



Preliminary Ecological Appraisal and Preliminary Bat Roost Assessment Survey

The Meadway Centre, Tilehurst, Reading, Berkshire RG30 4AB

Chillingham Ltd.

Status	Issue	Name	Date
Draft	1	Natalie Evans BA (Hons), MA, MRSB, Senior Consultant	23/04/19
Reviewed	1.1	Jo Gregory BA (Hons) MSc MRSB GradCIEEM, Senior Consultant	26/04/19
Draft (awaiting BRD)	1.2	Natalie Evans BA (Hons), MA, MRSB, Senior Consultant	26/04/19
Draft Updated	1.3	Natalie Evans BA (Hons), MA, MRSB, Senior Consultant	
Final	1.4	Natalie Evans BA (Hons), MA, MRSB, Senior Consultant	

Arbtech Consultant's Contact details:

Natalie Evans MA, MRSB
Senior Consultant

Tel: 07860951397 Email: ne@arbtech.co.uk

Arbtech Consulting Ltd

<https://arbtech.co.uk>

Limitations and Copyright

Arbtech Consulting Limited has prepared this report for the sole use of the above-named client or their agents in accordance with our General Terms and Conditions, under which our services are performed. It is expressly stated that no other warranty, expressed or implied, is made as to the professional advice included in this report or any other services provided by us. This report may not be relied upon by any other party without the prior and express written agreement of Arbtech Consulting Limited. The assessments made assume that the sites and facilities will continue to be used for their current purpose without significant change. The conclusions and recommendations contained in this report are based upon information provided by third parties. Information obtained from third parties has not been independently verified by Arbtech Consulting Limited.

© This report is the copyright of Arbtech Consulting Limited. Any unauthorised reproduction or usage by any person other than the addressee is strictly prohibited.

Guidelines

This assessment has been designed to meet:

- Chartered Institute of Ecology and Environmental Management 'Guidelines for Preliminary Ecological Appraisal' (2013); and
- British Standard 42020 (2013) 'Biodiversity – Code of Practice for Planning and Development'.

Proportionality

The work involved in preparing and implementing all ecological surveys, impact assessments and measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development. Consequently, the decision-maker should only request supporting information and conservation measures that are relevant, necessary and material to the application in question. Similarly, the decision-maker and their consultees should ensure that any comments and advice made over an application are also proportionate.

This approach is enshrined in Government planning guidance, for example, paragraph 193 of the National Planning Policy Framework for England.

The desk studies and field surveys undertaken to provide a preliminary ecological appraisal (PEA) might in some cases be all that is necessary.

(BS 42020, 2013)

In consequence of the scale and intensity of the proposed development, the low impact on ecological receptors identified through both the site survey and search of local biological records, and the passive interface with the mitigation hierarchy, this plan-led report is considered adequate and proportionate. It communicates all relevant information necessary to determine a planning application or support the recommendations for further surveys.

Executive summary

Arbtech Consulting Ltd. undertook a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) at The Meadway Centre, Tilehurst, Reading, Berkshire RG30 4AB 17/04/19. The aim of the survey was to complete an Extended Phase 1 Habitat Survey of the survey area (all land that will be impacted by the proposals) and analyse it against a desk study and complete a bat roost assessment of all structures to be impacted.

The development proposal is for redevelopment of the site to provide new and upgraded residential units and commercial units to service the local community. The planning application is being submitted to Reading Borough Council.

Recommendations –

Ecological Factor	Survey assessment conclusions (with justification)	Foreseen impacts	Recommendations	Enhancements The Local Planning Authority has a duty to ask for enhancements under the NPPF and circular 06/2005: Biodiversity and Geological Conservation. Para.99
Designated sites	Lousehill Copse LNR lies approx. 110m away to the north east.	There are no designated sites within close enough distance to be directly impacted by the development.	No further work required.	None applicable
Notable habitats and plants	There is deciduous woodland habitat on site to the west and north.	The woodland will be retained; however, some tree, grassland and scrub removal will be required.	The woodland should be cleaned of human waste. Any additional planting must be native woodland species of local stock.	The woodland can be enhanced long-term by clearing up the high volume of human waste currently present. Public access should be restricted by adding clear footpaths, and signage to prevent trampling of ground flora.

Invasive / Non-native species	None present above ground	No foreseen impacts	Remain vigilant whilst woodland work is being undertaken.	None applicable
Bats	B1 has negligible habitat value for bats. B2 has low habitat value for bats as there are raised tiles on the roof. B3-B6 have moderate habitat value for bats as there are numerous external features that could be used by crevice dwelling bats. The woodland is likely to provide an important foraging area for local bat populations.	The proposed development will result in the demolition of the buildings which could lead to the destruction of bat roosts and killing/injury of bats if present in buildings B2-B6.	No further surveys required for building B1. Building B2 will require one dusk emergence/dawn re-entry survey within the optimal survey season of mid-May to August. Two surveyors will be required to observe the whole building. Buildings B3-B6 require two surveys (one dusk emergence survey and one dawn re-entry survey) within the optimal survey season. Eight surveyors will be required to provide full coverage of the buildings. If bat roosts are identified a third survey will be required to inform a European protected species mitigation licence.	To be confirmed following further surveys.
Breeding Birds	The woodland habitat is excellent for nesting birds. Red kites were seen carrying nesting material to a tree within the woodland and it is likely this species is nesting here.	Felling of trees could destroy active nests.	The bird nesting season (March-August) should be avoided for any tree felling and scrub removal. If this is not possible, a nesting bird check must be carried out by an ecologist immediately prior to the start of work. If any nests are identified these must be left <i>in situ</i> until the young have fledged.	Bird boxes will need to be erected on retained trees on site post development, and also be built into the walls of the new buildings. These should cater for a range of bird species, with integrated nest boxes in the buildings for swifts and sparrows and

				tree mounted boxes for woodland species.
Reptiles	The woodland and grassland habitats on site are suitable for common reptile species.	There is risk of killing and injury during tree and vegetation removal.	Vegetation clearance and tree felling will only take place outside of the hibernation period. Works can take place between March and October providing there has not been a ground frost or periods of cold weather with night-time temperatures dropping below 7°C. The vegetation clearance will take place in two stages: Stage 1: all vegetation will be cut down to a height of 100mm using a hand-held strimmer, working from east to west and south to north, allowing any animals to migrate towards the adjacent woodland. The area will then be left for a week. Stage 2: The remaining vegetation can then be cut to ground level, again using a hand-held strimmer working from west to east, allowing any animals to migrate towards the adjacent grassland to the east. Topsoil can then be stripped and tree/shrub roots removed. Overnight – any pits/trenches must be covered over at night or left with a ramp so that any animals that fall in can get out. A designated person will check pits every morning for the	Using the wood and brash from the tree felling and scrub clearance, hibernacula and refugia should be built within the woodland to provide habitat for reptiles and other wildlife.

			presence of reptiles and any other wildlife. If anything is found, Arbtech will be called to attend and safely move the animal. If any of the four common reptile species are found on site, these can be encouraged to migrate safely into adjoining habitats or picked up and moved where necessary.	
Great crested newts (GCN)	The woodland and grassland habitats on site are suitable for GCN in their terrestrial phase. However, there are no ponds within 500m that would provide suitable breeding habitat for this species, therefore they should be considered likely-absent from the site.	No impact	No further surveys required	None applicable
Other Terrestrial Mammals	Hedgehogs are likely to be present on site. There was no evidence of badger activity.	Tree and scrub removal could lead to killing and injury of hedgehogs.	The following recommendations are given in order to mitigate against potential harm to terrestrial mammals during the development works. • Any trenches dug should either be covered at night or have a rough sawn plank placed in them to act as a ramp for any wildlife which may fall in. • Security lighting to be directed away from the undergrowth. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations.	Hedgehog boxes should be added on site to provide shelter for this species.

Contents

1.0 Introduction and Context	8
1.1 Background	8
1.2 Site Context	8
1.3 Scope of the report	8
1.4 Project Description	9
2.0 Methodology	9
2.1 Desk Study methodology	9
2.2 Site Survey methodology	9
2.3 Suitability Assessment	10
2.4 Limitations – evaluation of the methodology	12
3.0 Results and Evaluation	13
3.1 Desk Study Results	13
3.2 Designated sites	13
3.3 Landscape	13
3.4 Historical records	15
3.5 Field Survey Results	15
3.6 Site Feature descriptions and photos	16
4.0 Conclusions, Impacts and Recommendations	22
4.1 Informative guidelines	22
4.2 Evaluation	23
Appendix 1: Phase 1 Habitat Survey Map	29
Appendix 2: Proposed Site Plan	29
Appendix 3: Desk Study Information	37
Appendix 4: Legislation and Planning Policy	40

1.0 Introduction and Context

1.1 Background

Arbtech Consulting Ltd. was commissioned by Chillingham Ltd. to undertake a Preliminary Ecological Appraisal (PEA) at The Meadway Centre, Tilehurst, Reading, Berkshire RG30 4AB. An extended Phase 1 Habitat Survey of the survey area (all land that will be impacted by the proposals) has been carried out alongside a Preliminary Roost Assessment (PRA) on any buildings and trees.

A Preliminary Ecological Appraisal was carried out by Arbtech in 2015.

1.2 Site Context

The survey area is located at National Grid Reference SU 6839 7276 and measures approx. 2ha. The site is a complex of commercial units and flats with associated car park. There is deciduous woodland priority habitat on and adjacent to the site.

1.3 Scope of the report

This report describes the baseline ecological conditions at the site; evaluates habitats within the survey area in the context of the wider environment; and describes the suitability of those habitats for notable or protected species. It identifies significant ecological impacts as a result of the development proposals; summarises the requirements for further surveys and mitigation measures, to inform subsequent mitigation proposals, achieve Planning or other statutory consent, and to comply with wildlife legislation.

