GRAY'S
ECOLOGY

Land at Symphony, Grimethorpe

Ecological Impact Assessment Report

August 2020

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 mitigation licence & undertake prescribed measures
- Responsible removal of New Zealand pygmy weed.
- Timetable works to avoid bird nesting season.
- Deliver compensation for habitat loss and breeding birds losses, and provide biodiversity enhancement through a financial contribution to off-site habitat improvement opportunities elsewhere within the NIA.

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. 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.

This report has been produced with reference to current guidelines for Preliminary Ecological Assessment and report writing (Chartered Institute of Ecology and Environmental Management (CIEEM 2012)) and British Standard BS 42020:2013 (BSI 2013) which involves the evaluation of potential ecological constraints based on Extended Phase I (Joint Nature Conservation Committee (JNCC 2010)) survey data and background desk study.

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.

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 with trees, elsewhere the ground is 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

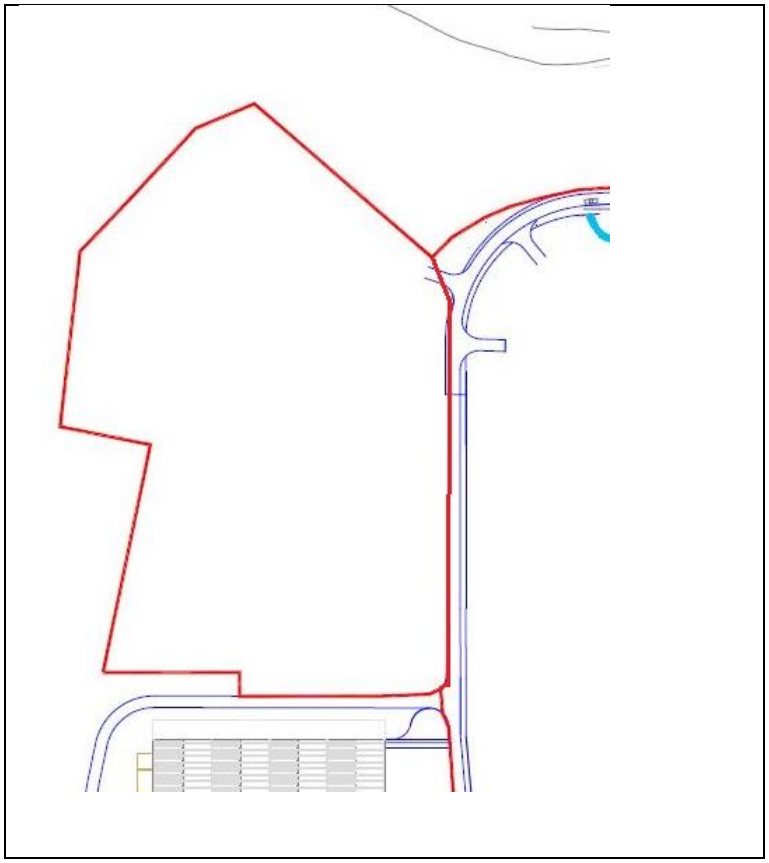


Figure 2



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 Metropolitan Borough Council.
- 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*

*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 was classified according to the relevant criteria.

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.

3.4 Defra Biodiversity Metric 2.0

The Biodiversity loss/ gain within the red line boundary has been calculated using the Defra Biodiversity Metric 2.0 Calculation tool – Beta Test December 2019 update. 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.

