

APPENDIX 1
PHASE 1 HABITAT SURVEY

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Former Sewage Plant, Monckton Coke
Works

Monckton Power Ltd



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Field Investigations and Data

Where field investigations have been carried out these have been restricted to a level of detail required to achieving the stated objectives of the work. Where any data supplied by the client or from other sources have been used it has been assumed that the information is correct. No responsibility can be accepted by AES - Ltd for inaccuracies in the data supplied by any other party.

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1.0 INTRODUCTION

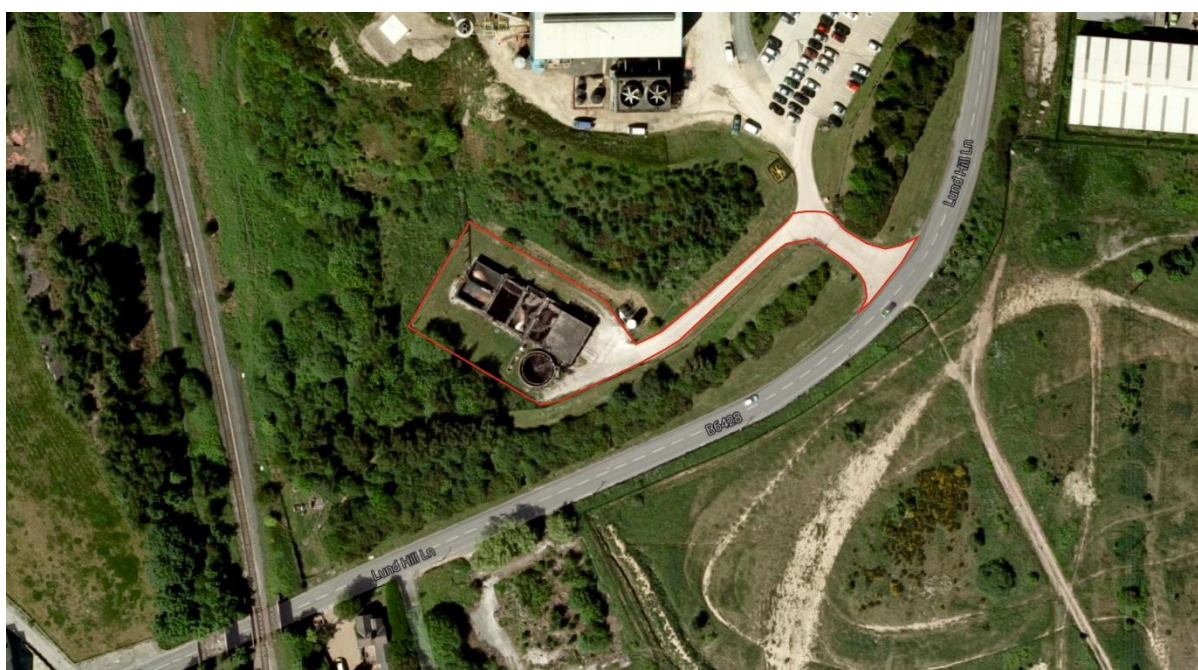
- 1.1 The following report has been prepared by Applied Ecological Services Ltd on behalf of Monckton Power Ltd. It provides details of an Extended Phase 1 Habitat Survey of the application area including a summary of protected Species surveys that were undertaken over a wider site area at Monckton Coke Works. (Approximate Central OS Grid Ref: SE 374 118). The Phase 1 habitat survey was undertaken 4th August 2015
- 1.2 The approximate 0.3ha site includes some 0.2ha for the proposed peaking plant compound, which exists as a defunct sewage plant within the former Monckton Coke and Chemical Works Site. The remaining 0.1ha of the Site involves an existing internal access road. The site is located north east of the town of Royston, Barnsley and is accessed off Lundhill Lane (B6428) which is located to the south of the site boundary. To the west is a railway lane which is in use on a weekly basis, and to the north and east lies the main areas of the former Coke & Chemical Works. The site is delineated by wire fencing and is surrounded by scrub.
- 1.3 The purpose of the Extended Phase 1 Habitat Survey was to map those habitats present within the site, to record any evidence indicating the presence of protected species and to identify where habitats were potentially suitable for such species.

2.0 THE PROPOSED DEVELOPMENT

SITE LOCATION

- 2.1 The site located at grid reference SE 374 118 (approximate central point) is located off Lundhill Lane (B6428), 1.33km to the east of Royston, Barnsley, 6.9km to the east of the M1 Motorway and 14.2km to the west of the A1 Motorway.

Figure 1: Site Location and Proposed Development Area



- 2.2 The proposal is for the installation of a Gas Peaking Plant.

