GRAY'S
ECOLOGY

Land at Symphony, Grimethorpe

Ecological Impact Assessment Report

January 2021

Version control

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This Report is not to be submitted as part of a planning application unless the Status is marked as 'Final'.

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1. Summary

1.1 Actions for the applicant

- Apply for a GCN District licensing mitigation licence
- Responsible removal of New Zealand pygmy weed
- Timetable works to avoid bird nesting season
- Create a nature reserve within the applicant's compound including one new pond
- Deliver off-site compensation for habitat and species losses (to ensure no net loss of biodiversity) working in partnership with the Land Trust
- Make a financial contribution to a NIA partner
- Provide compensation for loss of NIA integrity
- Deliver a landscaping scheme to contribute to no net loss of biodiversity

2. Introduction

2.1 Terms of Reference and quality assurance

Gray's Ecology was commissioned by ELG Planning to undertake a Preliminary Ecological Assessment (PEA), a breeding bird survey (BBS), a Defra Biodiversity Metric 2.0 assessment and an Ecological Impact Assessment (EcIA) for a proposed factory site on land at Symphony in Grimethorpe, in the Local Planning Authority of Barnsley Metropolitan Borough Council (BMBC). A great crested newt (GCN) survey and report was commissioned from another Ecology consultancy and the assessment of the findings are included in this report. The work for Gray's Ecology has been undertaken by Graham Megson (MSc Ecology) who has 36 years' experience working in the Ecology sector. A resume is given in Appendix 8.

This report has been produced with reference to the Chartered Institute of Ecology and Environmental Management (CIEEM) 'Guidelines for Ecological Report Writing December 2017' and British Standard BS 42020:2013 (BSI 2013).

All surveys and assessments have been undertaken with reference to the recommendations given in BS 42020:2013 Biodiversity. Code of practice for planning & development. Tree survey information is to BS 5837:2012 Trees in relation to design, demolition & construction.

Biodiversity losses and gains of habitats have been assessed using the Defra Biodiversity Metric 2.0, with the subsequent results submitted to the Local Planning Authority (LPA). The findings are discussed in this report.

The purpose of the EcIA report is to satisfy the requirements of the National Planning Policy Framework (NPPF), identifying the likely presence of ecological features within or near the

application site that could potentially pose a constraint to the proposed development. The following ecological features have been considered:

- Statutory and non-statutory designated conservation sites
- NERC Act 2006 Section 41 (S41) Habitats of Principal Importance (Priority habitats)
- Local Biodiversity Action Plan (LBAP) habitats
- NERC Act 2006 Section 41 (S41) Species of Principal Importance (Priority species), including W&C Act 1981 (as amended) legally protected species
- Local Biodiversity Action Plan (LBAP) species
- Invasive species

Recommendations follow the planning hierarchy of avoidance, mitigation, compensation. Where development is approved, the Local Planning Authority will expect ecological enhancements in accordance with the requirements of the NPPF.

NPPF (2018) paragraph 170 d) includes the bullet point: *Planning policies and decisions should contribute to and enhance the natural and local environment by: 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*. Net gain should be appropriate to the scale of the development and should be conditioned.

2.2 Background Information

2.2.1 Barnsley Local Plan (adopted January 2019)

The site is allocated in the Barnsley Local Plan for Employment use under Policy *ES8 (previously C2) Land off Ferrymoor Way, 17ha*, for which the site-specific policy includes the wording:
The development will be expected to:

- *Plant a strip of native shrubs and trees along the western boundary to allow for the corridor formed by the adjacent dismantled railway line to continue;*
- *As Skylark are breeding on site, the timing of development is critical, and should begin outside of the breeding season to prevent disturbance to breeding birds; and*
- *Retain, enhance and manage a buffer strip of existing vegetation along the north and eastern boundaries of the site including the stream corridor.*

Local Plan Policy BI01 Biodiversity and Geodiversity also applies to the site. Detailed information is provided in the Supplementary Planning Document 'Biodiversity and Geodiversity', adopted May 2019. The site is within the Dearne Valley Green Heart Nature Improvement Area (NIA).

2.2.2 The proposed development

The application is for an additional building to the Symphony factory site. The red line boundary is shown in Figure 1 and covers 6.47 Ha.

2.2.3 Site Context

The site is at OS grid reference SE 401-086 and is at the edge of an area of relatively recent road and factory development (Figure 2). This development has taken place on the former Grimethorpe Colliery site. The colliery closed in 1993 and some years later the site was restored. Development has since taken place on some areas, with others left as regenerating brownfield/ green infrastructure. Land immediately to the west (Cudworth Common) has been planted and naturally regenerated with trees and is managed as a nature reserve and for public recreation. Elsewhere the ground consists of grassland, with some bare areas. There are several ponds on all sides of the site including landscaped ponds, amphibian mitigation ponds and shallow scrapes. A stream runs along the eastern perimeter. Surrounding the site are factories, a sewage works, wooded countryside and the inter-connecting Dearne Valley wetlands which include the RSPB managed Edderthorpe Ings. The town of Grimethorpe lies to the east and Cudworth to the west.

Figure 1

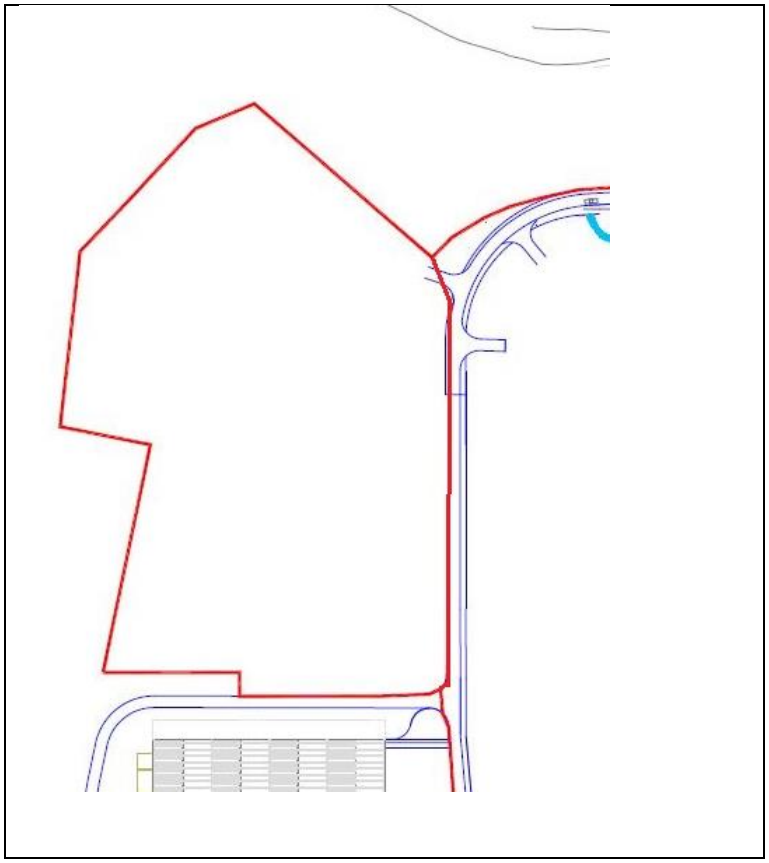


Figure 2



3. Methodology

3.1 Desk Study

The desktop study was informed by review of existing available information as follows:

- The Sheffield Biological Records Centre provided Barnsley biodiversity data on 04/09/2019. Magic mapping, Ordnance Survey (OS) and satellite mapping were used for a 2 km search area, accessed on 10/09/2019.
- A survey report for allocation ES8 (previously C2) dating from 2013 was provided by Barnsley MBC.
- Symphony provided a paper prepared in 2003 entitled 'Independent Review of Environmental Assessment Reports, Grimethorpe Colliery'.
- The Local Plan and Supplementary Planning Document.

Desk top search specific information was sought for:

- Statutory designated sites.
- Locally designated sites.
- Habitats of Principal Importance (NERC Act 2006 Section 41).
- European Protected and other S41 Species of Principal Importance.
- Barnsley Local Biodiversity Action Plan (LBAP): habitats and species.
- Nature Improvement Area.

3.1.1 LBAP habitats

These are available at:
http://www.barnsleybiodiversity.org.uk/Local%20Priority%20Habitats%20Summary%20Table.pdf

- Lowland mixed deciduous woodland
- Upland oakwood (remnants in dark peak)
- Wet woodland
- Wood pasture and parkland (including veteran trees) *
- Traditional orchards
- Lowland dry acid grassland
- Lowland meadow/neutral grassland
- Floodplain grazing marsh
- Purple moor grass and rush pasture
- Hedgerows
- Arable field margins*
- Upland heath
- Lowland heath
- Blanket bog
- Reedbeds*
- Lowland fens
- Upland flushes, fens and swamps
- Rivers (running water) *
- Ponds (standing water) *
- Eutrophic standing water *
- Open mosaic habitats on previously developed land* (OMHPDL)

*Indicates local priority habitat wider than national definition.

Other habitats of value included in our local list:

- amenity grassland
- built environment and gardens and school grounds

3.1.2 LBAP species

The LBAP includes species (see: http://www.barnsleybiodiversity.org.uk/species.html) that meet the following criteria:

Plant species growing or bird or animal species regularly breeding or overwintering in Barnsley are prioritised locally when they are

- identified nationally on statutory lists or by being red-listed
- scarce or rare nationally, regionally or locally, or
- of local concern or interest

There are some species for which there are signs that, although they do not currently breed or overwinter in Barnsley, they potentially could do so and these will be prioritised as well.

NERC Act Section 41 and Barnsley BAP habitats and species are a material consideration in development control planning.

3.2 Nature Improvement Area

The site falls within the Dearne Valley Green Heart NIA. The aim of the NIA partnership is to 'help restore and enhance the ecological networks of the river, its floodplain and its links to habitats on surrounding slopes and hills'.

The Supplementary Planning Document Biodiversity and Geodiversity (Adopted May 2019) publishes the following focal species for the NIA:

- Lapwing
- Redshank
- Snipe
- Wintering teal
- Wintering wigeon
- Wintering bittern
- Barn owl
- Willow tit
- Water vole
- Brown hare
- Noctule bat
- Grass snake
- Dingy skipper
- Wild flowers

3.3 Extended Phase 1 Habitat Survey

An Extended Phase 1 Habitat Survey of the site was carried out on the 5th September 2019. The weather conditions during the survey were: warm, dry, occasionally sunny, SW2 wind, 6/8 cloud cover.

The survey followed the 'Extended Phase 1' methodology (JNCC 2010). Each of the main habitats has been classified according to the relevant criteria and are presented in the results section.

In addition to the description of habitats, observations of priority species (including field signs) and the potential for such species to occur on site and in the surrounding landscape were also noted.

A plant species list is given in Appendix 5 and habitat photographs are in Appendix 3. Species names are generally given in their common (English) names.

3.4 Defra Biodiversity Metric 2.0

The Government NPPF update bulletin of July 2019 introduced Biodiversity Net Gain (BNG). BNG is included within the Environment Bill, which is currently passing through Parliament, where it is proposed for major developments to deliver 'at least 10% biodiversity net gain', which is intended to help reverse biodiversity loss and climate change.

Each of the main habitats has been classified according to the relevant criteria (with reference to the technical supplements) and are presented in the results section. The Defra Biodiversity Metric 2.0 Calculation tool – Beta Test December 2019 update has been used to measure the change in biodiversity (measured in Habitat units) for the proposed development. Biodiversity Metric 2.0 Habitat areas have been calculated using the measurement tool on the open-source data website https://gridreferencefinder.com/. The Biodiversity Metric 2.0 Calculation tool uses the UK Habitat Classification system which can be viewed at: https://ecountability.co.uk/ukhabworkinggroup-ukhab/. The Biodiversity Metric 2.0 covers habitats but not species specifically. For semi-natural habitats, quality corelates to greater species diversity so this is inherent in the scoring system. However, specific bird assemblages, such as ground nesting waders are not part of the metric's calculation and their potential losses have been assessed separately.

3.5 Breeding bird survey

Breeding bird surveys were carried out during the period March to June 2020 within the red line boundary and adjacent open area within the Symphony site.

The area was surveyed using the Breeding Bird Survey methodology developed by the British Trust for Ornithology (BTO). All birds seen or heard were marked on field maps on each of six visits. Details of bird survey methodology can be found in both Gilbert *et al.* (1998) and Bibby *et al.* (2000).

Bird surveys were undertaken on the following dates:
BBS visit 1. 20/03/2020, 10:25-11:40, NE2, 2-4/8, cool, sunny, bright, dry.
BBS visit 2. 20/04/2020, 09:00-11:00, E3, 0/8, sunny, bright, dry.
BBS visit 3. 03/05/2020, 10:50-12:10, calm, 6/8, cloudy, bright, recent rain.
BBS visit 4. 17/05/2020, 09:10-11:00, calm, 5/8, bright.
BBS visit 5. 07/06/2020, 10:30-12:15, N3, 8/8, rain, dull, cool.
BBS visit 6. 20/06/2020, 10:30-12:30, SW2, 8/8, dry, mild.

3.6 Assessment Limitations

Ecological surveys are limited by factors that affect the presence of plants and animals such as time of year, weather, migration patterns and behaviour. The absence of desk study records has not been relied upon to infer absence of a species/ habitat. Often, the absence of records is a result of under-recording within the given search area.

The spring of 2020 saw Government restrictions on many activities (a national lockdown) due to the Covid-19 pandemic and the Symphony factory was closed for a period. On 16/03/2020 Prime Minister Boris Johnson advised everyone in the UK against 'non-essential' travel and CIEEM issued guidance for field ecologists shortly after. In a letter from Defra to CIEEM dated 09/04/2020, the Ministerial Contact Unit said that '*Ecologists and environmental professionals should therefore be able to continue with outdoor work, including ecological surveying…'* The Health Protection (Coronavirus, Restrictions) (England) Regulations 2020 (the 'Lockdown Regulations') came into force on 26/03/2020.

