

# **FIDDLERS FERRY ALLOCATION SITE**

## Preliminary Ecological Appraisal

AUGUST 2023

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Date AUGUST 2023

## VERSION CONTROL

Version	Date	Author	Checker	Approver	Changes
01	30/08/2023	TM	EP	EP	Submitted version

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# 1 Introduction

## 1.1 Background

- 1.1.1 Arcadis Consulting (UK) Limited was instructed by Peel NRE to undertake an updated Preliminary Ecological Appraisal (PEA) across the Fiddler's Ferry Allocation Site (central grid reference SJ54828581), hereafter referred to as the 'FF Allocation Site'.
- 1.1.2 A Development Framework is currently being prepared, which supports the draft Emerging Local Plan Policy MD3, identifying the FF Allocation Site as a mixed-use opportunity, comprising approximately 101ha of employment land and a minimum of 860 new homes on land north of the St Helens Canal and the Warrington-Widnes rail line (hereafter the 'FF Development Site'). The site represents one of the largest brownfield sites in the region identified for redevelopment. The FF Allocation Site also includes land to the south of the railway / canal, comprising the ash storage lagoons associated with the former Fiddlers Ferry Power Station ('FFPS'), which will remain within the Green Belt.
- 1.1.3 FFPS was decommissioned in 2020 in line with Government policy to phase out coal-fired energy generation by 2025. Since 2020, prior approval for the first phase of demolition (Application Ref: 2022/42356), comprising the coal stockyard facility, northern cooling towers, the administration complex, laboratory building and buildings associated with the former workshops and stores facility has been granted. Demolition works have since commenced on site.
- 1.1.4 An application for full planning permission, relating to the first phase of employment development within the FF Development Site, was submitted to Warrington Borough Council ('WBC') in March 2023 and is currently pending determination (LPA ref. 2022/00392/EA) ('FF Employment Phase 1'). The FF Employment Phase 1 scheme relates to the redevelopment of the former coal pad. The wider redevelopment will be delivered through a series of phases as set out in the Development Framework, which will set out the principles of what will be delivered on the FF Allocation Site, and each phase will require a relevant planning consent.
- 1.1.5 This PEA has been prepared in support of the Development Framework and therefore provides an overview of the ecology of the FF Allocation Site and potential constraints and opportunities for future development over the various phases. The site has been subject to a significant number of previous ecology surveys over the years since 2005 and this historic information has been reviewed and used as a basis for this assessment in conjunction with the latest site information.

## 1.2 Site Location

- 1.2.1 The FF Allocation Site covers an extensive area of c.324ha, broadly centred on Cuerdley and stretching between Warrington in the east and Widnes in the west. The site is contained between Widnes Road to the north and the River Mersey to the south, bisected by a corridor of land formed by the St Helens Canal and the Warrington-Widnes rail line.
- 1.2.2 For the purpose of this report the FF Allocation Site is split between land to the north of the canal and land to the south. This split is based on the differing habitat types and future impacts associated with these two areas of land and allows the reader to make the distinction throughout. Figure 1 below provides an illustrative representation of this split.



Figure 1: FF Allocation Site Ecology Survey Area

## 2 Methodology

### 2.1 Overview

2.1.1 This PEA report has been prepared in accordance with the report guidance produced by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2018) and includes a desk-based study, field survey, assessment and evaluation.

### 2.2 Desk Study

2.2.1 A desk study was undertaken in October 2020 and updated in August 2022, to identify and existing ecological information relating to the site and its surroundings. The following resources/sources were used/consulted:

- The Multi-Agency Geographical Information for the Countryside (MAGIC) website (<https://magic.defra.gov.uk/>) and Natural England's Open Data Geoportal (<https://naturalengland-defra.opendata.arcgis.com/>) was used to search for the following information:
  - European Statutory Designated Sites (i.e., Special Areas of Conservation (SAC) and Special Protection Area (SPA)) and Ramsar Wetland Sites of International Importance located within 10km;
  - Statutory Designated Sites of national (i.e., Sites of Special Scientific Interest (SSSI) and National Nature Reserves (NNR)) and local importance (i.e., Local Nature Reserve (LNR)) located within 2km;
  - European Protected Species (EPS) mitigation licences for great crested newts *Triturus cristatus* (GCN) and bats within 2km of the site; and,
  - Any other relevant environmental datasets on protected or priority habitats and species, for example Ancient Woodland Inventory, GCN Class Survey Licence Returns, and GCN eDNA Pond Surveys for District Level Licensing (DLL).
- Natural England's GCN Risk Zone dataset was consulted to give an understanding of the potential presence of GCN in the local area and therefore the likelihood of the species being found to be present on the FF Allocation Site. This dataset identifies areas where the distribution of GCN has been categorised into distinct zones relating to GCN occurrence and the level of impact development is likely to have on this species. These zones are split into Red, Amber, Green and White and are described as follows:
  - Red zone – contains key populations of GCN, which are important on a regional, national or international scale and include designated Sites of Special Scientific Interest for GCN;
  - Amber zone – contains main population centres for GCN and comprise important connecting habitat that aids natural dispersal;
  - Green zone – contains sparsely distributed GCN and are less likely to contain important pathways of connecting habitat for this species; and,
  - White zone – contains no GCN. However, as most of England forms the natural range of GCN, white zones are rare and will only be used when it is certain that there are no GCN
- Ordnance Survey (OS) mapping and aerial photography (Google mapping) were studied to place habitats within the study area in the wider context, to identify potential ecological features that may not be evident on the ground during the field survey, and to identify potential barriers to animal movements (such as road networks, built development and major water courses).

- RECORD – A Biodiversity Information System for Cheshire, Halton, Warrington & Wirral was consulted to search for records of protected species and non-statutory designated sites within 2km of the FF Allocation Site boundary.
- The following ecological reports were reviewed for existing knowledge of the site:
  - Phase 1 Habitat Survey report (Thomson Ecology, 2005);
  - Environmental Statement for The Mersey Gateway Project (Halton Borough Council, 2008);
  - Extended Phase 1 Habitat Survey report (Thomson Ecology, 2009);
  - Badger and Water Vole Survey report (Peak Ecology, 2012);
  - Fiddlers Ferry Ecological Consultancy Reports from 2013 to 2020 (ELM, 2013-2020);
  - University of Salford Monitoring Contract Common Bird Census report (University of Salford, 2016);
  - Invasive Plant Survey report (ELM, 2020);
  - Ecological Survey report (ELM, 2020);
  - Fiddler’s Ferry Power Station Demolition – Screening Opinion Request Environmental Report (AECOM, 2021);
  - Preliminary Ecological Appraisal Fiddlers Ferry Power Station (Arcadis, 2021) (provided as Appendix D of the above);
  - Preliminary Ecological Appraisal & Great Crested Newt Report for the SSE BESS project (Dalcour Maclaren, 2022);
  - Environmental Impact Assessment for the FF Employment Phase 1 Scheme (Arcadis, March 2023).

## 2.3 Extended UK Habitat Classification Survey

- 2.3.1 The FF Development Site (land north of the canal) was surveyed on 4<sup>th</sup> and 15<sup>th</sup> August 2022 by ECUS ecologists Eilidh Brown and Ryan Evans. Land to the south of the canal was surveyed by ecologists Helen Hamilton and Eilidh Brown on 22<sup>nd</sup> to 24<sup>th</sup> May 2023.
- 2.3.2 The surveys followed the extended UK Habitat (UKHab) Classification System methodology (UK Habitat Classification Working Group (UKHCWG) 2018) and in accordance with the industry best practice guidance given by Chartered Institute for Ecology and Environment Management (CIEEM) “Guidelines for Preliminary Ecological Appraisal” (CIEEM, 2018). This survey method aims to characterise habitats and communities present and is not intended to provide a complete list of all plants occurring across the site.
- 2.3.3 Habitats and vegetation types present inside the site were recorded on to a field map and notable, rare or scarce plant species, including other features of ecological interest, were highlighted.
- 2.3.4 The abundance of plant species recorded was classified according to the DAFOR rating. The standardised terms are as follows:
- D – Dominant;
  - A – Abundant;
  - F – Frequent;
  - O – Occasional, and
  - R – Rare.



- 2.3.5 Where DAFOR values are preceded with an L, this refers to their presence locally within the site.
- 2.3.6 Evidence of protected species or species of nature conservation importance were recorded where present at the time of survey. Habitats present that are listed under Section 41 of the NERC Act 2006 or the Local Biodiversity Action Plan (LBAP) for Cheshire were also noted.

## 2.4 Protected and Key Species

- 2.4.1 Any evidence of protected species or groups encountered during the survey was recorded, including any observations of field signs and an assessment of the suitability of the habitats present to support protected species. For full details of legislation relating to all habitats and species discussed within this report visit <http://www.legislation.gov.uk>.

### **Amphibians**

- 2.4.2 To assess the potential presence of Great Crested Newts (GCN) and other common amphibian species, a desk-based assessment was undertaken using a 1:10,000 scale OS mapping to identify all waterbodies within 500m of the site that are not separated by a significant barrier to amphibian dispersal (such as a major road and/or fast flowing watercourse). As garden ponds within residential properties are often absent from OS map sources, aerial photography was also used to search for additional ponds.
- 2.4.3 Of the identified waterbodies within 500m of the site, those that are within 250m were then focused upon during the assessment as in accordance with the Great Crested Newt Conservation Handbook “at most sites, the majority of adults probably stay within around 250m of the breeding pond, so the density of individuals gradually decreases away from the pond”. (Froglife, 2001).
- 2.4.4 The terrestrial habitats present within the site were assessed for their suitability to support amphibians during their terrestrial stage and with consideration to their connectivity to other suitable habitat within the surrounding area.

### **Badgers**

- 2.4.5 Field signs for badger meles were searched for within the site and up to 30m from the site boundary, where accessible. The survey followed standard methodology detailed in “Surveying Badgers” (Harris et al., 1989). This included surveying for badger setts, latrine/dung pits, foraging marks, feeding signs and pathways, specifically along linear features and boundaries within the site.

### **Bats**

#### Roosting Bats

- 2.4.6 In accordance with the Bat Conservation Trust’s (BCT) Good Practice Guidelines (Collins, 2016), the potential suitability of features within the site (i.e., structures and trees) to support roosting bats was categorised as Negligible, Low, Moderate, High or Confirmed, based on the number and type of roosting features and surrounding landscape character.
- 2.4.7 All structures (e.g., underbridges, overbridges, buildings and tunnels), and trees within the site were subject to an external visual assessment, undertaken from ground-level. This approach permitted a search for the presence of suitable features that have potential to be used by roosting bats.
- 2.4.8 An individual tree or structure may have several features of potential interest to roosting bats associated with it. It is not always possible to confirm if a feature is used by bats given the transient nature of these species.

#### Commuting and Foraging Bats

- 2.4.9 Habitats within the site were also assessed for their potential to support foraging and commuting bats. The commuting and foraging assessment methodology is based on information contained within the BCT Good Practice Guidelines (Collins, 2016), which categorises the habitat as either Negligible, Low, Moderate, or High suitability for commuting and foraging bats.

## **Birds**

- 2.4.10 In 2021, a re-assessment of Birds of Conservation Concern 5 (BoCC5) was published by Stanbury et al. (2021), which defined rare and threatened bird species on two lists (Red and Amber) describing the varying levels of conservation concern for each species.
- 2.4.11 “Red” is the highest conservation priority, with species needing urgent action due to either a historical decline in breeding population, severe (>50%) decline in breeding or non-breeding population, or severe decline in breeding range over 50 years or more. “Amber” is the next most critical group, with species qualifying for this status as a result of either recovery from red list criterion, being classed as rare breeders in the UK, moderate (>25%) decline in breeding or non-breeding population or moderate decline in breeding range over 25 years or more. These categories are followed by “Green”, indicating that the species are relatively unthreatened.
- 2.4.12 Desk study data was filtered for WCA 1981 Schedule 1 bird species, and those species protected under Annex 1 of the EU Directive on the Conservation of Wild Birds, also known as the Birds Directive (2009/147/EC). Priority species (EWA 2016; Local BAP) were likewise highlighted and the UK Red List for birds, also known as the BoCC5 as described above, was also referred to.
- 2.4.13 Numerous historic bird surveys over the years have been undertaken and a summary of the findings have been presented within the results section of this report.
- 2.4.14 In addition, wintering bird surveys of the arable land within the site north of the canal, were undertaken by Ecus Limited over winter 2022/2023. The methodologies employed during the survey followed the bird monitoring methods as described in Gilbert et al. (1998). A set transect route was walked to allow the surveyor to view all points within the survey area, recording all species encountered, the number of specimens and any other relevant behaviours observed. Each survey was led by Saffra Wright, an experienced Ecus Ornithologist between October 2022 and March 2023. Surveys were carried out in suitable weather conditions and across a mixture of tidal conditions (high and low tides) in the nearby Mersey Estuary.

## **Reptiles**

- 2.4.15 The habitats present within the site were assessed for their suitability to support reptiles, and with consideration to their connectivity to other suitable habitat within the surrounding area. Habitat requirements were assessed with reference to the “Reptile Habitat Management Handbook” (Edgar, Foster & Baker, 2010). Any incidental reptile encounters made during the survey were recorded.

## **Otter and water vole**

- 2.4.16 A desk-based assessment was undertaken using a 1:10,000 scale OS mapping, to identify watercourses within 100m from the site that offer potential to support otter *Lutra lutra*, and within 30m from the site for water vole *Arvicola amphibius*. Any watercourses separated from the site by a major migration barrier (i.e., major roads) were not considered further as part of the assessment.
- 2.4.17 Any watercourses present within the site, where accessible, were assessed using standard survey methodologies for their suitability to support otter (Chanin, 2003) and water vole (Strachan, Moorhouse & Gelling, 2011).

## **Other Key and Notable Species**

- 2.4.18 Habitats were assessed for their potential to support other protected species, nationally or locally scarce or notable species, or any further species protected under nature conservation law which have not been highlighted above.

## **2.5 Invasive Species**

- 2.5.1 During the extended UKHab survey any evidence of invasive species, as listed on Schedule nine of the Wildlife and Countryside Act (WCA) 1981 (as amended), was recorded and subsequently mapped where seen.

## **2.6 Survey Limitations**

- 2.6.1 An ecological walkover and Extended UKHab survey is intended to provide an assessment of habitats present within a site and is not intended to replace detailed vegetation or targeted protected species surveys, where deemed necessary. The surveys are limited by a variety of factors which affect the presence of flora and fauna (e.g. climatic variation, season and species behaviour). A lack of evidence of a protected species during a survey does not mean that the species is absent; hence the survey also records and assesses the ability of habitats to support such species. The time frame in which the survey is implemented provides a snapshot of activity within the survey area and cannot necessarily detect all evidence of use by a species.
- 2.6.2 Where evidence of protected species, such as mammal pathways (e.g., badger) lead outside the boundary fence of the site, these were not followed beyond the boundary, due to lack of access to third party land. It should be noted that access constraints during the survey meant that certain areas (e.g., dense vegetation and steep ditches) could not be assessed for the presence of badger setts.

## 3 Results

### 3.1 Desk Study

#### Overview

- 3.1.1 Full details of the desk study can be found in Appendix B.

#### Designated Sites

- 3.1.2 The Mersey Estuary Special Protection Area (SPA) and Ramsar is the only site of international importance within 10km of the site, lying 3.6km southwest from the FF Development Site (north of the canal) and 3.2km southwest at its closest point from the wider FF Allocation Site (south of the canal). The Mersey Estuary is an internationally important site for wildfowl and consists of large areas of intertidal sand and mudflats. The site also includes an area of reclaimed marshland, saltmarshes, brackish marshes and boulder clay cliffs with freshwater seepages. The Mersey Estuary is also designated as a Site of Special Scientific Interest (SSSI) and the FF Allocation Site lies within the SSSI Impact Risk Zone (IRZ).
- 3.1.3 There are three Local Nature Reserves (LNR's) present within 2km of the site; Oxmoor Wood LNR, Wigg Island LNR and Dorchester Park LNR. The closest of which is Oxmoor Wood LNR which is located 1.7km south from the FF Development Site (north of the canal) and 720m south at its closest point from the wider FF Allocation Site (south of the canal).
- 3.1.4 The RECORD request returned records of 39 Local Wildlife Sites (LWS) within 2km of the FF Allocation Site, with the majority located over 1km to the land south of the canal. There are no LWS's present within the FF Development Site, however there are three LWS's located within the FF Allocation Site south of St Helen's Canal associated with the lagoon area:
- Upper Mersey Estuary LWS covers a large proportion of the southern parcel of the FF Allocation Site, south of St Helen's Canal, as well as the River Mersey to the south and south east of the site. It is designated for the occurrence of migratory birds, including rarities and protected species.
  - Widnes Warth Saltmarsh LWS covers a small portion of the southern parcel of the FF Allocation Site, south of St Helen's Canal and west of the Upper Mersey Estuary LWS. It is designated for the presence of saltmarsh and important wildfowl populations.
  - Upper Mersey Estuary Intertidal Areas and Mudflats LWS also covers a small portion of the southern parcel of the FF Allocation Site, south of St Helen's Canal, as well as the River Mersey to the south west of the site. This LWS is designated for important wildfowl populations and the presence of large areas of intertidal sand and mudflats.
- 3.1.5 Gatewarth LWS is situated adjacent to the east of the site at the pumping station and it is designated for its wild bird populations. There are also four sections of St Helen's Canal LWS which lie between the FF Development Site and remainder of the FF Allocation Site south of the canal. These LWSs are designated for its eutrophic standing water habitat and its margins of reedbed (tall-swamp vegetation) and a small amount of developing wet woodland.

#### Important Habitats

- 3.1.6 Data from the Natural England's Priority Habitat Inventory dataset returned two Habitat of Principal Importance (HPIs under Section 41 of NERC Act, 2006) from within 1km of FF Allocation Site, namely deciduous woodland and coastal saltmarsh. Deciduous woodland is present across the FF Allocation Site with the coastal saltmarsh present south of the lagoons on the edge of the FF Allocation Site.
- 3.1.7 No ancient woodland was found to be located within or adjacent to the FF Allocation Site.

#### Records of Protected and Notable Species

- 3.1.8 Desk study results for relevant protected and notable species are discussed within the relevant sections below.

## 3.2 Habitats

3.2.1 Habitat types recorded across the FF Allocation Site and their distribution and composition through the site have been discussed below. For ease of discussion habitats have been split between the north and south of the canal. The UKHAB Classifications described below have been illustrated on the UKHAB plan that can be found at Appendix A.

### Habitats north of the Canal

3.2.2 Overall the site north of the canal is dominated by hardstanding and buildings associated with the decommissioned power station, and associated infrastructure. The coal stock yard is located to the west of the main power station and is encircled by a railway loop (Phase 1 Redevelopment). Artificial concrete drainage channels are located around and near the coal stock yard and are likely to have originally been associated with the operation of the coal power station but are now abandoned and are collecting run-off and rainwater. There are several arable fields towards the north and east of the site, a fishing pond is located towards the northwest, and the former SSE Fiddlers Ferry nature reserve area (non designated) is located towards the northeast of the site. Present within and around the perimeter of the site are areas of woodland and scrub. Scattered throughout the site are areas of grassland habitats with areas of scattered scrub, tall herb and ephemeral/ruderal vegetation. Full details per habitat type have been provided below.

#### Grassland

##### *g3c Other Neutral Grassland, 10 Scattered Scrub and/or 16 Tall Herb*

- 3.2.3 Other neutral grassland is scattered throughout the site, with areas interspersed with scattered scrub and/or tall herb species. It is the dominant habitat surrounding the cooling towers to the north, with a sparse sward at a height of approximately 20-50cm.
- 3.2.4 Species present within the neutral grassland habitat include red fescue *Festuca rubra* (F), sweet vernal grass *Anthoxanthum odoratum* (O), Yorkshire fog *Holcus lanatus* (O), soft-rush *Juncus effusus* (O), crested dog's tail *Cynosurus cristatus* ® and meadow fescue *Festuca pratensis*®(R). Forb species include; field horsetail *Equisetum arvense* (F), ribwort plantain *Plantago lanceolata* (F), common fleabane *Pulicaria dysenterica* (F), common hogweed *Heracleum sphondylium* (O), creeping thistle *Cirsium arvense* (O), red clover *Trifolium pratense* (O), dandelion *Taraxacum officinale* agg. (O), meadow buttercup *Ranunculus acris* (O), common sorrel *Rumex acetosa* (O), spear thistle *Cirsium vulgare* (O), selfheal *Prunella vulgaris* (O), yarrow *Achillea millefolium* (O), black medick *Medicago lupulina* (O), common vetch *Vicia sativa* (R), and tall melilot *Melilotus albus* (R).
- 3.2.5 Other areas adjacent to the access tracks to the south of the site were dominated by tall herb and rough grassland species such as common evening-primrose *Oenothera biennis*, perforate St John's wort *Hypericum perforatum*, false oat grass *Arrhenatherum elatius*, cock's foot *Dactylis glomerata*, hemp agrimony *Eupatorium cannabinum*, common ragwort *Jacobaea vulgaris*, common bird's-foot-trefoil *Lotus corniculatus*, teasel *Dipsacus fullonum*, and great mullein *Thapsus thapsus* (R).
- 3.2.6 Scattered scrub species include willow *Salix* spp. (A), bramble *Rubus fruticosus* agg. (O), hawthorn *Crataegus monogyna* (O), butterfly bush *Buddleja davidii* (O), and the tall herb rosebay willowherb *Chamerion angustifolium*, was commonly interspersed with the scrub species.
- 3.2.7 Within the nature reserve area, the sward height is tall and areas are overgrown with tall herb and scrub species. Species include Yorkshire fog, creeping bent, red fescue, cock's-foot, sweet vernal-grass, common fleabane, common vetch, meadow buttercup, great willowherb, meadowsweet, meadow crane's-bill, water mint and floating sweet grass. Hay meadow indicators are rare or absent. Moderately species rich grassland that, due to the lack of management, is becoming overgrown with tall herb species and scrub.
- 3.2.8 This habitat is extremely widespread in the UK and is not listed as a NERC Act 2006 Section 41 habitat of principal importance. Given the extents of this habitat, the presence of areas of similar and better quality grassland in the surrounding land, it is considered that grassland present is of no greater than site level importance.

