

Project No: 314256

Newburn:
Ecological Impact Assessment

Prepared for:

FIG Power

Room 3:05,
Finzels Reach,
Generator Building,
Counterslip,
Bristol, UK
BS1 6BX

Contents Amendment Record

This report has been issued and amended as follows:

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Registered in Scotland No: SC 163378 info@mabbett.eu www.mabbett.eu

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Acknowledgement

This report has been prepared for the sole and exclusive use of FIG Power in accordance with the scope of work presented in Mabbett & Associates Ltd (Mabbett) Letter Agreement (314256/DK/240724/1.0), dated 24 July 2024. This report is based on information and data collected by Mabbett. Should any of the information be incorrect, incomplete, or subject to change, Mabbett may wish to revise the report accordingly.

This report has been prepared by the following Mabbett personnel:

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A handwritten signature in black ink, appearing to read 'DKilpatrick', with a long horizontal flourish extending to the right.

Douglas Kilpatrick MSc MA BSc (Hons)
Senior Ecologist

Executive Summary

Contents	Summary
Site Location	The Site is located on the premises of North East Concrete Ltd, just off High Street (A6085), in Newburn, a semi-rural parish of Newcastle-Upon-Tyne, Tyne and Wear, England, Postcode NE15 8LN, and is located approximately 8 km west of Newcastle city centre. The site is centred on Ordnance Survey (OS) Grid Reference: NZ 17061 65259
Proposals	The current proposals comprise of a Battery Energy Storage System (BESS) consisting of 18 battery blocks, 20 Power Conversion Systems, a 33kV switchgear, Auxiliary TR, hardstanding road infrastructure, an on-site substation with 2.4 m palisade fencing enveloping the ~0.64 ha site. Demolition of existing office buildings and a garage workshop will occur, and relocation of the substation onto the cleared area.
Survey Scope	<p>The objectives of the report are to carry out:</p> <ul style="list-style-type: none"> • To identify and characterise impacts and their effects; • To incorporate measures to avoid and to mitigate negative impacts and effects; • To assess residual effects after mitigation has been implemented; • To identify appropriate compensation measures to offset significant residual effects; and • To identify opportunities for ecological enhancement.
Results	<p>Designated Sites: Fifteen designated sites, including five Sites of Special Scientific Interest (SSSIs) and ten Local Nature Reserves (LNRs) were located within 5 km of the site</p> <p>Non-Statutory Designated Sites: 23 non-statutory designated sites were located within 2 km of the site. This included 18 Local Wildlife Sites (LWS) and five Sites of Local Conservation Interest (SLCI).</p> <p>Wildlife corridors: The site falls within three corridors:</p> <ul style="list-style-type: none"> • The City West Wildlife Enhancement Corridor (red category) (DM29). • The Green Infrastructure Opportunity Area (Area O) (DM27). • The Strategic Green Infrastructure Network: Ouseburn to Walbottle Dene (DM27). <p>Habitats: The habitats recorded within the site boundary during the field survey included:</p> <ul style="list-style-type: none"> ▪ Mixed scrub; scattered scrub, ruderal or ephemeral (h3h, 10, 81, 523). ▪ Developed land; sealed surface, road (u1b6, 800). ▪ Developed land; sealed surface, car park (u1b6, 804). ▪ Artificial unvegetated, unsealed surface, car park (u1c, 804) ▪ Developed land; buildings, commercial building (u1b5, 815). ▪ Developed land; buildings, industrial building (u1b5, 816). ▪ Other broadleaved woodland types (w1g). ▪ Other broadleaved woodland types, line of trees (w1g, 33). <p>Protected and Notable Species: No evidence of protected or notable species was recorded on site. The site provides suitable habitat for nesting and foraging birds, and there is low suitability for foraging and commuting bats.</p>
Assessment of Effects	<p>Mitigation: A LEMP and CEMP are proposed in accordance with BS42020:2013.</p> <p>Statutory and Non-Statutory sites: No direct impacts are anticipated on statutory and non-statutory sites.</p>

	<p>Breeding birds: Work should be timed to avoid the bird breeding season, and if this is not possible an ECoW should be present during works to ensure there is no damage to bird nests.</p> <p>Bats: Commuting bats may be disturbed by light pollution. A sensitive lighting scheme should be adopted.</p> <p>A single bat emergence survey should be undertaken for the substation prior to demolition.</p> <p>It is considered unlikely that other protected and notable species are considered unlikely to be adversely affected by the proposed development.</p>
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Section 1.0: Introduction

1.1 Introduction

Mabbett Ltd (Mabbett) was commissioned by FIG Power to carry out a Preliminary Ecological Appraisal in 2023 of the site known as Newburn and is hereafter referred to as 'the Site'. This Ecological Impact Assessment was requested to be prepared following that report.

This report has been prepared by Mabbett Senior Ecologist Douglas Kilpatrick MSc MA BSc (Hons) which is based on the Preliminary Ecological Appraisal completed by Consultant Ecologist Becca Campbell. Following adjustments to the site plan, amendments to the report were made to reflect the new site layout.

1.2 Site Location

The Site is located on the premises of North East Concrete Ltd, just off High Street (A6085), in Newburn, a semi-rural parish of Newcastle-Upon-Tyne, Tyne and Wear, England, Postcode NE15 8LN, and is located approximately 8 km west of Newcastle city centre. The site is centred on Ordnance Survey (OS) Grid Reference: NZ 17061 65259.

Habitats within the wider landscape include are semi-rural in nature, strips of broadleaved woodland surround the Site. Residential properties are present to the northwest and west, and industrial estates to the east and south. A woodland lies to the northeast. The southernmost end of the Site borders the High Street (A6085) and Walbottle Road along the Northeast. The River Tyne lies approximately 0.3 km to the south.

1.3 Development Proposals

The current proposals comprise of a Battery Energy Storage System (BESS) consisting of 18 battery blocks, 20 Power Conversion Systems, a 33kV switchgear, Auxiliary TR, hardstanding road infrastructure, an on-site substation with 2.4 m palisade fencing enveloping the Site. Demolition of existing office buildings and a garage workshop will occur, and relocation of the substation onto the cleared area. Detailed planning permission is sought for a major development at the Site. The following impact assessment is based on the Proposed Site Plan (29911-FIG-DR-0006_P04).

1.4 Scope of the Report

The objectives of the report are:

- To identify and characterise impacts and their effects;
- To incorporate measures to avoid and to mitigate negative impacts and effects ;
- To assess residual effects after mitigation has been implemented;
- To identify appropriate compensation measures to offset significant residual effects; and
- To identify opportunities for ecological enhancement. CIEEM (2018)

Section 2.0: Methods

2.1 Desk Study

2.1.1 Local Ecological Records Centre

Information was requested from Environmental Records Information Centre North East (ERICNE) on the following:

- Non-statutory nature conservation sites i.e. Local Wildlife Sites (LWS);
- Legally protected plant and animal species;
- Notable species e.g. Species of Principal Importance (SPI); and
- Priority habitats and species listed within the Newcastle and North Tyneside Local Biodiversity Action Plan (LBAP).

2.1.2 Online Resources

The following web-based databases were also accessed:

- Department for Environment Food and Rural Affairs MAGIC (DEFRA, 2023), for information on statutory designated sites.
- Newcastle City Council: Wildlife and Ecology.

2.2 Field Survey

The Preliminary Ecological Survey was conducted on the 21st of November 2023 by Mabbett Senior Ecologist Douglas Kilpatrick. The weather conditions were 8°C, 0 okta with a moderate north-westerly breeze.

The following methodologies were used to inform the assessment of habitat types and protected and notable species during the Extended Phase 1 Habitat Survey.

2.2.1 Habitats and Flora

UK Habitat Classification (UKHab) is a comprehensive habitat classification system for the UK that has been developed to benefit from changes in habitat categorisation, recording and analysis in recent decades, and its principal aim is to provide a rapid system for recording and classifying habitats. Each of the main habitats within the survey area was described using Version 2.01 of the guidance (UKHab Ltd, 2023), including details on component plant species abundances.

2.2.2 Invasive Plant Species

The site was searched for invasive plant species, primarily those included on Schedule 9 Wildlife and Countryside Act 1981, such as Japanese knotweed (*Reynoutria japonica*), Himalayan balsam (*Impatiens glandulifera*), giant hogweed (*Heracleum mantegazzianum*), wall cotoneaster (*Cotoneaster horizontalis*) and rhododendron (*Rhododendron ponticum*).

2.2.3 Protected and Notable Species

The site was assessed for the possible presence of, and the likely importance of its habitats for, protected or notable species, especially those listed under the Schedule 2 of the Habitat Regulations 2017, Schedule 5 of the W&CA, the Countryside and Rights of Way (CROW) Act 2000, those given extra protection under the Natural Environment and Rural Communities Act 2006, and species included in the Newcastle and North LBAP.

2.2.3.1 Reptiles

The site was appraised for its suitability to support reptiles, including viviparous lizard (*Zootoca vivipara*) and slow worm (*Anguis fragilis*). The assessment was based on Guidance outlined in the Herpetofauna Workers' Manual (Gent & Gibson, 2003).

2.2.3.2 Birds

Habitats on the site were appraised for their suitability to support breeding, migratory and wintering birds, with particular emphasis on species listed on Schedule 1 of the W&CA, SPI and bird species of conservation concern, as defined by Stanbury *et al* (2021).

2.2.3.3 Bats

Roosting Bats

Buildings, structures and trees on site were assessed from the ground for their suitability to support breeding, resting and hibernating bats, with reference to the methods outlined in Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th ed, 2023) (Collins, 2016); hereafter referred to as the ‘BCT Guidelines’. The following system has therefore been used to categorise the bat roost suitability of any features found:

Table 1: Bat Roost Suitability Categories.

Suitability	Description of Potential Roosting
Negligible	Negligible habitat features on site likely to be used by roosting bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain potential roost features (PRFs) but with none seen from the ground or features seen with only very limited roosting potential.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis & potentially for longer periods of time due to their size, shelter, protection, conditions & surrounding habitat.

Foraging/Commuting Bats

In accordance with BCT Guidelines, the following criteria have been used to categorise the potential value of site habitats and features for use by foraging and commuting bats (Table 3).

Table 2: Bat Foraging Habitat Categories.

Suitability	Description of Foraging Habitats
None	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices/suitable shelter at all ground/ underground levels).
Negligible	Negligible habitat features on site likely to be used by commuting or foraging bats.
Low	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	Continuous high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.

_____ were classified according to the criteria outlined in Surveying

2.2.3.5 Otter

The site was surveyed for its suitability for otter (*Lutra lutra*), based on guidance outlined in Monitoring the otter (Chanin, 2003).

2.2.3.6 Water Vole

The site was surveyed for its suitability to support water vole (*Arvicola amphibius*) based on the guidance outlined in The Water Vole Mitigation Handbook (Dean, et al., 2016).

2.2.3.7 Other Species

The site was also appraised for its suitability to support other protected or notable fauna including mammals, amphibians, and invertebrates with regard to CIEEM's Guidelines for Preliminary Ecological Appraisal (Chartered Institute for Ecology and Environmental Management, 2017) and BS42020:2013 Biodiversity – Code of Practice for Planning and Development. Evidence of any current or historical presence of such species was recorded.

