

Appendix 11.4 Extended Phase 1 UK Habs Survey Results

Introduction

This report has been prepared by Tyler Grange Group Ltd on behalf of Northern Gateway Development Vehicle LLP (NGDV). It sets out the findings of habitat surveys undertaken at 'Northern Gateway'.

The EIA¹ assesses the Project for Assessment, which measures approximately 570 ha. Within the Assessment Boundary, sits the Proposed Scheme (approximately 210 ha), for which an outline planning application is sought. Habitat surveys were undertaken within the Survey Area (**Figure 11.3**); which was largely defined by permitted access. Access was granted within the entirety of the Application Boundary, with the addition of fields immediately south of the southern Application Boundary also being permitted for access. All remaining areas outside of the Survey Area, but within the Assessment Boundary were not surveyed in detail, and assumptions were made of the habitat type and condition through aerial imagery and views from Public Rights of Way (PRoW).

Legislation and Planning Policy

Specific habitats and species receive legal protection in the UK under various pieces of legislation, including:

- The Environment Act 2021;
- The Wildlife and Countryside Act (WCA) 1981 (as amended);
- The Conservation of Habitats and Species Regulations 2017 (as amended);
- The Countryside and Rights of Way (CRoW) Act 2000;
- The Natural Environment and Rural Communities Act (NERC) 2006;
- The Hedgerows Regulations 1997; and
- The Protection of Badgers Act 1992.

The European Council Directive on the Conservation of Natural Habitats and of Wild Flora and Fauna, 1992, often referred to as the 'Habitats Directive', provides for the protection of key habitats and species considered of European importance. Annexes II and IV of the Directive list all species considered of community interest. The legal framework to protect the species covered by the Habitats Directive has been enacted under UK law through The Conservation of Habitats and Species Regulations 2017 (as amended).

In Britain, the WCA 1981 (as amended) is the primary legislation protecting habitats and species. SSSIs, representing the best examples of our natural heritage, are notified under the WCA 1981 (as amended) by reason of their flora, fauna, geology or other features. All breeding birds, their nests, eggs and young are protected under the Act, which makes it illegal to knowingly destroy or disturb the nest site during nesting season. Schedules 1, 5 and 8 afford protection to individual birds, other animals and plants.

The CRoW Act 2000 strengthens the species enforcement provisions of the WCA 1981 (as amended) and makes it an offence to 'recklessly' disturb a protected animal whilst it is using a place of rest or shelter or breeding/nest site.

¹ NORM3018 Northern Gateway JPA 1.1 Environmental Impact Assessment

Environment Act 2021: Town and Country Planning Act

As of the 12th February 2024 it is mandatory for development (with a small number of exceptions) to achieve at least a 10% gain in biodiversity units under Schedule 7A of the Town and Country Planning Act 1990 (as inserted by Schedule 14 of the Environment Act 2021).

Natural Office of the Deputy Prime Minister (ODPM) Circular 06/2005: Biodiversity and Geological Conservation - Statutory Obligations and their Impact within the Planning System

ODPM Circular 06/05 was prepared to accompany PPS9, however continues to be valid, and material in the consideration of planning applications since PPS9's replacement by the NPPF.

ODPM Circular 06/05 provides guidance on applying legislation in relation to nature conservation and planning in England. Part I considers the legal protection and conservation of internationally designated sites (namely candidate Special Areas of Conservation (cSACs), SACs, potential Special Protection Areas (pSPAs), SPAs and Ramsar sites) and Part II considers the legal protection and conservation of nationally designated sites, namely Sites of Special Scientific Interest (SSSIs).

Part III considers the protection of habitats and species outside of designated areas (particularly UK Biodiversity Action Plan species and habitats, which it states are capable of being a material consideration in the preparation of local development documents and the making of planning decisions.

Part IV considers species protected by law and states that the presence of a protected species is a material consideration in the consideration of a development proposal that, if carried out, would be likely to result in harm to the species or its habitat and that it is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted.

National Planning Policy

The updated National Planning Policy Framework (NPPF) was published in December 2023 and sets out the Government's planning policies for England and how these should be applied. It replaces the first National Planning Policy Framework published in March 2012.

Paragraph 11 states that:

"Plans and decisions should apply a presumption in favour of sustainable development." Section 11 of the NPPF, paragraph 120, sub-section b states that planning policies and decisions should:

- b) "encourage multiple benefits from both urban and rural land, including through mixed use schemes and taking opportunities to achieve net environmental gains such as developments that would enable new habitat creation or improve public access to the countryside;
- c) recognise that some undeveloped land can perform many functions, such as for wildlife, recreation, flood risk mitigation, cooling/shading, carbon storage or food production"

Section 15 of the NPPF (paragraphs 174 to 188) considers the conservation and enhancement of the natural environment.

Paragraph 180 states that planning 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; and
- 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”

Paragraph 181 states that 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.

Paragraph 185 states that in order 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 stepping stones 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.”

When determining planning applications, Paragraph 186 states that 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.”

As stated in paragraph 187 the following should be given the same protection as habitats sites:

- a) “potential Special Protection Areas and possible Special Areas of Conservation;
- b) listed or proposed Ramsar sites ; and
- c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.”

Paragraph 182 states that the presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site

Methodology

Due to the size of the Proposed Scheme, surveys were undertaken throughout spring and summer 2024. An extended Phase 1 habitat field survey, UK Habs and Condition Assessments² of the Survey Area were undertaken on 1st May 2024, 13th June 2024 and 3rd October 2024. The surveys were conducted by Olivia McKechnie, Bethany Pythian and Nick Bell, all members of CIEEM, experienced ecologist and BNG assessors at Tyler Grange (**Table 11.4.X**). The majority of the habitat assessment was undertaken during the May and June visits, with the October visit largely used for capturing photographs of hedgerows and accessing areas which were not accessible during May and June.