3.0 SURVEY AND SITE ASSESSMENT METHODS

DESK STUDY

3.1 In order to compile existing baseline information, relevant ecological information was requested for the previous 10 years from the following organisations, which for the purposes of this report included:

- Sheffield Biological Records Centre;
- West Yorkshire Joint Services;
- South Yorkshire Badger Group
- South Yorkshire Bat Group
- Multi Agency Geographic Information for the Countryside (Magic) website; and
- NBN Gateway website (for reference only)

3.2 A 10km radius was searched for sites of International nature conservation importance, such as Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and RAMSAR sites. A 2km radius was searched for statutory sites of national, regional and local importance, such as Sites of Special Scientific Interest (SSSIs) or National Nature Reserves (NNR), Local Nature Reserves (LNRs), and non-statutory designated sites such as Local Wildlife Sites (LWS) and also for records of protected and notable species.

3.3 Further inspection, using colour 1:25,000 OS base maps (www.ordnancesurvey.co.uk) and aerial photographs from Google Earth (www.maps.google.co.uk), was also undertaken in order to provide additional context and identify any features of potential importance for nature conservation in the wider countryside.

FIELD SURVEY

HABITATS / FLORA

3.4 The site was surveyed on the 4th August 2015 by Charlotte Mercer¹ experienced Ecologist (AES-LTD) using the standard Extended Phase 1 Habitat Survey methodology (JNCC, 2010)² as recommended by Natural England to identify specific habitats of ecological interest. Target notes were used to record features of interest or specific habitats and

¹ Charlotte Mercer M.Sc., B.Sc. (Hons) is a senior ecologist at AES-LTD. She has worked as a consultant Ecologist since 1997 and undertaken EcIA's on a number of schemes including green energy projects – windfarm & solar, housing and industrial development, quarries and surface mines. Charlotte has designed, project managed, advised and implemented numerous schemes which involve protected species / habitats, a range of ecologically enhanced restoration schemes and has designed site biodiversity plans for schemes which have long term (30+years) build out periods.

² JNCC, (2010), Handbook for Phase 1 habitat survey - a technique for environmental audit

species identified during the survey. Whilst a species list should not be regarded as exhaustive, sufficient information was gained during the survey to enable classification and assessment of major habitat types.

- 3.5 Any habitats suitable for, or features with the potential to support, protected or notable species were also assessed and recorded.
- 3.6 Checks for notifiable plant species, such as Japanese knotweed (*Fallopia japonica*) were also made during the survey.

FIELD SURVEY

FAUNA

Badgers

- 3.7 Land within the development area and areas of peripheral adjacent habitat (where suitable), approximately 30m from the redline boundary was surveyed on 16th April 2015 and the 4th August 2015 following the methodology outlined by Harris *et al* (1989)³. This involves a walkover of the site searching for field signs which would indicate the presence of badgers as follows:

- Setts: including earth mounds and evidence of bedding and or runways between identified setts;
- Latrines: often located close to setts; at territory boundaries or adjacent to favoured feeding areas;
- Prints and established track or runways;
- Hairs caught on rough wood or fencing; and
- Other evidence: including snuffle holes, feeding and playing areas and scratching posts.

Bats

Ground Based Tree Assessment

- 3.8 Ground based tree assessments were undertaken by Charlotte Mercer experienced ecologist on 16th April 2015, with the aid of binoculars where required, on all trees on site. Trees were inspected for signs of use by bats and features which have the potential to be used by bats as indicated in **Table 1**. Each inspected tree was placed into a category representing the signs of use by bats and the potential of the tree to support roosting bats as described in **Table 2**

³ Harris, S., Cresswell, P. & Jefferies, D. 1989. Surveying for badgers. Occasional Publication of the Mammal Society No. 9. Mammal Society, Bristol.

Table 1. Common types of features used by bats for roosting and shelter and field signs that may indicate use by bats. Source: BCT (2012)

Features of trees used as bat roosts	Signs indicating possible use by bats
Natural holes	Tiny scratches around entry point
Woodpecker holes	Staining around entry point
Cracks/splits in major limbs	Bat droppings in/around/below entrance
Loose bark	Audible squeaking at dusk or in warm weather
Behind dense, thick-stemmed ivy	Flies around entry point
Hollows/cavities	Distinctive smell of bats
Within dense epicormic growth	Smoothing of surfaces around cavity
Bird and bat boxes	

Table 2. Categorisation of tree roosting opportunities and signs of bat use from ground-based observations Source: BCT (2012)

BCT category	Level of bat roost potential	Tree roosting opportunities and signs of bat use
Roost Present	Known or Confirmed bat roost	Field evidence of the presence of bats e.g. scratch marks, oil or urine stains, droppings, audible bat social calls, distinctive odour of bats.
1*	High	High quantity and quality of bat roosting features e.g. abundant holes/cracks/splits in major limbs, dense thick-stemmed ivy, dense epicormic growth. Possible signs of bat use e.g. flies around a hole, smoothing of surfaces.
1	Medium	Trees with definite bat potential, supporting fewer suitable features that category 1* trees or with potential for use by single bats
2	Low	Trees with no obvious potential, although the tree is of a size and age that elevated surveys may result in cracks or crevices being found; or the tree supports some features which may have limited potential to support bats.
3	Negligible	Trees with no potential to support bats

SURVEY LIMITATIONS

3.9 The survey reported here was undertaken during the appropriate time of the year for undertaking Phase 1 Habitat surveys. There were no limitations to the survey and access was freely available.

