

Rotherham local plan

Supplementary Planning Document No. 11 Natural Environment



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Rotherham
Metropolitan
Borough Council



Introduction	2
Background	8
Part 1: Opportunities for biodiversity mitigation and enhancement	16
Part 2: Geodiversity	24
Contacts	26
Appendix 1: Suggested plant species lists	27
Appendix 2: Ecological survey requirements	29
Appendix 3: Ecological survey calendar	31
Appendix 4: References, advice and best practice guidance	32
Appendix 5: Glossary	35

Introduction

Background and purpose

- 1** This Supplementary Planning Document (SPD) is designed to support developers when considering the natural environment, particularly wildlife habitats and species and geology, within development proposals. A core planning principle is the conservation and enhancement of the natural environment. Under the Natural Environment and Rural Communities Act 2006 the Council has a duty to have regard to the purpose of conserving biodiversity. A key aim of this duty is to make biodiversity conservation a natural and integral part of policy and decision making. Furthermore, under the Conservation of Habitats and Species Regulations 2010 the Council must have regard to the requirements of the Habitats Directive in the exercise of its functions.
- 2** This guidance is structured as follows:
 - The background section provides details of key strategies and initiatives, over-arching principles, survey, assessment and planning application requirements, and wildlife legislation.
 - Part 1 is focused on biodiversity; and
 - Part 2 is focused on geodiversity.
 - The Appendices provide additional information, including references and links to relevant documents, advice and best practice methods.
- 3** The information in this SPD is collated from a range of design guides, best practice standards and conservation group advice. Links are provided for further details on much of the content (Appendix Four). The information covers the planning application process and detailed development design. The information can be used by developers, agents or consultants throughout the planning process and can apply to single dwellings or larger developments.
- 4** The aim of the guidance is to provide general advice and to support the principle of biodiversity and geodiversity protection and gain. It will help applicants to prepare and submit proposals that are mindful of biodiversity and geodiversity, and that support the delivery of relevant objectives and policies. Site specific and detailed advice can be obtained on request within the planning process.
- 5** Biodiversity decline, through habitat loss and fragmentation, requires significant enhancement of the ecological network, and the wider green infrastructure network, to repair and re-connect habitats, to buffer more sensitive sites and to make these more resilient to growth and development pressures. There are also multi-functional benefits that protecting and enhancing the natural environment will deliver, in addition to wildlife enhancement. Protecting and enhancing the existing green infrastructure network, including designated sites and supporting habitat, will deliver a wide range of environmental services including landscape enhancement, protection of soils, climate change mitigation and adaptation including carbon storage, increasing recreational and health and well-being opportunities for people, increased flood risk management, water resources and water quality.

Status

- 6 This SPD has been prepared in line with national planning policy and relevant legislation and regulations. The National Planning Policy Framework (NPPF) identifies that SPD add further detail and guidance to the policies in the development plan. They are capable of being a material consideration in planning decisions.
- 7 As required by The Town and Country Planning (Local Planning) (England) Regulations 2012 (as amended) consultation on a draft of this SPD took place between 17 August and 14 September 2020. The accompanying Consultation Statement sets out further detail on this consultation, including who was consulted, a summary of the main issues raised and how these have been addressed in the SPD. It also contains an adoption statement, confirming that this SPD was adopted by Rotherham Council on 21 June 2021.

Planning policy

National planning policy

- 8 The National Planning Policy Framework (NPPF) states that the purpose of planning is to contribute to the achievement of sustainable development – making economic, environmental and social progress for this and future generations. The natural environment is an essential element of sustainable development and design.
- 9 Amongst other things paragraph 170 of NPPF states that planning policies and decisions should contribute to and enhance the natural and local environment by:
 - protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils;
 - recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
 - preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability;
 - remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate; and
 - minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

10 Planning Practice Guidance provides further detailed guidance on the natural environment which recognises that:

- Information on biodiversity and geodiversity impacts and opportunities needs to inform all stages of development (including, for instance, site selection and design including any pre-application consultation as well as the application itself).
- An ecological survey will be necessary in advance of a planning application if the type and location of development could have a significant impact on biodiversity and existing information is lacking or inadequate.
- Local planning authorities should require ecological surveys where clearly justified, for example if there is a reasonable likelihood of a protected species being present and affected by development. Assessments should be proportionate to the nature and scale of development proposed and the likely impact on biodiversity.
- Consideration should be given to opportunities to restore or enhance local ecological networks; and
- There are opportunities to secure net gains for biodiversity and geodiversity as part of green infrastructure provision.

Local planning policy

11 Rotherham's Local Plan consists of the Core Strategy (adopted in September 2014) and the Sites and Policies Document (adopted in June 2018), alongside the Barnsley, Doncaster and Rotherham Joint Waste Plan (adopted in March 2012). These are available from our website: <https://www.rotherham.gov.uk/localplan>

12 Rotherham's Local Plan contains strategic objectives and policies that relate specifically to the conservation of the natural environment; these are supported by development management policies that set out expectations for the conservation and enhancement of the natural environment within the planning system. This guidance provides additional detail to, and should be read in conjunction with, the following policies:

CS 19 Green Infrastructure

sets out a range of considerations for planning proposals that support Rotherham's Green Infrastructure network, including that a net gain is to be realised through measures including promoting biodiversity.

CS 20 Biodiversity and Geodiversity

establishes that the Council will conserve and enhance Rotherham's natural environment, and that biodiversity and geodiversity resources will be protected and measures will be taken to enhance these resources.

CS 24 Conserving and Enhancing the Water Environment	seeks to avoid deterioration of watercourses, enhance their 'good quality' status under the Water Framework Directive, manage water demand, improve water efficiency, improve water quality and dispose of surface water appropriately.
SP32 Green Infrastructure and Landscape	sets out a range of measures applicable to new development.
SP 33 Conserving and Enhancing the Natural Environment	sets out guidance for planning proposals on how development should conserve and enhance existing and create new features of biodiversity and geodiversity value, and where it is not possible to avoid negative impact on a feature of biodiversity or geodiversity value through use of an alternate site, development proposals will be expected to minimise impact through careful consideration of the design, layout, construction or operation of the development and by the incorporation of suitable mitigation measures.
SP 34 Sites Protected for Nature Conservation	sets out specific guidance for planning proposals in relation to statutorily and non-statutorily protected sites.
SP 35 Protected and Priority Species	establishes how development likely to have a direct or indirect adverse impact on protected and/or priority species will be considered.

13 The Policies Map accompanying the Sites and Policies Document shows Statutorily Protected Sites and Non-Statutorily Protected sites and green infrastructure corridors, these include areas of biodiversity and geodiversity interest. However areas of interest are also found within other locations and therefore sites must be considered on a case by case basis.

14 Chapter 5 of the Sites and Policies Document provides site development guidelines for local plan allocation sites. These provide site specific guidance regarding biodiversity and geodiversity requirements when preparing planning applications.

Emerging Legislation and National Guidance

15 Recent documents on the Government position and emerging and proposed future legislation regarding nature conservation are detailed below.

16 *HM Government: A Green Future: Our 25 Year Plan to Improve the Environment* was published in 2018 and sets out the Government's commitment to improving the natural environment over the next 25 years. The term 'development' is mentioned 90 times in the document and is clearly crucial to delivering on the Governments targets. It includes a commitment to 'Clean and plentiful water'; to achieve clean and plentiful water by improving at least three quarters of waters to be close to their natural state as soon as is practicable by:

- reducing the damaging abstraction of water from rivers and groundwater, ensuring that by 2021 the proportion of water bodies with enough water to support environmental standards increases from 82% to 90% for surface water bodies and from 72% to 77% for groundwater bodies;
 - reaching or exceeding objectives for rivers, lakes, coastal and ground waters that are specially protected, whether for biodiversity or drinking water as per River Basin Management Plans;
 - supporting OFWAT's ambitions on leakage, minimizing the amount of water lost through leakage year on year, with water companies expected to reduce leakage by at least an average of 15% by 2025; and
 - minimizing by 2030 the harmful bacteria in designated bathing waters and continuing to improve the cleanliness of our waters; ensuring that potential bathers are warned of any short-term pollution risks.
- 17** *Conservation 21, Natural England's Conservation Strategy for the 21st Century* published in 2016 sets out Natural England's current conservation strategy.
- 18** *The Environment Bill* was presented to Parliament in January 2020. The Government sets out its commitment to a two-yearly review of the significant developments in international environmental legislation. It is anticipated these changes will be factored into the Environmental Improvement Plan and environmental target setting process. This is to ensure environmental legislation stays in line with developments.
- 19** The Bill also introduces a requirement for current and future Ministers to make a statement to Parliament identifying environmental impacts of all new environmental primary legislation.
- 20** The Environment Bill sets out a legally-binding target setting process and, once enacted, establishes a new independent Office for Environmental Protection to scrutinize environmental policy and law, investigate complaints and take enforcement action against public authorities. The Bill also includes the provision for a minimum 10% Biodiversity Net Gain to become mandatory for most developments from 2023, although Local Authorities can request it earlier. The Council is working towards a Biodiversity Net Gain requirement and has been working with the South Yorkshire Local Nature Partnership on the development of separate more detailed planning guidance on Biodiversity Net Gain. This is likely to be based on the existing national good practice principles and guidance (CIRIA/CIEEM) and forthcoming national guidance from Natural England and BSI. Exceptions will be outlined.
- 21** The UK exited the European Union (EU) on 31 January 2020. As the UK position develops through the various legislative changes to address environmental protection and governance in Westminster and the Devolved Nations the Council will keep abreast of the latest position and reflect appropriate changes within any future updates to policy or this SPD.
- 22** The UK Government and Statutory Nature Conservation Bodies have provided further advice on environmental legislation and standards following our exit from the European Union. For England, amendments to the Habitats Regulations will be largely limited to changes that will ensure the regulations can continue to have the same working effect as now after the transition period.