2.3 Limitations

The timing of the survey considered is not considered to be a limitation to the accurate assessment of the habitats and flora of the site as the dominant species of the respective vegetation types were visible and identifiable despite the survey timing.

To determine the presence, or likely absence, of notable flora and protected species usually requires multiple visits at suitable times of the year. This survey focuses on assessing the potential of the site to support such ecological features, particularly those given protection under European or UK wildlife legislation or which are considered to be of principal importance for the conservation of biodiversity. Where there are significant limitations to the assessment in respect of any ecological features then further ecological survey work is recommended.

Report Expiration

The details of this report are considered to be valid for a period of **two years** from the date of the survey. After two years, the assessment should be reviewed to determine whether any further updates are necessary.

Section 3.0: Baseline Ecological Conditions

3.1 Desk Study

All relevant ecological data received following the data requests was reviewed and the results from these investigations are summarised below. The original desk study data is available upon request. A summary of planning policy and legislation relating to the species highlighted by the desk study and field survey is presented in Appendix B.

3.1.1 Statutory Designated Sites

Fifteen designated sites, including five Sites of Special Scientific Interest (SSSIs) and ten Local Nature Reserves (LNRs) were located within 5 km of the site, Appendix B: Table 1.

3.2 Non-statutory Designated Sites

23 non-statutory designated sites were located within 2 km of the site. This included 18 Local Wildlife Sites (LWS) and five Sites of Local Conservation Interest (SLCI), Appendix B: Table 2.

3.3 Wildlife Corridors

The site lies within three wildlife corridors:

- The City West Wildlife Enhancement Corridor (red category) (DM29).
Wildlife Enhancement Corridors (DM29): City West: Wildlife Enhancement Corridors provide an inter-connecting network of habitats, allowing movement of species between areas helping to maintain species and habitat richness and variety.
- The Green Infrastructure Opportunity Area (Area O) (DM27).
Green Infrastructure Opportunity Areas (DM27): Green Infrastructure Opportunity Area – Area O: Green infrastructure links between areas providing physical and visual connection via features such as river corridors, tree-lined routes, public rights of way and cycle routes that enable the migration and movement of species. Development will be required to optimise the benefits and enhance existing green infrastructure assets, and contribute towards the delivery of new green infrastructure assets.
- The Strategic Green Infrastructure Network: Ouseburn to Walbottle Dene (DM27).
Strategic Green Infrastructure Network: Ouseburn to Walbottle Dene: The Strategic Green Infrastructure Network is made up of six main corridors which link important green spaces. Within these areas priority will be given to addressing gaps in the network that limit wildlife movement or access by people. Development will be required to optimise the benefits and enhance existing green infrastructure assets, and contribute towards the delivery of new green infrastructure assets.

3.4 Ancient Woodland

No ancient woodland is located on site. Throckley Dene is the nearest ancient woodland, located 1 km north-west of site.

3.5 Habitats

The full results of the Ecological Appraisal and target notes are presented in Figure 3. Habitats too small to be mapped have been mentioned in target notes. The main habitats recorded within the site boundary during the field survey included:

- Mixed scrub; scattered scrub, ruderal or ephemeral (h3h, 10, 81, 523).
- Developed land; sealed surface, road (u1b6, 800, 804).
- Developed land; sealed surface, car park (u1b6, 804).
- Artificial unvegetated, unsealed surface, car park (u1c, 804)
- Developed land; buildings, commercial building (u1b5, 815).
- Developed land; buildings, industrial building (u1b5, 816).
- Lowland mixed deciduous woodland (w1f).

- Other rivers and streams, culvert (r2b, 851)

3.5.1 Mixed Scrub (h3h, 10, 81, 523)

Mixed scrub was recorded in a small area in the north-east of the site and predominantly consisted of butterfly bush (*Buddleia davidii*), with bramble (*Rubus fruticosus* agg), English ivy (*Hedera helix*) and other tall ruderal vegetation such as great mullein (*Verbascum thapsus*) and rosebay willowherb (*Chamerion angustifolium*) (Appendix E: Image 1).

3.5.2 Developed Land; Sealed Surface, road (u1b6, 800, 804)

Parts of the north-western end of the site have been covered in tarmac and concrete on an ad-hoc basis. This area is used as a car park (Appendix E: Image 2). It comprised of an industrial yard used for storing machinery, car parking, skips and associated refuse (e.g. tires and wooden pallets). Various ruderal plants were recorded fringing the hardstanding tarmac/concrete around the site edges, such as common ragwort (*Senecio jacobaea*), dandelion (*Taraxacum officinale* agg.), mallow (*Malva sylvestris*) and creeping buttercup (*Ranunculus repens*).

3.5.3 Artificial unvegetated, unsealed surface, car park (u1c, 804)

The majority of the north-western end of the site consists of artificial unvegetated surface which is frequently disturbed by vehicles, as mentioned in 3.5.2. Aggregate has been deposited over most of the area as well, reducing viability of plants in the short term. Areas of more undisturbed ground along the periphery has small patches of grasses and or ruderal species (Appendix E: Image 3).

3.5.4 Developed Land; Sealed Surface, buildings, commercial building (u1b5, 815)

A metal flat-roofed building was recorded within the site boundary to the south-east, currently used by North East Concrete as office space and a car garage Elite Body Repairs, as well as Walbottle Tyres, a vehicle tyre shop.

The building is a single storey, built with corrugated metal panels (Appendix E: Image 4).

3.5.5 Developed land; buildings, industrial building (u1b5, 816).

Two large industrial buildings are located on site. The northern is a stone and aggregate storage which is constructed of corrugated metal with two silos. A double storey office cabin is affixed to the structure. (Appendix E: Image 5)

The southern industrial building is a garage and general storage facility, with a corrugated metal façade with a gentle pitched roof. (Appendix E: Image 6)

A substation was located on the south-eastern end of the site. The building consisted of a brick construction with a tiled roof. The building has fascia boards creating small gaps. While the roof is in good condition the ridge tiles have gaps with the rest of the roof. (Appendix E: Image 7)

3.5.6 Lowland mixed deciduous Woodland (w1f)

Lowland mixed deciduous Woodland was recorded to the east of the site behind the palisade fencing; species composition consisted of pussy willow (*Salix caprea*), silver birch (*Betula pendula*), sycamore (*Acer pseudoplatanus*), rowan (*Sorbus aucuparia*) and white elm (*Ulmus laevis*).

3.5.7 Other Broadleaved Woodland, line of trees (w1g, 33)

A line of trees is present at the top of the bank along Walbottle road. This line of trees falls just outside the site boundary. (Appendix E: Image 8)

3.5.8 Other rivers and streams, culvert (r2b, 851)

New Burn, a tributary of the River Tyne, has been culverted and lies more than 10 m from the site boundary (National Library of Scotland, Accessed 13 August 2024). (Appendix E: Image 9)

3.6 Invasive Plant Species

ERICNE identified 12 records of five invasive plant species within 2 km of the site, Table 4. Invasive plant species recorded during the field survey included a number of butterfly bushes (TN 3), rhododendron (*Rhododendron ponticum*) and cherry laurel (*Prunus laurocerasus*) bordering a channelled stream to the south-west of the site boundary, TN 5. It is anticipated that these species would be removed during development and, as these are not aggressive species such as Japanese knotweed, no further management other than ongoing diligence throughout the construction phase is required. This would be covered by a CEMP and no further impact assessment is necessary to inform the application.

Table 4: Invasive plant species records within 2 km of the site.

Species	No. of Records	Proximity to the Site
Himalayan cotoneaster <i>Cotoneaster simonsii</i>	2	Within 2 km
Hollyberry cotoneaster <i>Cotoneaster bullatus</i>	1	Within 2 km
Japanese knotweed <i>Fallopia japonica</i>	6	0.1 km south
Rhododendron <i>Rhododendron ponticum</i>	4	2 km north-west
Wall cotoneaster <i>Cotoneaster horizontalis</i>	3	Within 2 km

3.7 Protected and Notable Species

ERICNE provided a total of 1,487 records of 179 species within 2 km of the site. A list of records of protected and notable species from the past 10 years are presented in Appendix B: Table 1.

3.7.1 Plants

ERICNE provided 89 records of 29 plant species within 2 km of the site. Notable plant species records include bluebell (*Hyacinthoides non-scripta*), bee orchid (*Ophrys apifera*), common spotted orchid (*Dactylorhiza fuchsia*), northern marsh orchid (*Dactylorhiza purpurella*) and wood sorrel (*Oxalis acetosella*). With the exception of wood sorrel which may occur in the woodland to the east and within the wider landscape, none of the plant species (orchids) listed are considered likely to occur on site as it lacks suitable damp grassland habitats.

3.7.2 Fungi

ERICNE provided no records of fungi within 2 km of the site nor were any fungi species recorded during the field survey. The hardstanding and bareground nature of the majority of the site makes it unsuitable for fungi but common species may occur in the broadleaved woodland habitats bordering the site to the east, particularly saprophytic fungi.

3.7.3 Invertebrates

ERICNE provided 259 records of 68 invertebrate species within 2 km of the site. Due to the hardstanding nature of the majority of the site, it is considered broadly unsuitable for invertebrates, despite having some suitable native flowering species present, as these are limited in extent.

3.7.4 Great Crested Newt

ERICNE provided no records of great crested newt within 2 km of the site, nor were any suitable waterbodies identified within the site boundary or within a 500 m buffer. Records were provided for other amphibians, however, including common frog (*Rana temporaria*), common toad (*Bufo bufo*) and smooth newt (*Lissotriton vulgaris*). On this basis, great crested newt have been scoped out of any further assessment.

3.7.5 Reptiles

No records of reptiles were provided ERICNE within 2 km of the site. This site is generally bare and does not provide sufficient vegetation for reptiles to thrive, shelter and forage. The A6085 main road to the south and the Walbottle Road to the east also forms a partial barrier to reptile dispersal, meaning the site is comparatively isolated from suitable reptile habitat within the wider landscape, particularly to the east. On this basis, reptiles have been scoped out of any further assessment as the development proposals present negligible risk to reptiles based on baseline conditions.

3.7.6 Breeding Birds

ERICNE provided 917 records of 96 bird species within 2 km of the site. Birds recorded during the field survey included blackbird (*Turdus merula*), woodpigeon (*Columba palumbus*), robin (*Erithacus rubecula*), wren (*Troglodytes troglodytes*), blue tit (*Cyanistes caeruleus*), long-tailed tit (*Aegithalos caudatus*), rock dove (*Columba livia*) and ring-necked parakeet (*Psittacula kramera*).

These are common species which will thrive in urban environments, with the exception of ring-necked parakeet, which has no conservation status being an introduced species. Accordingly the proposals will not adversely effect the status of breeding birds in the wider area, and any (minor) displacement would be of common species only. The baseline value of the site is heavily limited by the general lack of vegetation and heavy disturbance, and no further survey work is necessary to determine that the proposals would have a negligible impact. Precautionary mitigation in the form of nest checks would be required if vegetation removal is undertaken during the nesting season.