4. Results

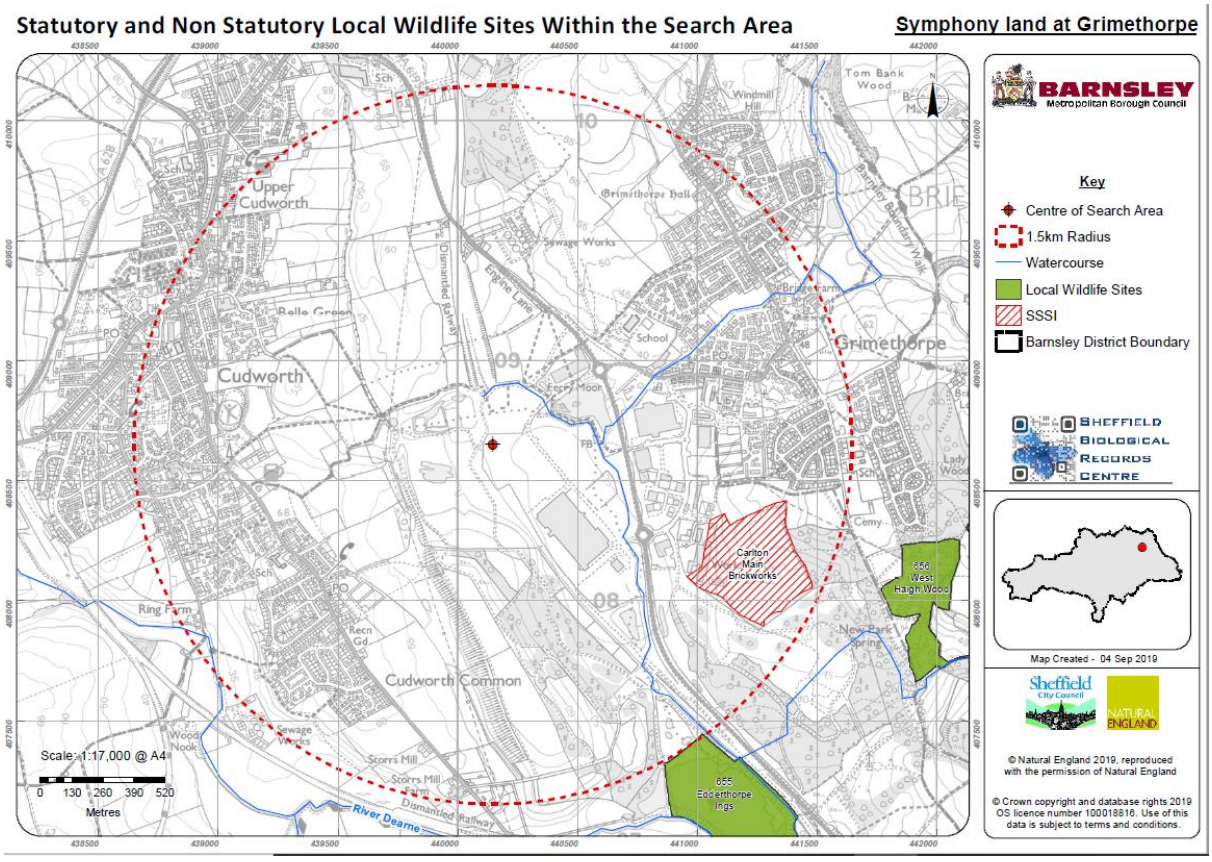
4.1 Introduction

Results are given below. Ecological assets have been evaluated based on the desk study records, survey records, the presence, extent and viability of supporting habitat, ecological connectivity and perceived nature and extent of effects. Any constraints are dealt with using the planning mitigation hierarchy of 'avoidance, mitigation, compensation' and recommendations are suggested.

4.2 Statutory and Non-Statutory Designated Sites

A map of sites was provided by the data centre (Figure 3).

Figure 3



4.2.1 European Sites

There are no European protected sites within 5km.

4.2.2 National Sites

There are no nationally designated sites within the red line boundary.

Carlton Main Brickworks SSSI

There is one Site of Special Scientific Interest (SSSI) within 2km. This is Carlton Main Brickworks SSSI which is 675m to the south-east. The SSSI Risk Impact Zone information for this site (given in Figure 4) shows that no constraint was triggered. Carlton Main Brickworks SSSI was designated in 1989 as a geological SSSI. Its citation reads:

This operational clay pit lies just to the south of Grimethorpe, six kilometres east of Barnsley. The special interests are within the Coal Measures strata, exposed by the extraction of clay. They include one of the best available exposures of the Top Marine Band (Westphalian C, Middle

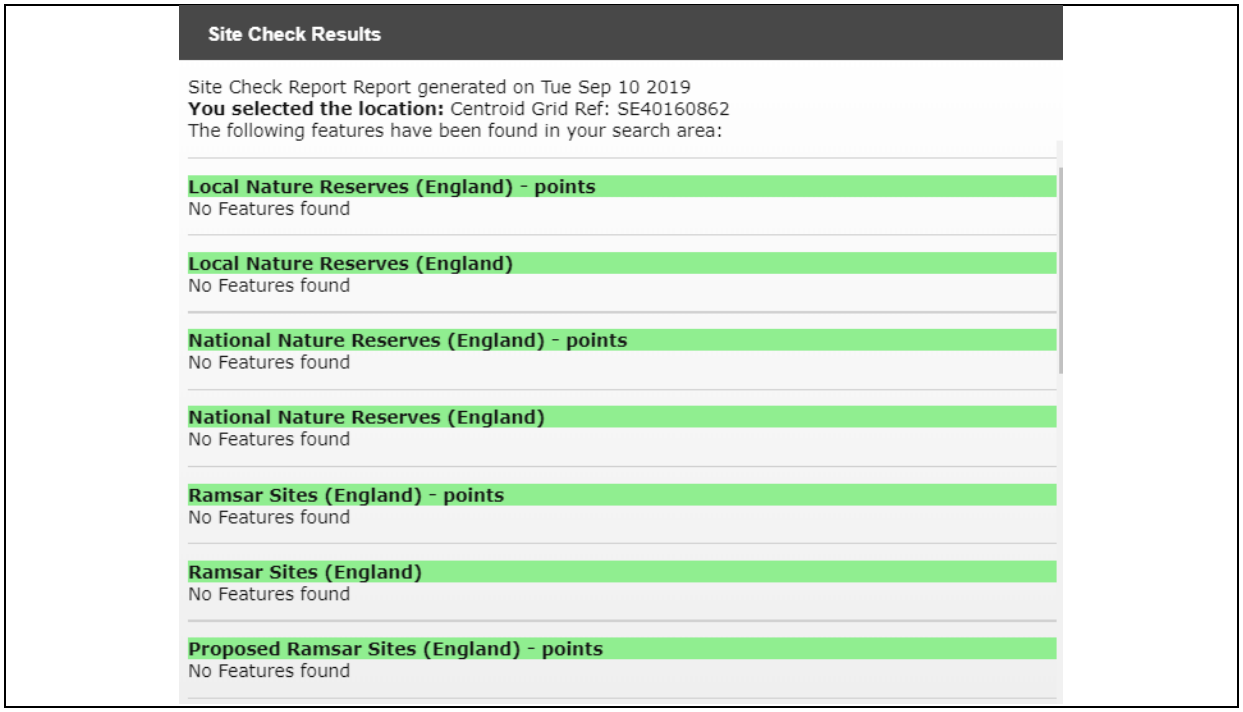
Carboniferous) in the Pennines coalfields. It has yielded an anomalous Myalina-facies fauna, a shelly fauna which contrasts with the Anthracoceras/ pectinoid facies fauna found elsewhere in this area of Yorkshire. The Top Marine Band is the highest Coal Measures marine band in Britain, and is the last evidence of normal marine conditions in this country during the Carboniferous Period. A site of considerable scientific interest.
This SSSI is classed as being in 'favourable condition'. The construction and operation of the proposed factory (and associated additional haulage) will be bound to planning and environmental regulations and is assessed as having no risk of causing harm to the SSSI.

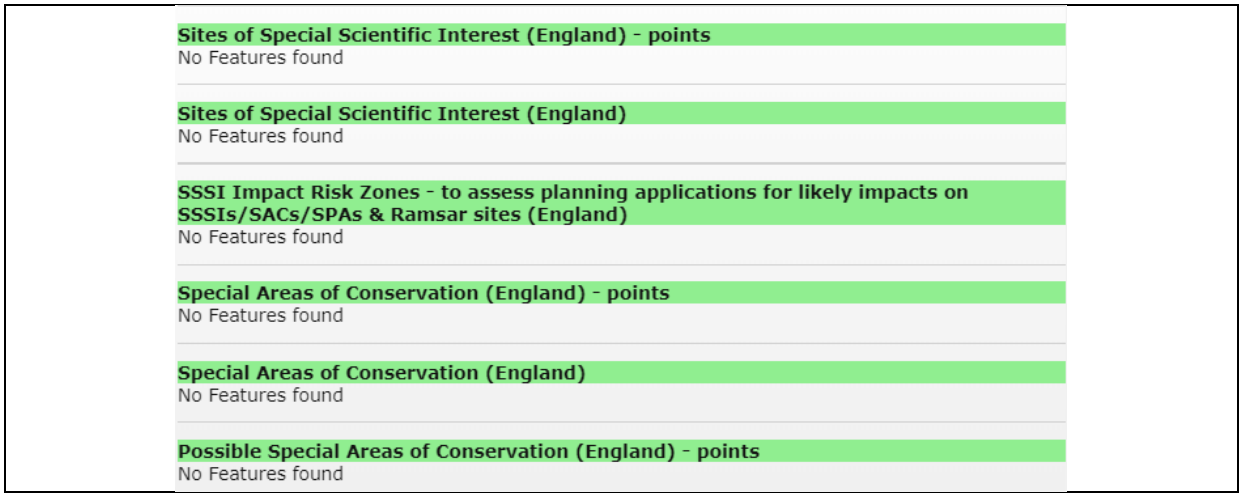
Candidate Dearne Valley wetlands SSSI
There is no information in the public domain regarding a candidate SSSI for wetland birds, situated within the Dearne Valley and possibly including all, or most, existing wetland sites. The series of Dearne Valley wetland sites are noted for wetland birds including wildfowl and waders and provide breeding, passage and wintering opportunities for several species of bird. It is reasonable to assume that there is an inter-change of lapwing, redshank, ringed plover, little ringed plover and snipe between the proposed development site and these wetland sites. As well as a local interchange, many of these birds move elsewhere in the UK and Europe over the course of a year, with little ringed plovers wintering in Africa. The construction and operation of the proposed factory (and associated additional haulage) will be bound to planning and environmental regulations and is assessed as having no risk of causing any physical harm (such as air pollution) to any of these wetland sites. The loss of several pairs of breeding waders on the application site requires compensating however it is assessed that the integrity and the functionality of the candidate SSSI will not be adversely affected.

4.2.3 SSSI Risk Impact Zone

Natural England (NE) has drawn Risk Impact Zones around SSSIs and these inform Local Planning Authorities when they need to consult with NE. The information in Figure 4 is taken from MAGIC and is based on the central OS grid reference for the study site and was accessed on 10/09/2019.

Figure 4





4.2.4 Local Designated Sites

There are no locally designated sites within the red line boundary. The closest Local Nature Reserve (LNR) is West Haigh Wood which is 1.7km to the east.

There are two Barnsley Local Wildlife Sites (LWS) within 2km of the site (illustrated in Figure 3):

1. West Haigh Wood LWS.
2. Edderthorpe Ings LWS.

West Haigh Wood is 37.2 Ha in extent and is designated for its archaeological features including abandoned Victorian ponds. Its main habitat is mixed woodland with oak dominating. Its habitat structure and its species composition largely differ from the biodiversity described for the Symphony site. The two sites are separated by the urban infrastructure of the south end of Grimethorpe, industrial factories and Carlton Main Brickworks. It is assessed that the proposed development will not harm West Haigh Wood.

Edderthorpe Ings is a 32 Ha wetland site. The Barnsley Biodiversity Trust gives the following information about wetland habitats (fen, marsh and swamps): 'Wetlands that are normally flooded throughout the year give rise to *swamp* with tall reed grasses such as *common reed*, *reedmace* and *reed canary grass*, emerging from the water'. Edderthorpe Ings (also referred to as Flash) is a noted site for wetland birds including wildfowl and waders. It provides breeding, passage and wintering opportunities for several species of bird. It is reasonable to assume that there is an inter-change of lapwing, redshank, ringed plover, little ringed plover and snipe between the proposed development site and Edderthorpe Ings. As well as a local interchange, many of these birds move elsewhere in the UK and Europe over the course of a year, with little ringed plovers wintering in Africa. Edderthorpe Ings is 1.5 km south of the site and the construction and operation of the proposed factory (and associated additional haulage) will be bound to planning and environmental regulations and is assessed as having no risk of causing physical harm to the Edderthorpe Ings. The issue of breeding waders is covered in section 4.4.4. Given the large numbers and regular interchange of wetland birds in the Dearne Valley wetlands, it is assessed that the importance of Edderthorpe Ings within this ecosystem will remain high, should breeding waders are lost from the proposed development site.

Evaluation of sites
European designation: n/a
National designation: Yes
Local designation: Yes
Constraint: No.

4.3 Habitats

4.3.1 Priority, Local Plan ecology survey and Phase 1 Habitats

Priority habitats

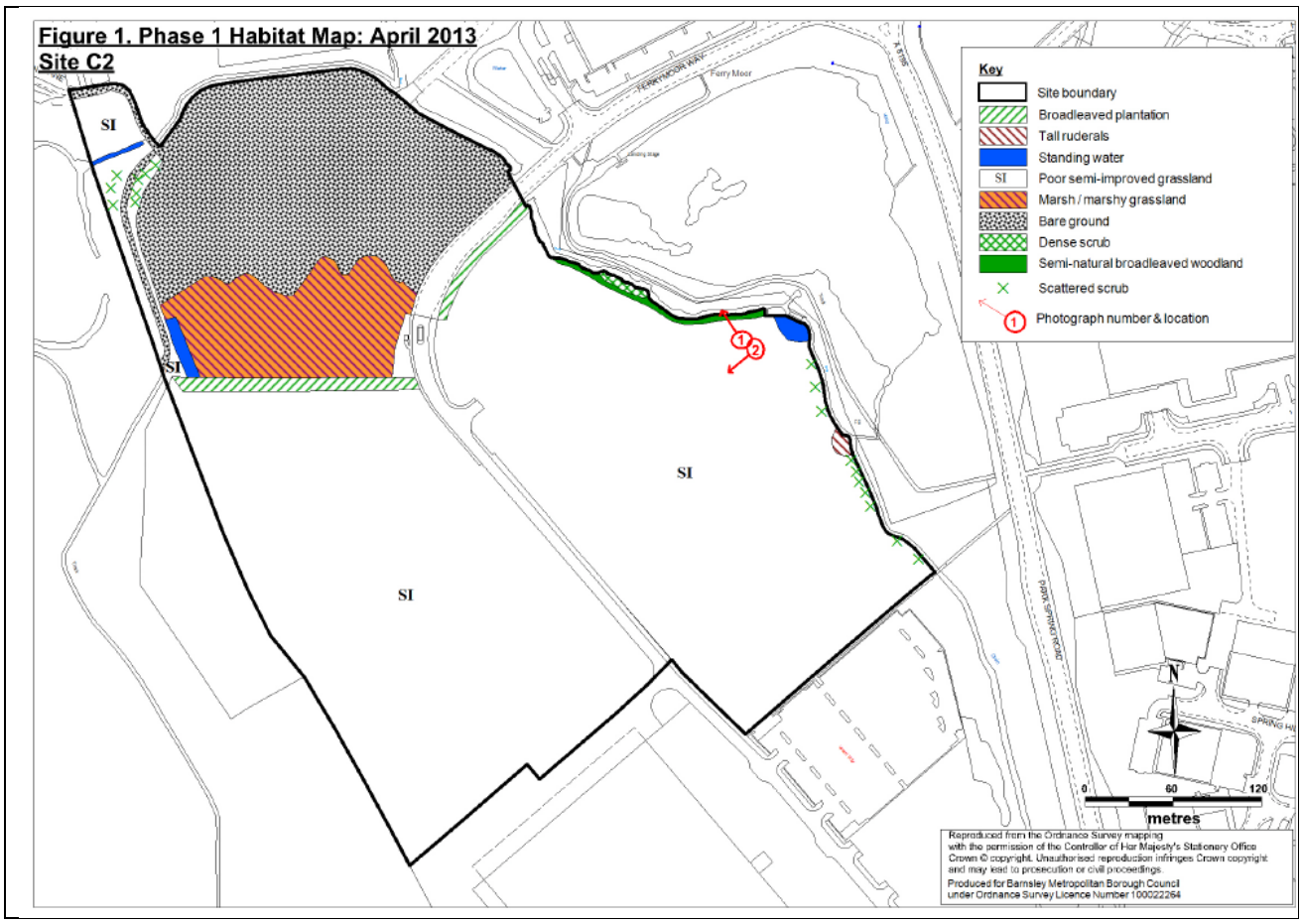
Magic mapping shows no priority 'habitat inventory habitats' on the site. There are several National Forest Inventory woodlands (classed as 'young trees') within 2km, which due to distance and intervening infrastructure, will not be affected.