*g4 Modified Grassland, 66 Frequently Mown, 700 Open Space Around Premises*

- 3.2.9 Small pockets of modified grassland are present across the centre and north of the site. This intensively managed grassland is of a uniform, very short sward (c. 5cm). A low diversity of grass species and forbs were observed within the sward, with species comprising perennial rye-grass *Lolium perenne* (D), red fescue *Festuca rubra* (F), annual meadow grass *Poa annua* (O), white clover *Trifolium repens* (O), common daisy *Bellis perennis*, creeping buttercup *Ranunculus repens* (O), and common ragwort *Se@io jacobaea* (R).
- 3.2.10 This habitat is extremely widespread in the UK and is not listed as a NERC Act 2006 Section 41 habitat of principal importance. The modified grassland on site is of low species diversity, does not contain notable botanical species and an abundance of similar modified grassland/modified grassland of slightly higher species diversity will be commonly occurring within the surrounding residential gardens, industrial premises and farmland in the surrounding area. The modified grassland on site is therefore considered to be of importance to nature conservation at no more than the site level.
- 3.2.11 Short sward grassland was also recorded within a football pitch towards the north (G10) that has been recently ploughed. A full assessment of this habitat was not possible and the areas has been assumed to be in good condition.

*g1c Bracken*

- 3.2.12 Bracken *Pteridium aquilinum* was recorded in one location near the western boundary of the site (average height of 1m). Whilst bracken can create conditions that are suitable for supporting a number of Priority Species (e.g. adder) and can act as a nursery for new woodland species e.g. bluebell *Hyacinthoides non-scripta*, the areas of bracken encountered on site were species-poor.
- 3.2.13 This habitat is not listed as a NERC Act 2006 Section 41 habitat of principal importance and from a habitat (plant species) perspective only, overall was considered to be of site level value only due to the bracken being species-poor and limited in extent.

Heathlands and Shrubs

*h3h Mixed Scrub with 11 Scattered trees and 16 Tall Herb*

- 3.2.14 Mixed scrub is present scattered throughout the site, in particular along the railway and towards the south of the site. The scrub has developed through succession from bare ground. The areas of scrub were also interspersed with tall herb vegetation and scattered trees.
- 3.2.15 Species recorded in the scrub habitats include bramble *Rubus fruticosus agg.* (D), willow *Salix spp.* (A), hawthorn *Crataegus monogyna* (O), butterfly bush *Buddleja davidii* (O), elder *Sambucus nigra* (O), dog rose *Rosa canina* (O), rowan *Sorbus aucuparia* (O) and hazel *Corylus avellana* (O). Young or semi-mature specimens of silver birch *Betula pendula* (O), willow (O), sycamore *Acer pseudoplatanus* (O), ash *Fraxinus excelsior* (O), and Leyland cypress *Cupr@us x leylandii* (R). Other species recorded include common nettle *Urtica dioica* (O), hedge bindweed *Calystegia sepium* (O), male fern species *Dryopteris spp.* (O), common ivy *Hedera helix* (O), rosebay willowherb *Chamerion angustifolium* (O), Herb Robert *Geranium robertianum* (O), tutsan *H@ricum androsaemum* (R), and t@el *Dipsacus fullonum* (R).

- 3.2.16 Scattered willow, hawthorn and bramble scrub was recorded within some of the grassland habitats.
- 3.2.17 Scrub is not listed in the NERC Act 2006 and the habitat comprises predominantly commonly occurring species. For these reasons this habitat is considered to be of no greater than site level importance.

*h3d Bramble Scrub*

- 3.2.18 Small areas of scrub dominated by only bramble is present scattered throughout the site.
- 3.2.19 Bramble scrub on their own are not listed under the NERC 2016, but as a whole they provide a valuable habitat for biodiversity and a variety of opportunities wildlife. Given the poor species diversity of dense bramble scrub, it is considered that they are of importance to nature conservation at the site level.

Woodland and Forest

*w1f7 Other Lowland Mixed Deciduous Woodland, 36 Plantation, 57 Young Trees – Self-Set*

- 3.2.20 An area of semi-mature broadleaved woodland located within the west of the site surrounding the coal pad to the north and west is present. This woodland appears to have been planted around the time of the power station opening but is now a mixture of planted and self-seeded trees. The woodland is a mixture of semi-mature/early mature and young trees. Species recorded include sycamore *Acer pseudoplatanus* (D), silver birch *Betula pendula* (D), ash *Fraxinus excelsior* (A), pedunculate oak *Quercus robur* (A), alder *Alnus glutinosa* (A) and willow *Salix spp.* (O). Shrub layer included dogwood *Cornus sanguinea* (O), elder *Sambucus nigra* (O), butterfly bush *Buddleja davidii* (O), and brambles *Rubus fruticosus agg.* (O). The field layer comprised tall herb species including common nettle (F), creeping thistle *Cirsium arvense* (O), soft rush *Juncus effusus* (O), hart's tongue *Asplenium scolopendrium* (O), wood avens *Geum urbanum* (O), cow parsley *Anthriscus sylvestris* (O), false brook *Brachypodium sylvaticum* (R), enchanter's nightshade *Circaea lutetiana* (R), and red campion *Silene dioica* (R). Scattered Himalayan balsam *Impatiens glandulifera* is present within woodland in the southwest corner.
- 3.2.21 Towards the north of the site semi-mature broadleaved woodland was recorded along the A562. From past aerial imagery, the woodland appears to have been planted around the time of the power station opening but is now a mixture of planted and self-seeded trees. A review of the Natural England's Priority Habitat Inventory database (data.gov.uk) identified this area to be Deciduous Woodland Habitat of Principal Importance (HPI). Species include pedunculate oak, black poplar sp., silver birch, wych elm, alder, wild cherry, ash, willow sp. and alder. There is a dense scrub layer including hazel, dogwood, hawthorn, dog rose, holly and blackthorn. Ground flora include wood avens, herb-robert, and bramble agg.
- 3.2.22 Towards the northeast of the site semi-mature broadleaved woodland was recorded along the A562 within the nature reserve area. The woodland is a mixture of planted and self-seeded trees, with slightly more mature broadleaved woodland in the southern section of the nature reserve area. Developed through succession from scrub. A review of the Natural England's Priority Habitat Inventory database (data.gov.uk) identified this area to be Deciduous Woodland Habitat of Principal Importance (HPI). Species include pedunculated oak, black poplar sp., silver birch, wych elm, wild cherry, ash, willow sp. and alder. There is a dense scrub layer including hazel, dogwood, hawthorn, dog rose, holly and blackthorn. Ground flora include wood avens, herb-robert, bramble agg., meadowsweet, common fleabane and great willowherb spp.
- 3.2.23 In the southeast of the site is an area of plantation broadleaved woodland which is situated adjacent to the railway line. The woodland is dominated by planted immature trees including alder, willow, ash, hawthorn, hazel, elder, and field maple. The ground layer is dominated by rank grasses and tall herb species, including common nettle, creeping thistle, common fleabane, bramble agg., and willowherb spp.
- 3.2.24 A small square area of plantation broadleaved woodland is present towards the northwest of the site, surrounded by arable fields. Species include sycamore, ash, pedunculate oak, holly, elder, and hazel.
- 3.2.25 An area of coniferous woodland dominated by coniferous trees is situated towards the north of the site near the northern cooling towers. This area is dominated by scots pine, with sporadic field maple, oak and willow sp. along the field margin. The ground layer is bare.
- 3.2.26 The other lowland mixed deciduous woodland type on site has some characteristics that may match with NERC Act 2006 Lowland Mixed Deciduous Woodland, but is not considered to be a high quality example. The other lowland mixed deciduous woodland type on site comprises of some woodland which is included within the Semi-natural Woodland in the Cheshire region Biodiversity Action Plan. The broadleaved semi-natural woodland on site is considered to be of importance to nature conservation at the Local level.

Urban

*u1b5 Developed Land, Sealed Surface: Buildings*

3.2.27 A number of buildings are currently present on site including administration buildings, workshops, reinforced concrete cooling towers, and coal plant maintenance buildings, although these are due to be demolished from summer 2023 onwards under demolition consent. The structures are predominately of steel frame construction with cladding, constructed of reinforced concrete, or brick built.

3.2.28 Developed land and buildings are not listed in the NERC 2016, have limited ecological value overall and are considered to be of no greater than site level importance.

*u1b6 Developed Land, Sealed Surface: Other Developed Land*

3.2.29 Areas of development land pertain to the sealed surfaces of the roads, pedestrian footpaths and the coal stock yard within the site. This habitat is devoid of vegetation.

3.2.30 Developed land is not listed in the NERC 2016 and given the limited floral growth and lack of species diversity present; this habitat is overall considered to be of no greater than site level importance.

*u1c Artificial Unvegetated, Unsealed Surfaces, 107 Railway*

3.2.31 The areas of artificially unsealed surfaces mainly consist of areas of ballast associated with the railway line that loops the coal stock yard. This area was largely devoid of vegetation, with some tall herb and scrub species for example butterfly bush, false oat grass *Arrhenatherum elatius*, brambles, willowherb species and scattered Himalayan balsam to the southwest.

3.2.32 Unsealed surfaces are not listed in the NERC Act 2016 and given the limited floral growth and lack of species diversity present; this habitat is overall considered to be of no greater than site level importance.

*u1c Artificial Unvegetated, Unsealed Surfaces, 73 Bare Ground and 17 Ruderal/ Ephemeral*

3.2.33 The areas of artificially unsealed surfaces mainly consist of access tracks or areas that have been disturbed in the past, leaving exposed bare ground. Some areas have short patchy plants covers with species such as black medick *Medicago lupulina*, colt's-foot *Tussilago farfara* and common fleabane *Pulicaria dysenterica*.

3.2.34 Artificial vegetated, unsealed surfaces are not listed in the NERC Act 2016 and given the limited floral growth and lack of species diversity present; this habitat is overall considered to be of no greater than site level importance.

Rivers and Lakes

*r1 Standing Open Water and Canals*

3.2.35 Man-made concrete water channels (approximately 1-3m wide), are located to the south of the site and around the cooling towers to the north. The channels have a steep sloped or vertical concrete sides with a bank height ranging from 1-2m, and supports approximately 2-3m of water with some areas of algae build up. The channels lack aquatic or marginal vegetation.

3.2.36 The open areas of water on the site are not designated as a main river by the Environment Agency (EA). The water channels are likely to have been subject to run-off and disturbance from the operation of the power station. Water channels are not listed as in the NERC Act 2016 and this habitat is overall considered to be of no greater than site level importance.

3.2.37 There are two ponds present within the nature reserve area within the northeast of the site at the time of survey, a pond situated near the ERC building (P1) and one further to the southwest (P2). P1 had marginal species include common reed, bulrush, yellow flag iris, great willowherb and purple loosestrife, while P2 had very low water levels, dominated by bulrush and surrounded by willow scrub.. During previous historic surveys great crested newts have been recorded in both ponds, and as such these ponds have been categorised as Priority Habitat. These two Priority Habitat ponds on site are considered to be of importance to nature conservation at the Local level.

3.2.38 A large fishing pond is located towards the north of the site. The pond is surrounded by dense scrub with willow sp. and alder trees. Bulrush and soft rush are situated along the margins. A negative eDNA



result from a recent great crested newt surveys conducted by Dalcour Maclaren (2022) was obtained, and as such this pond has not been categorised as a Priority Habitat.

- 3.2.39 A number of other historic ponds across the site were found to either be dry and/or overgrown with herbaceous and/or scrub vegetation.

#### Cropland

##### *c1b Temporary grass and clover leys*

- 3.2.40 The arable fields located to the northeast of the site have been categorised as temporary grass and clover leys and has been sown with perennial rye grass silage mix. A field within the southeast of the site has also been categorised under this habitat type.

##### *c1c Cereal crop/c1c5 winter stubble*

- 3.2.41 The two most fields adjacent to the Widnes Road within the northwest of the site consist of cereal crop as well as the three fields south of the nature reserve area to the east of the site.
- 3.2.42 Cropland fields are not listed in the NERC Act 2016 and given the limited floral growth and lack of species diversity present; this habitat is overall considered to be of no greater than site level importance.

#### h2 Hedgerow

- 3.2.43 There are two hedgerows within the site that classify as priority habitat. One hedgerow bounds a cereal crop field towards the north of the site and along the western edge of an access road and the other to the east of the access road. These hedgerows are considered priority habitat but given the short extent and lack of connectivity have been considered at no greater than site level importance.

### **Habitats South of the Canal**

- 3.2.44 Overall the site south of the canal is dominated by large operational ash lagoons that stored the ash material from the power station. It is thought that throughout its core operating periods, Fiddlers Ferry produced approximately 300,000 tonnes of ash each year. This ash is currently being extracted across various 'lagoons' with the future intention to restore the area for ecological and recreation purposes and create a diverse range of habitats to support a range of protected species.

#### Grassland

##### *g3c Other neutral grassland*

- 3.2.45 Approximately 10ha of land south of the canal was classified as other neutral grassland, with various sward heights. These areas are predominately located to the east found on ash spoil mounds (ONG2 – ONG 6), with small areas along access tracks leading to the south (ONG1), and a small patch in the northeast corner (ONG7).
- 3.2.46 Areas of grassland were found to include nine frequent species, false oat grass *Arrhenatherum elatius*, cock's-foot *Dactylis glomerata*, bent *Agrostis spp.*, red fescue *Festuca rubra*, common knapweed *Centaurea nigra*, ribwort plantain *Plantago lanceolata*, oxeye daisy *Leucanthemum vulgare*, cleavers *Galium aparine* and spear thistle *Cirsium vulgare*. The latter two as well as cock's foot and bent, were frequent in poor conditioned grassland.
- 3.2.47 Occasional species include common birds-foot trefoil *Lotus corniculatus*, common fleabane *Pulicaria dysenterica*, common mouse-ear chickweed *Cerastium fontanum*, common vetch *Vicia sativa*, cut leaved cranesbill *Geranium dissectum*, creeping buttercup *Ranunculus repens*, devil's-bit scabious *Succisa pratensis*, goat's beard *Tragopogon pratensis*, grass vetchling *Lathyrus nissolia*, hoary plantain *Plantago media*, red clover *Trifolium pratense*, silverweed *Potentilla anserina*, southern marsh orchid *Dactylorhiza praetermissa*, sweet vernal grass *Anthoxanthum odoratum*, yarrow *Achillea millefolium*, yellow oatgrass *Trisetum flavescens*. Poor condition grassland had occasional growth of common nettle *Urtica dioica*, cow parsley *Anthriscus sylvestris*, and creeping thistle *Cirsium arvense*.

- 3.2.48 Rarer occurrences of greater knapweed *Centaurea scabiosa*, hairy tare *Vicia hirsute*, lesser trefoil *Trifolium dubium* and wild carrot *Daucus carota* were also recorded in these areas.
- 3.2.49 Two invasive species were found, these were situated on the east of the site: Giant hogweed *Heracleum mantegazzianum*, and Japanese knotweed *Reynoutria japonica*.
- 3.2.50 This habitat is extremely widespread in the UK and is not listed as a NERC Act 2006 Section 41 habitat of principal importance. However given the extents of this habitat and its moderate/good habitat condition it is considered that grassland present is of Local level importance.

#### Heathland and shrub

##### *h3h Mixed scrub*

- 3.2.51 A large area of the site was occupied by mixed scrub totalling approximately 40ha (SC1 – SC17). This habitat was recorded predominately surrounding lagoons, growing along the bunds and across the northern site boundary, with some areas observed as maturing and developing into woodland with scattered trees.
- 3.2.52 Scrub was abundant with hawthorn *Crataegus monogyna* and willow *Salix spp.*, with frequent occurrences of alder *Alnus glutinosa*, bramble *Rubus fruticosus agg.*, dogwood *Cornus sanguinea*, elder *Sambucus nigra*, rowan *Sorbus aucuparia*, silver birch *Betula pendula*, sycamore *Acer pseudoplatanus*. Ash *Fraxinus excelsior*, Dog rose *Rosa canida*, field maple *Acer campestre*, gorse *Ulex europaeus*, oak *Quercus robur*, Scot's pine *Pinus sylvestris* and wayfaring-tree *Viburnum lantana*, were also recorded as occasional.
- 3.2.53 Three invasive species were recorded, giant hogweed *Heracleum mantegazzianum* located in the northeast (south of the canal), Himalayan balsam *Impatiens glandulifera* located along the bunds of the western most lagoon, and Japanese rose *Rosa rugosa* also located around the western lagoon.
- 3.2.54 Scrub is not listed in the NERC Act 2006 and the habitat comprises predominantly commonly occurring species. For these reasons this habitat is considered to be of no greater than site level importance.

##### *h3d Bramble scrub*

- 3.2.55 A much smaller area of 1.5ha was occupied by scrub heavy dominated by bramble. These areas mostly occurred along the east boundary in four small patches and two located in the far northeast corner, occurring adjacent or surrounded by mixed scrub (BS1).
- 3.2.56 Scrub is not listed in the NERC Act 2006 and the habitat comprises predominantly commonly occurring species. For these reasons this habitat is considered to be of no greater than site level importance.

#### Wetland

##### *Reedbed f2e*

- 3.2.57 Wetland reedbeds were predominately found along the central aqueduct (SW1 and SW2) and the northwest corner of the site (SW5). A small patch was observed adjacent to the lagoons (SW3) as well as patches occurring either side of the railway line in the northeast (SW6). In areas, common reed formed a mosaic with willow scrub *Salix sp.* as well as with the saltmarsh habitats occurring adjacent to the River Mersey.
- 3.2.58 Other than the dense growth of common reed *Phragmites australis*, species recorded in these habitats as frequent, included hemlock water-dropwort *Oenanthe crocata*. Other species species that were occasional included, creeping bent *Agrostis stolonifera*, hemp-agrimony *Eupatorium cannabinum* and wild angelica *Angelica sylvestris*. Rarer occurrences of greater pond sedge *Carex riparia* and nettles and bulrush *Typha sp.* were also recorded.
- 3.2.59 Reedbed is listed as a S41 Priority Habitat under the NERC Act 2006 and under the Cheshire BAP of 'Fen, Marsh and Swamp'. However the areas are relatively small in size and unconnected. Therefore onsite areas of reedbed is considered to be of importance to nature conservation at the local level.

#### Woodland and forest

*w1g Other woodland broadleaved*

- 3.2.60 A relatively small parcel of woodland is located in the south of the site adjacent to the western most lagoon (W1). This woodland is highly dominated with silver birch *Betula pendula*, with other species such as buddleja *Buddleja davidii*, dog rose *Rosa canida*, dogwood *Cornus sanguinea*, goat willow *Salix caprea*, gorse *Ulex europaeus*, oak *Quercus robur* and rowan *Sorbus aucuparia* recorded as occasional. W1 was conditioned as poor quality.
- 3.2.61 The broadleaved woodland on site has some characteristics that may match with NERC Act 2006 Lowland Mixed Deciduous Woodland but is not considered to be a high quality example. The broadleaved semi-natural woodland on site is considered to be of importance to nature conservation at the local level.

Rivers and lakes

*Standing open water and canals; 108 Reservoir*

- 3.2.62 Located in the south of the south, surrounded by woodland is a temporary 50m by 50m artificial reservoir (P1). This small area of standing water is a temporary resource for construction to pump water. No vegetation was recorded within the water, and very little was noted around the margins. Only small patches of common reed (*Phragmites australis*) were present. This area of water is not considered a pond and does not qualify as a priority habitat.
- 3.2.63 At the time of survey there were three 'lagoons' that contained some level of standing water. Ash extraction is ongoing including the most northern two lagoons (known as A&B), and this will require complete/partial de-watering. De-watering of the southern settling lagoon (C) is required to facilitate fish removal in line with current requirements of the EA. Currently ash extraction happens in a cycle across the site, so there is always some standing water available in a lagoon at any one time. Only LAG3 was recorded with aquatic vegetation, with water-crowfoot *Ranunculus sp.*. Young silver birch was seen emerging from the lagoons. Other noted species using these lagoons include: Canada goose *Branta canadensis*, coot *Fulica atra*, great crested grebe *Podiceps cristatus*, and sand martins *Riparia riparia*. All areas of reservoirs were conditioned as poor quality.