23 Natural England reiterated in October 2019 that as the UK leaves the EU:

- The UK government is committed to maintaining environmental standards, and will continue to uphold international obligations.
- All European protected sites and species retain the same level of protection once the UK leaves the European Union.
- The environmental assessment regimes that inform planning decisions Strategic Environmental Assessment/ Environmental Impact Assessment Habitat Regulation Assessment (SEA/EIA/HRA) continue to apply post EU exit.
- All permits and licences issued by UK regulatory bodies continue to apply.
- The legal framework for enforcing environmental regulations through regulatory bodies and the courts is unaffected by leaving the EU and continues to apply.
- The UK Government has produced further general advice on the transition period that may be of interest to individuals and businesses.
- The Dearne Valley Nature Improvement Area Planning Advice Note will still apply

Background

Key strategies and initiatives

Nature Improvement Area

- 24** The Dearne Valley Green Heart 'Nature Improvement Area' (NIA), includes parts of Rotherham, Barnsley and Doncaster boroughs. NIAs are large, discrete areas where a local partnership has been set-up to deliver benefits for the natural environment and community. NIAs were established to help address ecological restoration at a landscape-scale to improve biodiversity, ecosystems and our connections with the natural environment identified by the Natural Environment White Paper (2011) and taking forward recommendations identified in the *Lawton Review: Making Space for Nature (2010)*. The Interactive Policies Map (Policies Map Sheet 1 PDF) is prepared to accompany the Sites & Policies Local Plan, shows the extent of the NIA in Rotherham.
- 25** The vision of the NIA partnership is to restore and enhance the ecological network in the valley. At its core will be areas of reedbeds, fen, wet grassland, wet woodland and woodland buffered by areas of farmland, amenity grasslands, parklands and reclaimed industrial areas whose biodiversity value will be enhanced. 'Stepping stone' sites exist along the river corridor where habitat should be enhanced and specific measures put in place for species such as eels, otters and water voles. The NIA area will support an even richer diversity of wildlife, including nationally-important numbers of wintering waterbirds and breeding farmland birds.
- 26** Plans are in hand to designate part of the NIA area a Site of Special Scientific Interest which should impinge on Rotherham and this designation will help continue to protect a valuable wildlife site and help the site to continue to provide a high value biodiversity resource for the Wath and wider Dearne area in particular.

Rotherham Biodiversity Action Plan

- 27** The Rotherham Biodiversity Action Plan (BAP) was produced in 2012 and is reviewed periodically. The BAP lists the key species and habitats targeted for specific conservation action in the borough and draws from national BAP targets. The BAP indicates conservation actions which should be taken to help protect the species and habitats and/ or allow them to recover. Rotherham Council has adopted the BAP as part of the evidence-base supporting Local Plan decisions and will continue to use the BAP.

RMBC Waterways Strategy

- 28** The overarching goal of the Rotherham Waterways Strategy is to nurture, restore, celebrate and care for Rotherham's unique network of rivers, canals and water spaces.
- to recognise the vital role that rivers, water bodies and water margins play in promoting the biodiversity of Rotherham, by providing and protecting habitats, conservation areas

and wildlife corridors; to continue to improve water quality, and develop and manage a network of high quality waterside habitats.

- to treat Rotherham's rivers and water bodies as key assets for regeneration and economic development; to ensure that the restoration and enhancement of waterfront sites is integral to the borough's major regeneration projects.

River Basin Management Plan for the Humber River Basin District

- 29** This SPD also aligns with the principles of the current River Basin Management Plan for the Humber River Basin District as regards water quality and water quantity. Ongoing issues (as of 2020) that are outlined in the plan indicate where local government can support other regulators and operators in applying the relevant legislation and policy to improve the water environment.

Biodiversity Net Gain

- 30** Biodiversity Net Gain (BNG) is an approach to development that aims to leave biodiversity in a *measurably* better state than before. Where a development has an impact on biodiversity forthcoming legislation (see above) will require developers to provide an increase in appropriate natural habitat and ecological features over and above that being affected in such a way that the current loss of biodiversity through development will be halted and ecological networks can be restored.
- 31** Biodiversity net gain still relies on the application of the mitigation hierarchy to avoid, mitigate or compensate for biodiversity losses. It is additional to these approaches, not instead of them. Put simply, it involves the use of a metric as a proxy for recognising the negative impacts on habitats arising from a development and calculating how much new or restored habitat, and of what types is required to deliver sufficient net gain.
- 32** CIEEM in December 2016 published the first UK Principles on delivering biodiversity net gain through development. In February 2019 they published new guidance on how to deliver net gain in practice. These publications are available free online. A British Standard on Biodiversity Net Gain is also in preparation. Biodiversity Net Gain is enshrined within the Environment Act which is due to become law in the near future.
- 33** Rotherham has adopted 10% BNG in principle. Rotherham is working with neighbouring local authorities in South Yorkshire and with nature conservation organisations in the region to deliver BNG through the South Yorkshire Local Nature Partnership. A 'Planning Advice Note' to be used throughout South Yorkshire is being developed by the Partnership and it is hoped that this will guide developers, planners and other in administering and implementing BNG. The Partnership, in collaboration with the four local authorities in South Yorkshire, is also undertaking a Natural Capital Assessment mapping exercise over the whole of South Yorkshire (including Rotherham) in order to map and evaluate natural assets, identify opportunity areas for BNG and identify areas suitable for nature recovery. Once this has been completed, the Council will be in a better position to identify where off-site BNG can be targeted.
- 34** Biodiversity Net Gain is not appropriate to address loss of irreplaceable habitats.

- 35** All development proposals should contribute to and enhance the natural and local environment by firstly avoiding impacts where possible, where avoidance isn't possible minimising impacts on biodiversity and providing measurable net gains for biodiversity. All development proposals must provide clear and robust evidence setting out:
- information about the steps taken, or to be taken, to avoid and minimise the adverse effect of the development on the biodiversity of the onsite habitat and any other habitat,
 - the pre-development biodiversity value of the onsite habitat based on an up to date survey and using the Defra metric,
 - the post-development biodiversity value of the onsite habitat using the Defra metric; and
 - the ongoing management strategy for any proposals.
- 36** The Local Planning Department will, in due course, require relevant applications to submit a biodiversity calculator, based on the Defra 2.0 metric or very similar.

Great Crested Newt (GCN) District Licensing

- 37** Great crested newts are widely distributed throughout the UK. However 50% of the UK's ponds were lost in the 20th century and 80% of those left are in poor condition. As a result there have been enormous declines in the range and abundance of GCN and they are now strictly protected by law. Despite this protection GCN continue to decline. The current system has focused on management to prevent harm on development sites rather than addressing the wider enhancement of their remaining habitat. Currently developers commission field surveys and put in place measures to reduce the impact on newts within development sites which can be time consuming and costly. As a result, the Government has been rolling out a new scheme where surveys and population distribution models are developed across local authority areas in advance in order to identify areas where action can be directed. The approach enables developers to buy into a scheme to develop and manage compensation habitat offsite, thereby freeing up the development footprint.
- 38** The Council is currently considering whether to join this scheme. If it decides not to join the scheme, it could still be implemented in the borough by Natural England. Therefore, prospective developers and others should be aware of the existence of the scheme and its possible implementation in Rotherham in the future.

Natural England's Impact Risk Zones

- 39** In order to establish whether a proposal might have an effect on one of the above designations, then Natural England's Impact Risk Zones (IRZs) should be consulted in the first instance. IRZs are a GIS tool developed by Natural England to make rapid initial assessment of the potential risks posed by development proposals to: Sites of Special Scientific Interest (SSSIs), Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Ramsar sites. They define zones around each site which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts. The IRZs can be used by local planning authorities (LPAs) to consider whether a proposed development is likely to affect a SSSI, SAC, SPA or Ramsar site and determine whether they will need to consult Natural England to seek advice on the nature of any potential impacts

and how they might be avoided or mitigated. Links are provided at the end of this SPD on obtaining and using IRZs.

