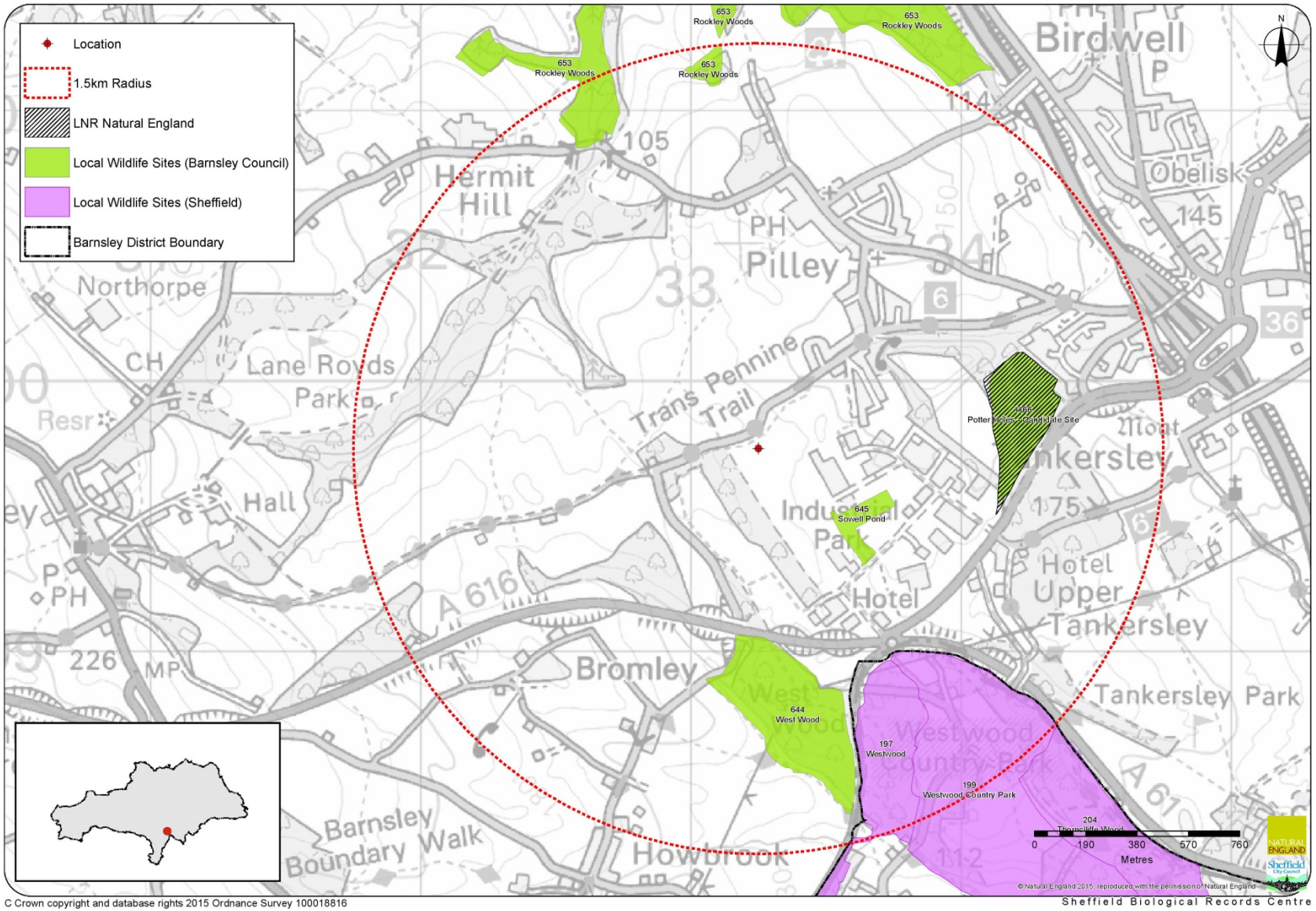

Figure 3 – *Non-statutory designated sites 1.5km buffer*

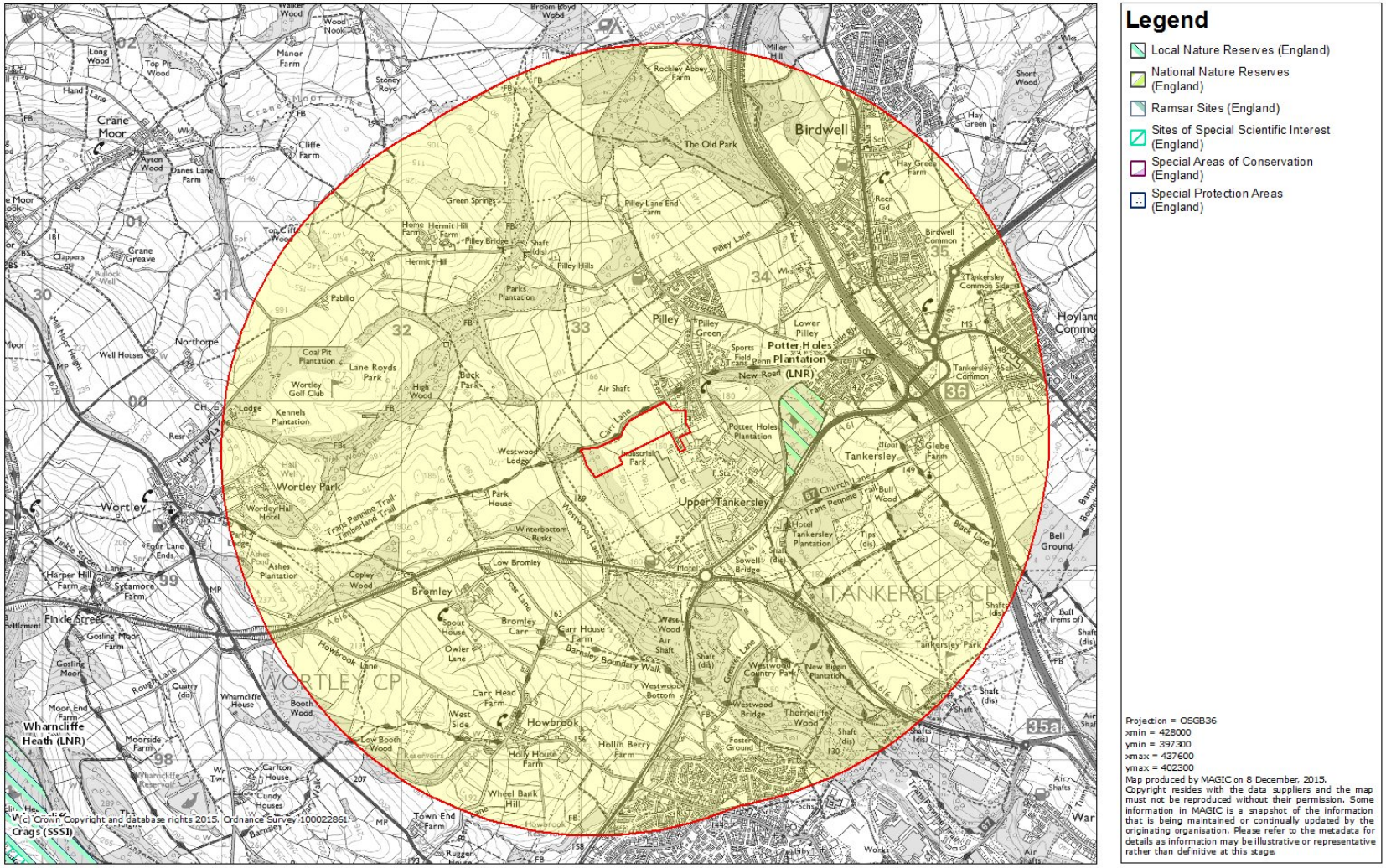

Figure 4 - *Statutory designated sites 2km buffer*

5.2 Vegetation

5.2.1 Details of the plant species found on site are included in the target notes. Species recorded are all commonly occurring and undoubtedly occur elsewhere in similar habitats in the local area.

5.2.2 The neutral grassland and ephemeral/short perennial vegetation is of high species diversity. Although none of the species themselves are of particular note, this entire habitat is considered to satisfy the criteria for classification as the BAP habitat 'Open Mosaic Habitats on Previously Developed Land'.

