

Englefield Green Village Neighbourhood Plan

Biodiversity and Green Spaces in Englefield Green

Englefield Green Village Neighbourhood Forum

Regulation 16 (of the Neighbourhood Plan Regulations 2012) Consultation Document

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Project number		4373-1	
Report and version number		1.4	

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1 Vision

- 1.1.1 Englefield Green Village Neighbourhood Forum has consulted the community to identify key priorities in relation to biodiversity ahead of the preparation of the Neighbourhood Plan. Based on this, and biodiversity requirements for the local area, the vision of the Englefield Green Village Neighbourhood Plan biodiversity policies is to:
- Protect and enhance biodiversity across green spaces
 - Protect important green spaces within the village
 - Ensure sustainable development
 - Enhance biodiversity links across Englefield Green Village Area, incorporating well-being for residents
 - Incorporate measures to improve climate change resilience.
- 1.1.2 This document presents the recommendations in relation to biodiversity policies and opportunities for enhancement for the Neighbourhood Plan to reflect its vision.

2 Introduction

2.1 Background

- 2.1.1 In August 2021 the Intergovernmental Panel on Climate Change (IPCC) issued their sixth assessment report that addressed the most recent physical understanding of the climate system and climate change (Inter-governmental Panel of Climate Change, 2021).
- 2.1.2 The report confirms unequivocally that human influence has warmed the atmosphere, ocean and land, resulting in widespread and rapid changes around the planet. Many of these changes are irreversible and will be evident for many centuries and millennia. The changes and the impacts they bring will become larger in direct relation to the increased global warming and will include the increased frequency and intensity of hot extremes, marine heatwaves and heavy precipitation; agricultural and ecological droughts in some regions; proportion of intense tropical cyclones; reductions in Arctic sea ice, snow cover and permafrost; thus adversely impacting biodiversity, and human well-being.
- 2.1.3 In autumn 2021, the UK hosted the UN Climate Change Conference of the Parties (COP26) with the goal of:
- Securing global net zero by mid-century and keep 1.5 degrees within reach
 - Adapt to protect communities and natural habitats
 - Mobilise finance
 - Work together
- 2.1.4 In consideration of the above, Local Authorities and communities around the country are mobilising to ensure Local Plans and Neighbourhood Plans incorporate measures to protect and enhance biodiversity, whilst ensuring the delivery of sustainable development and instilling climate change resilience.
- 2.1.5 In 2019, the Englefield Green Village Neighbourhood Forum and Area were designated by the Runnymede Borough Council Planning Committee. The forum is now charged with developing the Englefield Green Village Neighbourhood Plan. On 19th August 2021, SWT Ecology Services was commissioned by Englefield Green Village Neighbourhood Forum to prepare a report to inform the biodiversity policies of the Neighbourhood Plan.
- 2.1.6 The neighbourhood plan will:
- Complement and build-on the relevant National and Local plans that are applicable
 - Incorporate feedback from the community
 - Identify opportunities for local infrastructure and facilities improvements
 - Direct Community Infrastructure Levy (CIL) funds towards potential improvements.
- 2.1.7 The neighbourhood plan cannot:
- Stop development in the area
 - Be in opposition to National or Local plans
 - Dictate improvements to local infrastructure.
- 2.1.8 The development of these biodiversity policies aligns with the National Planning Policy Framework (NPPF 2021) (Ministry of Housing, Communities and Local Government, 2021), meaning that:

- Sites of biodiversity value will be protected
 - The intrinsic character and beauty of the countryside and the wider benefits from natural capital and ecosystem services are recognised
 - Impacts to biodiversity are minimised and policies must provide net gains for biodiversity.
 - Coherent ecological networks will be established
 - New and existing development that poses an unacceptable risk to soil, air, water or noise will be prevented.
 - Developments should help improve local conditions taking into account relevant information such as river basin management plans.
- 2.1.9 In considering biodiversity, the Neighbourhood Plan will be based on favouring the presumption of sustainable development and take account of the NPPF (2021) with clear policies that guide how the presumption should be applied locally.

2.2 Report objectives

- 2.2.1 The aim of this report is to develop biodiversity policies that build on the existing Runnymede Borough Council biodiversity policies to ensure sustainable development across the Englefield Green Village Area and to deliver the vision for the neighbourhood. The proposed policies, mitigation measure and enhancement opportunities recommended in this document should be incorporated into the Neighbourhood Plan to inform the development and design of proposed schemes. Areas identified as opportunities to enhance biodiversity (Figure 4) should be prioritised for delivering biodiversity objectives, direct funding opportunities and biodiversity initiatives.
- 2.2.2 The scope of work included:
- Desktop assessment of all available biodiversity information, that also considers existing strategies
 - Creation of a GIS layer of known habitat resources and boundaries of existing sites and open space. Opportunities to enhance these for biodiversity would be identified and would consider:
 - Opportunities for ecological enhancements
 - Connectivity
 - Buffer zones
 - Opportunities to enhance well-being
 - Recommendation of relevant policy setting out opportunities and targets for:
 - Protecting existing assets
 - Enhancements to encourage biodiversity including street trees, swales and rain gardens, increasing access to nature, enhancing the management of existing greenspaces for the benefit of wildlife;
 - Provision of a technical report.

- 2.2.3 The scope of work also considered the results of a questionnaire Englefield Village Forum submitted to the local residents to obtain and incorporate feedback into the Englefield Village Neighbourhood Plan.
- 2.2.4 In relation to biodiversity matters, the local residents indicated their desire to:
- Increase the number of green spaces, allotments and playing fields
 - Increase planting along St Jude's Road, and other roads where possible
 - Increase the number of Tree Preservation Orders
 - Encourage landowners to increase wildlife on their land through planting and appropriate habitat management
 - Encourage people to walk, cycle or take public transport
 - Increase the access and interaction between Royal Holloway University and the rest of the village.
- 2.2.5 The biodiversity policies presented in this document have been developed to respond to the community needs by:
- Identifying opportunities for habitat enhancement across Englefield Green Village Area
 - Identifying opportunities for green and blue infrastructure to encourage sustainable transport across Englefield Green Village Area and habitat connectivity.

3 Englefield Green Village Neighbourhood Area

3.1 Designated sites

- 3.1.1 Englefield Green Village Neighbourhood Area is located within Runnymede Borough Council and the boundary is presented in Figure 1, along with the statutory and non-statutory designated sites within and immediately adjacent to the boundary. Table 1 provides further details on these.

Table 1: Designated sites

Designation	Site name	Figure number
Statutory designated sites		
Special Area of Conservation	Windsor Forest & Great Park	1
Site of Special Scientific Interest	Windsor Forest & Great Park	1
	Langham Pond	1
Non-statutory designated sites		
Site of Nature Conservation Importance	Windsor Great Park	1
	Park Wood	1
	Runnymede SNCI (including Cooper's Hill and Cooper's Hill Slopes)	1
Local Green Space	Arboretum at RHUL	3
Other designations		
Biodiversity Opportunity Area	TV01: Windsor Great Park	1
	TV02: Runnymede Meadows and Slope	1

Designation	Site name	Figure number
Ancient woodland	Numerous parcels present including within Windsor Great Park and Runnymede SNCI and within the Royal Holloway University Grounds	1
Parks and gardens of historical interest	Kennedy Memorial Landscape	N/A
	Windsor Great Park	N/A
Green belt		3
Conservation Area		3
Tree Preservation Orders		3
Ancient tree inventory		3

3.1.2 Much of the land within the Englefield Green Village Area is designated as greenbelt, with a Conservation Area north of the urban areas. Urban areas within the area are generally undesignated.

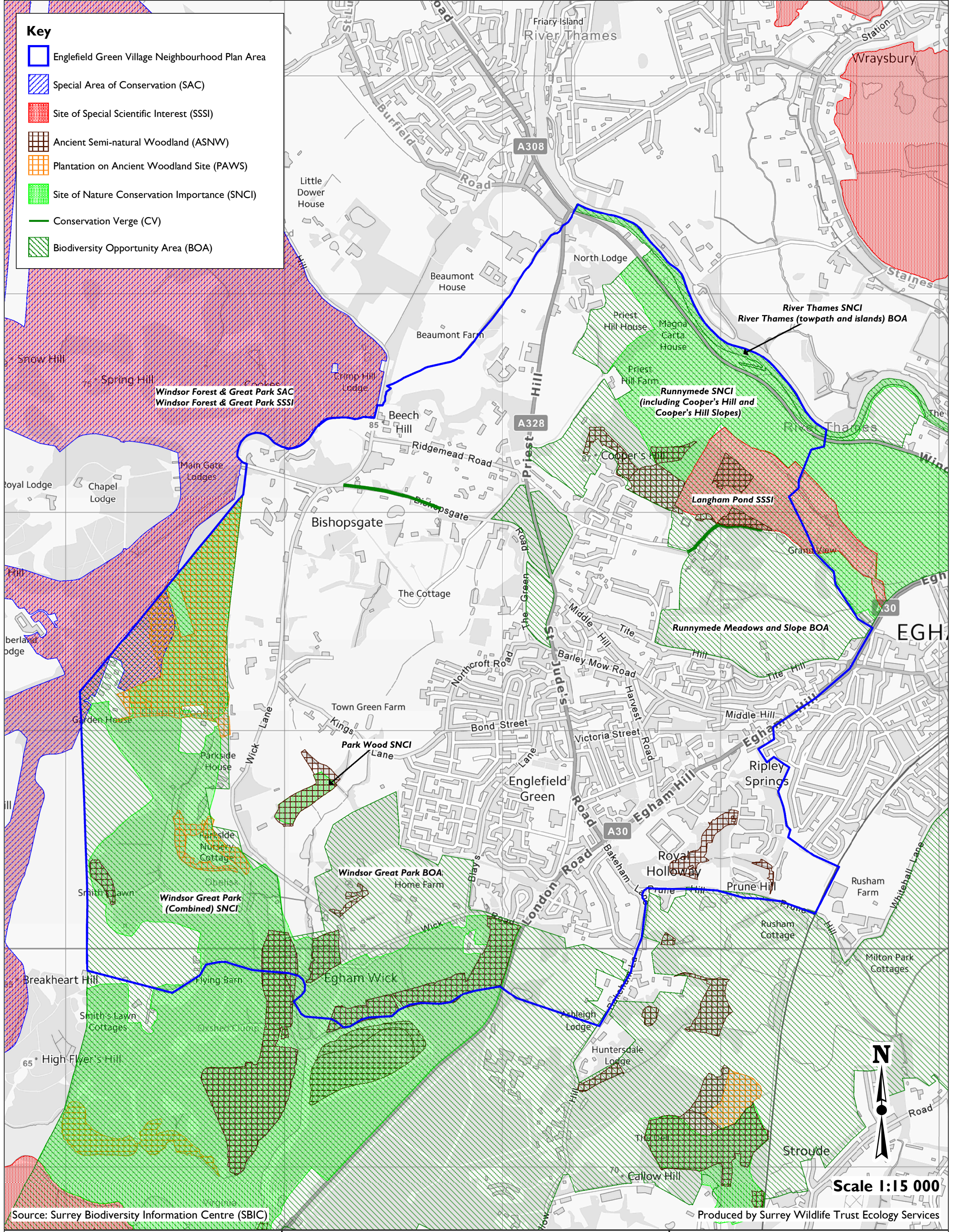


Figure I:
Englefield Green Village Neighbourhood Plan
Statutory and Non-statutory
Designated Sites for Nature