Avoid – Reduce – Mitigate – Compensate – Enhance

- 40** Rotherham has eight biological or geological Sites of Special Scientific Interest (SSSIs) six of which are either entirely within the Borough and two of which straddle the border with Nottinghamshire, nine Local Nature Reserves (LNRs), and nearly one hundred Local Wildlife Sites (LWSs), several candidate Local Wildlife Sites and one Nature Improvement Area (NIA). Rotherham also has twenty six designated Regionally Important Geological Sites (RIGS). Details of the statutory sites (SSSIs and LNRs); and Ancient Woodlands can be found on the MAGIC website whilst statutory and non-statutory sites are all shown on the Policies Map within the Rotherham Local Plan. In the future, when new local wildlife sites, regionally important geological sites, and local nature reserves are designated and approved by the Council, an up to date map of the borough showing all designations, will be maintained on the Council's web site.
- 41** The NERC Act 2006 legislates for Priority Habitats of Interest a list of habitats of priority interest, sites, and species that should be protected. There are no SACs (Special Areas of Conservation) / SPAs (Special Protection Areas) or NNRs (National Nature Reserves) in this Borough.
- 42** Planning decisions should prevent harm to biodiversity and geological conservation interests. Where granting planning permission would result in significant harm to those interests the local planning authority will need to be satisfied that the development cannot reasonably be located on any alternative sites that would result in less or no harm.
- 43** Where it is impossible to avoid negative impact on a feature of biodiversity or geodiversity value through use of an alternate site development should minimise impact by changing the design, layout, size or operation of the development and by the incorporation of suitable mitigation measures.
- 44** Where, despite mitigation, there will be residual adverse impact on biodiversity or geodiversity value or on wider ecological networks development should provide an adequate level of compensation. The aim of mitigation and compensation should be to respond to impact or loss with something of greater value; the minimum requirement will be to maintain 'no net loss'.
- 45** In addition, development will be requested to make a positive contribution to the natural environment by incorporating biodiversity gain, sustainable design, renewable energy technology and, where appropriate, direct contribution to the green infrastructure network and biodiversity opportunity areas.

Survey and Impact Assessment

- 46** The responsibility lies with the developer to demonstrate that proposals identify and consider their effect on the natural environment by the provision of ecological and geodiversity impact assessment, including the submission of detailed, timely and up to date survey, evaluation and records relevant to the proposed development. The Council also recommend:

- Survey work should be undertaken by suitably experienced consultants. The Council will expect their experience, qualifications, CIEEM accreditation, details of protected species licences held, etc to be provided in the ecological reports and to be appropriate for the tasks performed.
- The provision of outline development proposals in advance of survey work will allow all potential impacts to be assessed and will enable adequate levels of mitigation, compensation and gain to be established.
- All recommendations arising from survey and impact assessment should be incorporated into detailed design plans and highlighted within the submitted Design and Access Statement.
- It is important that survey work is completed in advance of application submission in order to inform the detailed development proposals.
- The submission of survey and impact assessment enables full evaluation of development proposals against all relevant development management policies.
- In cases where protected species may be affected it is essential that survey work is undertaken and submitted with the planning application.
- The Council recommends early engagement with the LPA and a professional ecologist due to the seasonal nature of surveys and to avoid delays for BNG to be considered from the outset.

47 Standard procedures for survey and reporting as detailed for example by the Bat Conservation Trust (Collins 2016), Chartered Institute of Ecology and Environmental Management (CIEEM) and British Standard BS42020 should be followed.

48 The Council does not support the netting of trees and shrubs by prospective developers to dissuade or prevent birds from nesting in these. This issue was recently (June 2019) debated by Central Government, although no further decisions from Central Government on the legality and appropriateness of netting trees and shrubs, has been forthcoming. Our stance reflects that of respected environmental organisations: RSPB, Woodland Trust, Wildlife Trusts and other organisations as well as many members of the public who have identified valid reasons why netting should not be allowed.

49 Appendix Two contains details of expected survey remit and report content. The aim of survey and impact assessment work can be summarised as follows:

1. Identify likely impacts on the natural environment.
2. Identify measures to avoid, reduce or mitigate for the identified impacts.
3. Identify measures to demonstrate additional enhancement.
4. Demonstrate understanding and incorporation of the recommendations.

50 There are optimal times for completing ecological survey work; survey work for certain species groups may be limited to particular months and will require a certain level of survey effort to be demonstrated. A survey calendar is included as Appendix Three to highlight survey opportunities; links to best practice guidance for survey methodologies are also provided. The ability to undertake adequate survey work needs to be considered at an early stage in order to ensure all necessary information is able to be submitted with an application. It is important to note however that the survey calendar is being affected by other factors such as for instance

changes to the climate. For example, birds are nesting earlier and other species breeding at different times to previous norms.

Planning Process

- 51** The natural environment should be considered at each stage in the planning process:
- Pre-application – identification of current site status, the extent of survey and impact assessment needed, timings for survey work
 - Application – submission of ecological survey and impact assessment work, inclusion in the Design & Access Statement of the ecological survey results and demonstration of how ecological recommendations have affected or been incorporated into the proposals
 - Planning Agreement – inclusion of conditions to agree biodiversity recommendations
 - Delivery – Information to support the discharge of any relevant conditions, demonstration of measures incorporated, results of any agreed monitoring, demonstration of long-term maintenance of features
- 52** The level of biodiversity mitigation, compensation and gain proposed should be appropriate to the size and impact of the proposed development. Biodiversity net gain will be sought for all development that impacts on the natural environment. These guidelines include a range of elements that can be incorporated into development proposals to demonstrate measures taken to conserve and enhance the natural environment.

Wildlife Legislation

- 53** The protection afforded to protected sites and species under UK and EU legislation is irrespective of the planning system and developers should therefore ensure that any activity undertaken, regardless of the need for any planning consent, complies with the appropriate wildlife legislation.

The Wildlife & Countryside Act 1981

- 54** The main piece of wildlife legislation in England is the Wildlife & Countryside Act 1981. Some key points of the Act are:
- All wild birds, their nests and eggs are protected.
 - It is an offence to intentionally disturb certain species of bird whilst nesting.
 - Certain species such as bats, water vole, otter, dormice, red squirrels, white-clawed crayfish, etc are protected. This protection extends to their roosts, burrows, holts, dreys, etc. This is why it is necessary to undertake bat roost surveys prior to considering undertaking work on certain types of buildings or trees. Advice on dealing with protected species in planning applications is provided on the Natural England website.

Protection of Badgers Act (1992)

- 55** Badgers and their setts are fully protected. Intentionally or recklessly damage or destroy a badger sett, or obstruct access to it. It is against the law to:

- Disturb a badger when it is occupying a sett.
- Intentionally or recklessly damage or destroy a badger sett, or obstruct access to it.

56 There are exceptions to the above however. Licences to undertake certain actions can be issued by Natural England, for example, where a badger sett is found on a proposed development site. Natural England can grant a licence to translocate badgers in these and other circumstances.

Water Framework Directive

57 This is the most far-reaching piece of legislation established to protect and enhance the water environment. The Water Framework Directive (WFD) establishes a legislative framework for the protection of surface waters (including rivers, lakes and coastal waters) and ground waters. The WFD is transposed into law in England and Wales by The Water Environment (Water Framework Directive)(England and Wales) Regulations 2017.

58 Under the WFD, in order to conserve, maintain and enhance water resources, development proposals should:

- Not result in the deterioration of water bodies and which conserve and enhance the following:
 - The natural geomorphology of watercourses;
 - The water quality; and
 - The ecological value of the water environment, including watercourse corridors.
- Implement positive progress towards achieving “good” status or higher under the WFD in Rotherham Metropolitan Borough’s ground water and surface water bodies, with any new development being able to demonstrate:
 - That there is no deterioration in the status of any surface or ground water body;
 - That it does not compromise the ability of any surface or ground water body to achieve its WFD status objectives;
 - That any proposed developments also meet wider environmental duties; and
 - That where possible, indicate how the proposed development contributes to the delivery of WFD objectives (set out in the River Basin Management Plan).
- Manage water demand and improve water efficiency through appropriate water conservation techniques and good practice adaptation to assist climate resilience (for example grey-water recycling and rainwater harvesting); and d) Dispose of surface water appropriately and improve water quality through the incorporation of SuDS. The overall aims and objectives of the WFD are to:
 - enhance the status and prevent further deterioration of surface water bodies, ground water bodies and their ecosystems;
 - ensure progressive reduction of groundwater pollution;
 - reduce pollution of water, especially by priority substances and certain other pollutants, as set out in the list of chemicals for Water Framework Directive assessments;
 - contribute to mitigating the effects of floods and droughts;

- achieve at least good surface water status for all surface water bodies and good chemical status in ground water bodies or good ecological potential in the case of artificial or heavily modified water bodies; and
- promote sustainable water use.