4.0 RELEVANT LEGISLATION & POLICY⁴

LEGISLATION

HABITAT REGULATIONS

- 4.1 The Conservation of Habitats and Species Regulations 2010 transpose Council Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Flora and Fauna (Habitats Directive) into English law, making it an offence to deliberately capture, kill or disturb⁵ wild animals listed under Schedule 2) of the Regulations (such as all bat species and great crested newts). It is also an offence to damage or destroy a breeding site or resting place of such an animal (even if the animal is not present at the time).

WILDLIFE & COUNTRYSIDE ACT

- 4.2 The Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way Act (CRoW) 2000 and the Natural Environment and Rural Communities Act (NERC) 2006, consolidates and amends existing national legislation to implement the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention, making it an offence to:

- Intentionally kill, injure or take any wild animal listed under Schedule 5 to the Act; intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection by any wild animal listed under Schedule 5 to the Act; intentionally or recklessly disturb certain Schedule 5 animal species while they occupy a place used for shelter or protection; and
- Pick or uproot any wild plant listed under Schedule 8 of the Act. Sites of Special Scientific Interest (SSSI) are designated under this Act.

POLICY

NATIONAL PLANNING POLICY FRAMEWORK

- 4.3 The Government published the National Planning Policy Framework (NPPF) on 27th March 2012. This sets out new guidance for local authorities, focusing on helping to produce planning policies that are clear and easier to understand. The NPPF is effective

⁴ Please note that this legal information is a summary and intended for general guidance only. The original legal documents should be consulted for definitive information.

⁵ Disturbance, as defined by the Conservation of Habitats and Species Regulations 2010, includes in particular any action which impairs the ability of animals to survive, breed, rear their young, hibernate or migrate (where relevant); or which affects significantly the local distribution or abundance of the species.

immediately; however the local plans are still valid, for the time being, even if they have been produced prior to the NPPF. There is emphasis on the need for economic growth through designing planning policies which are in favour of development but this will not be achieved in isolation from social and environmental development. Section 11 sets out the requirements for conserving and enhancing the natural environment. Land previously used for development (brownfield sites) should be favoured as long as they are not considered to be of high environmental value. Of particular note is paragraph 152 of the Plan-Making Section which states, “Local planning authorities should seek opportunities to achieve each of the economic, social and environmental dimensions of sustainable development, and net gains across all three. Significant adverse impacts on any of these dimensions should be avoided and, wherever possible, alternative options which reduce or eliminate such impacts should be pursued. Where adverse impacts are unavoidable, measures to mitigate the impact should be considered. Where adequate mitigation measures are not possible, compensatory measures may be appropriate”. The Framework is guidance for local planning authorities on the content of their Local Plans, but is also a material consideration in determining planning applications. The NPPF has replaced much existing planning policy guidance, including Planning Policy Statement 9: Biological and Geological Conservation. However, the government circular 06/05: Biodiversity and Geological Conservation - Statutory Obligations and their Impact within the Planning System, which accompanied PPS9 remains valid.

BIODIVERSITY ACTION PLANS / BIODIVERSITY 2020

- 4.4 The UK Biodiversity Action Plan (UKBAP) (Anon, 1995) was organised to fulfill the Rio Convention on Biological Diversity in 1992, to which the UK is a signatory. A list of national priority species and habitats has been produced with all listed species/habitats having specific action plans defining the measures required to ensure their conservation. Regional and local BAPs have also been organised to develop plans for species/habitats of nature conservation importance at regional and local levels.
- 4.5 The [‘UK Post-2010 Biodiversity Framework’](#), published in July 2012, succeeds the UK BAP and ‘Conserving Biodiversity – the UK Approach’, and is the result of a change in strategic thinking following the publication of the CBD’s [‘Strategic Plan for Biodiversity 2011–2020’](#) and its 20 ‘Aichi Biodiversity Targets’, at Nagoya, Japan in October 2010, and the launch of the new [EU Biodiversity Strategy \(EUBS\)](#) in May 2011. The Framework demonstrates how the work of the four countries and the UK contributes to achieving the Aichi Biodiversity Targets, and identifies the activities required to complement the country biodiversity

