

The Keadby 3 Low Carbon Gas Power Station Project

Document Ref: 6.3

Planning Inspectorate Ref: EN010114

The Keadby 3 (Carbon Capture Equipped Gas Fired Generating Station) Order

Land at and in the vicinity of the Keadby Power Station site, Trentside, Keadby, North Lincolnshire

Environmental Statement Volume II - Appendix 11D: Confidential Badger Survey Report

The Planning Act 2008

The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017

Applicant: Keadby Generation Limited

Date: May 2021

Document Ref	6.3.15/Appendix 11D (CONFIDENTIAL)
Revision	VP1.0
Document Owner	AECOM

GLOSSARY

Abbreviation	Description
AGI	Above Ground Installation
CCP	Carbon Capture and Compression
EclA	Ecological Impact Assessment
ES	Environmental Statement
LBMEP	Landscape and Biodiversity Mitigation and Enhancement Plan
LERC	Lincolnshire Environmental Records Centre
PEA	Preliminary Ecological Appraisal

CONTENTS

1.0	Introduction	1
1.1	Background.....	1
1.2	Survey Scope	1
2.0	Relevant Legislation	3
3.0	Methods.....	4
3.1	Desk Study	4
3.2	2017 Presence/ Absence Survey.....	4
3.3	2020 Presence/ Absence Survey.....	6
3.4	2017 Badger Bait Marking Survey	6
3.5	Survey Limitations	7
4.0	Results.....	8
4.1	Desk Study	8
4.2	Badger Presence/ Absence Survey	8
4.3	Badger Bait Marking Survey	11
5.0	Conclusions	14
5.1	Status of badger within the zone of influence of the Proposed Development.....	14
5.2	Potential Impacts of the Proposed Development on Badger	14
5.3	Mitigation and Ongoing Requirements.....	15
6.0	References	17

TABLES

Table 1:	Definitions of types of badger sett	5
Table 2:	Badger setts recorded in 2017 and 2020.....	8

FIGURES

Figure 11D.1 –	Badger Survey	18
----------------	---------------------	----

1.0 INTRODUCTION

1.1 Background

- 1.1.1 This report accompanies **Chapter 11: Biodiversity and Nature Conservation** (ES Volume I - **Application Document Ref. 6.2**) and describes the approach and findings of the badger (*Meles meles*) surveys undertaken by AECOM within the zone of influence for the construction of the Proposed Development and provides an assessment of the likely impacts and effects on badger during construction and operation, as well as proposed mitigation measures.
- 1.1.2 The terms of reference used to describe the Proposed Development in this report are broadly consistent with those defined within the main chapters of the Environmental Statement (ES) (ES Volume I – **Application Document Ref. 6.2**).
- 1.1.3 The Proposed Development Site encompasses an area of approximately 69.4 hectares (ha) which includes circa 20.7ha of land for construction laydown.
- 1.1.4 The Proposed PCC Site comprises an area of approximately 18.7ha of the Proposed Development Site within the wider Keadby Power Station site that is located within Keadby Common. Overhead electricity transmission lines associated with the existing National Grid 400kV Substation bisect the Proposed PCC Site. Land to the south of these overhead lines within the Proposed PCC Site is proposed for administration/ control room/ warehouse buildings and car parking areas and an above ground installation (AGI) for the gas connection. The area of the Proposed PCC Site on which the power generation (CCGT), carbon capture and compression (CCP) and associated stacks will be developed is referred to as the 'Main Site' herein.

1.2 Survey Scope

- 1.2.1 AECOM has completed three surveys relevant to the Proposed Development, the results of which are presented in this report. The surveys completed are:
- 2017 presence/ absence badger survey across the full extent of the former Keadby Ash Tip and the access route from A18 to North Pilfrey Bridge. This survey was for a different development scheme (under consideration at that time but no longer being progressed), but the results are relevant to the Proposed Development;
 - 2020 presence/ absence badger survey of the land required for, or otherwise within 30m of the land required for, the construction of the Proposed Development (see the Proposed Development boundary on **confidential Figure 11D.1**); and
 - 2017 badger bait marking survey within the former Keadby Ash Tip to investigate the clan affinities of the badger setts recorded in 2017. This survey did not need to be repeated in 2020 but it is considered that the 2017 survey results provide further context on how badgers use the former

Keadby Ash Tip suitable to inform (where relevant) subsequent impact assessment of the Proposed Development.