59 The WFD classifications for 2016 will be considered as baseline data for current water quality. The Council will highlight the key issues for the waterbodies within the district, which are stopping the waterbodies from reaching “good” status under WFD. Any targets around nature conservation will include the need for all waterbodies to reach “good” status under the WFD by 2027 or sooner.

Part 1: Opportunities for biodiversity mitigation and enhancement

- 60** Development proposals vary widely in size and design, and their individual circumstances will determine which types of biodiversity action are most applicable. Developers should identify existing biodiversity interest and key features, and the potential to enhance these as part of development and management of site. The following sections highlight actions which can be taken to enhance biodiversity in new development proposals.

General principles to support nature conservation

- Creating habitats appropriate for the relevant character area; Identifying and retaining any (semi) natural habitat present within the site, including mature trees and hedgerows;
- Reducing reliance on herbicides, insecticides, fertilisers and other chemicals that may be toxic to non-target organisms and could alter soil conditions that do not reflect the underlying geology;
- Not importing topsoils, i.e. using only subsoils in areas for biodiversity and concentrating the use of existing soils to areas for tree planting;
- Use of tree planting only if the existing soil conditions are sufficient;
- Using mixed native species hedgerows for boundary features and to connect open areas;
- Providing areas of bare ground where habitats can generate naturally;
- Identifying locally suitable plant species mixes and using locally sourced seed / plant materials;
- Creating basic grassland habitats on the understanding that they can be left to develop naturally into more complex grasslands, scrub and possibly eventually woodland;
- Identifying nearby biodiversity assets that can inform and connect to new schemes;
- Using ornamental species planting in limited amounts only and selecting non-native species for their nectar / food source or longer flowering period benefits to supplement the native habitats;
- Agreeing long-term management plans that have biodiversity as an overriding objective.

Decision makers should be clear about the need to protect and enhance the biodiversity alongside Rotherham's watercourses.

Landscaping, Planting and Open Spaces

- 61** There are significant opportunities to retain existing natural habitats within new landscaping and to create new habitats and features that benefit biodiversity. The Council also recommends:
- In residential developments new garden provision will add to biodiversity gain but any structural landscaping and areas of open space should include native species, natural habitat creation and, where possible, areas that are allowed to regenerate or colonise naturally.
 - Boundary features, shelter belts and other linear features can help to place new sites into the wider landscape and setting.

- Development adjacent to sites of importance to nature conservation will almost certainly need to incorporate buffer areas (typically 15 metres following Natural England's Standing Advice) of native planting to protect the sites from adverse impact; such areas should be distinct from the development and should be maintained in the long-term to benefit nature conservation.
- Development should aim to create or maintain connections and corridors that have been identified in green infrastructure strategies or landscape scale projects.
- Suitable plant species lists are provided in Appendix One. Advice on planting and growing native wildflowers is available from many organisations including the Royal Horticultural Society, Plantlife, Woodland Trust, Soil Association, etc.

Hedgerows

62 Hedges provide shelter, nesting and foraging sites for a wide variety of species and act as wildlife corridors if they are dense and wide enough. They are a Priority Habitat under the NERC Act (2006). The following principles should be considered:

- Plant hedges consisting of a number of wildlife friendly species so that fruit, seed and nectar will be provided throughout most of the year; a minimum of four species is recommended.
- Provide space for dense hedges to grow to at least 2 metres wide with a wide margin on each side for long grasses to grow at their base.
- Locate new hedges so that they will contribute towards forming a local wildlife habitat network with neighbouring hedges, trees, shrubs, scrub, wildflower rich grassland and watercourses.
- Plant native hedges, such as hawthorn, blackthorn and holly, along boundaries where security is important.
- Ensure adequate access and resources are provided for long-term maintenance
- Hedgerows should not be managed by flailing which is very damaging to the hedgerow and to the species it supports. Any hedgerow management regime shall be undertaken outside of bird nesting season

Trees and shrubs

63 Native trees and shrubs provide shelter, nesting sites and fruit for birds. Their flowers provide nectar for bees and other insects. Provision of dead and decaying wood is valuable to a range of invertebrates which depend upon it to complete all or part of their life cycles. Dense scrub provides good cover and food for birds, insects and reptiles. The following principles should be considered:

- Provide native, wildlife friendly tree and shrub species of varying height and structure. A variety of species will also provide a protracted supply of pollen, nectar and fruit.
- Locate trees and shrubs so that they provide continuity with nearby existing habitat.

- Retain trees with holes and dead wood as these are particularly valuable for wildlife such as bats, birds, insects and fungi. Also retain woody cuttings, stumps and fallen branches on site.
- Herbaceous plants and/or long grass in front of shrub/tree areas will provide additional wildlife interest and maintain moisture beneath.

Climbing plants

64 Climbing plants such as ivy, clematis and honeysuckle provide nesting, shelter and berries for birds and nectar for insects. They provide habitat for invertebrates, berries for birds and small mammals, and late nectar for pollinating insects. They are not ecologically perceived as a parasite. The following principles should be considered:

- Locate climbing plants so that they cover otherwise bare walls, fences and gabion baskets.
- Locate climbing plants close to existing hedges, trees, shrubs and flowering grassland, so they will help to connect the local wildlife habitat network.

Wildflower rich grass

65 Wildflower rich grassland is attractive and provides cover for small mammals and invertebrates and the wildflowers supported are a nectar source for insects. Short grass can be enhanced by adding flowering species tolerant of frequent mowing and trampling. Maintenance involving cutting and collecting will be required at appropriate intervals to achieve optimum results. Maintenance that creates a range of vegetation height, from bare ground to tall grasses will provide the most benefit; cutting different areas on a rotational 2-3 year cycle is recommended.

66 The following principles should be considered:

- Provide wildflower rich grassland as part of informal landscaping, on areas of poor soil or areas of poor drainage, under trees and hedgerows; temporary wildflower areas can be created on empty plots where development will be phased.
- Embed spring flowering bulbs and plugs of nectar rich flowering plants.
- Maintain patches of long grass, enabling plants to flower and seed, and providing habitat for grasshoppers and other invertebrates, and a food source for birds, amphibians and mammals.
- Always remove and compost cuttings from grassland and wildflower areas.
- Retain patches of bare earth for invertebrates to bask, nest and forage.
- Consider generating scrub habitat adjacent to existing wildlife rich habitat. Irregular micro-topography such as hollows, banks and slopes are better than homogeneous flat ground, especially if significant they are south or south-east facing.

Watercourses, wetlands and their banks

67 Rivers, streams, canals, wet ditches, and seasonal watercourses and their banks are important wildlife habitats but many are degraded in urban areas. The following principles should be considered:

- Enhance and restore the naturalness of any existing water course by removing culverts and other artificial engineering works, restoring water channels with soft contouring and suitable wetland planting. Where possible hidden streams and rivers should be "daylighted" and brought into the open.
- A vegetated buffer should be created, where appropriate, between the top of the bank and any development; a minimum of 5 metres is recommended, 2 metres is essential. (A minimum 8 metres will be required in some circumstances where statutory agency maintenance occurs.)
- Avoid development and hard landscaping adjacent to the watercourse; development should not involve the culverting of existing watercourses.
- Where appropriate, create new wildlife-friendly ponds and wetland areas, especially where existing ponds are to be affected by the development.
- Incorporate elements of sustainable urban drainage that permanently or temporarily hold water, ensuring pollution controls are incorporated.
- Other environmentally friendly measures will be supported including the retention of riparian trees and other bankside vegetation, avoidance of light pollution on to waterways so as not to disturb nocturnal wildlife, planting of native water plants, etc.
- When considering new development, the Council will aim to ensure best practice is followed regarding foul and surface water drainage, by following the hierarchy and guidance set out within the National Planning Policy Framework and Planning Practice Guidance, and the storage of oils, paints and chemicals, which could cause water pollution.
- Developer contributions from new development can help to enhance watercourses in the district and their value as an amenity to the local community.
- Measures to promote the biodiversity of waterway corridors and their connectivity to other aquatic and terrestrial features (Green Blue Infrastructure) will be supported. This can be particularly useful when developing SuDs within development to ensure that they form part of green spaces and result in multiple benefits including biodiversity and amenity alongside the water attenuation function. SuDs design should consider biodiversity and amenity benefits alongside the water quantity and quality aspects in line with the SuDs manual C753.

Amphibians and reptiles

68 Detailed advice is available from the Amphibian and Reptile Group (ARG) UK, Froglife and the Natural England website. The following principles should be considered:

- Creating links to other habitats.
- Creating new habitat such as ponds and wetland areas.
- Improving existing habitat.

Living roofs and walls

69 Living roofs and walls can mitigate for loss of habitat at ground level, particularly open mosaic habitats and where non-developed land is limited. Green bridges may also be appropriate. The following principles should be considered:

- Incorporate green or brown roofing wherever appropriate.
- A range of roof and wall styles can be considered depending on heating / cooling requirements, structural design, aspect and irrigation.