3.7.7 Bats

3.7.7.1 Roosting Bats

ERICNE provided 90 records of six bat species within 2 km of the site. Four of these records were associated with bat roosts; three common pipistrelle (*Pipistrellus pipistrellus*) and one soprano pipistrelle (*Pipistrellus pygmaeus*).

None of the trees on site had potential roosting features for bats.

The North East Concrete industrial and commercial buildings on site were assessed as having 'Negligible' bat potential suitability due to the lack of a roof void (flat roofs) and the fact the buildings were of metal construction; offering little grip for bats to climb. Bats are considered more likely to roost in mature trees in woodland to the east of the site.

The substation on the south-east corner of the site had minimal roost features and was assessed as having "low" bat potential. An subsequent internal survey revealed that there were no possible access points. The roof tiles and barge boards (on sides and gable ends) were intact with no suitable gaps identified. However the assessment of low suitability is based on the presence of some small gaps between the ridge tiles. These were unsuitable to support a major / significant roost although the possibility of these features being used opportunistically by low numbers of bats cannot be discounted.

3.7.7.2 Commuting and Foraging Bats

ERICNE provided 90 records of six bat species within 2 km of the site; Eighty-six of these records were commuting and foraging bats, including common pipistrelle, lesser noctule (*Nyctalus leisleri*), soprano pipistrelle, whiskered/Brandt's bat (*Myotis mystacinus/brandtii*) and two unidentified bat species.

The site itself is considered to have 'Negligible' potential suitability for commuting and foraging bats due to the overall absence of vegetation and habitat to support associated prey assemblages. Accordingly no further surveys are required to further inform the value of the site in respect of bats.

3.7.9 Red Squirrel

ERICNE provided two records of red squirrel within 2 km of the site and also provided nine records of grey squirrel *Sciurus carolinensis*. No evidence of red squirrel, including dreys or feeding remains, was recorded during the field survey. The woodland within and immediately adjacent to the site is considered too limited in extent and subjected to too much human disturbance for red squirrel on this basis, red squirrel have been scoped out of any further assessment.

3.7.10 Otter

ERICNE provided seven records of otter within 2 km of the site. Most of these records were associated with the River Tyne, approximately 0.5 km to the south. No otter signs, such as spraint, footprints, slides, couches or holts was recorded during the field survey. The New Burn is now a culverted and heavily engineered channelised watercourse with the nearest opening approximately 60 m to the south-west of the site boundary (Appendix E: Image 11), TN 5. The area is too prone to disturbance to be used by otter and therefore impacts on this species are assessed as being of negligible magnitude.

3.7.11 Water Vole

ERICNE provided no records of water vole within 2 km of the site and no evidence of water vole, such as burrows, latrines or feeding signs, was recorded during the field survey. As with otter, the channelised watercourse to the south-west of the site is considered unsuitable for water vole as it offers no burrowing opportunities. As the channelisation stops, however, with distance downstream, the banks are of a sufficient height for burrowing water vole and there is some suitable riparian vegetation for foraging. Although the watercourse is considered of a sufficient size for water vole, its narrowness and thus fast-flowing nature may make it unsuitable. As this watercourse is sub-optimal for water vole and as the more suitable section of watercourse lies beyond 50 m from the site boundary, water vole have been scoped out of any further assessment.

3.7.12 West European Hedgehog

ERICNE provided 65 records of west European hedgehog within 2 km of the site. No evidence of hedgehog was recorded during the field survey. As the majority of the site consists of mainly existing hardstanding, it is considered unsuitable for foraging and hibernating hedgehog but they may use the woodland and lines of trees to the north, east and west of the site.

3.8 Importance of Ecological Features

In accordance with CIEEM Guidelines (Chartered Institute for Ecology and Environmental Management, 2016) and based on the above baseline information, each ecological feature recorded within the study area is considered to have the following importance (Appendix D: Table 1).

Section 4.0: Assessment of Effects.

4.1 Ecological Mitigation Approach

The "Mitigation Hierarchy" which is proposed in CIEEM (2018, section 1.19) aims at limiting impacts to the environment. Wherever possible, a "Mitigation by Design" strategy should be adhered to, as this gives a more realistic approach to the deliverability of a scheme. The mitigation hierarchy is described below has been applied to the design layout of the proposed development.

Table 3: The Mitigation Hierarchy

Avoidance	Seek options that avoid harm to ecological features (for example, by locating on an alternative site).
Mitigation	Negative effects should be avoided or minimised through mitigation measures, either through the design of the project or subsequent measures that can be guaranteed – for example, through a condition or planning obligation.
Compensation	Where there are significant residual negative ecological effects despite the mitigation proposed, these should be offset by appropriate compensatory measures.
Enhancement	Seek to provide net benefits for biodiversity over and above requirements for avoidance, mitigation or compensation.

4.2 Potential Impacts and Ecological Effects

4.2.1 Statutory Designated Sites

Predicted effects

The closest statutory designated site to the site is Walbottle Brickworks LNR, which is designated for the natural colonisation of diverse, species-rich open habitats and the presence of a dingy skipper (*Erynnis tages*) colony. The LNR is across a road from the site. The dingy skippers main food plant is common birds foot trefoil (*Lotus corniculatus*). However, they will also feed on greater birds foot trefoil (*Lotus pedunculatus*), daisy (*Bellis perennis*), speedwells (*Veronica sp.*), buttercups (*Ranunculus sp.*) and horseshoe vetch (*Hippocrepis comosa*). These species were not recorded on site. Dingy skippers do bask on bare patches of earth, stones or low vegetation found in waste grounds, which is present on site but provides no value in itself. The habitats within the LNR differ from the site and therefore it is unlikely that the site would be suitable to support the colony of dingy skipper due to the absence of suitable vegetation on the site. Dingy skipper has been scoped out of further assessment.

No direct or indirect effects of the proposed development are anticipated to affect this LNR.

Walbottle Dene LNR is located 0.9 km north of the site and is designated for an area of semi-natural woodland with some ancient woodland indicator species and a varied bird assemblage. Due to the lack of connectivity, similar habitats, nor an ability for the proposed application site to support anything other than common urban bird species, no impacts would be anticipated.

All other statutory designated sites are considered to be sufficiently distant from the site, with no connectivity, such that it is unlikely that there would be any adverse impact from proposed development.

Accordingly, impacts on designated sites are scoped out of further assessment and do not require mitigation.

4.2.2 Non-statutory Designated Sites

The closest non-statutory designated sites are Walbottle Brickworks LWS (see above for discussion of the LNR on the same site), Shelley Road LWS, Percy Pit LWS, River Tyne Tidal Mud LWS and River Tyne Tidal Mud SNCI, all of which lie within 300 m of the site.

Predicted effects

Shelley Road LWS is a brownfield and lowland grassland site which also supports dingy skipper.

Percy Pit LWS provides valuable habitat for invertebrates, and also contains a dingy skipper colony. It is across the road from the site which contains different habitat. Given that dingy skipper has already been discussed and scoped out of the assessment in the context of closer designations, it can be concluded that the proposals would not impact the interest features of these sites either.

River Tyne Tidal Mud LWS and SNCI are designated for intertidal mudflats and associated populations of otter and wading birds, seal and fish populations. The site itself is not directly hydrologically connected to the River Tyne.

4.2.3 Wildlife Corridors

The three wildlife corridors which overlap the site include;

- Wildlife Enhancement Corridors (DM29): City West:
- Green Infrastructure Opportunity Areas (DM27):
- Strategic Green Infrastructure Network: Ouseburn to Walbottle Dene:

Accordingly, planting is proposed for the eastern side of the application site, which will retain some connectivity, although at this end of the site the connectivity to the south and east is broken by the road, with no other connectivity to the other aspects of the site. The extensive corridor to the north is outside of the proposed site boundary and therefore will remain unaffected.

4.2.4 Habitats & Trees

Predicted effects

The habitats within the site are not of high value. The wooded area on the southeastern side of the site provides some foraging habitat to wildlife. Similarly, the trees adjacent to the Site (but outside the boundary) are of Local importance. In the absence of mitigation these trees may be vulnerable to root damage during the construction phase from passing construction traffic, incorrect storage of materials and ground compaction. Any such impacts will result in adverse impacts, significant at the Local level.

Mitigation Measures

Suitable protective fencing (Such as HERA fencing) should be erected in accordance with *BS 5837:2012 Trees in Relation to Design, Demolition and Construction*, to create a tree root protection zone. These should remain in place for the duration of the construction phase. The tree root protection zone will be determined in the Tree Constraints Plan.

It was attempted to relocate the electricity pylons feeding into the proposed BESS in order to avoid clearing the vegetation in the southeast corner of the site, however repositioning was not possible due to the space available and angles required for the pylons to reach the BESS. Furthermore this was outside the design options of client, as the pylons are part of the national infrastructure as a third party.

4.2.5 Protected and Notable Species

4.2.5.1 Breeding Birds

Mitigation measures

Vegetation clearance and removal of stored equipment which is expected cleared as part of the development is recommended to be done outside of the bird breeding season (i.e. it should be carried out between September and February). If this is not possible, all areas should be checked for nesting birds by an ECoW ahead of equipment or vegetation clearance works and appropriate exclusion zones implemented if nests are found.

Construction should take place outside the bird nesting season to minimise noise disturbance to the adjacent woodland.

4.2.5.2 Roosting bats

Predicted effects

All but one of the buildings were considered to be of “negligible” suitability for roosting bats.

The substation was considered to have “low” suitability for roosting bats. An internal inspection was conducted on the substation on the 4th of November 2024 and no evidence of bats was found during the survey. It has been determined that the substation is unsuitable for anything other than opportunistic / low number roosting.

Mitigation measures


A single emergence survey should be conducted prior to the building undergoing works or demolition, and the survey should take place between the months of May and September.

4.2.5.3 Commuting and Foraging Bats

The site is assessed as being of negligible suitability for bats, although it would be expected that common species such as pipistrelle would pass by the site. Accordingly, lights during the construction phase should be angled away from the trees and wooded areas.

4.3 Good Practice Mitigation

The following good practice measures should be adhered to in order to avoid and mitigate construction-phase impacts on fauna on site:

- 
- Access ramps (plank of roughened wood) to be installed each night within any open trench or pit to prevent entrapment of mammals;
 - Daily checks of any excavations to be made prior to commencing work to ensure that no mammals have become trapped in the excavations. Should a trapped animal be found, a suitably experienced ecologist should be immediately contacted for advice;
 - Any pipes with a diameter of greater than 200 mm which are stored or installed on site are to be covered or capped at night to reduce the risk of animals becoming trapped inside;
 - Site lighting, whether temporary or permanent, should be minimal and directed away from trees, hedgerows and watercourses;
 - No construction activities should take place on site from one hour before dusk up to one hour after dawn; and
 - Any animals disturbed by site works should be allowed to disperse of their own accord and should not be caught or handled.

4.4 Residual Effects

Provided that the mitigation measures are implemented, no residual effects are anticipated.

4.5 Cumulative Effects

Due to the limited scale of the proposed development, a detailed assessment of potential cumulative effects has not been undertaken.