- 1.2.2 The 2020 badger survey was completed at the same time as the habitat surveys for the Preliminary Ecological Appraisal (PEA) as described in **Appendix 11C** (ES Volume II – **Application Document Ref. 6.3**).
- 1.2.3 This report should be treated as confidential, as badgers are still subject to illegal persecution. It is not considered good practice to place information on the location of badger setts and activity in the public domain. The report should be circulated to relevant consultees only.

CONFIDENTIAL

2.0 RELEVANT LEGISLATION

2.1.1 Badgers are protected under the Protection of Badgers Act 1992 (the Act). Relevant offences under the Act may result from any action that intentionally or recklessly:

- damages a badger sett or any part of it;
- destroys a badger sett;
- obstructs access to, or any entrance of, a badger sett; and
- disturbs a badger when it is occupying a badger sett.

2.1.2 The Act provides a defence against the offences outlined above. However, the defence is only sustained if it can be argued that the unintentional damaging was '*the incidental result of a lawful operation*' and '*could not reasonably have been avoided*' as set out in the Act. In order to demonstrate these two elements of the defence, as far as is reasonable, appropriate action would need to be taken to safeguard badgers and their setts to ensure there is as little risk as possible of interfering with them.

2.1.3 Where development cannot avoid potential offences then it is possible to apply to Natural England for a development licence to derogate the Act. For reasons of animal welfare and to avoid destruction of setts containing breeding females with dependent cubs, development licences are only issued for sett closure between 1st July and 30th November inclusive.

2.1.4 The term 'badger sett' is normally understood to mean the system of tunnels and chambers, in which badgers live, and their entrances and immediate surrounds. The Act specifically defines a sett as '*any structure or place which displays signs indicating current use by a badger*'. Further guidance on interpretation of this is given in Natural England (2009a).

2.1.5 Natural England has also provided clarification on interpretation of what would constitute a disturbance offence (Natural England, 2009b). This clarifies that in the view of Natural England the Act, and therefore the licensing system, is not concerned with 'trivial' levels of apparent disturbance at setts which would be unlikely to adversely affect any badgers present. There is no specified distance over which a disturbance offence would or would not apply. However, historically it has generally been accepted, except in exceptional circumstances involving activities likely to be disturbing a greater distance, that a 30m stand-off is usually sufficient to mitigate for a potential disturbance offence. Works within 30m may therefore require a licence, depending on the magnitude and duration of the relevant impact.

2.1.6 **Appendix 11A:** Biodiversity and Nature Conservation Legislation and Planning Policy (ES Volume II – **Application Document Ref. 6.3**) provides further information.

3.0 METHODS

3.1 Desk Study

3.1.1 A desk study was undertaken as part of the scope of works for the PEA, as described in **Appendix 11C** (ES Volume II - **Application Document Ref. 6.3**). Badger records were obtained from Lincolnshire Environmental Records Centre (LERC) for a search radius of 1km out from the indicative Proposed Development Site boundary.

3.1.2 AECOM previously undertook a badger survey of most the land required for the Proposed Development on behalf of the Applicant in 2017. The results of this survey remain directly applicable to the Proposed Development and have been combined with the results of the current (2020) badger survey to provide cumulative baseline data on badger activity in the study area. The work undertaken in 2017 is described in Section 3.2 and 3.4 below.

3.2 2017 Presence/ Absence Survey

3.2.1 In 2017, AECOM undertook a badger presence/ absence survey on behalf of the Applicant for a purpose unrelated to the Proposed Development but encompassing land within the zone of influence of the Proposed Development. The survey encompassed all habitats within the area of land referred to as the former Keadby Ash Tip, including the access road from the A18 to North Pilfrey Bridge.

3.2.2 The survey was completed on 23rd March 2017 in accordance with standard guidance (Harris *et al.*, 1989).

3.2.3 The following badger field signs were searched for:

- setts - comprising either single isolated holes or a series of holes, likely to be connected underground;
- paths – well-worn runs in vegetation between setts or leading to feeding areas;
- foraging activity - snuffle holes (small scrapes) where badgers have searched for insects, earthworms and plant tubers;
- dung pits - badgers usually deposit faeces in characteristic excavated pits, concentrations of which (known as latrines) are typically found at territorial boundaries;
- badger footprints in soft substrates; and
- badger hairs caught on fences.