The aim of the PEA was to obtain data on existing ecological conditions, and to conduct a preliminary assessment of the likely significance of ecological impacts on the proposed development; establishing the baseline conditions for future monitoring. To achieve this, the following steps were taken:

- The desk study area and field survey area (generally 50m from the site boundary/proposed footprint and including the 'zone of influence' of the scheme) have been identified
- A desk study has been carried out including a records search from Thames Valley Environmental Records Centre (TVERC).
- Baseline information on the site and surrounding area has been recorded through an 'Extended Phase 1 Habitat Survey', including a Phase 1 Habitat Survey (JNCC 2010) and recording further details in relation to notable or protected habitats and species
- The ecological features present within the survey area have been evaluated where possible (CIEEM, 2006)
- Invasive plant and animal species (such as those listed on Schedule 9 of the Wildlife & Countryside Act [WCA]) have been identified
- Likely impacts on features of value, as a result of the development proposals, have been identified
- Recommendations for further survey and assessment have been made

- Recommendations for mitigation and opportunities for enhancement have been provided based on current information

A survey plan is presented in Appendix 1, the proposed Project Plan is included in Appendix 2, desk study results are provided in Appendix 3, and a summary of relevant legislation can be found in Appendix 4.

1.4 Project Description

The development proposal is for redevelopment of the site to provide new and upgraded residential units and commercial units to service the local community. The planning application is being submitted to Reading Borough Council.

The proposed site plan is included in Appendix 2 (where available).

2.0 Methodology

2.1 Desk Study methodology

Existing biological records data relating to the site and a surrounding 2km radius (the study area) are required to conform to national guidelines. The data search is confidential information that is not suitable for public release.

A review of the following information sources has also been undertaken to inform the assessment:

- Landscape structure using aerial images from Google Earth and OS maps
- Designated sites, habitat and granted EPSL records held on Magic.gov.uk.

2.2 Site Survey methodology

The survey was undertaken by Natalie Evans (Natural England Bat Licence Number: 2018-37888-CLS-CLS) on 17/04/19.

The methodology for the Phase 1 Habitat Survey is based on the best practice publication Phase 1 Habitat Survey Methodology (JNCC, 2010). All land parcels are described and mapped according to JNCC Phase 1 habitat classification (see site map in Appendix 1). Where appropriate, target notes provide supplementary information on habitat conditions, features too small to map to scale, species composition, structure and management.

During the survey, habitats were assessed for their suitability to support protected species, and field signs indicating their presence recorded. The assessment takes into consideration the findings of the desk study, the habitat conditions on site and in the context of the surrounding landscape, and the ecology of the protected species. The likelihood of the presence of protected species is ranked; the habitats on site are evaluated against their likelihood to provide suitable habitat for protected species.

The ecological value of the survey area has been assessed based on the Guidelines for Ecological Impact Assessment (CIEEM, 2006), and the Handbook of Biodiversity Methods: Survey, Evaluation and Monitoring (David Hill, 2005), using geographic frames of reference. The biodiversity value of any identified designated sites, habitat types and associated species assemblages has been considered. The distribution and extent of invasive species listed on Schedule 9 of the Wildlife and Countryside Act (1981) were also noted throughout the survey area.

All features that will be impacted by the project proposals were assessed for their bat roosting and/or commuting habitat. The surveyor systematically surveyed all features suitable for-bats and signs of bat activity.

For any surveyed buildings:

A non-intrusive visual appraisal from the ground using binoculars, inspecting the external features of the building(s) for potential access/egress points, and for signs of bat use. An internal inspection of the building was also made, including the living areas of derelict or abandoned buildings and the accessible roof spaces of all buildings, using an endoscope, torch and ladders. The surveyor paid particular attention to the floor and flat surfaces, window shutters and frames, lintels above doors and windows, and carried out a detailed search of numerous features within the roof space.

For any surveyed trees

A visual inspection from ground level using binoculars and where accessible an internal inspection of suitable roosting features using an endoscope, torch and ladders.

2.3 Suitability Assessment

The likelihood of occurrence of protected species is ranked according to the criteria listed in Table 1. The habitats on site were evaluated as to their likelihood to provide sheltering, roosting, foraging, basking or nesting habitat.

Table 1: showing criteria considered when assessing the likelihood of occurrence of protected species

Present	Species are confirmed as present from the current survey or historical confirmed records.
High	Habitat and features of high quality for species/species assemblage. Species known to be present in wider landscape (desk study records). Good quality surrounding habitat and good connectivity.
Medium	Habitat and features of moderate quality. The site in combination with surrounding land provides all habitat/ecological conditions required by the species/assemblage. Within known national distribution of species and local records in desk study area.

	Limiting factors to suitability, including small area of suitable habitat, some severance/poor connectivity with wider landscape, poor to moderate habitat suitability in local area.
Low	Habitats within the survey area poor quality. Few or no records from data search. Despite above, presence cannot be discounted as within national range, all required features/conditions present on site and in surrounding landscape. Limiting factors could include isolation, poor quality landscape, or disturbance.
Negligible	Very limited poor-quality habitats and features. No local records from desk study; site on edge of, or outside, national range. Surrounding habitats considered unlikely to support species/species assemblage.
Likelihood of bats being present	Feature of building and its context
Higher	Buildings/structures with features of particular significance for roosting bats e.g. mines, caves, tunnels, icehouses and cellars. Habitat on site and surrounding landscape of high quality for foraging bats e.g. broadleaved woodland, tree-lined watercourses and grazed parkland. Site is connected with the wider landscape by strong linear features that would be used by commuting bats e.g. river and or stream valleys and hedgerows. Site is proximate to known or likely roosts (based on historical data).
Lower	A small number of possible roost sites/features, used sporadically by more widespread species. Habitat suitable for foraging in close proximity but isolated in the landscape. Or an isolated site not connected by prominent linear features. Few features suitable for roosting, minor foraging or commuting.
Likelihood of bats being present	Feature of tree and its context
Higher	A tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.
Lower	A tree of sufficient size and age to contain potential roosting features but with none seen from the ground or features seen with only very limited roosting potential.

2.4 Limitations – evaluation of the methodology

It should be noted that whilst every effort has been made to describe the baseline conditions within the survey area, and evaluate these features, this report does not provide a complete characterisation of the site. This assessment provides a preliminary view of the likelihood of protected species being present. This is based on suitability of the habitats on the site and in the wider landscape, the ecology and biology of species as currently understood, and the known distribution of species as recovered during the searches of historical biological records.

There were no specific limitations to the survey.

3.0 Results and Evaluation

3.1 Desk Study Results

A summary of desk study results is provided below; full details are included in Appendix 3.

3.2 Designated sites

There is one statutory designated site within the study area. Their location and extent are illustrated in Appendix 3. Table 2 (below) provides details of the designated sites including their reasons for notification.

Table 2: Designated sites within 1km radius of the site

Designated Site Name	Distance from Site (approx.)	Reasons for Notification from Natural England (unless otherwise stated)
Statutory Sites		
Lousehill Copse Local nature Reserve (LNR)	110m north east	Semi-ancient woodland surrounded by housing. Mature oak and hazel woodland with some coppice. There are many bluebells and other spring flowers, streams, relics of old ponds and boggy areas. The site is on sand and gravel. There is an open meadow with gorse and broom in the northern section with sandy soil.
Non-Statutory Sites		
Awaiting BRD		

3.3 Landscape

A review of the designated sites, aerial photographs (Figure 1), the Magic database and OS maps has been undertaken. Collated together, the site's local habitat is described below:

The local landscape offers high quality habitats for a range of protected species including deciduous woodland, aquatic and grassland habitats. Priority habitats within 1km of the site are listed in Table 3.

Table 3: Priority Habitat Inventory within 1km (Magic.gov.uk):

Habitat	Closest distance from site (approx.)
Deciduous Woodland	On site
Woodpasture and parkland	113m south east



Figure 1: Aerial photo of site, showing landscape structure

3.4 Historical records

Biological records from TVERC will be obtained and summarised below:

Table 4: Historical records within 2km of the site

Taxon Group	Common name	Scientific binomial	Record details
Awaiting records			

A search of the Magic database for granted European Protected Species Mitigation Licences (EPSMLs) within a 1km radius found three bat licenced sites. Any bat roosts over 1km away would be unlikely to relocate to suitable habitat on site.

Table 5: Granted EPSMLs within 1km of the site

Case reference of granted application	Approx. distance from site	Species Effected	Licence Start Date:	Licence End Date:	Impacts allowed by licence
EPSM2011-3384	890m north west	C-PIP	07/09/2011	01/09/2013	Destruction of a resting place
EPSM2010-2341	900m north west	C-PIP;BLE	04/10/2010	31/08/2012	Destruction of breeding site
EPSM2011-3499	900m north west	C-PIP;S-PIP;BLE	14/10/2011	01/09/2013	Destruction of a resting place

The EPSML records show that three roosts have been destroyed within 1km of the site involving common pipistrelle, soprano pipistrelle and brown long-eared bats. This includes a maternity roost. Displaced common and soprano pipistrelles could find roosting habitat on site.

3.5 Field Survey Results

The site of the proposed development area is illustrated in the map in Appendix 1. The environmental variables recorded at the time of the survey are shown in Table 6.

Table 6: Environmental variables during the survey

Date: 17/04/19	
Temperature	17°C
Relative Humidity	70%
Cloud Cover	5%
Wind	4mph
Rain	None

3.6 Site Feature descriptions and photos

A1 Woodland

To the north and west of the site there is an area of deciduous woodland priority habitat. The canopy includes oak *Quercus robur*, ash *Fraxinus excelsior*, willow *Salix sp.* poplar *Populus sp.* cherry *Prunus avium*, horse chestnut *Aesculus hippocastenum*, and scots pine *Pinus sylvestris*. The understorey contains hawthorn *Crataegus monogyna*, field maple *Acer campestre*, laurel *Prunus laurocerasus*, holly *Ilex aquifolium*, elder *sambucus nigra*. Ground flora includes ivy *Hedera helix*, lords and ladies *Arum maculatum*, bramble *Rubus fruticosus*, garlic mustard *Alliaria petiolate*, lesser celandine *Ficaria verna*, nettle *Urtica dioica*, bluebell *Hyacinthoides non-scripta*, and cow parsley *Anthriscus sylvestris*. Large amounts of pollution from human activities was present with a high volume of plastic waste.



B1 Semi Improved Acid Grassland (species poor)

Around the woodland fringes there are grassland areas with grassland species including Yorkshire fog *Holcus lanatus*, cock's foot *Dactylis glomerata*, meadow grasses *Poa sp.* common vetch *Vicia sativa*, daisy *Bellis perennis* and buttercups *ranunculus sp.*



J3.6 buildings and hard standing

The majority of the site consists of buildings and hard standing associated with the commercial units, flats and car parks. The photograph opposite shows the site facing north east.