The methods used during the walkover survey broadly followed methods used in an ‘extended’ Phase I habitat survey (JNCC)³ and entailed recording the main plant species and classifying and mapping habitat types with reference to the Habitat Definitions provided by the UK Habitat Classification Working Group (UKHab Ltd)⁴ to feed into the Biodiversity Metric. The Statutory Biodiversity Metric User Guide was used during surveys to determine habitat condition and ecological importance⁵.

All habitats were assessed utilising the relevant condition criteria for the relevant habitat type under the Statutory Metric, which included confirming ‘pass’ / ‘fail’ criteria taken from the UK Habitat/Phase 1 methodology where necessary.

Hedgerow surveys were also undertaken on all hedgerows within the Survey Area, during the three survey dates described above, using the methodology detailed in ‘The Hedgerow Survey Handbook. 2nd Edition⁶, in order to determine their species-richness. Based on this survey methodology, 30m sections of each hedgerow were surveyed and if 5 or more native wooded species were recorded in that section, the hedge was classified as species-rich. If a hedge was less than 30m in length, the entire length of hedge was surveyed using this methodology.

All hedge features, management and dimensions were also recorded, along with their condition as defined in the survey handbook.

² Natural England (2023). The Biodiversity Metric Statutory Metric User Guide: Natural England Joint Publication JP039.

³ Joint Nature Conservation Committee (2010). Handbook for Phase 1 habitat survey - a technique for environmental audit. JNCC, Peterborough

⁴ UKHab Ltd. (2023). UK Habitat Classification Version 2.0 (at <https://www.ukhab.org>)

⁵ The British Standards Institution (2021). Process for designing and implementing Biodiversity Net Gain Specification.

⁶ Defra (2007) Hedgerow Survey Handbook. A standard procedure for local surveys in the UK. Defra, London.

Table 11.4.1: Survey Dates and Surveyors

Extended Phase 1/ UK Habs	Date	Surveyor
1	1 st May 2024	Nick Bell
2	13 th June 2024	Olivia McKechnie, Bethany Pythian
3	3 rd October 2024	Nick Bell

A BNG assessment, which assessed the Proposed Scheme parameters plan only, has been undertaken; the results of which are reporting in a standalone document which is appended to this Environmental Impact Assessment.

Results

Habitats present within the Survey Area are discussed below with tabulated information for the main area habitats. Additional detail for other habitat features (hedgerows and individual fields) are provided beneath **Table 11.4.2**. The broad habitat types present within the Proposed Scheme were:

- Modified grassland;
- Other neutral grassland;
- Other woodland, broadleaved;
- Lakes and ponds;
- Heathland and shrub (Mixed Scrub);
- Rivers and streams;
- Line of trees;
- Developed land; sealed surfaces;
- Hedgerows;

For ease of reference, habitat types are described in **Table 11.4.2** below, and are shown on the Habitat Features Plan (**Figure 11.15 and 16**).

Hedgerow and individual field descriptions are also provided in Tables **11.4.3** and **11.4.4**. The UKHabs Condition Assessment for each habitat is provided in Microsoft Excel form as a separate attached document.

Records of invasive species are mentioned within the habitat in which they were observed and shown on the Habitat Features Plan (**Figure 11.15 and 16**)

Table 11.4.2: Habitat and Flora within the Survey Area

Habitat Type (UKhab)	Description and Species	Photograph
Primary code: Modified grassland g4	Detailed description and photographs of each field are available in Appendix 6. The vast majority of the Survey Area (Fields F1 – F57) comprised managed modified grassland. The fields were regularly cut and managed for haylage/ silage and are rye grass dominant. Average species across this habitat were recorded as: perennial rye grass <i>Lolium perenne</i>, meadow foxtail <i>Alopecurus pratensis</i>, Yorkshire fog <i>Holcus lanatus</i> and white clover <i>Trifolium repens</i>. Average number of species per m2 were fewer than 6-8 species, and did not show characteristics of a higher distinctiveness grassland. Therefore fields F1-F57 were assessed as being poor condition modified grassland. Photographs of Fields F10 and F14 provided for reference, see Appendix 6 for full details. The modified grassland fields (F1-F57) were assessed as being of negligible ecological importance.	 F10

		 F14
<u>Primary code:</u> Other neutral grassland g3c	There are four areas of neutral grassland within the Proposed Scheme: F58, F59, F60 and F61. F59 Assumed to be a former pasture, which has been left to grow-out. This field contained 6-8 species per m2 and showed characteristics of a higher distinctiveness grassland. Species present per m2 were: cocksfoot <i>Dactylis glomerata</i>, perennial rye, fescue sp., common bent <i>Agrostis capillaris</i>, reed canary grass <i>Phalaris arundinacea</i>, ribwort plantain <i>Plantago lanceolata</i>, common nettle <i>Urtica dioica</i> and broad-leaved dock <i>Rumex obtusifolius</i>. Other species found within this parcel, but did not account for average species per m2 were Himalayan balsam <i>Impatiens glandulifera</i>, teasel <i>Dipsacus</i>, cleavers <i>Galium aparine</i>, bramble <i>Rubus fruticosus</i>, dandelion <i>Taraxacum officinale</i>, creeping thistle <i>Cirsium arvense</i> and great willowherb <i>Epilobium hirsutum</i>. It was therefore assessed as being moderate condition neutral grassland.	

