Statement of Case – Biodiversity

Leconfield Road, Nanpantan, Loughborough Appeal Hearing

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Director, RammSanderson Ecology

September 2022

Contents

1. Introduction

Qualifications and Experience

1.1. My name is Oliver Ramm, I am a Director of RammSanderson Ecology Ltd, a CIEEM Registered Practice. I am a Full member of the Chartered Institute of Ecology & Environmental Management and have 18 years of professional ecological consultancy experience and hold a Batchelor of Science degree from the University of Nottingham in Environmental Biology.

1.2. I have significant experience in advising on ecological matters, on a range of project spanning all sectors. This has included advising on many residential planning applications, ranging in size and type from minor to major and SUE scale schemes. I am experienced in the assessment of sites for habitats and protected species and can ably advise on mitigation and enhancement measures.

1.3. Habitat surveys of the appeal site were completed by Senior Ecologist Lauri Leivers ACIEEM, a competent botanist (FISC 3) and experienced user of UK HAB and JNCC habitat assessment methods. We are both experienced and trained in the use of DEFRA's Biodiversity Metrics 2.0, 3.0 and 3.1 and have applied each of these to this site, as this assessment system has evolved during the planning history of this site.

1.4. The evidence which I have prepared and provided for this statement is true to the best of my knowledge. It has been prepared and is given in accordance with the Code of Practice of the Chartered Institute of Ecology and Environmental Management and I confirm that the opinions expressed are my true and professional opinions.

Outline

1.5. The Appeal is against the refusal to grant outline planning permission P/20/2199/2.

1.6. The relevant (2) Reason for Refusal (RfR) states that:

> *"The proposed development would result in significant adverse biodiversity impacts that would be contrary to the provisions of Core Strategy Policy CS13 and National Planning Policy Framework paragraphs 174 and 180."*

Planning History

1.7. The application was supported by an Ecological Appraisal (RSE_4942_R1_V1 June 2021).

1.8. Comments received by Charnwood Borough Council's ecologist Mr. Rupert Sims during the determination process led to a rebuttal letter being provided[1]. This is included in the Core Documents as CD.2.17.

[1] RSE_4942_L1_V1 Response to comments from Charnwood Borough Council 17th August 2021.

1.9. Following subsequent comments from Charnwood Borough Council and a separate assessment of the site completed by a third party appointed by the Nanpantan Ward Residents Group (NWRG) a second rebuttal letter was provided in October 2021[2]. This is included in the Core Documents as CD.2.20.

1.10. As a result of this and direct communication with Charnwood Borough Council's ecologist Mr. Rupert Sims during the determination process culminated in his acceptance of the Ecological Appraisal as providing a satisfactory assessment of the Appeal Site and accepted an updated Biodiversity Impact Assessment ["BIA"] as providing an suitable assessment of the site's baseline biodiversity value, raising no objections to the Proposed Development, subject to conditions, and an s.106 Agreement to secure commuted sum contributions, if needed, to ensure a biodiversity net gain is achieved through any future application for reserved matters consent. Core Document CD.8.25 confirms that Mr Sims had no further objections.

1.11. Unfortunately the confirmatory correspondence referred to at CD.8.25, was not filed and made available to the planning committee. As such, the RfR included point 2, relating to biodiversity.

Scope of this Report

1.12. This Proof of Evidence addresses the points raised in the reason for refusal relating to biodiversity (2) (reason 1 is being addressed by other witnesses).

1.13. The relevant RfR states that the proposals will have a significant impact on biodiversity and that this is contra to policy CS13 of the CBC Core Strategy, and paragraphs 174 and 180 of the NPPF.

1.14. We set out here, and in appended documents, that this Appeal meets and exceeds the requirements of these National and Local Policies. The Appeal provides a **significant biodiversity net gain of over 46% in habitats and over 117% in hedgerow terms**, and this should be afforded significant weight. This is achieved using a combined on and off site offsetting strategy, as detailed in the updated ecological assessment at Appendix 1, and as detailed in the DEFRA metric 3.1 Biodiversity Impact Assessment Calculator at Appendix 2. An off site offsetting 'receptor' has been secured on land in close proximity to the Appeal site and in the ownership of the same landowner. Legal agreement has been made to secure this land for Biodiversity Net Gain purposes, and a fully funded management plan and monitoring schedule will be submitted for the Council's approval with a Reserved Matters application.

Relevant Recent Cases

1.15. A recently allowed Appeal, Cossington Road, Sileby (Appeal Ref: APP/X2410/W/21/3287864), in which I acted for the Appellants on Biodiversity matters, also in

[2] RSE_4942_L2_V1 Response to Julian Jones and Charnwood Borough Council 22nd October 2021.

the Borough of Charnwood, stated in the Inspectors report (para. 79), that *"there would be a biodiversity net gain of c.39% (habitats) and 74% for hedgerows, both clearly above the government's target of 10% and so can be afforded reasonable weight".* It was perhaps the fact that biodiversity was not an RfR in this case, and that our assessments were not contested by CBC that only "reasonable weight" was afforded. When viewed in the light of the considerable losses to biodiversity and national and international targets to halt declines of biodiversity (as set out in the following section) it is perhaps more significant that developments that can contribute to halting biodiversity loss through this mechanism and greater weight should be applied, particularly where the 10% threshold of the Environment Act is exceeded.

2. The Appeal Proposals

2.1 The Appeal Proposals comprise development of up to 30 dwellings on the site and include a scheme of landscaping proposals which buffer and protect the sensitive adjacent habitats. This is supported by an updated ecological assessment and a combined on and off-site Biodiversity Net Gain strategy, which delivers a significant net gain for biodiversity.

2.2 The scheme has been designed in a landscape led fashion, in reflection of its setting and context. There has been ecological and landscape input throughout the masterplanning process. This has resulted in a scheme which incorporates tree planting throughout the scheme, a permanently wet detention basin designed to provide benefits to wildlife, and species rich grassland planting.

2.3 With the enactment of the Environment Act, and advent of Biodiversity Metric 3.1, since the submission of the planning application, we have updated our assessments and put forward in evidence, an updated Ecological Appraisal[3], Biodiversity Impact Assessment Metric[4] and Biodiversity Net Gain strategy (included within the updated Ecological Appraisal), which involves an off-site biodiversity offsetting scheme. We have negotiated and secured the required land and provide an ample net gain of much greater than the 10% included in the Environment Act, which although enacted, is currently undergoing a transition period, during which and reflecting on the wording of local policy the only enforceable position is a 'measurable net gain' (i.e. +0.1%).

2.4 The off site Biodiversity Net Gain proposal, detailed within the accompanying updated EcIA (see section 2.3.iii and Figure 1 (on pages 11 and 13), which describe the location of the offsetting land and section 7.1.2 (p29) which discusses management of the off site land that have been included in the BIA metric), , and BIA, both of which are appended to this document, is on land in the same ownership, which has been secured for this purpose and, should this Appeal be allowed, will be subject to a detailed Biodiversity Management Plan for a minimum 30 year duration. The land secured off-site to facilitate this is local to the site and will be managed for biodiversity benefit, with a

[3] RSE_4942_01_V3_EcIA - Ecological Appraisal of Land off Leconfield Road, Nanpantan V3 August 2022.
[4] RSE_4942 BIA V3 August 2022

management plan entered into between the Appellant and the landowner, to be secured by Unilateral Undertaking/S106 Agreement, and managed as grassland and scrub for the next 30 years. This has been factored for in the supporting BIA calculated using the most up to date DEFRA metric (v3.1) and results in a significant net gain for biodiversity of +46.90% in habitat units and +117.62% in hedgerow units.

2.5 The site baseline value and condition has previously been agreed in consultation with CBC. This remains unaltered and has been transposed into the most up to date metric (3.1).

2.6 Management of the on, and off site, offsetting land will be carried out by a management company appointed by the appellant, and monitoring surveys will be completed during the management plan period by ourselves. A monitoring report will be provided to CBC every 5 years, and if required, the management plan will be reviewed and updated on this rotation also.

3. Assessment against Planning Policy

Introduction

3.1 A brief summary of the importance and national context of biodiversity and in particular biodiversity net gain is given here. This is followed by the referencing of the aspects of national and local policy and guidance pertinent to this Proof of Evidence and the relevant RfR with commentary given to each policy item and how the Appeal site is in accordance.

Biodiversity Net Gain & The Environment Act Background

3.2 Following the Lawton Review[5] and DEFRA's response to the review[6] specific recommendations were made to identify and protect biodiversity assets. These and other recommendations were brought through to the National Planning Policy Framework (2012) and subsequently DEFRA set a 25 year plan[7] in 2018 to help the natural world regain and retain good health. A pilot study took place between 2012 and 2014 into biodiversity offsetting across 6 local authority areas. Five of the LPA's used the first draft of DEFRA's Biodiversity Impact Assessment metric calculator, and 1, Warwickshire, developed their own metric calculator. "The Warwickshire Metric" includes a tariff for biodiversity units, whereas the DEFRA Metric, even in the most recent versions, is currently being consulted on as to the inclusion of and valuation of tariffs, so currently excludes this element. Some local authorities chose to adopt the Warwickshire metric to assist with the valuation of commuted sums, including Charnwood Borough. The DEFRA metric is however referenced in the Environment Act (2021) and will be the only acceptable Biodiversity Impact Assessment calculator from the end of the transition period for the Act (November 2023).

3.3 As a result of the successful pilot scheme, the lean toward Biodiversity Net Gain was written into the amendment of wording of National Planning Policy, as the Framework has been updated and revised since its first adoption, from '*opportunities to incorporate biodiversity in and around developments should be encouraged*' (para 118 of 2012 version of NPPF) to '*providing a measurable net gain'* in biodiversity (para 179, added in 2019) and the use of BIA calculators accompanying ecological reports with planning applications became an expectation of most Local Authorities as a result. The period between 2019 and 2021 saw varying adoption rates, however the publication of a draft Environment Bill, also in 2019, which stated that a net gain of 10% would soon become mandatory solidified the need for these assessments, and has seen LPA's, the development community and ecological consultancy industry prepare themselves for a mandatory net gain. With the enactment of the Environment Act in November last year, which included a two year transition period, 10% net gain is a target to work to, which many applications, especially for outline permission (where the timescales

[5] Department for Environment, Food and Rural Affairs (2010) Making Space for Nature7
[6] Department for Environment Food and Rural Affairs (2011) Government Response to Making Space for Nature Review
[7] Department for Environment, Food and Rural Affairs (2018) 'A Green Future: Our 25 Year Plan to Improve the Environment'

in reaching Reserved Matters approval will be after the end of the transition period), are meeting or exceeding already, as here.

3.4 The Government committed at the 2021 G7 summit to halt and reverse the loss of biodiversity by 2030, including strengthening the duty to set a legally binding target to halt species decline by 2030. It is therefore of the utmost importance that each and every opportunity to create demonstrable, measurable net gains for biodiversity as a result of the planning process are taken and supported by forward thinking Councils. Many will be funded by development and will have multi-faceted benefits beyond BNG, such as ecosystem services, enhancing new housing sites with landscape led approaches (as here), using Sustainable Urban Drainage methods for site drainage and ecological benefit, providing public access into biodiverse public open spaces creating key resources for enjoyment, wellbeing and exercise and all the tangible onward benefits that these factors bring.

National Planning Policy Framework:

3.5 The RfR states that the proposals do not accord with Paragraph 174 of the NPPF. The 2021 version of the NPPF, Para 174 states [emphasis added] that:

> *"Planning policies and decisions should contribute to and enhance the natural and local environment by:*
>
> *a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);*
>
> *b) 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;*
>
> *c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;*
>
> *d) **minimising impacts on and providing net gains for biodiversity,** including by establishing coherent ecological networks that are more resilient to current and future pressures.*
>
> *e) 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. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and*
>
> *f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate"*

3.6 The proposals, through their significant (min. 20m wide) landscape buffer to Burleigh Woods, and the scheme of on and off site habitat creation, which deliver a significant net gain, are in accordance with the relevant sections of paragraph 174 of the NPPF.

3.7 Paragraph 180 of the NPPF 2021 states [emphasis added]:

> *"When determining planning applications, local planning authorities should apply the following principles:*
>
> *(a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts),* ***adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;***
>
> *(b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;*
>
> *(c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and*
>
> *(d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design,* ***especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate****"*

3.8 The Appeal Proposals are in accordance with paragraph 180 of the NPPF as the scheme secures a significant measurable net gain for biodiversity.