B1 is a gym/leisure building of brick and concrete construction with a flat roof. The building does not have any external features that could be utilised by bats, and no internal voids that could be occupied by void dwelling bats. The photograph opposite shows the western elevation.



There is a flat roofed garage area to the north of B1 which does not provide any suitable roosting habitat for bats.



There are warped and raised roof tiles on the northern elevation that will provide roosting areas for crevice dwelling bat species.



Buildings B3, B4, B5 and B6 are three storey buildings with retail units on the ground floor with flats above. The buildings are all of the same design; brick built with gabled, concrete tiled roofs. Dormer windows on the second floor give additional head to the vaulted ceilings. No loft voids are present. There is timber cladding on the flats, and timber fascia boards and soffit boxes. Window frames are UPVC. The photograph opposite shows the southern elevation of B4.



Throughout the buildings there is extensive damage to external features that could be exploited by crevice dwelling bats such as pipistrelles. Of particular note is the raised timber cladding found in several areas, and gaps under fascia boards at each gable end. There is also extensive damage to soffit boxes and roof tiles. The photographs below are representative of the condition of the buildings, and similar features can be found on each building. The photograph opposite shows raised timber cladding on the southern elevation of B6.



The photograph opposite shows the gaps under the fascia boards on the northern elevation of B4.



The photograph opposite shows damaged soffit boxes on the southern elevation of B6.



The photograph opposite shows damaged roof tiles and missing mortar on the southern elevation of B6.



4.0 Conclusions, Impacts and Recommendations

4.1 Informative guidelines

Likelihood of the presence of protected species

The habitats on site were evaluated as to their likelihood to provide sheltering, roosting, foraging, basking or nesting habitat. The likelihood of occupancy of protected species is ranked according to the criteria listed in Table 1.

Where this report supports a planning application, the ecological interest of the study area (including the survey area) and the proposed development has also been evaluated in terms of the planning policies relating to biodiversity. It will be clearly stated where a preliminary value can be given and where further information is required.

Appropriate justification for this assessment is provided in Section 2.3 of this report.

4.2 Evaluation

Taking the desk study and site survey results into account, the following conclusions for ecological factors has been reached.

Table 7: Evaluation of site

Ecological Factor	Survey assessment conclusions (with justification)	Foreseen impacts	Recommendations	Enhancements The Local Planning Authority has a duty to ask for enhancements under the NPPF and circular 06/2005: Biodiversity and Geological Conservation. Para.99
Designated sites	Lousehill Copse LNR lies approx. 110m away to the north east.	There are no designated sites within close enough distance to be directly impacted by the development.	No further work required.	None applicable
Notable habitats and plants	There is deciduous woodland habitat on site to the west and north.	The woodland will be retained; however, some tree, grassland and scrub removal will be required.	The woodland should be cleaned of human waste. Any additional planting must be native woodland species of local stock.	The woodland can be enhanced long-term by clearing up the high volume of human waste currently present. Public access should be restricted by adding clear footpaths, and signage to prevent trampling of ground flora.
Invasive / Non-native species	None present above ground	No foreseen impacts	Remain vigilant whilst woodland work is being undertaken.	None applicable
Bats	B1 has negligible habitat value for bats.	The proposed development will result in the demolition	No further surveys required for building B1.	To be confirmed following further surveys.

	B2 has low habitat value for bats as there are raised tiles on the roof. B3-B6 have moderate habitat value for bats as there are numerous external features that could be used by crevice dwelling bats. The woodland is likely to provide an important foraging area for local bat populations.	of the buildings which could lead to the destruction of bat roosts and killing/injury of bats if present in buildings B2-B6.	Building B2 will require one dusk emergence/dawn re-entry survey within the optimal survey season of mid-May to August. Two surveyors will be required to observe the whole building. Buildings B3-B6 require two surveys (one dusk emergence survey and one dawn re-entry survey) within the optimal survey season. Eight surveyors will be required to provide full coverage of the buildings. If bat roosts are identified a third survey will be required to inform a European protected species mitigation licence.	
Breeding Birds	The woodland habitat is excellent for nesting birds. Red kites were seen carrying nesting material to a tree within the woodland and it is likely this species is nesting here.	Felling of trees could destroy active nests.	The bird nesting season (March-August) should be avoided for any tree felling and scrub removal. If this is not possible, a nesting bird check must be carried out by an ecologist immediately prior to the start of work. If any nests are identified these must be left <i>in situ</i> until the young have fledged.	Bird boxes will need to be erected on retained trees on site post development, and also be built into the walls of the new buildings. These should cater for a range of bird species, with integrated nest boxes in the buildings for swifts and sparrows and tree mounted boxes for woodland species.

Reptiles	The woodland and grassland habitats on site are suitable for common reptile species.	There is risk of killing and injury during tree and vegetation removal.	Vegetation clearance and tree felling will only take place outside of the hibernation period. Works can take place between March and October providing there has not been a ground frost or periods of cold weather with night-time temperatures dropping below 7°C. The vegetation clearance will take place in two stages: Stage 1: all vegetation will be cut down to a height of 100mm using a hand-held strimmer, working from east to west and south to north, allowing any animals to migrate towards the adjacent woodland. The area will then be left for a week. Stage 2: The remaining vegetation can then be cut to ground level, again using a hand-held strimmer working from west to east, allowing any animals to migrate towards the adjacent grassland to the east. Topsoil can then be stripped and tree/shrub roots removed. Overnight – any pits/trenches must be covered over at night or left with a ramp so that any animals that fall in can get out. A designated person will check pits every morning for the presence of reptiles and any other wildlife. If	Using the wood and brash from the tree felling and scrub clearance, hibernacula and refugia should be built within the woodland to provide habitat for reptiles and other wildlife.
----------	--	---	--	---

			anything is found, Arbtech will be called to attend and safely move the animal. If any of the four common reptile species are found on site, these can be encouraged to migrate safely into adjoining habitats or picked up and moved where necessary.	
Great crested newts (GCN)	The woodland and grassland habitats on site are suitable for GCN in their terrestrial phase. However, there are no ponds within 500m that would provide suitable breeding habitat for this species, therefore they should be considered likely-absent from the site.	No impact	No further surveys required	None applicable
Other Terrestrial Mammals	Hedgehogs are likely to be present on site. There was no evidence of badger activity.	Tree and scrub removal could lead to killing and injury of hedgehogs.	The following recommendations are given in order to mitigate against potential harm to terrestrial mammals during the development works. • Any trenches dug should either be covered at night or have a rough sawn plank placed in them to act as a ramp for any wildlife which may fall in. • Security lighting to be directed away from the undergrowth. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations.	Hedgehog boxes should be added on site to provide shelter for this species.

5.0 Bibliography

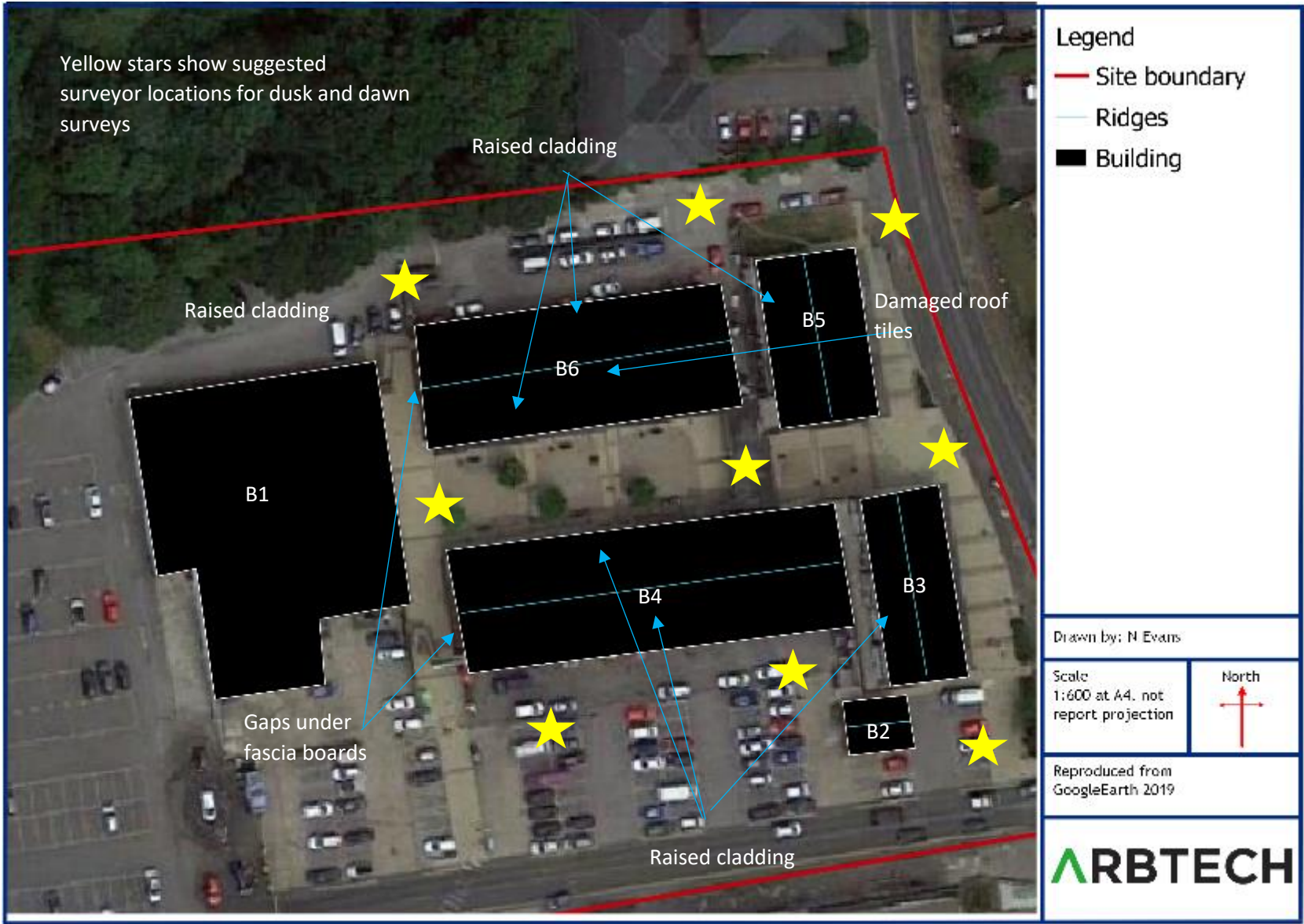
- British Trust for Ornithology (2016) www.bto.org/about-birds/nbnw/putting-up-a-nest-box
- BS 42020, Biodiversity – Code of practice for planning and development (2013) <http://www.eoebiodiversity.org/pdfs/BS42020.pdf>
- BS 42020, Biodiversity – Code of practice for planning and development (2013) <http://www.bsigroup.com/LocalFiles/en-GB/biodiversity/BS-42020-Smart-Guide.pdf>
- Cheffings, C. and Farrell, L. (eds.) (2005) The Vascular Plant Red Data List for Great Britain. Joint Nature Conservation Committee, Peterborough.
- CIEEM (2016) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester. http://www.cieem.net/data/files/Publications/EcIA_Guidelines_Terrestrial_Freshwater_and_Coastal_Jan_2016.pdf
- CIEEM (2013) Guidelines for Preliminary Ecological Appraisal Institute of Ecology and Environmental Management http://www.cieem.net/data/files/Resource_Library/Technical_Guidance_Series/GPEA/GPEA_April_2013.pdf
- Collins, J. (ed.) (2016). Bat Surveys for Professional Ecologists — Good Practice Guidelines, 3rd edition, Bat Conservation Trust, London. <http://www.bats.org.uk/pages/batsurveyguide.html>
- Garland & Markham (2008) Is important bat foraging and commuting habitat legally protected?
- Google Earth (2019)
- Gregory R.D., et al (2009). Birds of Conservation Concern 3: the population status of birds in the United Kingdom, Channel Islands and Isle of Man. <https://www.bto.org/sites/default/files/u12/bocc3.pdf>
- HMSO: Wildlife and Countryside Act 1981 (as amended) <http://jncc.defra.gov.uk/page-1377>
- HMSO: The Protection of Badgers Act 1992 (as amended) <http://www.legislation.gov.uk/ukpga/1992/51/contents>
- HMSO: Countryside & Rights of Way Act (2000) <http://jncc.defra.gov.uk/page-1378>
- HMSO: Natural Environmental and Rural Communities Act (2006) <http://www.legislation.gov.uk/ukpga/2006/16/contents>
- HMSO: The Conservation of Habitats and Species Regulations (2017) <http://www.legislation.gov.uk/uksi/2010/490/contents/made>
- JNCC (2004) Bat Workers Manual, 3rd Edition. <http://jncc.defra.gov.uk/page-2861>
- Joint Nature Conservation Committee (2010). Handbook for Phase 1 habitat survey a technique for environmental audit. http://jncc.defra.gov.uk/PDF/pub10_handbookforphase1habitatsurvey.pdf
- Magic database (2019) <http://www.magic.gov.uk/MagicMap.aspx>
- Mitchell-Jones, A.J. (2004). Bat Mitigation Guidelines. English Nature, Peterborough. http://roost.bats.org.uk/sites/default/files/publications/EnglishNature_BatMitigationGuidelines_2004.pdf