*Sparsely vegetated land; 17 Ruderal/ ephemeral*

- 3.2.64 Significant reduction in water levels in LAG1 and LAG2, has resulted in a large area of drawdown community early successional growth, where 90% of the land was bare ground. Both lagoons had similar species compositions with records of occasional growth of broad-leaved willowherb *Epilobium montanum*, celery leaved buttercup *Ranunculus sceleratus*, creeping bent *Agrostis stolonifera*, curled dock *Rumex crispus*, great willowherb *Epilobium hirsutum* and weld *Reseda luteola*. Rarer occurrences of bur-marigold species *Bidens sp.* and toad rush *Juncus bufonius* were also recorded for both lagoons. Swan mussel *Anodonta cygnea* shells were also present. The only difference highlighted, LAG2 appeared to be more terrestrial around the edges. Frequent butterfly bush shrubs *Buddleja davidii* were growing along with the emerging scrub in these areas.
- 3.2.65 Drawdown zones for both LAG1 and LAG2, held sparsely vegetated land found to be in a poor condition.

Urban

*Open mosaic habitats on previously developed land (u1a)*

- 3.2.66 Only one area on site was categorised as an open mosaic habitat (OM1) on the east of the site below LAG2. The vegetation growth in this area, showed indicators of early successional communities: Annuals, flower-rich grassland, inundation species, lichens, mosses and open grassland. OM1 were also reported to contain at least three different species of orchid. The most prevalent, southern marsh orchid was recorded as occasional to abundant, whereas the common spotted orchid *Dactylorhiza fuchsii* and other hybrids *Dactylorhiza sp.* were recorded as occasional.
- 3.2.67 The open mosaic habitat present onsite matches the criteria for S41 Priority Habitat under the NERC Act 2006. Therefore this open mosaic habitat is considered to be of importance to nature conservation at the Local level.

#### *u1b Developed land, sealed surface*

- 3.2.68 Small areas of sealed surface were found within the land south of the canal and these areas were predominantly access tracks used to access all areas of the site.

#### *u1c Artificial unvegetated, unsealed surface*

- 3.2.69 Three main areas of the site were categorised as artificial unvegetated, unsealed surface, labelled A2 – A4. One of these areas includes the lagoon that is currently an active quarry. The active quarry (A2) as well as the area A4, can both be found adjacent to each other on the west of the site. A3 can be found more central, adjacent to LAG3.

#### Marine inlets and transitional waters

##### *t2a Coast saltmarsh*

- 3.2.70 Coastal saltmarsh covers a large area, found along the southern boundary spanning from the northwest corner to the northeast corner of the site. The total area of salt marsh was recorded as 24ha. This habitat separates the rest of the site to the river Mersey. Recorded species include the more prevalent common couch *Elymus repens* and smaller patches of common reed *Phragmites australis*. All areas of coastal saltmarsh were found to be in a good quality condition.
- 3.2.71 Coastal saltmarsh is listed as a S41 Priority Habitat under the NERC Act 2006 and under the Cheshire BAP. The area present both within the site boundary and adjacent is considered to be significant. Therefore, onsite areas of saltmarsh is considered to be of importance to nature conservation at the County level.

##### h2 Hedgerow

- 3.2.72 A single hedgerow along the northwest boundary adjacent to the canal (H1) was found to be present. The hedgerow is recorded as species poor, intact and mature, abundant with hawthorn *Crataegus monogyna*, with occasional recordings of blackthorn *Prunus spinosa*, elder *Sambucus nigra*, field maple *Acer campestre* and hazel *Corylus avellana*. This hedgerow is considered priority habitat but given the short section and lack of connectivity it has been assessed as no greater than site level importance.

### **3.3 Invasive Species**

#### Invasive non-native plant species

- 3.2.73 The invasive plant species Himalayan balsam, giant hogweed and Japanese knotweed were recorded at the site. Giant hogweed was found at two locations within the lagoon area and one location within the power station area located at SJ 54336 85837. Himalayan balsam was found in various locations across the site, with a notable increase in its extent from the previous year's. Japanese knotweed was identified in one area of the site, located at SJ 53671 86131. Several immature individual plants were recorded, and evidence of previous treatment was evident at the location.

### **3.4 Protected and Notable Species**

#### Amphibians

- 3.2.74 Record returned a total of 27 great crested newt records from within 2km of the site. Great crested newts have been historically recorded within the grounds of the nature reserve area at Fiddler's Ferry; all recorded in 2015/2016. A total of 74 records of other common amphibian species from within 2km of the site were also returned, including 54 smooth newt *Lissotriton vulgaris*, 17 common frog *Rana temporaria*, and three common toad *Bufo bufo*.

- 3.2.75 A search of MAGIC revealed three European Protected Species Licences (EPSL) in relation to GCN have been granted within 2km of the site. All again were associated with the Fiddlers Ferry nature reserve area in the northeast corner of the site, from 2014-2016.
- 3.2.76 The area south of the canal and the western half of the land north of the canal, largely falls within a Green GCN District Level Licensing (DLL) Impact Risk Zone, meaning the zone contain sparsely distributed GCN and are less likely to contain important pathways of connecting habitat for this species. While the eastern half of the land north of the canal falls within the Amber Impact Risk Zone, meaning these areas may comprise important connecting habitat that aids natural dispersal and GCN may be present. This includes the nature reserve area.
- 3.2.77 Three ponds are situated within the boundary of Fiddler's Ferry, in particular two are present within the nature reserve area to the northeast of the site and historically these ponds were known to support a medium population of GCN. Newt fencing surrounds the nature reserve area, albeit it in a state of disrepair. A further seven ponds are located within 250m of the FF Allocation boundary, two within the chemical works to the west (which were previously discounted) and five to the west associated with the golf course. Recent surveys (Dalcour Maclaren, 2022) of the three onsite ponds and two offsite ponds to the west, either found them to be completely unsuitable or obtained a negative eDNA results. The ponds to the west have yet to be subject to a GCN survey and may offer potential breeding habitat for GCN.
- 3.2.78 Due to the brackish nature of the waterbodies located within the south of the canal and the relative terrestrial isolation created by the St Helen's Canal and the River Mersey, the newt species are unlikely to be present within this area.
- 3.2.79 The site north of the canal also offers suitable terrestrial habitat for GCN and other amphibians, including woodland, scrub, rough grassland and tall herb vegetation. The sealed surfaces, modified grassland, sparse sward other neutral grassland and unsealed surfaces with sparse ephemeral vegetation which comprised the majority of the vegetation on the site, provide no suitable terrestrial habitat for sheltering GCN due to its uniform short sward height or sparse vegetation (i.e., absence of dense, long sward/tussocks for shelter opportunities). The sealed surfaces, short and sparse sward would lead to exposure to predators so is sub-optimal, but would still provide some possible foraging and commuting potential if GCN passed through the area.

#### Badger

- 3.2.80 Record returned three badger meles records from within 2km of the site. The closest record, dated 2012, is situated 1km southwest of the site.
- 3.2.81 A potential outlier badger sett and field signs of badgers (i.e., dung pits, clear badger path, footprints and badger hairs) were observed during the 2022 survey in the woodland immediately to the north of the coal pad, although this was found to be inactive on subsequent visits. No other badger field signs were observed within the remaining site to the north of the canal.
- 3.2.82 The habitats within the north of the canal predominately comprise of sealed surfaces, these areas are considered to offer very few foraging and sett creation opportunities for badgers. The areas of dense scrub, grassland habitats, woodland and hedgerow on site provide potential suitable sett building, commuting and foraging habitat for badger. Greater abundance of sett building and foraging habitat is present within the west of the site.
- 3.2.83 Limited badger surveys of the land south of the canal have been undertaken. However surveys undertaken in 2020 (ELM, 2020) identified an active badger sett within scrub along one of the northern lagoons. During the site survey undertaken by Arcadis in November 2020, the sett entrances were covered by dense Bramble scrub, but several mammal paths and a latrine were found adjacent to it. No additional signs of badger activity were recorded during the 2023 visit.
- 3.2.84 Badgers are highly dynamic species and can create new setts overnight, the wider Fiddler's Ferry site provides an extensive area of suitable habitat for the species, which is highly connected to the wider landscape. Badgers have been confirmed to be present within the site.

## Bats

- 3.2.85 Record returned a total of 21 records of four different bat species from within 2km of the site. Of these, one record related specifically to an unidentified pipistrelle species *Pipistrellus* spp. bat roost, dated 2012, situated approximately 2km northeast from the site. The remaining 20 records pertain specifically to records of bat activity, droppings and casualty from within 2km of the site. Field records returned include common pipistrelle *Pipistrellus pipistrellus* (15 records), soprano pipistrelle *Pipistrellus pygmaeus* (two records), unidentified pipistrelle bat species (two records) and noctule *Nyctalus noctula* (one record).
- 3.2.86 A search of MAGIC returned no recent EPS licence relating to bats from within 2km of the site.

### *Roosting Bats*

- 3.2.87 Structures within the site were assessed for their suitability to support roosting bats. The majority structures within the main part of the power station are of steel frame construction with cladding, reinforced concrete structures or low lying buildings (one or two storey) of steel framed, steel sheeting and brick construction with flat roofs. The buildings within the site were all assessed to have negligible bat roosting suitability. The only exception to this is the Education Resource Centre (ERC) building in the Fiddlers Ferry Nature Reserve area which is brick built with wooden cladding and has a tiled pitched roof. The ERC building was assessed to have moderate suitability for roosting bats.
- 3.2.88 The majority of the trees on site were young or semi-mature and are planted or self-seeded, no trees that were surveyed within the site were found to display potential features that could support roosting bats and, therefore, are considered to display negligible suitability for roosting bats. However an exhaustive assessment of every tree within the nature reserve woodland area was not undertaken. In 2020, ELM identified a large Poplar *Populus* sp. tree within the nature reserve woodland area as having high roosting potential, although this wasn't confirmed in the latest surveys.

### *Foraging and Commuting Bats*

- 3.2.89 Numerous habitats within the site offer potential suitable foraging/commuting habitats for bats given the invertebrate interest they are likely to support, although no detailed bat activity surveys have yet been undertaken. These include all neutral grassland areas, scrub, saltmarsh, reedbeds and woodlands. In addition, linear features such as the aqueduct valley, watercourses and hedgerows offered foraging opportunities as well as acting as commuting corridors.
- 3.2.90 The site north of the canal has been, in line with current guidance (Collins, 2016), assessed as providing moderate foraging and commuting habitat for bats. The land south of the canal is likely to offer greater foraging opportunities given the habitats present and connective habitat of the River Mersey.

## Birds

### *Historic Data Summary*

- 3.2.91 The desk study returned records of 93 species of bird within 2km of the site. Of these, 14 were Local Biodiversity Action Plan (LBAP) species, 12 species were included in the UK Biodiversity Action Plan (UKBAP), 22 species were listed under S41 of the NERC Act (2006), 26 species were listed in Schedule 1 of the Wildlife and Countryside Act 1981 (as amended), 23 species were red listed Birds of Conservation Concern (BoCC), and 62 were amber listed BoCC.
- 3.2.92 During a 2009 survey (Thomson Ecology, 2009) buzzard *Buteo buteo* and kestrel *Falco tinnunculus* were recorded foraging within the site.
- 3.2.93 ELM Consultants undertook quarterly bird counts as part of the ecology monitoring contract between 2013 and 2020. 76 bird species were recorded annually between 2013-2017 (ELM, 2013, 2014, 2015, 2016, 2017), 19 were amber listed and 17 were red listed. This included curlew *Numenius arquata*, fieldfare *Turdus pilaris* and redwing *Turdus iliacus*.
- 3.2.94 81 bird species were recorded annually in 2018, 2019 and 2020 (ELM, 2018, 2019, 2020), 24 were amber listed and 16 were red listed species. Species that were recorded in 2018 and 2019 but not

previously, included golden eye *Bucephala clangula*, mallard *Anas platyrhynchos*, short-eared owl *Asio flammeus*, stock dove *Columba oenas*, and wigeon *Anas penelope*.

3.2.95 ELM Consultants also undertook monthly surveys of the lagoons present on site between 2013 and 2020, and recorded the following:

- Lagoon A (LAG2): consistently utilised bywaterfowl, including Canada goose *Branta canadensis*, greylag goose *Anser anser* and mute swan *Cygnus olor*. Lapwing *Vanellus vanellus*, redshank *Tringa tetanus*, little ringed plover *Charadrius dubius*, common sandpiper *Actitis hypoleucos*, teal *Anas crecca* and wigeon *Mareca penelope* have also been recorded using lagoon A and it is an important feeding site for kingfishers *Alcedo atthis*.
- Lagoon B (LAG3): supports sand martin *Riparia riparia*, between 100- 200 pairs were recorded annually. Other species that have been recorded using the lagoon include mallard, pink footed goose *Anser brachyrhynchus*, starling *Sturnus vulgaris*, swallows *Hirundo rustica* and house martins *Delichon urbicum*. It has also been used by lapwings to nest and raise young.
- Lagoon C (LAG1): up to four pairs of great crested grebe *Podiceps cristatus* consistently nest on or around the reed bed. Grasshopper warbler *Locustella naevia*, reed warbler *Acrocephalus scirpaceus* and sedge warbler *Acrocephalus schoenobaenus* have been recorded in some reed beds. The ash banks are used by lapwing and ringed plover *Charadrius hiaticula* for nesting. Kingfishers, cormorants *Phalacrocorax carbo*, teal, tufted duck *Aythya fuligula* and breeding shelduck *Tadorna tadorna* have also been recorded using lagoon C. Little egrets *Egretta garzetta* have been recorded using this habitat to feed.
- Lagoon E (ONG2/3): Stonechats *Saxicola rubicola* have been recorded breeding (ELM, 2018).

3.2.96 Surveys undertaken in 2020 (ELM, 2020) identified multiple areas on site that have high value to breeding birds, including broadleaved woodland that runs adjacent to the main A562 Warrington road and in the nature reserve area. Two pairs of tawny owls *Strix aluco* were also recorded using the nest boxes in the nature reserve area. Other areas of neutral grassland, such as in Lagoon E (ONG2/3), are home to a breeding population of resident and migratory birds. There are also a number of birds that nest on the main station complex, including a pair of peregrine falcons *Falco peregrinus* that nest in the boiler house roof, a pair of ravens *Corvus corax* that nest on the gas turbine exhaust tower and at least two pairs of grey partridge *Perdix perdix* that nest in long grass adjacent to cooling towers. There is a sand martin colony on site for and over the last ten years or so the colony has been situated on Lagoon B (LAG3) and has been successfully relocated within this area in tandem with ash extraction.

3.2.97 It is understood that the boiler house building (along with other buildings within the main power station site) are to be demolished within the future phase of demolition. Impacts and associated mitigation/compensation are to be addressed as part of the application to demolish these buildings and thus, are not included within this report.

3.2.98 It should be noted that the above historic bird data was compiled up to 2020 when the power station was operational and the lagoons actively had water pumped into them as part of the power stations operational activities. Since the decommissioning of the power station the pumping of water into the lagoons has also ceased and therefore the extent of open water and habitats in and around the lagoons have changed. This change in habitat will have had an impact on the suitability to support a range of breeding and over wintering birds.

#### *Wintering bird survey 2022/2023*

3.2.99 Full details of the wintering bird survey can be found at Appendix C. In summary a total of 41 bird species were recorded during the wintering bird survey (WBS). Six Red listed species, ten Amber listed species and 23 Green listed bird species of conservation concern (BoCC) were recorded on site across the six survey visits, plus two species holding no status. Six of the bird species recorded on site are also included as species of principal importance on Section 41 of the NERC Act (2006). Two Wildlife & Countryside Act 1981 (as amended) Schedule 1 bird species were recorded using the site during the surveys, namely peregrine *Falco peregrinus* and redwing *Turdus iliacus*.

3.2.100 Overall, species diversity recorded at the site north of the canal during the WBS is considered to be low. The numbers of birds recorded is also low, with the exception of a few species such as woodpigeon (peak count of 40), wren (peak count of nine), goldfinch (peak count of 91), and robin (peak count of ten).

#### Reptiles

3.2.101 The desk study returned no reptile records from within 2km of the site.

3.2.102 Thomson Ecology Ltd. (Thomson Ecology, 2009) highlighted records of a previous small population of common lizard *Zootoca vivipara* within the site. ELM Consultants recorded one grass snake *Natrix helvetica*, within a ditch within the nature reserve area (ELM, 2014). Grass snake and common lizard have been historically confirmed to occur within the site.

3.2.103 Woodland, scrub, rough grassland, tall ruderal and ephemeral / short-perennial vegetation found throughout the site provided a mosaic of good quality terrestrial habitat for reptiles, especially towards the northeast of the site as a variety of refuge piles and hibernacula have been created as part of great crested newt mitigation within the nature reserve area. Other suitable habitats within the site are well connected to the nature reserve area and wider landscape via hedgerows and/or watercourses.

#### Otter and Water Vole

3.2.104 The desk study returned no records of otter *Lutra lutra* and ten records of water vole *Arvicola amphibius* within 2km of the site. The closest water vole records were within St Helen's Canal.

3.2.105 Historic surveys by Thomson Ecology (2005) recorded signs of water vole activity (including burrows, feeding stations, latrines and footprints) within two ditches located along a road to the northeast of the site. More recent surveys however undertaken of all ponds and ditches on the site (north of the canal) in 2020 (ELM, 2020) found no evidence of water vole or otter.

3.2.106 No evidence of water vole or otter was recorded during the survey of ditches north of the canal in 2022. The ditches/water channels were considered predominantly unsuitable for water vole or otter with concrete banks or heavily choked with vegetation and lack of connectivity.

3.2.107 Although recent surveys have found no evidence, water vole has been recorded north of the site in 2005 and there are records adjacent to the site in St Helen's Canal. No recent detailed surveys have been undertaken along the canal itself or on the lagoons south of the canal. Water vole may therefore still be present on site in low densities. The likelihood of presence of water vole on site is considered to be low.

3.2.108 There are no records of otter within 2km of the site and this species has not been recorded during previous surveys. However, otter footprints have been recorded along the River Mersey near Fiddler's Ferry (BBC, 2011) and it is thought that otter has returned to this watercourse in recent years due to improvements in water quality and fish stocks. The River Mersey is located adjacent to the south of the site and the ash-settling lagoons support fish that could attract otter into the site. The likelihood of presence of otter on site is considered to be high.

#### Invertebrates

3.2.109 A total of 110 records of 24 species of invertebrates listed under Schedule 41 of the NERC Act 2006 were returned from within 2km of the site from Record. The most recorded species include buff ermine *Spilosoma lutea* (13 records), mottled rustic *Caradrina morpheus* (13 records), rustic *Hoplodrina blanda* (13 records), dot moth *Melanchra persicariae* (12 records), cinnabar *Tyria jacobaeae* (nine records), and small square-spot *Diarsia rubi* (eight records).

3.2.110 ELM Consultants undertook annual BioBlitz surveys within the nature reserve area between 2013 and 2018. Although no protected / notable species were found, these events recorded over 100 species of invertebrate, including moths, butterflies, bumblebees, dragonflies, beetles and spiders.

3.2.111 Two species of principal importance under S41 of the NERC Act 2006 have been confirmed to historically occur within the site; Cinnabar moth *Tyria jacobaeae* and shaded broad-bar moth *Scotopteryx chenopodiata*. The site comprised a wide variety of habitats suitable for invertebrates.



Due to their floristic diversity and rarity, the most important habitats for invertebrates within the site were the neutral grasslands, reedbeds and saltmarsh habitats, as well as associated woodland, scrub, hedgerow and areas of standing water.

#### Other mammals

- 3.2.112 The desk study returned records of five other mammal species. Records of brown hare *Lepus europaeus* and hedgehog *Erinaceus europaeus* were obtained in relative close proximity to the site but 210m southwest (associated with Widnes Warth Marsh) and 400m north respectively. One polecat *Mustela putorius* record was identified approximately 1.6km east of the site. Records of invasive grey squirrel *Sciurus carolinensis* were also returned from within the site in the nature reserve area and lagoon A (LAG2). The invasive American mink *Neovison vison* has been recorded adjacent to the site within St Helen's Canal.
- 3.2.113 Brown hare, hedgehog, grey squirrel and American mink have been confirmed to occur within or adjacent to the site. The rough grassland within the site provided suitable habitat for brown hare and rough grassland, dense scrub and woodland were suitable for hedgehog. The presence of American mink with St Helen's Canal may explain the decline of the water vole population within the site.

## 4 Evaluation

### 4.1 Overview

- 4.1.1 A separate planning application will be made for each development phase in turn, which will be supported by an ecological assessment. A review of the validity of the existing ecology survey information will be undertaken and updates and/or further ecological surveys will be undertaken to support the specific planning application. The following recommendations give a high level overview of the ecological considerations/constraints across the FF Allocation Site.

### 4.2 Recommendations

#### Designated Sites

- 4.3.1 The Mersey Estuary SSSI SPA & Ramsar is the only site of international importance located within 10km of the FF Allocation Site, located 3.5km to the southwest. The land south of the canal lies within an area identified as functionally linked land to the Mersey Estuary SPA Ramsar by Natural England, as set out in the 'Identification of Functionally Linked Land supporting SPA waterbirds in the north west of England' report (Natural England, 2021). This report identifies the lagoon area and land to the east of the power station?? as being visited by significant numbers of birds and therefore having moderate functionally linked land potential. It is recommended that all future phases of development on land to the east of the power station complete a HRA Screening assessment to determine if the proposals are likely to have significant effect on the site's conservation objectives. The FF Allocation site also lies within the Natural England's SSSI Impact Risk Zones for the Mersey Estuary SSSI and therefore consultation with Natural England over potential impacts should also be undertaken.
- 4.3.2 It is recommended that an assessment of potential impact on the three nearby LNR's is made for all future phases of development; Oxmoor Wood LNR, Wigg Island LNR and Dorchester Park LNR. These LNR's are all designated for their habitats and therefore impacts could be associated with any hydrological changes and a potential increase in public pressure.
- 4.3.3 There are a significant number of local wildlife sites (LWS) located within 2km of the FF Allocation Site boundary, although none are present within the FF Development Area itself there are a number of LWS within/adjacent to land south of the canal. Due to location and proximity to works it is assumed that an assessment of likely impact on the Upper Mersey Estuary LWS, Widnes Wrath Saltmarsh LWS, Upper Mersey Estuary Intertidal Areas and Mudflats LWS, Gatewarth LWS and four sections of the St Helen's Canal LWS will be made for each future development phase. This should include any direct or indirect potential impacts.