4. Results

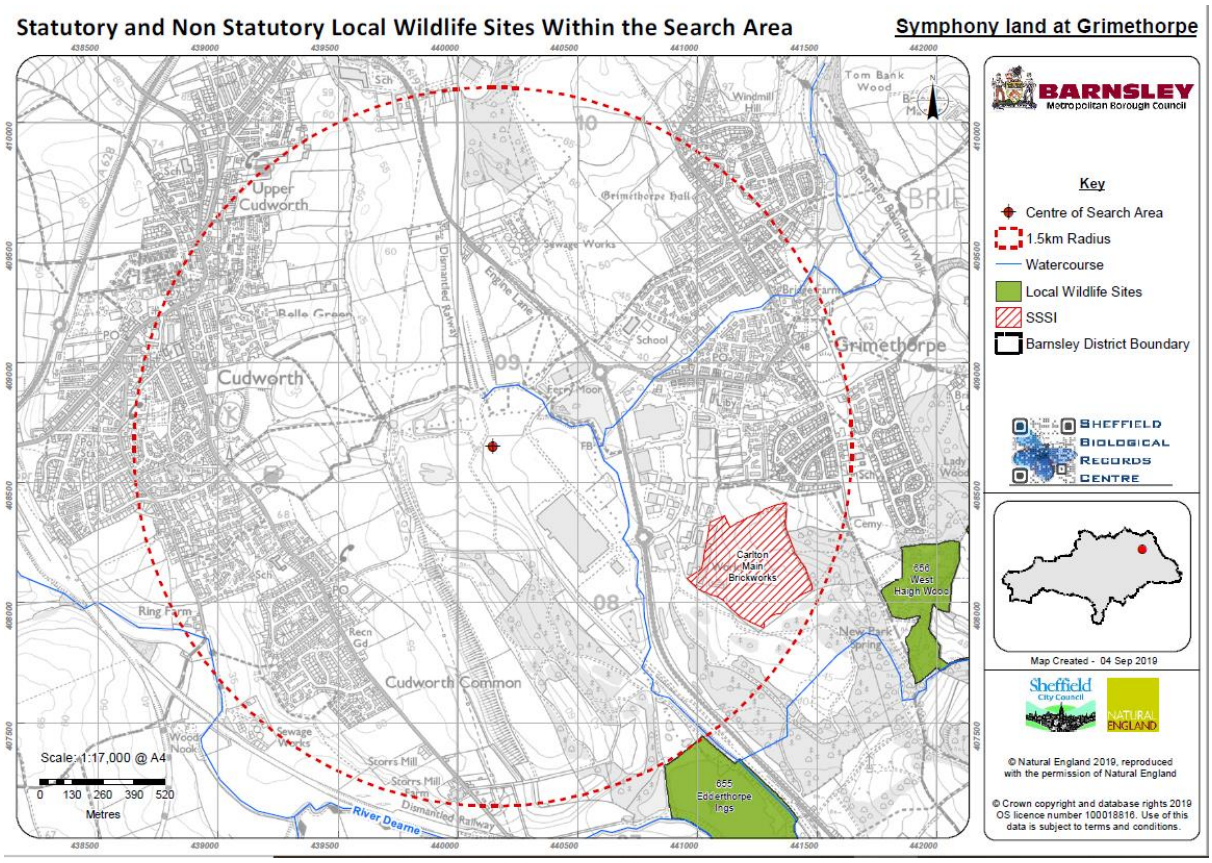
4.1 Introduction

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. There is one Site of Special Scientific Interest (SSSI) within 2km. This is Carlton Main Brickworks SSSI which is 675m to the south. The SSSI Risk Impact Zone information for this site is given below.

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.