F60 A rush dominant, damp area. This field contained 6-8 species per m2 and showed characteristics of a higher distinctiveness grassland. Average species present per m2 were: hard rush <i>Juncus inflexus</i>, cock's foot, Yorkshire fog <i>Holcus lanatus</i>, nettle, broad-leaved dock, ragwort <i>Jacobaea vulgaris</i> and tufted hair grass <i>Deschampsia cespitosa</i>. Other species within this parcel included Himalayan balsam, meadow buttercup <i>Ranunculus acris</i> and horsetail <i>Equisetum</i>. It was therefore assessed as being moderate condition neutral grassland. F61 A rush dominant unmanaged area, with some footpaths running through. This field contained 6-8 species per m2 and therefore categorised as a higher distinctiveness grassland. Species present per m2 were: hard rush, cock's foot, broad-leaved dock, creeping thistle, teasel and horsetail. Other species present in the wider sward included occasional stands of gorse <i>Ulex europaeus</i> and goat willow <i>Salix caprea</i>, with some isolated areas of common reed <i>Phragmites australis</i> and tufted hair grass; there was Himalayan balsam present to the western boundary. It was therefore assessed as being moderate condition neutral grassland. F62 Comprised a strip of rush dominant habitat on a small embankment, which was left unmanaged. This field contained 6-8 species per m2 and showed characteristics of a higher distinctiveness grassland. Average species present per m2 were: hard rush, cock's foot, Yorkshire fog, nettle, broad-leaved dock, tufted hair grass and red clover. There were scattered goat willow and occasional self-seeded hawthorn and Himalayan balsam. It was therefore assessed as being moderate condition neutral grassland. The neutral grassland fields (F58, F59, F60 and F61) were assessed as being of local ecological importance.	F59  F60  F61
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		 F62
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Primary code: Other woodland, broadleaved w1	There are areas of broadleaved woodland blocks across the Proposed Scheme. W1 was the largest and located to the south east of the Survey Area, it predominately comprised oak <i>Quercus robur</i>, ash <i>Fraxinus excelsior</i>, silver birch <i>Betula pendula</i> and hawthorn <i>Crataegus monogyna</i>. Ground flora predominantly comprised grasses such as cock's foot and perennial rye; Himalayan balsam was present in many areas. W1 was recorded as poor condition. However, W1 is recognised on the Priority Habitat Inventory⁷ on MAGIC⁸. W2 is a thin strip of woodland, marking a boundary and adjacent to neutral grassland. The woodland comprised oak, silver birch, ash, hawthorn, sycamore and holly <i>Ilex aquifolium</i>. Ground flora comprised cock's foot, perennial rye, common nettle and bramble. W2 was recorded as poor condition. W3 is a large area of woodland adjacent to Whittle Brook (photograph showing the northern end). Species present included oak, silver birch, hawthorn, beech <i>Fagus sylvatica</i>, cherry <i>Prunus avium</i>, aspen <i>Populus tremula</i>, ash and holly. W3 was recorded as moderate condition. W3 is recognised on the Priority Habitat Inventory⁷ on MAGIC W4 was a small, isolated block of woodland within the modified grassland fields to the west of the Proposed Scheme. Species comprised oak, ash, silver birch, sycamore and holly. Ground flora was limited to occasional grasses such as cock's foot, with some bramble and common nettle. This woodland was assessed as poor condition. W5 was a small woodland in the northwest corner of the Proposed Scheme. Species comprised holly, hawthorn, oak, silver birch and sycamore. The woodland was located on a steep bank which was poached extensively by horses, resulting in very little ground flora. The condition of W5 was assessed as poor. W6 was a block of woodland to the northern end of Brightley Brook. The southern side of the woods was a steep embankment, with the northern side being a field boundary.	 W1  W2
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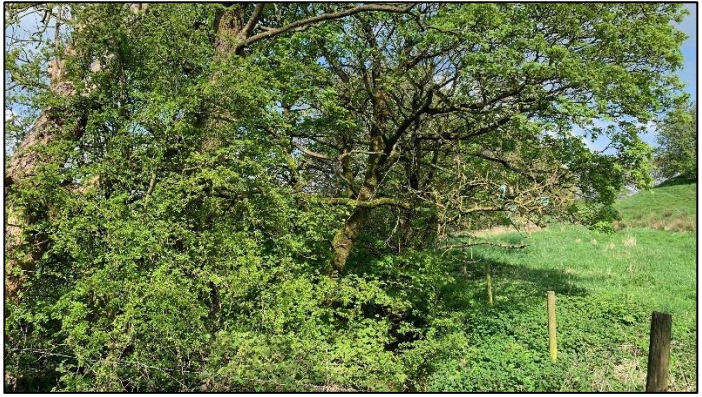
⁷ NERC (2006) Section 41 Habitats of Principal Importance: <https://www.data.gov.uk/dataset/4b6ddab7-6c0f-4407-946e-d6499f19fcde/priority-habitats-inventory-england>

⁸ https://magic.defra.gov.uk/Metadata_for_magic/Habitat%20Network%20Mapping%20Guidance.pdf