5.2.3 The broadleaf woodland bounding the site to the North, East and West is listed on the BAP Priority Habitat Inventory as deciduous woodland.

5.2.4 There is no evidence of Japanese knotweed, giant hogweed or Himalayan balsam on the site. No other invasive or notable weed species listed on Schedule 9 (Section 14) of the Wildlife and Countryside Act (1981) (as amended) was identified within the site or adjacent land.

5.3 Amphibian

5.3.1 There are records of great crested newt and smooth newt (*Lissotriton vulgaris*) from within the site, dating from 2012.

5.3.2 There are a further 102 records for amphibians within 2km of the site, comprising 48 records of great crested newt, 22 records of smooth newt, 16 records of common toad (*Bufo bufo*) and 16 records of common frog (*Rana temporaria*).

5.3.3 During the walkover survey of the site, it was observed that Temporary Amphibian Fencing (TAF) had been installed along the North, South and West , boundaries of the site, along with pitfall traps at regular intervals (Figure 5). In addition, a sign was found which provided information regarding the creation of a conservation area for great crested newts immediately to the West, by an ecological consultancy.

5.3.4 The TAF remains intact and looks to provide an effective barrier that would prevent the ingress of amphibians onto the site.

5.3.5 Contact was made with the ecologist for the project, who confirmed that they had undertaken works at the site between June and September 2008. Licence number EPSL 30167 covered clearance between these dates. Mitigation ponds were created and a total of 15 great crested newts were removed from the site.


Key
Site Boundary
Pond
Newt Fencing
120m
170m
440m
1
2
3
N
envirotech
Figure 5
Ponds Within 500m
and Distances from the Site
SCALE: NTS
REV 01

5.3.6 A freedom of information request was made from Natural England regarding this, and any other licensable activities, that were undertaken at the site. They responded that the documents pertaining to this licence had been misplaced and that they did not have digital copies (Appendix 1).

5.3.7 Natural England did, however, provide details of a scheme in close proximity to the South which included the issuing of an EPSM licence for great crested newts in 2010. This found a medium population (peak count 31) of great crested newts using three ponds in the vicinity of the site.

5.3.8 There are three ponds within 500m of the site boundaries that could be identified via OS mapping and aerial photography (Figure 5).

5.3.9 Ponds 1 and 2 are understood to have been created as part of the mitigation scheme detailed above. Surveys undertaken in 2010 found a small population of great crested newts present in Pond 1, but none were recorded in Pond 2. These are well connected to the site by grassland and woodland but the TAF obstructs access.

5.3.10 Pond 3 is understood to be the pond from which the great crested newts found on site in 2008 originated, and a medium population was recorded here in 2010. Given the >400m of hardstanding between this pond and the site, it is considered highly unlikely that amphibians would still traverse between the two areas.

5.3.11 The third pond which was found to contain great crested newts in 2010 was lost under the development.

5.3.12 Artificial refugia in the form of 50cm^2 rubber tiles were found scattered throughout the site, presumed to be remnants of previous survey work. These were searched for the presence of amphibians but no indications of their presence could be found.

5.3.13 It is considered that the site does not contain ponds or other permanent areas of standing water, and none are visible on either OS mapping or aerial photography of the site. There are, however, waterlogged areas and numerous ephemeral pools which will hold water for part of the year throughout the site. These are unlikely to remain inundated during the summer months and so have little potential to provide breeding ponds for amphibians. The habitats on site would offer foraging habitat for amphibians, comprising grassland, woodland and ephemeral pools. Piles of rubble and discarded materials would also offer potential refugia/hibernacula.

5.3.14 Great crested newts are known to have been trapped out from the site in 2008, at which time TAF was installed and has remained partly enclosing the site for 8 years. This is considered to remain an effective barrier which would prevent the ingress of amphibians onto the site from the ponds to the West. Many of the pitfall traps installed in 2008 remain on site, the majority are open and would continue to trap amphibians moving along the base of the TAF.

5.3.15 To the South, the site is isolated from the other known population of great crested newts by an active industrial park which is highly unlikely to be traversed by this species.