strategies in achieving the targets. The UKBAP is no longer an active strategy, and has been replaced by biodiversity strategies in England, Northern Ireland, Scotland and Wales. While the UKBAP is no longer an active policy, species listed on the UKBAP have been incorporated into the new biodiversity strategies for each country. In England under Biodiversity 2020: A strategy for England's wildlife and ecosystem services and under section 41 of The Natural Environment and Rural Communities (NERC) Act 2006, where UKBAP species were recognised as of principal importance for the conservation of biodiversity. Section 40 of the NERC Act 2006 requires all public bodies to have regard for biodiversity conservation when carrying out their function. This is commonly referred to as the '**biodiversity duty**'.

LOCAL PLAN

- 4.6 The statutory and emerging development plan documents for Barnsley include targets and policies which aim to maintain and enhance biodiversity. These are used by Planning Authorities to inform planning decisions

NATURAL ENVIRONMENT AND RURAL COMMUNITIES (NERC) ACT (2006)

- 4.7 Public authorities have a duty to conserve biodiversity under the Natural Environment and Rural Communities (NERC) Act, which came into force in 2006. This states that 'any public body or statutory undertaker in England and Wales must have regard to the purpose of conservation of biological diversity in the exercise of their function and that decisions of public bodies work with the grain of nature and not against it' (Part 3, Paragraph 60). The Act also includes a range of measures to strengthen the protection of wildlife and habitats.

WILDLIFE LEGISLATION

- 4.8 In addition to the above, a range of legislation is in place to ensure that habitats and species of conservation importance are protected from harm, either directly or indirectly.
- 4.9 Due to its location the site may have the potential to support or provide habitat for a number of those species protected by the various pieces of legislation summarised in **Table 3**. A summary of the key legislation for protected species is given in **Table 4**.

Table 3: Overview of Key Legislation

Legislation	Relevance
The Conservation of Habitats and Species Regulations 2010	<p>This transposes the EC Habitats Directive 1992 (<i>Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna</i>) and the EC Birds Directive 1979 (<i>Council Directive 79/409/EEC on the protection of wild birds</i>) into UK law.</p> <p>Annexes I and II of the Habitats Directive list (respectively) habitats and species for which member states are required to establish and monitor SACs. The EC Birds Directive provides a similar network of sites (SPAs) for all rare or vulnerable species listed in Annex I and all regularly occurring migratory species, with particular focus on wetlands of international importance. Together with SACs, SPAs form a network of pan-European protected areas known as ‘Natura 2000’ sites.</p> <p>The Habitats Regulations also make it an offence (subject to exceptions) to deliberately capture, kill, disturb, or trade in the animals listed in Schedule 2, or pick, collect, cut, uproot, destroy, or trade in the plants listed in Schedule 4.</p>
The Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention 1979)	<p>The Bern Convention aims to ensure conservation and protection of all wild plant and animal species and their natural habitats (listed in Appendices I and II of the Convention), to increase cooperation between contracting parties, and to afford special protection to the most vulnerable or threatened species (including migratory species).</p>
The Wildlife and Countryside Act (WCA) 1981 (as amended)	<p>The WCA is the primary UK mechanism for statutory site designation (Sites of Special Scientific Interest, SSSIs) and the protection of individual species listed under Schedules 1, 2, 5 and 8 of the Act, each subject to varying levels of protection</p>
The Countryside and Rights of Way Act 2000	<p>This legislation strengthens the provision of the 1981 WCA (as amended), both in respect of statutory sites such as SSSIs and protected species. It also places a statutory obligation on Local Authorities and other public bodies to further conservation of biodiversity in the exercise of their functions, thus providing a statutory basis to the Biodiversity Action Plan (BAP) process, which began in 1994. Section 74 of the Act lists the habitat types and species of principal importance in England.</p>
Hedgerow Regulations 1997	<p>The Hedgerow Regulations 1997 are intended to protect important countryside hedges from destruction or damage in England and Wales.</p>
Natural Environment and Rural Communities Act 2006	<p>The ‘NERC’ Act makes provision in respect of biodiversity, pesticides harmful to wildlife, protection of birds and invasive non-native species. Section 40 of the act also introduced a new duty on public bodies to have regard to the purpose of conserving biodiversity in the exercise of their functions.</p>