Natural England Standing Advice on Ancient Woodland (material consideration)

3.9 One of the principal matters relating to ecology and this development proposal is the presence of Burleigh Wood, an ancient woodland, which forms the site boundary to the north west. Since the application was submitted and refused, Natural England has released new standing advice[8] in relation to ancient woodlands and veteran trees. In relation to the size of a buffer from the woodland edge, the standing advice states:

> *"For ancient woodlands, the proposal should have a buffer zone of at least 15 metres from the boundary of the woodland to avoid root damage"*

3.10 The advice goes on to discuss planting types in the buffer zone, stating planting should consist of semi-natural habitats such as woodland; a mix of scrub, grassland, heathland and wetland and that local and appropriate native species should be specified. It further states that public access can be allowed within a buffer zone if habitats are not harmed by trampling.

[8] https://www.gov.uk/guidance/ancient-woodland-ancient-trees-and-veteran-trees-advice-for-making-planning-decisions

3.11 It is my view that the Appeal Proposals and landscaping details provided for the buffer zone satisfy these conditions.

Local Planning Policy

3.12 The Appeal site is located with Charnwood Borough, and the relevant policy document at the time the application was submitted was the Charnwood Local Plan 2011 – 2028 Core Strategy. The RfR references Core Strategy policy CS13, which states:

"We will conserve and enhance our natural environment for its own value and the contribution it makes to our community and economy. We will do this by: Supporting developments that protect biodiversity and geodiversity and those that enhance, restore or re-create biodiversity. We will expect development proposals to consider and take account of the impacts on biodiversity and geodiversity, particularly with regard to:

- *Sites of Special Scientific Interest*
- *Local Wildlife Sites*
- *Regionally Important Geological Sites*
- *UK and Local Biodiversity Action Plans priority habitats and species*
- *protected species, and*
- *ecological networks*

We will only support development that results in the loss of ecological or geological features in exceptional circumstances where the benefit of development clearly outweighs the impact on ecology and geodiversity. Where there are impacts on biodiversity we will require adequate mitigation; or as a last resort, ***compensation which results in replacement provision that is of equal or greater value and potential than that which will be lost, and is likely to result in a net gain in biodiversity****. We will consider this by requiring development* ***proposals to be accompanied by ecological surveys and an assessment of the impacts on biodiversity*** *and geodiversity. We will also work with our partners to secure long term management and investment plans for biodiversity and geodiversity"*

3.13 By submitting the application with accompanying ecological survey reports which included an assessment of the impacts on biodiversity, the Appellant acted in accordance with this policy.

3.14 The Ecological Appraisal has been updated throughout the determination and Appeal process in order to keep it current and relevant, with the Environment Act having been enacted since the application was submitted, and in reflection of the rapidly changing, emerging area of Biodiversity Impact Assessment and Net Gain, which has seen 3 new iterations of the metric calculator and supporting technical guidance since the time of submission.

4. Summary & Conclusions

Summary

4.1 At the time of determining and application, fundamentally, the CBC consultee on ecological matters was in agreement with our assessment of the site and had no objection to the submitted scheme.

4.2 An administrative omission led to a biodiversity reason for refusal being added to the committee report.

4.3 A subsequent update of the technical supporting information has been completed ahead of the submission of evidence to the Appeal, in order to ensure current, accurate information is used to determine the Appeal.

4.4 This includes a combined on and off site biodiversity strategy; the off site land is in the same land ownership and legal agreement has been reached. Finer details relating to this and a 30 year management plan for the BNG land and the on site habitats, will be produced in advance of a reserved matters application for the site. This is an entirely appropriate and standard means of progressing and assessing such matters.

4.5 The submitted strategy, appended to this Proof of Evidence, shows a significant biodiversity net gain is achieved as a result of the proposals. The minimum, and maximum enforceable quantum of gain currently in the Borough is 0.1%. We provide a 46.90% habitat unit gain, and 117.62% hedgerow unit gain, far in excess of the 10% set out in both the Environment Act 2021 (which is currently in a 2 year transition period and is therefore not yet mandatory), and the draft Charnwood Borough Local Plan.

4.6 The recently published Charnwood Borough Council Planning Guidance for Biodiversity[9] (June 2022) has been reviewed as part of this Appeal and the submitted updated assessment and metric, is in accordance with it.

[9] Agenda for Cabinet on Thursday, 9th June, 2022, 6.00 pm - Charnwood Borough Council (moderngov.co.uk)

Leconfield Road, Nanpantan

Low Impact Ecological Impact Assessment (EcIA)

Client:

Bowbridge Homes

Report Reference:

RSE_4942_01_V3

Issue Date:

August 2022

RammSanderson

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HABITATS

CIEEM REGISTERED

PROJECT			
Client:	Bowbridge Homes		
Project:	Leconfield Road, Nanpantan		
Reference	RSE_4942_01_V3_EcIA		
Report Title	Ecological Impact Assessment		

DOCUMENT CONTROL			
Originated:	**Lauri Leivers** BSC (Hons) GCIEEM	Senior Ecologist	21/08/2022
Technical Reviewed:	**Amy Skuce** BSc (Hons)	Senior Ecologist	22/08/2022
Approved for Issue	**Oliver Ramm** BSc MCIEEM	Director	30/08/2022

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DISCLOSURE:

1

1 EXECUTIVE SUMMARY

1.1 Background

i RammSanderson Ecology Ltd was instructed by Bowbridge Homes to carry out an Ecological Impact Assessment (EcIA) of a site referred to as land off Leconfield Road, Nanpantan, Loughborough, Leicestershire ("the site") to update the initial ECIA report and surveys previously completed and reported on as part of the outline planning submission in 2021 (RSE_4942_01_V1, June 2021).

ii The planning application, ref P/20/2199/2 was refused, and this decision is being appealed by the client (the appellant). Charnwood Borough Council stated two reasons for refusal, citing landscape and biodiversity issues.

iii The relevant (2) Reason for Refusal (RfR) states that:

> *"The proposed development would result in significant adverse biodiversity impacts that would be contrary to the provisions of Core Strategy Policy CS13 and National Planning Policy Framework paragraphs 174 and 180."*

iv This report has been updated and revised with a new off site offsetting strategy, on land local to the scheme, which delivers a significant net biodiversity gain. On site measures and landscaping are still being included in the masterplan, but the off site scheme, helps the project deliver a more significant net gain which removes the requirement for commuted sums secured via legal agreement. This document will be used as supporting evidence for the appeal hearing, for the proposed residential development of the site. The site comprised species poor semi-improved grassland with areas of scrub, scattered trees and boundary hedgerows. Burleigh Woods LWS is located immediately adjacent to the site. A suite of reptile surveys were undertaken in 2021, during which no reptiles were recorded on site.

Table 1: Summary of Ecological Features

Ecological Feature	Comment	Avoidance	Mitigation	Compensation/Enhancement	Residual Impact
Designated Sites	The proposals fall outside the notifiable categories within the Zone of Influence (ZoI) of nearby statutorily designated sites. Burleigh Woods LWS is immediately adjacent the site.	A buffer zone between dwellings and the LWS is to be implemented.	A detailed construction ecological management plan (CEMP) should be followed and measures taken to prevent direct public access from the site into the woodland. Provision of suitable public open space on site.	Buffer zone habitats should incorporate diverse, native planting.	Negligible

Ecological Feature	Comment	Avoidance	Mitigation	Compensation/Enhancement	Residual Impact
Habitats	Habitats onsite are generally of poor species diversity and all higher value habitats are to be retained.	Hedgerows and scattered trees to be retained.	CEMP to be implemented to protect retained habitats. Habitat loss to be mitigated for with creation of more diverse native habitats on and off site.	Any SUDS features onsite should be designed with ecological value.	Negligible
Great Crested Newt	A pond was identified within Burleigh Woods (P1) during the condition assessment walkover. This was scheduled for eDNA survey, but dried before this could take place. As P1 was dry for much of the GCN breeding season this waterbody has been assessed as unsuitable for supporting GCN breeding populations. P2 and P3 situated c.200-300m east of the site boundary within residential gardens. Due to their location and the likelihood that these are ornamental / fish stocked ponds located beyond a significant residential area these waterbodies have also been assessed as being highly unlikely to support breeding GCN populations. The remaining waterbodies were located beyond barriers to dispersal in the form of residential areas and roads (P14-P16) and flowing watercourses and roads (P4-13) and have been scoped out of this assessment.	N/A	N/A	N/A	N/A
Bats	One tree was assessed as having low bat roosting potential. The woodland edge and	Retention of hedgerows,	If low potential tree is to be felled, (current plans include its retention) soft felling	Inclusion of bat boxes, planting of night scented	Negligible

Ecological Feature	Comment	Avoidance	Mitigation	Compensation/Enhancement	Residual Impact
	hedgerows provided suitable foraging and commuting habitat.	low potential tree should be retained if possible.	techniques should be used. Avoidance of light spill onto the adjacent woodland and hedgerows to maintain a dark corridor in the area. Lighting requirements of the new car park area should be carefully considered and avoided where possible.	pollinators to improve foraging in the area.	
Badger	Two disused and collapsed mammal holes were identified along the western edge of the site, although disused it is possible that the site may be re-used in the future, as such an updated walkover should be carried out prior to works beginning on site.	Retain if possible	Best practice should be followed during works for any large mammals that may pass through the site.	Planting of native species such as fruit trees would enhance the foraging potential for this species.	Negligible
Birds	The scattered trees, scrub and hedgerows have scope for bird nesting provision, as do the adjacent woodland habitats.	Retention of trees and hedgerows.	Any vegetation clearance should be completed during the period September to February to avoid nesting birds. Where this is not possible an ecologist should complete a pre-clearance survey.	Inclusion of a range of nesting boxes within retained trees and new buildings.	Negligible
Reptiles	Whilst surveys did not identify reptiles on site Scope for foraging and commuting reptiles within the site.	Retention of hedgerows	Vegetation clearance undertaken under Precautionary Method of Works	Refugia creation and wildflower meadows	Negligible
Water Vole and Otter	No suitable habitats on site of within ZoI	N/A	N/A	N/A	N/A
Terrestrial Invertebrates	The site does not provide habitats suited to any principal or endangered invertebrate species	N/A	N/A	N/A	N/A
Aquatic Invertebrates	No suitable habitats on site of within ZoI	N/A	N/A	N/A	N/A

Ecological Feature	Comment	Avoidance	Mitigation	Compensation/Enhancement	Residual Impact
Fish	No suitable habitats on site of within ZoI	N/A	N/A	N/A	N/A
Principal Species	Species such as hedgehog and toad are potentially present locally.	Retention of hedgerows.	CEMP should incorporate precautionary measures for small mammals. Any full board fencing should incorporate access holes for hedgehog.	Any SUDs should be designed to be suitable for native amphibians such as toad.	Negligible.
Biodiversity Impact Assessment	The site baseline value and condition has previously been agreed in consultation with CBC. This remains unaltered and has been transposed into the most up to date metric (DEFRA 3.1). A combined scheme of habitat creation is provided through on and off site measures. This delivers a net gain of 3.89 habitat units (+46.90%), and 0.69 hedgerow units (+117.62%).	A degree of on site habitat loss cannot be avoided with the current proposals.	On site habitat loss mitigated through the masterplan and landscaping proposals provided with the application.	Scheme of on and off site compensation provided to secure net gain for biodiversity.	Net positive effect.

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TABLES

2 INTRODUCTION AND BACKGROUND

2.1 Purpose and Scope of this Report

i RammSanderson Ecology Ltd was commissioned by Bowbridge Homes to provide an Ecological Impact Assessment (EcIA) to assess the potential for protected species and habitats to be present on the site of a proposed residential development on land at Leconfield Road, Nanpantan. To complete an EcIA of the proposals, a desk-based assessment, Extended Phase 1 Habitat Survey, UK HAB survey and condition assessment and protected species assessments were carried out in June 2021. In order to update the report, a walkover survey was conducted in April 2022.

ii This report is a stand-alone EcIA which has been prepared following current guidance (CIEEM, 2018) and can be used to lawfully determine a planning application in line with current planning policy[1]. This report does not form part of a wider discipline Environmental Impact Assessment (EIA) of Environmental Statement (ES), nor does it confer the need for any such documentation.

iii This report is also an update and supersedes the survey and report carried out by CBE Consulting in November 2020 (Reference: P2164 /1020 /01). The desk-based assessment can be located in Appendix 2 of their report.

iv The study area was defined depending on the proposals (Appendix 3) and applicable legislation as shown in the enclosed Site Location Plan (Figure 3) and Phase 1 Habitat plan (Appendix 1) plus a buffer zone extended to include the Zone of Influence (see section below) of the proposals (hereafter referred to as the "site").

v This ecological impact assessment is based on a review of the development proposals provided by the Client in Drawing: GL1028 14 (Appendix 3), desk study data (Leicestershire and Rutland Environmental Records Centre) and a survey of the site. The aims of this report are to:

- Classify the habitat types at the site based on standard Phase 1 Habitat survey methodology;
- Evaluate any potential for protected species to be present;
- Identify any ecological constraints that may affect the scheme design;
- Provide recommendations for any further actions that might be required (for example, to monitor badger setts periodically through construction);
- Identify Likely Significant Effects on ecological receptors;
- Assess if the proposals are compliant with legislation and policy relating to biodiversity; and
- Identify opportunities for ecological enhancement to provide net biodiversity gain in line with the National Planning Policy Framework (NPPF, 2021).

vi This report pertains to these results only; recommendations included within this report are the professional opinion of an experienced ecologist and therefore the view of RammSanderson Ecology Ltd.

vii The surveys and desk-based assessments undertaken as part of this review and subsequent report are prepared in accordance with the British Standard for Biodiversity Code of Practice for Planning and Development (BS42020:2013) and follow current guidance (CIEEM, 2018).

