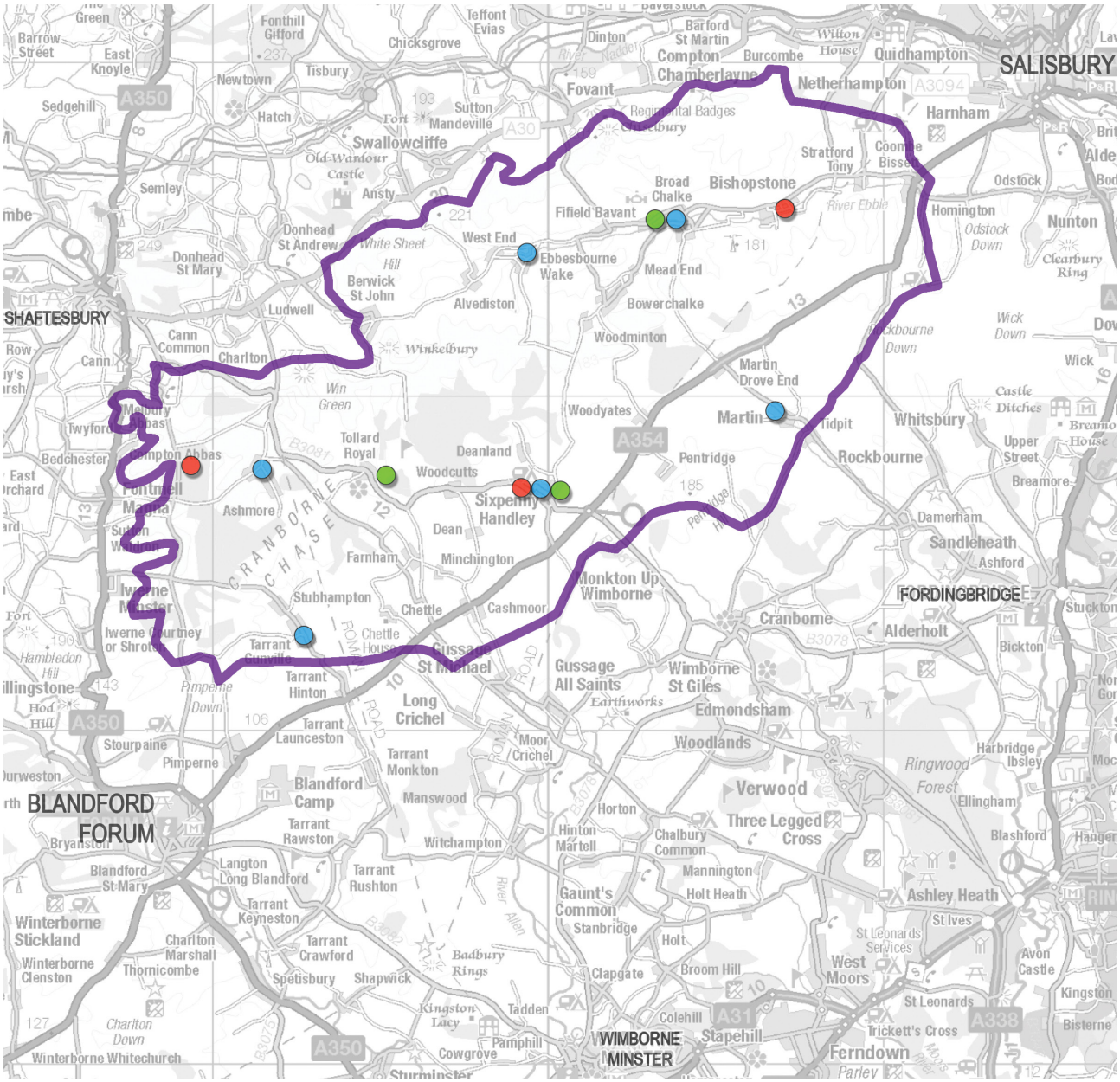
Total Budget:	£6,800 (HLF contribution 32%)
HLF:	£2,200
In-kind:	£1,600 ((4 training, sharing of knowledge by existing astronomy experts and volunteers in the area £350 BAA per day and £50 WAS per day)
Volunteers:	£1,200 (2 sets of dark sky readings per year each p/a - 8 trained volunteers, advice given to their communities on lighting, talks to parish meetings, helping or leading their own dark sky events - £150 per day)
Cash match:	£1,800 (CC AONB)
Audience:	Parish communities, interest groups, individuals, local businesses and visitors interested in sharing knowledge and enthusiasm for dark skies with others and learning the skills to encourage minimal light pollution in the area and beyond.