Habitat Inventory: Woodland
LBAP: Yes (Lowland Mixed Deciduous Woodland)
Constraint: No

Local Plan ecology survey

The Local Plan ecology survey report for allocation unit ES8 (previously C2), dating from 2013 was provided by Barnsley MBC. The area covered by ES8 is shown in Figure 5. The ES8 allocation area includes an area of land not in Symphony ownership.

Figure 5



The 2013 report recorded the current application red line boundary site as semi-improved neutral grassland and records a strip of planted broadleaved woodland. Elsewhere on the Symphony site (outside of the red line boundary) the habitats are recorded as more semi-improved neutral grassland, another strip of broadleaved woodland, a flowing watercourse, and along the stream corridor: scrub, standing water, tall ruderals and scattered scrub. Land to the north (not in Symphony ownership) includes habitats classified as standing water, bare ground and marsh/ marshy grassland.

The habitat quality and suitability for species groups in the area ES8 is as follows:

Species group	**Quality/ suitability of habitat**
Plants (present)	Not given
Invertebrates (present)	Not given
Amphibians	Moderate
Reptiles	Low
Birds (present)	High
Mammals (present)	Moderate
Fish	Moderate

The stream and Ferrymoor pond are noted as linked external features, and the disused railway line along the western perimeter as a partial influence in terms of a wildlife corridor. The report notes that if the ES8 'Employment use allocation' unit was developed (without adequate mitigation) there would be a risk that Ferrymoor Pond would be isolated from surrounding countryside. Potential development was described as: *Development of the site would result in some adverse local ecological impact but there is scope for mitigation*.

The report says: *It is strongly recommended that any future development of this site includes the provision of an ecological buffer zone along its northern and eastern boundaries to protect the stream and wetland habitats present in this area. This buffer zone would also help to strengthen the connectivity of the adjacent pond with the countryside to the west. It is also recommended that a strip of native shrubs and trees is planted along the western boundary. This will allow the corridor formed by the adjacent dismantled railway line to continue. Additionally, as skylark are breeding on site, the timing of development is critical, and should begin outside of the breeding season to prevent disturbance to breeding birds.*

The report describes the northern portion of the Symphony site as follows:
This large site comprises areas of bare ground and species-poor semi improved grassland within an industrial complex. The site is bounded by the A6195 to the east, and Ferrymore Landfill site to the west. A large pond is present immediately adjacent to the site's north-eastern corner, and a number of watercourses (stream and wet ditches) form its northern and eastern boundary. In common with many such industrial sites, the survey area has been flattened and compacted and seeded with a wildflower mix, in preparation for future development. The sward across these areas is sparse, with impeded drainage leading to the formation of seasonally wet areas. The species-poor semi-improved grasslands are dominated by grasses such as Creeping Bent (Agrostis stolonifera), Velvet Bent (Agrostis canina) and Yorkshire Fog (Holcus lanatus). White clover (Trifolium repens), Bird's-foot Trefoil (Lotus corniculatus), Creeping Buttercup (Ranunculus repens) and Ribwort plantain (Plantago lanceolata) are frequent in the sward, whilst ruderal species such as Dandelion (Taraxacum agg.), Colt's-foot (Tussilago farfara) and Teasel (Dipsacus fullonum) are common. Where the earth has been bunded on the site periphery, the same semi-improved, neutral grassland was recorded but here the sward was much lusher, with Cocksfoot (Dactylis glomerata) abundant.

Phase 1 habitats
The original PEA report Phase 1 habitats map forms Appendix 1. Photographs of habitats within the red line boundary (and elsewhere within the Symphony compound where relevant) form Appendix 3. A plant species list forms Appendix 5. The habitat accounts below are based on the Phase 1 habitat type names and codes.

Semi-improved grassland (B2.2)
Former colliery spoil land has been removed, the land levelled, and possibly sown with a grass and herbs seed mix. This habitat consists of closed turf short, which is close to Phase 1 habitat Ephemeral/ short perennial (J1.3), but lacks free draining soil which that habitat type must have.

NB: The 2013 Barnsley MBC Phase 1 Habitat survey and report classified the whole area within the red line boundary as Poor semi-improved grassland (B6).
S41: Yes
LBAP: Yes
Constraint: Yes

Open mosaic habitats on previously developed land (no Phase 1 code)
Part of the proposed site fits the description of this habitat given in the UK Biodiversity Action Plan Priority Habitat Descriptions (Maddock 2008). The habitat has to meet five criteria as follows:
1 The area of open mosaic habitat is at least 0.25 ha in size.
There is at least 0.25 ha of the site that could be classed as open mosaic habitat.
2 Known history of disturbance at the site or evidence that soil has been removed or severely modified by previous use(s) of the site. Extraneous materials/substrates such as industrial spoil may have been added.
3 The site contains some vegetation. This will comprise early successional communities consisting mainly of stress-tolerant species (e.g., indicative of low nutrient status or drought). Early successional communities are composed of (a) annual, or (b) mosses/liverworts, or (c) lichens, or (d) ruderals, or (e) inundation species, or (f) open grassland, or (g) flower-rich grassland, or (h) heathland.
4 The site contains unvegetated, loose bare substrate, and pools may be present.
5 The site shows spatial variation, forming a mosaic of one or more of the early successional communities (a)-(h) above (criterion 3) plus bare substrate, within 0.25 ha.
S41: Yes
LBAP: Yes
Constraint: Yes

Bare ground (J.4)
There are patches of predominantly bare and rutted ground, which are largely plant, moss and lichen free.
S41: No
LBAP: No
Constraint: No

Poor semi-improved grassland (B.6)
A grassy bund around some of the site, containing rank grasses and herbs and the occasional self-sown tree and dog rose.
S41: No
LBAP: No
Constraint: No

Broad-leaved plantation woodland (A1.1.2)
Two narrow strips of broad-leaved deciduous plantation occur – along the W and N boundaries. These plantations are largely outside of the site, but the perimeter palisade fence cuts through them. Rides have been cut to facilitate the fence construction leaving lines of stumps. The plantations contain a broad mix of native species, including silver birch, hazel, field maple, alder, willow, hawthorn, blackthorn, Corsican pine, dog rose, broom and gorse. The plantation appears to be around 15-20 years old. This habitat is referred to as Lowland Mixed Deciduous Woodland in the Local BAP. All of this is to be retained and included in the perimeter landscaping.
S41: Yes
LBAP: Yes
Constraint: No

Amenity grassland (J1.2)
Narrow, regularly mown verges along the access road on the eastern edge of the site and opposite the factory on the southern end of the site are amenity grassland (see photograph in Appendix 3).

These are dominated by grasses, with locally frequent bird's-foot trefoil. White clover was recorded as occasional.
S41: No
LBAP: No
Constraint: No

Defra Biodiversity Metric 2.0 habitat classification
The UK Habitats classification system is used by the Defra Biodiversity Metric 2.0. There are some differences in habitat descriptions (with greater complexity and more sub-divisions) between this and Phase 1. Within the Biodiversity Metric 2.0, Tab 'G-9 Translation Phase 1' (Technical data) has been used to translate the Phase 1 habitat types (above) to UK Habitat types for the Defra Biodiversity Metric 2.0. Explanation is provided regarding the UK Habitat classification choices.

Version 3 of the EcIA re-assessed habitats following consultee comments and wider discussion.

Version 4 has again re-assessed the habitats following comments from Wildscapes CIC Ltd. NB: The classification of this suite of habitats is subjective and a comprehensive botanical survey was constrained by ground-nesting birds. Once the breeding season was complete, a further survey and mapping exercise was not deemed necessary as the habitat had been assessed as being largely one block of OMHPDL. This was subsequently changed to Semi-improved grassland following comments from Barnsley MBC and Wildscapes. Following a further critical review from Wildscapes, it is now established that some areas do meet the OMHPDL guidelines.

UK Habitats have been mapped (Appendix 2) with additional photographs (Appendix 4). Ground-nesting birds are good indicators of habitat with lapwings and skylarks favouring the turf, ringed plovers favouring the bare ground and redshanks favouring the pools. The 2020 nest locations of these species support the classification of habitat within the red line boundary.

The habitats in the red line boundary area are now classified as follows:

Grassland - Other Neutral Grassland.
UK Habitats code g3c (2.12 Ha). Phase 1 code B2.2.
This area includes a mixture of grasses and plants forming a thin but continuous turf in the northern sector of the proposed development area. The majority of breeding lapwings were in this habitat, as well as most pairs of skylark.

Woodland and forest - Other woodland; Young Trees planted.
UK Habitats code w1g (0.21 Ha).
Two narrow strips of broad-leaved deciduous plantation occur – along the W and N boundaries. These plantations are largely outside of the site, but the perimeter palisade fence cuts through them. Rides have been cut to facilitate the fence construction leaving lines of stumps. The plantations contain a broad mix of native species, including silver birch, hazel, field maple, alder, willow, hawthorn, blackthorn, Corsican pine, dog rose, broom and gorse. The plantation appears to be around 15-20 years old. The condition 'poor' is pre-determined by the biodiversity Metric 2.0.

Grassland - *Arrhenatherum* neutral grassland
UK Habitats code g3c5 (0.91 Ha). Phase 1 code B2.2.
This area covers the bunds which have a more luxuriant covering of vegetation, including the establishment of saplings, especially sallow. They are dominated by false oat grass (*Arrhenatherum elatius*). The condition is assessed as moderate as the grassland has a higher number of herbs than many false oat verges and grasslands.

Urban - vacant/ derelict land/ bare ground (Ponds)
Urban - secondary code 119 (0.28 Ha). Phase 1 code F1/ F2/ B5 with some J.4.

This is an area of seasonally wet habitat which fits the description; 'Water table variable at surface and waterlogged for the winter months or spring flooding season, becoming wet or mesic during the summer period'. The condition is assessed as poor as there is over 20% of the non-native invasive species New Zealand pygmy weed. At the time of survey, the impeded drainage had caused one area to hold water to a depth of 1cm. Some dried up pool beds formed bare areas. Vegetation dominated by soft or hard rush, with occasional reedmace was evident along the toe of the bund which could be coded as Phase 1 F1/ F2/ B5. This is the area identified in Target notes 1 and 2. A pair of redshanks favoured this habitat.

Grassland – Modified grassland
UK Habitats code g4 (0.18 Ha). Phase 1 code J.1.2.
Two regularly mown verges which contain locally abundant bird's-foot trefoil and only occasional white clover could develop into 'Other, Neutral grassland' if left unmown, however, the UK Habitats technical report states that species-poor grassland with fewer than nine species per m^2 should be classified as Grassland - Modified grassland.

Urban - Open Mosaic Habitats on Previously Developed Land
UK Habitats code u1a (2.77 Ha). Phase 1 code n/a.
Sparsely vegetated ground with abundant bare patches up to 10 cm diameter between individual plants. The area fits the OMHPDL published guidelines and the plant species list. NB: Adjacent areas formed more continuous blocks of turf and ponds which fall outside of the guidance and have been coded differently.

4.3.2 Target notes

Target Notes (T) from the PEA field survey are described below and are marked on the Phase 1 Habitats Map (Appendix 1).

T1
Bare areas of ground, occasionally damp indicating shallow ephemeral scrapes, plus wheel ruts. Locally abundant New Zealand pygmy weed.
See Urban - vacant/ derelict land/ bare ground above.

T2
An area of marshy grassland with dominant New Zealand pygmy weed, situated mostly along the toe of the eastern boundary bund and supporting patches of soft/ hard rush, reedmace and sallow.
See Urban - vacant/ derelict land/ bare ground.

T3
A rectangular area (approximately 15x2m) of damper ground containing soft rush, alongside the western perimeter fence. Included in Grassland - Other Neutral Grassland.

4.3.3 Notable Phase 1 habitats outside of the red line boundary

Poor Semi-improved neutral grassland (B6) and Bare ground (J4)
This area lies to the east of the northern access road and is referred to as Area A in the report. Former colliery spoil land has been removed and the land levelled. The ground has less vegetation and more bare ground than the land within the red line boundary. There is evidence of ephemeral water bodies but these were already dry by April. The invasive, non-native, New Zealand pygmy weed was present in damper zones. The ground shows recent disturbance in the eastern portion (covering 0.69 Ha). A narrow, sparsely vegetated earth bund borders the southern side of the open area. To the north of this area is a concrete pad for trailer parking.
S41: Yes
LBAP: Yes

Constraint: No

Bare ground (J4) and Marshy grassland (B5)
An area of land located immediately north of the northern Symphony boundary fence is owned by R2Developments. This largely bare area was dry, although rushes showed that the area can be wetter. This matches the 2013 Barnsley local Plan ecology survey, where it is noted as bare ground, an area of standing water, and Phase 1 'marsh and marshy grassland'. It has a high level of informal (as well as a public right of way) access for people visiting Cudworth Common.
S41: No
LBAP: No
Constraint: No

Running water, mesotrophic (G2.1)
A slow flowing, shallow steam runs through the 1km length of the Symphony site, in a heavily vegetated channel, to the east of the red line boundary. At its closest this is 150m away from the proposed development and it will not be adversely affected.
S41: No
LBAP: No
Constraint: No

Standing water, mesotrophic (G1.2)
Several ponds are present within 500m of the red line boundary. These include Ferrymoor Pond, a lake supporting wildfowl south of Ferrymoor Way, and Ferry Moor Wader Scrapes off Ferry Moor Lane. These will not be affected by the proposed development. These ponds are discussed further in the GCN section.
S41: Ponds
LBAP: Ponds
Constraint: No

4.3.4 Defra Biodiversity Metric 2.0 results

The Defra Biodiversity Metric 2.0 (v9) has been used to measure the change in biodiversity (measured in Habitat units) for the proposed development. This has been submitted as a separate (Excel) document (updated 10/01/2021) and the headline results are replicated in Figure 6.

Figure 6

On-site baseline	*Habitat units*	68.13
	Hedgerow units	0.00
	River units	0.00
On-site post-intervention (Including habitat retention, creation, enhancement & succession)	*Habitat units*	1.35
	Hedgerow units	0.72
	River units	0.00
Off-site baseline	*Habitat units*	59.80
	Hedgerow units	0.00
	River units	0.00
Off-site post-intervention (Including habitat retention, creation, enhancement & succession)	*Habitat units*	127.81
	Hedgerow units	0.00
	River units	0.00
Total net unit change (including all on-site & off-site habitat retention/creation)	*Habitat units*	1.23
	Hedgerow units	0.72
	River units	0.00
Total net % change (including all on-site & off-site habitat creation + retained habitats)	*Habitat units*	1.80%
	Hedgerow units	Check Data
	River units	0.00%

The red line boundary covers 6.47 Ha and is valued by the Defra Biodiversity Metric 2.0 as 68.13 habitat units. Of this, 0.15 Ha of Amenity grassland will be retained and 0.2 Ha of Deciduous woodland will be retained. A 0.15 km length of hedgerow will be created (0.33 habitat units – NB: this does not count towards replacing area habitats but does count towards 'no net loss'). Grass verge measuring 0.02 Ha (0.04 habitat units) and woodland measuring 0.02 Ha (0.04 habitat units) will be created.