Biodiversity in the Built Environment

70 Development should include opportunities to incorporate biodiversity features into the built environment:

- A range of bird nesting features can be provided, depending on the type, size, scale and location of a development.
- Nesting features can cater for common species but, wherever possible those species that rely on buildings should be provided for; bird nesting provision can offset the lack of nesting opportunities provided by modern building design.
- Bat roosting features are also easily incorporated into many building types.
- Individual property developments should be encouraged to incorporate at least one feature; multiple dwelling and major developments should be encouraged to incorporate features on a good proportion of properties, ideally 20% or greater.
- Redevelopment of buildings that will involve the reduction or destruction of existing nest or roost features will be required to replace any lost provision and provide additional features; total provision of at least 125% of the original number is recommended.

Common swift

71 The following principles should be considered:

- Incorporate multiple, internal swift boxes at soffits/eaves level.
- Any suitable buildings, proximity of an existing colony reinforces need for new nest sites.
- At least five metres above ground level with unimpeded access.
- A northerly or well shaded aspect is essential; avoid southerly elevations and the immediate vicinity of windows.

House martin

72 The following principles should be considered:

- Incorporate multiple, pre-formed house martin nest cups at soffits/eaves level.
- Suitable for buildings with wide soffits/eaves in close proximity to open space or other green infrastructure, particularly where there are standing or running water features near by.
- At least five metres above ground level. Adequate shelter from sun and prevailing weather, avoid direct south elevations.
- Avoid fixing directly over doors and windows.

Barn swallow

73 The following principles should be considered:

- Incorporate pre-formed swallow nest cups and purpose built ledges inside appropriate open access buildings, such as car ports, porches, storage areas.
- Suitable for buildings in close proximity to open space or other green infrastructure, particularly where there are standing or running water features near by.
- Avoid locations where droppings might become a nuisance.

House Sparrow

74 The following principles should be considered:

- Incorporate multiple boxes / terraces at soffits/eaves level, preferably a minimum of six features in close proximity.
- At least two metres above ground level with somewhere to perch in the immediate vicinity.
- Needs to be shaded; easterly aspect is best, avoid direct south-facing elevations.

Starling

75 The following principles should be considered:

- Incorporate multiple boxes at soffits/eaves level leaving at least 1.5m between each box.
- At least three metres above ground level with somewhere to perch in the immediate vicinity.
- Needs to be shaded, an easterly aspect is best, avoid direct south-facing aspect.
- Starlings can be noisy so their nests are best sited where they won't be a nuisance.

Garden birds

76 The following principles should be considered:

- Install appropriate nest boxes on buildings, retained or new trees, fences or other boundary features, as high as possible to deter predators.
- Locations should be sheltered from direct sunlight and the prevailing weather.
- A mix of boxes with entry holes of different sizes or open fronts should be used to attract a range of species.

Birds of Prey

77 The following principles should be considered:

- Incorporate on sites in suburban and urban – countryside interface sites, where there is direct access to suitable hunting grounds.
- Features for diurnal or nocturnal species can be considered.
- Will be suitable on sites where ecological recommendations have specified mitigation or enhancement for these species.

Bat Species

78 The following principles should be considered:

- Provide features, spaces and access points dependant on the species found locally and the style of structure:
 - Crevice dwelling species (includes Pipistrelles, Brandt's and Whiskered) – create spaces in walls, cladding, eaves, tiles and ridge-tiles; install integrated or external ready-made bat boxes
 - Void dwelling species (includes Noctule, Serotine, Leisler's, Daubenton's) – create access points under eaves or tiles, leave joists or beams exposed, ensure toxic materials are not used and that insulation etc does not create a risk of entanglement
 - Species needing flight space (including Natterer's, Brown long-eared and Grey long-eared) – create open untrussed roof space of at least 2.5m x 5m x 5m (H x W x L)
- Access points should be 4-7m above ground level.
- No artificial lighting should interfere with the access points.
- Roost features can be either north-facing to support male roosts and winter hibernation or south / west facing to support maternity roosts.
- Access points should be accessible from open space; the location of bat features close to hedgerows, watercourses and trees is beneficial for commuting and foraging use by bats.
- Follow Bat Conservation Trust guidance on lighting i.e. using cowls and hoods, using the shortest possible poles, directing lighting inwards and downwards into development sites rather than outwards, avoid directing lighting at habitats such as woodland and hedgerows, lights triggered by human movement rather than being left on permanently, etc. Developers should provide information on projected luminance where bats (and other nocturnal wildlife i.e. next to protected sites) are likely to be affected.

Hedgehogs

79 Hedgehogs themselves are partially protected from being taken or killed under Schedule 6 of the Wildlife and Countryside Act 1981. Appropriate enhancement might include:

- Cutting holes measuring 13 x 13cm at suitable points in all new fences and walls to provide access for hedgehogs to all areas of the site and to the surrounding environment. Once cut a fence plate (see Appendix 4 for example) can be installed, indicating the purpose of the hole to deter homeowners/ tenants from blocking the holes in future.
- Planting of native hedgerows across the development.
- Providing log piles to increase nesting options for the hedgehogs.

Nature Improvement Area

80 Within the NIA (Nature Improvement Area) the Council require specific biodiversity enhancements with developments over and above the minimum mitigation/ compensation

measures. A Planning Advice Note has been produced by the three Dearne Valley Local Authorities including Rotherham to ensure that the aims and objectives of the NIA are incorporated into development proposals. The guiding principle of the Dearne Valley NIA is to restore and enhance the ecological network of the Dearne Valley, reconnect people in local communities with their natural environment and create a high value environment that will provide a setting for future investment.

- 81** The NIA would welcome applications that seek to provide improvement for the focal species of the NIA which are: lapwing, redshank, snipe, wintering teal, wintering wigeon, wintering bittern, barn owl, willow tit, water vole, brown hare, noctule bat, grass snake, dingy skipper and wild flowers.
- 82** Opportunities for biodiversity enhancement in small scale commercial and industrial buildings in the NIA might include:
- Native species hedgerow planting
 - Insect boxes/bee hotel
 - Bird boxes
 - Tree planting
 - Woodpiles/log shelter
 - Ponds and soak-a-ways
 - Living roofs
 - Swift bricks/internal nest boxes
 - SuDS
 - Use of native tree and shrub species in landscaping
 - Green walls/habitat walls, willow fence/hedge
 - Introduce wildflowers into verges
- 83** Opportunities for biodiversity enhancement in large scale development including residential and commercial in the NIA might include:
- SuDS
 - Incorporate habitats/features within green space to create green corridors
 - Habitat creation and restoration of existing habitats
 - Use of nectar rich species and food plants in landscaping
 - Buffer strips along watercourses and ditches
 - Use show home garden or demonstration area on industrial site to demonstrate wildlife gardening
 - Develop a site/company Biodiversity Action Plan (BAP)

Part 2: Geodiversity

The geology of Rotherham

- 84** The bedrock that forms the foundations of Rotherham includes the Coal Measures of late Carboniferous age and the Magnesian Limestone of Permian age. This produces the two contrasting landscapes of the Yorkshire Coalfield and the South Yorkshire Magnesian Limestone Ridge that forms the eastern part of Rotherham Borough.
- 85** The Coal Measures include alternating sandstones and mudstones with siltstones and coal seams. The contrasting resistance to erosion of the sandstones and mudstones produces the distinctive edges and variable slopes on the sides of the valleys. Most of the sandstones have been quarried for local building stone, including the distinctive Rotherham Red sandstone. The Carboniferous mudstones have historically been used for brick manufacture. Most of the thicker coal seams have been mined for coal for domestic use and coking.
- 86** The Magnesian Limestone produces a slightly undulating plateau to the east around Anston, Lindrick and Maltby, with valleys and steep sided gorges with crags cutting across the plateau. The Magnesian Limestone is a distinctive limestone rock type that in places has been eroded to produce caves, sinkholes and fissures which form part of the landscape. Magnesian Limestone has been quarried locally as a building stone and for other purposes.

Supporting positive development proposals

- 87** Geodiversity resources are protected through Local Plan Policies. Areas designated for geodiversity are shown on the Local Plan Policies Maps. These are: Statutorily Protected Sites for geodiversity, those Sites of Special Scientific Interest (SSSI) which have been designated for earth heritage value and Non Statutorily Protected Sites for geodiversity in Rotherham Local Plan, which are currently represented by Regionally Important Geological Sites (RIGS).
- 88** RIGS are a local planning designation that recognises the geological conservation interest of a site. Benefits of RIGS include:
- Conserving areas with recognised geological interests;
 - Contributing to local and national geodiversity and biodiversity targets;
 - Adding to the local character and distinctiveness of an area; and
 - Contributing to the quality of life.
- 89** However it is also recognised that there may be assets which are not identified within the above designations. In these circumstances criterion d. of Policy CS20 Biodiversity and Geodiversity clarifies that priority will be given to conserving and enhancing sites and features which have demonstrable biodiversity and geodiversity value, including woodland, important trees, hedgerows, watercourse, glacial features, (overflow channels, moraines) gorges (Anston Stones) caves, (Anston Stones), crags and structures, but which are not included in designated sites.
- 90** Geodiversity will be considered on a case by case basis; however where proposed developments are likely to have a detrimental impact on a geodiversity site or asset(s) further geological investigation will be required prior to the submission of a planning application. All relevant

geodiversity datasets should be gained. The most up to date information on geodiversity in Rotherham is held in the Rotherham Geological Records Centre, this is administered by Sheffield Area Geology Trust (SAGT), to whom enquiries for records should be made. The Geodiversity Scoping Study (2015) assessed and provides generic planning advice for 28 possible allocation sites in Rotherham and will also be a useful source of information for relevant sites.