PROJECT SUMMARY

Hundreds of spectacular constellations of stars have been joined together by cultures across the world and over time to create legends. Our awe-inspiring galaxy, the Milky Way, can be seen easily, something that over 85% of the UK population cannot see due to light pollution. Our neighbouring galaxy, Andromeda, is also visible to the naked eye on a clear night, as our ancestors would have seen thousands of years before us.

The CCCV LP area has some of the darkest night skies remaining in south, central England; some of the darkest in England. This project will create Community Dark Sky Champions and provide them with the knowledge and skills to share their enthusiasm for the myriad of sparkling stars with others and volunteers who will lead stargazing evenings and being trained to monitor their local dark skies. The AONB is working with partners to do all we can to protect the precious dark skies, reducing light pollution even further.

STARRY, STARRY NIGHTS



LPS Area Boundary

Potential Dark Sky Champion Areas

Astro-tourism Busness Training

School astro Workshops

Community Dark Sky Champions will learn about the multiple benefits of dark skies; benefits to human health, wildlife, saving money and carbon by reducing unnecessary lighting, better targeted lighting for security purposes and the amazing wonder, enjoyment and learning that comes from a better understanding of the nightscape that forms 50% of our environment. The project will provide at least a dozen Champions to share their enthusiasm and knowledge with communities, groups and visitors to the CCCV LP area through talks and media articles. They will also learn how to take regular Sky Quality Meter (SQM) readings to record and measure light pollution. They will also be encouraged to share simple remedial actions, through one-to-one conversations or through parish media within their communities, to minimise and monitor light pollution, protecting dark skies for future generations.

The project will encourage the identification of local 'Dark Sky Discovery Sites', where landowner permission is gained and all safety issues minimised allowing regular stargazing evenings or events to occur, enabling sharing of community knowledge, enthusiasm and pride in their dark skies.

The magical starry skies would also be brought alive to schoolchildren, scouts and brownie groups via 'Space Detective' themed workshops and talks allied to school Key Stages 1, 2 and 3 and to assist uniformed groups to gain Astronomy badges.

The project will offer training to tourism-related businesses in how sharing their knowledge and interest in dark skies could add value to their businesses by offering tailor-made 'Dark Sky' packages to visitors, encouraging increased visitor wonder, knowledge and enjoyment, becoming 'Dark Sky Friendly' operations themselves, and encouraging others to do likewise.

COMMUNITY CONSULTATION

The British Astronomical Associations' Commission for Dark Skies have stated that 85% of the UK population have never seen a truly dark sky and only 2% have ever seen the Milky Way. The Campaign for the Protection of Rural England (CPRE) produced a report in 2016 'Night Blight' – Mapping England's Light Pollution and Dark Skies. This confirmed that 52% of the AONB is in the darkest night sky category, whilst 40% is in the next darkest category, providing the evidence for the International Dark-Sky Reserve bid.

At various consultation events, events and shows the AONB has attended, great public interest and support has been shown from the public both outside and within the LPS area, with much engagement with the AONBs bid for International Dark Sky Reserve (IDSR) status. This has stemmed primarily from concern at the threat that increasing light pollution poses to the area's dark night skies. At the annual Chalke Valley History Festival at Broadchalke, consultation focussed heavily on the Reserve bid together with this LP project. A high proportion of those attending are from the LPS area and anecdotally, it can be reported that discussions often centred on how much people loved seeing the myriad of stars and about how they could keep it that way. Over 70 people signed up to receive notice of forthcoming stargazing presentations, events and information with 200 people pledging their support online at www.chasingstars.org.uk . Stargazing evenings and nightscape photography sessions have been consistently well attended over the last two years.