Species comprised oak, silver birch, sycamore, beech and holly. Himalayan balsam was extensive throughout the ground flora. The condition of W5 was assessed as poor. W7 was located to the north of Proposed Scheme, close to Butterfields Farm. The woodland block comprised horse chestnut <i>Aesculus hippocastanum</i> hawthorn, cherry, holly, goat willow and sycamore. There was no recognisable NVC ground flora, as it was limited to common grasses. This woodland was of poor condition. W8 is a small block of woodland directly south of Butterfield Farm. It is located on a steep bank, with species comprising oak, sycamore, silver birch, horse chestnut and hawthorn. Ground flora was limited to common grasses with some nettle and bramble. This woodland was of moderate condition. W9 was located in the far north of the Proposed Scheme and comprised oak, ash, hawthorn, elder and silver birch. Ground flora was limited to common grasses with common nettle and isolated patches of Himalayan balsam. The condition of this woodland was assessed as moderate. The woodlands were assessed as being of local ecological importance.	 W3  W4
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		 W5
		 W6

		 W7
		 W8

		 W9
<u>Primary code:</u> Lakes and ponds r1	There are nine ponds within the Proposed Scheme. Most of which were categorised as moderate condition, with one good condition and one poor condition. Refer to Appendix 3 for the Condition Assessments. P5 a narrow, tree lined pond to the north of the Proposed Scheme. Moderate condition P12 a small, common reed dominant pond to the northeast of the Proposed Scheme. Poor condition. P13 an oval shaped, moderate size pond within the southeastern fields. Moderate condition. P14 only seasonally wet, bullrush dominant. Poor condition. P15 a large pond with good water quality and emergent vegetation. Moderate condition. P17a newly created pond to store run-off and provide water for cattle. No submergent or emerging vegetation, linked to P17b through a pipe. Poor condition.	 P5

	P17b newly created pond to store run-off and provide water for cattle. Only seasonally wet. No submergent or emerging vegetation, linked to P17a through a pipe. Poor condition. P18 small pond with good water quality and submerged and emergence vegetation. Moderate condition. P39 a large stone-lined reservoir, storing water. Some submerged vegetation. Poor condition Habitat subject to statutory protection under UKBAP Priority Habitats⁹ and therefore were assessed as being of local ecological importance.	 P12
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⁹ JNCC UKBAP Priority Habitats: <https://jncc.gov.uk/our-work/uk-bap-priority-habitats/#uk-bap-broad-habitats>

		 P13 
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		P14  P15
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		 P17a 
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		P17b  P18
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		 P39
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Primary code: Heathland and shrub h Secondary Code Dense scrub h3	There were three main areas of dense scrub habitat within the Proposed Scheme. H3a is located around the small reservoir to the north of the Proposed Scheme. This habitat included bramble, gorse, hawthorn and goat willow with some self-seeded trees such as silver birch to the west. Himalayan balsam was present. This habitat scored a poor condition on the condition assessment. There was a large area of dense scrub to the east of the Proposed Scheme (H3b), situated on an embankment leading down to woodland W1. This habitat comprised dense bramble with teasel. Himalayan balsam was present. This habitat scored a poor condition on the condition assessment. H3c comprised a large area of dense scrub, located towards the southeast of the Proposed Scheme. It comprised an unmanaged bund of bramble, dock and rosebay willowherb <i>Chamerion angustifolium</i>, with bramble scrub to the east of the hardstanding area. Himalayan balsam was present to the east. This habitat scored a poor condition on the condition assessment. Mixed scrub is not a Priority habitat, and all three habitat areas scored poor condition in UKHabs. This broad habitat was therefore assessed as being of negligible ecological importance.	 H3a 
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		H3b  H3c
Primary Code Rivers and streams r2	Streams within Survey Area Stream S1 comprised a narrow and shallow channel, often recorded as being almost dry/ only found to have running water when seasonally wet. It runs entirely within woodland W1 and connects to Whittle Brook. It has a relatively flat gradient to the north, then the embankments become increasingly steep towards the south. A condition assessment of the brook itself has not been undertaken as impacts are unknown at this stage; for the purpose of this assessment, it was considered to be moderate. Stream S2 (Brightley Brook) comprised narrow (c. 30-40cm) channel, with modified grassland on both embankments to the north, and common and widespread grasses found within the channel itself, suggesting that the water level and flow may fluctuate. The brook flows along a culverted section to the south of Pilsworth Lake, then drops steeply down an artificial waterfall and into a predominantly artificial stone-lined channel comprising the northwest boundary of the Application site. A condition	

assessment of the brook itself has not been undertaken; although the parameters plans show a full retention of its length, impact are not known at this stage. For the purpose of this assessment, it was considered to be moderate Stream S3 (Pilsworth Clough) comprised a narrow channel (c. 20-35cm), with neutral grassland on both embankments at its northern extent (F62). The brook then runs through an area of 'no access', it is culverted underneath Moss Hall Road, re-emerges within F8 (modified grassland) and then follows the access track to Pilsworth Fisheries and enters the small reservoir (P39). A condition assessment of the brook itself has not been undertaken; although the parameters plans show a full retention of its length, impacts are not known at this stage. For the purpose of this assessment, it was considered to be moderate. Stream S4 comprised a narrow channel (c. 20-35cm), located to the north east of the Survey Area and comprising the boundary. It is situated within a small woodland block (W9). The stream was found to be showing signs of iron oxidisation during the habitat survey (see photograph). The embankments appeared to be poached, through cattle accessing from the eastern embankment. A condition assessment of the brook itself has not been undertaken; although the parameters plans show a full retention of its length, impacts are not known at this stage. For the purpose of this assessment, it was considered to be moderate. Stream S5 (Whittle Brook) comprises the majority of the southern boundary of the Application Boundary, but deviates away from the boundary towards the southwest (and therefore runs through the Assessment Boundary). Whittle Brook is a meandering watercourse, where some sections are up to 2.5m in width, however in some location it can be as narrow as 50cm. The depth of the watercourse fluctuates, in some locations it is shallow with shingle substrate, in other locations – often where water pools at a meander – it can be up to 1m deep. There is a moderate flow along its length. Adjacent habitats largely comprise broadleaved woodland and modified grassland. Encroachment and poaching is relatively minor as sheep and cattle are not often present within the adjacent fields. A condition assessment of the brook itself has not been undertaken; although the parameters plans show a full retention of its length,	Stream S1  Stream 2: Brightley Brook (north east) additional photograph shown in W6 above.
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	impacts are not known at this stage. For the purpose of this assessment, it was considered to be moderate. This habitat subject to statutory protection under UKBAP Priority Habitats¹⁰ and is considered to be of local ecological importance.	 Stream 3: Pilsworth Clough
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¹⁰ JNCC UKBAP Priority Habitats: <https://jncc.gov.uk/our-work/uk-bap-priority-habitats/#uk-bap-broad-habitats>