Section 5.0: Bibliography

Amphibian and Reptile Groups UK, 2010. *ARG UK Advice Note 5: Great Crested Newt Habitat Suitability Index*, s.l.: Amphibian and Reptile Groups of the United Kingdom.

The British Standards Institution, 2013. BSI Standards Publication: BS 42020:2013 - Biodiversity — Code of practice for planning and development. Online. ISBN 978 0 580 77917 6

The British Standards Institution, 2013. BSI Standards Publication: BS 5837:2012 – Trees in Relation to Design, Demolition and Construction. Online. ISBN 978 0 580 69917 7

Butcher, B. et al., 2020. *The UK Habitat Classification User Manual Version 1.1*. [Online]
Available at: [consideration for Local Planning Authorities \(LPAs\) during the planning process](#).

Carlisle City Council, 2016. *Carlisle District Local Plan 2015-2030*, Carlisle: Carlisle City Council.

Chanin, P., 2003. *Monitoring the Otter Lutra lutra: Conserving Natura 2000 Rivers Monitoring Series No. 10*. Peterborough: JNCC.

Chartered Institute for Ecology and Environmental Management, 2018. *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*. Chartered Institute of Ecology and Environmental Management, Winchester.

Chartered Institute for Ecology and Environmental Management, 2016. *Guidelines for Preliminary Ecological Appraisal*, s.l.: CIEEM.

Chartered Institute for Ecology and Environmental Management, 2017. *Guidelines for Preliminary Ecological Appraisal*. s.l.:CIEEM.

Collins, J., 2016. *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edition)*. s.l.:Bat Conservation Trust.

Collins, J., 2023. *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition)*, s.l.: Bat Conservation Trust.

Dean, M. et al., 2016. *The Water Vole Mitigation Handbook (The Mammal Society Mitigation Guidance Series)*, London: The Mammal Society.

DEFRA, 2023. *MAGIC*. [Online]
Available at: <https://magic.defra.gov.uk/>
[Accessed 24 March 2023].

Development and Allocations Plan Newcastle upon Tyne 2015-2030 Pre-Submission Plan. Newcastle City Council. Online. Available at:
https://www.newcastle.gov.uk/sites/default/files/planning/dap_final_submission.pdf Accessed 8 August 2024.

Gent, T. & Gibson, S., 2003. *Herpetofauna Workers' Manual*. Peterborough: JNCC.

Gent, T. & Gibson, S., 2003. *Herpetofauna Workers' Manual*, Peterborough: JNCC.

Harris, S., Cresswell, P. & Jefferies, D., 1989. *Surveying Badgers. Occasional Publication of the Mammal Society 9*. London: Mammal Society.

Langton, T. E., Beckett, C. L. & Foster, J. P., 2001. *Great Crested Newt Conservation Handbook*, Halesworth: Froglife.

National Library of Scotland: Ordnance Survey Maps - Six-inch England and Wales, 1842-1952. Online. Available at: <https://maps.nls.uk/os/6inch-england-and-wales/> Accessed 13 August 2024.

NEWCASTLE'S WILDLIFE ENHANCEMENT CORRIDORS: Newcastle City Council. Online. Available at: https://www.newcastle.gov.uk/sites/default/files/2019-01/wildlife_enhancement_corridors_2013_-_ldf.pdf Accessed 13 August 2024.

Planning for the Future: Core Strategy and Urban Core Plan for Gateshead and Newcastle upon Tyne 2010-2030. Adopted March 2015.

https://www.gateshead.gov.uk/media/7765/Core-Strategy-and-Urban-Core-Plan-for-Gateshead-and-Newcastle/pdf/Core-Strategy-and-Urban-Core-Plan-for-Gateshead-and-Newcastle_SMALLER.pdf?m=1526313509250

Stanbury, A. et al., 2021. The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of man and second IUCN Red List assessment of extinction risk for Great Britain.. *British Birds*, Volume 114, pp. 723-747.

UKHab Ltd, 2023. *UK Habitat Classification*. [Online]
Available at: <https://ukhab.org/>

UKHab Ltd, 2023. *UK Habitat Classification Version 2.0*. [Online]
Available at: <https://www.ukhab.org>

Newcastle City Council: Wildlife and Ecology. Online. Available at: <https://www.newcastle.gov.uk/services/planning-building-and-development/trees-wildlife-and-green-environment/wildlife-and> Accessed 13 August 2024.

Mabbett and Associates Ltd. 2024. Newburn: Biodiversity Net Gain Calculations Report.

Appendix A: Overview of Relevant Planning Policy and Legislation

5.1 Plans and Policy

Planning for the Future: Core Strategy and Urban Core Plan

Newcastle City Council and Gateshead Council have a joint urban core plan strategy. This strategy was adopted in 2015 and runs from 2010 to 2030. Policy CS18 *Green Infrastructure and the Natural Environment* is the section relevant to ecology.

Planning for the Future: Core Strategy and Urban Core Plan for Gateshead and Newcastle upon Tyne 2010-2030. Adopted March 2015.

https://www.gateshead.gov.uk/media/7765/Core-Strategy-and-Urban-Core-Plan-for-Gateshead-and-Newcastle/pdf/Core-Strategy-and-Urban-Core-Plan-for-Gateshead-and-Newcastle_SMALLER.pdf?m=1526313509250

Policy CS18 Green Infrastructure and the Natural Environment

Green infrastructure in Gateshead and Newcastle comprises a range of multifunctional green spaces (whether stand-alone or forming part of the network) and inter-connecting links. It is important in meeting the environmental, social and economic needs of communities and in supporting natural and ecological processes. It contributes to the quality of the natural and built environment and is integral to the health and quality of life of communities. Green infrastructure includes wildlife sites, parks and gardens, areas of countryside, woodland and street trees, allotments and agricultural land, outdoor sport and recreation provision, local green spaces, footpaths, cycle and bridleways, ponds, lakes and watercourses.

Open space, sport and recreation facilities are key elements of green infrastructure, and appropriate provision of such assets makes a fundamental contribution to the health and wellbeing of communities. Areas of open space which are valued by residents provide an important community function, and can make a significant contribution to the aesthetic quality of an area. Safeguarding open space is vital in ensuring that there is sufficient quantity to meet the needs of local people. The NPPF presumes against the loss of these areas to built development unless:

- An assessment has been undertaken which shows the open space is surplus to requirements, or
- The loss resulting from the proposed development will be replaced by equivalent or better provision in terms of quantity and quality in a suitable location, or
- The development is for an alternative sports and recreation provision, the needs for which clearly outweigh the loss.

Policy CS18 intends to protect and enhance our Green Infrastructure Network and natural environment. This includes the provision of adequate open space, sport and recreational facilities, the conservation and enhancement of biodiversity and geodiversity, and safeguarding landscape character. Building design can also incorporate features that make an important contribution to conserving and enhancing biodiversity.

Woodlands, trees and hedgerows, including street trees and listed trees in urban areas, are important for the attractiveness of our area as well as being a key component of ecosystems. They contribute to cooling and shading in urban areas and to linkages in the Green Infrastructure Network. Tree Preservation Orders and Conservation Area designations protect many of the most important assets. There will be a presumption in favour of the retention, protection, and enhancement of woodlands, trees and hedgerows, as well as, where appropriate, additional provisions by new developments.

Policy CS18 Green Infrastructure and the Natural Environment

A high quality and comprehensive framework of interconnected green infrastructure that offers ease of movement and an appealing natural environment for people and wildlife will be achieved by:

1. Maintaining, protecting and enhancing the integrity, connectivity, multifunctionality and accessibility of the Strategic Green Infrastructure Network.
2. Protection, enhancement and management of green infrastructure assets which include:

- I. Biodiversity and geodiversity assets, including designated sites, designated wildlife corridors and priority habitats and species,
- II. Distinctive landscape character, recognising the particular importance of our rivers and topography, and
- III. Trees, woodland and hedgerows.
3. Addressing gaps in the network and making improvements in Opportunity Areas.
4. Improving and extending linkages to and within the Strategic Green Infrastructure Network.
5. Protecting and enhancing open spaces, sport and recreational facilities in accordance with agreed standards in line with National Policy.
6. Improving access to, along and onto the River Tyne and tributaries, without adversely impacting on the local ecology or damaging the river banks.

Development and Allocations Plan

Newcastle City Council has a further Development and Allocations Plan running from 2015 to 2030. Policy DM27 *Protecting and Enhancing Green Infrastructure Development* is relevant to ecology.

Development and Allocations Plan Newcastle upon Tyne 2015-2030 Pre-Submission Plan. Newcastle City Council. Online. Available at: https://www.newcastle.gov.uk/sites/default/files/planning/dap_final_submission.pdf Accessed 8 August 2024.

Policy DM27 - Protecting and Enhancing Green Infrastructure Development will be required to protect, maintain and enhance existing green infrastructure assets, and contribute towards the delivery of new green infrastructure assets by:

1. Providing on-site green infrastructure, or where it can be demonstrated that this is not possible, contribute to off-site provision.
2. Addressing gaps in the Strategic Green Infrastructure Network corridors and, providing improvements within the Opportunity Areas., and enhancing the function of the Green Belt as a Green Infrastructure resource.
3. Ensuring development proposals which could adversely affect green infrastructure assets demonstrate:
 - I. that alternative provision which maintains or creates new green infrastructure assets is accessible and of equal value to health, climate protection, and biodiversity; or
 - II. the proposed development would be ancillary to the main use of the green infrastructure asset and the benefits would outweigh any harm.
4. Requiring proposals for the creation of new green infrastructure assets or enhancements of existing green infrastructure assets to:
 - I. maximise multi-functionality;
 - II. enhance connectivity and accessibility;
 - III. enhance biodiversity;
 - IV. contribute to the areas character and improve visual amenity;
 - V. take opportunities to include community involvement and education;
 - VI. secure long-term maintenance and management; and
 - VII. incorporate climate change mitigation measures.

NEWCASTLE'S WILDLIFE ENHANCEMENT CORRIDORS

Newcastle City Council has a Wildlife Enhancement Corridor policy to work in conjunction with the National Planning Policy Framework. The aim of this policy is to increase the connectivity between ecologically valuable sites.

Low Biodiversity Value: Creation

Priority will be to create and restore new wildlife habitat within these areas

Intermediate Biodiversity Value: Buffer & Link

Improvements will be required to link or buffer existing sites or provide corridors and 'stepping stones' for wildlife

High Biodiversity Value: Protect & Manage

The main aim will be to protect, manage and maintain these areas of higher ecological value

NEWCASTLE'S WILDLIFE ENHANCEMENT CORRIDORS: Newcastle City Council. Online. Available at: https://www.newcastle.gov.uk/sites/default/files/2019-01/wildlife_enhancement_corridors_2013_-_ldf.pdf Accessed 13 August 2024.

5.2 General Legislation

The following presents accounts present a summary of the legislation relevant to the site and proposals. It is recommended that the reader also refer to the original legislation for definitive interpretation.