Table 4: Key Legislation for protected species

Species	Key legal protection
Bats (all species)	<p>All European species of bat are listed on Annex IV of the EC Habitats Directive as being in need of “strict protection”. This is implemented in Britain under The Conservation of Habitats and Species Regulations 2010. All British bats are included on Schedule 5 of the WCA (1981) and the whole of Section 9 of The Act applies to European bat species. In summary, the above legislation collectively prohibits the following:</p> <ul style="list-style-type: none"> • Deliberately or recklessly capturing, injuring, taking or killing of a bat; • Deliberately or recklessly harassing a bat; • Intentionally or recklessly disturbing of a bat in its place of rest (roost), or which is used for protection or rearing young; • Deliberately or recklessly damaging, destroying or obstructing access to any resting place or breeding area used by bats; • Deliberately or recklessly disturbing a bat in any way which is likely to significantly affect the local populations of the species, either through affecting their distribution or abundance, or affect any individuals ability to survive, reproduce or rear young; • Possession or advertisement/sale/exchange of a bat (dead or alive) or any part of a bat. <p>In England, licences are issued by Natural England for any actions that may compromise the protection of a European protected species, including bats, under the Habitats Regulations 2010. This includes all developments, regardless of whether or not they require planning permission. Bats are also protected by the Wild Mammals (Protection) Act 1996 and selected species are listed on the UK Biodiversity Action Plan (BAP) and the Hull Biodiversity Action Plan (LBAP)</p>
Great crested newt	<p>Great crested newts are protected under European and British law, having the same level of protection as bats (see above). Licenses are issued by Natural England for any actions that may compromise the protection of this species, under the Habitat Regulations 2010. This includes all developments, regardless of whether or not they require planning permission. The species is also listed on the UK and Local BAPs.</p>
Otter	<p>Otter are protected under European and British law and receive the same level of protection as bats (see above.) The species is listed under Annex II and IV of the Habitats Directive, which is implemented in Britain under The Conservation of Habitats and Species Regulations 2010. Otter are also protected under Schedules 5 and 6 of the WCA 1981, The Wild Mammals (Protection) Act 1996 and are listed as a priority species in Appendix II of the Bern Convention. The species is also listed on the UK and Local BAPs.</p>

Table 4: Continued

Species	Key legal protection
Water Vole	<p>Water vole is protected under Schedule 5 of the WCA 1981 (as amended). This makes it an offence to:</p> <ul style="list-style-type: none"> • Intentionally kill, injure or take water voles; • Possess or control the species; • Damage or destroy any place used by water vole for shelter or protection; • Disturb water vole while they occupy such places of shelter; • Sell, possess or transport water vole for the purpose of sale; and • Advertise the buying or selling of water vole. <p>The species is also protected under the Wild Mammals (Protection) Act 1996 and listed on the UK and Local BAPs.</p>
Birds	<p>The majority of bird species, with the exception of some species listed on Schedule 2, are protected under the WCA 1981 (as amended). This makes it an offence to intentionally or recklessly:</p> <ul style="list-style-type: none"> • Kill, injure or take any wild bird; • Take, damage or destroy any nest which is in use or being built; and • Take, damage or destroy the eggs of any such bird. <p>Additional protection against disturbance whilst at the nest is also afforded to any bird species, whether an adult bird or their dependant young, which is listed on Schedule 1 of the Act. Certain species are also listed as being of priority conservation importance on the UK and Local BAPs</p>
Badger	<p>Badger are protected under the Protection of Badgers Act 1992, which makes it an offence to:</p> <ul style="list-style-type: none"> • Knowingly kill, capture, injure or disturb any individual; • Intentionally damage or destroy a badger sett, or any part thereof; • Obstruct access to an area which is used for breeding, resting or shelter; and • Disturb a badger while it is using any place used for breeding, resting or shelter. <p>The species is also protected by the Wild Mammals (Protection) Act 1996.</p>

5.0 RESULTS & DISCUSSION

DESKTOP ASSESSMENT

Designated Sites

International & National Designated Sites

- 5.1 There are no sites of International Nature Conservation within 10km of the study area.
- 5.2 There are no Nationally Designated Sites within 2km of the study area

Locally Designated Sites

- 5.3 One Local Nature Reserve (LNR) and one Local Wildlife Site (LWS) (Sheffield Biological Records Centre) are located within 2km of the survey area and three Wakefield Nature Area's (WNA) are located within 2km of the survey area and are summarised below in **Table 5**.

Table 5: Locally Designated Sites within 2km of the survey Site

Site Name & Designation	Feature of Interest	Distance from Survey Area
Carlton Marshes - LNR	Wetland Reserve with particular interest for bird watchers	1.53km to the south of the site boundary
Barnsley Canal - LWS	Wetland, grass snake	212m to the west of the site boundary
Ellis Laithe, Cold Hiendley	Grassland, scrub, woodland features, yellow meadow ant, dingy skipper, hare	541m to the north of the site boundary
Barnsley Canal Royston	No information available	1.43km to north of site boundary
Barnsley Canal, Cold Hiendley	Wetland, grass snake	1.67km to north of site boundary

- 5.4 No statutory or non-statutory designated sites are located within the site boundary. Following a review of the development proposals and of the features of interest of each designated site it is unlikely that there would be any negative effects on the sites listed in Table 5 above. The closest designated site to the application Site is Barnsley Canal located approximately 212m to the west of the site boundary, it is designated for its wetland habitat and presence of grass snake there are no direct habitat links between the application site and the LWS and the two areas do not share any features.