#### Habitats & Flora

- 4.3.4 Updated habitat surveys should be undertaken where necessary per development phase, prior to submission of a planning application where existing information is out of date. This updated survey will ensure both the habitat type and condition of the habitat has been captured appropriately and can be relied upon. Habitat surveys usually have a 3 year validity.
- 4.3.5 There are currently a number of S41 priority habitats present within the FF Allocation Site, these include lowland mixed deciduous woodland, ponds, hedgerows, reedbed, open mosaic habitat and coastal saltmarsh. These S41 priority habitats are considered to be the most threatened habitats and require conservation action. Each phase of future development will seek to avoid impact of these priority habitats where possible, and where impact cannot be avoided to provide like for like mitigation as a minimum. Where habitat creation and/or enhancement is possible, this should focus on these areas of priority habitat. The majority of these priority habitats lie within land south of the canal offering significant potential for biodiversity improvements.
- 4.3.6 All development phases will aim to avoid habitat loss to that strictly necessary to realise the local plan allocation and for the construction of the development. A Biodiversity Net Gain (BNG) 4.0 metric (Natural England, 2023), or equivalent updated version, will be used to calculate the BNG potential of the each development phases and guide the required amount of habitat retention, enhancement and/or creation. Under the Environment Act 2021 (HMSO, 2021), BNG of 10% will be mandatory for

development from November 2023. A 10% BNG commitment has already been made by Peel. Although each development phase will require its own BNG metric, the overall BNG strategy for the FF Allocation Site will be followed to ensure a joined-up, cohesive approach.

- 4.3.7 Schedule 9 invasive plant species Himalayan balsam, giant hogweed and Japanese knotweed were recorded across the FF Allocation Site. The presence of these invasive species should be considered and mitigated for in each future development phase to ensure the avoidance of further spread across the site and into adjacent land. There is an existing ongoing invasive species management strategy for the site as a whole, the approach to invasive management should take into account the phases of development.

#### Amphibians

- 4.3.8 Updated GCN surveys should be undertaken on all ponds within 250m of each future development phase, within land to the north of the canal, as each application is brought forward. Data should be no more than 3 years old to remain valid. Based on historic information it is likely that GCN will be found within the northwest corner of the site associated with the nature reserve and subsequent GCN licences/DLL will be required in advance of construction for the relevant phases. Given the brackish nature of the areas of standing water south of the canal these are considered unsuitable for GCN and other amphibians.
- 4.3.9 It should be noted that nature reserve area historically supported a medium population of GCN and, although it is not locally designated, it has been a receptor site for the species during previous development on site (under EPSL). If any works are required within the nature reserve area that may have a detriment on the population (this could include land use changes such as the creation of areas of public open space and/or for biodiversity enhancement), then it is recommended that traditional survey methods are undertaken to determine the population size class and that Natural England are consulted to determine the extent of any restrictions within the area.
- 4.3.10 It is recommended that for other amphibians suitable Reasonable Avoidance Measures (RAMs) should be followed for any impact on suitable terrestrial habitat within minimum of 500m of any ponds north of the canal. The brackish nature of the lagoons make the habitat south of the canal unsuitable for other amphibians.

#### Badger

- 4.3.11 Although no currently active badger setts are known to be present within the FF Allocation Site, the site does offer suitable sett building habitat, as well as suitable foraging/commuting habitat for badgers. Updated badger surveys should be undertaken across each future development phase prior to each planning application. Badgers are highly dynamic species, due to the extent and type of habitats present across the site there is a strong likelihood of additional setts being created/uncovered in the future. An assessment of impact on badgers will be made for each future application, based on the most up to date survey information. If necessary appropriate badger mitigation/licensing will then be required per development phase.

#### Bats

##### *Roosting Bats*

- 4.3.12 The majority of structures within the FF Allocation Site offer negligible potential for roosting bats, with the exception of the ERC building within the nature reserve area which was categorised as offering moderate roosting potential. Should works to the building be required, further bat roosting surveys will be needed. The remaining buildings across the site will be demolished as part of the demolition consent. No further implications to the development with regard to roosting bats and buildings/structures are currently identified.
- 4.3.13 The majority of trees across the FF Allocation Site are young or semi-mature and therefore offer negligible potential. However updated ground-based assessments of all trees due to be impacted should be undertaken per development phase ahead of each planning application, along with any further necessary bat surveys in line with survey guidance (BCT, 2016) such as aerial inspections

and/or emergence/re-entry. It should be noted that new bat survey guidance is expected to be published in Autumn 2023 which may alter the recommended survey approach.

#### *Foraging and Commuting Bats*

- 4.3.14 It is recommended that bat activity/static surveys are undertaken across the arable fields to the east of the site (north of the canal). The survey will aim to pick up any key bat foraging and commuting routes that should be retained/considered within detailed design stage. Although habitats to the south of the canal are also considered suitable for foraging/commuting bats, no activity survey are recommended at this stage given the type of enhancement works likely to take place.
- 4.3.15 It is recommended that a lighting strategy is produced for each development phase which will set out bat sensitive measures for both the construction and operational lighting.

#### Birds

- 4.3.16 As shown by extensive survey effort on site over a number of years, the land south of the canal has been confirmed to support an important population of breeding and wintering birds. Due to the habitats and species recorded on site and the close proximity to the Mersey Estuary SSSI SPA Ramsar site, this area of the FF Allocation Site is considered potentially functionally-linked to this designated site. However it should be noted that since the decommissioning of the power station no water is being pumped into these lagoons and therefore the extent of open water and type of surrounding habitats has changed since this assessment was made. Further wintering and breeding bird surveys are recommended across the lagoon area (land south of the canal) to inform future biodiversity enhancement works in the area once the ash extraction has been completed.
- 4.3.17 Land north of the canal is considered to be of relatively lower value for passage/wintering birds, based on the 2022/2023 wintering bird surveys undertaken across the site. The survey found both species diversity and recorded numbers found to be low. It is recommended that consultation with Natural England is undertaken to establish the need for a second years' worth of wintering bird survey data based on the limited results found in year 1.
- 4.3.18 It is however recommended that breeding bird surveys are considered for each future development phase, specifically for the residential phase which includes the arable fields south of the nature reserve area. Habitats within the east of the site are generally considered to offer greater value for breeding birds.
- 4.3.19 It is recommended that any vegetation clearance north of the canal is undertaken outside the core nesting bird season of March-August. However timings should be considered in relation to impact on wintering birds for a vegetation clearance works associated with land south of the canal.

#### Reptiles

- 4.3.20 The need for reptile surveys for each development phase should be informed by the latest habitat survey information available. Based on the existing information present, reptile surveys are currently recommended within the following areas north of the canal; the neutral grassland areas associated with the cooling towers and the scrub habitat located to the south and east; the nature reserve and associated woodland, scrub, hedgerows and standing water; and the grassland and scrub mosaic to the south. It is not envisaged that reptile surveys will be required to inform the biodiversity enhancement plan for the land south of the canal.
- 4.3.21 Reasonable Avoidance Measures (RAMs) for reptiles are recommended for all vegetation clearance works undertaken both to the north and south and the canal.

#### Otter and Water Vole

- 4.3.22 Updated otter and water vole surveys should be undertaken on any watercourses/ditches due to be directly impacted or where works occurring within a 6m buffer for each development phase north of the canal. Latest survey information indicates no current presence of either water vole or otter locally, however there are historic records of water vole in area. Should either water vole or otter be found to be present during the updated surveys, an appropriate assessment of impacts and any necessary mitigation/licensing should be implemented.

4.3.23 It is not envisaged that otter or water vole surveys will be required to inform the biodiversity enhancement plan for the land south of the canal.

Invertebrates

4.3.24 The extent/need for invertebrate surveys (terrestrial and/or aquatic) should be informed by the updated habitat survey information prior to each application. However significant invertebrate data already exists for the nature reserve area to the northeast corner of site and within the lagoon area south of the canal. It is therefore proposed that for each future development phase this existing data be used to inform any future impact assessment. No further invertebrate surveys are currently recommended.

Other mammals

4.3.25 This PEA identified records of five other mammal species; brown hare, hedgehog, polecat, grey squirrel and American mink. No specific surveys are recommended for these species but they may be picked up as incidental sightings during the other surveys recommended above. Measures should be taken during construction to avoid impacts on brown hare, hedgehog and polecat and habitats created/enhanced should seek to create opportunities for these species.

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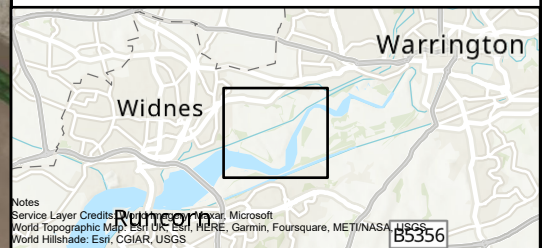
# APPENDIX A

## Drawings

Site Location Plan  
UK Habitat Plan



Legend  
 Site Boundary



Rev	Date	Description	Drawn	Check	Approv
01	31/08/23	INITIAL ISSUE	MS	TM	SN

Client:

**Peel NRE** PROJECT: **FIDDLERS FERRY EIA**

Site: Fiddlers Ferry Power Station, Widnes Road, Curdley, WARRINGTON, WAS 2UT  
 Client: Peel NRE Developments Acquisitions No.1 Ltd

**ARCADIS**

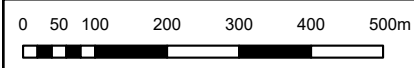
Registered office: 80 Fenchurch Street, London EC3M 4BY  
 Coordinating Office: Suite 1A, 4 Piccadilly Place, Manchester M1 3BN  
[www.arcadis.com](http://www.arcadis.com)

Title:  
**Site Location Plan**

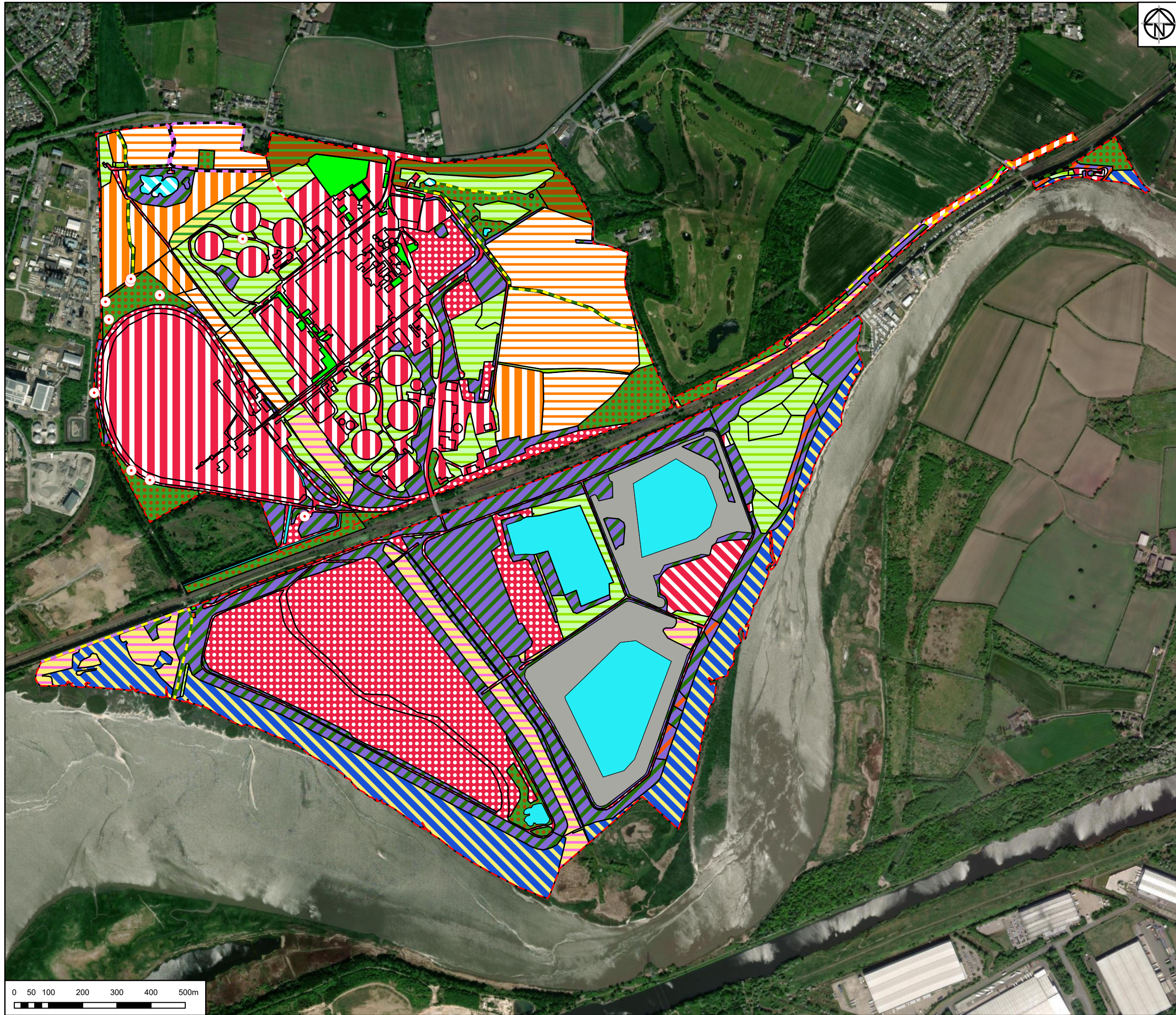
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Drawn	M. Shetye	Date	31 Aug 23	Signed
Checked	E. Pickering	Date	31 Aug 23	Signed
Approved	S.Newbold	Date	31 Aug 23	Signed
Scale:	1:10,500	Datum:	AOD	
Original Size:	A3	Grid:	OS	
Suitability Code:	S2	Project Number:	30171032	

Suitability Description:  
**For Information**

Drawing Number: \_\_\_\_\_ Revision: **P01**

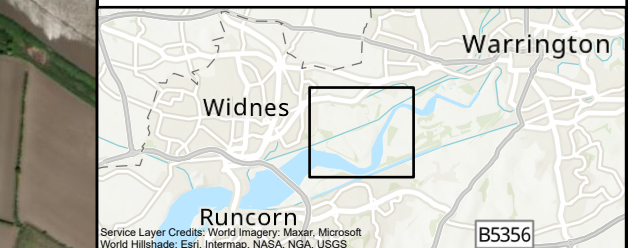






**Legend**

- Site Boundary
- Target Notes
- h2 - hedgerow
- h2a - hedgerow (Priority Habitat)
- r1e - canal or ditch
- u1b - developed land, sealed surface
- u1e - built linear feature Fence
- w1g6 - line of trees
- w2c - other coniferous woodland
- u1b5 - buildings on previously developed land
- u1a - open mosaic habitats on previously developed land
- g1c - bracken
- s - sparsely vegetated land
- r1a - eutrophic standing water
- r - rivers and lakes
- w1f - lowland mixed deciduous woodland
- t2a - coastal saltmarsh
- c1c - cereal crops
- c1b - temporary grass and clover leys
- f2e - reedbeds
- w1g - other woodland, broadleaved
- g4 - modified grassland
- u1c - artificial unvegetated unsealed surface
- g3c - other neutral grassland
- u1b - developed land, sealed surface
- h3d - bramble scrub
- h3h - mixed scrub



Rev	Date	Description	Drawn	Check	Approv
01	30/08/23	INITIAL ISSUE	MS	EP	SN

Client:

**Peel NRE** PROJECT: **FIDDLERS FERRY EIA**

**Site** Fiddlers Ferry Power Station  
Widnes Road  
Cuddiey  
WARRINGTON  
WAS 2UT

**Client** Peel NRE Developments Acquisitions No.1 Ltd

**ARCADIS**

Registered office: 80 Fenchurch Street, London EC3M 4BY  
Coordinating Office: Suite 1A, 4 Piccadilly Place, Manchester M1 3BN

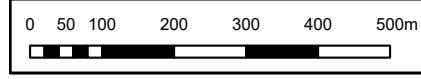
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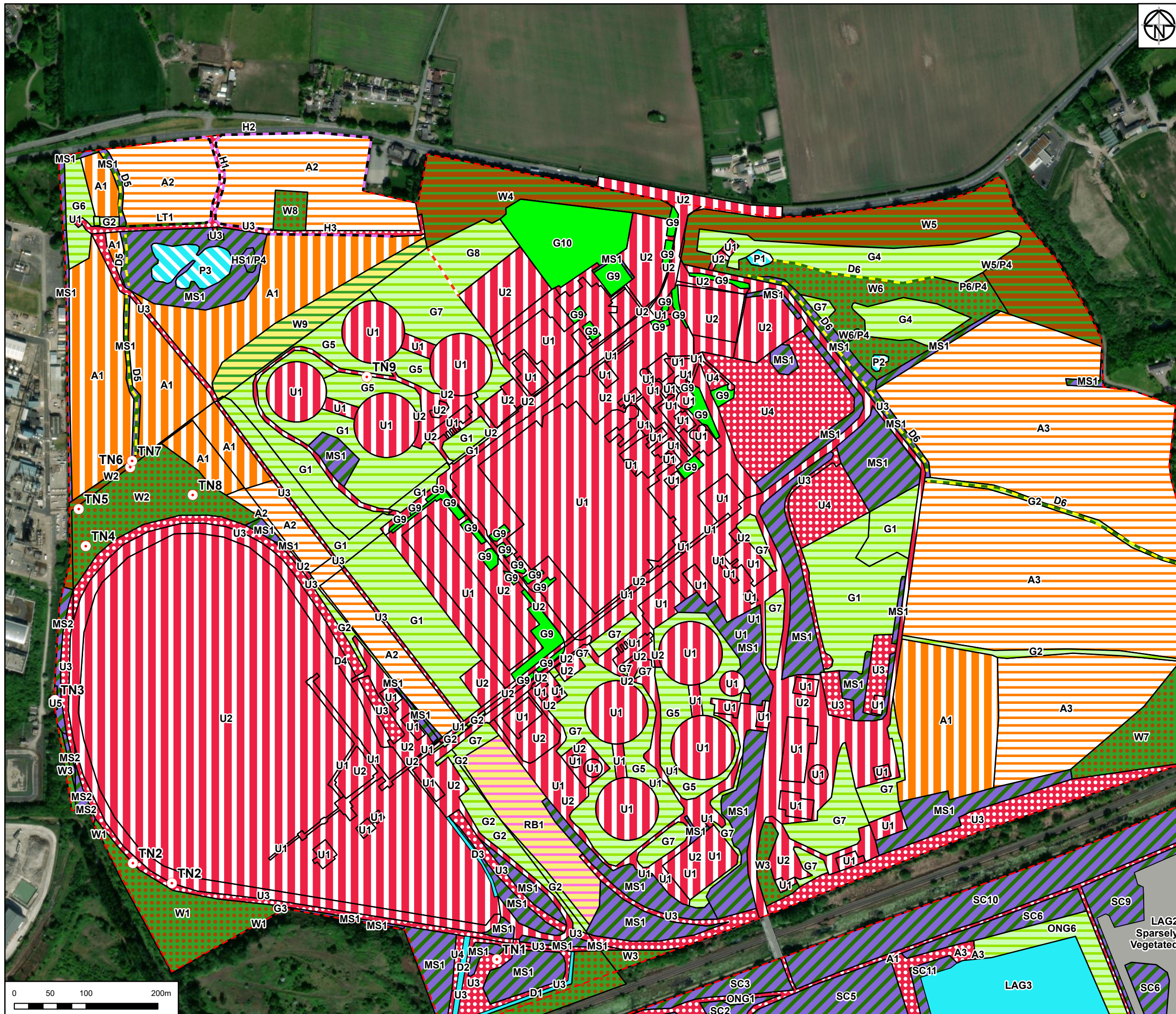
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Drawn	M. Shetye	Date	30 Aug 23	Signed
Checked	E. Pickering	Date	30 Aug 23	Signed
Approved	S.Newbold	Date	30 Aug 23	Signed
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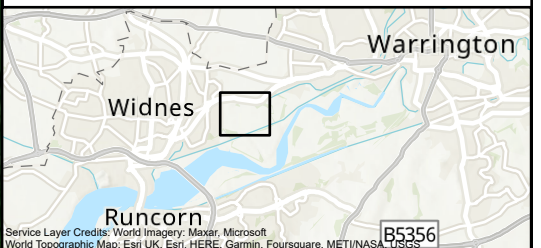
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**Legend**