Ecology
Services

3.2 Habitats with Englefield Green Village Neighbourhood Area

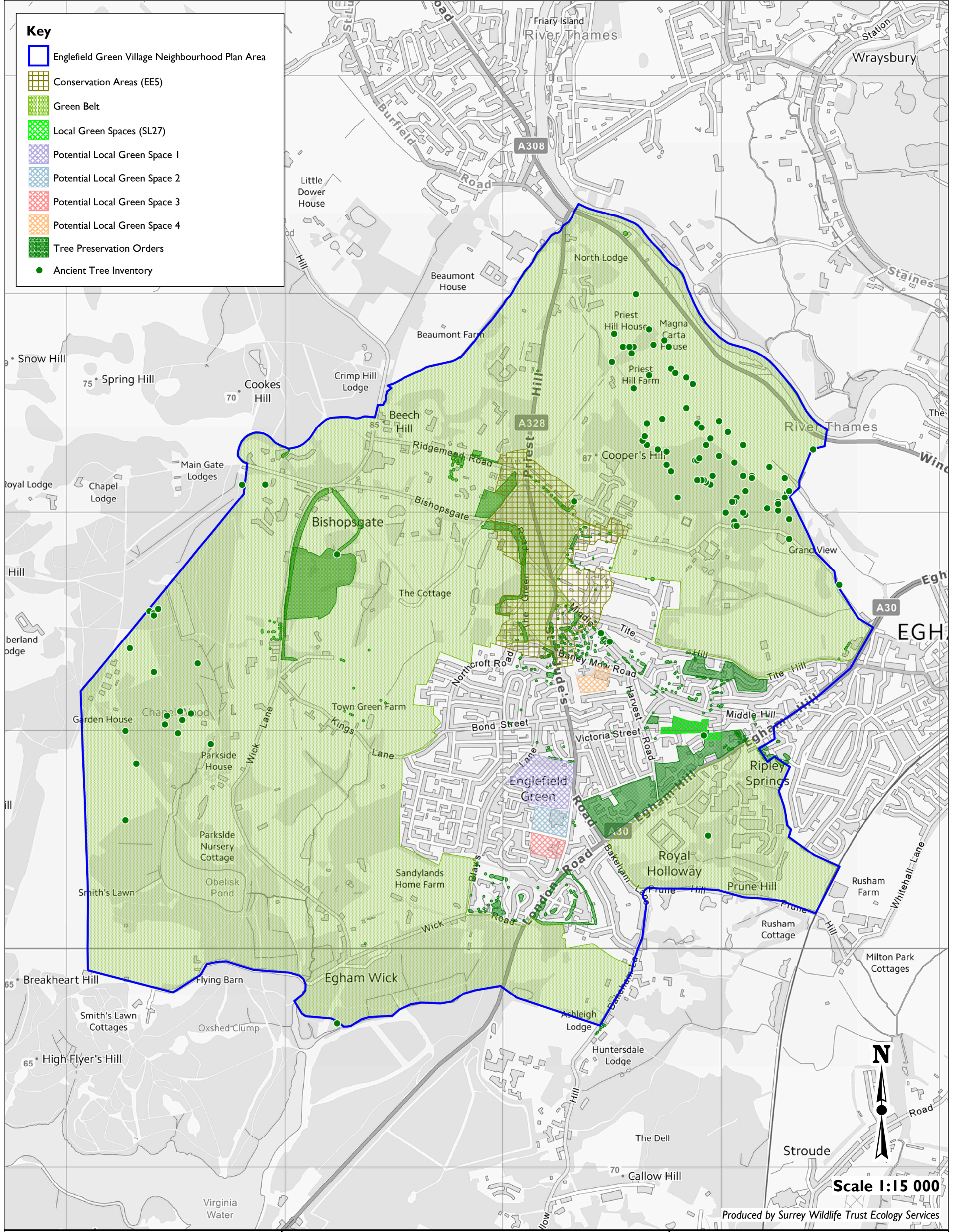
3.2.1 Based on a review of habitat mapping and modelling, several parcels identified as the following Habitats of Principle Importance (HPI), are located in Englefield Green Village Neighbourhood Area (Figure 2):

- Deciduous Woodland
- Lowland Dry Acid Grassland
- Lowland Heathland
- Lowland Meadow
- Reedbeds
- Traditional Orchard

3.2.2 The Lowland Heathland is associated with the Runnymede Site of Nature Conservation Importance (SNCI).

3.2.3 The Thames Valley Biodiversity Opportunity Areas (TV01 and TV02) identify the following HPI as priorities for restoration and creation:

- Wood pasture & parkland
- Heathland
- Acid grassland
- Mixed deciduous woodland
- Wet woodland
- Fen
- Meadows
- Ponds



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Figure 3:
Englefield Green Village Neighbourhood Plan
Local Green Space Designation Opportunities



3.4 Species within Englefield Green Village Neighbourhood Area

3.4.1 The Thames Valley Biodiversity Opportunity Areas (TV01 and TV02) identify the following examples of Species of Principle Importance (SPI) that could be prioritised for stabilisation and recovery:

- Greater water-parsnip
- Marsh stitchwort
- Skylark
- Water vole
- Oak polypore
- Tooth fungi (assemblage)
- Lesser spotted woodpecker
- Marsh tit
- Hedgehog.

3.5 Threats to biodiversity

3.5.1 Furthermore, threats to biodiversity are identified in Table 2 and mitigation measures to incorporate into the biodiversity policies are detailed. These measures should be incorporated into development designs to mitigate impacts to biodiversity and also incorporate enhancement measures into development designs. Enhancement measures are detailed in Section 5 of this report and summarised in the Table 2.

Table 2: Ecological threats and challenges and proposed mitigation measures

Ecological Threat and Challenge	Source	Impact on biodiversity	Proposed mitigation	Recommended enhancements (see Section 5 for further information)
Pollution	Untreated storm-water runoff New light sources along darker areas, associated with new development	Habitat degradation Habitat loss	Improved Nature Based Solutions for storm-water run-off treatment. Development plans to include wildlife-sensitive lighting plans, clearly demonstrating the location of dark corridors and ensuring these connect across the landscape.	Encourage rain gardens to slow runoff and improve water quality in new developments. Plant with native species of local provenance, or species of known ecological benefit.
Habitat removal to facilitate development	Development in greenbelt, increasing habitat loss, degradation and fragmentation across the landscape. Relevant Strategic Land Availability Sites in Englefield Village Green include: - ID 50 - Brunel University Site, Coopers Hill Lane - ID 289 - Webbs, The Green - ID 233 - 6 Northcroft Road, Egham - ID 52 - Dial House, Englefield Green Village - ID 293 - Land north of Kings Lane, - ID 36 - Sandylands Home Farm East, Blays	Habitat degradation Habitat loss Habitat fragmentation	Incorporation of Nature Based Solutions into development plans. Development plans to include wildlife-sensitive lighting plans, clearly demonstrating the location of dark corridors and ensuring these connect across the landscape. Appropriate and documented implementation of biodiversity net gain hierarchy: avoid, minimise, realise a minimum 20% net gain on-site including compensating for any habitat loss, as an offset in the last resort. Development of robust green and blue infrastructure plans within the sites, and within Englefield Green Village Area. Appropriate selection of species in landscape plans. Presumption against the removal of trees unless there are sound	Increase the diversity of habitats within existing open spaces and consider: - Reducing mowing regime along roads, field margins in public parks and green spaces, and under tree drip lines - Where funding opportunities exist, plant trees and shrubs in open spaces (recommended species list provided in Section 5) - Deploying planters in urban areas to create linking corridors across the urban landscape.

Ecological Threat and Challenge	Source	Impact on biodiversity	Proposed mitigation	Recommended enhancements (see Section 5 for further information)
	- ID 156 - Blays House, Blays Lane, Egham - ID 37 - Wick Road, Englefield Green Village - ID 22 - Land South of St Davids Drive & Roberts Way, situated between London Road & Bakeham Lane - ID 208 - Land adjacent Ulverscroft, Bakeham Lane, Egham - ID 177 - Royal Holloway University of London campus, Egham Hill, Egham - ID 240 - Land at Middle Hill - ID 299 - Ashdene House - ID 321 - Church Of Assumption, Harvest Road - ID 319 - 9-11 Victoria Street, Englefield - ID 311 - 16-18 Victoria Street, Englefield Green Village		arboricultural reasons for these to be removed.	

Ecological Threat and Challenge	Source	Impact on biodiversity	Proposed mitigation	Recommended enhancements (see Section 5 for further information)
	ID 176 - Queen Elizabeth House, Torin			
Inappropriate or lack of habitat management within areas of public or private open space	Habitats in private or public open spaces not being managed for biodiversity.	Habitat degradation Habitat loss Habitat fragmentation	Identification of areas for biodiversity enhancement within open space identified in Figure 4. Development and implementation of management plans for areas identified for habitat improvement and green and blue infrastructure. Biodiversity Opportunity Area policies to be implemented in the management of public and private open space. Liaise with persons responsible for managing open spaces to review management regime and identify measures to improve habitat condition and diversity.	- Where funding opportunities exist, plant trees and shrubs in open spaces (recommended species list provided in Section 5) - Plant with native species of local provenance, or species of known ecological benefit.
Invasive non-native species and pests	Introduction of invasive non-native species through poor biosecurity measures when working between sites. Landscape plans for proposed developments and planting in public open spaces lacking focus on species that provide biodiversity benefits.	Habitat degradation Habitat loss	Strengthening resilience of habitats being improved for biodiversity, including preparation and implementation of management plan. Species selection in landscape plans to ensure species of local provenance and/or their ability to deliver clear benefits to biodiversity.	Where invasive or non-native plants have been removed, replace these with native species of local provenance, or species of known ecological benefit.
Resource and investment	Budgetary restrictions	Lack of funding and staff resource to implement	Encourage volunteer and community engagement.	