ECOLOGICAL RECORDS

- 5.5 At the time of writing only data from Sheffield Biological Records Centre (SBRC) have been returned and are reported here. However data was requested for a different planning application in 2013 from West Yorkshire Joint Services (then West Yorkshire Ecology) – any important records will also be reported here.

Amphibians

- 5.6 26 records of amphibians were returned from SBRC; x6 records great crested newt *Triturus cristatus*, 10 records of common toad *Bufo bufo*, 3 records of common frog *Rana temporaria* and 7 records of smooth newt *Triturus vulgaris* were provided. All records were from the Rabbit Ings Country Park which is located across the B6428 to the east of the site. Great Crested newt are also recorded in the Cold Heindley area to the north of the site.

Birds

- 5.7 773 records of birds were returned from SBRC representing 65 species. All of these records are from the Rabbit Ings Country Park and a very well-watched location known as Carlton Marsh a Local Nature Reserve (SE 379 009). Carlton Marsh is located 1.53km to the south of the Site. Records here indicate the presence of a range of schedule 1 raptors including merlin, *Falco columbaris*, hobby, *Falco subbuteo* marsh harrier *Circus aeruginosus* and peregrine, *Falco peregrinus* along with waders and wildfowl notably bittern *Botaurus stellaris*, and kingfisher *Alcedo atthis* There were also records for barn owl *Tyto alba*.

Mammals

- 5.8 26 records of bats were returned from SBRC for the Rabbit Ings Country Park. There are two records of Daubentons bats roosting, the rest of records are for bats in flight / foraging bats and are for the following species: Daubentons, Noctule, Pipistrelle (not specified) and Common Pipistrelle.
- 5.9 There are two records of badger *Meles meles* (2007, 2015) for the Rabbit Ings Country Park.
- 5.10 There were 438 records of water vole *Arvicola terrestris* returned from SBRC within 2 km of the site boundary, 300 of the records are from Carlton Marsh 1.53km to the south of the site. 42 of the records originated from the Rabbit Ings Country Park to the east of

the Site, 22 records (2011) from Shafton 1.09km, the fishing lakes to the west of Barnsley canal (715m to the north west) and Barnsley Canal 1.62km to the south of the site.

- 5.11 There were eight records of hedgehog, twelve records of harvest mouse and nine records of brown hare.

Reptiles

- 5.12 Ten records of grass snake *Natrix natrix*, were returned from SBRC for the 2km search area. Two of the records were from the Rabbit Ings Country Park to the east, and the remaining eight records from Carlton Marsh (LWS).

Invertebrates

- 5.13 Six records of Dingy Skipper *Erynnis tages* were returned by SBRC. Four of the records were from 2013 from the Rabbit Ings Country Park to the east of the Site, one from Carlton Marsh LWS and the remaining record from Cronk Hill Marsh (approximately 955m to the south of the site boundary).

FIELD SURVEY

GENERAL SITE DESCRIPTION - HABITATS

- 5.14 The Site for the peaking plant compound is a defunct sewage plant located within the former Monckton Coke & Chemical Works. It is sited on a concrete pad with several dry raised lagoons, steel hoppers and a steel corrugated shed. The small compound site area (0.2ha) is delineated by a high chain link fence with concrete posts. There is an existing road access to the Site from Lund Hill Lane (B6428) which is also within the site.
- 5.15 The Site is surrounded by scrub and tall ruderal vegetation. Surrounding habitats include the main area of the former Coke Works which is located to the north of the site, whilst to the south and east lies the B6428 and the Rabbit Ings Country Park– habitats here include woodland, grassland, wetland areas and ponds along with sports pitches, footpaths and cycle routes. To the west there is a railway line which is in use on a weekly basis beyond which (approximately 215m) lies Barnsley Canal.
- 5.16 The locations of the habitats described in the following sections can be found on **Figure 2: Phase I Habitat Plan**.

BUILDINGS AND HARDSTANDING

- 5.17 The site compound area is in part based on a concrete pad. There are several dry raised concrete lagoons and other infrastructure relating to the former sewage plant including steel hoppers and a steel corrugated shed.
- 5.18 There is an existing concrete access road from the B6428 to the site.