5.3.16 There are no potential breeding ponds for great crested newts on the site, and whilst it does offer potential refugia/hibernacula and limited foraging potential, these are of lower quality than opportunities occurring closer to the ponds, such as the band of woodland to the West. It is therefore judged that the likelihood of this species occurring on site is very low and no further survey work will be required.

5.3.17 Precautionary mitigation with regard to construction activities should be observed as a matter of best practice. The pitfall traps should be removed and the TAF taken down on the completion of site works.

5.4 Badger

5.4.1 Two records of badgers occur within 2km of the site.

5.4.2 An active badger sett was found along the Northern boundary of the site, comprising two entrance holes (FTN1, Figure 1). This is judged to be an 'outlier' sett which would be used sporadically by low numbers of badgers. Badger latrines were also found in close proximity to this sett.

5.4.3 In addition, badger hairs were found at a breach in the fence on the South-west boundary of the site, and numerous runs were identified in the woodland to the West.

5.4.4 Following consultation with Argus Ecology, it was learnt that a mitigation licence for this species was granted by Natural England, but not implemented.

5.4.5 A freedom of information request was made to Natural England for details of this licence but they hold no records of any such application (Appendix 1).

5.5 Bats

5.5.1 There are 60 records of seven species of bat within 2km of the site. Species recorded locally are common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*P. pygmaeus*), brown long-eared (*Plecotus auritus*), whiskered (*Myotis mystacinus*), Daubenton's (*M. daubentonii*), noctule (*Nyctalus noctula*) and Leisler's (*N. leislerii*) bats.

5.5.2 The foraging habitat within the core of the site is very poor for bat species being open and exposed. The woodland bounding the site, however, is of high quality for foraging and provides connectivity to the numerous other woodland parcels in the local area.

5.5.3 Whilst the site peripheries are likely to be of some value to foraging bats, they are unexceptional locally where much more extensive woodland cover occurs.

5.5.4 It is not considered there would be significant degradation of foraging habitat as a result of the proposal so long as the woodland along the North and West boundaries is retained, or its loss is compensated for.

5.5.5 Trees around the site perimeter were assessed in accordance with BCT (2012) and assigned a risk category. All of the trees on site were of narrow stem diameter and are assessed as category 3 (negligible risk). No indications of roosting or highly suitable

roost sites were located within the trees. All of the trees could be adequately inspected. Risk categories from BCT (2012) and the requirement for mitigation for each tree category are shown on Figure 7.

5.5.6 We consider bat species are highly unlikely to rely on the site for feeding but may occur in the local area. Roosting by bats will not occur on the site.

5.5.7 Precautionary mitigation would be appropriate in respect of ensuring the foraging habitat on site is at least improved for use by bats during development.

Key

Site Boundary

envirotech

Figure 6
Results* of
Bat Habitat Survey

SCALE: NTS | REV 01

*Habitats outside the site boundary are indicative only
and have been mapped from within the site boundary or from publicly accessible land

Tree category and description	Stage 1 Initial survey requirements	Stage 2 Further measures to inform proposed mitigation	Stage 3 Likely mitigation
Known or confirmed roost	Follow SNCO guidance and these guidelines wherever possible, to establish the extent to which bats use the site. This is particularly important for roosts of high risk species and/or roosts of district or higher importance and above		The tree can be felled only under EPS licence following the installation of equivalent habitats as a replacement.
Category 1* Trees with multiple, highly suitable features capable of supporting larger roosts	Tree identified on a map and on the ground. Further assessment to provide a best expert judgement on the likely use of the roost, numbers and species of bat, by analysis of droppings or other field evidence. ***A consultant ecologist is required***	Avoid disturbance to trees, where possible. Further dusk and pre-dawn survey to establish more accurately the presence, species, numbers of bats present and the type of roost, and to inform the requirements for mitigation if felling is required.	Felling would be undertaken taking reasonable avoidance measures[3] such as 'soft felling' to minimise the risk of harm to individual bats.
Category 1 Trees with definite bat potential, supporting fewer suitable features that category 1* trees or with potential for use by single bats	Tree identified on a map and on the ground. Further assessed to provide a best expert judgement on the potential use of suitable cavities, based on the habitat preferences of bats. ***A consultant ecologist required***	Avoid disturbance to trees, where possible. More detailed, off the ground visual assessment. Further dusk and pre-dawn survey to establish the presence of bats, and if present, the species and numbers of bats and type of roost, to inform the requirements for mitigation if felling is required.	Trees with confirmed roosts following further survey are upgraded to Category 1* and felled under licence as above. Trees with no confirmed roosts may be downgraded to Category 2 dependent on survey findings
Category 2 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.	None. ***A consultant ecologist is unlikely to be required***	Avoid disturbance to trees, where possible. No further surveys.	Trees may be felled taking reasonable avoidance measures. Stop works and seek advice in the event bats are found, in order to comply with relevant legislation.
Category 3 Trees with no potential to support bats	None. ***A consultant ecologist is not required unless new evidence is found***	None.	No mitigation for bats required.

