Surrey Nature Partnership
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'*Irreplaceable Habitats*' Guidance for Surrey.

1. Rationale.

The purpose of this document is to assist Surrey's planning and ecological consultancy sectors in the identification of 'irreplaceable habitats', to inform their consideration of paragraph **175**(**c**) of the **National Planning Policy Framework** (NPPF)[1], which states;

> "..*When determining planning applications, local planning authorities should apply the following principles: development resulting in the loss or deterioration of* ***irreplaceable habitats***[2] *(such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists*".

To realise the related NPPF requirement for planning policies and decisions to enhance the natural environment by providing net gains for biodiversity (paragraph 170), Local Planning Authorities are recommended using the **Defra Biodiversity Metric v.2** calculation tool and any subsequent updates to it. This metric also recognises the concept of irreplaceable habitats, where on principle these are essentially exempt from any assumption that their loss is compensable through use of the tool.

National planning policy guidance (July 2019) implies that *any* protected sites and areas (statutory or non-statutory) can be considered as comprised of irreplaceable ['natural'] habitats, for which biodiversity net gain proposals should not undermine their strict protection as also set out in the NPPF[3].

A report commissioned by Natural England[4] provides evidence for considering the concept of irreplaceable habitats in the planning system. At the current time the report remains in draft however, with no indication that a final policy direction will eventually derive from it.

2. Overview of the 'irreplaceable' concept.

If the national policy guidance is viewed as clear enough on this matter, it follows that it is only those habitats within sites that are not formally designated and subject to some parallel protection within the planning system, that are the object of further consideration for the purposes of our guidance document here. Should it become necessary to assess the expendability of parts of, or even entire designated sites (in particular the less-defensible SNCI, or perhaps in exceptional circumstances of IROPI[5]), then these too may require reaffirmation of their presupposed irreplaceability, however.

If protected sites are considered universally irreplaceable, it also follows that their selection criteria might be used as a basis for judging habitat 'irreplaceability'. These criteria are extensive and whilst the stringency of their application varies relative to the importance of the type of protected site, they do share a broadly common structure and componentry. For statutory Sites of Special Scientific Interest,

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[1] See; MHCLG (2019): National Planning Policy Framework.

[2] The NPPF 2019 glossary describes irreplaceable habitats as "*Habitats which would be technically very difficult (or take a very significant time) to restore, recreate or replace once destroyed, taking into account their age, uniqueness, species diversity or rarity. They include ancient woodland, ancient and veteran trees, blanket bog, limestone pavement, sand dunes, salt marsh and lowland fen.*" This list is confirmed as being exemplary (ie. containing examples only) and is therefore not inclusive/definitive.

[3] See; https://www.gov.uk/guidance/natural-environment#biodiversity-geodiversity-and-ecosystems; "*Biodiversity net gain complements and works with the biodiversity mitigation hierarchy set out in NPPF paragraph 175(a). It does not override the protection for designated sites, protected or priority species and irreplaceable or priority habitats set out in the NPPF.*"

[4] *Evidence Gathering on Criteria for Identifying Irreplaceable Habitats* (NE, March 2015).

[5] Imperative Reasons of Overriding Public Interest.

the criteria are currently in a review programme as *Guidelines for selection of SSSI*[6] (JNCC 2013-ongoing). For internationally important 'habitats sites', re-adoption of their original selection criteria[7] is likely to be reviewed in future legislation. Surrey's Local Wildlife Sites, colloquially known as Sites of Nature Conservation Importance (SNCI), are selected against criteria set-out as *Guidance for Selection of Sites of Nature Conservation Importance in Surrey*[8] (Surrey Wildlife Trust 2008). These are also due an update, to be undertaken by their administering body the Surrey Local Sites Partnership (SLSP) imminently.

The aforementioned Natural England report[4] researches the 'irreplaceable' concept in detail. This concludes with a set of recommended criteria that could be used to identify an **irreplaceable area** of a habitat. The report is clear that these criteria are not limited to identifying just its **replaceability** - defined as the relative ability to re-create the habitat on a new site (*cf*. NPPF glossary definition[2]). It consequently provides principles to identify an area of habitat that meets its own definition of irreplaceability, and moreover does not anticipate this to apply to very many habitat types inclusively (as *is* the case for example with all ancient woodland and veteran trees). Thus the principles are intended to enable assessment of **specific habitat patches** that can be applied locally on a site-specific basis.

3. Principles for establishing irreplaceable habitat patches.

Irreplaceable habitat exists because of a complex set of factors. The following four criteria incorporate the key factors that would contribute to a decision that a particular habitat is irreplaceable.

1. **Age**: Habitats generally become more complex over time, for example by accruing greater species diversity or supporting species with more specialised requirements. Age will also directly elevate their importance as a carbon storage asset.
2. **Environmental context**: Habitats may exist only as a result of a unique or very rare combination of physical, ecological or historical circumstances.
3. **Achievability of re-creation**: Judgements as to whether or not the habitat and its key features can be re-created successfully within a realistic timescale (based on practical evidence and scientific research).
4. **Geographic position within the landscape**: Increasingly the unique location of a habitat patch within the landscape, and thus its role in an ecological connectivity 'network', is recognised as of quite fundamental importance to its distinctiveness and irreplaceability.