Outside of the red line boundary but within the Symphony compound, one suitable area for a nature reserve including habitat creation was identified. A 0.006 Ha pond will be created.

Two projects which the applicant is willing to support (see 5.6) include habitat enhancements and these have been calculated by version 9 of the Biodiversity Metric.

The overall net unit change for the proposed development is +1.23 habitat units, which is a biodiversity change of 1.8% gain.

4.4.1 European Protected Species (EPS)

Bats

Bats (all species) are EPS, S41 and LBAP species. There are no natural or artificial roost structures on the site. The majority of common pipistrelle records are from houses in the urban settlements. However, there are two records of common pipistrelle (three individuals) and noctule bat (three individuals) from the small lake named Ferrymoor Pond (175m to the east of the site) from 2011.

The South Yorkshire Bat Group provided a data set covering a 2 km radius from the proposed site and containing 38 records going back to 1993. As above, the majority of records relate to bats in the urban areas, presumably brought to the attention of bat workers. The majority of records are for species of pipistrelle. Three noctule bats over Ferrymoor Pond on 08/07/2011 refer to the record

discussed above. In addition, a single noctule bat was over West Haigh Wood on 20/08/1994. This wood is 2.1 km to the east of the site.

It is assessed that bats are likely to be foraging over the ponds and stream in the area. The impact on bats from development is assessed as being nil.
EPS: Yes
S41: Yes
LBAP: Yes
Constraint: No

Great crested newt
An EPS, S41 and Local BAP species. Magic map shows no 'Granted European Protected Species (EPS) Applications' for GCN, however, survey and mitigation work during the period of open cast mining and subsequent restoration pre-dates the Natural England licensing system. Historic data is summarised in Appendix 7.

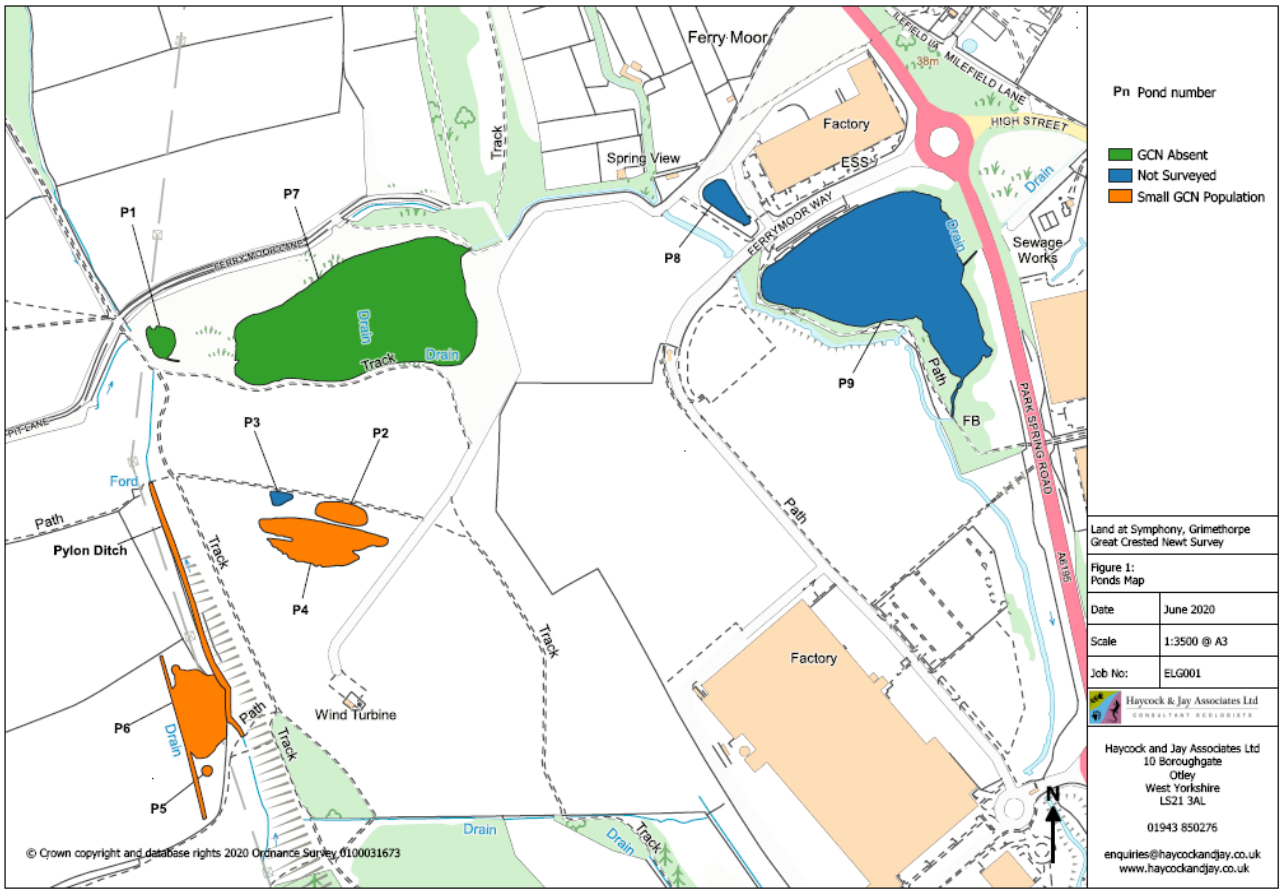
The data centre has GCN records from a 'willow pond and ditch east of Moorland Crescent, Cudworth' at National Grid Reference (NGR) SE 3977-0835, of '*ca*: 100 each year for four years in pitfalls during open-casting', with the records (but not the observations) dated as 01/01/2000. This is relatively close to the application site.

A comprehensive GCN survey was undertaken in 2020 by Haycock and Jay Associates Ltd and the results are presented in the submitted 'Land at Symphony, Grimethorpe, Great Crested Newt Report' (June 2020). The Report summary says:

Great crested newt surveys were undertaken at seven ponds within 500m of land at Symphony, Grimethorpe, during the period April to June 2020. The surveys identified small populations of great crested newts at five ponds within 500m of the site (Ponds P2, P4, P5, P6 and Pylon Ditch). Great crested newt eggs or larvae were also identified in Ponds P4, P5 and P6, confirming breeding at these water bodies.

The Report map (Figure 7) shows the ponds (P). Those supporting GCN are coloured orange. The waterbodies coloured blue were unsuitable for GCN or not accessible due to Coronavirus lockdown measures and those coloured green indicate GCN absence.

Figure 7



The 2020 GCN maximum counts were P2=1, P4=3, P5=1, P6=3, pylon ditch=1. This forms a meta-population, which is 140m (at the closest point) from the red line boundary. Natural England refer to this as a 'small' population of GCN (small population class size is 1-10). The 2020 population size and GCN distribution is very similar to the 2013 survey results (Appendix 7) showing that these have remained constant.
EPS: Yes
S41: Yes
LBAP: Yes
Constraint: Yes

Otter
An EPS, S41 and Local BAP species for which there are no records. The stream and its banks (within the applicant's compound) were walked and checked for otter sightings and field signs once in July 2019 and on six occasions throughout the spring and summer of 2020 with no findings. This species is currently expanding its range in the region and may pass along the stream occasionally and may use Ferrymoor Pond and Ferry Moor Wader Scrapes. Likely impact from development is assessed as nil.
EPS: Yes
S41: Yes
LBAP: Yes
Constraint: No

4.4.2 Other mammals

Badger

Badgers are protected under Schedule 5 of the Wildlife and Countryside Act (1981, as amended) and the Protection of Badgers Act 1992. There are no data centre records and no field signs were noted within the red line boundary on the PEA survey of 05/09/2019. The rest of the green space within the Symphony compound was walked around on six occasions in 2020 (see water vole below for dates). Badger setts, tracks and latrines were looked for but none were found. The South Yorkshire Badger Group were consulted in November 2020 and responded that there are no badger setts in the vicinity which would be affected by the planning application. Due to the lack of records, lack of field signs and the robustness of the perimeter fence (see photograph in Appendix 3), it is assessed that the likelihood of harm to badgers is nil.

S41: No
LBAP: Yes
Legally protected: Yes
Constraint: No

Water vole

There are 14 records from 2011-2012, all of which are over 1km to the north of the site. The stream and its banks (within the applicant's compound) were walked and checked for water vole sightings and field signs once in September 2019 and on six occasions throughout the spring and summer of 2020 with no findings.

Visit 1. 05/09/2019, SW2, 6/8, warm, occasionally sunny, dry.
Visit 2. 20/03/2020, NE2, 2-4/8, cool, sunny, bright, dry.
Visit 3. 20/04/2020, E3, 0/8, sunny, bright, dry.
Visit 4. 03/05/2020, calm, 6/8, cloudy, bright, recent rain.
Visit 5. 17/05/2020, calm, 5/8, bright.
Visit 6. 07/06/2020, N3, 8/8, rain, dull, cool.
Visit 7. 20/06/2020, SW2, 8/8, dry, mild.

On each occasion the western bank was slowly walked from north to south, with regular stops to scan both banks, where visible, with 10x32 binoculars for field signs such as holes at water level and feeding lawns, and to look and listen for the fairly distinctive 'plop' of water voles entering the water. The pedestrian bridge was used as a vantage point and allowed easy access to the eastern bank for closer inspection of that section of the watercourse.

Water vole is declining throughout the country and expansion of the known colony southwards to the stream close to the site is unlikely. Even should animals reach this stream likely impact from development is nil, so long as Environment Agency discharge standards are met.

S41: Yes
LBAP: Yes
Constraint: No

West European hedgehog

There are no records for this species, however, it will be present (just not reported) in the recording area. This is a widespread species and is likely to be present within the wider area as there is ample supporting habitat. The loss of an area (to development) of grassland used for foraging is assessed as being insignificant.

S41: Yes
LBAP: Yes
Constraint: No

Brown hare

There are seven data centre records, of up to two animals, dating from 2011 to 2017 in the study area including on Symphony land. The 2013 Barnsley Local Plan ecology survey notes nine hares

together on Cudworth Common. One brown hare was seen during the 05/09/2019 PEA survey. Brown hare was looked for (with two seen) during the 2020 survey visits which took place on:
Visit 1. 20/03/2020
Visit 2. 20/04/2020
Visit 3. 03/05/2020
Visit 4. 17/05/2020
Visit 5. 07/06/2020
Visit 6. 20/06/2020
The surrounding area has ideal habitat for this species, which frequents open ground with abundant tree cover. Brown hares are illegally persecuted in many places, so they benefit from land protected by the site fence. The 9.8 Ha of existing greenspace within the Symphony site fence which is to be retained, provides a continued safe area for this species. However, as 6.5 Ha of land will be lost, this triggers brown hare as a constraint.
S41: Yes
LBAP: No
Constraint: Yes

Harvest mouse
S41 species. There are two records from 2011 and 2012 from near Edderthorpe Ings, with two and three nests in canary reed grass. While this is over 1km to the S, there are closer areas which are suitable, chiefly along the stream which will not be impacted. The poorer semi-improved grassland on the mounds was assessed as not being rank enough to support this species.
S41: Yes
LBAP: Yes
Constraint: No

4.4.3 Reptiles and amphibians

Grass snake
A total of 29 records (all single specimens) were returned, showing that the Dearne valley is locally important for this reptile. All of the records are from wetlands at or close to Edderthorpe Ings. It is assessed that this visible species would have been recorded if it occurred at the other ponds within the study area. While this species will stray from ponds it is assessed as unlikely to reach the red line boundary and therefore would not be harmed by the proposed development.
S41: No
LBAP: Yes
Constraint: No

Common lizard
There are ten records, all of single animals (one in April 2012 and nine in July 2016). All were seen on the disused railway line and/or a layby on the A6195, to the south of the site, close to Edderrthorpe Ings. This would appear to be a discrete population although it may extend along the former rail route.
While there was no formal survey effort using reptile felts, common lizards were visually searched for (including looking on and under suitable pieces of debris) in the Symphony compound (excluding Areas A and B where birds were nesting) on the six days when breeding bird surveys were undertaken:
Visit 1. 20/03/2020, NE2, 2-4/8, cool, sunny, bright, dry.
Visit 2. 20/04/2020, E3, 0/8, sunny, bright, dry.
Visit 3. 03/05/2020, calm, 6/8, cloudy, bright, recent rain.
Visit 4. 17/05/2020, calm, 5/8, bright.
Visit 5. 07/06/2020, N3, 8/8, rain, dull, cool.
Visit 6. 20/06/2020, SW2, 8/8, dry, mild.
In addition, visual searches were made in ideal common lizard weather conditions on an area of Cudworth Common west of the Symphony compound on 20/03/2020, and along the disused railway

track between Park Spring Road (A6195) and Edderthorpe Ings on 20/04/2020 and 17/05/2020. None were seen. Consideration of the evidence led to an assessment that this species would not be harmed by the proposed development.
S41: No
LBAP: Yes
Constraint: No

Common toad
There are eight data centre records from ponds referred to as Cudworth Ponds. During the 2020 GCN survey, common toads were found in six ponds and a ditch (Figure 5). The wider area of ponds and terrestrial habitat is clearly beneficial to this well distributed amphibian, which is a priority species. As the semi-improved grassland within the red line boundary is suitable foraging and hibernating habitat, this species is a constraint.
S41: Yes
LBAP: Yes
Constraint: Yes

Smooth newt
There are six data centre records dated between 2001 and 2010 from the Cudworth Ponds. During the 2013 amphibian survey, 76 smooth newts were found in small numbers in all of the ponds illustrated in Figure 13 (Appendix 7). During the 2020 GCN survey, smooth newts were found in six ponds (Figure 5). The wider area of ponds and terrestrial habitat is clearly beneficial to this well distributed amphibian, which is not a priority species. While smooth newt will be slightly harmed by the loss of terrestrial habitat, the overall assessment of harm is low.
S41: No
LBAP: No
Constraint: No

Common frog
There are four records dating between 2001 and 2010 from the Cudworth Ponds. During the 2020 survey, common frogs were found in five ponds (Figure 5). The wider area of ponds and terrestrial habitat is clearly beneficial to this well distributed amphibian, which is not a priority species. While common frog will be slightly harmed by the loss of terrestrial habitat, the overall assessment of harm is low.
S41: No
LBAP: No
Constraint: No

4.4.4 Birds

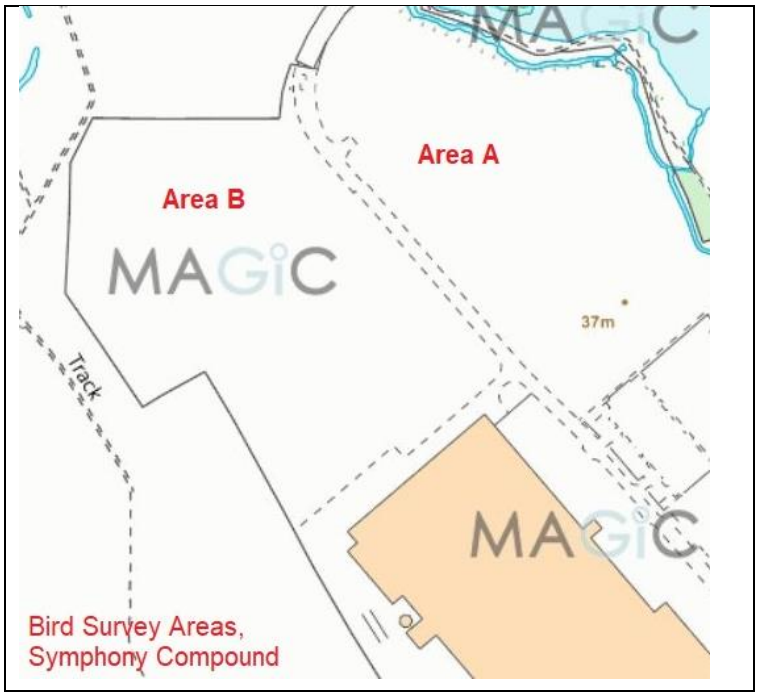
The data centre species list includes a number of records covering several species. Many of these are from nearby, locally important wetlands, especially Edderthorpe Ings and Ferry Moor Wader Scrapes. Outside of the 2km search area but within the NIA are several important wader breeding, passage and wintering sites, including those managed by the RSPB Dearne Valley team (centred on Old Moor Wetlands) and the Garganey Trust. There is a significant regional stronghold for wading birds, to which, the Symphony birds contribute. Both Cudworth Common and New Park Springs support breeding lapwing and skylark.

