Date: 26 May 2023
Our ref: 425633425633
Your ref: 21/1045921

Lisa Kirby-Hawkes
Development Planning Manager
Hampshire County Council

Customer Services
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Dear Lisa,

Planning consultation: Extract & process building sand - incidental sand & gravel, ecological mitigation works, new access off the B3081 Verwood Road, processing plant, conveyor system, weighbridge, site office & welfare facilities, staff parking with progressive restoration to a mosaic of lowland heath, gorse scrub, woodland & pond areas.
Location: Purple Haze, Nr. Verwood.

Thank you for your consultation on the above dated 13 March 2023 which was received by Natural England on the same date.

Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development.

SUMMARY OF NATURAL ENGLAND'S ADVICE

OBJECTION

Natural England objects to this application. As submitted we consider it will:

- have an adverse effect on the integrity of Dorset Heathlands Special Protection Area (SPA) and Ramsar site and Dorset Heaths Special Area of Conservation (SAC) https://designatedsites.naturalengland.org.uk/
- damage or destroy the interest features for which Ebblake Bog Site of Special Scientific Interest (SSSI) has been notified.

Natural England's further advice on designated sites/landscapes and advice on other natural environment issues is set out below.

Natural England have reached this view for the following reasons:

- The proposals may result in significant permanent changes to the functional hydrology of wetland habitats for which will impact Dorset Heaths SAC, Dorset Heathlands Ramsar site and Ebblake Bog SSSI
- The proposals are likely to significantly affect SPA birds via loss of breeding and foraging habitat on functionally linked land

- The proposals may result in negative impacts on areas of the Dorset Heathlands SPA and New Forest SPA through the displacement of recreational pressures

The consultation documents provided by your authority do not include information to demonstrate that the requirements of Regulations 63 and 64 of the Conservation of Habitats and Species Regulations 2017 ('the Habitats Regulations') have not been considered by your authority, i.e. the consultation does not include a Habitats Regulations Assessment (HRA).

In advising your authority on the requirements relating to Habitats Regulations Assessment, it is Natural England's advice that the proposal is not necessary for the management of the European site. Your authority should therefore determine whether the proposal is likely to have a significant effect on any European site, proceeding to the Appropriate Assessment stage where significant effects cannot be ruled out. Natural England must be consulted on any appropriate assessment your Authority may decide to make.

Natural England advises that the following additional information should be submitted by the applicant in order for your authority to fully assess the proposal:

- Further hydrogeological assessment of impacts on European and nationally designated sites,
- Further information relating to the functional linkage of the application site and surrounds in relation to Dorset Heathlands SPA birds.

Please see further advice below that expands further on the issues discussed above.

Hydrology and hydrogeology

Natural England still requires further information to assess whether the proposals at the Purple Haze site will have adverse effects on Dorset Heaths SAC and Dorset Heathlands Ramsar site, and/or adverse impacts on Ebblake Bog Site of Special Scientific Interest (SSSI) in relation to hydrology.

The proposed works at Purple Haze have the potential to significantly alter the natural hydrogeological regime of the designated sites via changes in water flow and quality. The hydrology report that supports the application, Hydrogeological Impact Assessment Purple Haze Quarry (Hafren Water, February 2023), provides no information that enables an assessment of the hydrological functioning of the Ebblake Bog SSSI. The report has been included in order to be able to make a reasonable judgment on whether there are likely to be any impacts. There is also a lack of clarity about the importance of different hydrological inputs. It states that the majority of the water is derived from the surface water catchment of Ebblake Stream (with groundwater inputs of negligible quantity by comparison) indicating that it is the stream itself that is the main water source for the SSSI wetland. However this appears to be an unevidenced assertion and is contrary to our understanding of the functioning of the bog where there appears to be little surface water connectivity between the stream and bog. The report neglects the potential importance of even relatively small inputs from groundwater seepage on maintaining the biological diversity and designated interest features. Moreover there is an implicit assumption throughout that provided the quantity of water reaching the bog is maintained then effects will be negligible. However, wetland vegetation is also be affected by the characteristics of the hydrological regime where the existing geology will provide a degree of attenuation that would be partially lost. This issue has not been explored. The hydrology report also discusses the presence of perched groundwater stating that these do not support the bog; however, no evidence has been provided to support this.