		 Stream S4  Stream S5 (Whittle Brook, west)
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		 Stream S5 (Whittle Brook) with Woodland W3 on northern bank
<u>Primary Code</u> Line of trees	There are three lines of trees habitat across the Proposed Scheme. LT1 comprised predominantly oak, silver birch and ash. It was assessed as being moderate condition. LT2 comprised beech, cherry, silver birch and oak. It was assessed as being moderate condition. LT3 comprised beech, silver birch, oak and hawthorn. It was assessed as being moderate condition. The lines of trees are considered to be of local ecological importance.	 LT1

		 LT2
		 LT3

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<u>Primary Code</u> Developed land; sealed surfaces u1b	There were areas of developed land; sealed surface throughout the Proposed Scheme, comprising buildings, hardstanding, access roads and storage/ lay-down areas. This habitat has no intrinsic ecological value and therefore is not applicable for condition assessment. This habitat is considered to be of negligible ecological importance.	
<u>Primary code</u> Heathland and shrub h <u>Secondary code</u> Hedgerows h2	There were 52 hedgerows across the Proposed Scheme. The vast majority of the hedgerows were homogenous in species diversity and condition, due to similar farming management and maintenance practices. Hedgerow descriptions and photographs are provided in Appendix 5. Hedgerows H1 – H10, H12, H13, H15-H22, H24-H29, H32, H33-H46, H48-52 were found to be species-poor, native hedgerows largely comprising hawthorn and elder. Hedgerows H11, H14, H23, H30, H31, H33 and H47 were found to be better condition hedgerows, with a greater species diversity, however were still associated with heavily managed modified grassland fields with little or no field boundary/ understorey vegetation. All hedgerows within the Proposed Scheme were found to be Priority habitat, largely due their length. This habitat is therefore subject to statutory protection under UKBAP	

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	Priority Habitats ⁷ . It is therefore considered that all hedgerows within the Survey Area are of local ecological importance .	
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Descriptions of each hedgerow are provided within **Table 11.4.3** below, with corresponding photographs provided beneath the table.

Table 11.4.3: Hedgerow Descriptions

Hedgerow	Description: Species Present, Length and Height and Importance
H1	Hawthorn and elder, 0.07km in length, >1.5m height. Priority ¹¹ habitat due to the length of the hedgerow.
H2	Hawthorn, 0.34km in length, <1.5m height. Priority habitat due to the length of the hedgerow.
H3	Hawthorn, elder, holly. 0.23km in length, >1.5m height. Priority habitat due to the length of the hedgerow.
H4	Hawthorn. 0.06km in length, >1.5m height. Priority habitat due to the length of the hedgerow.
H5	Hawthorn and elder, 0.18km in length, >1.5m height. Priority habitat due to the length of the hedgerow.
H6	Hawthorn and elder, 0.26km in length, >1.5m height. Priority habitat due to the length of the hedgerow.
H7	Hawthorn. 0.65km in length, <1.5m height. Priority habitat due to the length of the hedgerow.
H8	Hawthorn. 0.35km in length, <1.5m height. Priority habitat due to the length of the hedgerow.
H9	Hawthorn, elder. 0.11km in length, <1.5m height. Priority habitat due to the length of the hedgerow.
H10	Hawthorn, elder. 0.11km in length, <1.5m height. Priority habitat due to the length of the hedgerow.
H11	Hawthorn, wild cheery, oak. 0.22km in length, >1.5m height. Priority habitat due to the length of the hedgerow.
H12	Hawthorn, elder. 0.51km in length, <1.5m height. Priority habitat due to the length of the hedgerow.
H13	Hawthorn, elder. 0.54km in length, <1.5m height. Priority habitat due to the length of the hedgerow.
H14	Hawthorn, elder, silver birch, holly. 0.27km in length, <1.5m height. Priority habitat due to the length of the hedgerow.
H15	Hawthorn. 0.07km in length, <1.5m height. Priority habitat due to the length of the hedgerow
H16	Hawthorn. 0.81km in length, >1.5m height. Priority habitat due to the length of the hedgerow.
H17	Hawthorn. 0.07km in length, >1.5m height. Priority habitat due to the length of the hedgerow.
H18	Hawthorn, elder. 0.12km in length, >1.5m height. Priority habitat due to the length of the hedgerow.
H19	Hawthorn. 0.13km in length, <1.5m height. Priority habitat due to the length of the hedgerow

¹¹ UK Biodiversity Action Plan, Priority Habitat Descriptions: <https://data.jncc.gov.uk/data/ca179c55-3e9d-4e95-abd9-4edb2347c3b6/UKBAP-BAPHabitats-17-Hedgerows.pdf>