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

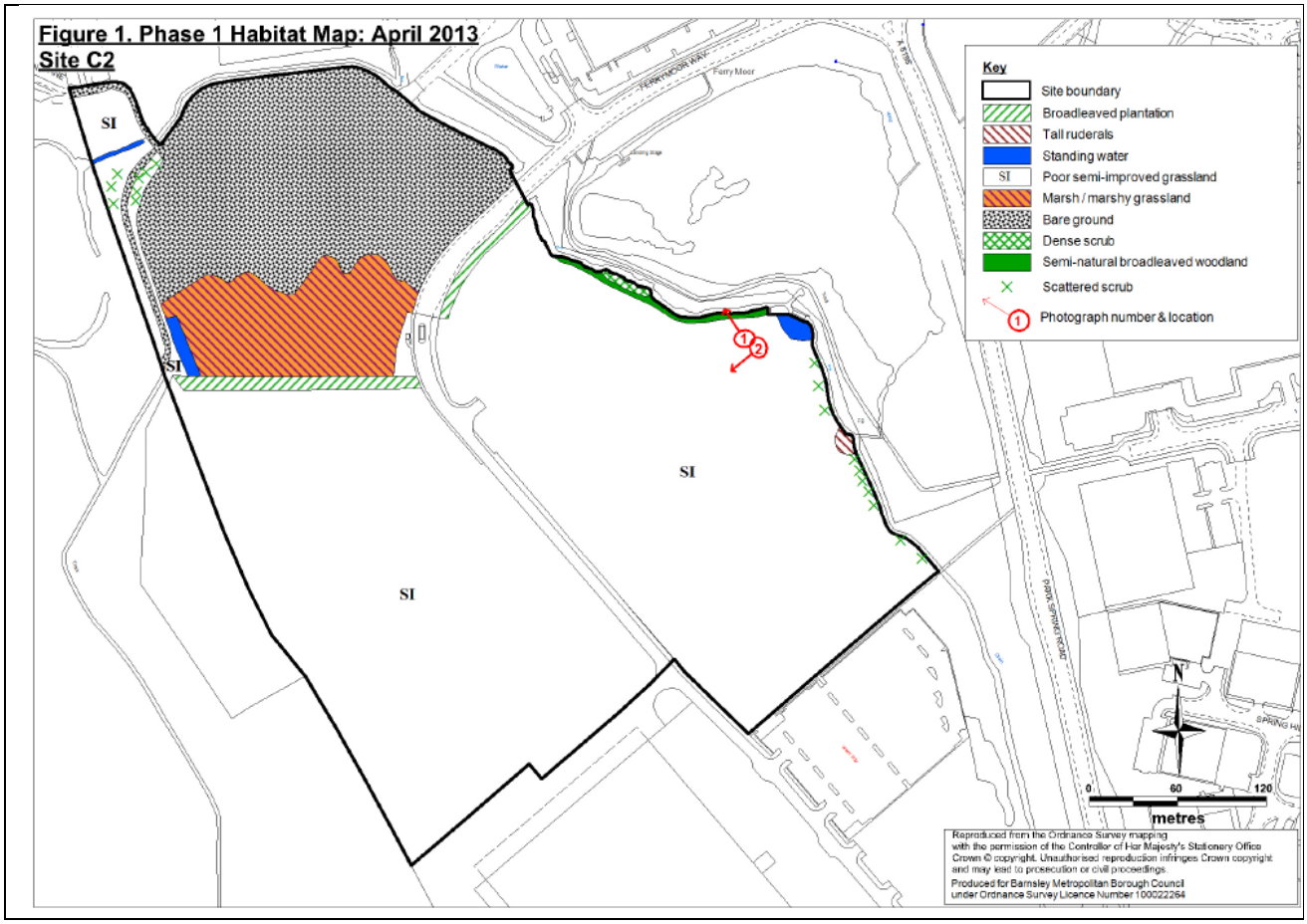
4.3 Habitats

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 Metropolitan Borough Council. 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

Phase 1 habitat types from the 2019 field survey are described below and are illustrated on the Phase 1 Habitats Map (Appendix 1). Photographs of all Phase 1 habitats form Appendix 2.

The habitat accounts below use the Phase 1 habitat type names. The Biodiversity Metric 2.0 habitat name is given in the text in italics.

Semi-improved neutral grassland

Urban - Open Mosaic Habitats on Previously Developed Land (5.85 Ha) and Lakes – Temporary lakes, pond and pools (0.23 Ha).
This habitat best fits the Local BAP as Open mosaic habitats on previously developed land. This habitat dominates the site, covering some 95% of the red line boundary. Former colliery spoil land has been removed, the land levelled, and possibly seeded. The grass sward is relatively sparse, with impeded drainage leading to the formation of wet areas following prolonged rainfall. Included within this habitat block is 0.23 Ha of ephemeral pools. At the time of survey one small area held water to a depth of 1cm. The invasive, non-native, New Zealand pygmy weed (*Crassula helmsii*) was present in these damper zones. Earth bunds border the N, E and S sides of the open area. These are also Semi-improved neutral grassland, but with ranker vegetation due to deeper, nutrient-rich soils.
S41: Yes
LBAP: Yes
Constraint: Yes

Broad-leaved plantation woodland

Woodland and forest - Other woodland; Young Trees planted (0.21 Ha combined).
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 peri meter landscaping.
S41: Yes
LBAP: Yes
Constraint: No

Amenity grassland
Grassland - Other neutral grassland (0.18 Ha).
Narrow strips of regularly mown grassland form narrow verges along the access road and factory site. These contained bird's-foot trefoil (locally frequent).
S41: No
LBAP: No
Constraint: No

4.3.2 Target notes

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

T1
Lakes - Temporary lakes, ponds and pools (0.23 Ha).
Damp areas of ground indicating, shallow ephemeral scrapes. These are along the toe of the eastern boundary bund and support small patches of soft rush, reedmace and occasional sallow.

T2
New Zealand pygmy weed was dominant in an area of the ephemeral scrapes covering approximately 25x12m. A second area of New Zealand pygmy weed was noted off site on bare ground to the E.

T3
A rectangular area (approximately 15x2m) of damper ground containing soft rush, alongside the W perimeter fence.

4.3.3 Notable habitats outside of the red line boundary.

Semi-improved neutral grassland
Urban - Open Mosaic Habitats on Previously Developed Land (4.02 Ha).
This habitat best fits the Local BAP as Open mosaic habitats on previously developed land. Classified the same as the majority of the habitat in the adjacent red line boundary, this area lies to the east of the northern access road. Former colliery spoil land has been removed and the land levelled. The ground has less vegetation and more bare areas than the land within the red line boundary. There was 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. To the north of this area is a concrete pad for trailer parking and a vegetated stream valley runs to the east. The ground shows recent disturbance in the eastern portion, covering 0.69 Ha, where it is bare. A vegetated earth bund borders the southern side of the open area.
S41: Yes
LBAP: Yes
Constraint: No

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. It was assessed as Urban - Open Mosaic Habitats on Previously Developed Land. In the 2013 Barnsley local Plan ecology survey it is noted as 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.

Running water, mesotrophic
Rivers and Streams (Other) (1.0km). 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
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 baseline

The Defra Biodiversity Metric 2.0 has been used to gauge the overall level of biodiversity. The red line boundary equates to 145.0 habitat units. The remaining land within the Symphony fenced boundary equates to 51.65 habitat units.

4.4 Species

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 (no number) and noctule bat (no number) from the small lake named Ferrymoor Pond (175m to the east of the site) from 2011. 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. There is existing light pollution around Ferrymoor Pond.
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 3.