Natural England also have two additional concerns with regard to the proposed ground water abstraction. The hydrology report states that the radius of influence would be entirely within the site, but no assessment has been undertaken to support this. Secondly, clarification is required as to the material to be used for restoration purposes. The report states that site-won material will be used; where this is clay material, there could be impacts on infiltration post-restoration.

At present Natural England objects to the proposals as there remains insufficient information to

provide the certainty required that the proposals will not have adverse impacts on designated sites. Further information is required to address the concerns raised above and within the 2021 consultation response. However, given our current understanding of this issue, our view is that it remains a strong possibility that the development in its current form cannot be implemented without adverse effects on these designated wetland sites.

Functional linkages to European designated sites

As highlighted in our previous response in 2021. we consider the Purple Haze application site has various functional linkages with the nearby Dorset Heathlands SPA in relation to SPA birds, and the Dorset Heaths SAC concerning great crested newt and typical species of SAC habitat features including rare reptiles and invertebrates. Please refer to NE supplementary advice to the conservation objectives for these sites. These will need to be assessed within the appropriate assessment, and are discussed in further detail below.

SPA Birds

It remains Natural England advice that the proposals will result in a in a significant loss of Ringwood Forest, a locally designated Site of Importance for Nature Conservation (SINC) which is known to support Annex 1 birds, which are the basis of the Dorset Heathlands SPA designation. Ringwood Forest has been identified by the RSPB as an Important Bird Area. Research carried out by British Trust for Ornithology[1] explores the home range size and behaviour of nightjars, establishing that an individual nightjar can travel up to 747m a night between breeding and foraging sites, demonstrating the requirement that nightjars rely on different habitat components to support their conservation status. The Dorset Heathlands SPA and Ringwood Forest SINC, also is known to support breeding heathland birds such as woodlark and Dartford warbler, as well as non-breeding features of the merlin and hen harrier.

The Purple Haze site supports six breeding pairs of nightjars, a designated interest feature of the SPA, with an additional ten pairs recorded on Ebblake Bog SSSI as noted in the breeding and wintering bird report (Ecology by Design, 2023). The nightjars recorded on the application site are considered to form part of the wider SPA population, and hence the site supports the functionality and integrity of the SPA for this feature. This land will contribute to the achievement of the SPA's conservation objectives and it can therefore be protected in this context. Any proposals that result in the loss of nightjar habitat on the Purple Haze site has the potential to impact the Dorset Heathlands SPA, and this aspect should be taken through to appropriate assessment.

We previously referred to a similar case known as the Land At Former Rufford Colliery, APP/L3055/V/09/2102006, which utilised a risk based approach that could provide a suitable methodology for considering the impacts of the proposal in relation to nightjar for the Purple Haze application.

The above advice relates specifically to nightjar, however effects on other SPA birds such as Dartford warbler, woodlark, merlin and hen harrier should also be considered.

Where impacts on SPA birds are identified, a suitable avoidance and/or mitigation strategy should be put forward. At present, the mitigation to offset the Purple Haze proposal is detailed within the Shadow Habitat Regulation Assessment and Appropriate Assessment (Ecology by Design, 2023). The Outline Landscape and Ecology Management and Monitoring Plan (Ecology by Design, 2023) details the mitigation and enhancements for SPA birds. However, the current supporting information does not provide the necessary confidence that impacts have been fully assessed. We strongly advise that further work is done to ascertain the true scale and nature of impacts on SPA birds that should then go to inform a suitable mitigation strategy as required. It is unclear as to whether nightjars will be able to move through the site during the operational phase. The effects of phasing and restoration plans should be considered carefully in order to quantify the loss of habitat

[1] Home-range size and habitat use of European Nightjars Caprimulgus europaeus nesting in a complex plantation-forest landscape | BTO - British Trust for Ornithology

for Annex 1 species at any given time. It is recommended that the restoration of the quarried phases is complete before the next stage is cleared. The newly planted woodlands and heathland will be important components to enabling the recolonisation of Annex 1 species such as nightjar across the site throughout the operational life of the quarry.