Ecological Threat and Challenge	Source	Impact on biodiversity	Proposed mitigation	Recommended enhancements (see Section 5 for further information)
		management and monitoring strategy.	Biodiversity offsets within the Englefield Green Village Area and Green and Blue Infrastructure to have costed management plans. CIL and Section 106 payments to be used to deliver robust management and monitoring strategies.	
Climate change	Increased carbon emissions	Loss in biodiversity Increased invasive non-native species and pests Significant changes to weather patterns including increased drought, flooding and fire risk.	Increasing resilience in the habitats present. Implementing the environmental net gain strategy to avoid impacts in the first instance, where this cannot be avoided minimise the impacts, restore existing habitats and as a last resort offset the loss of habitats. Develop and implement green and blue infrastructure strategies across Englefield Green Village Area. Enhance the existing habitats within publically owned open spaces. Plant trees and other plants to enhance habitat connectivity across urban areas and create green corridors along key route (e.g. St Jude's Avenue). Opportunities for green and blue infrastructure are presented in Figure 4.	The enhancement measures detailed above will contribute towards climate resilience. The key enhancements for this are: • Diversify habitats as much as possible through appropriate management of open spaces, such as allowing some areas to grow tall whilst allowing continued public enjoyment • Using grant opportunities to plant trees, shrubs and understorey plants • Using grant opportunities to add planters, trees and baskets in urban areas • Using grant opportunities to purchase a diversity of bird and bat boxes and deploy them in public parks.

4 Local Green Space Assessment

4.1 Method

4.1.1 The NPPF (2021) identifies opportunities to designate Local Green Spaces in the Neighbourhood plan which are areas of green space particularly important to the local community and that are not already designated through the local plan. Local Green Spaces should only be designated where:

- They are reasonably close to the community it serves
- They are demonstrably special to the local community and holds a particular local significance (e.g. amenity value, historic significance) or importance to wildlife
- Are local character and are not extensive in size.

4.1.2 There is no minimum size for a Local Green Space.

4.1.3 When designating an area for Local Green Space, consideration is made with regards to the benefits of this additional designation. For those that are already designated within the local plan, or have statutory designation, there is limited benefit to the Local Green Space designation. Therefore, one of the steps in the assessment process (Stage 2), reviews any existing designations and excludes parcels of land that have already been designated. Furthermore, sites that have already been allocated for development within the Local Plan are also not appropriate for designation and these are also excluded.

4.1.4 The identification of sites for Local Green Space is undertaken in three stages, detailed below. Within Englefield Green 6,684 parcels of open space were assessed for Local Green Space designation and this was undertaken using MapInfo Geographical Information System (GIS). The aim of each stage is to exclude parcels that do not qualify for Local Green Space designation, such that at the end of the process, only sites that qualify are assessed.

4.1.5 The open spaces layer use in this assessment is divided into separate parcels, many of which are located within the same ownership boundary. Following the last stage of the assessment process to identify the potential Local Green Space designation sites a review of the parcel location was made to identify the appropriate site boundary.

- Stage 1: Desktop assessment to identify location of existing designations
 - The Runnymede Borough Council open space layer was accessed to identify all areas of open space. Those included for consideration included:
 - Allotments Or Community Growing Spaces
 - Amenity: residential or business
 - Amenity transport
 - Cemetery
 - Institutional grounds
 - Natural
 - Other sports facility
 - Play space
 - Playing field
 - Public park or garden
 - Religious grounds
 - School grounds
 - Tennis Court

- During Stage 1 4,220 parcels of open space were excluded from the study, and 2,464 parcels of open space were selected to proceed to Stage 2.
- Stage 2: Local Green Space designation is only appropriate where the areas of open space are not already covered by another designation. On this basis, sites were excluded where these were:
 - Located within green belt
 - Within an existing statutory designation (e.g. Special Area of Conservation, Site of Special Scientific Interest)
 - Within a non-statutory designation (e.g. Conservation Area, Site of Nature Conservation Importance)
 - Larger than 10ha
 - Those that were more than 3km from the edge of the urban area
 - 1,370 parcels of open space were excluded from the study as they were already designated.
 - The Runnymede Borough Planning Portal was then reviewed to identify sites that were:
 - Allocated for development
 - Already had a planning application being determined or submitted.
 - Of the 894 parcels of open space that were considered 753 have already been allocated for development in the Runnymede Local Plan. The remaining 141 parcels of open space were located across four sites for which Local Green Space designation could be considered. Information on these four sites is presented in the results section.
- Stage 3: Identify those recommended for Local Green Space designation. This shortlist is presented in this report and the next stage is for the Neighbourhood Plan Steering Committee to:
 - Assess the proposed sites and include those in the Neighbourhood Plan they feel are appropriate
 - Engage with the local community to discuss the proposals
 - Notify landowners as appropriate

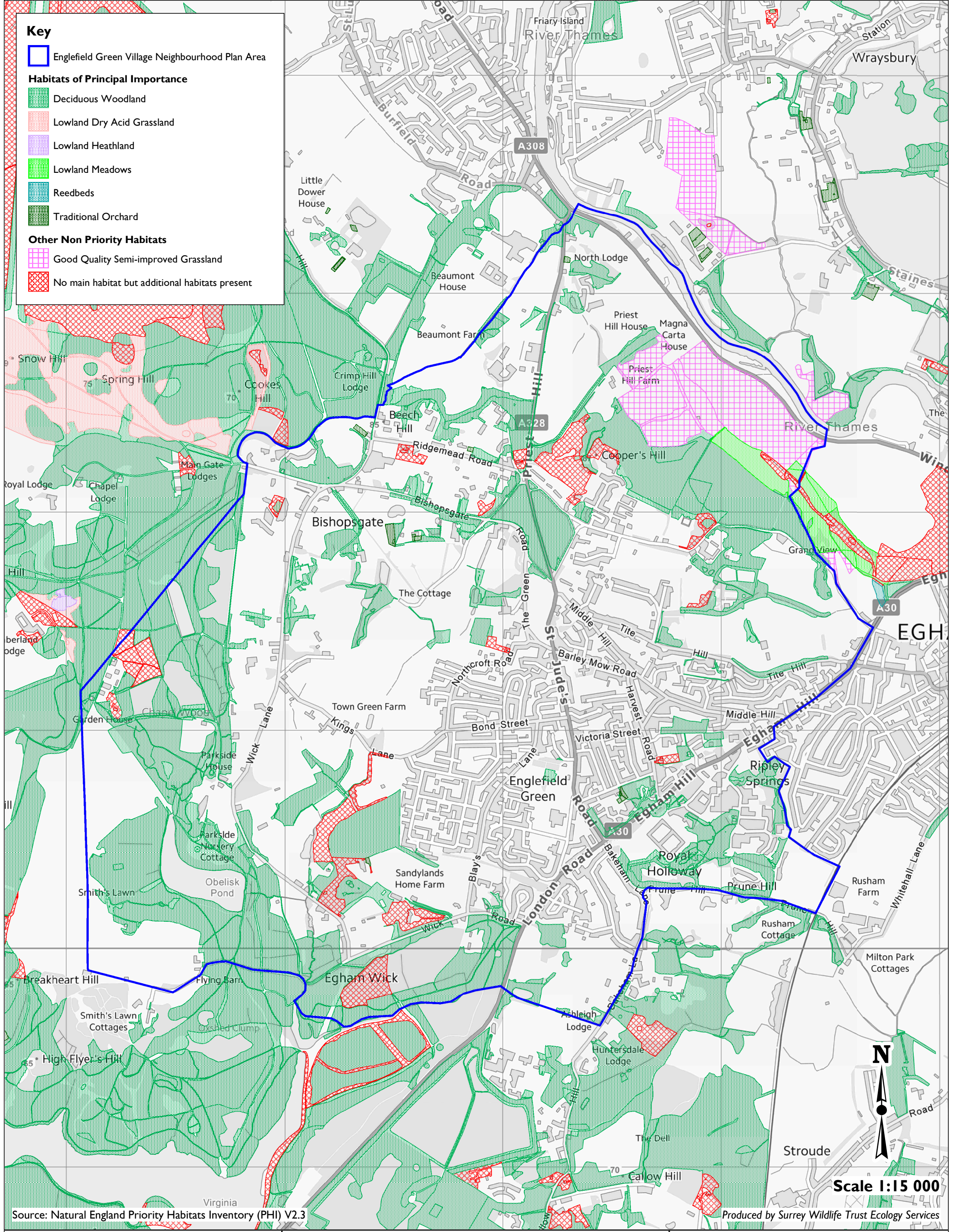
4.2 Results

- 4.2.1 Four sites were identified for Local Green Space designation (see Figure 3). These comprise:
- St Jude's Cemetery
 - St Jude's Junior School Playing Fields
 - St Cuthbert's Catholic Primary School Playing Fields
 - St Jude's Church of England Infant School Playing Fields
- 4.2.2 Runnymede Borough Council has already done an assessment for a Local Green Space within Englefield Green Village, the location of which is presented in Figure 3.
- 4.2.3 The outcome of this Local Green Space assessment is presented in Table 3 and the location of the four sites is location is presented in Figure 3.

Table 3: Local Green Space assessment

Attribute	•St Jude's Cemetery	St Jude's Junior School Playing Fields	St Cuthbert's Catholic Primary School Playing Fields	St Jude's Church of England Infant School Playing Fields
Address	St Jude's Road, Englefield Green, Surrey TW20 0BZ	Bagshot Rd, Englefield Green, Egham TW20 0RU	Corby Dr, Englefield Green, Egham TW20 0RY	Barley Mow Rd, Englefield Green, Egham TW20 0NP
Location	SU99217078	SU99207059	SU99197046	SU99407122
Area	5.4ha	1.7ha	1.4ha	1.3ha
Status/designation	None	None	None	None
Description	Active cemetery, well managed.	Well managed school playing fields	Well managed school playing fields	Well managed school playing fields
Boundaries	Site is well defined and is accessible by members of the public.	Site is well defined but is not accessible by the public.	Site is well defined but is not accessible by the public.	Site is well defined but is not accessible by the public.
Distance from Village	Within village centre.	Within village centre.	Within village centre.	Within village centre.
Uses	Active cemetery, but is publically accessible.	School use only and other activities.	School use only and other activities.	School use only and other activities.
Quality	Site is well maintained	Site is well maintained	Site is well maintained	Site is well maintained
Facilities	Cemetery	Sports pitches	Sports pitches	Sports pitches
Visual attractiveness	Green space, however managed for amenity purposes and could be enhanced.	Green space, however managed for amenity purposes and could be enhanced.	Green space, however managed for amenity purposes and could be enhanced.	Green space, however managed for amenity purposes and could be enhanced.
Historical significance	Created in 1858, important historical place.	Moved to current location in 1967.	The school at this location was constructed in 1963 and extended in 1969. The original St Cuthbert's school began in the Social Hall in	No historical information provided.