Figure 7 - *Tree risk categories*

5.6 Birds

5.6.1 There are 415 records of birds within 2km of the site.

5.6.2 The woodland around the site boundaries offer potential habitat for feeding and nesting birds. There were no rot holes or cracks in the trees around the site which would support tree hole dwelling species such as woodpeckers.

5.6.3 Ground nesting birds dependent upon cover such as skylark (*Alauda arvensis*) are unlikely to find the rushes on site suitable for nesting due to their proximity to earth banks. Ground nesting birds which nest in open habitat such as lapwing (*Vanellus vanellus*) may find the centre of the site suitable for use but the limited foraging potential afforded by the compact ground would limit its potential for foraging and the site is not linked to more suitable foraging areas.

5.6.4 A risk assessment of the site in respect of its future potential for and value to nesting birds could be adequately made.

5.6.5 Precautionary mitigation would be appropriate in respect of construction activities and compensation for lost nesting and foraging opportunities will be required.

5.7 Brown Hare

5.7.1 Brown hare are a UK BAP priority species. There are five records of brown hares within 2km of the site.

5.7.2 No indication of brown hares was recorded on the site.

5.7.3 Use of the site is likely to be limited due to its open and exposed nature and high levels of disturbance in the surrounding area.

5.7.4 A risk assessment of the site in respect of its future potential for and value to brown hares could be adequately made. We consider the risk to brown hares is very low.

5.8 Invertebrates

5.8.1 Notable invertebrates have been recorded within 2km of the site.

5.8.2 Mobile species of invertebrate such as butterflies and bumblebees may make use of the flowering plant species within the site particularly buddleia, vetch, clover and birds-foot-trefoil. The neutral grassland areas provide the most suitable locations for them to occur.

5.8.3 Some, but not an abundance of, standing or fallen deadwood was recorded on site; scrub and boundary areas contain common plant species such as Bramble which is not considered significant.

5.8.4 Whilst the site is likely to provide suitable habitat for invertebrates we do not consider this is likely to be locally significant.

5.9 Reptiles

5.9.1 There are 10 records for reptiles within 2km of the site. Adder (*Viperus berus*) and grass snake (*Natrix natrix*) have been recorded locally.

5.9.2 Artificial refugia in the form of 50cm^2 rubber tiles were found scattered throughout the site, presumed to be remnants of previous survey work.

5.9.3 The site is judged to contain habitats with the potential to support reptiles, comprising grassland, bare ground and woodland areas which would offer foraging and basking opportunities as well as refugia/hibernacula.

5.9.4 The woodland bounding the site also provides linkage across the landscape, however the TAF detailed previously would provide an effective barrier against the ingress of these species. The presence of open pitfall traps along the TAF is likely to result in any population which established on the site being rapidly depleted.

5.9.5 Precautionary mitigation with regard to construction activities should be observed to ensure that reasonable steps are taken to prevent harm or injury to reptiles. The pitfall traps should be removed and the TAF taken down on the completion of site works.

5.10 Other

5.10.1 The site may be crossed by species such as fox (*Vulpes vulpes*) and rabbit (*Oryctolagus cuniculus*) are known to occur locally.