2.2 Zone of Influence

i The Zone of Influence is used to describe the geographic extent of potential impacts of a proposed development. The Zone is determined by the development proposals in relation to individual species ecological requirements indicated in best practice guidelines.

[1] Office of the Deputy Prime Minister Circular 06/05: Biodiversity and Geological Conservation - Statutory Obligations and Their Impact Within the Planning System

ii In relation to great crested newts (GCN), the zone of influence is considered to be up to 500m from the site boundaries, as this is the distance that Natural England would require to be considered in relation to GCN licensing.

iii For badgers, the zone of influence is typically 30-50m from the Site boundary as this is the distance within which a sett can be damaged or disturbed by heavy machinery.

iv For designated sites, the Zone of Influence can be >20km from the Site and this is termed the Impact Risk Zone (IRZ). Where site occurs within an IRZ and the proposals meet the qualifying criteria, the requirement for a Habitat's Regulations Assessment or Environmental Impact Assessment may be triggered.

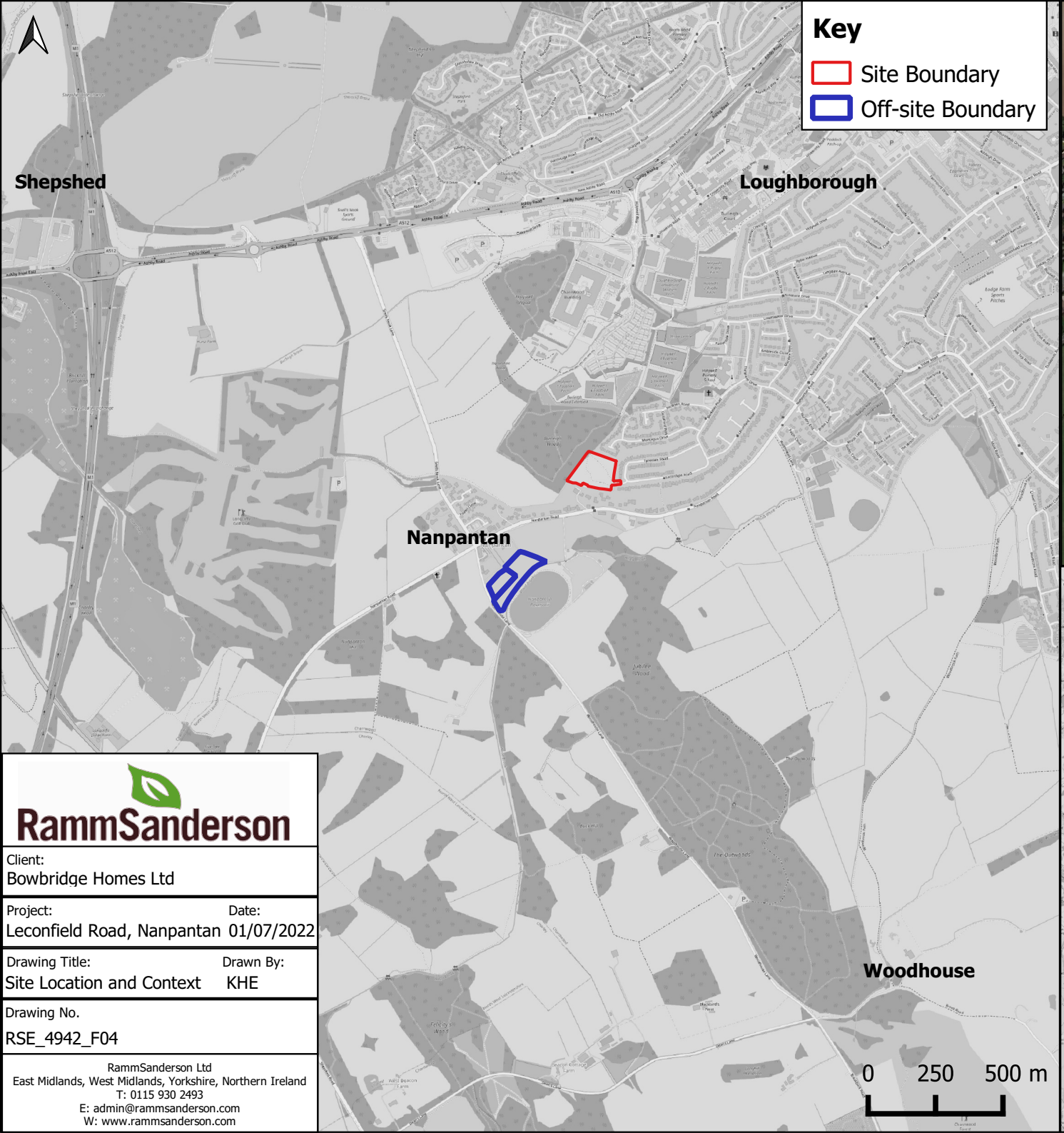
2.3 Site Context and Location

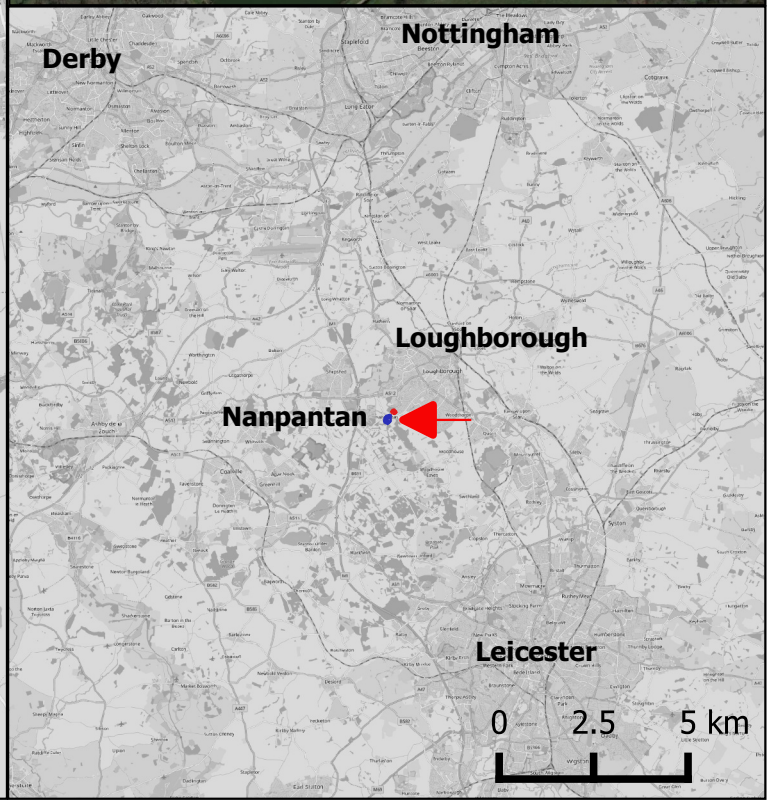
i The site is located in the southwest of Loughborough, Leicestershire (central grid reference SK50951 17549). On three sides it was bordered by residential housing and on the western boundary was a large section of ancient woodland.

ii The development site formed a parcel of poor semi-improved grassland with continuous scrub located on the south-western and north-eastern boundaries. There were three small sections of tall ruderal vegetation and three hedgerows located on site.

iii Located to the south-west of the site, beyond Nanpantan Road (adjacent Nanpantan Reservoir) is an area of improved grassland in poor condition, which will be utilised as an offsite offsetting area in order to achieve net gain within this development, see Figure 1.

Figure 1: Site Context and Location Plan





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Client:
Bowbridge Homes Ltd

Project: Leconfield Road, Nanpantan
Date: 01/07/2022

Drawing Title: Site Location and Context
Drawn By: KHE

Drawing No.
RSE_4942_F04

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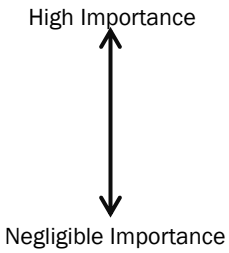
3 METHODOLOGY

3.1 Ecological Impact Assessment

i The ecological impact assessment is based on the standard best practice methodology provided by the Guidelines for Ecological impact Assessment (CIEEM, 2018). The assessment identifies important sites, habitats, species and other ecological features that are of conservation value based on factors such as legal protection, statutory or local site designations such as Sites of Special Scientific Interest (SSSI) or Local Wildlife Sites (LWS) or inclusion on Red Data Book Lists or Local Biodiversity Action Plans.

ii The importance of an ecological feature is considered within a defined geographical context. The following frame of reference is used, or adapted to suit local circumstances:

- International and European
- National
- Regional
- Metropolitan, County, vice-county or other local authority-wide area
- River Basin District
- Estuarine system/Coastal cell
- Local
- Below Local level e.g. on site only



iii Consideration of impacts at all scales is important, and essential if objectives for no net loss of biodiversity and maintenance of healthy ecosystems are to be achieved.

iv In identifying impacts, the review considers the Client's site proposals and any subsequent recommendations made are proportionate / appropriate to the site and have considered the Mitigation Hierarchy as identified below:

- **Avoid:** Provide advice on how the development may proceed by avoiding impacts to any species or sites by either consideration of site design or identification of an alternative option.
- **Mitigate:** Where avoidance cannot be implemented mitigation proposals are put forward to minimise impacts to species or sites as a result of the proposals. Mitigation put forward is proportionate to the site.
- **Compensate:** Where avoidance cannot be achieved any mitigation strategy will consider the requirements for site compensatory measures.
- **Enhance:** The assessment refers to planning policy guidance (e.g. NPPF) to relate the ecological value of the site and identify appropriate and proportionate ecological enhancement in line with both national and local policy.

v For the purpose of this EcIA, a '*significant effect*' is an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' (explained in 3.1.i.) or for biodiversity in general. Conservation objectives may be specific (e.g. for a designated site) or broad (e.g. national/local nature conservation policy) or more wide-ranging (enhancement of biodiversity). Effects are considered significant at the range of scales from international to local. A significant effect is an effect that is sufficiently important to require assessment and reporting so that the ecological consequences of the project are understood. In broad terms, significant effects encompass impacts on structure and function of defined sites, habitats or ecosystems and the conservation status of habitats and species (including extent, abundance and distribution).

vi Note: The following definitions are used for the terms 'impact' and 'effect' throughout this report:

- **Impact** – Actions resulting in changes to an ecological feature. For example, the construction activities of a development removing a hedgerow.
- **Effect** – Outcome to an ecological feature from an impact. For example, the effects on a dormouse population from loss of a hedgerow.

3.2 Desk Based Assessment

i The desk based assessment was carried out previously by CBE Consulting. Data regarding statutory and non-statutory designated sites, plus any records of protected or Priority species and habitats was requested from the local ecological records centre and online resources. Details of which can be found in Appendix 2 of P2164 /1020 /01.

ii An updated MAGIC search was undertaken on 29/07/2022.

3.3 Phase 1 Habitat Survey

i An extended Phase 1 Habitat Survey of the site was completed to identify habitats present within the site. All habitats within and adjacent to the site boundary were described and mapped following standard Phase 1 Habitat Survey methodology (JNCC, 2010), which categorises habitat type through the identification of individual plant species.

ii Nomenclature follows Stace (Stace, 2010) for vascular plant species and the DAFOR scale for relative abundance was used in the field to determine dominant plants within habitats and communities (D = dominant, A = abundant, F = frequent, O = occasional and R = rare).