The Wildlife and Countryside Act (WCA) 1981

The WCA, as amended, consolidates and amends pre-existing national wildlife legislation in order to implement the Bern Convention and the Birds Directive. It complements the Conservation (Natural Habitats) Regulations 2017 (as amended), offering protection to a wider range of species. The Act also provides for the designation and protection of national conservation sites of value for their floral, faunal or geological features, termed Sites of Special Scientific Interest (SSSIs).

Schedules of the act provide lists of protected species, both flora and fauna, and detail the possible offences that apply to these species. All relevant species-specific legislation is detailed later in this Appendix.

Wild Mammals Protection Act 1996

This Act offers protects a form of protection to all wild species of mammals, irrespective of other legislation, and focussed on animal welfare, rather than conservation.

Unless covered by one of the exceptions, a person is guilty of an offence if he mutilates, kicks, beats, nails or otherwise impales, stabs, burns, stones, crushes, drowns, drags, or asphyxiates any wild mammal with intent to inflict unnecessary suffering.

Its application is typically restricted to preventing deliberate harm to wildlife (in general) during construction works, etc.

5.3 Specific Legislation

Herpetofauna (reptiles and amphibians)

All the UK's native reptiles and amphibians are protected by law, although their level of protection differs. The following species are European Protected Species and therefore have additional protection under the Habitats Regulations 2017 (as amended):

- Great crested newt *Triturus cristatus*.
- Pool frog *Pelophylax lessonae*.
- Natterjack toad *Epidalea calamita*.
- Sand lizard *Lacerta agilis*.
- Smooth snake *Coronella austriaca*.
- Sea turtles (*Caretta caretta*, *Chelonia mydas*, *Dermochelys coriacea*, *Eretmochelys imbricata*, *Lepidochelys kempii*).

The legal protection for these species is outlined in Section 43 of the Habitats Regulations 2017, and states that a person commits an offence if they:

- deliberately capture, injure or kill a protected species;
- deliberately disturb a protected species;

- deliberately take or destroy eggs of a protected species; or
- damage or destroy a protected species' breeding site or resting place.

This is a simplified description of the legislation. In particular, the offences mentioned here may be absolute, intentional, deliberate or reckless. Note that where it is predictable that reptiles are likely to be killed or injured by activities such as site clearance, this could legally constitute intentional killing or injuring. Widespread reptile species are protected under part of Section 9(1) of the Wildlife & Countryside Act 1981 (as amended) against:

- intentional killing and injuring (note the provision in Section 9(1) of Wildlife & Countryside Act 1981 prohibiting "taking" does not apply to reptiles).

Both reptiles (adder, grass snake, common lizard, and slow worm) and amphibians (common frog, common toad, smooth newt, palmate newt) are protected via part of Section 9(5) of the Wildlife & Countryside Act 1981 (as amended) against:

- selling, offering or exposing for sale, or having in possession or transporting for the purpose of sale, any live or dead wild animal or any part of, or anything derived from, such an animal; or
- publishing or causing to be published any advertisement likely to be understood as conveying buying or selling, or in or selling, or intending to buy or sell, any of those things.

Birds

The Wildlife and Countryside Act (WCA) 1981, as amended, protects all breeding birds in the UK with a few exceptions (i.e., sporting birds listed in Schedule 2 and for certain specified purposes under licence). The WCA makes it an offence to intentionally or recklessly:

- kill, injure or take a wild bird;
- take, damage, destroy or interfere with the nest of any wild bird whilst it is in use or being built (or at any time for a nest habitually used by any listed in Schedule A I);
- obstruct or prevent any wild bird from using its nest;
- take or destroy an egg of any wild bird;
- disturb any wild bird listed on Schedule 1 whilst it is building a nest or is in, on, or near a nest containing eggs or young, or whilst lekking; or
- disturb the dependent young of any wild bird listed on Schedule 1.

Recklessly in this context is to be understood as pursuing a course of action while consciously disregarding the fact that the action gives rise to a substantial and unjustifiable risk.

Schedule 1 is a list of rare breeding species that are specially protected in the UK. Two additional Schedules (Schedule 1A and A1) have been created to afford further protection to some species included on Schedule 1. This additional protection makes it an offence to intentionally or recklessly:

- at any time, damage, destroy or interfere with any nest habitually used by any wild bird included in Schedule A1; or
- at any time harass any wild bird included in Schedule 1A.

Forty-nine bird species are listed as SPI in England within Section 41 of the NERC Act 2006. This makes them capable of being material considerations in the planning process.

Bats

Bats and the places they use for shelter or protection (i.e., roosts) receive European protection the Habitats Regulations 2017. They receive further legal protection under the Wildlife and Countryside Act (WCA) 1981, as amended. This protection means that bats, and the places they use for shelter or protection, are capable of being a material consideration in the planning process.

Regulation 41 of the Habitats Regulations 2017 (as amended), states that a person commits an offence if they:

- deliberately capture, injure or kill a bat;
- deliberately disturb bats; or
- damage or destroy a bat roost (breeding site or resting place).

Disturbance of animals includes in particular any disturbance which is likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or in the case of animals of a hibernating or migratory species, to hibernate or migrate; or to affect significantly the local distribution or abundance of the species to which they belong.

It is an offence under the Habitats Regulations 2017 (as amended) for any person to have in their possession or control, to transport, to sell or exchange or to offer for sale, any live or dead bats, part of a bat or anything derived from bats, which has been unlawfully taken from the wild.

Whilst broadly similar to the above legislation, the WCA 1981 (as amended) differs in the following ways:

- Section 9(1) of the WCA makes it an offence to intentionally kill, injure or take any protected species;
- Section 9(4)(a) of the WCA makes it an offence to intentionally or recklessly damage or destroy, or obstruct access to, any structure or place which a protected species uses for shelter or protection; and
- Section 9(4)(b) of the WCA makes it an offence to intentionally or recklessly disturb any protected species while it is occupying a structure or place which it uses for shelter or protection.

As bats re-use the same roosts (breeding site or resting place) after periods of vacancy, legal opinion is that roosts are protected whether or not bats are present.

Seven bat species are listed as 'SPI' in England under Section 41 of the NERC Act 2006. These are:

- Barbastelle bat *Barbastella barbastellus*.
- Bechstein's bat *Myotis bechsteinii*.
- Noctule *Nyctalus noctula*.
- Soprano pipistrelle *Pipistrellus pygmaeus*.
- Brown long-eared bat *Plecotus auritus*.
- Greater horseshoe bat *Rhinolophus ferrumequinum*.
- Lesser horseshoe bat *Rhinolophus hipposideros*.

Badger

Badgers are protected in Britain by the Protection of Badgers Act 1992. The purpose of this Act is to protect the animals from deliberate cruelty and from the incidental effects of lawful activities which could cause them harm. Under this legislation it is an offence to:

- wilfully kill, injure or take a badger (or attempt to do so);
- cruelly ill-treat a badger;
- dig for a badger;
- intentionally or recklessly damage or destroy a badger sett, or obstruct access to it;
- cause a dog to enter a badger sett;
- disturb a badger when it is occupying a sett;
- have in their possession, or under their control, any dead badger or any part of, or anything derived from, a dead badger;
- use, for the purpose of killing or taking a badger, badger tongs or any firearm (see legislation for exceptions);
- sell a live badger or offers one for sale or has a live badger in their possession or under their control; or
- mark, or attaches any ring, tag or other marking device to, a badger (other than one which is lawfully in their possession by virtue of such a licence).

If any of the offences listed above resulted from a person being reckless, even if they had no intention, their action would still be considered an offence.

Otter

Otters are protected under sections 9 and 11 of the Wildlife and Countryside Act 1981 and also under the Habitats Regulations 2017, making them a European protected species. Under this legislation, it's an offence to:

- capture, kill, disturb or injure otters (on purpose or by not taking enough care);
- damage or destroy a breeding or resting place (deliberately or by not taking enough care);
- obstruct access to their resting or sheltering places (deliberately or by not taking enough care); or
- possess, sell, control or transport live or dead otters, or parts of otters.

Sites of Special Scientific Interest (SSSI)

SSSIs are nationally important sites in Scotland. They are highly protected to safeguard the range, quality and variety of habitats, species and geological features in all parts of Scotland. They are the cornerstones of conservation work, protecting the core of natural heritage.

Appendix B: Statutory and Non-Statutory Sites

Table 1: Statutory Designated Sites within 5 km of the site.

Site Name and Designation	Proximity and Direction to the site	Designated Features
Walbottle Brickworks LNR	0.02 km east	Old quarry and brickworks designated for the natural colonisation of diverse, species-rich open habitats and the presence of a dingy skipper (<i>Erynnis tages</i>) colony.
Walbottle Dene LNR	0.9 km north	Designated for an area of semi-natural woodland with some ancient woodland indicator species and a varied bird assemblage.
Hallow Hill SSSI	1 km north-west	Designated for flushed neutral grassland and fen habitats. Site is known to support several species of butterfly including small copper <i>Lycaena phlaeas</i> , wall brown <i>Lasiommata megera</i> , meadow brown <i>Maniola jurtina</i> , orange tip <i>Anthocharis cardamines</i> , green-veined white <i>Pieris napi</i> and common blue <i>Polyommatus icarus</i> .
Sugley Dene LNR	1.7 km east	Designated for an area of semi-natural ancient woodland running along the banks of a small burn.
Denton Dene LNR	2.3 km east	Designated for an area of woodland and amenity grassland; woodland is likely a remnant of semi-natural woodland.
Shibdon Pond SSSI	3 km south-east	Designated for a pond with fringing reedswamp, tall fen, willow scrub, damp grassland, dry grassland and hawthorn scrub. Pond is important for wintering waterfowl, including tufted duck <i>Aythya fuligula</i> , pochard <i>Aythya ferina</i> , mallard <i>Anas platyrhynchos</i> , teal <i>Anas crecca</i> , shoveler <i>Anas clypeata</i> and coot <i>Fulica atra</i> .
Close House Riverside SSSI	3.7 km west	Designated for an unusual community of metal-tolerant plants due to a history of heavy metal contamination from the upstream North Pennine Orefield.
Clara Vale LNR	3.8 km west	Site of former coal mine which was reclaimed by nature after the pit closure; site is of value to a variety of wintering birds, amphibians, wildflowers and butterflies.
Lower Derwent Meadows SSSI	4.2 km south-east	Designated for two meadows with diverse plant communities of unimproved acid-neutral grassland and associated flush, pond scrub and bankside vegetation. Traditional management for hay production followed by winter grazing has maintained a herb-rich sward.
Thornley Wood SSSI	4.2 km south	Designated for semi-natural woodland; of particular value as it is one of the few remaining areas of semi-natural woodland in the Lower Derwent Valley.
Heddon Common LNR	4.2 km north-west	Designated for wildflowers and fungi.