5.10.2 The boundary woodland may provide suitable habitat for small mammals such as field vole (*Microtus agrestis*) and hedgehog (*Erinaceus europaeus*).

5.11 Statutory and Non-Statutory Sites

Direct Impacts:

5.11.1 There are no statutory or non-statutory sites which are connected to the site such that site development would directly affect the dispersal of species between them or directly impact upon their integrity.

5.11.2 The habitats on site do not represent or are linked to those found in any of the statutory or non-statutory sites locally.

Indirect Impacts:

5.11.3 There are no statutory or non-statutory sites which are connected to the site such that site development would indirectly affect the dispersal of species between them or indirectly impact upon their integrity.

6. MITIGATION/RECOMMENDATIONS

6.1 Compensatory planting and habitat enhancement

6.1.1 The wooded peripheries of the site should be retained in the proposed scheme and protected during works. This will maintain connectivity across the landscape by preserving existing wildlife corridors.

6.1.2 Low growing, dense shrubs would be best incorporated into the scheme as these may provide suitable nesting sites for small passerines.

6.1.3 The loss of a vegetation assemblage which falls within the BAP priority habitat classification of "Open Mosaic Habitats on Previously Developed Land" is unavoidable and cannot be compensated for within the development.

6.2 Amphibians

6.2.1 There is no requirement for specific mitigation for these species. However, as a precautionary measure, in the unlikely event that any signs of any amphibian activity is subsequently found, all site works should cease and further ecological advice should be sought with a view to a detailed method statement and programme of mitigation measures being prepared and implemented.

6.2.2 Consider the use of SUDS on site to provide new aquatic habitat during development. Such areas would be best placed in public open space where connectivity to the site boundaries and wider area is improved.

6.2.3 In order to further minimise impacts on amphibians the following points should also be followed.

- All work must take place during daylight hours as amphibians are more likely to be commuting over night and this will ensure the risk to any amphibians commuting through the site will be minimised.

- During the development, measures should be put in place to discourage amphibians from using the development area, the creation of any piles of earth, materials and rubble which could form potential artificial hibernacula and refuge should be avoided at all times. It is recommended that any spoil or rubble will be removed immediately to skips, or on hard standing or short grass. This will ensure that no potential amphibian hibernation or resting sites are created.

- The storage of all loose materials must be palletised or similar so they are off the ground whenever possible.

- Should any trenches and excavations be required, an escape route for animals that enter the trench must be provided, especially if left open overnight. Ramps should be no greater than of 45 degrees in angle. Ideally, any holes should be securely covered. This will ensure amphibians are not trapped during work.

- All excavations left open overnight or longer should be checked for animals prior to the continuation of works or infilling. Back filling should be completed immediately after any excavations, ideally back filling as an on-going process to the work in hand.

- The pitfall traps should be removed and the TAF taken down on the completion of site works.

6.3 Badger

6.3.1 An outlier badger sett was found at the base of an earth embankment on the Northern boundary of the site. This is outside the development area and is shielded from this area by the embankment. There is judged to be a very low risk of disturbance to this sett as a result of the proposed work.

6.3.2 Although this sett will be undisturbed by work, in order to minimise impacts on badgers passing over the site the following points should be followed;

- All work must take place during daylight hours as badgers are more likely to be commuting over the site at night and this will ensure the risk to any badgers passing through the site will be minimised.

- Should any trenches and excavations be required, an escape route for animals that enter the trench must be provided, especially if left open overnight. Ramps should be no greater than of 45 degrees in angle. Ideally, any holes should be securely covered. This will ensure badgers are not trapped during work.

- All excavations left open overnight or longer should be checked for animals prior to the continuation of works or infilling. Back filling should be completed immediately after any excavations, ideally back filling as an on-going process to the work in hand.

- Completed boundary fences/walls should incorporate gaps at their base to facilitate the passage of badgers across the site.

6.4 Bats

6.4.1 There is negligible potential for bats to roost on the site. Bats are likely to forage along the boundaries of the site although this is unlikely to be anything other than at low levels.

6.4.2 Whilst there is already some artificial illumination from houses and other buildings locally, additional external floodlighting of the site should as far as possible be minimised. Any external lighting at the site should be directed downwards only. In particular light spill onto any retained trees should be avoided.