3.2.4 Where badger setts were found, each sett was assessed to determine its type (main, outlier, annex or subsidiary) and current usage. Definitions for the different types of badger sett are provided below as Table 1.

Table 1: Definitions of types of badger sett

Sett type	Definition
Main	Normally in continuous use and usually used for breeding. They generally include a large number of entrance holes with significant amounts of earth spoil piled around the surrounding ground. The holes and surrounding area generally show strong signs of current active use, including well used paths and sett entrances.
Annex	Usually quite close to a main sett - normally less than 150m away. They are usually clearly linked to the nearby main sett by well-worn paths. They usually have multiple holes not all of which may appear active, but some holes usually show signs of recent activity at most times of year. At larger annex setts, there is likely to be a considerable accumulation of spoil around the sett area.
Subsidiary	Setts with only a small number of holes (generally less than 5) and usually greater than 50m away from a main sett and often without obvious linking paths. The holes can be very variable in signs of usage and are often much less consistently in use than those of main or annex setts. Generally, however, they show signs of recent use. They tend to be repeatedly used and accumulations of spoil – often including digging from the current year – are usually present.
Outlier	Usually consist of a single or double hole but may occasionally have more. Generally, they have only a small accumulation of spoil at the hole entrance and are not clearly linked to other setts by worn trails. They are usually only used sporadically and may show little evidence of very recent use. Outliers may be occupied by foxes or rabbits when not in use by badgers.

3.2.5 The level of activity at the observed badger setts was classified according to the following criteria:

- active – well-worn entrance holes, fresh excavated soil, presence of bedding material, fresh latrines;
- partially active – leaves or twigs present in entrance holes, mosses or other plants growing in or around entrance; and
- disused – holes partially or completely blocked, no recent excavation or other evidence of activity around sett. For disuse to be confirmed, field signs would need to have deteriorated or decayed to such an extent that there could be confidence that the sett had fallen out of use (rather than just not being occupied at the time of inspection).

3.3 2020 Presence/ Absence Survey

- 3.3.1 The survey was completed on 22nd April 2020, with a supplementary inspection on 15th July 2020. The survey applied the same methods used in 2017.
- 3.3.2 The survey encompassed the former Keadby Ash Tip and additional areas within and adjacent to the Main Site. A minimum 30m search radius for badger setts was completed based on the likely zone of influence for the Proposed Development on badger setts, both in terms of direct effects and indirect effects from potential disturbance during construction.

3.4 2017 Badger Bait Marking Survey

- 3.4.1 The 2017 presence/ absence survey found two main badger setts within the former Keadby Ash Tip. As a consequence, it was inferred that two badger family groups (clans) made use of the former Keadby Ash Tip.
- 3.4.2 Badgers are territorial, with each discrete clan using an exclusive territory and defending this against incursion by badgers from other clans. A bait marking study was therefore undertaken to better understand how badgers are using the former Keadby Ash Tip, to confirm the number of clans present, and to determine (where possible) the boundary between the territories of the two clans.
- 3.4.3 The methods employed for the badger bait marking study followed the approach described by Delahay *et al.* (2000). This method works on the principle of providing badgers with supplementary food comprising pre-prepared 'bait' (peanuts and molasses), amongst which small coloured indigestible medical-grade plastic pellets are included (one colour per badger clan). The bait is laid at well-established badger setts, which in this case was taken to be the two main setts (Setts 3 and 11, **confidential Figure 11D.1**). The deposition of pellets was subsequently recorded through the examination of badger latrines throughout the site. Where latrines are used by badgers to demarcate territorial boundaries, bait-marking studies can be used to delineate the full extent of a badger clan's territory and to ascribe 'ownership' of different setts to separate clans.
- 3.4.4 The coloured bait was laid daily at several points around each main sett to ensure more than one badger would potentially consume the bait. The bait was laid under bricks or stones, to reduce the risk of birds or small mammals consuming the bait before it was found by the badgers. In addition, to ensure successful uptake by badgers, some bait was placed into the entrances of well used sett holes.
- 3.4.5 The bait marking study was undertaken daily over the period 13th October to 3rd November 2017 (16 days, excluding weekends). Badger use of latrines follows a seasonal pattern, particularly in relation to the use of latrines as territorial markers. This has implications for the timing of bait-marking studies. The use of latrines to mark territorial boundaries is most frequent during late winter and early spring (late February to late April), with a shorter peak in

autumn (October). The study therefore coincided with a time of year when badgers are territorially active.