The shadow HRA states that the restored areas will be out of bounds for recreational use throughout the operational phase, which is a positive for nightjars and other heathland species. The areas of grassland and newly planted coniferous woodland will be important for the re-establishment of nightjar territories. However, Natural England has some concerns over the separate offsite areas put forward as additional mitigation, notwithstanding the advice above about further work to ascertain the level of impact. No baseline bird surveys of the areas known as Bakers Hang and Jack's Garden have been carried out. It is anticipated that these two areas also breeding nightjar along with other Annex 1 species. Additionally, these areas will be subject to disturbance as a result of increase recreational pressure dispersed from the Purple Haze site (discussed in further detail below). There is the potential that the proposals could result in a decline in the local SPA population of nightjars due to the large area the proposals are impacting. In recent years a decline in nightjar on the nearby New Forest designated sites as a result of changes in habitat management and increased recreational pressure, was recorded within the Survey and Assessment of Nightjar status in the New Forest report (Arcadian Ecology, 2018). The supporting survey data that has been submitted within the Breeding and Wintering bird report (Ecology by Design, 2023) is considered inadequate to be able to assess the impacts the proposals will have on Annex 1 species which are associated with the Dorset Heathlands SPA. Further information is required of the bird species assemblage across the offset areas, which is recommended to be followed by an update mitigation strategy as necessary.

Natural England also advises that post-restoration habitats and landscaping are reconsidered in accordance with the East Dorset Forest Design Plan (FDP) by Forest England. To ensure that post restoration habitats still have the ability to support SPA birds, the conservation objectives detailed within The European Site Conservation Objectives: Supplementary advice on conserving and restoring site features of Dorset Heathlands Special Protection Area (Natural England, 2019) should also be referred too. The report highlights that areas of open heathland should be restored and management of trees and scrub to allow for restoration of heathland should be undertaken. The highland seed mix proposed for the site, could result in new species not related to the area to be introduced to the seed bank which could interfere with the heathland restoration.

At present Natural England objects to the proposals as there is insufficient information to confirm that the proposal will not have adverse impacts on Annex 1 species related to the Dorset Heathlands SPA.

Rare reptiles

Ringwood Forest is locally designated as a Site of Importance for Nature Conservation (SINC), based on an extensive 1,081 ha composed of plantation, mire and heathland habitat. The supporting reptile report (Ecology by Design, 2023) outlines that the site is considered to support nationally important populations of rare reptiles. The report details that the Purple Haze site supports a good population of smooth snakes and sand lizards which are the UK's rarest and most secretive reptile, as well as grass snake, adder and common lizard. The heathland habitats recorded across the Purple Haze site form part of a wider ecological network of heathland, conifer woodland plantations and rough grassland which provides connecting corridors to the Dorset Heaths SAC. Rare reptiles are classed as typical species of the SAC and therefore impacts on resident populations should be considered within the HRA.

We would reiterate our previous advice that a European Protected Species license (EPSL) from Natural England would be required in order to prevent the contravention of statutory protections of these reptiles and their habitats under both the Wildlife and Countryside Act and the Habitat Regulations. In order to grant the requisite licenses, Natural England would need to be satisfied, amongst other criteria, that favourable conservation status for each species was maintained.

The proposed mitigation measures detailed in the mitigation and Outline Landscape Environmental Mitigation Management Plan (OLEMMP) are considered to fall a long way short of demonstrating that there will be no adverse impacts on rare reptiles, which goes against the requirements of Policy 12 of the current Hampshire Waste and Mineral Plan (HWMP). The following concerns still need to be clarified;

- The EPSL will need to consider the impacts of the proposed quarry on rare reptiles as typical species of the heathland feature of the Dorset Heaths SAC. This should include further detailed consideration of the proposed realignment of Track F; there is a spine of heathland which runs along both sides of this track that is known to support rare reptiles and is likely to suffer from direct habitat loss and increased recreational impacts during the lifetime of Purple Haze works.

- The proposal for the site will be subject to obtaining a European Protected Species Licence (ESPL) for rare reptiles from Natural England. The current mitigation report misses out entire sections detailing the translocation methodology, timings of works and does not include any details of the chosen receptor areas or enhancements prior to translocation. The survey data also presented is out of date according to CIEEM[2].

- Further detailing on phasing is required to assess the habitat loss on reptiles at any one time. It is understood that the reptile fencing will remain in place for up to 5 year post-restoration. It is unclear if the restoration for one phase will be completed before the next phase is started.