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H20	Hawthorn, elder. 0.13km in length, <1.5m height. Priority habitat due to the length of the hedgerow
H21	Hawthorn, elder. 0.13km in length, >1.5m height. Priority habitat due to the length of the hedgerow
H22	Hawthorn, elder. 0.26km in length, >1.5m height. Priority habitat due to the length of the hedgerow
H23	Hawthorn, elder, sycamore. 0.22km in length, >1.5m height. Priority habitat due to the length of the hedgerow
H24	Hawthorn, elder, wild cherry. 0.11km in length, >1.5m height. Priority habitat due to the length of the hedgerow
H25	Hawthorn, elder. 0.3km in length, >1.5m height. Priority habitat due to the length of the hedgerow
H26	Hawthorn, elder. 0.15km in length, >1.5m height. Priority habitat due to the length of the hedgerow
H27	Hawthorn. 0.13km in length, >1.5m height. Priority habitat due to the length of the hedgerow
H28	Hawthorn. 0.19km in length, >1.5m height. Priority habitat due to the length of the hedgerow
H29	Hawthorn. 0.16km in length, >1.5m height. Priority habitat due to the length of the hedgerow
H30	Hawthorn, elder, wild cherry, sycamore. 0.5km in length, >1.5m height. Priority habitat due to the length of the hedgerow
H31	Hawthorn, elder, wild cherry, sycamore. >0.16km in length, <1.5m height. Priority habitat due to the length of the hedgerow
H32	Hawthorn. 0.09m in length, >1.5m height. Priority habitat due to the length of the hedgerow.
H33	Hawthorn, elder, wild cherry. 0.35km in length, >1.5m height. Priority habitat due to the length of the hedgerow
H34	Hawthorn. 0.04km in length, >1.5m height. Priority habitat due to the length of the hedgerow
H35	Hawthorn. 0.13km in length, >1.5m height. Priority habitat due to the length of the hedgerow.
H36	Hawthorn. 0.25km in length, >1.5m height. Priority habitat due to the length of the hedgerow.
H37	Hawthorn, elder. 0.13km in length, >1.5m height. Priority habitat due to the length of the hedgerow.
H38	Hawthorn, elder. 0.11km in length, >1.5m height. Priority habitat due to the length of the hedgerow.
H39	Hawthorn. 0.08km in length, >1.5m height. Priority habitat due to the length of the hedgerow.
H40	Hawthorn. 0.14km in length, <1.5m height. Priority habitat due to the length of the hedgerow.
H41	Hawthorn, elder. 0.08km in length, >1.5m height. Priority habitat due to the length of the hedgerow.
H42	Hawthorn. 0.04km in length, <1.5m height. Priority habitat due to the length of the hedgerow.
H43	Hawthorn. 0.23km in length, <1.5m height. Priority habitat due to the length of the hedgerow.

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H44	Hawthorn, elder. 0.24km length, >1.5m height. Priority habitat due to the length of the hedgerow.
H45	Hawthorn, elder. 0.08km in length, >1.5m height. Priority habitat due to the length of the hedgerow.
H46	Hawthorn, elder. 0.16km in length, >1.5m height. Priority habitat due to the length of the hedgerow.
H47	Hawthorn, elder. 0.15km in length, >1.5m height. Priority habitat due to the length of the hedgerow.
H48	Hawthorn, elder. 0.13km in length, >1.5m height. Priority habitat due to the length of the hedgerow.
H49	Hawthorn, elder. 0.16km in length, >1.5m height. Priority habitat due to the length of the hedgerow.
H50	Hawthorn, elder. 0.15km in length, >1.5m height. Priority habitat due to the length of the hedgerow.
H51	Hawthorn, elder. 0.16km in length, >1.5m height. Priority habitat due to the length of the hedgerow.
H52	Hawthorn, elder. 0.12km in length, >1.5m height. Priority habitat due to the length of the hedgerow.
Defunct	There are two defunct hedgerows comprising scattered hawthorn and are located on the boundary of Field F40. There is fencing along the lengths, demarcating the field boundary.

Photographs of each hedgerow are provided below:

H1



H2



H3



H4



H5 and H6



H7



H8



H9 and H10



H11



H12



H13



H14



H15



H16



H17



H18



H19



H20



H21



H22 and H23



H24



H25



H26



H27



H28



H29



H30 and H31



H32



H33 and H34



H35



H36



H37



H38



H39



H40 and H41



H42



H43



H44



H45



H46



H47



H48



H49 and H50



H51



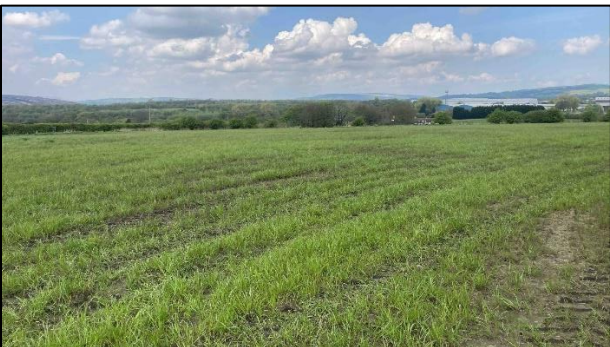
H52

Table 11.4.4 below describes each individual field and provides a photograph. The ecological importance of the broad habitat type is described in **Table 11.4.2** above.