Attribute	•St Jude's Cemetery	St Jude's Junior School Playing Fields	St Cuthbert's Catholic Primary School Playing Fields	St Jude's Church of England Infant School Playing Fields
			Harvest Road in 1945. The Social Hall itself was constructed in 1880.	
Recreational value	Regularly used by members of the public.	Use limited to school children and limited to daytime activities.	Use limited to school children and limited to daytime activities.	Use limited to school children and limited to daytime activities.
Tranquillity	Moderate with some road noise.	Fluctuates based on school activities, adjacent to a main road.	Fluctuates based on school activities, adjacent to a main road.	Fluctuates based on school activities, adjacent to a main road.
Wildlife Value	Low, however could be improved.	Low, however could be improved.	Low, however could be improved.	Low, however could be improved.
Recommended as a potential LGS?	Yes as although it is of low value in some instances, it does provide an important greenspace in a very urbanised environment.	Yes as although it is of low value in some instances, it does provide an important greenspace in a very urbanised environment.	Yes as although it is of low value in some instances, it does provide an important greenspace in a very urbanised environment.	Yes as although it is of low value in some instances, it does provide an important greenspace in a very urbanised environment.



5 Opportunities for biodiversity

5.1 Policy framework

- 5.1.1 This policy framework will support and provide direction for planning and decision-making in relation to development within the Englefield Green Village Area, and aims to deliver a long-term integrated approach to biodiversity conservation. These policies should be considered for inclusion in the Neighbourhood Plan. It will guide the design and delivery of development that affects biodiversity and build on existing legislation and planning policy. Appendix 1 details the existing planning policies and how these relate to key ecosystem services; and Appendix 2 details the existing legislation pertaining to biodiversity.

5.2 Biodiversity net gain

- 5.2.1 The Environment Act 2021 is the UK Government's key piece of environmental legislation post-Brexit. The Environment Act 2021 will require new development to deliver a minimum 10% biodiversity net gain. Provisions for the act will be made through secondary legislation and at the time of writing, these were undergoing a consultation process.
- 5.2.2 In addition to impacts of climate change on biodiversity, the current rate of habitat loss due to development, urbanisation and land use change is a top pressure on biodiversity (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, 2019). The State of Surrey's Nature report reflects the continued threat to biodiversity at a local level (Surrey Nature Partnership, 2019). It is therefore key to ensure ambitious targets are set to halt, and where possible reverse, biodiversity declines within Englefield Green Village Area.
- 5.2.3 Surrey Nature Partnership (SNP) is a Local Nature Partnership that is formally recognised by the Department of Environment, Food and Rural Affairs (DEFRA) and has the purpose of championing the value of the natural environment in decision-making at all levels. In November 2020, SNP produced a position statement recommending that Surrey's planning authorities adopt a 20% minimum biodiversity net gain for all development (Surrey Nature Partnership, 2020).
- 5.2.4 In reviewing the appropriate level of gain, SNP assessed:
- Evidence from the national cost/benefit analysis (DEFRA, 2018)
 - Surrey's rate of biodiversity loss (Surrey Nature Partnership, 2019)
 - Natural capital approach (Surrey Nature Partnership, 2015b)
- 5.2.5 DEFRA indicates in its cost benefit analysis that 10% is the **lowest level** of net gain that is required to deliver a genuine net gain or a no net loss; whilst the Natural Capital Committee "indicates that a net gain of 10% or above is necessary to give reasonable confidence in halting biodiversity (Natural Capital Committee, 2019)." The additional financial burden to deliver 20% biodiversity net gain instead of 10% is minimal compared with the additional biodiversity benefits that these would bring, particularly in an urban environment. A 20% biodiversity net gain has been set by other Local Authorities, including Greater Cambridge (Greater Cambridge Shared planning, 2021).
- 5.2.6 The proposed site allocations plus existing planning applications within the Runnymede Borough Local Plan (Runnymede Borough Council, 2020) will result in a

significant loss of the greenbelt around urban areas within Englefield Green Village Area, thus significantly increasing pressures to biodiversity from development. In order to incorporate climate and biodiversity resilience into its policy and reflect the residents' desire to increase green spaces across Englefield Green Village Area, it is recommended that the SNP approach is adopted and all development should deliver a 20% biodiversity net gain. The types of measures to deliver this will be reflective of the nature of the development.

Policies to consider

5.2.7 Considering the above, the Neighbourhood Plan policies should address the following:

- All development will require a biodiversity net gain assessment to be undertaken by an appropriately qualified ecologist.
- All development will deliver at least 20% biodiversity net gain.
- Any offsite offsets will be delivered within Englefield Green Village and projects will need to demonstrate how they have applied the 'avoid, minimise, restore and offset' principles in the design process.
- Ensure that S106 or CIL funding is appropriate to manage and maintain green and blue infrastructure and open spaces, where appropriate.
- Policies should also consider to seek wider environmental gains through natural capital delivery, specifically relating to air quality, water quality, carbon sequestration and biodiversity net gain offset opportunities to general funding for the improvement of open spaces and enhancement of connectivity across the landscape.
- Identify opportunities to deliver nature based solutions in areas of open space, also providing connectivity across the landscape.

5.3 Protecting habitats and species and encouraging landscape connectivity

5.3.1 A key limitation of the current biodiversity metrics is the use of habitats as a proxy for biodiversity (Panks, et al., Biodiversity Metric 3.0: Auditing and Accounting for Biodiversity: Technical Supplement , 2021b). However whilst an urban or non-urban site can be void of "green" areas, it can provide habitat for protected species and species of conservation concern, such as bats, birds and invertebrates. The NPPF 2021, Runnymede Local Plan and national legislation makes for provisions for some of these species, however these are not considered within the current biodiversity net gain assessment methodologies and often enhancement provisions include erecting bird and bat boxes without considering the appropriateness of the measures, and are often generic and not specific to local conditions. In order to ensure the long-term protection of these species and ensuring they are appropriately considered in development plans, it should be an aspiration that ambitious measures to enhance the urban habitats across Englefield Green Village Area are delivered.

5.3.2 Green infrastructure is defined as a "network of multi-functional green and blue spaces and other natural features, urban and rural, which is capable of delivering a wide range of environmental, economic, health and well-being benefits for nature, climate, local and wider communities and prosperity (Ministry of Housing, Communities and Local Government, 2021)". Paragraph 186 indicates that these should be considered at a plan making stage.

- 5.3.3 Runnymede Borough Council drafted a Green and Blue Infrastructure Supplementary Planning Document (SPD) in August 2021 and this is currently open for public consultation (CBA and Runnymede Borough Council, 2021).
- 5.3.4 The draft SPD identified key areas in the GBI networks across Runnymede Borough Council and the most relevant to Englefield Green Village Neighbourhood Area is GBI corridor 2: Windsor Great Park green corridor. Accessible GBI, as identified in the SDP (CBA and Runnymede Borough Council, 2021) is presented in Figure 4, in addition to other green infrastructure opportunities that have been identified by SWT Ecology Services to provide connectivity across the landscape. The SDP supports local plan policies EE11 and EE12, and also provides guidance on how GBI can be implemented into householder, minor and major development sites. In summary, these measures include, but should not be limited to:
- Using species of native and local provenance for soft landscaping
 - Living roofs and green walls
 - Green boundary features (e.g. species-rich hedgerow)
 - Incorporating gaps under fences to allow movement of mammals across the landscape
 - Incorporation of bat and bird boxes
 - Wildlife sensitive lighting
 - Wildlife ponds
 - Invertebrate and reptile habitats, including refugia using log and stone piles
- 5.3.5 For minor and major developments, the steps to embed GBI are summarised below, with further details provided in the SDP:
- Step 1: Auditing the GBI Assets using available information such as the presence of Biodiversity Opportunity Areas, designated sites (SAC, SPA, SSSI, SNCI etc).
 - Step 2: Consider GBI opportunities to consider hard and soft landscaping including long-term management and details of how the existing GBI will be retained, enhanced, created and designed to link to other opportunities in the wider landscape.
 - Step 3: Incorporate GBI into development proposals
- 5.3.6 In order to further build on Runnymede's GBI Strategy, SWT Ecology Services reviewed the available ecological information for Englefield Green Village to identify key areas and corridors for GBI and biodiversity enhancement. This was achieved by:
- Mapping areas of ecological interest including:
 - Statutory and non-statutory designated sites
 - Runnymede Borough Council's open spaces layer
 - Habitats of Principal Importance
 - Ancient woodland
 - Biodiversity Opportunity Areas
 - Incorporating a 15m buffer around these spaces (the basis for the buffer size is discussed further in this report)
 - Including the areas identified in the SPD as accessible GBI
 - Reviewing the information collected by an experienced ecologist (Gabrielle Graham BSc MSc MCIEEM CEcol, Managing Director with over 18 years of consultancy experience) and GIS analyst (Alistair Kirk BSc MSc Manager Surrey Biological Information Centre (SBIC) with over 25 years of experience) to identify the key locations for enhancing GBI and biodiversity.

- 5.3.7 The results are presented in Figure 4. Within the areas identified in the figure, Section 106 and CIL funding grants in addition to other funding opportunities should be used to optimise the delivery of biodiversity enhancements and ecosystem services, such as reducing noise, air and water pollution and benefitting the well-being of residents. The enhancements below should therefore be considered when delivering biodiversity benefits.
- 5.3.8 For each of the measures we have identified potential areas where these could be implemented. Examples of some of how green spaces could be diversified across Englefield Green Village and improved for biodiversity are presented in Plates 1 to 4. These examples are not exhaustive but to provide some ideas with regards to biodiversity improvements. Where funding opportunities arise to implement biodiversity improvements, we would recommend:
- Reviewing the objectives of the location of the proposed objectives to ensure the enhancements meet these objectives
 - Identifying who will be responsible to implementing the enhancements
 - Discussing methods of delivering the enhancement with the provider to maximise success
 - Determining how the measures will be managed in the future
 - Identifying who will be best placed to monitor the success of the measures.
- 5.3.9 The enhancement recommendations, along with the management of these, should also be considered with regards to any future planting, as identified in the Englefield Green Village Placemaking study (Englefield Green Village Neighbourhood Plan, 2021). The proposals within this document will encourage planting along roads and this will enhance the connectivity opportunities throughout Englefield Green. Swales along these sections would also improve water quality and provide biodiversity opportunities for a range of species.