- Site Boundary
- Target Notes
- h2a - hedgerow (Priority Habitat)
- r1e - canal or ditch
- u1b - developed land, sealed surface
- u1e - built linear feature
- Fence
- w1g6 - line of trees
- w2c - other coniferous woodland
- g1c - bracken
- s - sparsely vegetated land
- r1a eutrophic standing water
- r - rivers and lakes
- w1f - lowland mixed deciduous woodland
- c1c - cereal crops
- c1b - temporary grass and clover leys
- f2e - reedbeds
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- g4 - modified grassland
- u1c - artificial unvegetated unsealed surface
- g3c - other neutral grassland
- u1b - developed land, sealed surface
- h3h - mixed scrub



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Client:

**Peel NRE** PROJECT: **FIDDLERS FERRY EIA**

Site: Fiddlers Ferry Power Station, Widnes Road, Curdley, WARRINGTON, WAS 2UT

Client: Peel NRE Developments Acquisitions No.1 Ltd

**ARCADIS**

Registered office: 80 Fenchurch Street, London EC3M 4BY

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www.arcadis.com

Title: **Habitat Map**  
1

Designed	E. Pickering	Date	30 Aug 23	Signed
Drawn	M. Shetye	Date	30 Aug 23	Signed
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Approved	S.Newbold	Date	30 Aug 23	Signed
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Original Size:	A3	Grid:	OS	
Suitability Code:	S2	Project Number:	30171032	

Suitability Description: **For Information**

Drawing Number: \_\_\_\_\_ Revision: **P01**



**Legend**

Site Boundary	c1b - temporary grass and clover leys
h2 - hedgerow	f2e - reedbeds
r1e - canal or ditch	w1g - other woodland, broadleaved
w1g6 - line of trees	g4 - modified grassland
u1b5 - buildings	u1c - artificial unvegetated unsealed surface
u1a - open mosaic habitats on previously developed land	g3c - other neutral grassland
s - sparsely vegetated land	u1b - developed land, sealed surface
r - rivers and lakes	h3d - bramble scrub
l2a - coastal saltmarsh	h3h - mixed scrub
c1c - cereal crops	



Service Layer Credits: World Imagery, Maxar, Microsoft World Topographic Map, Esri, HERE, Garmin, Foursquare, METI/NASA, USGS

Rev	Date	Description	Drawn	Check	Approv
01	30/08/23	INITIAL ISSUE	MS	EP	SN

Client:

**PROJECT: FIDDLERS FERRY EIA**

**Peel NRE**  
PEEL ENERGY NATURAL RESOURCES

**Site:** Fiddlers Ferry Power Station, Widnes Road, Curdley, WARRINGTON, WAS 2UT

**Client:** Peel NRE Developments Acquisitions No.1 Ltd

**ARCADIS**

Registered office: 80 Fenchurch Street, London EC3M 4BY

Coordinating Office: Suite 1A, 4 Piccadilly Place, Manchester M1 3BN

www.arcadis.com

Title: **Habitat Map**  
2

Designed	E. Pickering	Date	30 Aug 23	Signed
Drawn	M. Shetye	Date	30 Aug 23	Signed
Checked	E. Pickering	Date	30 Aug 23	Signed
Approved	S.Newbold	Date	30 Aug 23	Signed
Scale:	1:5,000	Datum:	AOD	
Original Size:	A3	Grid:	OS	
Suitability Code:	S2	Project Number:	30171032	

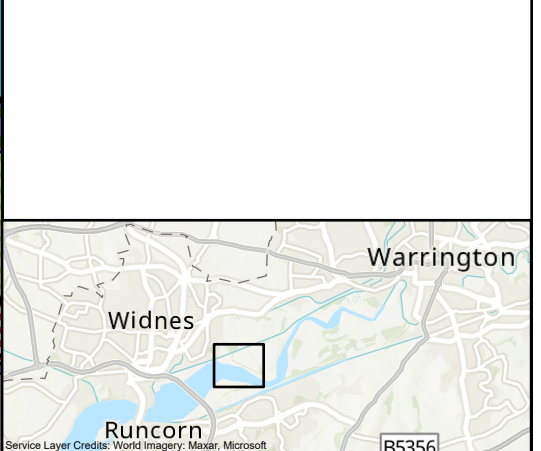
Suitability Description: **For Information**

Drawing Number: \_\_\_\_\_ Revision: **P01**



**Legend**

[Red dashed line]	Site Boundary	[Green diagonal lines]	w1g - other woodland, broadleaved
[Red circle]	Target Notes	[Green horizontal lines]	g4 - modified grassland
[Yellow dashed line]	h2 - hedgerow	[Red dotted pattern]	u1c - artificial unvegetated unsealed surface
[Blue dashed line]	r1e - canal or ditch	[Light green pattern]	g3c - other neutral grassland
[Grey pattern]	s - sparsely vegetated land	[Red solid pattern]	u1b - developed land, sealed surface
[Blue pattern]	r - rivers and lakes	[Blue diagonal lines]	h3d - bramble scrub
[Brown pattern]	w1f - lowland mixed deciduous woodland	[Green diagonal lines]	h3h - mixed scrub
[Blue diagonal lines]	t2a - coastal saltmarsh		
[Yellow pattern]	f2e - reedbeds		



01	30/08/23	INITIAL ISSUE	MS	EP	SN
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Client:

**Peel NRE** PROJECT: **FIDDLERS FERRY EIA**

Site: Fiddlers Ferry Power Station, Widnes Road, Curdley, WARRINGTON, WAS 2UT

Client: Peel NRE Developments Acquisitions No.1 Ltd

Registered office: 80 Fenchurch Street, London EC3M 4BY

Coordinating Office: Suite 1A, 4 Piccadilly Place, Manchester M1 3BN

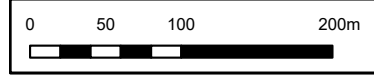
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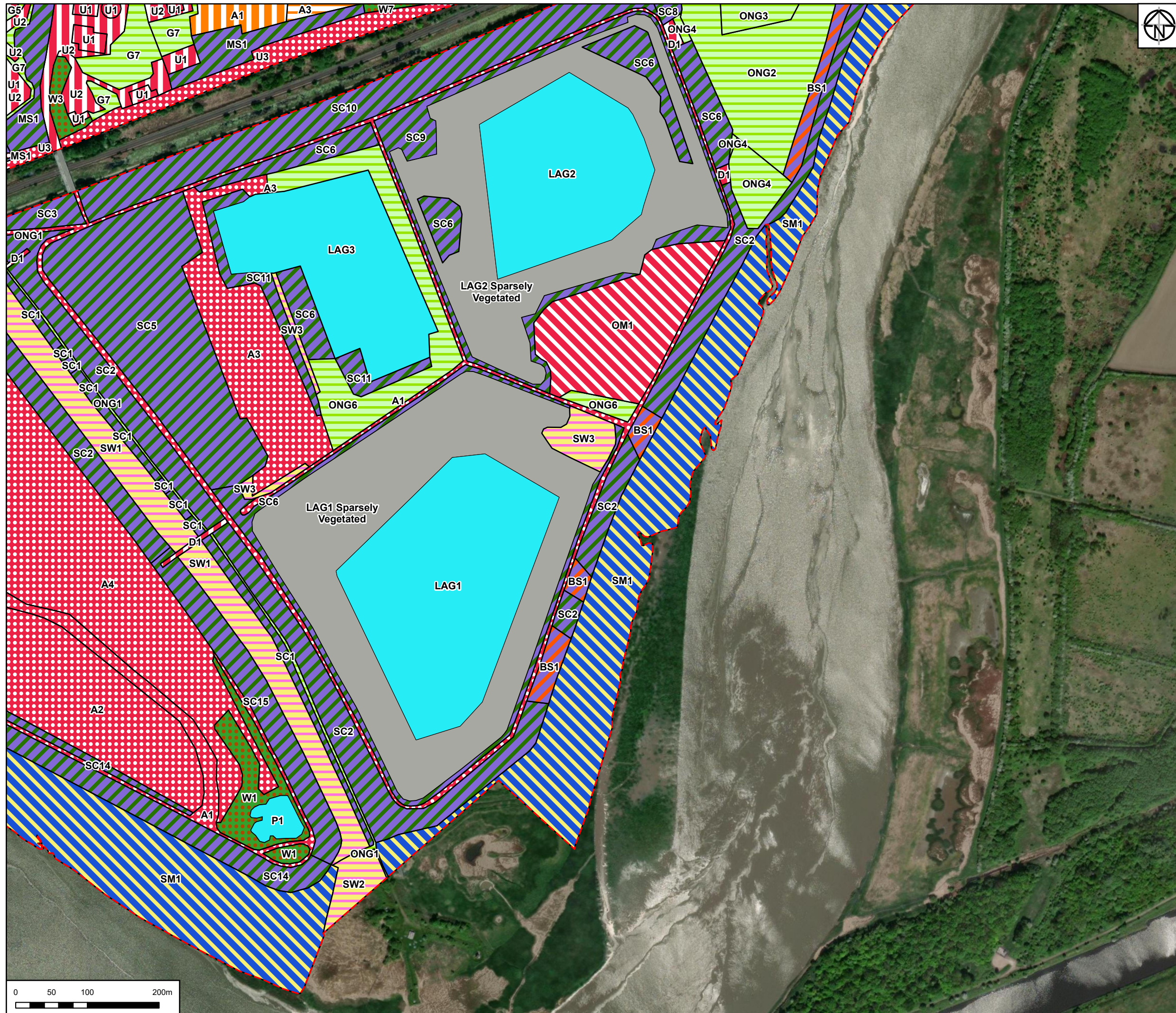
Title: **Habitat Map**  
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Designed	E. Pickering	Date: 30 Aug 23	Signed
Drawn	M. Shetye	Date: 30 Aug 23	Signed
Checked	E. Pickering	Date: 30 Aug 23	Signed
Approved	S.Newbold	Date: 30 Aug 23	Signed
Scale:	1:5,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	S2	Project Number:	30171032

Suitability Description: **For Information**

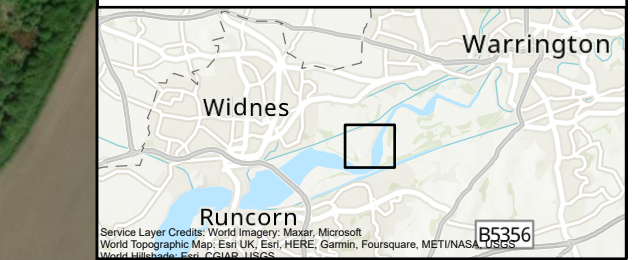
Drawing Number: \_\_\_\_\_ Revision: **P01**





**Legend**

- Site Boundary
- u1a - open mosaic habitats on previously developed land
- s - sparsely vegetated land
- r - rivers and lakes
- t2a - coastal saltmarsh
- c1c - cereal crops
- c1b - temporary grass and clover leys
- f2e - reedbeds
- w1g - other woodland, broadleaved
- u1c - artificial unvegetated unsealed surface
- g3c - other neutral grassland
- u1b - developed land, sealed surface
- h3d - bramble scrub
- h3h - mixed scrub



Rev	Date	Description	Drawn	Check	Approv
01	30/08/23	INITIAL ISSUE	MS	EP	SN

Client:

**Peel NRE** PROJECT: **FIDDLERS FERRY EIA**

Site: Fiddlers Ferry Power Station, Widnes Road, Curdley, WARRINGTON, WAS 2UT

Client: Peel NRE Developments Acquisitions No.1 Ltd

**ARCADIS**

Registered office: 80 Fenchurch Street, London, EC3M 4BY

Coordinating Office: Suite 1A, 4 Piccadilly Place, Manchester, M1 3BN

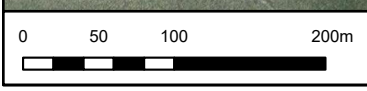
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Title: **Habitat Map**  
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Designed	E. Pickering	Date	30 Aug 23	Signed
Drawn	M. Shetye	Date	30 Aug 23	Signed
Checked	E. Pickering	Date	30 Aug 23	Signed
Approved	S.Newbold	Date	30 Aug 23	Signed
Scale:	1:5,000	Datum:	AOD	
Original Size:	A3	Grid:	OS	
Suitability Code:	S2	Project Number:	30171032	

Suitability Description: **For Information**

Drawing Number: \_\_\_\_\_ Revision: **P01**



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**APPENDIX B**

**Desk Study Data**

**Table 1: Statutory Designated Sites within Search Area (10km for international & 2km for national/local).**

Site Name	Description	Distance & Direction from Site (North of Canal)	Distance & Direction from Site (South of Canal)
Mersey Estuary SSSI, SPA, Ramsar	<p>The Mersey Estuary is an internationally important site for wildfowl and consists of large areas of intertidal sand and mudflats. The site also includes an area of reclaimed marshland, saltmarshes, brackish marshes and boulder clay cliffs with freshwater seepages. The following types of planning applications need to be assessed for likely impacts on the SSSI:</p> <ul style="list-style-type: none"> <li>• Pipelines, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals.</li> <li>• Solar schemes with footprint &gt; 0.5ha, all wind turbines.</li> <li>• Planning applications for quarries: new proposals or extensions, outside or extending outside existing settlements/urban areas affecting greenspace, farmland or semi natural habitats. Oil &amp; gas exploration/extraction.</li> <li>• Large non-residential developments outside existing settlements/urban areas where footprint exceeds 1ha. • Any residential development of 50 or more houses outside existing settlements/urban areas.</li> <li>• Any industrial/agricultural development that could cause air pollution (incl: industrial processes, livestock &amp; poultry units with floorspace &gt; 500m<sup>2</sup>, slurry lagoons &gt; 750m<sup>2</sup> &amp; manure stores &gt; 3500t).</li> <li>• General combustion processes &gt;50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.</li> <li>• Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill.</li> <li>• Any discharge of water or liquid waste of more than 20m<sup>3</sup>/day to ground (i.e. to seep away) or to surface water, such as a beck or stream (NB This does not include discharges to mains sewer which are unlikely to pose a risk at this location).</li> </ul>	3.5km southwest	3.2km southwest
Oxmoor Wood LNR	Habitats include grassland, woodland, reedbeds, open water and tall herb communities. Supports a variety of birds, butterfly and dragonfly species.	1.7km south	720m south
Wigg Island LNR	Supports a rich variety of native wildflowers, including bee orchid ( <i>Ophrys apifera</i> ). Also supports purple hairstreak butterflies ( <i>Neozephyrus quercus</i> ).	1.7km southwest	1.5km southwest
Dorchester Park LNR	Habitats include woodland, grassland and a ditch.	2.5km south	1.5km south

**Table 2: Non-Statutory Designated Sites within 2km Search Area.**

Site Name	Distance & Direction from Allocation Site/Development Site
Upper Mersey Estuary LWS	Within the FF Allocation Site south of St Helen's Canal but adjacent to the Development Site.
Widnes Warth Saltmarsh LWS	Within the FF Allocation Site south of St Helen's Canal but adjacent to the Development Site.
Upper Mersey Estuary Intertidal Areas and Mudflats LWS	Within the FF Allocation Site south of St Helen's Canal but adjacent to the Development Site.
Gatewarth LWS	Adjacent. East from both FF Allocation and Development Site.
St Helen's Canal LWS	Adjacent. Northwest of FF Development Site.
St Helen's Canal Disused_A LWS	Adjacent. Lies between the FF Development Site and remainder of the FF Allocation Site south of the canal.
St Helen's Canal Disused_B LWS	Adjacent. Lies between the FF Development Site and remainder of the FF Allocation Site south of the canal.
St Helen's Canal Disused_C LWS	Adjacent. Lies between the FF Development Site and remainder of the FF Allocation Site south of the canal.
Norton Marsh and Upper Moss Side Fields LWS	0.13km Southeast from the FF Allocation Site.
Astmoor Saltmarsh and Swamp LWS	0.29km Southwest from the FF Allocation Site.
Norbury Wood LWS	0.34km South from the FF Allocation Site.
Upper Moss Side Farm LWS	0.55km South from the FF Allocation Site.
Moore Nature Reserve LWS	0.66km Southeast from the FF Allocation Site.
Oxmoor_A LWS	0.74km South from the FF Allocation Site.
Haystack Lodge LWS	1.02km South from the FF Allocation Site.
Oxmoor_B LWS	1.04km South from the FF Allocation Site.
Haddocks Wood_D LWS	1.17km Southwest from the FF Allocation Site.
Lodge Plantation LWS	1.21km South from the FF Allocation Site.
Norton Priory_A LWS	1.25km Southwest from the FF Allocation Site.
Wigg Island LWS	1.5km Southwest from the FF Allocation Site.
Dorchester Park LWS	1.5km Southwest from the FF Allocation Site.
Manor Park Woodland LWS	1.51km South from the FF Allocation Site.
Manchester Ship Canal Bank, Astmoor LWS	1.54km Southwest from the FF Allocation Site.



Site Name	Distance & Direction from Allocation Site/Development Site
Big Wood LWS	1.57km South from the FF Allocation Site.
Haddocks Wood_A LWS	1.6km Southwest from the FF Allocation Site.
Haddocks Wood_B LWS	1.61km Southwest from the FF Allocation Site.
Haddocks Wood Pasture LWS	1.66km Southwest from the FF Allocation Site.
Pitts Heath Wood LWS	1.67km Southwest from the FF Allocation Site.
Haddocks Wood_C LWS	1.72km Southwest from the FF Allocation Site.
Land off Lunts Heath Road_B LWS	1.77km Northwest from both FF Allocation and Development Site.
Norton Priory_B LWS	1.77km Southwest from the FF Allocation Site.
Sandymoor Wood LWS	1.77km South from the FF Allocation Site.
Moore Meadows LWS	1.9km South from the FF Allocation Site.
Windmill Hill Wood_B LWS	1.9km South from the FF Allocation Site.
Windmill Hill Wood_C LWS	1.92km South from the FF Allocation Site.
Windmill Hill Wood_A LWS	1.95km South from the FF Allocation Site.
Sankey Canal Central_A LWS	1.99km East from both FF Allocation and Development Site.
Disused Railway Line South of Warrington Road LWS	1.99km Northwest from both FF Allocation and Development Site.

## **APPENDIX C**

### **Wintering Bird Report 2022/2023**



# **Fiddlers Ferry – Residential Area 1 Wintering Bird Survey Report**

**Arcadis**

**May 2023**

## Ecus Ltd

Report to: **Arcadis**

Report Title: **Fiddlers Ferry Residential Area 1 - Wintering Bird Survey**

Version: **V1.0**

Issue Date: **May 2023**

Report Ref: **20067**

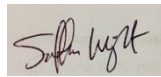
Originated By:



**Adam Penney**  
Consultant Ecologist

Date: 15<sup>th</sup> May 2023

Reviewed By:



**Saffra Wright**  
Technical Director

Date: 16/5/2023

Approved By:



**Andrew Ainsworth**  
Regional Director North West

Date: 19/05/2023

Version	Author	Description	Date
V0.1	Adam Penney	Initial Draft	15.05.2023
V0.2	Saffra Wright	QA1	16/05/2023
V.0.3	Adam Penney	QA1 Review Amendments	17/05/2023
V0.4	Andrew Ainsworth	QA2	19/05/2023

The report and the site assessments carried out by Ecus on behalf of the client in accordance with the agreed terms of contract and/or written agreement form the agreed Services. The Services were performed by Ecus with the skill and care ordinarily exercised by a reasonable Environmental Consultant at the time the Services were performed. Further, and in particular, the Services were performed by Ecus taking into account the limits of the scope of works required by the client, the time scale involved and the resources, including financial and manpower resources, agreed between Ecus and the client. Other than that expressly contained in the paragraph above, Ecus provides no other representation or warranty whether express or implied, in relation to the services. This report is produced exclusively for the purposes of the client. Ecus is not aware of any interest of or reliance by any party other than the client in or on the services. Unless expressly provided in writing, Ecus does not authorise, consent or condone any party other than the client relying upon the services provided. Any reliance on the services or any part of the services by any party other than the client is made wholly at that party's own and sole risk and Ecus disclaims any liability to such parties.

## Fiddlers Ferry Residential Area 1- Wintering Bird Survey

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This report is based on site conditions, regulatory or other legal provisions, technology or economic conditions at the time of the Service provision. These conditions can change with time and reliance on the findings of the Services under changing conditions should be reviewed. Ecus accepts no responsibility for the accuracy of third party data used in this report.

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## Executive Summary

Ecus Limited (Ltd) were commissioned in September 2022 by Arcadis, to undertake Wintering Bird Surveys (WBS) at the former Fiddlers Ferry Power Station site (OS Grid Reference: SJ54828581).

Proposals for the decommissioned Fiddler's Ferry Power Station are the regeneration of the site through a 10 to 15 year mixed use masterplan with the capacity to deliver a minimum of 1,760 homes and 89 ha of employment land delivered over multiple phases.

Ecus were commissioned by Arcadis to undertake wintering bird surveys (WBS), with a focus on residential area one at the site, as shown in Appendix 1.

The methodologies employed during the survey followed the bird monitoring methods as described in Gilbert *et al.* (1998). A set transect route (Figure 2) was walked to allow the surveyor to view all points within the survey area, recording all species encountered, the number of specimens and any other relevant behaviours observed. Each survey was led by Saffra Wright, an experienced Ecus Ornithologist (Figures 3-8) between October 2022 and March 2023. Surveys were carried out in suitable weather conditions and across a mixture of tidal conditions (high and low tides) in the nearby Mersey Estuary.

A total of 41 bird species were recorded during the WBS. Figures 3-8 illustrate the survey results from each of the visits, with a species key provided in Appendix 3. Six Red listed species, 10 Amber listed species and 23 Green listed bird species of conservation concern (BoCC) were recorded on Site across the six survey visits, plus two species holding no status. Six of the bird species recorded on Site are also included as species of principal importance on Section 41 of the NERC Act (2006).