3.4.6 Key survey dates associated with the above study were:

- 13th October 2017 - Start of study. Start of supplementary feeding and a site walkover to re-verify sett locations and to map badger pathways and latrines;
- 13th October to 2nd November 2017 – Daily supplementary feeding (15 days out of 16); and
- 20th October to 3rd November 2017 – Start of main study, daily searches for badger latrines and recording of distribution of colour pellets (11 days).

3.4.7 As illustrated on **Confidential Figure 11D.1**, badger groups included in the bait marking study were named as follows:

- 'Blue Clan', which was associated with the main sett near the eastern boundary of the Main Site (Sett 3). This group was fed blue pellets; and
- 'Yellow Clan', which was associated with the main sett near the western boundary of the former Keadby Ash Tip site (Sett 11). This group was fed yellow pellets.

3.5 Survey Limitations

3.5.1 There are no limitations to the survey work undertaken in 2017 and 2020. The survey followed appropriate methods and was undertaken at appropriate times of year and in appropriate favourable weather conditions. All land required for the construction of the Proposed Development was accessible in 2020, with the exception of land that currently forms the construction site and laydown area for the new Keadby 2 Power Station. The latter land did not need to be surveyed as it is currently does not contain habitats suitable for use by badger and is therefore not a relevant constraint.

3.5.2 Badgers found and readily utilised the supplementary food resources provided during the 2017 bait marking study and were active widely over the survey period. No survey difficulties were encountered that were likely to alter the conclusions of this assessment.

4.0 RESULTS

4.1 Desk Study

4.1.1 The desk study data received from LERC did not give precise locations and details of badger activity. However, 11 records were provided for land within Keadby Wind Farm in 2012 and two records of badger within the former Keadby Ash Tip from 2012.

4.2 Badger Presence/ Absence Survey

4.2.1 The presence/ absence of badger setts was first determined through survey by AECOM in 2017 within the site of the former Keadby Ash Tip. Relevant areas of the former Keadby Ash Tip were re-surveyed in 2020, along with all other land required for the construction of the Proposed Development i.e. encompassing Keadby 1 Power Station and Keadby Common also. Together, this data provides a robust baseline in relation to the location and classification of badger setts within the potential zone of influence of the Proposed Development. The results of the 2017 and 2020 surveys are summarised in Table 2 and the locations of the identified setts and other field signs is shown on **confidential Figure 11D.1**.

4.2.2 A total of 14 badger setts were found as a result of the 2017 and 2020 surveys, of which nine were active in 2020. Of the setts recorded, only Sett 14 is located within the Proposed Development Site. All other setts are located within the former Keadby Ash Tip.

4.2.3 The closest main badger sett to the Proposed Development is Sett 3 (a main sett) which is located approximately 42m west of the proposed security fence around the Main Site (which is the worst-case extent of potentially disturbing construction activities). The only other setts within 30m of the Proposed Development are the minor Setts 4 and 8, which are located approximately 22m west of the proposed security fence. Sett 14 is located within the Proposed Development Site but is within woodland more than 30m east of the closest potential construction works for the Proposed Development.

Table 2: Badger setts recorded in 2017 and 2020

Sett No.	Location	Grid reference	Status in 2017	Status in 2020	Sett type	Summary evidence
1	Former Keadby Ash Tip – base of western slope	SE 8100 4 1175 8	Active	Not found (dense vegetation obstructed access)	Annex	In 2017 four active holes with well-used paths, bedding and fresh spoil heaps were found.