Plate 1: Cherrywood Avenue – Ecological enhancements for green areas



Plate 2: Beechwood Avenue – Ecological Enhancements for green areas

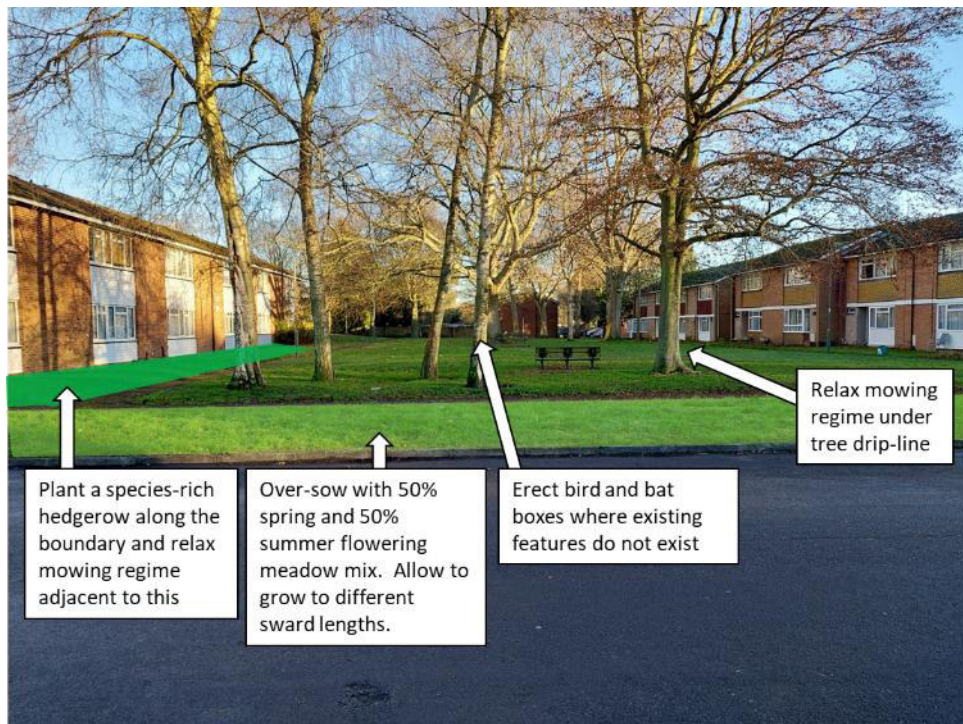


Plate 3: Bond Street – Ecological enhancements for wide verges

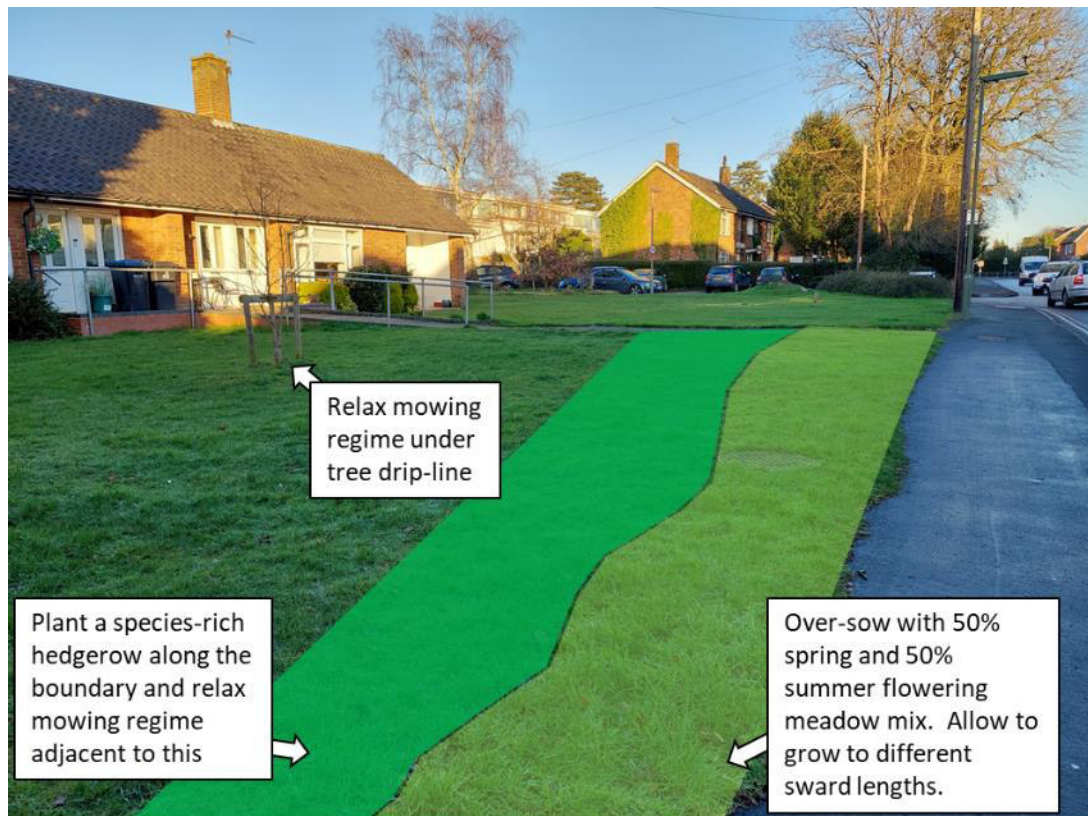
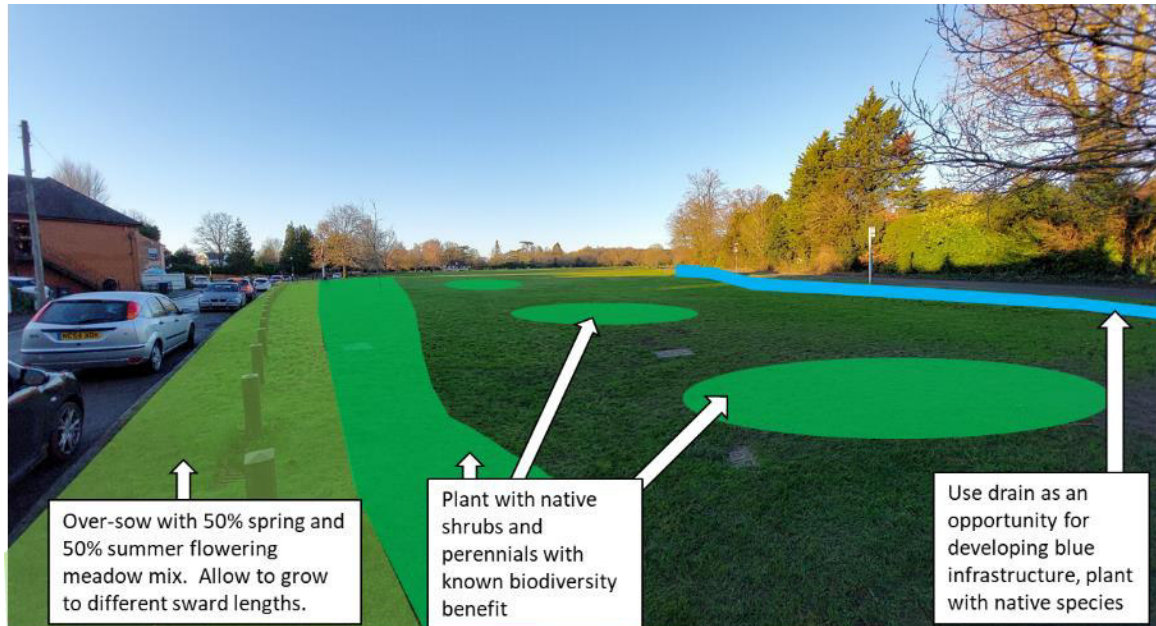


Plate 4: Englefield Green Village – Ecological enhancements opportunities



Policies to consider

- All new development, excluding house extensions, to prepare a green and blue infrastructure plan. The plan will need to demonstrate:
 - The location of the green and blue infrastructure
 - Benefits to ecosystem services
 - How the green and blue infrastructure connects and enhances connectivity across the landscape
 - How the green and blue infrastructure will be managed to benefit locally native species, focussing on recognised nature conservation priorities
 - How the green and blue infrastructure delivers at least 20% biodiversity net gain (but see also below).
- Where development cannot deliver green and blue infrastructure within the development boundary, opportunities to secure multi-functional green spaces beyond and within development boundary through application of biodiversity net gain, biodiversity net gain offsetting and creation of compensation habitats and other green and blue infrastructure promotion schemes. Delivery of green and blue infrastructure to be focused on Englefield Green Village Neighbourhood Area to ensure the benefits are realised for the local community.
- New developments with boundary features should incorporate existing native vegetation, hedgerows and trees. New boundary features should include native species with at least five native woody species per 20 metres to deliver species-rich hedgerows. All hedgerows to incorporate a minimum of two metre buffer.
- A minimum 15 metre buffer will be required for the protection of statutory and non-statutory designated sites, habitats of principal importance and habitats for species of principal importance.
- The buffer should contribute to wider ecological networks and be part of the local green and blue infrastructure. Access can be permitted where habitats will not be adversely impacted by trampling.
- Trees form an important asset across the landscape and given the time it takes for the asset to be realised, and to mitigate risk of tree loss, trees should be planted at a ratio of 3:1.
- Conditions to protect wildlife should be included in development proposals to ensure biodiversity is incorporated into the development design.
- Inappropriate development of residential gardens will be resisted where this could cause harm to the environment.

Proposed aspirations

- Promote activities to raise awareness of green and blue infrastructure across all social, demographic, ethnic and diversity groups.
- Public realm green and blue infrastructure will be improved to reduce pollution and improve character and sense of place.
- Identify a suitable circular walk around Englefield Green Village Area, specifically in areas where green and blue infrastructure are deficient.
- Implement the recommendations below for enhancing biodiversity.