- 91** The planning application shall be supported by a Geodiversity Survey and Report, which assesses the impact of the specific development proposals on the geodiversity asset(s). The assessment should identify and describe potential development impacts likely to harm designated sites and or geodiversity features, including both direct and indirect effects both during and after construction. Where harm is likely, evidence must be submitted to show how:
- Alternative designs or locations have been considered;
 - Adverse effects will be avoided wherever possible;
 - Unavoidable impacts will be mitigated or reduced;
 - Impacts that cannot be avoided or mitigated will be compensated, ensuring that development decisions will safeguard the natural environment.
- 92** This may require desk study, field exploration, the drilling of boreholes and excavations for the necessary data to be acquired. Where a site is not designated, data collection and analysis shall enable an assessment of the site for its suitability for designation as a local site or a site of special scientific interest .
- 93** All data should be recorded and assessed by an appropriate expert using nationally recognised survey guidelines/methods where available. A copy of the Geodiversity Survey and Report should be deposited in the Rotherham Geological Records Centre.
- 94** When proposed development lies within an area which is likely to contain features of geodiversity interest, the planning authority may advise that any excavations into bedrock carried out in the course of development works should be examined by a competent geoscientist so that any features of geodiversity interest that may be present can be recorded. This provision is not intended to delay the development process, nor would it further disturb the site, but is simply to record geodiversity present - for the benefit of increased geodiversity knowledge. Sheffield Area Geology Trust (subject to capacity) can advise on geodiversity features that are expected to be present, their documentation and conservation.

Contacts

If you have any questions regarding this Supplementary Planning Document please contact Planning Policy:

Submit an enquiry to Planning Policy online:

https://www.rotherham.gov.uk/forms/200074/planning_and_regeneration

Email: planning.policy@rotherham.gov.uk
Telephone: 01709 823869
Website: <https://www.rotherham.gov.uk/localplan>
Post: Planning Policy Team, Planning, Regeneration and Transport, Regeneration & Environment Services, Rotherham Metropolitan Borough Council, Riverside House, Main Street, Rotherham, S60 1AE

For planning application and pre-application advice, please contact Development Management:

Submit an enquiry to Development Management online:

https://www.rotherham.gov.uk/forms/200074/planning_and_regeneration

Email: development.management@rotherham.gov.uk
Telephone: 01709 823835
Website: <https://www.rotherham.gov.uk/planning>
Post: Development Management, Planning, Regeneration and Transport, Regeneration & Environment Services, Rotherham Metropolitan Borough Council, Riverside House, Main Street, Rotherham, S60 1AE

Biological records

The Rotherham Biological Records Centre can be contacted using this online form:

https://www.rotherham.gov.uk/forms/form/487/en/make_a_biological_records_report_or_enquiry

Geological records and Sheffield Area Geology Trust

The Sheffield Area Geology Trust maintain the Rotherham Geological Records Centre.

Further information on The Sheffield Area Geology Trust (SAGT) can be found on their website: www.sagt.org.uk

The Trust can be contacted by email at sageologytrust@gmail.com

Appendix 1: Suggested plant species lists

95 The lists provided include common and indicative species for the different habitats; these are based on the Rotherham Local Wildlife Site selection criteria. Many horticultural suppliers can create mixes to suit individual requirements or will stock mixes suitable for a range of soils and conditions that may reflect the species listed here. Native planting supports local biodiversity; whilst ornamental species provide food and shelter for wildlife they are unlikely to be good as food plants for phytophagous insects or pollinating insects, which have evolved to pollinate native flowers .

Table 1 Suggested species list: trees and woodlands

Trees and woodlands			
Hedgerow Species	Woodland: Coal Measures Area	Woodland: Limestone Area	Wet Woodlands
<i>Acer campestre</i>	<i>Betula pendula</i>	<i>Acer campestre</i>	<i>Alnus glutinosa</i>
<i>Cornus sanguinea</i>	<i>Corylus avellana</i>	<i>Corylus avellana</i>	<i>Betula pendula</i>
<i>Corylus avellana</i>	<i>Ilex aquifolium</i>	<i>Fraxinus excelsior</i>	<i>Betula pubescens</i>
<i>Crataegus monogyna</i>	<i>Malus sylvestris</i>	<i>Quercus robur</i>	<i>Fraxinus excelsior</i>
<i>Fraxinus excelsior</i>	<i>Quercus petraea</i>	<i>Sorbus torminalis</i>	<i>Quercus petraea</i>
<i>Ilex aquifolium</i>	<i>Quercus robur</i>	<i>Tilia cordata</i>	<i>Quercus robur</i>
<i>Ligustrum vulgare</i>	<i>Sorbus aucuparia</i>	<i>Tilia platyphyllos</i>	<i>Salix Spp. particularly caprea, cinerea & fragilis</i>
<i>Malus sylvestris</i>		<i>Taxus baccata</i>	
<i>Prunus spinosa</i>		<i>Ulmus glabra</i>	
<i>Ulmus glabra</i>			
<i>Rosa canina</i>			
<i>Viburnum opulus</i>			

Table 2 Suggested species list: grasslands

Grasslands			
Woodland Ground Flora	Acid – Neutral (Coal Measures Area)	Calcareous (Magnesian Limestone Area)	Wet grassland, pond & stream edges
<i>Ajuga reptans</i>	<i>Agrostis capillaris</i>	<i>Brachypodium pinnatum</i>	<i>Alopecurus pratensis</i>
<i>Anemone nemorosa</i>	<i>Anthoxanthum odoratum</i>	<i>Briza media</i>	<i>Alopecurus geniculatus</i>
<i>Carex sylvatica</i>	<i>Cynosaurus cristatus</i>	<i>Bromus erectus</i>	<i>Alopecurus pratensis</i>

Grasslands			
<i>Conopodium majus</i>	<i>Deschampsia flexuosa</i>	<i>Festuca ovina</i>	<i>Anthoxanthum odoratum</i>
<i>Fragaria vesca</i>	<i>Festuca ovina</i>	<i>Agrimonia eupatoria</i>	<i>Deschampsia cespitosa</i>
<i>Galium odoratum</i>	<i>Ajuga reptans</i>	<i>Aquilegia vulgaris</i>	<i>Festuca pratensis</i>
<i>Geum urbanum</i>	<i>Centaurea nigra</i>	<i>Campanula rotundifolia</i>	<i>Festuca rubra</i>
<i>Hyacinthoides nonscripta</i>	<i>Daucus carota</i>	<i>Carlina vulgaris</i>	<i>Holcus lanatus</i>
<i>Lamiaeum galeobdolon</i>	<i>Galium saxatile</i>	<i>Centaurea scabiosa</i>	<i>Holcus mollis</i>
<i>Myosotis sylvatica</i>	<i>Geranium pratense</i>	<i>Centaureum erythraea</i>	<i>Caltha palustris</i>
<i>Oxalis acetosella</i>	<i>Hypericum maculatum</i>	<i>Conopodium majus</i>	<i>Cardamine pratensis</i>
<i>Primula vulgaris</i>	<i>Lathyrus pratensis</i>	<i>Dactylorhiza fuchsia</i>	<i>Carex Spp.</i>
<i>Ranunculus ficaria</i>	<i>Leontodon autumnalis</i>	<i>Fragaria vesca</i>	<i>Cirsium palustre</i>
<i>Scrophularia nodosa</i>	<i>Leucanthemum vulgare</i>	<i>Galium verum</i>	<i>Filipendula ulmaria</i>
<i>Stellaria holostea</i>	<i>Lotus corniculatus</i>	<i>Helianthemum</i>	<i>Galium palustre</i>
<i>Veronica Montana</i>	<i>Lychnis flos-cuculi</i>	<i>nummularium</i>	<i>Geum rivale</i>
<i>Viola riviniana</i>	<i>Lysimachia nummularia</i>	<i>Leontodon hispidus</i>	<i>Hypericum tetrapterum</i>
Climbing Plants	<i>Primula vulgaris</i>	<i>Leontodon saxatilis</i>	<i>Iris pseudacorus</i>
<i>Clematis vitalba</i>	<i>Rumex acetosella</i>	<i>Primula veris</i>	<i>Juncus effuses</i>
<i>Hedera helix</i>	<i>Rhinanthus minor</i>	<i>Hypericum montanum</i>	<i>Juncus inflexus</i>
<i>Humulus lupulus</i>	<i>Stellaria graminea</i>	<i>Hypericum perforatum</i>	<i>Lathyrus pratensis</i>
<i>Lonicera periclymenum</i>	<i>Trifolium medium</i>	<i>Knautia arvensis</i>	<i>Lythrum salicaria</i>
	<i>Trifolium pratense</i>	<i>Lotus corniculatus</i>	<i>Mentha aquatica</i>
	<i>Valeriana officinalis</i>	<i>Orchis mascula</i>	<i>Myosotis scorpioides</i>
		<i>Origanum vulgare</i>	<i>Persicaria amphibian</i>
		<i>Sanguisorba minor</i>	<i>Ranunculus flammula</i>
		<i>Scabiosa columbaria</i>	<i>Ranunculus sceleratus</i>
		<i>Succisa pratensis</i>	<i>Scrophularia auriculata</i>
		<i>Thymus praecox</i>	<i>Valeriana dioica</i>
			<i>Veronica anagallisaquatica</i>
			<i>Veronica beccabunga</i>