Several priority species records relate specifically to the Symphony factory site and these include lapwing, ringed plover, redshank, little ringed plover and skylark and this triggered the need for a Breeding Bird Survey, which was undertaken in 2020.

4.4.4.1 Breeding bird surveys

A breeding bird survey of the Symphony site was undertaken in spring 2020 and the results are presented below. The survey covered the eastern area A and the red line boundary area B to the west of the road (Figure 8).

Figure 8



Gray's Ecology data 2020

Species	**Area A Nº of pairs on each of six visits**	**Area A Total pairs for the season**	**Area B Nº of pairs on each of six visits**	**Area B Total pairs for the season**
Lapwing	3,2,1,2,2,3	3	14,12,11,5,8,7	12
Ringed plover	3,2,1,2,3,3	3	1,2,3,3,2,2	3
Little ringed plover	0,1,0,0,1,0	1	0,0,0,0,0,0	0
Redshank	0,0,0,0,0,0	0	1,1,1,0,2,1	2
Oystercatcher	0,0,0,0,0,1	0	0,0,0,0,0,0	0
Skylark	1,0,0,0,0,0	0	2,2,3,3,3,2	3

In addition, detailed Symphony enclosure breeding survey results were provided by the Barnsley Bird Study Group for the years 2016 to 2020 (counts undertaken through the perimeter fence from the public domain). These results are tabulated and presented below.

Barnsley Bird Study Group data 2020

Species	**Area A (pairs)**	**Area B (pairs)**	**Area A and B total (pairs)**	**Total Nº fledged**
Lapwing	2	11	13	Unknown
Ringed plover	3	4	7	Unknown
Little Ringed Plover	1	0	1	Unknown
Redshank	0	1	1	Unknown
Skylark	Unknown	3	3	Unknown

Barnsley Bird Study Group data 2019

Species	**Area A (pairs)**	**Area B (pairs)**	**Area A and B total (pairs)**	**Total Nº fledged**
Lapwing	2	10	12	4+
Ringed plover	2	2	4	2+
Little Ringed Plover	Unknown	Unknown	2	0
Redshank	0	0	0	0
Skylark	0-3	0-3	0-3	Unknown

Barnsley Bird Study Group data 2018

Species	**Area A (pairs)**	**Area B (pairs)**	**Area A and B total (pairs)**	**Total Nº fledged**
Lapwing	Unknown	Unknown	6	3
Ringed plover	Unknown	Unknown	4	0
Little Ringed Plover	Unknown	Unknown	1	0
Redshank	0	0	0	0
Skylark	Unknown	Unknown	Unknown	Unknown

Barnsley Bird Study Group data 2017

Species	**Area A (pairs)**	**Area B (pairs)**	**Area A and B total (pairs)**	**Total Nº fledged**
Lapwing	4	9	13	Unknown
Ringed plover	5	3	8	6
Little Ringed Plover	1	0	1	Unknown
Redshank	0	2	2	Unknown
Skylark	-	-	Unknown	Unknown

Barnsley Bird Study Group data 2016

Species	**Area A (pairs)**	**Area B (pairs)**	**Area A and B total (pairs)**	**Total Nº fledged**
Lapwing	Unknown	Unknown	16	Unknown
Ringed plover	Unknown	Unknown	6	Unknown
Little Ringed Plover	2	0	2	Unknown
Redshank	0	1	1	Unknown
Skylark	Unknown	Unknown	Unknown	Unknown

Within the Symphony site, Area B (Figure 6) supports more ground-nesting birds and Area A supports fewer. Suitable open areas elsewhere on the site are limited to one location near the Sustainable Urban Drainage Scheme (SUDS) feature, where one pair of lapwings nested. Breeding birds may benefit from the perimeter fencing excluding members of the public; however, it does not exclude predators such as fox, hedgehog, stoat, weasel, sparrowhawk, buzzard and kestrel. The following species accounts assess data centre records, 2020 BBS results and Barnsley Bird Study Group data collated over the last five years.

Lapwing
There are 47 data centre records mostly from 2009 to 2018. The records include birds at Ferry Moor Wetlands (breeding) and Cudworth Common but not New Park Springs. The GCN survey team noted a breeding pair on Cudworth Common in 2020. In 2020 ten pairs nested within Area B, but two nights of severe frost on 10/05/2020 and 11/05/2020 are reported to have killed most/ all chicks (Barnsley Bird Study Group pers com). This caused some moving around of nesting lapwings and the final assessment is that 12 pairs attempted to nest within the red line boundary and three pairs in Area A. No fledglings were seen, although across both areas, two June broods of half-grown chicks were seen on the final BBS visit and a further one adult was likely to be on a nest and seven broods were thought to be out of sight in long grass.
S41: Yes
LBAP: Yes
Constraint: Yes

Redshank
There are 22 data centre records for the 2km search area. Notable are birds at Ferry Moor Wader Scrapes (shown in Figure 5) between 2010 and 2017, with confirmed breeding (maximum of two pairs in 2013). There was one pair on Symphony land in 2014 and two pairs in 2017. In 2020 a pair nested within Area B but lost the first clutch, probably due to two nights of hard frost in May. What are presumed to be five failed breeders from the site and elsewhere were on site on 07/06/2020, with one pair making a second nesting attempt (outcome unknown).
S41: Yes
LBAP: Yes
Constraint: Yes

Ringed plover
There are 20 data centre records dating from 2009 to 2017 for the study area, including at Ferry Moor Wetlands and two (February and March) records from New Park Springs. One breeding pair 'at Symphony' was recorded in June 2009 for the 'Barnsley Bird Breeding Atlas 2006-2011'. In 2020 three pairs nested within Area B and three pairs in Area A. Widespread first clutch failure was likely to have been caused by two nights of hard frost in May. One fledgling was seen and two June broods of half-grown chicks were recorded on the final BBS visit.
S41: No
LBAP: Yes
Constraint: Yes

Little ringed plover
There are two data centre records for the 1km square SE 40-08, which includes the application site. Two breeding pairs were recorded in June 2009 for the 'Barnsley Bird Breeding Atlas 2006-2011'. In 2020 one pair twice frequented Area A, but it is assessed that their nesting attempt failed both times.
S41: Yes
LBAP: Yes
Constraint: Yes

Oystercatcher
There are four records including a pair to the SW of the site (2007) and birds at Ferry Moor Wader Scrapes (2013). In June 2020 a pair with two well-grown chicks appeared in Area A, having nested on Ferrymoor Pond.
S41: No
LBAP: No
Constraint: No

Skylark

With 76 data centre records this is clearly a common and well distributed species and shows that the study area contains much suitable breeding habitat, including the Symphony Compound, Cudworth Common, Ferry Moor wetlands and New Park Springs. The Barnsley Bird Breeding Atlas 2006-2011, gives 15 breeding pairs for the 1km square SE 40-08 which contains the application site. In 2020 three pairs nested in Area B, favouring areas of longer grass including the north to south running bund. A further pair could be seen and heard over Cudworth Common outside of the perimeter fence. None nested on Area A, probably because this area was mostly bare or only sparsely vegetated.

S41: Yes
LBAP: Yes
Constraint: Yes

Other birds

Several other species will casually use the red line boundary area, but not for breeding and are assessed as not being significantly affected by development. These include the Birds of Conservation Concern (BoCC) red listed linnet, which feeds on plant seeds on barely vegetated ground and nests in bushes. During 2020, a pair of red-legged partridge were seen at various points around the Symphony site and a pair of kestrels (BoCC) regularly hunted over it. Three or four broods of recently fledged pied wagtails were noted and a reed bunting (BoCC) held territory in the SUDS. Willow warbler (BoCC), chiffchaff, blackcap and whitethroat all nested along the stream. Bullfinch (BoCC), goldfinch and greenfinch all held territories. Feral greylag geese were seen on the open areas several times, having flown across from Ferrymoor Pond.

LBAP: Yes (some)
Constraint: No

4.4.5 Plants

There is just one notable plant record for the study area, a record of cornflower from the 1km square in which the application site sits. No details are given and the record entry is dated as 01/01/1999. Given the main habitat is grassland, this arable plant is unlikely to still exist and is not a constraint.

S41: No
LBAP: Yes
Constraint: No

4.4.6 Invertebrates

During site visits the following butterfly species were recorded:

- Common blue
- Brown argus
- Small heath
- Meadow brown
- Ringlet
- Speckled wood
- Green-veined white
- Painted lady
- Small tortoiseshell

Of these species, small heath is a S41 priority. The data centre records include seven small heath butterfly records as well as one S41 species record of dingy skipper (maximum two individuals). This record is from 2005 and is for the grid square to the south-east of the application site (given as Park Springs tip). Two dingy skippers were recorded by the SUDS on the site visit dated 17/05/2020. Dingy skipper occurs on many sparsely grassed sites which support common bird's-foot trefoil and could occur within the red line boundary. The loss of semi-improved neutral grassland is a constraint for two species of butterflies.

Numerous ant nests (not identified to species) were found on site visits as well as grasshoppers (probably common grasshopper). Several common darter dragonflies and one southern hawker dragonfly were noted, as expected in habitat close to ponds. Several alder beetles (*Agelastica alni*) were found and photographed on a single alder tree in the belt of trees on the northern boundary. This species was thought to be extinct in Britain but is now thoroughly established in the UK and found across Cheshire, Lancashire, Staffordshire, Yorkshire and as far north as Cumbria, as far south as North Wales.
There are data centre records for the following moths:

- Cinnabar (S41)
- Latticed heath (S41)
- Shaded broad-bar (S41)

These are all from July 2017 from New Park Spring tip, which is to the SE of the site and across the A6195. All three of these moths could occur within the red line boundary and the loss of semi-improved neutral grassland is a constraint.
S41: Yes (small heath; dingy skipper, cinnabar, latticed heath, shaded broad-bar)
LBAP: Yes (small heath; dingy skipper, cinnabar, latticed heath, shaded broad-bar)
Constraint: Yes

4.4.7 Invasive Species

New Zealand pygmy weed was found in an extensive area and needs to be responsibly destroyed and disposed of. It also occurs in an area to the E of the red line boundary, where it should also be eradicated. NB: Himalayan balsam (abundant) occurs offsite, along the stream.
S41: No
LBAP: No
Legal requirement: Yes
Constraint: Yes

5. Assessment

5.1 Required legal and mitigation hierarchy measures

As the Local Plan allocation is for an Employment use, there is a presumption in favour of development, subject to the findings of the ecology surveys and detailed proposals for mitigation and compensation being agreed at the planning application stage. Mitigation measures following the planning mitigation hierarchy are offered to remove constraints for following priority habitats and species:

- Other neutral grassland (loss of 3.03 Ha)
- Open Mosaic Habitat on Previously Developed Land (loss of 2.77 ha)
- Ponds, scrapes and marshy grassland [Urban bare ground] (loss of 0.28 ha)
- Great crested newt (likely harm to adults within red line boundary)
- Brown hare (reduction in extent of currently occupied habitat)
- Common toad (reduction in extent of currently occupied habitat)
- Breeding ground-nesting birds (loss of 20 pairs of breeding ground nesting birds as follows: lapwing (12), ringed plover (3), redshank (2) and skylark (3))

- Small heath and dingy skipper butterflies and cinnabar, latticed heath and shaded broad-bar moths (reduction in extent of currently occupied habitat)

- New Zealand pygmy weed (risk of spreading into wider countryside)

The Barnsley Local Plan 2013 ecology report recommends the following if the unit ES8 is developed. Symphony land makes up approximately 70% of ES8.
It is strongly recommended that any future development of this site includes the provision of an ecological buffer zone along its northern and eastern boundaries to protect the stream and wetland habitats present in this area. This buffer zone would also help to strengthen the connectivity of the adjacent pond with the countryside to the west. It is also recommended that a strip of native shrubs and trees is planted along the western boundary. This will allow the corridor formed by the adjacent dismantled railway line to continue. Additionally, as skylark are breeding on site, the timing of development is critical, and should begin outside of the breeding season to prevent disturbance to breeding birds.

The site-specific policy includes the wording:
The development will be expected to:

1. *Plant a strip of native shrubs and trees along the western boundary to allow for the corridor formed by the adjacent dismantled railway line to continue;*
2. *As Skylark are breeding on site, the timing of development is critical, and should begin outside of the breeding season to prevent disturbance to breeding birds; and*
3. *Retain, enhance and manage a buffer strip of existing vegetation along the north and eastern boundaries of the site including the stream corridor.*

Point 1 – a large extent of the western boundary of ES8 (and nearly all of the Symphony western boundary) is adjacent to recently planted deciduous woodland (on the Land Trust's Cudworth Common land holding) and this corridor will not be impacted by this development.

Point 2 – a breeding bird condition will safeguard nesting skylarks, satisfying this concern.

Point 3 – the stream corridor as it passes through Symphony land is outside of the red line boundary and will not be impacted. The northern boundary of ES8 is outside of Symphony control. The stream remains buffered from development and wildlife connectivity post development will remain high.

5.2 NIA integrity

As the habitats and species to be harmed are within the NIA, additional compensation is required.

5.3 Biodiversity enhancement

National Planning Policy Framework (NPPF) (2018) paragraph 170 d) includes the bullet point: *Planning policies and decisions should contribute to and enhance the natural and local environment by: 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.* Biodiversity enhancement should be appropriate to the scale of the development and should be secured by the LPA. Biodiversity enhancement counts towards BNG and is added into the Defra Biodiversity Metric 2.0.

5.4 Biodiversity Net Gain

The Defra Biodiversity Metric 2.0 tool has been developed and launched to measure BNG, which it does in Habitat units. The Government proposes that BNG habitat trading schemes and tariffs will be set up by LPAs (or third-party suppliers), however, this has not yet been done in Barnsley. The change in biodiversity for this scheme is given in Habitat units (see section 4.3.4), but these units are not linked to a habitat trading scheme and have no assigned trading value, therefore a pragmatic alternative has been sought.