Habitat improvements

- 5.3.10 Habitat improvements can be implemented anywhere within the green spaces identified in Figure 4. Where practical, they can also be implemented along the accessible and additional green infrastructure opportunities in Figure 4 (red and orange lines).
- 5.3.11 Amenity grasslands are managed through extensive mowing and whilst they provide extensive green spaces, they offer few opportunities for biodiversity as they prevent the development of a diverse sward with few flowers, which is a contributing factor to the decline in invertebrates. Healthy invertebrate populations are important for the local and national biodiversity. Not only do they pollinate plants and ensure our crops grow and fruit, but they have a very important role in decomposing dead matter, fertilising the soil and feeding species higher up the food chain. Therefore, declines in invertebrate species will have catastrophic impacts on the planet. Although the management of open spaces and amenity grasslands is undertaken by Runnymede Borough Council, new open spaces created through development should also consider the management and enhancement measures detailed below.
- 5.3.12 Although the management of the amenity grasslands are the responsibility of Runnymede Borough Council it is an aspiration that these are managed to benefit biodiversity, in addition to benefitting the local residents.
- 5.3.13 Figure 4 presents areas opportunities for habitat improvements throughout Englefield Green Village Area. These include spaces where altered mowing regimes can benefit the local ecology and enhance connectivity across the landscape include. More specifically, areas that could be considered include:
- Field margins around parks an open spaces and churchyards including Englefield Village Green and Englefield Playing Area whereby field margins (e.g.1 – 2 metre strips) can be managed as per below.
 - School playing fields, Royal Holloway University and offices amenity spaces, again allowing 1 – 2 metre strips around borders to be managed for biodiversity
 - Amenity grasslands around within housing estates and adjacent to roads (e.g. Queenswood Crescent, Elmbank Avenue, Cherrywood Avenue, Beechtree Avenue, Larchwood Drive, Torin Crescent, Northcroft Road and The Green, Middle Hill and Harvest Road, Spencer Gardens and Egham Hill roundabout
- 5.3.14 Improved management that should be considered includes:
- Relax the mowing regime to one early and one late cut only.
 - Provide scalloped edges and bays to provide sheltered areas for invertebrates
 - Collecting and removing the arisings
 - Rotate 20% area left long over winter
 - Enhance the biodiversity through plug planting and re-seeding with appropriate mixes
 - Apply this reduced mowing regime to all areas under tree drip lines.

Trees and hedgerows

- 5.3.15 Tree and hedgerow management and planting can be implemented anywhere within the green spaces identified in Figure 4. Where practical, they can also be implemented along the accessible and additional green infrastructure opportunities in Figure 4 (red and orange lines).

- 5.3.16 Trees and hedgerows provide important connectivity links across the landscape and also provide food, shelter and commuting opportunities for terrestrial species. Trees are also important for sequestering carbon and reducing noise and air pollution and contribute to urban cooling.
- 5.3.17 Forest Research conducted an extensive study on the ecosystem services provided by large (Hand & Doick, Ecosystem services delivery by large stature urban trees, 2019) and small and medium (Hand & Doick, Ecosystem services delivery by small and medium stature trees, 2019b) stature trees. The recommendations below are made based on the results of these assessments.
- 5.3.18 In the first instance, any new tree planting should consider the localised ecology to determine whether it is appropriate to plant trees in this location. Where new tree planting opportunities have been identified the following should be considered:
- The species selected should be of local provenance and a native species, or species that is known to provide biodiversity benefits.
 - Species that should be considered for planting include:
 - Standing mature trees:
 - Pedunculate oak
 - English elm
 - Beech
 - Sycamore
 - Holm oak
 - Lime species
 - Sweet cherry
 - Rowan
 - Bird cherry
 - Silver birch
 - Hedgerow
 - Yew
 - Hornbeam
 - Field maple
 - Rowan
 - Holly
 - Bird cherry
 - Hawthorn
 - Hazel
 - Elder
- 5.3.19 Where hedgerows are planted there should be a minimum of five species per 30m, such that these can be native species-rich hedgerows, enhancing the local biodiversity.
- 5.3.20 Tree management should be undertaken by qualified arborists. It is advised that grassland under the tree drip line is not mown to promote biodiversity. Biodegradable tree guards should be used when planting so as to minimise plastic waste.
- 5.3.21 Hedgerows should be managed on a five year rotation whereby 20% of the hedgerows are cut in any one year. Where possible a minimum of 1m either side of the hedgerows should be left unmown to promote biodiversity.

5.3.22 Areas that could be considered for tree and hedgerow planting are within open spaces identified for habitat enhancement and connectivity in Figure 4. A low species-rich hedgerow could be planted along the border of Englefield Village Green. This could be a low hedge so as to not lose the views.

5.3.23 Trees and hedgerow could also be planted along the A328 and other main roads to ensure connectivity, although species selected would need to ensure health and safety requirements are met.

Swales and Wetlands

5.3.24 Blue infrastructure (swales and wetlands) provide excellent opportunities for flood management and biodiversity enhancement. Throughout Englefield Green Village Area, areas of damp or standing water in winter should be investigated to determine whether these provide opportunities to develop formal swales and wetlands. Figure 4 presents blue infrastructure opportunities with key areas including ditches around amenity spaces. These are usually created to deter access to vehicles within the parks, however they could be managed to enhance biodiversity through ensuring their design encourages water pooling such that it encourages a range of species, including invertebrates, reptiles, amphibians, birds and mammals to use the habitats, in addition to diverse plants. Once areas have been selected for improvement, an ecologist should be consulted to ensure the species mix selected reflects the local conditions and ecology.

5.3.25 Where opportunities arise for new urban developments, encourage the development of rain gardens to slow water runoff and improve water quality. They should be placed to intercept runoff from downpipes and paved surfaces.

Other ecological enhancements

5.3.26 Improving habitat diversity and structure are key for promoting biodiversity, however other measures that should be considered are:

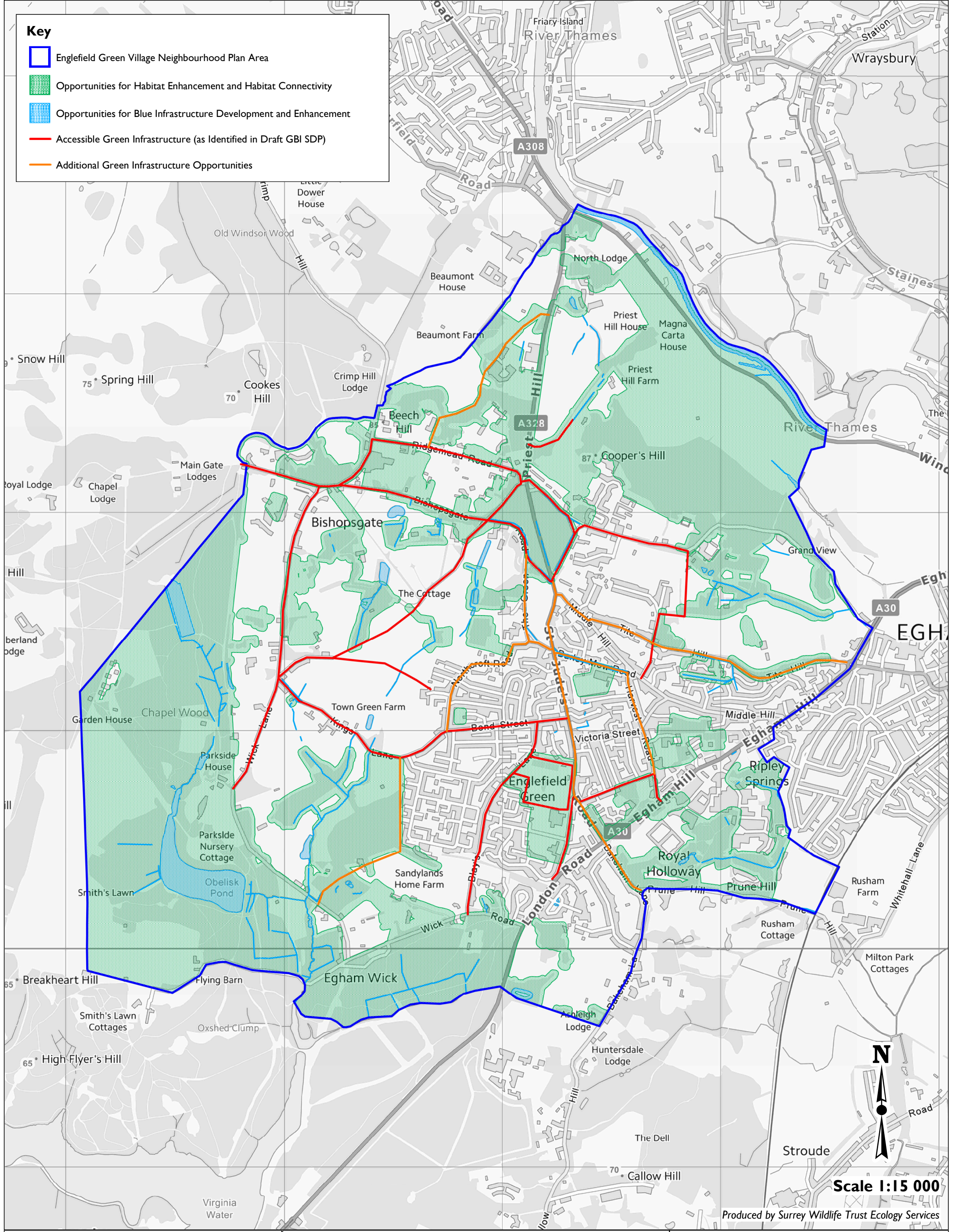
- Installing integrated bird and bat boxes within new developments. These should include a diverse range of boxes to provide habitat opportunities for several types of species. Targeting species within the Biodiversity Opportunity Areas should be a key focus to ensure local priorities are being met. Integrated swift boxes should be included in every new development or extension as these provide nesting opportunities for a range of species, including swifts
- Installing free-standing bird and bat boxes on existing trees, ensuring these are placed at varying height (minimum 4m high) and at different orientations, whilst ensuring a diversity of box types are erected. These would need to be placed in areas with minimal lighting. Mature trees are present throughout Englefield Village Green Area and those sheltered from street lighting should be selected. Bat and bird boxes should not be installed on trees with existing roosting or nesting features within the trunks and branches.
- Placing planters with a diversity of species that flower throughout the season and are known to have biodiversity and amenity benefits.
- Use planters to plant climbing plants along walls within urban areas, specifically the high street. This will encourage a diversity of species, but will also provide residents with inspiration with regards to their own species selections and measures to enhance biodiversity.