Sett No.	Location	Grid reference	Status in 2017	Status in 2020	Sett type	Summary evidence
2	Former Keadby Ash Tip - top of eastern slope	SE 81720 11896	Active	Not found	Annex	In 2017 three holes with only low-level use were found, paths linked to main sett.
3	Former Keadby Ash Tip - in scrub at base of eastern slope	SE 81752 11877	Active	Active	Main	Six entrance holes of which four were active. In 2020 there were obvious signs of use such as fresh bedding, hairs, and fresh spoil mounds as well as well-used paths heading north and east.
4	Former Keadby Ash Tip – in scrub 10m north of Sett 3	SE 81771 11900	Active	Active	Outlier	A one hole sett linked to Sett 3 by a well-used path.
5	Former Keadby Ash Tip - mid-slope between Setts 2 and 3	SE 81749 11898	Active	Disused	Annex	Two disused holes are present. Vegetation is present blocking the holes. No fresh spoil was found.
6	Former Keadby Ash Tip -	SE 81768 12110	Not present	Active	Outlier	One hole. Associated paths leading towards Sett 3, and up onto

Sett No.	Location	Grid reference	Status in 2017	Status in 2020	Sett type	Summary evidence
	easter n slope					the former Keadby Ash Tip.
7	Former Keadby Ash Tip - easter n slope	SE 8175 9 1211 9	Not present	Active	Outlier	One hole. Associated paths leading towards Sett 3, and up onto the former Keadby Ash Tip.
8	Former Keadby Ash Tip - easter n slope	SE 8178 3 1201 3	Not present	Active	Subsidiary	Two holes and associated path. Appears to be regularly used.
9	Former Keadby Ash Tip – base of wester n cliff of central area	SE 8148 6 1189 1	Disused	Disused	Subsidiary	In 2017 five disused holes were found. Entrances were overgrown, and no paths were present nearby.
10	Former Keadby Ash Tip - easter n slope	SE 8175 5 1216 0	Active	Active	Subsidiary	Three entrances, of which only one is partially active. Low levels of use were also recorded in 2017. Paths lead towards Sett 3, and up onto the former Keadby Ash Tip.
11	Former Keadby Ash Tip – within scrub on west	SE 8105 9 1178 6	Active	Active	Main	In 2017 fourteen active holes and two disused holes were found. The sett had heavily used paths and bedding was found.

Sett No.	Location	Grid reference	Status in 2017	Status in 2020	Sett type	Summary evidence
	facing bank of steep gully					
12	Former Keadby Ash Tip - north facing bank of steep gully	SE 8113 2 1173 0	Disused	Disused	Annex	In 2017 one disused hole was found.
13	Former Keadby Ash Tip - halfway down western slope in scrub	SE 8110 9 1213 5	Active	Not inspected	Subsidiary	In 2017 four active holes with paths which showed some signs of use.
14	Proposed Development Site, woodland to north-east of Keadby 1 Power Station	SE 8302 9 1176 7	Not surveyed	Active	Subsidiary	Four active entrance holes. Fresh bedding present. Clear pathway leading towards the former Keadby Ash Tip.

4.3 Badger Bait Marking Survey

4.3.1 A badger bait marking survey was undertaken on the former Keadby Ash Tip in 2017 as it was relevant to the scheme being assessed at that time. This survey

clarified the habitat usage and territory boundaries of the two badger clans using the former Ash Tip (i.e. the clans focussed on Main Sett 3, the 'blue clan', and Main Sett 11, the 'yellow clan').