Two Wildlife & Countryside Act 1981 (as amended) Schedule 1 bird species were recorded using the Site during the surveys, namely peregrine *Falco peregrinus* and redwing *Turdus Iliacus*.

Overall, species diversity recorded at the Site during the WBS is considered to be low. The numbers of birds recorded is also low, with the exception of a few species such as woodpigeon (peak count of 40), wren (peak count of nine), goldfinch (peak count of 91), and robin (peak count of 10).

The six BoCC Red listed species recorded during the surveys, were recorded in low numbers and were generally associated with sections of woodland and existing arable fields at the site (Appendix 4; Figures 3-8). Overall, the loss of sections of these habitats as a result of the proposed development, is considered to be of importance at no more than site level to these species during winter, as there is suitable wintering habitat to the north in the form of farmland, as well as woodland to the east of the Site.

Of the 10 Amber listed bird species recorded during the surveys, most of these species were identified in low numbers, with the exception of woodpigeon (peak count of 40) and wren ((peak count of nine) (Appendix 4)). Habitat loss as a result of the development is considered to be of negligible importance to these species, as they are able to use a wide range of habitats for foraging and there are many arable habitats in the wider area beyond the Site, particularly to the north. Habitat loss as part of the development is therefore considered to be of site level importance to Amber listed bird species only.

Of the 23 Green listed bird species recorded during the surveys, most of these species were identified in low numbers, with the exception of goldfinch (peak count of 91) and wren (peak count of nine (Appendix 4)). With regards to other green listed species, habitat loss as a result of the development is also considered to be of negligible importance, as they are considered to be common, able to use a wide range of habitats for foraging, and there are many arable habitats in the wider area beyond the Site. Habitat loss as part of the development is therefore considered to be of site level importance only.

Species of principal importance are discussed where relevant under BoCC 5 Red listed species.

The Mersey Estuary SPA and Ramsar site is located c.3.5km from the Site, which is designated for its internationally important wintering waterbird assemblage.

A separate Habitat Regulations Assessment (HRA) will be completed by Arcadis to determine the scope of impact the development proposals will have on the designated sites, and if necessary, determine the required mitigation, compensation and enhancement measures.



# 1. Introduction

## 1.1 Background

1.1.1 Ecus Limited (Ltd) were commissioned in September 2022 by Arcadis, to undertake Wintering Bird Surveys (WBS) at the former Fiddlers Ferry Power Station site (OS Grid Reference: SJ54828581). The survey area is hereafter referred to as the 'Site' (shown on Figures 1a and 1b).

## 1.1 Proposed Development and Scope

1.1.1 The Fiddler's Ferry Power Station situated off Widnes Road, Warrington, WA5 2UTm, was operated by Scottish and Southern Energy (SSE) and ceased operation in March 2020. The proposals for the decommissioned power station are the regeneration of the Fiddler's Ferry site through a 10 to 15 year mixed use masterplan with the capacity to deliver a minimum of 1,760 homes and 89 ha of employment land delivered over multiple phases. Peel Natural Resources and Energy (NRE) have bought the Fiddler's Ferry Site from SSE.

1.1.2 Ecus were commissioned by Arcadis to undertake WBS, with particular focus on Residential Area One as shown in Appendix 1. As part of the agreed WBS works, however, it was agreed that employment phases one, two and three would be generally assessed for suitability to support wintering birds and any suitable areas also included within the survey. Figure 2 shows the transects that were used during the surveys and therefore areas of habitat/built structures considered suitable for important wintering bird species.

## 1.2 Site Location

1.2.1 The Site is located within the grounds of the now decommissioned Fiddler's Ferry Coal Power Station, located on the outskirts of Widnes approximately 2 km from the town centre.

1.2.2 The boundary of the residential one area (the 'Site') is seen in Appendix 1, along with the employment phase one, two and three areas.

1.2.3 Fiddler's Ferry Power Station is located to the east of an industrial estate, north of the St Helen's Canal, and to the south of Widnes Road. A golf course is located to the north-east of the Site and Warrington lies to the east. Farmland landscape is situated to the north of the Site and the River Mersey and estuary are situated approximately 1.3 km to the south of the Site.

## 1.3 Purpose of this Report

1.3.1 The purpose of the WBS was to record the location, numbers and movements of birds present within the Site to inform a future shadow Habitat Regulations Assessment (HRA).

1.3.2 This report details the findings of the WBS carried out by Ecus Ltd from October 2022-March 2023. The methodologies employed during the survey, and all survey findings are described, along with an evaluation and assessment of the value of the site to support wintering birds.

1.3.3 Further information and details of UK legislation in relation to birds is detailed in Appendix 2.

## 2. Methodology

### 2.1 Legislation and Conservation Guidance

#### **Legislation**

- 2.1.1 All wild birds, their nests and eggs are protected under the Wildlife & Countryside Act 1981 (as amended) while a nest is in use or occupied. The nesting bird season is typically considered to fall between March and August (inclusive). At least 79 bird species are listed under Part I of Schedule 1 of the Act and these species receive additional protection against disturbance whilst occupying a nest site. More detailed legislation is available in Appendix 2.
- 2.1.2 Although not protected with regards to nesting during the winter, it is still an offence to intentionally kill, injure or take any wild bird at any time. Bird populations change in the winter to often join as large flocks to search for available food sources, especially on arable land and coastal areas. Increased numbers of certain waterbirds can flock in large groups and be associated with both coastal areas and surrounding arable fields.

#### **Birds of Conservation Concern 5**

- 2.1.3 In 2021 Government and Non-Governmental Organisations (NGO's) including the Joint Nature Conservation Committee (JNCC), Royal Society for the Protection of Birds (RSPB) and the BTO produced lists of the current status of the UK's birds (Stanbury *et al.* 2021), which assigned bird species to one of three conservation status lists (Red, Amber or Green). These lists are based on standardised assessment criteria, describing the level of conservation threat to each species. In addition, some species are listed as "Introduced" which applies to species which are not native to the UK and have no specific UK conservation status.
- 2.1.4 'Red' is the highest conservation priority, with species needing urgent action due to either a historical decline in breeding population, severe (>50%) decline in breeding or non-breeding population, or severe decline in breeding range over 50 years or more. 'Amber' is the second most critical group, with species qualifying for this status as a result of either recovery from red list criterion, being classed as rare breeders in the UK, moderate (>25%) decline in breeding or non-breeding population, moderate decline in breeding range over 25 years or more, or where the UK holds over 20% of the European population of either a breeding or wintering population of a species. These categories are followed by 'Green', indicating that the species are currently relatively unthreatened.

#### **Species of Principal Importance**

- 2.1.5 A total of 49 bird species are listed as species of principal importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. Under the Act, these species are of principal importance for the purposes of conserving biodiversity and the Secretary of State must take steps or promote others to further the conservation of living organisms within this list. Where observed, these bird species were recorded during the surveys.

### 2.2 Wintering Bird Survey

- 2.2.1 The methodologies employed during the survey followed the bird monitoring methods as described in Gilbert *et al.* (1998). A set transect route (Figure 2) was walked to allow the surveyor to view all points within the survey area, recording all species encountered, the number of specimens and any other relevant behaviours observed.
- 2.2.2 Each survey was led by Saffra Wright, an experienced Ecus Ornithologist (Figures 3-8) between

October 2022 and March 2023. Surveys were carried out in suitable weather conditions.

2.2.3 The dates and weather conditions during the surveys are detailed in Table 1 below.

**Table 1. Fiddlers Ferry WBS Details**

Date	Survey Number and Type	Surveyors	Air Temp (°C)	General Conditions
26/10/22	V1	SW and CC	15	Rain (11:26 – 12), 20% cloud cover, calm (Beaufort Scale : 1) 10:39 – 15:10
24/11/22	V2	SW	8	Dry, 100% Cloud cover, light breeze (Beaufort Scale : 2) 8:44 – 12:15
04/01/2023	V3 (December visit postponed due to poor weather)	SW	13	Dry, 100% cloud cover to 10% by the end of the survey, calm (Beaufort scale : 1) 8:40 - 12:16
26/01/23	V4	SW and BD	3	Dry, 80 % cloud cover to 10% by the end of the survey, light breeze (Beaufort scale : 2) 9:15 – 12:30
20/02/23	V5	SW and EM	10	Dry, 70% cloud cover, light to gentle breeze (Beaufort scale : 2-3) 8:26 – 12:27
28/03/23	V6	SW and ML	6	Rain (heavy rain from 9:30 onwards), cloud cover 100%, calm (Beaufort scale : 1) 8:10 – 10:41

Surveyors: SW Saffra Wright – CC Caitlin Cross – BD Bronwyn Dennis – ML Megan Leary – EM Emma McCartney

2.2.4 The standard BTO codes were used to note species, sex and age where possible, and to record activity such as singing, nest-building or carrying food.

2.2.5 During the survey, the surveyor(s) scanned the surrounding area with the aid of binoculars and

listened for bird song or repeated territorial calls, and observed for behaviours including territorial aggression, displaying, adults carrying food or nesting material, juvenile birds and/or family groups.

- 2.2.6 When individuals or pairs were observed, the surveyor used their professional opinion to assess whether the birds recorded were new observations or the same individuals as previously encountered during the survey.

### **2.3 Assessment**

- 2.3.1 The value of the Site and sensitivity of bird species present within the Site was determined based on the guidance provided in '*Guidelines on Ecological Impact Assessment*' (CIEEM, 2018). Individual ecological receptors (i.e. wintering birds and the habitats which support wintering birds) that could be affected by the proposed development were assigned levels of importance for nature conservation. The highest level is international, then decreasing in order of importance through national, regional, county, local and site level (within the zone of influence).

### **2.4 Survey Limitations**

- 2.4.1 Standard WBS surveys are conducted over the months of October to March inclusive. The December survey was cancelled due to heavy rain and rescheduled for the 4<sup>th</sup> January 2023. All other visits went ahead as planned with a visit being undertaken within each month, during suitable conditions. Survey visits were undertaken at approximately one month apart. The slight re-scheduling of the December survey is not considered to be a significant constraint to the overall results.
- 2.4.2 A small area of the site was not accessed due to uncertainty about access permissions during visit 1. This comprised the fields to the north west of Employment Phase 2. This area was surveyed during the following five visits and the initial omission is not considered to represent a significant constraint to the overall results.

### 3. Results and Evaluation

#### 3.1 Designated Sites

- 3.1.1 As part of the original preliminary ecological appraisal undertaken at the site, a desktop study was undertaken by Ecus Ltd in August 2022, via a data purchase from Record which is the Local Environmental Records Centre for Cheshire, Halton, Warrington and Wirral (ECUS, 2022).
- 3.1.2 Multi-Agency Geographical Information for the Countryside (MAGIC) website (<https://magic.defra.gov.uk/>) and Natural England's Open Data Geoportal (<https://naturalengland-defra.opendata.arcgis.com/>) were also consulted in August 2022 to obtain additional information (ECUS, 2022).
- 3.1.3 The desk study results show that there are two European designated sites or Ramsar Sites of International Importance with nature conservation value located within 5 km of the Site boundary, namely Mersey Estuary Ramsar and Special Protection Area (SPA) (Figure 1a). The Mersey Estuary is also designated as a Site of Special Scientific Interest (SSSI) (ECUS, 2022).

#### 3.2 Wintering Bird Survey Results

- 3.2.1 A total of 41 bird species were recorded during the WBS. Figures 3-8 illustrate the survey results from each of the visits, with a species key provided in Appendix 3.
- 3.2.2 Six Red listed species, 10 Amber listed species and 23 Green listed bird species of conservation concern (BoCC) were recorded on Site across the six survey visits, plus two species holding no status. Six of the bird species recorded on Site are also included as species of principal importance on Section 41 of the NERC Act (2006).
- 3.2.3 A summary of the species recorded during each WBS visit, in relation to their conservation status classifications and total and peak counts is provided in Appendix 4.

##### ***Wildlife & Countryside Act 1981 (as amended) Schedule 1 Bird Species***

- 3.2.4 Two Wildlife & Countryside Act 1981 (as amended) Schedule 1 bird species were recorded using the Site during the surveys, namely peregrine *Falco peregrinus* and redwing *Turdus Iliacus*. As this legislation relates to additional protection of these species during the active nesting season, however, it is thought that it is not relevant to wintering birds and is therefore not discussed further in this report.

##### ***BoCC 5 Red Listed Species***

- 3.2.5 Six Red listed bird species were recorded during the surveys, which are detailed below.

##### Greenfnch

- 3.2.6 Greenfinch *Chloris chloris* were recorded at the site during visits five and six, and were seen near the waterbodies located to the north-west of the site, towards the centre, and the east of the site near existing arable fields, and to the east of the site red line boundary in a small section of woodland (Figures 7 and 8). A peak count of six greenfinch was recorded in visit five (Appendix 4).
- 3.2.7 The greenfinches recorded were likely to be using the Site for foraging or shelter and low numbers of this species was seen across all surveys. This species is also likely to use other adjacent off-Site habitats which are suitable when looking for food and shelter. As a result, it is considered that Site habitats are of importance to wintering greenfinch at the site level only.

### Herring gull

- 3.2.8 Herring gull *Larus argentatus* were recorded during both visits two and three at the site, and were generally associated with the north-western corner of the site, as well as towards the centre of the Site where they were identified flying north to south towards an area of arable field habitat (Figures 4 and 5). A peak count of one herring gull was recorded in both surveys when they were identified (Appendix 4).
- 3.2.9 The herring gull recorded were likely to be commuting over the Site, or using some habitats present for foraging or shelter in low numbers. This species is also likely to use other adjacent off-Site habitats which are suitable when looking for food and shelter. As a result, it is considered that Site habitats are of importance to wintering herring gull at the site level only.

### Grey Partridge

- 3.2.10 Grey Partridge *Perdix perdix* were recorded in visits 4-6 at the site. This species was seen in the arable fields to the north west and south east of the Site (Figures 6-8). A peak count of seven grey partridges was recorded on visit one (Appendix 4). Grey partridge was identified using habitats at the site likely for foraging or shelter purposes, and also likely uses similar adjacent off-Site habitats when looking for food and shelter. Only a small number of this species was observed, it is therefore considered that Site habitats are of importance to wintering grey partridge at the site level only.

### Skylark

- 3.2.11 Skylark *Alauda arvensis* were recorded in survey visits one and six at the Site (Figures 3 and 8). This species was identified in the sections of arable field to the southeast of the site. This species was recorded in low numbers, with a peak count of one seen in both surveys (Appendix 4). These individuals were likely using habitats present at the site for foraging or shelter. This species may also utilise other similar off-Site habitats for the same purposes in the local area. As such, the Site habitats are of importance to skylark at the site level only.

### Woodcock

- 3.2.12 Woodcock *Scolopax rusticola* were recorded during visits three and four at the site (Figures 5 and 6). This species was identified near sections of woodland adjacent to arable land to the north eastern and south eastern corners of the site, as well as in the arable fields located to the east of the Site boundary, adjacent to the existing road. A peak count of two woodcocks was recorded in survey visit four (Appendix 4). This species was recorded in low numbers, with individuals likely using habitats present at the site for foraging or shelter. This species may also utilise other similar off-Site habitats for the same purposes in the local area. As such, the Site habitats are of importance to woodcock at the site level only.

### Yellowhammer

- 3.2.13 Yellowhammer *Emberiza citronella* was recorded in visit five at the site only (Figure 7). This species was identified near sections of arable land towards the north western corner of the site. A peak count of 4 individuals was seen during this survey (Appendix 4). It is likely that individuals were using habitats present at the site for foraging or shelter in low numbers. This species may also utilise other similar off-Site habitats for the same purposes in the local area. As such, the Site habitats are of importance to yellowhammer at the site level only.

### **BoCC 5 Amber Listed Species**

- 3.2.14 Ten Amber listed bird species were recorded during the surveys.

### Woodpigeon

- 3.2.15 Woodpigeon *Columba palumbus* were recorded at the site in the third, fourth and fifth site visits (Figures 5-7). Woodpigeon were identified in sections of woodland located to the north of the Site, as well as in flight near arable fields to the south west. A peak count of 40 individuals was identified during visit 5 (Appendix 4).
- 3.2.16 Woodpigeons are able to forage in a variety of habitats when searching for food and it is considered that the Site is likely to form part of a wider foraging area for woodpigeon. Overall, it is considered that the Site is of importance to wintering woodpigeon at no greater than the site level only, given the presence of suitable habitat in the wider area.

### Wren

- 3.2.17 Wrens *Troglodytes troglodytes* were recorded during all survey visits at the Site (Figures 3-8). Wrens were primarily seen to the east of the Site in areas of woodland and near arable fields but were also seen to the north-west. During survey visit one, Wrens were observed in song at the Site in sections of woodland to the north and south-east. A peak count of nine wrens was identified during visit one (Appendix 4).
- 3.2.18 Hedgerow, scrub and woodland habitats offer suitable foraging and shelter habitat for wren, so individuals observed were likely using habitats for these purposes. Given the presence of similar habitats in the wider area, however, the Site is considered to be of importance to wintering wren at no greater than the site level.

### Other species

- 3.2.19 The remaining amber listed bird species were not recorded at the site in large numbers, and are primarily common, opportunistic and adaptable species (Appendix 4). Other habitat areas in the surrounding landscape such as other areas of hedgerow, scrub, arable fields and woodland are also available and also offer suitability for use by these species. The Site habitats are therefore considered to be of value at the site level only for the remaining amber listed species.

### **BoCC 5 Green Listed Species**

The remaining bird species recorded are 'Green' listed species. Of these only two were recorded in larger numbers which were goldfinch *Carduelis carduelis* for which the peak count was 91 in survey visit five, and robin *Erithacus rubecula*, for which the peak count was 10 in survey visit five. Both robin and goldfinch are highly adaptable and opportunistic species, so it is considered likely that they will utilise a variety of other hedgerow, scrub and woodland habitats for commuting, foraging and sheltering purposes across the wider landscape. These species and other green listed species shown in Appendix 4 were either recorded in very low numbers or are common and widespread. Site habitats are considered to be of value at the site level only for Green listed bird species.

### **Species of Principal Importance**

- 3.2.20 A total of six bird species recorded on Site are listed as species of principal importance under Section 41 of the NERC Act (2006). These are also BoCC 5 Red listed species as described above. These are greenfinch, herring gull, grey partridge, skylark, woodcock and yellowhammer. All five species are discussed above with regards to their location on site and status within the Site.

## 4. Assessment and Mitigation

### 4.1 Development Proposals

- 4.1.1 The development proposals for the existing Fiddler's Ferry Power Station includes the regeneration of the Site through a 10 to 15 year mixed use masterplan with the capacity to deliver a minimum of 1,760 homes and 89 ha of employment land delivered over multiple phases. Peel Natural Resources and Energy (NRE) have bought the Fiddler's Ferry Site from SSE.
- 4.1.2 As such, the proposed development will result in the removal of the majority of the habitats at the Site, as shown in phased master plan for the site (Appendix 1).

### 4.2 Assessment

- 4.2.1 Overall, species diversity recorded at the Site during the WBS is considered to be low. The numbers of birds recorded is also low, with the exception of a few species such as woodpigeon (peak count of 40), wren (peak count of nine), goldfinch (peak count of 91), and robin (peak count of 10). As the surveys primarily focused on surveying the eastern section of the Site (Residential Area 1, Appendix 1), most bird species were identified in this area in sections of woodland and in arable fields. Some species were also recorded within fields to the north-western corner of the site.

#### ***BoCC 5 Red Listed Bird Species***

- 4.2.2 The six BoCC Red listed species recorded during the surveys, were recorded in low numbers and were generally associated with sections of woodland and existing arable fields at the Site (Appendix 4; Figures 3-8). Overall, the loss of sections of these habitats as a result of the proposed development, is considered to be of importance at no more than site level to these species during winter, as there is suitable wintering habitat to the north in the form of farmland, as well as woodland to the east of the Site.

#### ***BoCC 5 Amber Listed Bird Species***

- 4.2.3 Of the ten Amber listed bird species recorded during the surveys, most of these species were identified in low numbers, with the exception of woodpigeon (peak count of 40) and wren ((peak count of nine) (Appendix 4)). Habitat loss as a result of the development is considered to be of negligible importance to these species, as they are able to use a wide range of habitats for foraging and there are many arable habitats in the wider area beyond the Site, particularly to the north. Habitat loss as part of the development is therefore considered to be of site level importance to Amber listed bird species only.

#### ***BoCC 5 Green Listed Bird Species***

- 4.2.4 Of the 23 Green listed bird species recorded during the surveys, most of these species were identified in low numbers, with the exception of goldfinch (peak count of 91) and wren (peak count of nine) (Appendix 4). Similarly, with regards to other green listed species, habitat loss as a result of the development is also considered to be of negligible importance, as they are considered to be common, able to use a wide range of habitats for foraging, and there are many arable habitats in the wider area beyond the Site. Habitat loss as part of the development is therefore considered to be of site level importance only.

#### ***Species of Principal Importance***

These species are discussed above where relevant under BoCC 5 Red listed species.