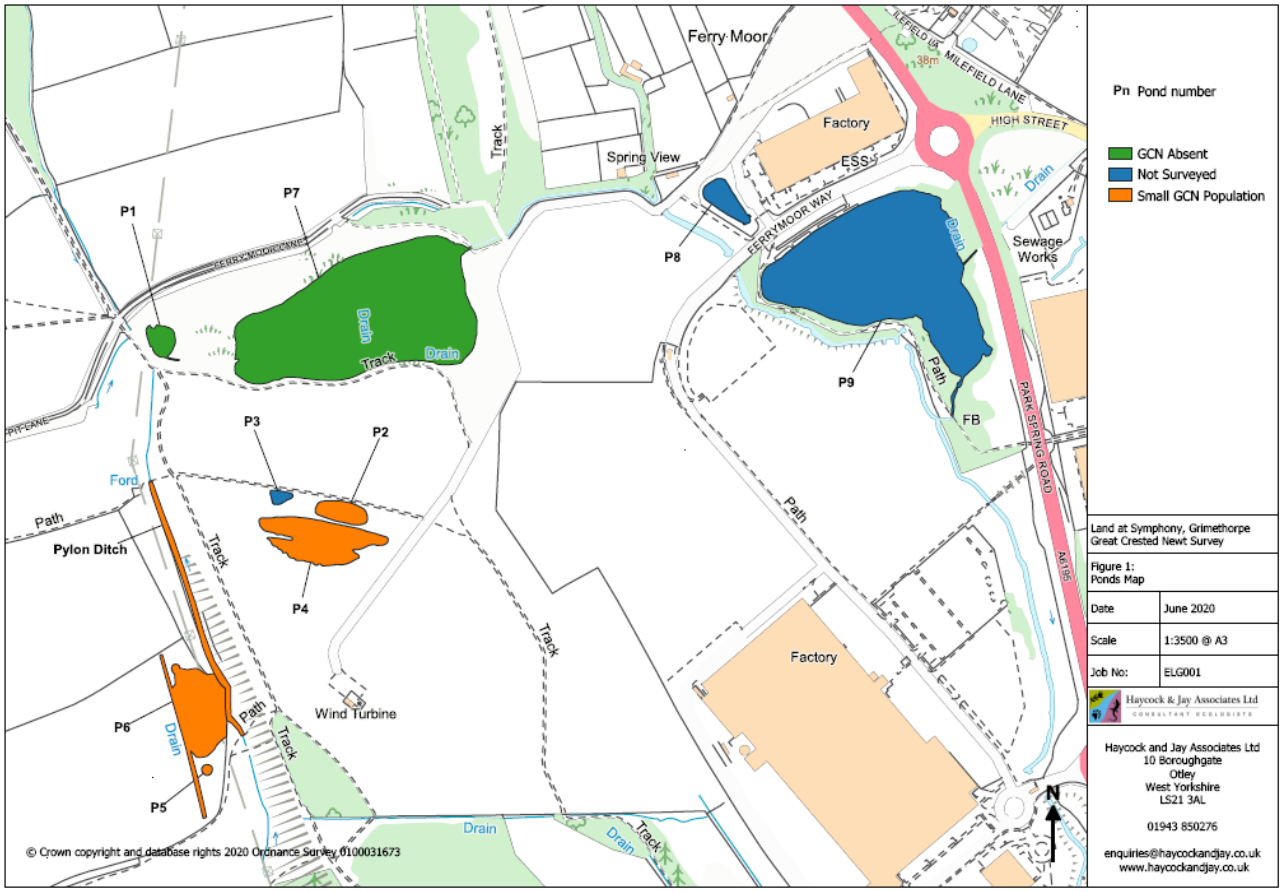
The data centre has GCN records from a 'willow pond and ditch east of Moorland Crescent, Cudworth' at National Grid Reference (NGR) SE 3977-0835, of '*ca*: 100 each year for four years in pitfalls during open-casting', with the records (but not the observations) dated as 01/01/2000. This is relatively 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 6) 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 6



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 3) 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. 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.
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. 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 2019 PEA survey and one to two during two of the 2020 breeding bird survey visits. 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 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 survey area. While this species will stray from ponds it is assessed as unlikely to reach the red line boundary.
S41: No
LBAP: Yes
Constraint: No

Common lizard
There are nine records, all of single animals in July 2017. All were seen on the disused railway line and/or a layby on the A6195, to the S of the site, close to Edderrthorpe Ings. This would appear to be a discrete population although it may extend along the former rail route. It is assessed that this species would not be affected by 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 3). 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

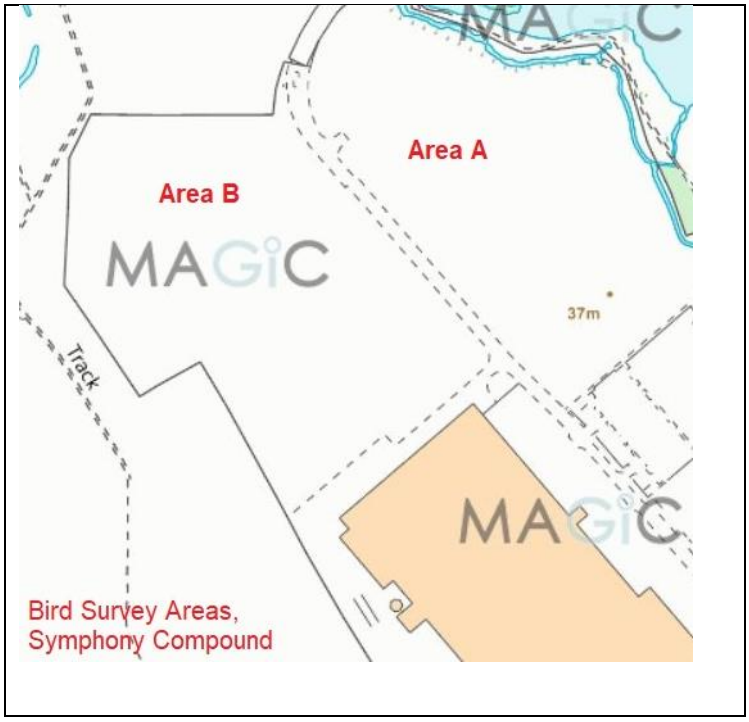
4.4.4 Birds

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.