3.4 Protected / Priority Species Scoping Assessment

i The habitats on site were assessed for their suitability for supporting any legally protected or Priority species that would be affected by the proposed development. This includes invasive non-native plant species such as Japanese knotweed (*Fallopia japonica*), Himalayan balsam (*Impatiens glandulifera*) and giant hogweed (*Heracleum mantegazzianum*).

ii The full scope of species assessments and survey methods are detailed in Appendix 2. Any incidental sightings of individual species or field signs such as footprints, latrines or feeding remains discovered during the survey were noted.

3.5 Biodiversity Impact Assessment (BIA)

3.5.1 Outline Procedure

i Biodiversity Impact Assessment of proposals was carried out in accordance with guidelines published by DEFRA and via the DEFRA Metric Calculation Tool 3.1. The existing value of individual habitats on site is initially calculated by accurately mapping the proposed development site from information collected during a Biodiversity Scoping Assessment/Phase 1 Habitat Survey and by dividing the land into individual habitat parcels. This part of the study is informed by JNCC Phase 1 habitat and UK habitats classification systems. The distinctiveness, condition, connectivity and strategic significance of these parcels is then assessed and together with the area of each habitat, a value is assigned. A summary of how habitat distinctiveness, condition assessment, connectivity and strategic significance is determined is detailed within DEFRA best practice literature.

3.5.2 Calculation

ii Once the habitat types have been input into the DEFRA Metric Calculation Tool 3.1, along with their area, distinctiveness, condition, connectivity and strategic significance an overall score in biodiversity units is calculated.

3.5.3 Compensation

iii Once the biodiversity value of existing on-site habitats has been quantified, the value of indicatively proposed habitats to achieve a net gain as part of development must be calculated. This is calculated using the methodology applied above, taking into account the area/length of indicatively proposed habitats, their

distinctiveness, condition, connectivity and strategic significance once this is established. A further two parameters are also taken into consideration at this stage. These are the time it will take to reach this target condition and the difficulty of creating/restoring each habitat type proposed. By using these parameters, the calculation takes into account that the time it takes for a habitat to establish may result in a loss of biodiversity for a period of time and also the risk of failure associated with any habitat creation/restoration

3.6 Limitations

i It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no investigation could ensure the complete characterisation and prediction of the natural environment.

ii During the second reptile survey, conducted on 24th May 2021, the temperature was recorded at 9°C. During this survey, no reptiles were recorded. All six other surveys were, however, conducted in suitable conditions (i.e., in temperatures over 11°C) over the optimal survey period, and no reptiles were recorded during these surveys. As such, the suboptimal temperature recorded during the second reptile survey is not considered to be a limiting factor on assessing the value of the site for local reptile populations.

3.7 Accurate lifespan of ecological data

i The majority of ecological data remain valid for only short periods due to the inherently transient nature of the subject. The survey results contained in this report are considered accurate for approximately 2 years, notwithstanding any considerable changes to the site conditions.

4 BASELINE CONDITIONS

4.1 Surveyor Competency

i The survey was carried out by Senior Ecologist Lauri Leivers BSc (Hons) GCIEEM. Lauri holds a class two licence for GCN (2018-37695-CLS-CLS) as well as a FISC Level 3 in Botanical Identification Skills and has been a professional ecologist for the past five years. The survey was completed during suitable conditions as detailed in the table below.

ii The update survey was carried out by Lauri Leivers and Oliver Ramm BSc MCIEEM. Oliver has been a professional ecologist for the past 18 years.

Table 2: Summary of conditions during survey

Abiotic Factor	Survey 1	Survey 2
Survey type	PEA Update, condition assessment and UK HAB survey	Offsite area condition assessments (JNCC & UK HAB survey methods)
Date completed	14.04.2022	12.05.2022
Temperature	14°C	19°C
Wind speed (Beaufort Scale)	2	2
Cloud cover (Oktas Scale)	6	3
Precipitation	Dry	Dry

4.2 Designated Sites

4.2.1 Statutory Designated Sites and Non-Statutory Designated Sites[2]

i One statutorily designated site was located 170m South of the site. The site lies within Beacon Hill, Hangingstone and Out Woods SSSI IRZ however, the proposals are not of a type that require consultation with Natural England as they fall below the notification threshold of 100 houses.

ii The desk study identified 15 non-statutorily designated sites within 1km of the site. The nearest non-statutorily designated site was Burleigh Wood that sits adjacent to the site.

4.3 Habitats[3]

i The site was approximately 1.5 hectares in area and located to the north of Nanpantan Road, and East of Snell's Nook Lane. The site was bordered Burleigh Woods to the west and residential housing on the three remaining sides. The site consisted of a poor semi-improved grassland field, bounded by continuous scrub, three intact species poor hedgerows and scattered broadleaved trees. There were three small sections of tall ruderal vegetation within the grassland and an area of hard standing to the east.

ii The majority of habitats on site were generally of limited botanical interest and poor species diversity. The value of habitats such as the scattered broad-leaved trees, hedgerow and scrub were largely noted in their

[2] Full desk study results are provided in Appendix 5.

[3] Full Phase 1 survey results are displayed in Appendix 5.

potential to support a range of protected / priority faunal species rather than for their botanical value. These habitats also offered some value as ecological corridors for the dispersal of fauna and flora into the wider countryside.

iii No protected or Priority plant species were observed, and all plant species encountered were common, widespread and characteristic of the common habitat types they represent.

4.4 Protected / Priority Species/Species Groups[4]

i The presence/likely absence of protected species to be present on site and impacted by the proposals is discussed under the headings below.

4.4.2 Great Crested Newt (GCN)

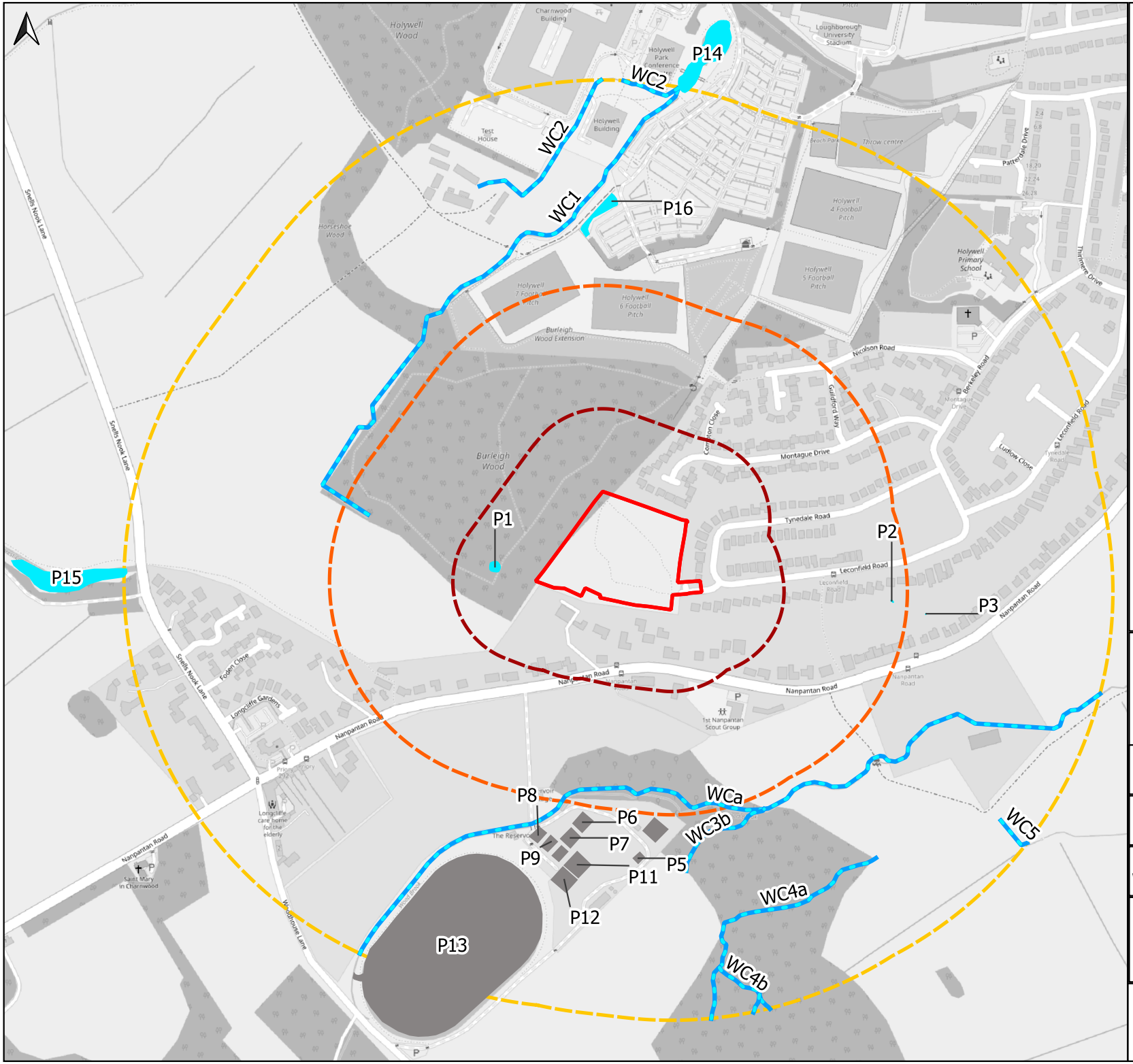
i No ponds were located on site, however there were 15 waterbodies within 500m of the site boundary, all apart from P1 were located beyond barriers to dispersal in the form of the surrounding road network and housing developments. Additionally, ten of these waterbodies are associated with Nanpantan Reservoir and unsuitable for breeding amphibians such as GCN.

ii Pond 1 was due to be subject to an eDNA survey however it dried before this could be undertaken, within the GCN breeding season. As such, this waterbody is not able to support breeding GCN populations.

iii The peripheral vegetation on site, including the hedgerow and scrub woodland provide some opportunities for foraging, refuge seeking and commuting GCN. However, given the lack of suitable breeding ponds nearby the likelihood of GCN being onsite is negligible.

[4] Full protected species survey results are in Appendix X.

Figure 2: Waterbody Plan



Key

- Site Boundary
- 100m Buffer
- 250m Buffer
- 500m Buffer
- Pond
- Pond (with watercourse as a barrier)
- Watercourses

RammSanderson

Client: Nineteen47

Project: Leconfield Road, Nanpantan

Drawing Title: Waterbody Plan

Drawing No.: RSE_4942_F02

Rev: V2

Drawn By: LG

Scale @A4: 1:6255

Date: 01/07/2022

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4.4.3 Bats

Trees

i All of the trees on site, were subject to a ground level tree assessment. An ash tree, T1, (SK 50884 17521) in the south-west corner was assessed as having low potential to support roosting bats (using BCT guidelines). This classification was due to ivy coverage and shallow rot holes which were upward faced upwards, allowing water ingress.

Figure 3: Ash with Low Bat Roost Potential (T1)

Foraging Habitat

ii The onsite grassland, comprising the majority of the site, was of limited suitability for foraging and commuting bats, due to the lack of species diversity and limited size. The boundary hedgerows and scrub were of greater potential for supporting local bats, and in particular the offsite woodland situated west of the site is of greater value to local bats. The woodland edge on the sites western boundary is therefore likely to have higher suitability for foraging and commuting bats.

4.4.4 Birds

i The hedgerow, scrub and trees located on site are suitable habitat for bird nesting sites and are likely to support a range of common garden and farmland bird species. The semi-improved grassland also provides some, albeit limited value to foraging birds.

4.4.5 Reptiles

i One record of slow worm (*Anguis fragilis*) was identified within 2km of the site during the desk study and the brash piles within the site provided scope for refuge seeking reptile with the grassland and hedgerows providing some suitable foraging habitat.

ii The previous ecological assessment (CBE Consulting, 2020) recommended reptile presence/likely absence survey and, as such, a full suite of reptile surveys was conducted between May-July 2021. No reptiles were recorded during these surveys, and therefore reptiles are deemed likely absent from site.

iii Full survey results are provided in Appendix 6.

4.4.6 Water Vole, Otter and White Clawed Crayfish

i There were no suitable habitats onsite to support these species. These species will therefore not be discussed further within this report.

4.4.7 Badgers

i Two mammal holes were identified in the western part of the site, one of which was not considered to be badger due to the size and shape of the entrance which was not large enough to allow badger to enter. Additionally, both appeared disused with partial collapse to the tunnels and leaf litter and bramble filling the entrances. The latest survey in 2022 showed that the hole is still disused and overgrown.

ii The sites location adjacent to woodland and the onsite habitats do present the opportunity for foraging and sett building.

4.4.8 Principal Species

i The site provides some scope for species such as hedgehog (*Erinaceus europaeus*) and common toad *(Bufo bufo)* with the hedgerows, scrub and brash piles providing suitable refuging and commuting habitat.

ii Due to a lack of suitable habitats and connectivity, the site is not considered likely to support any other legally protected or Priority species.