Appendix 2: Ecological survey requirements

From a planning perspective the information required to be submitted in relation to a proposed development should include:

- Results of consultation with Rotherham Biological Records Centre, and / or other likely holders of biological data,
- Details, with appropriate mapping, of habitats occurring and present vegetation status.
- The presence of or potential for protected and priority species and priority habitats on the site. Including identification of any features that may be used by or support protected fauna (e.g. roosts, nest sites etc).
- Details of the survey methodology employed, including identifications of limitations and recommendations for further survey work if necessary.
- Key factors resulting from the development that are likely to affect the ecological interest identified by the survey work. Including the expected timing, phasing and duration of works.
- Opinion as to whether the site, either in whole or in part, is suitable for development as proposed.
- Details of measures to safeguard features of ecological interest and recommendations for ecological enhancement of the proposed development site.
- Details of direct mitigation measures to be incorporated for ecological interest to be lost or reduced as a result of the proposed development.

Where there is the potential for protected species the following requirements should also be included:

- Details of survey methodology used including survey dates, times, conditions, comparison of survey work undertaken to established best practice methodology, identification of limitations and recommendations for further survey work if necessary;
- Details of evaluation methodology used to assess the survey results;
- Survey staff involved in the survey work, including an outline of their training and experience;
- Description of the need for and the objectives of the survey;
- Description of the site and any structures surveyed including evaluation of potential features of interest, use of images where appropriate;
- Results of site and structure assessment, i.e. details of any evidence of protected species or potential found during survey;
- Evaluation of the survey results including confirmation of protected species presence / absence, estimated species population size, key features of importance;
- Key factors resulting from the development / proposed works that are likely to affect the ecological interest identified by the survey work. Including the expected timing, phasing and duration of works;
- Opinion as to whether the site / structure, either in whole or in part, is suitable for development / works as proposed;
- Details of measures needed to safeguard features of ecological interest and recommendations for ecological enhancement of the proposed works;

- Details of direct mitigation measures to be incorporated for ecological interest to be lost or reduced as a result of the proposed works;
- Opinion as to whether a European Protected Species Licence will be required from Natural England and what measures are likely to be required to meet Natural England's licensing application process;
- Provision of a detailed working method statement to be followed throughout the proposed works to ensure that harm or disturbance to any protected species not found during the survey work is minimised.

Appendix 3: Ecological survey calendar

Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Habitats / vegetation	Phase 1 only (sub-optimal)											
Badgers	Limited sett / bait surveys	Phase 1 and NVC										
Bats	Bait marking and sett surveys	Limited sett surveys										
Bats	Inspection of hibernation roosts	Limited activity	Survey for summer roosts and activity surveys possible for all areas with suitable habitat									
Bats	Potential roosts and internal surveys are possible all year round; trees are best surveyed in winter											
Birds	Surveys for Winter Species, i.e. Wintering waders	Breeding bird surveys, and those for migrant species	Breeding bird surveys									
Dormice	Gnawed hazel nut search	Nest tube survey from April to November. Gnawed hazel nut search (best from September to December)										
Great crested newts	Newts hibernating; no survey possible	Pond surveys for adults; terrestrial survey, egg surveys April to mid-June, larvae surveys from mid-May										
Otters	There are no distinct seasonal constraints to otter survey; however they may be affected by vegetation cover and weather conditions.											
Reptiles	Reptiles hibernating; no survey possible	Peak survey months are April and May										
Water voles	Low activity	Surveys for habitat suitability	Habitat and field signs / activity surveys. May be limited by vegetation cover and weather.									
White-clawed crayfish	Low activity; no survey possible											
	Searching; Where present likely to have young, hence avoid survey											
	Substrate search by hand, Torchlight and trapping surveys.											
:Key:	Surveys recommended				Sub-optimal survey period				Surveys not possible			

Appendix 4: References, advice and best practice guidance

Amphibian and Reptile Groups of the United Kingdom. November 2006. Advice Note 1 Engaging with the Planning System. <https://www.arguk.org/info-advice/advice-notes>

Barn Owl Trust. <http://www.barnowltrust.org.uk/>

Bat Conservation Trust. <http://www.bats.org.uk/index.php>

British Standard BS 42020:2013 Biodiversity – Code of practice for planning and development. 2013. British Standards Institute (BSI).

British Standard on Biodiversity Net Gain. Due to be published in 2021.

Chartered Institute of Ecology & Environmental Management (CIEEM): Biodiversity Net Gain. Good Practice Principles for Development. 2016.

<https://cieem.net/i-am/current-projects/biodiversity-net-gain/>

Chartered Institute of Ecology & Environmental Management (CIEEM): Guidelines for Ecological Report Writing. 2nd Edition. December 2017.

<https://cieem.net/resource/guidelines-for-ecological-report-writing/>

Chartered Institute of Ecology & Environmental Management (CIEEM): Guidelines for Preliminary Ecological Appraisal. 2nd Edition. December 2017.

<https://cieem.net/resource/guidance-on-preliminary-ecological-appraisal-gpea/>

Chartered Institute of Ecology & Environmental Management (CIEEM): Guidelines for Ecological Impact Assessment in the UK and Ireland. September 2018.

<https://cieem.net/resource/guidelines-for-ecological-impact-assessment-ecia/>

Chartered Institute of Ecology & Environmental Management (CIEEM), CIRIA & IEMA: Biodiversity Net Gain. Good Practice Principles for Development. A Practical Guide. February 2019.

<https://cieem.net/i-am/current-projects/biodiversity-net-gain/>

Collins, J. et al (2016) Bat Surveys for Professional Ecologists. Good Practice Guidelines (3rd Edition).

Dearne Valley Green Heart Partnership: Development in the Dearne Valley NIA. [No date]

<https://www.rspb.org.uk/our-work/conservation/landscape-scale-conservation/sites/dearne-valley-green-heart/>

DEFRA. Natural Environment White Paper. 2011.

<https://www.gov.uk/government/publications/the-natural-choice-securing-the-value-of-nature>

Exeter City Council. Residential Design Guide Supplementary Planning Document. 2010.

<https://exeter.gov.uk/planning-services/planning-policy/supplementary-planning-documents/>

Freshwater Habitats Trust. <http://www.freshwaterhabitats.org.uk/>

Froglife (1998) The Planning System and Site Defence. Froglife Advice Sheet 9.

Great crested newts: district level licensing schemes.

<https://www.gov.uk/government/publications/great-crested-newts-district-level-licensing-schemes>

Hedgehog gates (example of):

<https://www.nhbs.com/eco-hedgehog-hole-fence-plate?bkfno=242607>

Johnston, J. & Newton, J. Plants for Roofs and Walls 2004 Greater London Authority

Joint Nature Conservancy Committee (JNCC) UK and international nature conservation advice.

<https://jncc.gov.uk/>

Lawton Review Making Space for Nature (2010)

MAGIC MAP website. <https://magic.defra.gov.uk/MagicMap.aspx>

MHCLG. National Planning Policy Framework.2019.

<https://www.gov.uk/government/publications/national-planning-policy-framework--2>

MHCLG. Planning Practice Guidance. 2019.

<https://www.gov.uk/government/collections/planning-practice-guidance>

Natural England guidance. <https://www.gov.uk/government/organisations/natural-england>

Natural England's Impact Risk Zones (IRZ)

<https://naturalengland-defra.opendata.arcgis.com/datasets/sssi-impact-riskzones-England>

The IRZs data can also be viewed on government's MAGIC website: <https://magic.defra.gov.uk/>

Natural England – Standing Advice for Protected Species.