CHANGES FROM STAGE ONE

Celebration of the CCCV LP dark skies has now been incorporated within the silk flags project.

In the first round bid we said we would undertake presentations in schools. This element has now been expanded to offer professionally delivered curriculum based astronomy workshops.

KEY PROJECT MESSAGES

The aim is to involve local communities within the CCCV LP area to protect, conserve and enhance their dark skies, understand the multitude of benefits that dark skies bring and to minimise light pollution locally. Minimising light pollution offers improved human health, benefits for wildlife, reduced costs and carbon footprint from unnecessary lighting. This project offers enhanced education and learning for all ages together with increasing astro-tourism opportunities for local businesses.

Local Dark Sky Champions will be offered training to understand the effect of the power of different bulbs and light fittings, on the potential to view the night sky clearly. They will be supported to then encourage residents within parishes to alter, adjust or change those fittings and bulbs through one-to-one conversations, talks and/or articles in parish magazines or newsletters. Astronomy training will also be offered to include identifying the constellations and planets enabling them to lead stargazing evenings locally and share their knowledge. A pop-up planetarium will be available at suitable locations to help inspire wonder at the stars above.

The most suitable stargazing locations, or Discovery Sites, would be identified by the Champions in the CCCV LP area and publicised for all to use, after agreement with the landowner and after all safety issued have been agreed. These will not require any infrastructure; merely an agreed place for people to congregate to view the stars.

Schoolchildren at Key Stages 1, 2 and 3 will have the opportunity to enjoy basic astronomy workshops aligned to the curriculum whilst uniformed groups, such as brownies and scouts will be offered specifically targeted stargazing activities to enable them to gain their Astronomy badge.

Tourism related businesses will be offered training to include case studies, advice on marketing and making themselves ‘dark sky friendly’. They should then be able to take advantage of what is a growing market for stargazing in the UK’s darker areas. There will be an ongoing back-up advice and support service provided by the consultant delivering the business training as part of the package. This service includes after- advice on buying appropriate equipment for stargazing, checking promotional copy for web site use and specific advice on achieving dark sky friendly lighting themselves via an accreditation scheme.

TARGET AUDIENCE

Parish councils and communities, interested individuals, schools, uniformed groups, local businesses, visitors.

MEDIA

Dark Sky Champions will be encouraged to communicate via blogs, social media, the LPS and Chasing Stars web sites. Articles and promotion of events will occur through parish, local magazines and media from the surrounding market towns. A new local community radio station in nearby Shaftesbury is already keen to feature regular updates on the dark skies of the AONB from its residents.

The businesses of the LPS who wish to take advantage will receive promotional assistance via the AONB, VisitWiltshire and VisitDorset.

OUTPUTS AND OUTCOMES

HLF Outcome	Scheme Outcome	Project Outcome	Project Output	Indicator 1	Year 1	Year 2	Year 3	Year 4	Year 5	Total
IDENTIFIED & RECORDED	**LC1** – Natural & historical elements of the landscape recorded, understood & valued to support heritage management long-term	Light pollution measurements recorded and understood	Dark Sky Champions measuring sky quality, interpreting results and sharing with communities.	Number of baseline sky quality measurements recorded year 1 and each winter thereafter to assess change	30	50	100	100	100	380
ENVIRONMENTAL IMPACTS REDUCED	**LM3** – Landscape managed for multiple benefits	Increased awareness and appreciation of the value to dark skies	Individuals learn: 1. To identify constellations/ planets 2. How to lead stargazing evenings 3. How to take, record and interpret dark sky readings 4. Details of different light fittings, to offer pollution reduction guidance	Number of Dark Sky Champions	3	3	3	2	1	12
VOLUNTEERED TIME	**P1** – People actively participating in initiatives, acting as advocates for the importance of this landscape, playing a positive role in caring and valuing it	Volunteer dark sky champions / event leaders trained & active Better knowledge, skills and enthusiasm amongst communities, interest groups, schools and businesses to minimise light pollution, become advocates for dark skies and positively promote the area as a prime stargazing location to others Communities better able to identify constellations, and understand the role of, and purpose of minimising, light pollution	Individuals learn: 1. To identify constellations/ planets 2. How to lead stargazing evenings 3. How to take, record and interpret dark sky readings 4. Details of different light fittings, to offer pollution reduction guidance	Adults / youngsters attending talks/ training	10	10	10	5		35
				Stargazing event leaders established in parishes	1	1	1	1		4
			Schools receive dark sky/ astronomy related workshops Uniformed group members Planetarium visits	Number of schoolchildren receiving workshops	30	60	60	60		210
				Number of youngsters gaining Astronomy Badge	5	5	5	5		25
				Numbers visiting pop-up planetarium	25	50	50	50		200
DEVELOPED SKILLS	**P2** – People have gained key skills & knowledge relevant to our landscape & heritage		Stargazing talks and evenings to view the constellations, planets, meteors, International Space Station	Percentage of participants attending talks / events / workshops who report they have learnt new things	50%	80%	80%	80%		