BNG is not yet a legal requirement and Barnsley MBC expect, as a minimum, 'no net loss' of biodiversity from this development. Agreed biodiversity measures should be secured by the LPA.

5.5 Symphony site mitigation, compensation and enhancement considerations

The project team decided early on that the whole of Area B (what was to become the red line boundary) was required for the new factory, and that a smaller factory could not contain all of the equipment required for the business. The alternative of a smaller factory and retention of some of the existing habitat was considered but dismissed on economic grounds.

A landscaping scheme has been devised for some lengths of the northern and eastern sides of the red line boundary, which incorporates the existing strips of deciduous woodland. This scheme creates 0.02 Ha of deciduous woodland referred to as 'Woodland shrub mix' on the Landscape plan (Revision D). It features hawthorn, hazel, holly and wild privet. A 150m native species hedge (featuring hawthorn and holly) will be planted along part of the eastern side (by the car parking bays). A small area (0.02 Ha) of amenity grassland will be provided (mostly as verge) and several specimen trees are to be planted in beds within the parking area. While the main purpose of this scheme is to satisfy landscaping requirements, it does add to the habitats within the red line boundary and counts towards no net loss of biodiversity.

All potential areas within the fenced Symphony site (outside of the red line boundary) were assessed for habitat enhancement, with the aim of providing compensation measures outside of the red line boundary but within the wider Symphony site. The existing greenspace is relatively biodiverse, and provides high recreational value space enjoyed by the workforce. Much of the greenspace habitat is appropriately managed. Habitats include neutral grassland, a well-vegetated stream, copses and a small SUDS area which includes swamp and a reedbed. The following five areas were investigated in more detail:

Green roof

A green roof for the proposed new factory was considered by the design team. The Barnsley MBC Biodiversity Supplementary Planning Document (SPD) Biodiversity and Geodiversity, adopted May 2019, promotes the use of green roofs. However, the project architect has stated: *The building has been designed as a large span warehouse/production facility, and as such would not be able to support the loadings of a green roof construction.* This idea was therefore discounted.

Area A

The 4.02 Ha of open land east of the red line boundary and northern access road is similar in context and habitat to that within the red line boundary (Figure 8). It differs by being less well established and therefore has a sparser vegetation cover and a greater extent of bare areas. Ephemeral pools contain New Zealand pygmy weed and there are no rushes. See photograph in Appendix 3. The breeding bird data shows that this area is less favoured than the red line boundary area for most ground nesting birds. Fewer lapwings use it and no redshank or skylarks use it, probably due to the sparsity of the vegetation. Approximately the same number of pairs of ringed plovers use it, and little ringed plover favour it. This area is allocated in the Local Plan for Employment use and Symphony wish to retain it in its current condition. On the site plan submitted to the LPA this area is marked as 'Future development' and it would not be appropriate to invest in habitat enhancement. This area was therefore discounted.

Recreation area

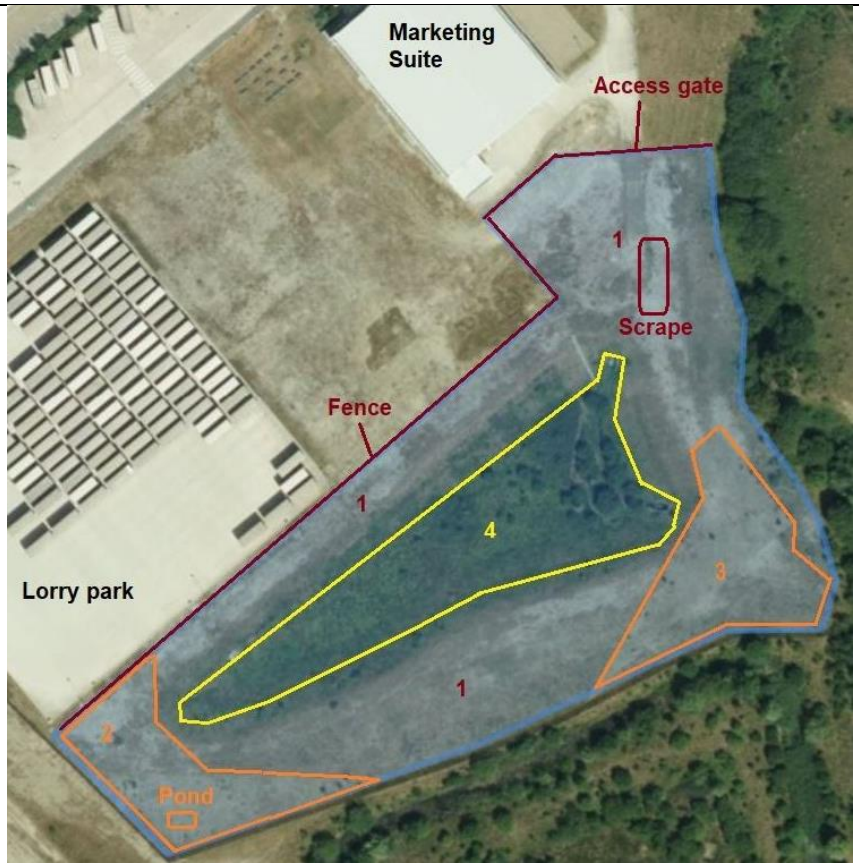
An amenity grassed area along the streamside on both banks includes the pedestrian route between the factory and the pedestrian access gate onto Park Spring Road, close to which picnic tables are situated. As such, it is well used by employees and regularly disturbed. This area is a mosaic of habitats. See photograph in Appendix 3. The stream appears to be in good condition. The lower stream banks are moderately vegetated and uncut, and include hogweed, common reed, the non-

native invasive species Himalayan balsam, clumps of bramble and mature native deciduous trees. Mature native tree and shrub copses line the western side (and screen the car and trailer parks). The regularly mown grassland is used by foraging birds such as blackbird and magpies and possibly by amphibians. The priority species willow warbler, bullfinch and reed bunting occur along this corridor. The soil here is expected to be nutrient-rich, which hinders habitat improvements. Any habitat enhancement, such as changing the management of the grassland, would also reduce the amount of greenspace available to employees, from which they gain health and wellbeing benefits and access to nature, while not delivering significant biodiversity uplift.

Land near Marketing suite

Symphony has proposed the creation of the Symphony Nature Reserve (SNR) within their compound in order to help compensate for the loss of habitats on the development site and the loss of 20 pairs of breeding ground-nesting bird (as well as brown hare, common toad and some invertebrate species). This is centred on SE 40680 08034 and covers an area of 1.55 ha (Figure 9). Should the planning application be approved it is expected that a SNR Management Plan will be a condition.

Figure 9



Compartment	UK Habitat	Area (ha)
1	g3c	0.97
2	Urban: 351 Vacant/ derelict land	0.12
3	Urban: 351 Vacant/ derelict land	0.16
4	Urban: 1190 sustainable urban drainage feature	0.30
Total		1.55

Compartment 1

The SNR will be fenced with a post and rail fence along the northern boundary (+ access gate), attaching to the steel perimeter fence in the west and ending at the stream in the east. A 4x10m

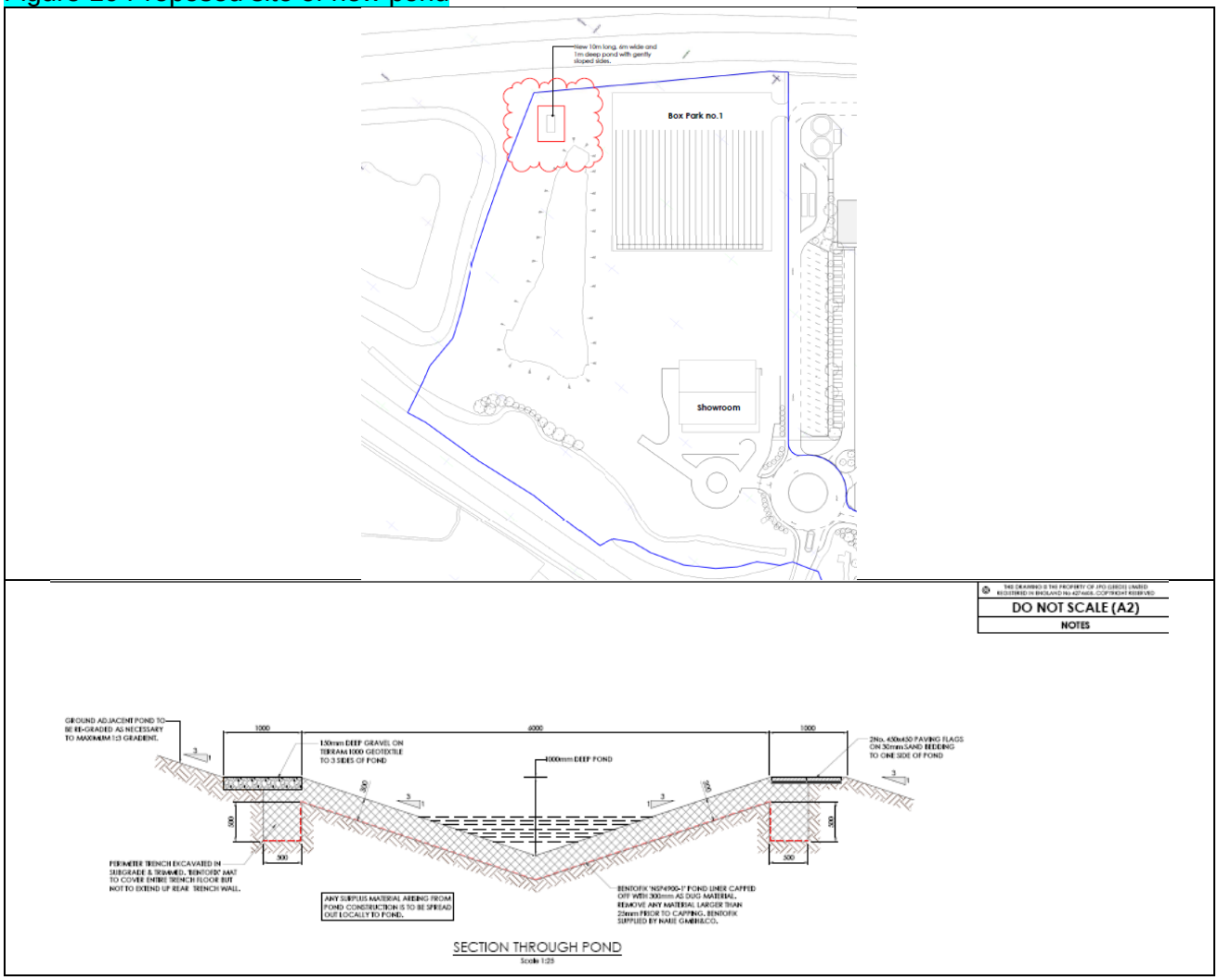
scrape will be created to a depth of 25cm, which will benefit ground nesting waders. It is anticipated that the area will support one pair of lapwings. The berm and slope south of the SUDS consists of a sparse grassland vegetation including wild carrot, black knapweed, coltsfoot and bird's-foot trefoil. See photograph in Appendix 3. This area supports a range of existing wildlife value, including common blue butterflies and the priority species small heath and dingy skipper.

Compartments 2 and 3

An area of mostly bare gravel, likely to be from the construction of the SUDS feature. Several plants beginning to establish, notably some grasses, dog rose, bramble and dog-wood. Some herbs noted including *Hieracium* sp. and bird's-foot trefoil. See photograph in Appendix 3. The culvert for the SUDS pond passes underneath compartment 3.

An area within compartment 2 is a suitable location for a pond to be created (indicative size and position marked in red in Figure 10). The pond will be approximately 6x10m in size, excavated to approximately 1m in depth and lined with a suitable membrane. The pond will be filled and then left to colonise naturally. It will increase opportunities for amphibians (recorded in ponds to the south) as well as aquatic plants and invertebrates. In the Biodiversity Metric (v9) the pond has been entered as Lakes - Ponds (Non- Priority Habitat) with the condition set as good, with the attached comment: 'A 6x10 m pond will be created and left to colonise naturally. Condition is entered as good because it will have matured and be functional within ten years. A management plan will be provided'. The pond delivers 0.19 habitat units.

Figure 10 Proposed site of new pond



Compartment 4

This is a SUDS basin with swamp habitat and a small *Phragmites* reedbed, reed canary grass and several sallows, supporting one pair of reed bunting. See photograph in Appendix 3. The sides are vegetated with false oat grass and other coarse grass species, black knapweed, broad-leaved dock and colonising dog roses. The base of the pond contained up to 10cm of standing water. The basin drains from the eastern end via a culvert into the main stream. Due to the amphibian interest on site, the opportunity to deepen part of the SUDS area in order to create a 0.1 Ha permanent waterbody was considered. However, the site engineer reported back that the SUDS is lined with an impervious membrane, so it was not practicable to puncture the liner to deepen the feature. This idea was therefore discounted and a new pond proposed to be located in compartment 2.

Symphony site summary

There is an opportunity for the creation of a Symphony Nature Reserve to include a new wildlife pond and encourage ground-nesting breeding birds. Other areas on site are already of moderate to good habitat quality and support priority species. The recreation area is an important greenspace that delivers health and wellbeing benefits to the employees. On the remaining areas, there are constraints due to economic development and engineering limitations.

After the delivery of compensation within the Symphony site, further compensation measures need to be delivered off-site.