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 7).

Figure 7



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 SUDS, 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 and weasel. 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. 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. 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. 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 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, development is permitted so long as appropriate measures are agreed with the LPA. Mitigation measures following the planning mitigation hierarchy are offered to remove constraints for following priority habitats and species:

- Semi-improved neutral grassland including ephemeral pools (loss of 6.20 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 breeding pairs of 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.* Net gain should be appropriate to the scale of the development and should be conditioned.

5.4 Biodiversity net gain

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. The Defra Biodiversity Metric 2.0 tool has been developed and launched to measure BNG.

5.5 Symphony site mitigation, compensation and enhancement considerations

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 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. It is not, however, counted as mitigation for habitats lost.

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:

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. It differs by being less well established and therefore has a sparser vegetation cover and a greater extent of bare areas. 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. This area was therefore discounted.

Land near Marketing suite

A 0.76 Ha area of Open mosaic habitat at the southern end by the Marketing suite held one pair of lapwings on several of the breeding bird survey visits, but is too small an area to attract greater numbers of ground nesting birds through biodiversity uplift measures. This area was therefore discounted.

Recreation area

An amenity grassed area along the streamside includes picnic tables and is on the pedestrian route between the factory and the pedestrian access gate onto Park Spring Road. Copses have been planted to screen the car and trailer parks and to visually improve this greenspace. As such, it is well used by employees and highly disturbed. This area is not suitable for biodiversity uplift.

SUDS

Due to the amphibian interest on site, the opportunity to deepen part of the 0.6 Ha 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 is not practicable to puncture the liner to deepen the feature. This idea was therefore discounted.

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.

Symphony site conclusion

With the Symphony site areas discounted for compensation and biodiversity enhancement, the Defra Biodiversity Metric 2.0 has been used to gauge the loss of biodiversity for development (Figure 8). The red line boundary equates to 145.0 habitat units (covering 6.5 Ha). Of this, 0.2 Ha of habitat will be retained (woodland), giving a post-development score of 1.51 habitat units.

The biodiversity of the remaining Symphony site has been calculated as 51.65 habitat units (covering 9.8 Ha). All of this 9.8 Ha of habitat will be retained and none will be enhanced, giving a post-development score of 51.65 habitat units.

For the Symphony site as a whole, the baseline is 196.65 habitat units before the development and will be 52.78 habitat units after. This overall loss of 143.87 habitat units is a 99.2% loss of biodiversity. The outcome of this, is that compensation and enhancement measures need to be delivered off-site.

Figure 8

On-site baseline	*Habitat units*	145.00
	Hedgerow units	0.00
	River units	0.00
On-site post-intervention (Including habitat retention, creation, enhancement & succession)	*Habitat units*	1.13
	Hedgerow units	0.38
	River units	0.00
Off-site baseline	*Habitat units*	51.65
	Hedgerow units	0.00
	River units	14.66
Off-site post-intervention (Including habitat retention, creation, enhancement & succession)	*Habitat units*	51.65
	Hedgerow units	0.00
	River units	14.66
Total net unit change (including all on-site & off-site habitat retention/creation)	*Habitat units*	-143.87
	Hedgerow units	0.38
	River units	0.00
Total net % change (including all on-site & off-site habitat creation + retained habitats)	*Habitat units*	-99.22%
	Hedgerow units	Check Data
	River units	0.00%