HLF Outcome	Scheme Outcome	Project Outcome	Project Output	Indicator 1	Year 1	Year 2	Year 3	Year 4	Year 5	Total
LEARNT ABOUT HERITAGE	**P3** – People having a stronger sense of place, better experiences, they understand and value the landscape, together with the benefits it provides	Increased understanding of the benefits of maintaining dark skies and appreciation of why where they live is so special	Increased number of parish councils, householders, youngsters, landowners and businesses understand implications of unnecessary lighting; Increased pride and sense of place through increased involvement in protecting and valuing their dark skies	Increased knowledge and positive comments through survey		50%	70%	70%	80%	
MORE PEOPLE ENGAGED	**P4** – People, communities and businesses currently disconnected from the landscape supported to build a relationship and value it more highly	Understanding that dark skies increase environmental quality which benefits residents and visitors	Regular stargazing evenings , talks, and events take place throughout LPS led by local volunteers; communities & businesses work together to share with visitors	Number of event leaders/ champions	2	2	2	2		8
				Number attending events	30	30	30	30	30	150
				% of repeat attendances		10%	10%	20%	20%	
			Businesses developing specific stargazing packages	Number of businesses promoting the visitor packages		3	4	3		10
				% increase in dark sky related tourism bookings, especially in shoulder months		5%	15%	15%	15%	

MONITORING & EVALUATION (catching the difference this project will make)

• Helpful evaluation questions

- How many sky quality measurements are being made each winter?
- What use is being made of the measurements?
- How many champions have been recruited and are active?
- How many workshops and events have been held? How many people and who has attended?
- Are participants reporting that they have learnt new things? If so, what?
- Are participants reporting more understanding about the benefits of maintaining dark skies and why they are special?
- Are participants reporting more activity around star-gazing and dark skies?
- How many businesses are getting involved and what are they doing?
- Are target audiences (including volunteers) valuing the area's dark skies more? Do they feel more proud of it?
- Are participants building their networks? Face to face or on social media.
- Are they aware of what other related work is being done by the Scheme?
- Is this project linking up with other projects in the Scheme? And if so, is this being promoted?
- Are the project's work and achievements being promoted, and if so, how, by whom and how much?

• Baseline data

- Data about sky quality.
- Amount and nature of current dark skies promotion and engagement activity.
- Level of knowledge of volunteers and participants before they begin activities with the project.

WHAT TO DO AND WHEN

Baseline

- Baseline survey with participants/volunteers immediately prior to any project activity
- Review of data and records – sky quality, existing promotion & engagement activity

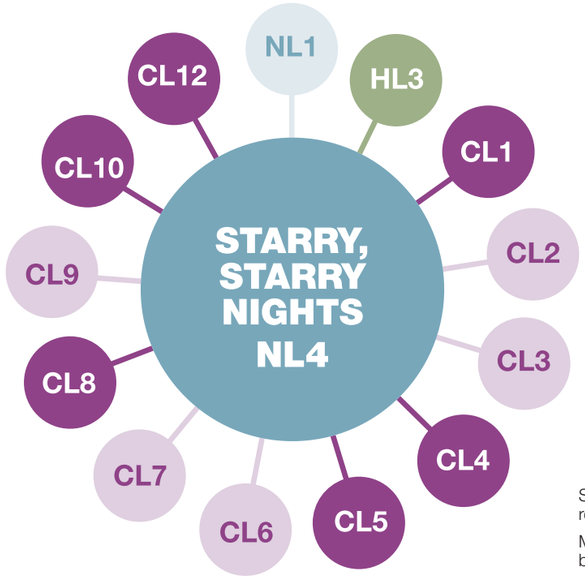
On-going

- Event/activity attendance and feedback
- Observations and recording of ad hoc comments
- Sky quality surveys.