4.5 Biodiversity

i When assessed against the DEFRA Metric Calculation Tool 3.1 for biodiversity, the site contains 8.30 baseline biodiversity units for habitat areas and 0.59 for linear features (e.g. hedgerows). The most distinctive habitats within the site were the small areas of scattered trees and the bramble and hawthorn scrub.

ii Following input of habitat data for the combined scheme of on and off site habitat creation into the DEFRA Metric 3.1, it has been considered there will be quantified net gain in biodiversity of 3.89 habitat units (46.90%) and a net gain of 0.69 hedgerow units (117.62%).

iii For additional details regarding the condition assessments see the appendices within this report. It is noted that this report should be read in conjunction with the DEFRA Metric Calculation tool for this site.

Figure 4: BIA Headline Results

Leconfield Road, Nanpantan

Headline Results

Return to results menu

On-site baseline	*Habitat units*	8.30
	Hedgerow units	0.59
	River units	0.00
On-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	6.76
	Hedgerow units	1.28
	River units	0.00
On-site net % change (Including habitat retention, creation & enhancement)	*Habitat units*	-18.57%
	Hedgerow units	117.62%
	River units	0.00%
Off-site baseline	*Habitat units*	2.59
	Hedgerow units	0.00
	River units	0.00
Off-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	8.02
	Hedgerow units	0.00
	River units	0.00
Total net unit change (including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	3.89
	Hedgerow units	0.69
	River units	0.00
Total on-site net % change plus off-site surplus (including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	46.90%
	Hedgerow units	117.62%
	River units	0.00%
Trading rules Satisfied?		Yes ✓

5 IMPACTS AND MITIGATION (CUMULATIVE AND/OR IN ISOLATION)

5.1 Planning Application Search

i A planning application search was not conducted for this site as affects upon all ecological receptors were nugatory and so would not act in synergy with other proposals. Therefore, an evaluation of cumulative effects was deemed disproportionate as an assessment of impacts can be made in in the absence of this data.

5.2 Habitats

i The majority of habitats on site are of limited species diversity and widespread locally and nationally. The hedgerows were of greater diversity and are Habitats of Principal Importance (HPI, NERC Act, 2006) as well as LBAP Habitats within Leicestershire. As such the site has been designed in order to retain these habitats, and their protection and enhancement throughout the development is recommended. Therefore, impacts in isolation or combination with other developments are negligible. To mitigate potential impacts upon these habitats during construction:

- Retained habitats/trees to be protected through fencing; and
- Implementation of a lighting strategy sympathetic to nocturnal fauna.

ii No other habitats of importance were recorded on site (dominated by semi-improved grassland).

iii The adjacent woodland, Burleigh Wood on the western boundary, was identified on Magic as a Priority habitat, and was also listed as Ancient and Semi Natural Woodland. As such suitable protection measures during construction and following completion should be undertaken. A detailed Construction Ecological Management Plan has been produced to assist in this regard.

iv The site has been designed to maintain a buffer zone (greater than the 15m required) between residential housing and the woodland, reducing risks from introduction of non-native and invasive species from gardens. This buffer zone should also ensure a dark corridor, with no artificial lighting is maintained. Measures, such as adequate fencing and public open space provision, should be taken to minimise recreational access from the development into the woodland. This development includes the addition of a low number of residential units into the area, again limiting the impact to designated sites within the locality.

5.3 Statutorily and Non-Statutorily Designated Sites

i The site falls within the IRZ for Beacon Hill, Hanging Stone and Out Woods SSSI, this site was designated as a mixed woodland. As such a MAGIC search was conducted, the site falls within three of the impact risk zones which generally decrease in sensitivity with distance. Developments within the closest IRZ are considered to pose a risk to the SSSI site if they fall within one of the below categories:

- **All planning applications:** All planning applications (except householder) outside or extending outside existing settlements/urban areas affecting greenspace, farmland, semi natural habitats or landscape features such as trees, hedges, streams, rural buildings/structures.
- **Infrastructure:** Pipelines, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals.
- **Wind & solar energy:** Solar schemes with footprint > 0.5ha, all wind turbines
- **Minerals, oil & gas:** Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.
- **Rural non-residential:** Large non residential developments outside existing settlements/urban areas where net additional gross internal floorspace is > 1,000m² or footprint exceeds 0.2ha.
- **Residential:** Residential development of 100 units or more.

- **Rural residential:** Any residential developments outside of existing settlements/urban areas with a total net gain in residential units
- **Air Pollution:** Any development that could cause AIR POLLUTION or DUST either in its construction or operation (incl: industrial/commercial processes, livestock & poultry units, slurry lagoons/manure stores).
- **Combustion:** All general combustion processes. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.
- **Waste:** Mechanical and biological waste treatment, inert landfill, non-hazardous landfill, hazardous landfill, household civic amenity recycling facilities construction, demolition and excavation waste, other waste management
- **Composting:** Any composting proposal. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.
- **Discharges:** Any discharge of water or liquid waste that is discharged to ground (ie to seep away) or to surface water, such as a beck or stream
- **Water Supply:** Large infrastructure such as warehousing / industry where net additional gross internal floorspace is > 1,000m^2 or any development needing its own water supply

ii It is determined that this development does fall within the residential category listed above, as such, it is recommended that Natural England is consulted in relation to the is development. It should be noted however that a CEMP (RSE_4942_02_V2) is already in place. Additionally, the site is not considered to be functionally linked to the nearest SSSI.

iii Whilst there is likely an increase in public recreation within the nearest statutory sites, the small scale of the proposed development is not considered to have a significant increase in the local usage of this site and sufficient public open space has been provided within the development. Furthermore, the designated site (Beacon Hill, Hangingstone and Out Woods SSSI) has infrastructure in place to minimise the negative impacts of recreational use, including formal car parking and footpath provision.

iv Burleigh Wood, situated on the western boundary is designated as a Local Wildlife Site. Measures to protect this habitat are detailed in section 5.2 above and the accompanying CEMP report.

5.4 Fauna

5.4.1 Great Crested Newts

i Due to the lack of suitable waterbodies locally this species will not be discussed further.

5.4.2 Bats

i A single tree, T1 was considered to have bat roosting potential, being classified as Low suitability for roosting bats as per BCT guidelines.

ii Due to this classification, it is recommended that this tree be retained within the development, for both its botanical interest and habitat provision as a potential bat roost. If possible this tree should be retained, however current proposals indicate that it is likely to be removed. As such, it is recommended that this is subject to a soft felling technique in the presence of a suitably qualified ecologist. It is recommended that a bat sensitive lighting strategy is adhered to in order to prevent light spill onto features of bat roost potential.

iii Additionally, a number of bat boxes are proposed across the site post development. See enhancements section.

5.4.3 Bat Foraging Habitat

i The highest value habitats on site are to be retained, and as such no further nocturnal activity surveys were considered proportionate or necessary, providing the following mitigation is followed.

ii The buffer zone along the western boundary with Burleigh Wood is to be maintained as a dark commuting corridor, with no artificial lighting within this area. Similarly, the hedgerows at the boundaries should also be maintained as a dark corridor for nocturnal fauna and any artificial lighting within the site should be designed appropriately as discussed below and planting of buffer zone habitats with a more diverse, species rich grassland, will be of benefit for foraging bats due to an increase in invertebrates locally.

iii Artificial lighting can affect the way that bats use habitats in a number of ways, depending on the species and proximity to a roost. Direct bright lighting of a roost can cause bats to delay emergence from a roost and could even cause them to desert the roost or become entombed within it (BCT and ILP, 2018). The prey items for British bats are flying insects, and many flying insects are attracted to certain types of artificial light sources, especially those that emit light with an ultraviolet component or have a high blue spectral component (BCT and ILP, 2018). Some species of bat recorded are known to be attracted to insects gathered around light sources (such as pipistrelle, noctule, Leisler's and serotine), whereas other species actively avoid lit areas (such as long-eared bats, *Myotis* species, barbastelle and greater and lesser horseshoe bats). Lighting within the site could therefore be expected to affect the ways that the bats in the area are able to use the site. As a result, it is recommended that construction works are to be undertaken in daylight hours only with no night hours work permitted.

iv Sensitive lighting on site should follow the guidance set out in Bats and Lighting in the UK (BCT and ILP, 2018). Therefore**,** associated site lighting proposals must consider the following:

- Avoid lighting where possible, with particular focus on the site boundaries and woodland strip to the east and south of the site;
- Install lamps and the lowest permissible density;
- Lamps should be positioned to direct light to avoid upward spill onto any green corridors that could be used by commuting bats or features with bat roost potential;
- LED lighting – with no/low UV component is recommended;
- Lights with a warm colour temperature – 3000K or 2700K have significantly less impact on bats;
- Light sources that peak higher than 550nm also reduce impacts to bats; and
- The use of timers (less than 1 minute) and dimmers to avoid lighting areas of the site all night is recommended.

5.4.4 Birds

i The scattered trees, scrub and hedgerow habitats within the site provide suitable habitat for nesting birds. However, the majority of habitats of value to breeding bird are to be retained within proposals. The semi-improved grassland is to be lost to facilitate proposals, however, recommended native planting with species such as hawthorn and rowan will provide foraging opportunities to bird species to compensate for this loss. As such impacts are deemed unlikely to extend beyond the local level.

ii Any tree management works or vegetation clearance, to allow for site access, should take place outside the bird nesting season to ensure compliance with the general protection afforded to wild birds under the Wildlife and Countryside Act 1981 (as amended). If this is unavoidable, the trees and hedgerows should be carefully checked, by a suitably qualified ecologist, prior to removal. Where active nests are found, working restrictions would be put in place until follow up survey can demonstrate that all chicks have fledged. This will reduce impacts to negligible.

5.4.5 Reptiles

i No reptiles were observed on site during the presence/likely absence surveys conducted in May-July 2021, and therefore are considered to be absent from site.

ii Due to the suitability of the habitats on site, in addition to the connectivity of the works area to Burleigh Wood and the wider landscape, however, there remains the residual risk for transient reptiles to utilise the suitable habitats on site during the works. As such, it is recommended that vegetation clearance should be conducted under a specific procedure. Full details of this approach are given within the Construction and Ecological Management Plan (CEMP) document (ref: RSE_4942_02_V2).

5.4.6 Badgers and Principal Species

i No evidence of badger in the form of sett building, latrines or snuffle holes were observed onsite, however 2 mammal holes, unsuitable for badger were identified.

ii However, habitats onsite such as the woodland and grassland have the potential to support foraging, refuge seeking and commuting badger and other mammals, such as hedgehog. It is recommended that a survey for new badger evidence such as sett building is conducted every 6 months by a suitably experienced ecologist from the date of this report until the commencement of works onsite. To enable hedgehog to move freely across the Site, small 15x15cm gaps could be left at the bottom of residential fencing. Precautionary measures are also recommended to reduce the risk of impacting badgers and hedgehogs, or any other mammals during the works. Any brash piles within the site should be dismantled by hand, outside of hibernation season, (October-March) to avoid injuring hedgehogs.

i These precautions are:

- Mammal ladders (such as a plank) or earth ramps to be placed in any open excavations at the end of each day;
- Cap off any open pipes at the end of each day;
- Cover any open holes, or install mammal ladders or earth ramps in any open excavations at the end of each day to prevent animals from becoming trapped;
- Keep all fuel and other harmful substances in a locked area;
- Ensure any spillages are treated with spill kits;
- Night work should be avoided where possible, and any flood lighting should face away from the Site boundaries; and
- If any fresh sett digging is observed notify an ecologist immediately and leave a 20m buffer around the area until an assessment can be made.