- Encourage the use of baskets throughout the town centre to again provide opportunities for biodiversity.
- Develop insect hotels and habitat walls to increase the number of beneficial invertebrates. They can also include nesting material for birds, and offer bat roost opportunities.
- All new housing and housing extensions to include integrated bat and bird boxes including ridge tile access, soffit box and tile access, proportionate to the impact.
- Sites within 1km of a Biodiversity Opportunity Area (BOA) to specifically reference the relevant BOA policy and demonstrate how its objectives will be delivered within the proposed development.

Buffers

5.3.27 Natural England's standing advice in relation to impacts to ancient woodland is to protect this with a 15m buffer (Natural England, 2018). In order to inform a planning application, the developer must appoint an ecologist to assess the impact of the development on the ecological receptors, including statutory and non-statutory designated sites. A Local Planning Authority must consider impacts to the ecological receptors and impacts to Habitats and Species of Principle Importance, as detailed in the Natural Environment and Rural Communities (NERC) Act 2006 are of material consideration when determining a planning application.

5.3.28 Englefield Green Village Area has an urban centre and a large area of green space on the outskirts with several site allocations expanding the urban area. Buffer zones are vital for the protection of core habitats, but also the species they support (The Nature Conservancy , 2015) and (Everard, 2010). The exact size of the buffer should reflect the habitat being impacted and its location within the landscape. Considering the increasing development pressure in Englefield Green Village Area and resident feedback to protect and enhance green spaces, increasing connectivity across the landscape with the use of appropriately designed buffers is required.



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4373/1, February 2022

Figure 4:
Englefield Green Village Neighbourhood Plan
Opportunities for Habitat Enhancement and Blue
and Green Infrastructure Development and
Enhancement



6 References and Bibliography

- BCT and Intitute of Lighting Professionals. (2018). *Guidance Note 08/18: Bats and artificial lighting in the UK: Bats and Built Environment*. Rugby: BCT and ILP.
- British Standard Institution. (2012). *Trees in relation to design, demolition and construction: recommendations*. British Standards Institution.
- BSI. (2013). *Biodiversity code of practice for planning and development: BS42020:2013*. London: British Standards Institution.
- Butcher, B., P, C., R, E., Norton, L., & Treweek, J. (2020). *The UK Habitat Classification User Manual Version 1*. <http://www.ukhab.org>.
- CBA and Runnymede Borough Council. (2021). *Draft Green and Blue Infrastructure Supplementary Planning Document*. Runnymed Borough Council.
- CIEEM. (2019b). *Guidelines for Ecological Impact Assessment in the UK and Ireland, Update 1.1*. Winchester: Chartered Institute of Ecology and Environmental Management.
- CIEEM. (2021). *Biodiversity Net Gain Report and Audit Templates*. Winchester, UK: Chartered Institute of Ecology and Environmental Management.
- CIEEM, CIRIA, IEMA. (2019). *Biodiversity net gain. Good practice principles for development. A practical guide*. London, UK: CIRIA C776a.
- DEFRA. (2018). *Biodiversity Net Gain Consultation Impact Assessment*.
- DEFRA. (n.d.). *Multi-agency geographic information for the countryside*. Retrieved from <https://magic.defra.gov.uk/>.
- Englefield Green Committee. (2018). *Woodland Management Plan*. Englefield Green Committee.
- Englefield Green Village Neighbourhood Plan. (2021). *Placemaking: A preliminary study*.
- Environment Act. (2021). Retrieved from Available at <https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted>.
- European Commission. (2019). *Ecosystem services and green infrastructure: From Natural Capital Accounting in the European Union*.
- Everard, M. a. (2010). *Ecosystem services assessment of buffer zone installation on the upper Bristol Avon, Wiltshire*. Environment Agency.
- Greater Cambridge Shared planning. (2021). *Biodiversity and Green Spaces Topic Paper*.
- Hand, K., & Doick, K. a. (2019). *Ecosystem services delivery by large stature urban trees*. Edinburgh: Forest Research i.v. + 1 - 24pp.
- Hand, K., & Doick, K. a. (2019b). *Ecosystem services delivery by small and medium stature trees*. Edinburgh: Forest Research i - iv, 1 - 22pp.
- Inter-governmental Panel of Climate Change. (2021). *AR6 Climate Change 2021: The Physical Science Basis*. IPCC.
- Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. (2019). *Summary for policymakers of the global assessment report on biodiversity and ecosystem services*. Bonn: IPBES secretariat.

- JNCC. (2018). *European Community Directive on the Conservation of Natural Habitats and Wild Fauna and Flora (92/43/EEC); Conservation status assessment for Bechstein's bat*. JNCC.
- Ministry of Housing, Communities and Local Government. (2021). *National Planning Policy Framework*. London: Ministry of Housing, Communities and Local Government.
- Natural Capital Committee. (2019). *Advice to government on net environmental gain*.
- Natural Capital Committee. (2020). *End of Term Report to the Domestic and Economy Implementation Committee of the Cabinet*.
- Natural England. (2018). *Ancient woodland, ancient trees and veteran trees: protecting them from development*. Natural England.
- Natural England. (2018). *Guidance: Ancient woodland, ancient trees and veteran trees: protecting them from development*. Retrieved from www.gov.uk/guidance/ancient-woodland-and-veteran-trees-protection-surveys-licences
- Natural England. (2021). *The Biodiversity Metric 3.0*. Natural England JP039.
- Office of the Deputy Prime Minister. (2005). *Government circular: biodiversity and geological conservation - statutory obligations and their impact within the planning system*. London: The Stationary Office.
- Panks, S., White, N., Newsom, A., Potter, J., Heydon, M., Meyhew, E., . . . Stone, D. (2021). *Biodiversity Metric 3.0: Auditing and Accounting for Biodiversity - User Guide*. Natural England.
- Panks, S., White, N., Newsom, A., Potter, J., Heydon, M., Meyhew, E., . . . Stone, D. (2021b). *Biodiversity Metric 3.0: Auditing and Accounting for Biodiversity: Technical Supplement*.
- Runnymede Borough Council. (2021). *Green and Blue Infrastructure Supplementary Planning Document (SPD)*. Runnymede Borough Council.
- Runnymede Borough Council. (2020). *Runnymede 2030 Local Plan*. Runnymede Borough Council.
- Stace, C. (2019). *New Flora of the British Isles*. C&M Floristics.
- Surrey Nature Partnership. (2015a). *Thames Valley Biodiversity*. Surrey Nature Partnership.
- Surrey Nature Partnership. (2015b). *Naturally Richer: A Natural Capital Investment Strategy for Surrey*. Surrey Nature Partnership.
- Surrey Nature Partnership. (2019). *Biodiversity Opportunity Areas: the basis for realising Surrey's ecological network*.
- Surrey Nature Partnership. (2019). *The State of Surrey's Nature*.
- Surrey Nature Partnership. (2020). *Recommendation for adoption of 20% minimum biodiversity net gain across Surrey's planning sector: a Surrey Nature Partnership Position Statement*. Surrey Nature Partnership.
- The Nature Conservancy . (2015). *Ecological Buffers*. The Nature Conservancy.

Appendix 1: Planning policy summary

Policy Reference	Policy number/Paragraph Number	Detail	Relevant to Ecosystem Services					
			Air quality	Water quality	Pollution	Noise	Biodiversity	Well-being
NPPF 2021 Framework (Ministry of Housing, Communities and Local Government, 2021)	Paragraph 174	Protection of sites of biological values Preventing new and existing development from adverse impacts to soil, air, water or noise Development should help improve local conditions	✓	✓	✓	✓	✓	✓
	Paragraph 175	Maintenance and enhancement of networks of habitats and green infrastructure; plan for the enhancement of natural capital at a catchment or landscape scale					✓	✓
	Paragraph 179	Plans should: Identify and safeguard components of wildlife rich habitats and ecological network Promote conservation, restoration and enhancement of priority habitats and ecological networks; identify measurable gains for biodiversity	✓	✓	✓	✓	✓	✓
	Paragraph 180	Development should apply biodiversity net gain hierarchy Development resulting in the loss of irreplaceable habitat should be refused Development whose primary purpose is to conserve or enhance biodiversity should be encouraged.	✓	✓	✓	✓	✓	✓
	Paragraph 186	Opportunities to improve are quality or mitigate impacts should be identified, to include traffic and travel management, green infrastructure and provision.	✓		✓	✓	✓	✓

Policy Reference	Policy number/Paragraph Number	Detail	Relevant to Ecosystem Services					
			Air quality	Water quality	Pollution	Noise	Biodiversity	Well-being
Runnymede Local Plan (2030) (Runnymede Borough Council, 2020)	SD7	Protect existing biodiversity; Opportunities to achieve net gains; Greening urban environment		✓			✓	✓
	SL5	Safeguarding Windsor Great Park Site of Nature Conservation Importance (SNCI) through appropriately designed green infrastructure buffer. Incorporating measures from the Thames Valley 01 Biodiversity Opportunity Area (BOA) specifically to protect and enhance habitats within the SNCI.					✓	✓
	SL25	Protect, maintain, and where possible, enhance existing open space. Developments which look to maintain or increase the quality of open spaces, in particular natural and semi natural spaces, to provide an improved environment for wildlife and to achieve recreation enhancements for the community, will be welcomed.	✓	✓	✓	✓	✓	✓
	EE9	Development affecting SNCI, ancient woodland or trees and woodland protected by Tree Protection Order (TPP), Ramsar sites, Special Areas of Conservation (SAC), Special Protection Areas (SPA), priority habitats will need to demonstrate biodiversity net gains and how these will be delivered.	✓	✓	✓	✓	✓	✓
	EE11	Encourage proposals that enhance, restore and maintain green infrastructure. Encourage delivery of high quality and multi-functional green infrastructure.		✓	✓		✓	✓
	EE12	Encourage proposals that enhance, restore and maintain blue infrastructure.		✓			✓	✓