End of project, mid-term and final evaluations

- Interviews/surveys with champions, businesses and participants
- Analysis of monitoring data including numbers of businesses, champions, participants, sky quality
- Site and volunteer case studies

PROJECT CONNECTVITY



Strong links and overlaps require planning

Mild potential and awareness between projects (adding value)

ACTIVITY PLAN

	2019-20												2020-21				2021-22				2022-23				2023-24			
Activities	**A**	**M**	**J**	**J**	**A**	**S**	**O**	**N**	**D**	**J**	**F**	**M**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
Stargazing events											■				■				■				■					
Dark Sky Champion training												■			■				■									
Planetarium visits											■		■				■				■							
Astro-tourism business training										■						■												
School astro-workshops											■			■	■				■	■			■	■				
Local Dark Sky Discovery sites set up and used														■	■	■			■	■	■							
Astronomy badge gained by uniformed group members											■	■			■	■			■	■			■	■				

PROJECT RISKS

Risk	How likely	Severity	Consequence	Action
Lack of interest from parish communities	L	H	Project's effectiveness reduced	Development work and consultations over last 2 years has indicated strong and growing interest and commitment to pledge support for dark skies work. Reinvest time into promoting benefits of dark skies to communities
Lack of take up of tourism business training, advice and support	L	H	Project's effectiveness and impact reduced	Tourism businesses have previously taken up training on alternative issues. Several have already given positive response to the concept
Lack of workshop take-up by schools	L	H	Project's effectiveness reduced	Re-publicise opportunity and promote to teachers through those schools in receipt of the workshops
Reduction in Wessex Astronomical Society volunteers	L	H	Project's effectiveness and impact reduced	Approach additional local astronomy clubs to assist in project

DETAILED PROJECT COSTS (breakdown and timing)

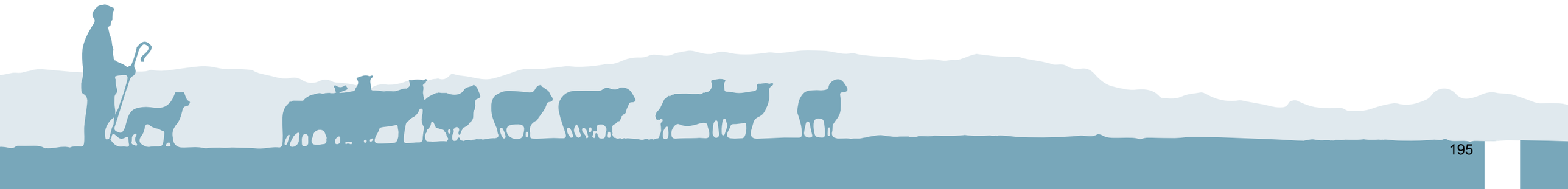
Activity	(2019/20) Q1	(2019/20) Q2	(2019-20) Q3	(2019-20) Q4	2020-21	2021-22	2022-23	2023-24	Total Budget
Evening talks / stargazing events by volunteers/Champions					300	300	300		1,200
Dark Sky Champion training (in-kind)				300	300	300	200		1,100
Planetarium events (in-kind)					250		250		500
Planetarium events (cash cost)				250		250		250	750
Tourism related business training (cash cost)					600	600	600		1,800
School astronomy workshops (cash cost)				250	400	400	400		1,450
									6,800

BACKGROUND INFORMATION

Night Blight – Mapping England's Light Pollution and Dark Skies, CPRE, 2016

Lighting Guide for Residents and Businesses – Commission for Dark Skies, British Astronomical Association

'Chasing Stars', Dark Skies Guide, Cranborne Chase AONB, June 2018



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