6 SUMMARY POTENTIAL IMPACTS

Table 3: Summary of Potential Impacts

Ecological Feature	Importance (Geographic Frame of Reference)	Potential Effect	Mitigation Proposed	Proposed Mechanism to Secure	Residual Impact
Statutory Designated Sites	National	Increase in recreational impacts in nearby SSSI	Onsite provision of public open space	Site design	Not significant
Non-statutory designated sites	Local	Damage to adjacent LWS during construction phase. Impacts from recreational use following completion.	Detailed CEMP to be implemented. Buffer zone to be appropriately designed to restrict direct access into the woodlands.	Planning condition and site design.	Not significant
Habitats including invasive and Priority flora	Local	Loss of species poor and low diversity habitats.	Retention of hedgerow, trees and woodland in accordance with root protection areas. Any proposed habitats should aim to use a diverse mix of native species.	Planning Condition – detail within a CEMP	Not significant
Reptiles	Local	Potential for killing/injury of individual animals during construction.	Vegetation clearance undertaken under Precautionary Method of Works Refugia and wildflower meadow creation	Planning Condition – detail within a CEMP	Not significant
Bats – Roosting	Local	Light spill onto trees with bat roost potential.	Implementation of a bat friendly lighting strategy to prevent light spill onto trees with bat roost potential. Retention of trees onsite.	Planning Condition	Not significant
Bats – Foraging/Commuting	Local	Light spill onto connective corridors and adjacent woodland.	Retention of scattered trees, buffer zone between residential housing and the adjacent broadleaved woodland. Implementation of sensitive bat lighting scheme, with particular focus on woodland edge. No night working to be undertaken.	Planning Condition	Not significant
Great crested newts	N/A	None	No	N/A	N/A
WWC	N/A	None	No	N/A	N/A
Water vole	N/A	None	No	N/A	N/A

Ecological Feature	Importance (Geographic Frame of Reference)	Potential Effect	Mitigation Proposed	Proposed Mechanism to Secure	Residual Impact
Badgers and small mammals.	Local	Potential for killing/injury to transient badgers.	Best practice/precautionary method of working to be followed to avoid risks to transient mammals during construction phase. Any full board fencing should include provision of access holes for hedgehogs.	Planning Condition, CEMP.	Not significant
Breeding birds	Local	Damage or destruction of nests	Precautionary methods in relation to legislative protection of nesting birds and active nests. Increased provision of nest boxes within the site.	Planning Condition	Not significant
Otter	N/A	None	No	N/A	N/A
Biodiversity	Local	Removal of low diversity and common habitats that support only limited protected species. Creation of more diverse grassland habitat and increased tree planting.	All habitat creation should aim to use a diverse mix of native species, and the development should provide a range of faunal nest boxes including those for a range of bat and bird species.	Planning Condition	Not Significant
		BIA has been undertaken and updated to include an off site offsetting solution, which provides a significant net gain of 3.89 habitat units (+46.90%) and a gain of 0.69 hedgerow units (+117.62%).	Off site offsetting scheme provided in close proximity to development location which delivers a significant net gain and will be the subject of a biodiversity net gain management plan for 30 years.	Legal Agreement (S106 / Unilateral Undertaking)	Significant net gain (+46.90%)

7 COMPENSATION & ENHANCEMENT RECOMMENDATIONS

i The National Planning Policy Framework (2021), and local development plan requires ecological enhancement of sites subject to development proposals to the extent that they provide a net biodiversity gain.

ii A combined on and off site compensation scheme is provided with this application. Detailed landscape planting specification and a 30 year Biodiversity Net Gain management plan will be provided with a reserved matters application for the site once the outline permission has been secured.

iii Additional enhancements that could easily be met within the development scope include the incorporation of bat and bird nest boxes and hedgehog boxes. Bat and bird boxes could be placed either within the fabric of the new buildings or on trees within the site boundaries. A hedgehog box could be placed within the retained hedgerow. Tree mounted bat boxes should ideally face a variety of orientations and be positioned at least 4 metres from the ground, with the entrances being free of overhanging branches. Suitable bat box dimensions are 430mm high X 270mm wide X 140mm deep. The boxes are designed to mimic natural roost sites and to provide a stable environment. In-cavity bat boxes located on buildings could be incorporated into the structure of the properties as they are built. These boxes could consist of Ibstock Enclosed Bat Box 'C' or similar, which is positioned at least 4 metres from the ground, facing either south, south-west or south-east (for additional warmth) and close to good foraging habitat. Theses bat box dimensions are 215mm high x 215mm wide x 105mm deep (small) or 290mm high x 215mm wide x 105mm deep (large) and are made from brick (an example is shown below in Figure 8).

iv Compensation for the loss of potential badger foraging habitat and well as maintenance of ecological corridors through the site are recommended. This could include planting fruit trees and keeping a buffer of vegetation along the woodland edge and northern boundary.

v As per current proposals a buffer strip is proposed along the western edge of the site, this is recommended for planting with native diverse grassland mixes such as Naturescapes N10 Woodland Meadow Mixture and N10G Woodland Grasses Mixture. Additional enhancements could include the incorporation of fruit trees to create an orchard area.

Figure 5: Bat Box

Ibstock Enclosed Bat Box 'C'

vi In addition, the creation of refuge piles and compost heaps are recommended to enhance the site for reptiles. Arisings from sectional hedge/vegetation clearance and from management practices such as mowing could

be used for compost piles. For the refuge, arisings such as brash and logs should be piled in a sunny position within existing vegetation and within or adjacent to habitat linked to the proposed surface water attenuation in the north-western corner of the site. The pile can be maintained by adding additional material as it decomposes, which can be provided from ongoing tree and scrub management.

7.1.2 Offsite Enhancements

Grassland

vii The area that is designated for offsite offsetting within the BIA is currently sitting at poor condition due to previous enrichment of the site and regular management. As such, it is recommended that to improve this to good condition a mowing regimen of twice per year, once in spring and once in autumn, should be adhered to in addition to the sowing of additional grass and wildflower species in order to enhance the biodiversity of the site. A mix recommended for this would be naturescapes N5 long season meadow mixture containing a mix of 80% grasses and 20% wildflowers by weight. Another mix that may be used would be the N4 summer flowering butterfly and bee meadow mixture which has the same ratio of grass to wildflower. If these mixes are not suitable then a similar one should be utilised.

Scrub

viii A small area of scrub is proposed for creation within the area of offsite grassland that is to be enhanced. This area is proposed due to some small areas of scrub loss on the main site. The habitat created will be mixed scrub and will be planted with a mix of native shrub species such as: rowan, hawthorn, blackthorn, beech, hazel and willow species. Underplanting with honeysuckle, field rose and white briony is also proposed. The area will be managed to maintain as scrub, bramble and bracken will be removed annually and trimming / thinning will occur biannually after an initial 5 year establishment period in order to create / maintain glades and a natural line between the scrub and the grassland.

ix Both the grassland and scrub will be fenced off (though with an access point for maintenance) from the public in order to prevent trampling, littering or nutrient enrichment from waste.

8 MONITORING

i As part of the 30 year BNG management plan, regular monitoring surveys of the on and off site habitats created as part of the scheme will be carried out.

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10 LEGISLATION AND PLANNING POLICY

10.1 General & Regionally Specific Policies

Articles of British legislation, policy guidance and both Local Biodiversity Action Plans (BAPs) and the NERC Act 2006 are referred to throughout this report. Their context and application is explained in the relevant sections of this report. The relevant articles of legislation are:

- The National Planning Policy Framework (2021);
- ODPM Circular 06/2005 (retained as Technical Guidance on NPPF 2021);
- Local planning policy PD3 (Charnwood Borough Council);
- The Conservation of Habitats & Species Amendments (EU Exit) Regulations 2019 (as amended);
- The Wildlife and Countryside Act 1981 (as amended);
- EC Council Directive on the Conservation of Wild Birds 79/409/EEC;
- National Parks and Access to the Countryside Act 1949;
- The Protection of Badgers Act 1992;
- The Countryside and Rights of Way Act 2000;
- The Hedgerow Regulations 1997;
- The Natural Environment and Rural Communities (NERC) Act 2006; and
- Local Biodiversity Action Plan for Leicestershire and Rutland.

i In relation to these proposals relevant sections of the NPPF, 2021 are:

"174. Planning policies and decisions should contribute to and enhance the natural and local environment by: a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan); b) 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; c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate; d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures. e) 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. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate

175. Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.

179. To protect and enhance biodiversity and geodiversity, plans should: a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and steppingstones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity 180. When determining planning applications, local planning authorities should apply the

following principles: a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused; b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest; c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate"

180. When determining planning applications, local planning authorities should apply the following principles:

(a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

(b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

(c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons 63 and a suitable compensation strategy exists; and

(d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

Charnwood Borough Council Core Strategy Policy CS 13 Biodiversity and Geodiversity

We will conserve and enhance our natural environment for its own value and the contribution it makes to our community and economy. We will do this by: Supporting developments that protect biodiversity and geodiversity and those that enhance, restore or re-create biodiversity. We will expect development proposals to consider and take account of the impacts on biodiversity and geodiversity, particularly with regard to:

- *Sites of Special Scientific Interest*
- *Local Wildlife Sites*
- *Regionally Important Geological Sites*
- *UK and Local Biodiversity Action Plans priority habitats and species*
- *protected species, and*
- *ecological networks*

We will only support development that results in the loss of ecological or geological features in exceptional circumstances where the benefit of development clearly outweighs the impact on ecology and geodiversity. Where there are impacts on biodiversity we will require adequate mitigation; or as a last

resort, compensation which results in replacement provision that is of equal or greater value and potential than that which will be lost, and is likely to result in a net gain in biodiversity. We will consider this by requiring development proposals to be accompanied by ecological surveys and an assessment of the impacts on biodiversity and geodiversity. We will also work with our partners to secure long term management and investment plans for biodiversity and geodiversity.

10.2 Bats and Great Crested Newts

i Great crested newt and species of British bats are fully protected within UK Law under *Wildlife and Countryside Act 1981* (as amended) through their inclusion in Schedule 5. Under the Act, they are protected from:

- Intentional or reckless killing, injury, taking;
- Damage to or destruction of or, obstruction of access to any place of shelter, breeding or rest;
- Disturbance of an animal occupying a structure or place;
- Possession or control (live or dead animals);
- Selling, bartering or exchange of these species, or parts of.

ii This law is reinforced by the UK's transposition of the EU Habitats Regulations under *The Conservation of Habitats & Species Amendments (EU Exit) Regulations 2019 (as amended)*. These Regulations also prohibit:

- the deliberate killing, injuring or taking of great crested newt or bats;
- the deliberate disturbance of any great crested newt or bat species in such a way as to be significantly likely to affect:
- their ability to survive, hibernate, migrate, breed, or rear or nurture their young; or
- the local distribution or abundance of that species.
- damage or destruction of a breeding site or resting place;
- the possession or transport of great crested newt or bats or any other part of.

iii Under certain circumstances a licence may be granted by Natural England to permit activities that would otherwise constitute an offence. In relation to development, a scheme must have full planning permission before a licence application can be made.

iv In addition, seven British bat species are listed as Species of Principal Importance (SPI) under the Natural Environment and Rural Communities (NERC) Act, 2006. These are barbastelle (*Barbastellus barbastellus)*, Bechstein's (*Myotis bechsteinii)*, noctule (*Nyctalus noctula)*, soprano pipistrelle (*Pipistrellus pygmaeus)*, brown long-eared (*Plecotus auritus)*, greater horseshoe (*Rhinolophus ferrumequinum)* and lesser horseshoe (*Rhinolophus hipposideros)*.

v Under the National Planning Policy Framework 2021 the presence of any protected species is a material planning consideration. The Framework states that impacts arising from development proposals must be avoided where possible or adequately mitigated/compensated for and that opportunities for ecological enhancement should be sought.

10.3 Birds

i The Wildlife and Countryside Act 1981 (as amended) is the Priority legislation affording protection to UK wild birds. Under this legislation all birds, their nests and eggs are protected by law and it is an offence, with certain exceptions, to recklessly or intentionally:

- Kill, injure or take any wild bird;
- Take, damage or destroy the nest of any wild bird while it is in use or being built;
- Take or destroy the egg of any wild bird.

ii For birds listed on Schedule 1 of the Act, it is an offence to disturb any bird while it is building a nest, is at or near a nest with young; or disturb the dependant young of such a bird.

iii Species listed in Annex 1 of the EU Birds Directive 1994 (e.g. barn owl) are required to have special conservation measures taken to preserve their habitats and sites to be classified as Special Protection Areas (SPAs) where appropriate.

10.4 Reptiles

i All reptile species are partially protected under Schedule 5 (Sections 9(1) and 9(5)) of the Wildlife and Countryside Act 1981 (as amended). This legislation protects these animals from:

- Reckless or intentional killing and injury;
- Selling, offering for sale, possessing or transporting for the purpose of the sale or publishing advertisements to buy or sell a protected species.

ii In addition to the above legislation, UK rare reptiles; sand lizards (*Lacerta agilis*) and smooth snakes (*Coronella austriaca*), are listed under The Conservation of Habitats & Species Amendments (EU Exit) Regulations 2019 (as amended). This makes it an offence to;

- Capture, kill, injure and disturb;
- Take or destroying eggs;
- Damage or destroy breeding/resting places;
- Obstruct access to resting places; and
- Possess, advertise for sale, sell or transport for sale, live or dead (part or derivative).

iii Where these animals are confirmed as present on land that is to be affected by development guidance recommends that:

- The animals should be protected from injury or killing during construction operations;
- Mitigation should be provided to maintain the conservation status of the species locally;
- Under the National Planning Policy Framework 2021 the presence of any protected species is a material planning consideration. The Framework states that impacts arising from development proposals must be avoided where possible or adequately mitigated/compensated for and that opportunities for ecological enhancement should be sought.