- 4.3.2 There was no requirement to repeat this badger bait marking survey in 2020 for the Proposed Development, as there had been no significant changes in the number, status and distribution of badger setts across the former Keadby Ash Tip and therefore territorial boundaries are not likely to have changed. In addition, the land required for the construction of the Proposed Development is not likely to alter land available to the two badger clans for foraging, and therefore territorial boundaries are not likely to be adversely disrupted.
- 4.3.3 The 2017 bait marking survey identified that four of the setts (Setts 1, 11, 12 and 13) found in that year were associated with the Yellow Clan, including Main Sett 11. Five setts (Setts 2, 3, 4, 5 and 10) were confirmed as being associated with the Blue Clan, including Main Sett 3. The new setts found within the former Keadby Ash Tip in 2020 (Setts 6, 7 and 8) are all located unambiguously within the territory occupied by the Blue Clan.
- 4.3.4 The inferred territory of the Yellow Clan (focussed on Sett 11) shows a clear association with the western half of the former Keadby Ash Tip. This is supported by the size of the main sett, which at 14 active holes, is very large and has more than twice the number of holes present in association with the other main sett (Sett 3, Blue Clan).
- 4.3.5 The Yellow Clan territory includes a heavily used badger path at the south-west corner of the former Keadby Ash Tip opposite North Piffrey Farm, via which badgers access the arable farmland to the west of the former Keadby Ash Tip. While no off-site survey work was undertaken, the level of path usage would imply that this farmland comprises an important part of the territory for this clan. The 2017 bait marking study recorded a much more extensive network of pathways than was found in the original 2017 presence/ absence survey. These, in combination with the latrine evidence, demonstrate the extent of badger activity within the Yellow Clan territory.
- 4.3.6 The inferred territory of the Blue Clan (focussed on Sett 3) correlates with the grassland on the summit of the former Keadby Ash Tip. Although the full extent of the activity westwards was not proven, it was considered possible that the western end of the summit grassland was used by the Yellow Clan. The Blue Clan otherwise uses a relatively small part of the former Keadby Ash Tip to the south of the main sett, as well as land to the east towards Keadby Power Station. This is the clan most closely associated with the land required for construction of the Proposed Development. Away from the former Keadby Ash Tip, badger pathways were hard to find, but a number of pathways were found, showing that badgers exit the Proposed Development Site to access adjoining habitats to the east.
- 4.3.7 While not included within the remit of the 2017 bait marking survey, the results of the 2020 survey indicate that Sett 14 north of the gatehouse of Keadby 1

Power Station is linked to Main Sett 3. This is supported by the locations and orientations of badger field signs found on land between Setts 3 and 14.

CONFIDENTIAL

5.0 CONCLUSIONS

5.1 Status of badger within the zone of influence of the Proposed Development

- 5.1.1 There are two badger clans in the vicinity of the Proposed Development Site, both of which primarily occupy and are likely to be substantively dependent on habitats within the former Keadby Ash Tip, given this is where all but one of the setts is located..
- 5.1.2 The badger is considered a widespread and common species nationally and is not considered threatened (Judge et al. 2017; Matthews et al. 2018; Mammal Society, 2020), and therefore legal protection is afforded primarily to secure its general welfare and to address threats from illegal persecution. Given this, it is considered that the population of badger (comprising two clans) associated with the Proposed Development Site is of local (site level) nature conservation value only.

5.2 Potential Impacts of the Proposed Development on Badger

- 5.2.1 The surveys found no main badger setts within or immediately adjacent to the land required for the construction of the Proposed Development. The closest main badger sett is Sett 3 which is located outside the Proposed Development Site, approximately 42m from the closest potential construction activities (at the Main Site) and is otherwise well buffered by intervening stands of dense scrub. Given this, no main setts would be directly affected, and all main setts are located beyond the distance (30m) within which it is generally considered that there is potential for meaningful disturbance to occur.
- 5.2.2 There are two minor setts, Setts 4 and 8, which are located outside the Proposed Development Site but within 30m of potential construction activities. These minor setts are within the territory of the badger clan associated with Sett 3. In addition to the latter main sett, this clan has access to at least three other setts all of which are more than 38m from potential construction works and otherwise well buffered by dense scrub and woodland. Given this, even if construction works do disturb badgers using these two minor setts, the badgers present would have access to other setts nearby. Consequently, an adverse disturbance effect on this badger clan is not likely as construction of the Proposed Development will not prevent access to setts and other suitable habitats. The proposed core construction working hours are during the daytime period i.e. 07:00 and 19:00 (**Chapter 5: Construction Programme and Management (ES Volume I – Application Document Ref. 6.2)**) which will assist in minimising the duration of any impacts due to potentially disturbing construction activities. In this context, no requirements for sett closure or exclusion measures are identified to permit the Proposed Development to proceed in accordance with legal requirements. It is considered least intrusive to allow badgers to decide whether to continue to use Setts 4 and 8 over the duration of construction than to make this judgement for them. This is particularly the case given there are no other potential construction impacts on

these two setts. It is proposed that this rationale will be reviewed again prior to construction (see Section 5.3, below).