5.6 Off-site compensation and enhancement opportunities

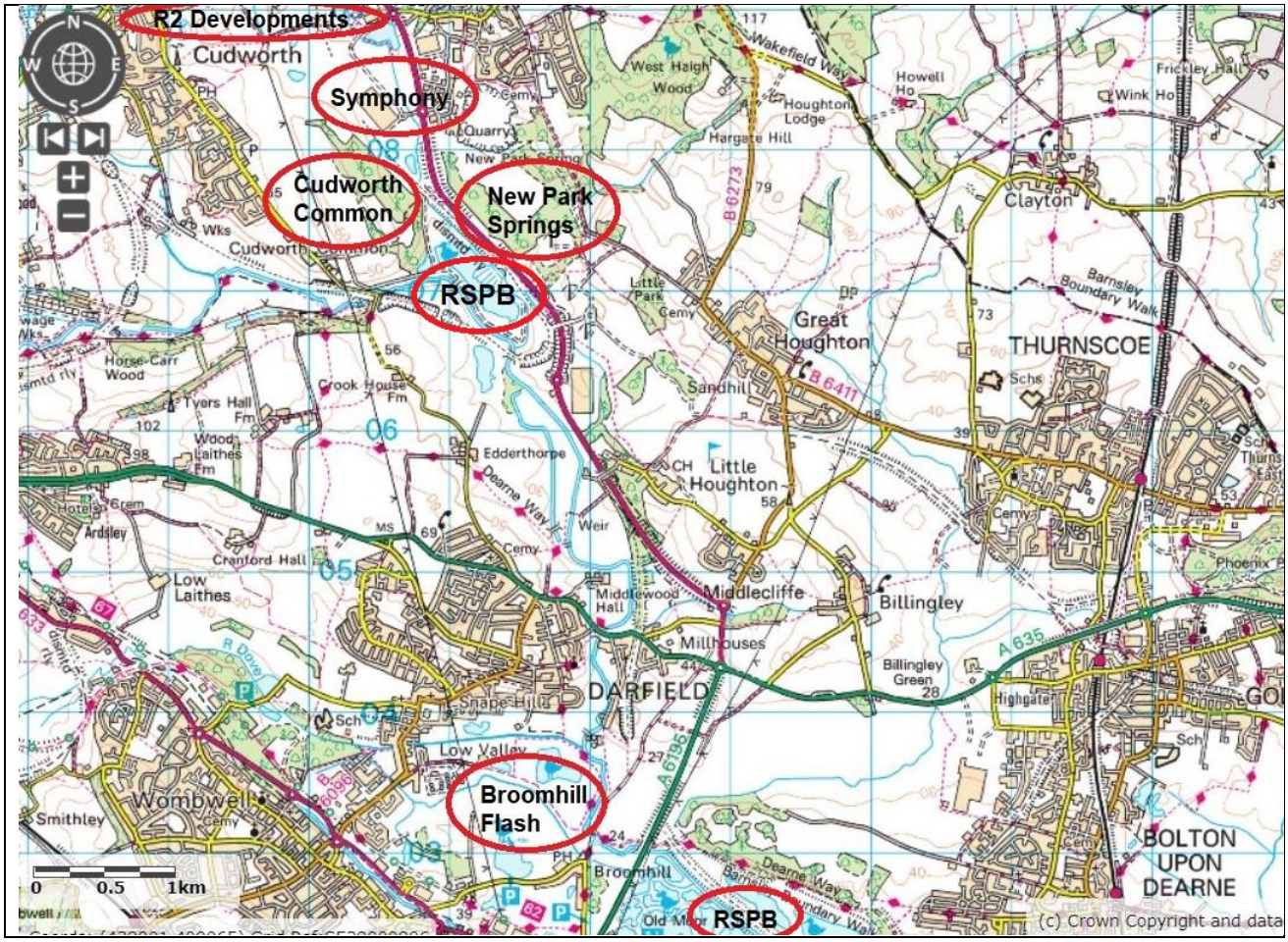
This is to compensate for:

- the loss of habitats (to ensure 'no net loss' and calculated as Habitat units if required)
- the loss of species
- the loss of NIA integrity
- plus, biodiversity enhancement

The loss of a large area of habitat can only realistically be compensated for by the creation of new habitat on very low scoring land, such as arable. For this reason, the Government is promoting research into habitat banking schemes, however there is no formal habitat banking scheme set up in Barnsley. Land surrounding Symphony is either in private ownership and not for sale, or being managed by many of the nature conservation organisations in the NIA Dearne Valley Green Heart Nature Partnership (DVGHP). The Land Trust (Cudworth Common and New Park Springs), the Garganey Trust (Broomhill Flash), the Yorkshire Wildlife Trust (several sites) and the RSPB (Old Moor Wetlands and Edderthorpe Flash) all manage land within the NIA (Figure 11).

These organisations are well placed suggest a range of nature conservation opportunities in partnership with the applicant. The applicant will support off-site habitat and bird measures proposed by the Land Trust, involving works on Cudworth Common and New Park Springs. Details are provided in Appendix 6. These will provide compensation for the loss of habitats and are expected to support two pairs of lapwing and two pairs of skylark on New Park Springs and two pairs of lapwing, one pair of redshank and two pairs of skylark on Cudworth Common.

Figure 11



6. Recommendations

6.1 Bird nesting condition

In the interest of legally protected nesting birds, all construction works should be undertaken outside of the bird breeding season (March to August inclusive), unless the site is first checked by a professional Ecologist within 48 hours of works, and a report submitted in writing to the satisfaction of the LPA within one week. In the event that any active bird nests are found prior to or during the works, a suitable exclusion zone (minimum of 10m) should be put in place, with no work taking place in this area until the nest can be confirmed as no longer active, after which time the exclusion zone can be removed and works in this area can be carried out.

6.2 Great crested newt.

The terrestrial habitat within the red line boundary is suitable for GCN (short vegetation, bare areas + tussocks for hibernation) therefore a NE EPS (GCN) mitigation licence is required prior to ground works. This can only be applied for once planning approval is secured. Information from NE via Barnsley MBC (January 2021) established that the scheme is eligible for a NE GCN District Licence. This allows for the applicant to make a voluntary financial contribution to a GCN project within the region, rather than undertake on-site measures such as fencing, trapping and translocation.

6.3 New Zealand pygmy weed.

There is a legal requirement to ensure contaminated material is disposed of lawfully, to avoid the spread of this non-native pond plant.

6.4 Deliver a landscaping scheme

Biodiversity enhancement will be delivered via a conditioned landscaping scheme, as shown in the submitted document Landscape Plan SF 3012 LL01 rev D.
This includes:

- a woodland mix of 191 hazel, 14 hawthorn, 55 holly and 14 blackthorn trees
- a second patch of woodland, with a mix of 16 hazel, two hawthorn, five holly and two blackthorn trees
- a 150m length of native species hedge of 385 hawthorn and 43 holly trees
- 1,205 assorted ornamental trees and shrubs

To meet Local Plan site policy ES8, the landscaping should meet the following requirement:

1. *Plant a strip of native shrubs and trees along the western boundary to allow for the corridor formed by the adjacent dismantled railway line to continue.*

The northern and western perimeter of the site will be bounded entirely with native tree and shrub species (a new native species hedge, new native species copses and the existing strip of woodland). The ornamental elements will be part of the car parking provision. This is complaint with the ES8 policy.

Rabbit fencing will enclose the newly planted hedge but will not be disruptive to hedgehogs travelling through the wildlife corridor, as the enclosure is limited in extent. The wildlife corridor runs from the west of the Symphony compound, through or around the northern end (where there is a broad strip of marshy grassland) to the stream and other habitat east of the site access road.

6.5 Pond creation

The applicant will create one pond within their land ownership.

6.6 Compensation and no net loss of biodiversity

The applicant will deliver measures within their land holding and support the Land Trust projects at New Park Springs and Cudworth Common, to deliver appropriate compensation measures to ensure 'no net loss' required by the Barnsley MBC Local Plan, and will compensate for losses of:

- semi-improved neutral grassland
- OMHPDL
- brown hare
- common toad
- up to ten pairs of breeding ground-nesting birds (one Symphony, four New Park Springs and five Cudworth Common)
- small heath and dingy skipper butterflies and cinnabar, latticed heath and shaded broad-bar moths
- plus, compensation for the loss of NIA integrity.
- Financial contribution*

*As the establishment of one pair of breeding ground-nesting birds on the Symphony Nature Reserve and nine pairs on Land Trust sites is not guaranteed and still leaves a deficit of ten pairs, the applicant will make a financial contribution to a DVGHP organisation to support the aim of 'no net loss'.

6.8 Conclusion

Habitat enhancements
The creation of the Symphony Nature Reserve including a wildlife pond within the Company's land ownership and the delivery of the Land Trust projects will result in an overall Biodiversity Metric net unit change for the proposed development of 1.23 habitat units, which is a biodiversity change of 1.8% loss.

Species conservation

The delivery of the Symphony Nature Reserve and the Land Trust projects are expected to provide compensation for ten pairs of breeding ground-nesting birds. A financial contribution will be made to cover the shortfall of ten pairs.

The compensatory measures are a mix of habitat enhancements and species conservation measures (particularly for ground-nesting birds) and are aimed to provide 'no net loss' of biodiversity within the NIA.

The measures evidenced in this report are assessed as allowing the development to proceed with no overall significant harm to priority species and habitats and with a degree of biodiversity enhancement.

7. References

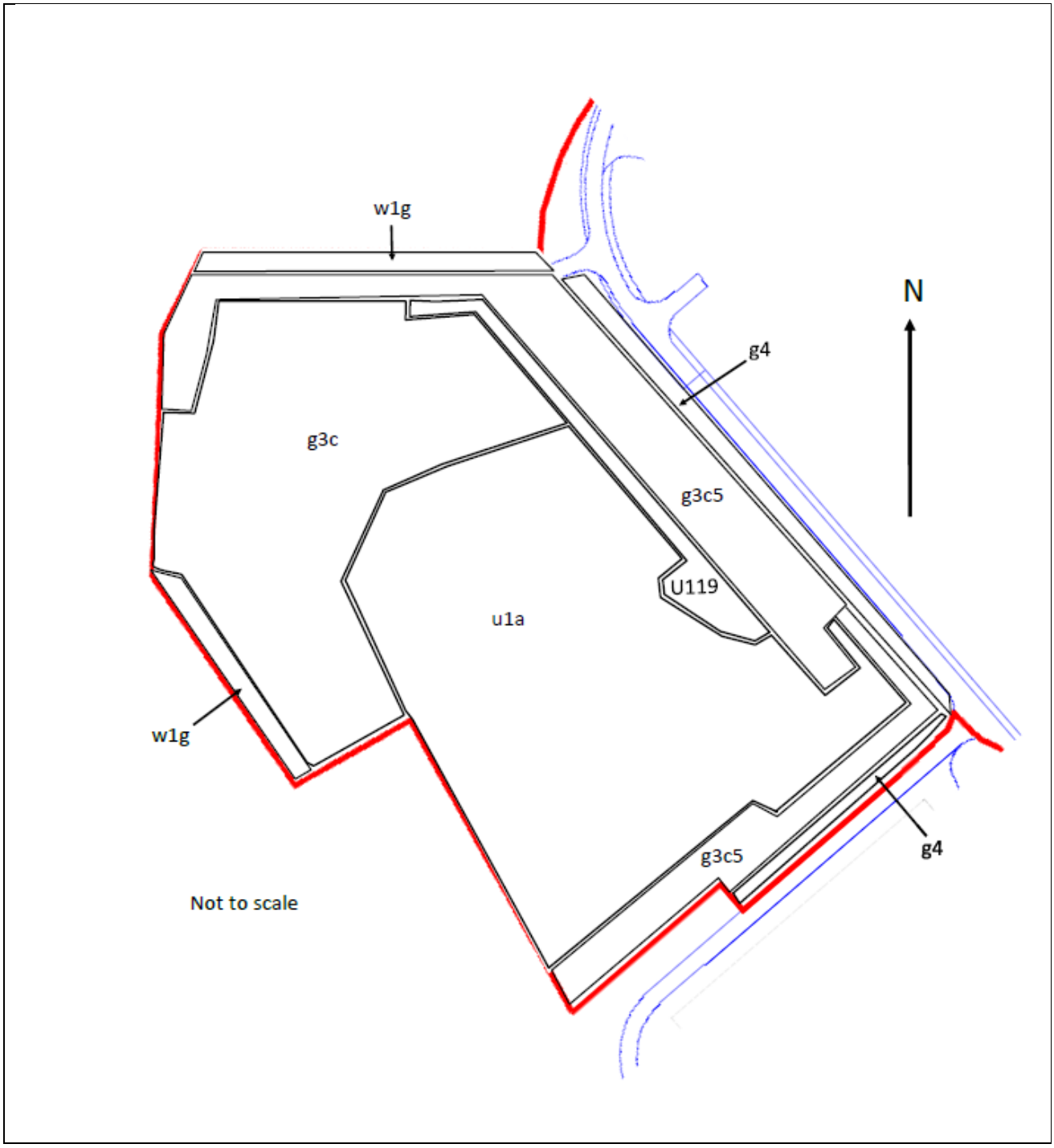
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Appendix 1. Application site Phase 1 Habitats Map (not to scale)



Appendix 2. Application site UK Habitats Map (not to scale)



Appendix 3. Phase 1 Habitats Photographs

	Photograph
Red line boundary Phase 1 Habitats	
B6, Semi-improved neutral grassland	
B6, Semi-improved neutral grassland, on mounds	

	Photograph
A1.1.2, Broad-leaved plantation woodland	
J1.2, Amenity grassland (showing abundant bird's-foot trefoil)	
Phase 1 habitats elsewhere on Symphony site	

	Photograph
Area A	
Area A	
Recreation area (mown grass on both sloping banks)	

	Photograph
Stream looking south from footbridge	
Grassland to south of Marketing suite	
SUDS feature	

	Photograph
Bare ground south-east of SUDS feature	
Perimeter fence detail	

Appendix 4. UK Habitats Photographs

UK Habitats	Photograph
Other; neutral grassland (g3c)	
Other woodland, young trees planted (w1g)	
Arrhenatherum neutral grassland (g3c5)	

Urban; water table variable…(u119)	
Modified grassland (g4)	

OMHPDL (u1a)	

Appendix 5. Survey plant species list for red line boundary (Area B)

OMHPDL (u1a) and Other neutral grassland (g3c)	Shallow pools (u119)	Mounds (g3c5)	Sapling trees on Mounds
Common fleabane	New Zealand pygmy weed	False oat grass	Dogwood
Bird's-foot trefoil	Soft/ hard rush	Couch grass	Flowering currant
Dovesfoot cranesbill	Common reedmace	Yorkshire fog	Rowan
Hare's-foot clover	Sallow	Cock's-foot	Buddleia
Black medick	Common rush	Meadow grass sp.	Sallow
White clover		Dandelion	Dog rose
Common toadflax		Rose-bay willowherb	Blackthorn
Soft/ hard rush		Teasel	
Self-heal		Curled dock	
Daisy		Red bartsia	
Fairy flax		Coltsfoot	
Common sorrel		Wild carrot	
Mouse-ear hawkweed		Ox-eye daisy	
Catsear		Common ragwort	
Ribwort plantain		Common St. John's wort	
Mosses		Yellow-wort	
Creeping bent		Confused Michaelmas daisy	
Red fescue		Bush vetch	
Soft brome		Tufted vetch	
Creeping buttercup		Spear thistle	
Yarrow		Creeping thistle	
Common centaury		Meadow vetchling	
Common mouse-ear		Common sedge	
Sand spurrey		White clover	
Yellow centaury		Red clover	

Red clover Bur medick Broad-leaved willowherb Groundsel		Prickly sow-thistle Mugwort Mouse-ear hawkweed	

Woodland strips (w1g)	Grass verges (g4)
Hazel Birch Hawthorn Field maple Dog rose Alder Sallow Blackthorn Corsican pine Gorse Broom	Rye grass Bird's-foot trefoil Dandelion Daisy

Appendix 6. Off-site biodiversity compensation projects

Planning application 2020/1032
Symphony Group Grimethorpe, biodiversity compensation measures

The development

The proposed development will lead to the loss of 2.77 ha of Open Mosaic habitat on Previously Developed Land, 0.28 ha of ponds and marshy grassland, 3.03 ha of semi-natural grassland habitat, 20 pairs of ground-nesting birds (12 pairs lapwing, 3 pairs ringed plover, 2 pairs redshank and 3 pairs skylark), plus harm to brown hare, common toad, small heath butterfly, dingy skipper butterfly, cinnabar moth, latticed heath moth and shaded broad-bar moth populations.

Mitigation within the applicant's site

Barnsley MBC has asked for ecology mitigation within the applicant's land holding and this will be provided by the creation of the including measures to enhance the breeding ground-nesting bird population and the creation of a wildlife pond.

Project Partners

The Council has indicated that off-site compensation measures should be within proximity of the development site. The applicant will support two off-site compensation projects, delivered by an established, nature conservation, non-government organisation. These comprise of two sites on land owned by the Land Trust and managed on their behalf by the Conservation Volunteers - Cudworth Common (adjacent to the development site) and New Park Springs (0.8 km from the development site).