Policy Reference	Policy number/Paragraph Number	Detail	Relevant to Ecosystem Services					
			Air quality	Water quality	Pollution	Noise	Biodiversity	Well-being
		Encourage delivery of high quality and multi-functional blue infrastructure.						
	EE13	New development in flood zone 2, 3 or areas over 1 ha in flood zone 1 will need to be accompanied by flood risk assessment, proportionate to the scale of impact. This will need to consider impacts of climate change and incorporate resilience and resistance measures.		✓				
	EE14	Extensions and alterations in green belt can be undertaken where they are not disproportionate to the building						
	EE18	Changes in land use in the green belt may be appropriate where this has no impact on the openness of the greenbelt.						
Englefield Woodland Management Plan (Englefield Green Committee, 2018)	N/A	Aim of the management plan is to encourage the use of woodland as a recreational space whilst encouraging and enhancing biodiversity value		✓			✓	✓
Thames Valley Biodiversity Opportunity Area Policy Statement (Surrey Nature Partnership, 2015a)	N/a	Thames Valley Biodiversity Opportunity Area Policy Statement for Windsor Great Park (TV01) and Runnymede Meadows and Slope (TV02) are summarised below. - TV1 and TV2 - SSSI units to achieve favourable condition - SNCI protected by planning policy - Habitats of Principal Importance are restored and created		✓			✓	✓

Policy Reference	Policy number/Paragraph Number	Detail	Relevant to Ecosystem Services					
			Air quality	Water quality	Pollution	Noise	Biodiversity	Well-being
		Habitats for Species of Principal Importance are restored and created to ensure the stabilisation and preferable recovery in the local population						

Appendix 2: Legislation

Conservation of Habitats and Species Regulations 2017 (as amended)

Provides for the protection of Natura 2000 sites (SACs, SPAs and Ramsar sites), European Protected Species and habitats. European Protected Species are protected from:

- Deliberate capture, injury or killing.
- Deliberate disturbance of a European Protected Species, such that it impairs their ability to breed, reproduce or rear their young, hibernate or migrate or significantly affect their local distribution or abundance.
- Deliberately take or destroy effect.
- Damage or destroy a breeding site or resting place.
- Keep, transport, sell or exchange any live, dead or part of a European Protected Species.

European Protected Species include, but are not limited to:

- Great crested newt
- Natterjack toad
- Otter
- Smooth snake
- Sand lizard
- All bat species
- Hazel dormouse

The LPA will be aware of its legal duty under Regulation 9(3) of Conservation of Habitats and Species Regulations 2017, as amended, which states that “*a competent authority in exercising any of its functions, must have regard to the requirements of the Directives so far as they may be affected by the exercise of those function*”.

Also, under Regulation 55 (9b) of the above regulations, the LPA must apply the following three tests when deciding whether to grant planning permission where a Protected Species (bats) may be harmed, in line with of the Conservation of Habitats and Species Regulations 2017, as amended.

- The activity must be for imperative reasons of overriding public interest or for public health and safety;
- There must be no satisfactory alternative;
- Favourable conservation status of the species must be maintained.

Natural England has stated that they would expect these three tests to be adequately considered by the LPA before planning permission is granted. Natural England will require evidence from the applicant that the LPA has considered the three tests and how they were met, before a mitigation licence can be issued. Where a mitigation licence is required to avoid breach of legislation, development cannot proceed even where a valid planning permission is granted.

Environment Act (2021)

The Environment Act (2021) makes a provision for biodiversity net gain to be a condition of planning permission in England. Planning applications will need to demonstrate a 10% biodiversity net gain can be met. A biodiversity net gain plan must be submitted and must include:

- (a) information about the steps taken or to be taken to minimise the adverse effect of the development on the biodiversity of the onsite habitat and any other habitat
- (b) the pre-development biodiversity value of the onsite habitat,
- (c) the post-development biodiversity value of the onsite habitat,
- (d) any registered offsite biodiversity gain allocated to the development and the biodiversity value of that gain in relation to the development,
- (e) any biodiversity credits purchased for the development,

Wildlife and Countryside Act 1981 (as amended)

Key piece of legislation consolidating existing wildlife legislation to incorporate the requirements of the Bern Convention and Birds Directive. It includes additional protection measures for species listed under the Conservation of Habitats and Species Regulations 2017 (as amended) and includes a list of species protected under the Act. It also provides for the designation and protection of Sites of Special Scientific Interest (SSSI).

Development which would adversely affect a SSSI is not acceptable except only in special cases, where the importance of a development outweighs the impact on the SSSI when planning conditions or obligations would be used to mitigate the impact. Developments likely to impact on a SSSI will likely require an Environmental Impact Assessment (EIA).

The Impact Risk Zones (IRZs) dataset is a GIS tool which details zones around each SSSI according to the particular sensitivities of the features for which it is notified and specifies the types of development that have the potential to have adverse impacts. Natural England uses the IRZs to make an initial assessment of the likely risk of impacts on SSSIs and to quickly determine which consultations are unlikely to pose risks and which require more detailed consideration. Local Planning Authorities (LPAs) have a duty to consult Natural England before granting planning permission on any development that is in or likely to affect a SSSI.

Further information on specific legislation relating to species protected under the Wildlife and Countryside Act 1981 (as amended) is detailed below, under Protection of Protected Species and Habitats.

Countryside and Right of Way Act 2000

Amends and strengthens the Wildlife and Countryside Act 1981 (as amended). It also details habitats and species for which conservation measures should be promoted.

Natural Environment and Rural Communities Act 2006

Section 40 of the Act places a duty on local authorities to have regard to the conservation of biodiversity in England whilst carrying out their normal functions. Section 41 comprises a list of Habitats of Principal Importance (HPIs) and Species of Principal Importance (SPIs) which should be considered.

Hedgerows Regulations 1997

Under these regulations it is an offence to intentionally or recklessly remove, or cause or permits another person to remove, a hedgerow. Important hedgerows are defined in Section 4 of the Regulations. This includes hedgerows that have existed for over 30 years or satisfies at least one criteria listed in Part II of Schedule 1.

Wild Mammals (Protection) Act 1996

Under this act wild mammals are protected from the intentional unnecessary suffering by crushing and asphyxiation.

Protection of protected species and habitats

Amphibians

Natterjack toad, pool frog and great crested newt are protected under the Conservation of Habitats and Species Regulations 2017 (as amended). They are also afforded additional protection under the Wildlife and Countryside Act 1981 (as amended).

Natterjack toad, common toad, great crested newt and northern pool frog are also SPIs.

Reptiles

Smooth snake and sand lizard are protected under the Conservation of Habitats and Species Regulations 2017 (as amended). They are afforded additional protection under the Wildlife and Countryside Act 1981 (as amended).

Adder, grass snake, common lizard and slow-worm are all protected from killing and injury under the Wildlife and Countryside Act 1981 (as amended). All UK reptile species are SPIs.

Birds

All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended). This includes damage and destruction of their nests whilst in use, or construction. Species listed under Schedule 1 of the Act are afforded protection from disturbance during the nesting season.

The following 50 bird species are SPIs: lesser redpoll, aquatic warbler, marsh warbler, skylark, white-fronted goose, tree pipit, scaup, bittern, dark-bellied brent goose, stone-curlew, nightjar, hen harrier, northern harrier, hawfinch, corncrake, cuckoo, Bewick's swan, lesser spotted woodpecker, corn bunting, ciril bunting, yellowhammer, reed bunting, red grouse, herring gull, black-tailed godwit, linnet, twite, Savi's warbler, grasshopper warbler, woodlark, common scoter, yellow wagtail, spotted flycatcher, curlew, house sparrow, tree sparrow, grey partridge, wood warbler, willow tit, marsh tit, dunnoek, Balearic shearwater, bullfinch, roseate tern, turtle dove, starling, black grouse, song thrush, ring ouzel and lapwing.

Badger

Badger is protected under the Protection of Badgers Act 1992. Under this legislation it is an offence to kill or injure a badger; to damage, destroy or block access to a badger sett; or to disturb badger in its sett. The Act also states the conditions for the Protection of Badgers licence requirements.

Bats

All bat species are protected under the Conservation of Habitats and Species Regulations 2017 (as amended), as detailed above. Bats are further protected under the Wildlife and Countryside Act 1981 (as amended), making it an offence to:

- Deliberately or recklessly damage or destroy any structure or place which bat(s) use for shelter or protection.
- Disturb bat(s) while occupying a structure or place which it uses for shelter or protection.
- Obstruct access to any structure or place which they use for shelter or protection.

Furthermore, seven bat species are SPIs, covered under Section 41 of the NERC Act 2006. These include western barbastelle, Bechstein's, noctule, soprano pipistrelle, brown long-eared, lesser horseshoe and greater horseshoe.

Hazel dormouse

Hazel dormouse is protected under the Conservation of Habitats and Species Regulations 2017 (as amended). It is afforded additional protection under the Wildlife and Countryside Act 1981 (as amended), including obstruction to a place of shelter or rest.

Hazel dormouse is also a SPI.

Hedgerow

Under the Hedgerows Regulations 1997 it is against the law to remove or destroy certain hedgerows without permission from the LPA, which are also the enforcement body for offences created by the Regulations. LPA permission is normally required before removing hedges that are at least 20 m in length, more than 30 years old and contain certain plant species. The authority will assess the importance of the hedgerow using criteria set out in the regulations. The regulations **do not** apply to hedgerows within the curtilage of, or marking a boundary of the curtilage of, a dwelling house.

Hedgerow is a HPI.

Otter

Otter is protected under the Conservation of Habitats and Species Regulations 2017 (as amended) and is afforded additional protection under the Wildlife and Countryside Act 1981 (as amended). Otter is also a SPI.

Water vole

Water vole is fully protected from capture, killing or injury; damage, destruction or blocking access to a place of shelter; disturbance whilst in a place of shelter or possessing, selling any part of a water vole, dead or alive under the Wildlife and Countryside Act 1981 (as amended).

Water vole is also a SPI.

Other mammals

West European hedgehog, brown hare, mountain hare, pine marten, harvest mouse, polecat and red squirrel are all SPIs.

The following mammals are listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended): wildcat, brown hare (Schedule 5A), mountain hare (Schedule 5A), pine marten and red squirrel.

Non-native invasive plant species

Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) is a list of non-native plant species for which Section 14 of the Act applies. It is an offence to plant, or otherwise cause to grow in the wild species listed under Schedule 9 of the act. These include, but are not limited to:

- Himalayan balsam
- Cotoneaster sp.
- Japanese knotweed
- Giant hogweed

Habitats of Principal Importance

Section 41 of the NERC Act 2006 details 56 HPIs, divided into 10 broad categories: arable and horticulture, boundary, coastal, freshwater, grassland, heathland, inland rock, marine, wetland and woodland.

Ancient woodland and veteran trees

The NPPF 2019 states that 'Planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss'. In addition, Natural England's standing advice for ancient woodland indicates that a 15 m buffer is retained between ancient woodland and any works or development. Ancient woodlands, and ancient and veteran trees, may also be protected by Tree Preservation Orders.