Table 11.4.4: Field Description and Photograph

Field	Description and Species	Photograph
F1	Modified grassland, species per average m2: perennial rye grass, meadow foxtail, Yorkshire fog and white clover	
F2	Modified grassland, species per average m2: perennial rye grass, meadow foxtail, Yorkshire fog, red clover and dandelion	

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F3	Modified grassland, species per average m2: perennial rye grass, meadow foxtail, Yorkshire fog, red clover and dandelion; occasional hard rush	
F4	Modified grassland, species per average m2: perennial rye grass, annual meadow grass, meadow foxtail	
F5	Modified grassland, species per average m2: perennial rye grass, annual meadow grass, meadow foxtail	
F6	Modified grassland with goat willow (dry pond). Species per average m2: perennial rye grass, annual meadow grass, cock's foot.	

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F7	Ploughed on May 2024, but recorded as modified grassland during subsequent visits. Species per average m2: perennial rye grass, meadow foxtail, sweet vernal.	
F8	Modified grassland, species per average m2: perennial rye grass, cock's foot, annual meadow grass, sweet vernal and dandelion.	
F9	Modified grassland, species per average m2: perennial rye grass, cock's foot, dandelion and red clover.	
F10	Modified grassland, species per average m2: perennial rye grass, cock's foot, annual meadow grass, sweet vernal and dandelion.	

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F11	Small area of modified grassland, species per average m2: perennial rye grass, cock's foot, annual meadow grass, and dandelion.	
F12 F13	Modified grassland, species per average m2: perennial rye grass, sweet vernal, annual meadow grass, and red clover.	
F14	Modified grassland, species per average m2: perennial rye grass, sweet vernal, annual meadow grass, and red clover	
F15	Modified grassland, species per average m2: perennial rye grass, sweet vernal, annual meadow grass, and red clover.	

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F16	Modified grassland, species per average m2: hard rush, perennial rye grass and annual meadow grass	
F17	Modified grassland, species per average m2: perennial rye grass, sweet vernal, annual meadow grass.	
F18	Modified grassland, species per average m2: perennial rye grass, sweet vernal, annual meadow grass.	
F19	Modified grassland, species per average m2: perennial rye grass, sweet vernal, annual meadow grass.	

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F20	Modified grassland, species per average m2: perennial rye grass, sweet vernal, annual meadow grass.	
F21 F22 F23	Modified grassland, species per average m2: perennial rye grass, annual meadow grass, Yorkshire fog.	
F24 F25 F26	Modified grassland, species per average m2: perennial rye grass, annual meadow grass, Yorkshire fog and dandelion	 

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F27	Modified grassland, species per average m2: perennial rye grass, Yorkshire fog, cock's foot and meadow buttercup.	
F28	Modified grassland adjacent to W9; species per average m2: perennial rye grass, Yorkshire fog, cock's foot and meadow buttercup	
F29	Modified grassland, species per average m2: perennial rye grass, Yorkshire fog, cock's foot and meadow buttercup.	
F30	Modified grassland, species per average m2: perennial rye grass, Yorkshire fog, cock's foot, dandelion and white clover	

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F31 F32	Modified grassland, species per average m2: perennial rye grass, Yorkshire fog, cock's foot and red clover	
F33	Modified grassland, species per average m2: perennial rye grass, cock's foot, dandelion.	
F34		
F35	Modified grassland, species per average m2: perennial rye grass, Yorkshire fog, cock's foot and red clover	
F36	Modified grassland, species per average m2: perennial rye grass, Yorkshire fog, sweet vernal, cock's foot and meadow buttercup	

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F37	Modified grassland, species per average m2: perennial rye grass, Yorkshire fog, sweet vernal, cock's foot and meadow buttercup.	
F38	Modified grassland, species per average m2: perennial rye grass, Yorkshire fog, sweet vernal, cock's foot and meadow buttercup. (same assessment for F38, F42, F46 and F47 as one continuous field)	
F39	Modified grassland, species per average m2: perennial rye grass, Yorkshire fog, sweet vernal, cock's foot and meadow buttercup. (same assessment as F43)	
F40	Modified grassland, species per average m2: perennial rye grass, Yorkshire fog, cock's foot and meadow buttercup.	
F41	Modified grassland, species per average m2: perennial rye grass, Yorkshire fog, cock's foot and dandelion	

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F42	Modified grassland, species per average m2: perennial rye grass, Yorkshire fog, sweet vernal, cock's foot and meadow buttercup (same assessment as F38, as one continuous field)	
F43	Modified grassland, species per average m2: perennial rye grass, Yorkshire fog, sweet vernal, cock's foot and meadow buttercup. (same assessment as F43)	
F44	Modified grassland, species per average m2: perennial rye grass, Yorkshire fog, sweet vernal, cock's foot and meadow buttercup.	
F45	Modified grassland, species per average m2: perennial rye grass, Yorkshire fog, cock's foot and meadow buttercup.	

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F46 F47	Modified grassland, species per average m2: perennial rye grass, Yorkshire fog, sweet vernal, cock's foot and meadow buttercup. (same assessment for F38, F42, F46 and F47 as one continuous field)	
F48	Modified grassland, species per average m2: hard rush, perennial rye grass, cock's foot and meadow buttercup.	
F49 F50	Modified grassland, species per average m2: hard rush, perennial rye grass, cock's foot and meadow buttercup.	
F51	Modified grassland, species per average m2: perennial rye grass, cock's foot, annual meadow and red clover.	