- 5.2.3 There is a potential low risk of injury to individual badgers foraging within construction working areas, if these are accessible to badgers. This has been considered in **Chapter 11: Biodiversity and Nature Conservation** (ES Volume I – **Application Document Ref. 6.2**), and the relevant mitigation measures are also captured and committed to in the Indicative Landscape and Biodiversity Mitigation and Enhancement Plan (LBMEP) (**Application Document Ref. 5.10**).
- 5.2.4 Once the Proposed Development is operational, it is unlikely to conflict with the legal protections afforded to badger, indeed the proposed screening plantings and other soft landscaping is likely to be attractive to badgers as foraging habitat. Relevant security fences will also be fitted with badger gates to maintain comparable habitat connectivity for badgers over the medium to long-term, tying in with the habitat creation and enhancement proposals specified in the Indicative LBMEP (**Application Document Ref. 5.10**).
- 5.2.5 Should badgers subsequently establish setts within operational areas then this would indicate that the associated activities are not disturbing to badgers. The presence of badgers within operational areas and any operational constraints arising from this would be managed by the Applicant on a case by case to achieve legislative compliance, as is currently the case within the operational Keadby 1 Power Station and the consented Keadby 2 Power Station.
- 5.2.6 The above potential construction impacts relate to requirements for legislative compliance. Given the status of the species (see above, Section 5.1) construction of the Proposed Development is not likely to affect the nature conservation status of the species. No significant adverse effects are therefore likely, either before or after implementation of any necessary mitigation measures.

5.3 Mitigation and Ongoing Requirements

- 5.3.1 Mitigation requirements are specified and committed within **Chapter 11: Biodiversity and Nature Conservation** (ES Volume I – **Application Document Ref. 6.2**) and Indicative LBMEP (**Application Document Ref. 5.10**).
- 5.3.2 There will remain potential for the status of the species to change in the period prior to construction of the Proposed Development. If new setts are subsequently established in the land required for construction of the Proposed Development, then there would be a potential for construction works to conflict with the protection afforded to the species under the Act. Given this, the following impact avoidance and mitigation measures would be implemented prior to and during construction of the Proposed Development in order to minimise impacts on badger and ensure legislative compliance:
- an updated badger survey will be completed in advance of construction works to re-confirm the status and distribution of badgers;

- mitigation requirements will be reviewed and confirmed based on this updated badger survey; and
- if subsequently determined as necessary follow re-survey, a badger development licence would be obtained from Natural England to permit works likely to result in offences under the relevant legislation.

CONFIDENTIAL

6.0 REFERENCES

Delahay, R.J., Brown, J.A., Mallinson, P.J., Spyvee, P.D., Handoll, D., Rodgers, L.M & Cheeseman, C.L. (2000). The use of marked bait in studies of the territorial organization of the European Badger (*Meles meles*). *Mammal Review* 30 (2): 73-87

Harris, S., Cresswell, P. & Jefferies, D. (1989) *Surveying Badgers*. Mammal Society

Judge, J., Wilson, G.J., Macarthur, R., McDonald, R.A. & Delahey, R.J. (2017) Abundance of badgers (*Meles meles*) in England and Wales. *Scientific Reports* 7

Mammal Society (2020 *Red List for Britain's Mammals*. Available online: <https://www.mammal.org.uk/science-research/red-list/> [accessed October 2020]

Mathews, F., Kubasiewicz, L.M., Gurnell, J., Harrower, C.A. & McDonald R.A. (2018) *A Review of the Population and Conservation Status of British Mammals*. Natural England Joint Publication JP025