- National Planning Policy Framework, 2012 <https://www.gov.uk/government/publications/national-planning-policy-framework--2>
- Natural England (2007). Badgers and Development a Guide to Best Practice and Licensing. Natural England. Bristol. <http://www.wildlifeco.co.uk/wp-content/uploads/2014/03/badgers-and-development.pdf>
- Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000) Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). *Herpetological Journal* 10(4), 143-155. https://www.waterways.org.uk/wrg/wrg_documents/gcn_hsi
- Paul Edgar, Jim Foster and John Baker (2010). Reptile Habitat Management Handbook. Amphibian and Reptile Conservation, Bournemouth <http://downloads.gigl.org.uk/website/Reptile%20Habitat%20Management%20Handbook.pdf>
- Tom Langton, Catherine Beckett and Jim Foster (2001). Great Crested Newt Conservation Handbook. Froglife. Suffolk. http://www.froglife.org/wp-content/uploads/2013/06/GCN-Conservation-Handbook_compressed.pdf

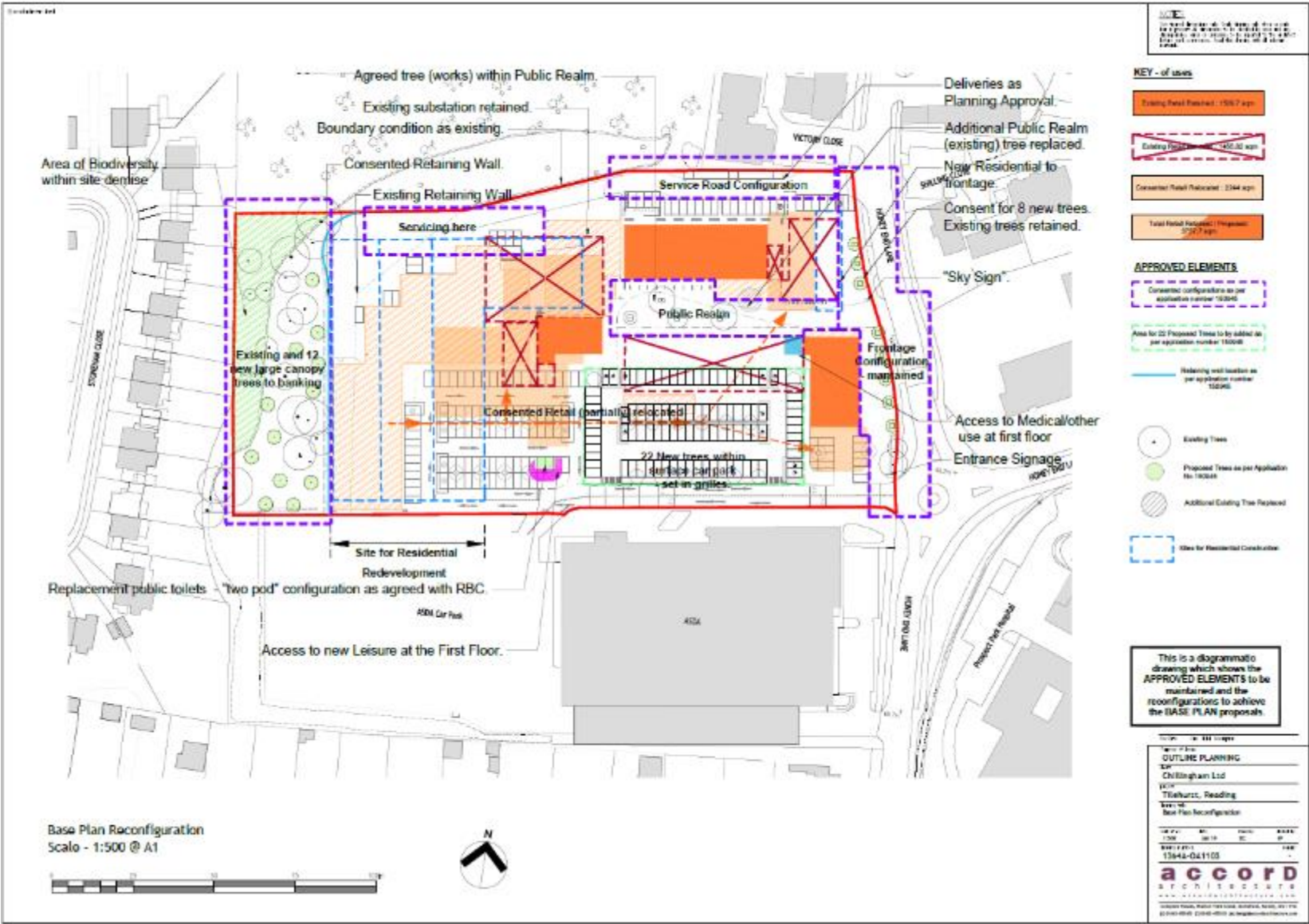
Appendix 1: Phase 1 Habitat Survey Map

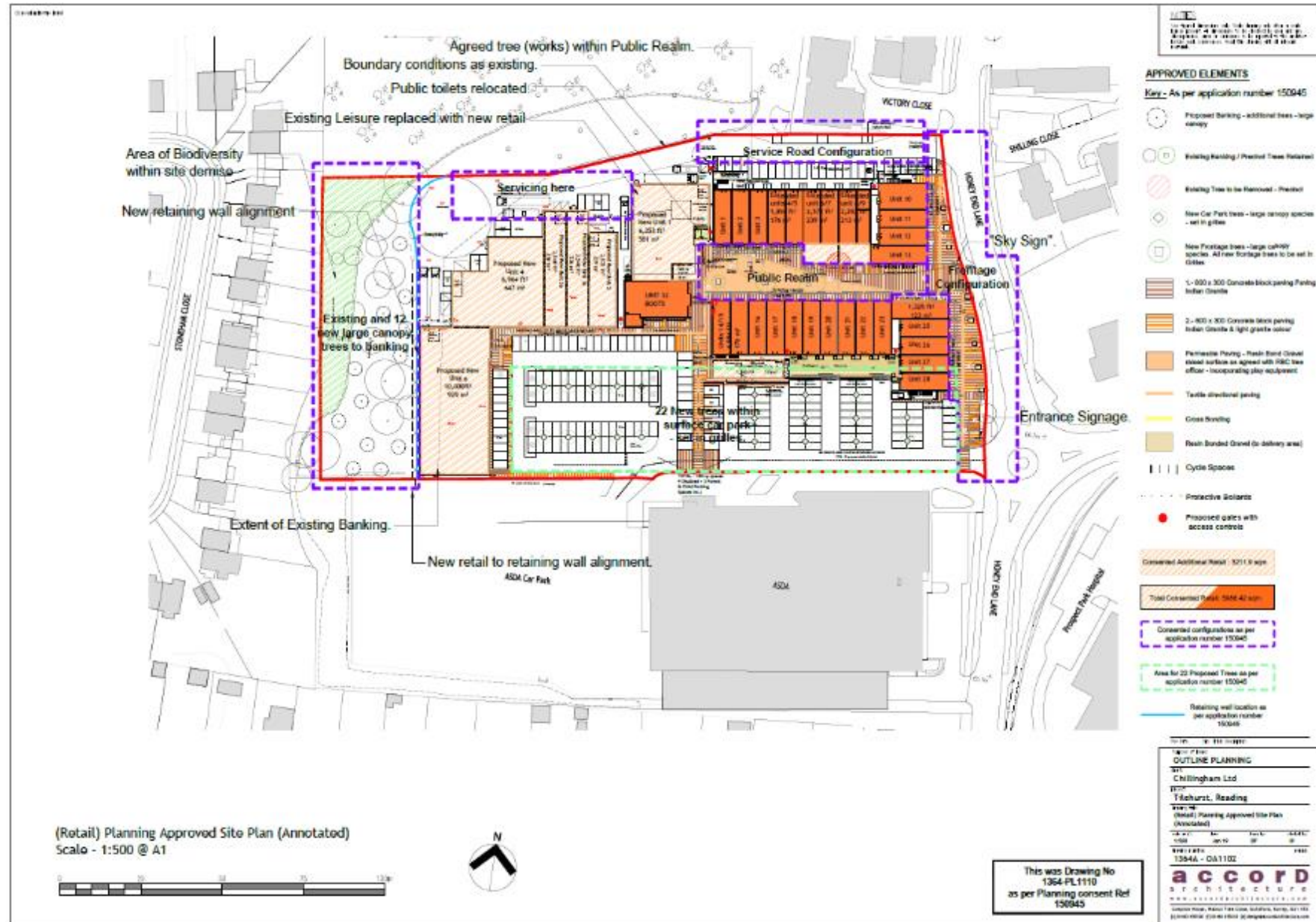


PRA Map

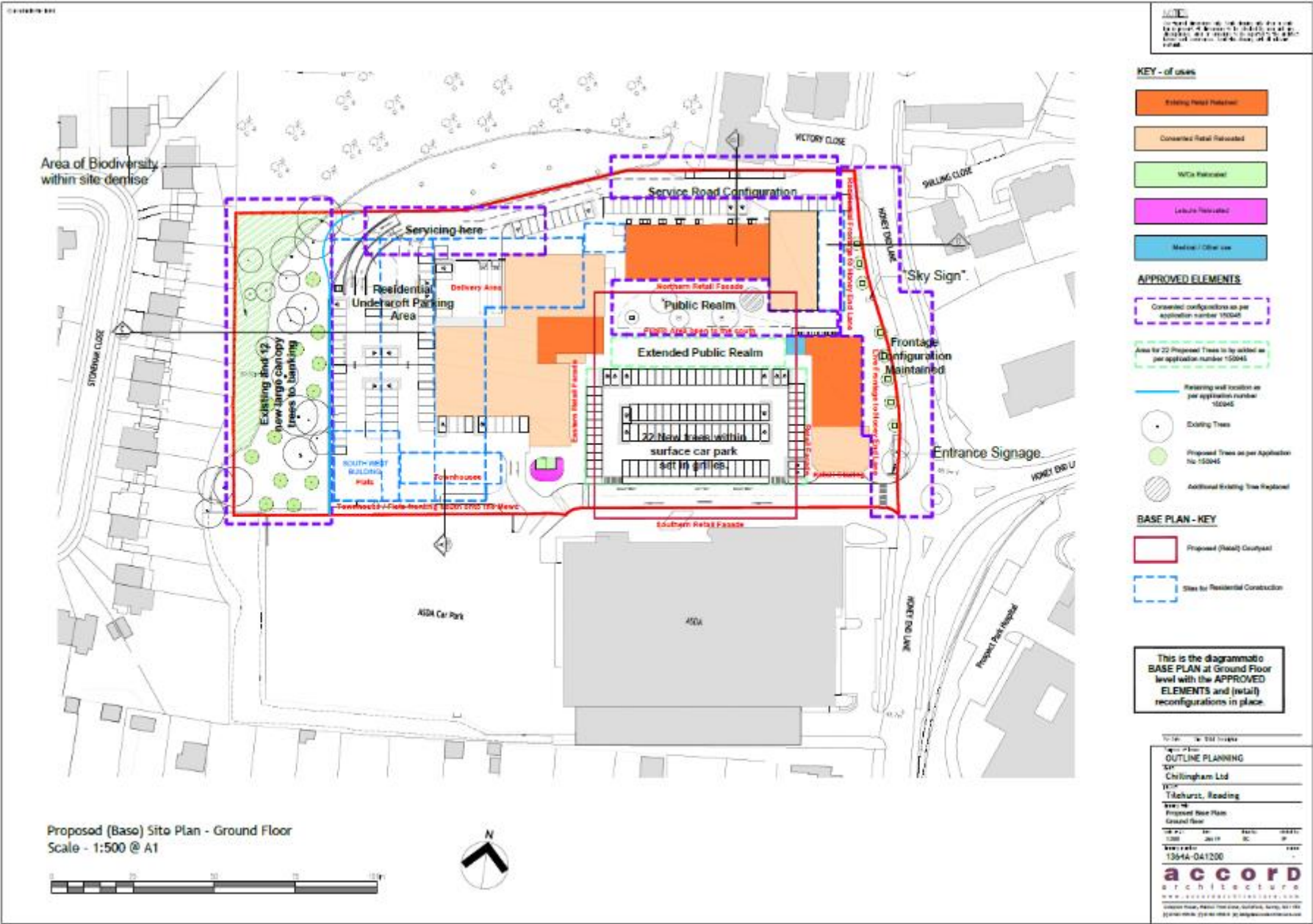


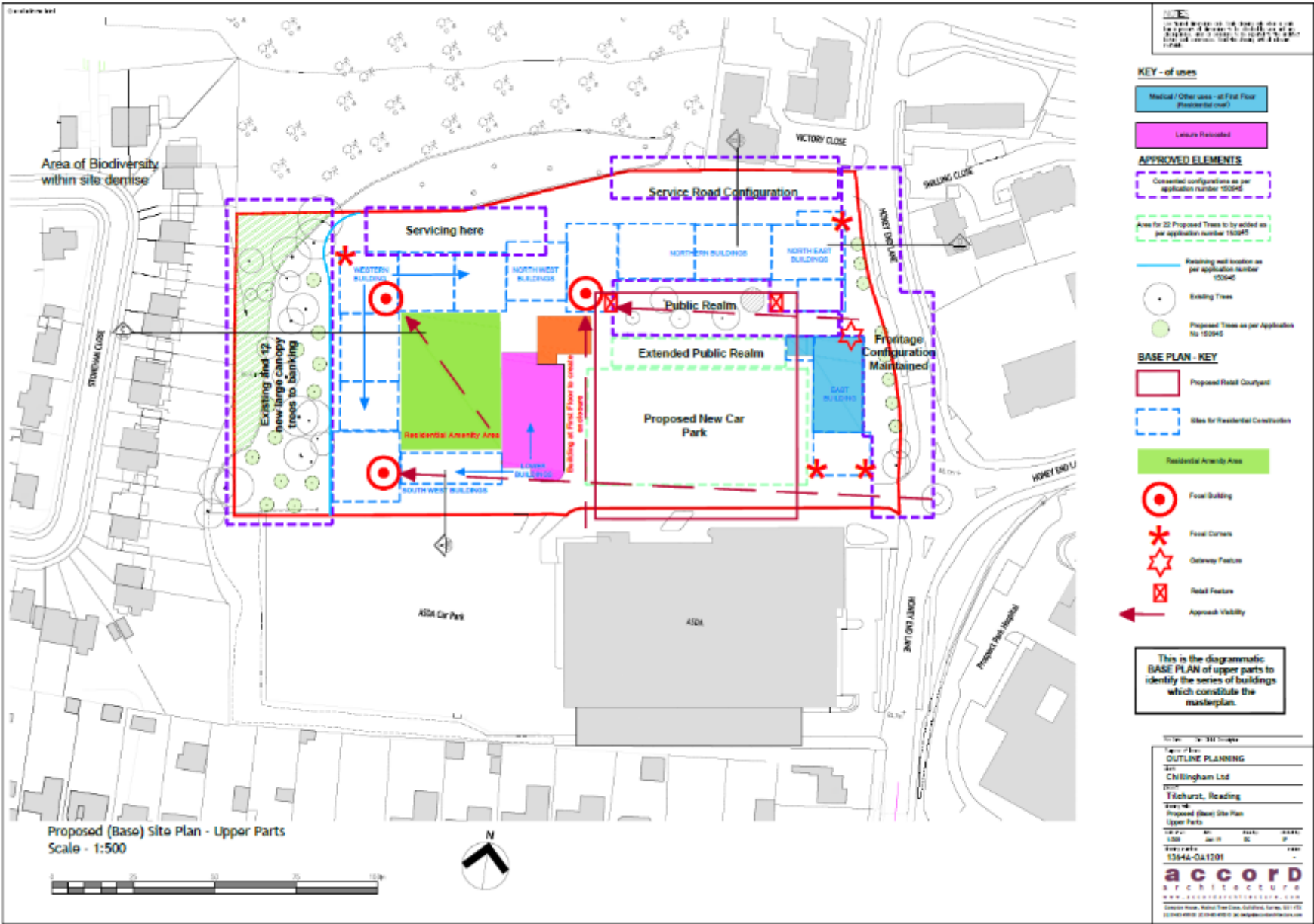
Appendix 2: Proposed Site Plan
Part 1



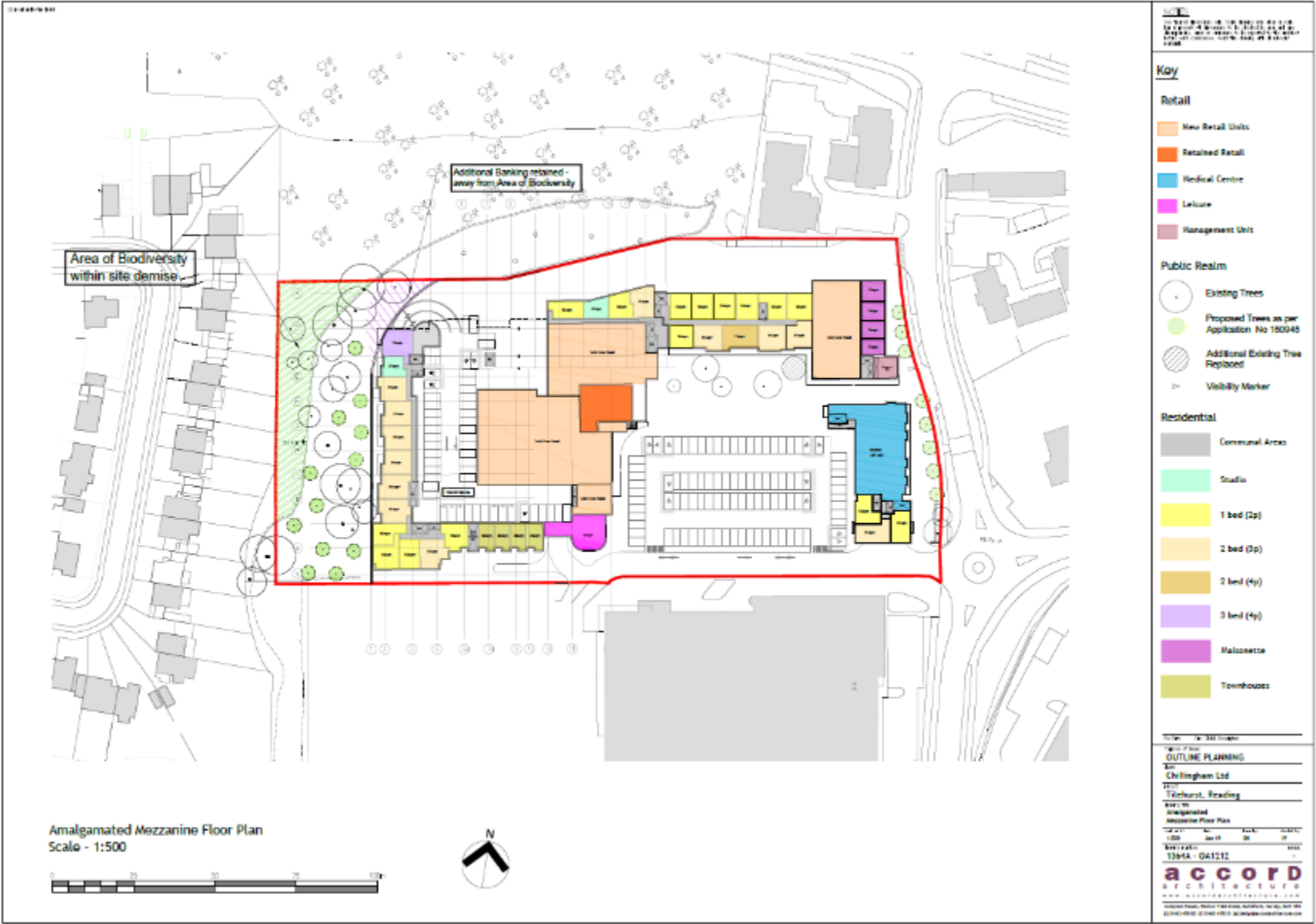








Part 3

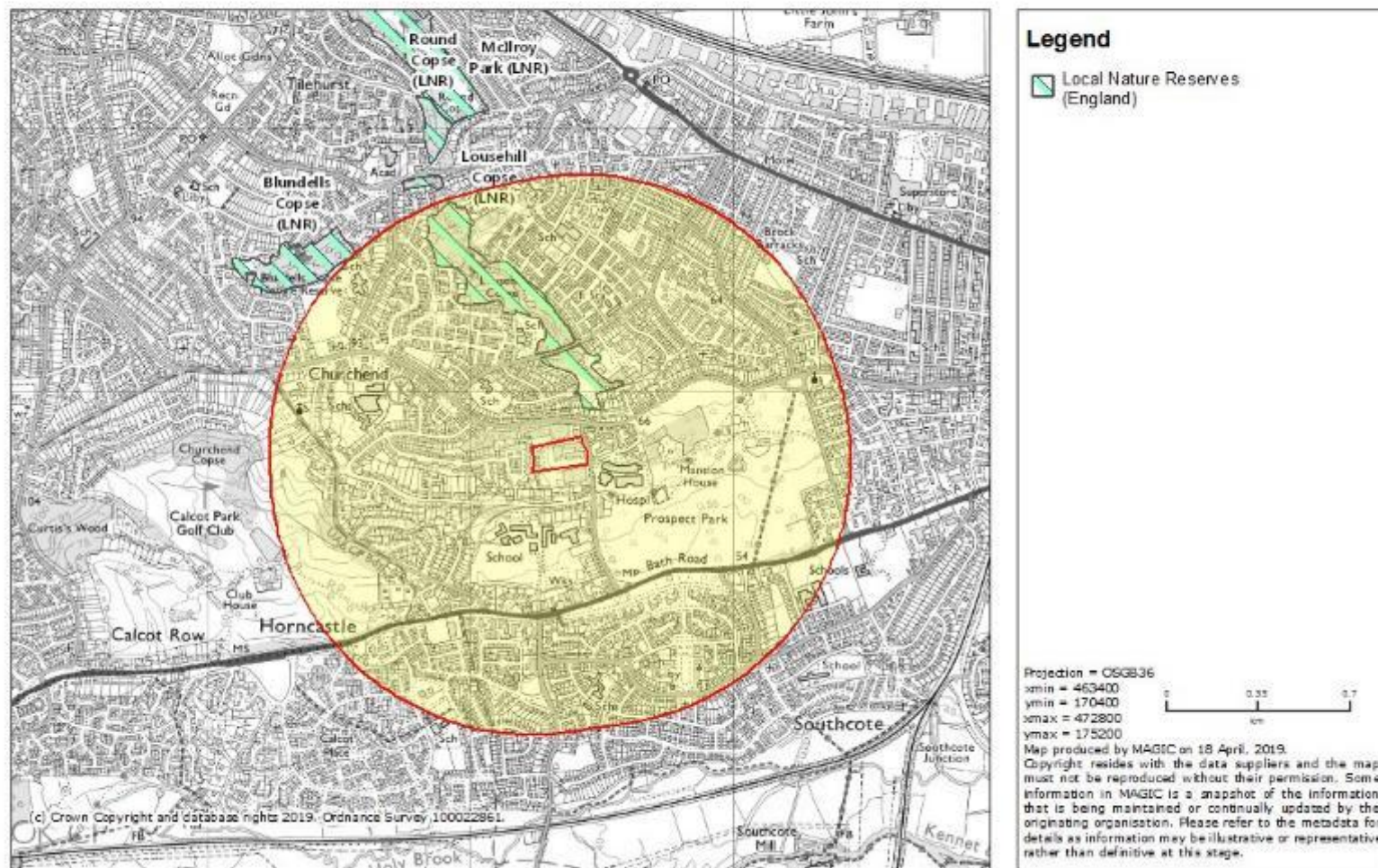


Appendix 3: Desk Study Information

Full historical records can be provided on request.