10.5 Badgers

i Badgers (*Meles meles*) and their setts are protected by the Protection of Badgers Act 1992. This makes it an offence to:

- intentionally capture, kill or injure a badger;
- damage, destroy or block access to their setts;
- disturb badgers in setts;
- treat a badger cruelly;
- deliberately send or intentionally allow a dog into a sett; and
- bait or dig for badgers.

i Case law for this species contains example prosecutions of imprisonment for six months and heavy fines.

10.6 Hedgehogs and Common Toads

i Under the NERC Act 2006, the hedgehog (*Erinaceus europaeus*) and common toad (*Bufo bufo*) are categorised as a 'Species of Principal Importance' (SPI) for biodiversity. Listing as SPI reflects concerns that populations have suffered a rapid and sustained decline in the UK. As such, they are a material consideration during planning.

10.7 Hedgerows

i All native hedgerows (including species-poor ones) are listed under Section 41 of the NERC Act (2006) as HPI. All native hedgerows are considered to be of high conservation value.

ii The Hedgerow Regulations (1997) classifies a hedgerow as 'important' if it:

- Satisfies at least 1 of the criteria listed in Part II of Schedule 1
- Has existed for 30 years or more

iii Any person wishing to remove a hedgerow is required to submit a hedgerow removal notice to the LPA (unless planning permission is granted which includes the removal of hedgerows or a section thereof).

iv Items of Legislation that are pertinent regarding hedgerows include:

- Hedgerow Regulations 1997
- The countryside Rights of Way Act 2000
- Natural Environment and Rural Communities Act (NERC) 2006
- Planning Policy Statement (PPS) 9: Biodiversity and Geological Conservation
- The UK Biodiversity Action Plan (UK BAP)
- The Conservation of Habitats & Species Amendments (EU Exit) Regulations 2019 (as amended)

11 APPENDIX 1: PHASE 1 HABITAT SURVEY PLAN

Key

- Boundary
- A2.1 - Scrub - dense/continuous
- A2.2 - Scrub - scattered
- B6 - Poor semi-improved grassland
- C3.1 - Other tall herb and fern - ruderal
- J6 - Hard Standing
- J2.1.2 - Intact hedge - species-poor
- J2.3.1 - Intact hedge with trees - species-poor
- J2.4 - Fence
- Target Note
- Tree with Bat Potential
- Deciduous Tree

Target notes:
TN1: Brash pile
TN2: Mammal hole
TN3: Mammal hole

RammSanderson

Client:
Nineteen47

Project:
Leconfield Road, Nanpantan

Drawing Title:
Phase 1 Habitat Plan

Drawing No.
RSE_4942_F02

Rev:
V1

Drawn By:
AC

Scale:
1:987 @A4

Date:
20/08/2021

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12 APPENDIX 2: SPECIES SPECIFIC SURVEY METHODS

12.1 Bats

i The overall value of the site and its connectivity to the wider countryside was assessed in relation to bats. The likelihood of bats roosting at the site or moving through the site between local roost sites and foraging/mating/hibernation habitats was considered.

ii The site, including the trees and boundary trees, were assessed by an ecologist and graded as to their suitability for supporting roosting bats using the Bat Conservation Trust's *Bat Surveys for Professional Ecologists: Good Survey Guidelines* (Collins, J. Eds. 2016), an extract of which is provided interpreted in Table 4.

Table 4: Criteria for bat roost potential assessment of trees

Roost Potential	Description	Surveys Required (Trees)
Confirmed roost	Evidence of roosting bats found during initial daytime inspection.	3 – including 1 dawn as a minimum
High *	Structures with one or more features suitable for bat roosting, with obvious suitability for larger numbers of bats.	3 – including 1 dawn as a minimum
Moderate	Structure with one or more potential roost sites that could be used due to size, shelter and protection but unlikely to support a roost of high conservation status.	2– including 1 dawn as a minimum
Low	Structure with one or more potential roosting sites used by individual bats opportunistically. Insufficient space, shelter or protection to be used by large numbers of bats.	Precautionary Mitigation Approach, some instances may require further survey
Negligible	No or negligible features identified that are likely to be used by roosting bats	None

** Unless it is a confirmed roost, additional surveys are required of buildings to assess presence / likely absence of a roost. The number of surveys are indicative to give confidence in a negative result, i.e. where no bats are found, confidence in a result can be taken.*

12.2 Reptiles

i The reptile survey followed standard methodology as outlined in the 'Herp Workers Manual' (Gent & Gibson, 2003) and Froglife Advice Sheet 10 - 'Reptile survey: an introduction to planning, conducting and interpreting surveys for snake and lizard conservation' (Froglife, 1999).

ii Reptile refugia measuring 0.5m2 were laid out on the 23rd April 2021 and left to 'bed in' for 25 days. The refugia were placed in areas where the habitat was considered suitable for reptiles, such as along field margins in long grassland or the edge of scrub where they would receive sun.

iii The refugia were checked during appropriate weather conditions (dry, calm and an ambient temperature 11-18°C). During each survey visit, all other parts of the Site were subject to a walkover survey looking for reptiles.

iv Refugia were removed following the completion of the surveys.

13 BIA CONDITION ASSESSMENT SUMMARY

Table 5: BIA Condition Assessment Summary (Baseline Habitats)

Criteria	Pass/Fail	Additional Comments
Woodland and forest – Lowland mixed deciduous woodland		
This should be an area of trees with complete canopy cover	Pass	
Native species are dominant. Non-native and invasive species account for less than 10% of the vegetation cover	Pass	
A diverse age range and height structure of the trees	Fail	All largely the same age range
Free from damage (in the past five years) from stock or wild mammals with less than 20% of vegetation being browsed	Pass	
There should be evidence of successful tree regeneration such as seedlings, saplings and young trees	Pass	
Standing and fallen dead wood of over 20cm diameter are present including fallen large dead branches/stems and stumps	Pass	
Wetland habitat if they exist within the wood has little sign of drainage or channel straightening	N/A	No wetland habitats present
The area is protected from damage by agricultural and other adjacent operations	Fail	PRoW and further informal worn pathways through the woodland
There should be no evidence of inappropriate management	Fail	PRoW and further informal worn pathways through the woodland
Invasive non-native plants are below 5%	Pass	
No signs of significant enrichment present	Pass	
More than 3 different native trees and 3 shrub species in an average 10m radius	Fail	Oak dominant
Condition Score: Moderate		

Criteria	Pass/Fail	Additional Comments
Woodland and forest – Other Broad Leaved		
This habitat type was utilised for recording scattered trees as there is no capacity for that within the matrix		
This should be an area of trees with complete canopy cover	Pass	
Native species are dominant. Non-native and invasive species account for less than 10% of the vegetation cover	Pass	Ash tree
A diverse age range and height structure of the trees	Fail	No diverse age range
Free from damage (in the past five years) from stock or wild mammals with less than 20% of vegetation being browsed	Fail	A number of damaged limbs present
There should be evidence of successful tree regeneration such as seedlings, saplings and young trees	Pass	
Standing and fallen dead wood of over 20cm diameter are present including fallen large dead branches/stems and stumps	Pass	
Wetland habitat if they exist within the wood has little sign of drainage or channel straightening	N/A	No wetland habitats present
The area is protected from damage by agricultural and other adjacent operations	Fail	Damage to limbs from pruning and heavy mowing at the base of the tree
There should be no evidence of inappropriate management	Fail	Damaged limbs
Invasive non-native plants are below 5%	Pass	
No signs of significant enrichment present	Pass	
More than 3 different native trees and 3 shrub species in an average 10m radius	Fail	Ash and Oak
In addition to the above criteria, the following characteristics are detailed within the Technical Supplement guide to determine woodlands in 'poor' condition: • Non-native trees often of a single species or the same age are the dominant component. • OR invasive non-native plants are greater than 20%. • Mixed species show a consistent planting pattern across the site. • Original planting lines, or remains of planting lines, can be seen. • Drainage features and channel straightening of watercourses ***Condition Score: Moderate***		

Criteria	Pass/Fail	Additional Comments
Heathland and shrub – Mixed Scrub		
There are at least three woody species, with no one species comprising more than 75% of the cover	Fail	Two species only: Hawthorn and Blackthorn
There is a good age range – a mixture of seedlings, saplings, young shrubs and mature shrubs	Fail	Age range is limited
Pernicious weeds and invasive species make up less than 5% of the ground cover	Fail	Common nettle is the dominant ground layer
The scrub has a well-developed edge with un-grazed tall herbs	Fail	No structural diversity with managed margins
There are many clearings and glades within the scrub	Pass	Some limited clearings, footpath running through
Condition Score: Poor		
Heathland and shrub – Bramble scrub		
Habitat is representative of UKHab description (where in its natural range). There are at least three woody species, with no one species comprising more than 75% of the cover (except common juniper, sea buckthorn or box, which can be up to 100% cover).	Fail	Entirely bramble
There is a good age range – all of the following are present: seedlings, young shrubs and mature shrubs.	Fail	
There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981) and species indicative of sub-optimal condition1 make up less than 5% of ground cover.	Pass	
The scrub has a well-developed edge with scattered scrub and tall grassland and/or herbs present between the scrub and adjacent habitat(s).	Pass	
There are clearings, glades or rides present within the scrub, providing sheltered edges.	Fail	
Condition Score: Poor		
Heathland and shrub – Bramble scrub		
Habitat is representative of UKHab description (where in its natural range). There are at least three woody species, with no one species comprising more than 75% of the cover (except common juniper, sea buckthorn or box, which can be up to 100% cover).	Fail	Mainly bramble, some hawthorn, blackthorn, dock

Criteria	Pass/Fail	Additional Comments
There is a good age range – all of the following are present: seedlings, young shrubs and mature shrubs.	Fail	
There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981) and species indicative of sub-optimal condition1 make up less than 5% of ground cover.	Pass	
The scrub has a well-developed edge with scattered scrub and tall grassland and/or herbs present between the scrub and adjacent habitat(s).	Fail	
There are clearings, glades or rides present within the scrub, providing sheltered edges.	Fail	
Condition Score: Poor		
Heathland and shrub – Blackthorn scrub		
Habitat is representative of UKHab description (where in its natural range). There are at least three woody species, with no one species comprising more than 75% of the cover (except common juniper, sea buckthorn or box, which can be up to 100% cover).	Fail	
There is a good age range – all of the following are present: seedlings, young shrubs and mature shrubs.	Pass	
There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981) and species indicative of sub-optimal condition1 make up less than 5% of ground cover.	Pass	
The scrub has a well-developed edge with scattered scrub and tall grassland and/or herbs present between the scrub and adjacent habitat(s).	Pass	
There are clearings, glades or rides present within the scrub, providing sheltered edges.	Fail	
Condition score: Moderate		
Grassland – Other Neutral Grassland		
The appearance and composition of the vegetation closely matches characteristics of the specific grassland habitat type (see UKHab definition). Wildflowers, sedges and indicator species for the specific grassland habitat type are very clearly and easily visible throughout the sward. NB - This criterion is essential for achieving moderate condition for nonacid grassland types only.	Fail	Wildflowers are present, however grassland is dominated by cocksfoot and perennial rye

Criteria	Pass/Fail	Additional Comments
Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	Fail	
Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens.	Pass	Some bare ground
Cover of bracken is less than 20% and cover of scrub (including bramble) is less than 5%.	Fail	No bracken but bramble and scrub above 5%
There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981). Combined cover of species indicative of sub-optimal condition1 and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area.	Fail	Undesirable species above 5% cover incl: creeping buttercup, ragwort, white clover, cow parsley, curled and broad-leaved dock, and common nettle.
Condition Score: Poor		
Grassland – Lowland dry acid grassland		
The appearance and composition of the vegetation closely matches characteristics of the specific grassland habitat type (see UKHab definition). Wildflowers, sedges and indicator species for the specific grassland habitat type are very clearly and easily visible throughout the sward. NB - This criterion is essential for achieving moderate condition for nonacid grassland types only.	Fail	Pendulous sedge, hard rush, gorse, creeping buttercup, soft rush, broadleaved dock, buddleia, Yorkshire fog, perennial rye grass, spear thistle, sedge sp.
Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	Pass	
Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens.	Fail	
Cover of bracken is less than 20% and cover of scrub (including bramble) is less than 5%.	Pass	
There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981). Combined cover of species indicative of sub-optimal condition1 and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area.	Pass	
Condition Score: Poor (do not select moderate or good as condition 1 has not been met)		