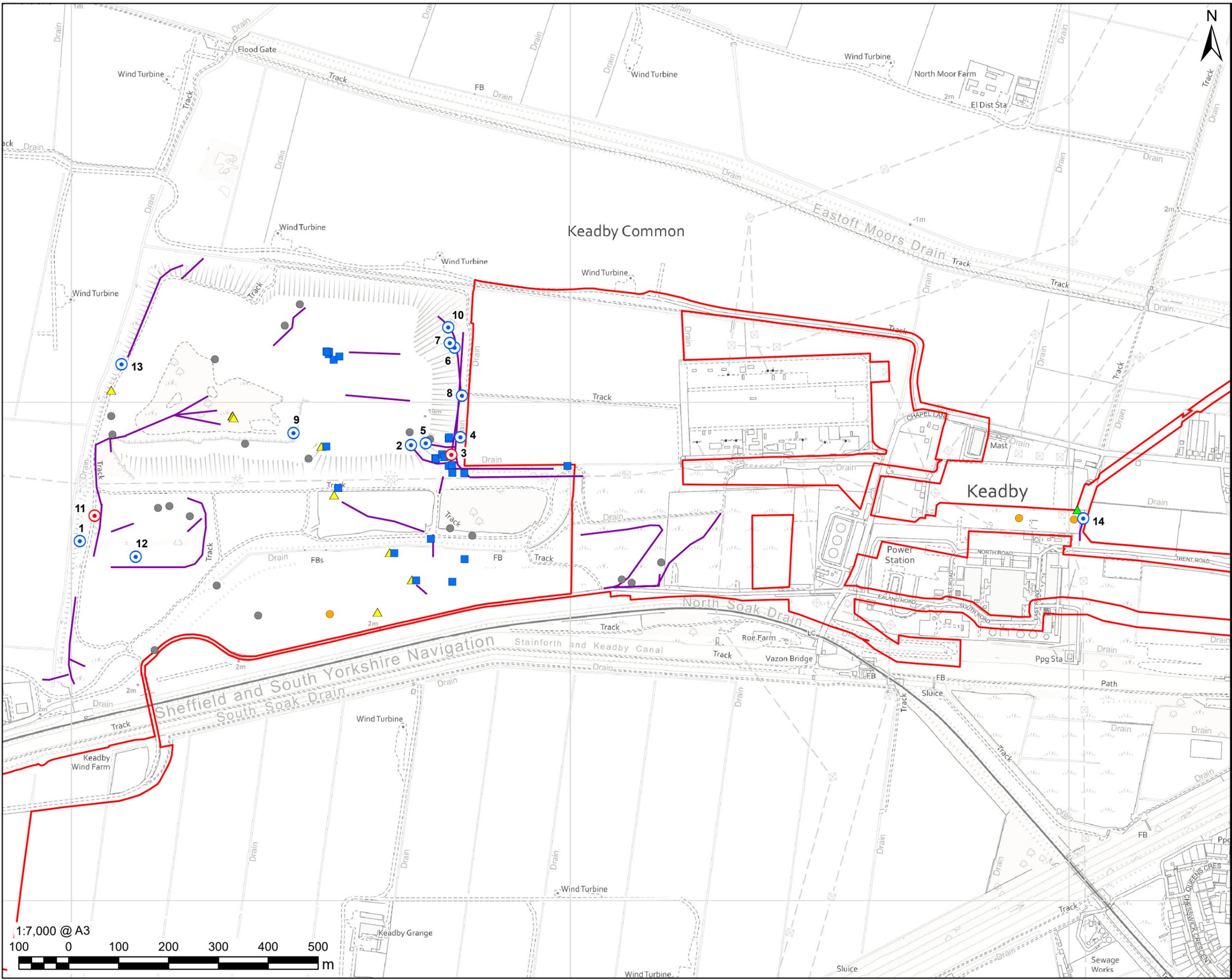
Natural England (2009a) *Guidance on 'current use' in the definition of a badger sett*. Available online: http://webarchive.nationalarchives.gov.uk/20140605121602/http://www.naturalengland.org.uk/Images/WMLG17_tcm6-11815.pdf [accessed May 2020]

Natural England (2009b) *Interpretation of 'disturbance' in relation to badgers occupying a sett*. Available online: http://webarchive.nationalarchives.gov.uk/20140605121600/http://www.naturalengland.org.uk/Images/WMLG16_tcm6-11814.pdf [accessed May 2020]

Figure 11D.1 – Badger Survey

CONFIDENTIAL

Confidential



Revision: 01 Drawn: JW Checked: CN Approved: RW Date: 13/05/2021
Filename: K:\07 CAD & GIS\02_Maps\PEA Preliminary Environmental Assessment\ES_VersionK_ES_PEA_Fig_11D.1_Badger_Survey_A3_20210507_R01_Confidential.mxd

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as signed by AECOM or as required by law. AECOM accepts no responsibility and disclaims any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.