### **Designated Sites**

- 4.2.5 The Mersey Estuary SPA and Ramsar site is located c.3.5 km from the Site, which is designated for its internationally important wintering waterbird assemblage. The Mersey Estuary qualifies under article 4.1 of the Wild Birds Directive for which the following non-breeding bird populations form the qualifying features:
- Shelduck *Tadorna tadorna*
  - Teal *Anas crecca*
  - Pintail *Anas acuta*,
  - Golden plover *Pluvialis apricaria*,
  - Dunlin *Calidris alpina alpina*,
  - Black-tailed godwit *Limosa limosa islandica*, and
  - Redshank *Tringa tetanus*,
- 4.2.6 Ramsar designation species are the same with the exception of black-tailed godwit and golden plover which are omitted from the qualifying species list.
- 4.2.7 Other non-qualifying species of interest include Bewick's swan *Cygnus columbianus*, whooper swan *Cygnus cygnus*, merlin *Falco columbarius* and peregrine falcon *Falco peregrinus*, amongst others.
- 4.2.8 No SPA qualifying species were recorded during the wintering bird survey. However, peregrine falcon (a non-qualifying species of interest for the SPA) were seen utilising the main site regularly (see Figures 3 to 8) for feeding and winter roosting during all of the survey visits with the exception of visit 5 (the February visit). Records for this species were observed within the main site (labelled Employment Phases 2 and 3) rather than the Residential 1 area and they were recorded utilising the cooling towers and other adjacent built structures. This species should be appropriately considered within any recommendations for mitigation with the shadow HRA accordingly.
- 4.2.9 It is understood that a separate shadow Habitat Regulations Assessment (HRA) will be completed that will determine the scope of impact the development proposals will have on the designated sites with regards to bird species and other impacts, and if necessary, identify appropriate mitigation, compensation and enhancement measures. As such, no further recommendations are made as part of this report.

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## 5. References

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

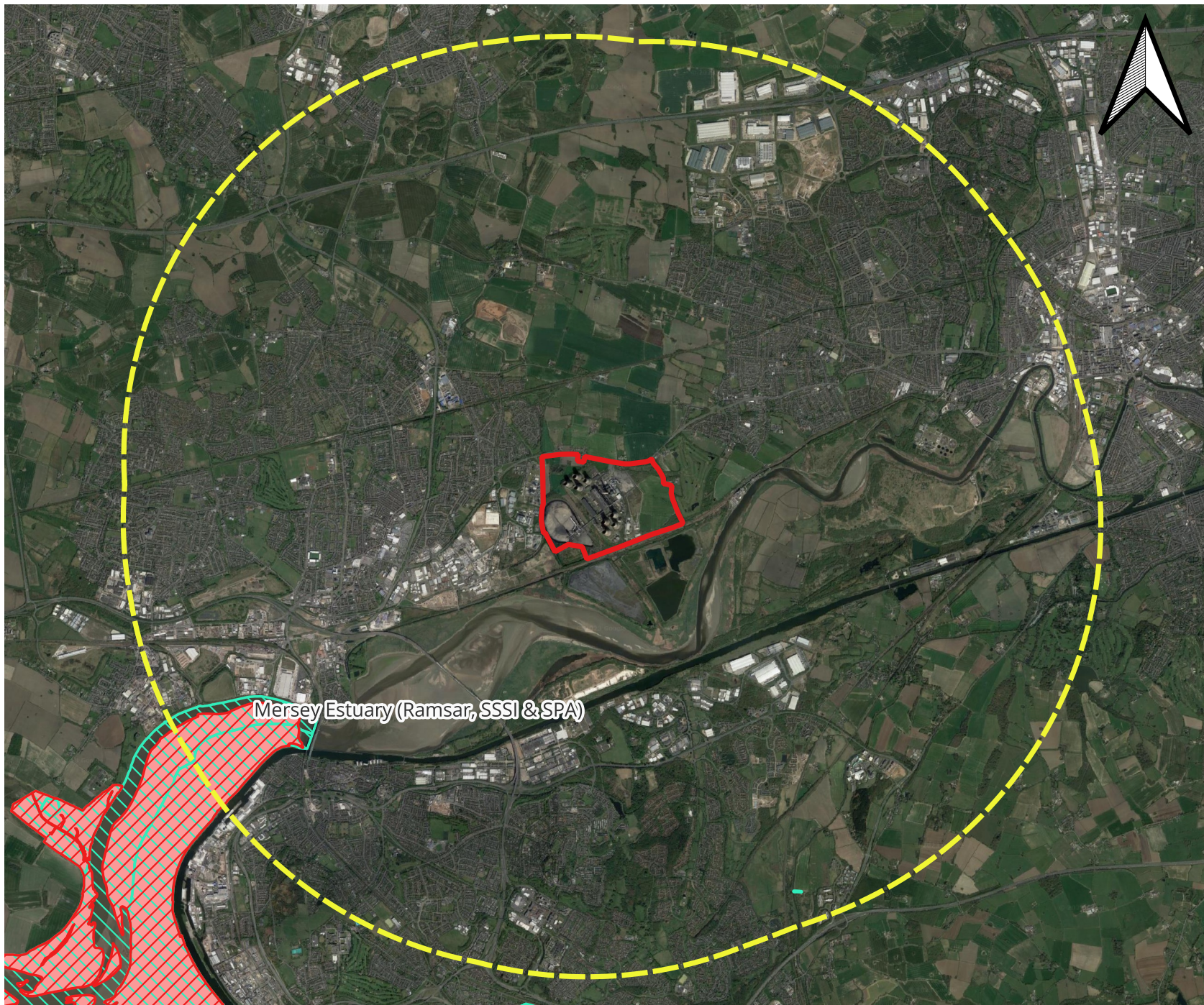
Ecus. (2022). Fiddler's Ferry Phase 1 Demolition Area - Preliminary Ecological Appraisal (PEA) Report. Unpublished.

Gilbert, G., Gibbon, D.W. and Evans J. (1998). '*Bird Monitoring Methods: A Manual of Techniques for Key UK Species*'. Royal Society for the Protection of Birds, The Lodge, Sandy, Bedfordshire.



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, 114, 723-747. BTO, Thetford.

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## Figure 1a. Site Location Plan - Statutory Designated Sites

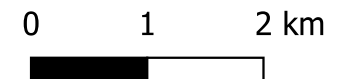


**Legend**

-  Site Boundary
-  5 km buffer

**Statutory Sites**

-  Ramsar
-  Sites of Special Scientific Interest (SSSI)
-  Special Protection Areas (SPA)



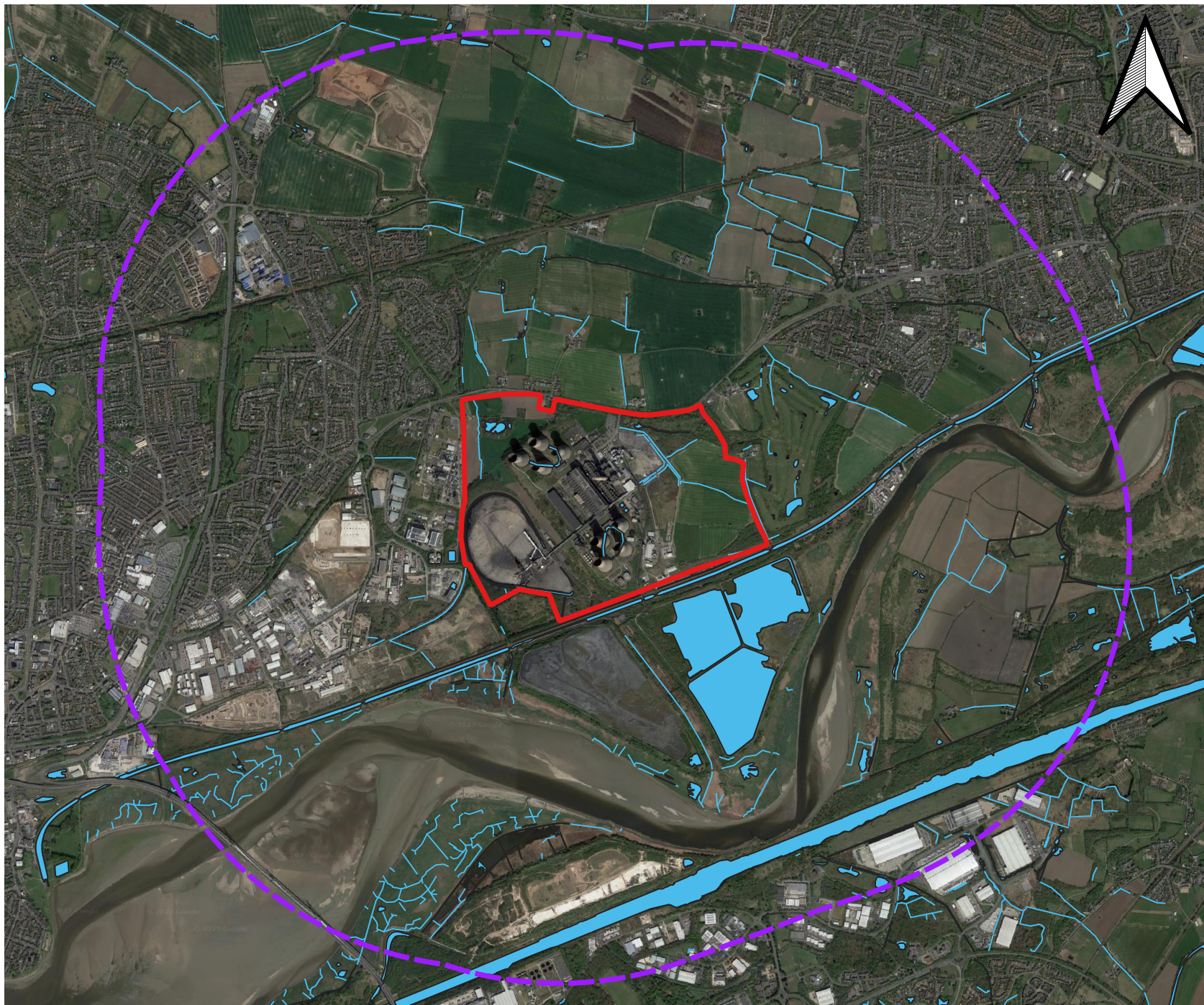
Arcadis  
Fiddler's Ferry

Figure 1A: Statutory Sites Within 5 km



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## Figure 1b. Site Location Plan - Waterbodies and Watercourses

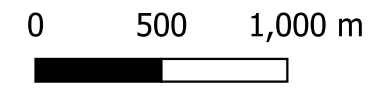


**Legend**

-  2 km
-  Site Boundary

**Watercourses and waterbodies**

-  Waterbodies
-  Watercourses



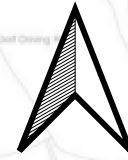
Arcadis  
Fiddler's Ferry



Figure 1B: Watercourses and waterbodies within 2 km

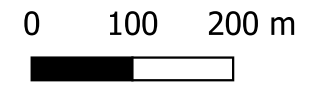
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## Figure 2. Wintering Bird Survey Transect Routes



- Legend**
-  Site Boundary
  -  walked transect



Arcadis

Fiddlers Ferry Winterring Bird Surveys  
Figure 2: Transect Routes

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## Figure 3. Wintering Bird Survey Visit 1 Survey Results


**Legend**


 Site Boundary

 Bird Species

**Activity**

 In flight

 Calling

 In Song

0 100 200 m



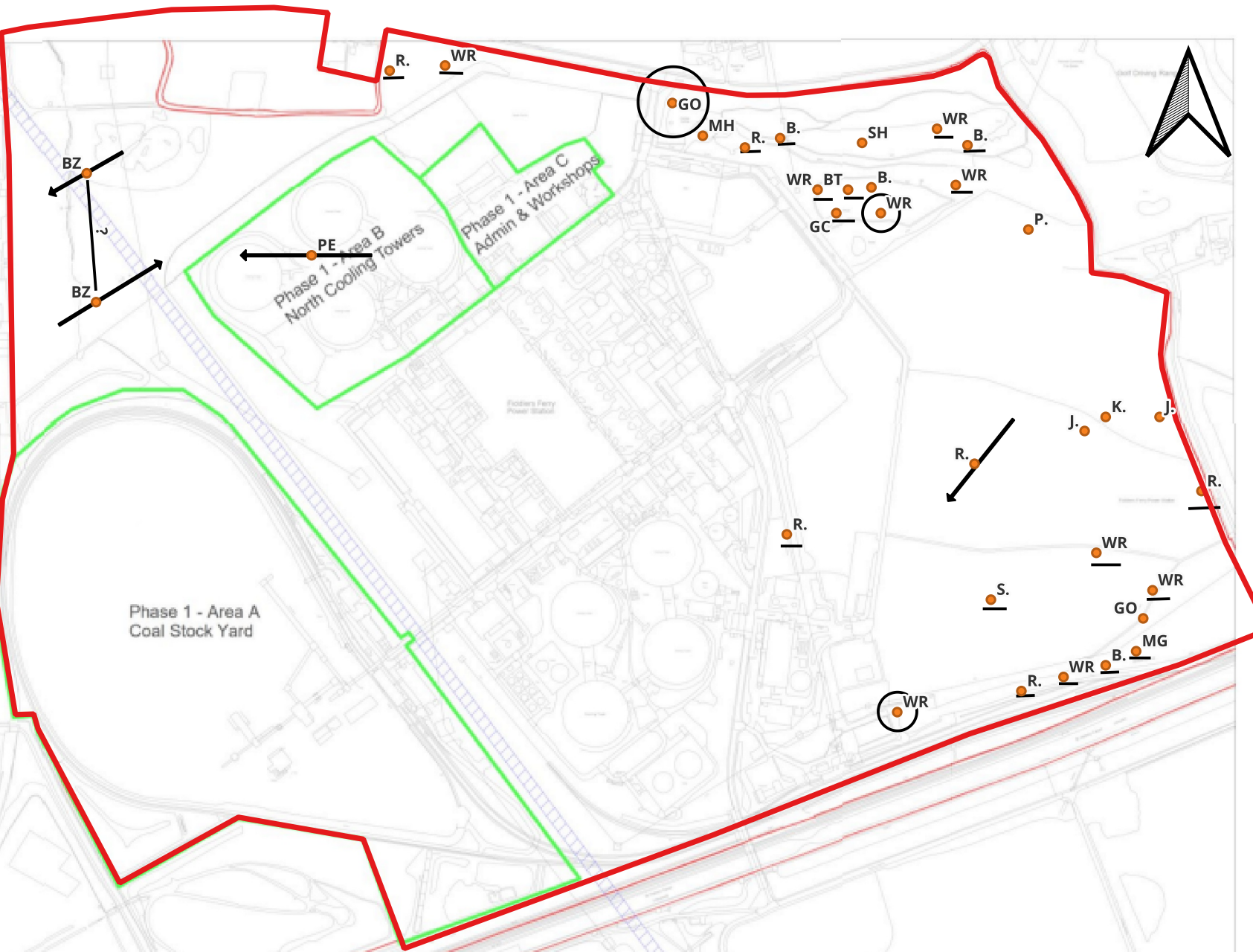
Arcadis

Fiddlers Ferry Winterring Bird Surveys

Figure 3: Visit 1 26/10/2022

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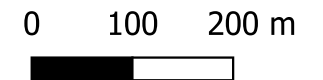


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## Figure 4. Wintering Bird Survey Visit 2 Survey Results

**Legend**

- Site Boundary
- Bird Species
- Activity**
- In Flight
- Calling

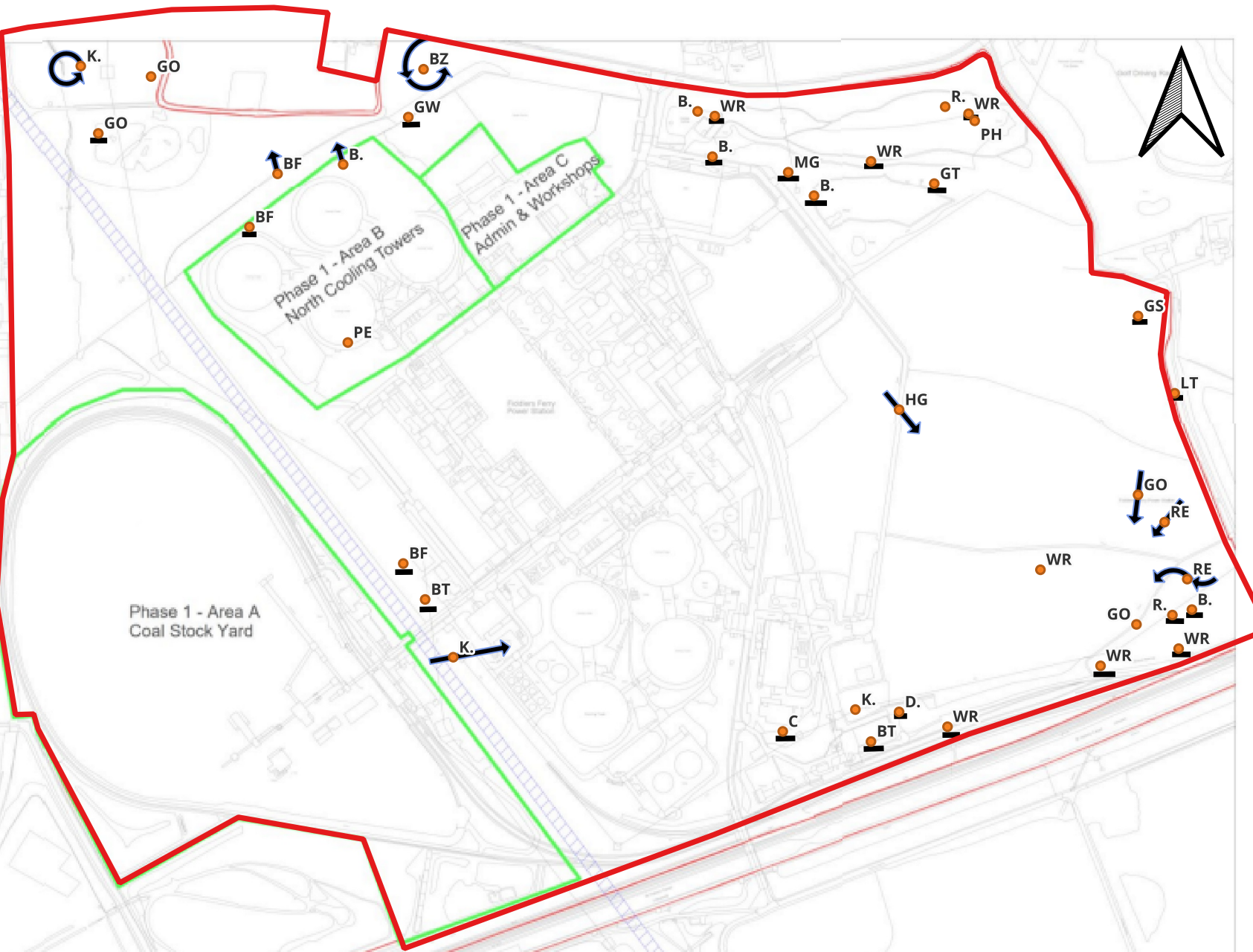


Arcadis

Fiddlers Ferry Winterring Bird Surveys

Figure 4: Visit 2 24/11/2022

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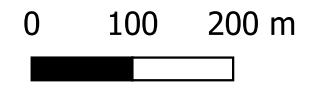
## Figure 5. Wintering Bird Survey Visit 3 Survey Results

**Legend**

- Site Boundary
- Bird Species

**Activity**

- In Flight
- Calling
- - - Aggressive Encounter



Arcadis

Fiddlers Ferry Winterring Bird Surveys

Figure 5: Visit 3 04/01/2023

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## Figure 6. Wintering Bird Survey Visit 4 Survey Results