SEMI-IMPROVED GRASSLAND

- 5.19 Small areas of grassland were located within the sewage plant that were neutral in their assemblage and were largely similar to verges that were located next to the access road. Species recorded included false oat grass *Arrhenatherum elatius*, crested dogs tail *Cynosaurus cristatus*, festuca spp *Festuca spp.*, cocksfoot *Dactylis glomerata*, ribwort plantain *Plantago lanceolata*, creeping buttercup *Ranunculus repens*, birds foot trefoil *Lotus corniculatus*, common sorrel *Rumex acetosa*, daisy *Bellis perennis* and dandelion *Taraxacum officinale*.

TALL RUDERAL

- 5.20 Tall ruderal herbs had encroached at the edges of the site area, these areas were poor in diversity. False-oat grass, cocksfoot, common nettle *Urtica dioica* and creeping thistle dominated. Other species present included great willowherb *Epilobium hirsutum*, rosebay willowherb *Chamerion angustifolium*, spear thistle *Cirsium vulgare*, broad-leaved dock and hogweed *Heracleum sphondylium*.

SCATTERED SCRUB

- 5.21 Occasional scattered scrub was growing within the fence line, likely to have self-seeded from adjacent areas. Species present were dog rose *Rosa canina* and silver birch *Betula pendula*.

BOUNDARIES

- 5.22 The proposed peaking plant compound site is delineated by tall chain link fencing and concrete posts.

PROTECTED / NOTABLE SPECIES

BATS

- 5.23 There are no roosting opportunities within the site or immediately adjacent to the site. Although the dense scrub located around the site had potential for foraging and or commuting bats. Transect surveys undertaken by AES-LTD during 2015 recorded Noctule (x2 individuals) and common Pipistrelle (x1 bat) bats foraging in and around this location. No scrub will be removed to facilitate development of this area.

REPTILES

- 5.24 Grass snake are recorded frequently within the locality and have been recorded within the wider site during surveys undertaken in 2013 (unimproved grassland field to the north of Monckton Coke Works). More recent reptile survey undertaken by AES-LTD in 2015 did not record the presence of reptiles within the application area or the wider Monckton Coke Works Site, however a grass snake was recorded adjacent to the Barnsley Canal whilst undertaking Great Crested Newt Surveys (approximately) 212m to the west of the site. Reptiles are not considered to be a constraint to development.

GREAT CRESTED NEWT (GCN)

- 5.25 GCN surveys have been undertaken in 2013 and 2015. GCN were recorded in the north of the Monckton Coke Works Site in a pond within an unimproved grassland field at grid reference SE 37992 12126 (452m North of the application area) during 2013 but were not recorded during a repeat survey in 2015. GCN are recorded in the adjacent Rabbit Ings Country Park but are not considered a constraint to the installation of the Peaking Plant Apparatus – GCN have been recorded by Rabbit Ings Park Ranger at a pond at grid reference: SE 37660 12206 located approximately 468m to the north east of the site boundary. Although there is a habitat link between the Rabbit Ings Country Park and an underpass to an unimproved grassland field in the north of the wider Monckton Coke Works site, the application site has no habitat features to attract GCN. There are major barriers to dispersal of GCN to the application site including isolation of the application site by unsuitable habitat of the Coke Works itself and by Lunhill lane a busy 'B' road with high kerbs.

BADGER

- 5.26 The site provides no potential for badgers in terms of sett creation. There were no characteristic field signs of badger such as setts, latrines, hairs or footprints recorded within the site or its immediate surrounds at the time of survey.

WATERVOLE

- 5.27 The disused Barnsley canal may offer potential for the presence of water vole. However the canal is situated approximately 212m to the west of the development, the development would not impact upon the canal itself and there are no habitat features that could support water vole within the site. This species does not require further consideration.

BREEDING BIRDS

- 5.28 Breeding Bird Survey was undertaken during 2015 by AES-LTD. Feral Pigeon was confirmed breeding in an area of scrub on the north eastern boundary of the site. Robin, Mistle Thrush and Blackbird were also confirmed breeding within the dense scrub area to the south of the site boundary and Blue Tit within dense scrub to the west. Probable breeders recorded within the area were Wood Pigeon, Wren, Dunnock and Blackcap. No scrub habitat will be removed to facilitate development and there will be no effect on breeding birds.