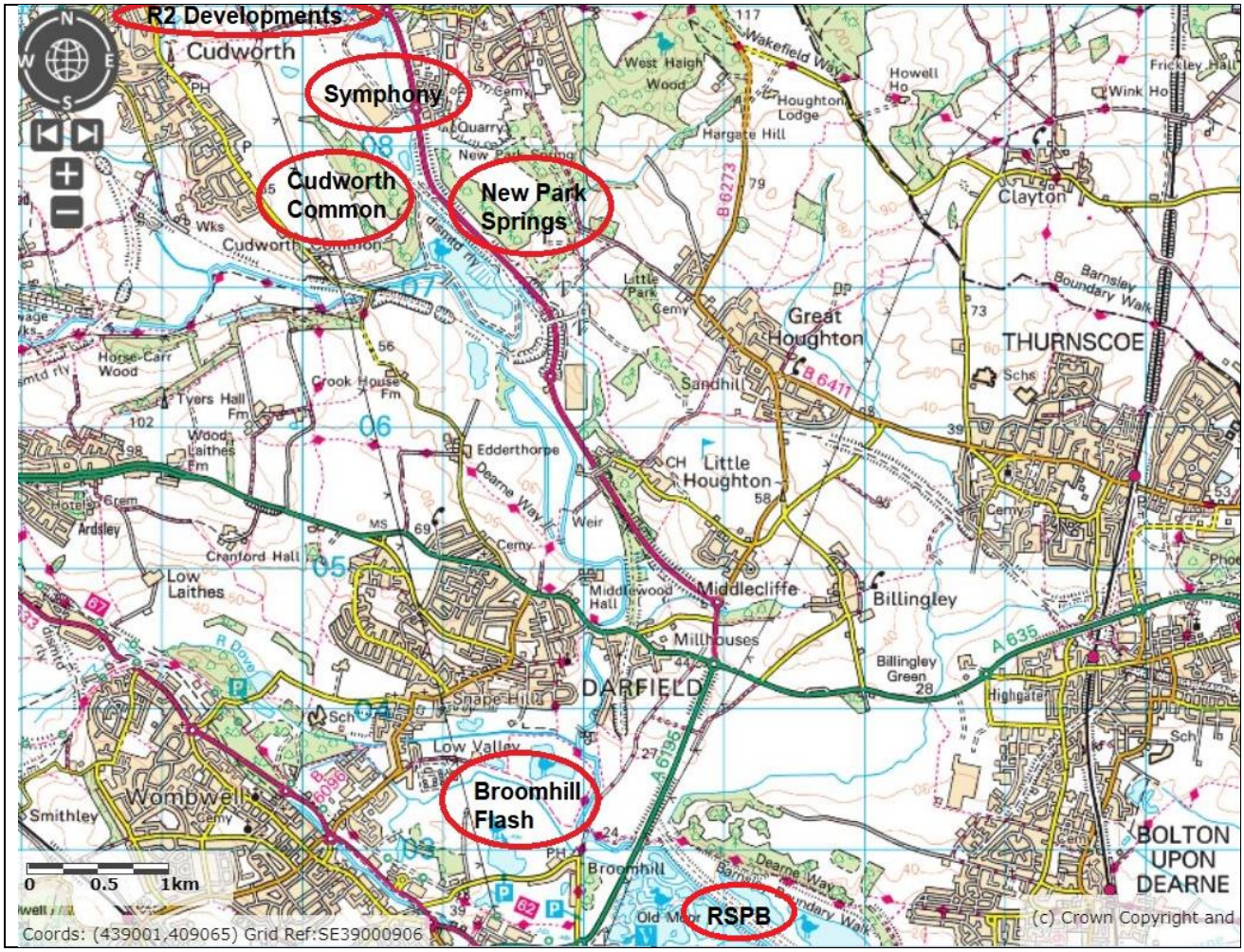
NB: The % gain for 0.38 Hedgerow units has not been calculated due to an error in the tool.

5.6 Off-site compensation and enhancement opportunities

Compensation for all of the priority habitats and species which will be lost (section 5.1), compensation for the loss of NIA integrity (5.2) and biodiversity enhancement (5.3) will be delivered off of the Symphony site. Compensation is in the form of a financial contribution for nature conservation projects elsewhere within the NIA.

The Land Trust (Cudworth Common and New Park Springs), the Garganey Trust (Broomhill Flash) and the RSPB (Old Moor Wetlands) all manage land within the NIA (Figure 9) and are well placed in terms of off-site conservation opportunities to compensate for adverse impacts. These would involve habitat improvements likely to benefit ground-nesting bird species. Land to the north of Symphony is in private ownership.