**Legend**


 Site Boundary

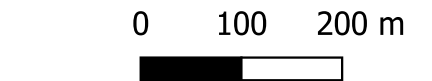
 Bird Species

**Activity**

 In Flight

 Calling

 In Song

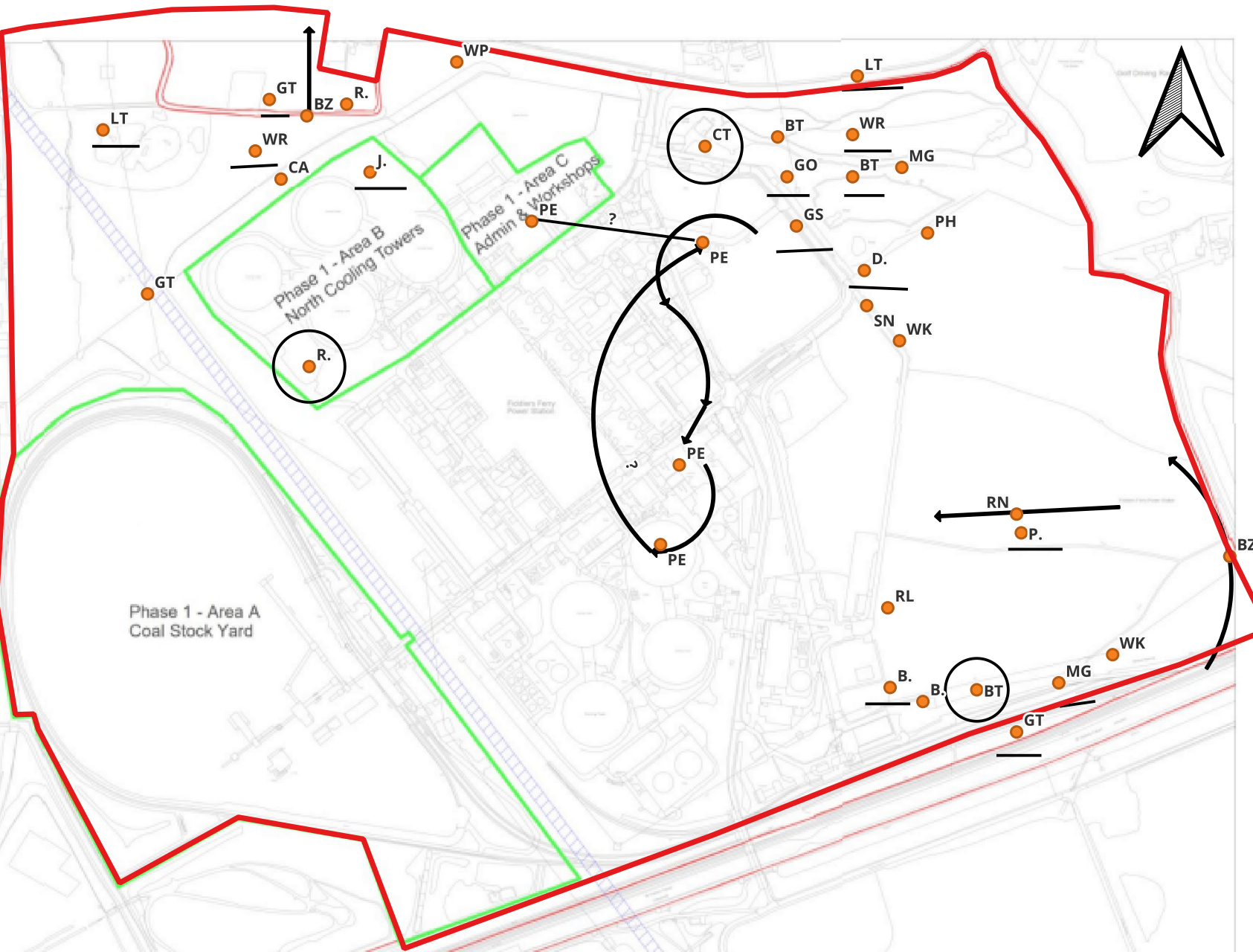


Arcadis

Fiddlers Ferry Winterring Bird Surveys

Figure 6: Visit 4 26/01/2023

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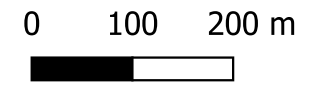


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## Figure 7. Wintering Bird Survey Visit 5 Survey Results

**Legend**

- Site Boundary
- Bird Species
- Activity**
- In Flight
- Calling
- In Song

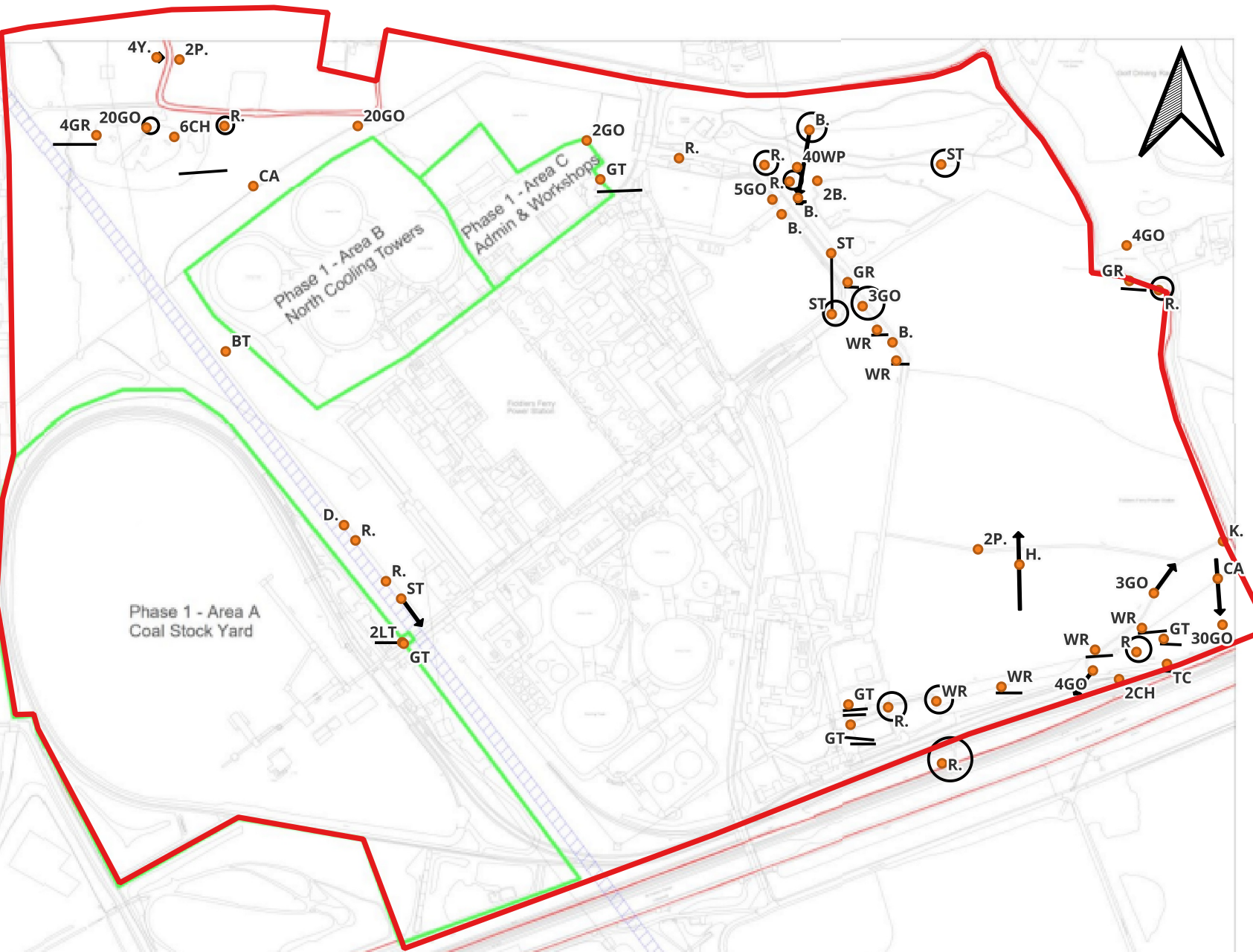


Arcadis

Fiddlers Ferry Winterring Bird Surveys

Figure 7: Visit 5 20/02/2023

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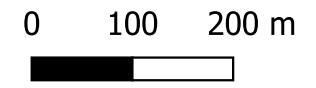


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## Figure 8. Wintering Bird Survey Visit 6 Survey Results

**Legend**

- Site Boundary
- Bird Species
- Activity**
- ➔ In flight
- Calling
- In Song

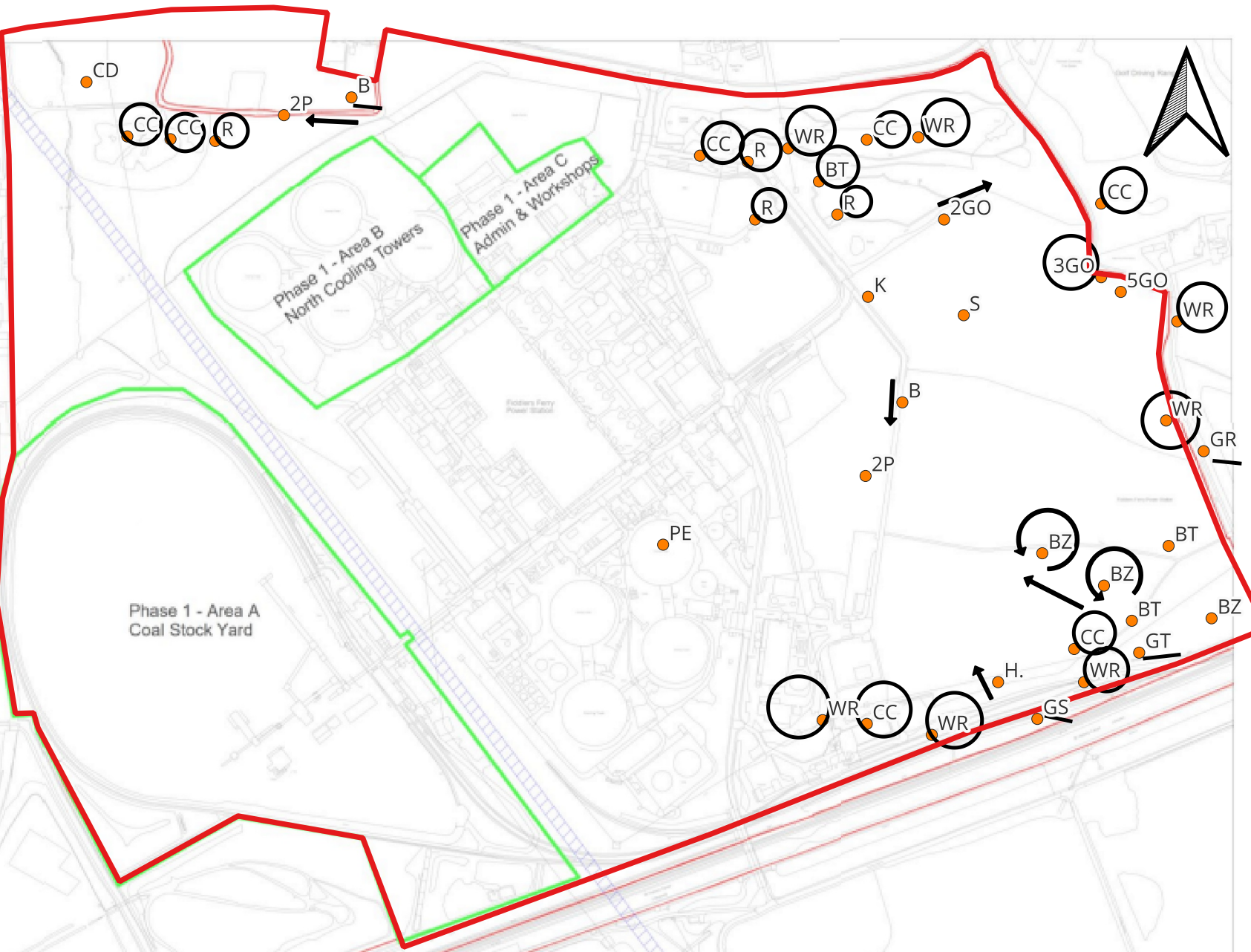


Arcadis

Fiddlers Ferry Winterring Bird Surveys

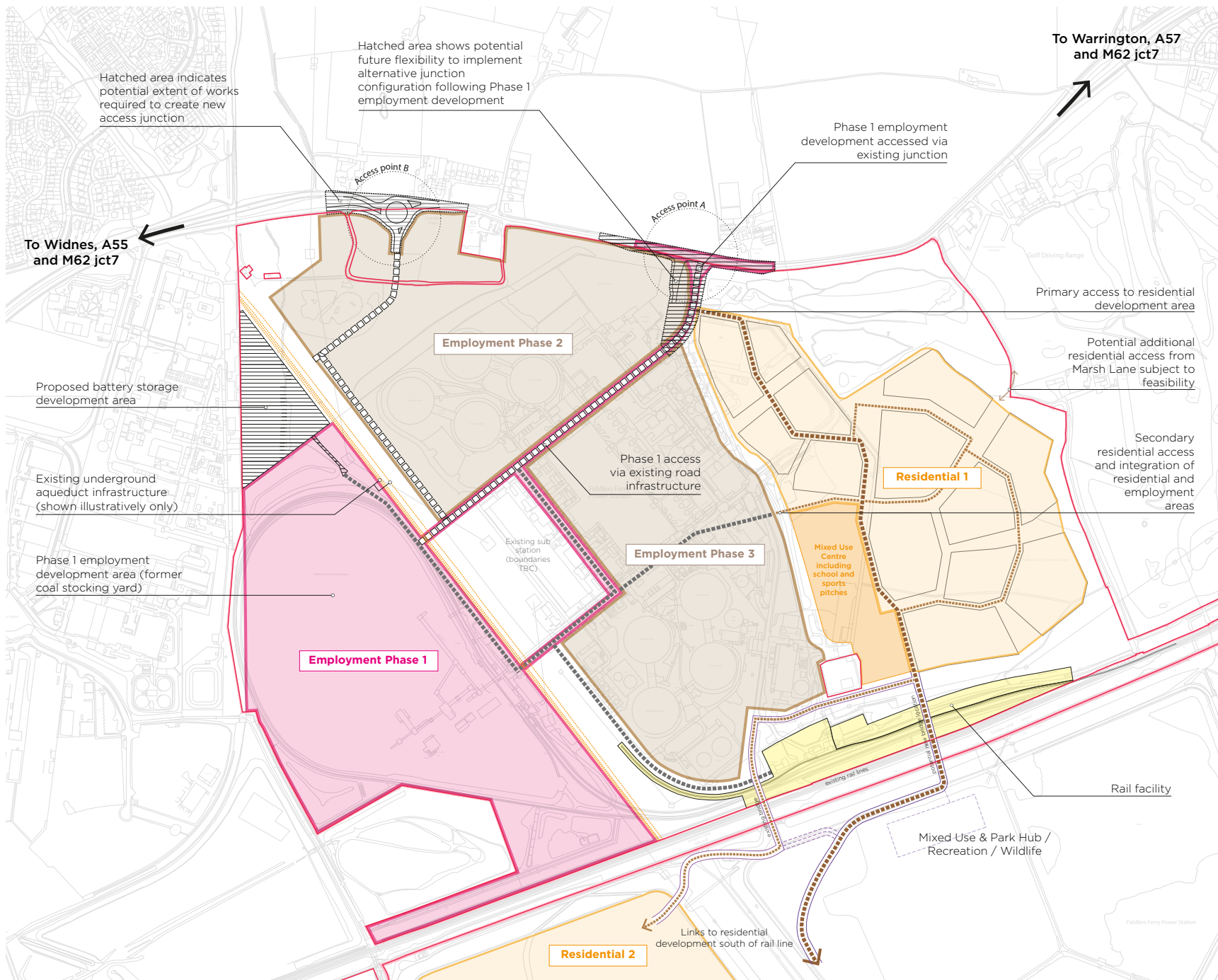
Figure 8: Visit 6 28/03/2023

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## Appendix 1. Fiddlers Ferry Phasing Concept Plan



Not to scale  
Preliminary - for information

- Former power station site boundary
- Proposed employment development - Phase 1
- Proposed employment development - later phases
- Proposed residential development
- Primary employment access routes
- Secondary employment access routes / internal circulation
- Primary residential access routes
- Secondary residential access routes / internal circulation
- Mixed use centre including school and sports pitches
- Rail facility

Junctions shown on Widnes Road based on access designs provided by Curtins

M20423 Fiddlers Ferry  
Framework Plan

# Phasing concept: Transport scoping

Optimised Environments  
220816

## Appendix 2. Key to Bird Species Recorded using BTO Species Codes on Figures 3-8

Common Name	BTO Species Code
Blackbird	B.
Bullfinch	BF
Blue tit	BT
Buzzard	BZ
Carrion crow	C.
Cormorant	CA
Chiffchaff	CC
Collared dove	CD
Chaffinch	CH
Coal tit	CT
Dunnock	D.
Goldcrest	GC
Goldfinch	GO
Greenfinch	GR
Great spotted woodpecker	GS
Great tit	GT
Garden warbler	GW
Grey Heron	H.
Herring gull	HG
Jay	J.
Kestrel	K.
Lesser black-backed gull	LB
Long-tailed tit	LT
Magpie	MG
Moorhen	MH
Grey partridge	P.
Peregrine	PE
Pink-footed goose	PG
Pheasant	PH
Robin	R.
Redwing	RE
Red-legged partridge	RL
Raven	RN
Skylark	S.
Sparrowhawk	SH
Snipe	SN
Song thrush	ST
Treecreeper	TC
Woodcock	WK

Fiddlers Ferry Residential Area 1-  
Wintering Bird Survey

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Woodpigeon	WP
Wren	WR
Yellowhammer	Y.



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## Appendix 3. Bird Legislation

### Birds General Protection

All species of bird are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended). The protection was extended by the countryside rights of way (CRoW) Act.

The legislation makes it an offence to intentionally:

- kill, injure or take any wild bird;
- take, damage or destroy the nest of any wild bird while that nest is in use or being built; or
- take or destroy an egg of any wild bird.

### Birds (Specially Protected Species)

Certain species of bird are listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) and receive protection under Sections 1(4) and 1(5) of the Act. The protection was extended by the CRoW Act. The legislation confers special penalties where the above-mentioned offences are committed for any such bird and also make it an offence to intentionally or recklessly:

- disturb any such bird, whilst building its nest or it is in or near a nest containing dependant young;  
or
- disturb the dependant young of such a bird.

## Appendix 4. Species Recorded During the WBS Visits – Conservation Status, Total & Peak Counts

Common Name	Scientific Name	Conservation Status	V1 – 26/10/2022	V2 – 24/11/2022	V3 – 04/01/2023	V4 – 26/01/2023	V5 – 20/02/2023	V6 – 28/03/2023
Greenfinch (GR)	<i>Chloris chloris</i>	Red, NERC s.41	0	0	0	0	6	1
Herring gull (HG)	<i>Larus argentatus</i>	Red, NERC s.41	0	1	1	0	0	0
Grey partridge (P.)	<i>Perdix perdix</i>	Red, NERC s.41	0	0	0	1	4	4
Skylark (S.)	<i>Alauda arvensis</i>	Red, NERC s.41	1	0	0	0	0	1
Woodcock (WK)	<i>Scolopax rusticola</i>	Red, NERC s.41	0	0	1	2	0	0
Yellowhammer (Y.)	<i>Emberiza citrinella</i>	Red, NERC s.41	0	0	0	0	4	0
Kestrel (K.)	<i>Falco tinnunculus</i>	Amber	1	3	1	0	1	1
Lesser black-backed gull (LB)	<i>Larus fuscus subsp. graellsii</i>	Amber	0	0	1	0	0	0
Moorhen (MH)	<i>Gallinula chloropus</i>	Amber	1	0	0	0	0	0
Pink-footed goose (PG)	<i>Anser brachyrhynchus</i>	Amber	0	0	2	0	0	0
Redwing (RE)	<i>Turdus iliacus</i>	Amber Sch 1	0	2	1	0	0	0
Sparrowhawk (SH)	<i>Accipiter Nisus</i>	Amber	1	0	0	0	0	0
Snipe (SN)	<i>Gallinago gallinago</i>	Amber	0	0	0	1	0	0
Song thrush (ST)	<i>Turdus philomelos</i>	Amber	0	0	0	0	3	0
Woodpigeon (WP)	<i>Columba palumbus</i>	Amber	0	0	1	1	40	0
Wren (WR)	<i>Troglodytes troglodytes</i>	Amber	9	7	3	2	5	7
Blackbird (B.)	<i>Turdus merula</i>	Green	4	4	1	2	5	2
Blue tit (BT)	<i>Cyanistes caeruleus</i>	Green	1	0	1	2	1	2
Buzzard (BZ)	<i>Buteo buteo</i>	Green	2	1	2	2	0	3
Carrion crow (C.)	<i>Corvus corone</i>	Green	0	0	1	0	0	0
Cormorant (CA)	<i>Phalacrocorax carbo</i>	Green	0	0	0	1	2	0
Chiffchaff (CC)	<i>Phylloscopus collybita</i>	Green	0	0	0	0	0	7
Collared dove (CD)	<i>Streptopelia decaocto</i>	Green	0	0	0	0	0	1

Common Name	Scientific Name	Conservation Status	V1 – 26/10/2022	V2 – 24/11/2022	V3 – 04/01/2023	V4 – 26/01/2023	V5 – 20/02/2023	V6 – 28/03/2023
Chaffinch (CH)	<i>Fringilla coelebs</i>	Green	0	0	0	0	8	0
Coal tit (CT)	<i>Periparus ater</i>	Green	0	0	0	1	0	0
Goldcrest (GC)	<i>Regulus regulus</i>	Green	1	0	0	0	0	0
Goldfinch (GO)	<i>Carduelis carduelis</i>	Green	2	3	1	1	91	10
Great spotted woodpecker (GS)	<i>Dendrocopos major</i>	Green	0	1	0	1	1	1
Garden warbler (GW)	<i>Sylvia borin</i>	Green	0	1	0	0	0	0
Great tit (GT)	<i>Parus major</i>	Green	0	1	0	3	5	0
Grey heron (H.)	<i>Ardea cinerea</i>	Green	0	0	0	0	1	1
Jay (J.)	<i>Garrulus glandarius</i>	Green	2	0	0	1	0	0
Long-tailed tit (LT)	<i>Aegithalos caudatus</i>	Green	0	1	0	2	2	0
Magpie (MG)	<i>Pica pica</i>	Green	0	1	2	2	0	0
Peregrine (PE)	<i>Falco peregrinus</i>	Green Sch 1	1	1	2	4	0	1
Robin (R.)	<i>Erithacus rubecula</i>	Green	6	0	0	2	10	4
Raven (RN)	<i>Corvus corax</i>	Green	0	0	1	1	0	0
Treecreeper (TC)	<i>Certhia familiaris</i>	Green	0	0	0	0	1	0
Red-legged partridge (RL)	<i>Alectoris rufa</i>	No Status	0	0	0	1	0	0
Pheasant (PH)	<i>Phasianus colchicus</i>	No Status	0	1	0	1	0	0

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