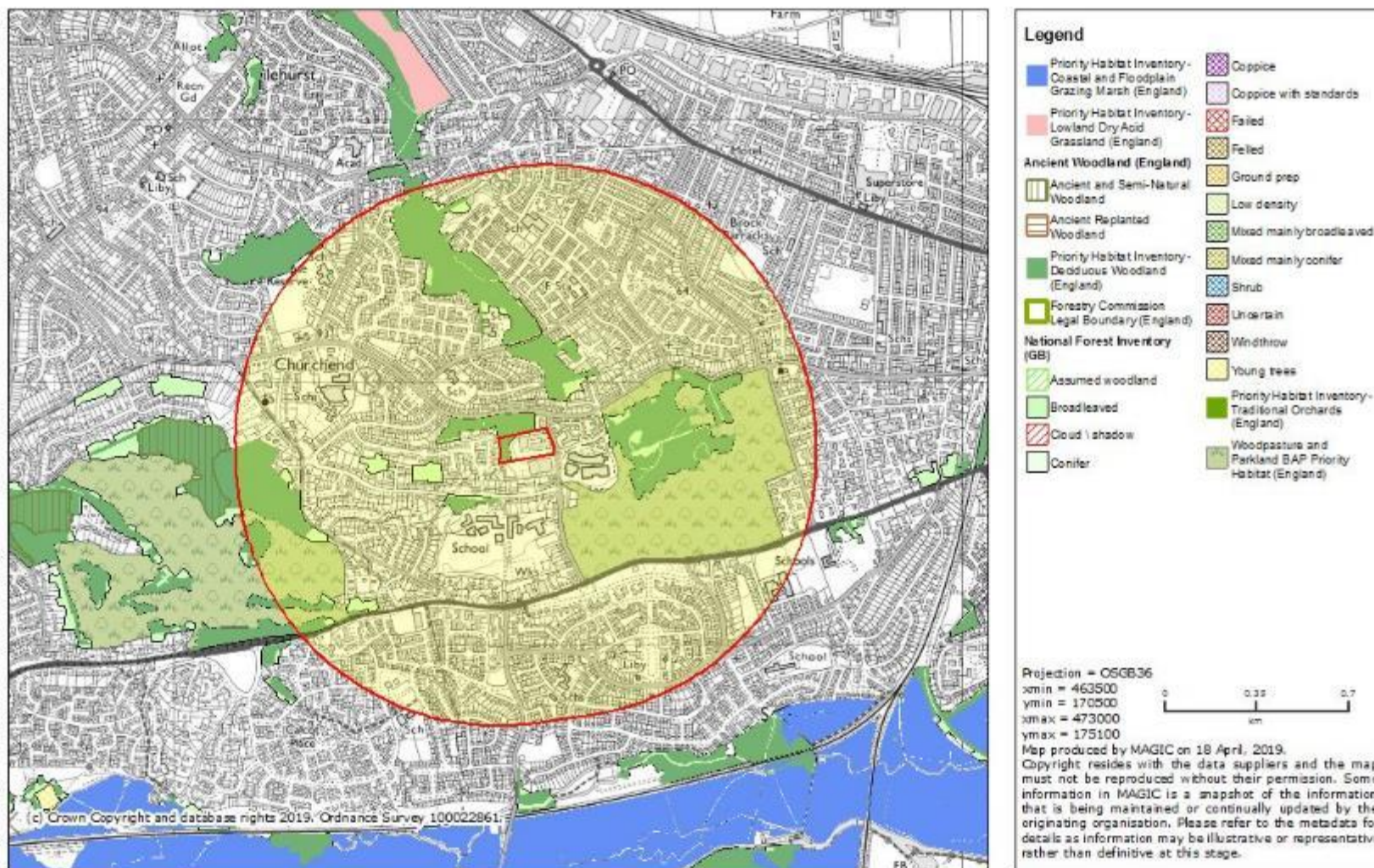
MAGiC

Designated Sites



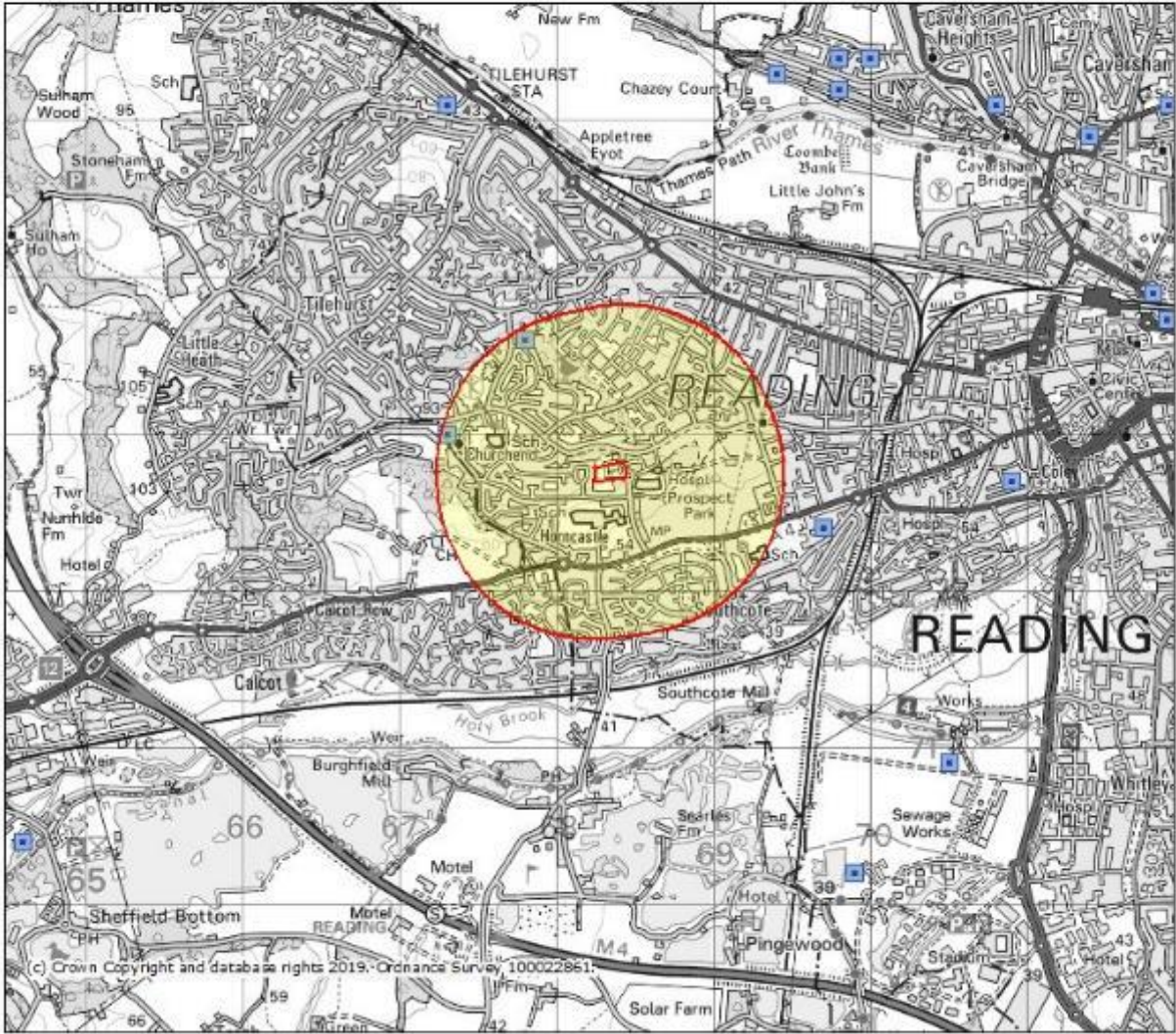
MAGiC

Habitats



MAGiC

EPSLs



Legend

Granted European Protected Species Applications (England)

- Amphibian
- Bat
- Cetacean
- Invertebrate
- Other Mammal
- Plant
- Reptile

Projection = OSGB36
xmin = 458700
ymin = 167500
xmax = 477700
ymax = 177000

Map produced by MAGIC on 18 April, 2019.
Copyright resides with the data suppliers and the map must not be reproduced without their permission. Some information in MAGIC is a snapshot of the information that is being maintained or continually updated by the originating organisation. Please refer to the metadata for details as information may be illustrative or representative rather than definitive at this stage.

Appendix 4: Legislation and Planning Policy

LEGAL PROTECTION

National and European Legislation Afforded to Habitats

International Statutory Designations

Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) are sites of European importance and are designated under the EC Habitats Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (the Habitats Directive) and the EC Birds Directive 2009/147/EC on the conservation of wild birds respectively. Both form part of the wider Natura 2000 network across Europe.

Under the Habitats Directive the, Article 3 requires the establishment of a network of important conservation sites (SACs) across Europe in order to conserve the 189 habitats and 788 species (non- bird) identified in Annexes I and II of the Directive (as amended).

SPAs are classified under Article 2 of the EC Birds Directive both for rare bird species (as listed on Annex I) and for important migratory species.

SACs and SPAs up to 12 nautical miles (nm) from the coast are afforded protection in the UK under the Conservation of Habitats and Species Regulations 2010 which consolidate all amendments made to the Conservation (Natural Habitats, &c.) Regulations 1994. In Scotland, the requirements of Habitats Directive are implemented through a combination of the 1994 and the 2010 (reserved matters) Regulations. The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended) provide a means for designating and protecting SACs in UK offshore waters (from 12-200 nm).

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. The Convention covers all aspects of wetland conservation and recognises the importance of wetland ecosystems in relation to global biodiversity conservation. The Convention refers to wetlands as “areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres” however they may also include riparian and coastal zones. Ramsar sites are statutorily protected under the Wildlife & Countryside Act 1981 (as amended) with further protection provided by the Countryside and Rights of Way (CROW) Act 2000. Policy statements have been issued by the Government in England and Wales highlighting the special status of Ramsar sites. The Government in England and Wales has issued policy statements which ensure that Ramsar sites are afforded the same protection as areas designated under the EC Birds and Habitats Directives as part of the Natura 2000 network (e.g. SACs & SPAs).

National Statutory Designations

Sites of Special Scientific Interest (SSSI) are designated by nature conservation agencies in order to conserve key flora, fauna, geological or physio-geographical features within the UK. The original designations were under the National Parks and Access to the Countryside Act 1949 but SSSIs were then re-designated under the Wildlife & Countryside Act 1981 (as amended). As well as reinforcing other national designations (including National Nature Reserves), the system also provides statutory protection for terrestrial and coastal sites which are important within

the European Natura 2000 network and globally. Further provisions for the protection and management of SSSIs have been introduced by the Countryside and Rights of Way Act 2000 (in England and Wales) and the Nature Conservation (Scotland) Act 2004.

Local Statutory Designations

Local authorities in consultation with the relevant nature conservation agency can declare Local Nature Reserves (LNRs) under the National Parks and Access to the Countryside Act 1949. LNRs are designated for flora, fauna or geological interest and are managed locally to retain these features and provide research, education and recreational opportunities.

Non- Statutory Designations

All non-statutorily designated sites are referred to as Local Wildlife Sites (LWS) and can be designated by the local authority for supporting local conservation interest. Combined with statutory designation, these sites are considered within Local Development Frameworks under the Town and Country Planning system and are a material consideration during the determination of planning applications. The protection afforded to these sites varies depending on the local authority involved.

Regionally Important Geological Sites (RIGs) are the most important geological and geomorphological areas outside of statutory designations. These sites are also a material consideration during the determination of planning applications.

The Hedgerow Regulations 1997

The Hedgerow Regulations 1997 are designed to protect 'important' countryside hedgerows. Importance is defined by whether the hedgerow (a) has existed for 30 years or more; or (b) satisfies at least one of the criteria listed in Part II of Schedule 1 of the Regulations.

Under the Regulations, it is against the law to remove or destroy hedgerows on or adjacent to common land, village greens, SSSIs (including all terrestrial SACs, NNRs and SPAs), LNRs, land used for agriculture or forestry and land used for the keeping or breeding of horses, ponies or donkeys without the permission of the local authority. Hedgerows 'within or marking the boundary of the curtilage of a dwelling-house' are excluded.

National and European Legislation Afforded to Species

The Habitats Directive

The EC Habitats Directive aims to promote the maintenance of biodiversity by requiring Member States to take measures to maintain or restore wild species listed on the Annexes to the Directive at a favourable conservation status, introducing robust protection for those species of European importance. The Directive is transposed into UK law by The Conservation of Habitats and Species Regulations 2010 (the Conservation Regulations) and the Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended). The following notes are relevant for all species protected under the EC Habitats Directive:

In the Directive, the term 'deliberate' is interpreted as being somewhat wider than intentional and may be thought of as including an element of recklessness.

The Habitats Regulations do not define the act of ‘migration’ and, therefore, as a precaution, it is recommended that short distance movement of animals for e.g. foraging, breeding or dispersal purposes are also considered.

In order to obtain a European Protected Species Mitigation (EPSM) licence, the application must demonstrate that it meets all of the following three ‘tests’:

the action(s) are necessary for the purpose of preserving public health or safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequence of primary importance for the environment;

- There is no satisfactory alternative; and
- The action authorised will not be detrimental to the maintenance of the species concerned at a favourable conservation status in their natural range.

The Wildlife and Countryside Act (WCA) 1981 (as amended)

The Wildlife and Countryside Act (WCA) 1981 (as amended) implements the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and implements the species protection requirements of EC Birds Directive 2009/147/EC on the conservation of wild birds in Great Britain (the birds Directive). The WCA 1981 has been subject to a number of amendments, the most important of which are through the Countryside and Rights of Way (CROW) Act (2000) and Nature Conservation (Scotland) Act 2004.