- The area north east of Ashley Heath, known as Jack's Garden, has been put forward to mitigate for the loss of habitat during the quarry operational phase. We note the site is already subject to recreational access from visitors to Moors Valley Country Park, and that access use is likely to increase via plans to expand the nearby car park as a measure to address recreational impacts (see further advice on this aspect below). Out of the 34.5ha only 5% has been assessed as suitable to support reptiles. 9.7ha of Jack's Garden is planned to be restored to heathland to increase the carrying capacity for reptiles. However, we consider that this approach may be undermined by increases in recreational use of the site; the same area of Jack's Garden has also been allocated to absorb additional recreational pressure to offset visitor displacement impacts by the proposals. The additional visitor numbers are likely to have adverse impacts on the rare reptiles via disturbance, trampling and other impact pathways. How has this been considered?

- Additionally, due to the associated conifer and mixed woodland seed bank within the soil, intense management is likely to be required to ensure the site will be able to function effectively as mitigation. At present islands of heathland within the centre of Jack's Garden are isolated by conifer woodlands and the removal of the woodland should allow heathland to recolonise. Further detail about proposed management and monitoring is required.

- There are lots of missed opportunities to enhance the offsetting areas for reptiles, e.g. through sandscrapes, hibernacula, and log piles from cleared vegetation.

- With regard to proposed habitats for restoration, certain species in the proposed woodland mix such as downy birch, may become invasive across the heathland where inappropriately managed over time.

Proposed habitat restoration to mitigate impacts on reptiles should be designed appropriately, and implemented and managed in line with a robust long term management and monitoring plan that should reflect the FDP for the area.

We consider the proposal as it currently stands is likely to impact the conservation status of the

[2] CIEEM, (2019) Advice Note on the Lifespan of Ecological Reports and Surveys. Available at Advice-Note.pdf (cieem.net)

resident populations of rare reptiles, and is therefore likely to have a significant effect on the heathland feature of the Dorset Heaths SAC.

Great Crested Newts

Great crested newts (GCN) are a qualifying Annex 2 species of the Dorset Heaths SAC. The ecological surveys carried out at the site in 2019 recorded GCN present within two of the waterbodies within 500m of the application site, within Ebblake Bog SSSI. The closest is 281m north west of the boundary of the Purple Haze site. No further survey work appears to have been carried out to establish the size of the local metapopulation.

GCN recorded within the waterbodies C and E north west of the site, could potentially disperse traveling up to 500m through the mosaic of heathland, grassland and scrub on the Purple haze site. It is anticipated that due to the distance from the waterbodies, GCN are only likely to be present within terrestrial habitat in the northern section of the site. Any loss of habitat or habitat alternations have the potential to impact individual GCN, and could have significant effects on the Dorset SAC.

To ensure that the Purple Haze quarry proposal does not breach relevant wildlife legislation or result in killing or injuring GCN during the construction phase, an EPSL will be required. To inform the licence, updated surveys will be required to be undertaken of the waterbodies within 500m of the site. If GCN remain present within the waterbodies, a mitigation strategy, based on the current population size, should be developed that includes suitable enhancement measures .At present Natural England advise it is not possible to assess whether the Purple Haze proposals will impact upon the integrity of the SAC in relation to GCN, and we advise this aspect is taken through to appropriate assessment for further detailed consideration.

Invertebrates

The diverse mosaic of habitats across the site, featuring wet and dry heathland, scrub and tall-herb communities, provides a wide range of opportunities of high conservation value for invertebrates. The habitats on site form part of the wider habitat network across Ringwood Forest SINC, and the Dorset Heaths SAC. The invertebrate surveys carried out in 2019 and 2020 recorded a total of 511 species. 55 (over 10%) of those were species of recognised conservation importance in the UK. Of these, 6 species are currently listed as 'Nationally Rare' (NR) (based on IUCN rarity criteria); 39 species are classed as 'Nationally Scarce' (NS) and one species, the formerly rare Alder Leaf Beetle *Agelastica alni*, is listed in the 'Data Deficient' (DD) category. The rarest species recorded on the application site is the Nationally Endangered comb-footed spider.