F52	Modified grassland, species per average m2: perennial rye grass, cock's foot, annual meadow.	
F53	Modified grassland, species per average m2: perennial rye grass, cock's foot, annual meadow and red clover.	
F54 F55	Modified grassland, species per average m2: perennial rye grass, cock's foot, annual meadow and red clover.	
F56	Modified grassland, species per average m2: perennial rye grass, cock's foot, annual meadow and red clover	

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F57	Modified grassland, species per average m2: perennial rye grass, cock's foot, annual meadow and dandelion	
F58	Arable crop field	
F59	Assumed to be a former pasture, which has been left to grow-out. This field contained 6-8 species per m2 and showed characteristics of a higher distinctiveness grassland. Species present per m2 were: cocksfoot <i>Dactylis glomerata</i>, perennial rye, fescue sp., common bent <i>Agrostis capillaris</i>, reed canary grass <i>Phalaris arundinacea</i>, ribwort plantain <i>Plantago lanceolata</i>, common nettle <i>Urtica dioica</i> and broad-leaved dock <i>Rumex obtusifolius</i>. Other species found within this parcel, but did not account for average species per m2 were Himalayan balsam <i>Impatiens glandulifera</i>, teasel <i>Dipsacus</i>, cleavers <i>Galium aparine</i>, bramble <i>Rubus fruticosus</i>, dandelion <i>Taraxacum officinale</i>, creeping thistle <i>Cirsium arvense</i> and great willowherb <i>Epilobium hirsutum</i>. It was therefore assessed as being moderate condition neutral grassland.	

F60	A rush dominant, damp area. This field contained 6-8 species per m2 and showed characteristics of a higher distinctiveness grassland. Average species present per m2 were: hard rush <i>Juncus inflexus</i>, cock's foot, Yorkshire fog <i>Holcus lanatus</i>, nettle, broad-leaved dock, ragwort <i>Jacobaea vulgaris</i> and tufted hair grass <i>Deschampsia cespitosa</i>. Other species within this parcel included Himalayan balsam, meadow buttercup <i>Ranunculus acris</i> and horsetail <i>Equisetum</i>. It was therefore assessed as being moderate condition neutral grassland.	
F61	A rush dominant unmanaged area, with some footpaths running through. This field contained 6-8 species per m2 and therefore categorised as a higher distinctiveness grassland. Species present per m2 were: hard rush, cock's foot, broad-leaved dock, creeping thistle, teasel and horsetail. Other species present in the wider sward included occasional stands of gorse <i>Ulex europaeus</i> and goat willow <i>Salix caprea</i>, with some isolated areas of common reed <i>Phragmites australis</i> and tufted hair grass; there was Himalayan balsam present to the western boundary. It was therefore assessed as being moderate condition neutral grassland.	
F62	Comprised a strip of rush dominant habitat on a small embankment, which was left unmanaged. This field contained 6-8 species per m2 and showed characteristics of a higher distinctiveness grassland. Average species present per m2 were: hard rush, cock's foot, Yorkshire fog, nettle, broad-leaved dock, tufted hair grass and red clover. There were scattered goat willow and occasional self-seeded hawthorn and Himalayan balsam. It was therefore assessed as being moderate condition neutral grassland.	

To summarise, the following habitats within the Survey Area were found to be of local ecological importance:

- Neutral grassland;

- Woodlands;
- Ponds;
- Streams;
- Tree lines;
- Hedgerows

Modified grassland, mixed scrub and developed land/ hardstanding was assessed as being negligible ecological importance.

Project for Assessment Habitats

Habitats beyond the Proposed Scheme were not assessed in detail, largely due to the land being inaccessible. However, from assessing aerial imagery and high level assessments from accessible footpaths, the habitats within the wider Project for Assessment were considered to be broadly similar to those within the Proposed Scheme. The main broad habitat types within the Project for Assessment were

Modified Grassland

The vast majority of the habitat types with the Project for Assessment are considered to be modified grassland. This habitat comprises large swathes of agricultural grassland (akin to grassland within the Proposed Scheme) and a large Gold Course (Pike Fold). These habitats are considered to be species poor due to their regular management and are considered to be of **negligible ecological importance**.



Plate 1: Showing species-poor modified grassland, taken from Egypt Lane, looking north

Ponds

There are numerous ponds within the wider Project for Assessment are, mainly located within Pike Fold Gold Couse. Access was not permitted, so condition assessment were not possible. Ponds are considered to be of at least **local ecological importance**.

Woodland

There are pocket of broadleaved woodland located across the Project for Assessment; most of which are located to the south, comprising screening for the M66 (**Plate 2**). Broadleaved woodland is generally considered to be of at least **local ecological importance**.



Plate 2: Showing broadleaved woodland, taken from Egypt Lane, looking north

Hedgerows

Much like the Proposed Scheme, there appear to be extensive networks of hedgerows throughout the Project for Assessment; most of which comprise field boundaries. As they were inaccessible, condition assessments were not possible, however, hedgerows are generally considered to be of at least local ecological importance.



Plate 3: Showing boundary hedgerows, taken from Simon Lane

Developed land; sealed surfaces

There are large areas of hardstanding/ developed land within the wider Project for Assessment, including Birch Service, commercial units, houses and associated infrastructure (see photographs taken from Manchester Road, A6045, for example). These habitats are of **negligible ecological importance**.



Plates 4 and 5: Showing hardstanding/ developed land to the far NE of the Project for Assessment.

As described above, the high level habitat assessment of the Project for Assessment, taken from public rights of way and aerial imagery has concluded that the habitat within the wider landscape are broadly similar to that which have been assessed within the Proposed Scheme. However, detailed assessment, including condition assessments should be undertaken to establish actual habitat types and conditions.