These criteria are often inter-related and a habitat may be considered irreplaceable when any one or more of the three initial factors, or at least one of these plus the fourth apply. It is also very likely that presence of the first three criteria may qualify a habitat patch for selection as a SNCI, or even a new SSSI[9] (although subsequent designation by Natural England in the latter case is at the current time fairly remote).

Key defining features of habitats that would contribute to irreplaceability (as developed further from the first two of the above criteria) are listed below:

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[6] See; https://jncc.gov.uk/our-work/guidelines-for-selection-of-sssis/.
[7] See; https://jncc.gov.uk/our-work/special-protection-areas-overview/#spa-classification-selection-guidelines-for-spas, and http://archive.jncc.gov.uk/SACselection.
[8] See; https://surreynaturepartnership.files.wordpress.com/2018/09/guidance-for-the-selection-of-sncis-in-surrey.pdf
[9] It is important to remember here the basic purpose of SSSI as an exemplary system for protecting sites, each of which is selected as one of/the best representative(s) of its type within defined Areas of Search (normally counties).

- **Habitat Quality**: overall species diversity and richness; age; size; uniqueness/rarity; cultural/historic features; management and land use; key reference sites; closely related habitats.
- **Environmental Context**: geology; climate/region/topography; soils and nutrient levels.
- **Species Assemblages**: vegetation communities; fungi, including lichens; plant & fungal assemblages/species of conservation value; invertebrate assemblages/species of conservation value; birds and other vertebrates of conservation value.

Examples of the above criteria and key defining features applied to four terrestrial priority/Habitats of Principal Importance[10] are presented in the **Appendix**.

An extensive literature on the restoration and re-creation of semi-natural vegetation shows the problems that arise from high nutrient levels, notably phosphorus, and the management difficulties that need to be overcome in dealing with this. This underlies a strong case for treating *any* intrinsically low-nutrient soil as of high "irreplaceability value", even where the supported vegetation or fauna is lacking in other respects. However this also alludes to the 'potential' value of a site or patch, which is difficult to justify applying *routinely* to assessments for *current* conditions of irreplaceability[11].

4. Recommendations for the planning sector.

It should be possible to assess habitat irreplaceability using readily available information about a site or habitat patch. To enable this, the minimum information required is likely to comprise an Extended Phase 1 Habitat Survey, and a desk study to obtain records for site designations, habitats and species.

If initial baseline survey and data collection suggests that the criteria listed above are likely to be met then further surveys may need to be carried out. In this case information to be provided by the developer (collected to best practice standards[12]) could include:

- Standardised botanical survey (to NVC level) plus average number of species/metre^2, presence of rare species and total species;
- Standardised invertebrate survey;
- Survey for other rare/scarce species assemblages;
- Account of historic and current land use and management (site and adjacent area);
- Consideration of the wider connectivity of the site with respect to other areas of semi-natural vegetation; evidence of significance ascertained through any bespoke ecological connectivity modelling analysis[13];
- Context of site/key species in terms of national distribution (eg. at the edge of their range);
- Soil survey data: soil profile and type, pH, nutrients; and
- Geological and physiographic mapping data.

The information required would be specific to the site under consideration but not all of the above is likely to be needed in every case.

[10] Listed under Section 41 of the Natural Environment & Rural Communities Act 2006 as Habitats [& Species] of principal importance for the conservation of biological diversity in England (for which public bodies are obliged to have regard under Section 40).
[11] However restoration potential is currently a criterion for SNCI selection; and is also an important consideration in the outcome of planning enforcement cases.
[12] See; https://cieem.net/i-am/resources-landing/resources-hub/
[13] This will become increasingly important when considering the current local (and aspirational) componentry of the national Nature Recovery Network, as a new statutory duty under the Environment Act (in process).

Finally, even with the use of this guidance document it is unlikely that non-specialist planners would feel able to adequately interpret submitted information of this nature without in-house or externally procured expert ecological advice. There is no way around this – it is likely that planning authorities will need to review many of their specialist advisory services in respect of new and evolving regulatory duties, and not just in the area of environmental protection and related biodiversity recovery issues.

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Appendix:

1.1 *Key Criteria for "irreplaceability" developed for dry* ***Neutral Lowland Grassland:***

- Presence of designated species or habitats with protected status at the regional, national or international level. This could include rare or scarce vascular plant, fungal & lichen or invertebrate species. Protected species or habitats are not necessarily irreplaceable, but would in all cases require careful consideration.
- Presence of species-rich characteristic NVC MG5 community with good representation of positive indicator species (JNCC 2004 – lowland grasslands).
- Known presence of an established permanent grassland of more than 20-30 years old, with no major disturbance and appropriate management.
- Appropriate soil-nutrient levels. Available evidence shows a very strong inverse relationship between species richness in grassland and soil phosphorus levels.