6.0 SUMMARY & RECOMMENDATIONS

- 6.1 The application site supports a limited range of habitat types and low potential for protected / notable species to occur.
- 6.2 There were no opportunities for roosting bats, however bat surveys undertaken during 2015 recorded the presence of foraging Noctule and common pipistrelle.
- 6.3 It is recommended that lighting is kept to a minimum on site and that consideration will be given to low level lighting of the development as well as consideration to minimise light pollution to reduce impact on retained habitat.
- Use low pressure sodium lamps or high pressure sodium instead of mercury or metal halide where glass glazing is preferred due to its UV filtration properties;
 - Lighting should be directed to where it is needed and light spillage avoided. This may be achieved through design and using accessories such as hoods, cowls, louvres and shields;
 - The lighting should be as low as guidelines permit, if lighting is not needed don't light;
 - Many security lights may be fitted with movement sensors which if well installed and aimed will reduce the amount of time a light is on each night; and
 - The light should be aimed to light only the immediate area required by using as sharp a downward angle as possible.
- 6.4 No signs characteristic of badger were found during site survey with no opportunities for sett creation within the site. However due to their presence within the wider area and highly mobile nature of the species it is recommended that precautionary measures be undertaken prior to commencements of works to ensure that badgers are not harmed (thus maintaining legal compliance).
- The site and an area of 30m around the site will be reassessed for the possible presence of badger setts immediately prior to commencement of construction.
- 6.5 Appropriate working and material storage methods will be implemented throughout the construction period to ensure adjacent habitats are not adversely affected by the proposal.

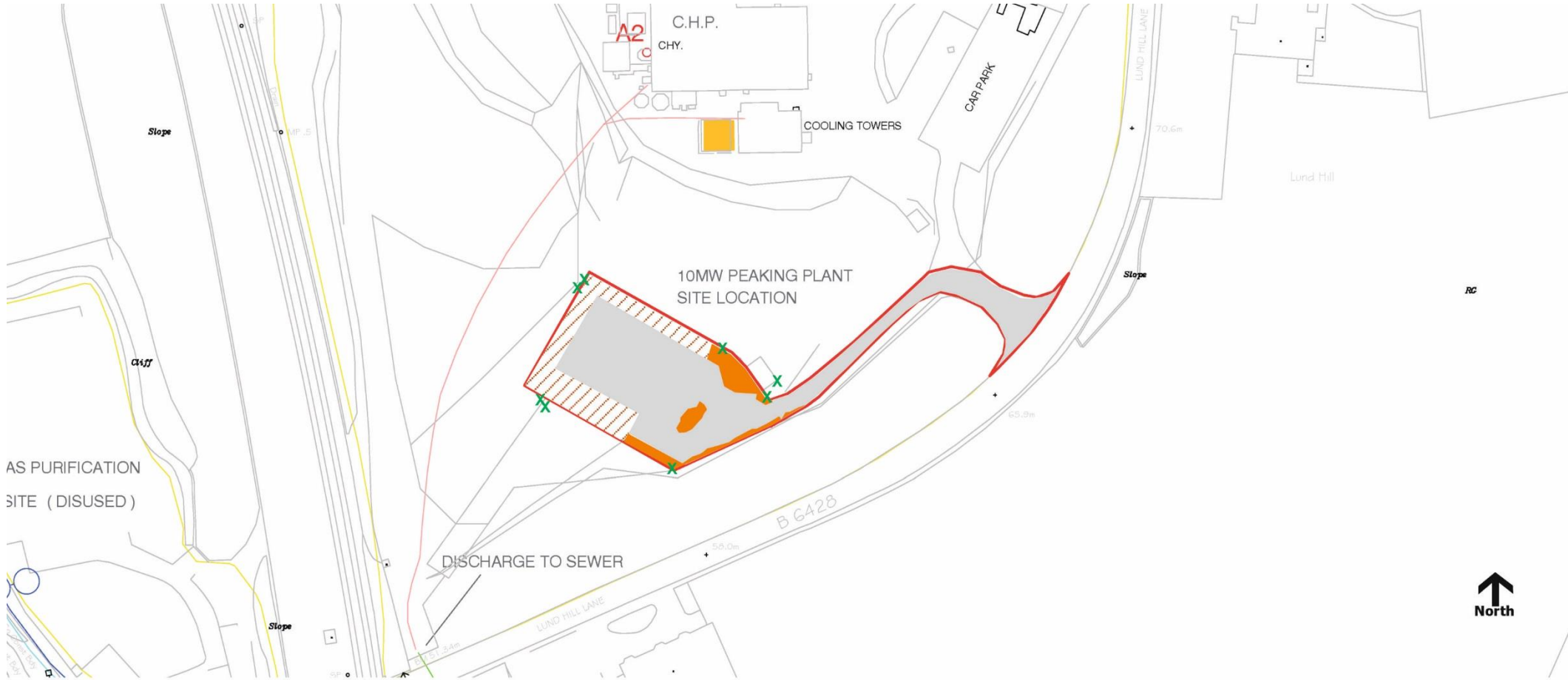
SITE PHOTOGRAPHS:



Existing Access Road from Lund Hill Lane B6428



Application Site – former sewage plant delineated by chain link fencing



KEY

-  Site Boundary
-  Buildings / hardstanding
-  Tall ruderal
-  Semi improved grassland
-  Scattered scrub

Monckton Power Limited

Monckton

Phase 1 Habitat Plan



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