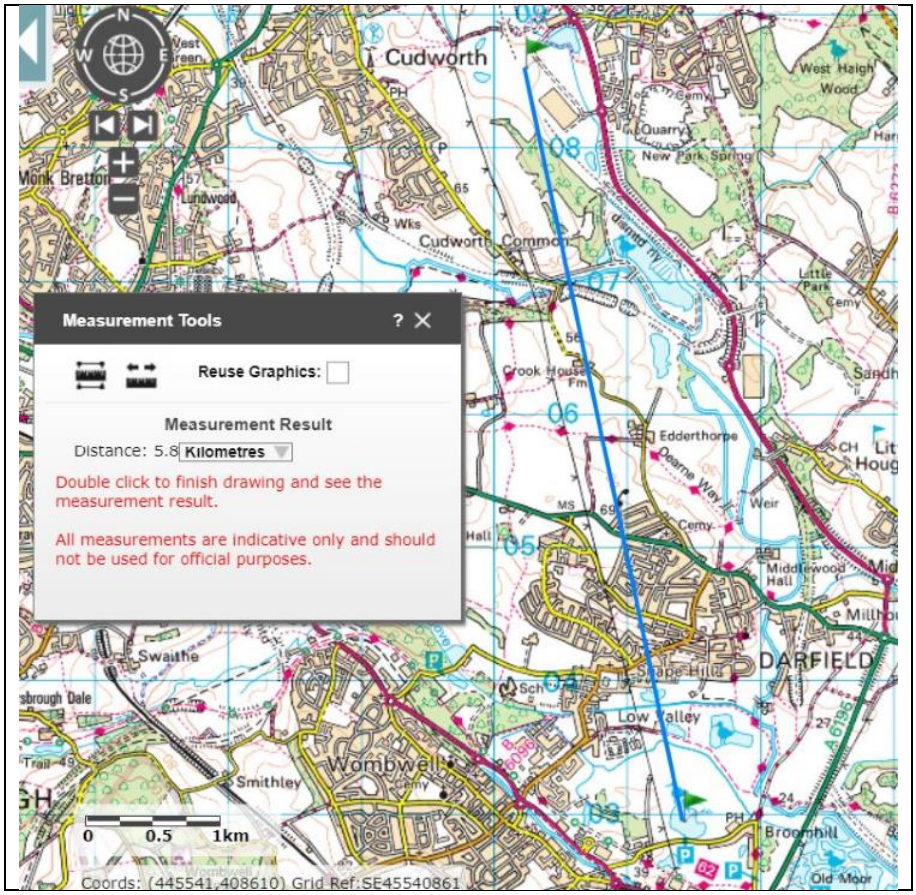
Figure 9



Review the conservation projects

Early discussions with conservation agencies suggested that a ground-nesting bird initiative would be appropriate. These opportunities were studied in the order of proximity to the planning application site, in an attempt to secure biodiversity compensation as close as possible to the harm. However, the distance to the furthest potential receptor site is 5.8km (Figure 10) and the reasonableness of utilising any of the potential sites has been assessed as high.

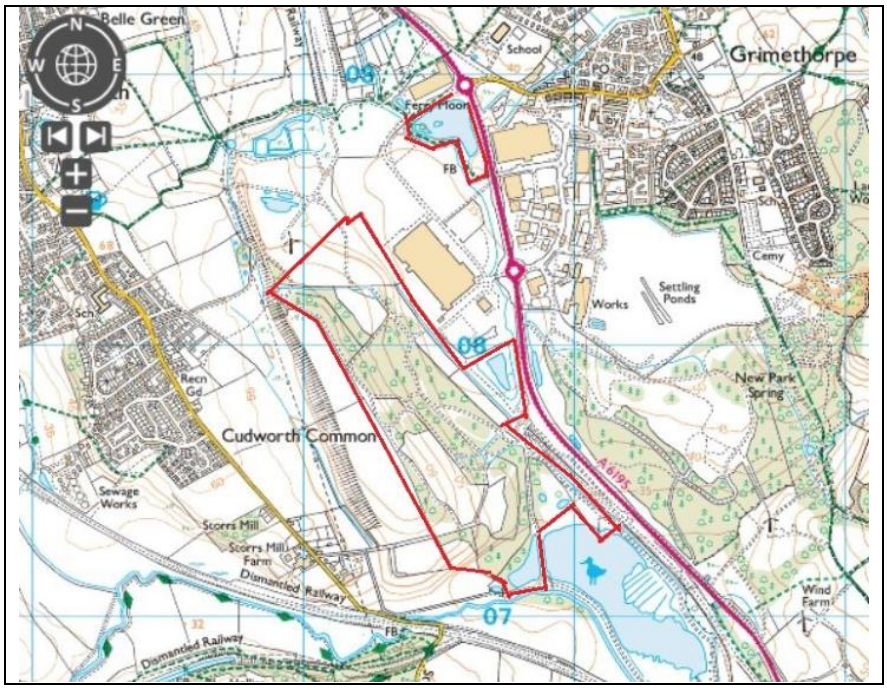
Figure 10



Cudworth Common

The nearest potential sites are Cudworth Common and Ferrymoor Pond, both owned by the Land Trust (Figure 11). Ferrymoor Pond is already managed by The Conservation Volunteers (TCV) for nature conservation.