The proposals will result in a loss of valuable heathland habitat and consequentially adversely affect the invertebrate populations. No further surveys appear to have been carried out to ascertain the invertebrate assemblage across the wider Ringwood Forest. Further clarity is required with respect to phasing and restoration plans to assess and quantify habitat loss at any one time.

The area to the north of the site is proposed to be enhanced for invertebrates through the removal of blocks of rhododendron and bracken, as well as woodland which will allow the heathland seed bank within the soil to flourish through natural colonisation.

The supporting Shadow HRA states that invertebrates will naturally recolonise the site post restoration, but we consider the habitats proposed within the landscaping plans are likely to be detrimental to the survival of heathland invertebrates. The areas of proposed broadleaved woodland may hamper the restoration of lowland heathland via invasion of species such as birches which spread quickly. Natural England also strongly recommends against the use of Habitat Aid's Scottish Highland Meadow Seed Mix; the seed mix is associated with the grasslands and species assemblage in the north, and is likely to fail to support heathland species recorded at the site, resulting in local species dying out.

No baseline invertebrate surveys appear to have been carried out across the two offset areas, known as Bakers Hang and Jack's Garden. Jack's Garden at Ashley Heath is made up of

predominantly coniferous woodland (23.2 ha) with pockets of lowland heath (0.7 ha) and wet heathland (0.5ha). Within the pockets of heathland saplings of early succession birch and pine were recorded, as a result of a high seed bank, soil enrichment over the years and high recreational use. Management is required to promote the restoration of heath once the woodland clearance has been undertaken. The areas of heathland within Jack's Garden has the potential to support invertebrates.

Overall the application for Purple Haze will result in a loss of habitat that supports an invertebrate assemblage with several species of national importance at the site, that may adversely affect the Dorset Heaths SAC through functional linkage. The proposed landscaping as part of the restoration has the potential to result in local species dying out long term. This will need careful consideration within the appropriate assessment.

Other Protected and Notable Species

Plants

The National Vegetation Classification (NVC) surveys carried out across the 2019 and 2022 recorded heathland, woodland and other associated habitats across the Purple Haze site. A significant population of the IUCN Endangered, Rare and GB Red listed coral necklace *Illecebrum verticillatum* was recorded on the Purple Haze site along the eastern trackside. By 2022 this had spread slightly northwards. The surveys indicate that the Purple Haze site is nationally important for the conservation of the species. The mitigation measures put in place detailed within the OLEMMP and EIA is not considered adequate to ensure the survival of the species will be supported in this area; the experimental translocation of the coral necklace detailed within Section 6.5.33 has a high risk of failure due to the difficulty in replicating the particular needs of the species.

Habitat Loss

The quarry will result in a significant loss of nationally and internationally important habitat, including wet heath, mire, transitional and associated habitats, equating to approximately 61 ha, with sections being cleared and species dispersed in three year blocks. We consider the mitigation proposed to compensate for the losses remains inadequate. The OLEEMP does not include enough detail on the creation and establishment of new restored habitats, which includes the time delay. This will be detrimental to supporting species on site, and have the potential to lead to local extinction of invertebrates. Previous sand gravel quarries in Dorset have shown that it in practice is not feasible to establish wet heath or other peat-based habitats.

Wet heath and mire habitats have established over a long period of time, developing over a layer of peat which takes decades to form. We retain our view that the wet heath and wet heath/mire transitions within the application site should be viewed as irreplaceable habitat and dealt with as such as part of the application.

Recreational Impact

Natural England still requires further information to assess the impacts of the recreational displacement as a result of the Purple Haze proposals on local European designated sites particularly with regard to Dorset Heathlands SPA, Dorset Heaths SAC and New Forest SAC, SPA and Ramsar site as a result of the displacement of people by the proposed works.

The current information supporting the application is inadequate to assess the impacts in relation to recreational disturbance. As highlighted within our 2021 consultation response, Ringwood Forest was the third most visited of all Dorset heathland sites in a survey carried out in 2008 by Footprint Ecology (Access Patterns in South-east Dorset. Dorset Household Survey and Predictions of Visitor Use of Potential Greenspace Sites). The supporting visitor survey report detailed the visitor survey carried out across the site, which consisted of 6 cameras at mapped locations for a short period between 11- 29 September but only 7 days were analysed, which is not considered extensive enough; additionally the camera surveys were carried out during the Covid lockdown, when recreation and travel were significantly restricted, and therefore the results of the survey do not

necessarily provide a true picture. No survey effort was made to assess the recreational pressure of other areas of Moors Valley Country Park or the two areas put forward to offset recreational impacts from the quarry. The mapping across the reports has wrongly identified the forest loop cycle trail as the Watchmoor Loop, this may need revisiting.