1.2 *Key Criteria for "irreplaceability" developed for* ***Calcareous Grassland:***

- Presence of designated species or habitats with protected status at the regional, national or international level. This could include rare or scarce vascular plant, fungal & lichen or invertebrate species or assemblages. Protected species or habitats are not necessarily irreplaceable, but would in all cases require careful consideration.
- Characteristic and appropriately managed areas of "chalk grassland" carrying the most diverse and complex communities (such as NVC CG1, CG2 and CG7) with evidence of long establishment (>100 years).
- Presence of characteristic topography, aspect, geology and soil conditions.

*The majority of the larger remaining areas of very species-rich calcareous grasslands are now protected and development issues are most likely to arise with small fragments of grassland on calcareous soils where abandonment has led to higher herbaceous vegetation or scrub formation, and characteristic species diversity has been lost. However, where such sites can be shown to hold undamaged calcareous soils with appropriate soil nutrient and pH levels, they should still be considered of significant value.

1.3 *Key Criteria for "irreplaceability" developed for dry* ***Lowland Heathland:***

- Presence of designated species or habitats with protected status at the regional, national or international level. This could include rare or scarce vascular plant, fungal & lichen or invertebrate species or assemblages. Protected species or habitats are not necessarily irreplaceable, but would in all cases require careful consideration.
- Presence of characteristic soil conditions, and geology.
- Presence of a heathland mosaic of good connectivity and fragment size, with evidence of long term continuity of land use and management.
- Presence of very specialized vegetation communities with highly characteristic, rare or diverse botanical or invertebrate species or species assemblages.

*Evidence clearly suggests that a largely intact and characteristic heathland soil is of very high irreplaceability value, even where the vegetation is degraded due to poor management (including scrub development). The negative impact of increased fragmentation associated with the period of heaviest historic heathland loss is evidenced by clear relationships between fragment size, isolation and surrounding land use on plant, invertebrate and vertebrate species diversity and long-term survival. Heathland fragments with good connectivity and characteristic soil should, therefore, also be considered as of high irreplaceability value.

1.4 *Key Criteria for "irreplaceability" developed for* ***Dry Acidic Lowland Grassland:***

- Presence of designated species or habitats with protected status at the regional, national or international level. This could include rare or scarce vascular plant, fungal & lichen or invertebrate species or assemblages. Protected species or habitats are not necessarily irreplaceable, but would in all cases require careful consideration.

- Presence of characteristic soil conditions, and geology.
- Presence of a heathland mosaic of good connectivity with evidence of long-term continuity of land use and management.
- Presence of very specialized vegetation communities (e.g. the NVC U1 sub-communities) with highly characteristic, rare or diverse species or species assemblages.

*The evidence for the very high irreplaceability value of well-developed and undamaged heathland/ acid grassland mosaic soils is well established, and evidence for this must be considered in respect of the wider cultural, historical and land use context. These soils form the end point of an ancient pattern of land use on initially suitable geology, and are very difficult to reproduce or restore when significant nutrient enrichment has taken place. An undamaged acid grassland soil is therefore of very high irreplaceability value. Where undamaged soil structure can be established, any fragment that retains or improves connectivity is of high irreplaceability value.

1.5 Summary: The criteria identified above show a strong degree of overlap for these four habitats, and the key criteria that need to be addressed in considering the irreplaceability of this group of dry terrestrial habitats can be summarized as follows:

- Presence of designated species or habitats with protected status at the regional, national or international level. This could include rare or scarce vascular plant, fungal & lichen or invertebrate species;
- Presence of characteristic and appropriately managed areas of habitat with evidence of long establishment;
- Presence of appropriately managed areas of habitat with high species richness and/or highly characteristic species and/or species assemblages;
- Presence of characteristic topography, aspect, geology and soil conditions;
- Presence of habitat area of a good size, and/or with good connectivity to other areas of similar habitat; and
- Presence of habitat with good connectivity to wider semi-natural or extensively managed habitats.

2. Habitats of Principal Importance (HPI/Priority habitats) present in Surrey, for which irreplaceability should always be considered.

WOODLAND (Note: any ancient woodland[14] is viewed as irreplaceable on principle)

- *Lowland Beech & Yew woodland*
- *Lowland mixed deciduous woodland*
- *Wet woodland*
- *Wood-pasture & parkland* (ie. containing ancient/veteran trees; associated grassland may not prove irreplaceable)

FRESHWATER & WETLANDS

- *Rivers* (primarily within 'natural' courses)
- *Ponds* (most likely long-established only)
- *Eutrophic standing waters* (ditto above)
- *Floodplain grazing marsh* (esp. long-established drainage ditch networks)
- *Reedbeds* (most likely long-established only)
- *Lowland fens* (incl. valley mires)

HEATHLAND & GRASSLAND

- *Lowland heathland*
- *Lowland calcareous grassland*
- *Lowland dry acid grassland*
- *Lowland meadows* (= 'dry Neutral grassland', as 1.1 above)

ARABLE/HORTICULTURE & BOUNDARY

- *Arable field margins* (highly individual; long-established only & interest highly species-related)
- *Traditional orchards* (ie. with veteran trees; defining criteria apply)
- *Hedgerows* (species-rich only; defining criteria apply)

[14] See; Surrey Revised Ancient Woodland Inventory (2011)