Project aims

Cudworth Common and New Park Springs projects deliver habitat and breeding bird management measures. The initial project aims are given in Table 3 (NB: areas have changed). These have been refined and compartment maps and habitat management objectives for each site and each compartment are shown below (tables 2 and 3). If the planning application is approved Management Plans are expected to be a condition of approval.

New Park Springs



Table 1. UK habitats and areas in each compartment (New Park Springs)

Compartment	Current UK Habitat	Target UK Habitat	Area (ha)
1	g3c. Grassland: Other neutral grassland	g3c. Grassland: Other neutral grassland (marshy + better condition)	0.36
2	g3c. Grassland: Other neutral grassland	g3c. Grassland: Other neutral grassland (marshy + better condition)	0.21
3	g3c. Grassland: Other neutral grassland	g3c. Grassland: Other neutral grassland (marshy + better condition)	0.54
4	g4. Grassland: Modified grassland	u1a. Urban: Open Mosaic Habitats on Previously Developed Land	2.30
4	u1a. Urban: Open Mosaic Habitats on Previously Developed Land	Retain	0.08
5	g4. Grassland: Modified grassland	u1a. Urban: Open Mosaic Habitats on Previously Developed Land	0.68
6	g4. Grassland: Modified grassland	u1a. Urban: Open Mosaic Habitats on Previously Developed Land	0.40
7	g4. Grassland: Modified grassland	u1a. Urban: Open Mosaic Habitats on Previously Developed Land	0.20
8	g4. Grassland: Modified grassland	u1a. Urban: Open Mosaic Habitats on Previously Developed Land	0.45
9	g4. Grassland: Modified grassland	u1a. Urban: Open Mosaic Habitats on Previously Developed Land	0.82
Total			6.04

Habitat improvement expected to support two pairs of lapwing and two pairs of skylark.

Cudworth Common

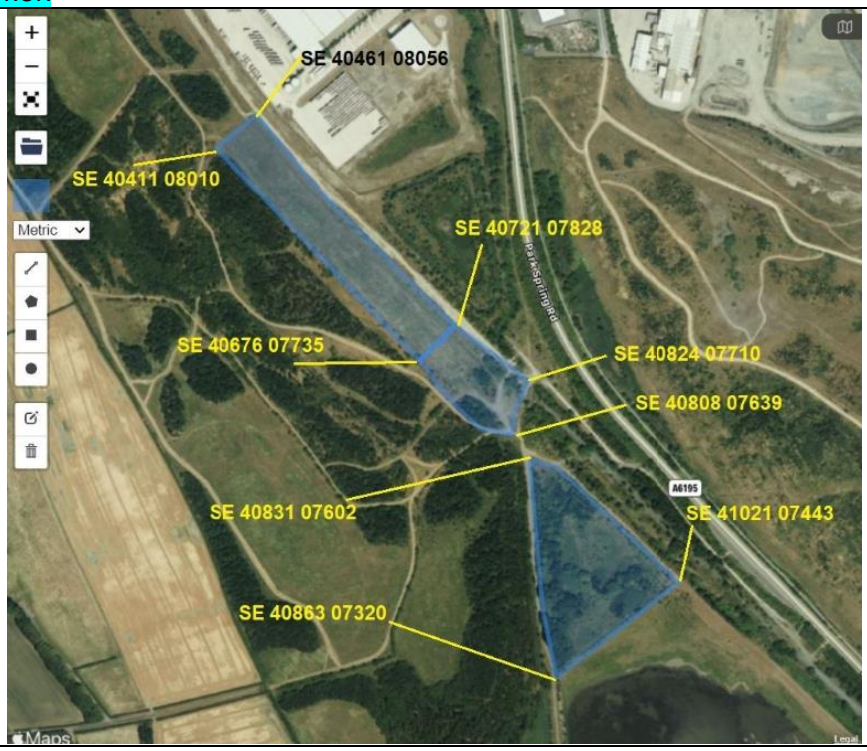


Table 2. UK habitats and areas in each compartment (Cudworth Common)

Compartment	Current UK Habitat	Target UK Habitat	Area (ha)
1	G4. Grassland: Modified grassland	g3c. Grassland: Other neutral grassland	2.82
2	w1f7 Other lowland mixed deciduous woodland	u1a. Urban: Open Mosaic Habitats on Previously Developed Land	0.17
2	h3h Mixed scrub	u1a. Urban: Open Mosaic Habitats on Previously Developed Land	0.25
2	g4. Grassland: Modified grassland	u1a. Urban: Open Mosaic Habitats on Previously Developed Land	0.23
3	w1f7 Other lowland mixed deciduous woodland	Retain	0.86
3	h3f Hawthorn scrub	g3c. Grassland: Other neutral grassland (marshy + better condition)	1.08
3	g4. Grassland: Modified grassland	g3c. Grassland: Other neutral grassland (marshy + better condition)	0.23
3	f2 Fen, marsh and swamp	Retain	0.1
Total:			5.74

Habitat improvement expected to support two pairs of lapwing, one pair of redshank and two pairs of skylark.

Table 3. Original proposal.

Organisation	Project
the Land Trust	New Park Springs Habitat uplift of rough grassland to wet flushes. Area = 0.395 ha Benefitting species: lapwing, redshank Habitat management, returning scrub & rough grassland to bare ground. Area = 2.43 ha Benefitting species: lapwing, skylark, meadow pipit Cudworth Common Habitat uplift of rough grassland to semi-improved grassland (fenced & grazed). Area = 2.4 ha. Benefitting species: lapwing Habitat uplift by returning scrub to wet grassland (fenced & grazed). Area = 2.6 ha. Benefitting species: redshank, snipe Habitat uplift of rough grassland & scrub to bare ground (fenced & grazed). Area = 0.7 ha. Benefitting species: lapwing, little ringed plover

Appendix 7. Historic GCN data

A Scot Wilson report prepared in 2003, entitled 'Independent Review of Environmental Assessment Reports, Grimethorpe Colliery', refers to a report called 'RJB Mining (UK) Ltd (May 1998) Ferry Moor Proposed Reclamation Scheme, Environmental statement and Supporting Information', which reports 'an amphibian survey comprising one visit on the evening of 11/12th May 1997 from 22:00 to 02:00 hours using lamps'. The report refers to Ferry Moor but no NGR is given for the pond. No GCN were found. The report refers to GCN records from a pond over 500m to the W, which could refer to the Cudworth willow pond referred to above. The Scot Wilson report next reviews the 'Hallam Environmental Consultants (2001) Phase 3 Amphibian Survey of part of the coalfields link road, Grimethorpe, commissioned by Barnsley MBC'. Relevant snips from the text are shown below.

Hallam Environmental Consultants (2001) Phase III Amphibian Survey of part of the Coalfields Link Road, Grimethorpe. Commissioned by Barnsley MBC

The report details the Phase III amphibian surveys undertaken in May, June and July 2001. The survey included the Coalfields Link Road between Grimethorpe roundabout and Yellow Bridge and adjacent areas, five ponds located to the south-east of the Symphony site, and surrounding areas. Wetlands, feeding sites, winter hibernacula and dry weather refuges were studied. Only Pond 1, a small pond that had dried up by June in the year of survey, is within the Symphony site. This pond is within the area of landscaping in the south-east section of the Symphony site, by Grimethorpe roundabout.

The survey was the third survey to be undertaken in the Coalfields Link Road area and expanded on earlier surveys undertaken in 2000 following incidents of toad deaths on the road during Spring 2000. The Phase III survey comprised eleven site visits during May to July 2001. During the survey, the large ponds were investigated both during the day and later evening using a combination of torchlight and netting to locate and identify amphibians. Small bodies of standing water were not investigated and trapping was not undertaken as a survey technique.

Common frog, common toad and smooth newt were all found to be present in substantial breeding populations within the site. These species receive only partial protection (protection from sale) under Schedule 5 of the Wildlife and Countryside Act 1981. Great-crested newt and their habitats are fully protected under the EC Directive on the Conservation of Natural Habitats and Wild Fauna and Flora 1992, which is transposed into domestic legislation in the Conservation (Natural Habitats &c.) Regulations 1994. This species was not found during the survey, although anecdotal reports of the species were noted. The precise nature of these anecdotal reports is not specified.

Detailed mitigation proposals are presented in the report to enhance the amphibian habitat (ponds, feeding habitat and hibernacula) and create two separate viable communities in an attempt to reduce migration across the road, which has lead to a number of amphibian mortalities in the past. The mitigation proposals include a management plan for the ponds, including vegetation control and silt removal every five years. The mitigation proposals are for ponds outside of the Symphony site.

a

The surveys conducted were comprehensive in terms of the number of site visits but only used two methods of survey. This is not in accordance with the current English Nature guidelines for establishing the presence or absence of great-crested newt (English Nature, 2001). This requires the employment of three different survey methods (trapping, torching, netting and egg searches). However, this survey was targeting amphibians in general after reports of toad road-kill, and did not primarily seek to clarify the presence or absence of great-crested newt. Similarly, the survey was undertaken before the English Nature guidelines were published.

The mitigation proposals for amphibians are detailed and relatively comprehensive considering the species present. Conversely, the anecdotal reports of great-crested newt in the area are not specific and it is unclear whether or not they may refer to Pond 1.

In summary, since Pond 1 is more than 500 m from the boundary of the site Symphony intends to acquire, and land management since the surveys were undertaken has been inappropriate for maintaining amphibian communities, the risk that amphibians have colonised the land to be acquired is considered to be very low.

The report concludes:

Amphibian surveys commissioned by Barnsley MBC following incidences of toad fatalities on the new Coalfields Link Road indicate that populations of common frog, common toad and smooth newt inhabit the ponds located immediately south of the site. No great-crested newts were found during these extensive surveys, although the surveys

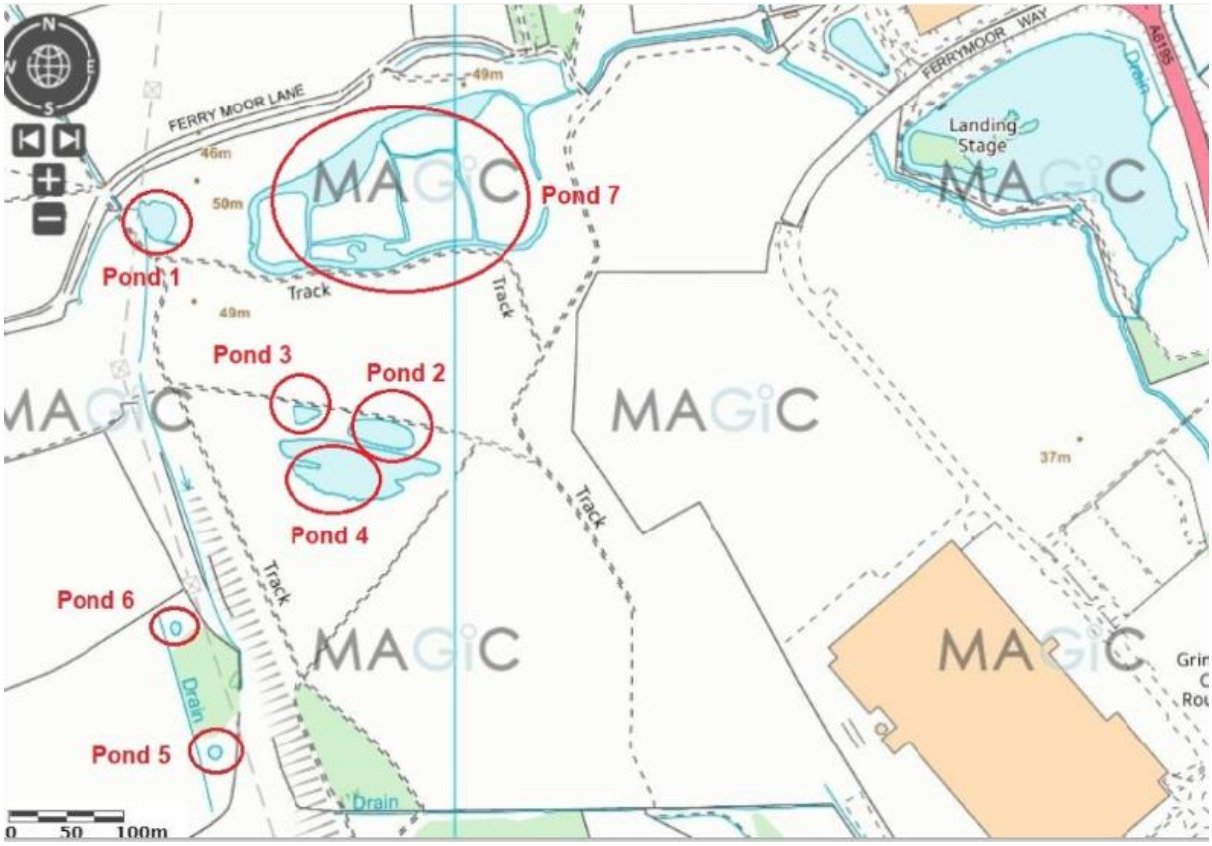
do not comply with current English Nature guidelines for great-crested newt, which were not published until August 2001 (after the surveys were completed).

The following records relate to the surveying of seven ponds undertaken in 2013 (Figure 11). The two ponds found to hold GCN are numbered 5 and 6 and are approx. 400m west of the current application red line boundary.

- 19/05/2013, 1Nº GCN in pond 5, NGR SE 3979-0826
- 05/05/2013, 2 Nº GCN in pond 6, NGR SE 3975-0837
- 19/05/2013, 10 Nº GCN pond 6, NGR SE 3975-0837
- 25/05/2013, 5Nº GCN pond 6, NGR SE 3975-0837

There were no GCN records in ponds 1,2,3,4 and 7.

Figure 11



End

Appendix 8. G Megson resume

Graham Megson - ecological experience

I have 38 years' experience working in the ecology sector, mostly in Local Government, with an intimate knowledge of ecology in the planning system. I am a member of the Association of Local Government Ecologists (ALGE).

I have attained a high level of competency skills in countryside management, biodiversity action planning, ecology and the planning system.

I am a member of the North-East Local Planning Authority Ecologists forum and I sit on the Tees Valley Nature Partnership, the Tees Estuary Partnership and the Teesmouth Bird Club. I have sat on three AONB joint advisory committees and set up and chaired seven Local Biodiversity Action Plan partnerships.

I led the North Yorkshire County Council Natural Environment Team for several years, was the Hartlepool Borough Council Ecologist for eight years, was the Nidderdale AONB Biodiversity Officer and ran a limited Ecology company for five years. I now work as a sole treader providing ecology services.

My experience includes:
Preliminary Ecological Assessment (PEA) reports
Ecological Impact Assessment (EcIA) reports
Habitats Regulations Assessments (HRA) stages 1 screening, and 2 appropriate assessment.
Method statements (GCN, bats, reptiles)
Landscape and Ecology Management Plans (LEMP)
GCN survey and reports
Breeding bird survey and reports
Local Nature Reserve (LNR) Management Plans
Local Biodiversity Action Plans (LBAP)
Countryside Stewardship Farm Environment Plans (FEP)
Upland hay meadow surveys and re-creation (Nidderdale AONB)
Ecology chapters for Environmental Impact Assessments (EIA)
Natural Environment polices for local plans and mineral and waste plans
Local Wildlife Site (LWS), Special Interest Verge and other botanical surveys
Report proof reading
Annual bird report and Bird Atlas compiling
Arboricultural Impact Assessments (AIA)

I have 30 years' experience of surveying and record submission.