Table 2: Non-statutory designated sites within 2 km of the site boundary

Site Name and Designation	Proximity and Direction to the Site	Designated Features
Walbottle Brickworks LWS	0.02 km east	As for LNR designation; Old quarry and brickworks designated for the natural colonisation of diverse, species-rich open habitats and the presence of a dingy skipper colony.
Shelley Road LWS	0.02 km south	Biodiversity Action Plan Habitat Brownfield, Lowland Grassland. UKBAP species Dingy Skipper, Bumblebees.
Percy Pit LWS	0.03 km east	Open grassland and plantation woodland habitats. Valuable habitat for invertebrates. Dingy skipper present.
River Tyne Tidal Mud LWS	0.3 km south	Designated for national and local Biodiversity Action Plan habitats, namely rivers, intertidal mud flats, coastal saltmarsh, estuarine rocky habitats. Also designated for otter, harbour seal <i>Phoca vitulina</i> , salmon <i>Salmo salar</i> , sea trout <i>Salmo trutta</i> , eel <i>Anguilla anguilla</i> , river lamprey <i>Lampretra fluviatillas</i> and sea lamprey <i>Petromyzon marinus</i> . Bird designations comprise lapwing <i>Vanellus vanellus</i> , curlew <i>Numenius arquata</i> , dunlin <i>Calidris alpina</i> , redshank <i>Tringa totanus</i> , teal and golden plover <i>Pluvialis apricaria</i> .
River Tyne Tidal Mud SNCI	0.3 km south	Designated for intertidal mudflats and associated populations of otter and wading birds.
Rye Hill SLCI	0.6 km north-west	Important wildlife corridor linking together multiple Local Wildlife Sites.
Throckley / Walbottle Dene LWS	0.9 km north	Area of semi-natural woodland with interesting plant populations. Diverse bird assemblage.
Ryton Willows LWS	1 km south-west	Ryton Willows LWS comprises six areas adjacent and contiguous with Ryton Willows SSSI. Habitats comprise dry acidic grassland and substantial areas of gorse and broom scrub used by breeding birds.
Newburn Haugh LWS	1 km south-east	Area of grassland with a dingy skipper population.
Newburn Haugh Wetland SLCI	1 km south-east	Important wildlife corridor linking together multiple Local Wildlife Sites. Pond habitat is rare in this area.
Hedgefield Quarry LWS	1.1 km south-west	Semi-natural woodland, scrub and mesotrophic grassland. Supports a diverse breeding bird population.
Ryton Runhead LWS	1.1 south-west	Scrub with flushed mesotrophic grassland and a small area of semi-natural woodland. Considered of significant botanical and entomological interest.
Holburn Dene LWS	1.1 south-west	Semi-natural woodland, hedgerows and herb-rich meadow.
The Spreading Field LWS	1.2 km west	Species-rich grassland; history of tipped gravel has led to colonisation of interesting mix of herbaceous plants.
Reigh Burn and Engine Plant SNCI	1.3 km north-west	Important wildlife corridor linking together multiple Local Wildlife Sites.

Stella Lane Pasture SNCI	1.5 km south	Unimproved permanent pasture and marshland. Mesotrophic grassland.
Stella and Pathhead Woods LWS	1.6 km south-west	Ancient semi-natural and semi-natural woodland.
Crookhill Pasture LWS	1.6 km south-west	Herb-rich permanent pasture with locally flushed areas containing glaucous, common, oval, carnation and common yellow sedge.
Sugley Dene LWS	1.7 km east	As for LNR designation; Designated for an area of semi-natural ancient woodland running along the banks of a small burn.
Pathhead Quarry LWS	1.9 km south-west	Discussed sand and gravel quarry with developing grassland and scrub. Sandy ground supports a diverse and specialised variety of flora which in turn support a range of butterflies. Extensive area of scrub is of value to a range of nesting bird. Sand martins <i>Riparia riparia</i> are known to nest in a sand cliff on site.
Pathhead Meadow LWS	1.9 km south-east	Traditionally managed mesotrophic herb-rich grassland.
Stargate Ponds/Bewes Hills LWS	1.9 km south	Ponds, grassland and scrub in former quarry.
Blaydon Burn LWS	1.9 km south-east	Reclaimed industrial site with semi-natural woodland on steep valley sides. Large areas of species-rich grassland.
Image Hill SNCI	1.6 km south-west	Mesotrophic grassland showing both wet and dry types.

Appendix C: Environmental Records Information Centre North East

Table 1: Protected and notable species records within 2 km of the site from the past 10 years.

Species	No. Of Records	Most Recent Record	Proximity of Nearest Record to Study Area	Species of Principal Importance	Legislation/Conservation Status
Mammals					
Bat sp.	1	2013	Within 2 km		
Common pipistrelle <i>Pipistrellus pipistrellus</i>	62	2022	0.4 km northwest		
Eurasian otter <i>Lutra lutra</i>	7	2019	0.4 km southwest		
Eurasian red squirrel <i>Sciurus vulgaris</i>	2	2014	0.6 km east		
Lesser noctule <i>Nyctalus leisleri</i>	1	2016	2 km southwest		
Noctule bat <i>Nyctalus noctule</i>	6	2014	1 km east		
Pipistrelle sp. <i>Pipistrellus</i>	3	2014	0.9 km northwest		
Soprano pipistrelle <i>Pipistrellus pygmaeus</i>	17	2017	0.8 km northwest		
West European hedgehog <i>Erinaceus europaeus</i>	65	2021	0.2 km northwest		
Whiskered/Brandt's bat <i>Myotis mystacinus/brandtii</i>	1	2016	2 km southwest		
Birds					
Blackbird <i>Turdus merula</i>	40	2022	0.2 km southeast		BoCC5 Amber
Black-headed gull <i>Croicocephalus rindibundus</i>	16	2021	0.6 km southwest		BoCC5 Amber
Bullfinch <i>Pyrrhula pyrrhula</i>	30	2022	0.1 km northeast	✓	BoCC5 Amber
Common gull <i>Larus canus</i>	5	2021	0.9 km west		BoCC5 Amber
Dunnock <i>Prunella modularis</i>	21	2022	0.2 km southeast	✓	BoCC5 Amber
Fieldfare <i>Turdus pilaris</i>	2	2018	Within 2 km		WCA1, BoCC5 Red
Great black-backed gull <i>Larus marinus</i>	9	2021	Within 2 km		BoCC5 Amber
Greenfinch <i>Carduelis chloris</i>	14	2021	0.4 km southwest		BoCC5 Red

Species	No. Of Records	Most Recent Record	Proximity of Nearest Record to Study Area	Species of Principal Importance	Legislation/Conservation Status
Herring gull <i>Larus argentatus</i>	18	2021	1 km southeast	✓	BoCC5 Red
House martin <i>Delichon urbicum</i>	5	2021	1.5 km northwest		Bocc5 Red
House sparrow <i>Passer domesticus</i>	14	2021	0.5 km southwest	✓	BoCC5 Red
Kestrel <i>Falco tinnunculus</i>	18	2021	0.2 km northeast		BoCC5 Amber
Kingfisher <i>Alcedo atthis</i>	9	2021	0.5 km northwest		Annex I, WCA1, BoCC5 Green
Lesser black-backed gull <i>Larus fuscus</i>	8	2021	Within 2 km		BoCC5 Amber
Lesser redpoll <i>Acanths cabaret</i>	1	2017	Within 2 km	✓	BoCC5 Red
Linnet <i>Linaria cannabina</i>	6	2021	1 km southwest	✓	BoCC5 Red
Mistle thrush <i>Turdus viscivarus</i>	10	2021	0.5 km southeast		BoCC5 Red
Peregrine falcon <i>Falco peregrinus</i>	1	2013	Within 2 km		Annex I, WCA1, Bocc5 Green
Red kite <i>Milvus milvus</i>	2	2013	Within 2 km		Annex I, WCA1, BoCC5 Green
Redstart <i>Phoenicurus phoenicurus</i>	1	2017	1.8 km southeast		BoCC5 Amber
Redwing <i>Turdus iliacus</i>	9	2021	0.8 km southeast		WCA1, BoCC4 Amber
Rook <i>Corvus frugilegus</i>	3	2019	1.7 km northwest		BoCC5 Amber
Song thrush <i>Turdus philomelos</i>	12	2021	0.6 km northwest	✓	BoCC5 Amber
Sparrowhawk <i>Accipiter nisus</i>	7	2021	0.2 km southeast		BoCC5 Amber
Starling <i>Sturnus vulgaris</i>	14	2021	1.4 km northwest	✓	BoCC5 Red
Stock dove <i>Columba oenas</i>	1	2019	Within 2 km		BoCC5 Amber
Swift <i>Apus apus</i>	1	2013	Within 2 km		BoCC5 Red
Tawny owl <i>Stric aluco</i>	1	2018	1.5 km east		BoCC5 Amber
Tree sparrow <i>Passer montanus</i>	6	2019	Within 2 km	✓	BoCC5 Red
Whitethroat <i>Sylvia communis</i>	6	2021	1.3 km southwest		BoCC5 Amber
Willow tit <i>Poecile montanus</i>	8	2019		✓	BoCC5 Red
Woodpigeon <i>Columba palumbus</i>	27	2021			BoCC5 Amber

Species	No. Of Records	Most Recent Record	Proximity of Nearest Record to Study Area	Species of Principal Importance	Legislation/Conservation Status
Wren <i>Troglodytes troglodytes</i>	39	2022			BoCC5 Amber
Yellowhammer <i>Emberiza citrinella</i>	10	2021		✓	BoCC5 Red
Amphibians					
Common frog <i>Rana temporaria</i>	1	2018			
Common Toad <i>Bufo bufo</i>	7	2013			
Smooth newt <i>Lissotriton vulgaris</i>	3	2018			
Plants					
Bluebell <i>Hyacinthoides non-scripta</i>	3	2023			

Appendix D: Importance of Ecological Features

Table 1: Importance of Ecological Features

Feature	Importance	Rationale
Ryton Willows SSSI and LNR	National Importance	Designated for its wetland habitats.
Hallow Hill SSSI	National Importance	Designated for flushed neutral grassland and fen habitats.
Shibdon Pond SSSI	National Importance	Designated for a pond with fringing reedswamp, tall fen, willow scrub, damp grassland, dry grassland and hawthorn scrub.
Close House Riverside SSSI	National Importance	Designated for an unusual community of metal-tolerant plants.
Lower Derwent Meadows SSSI	National Importance	Designated for two meadows with diverse plant communities of unimproved acid-neutral grassland and associated flush, pond scrub and bankside vegetation.
Thornley Wood SSSI	National Importance	Designated for semi-natural woodland; of particular value as it is one of the few remaining areas of semi-natural woodland in the Lower Derwent Valley.
Walbottle Brickworks LNR & LWS	Local Value	Designated for the natural colonisation of diverse, species-rich open habitats and the presence of a dingy skipper <i>Erynnis tages</i> colony.
Sugley Dene LNR & LWS	Local Value	Designated for an area of semi-natural ancient woodland running along the banks of a small burn.
Denton Dene LNR	Local Value	Designated for an area of woodland and amenity grassland; woodland is likely a remnant of semi-natural woodland.
Heddon Common LNR	Local Value	Designated for wildflowers and fungi.
Clara Vale LNR	Local Value	site is of value to a variety of wintering birds, amphibians, wildflowers and butterflies.
Percy Pit LWS	Local Value	Open grassland and plantation woodland habitats. Valuable habitat for invertebrates. Dingy skipper present.
River Tyne Tidal Mud LWS & SNCI	Local Value	Designated for intertidal mudflats and associated populations of otter and wading birds, seal and fish populations.
Rye Hill SLCI	Local Value	Important wildlife corridor linking together multiple Local Wildlife Sites
Throckley / Walbottle Dene LWS	Local Value	Area of semi-natural woodland with interesting plant populations. Diverse bird assemblage
Shelley Road LWS	Local Value	Biodiversity Action Plan Habitat: Brownfield and Lowland Grassland with Dingy Skipper UKBAP species recorded on site.
Ryton Willows LWS	Local Value	Habitats comprise dry acidic grassland and substantial areas of gorse and broom scrub used by breeding birds.
Newburn Haugh LWS	Local Value	Area of grassland with a dingy skipper population.