6.4.3 Overall it is considered there is more than sufficient scope for mitigation and compensation at the site such that there will be no adverse impact on the favourable conservation status of bats affected by the proposal.

6.5 Birds

6.5.1 Nesting by birds within the development area is considered unlikely to occur. Birds may nest within woodland on the periphery of the site.

6.5.2 Any scrub or vegetation to be trimmed or cleared should be checked for nesting birds before it is removed. Ideally this should occur outside the bird nesting period March-September. If scrub clearance is to occur in the March-September period a check for nesting birds should be conducted first by a suitably qualified individual.

6.5.3 Sparrow nest boxes could be incorporated into the new buildings on site. House sparrow (*Passer domesticus*) is a UK BAP species. Mitigation in respect of lost foraging areas for species such as this cannot be provided within the site. The use of species such as rowan (*Sorbus aucuparia*) within the car-parking areas may provide a food source in winter for some species of bird.

6.5.4 If nesting birds are found at the site all site works shall cease and further ecological advice shall be sought with a view to a detailed method statement and programme of mitigation measures being prepared and implemented.

6.6 Brown Hares

6.6.1 There is no requirement for specific mitigation for this species. However, as a precautionary measure, in the unlikely event that any signs of any brown hare activity is subsequently found, all site works should cease and further ecological advice should be sought with a view to a detailed method statement and programme of mitigation measures being prepared and implemented.

6.6.2 The points in respect of not working at night and leaving open trenches with means of escape detailed for badgers are also applicable to this species.

6.7 Invertebrates

6.7.1 Landscaping should include native or wildlife friendly species including night flowering plants.

6.8 Reptiles

6.8.1 There is no requirement for specific mitigation for these species. The probability of use of the site is low. However, as a precautionary measure scrub clearance should occur such that vegetation piles are not created. Any rubble piles to be created during initial site clearance should be stored on area of existing hard standing away from the vegetated banks on the perimeter of the site.

6.8.2 In the unlikely event that any signs of any reptile activity is subsequently found, all site works should cease and further ecological advice should be sought with a view to a detailed method statement and programme of mitigation measures being prepared and implemented.

6.8.3 Dense scrub and woodland on the edge of the development site should be retained such that it is in proximity to open areas of ground which will also be suitable for basking.

6.8.4 The points in respect of not leaving open trenches without means of escape detailed for badgers are also applicable to these species.