<https://www.gov.uk/guidance/protected-species-how-to-review-planning-applications>

Natural Environmental Research Council. <https://nerc.ukri.org/>

Natural Environment and Rural Communities Act. 2006.

<http://www.legislation.gov.uk/ukpga/2006/16/contents>

Plantlife: Advice on planting and growing native wild flowers.

https://plantlife.love-wildflowers.org.uk/wildflower_garden

Rotherham Biodiversity Forum. Rotherham Biodiversity Action Plan. 2012.

<https://www.rotherham.gov.uk/downloads/download/79/evidence-base-downloads>

Rotherham Metropolitan Borough Council. Local Wildlife Site Framework & Selection Criteria. 2010.

<https://www.rotherham.gov.uk/downloads/download/54/natural-environment-documents>

Rotherham Metropolitan Borough Council & Sheffield Area Geology Trust. Regionally Important Geological Sites in Rotherham - methodology. 2010.

<https://www.rotherham.gov.uk/downloads/download/54/natural-environment-documents>

Royal Horticultural Society. Plants for Pollinators.

<https://www.rhs.org.uk/science/conservation-biodiversity/wildlife/plants-for-pollinators>

<https://www.rhs.org.uk/science/conservation-biodiversity/wildlife/plants-for-pollinators>

Sheffield Area Geology Trust. Geodiversity Scoping Study. 2015.

<https://www.rotherham.gov.uk/downloads/file/654/geodiversity-scoping-study-2015>

Sheffield & Rotherham Wildlife Trust. <http://www.wildsheffield.com/>

The SuDs Manual (C753). CIRIA.

Swift conservation. <http://www.swift-conservation.org/>

Town & Country Planning Association. Planning for a healthy environment: good practice for green infrastructure and biodiversity. 2012.

<https://www.tcpa.org.uk/Handlers/Download.ashx?IDMF=34c44ebf-e1be-4147-be7d-89aaf174c3ea>

Wildflower seed providers:

- Emorsgate: <https://wildseed.org.uk>
- Naturescape: <https://www.naturescape.co.uk>

Yorkshire Wildlife Trust. <http://www.ywt.org.uk/>

Appendix 5: Glossary

In addition to the entries below, reference should be made to the glossaries provided at Appendix C of the Core Strategy, Appendix 4 of the Sites and Policies Document, and Annex C of the National Planning Policy Framework.

Ancient Woodland: An area that has been wooded continuously since at least 1600 AD.

Biodiversity: is the whole variety of life on earth; all species of plants and animals and the ecosystems of which they are part.

Biodiversity Net Gain (BNG): Biodiversity Net Gain is an approach to development that leaves biodiversity in a better state than before. Where a development has an impact on biodiversity it encourages developers to provide an increase in appropriate natural habitat and ecological features over and above that being affected in such a way it is hoped that the current loss of biodiversity through development will be halted and ecological networks can be restored.

Coal Measures: Rocks of the Upper Carboniferous Period, around 310 million years old. The Coal Measures comprises sandstones, siltstones and other sedimentary rocks interspersed with coal measures which initially formed in deltaic environments.

Core Strategy: sets out the long-term spatial vision for the local planning authority area, the spatial objectives and strategic policies to deliver that vision. The core strategy has the status of a development plan document.

Dearne Valley Green Heart: The Dearne Valley Green Heart Partnership is a coalition of local organisations including Rotherham, Barnsley and Doncaster councils, the RSPB & Yorkshire Wildlife Trust who are committed to improving the natural environment of the Dearne Valley for the benefit of the local population and wildlife.

District Level Licensing (DLL): If you are a developer proposing to develop land, you can pay to join a district level licensing scheme. If you join a scheme, you do not need to carry out your own surveys; plan and carry out mitigation work; District level licensing schemes operate in certain parts of England to better protect great crested newt populations. Schemes are operated by either: Natural England; a local planning authority (LPA); a third party on behalf of the LPA.

Ecological networks: The connections and interactions between the organisms and components of an ecosystem that conserve the ecosystem and provide ecosystem services that may also have social and economic values.

Geodiversity: The variety of rocks, fossils, minerals, landforms and soils, and all the natural processes that shape the landscape.

Great Crested Newts (GCN): The great crested newt (*Triturus cristatus*) is the largest and least common of the three newt species in the UK, with the larger females growing up to 16cm. Since the 1940s, populations of crested newts have declined in most of Europe due to loss of habitat. In England, Wales and Scotland it is a protected species under Schedule 5 of the Wildlife & Countryside Act 1981. It is also a European Protected Species and it has additional protection in the UK under

Regulation 39 of the Conservation (Natural Habitats etc.) Regulations 1994 (the Habitats Regulations) as amended by the Conservation (Natural Habitats etc) (Amendment) Regulations 2007. It is an offence to:

- Intentionally kill, injure or take a northern crested newt somewhere else from its own habitat
- Possess or control any live or dead specimen or anything derived from a northern crested newt
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a northern crested newt (in practice this means both its breeding sites and its terrestrial habitat)
- Intentionally or recklessly disturb a northern crested newt while it is occupying a structure or place which it uses for that purpose

Green infrastructure: the network of multi-functional green space, both new and existing, both rural and urban, which supports the natural and ecological processes and is integral to the health and quality of life of sustainable communities.

Habitats Directive: The Habitats Directive (more formally known as Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora) is a European Union directive adopted in 1992 as an EU response to the Berne Convention. It is one of the European Union's directives in relation to wildlife and nature conservation, another being the Birds Directive. The Habitats Directive requires national governments to specify areas that are expected to be ensuring the conservation of flora and fauna species. This led to the setting up of a network of protected areas across the EU, special areas of conservation which together with the existing Special Protection Areas, became the so-called Nature 2000 network established to protect species and habitats.

Habitats and Species of Principle Importance for Biodiversity: The habitats and species in England that have been identified via the Natural Environment and Rural Communities Act 2006 as requiring action in the England Biodiversity Strategy and which Local Authorities have a duty to protect and enhance.

Irreplaceable habitat: 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 68 veteran trees, blanket bog, limestone pavement, sand dunes, salt marsh and lowland fen.

Local Nature Reserves (LNR): A statutory designation made under section 21 of the National Parks and Access to the Countryside Act 1949, and amended by Schedule 11 of the Natural Environment and Rural Communities Act 2006

Local Wildlife Sites (LWS): Non-statutory areas of of local importance for nature conservation that complement nationally and internationally designated geological and wildlife sites. Local Sites are protected within the planning framework.

Magnesian Limestone:A traditional name for rocks of Permian age, consisting largely of limestones composed of calcium-magnesian carbonate. The Magnesian Limestone strata in Rotherham are about 250 million years old. The Magnesian Limestone is a suite of calcareous rocks in north-east England

and the East Midlands dating from the Permian period (i.e. following the Coal Measures or the Carboniferous period). The outcrop stretches from Nottingham northwards through Yorkshire and into County Durham where it is exposed along the coast. Much of the Magnesian Limestone is dolomite which is limestone with a high magnesium content. As with other limestones, it often supports habitats of high nature conservation value due to the thin infertile soils associated with it and which prevent competitive plants from dominating.

National Planning Policy Framework (NPPF): The National Planning Policy Framework sets out the Government's planning policies for England and how these are expected to be applied. Council's must take account of the NPPF when preparing their Local Plans.

Nature Improvement Area (NIA): Nature Improvement Areas (NIAs) are a network of large scale initiatives in the landscape of England to improve ecological connectivity and improve biodiversity. They were launched in 2012. The NIAs form part of the UK Government's response to Sir John Lawton's 2010 report 'Making Space for Nature'. They were then implemented via the Natural Environment White Paper, the first natural environment government White Paper in 20 years. The NIAs run with the aid of Local Nature Partnerships and around local volunteers.

Priority habitats and species: Species and Habitats of Principal Importance included in the England Biodiversity List published by the Secretary of State under section 41 of the Natural Environment and Rural Communities Act 2006.

Regionally Important Geological Sites (RIGS): Non-statutory areas of local importance for nature conservation that complement nationally and internationally designated geological and wildlife sites. Local Sites are protected within the planning framework.

Sites & Policies Development Plan Document: This shows specific development sites and contain policies to guide the release of land and design of new development.

Sites of Special Scientific Interest (SSSI): Representative examples of nationally important wildlife and geology. SSSIs are notified by Natural England under section 28 of the Wildlife and Countryside Act 1981 as being of special value for nature conservation and are legally protected under the Wildlife and Countryside Act, as amended by the Countryside and Public Rights of Way Act (CROW) 2000 and the Natural Environment and Rural Communities (NERC) Act 2006.

Supplementary Planning Document (SPD): provide supplementary information in respect of the policies in development plan documents. They do not form part of the development plan and are not subject to independent examination.

Sustainable Urban Drainage Systems (SuDS): Water management practices and control systems designed to drain surface water in a more sustainable way than conventional systems. Different techniques, such as infiltration and retention, are used which mimic runoff from the site in its natural state.