Feature	Importance	Rationale
Newburn Haugh Wetland SLCI	Local Value	Important wildlife corridor linking together multiple Local Wildlife Sites. Pond habitat is rare in this area.
Hedgefield Quarry LWS	Local Value	Semi-natural woodland, scrub and mesotrophic grassland. Supports a diverse breeding bird population.
Ryton Runhead LWS	Local Value	Scrub with flushed mesotrophic grassland and a small area of semi-natural woodland. Considered of significant botanical and entomological interest.
Holburn Dene LWS	Local Value	Semi-natural woodland, hedgerows and herb-rich meadow.
The Spreading Field LWS	Local Value	Species-rich grassland; interesting mix of herbaceous plants.
Reigh Burn and Engine Plant SNCI	Local Value	Important wildlife corridor linking together multiple Local Wildlife Sites.
Stella Lane Pasture SNCI	Local Value	Unimproved permanent pasture and marshland. Mesotrophic grassland.
Stella and Pathhead Woods LWS	Local Value	Ancient semi-natural and semi-natural woodland.
Crookhill Pasture LWS	Local Value	Herb-rich permanent pasture with locally flushed areas containing glaucous, common, oval, carnation and common yellow sedge.
Pathhead Quarry LWS	Local Value	Sandy ground supports a diverse and specialised variety of flora which in turn support a range of butterflies. Extensive area of scrub is of value to a range of nesting bird.
Pathhead Meadow LWS	Local Value	Traditionally managed mesotrophic herb-rich grassland.
Stargate Ponds/Bewes Hills LWS	Local Value	Ponds, grassland and scrub in former quarry.
Blaydon Burn LWS	Local Value	Reclaimed industrial site with semi-natural woodland on steep valley sides. Large areas of species-rich grassland.
Image Hill SNCI	Local Value	Mesotrophic grassland showing both wet and dry types.
Mixed Scrub	Local Value	Scrub habitat can be rich in invertebrates, reptiles, amphibians, small mammals and birds, as it provides food and shelter.
Broadleaved Woodland	Local Value	Broadleaf woodland can support a range of bird, invertebrate and small mammal species.
Breeding Birds	Local Value	There is habitat on site suitable for supporting a number of nesting birds.
Plants	Negligible	The site is unlikely to support rare or notable plant species.
Fungi	Negligible	The hardstanding nature of the majority of the site makes it unsuitable for fungi but common species may occur in the broadleaved woodland.
Invertebrates	Negligible	The habitat on site is considered broadly unsuitable for supporting invertebrates.
Reptiles	Negligible	The habitat on site is considered unsuitable for reptiles.
Roosting Bats	Negligible	The habitat on site is considered unsuitable for roosting bats.

Feature	Importance	Rationale
Commuting and Foraging Bats	Negligible	The habitat on site is considered to be of low suitability for commuting or foraging bats.
Red Squirrel	Negligible	The habitat on site is considered unsuitable for red squirrel.
Otter	Negligible	The watercourse on site is considered unsuitable for otter.
Water Vole	Negligible	The watercourse on site is considered unsuitable for water vole.
West European Hedgehog	Negligible	The habitat on site is considered unsuitable for hibernating or foraging hedgehog.



Appendix E: Figures and Images




Table 1: Figures



Figure No.	Summary
Figure 1	Red Line Boundary
Figure 2	Statutory Designated Sites
Figure 3	UKHab Map and Target Notes
Figure 4	Proposed Development Plan - 29911-FIG-DR-0006_P04



Table 2: Images



Image	Description	Photograph
1	Scattered shrub of butterfly bush.	

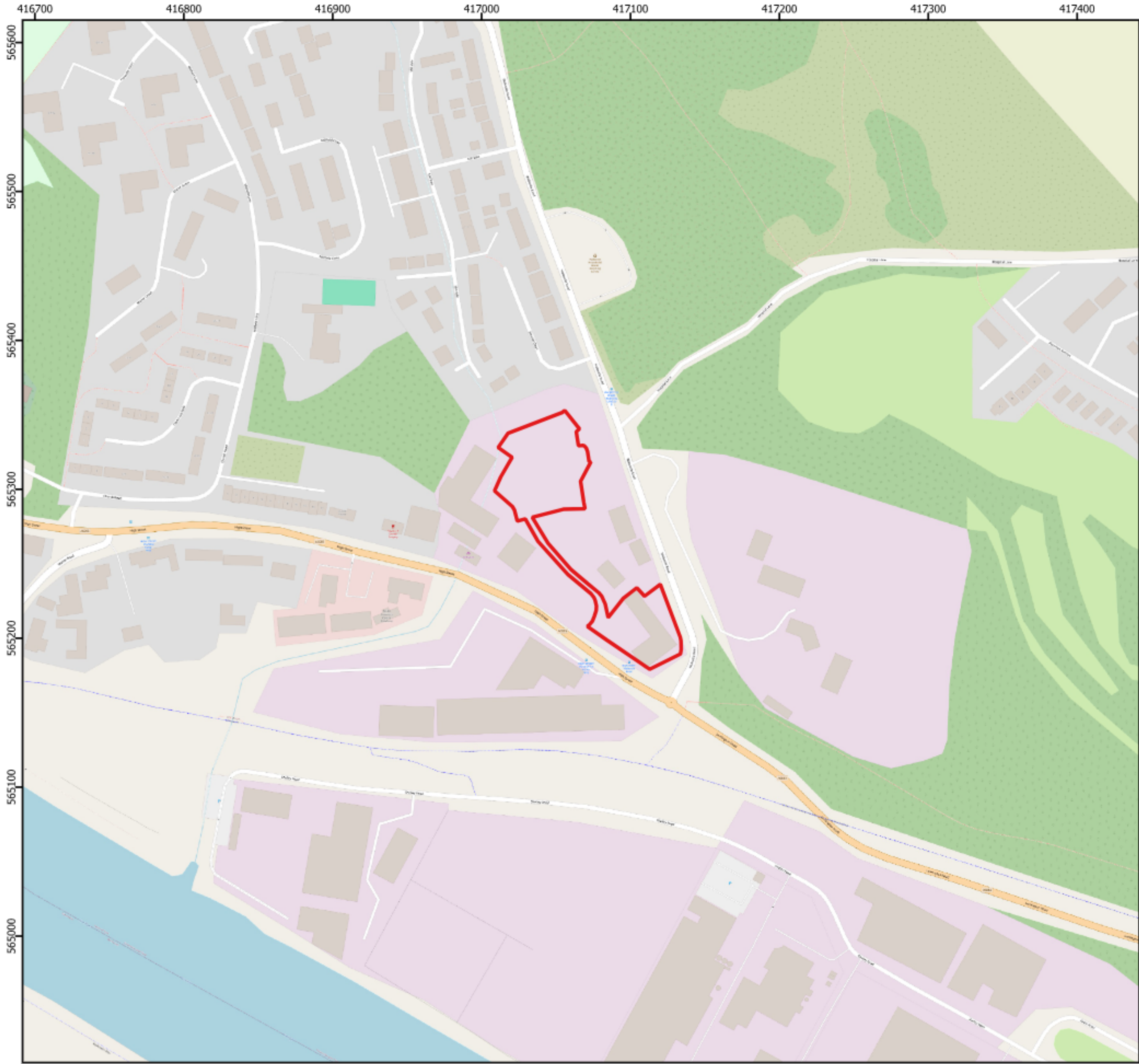
2	<p><i>ad-hoc sealed surface of tarmac and concrete in the northwest section of the site.</i></p>	
3	<p><i>Artificial unvegetated, unsealed surface covering the northwest section of the site.</i></p>	

4	<p>The commercial buildings housing North East Concrete and several other shops are present in the south east corner of the site.</p>	
5	<p>The aggregate storage industrial building is present in the centre of the site.</p>	
6	<p>The garage and storage facility in the centre of the site.</p>	

7	<p><i>A small substation in the southeast corner of the site.</i></p>	
8	<p><i>A line of trees along the northern border of the site and the top of the bank.</i></p>	

9	<p><i>New Burn, a heavily engineered tributary of the river Tyne, photographed south of site.</i></p>	
10	<p>Old bird nest located in the woodland adjacent to site</p>	

11	<p>Channelised watercourse to the south-west of the site boundary. Unsuitable for either otter or water vole.</p>	
12	<p><i>Further downstream the watercourse becomes more broadly suitable.</i></p>	