The ES and Shadow HRA only consider how access may change within the immediate area of Ringwood Forest around the application site, thus with only the Dorset Heathlands SPA/SAC at Ebblake Bog affected. It does not examine how visitors may be put off going to this part of Ringwood Forest entirely and divert to other parts of these designated sites, for example at Avon Heath Country Park or Stephens Castle. These were only some of the several locations mentioned that are within the Dorset Heathlands SPA (Canford, Ferndown Common, Dewlands Common, Holt Heath, Whitesheet) demonstrating that factors that affect the attractiveness of the site could lead to these alternative locations being more frequently chosen.

It is observed that because of the wet nature of Ebblake Bog people tend to keep to the paths. But this does not mean that there are not drier areas around the fringe of the bog supporting features sensitive to increased visitor numbers or that dogs will not stray away from paths.

Two areas. Bakers Hang and Jack's Garden. are put forward as mitigation to address recreational impacts.. The two sites together amount to less than the area at Ringwood Forest being lost. Other than the Phase 1 habitat survey carried out at the site, no further visitor survey effort has been carried out across the two areas to establish the potential of the sites for addressing recreational impacts. Therefore, Natural England still has the following concerns that require addressing;

- Are the two offset areas capable of supporting an increase in visitor numbers and recreation pressures. Baseline visitor surveys are needed to establish current levels of recreational use.
- Can it be demonstrated that increasing access to these areas will not undermine mitigation plans for other target habitats and species features including rare reptiles and SPA birds? How will impacts be avoided?
- A detailed monitoring and management strategy during and post the operational phase will be needed.

The proposals must demonstrate that there will be no additional recreational pressure or increased visitors numbers to the nearby designated sites(as is the case for all housing developments in the Dorset heathland area [within 5km]) The Purple Haze proposal will result in a loss of 61 ha of Ringwood Forest during the operational phase, which we consider is likely to result in a dispersal of recreational users across other locally designated sites within the area. Therefore, our previous comments in relation to this impact still stand.

The proposals must demonstrate that there will be no additional recreational pressure or increased visitors numbers to the nearby designated sites. The Purple Haze proposal will result in a loss of 61 ha of Ringwood Forest during the operational phase, which we consider is likely to result in a dispersal of recreational users across other locally designated sites within the area. Therefore, our previous comments in relation to this impact still stand.

Further general advice on the protected species and other natural environment issues is provided at Annex A.

If you have any queries relating to the advice in this letter please contact me at Emma.Taylor@naturalengland.co.uk .

Should the applicant wish to discuss the further information required and scope for mitigation with Natural England, we would be happy to provide advice through our Discretionary Advice Service.

Please consult us again once the information requested above, has been provided.

Yours sincerely

Emma Taylor
New Forest Lead Adviser
Thames Solent Team

Annex A

Natural England offers the following additional advice:

Protected Species
Natural England has produced standing advice[3] to help planning authorities understand the impact of particular developments on protected species. We advise you to refer to this advice. Natural England will only provide bespoke advice on protected species where they form part of a Site of Special Scientific Interest or in exceptional circumstances.

Local sites and priority habitats and species
You should consider the impacts of the proposed development on any local wildlife or geodiversity sites, in line with paragraphs 175 and179 of the NPPF and any relevant development plan policy. There may also be opportunities to enhance local sites and improve their connectivity. Natural England does not hold locally specific information on local sites and recommends further information is obtained from appropriate bodies such as the local records centre, wildlife trust, geoconservation groups or recording societies.

Priority habitats and Species are of particular importance for nature conservation and are included in the England Biodiversity List published under section 41 of the Natural Environment and Rural Communities Act 2006. Most priority habitats will be mapped either as Sites of Special Scientific Interest, on the Magic website or as Local Wildlife Sites. List of priority habitats and species can be found on Gov.uk. Natural England does not routinely hold species data, such data should be collected when impacts on priority habitats or species are considered likely. Consideration should also be given to the potential environmental value of brownfield sites, often found in urban areas and former industrial land, further information including links to the open mosaic habitats inventory can be found here.