Figure 11

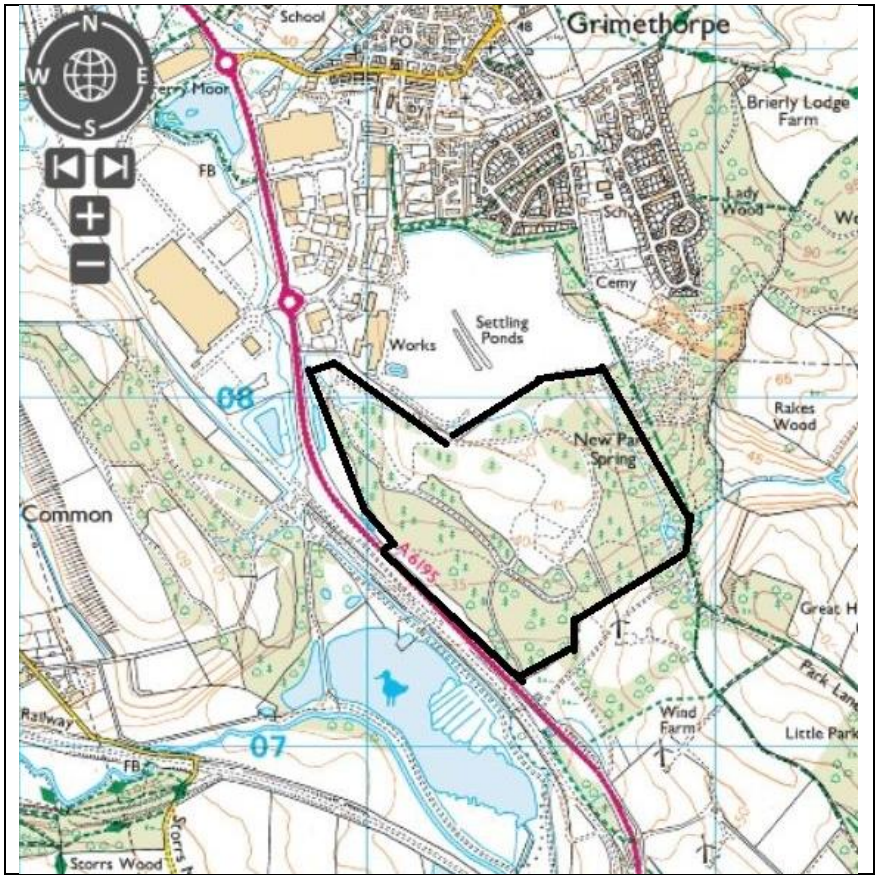


The Land Trust owned part of Cudworth Common is largely re-generated, deciduous, plantation woodland and therefore not suitable for ground-nesting waders and skylarks. There are two parcels of land which were fenced as potential grazing paddocks several years ago, but the fencing has since been removed. The possibility of erecting robust fencing in these areas, which would safeguard ground-nesting birds was considered. However, the Land Trust policy states: *We create, conserve and enhance green spaces in and around urban areas, managing them long term, with secured funding, so that people have access to good quality open spaces and can benefit from the many opportunities the natural environment provides.* Preventing public access with fencing does not meet this aim. Casual observations of the Common during Symphony site visits noted heavy use by people, dogs off the lead and signs of anti-social behaviour, suggesting high levels of disturbance.

New Park Springs

The next closest potential site is New Park Springs, also owned by the Land Trust (Figure 12). This is sloping hillside, largely composed of re-generated, deciduous, plantation woodland and therefore not suitable for ground-nesting waders, although it does support breeding skylarks in some more open, grassy areas. The area is open access and has numerous paths through it. Several wind turbines are situated on land to the south. The combination of sloping ground, tree cover and public access make it unsuitable for a ground-nesting birds project.

Figure 12



RSPB Dearne Valley Old Moor

In early discussions, the Dearne Valley RSPB team expressed a preference for the ground-nesting waders project devised by Garganey Trust.

Broomhill Flash and the Fleets

The Garganey Trust own and manage Broomhill Flash and the Fleets, which is a site of wet grassland with subsidence flashes, adjacent to Old Moor Wetland RSPB reserve, lying east of Wombwell. The Garganey Trust is seeking funding for a predator proof fence that will encircle the site, comprising of mesh sunk into the ground (to prevent terrestrial predators digging underneath) and electric wires (using the mains supply from Broomhill village) to prevent predators climbing over. Protecting breeding waders from terrestrial predators on this site would mean that this area becomes a safe breeding site for them. This would increase the site's capacity to support nesting birds, including those displaced by the proposed Symphony work. The combined sites of Broomhill Flash and the Fleets, Wombwell Ings (also managed by the Garganey Trust) and Old Moor Wetlands would create a large, biodiversity-rich, protected area of lowland wet grassland and wetlands in the NIA. This project has been drafted and costed and would provide the appropriate and proportionate compensation in a relatively short time.

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 to the Local Planning Authority. In the event that any active bird nests are found prior to or during the works, a suitable

exclusion zone (minimum of 5m) 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. The application for a mitigation licence will stipulate the need for the erection of newt fencing and pit fall traps within the Symphony compound and for 30+ days of trapping on nights where the temperature does not fall below 5^{o}C. This has to be during the GCN's active season which is spring to autumn and is to ensure that any and all GCN moving into the compound are translocated to a safe site by a licensed person. After 30 days and five clear days of no GCN being caught the site can be declared GCN free.

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 Compensation

Following assessment of the off-site opportunities and discussion with relevant agencies, the Garganey Trust project is assessed as the best option. It is recommended that a financial contribution is secured via a legal agreement.

6.5 Conclusion

With the recommended mitigation and compensation measures detailed above, the development can proceed with no overall significant harm to priority species and habitats and with a degree of biodiversity net gain.

7. References

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Appendix 1. Phase 1 Habitats Map



Appendix 2. Phase 1 Habitats Photographs

Phase 1 Habitats	Photograph
B2.2, Semi-improved neutral grassland (poor)	
B2.2, Semi-improved neutral grassland (mounds)	

Phase 1 Habitats	Photograph
A1.1.2, Broad-leaved plantation woodland	
J1.2, Amenity grassland	

Appendix 3. 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.

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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 A). 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, 1N^{o} GCN in pond 5, NGR SE 3979-0826
- 05/05/2013, 2 N^{o} GCN in pond 6, NGR SE 3975-0837
- 19/05/2013, 10 N^{o} GCN pond 6, NGR SE 3975-0837
- 25/05/2013, 5N^{o} GCN pond 6, NGR SE 3975-0837

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

Figure 13