6.8.5 The pitfall traps should be removed and the TAF taken down on the completion of site works.

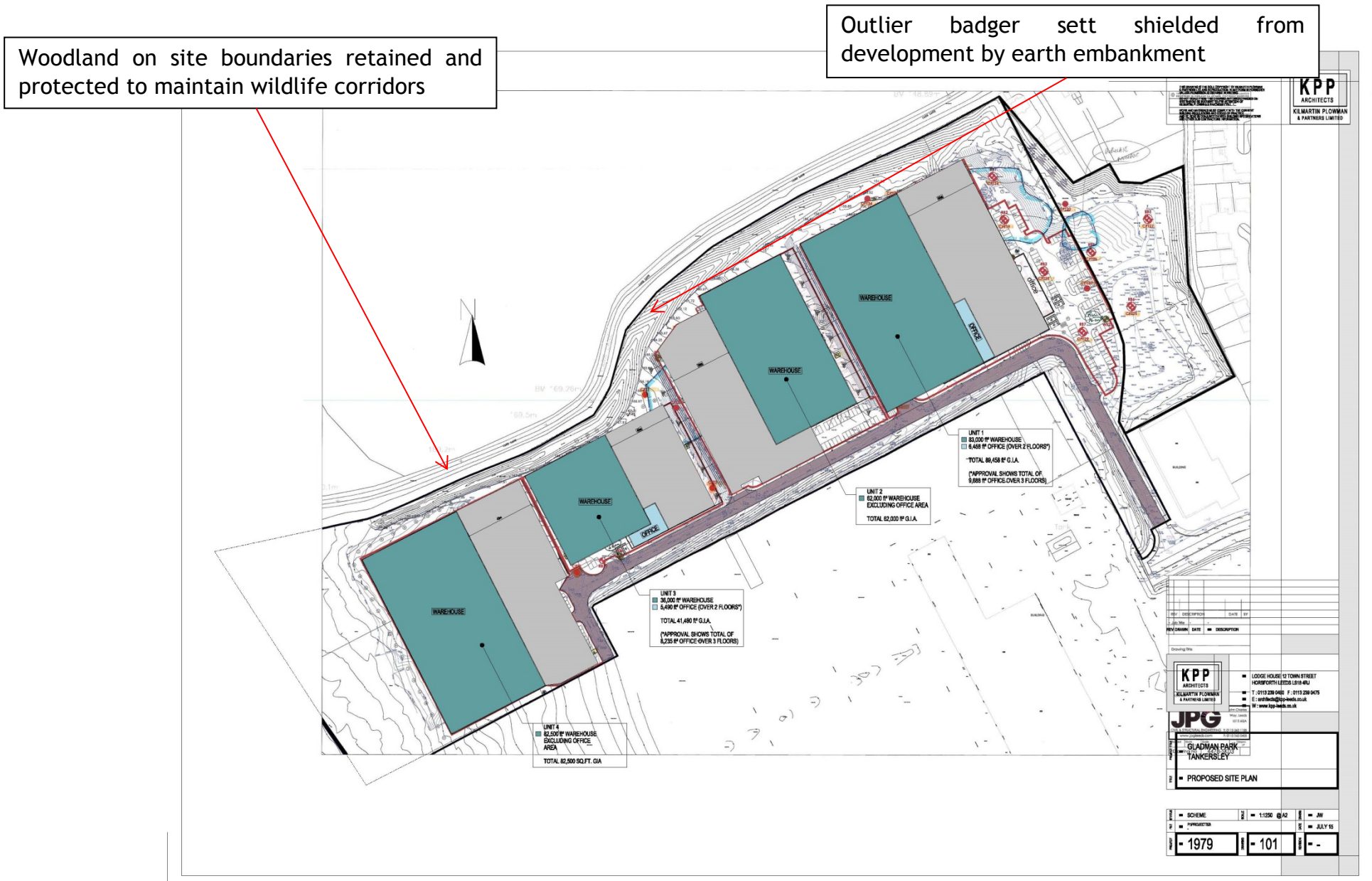

Figure 8 - *Site Plan*

7. CONCLUSION

7.1.1 Ecological surveys, site appraisals and impact assessments were carried out with respect to land comprising previously developed ground at Wentworth Industrial Estate, Tankersley, Barnsley. It is proposed that new industrial units will be constructed on the site.

7.1.2 A small outlier badger sett was found on site in proximity to the proposed development. This is outside of the development area and shielded from it by a steep earth embankment. It is not considered that there would any disturbance to the sett as a result of the proposed work.

7.1.3 Great crested newts are known to occur in the local area and have previously been cleared from the site. There are no permanent waterbodies within the site, and the TAF installed around the perimeter is considered to still provide an effective barrier against the dispersal of amphibians and so they are judged to be absent from the site.

7.1.4 There was no conclusive evidence of any other specifically protected species regularly occurring on the site or the surrounding areas which would be negatively affected by site development following the mitigation proposed.

7.1.5 The vegetation to be cleared falls within the BAP priority habitat classification of "Open Mosaic Habitats on Previously Developed Land". There is no potential for the retention of this habitat type on site. This habitat type on site is not linked with similar habitats in the wider area.

7.1.6 The protection of trees on the site boundary will be required to ensure the continued ecological functionality of these areas as wildlife corridors.

7.1.7 Contractors will be observant for protected species and all nesting birds. Should any species be found during construction, all site works should cease and further ecological advice should be sought with a view to a detailed method statement and programme of mitigation measures being prepared and implemented.

7.1.8 I certify this report has been compiled in accordance with the code of professional conduct for the Chartered Institute of Ecology and Environmental Management and The Royal Institute of Chartered Surveyors and reflects my objective opinion of the facts found in relation to the instruction received and information available based upon the methodology, assumptions and constraints detailed within this report.

8. APPENDIX 1 NATURAL ENGLAND RESPONSE LETTER