Ancient woodland, ancient and veteran trees
You should consider any impacts on ancient woodland and ancient and veteran trees in line with paragraph 180 of the NPPF. Natural England maintains the Ancient Woodland Inventory which can help identify ancient woodland. Natural England and the Forestry Commission have produced standing advice for planning authorities in relation to ancient woodland and ancient and veteran trees. It should be taken into account by planning authorities when determining relevant planning applications. Natural England will only provide bespoke advice on ancient woodland, ancient and veteran trees where they form part of a Site of Special Scientific Interest or in exceptional circumstances.

Environmental gains
Development should provide net gains for biodiversity in line with the NPPF paragraphs 174(d), 179 and 180. Development also provides opportunities to secure wider environmental gains, as outlined in the NPPF (paragraphs 8, 73, 104, 120,174, 175 and 180). We advise you to follow the mitigation hierarchy as set out in paragraph 180 of the NPPF and firstly consider what existing environmental features on and around the site can be retained or enhanced or what new features could be incorporated into the development proposal. Where onsite measures are not possible, you should consider off site measures. Opportunities for enhancement might include:

- Restoring a neglected hedgerow.
- Creating a new pond as an attractive feature on the site.
- Planting trees characteristic to the local area to make a positive contribution to the local landscape.
- Using native plants in landscaping schemes for better nectar and seed sources for bees and birds.
- Incorporating swift boxes or bat boxes into the design of new buildings.
- Designing lighting to encourage wildlife.
- Adding a green roof to new buildings.

Natural England's Biodiversity Metric 4.0 may be used to calculate biodiversity losses and gains for terrestrial and intertidal habitats and can be used to inform any development project. For small development sites the Small Sites Metric may be used. This is a simplified version of Biodiversity Metric 4.0 and is designed for use where certain criteria are met.

[3] https://www.gov.uk/protected-species-and-sites-how-to-review-planning-proposals

Natural England's Environmental Benefits from Nature tool may be used to identify opportunities to enhance wider benefits from nature and to avoid and minimise any negative impacts. It is designed to work alongside Biodiversity Metric 4.0 and is available as a beta test version.

Green Infrastructure

Natural England's Green Infrastructure Framework provides evidence-based advice and tools on how to design, deliver and manage green infrastructure (GI) . GI should create and maintain green liveable places that enable people to experience and connect with nature, and that offer everyone, wherever they live, access to good quality parks, greenspaces, recreational, walking and cycling routes that are inclusive, safe, welcoming, well-managed and accessible for all. GI provision should enhance ecological networks, support ecosystems services and connect as a living network at local, regional and national scales.

Development should be designed to meet the 15 Green Infrastructure Principles. The Green Infrastructure Standards can be used to inform the quality, quantity and type of green infrastructure to be provided. Major development should have a GI plan including a long-term delivery and management plan. Relevant aspects of local authority green infrastructure strategies should be delivered where appropriate.

GI mapping resources are available here and here. These can be used to help assess deficiencies in greenspace provision and identify priority locations for new GI provision.

Access and Recreation

Natural England encourages any proposal to incorporate measures to help improve people's access to the natural environment. Measures such as reinstating existing footpaths together with the creation of new footpaths and bridleways should be considered. Links to urban fringe areas should also be explored to strengthen access networks, reduce fragmentation, and promote wider green infrastructure.

Rights of Way, Access land, Coastal access and National Trails

Paragraphs 100 and 174 of the NPPF highlight the important of public rights of way and access. Development should consider potential impacts on access land, common land, rights of way and coastal access routes in the vicinity of the development. Consideration should also be given to the potential impacts on the any nearby National Trails. The National Trails website www.nationaltrail.co.uk provides information including contact details for the National Trail Officer. Appropriate mitigation measures should be incorporated for any adverse impacts.

Biodiversity duty

Your authority has a duty to have regard to conserving biodiversity as part of your decision making. Conserving biodiversity can also include restoration or enhancement to a population or habitat. Further information is available here.