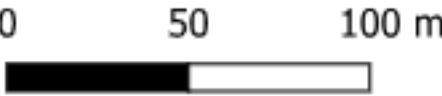
Site Boundary

FIG Power

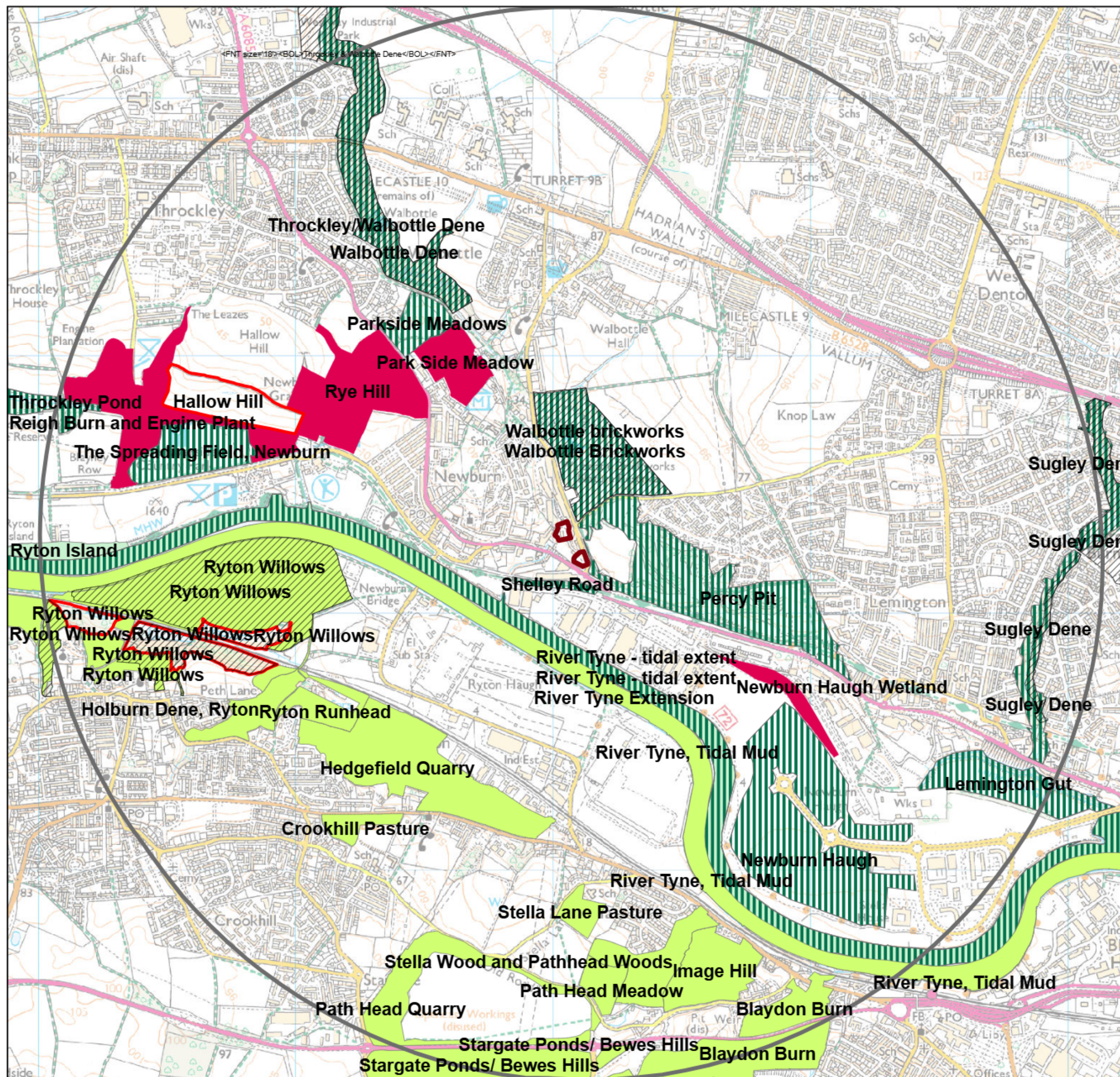
Newburn BESS

Key:

Site Boundary - September 2024
OSM Standard



Project Number: 314256	Scale at A3:
Drawn By: DK	1:2,500
Reviewed By: DK	Version: Final
Projection: OSGB 1936/British National Grid - EPSG 27700	Issue Date: 24/09/2024



ECOLOGICAL DATA SEARCH - STATUTORY & NON STATUTORY SITES

NEWBURN

MABBETT

PLOT PRODUCED: 30 November 2023

- Route
- 2000m Search Area
- Local Nature Reserve
- SSSI
- Gateshead Local Wildlife Sites
- Newcastle Local Wildlife Sites
- Newcastle SLCI
- Northumberland Local Wildlife Sites

Produced by



**Environmental Records
Information Centre
North East**

**Great North Museum: Hancock
Barras Bridge
Newcastle upon Tyne
Tyne & Wear
NE2 4PT**

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417000

417100

565300

565200



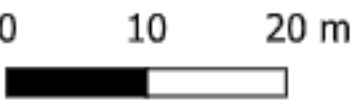
UKHab v2.01 and Target Notes

FIG Power

Newburn BESS

Key:

- Target Notes
- Site Boundary - September 2024
- UKHab Pre-Development September 2024
- Artificial unvegetated, unsealed surface
- Developed land; sealed surface
- Lowland mixed deciduous woodland
- Mixed scrub
- OSM Standard



Project Number: 314256	Scale at A3:
Drawn By: DK	1:650
Reviewed By: DK	Version: Final
Projection: OSGB 1936/British National Grid - EPSG 27700	Issue Date: 18/11/2024

Project No: 314256

Newburn:
Ecological Impact Assessment

Prepared for:

FIG Power

Room 3.05,
Finzels Reach,
Generator Building,
Counterslip,
Bristol, UK
BS1 6BX

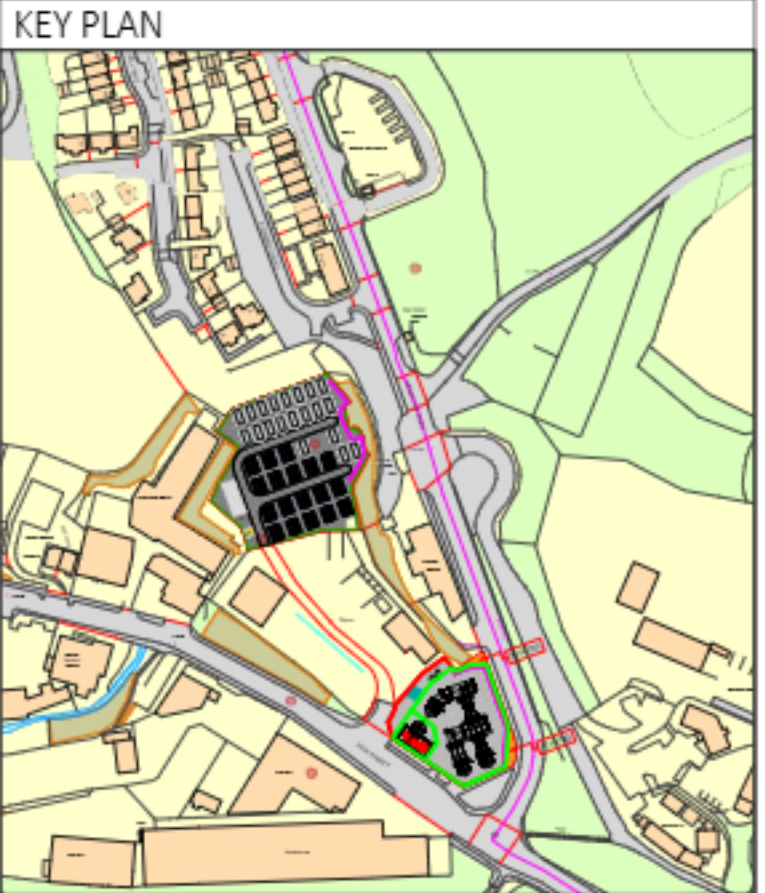
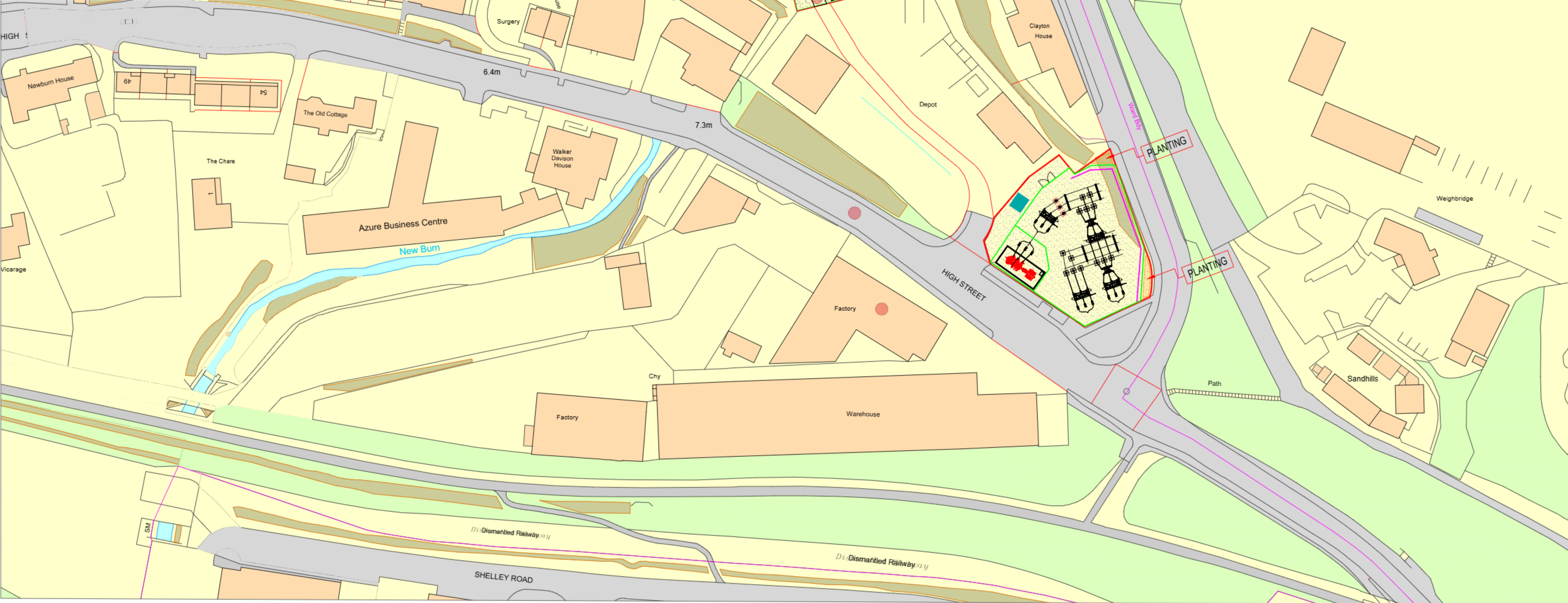
Contents Amendment Record

This report has been issued and amended as follows:

Revision	Description	Date	Signed
0.1	Draft	07 August 2024	Douglas Kilpatrick
0.2	Review	23 September 2024	Nick Masters
0.3	Amendments	07 November 2024	Douglas Kilpatrick
1.0	Final	18 November 2024	Nick Masters



Mabbett & Associates Ltd. Corporate and Registered Office: 13 Henderson Road, Inverness, UK, IV1 1SN
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NOTES
Any equipment shown is indicative of dimensions and general appearance and may be subject to minor amendments by the manufacturer or supplier

LEGEND

	BATTERY
	TRANSFORMER
	PCS AND TRANSFORMER
	CONCRETE PLINTHS
	TYPE I - SURFACE (CRUSHED LIMESTONE)
	PROPOSED NEW LOCATION OF NORTHERN POWER GRID SUBSTATION
	3 m SECURITY FENCE
	COAL-MINESHAFT
	ON SITE SUBSTATION
	RETAINING WALL

REVISIONS

P04	UPDATED VERSION - SUBSTATION/RETAINING WALL	SS	17/10/24	XX	XX	XX	XX
P03	UPDATED VERSION - SUBSTATION/MINESHAFT	SS	11/09/24	XX	XX	XX	XX
P02	UPDATED VERSION	CL	24/07/24	XX	XX	XX	XX
P01	INITIAL VERSION	CL	22/01/24	XX	XX	XX	XX
REV	REVISION NOTES/COMMENTS	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE

fig power
firm, flexible energy

CLIENT
FIG POWER

PROJECT
NEWBURN
BATTERY ENERGY STORAGE SYSTEM

TITLE
SITE LAYOUT
FOR OPERATION- ALIGNMENT WITH
TOPO

FIG PROJECT NO. 29911	SCALE @ A1 1:500	PAGE NO. X:XXX
STATUS DESCRIPTION FOR INFORMATION	STATUS S2	
DRAWING NO. (PROJECT CODE-000) WATER/CONTAINMENT/TYPE/REVISION NUMBER 2991-FIG-DR-0006	REVISION	P04