Criteria	Pass/Fail	Additional Comments
Hedgerow 1		
A1 Height >1.5m average along length	Pass	
A2 Width > 1.5m average along length	Fail	Average 1m
B1 Gap between ground and base of the canopy < 0.5m for > 90% of length unless 'line of trees'	Fail	
B2 Gaps make up < 10% of total length and no canopy gaps of >5m	Pass	
C1 >1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length is present on one side of the hedge (at least)	Fail	Mown regularly
C2 Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground	Fail	Cow parsley and common nettle dominant
D1 >90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species	Pass	
D2 >90% of the hedgerow or undisturbed ground is free of damage caused by human activities	Fail	Adjacent to gardens, regularly mown and trimmed, garden waste dumped at base in places
Condition Score: Poor (fails more than 4 attributes)		
Hedgerow 2		
A1 Height >1.5m average along length	Pass	
A2 Width > 1.5m average along length	Pass	
B1 Gap between ground and base of the canopy < 0.5m for > 90% of length unless 'line of trees'	Fail	
B2 Gaps make up < 10% of total length and no canopy gaps of >5m	Pass	
C1 >1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length is present on one side of the hedge (at least)	Fail	Mown regularly
C2 Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground	Fail	Cow parsley and common nettle dominant
D1 >90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species	Pass	

Criteria	Pass/Fail	Additional Comments
D2 >90% of the hedgerow or undisturbed ground is free of damage caused by human activities	Fail	Adjacent to gardens, regularly mown and trimmed, garden waste dumped at base in places
Condition Score: Moderate		
Hedgerow 3		
A1 Height >1.5m average along length	Pass	
A2 Width > 1.5m average along length	Pass	
B1 Gap between ground and base of the canopy < 0.5m for > 90% of length unless 'line of trees'	Fail	
B2 Gaps make up < 10% of total length and no canopy gaps of >5m	Pass	
C1 >1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length is present on one side of the hedge (at least)	Fail	Mown regularly and adjacent to garden
C2 Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground	Fail	Cow parsley and common nettle dominant
D1 >90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species	Pass	
D2 >90% of the hedgerow or undisturbed ground is free of damage caused by human activities	Fail	Adjacent to gardens, regularly mown and trimmed, garden waste dumped at base in places
A1 Height >1.5m average along length	Pass	
A2 Width > 1.5m average along length	Pass	
B1 Gap between ground and base of the canopy < 0.5m for > 90% of length unless 'line of trees'	Fail	
Condition Score: Moderate		

APPENDIX 3: CLIENT PROPOSALS

Burleigh Wood

The Tudor Farmhouse

231a

Greystones

223

229

116

50

46

42

47

56

57

87

TYNDALE ROAD

LECONFIELD ROAD

Surface Water Attenuation Basin

Children's Play Event

Graded and planted earth bund

Retaining structure

27-30 26 25 24 23 22 13 12 11 10 14 9 15 8 7 16 6 5 17 4 18 3 21 20 19 2 1

Key

- Application site boundary
- Existing (retained) trees & hedgerow
- Indicative proposed planting
- Indicative meadow planting
- Indicative surface water attenuation basin
- Open space
- Potential for local children's play event (LAP)
- Indicative buildings
- Potential locations of landmark buildings (max 2 storey)

N 0 10 20 m

BOWBRIDGE HOMES

nineteen47
CHARTERED TOWN PLANNERS & URBAN DESIGNERS

Project
Leconfield Road, Nanpanton

Drawing Title
Illustrative Layout

Project Code	Drawing Nr	Rev
n1249	007	F
Date	Drawing Scale	
06.08.2021	1:500 @ A2	

14 APPENDIX 4: PHASE 1 SURVEY RESULTS

14.1 Phase 1 Habitat Survey

i The site comprised a parcel of poor semi improved grassland, with areas of tall ruderal and scrub, and broad-leaved scattered trees present throughout the site. Broad-leaved woodland was present adjacent to the western boundary. Boundary fence is present on all aspects, with two species poor hedgerows present on the northern boundary. Full habitat descriptions and photos are provided below. For a Phase 1 Habitat Survey Plan and full species list please refer to the appendices.

ii Habitats types detailed below are listed in order of the JNCC (2010) Handbook. The species list provided in this report reflect only those taxa observed during the survey.

1.1.1 Scrub – Dense/Continuous

i This habitat type was concentrated at the boundaries of the site, it comprised dominant blackthorn *(Prunus spinosa)*, abundant bramble (*Rubus fruiticosus*), frequent holly (*Ilex aquifolium*) and elder (*Sambucus nigra*) occasional beech *(Fagus sylvatica)* and hazel (Corylus avellana) with an ivy (*Hedera helix*) covered understorey.

Figure 6: Scrub – Dense/Continuous

1.1.2 Scrub – Scattered

i This habitat was located in a small area within the south eastern corner of the site, it was comprised of only bramble.

Figure 7: Scrub – Scattered

1.1.3 Broad-leaved Scattered Trees

i A number of young broad-leaved scattered trees were present onsite. The species comprised ash *(Fraxinus excelsior),* blackthorn, beech, oak *(Quercus* sp.*)* and horse chestnut *(Aesculus Hippocastanum)*.

Figure 8: Scattered trees

14.1.2 Tall herb and ruderal

i A small parcel of tall herb and ruderal vegetation was present at the south eastern corner of the site. Species composition comprised dominant broad-leaved dock *(Rumex obtusifolium*) with abundant nettle (*Urtica dioica),* and cock's-foot *(Dactylus glomerata)*, frequent hard rush (*Juncus inflexus*), occasional pendulous sedge (*Carex pendula*) and curled dock (*Rumex crispus)* and rarely occurring cow parsley (*Anthriscus sylvestris)* and common ragwort (*Jacobaea vulgaris)*.

Figure 9: Tall herb and ruderal

14.1.3 Other Neutral Grassland

i Other neutral grassland formed the majority of the site. This was tussocky with a sward height between 10 cm and 30 cm, it appeared to be mown bi-annually. False oat grass and cocks-foot were equally abundant with frequent perennial rye grass (*Lolium perenne*), Yorkshire fog (*Holcus lanatus)* and meadow fox tail (*Alopecurus pratensis)* occasional creeping buttercup *(Ranunculus repens*), annual meadow grass (*Poa annua*) and white clover *(Trifolium repens),* rarely occurring chickweed (*Stellaria media),* daffodil (*Narcissus sp)* and meadow buttercup (*Ranunculus acris)*. An area of locally dominant cow parsley (*Anthriscus sylvestris)* was present in the south western corner of the site.

Figure 10: Other neutral grassland

14.1.4 Lowland dry acid grassland

i This habitat is present in the south-eastern corner of the site. Pendulous sedge, hard rush, gorse, creeping buttercup, soft rush (*Juncus effusus*), broadleaved dock, buddleia, Yorkshire fog, perennial rye grass, spear thistle, sedge sp (*Carex* sp.).

Figure 11: Acid Grassland

14.1.5 Intact species poor hedgerows

i There were three hedgerows on site, H1 was located along the southern boundary, and hedges 2 and 3 along the northern boundary. Hedgerow 1 did not have a dominant species instead comprised frequently occurring leylandii, cherry laurel (*Prunus laurocerasus),* elder (*Sambucus nigra*) and blackthorn (*Prunus spinosa*).

ii Hedgerow 2 comprised equally abundant hawthorn (*Crataegus monogyna)* and blackthorn with occasional elder and holly (*Ilex aquifolium*). Hedgerow 2 was 1-2m tall and wide and was located between the site and residential garden to the north.

iii Hedgerow 3 (H3) was dominated by *leylandii* only and was 2-3m in height and 1m wide.

Figure 12: Intact species poor hedgerow

14.1.6 Offsite offsetting area (Grassland)

i This area of poor semi improved (Modified) grassland was dominated by perennial ryegrass with occasional creeping buttercup, dandelion and white clover. Signs of enrichment were present in the form of large variations of species and very low biodiversity. This area is to be enhanced to neutral grassland through planting and mowing procedures.

Figure 13: Offsite offsetting area

ii There were three hedgerows on site, H1 was located along the southern boundary, and hedges 2 and 3 along the northern boundary. Hedgerow 1 did not have a dominant species instead comprised frequently occurring leylandii, cherry laurel (*Prunus laurocerasus),* elder (*Sambucus nigra*) and blackthorn (*Prunus spinosa*).

iii Hedgerow 2 comprised equally abundant hawthorn (*Crataegus monogyna)* and blackthorn with occasional elder and holly (*Ilex aquifolium*). Hedgerow 2 was 1-2m tall and wide and was located between the site and residential garden to the north.

Hedgerow 3 (H3) was dominated by *leylandii* only and was 2-3m in height and 1m wide

15 APPENDIX 5: SPECIES LIST

Common Name	Scientific Name	DAFOR
Blackthorn	*Prunus spinosa*	D
Ash	*Fraxinus excelsior*	O
Oak	*Quercus robur*	O
Cocks foot grass	*Dactylus glomerata*	A
Leyland cypress	*Cupressus × leylandii,*	O
Pendulous sedge	*Carex pendula*	O
Cherry laurel	*Prunus laurocerasus*	O
Elder	*Sambucus nigra*	F
Ragwort	*Jacobaea vulgaris*	R
Hazel	*Corylus avellana*	O
Meadow foxtail	*Alopecurus pratensis*	A
Holly	*Ilex aquifolium*	F
Ivy	*Hedera helix*	O
Beech	*Fagus Sylvatica*	O
Horse chestnut	*Aesculus Hippocastanum*	O
Creeping buttercup	*Ranunculus Repens*	O
Annual meadow grass	*Poa annua*	O
Cow parsley	*Anthriscus sylvestris*	R
Daffodil	*Narcissus sp*	R
Creeping thistle	*Cirsium arvense*	R
Spear thistle	*Cirsium vulgare*	R
Common chickweed	*Stellaria media*	R
Perennial ryegrass	*Lolium perenne*	F
White clover	*Trifolium repens*	O
Mugwort	*Artemisia vulgaris*	R
Meadow buttercup	*Ranunculus acris*	R
Hard rush	*Juncus inflexus*	O
Curled dock	*Rumex crispus*	F
Yorkshire fog	*Holcus lanatus*	F

Common Name	Scientific Name	DAFOR
Common nettle	*Urtica dioica*	A
Common hogweed	*Heracleum sphondylium*	O
Bramble	*Rubus fruticosus*	A
Broad-leaved dock	*Rumex obtusifolius*	D
Sweet vernal grass	*Anthoxanthum odoratum*	R
Red fescue	*Festuca rubra*	R
Red dead nettle	*Lamium purpureum*	R
Dandelion	*Taraxacum* sp.	F
Soft rush	*Juncus effusus*	R
Buddleia	*B. davidii*	O
Gorse	*Ulex* sp.	R

16 APPENDIX 6: BIA VISUALISATION PLAN

17 APPENDIX 7: REPTILE SURVEY RESULTS

i The reptile surveys were overseen by Senior Ecologist Lauri Leivers BSc (Hons) GradCIEEM, and conducted by seasonal field ecologists Catherine Firth, Ellie Orme, and Brandon Whatman. Lauri holds a class two licence for GCN (2018-37695-CLS-CLS) as well as a FISC Level 3 in Botanical Identification Skills and has been a professional ecologist for the past five years. The surveys were completed during suitable conditions as detailed in the table below.

Table 6: Reptile Survey Results

Survey	Abiotic Factor					
	Date	Temperature (°C)	Wind Speed (Beaufort Scale)	Cloud Cover (Oktas Scale)	Precipitation	Reptiles Identified
Setup	23/04/2021	10	2	3	0	None
Survey 1	18/05/2021	13	1	3	0	None
Survey 2	24/05/2021	9*	2	4	0	None
Survey 3	28/05/2021	18	1	4	0	None
Survey 4	16/06/2021	16	1	1	0	None
Survey 5	21/06/2021	11	3	7	0	None
Survey 6	23/06/2021	16	2	0	0	None
Survey 7	01/07/2021	16	1	3	0	None

**During the second reptile survey, conducted on 24th May 2021, the temperature was recorded at 9°C. During this survey, no reptiles were recorded. All six other surveys were, however, conducted in suitable conditions (i.e., in temperatures over 11°C) over the optimal survey period, and no reptiles were recorded during these surveys. As such, the suboptimal temperature recorded during the second reptile survey is not considered to be a limiting factor on assessing the value of the site for local reptile populations.*

Figure 14: Reptile Mat Locations