Other legislative Acts affording protection to wildlife and their habitats include:

- Deer Act 1991
- Natural Environment & Rural Communities (NERC) Act 2006
- Protection of Badgers Act 1992
- Wild Mammals (Protection) Act 1996

Badgers

Badgers *Meles meles* are protected under The Protection of Badgers Act which makes it an offence to:

- Wilfully kill, injure, take, or attempt to kill, injure or take a badger
- Cruelly ill-treat a badger, including use of tongs and digging
- Possess or control a dead badger or any part thereof
- Intentionally or recklessly damage, destroy or obstruct access to a badger sett or any part thereof
- Intentionally or recklessly disturb a badger when it is occupying a badger sett
- Intentionally or recklessly cause a dog to enter a badger sett
- Sell or offers for sale, possesses or has under his control, a live badger

Effects on development works:

A development licence will be required from the relevant countryside agency for any development works liable to affect an active badger sett, or to disturb badgers whilst they occupy a sett.

Guidance has been issued by the countryside agency’s to define what would constitute a licensable activity. It is not possible to obtain a licence to translocate badgers.

Birds

With certain exceptions, all birds, their nests and eggs are protected under Sections 1-8 of the WCA. Among other things, this makes it an offence to:

- Intentionally (or recklessly in Scotland) kill, injure or take any wild bird
- Intentionally (or recklessly in Scotland) take, damage or destroy (or, in Scotland, otherwise interfere with) the nest of any wild bird while it is in use or being built
- Intentionally take or destroy an egg of any wild bird
- Sell, offer or expose for sale, have in his possession or transport for the purpose of sale any wild bird (dead or alive) or bird egg or part thereof.
- Intentionally or recklessly obstruct or prevent any wild bird from using its nest (Scotland only)

Certain species of bird, for example the barn owl, bittern and kingfisher receive additional protection under Schedule 1 of the WCA and Annex 1 of the European Community Directive on the Conservation of Wild Birds (2009/147/EC) and are commonly referred to as “Schedule 1” birds.

This affords them protection against:

- Intentional or reckless disturbance while it is building a nest or is in, on or near a nest containing eggs or young
- Intentional or reckless disturbance of dependent young of such a bird
- In Scotland only, intentional or reckless disturbance whilst lekking
- In Scotland only, intentional or reckless harassment

Effects on development works:

Works should be planned to avoid the possibility of killing or injuring any wild bird, or damaging or destroying their nests. The most effective way to reduce the likelihood of nest destruction in particular is to undertake work outside the main bird nesting season which typically runs from March to August. Where this is not feasible, it will be necessary to have any areas of suitable habitat thoroughly checked for nests prior to vegetation clearance.

Schedule 1 birds are additionally protected against disturbance during the nesting season. Thus, it will be necessary to ensure that no potentially disturbing works are undertaken in the vicinity of the nest. The most effective way to avoid disturbance is to postpone works until the young have fledged. If this is not feasible, it may be possible to maintain an appropriate buffer zone or standoff around the nest.

Herpetofauna (Amphibians and reptiles)

The sand lizard *Lacerta agilis*, smooth snake *Coronella austriaca*, natterjack toad *Epidalea calamita*, pool frog *Pelophylax lessonae* and great crested newt *Triturus cristatus* receive full protection under Habitats Regulations through their inclusion on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species
- Deliberate disturbance of species in such a way as:
- To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
- To impair their ability to hibernate or migrate

- To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

With the exception of the pool frog, these species are also listed on Schedule 5 of the WCA and they are additionally protected from:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection
- Selling, offering or exposing for sale, possession or transporting for purpose of sale.

Other native species of herpetofauna are protected solely under Schedule 5, Section 9(1) & (5) of the WCA, i.e. the adder *Vipera berus*, grass snake *Natrix natrix*, common lizard *Zootoca vivipara* and slow-worm *Anguis fragilis*. It is prohibited to:

- Intentionally or recklessly kill or injure these species.

Effects on development works:

A European Protected Species Mitigation (EPSM) Licence issued by the relevant countryside agency (e.g. Natural England) will be required for works liable to affect the breeding sites or resting places amphibian and reptile species protected under Habitats Regulations. A licence will also be required for operations liable to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, rear young and hibernate). The licences are to allow derogation from the relevant legislation, but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored.

Although not licensable, appropriate mitigation measures may also be required to prevent the intentional killing or injury of adder, grass snake, common lizard and slow worm, thus avoiding contravention of the WCA.

Water voles

The water vole *Arvicola terrestris* is fully protected under Schedule 5 of the WCA. This makes it an offence to:

- Intentionally kill, injure or take (capture) water voles
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection
- Intentionally or recklessly disturb water voles while they are occupying a structure or place used for shelter or protection

Effects on development works:

If development works are liable to affect habitats known to support water voles, the relevant countryside agency must be consulted. It must be shown that means by which the proposal can be re-designed to avoid contravening the legislation have been fully explored e.g. the use of alternative sites, appropriate timing of works to avoid times of the year in which water voles are most vulnerable, and measures to ensure minimal habitat loss. Conservation licences for the capture and translocation of water voles may be issued by the relevant countryside agency (e.g. Natural England) for the purpose of development activities if it can be shown that the activity has been properly planned and executed and thereby contributes to the conservation of the

population. The licence will then only be granted to a suitably experienced person if it can be shown that adequate surveys have been undertaken to inform appropriate mitigation measures. Identification and preparation of a suitable receptor site will be necessary prior to the commencement of works.

Otters

Otters *Lutra lutra* are fully protected under the Conservation Regulations through their inclusion on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species
- Deliberate disturbance of species in such a way as:
 - To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
 - To impair their ability to hibernate or migrate
 - To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

Otters are also currently protected under the WCA through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection

Effects on development works:

An EPSM Licence issued by the relevant countryside agency (e.g. Natural England) will be required for works liable to affect otter breeding or resting places (often referred to as holts, couches or dens) or for operations likely to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, and rear young). The licence is to allow derogation from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored

Bats

All species are fully protected by Habitats Regulations 2010 as they are listed on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species (e.g. All bats)
- Deliberate disturbance of bat species in such a way as:
 - To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
 - To impair their ability to hibernate or migrate
 - To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

Bats are afforded the following additional protection through the WCA as they are included on Schedule 5:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection

Effects on development works:

Works which are liable to affect a bat roost or an operation which are likely to result in an illegal level of disturbance to the species will require an EPSM licence. The licence is to allow derogation from the legislation through the application of appropriate mitigation measures and monitoring.

Dormice

Dormice *Muscardinus avellanarius* are fully protected under Habitats Regulations through their inclusion on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species
- Deliberate disturbance of species in such a way as:
 - To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
 - To impair their ability to hibernate or migrate
 - To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

Dormice are also protected under the WCA through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection

Effects on development works:

Works which are liable to affect a dormice habitat or an operation which are likely to result in an illegal level of disturbance to the species will require an EPSM licence. The licence is to allow derogation from the legislation through the application of appropriate mitigation measures and monitoring.

White clawed crayfish

The white clawed crayfish *Austropotamobius pallipes* receives partial protection under Schedule 5 of the WCA in respect of Sections 9(1) and 9(5). This makes it an offence to:

- Intentionally take (capture) white-clawed crayfish.

Effects on development works:

The relevant countryside agency will need to be consulted about development which could impact on a watercourse or wetland known to support white clawed crayfish. Conservation licences for the capture and translocation of crayfish can be issued if it can be shown that the activity has been properly planned and executed and thereby contributes to the conservation of the population. The licence will only be granted to a suitably experienced person if it can be shown that adequate surveys have been undertaken to inform appropriate mitigation measures. Identification and preparation of a suitable receptor site will be necessary prior to the commencement of the works.

Wild Mammals (Protection Act) 1996

All wild mammals are protected against intentional acts of cruelty under the above legislation. This makes it an offence to mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.

To avoid possible contravention, due care and attention should be taken when carrying out works (for example operations near burrows or nests) with the potential to affect any wild mammal in this way, regardless of whether they are legally protected through other conservation legislation or not.

Legislation afforded to Plants

With certain exceptions, all wild plants are protected under the WCA. This makes it an offence for an 'unauthorised' person to intentionally (or recklessly in Scotland) uproot wild plants. An authorised person can be the owner of the land on which the action is taken, or anybody authorised by them.

Certain rare species of plant, for example some species of orchid, are also fully protected under Schedule 8 of the Wildlife and Countryside Act 1981 (as amended). This prohibits any person from:

- Intentionally (or recklessly in Scotland) picking, uprooting or destruction of any wild Schedule 8 species (or seed or spore attached to any such wild plant in Scotland only)
- Selling, offering or exposing for sale, or possessing or transporting for the purpose of sale, any wild live or dead Schedule 8 plant species or part thereof
- In addition to the UK legislation outlined above, several plant species are fully protected under Schedule 5 of The Conservation of Habitats and Species Regulations 2010. These are species of European importance. Regulation 45 makes it an offence to:
 - Deliberately pick, collect, cut, uproot or destroy a wild Schedule 5 species
 - Be in possession of, or control, transport, sell or exchange, or offer for sale or exchange any wild live or dead Schedule 5 species or anything derived from such a plant.

Effects on development works:

An EPSM licence will be required from the relevant countryside agency for works which are liable to affect species of planted listed on Schedule 5 of the Conservation or Habitats and Species Regulations 2010. The licence is to allow derogation from the legislation through the application of appropriate mitigation measures and monitoring.

Invasive Species

Part II of Schedule 9 of the WCA lists non-native invasive plant species for which it is a criminal offence in England and Wales to plant or cause to grow in the wild due to their impact on native wildlife. Species included (but not limited to):

- Japanese knotweed *Fallopia japonica*
- Giant hogweed *Heracleum mantegazzianum*
- Himalayan balsam *Impatiens glandulifera*

Effects on development works:

It is not an offence for plants listed in Part II of Schedule 9 of the WCA 1981 to be present on the development site however it is an offence to cause them to spread. Therefore, if any of the species are present on site and construction activities may result in further spread (e.g. earthworks, vehicle movements) then it will be necessary to design and implement appropriate mitigation prior to construction commencing.

Injurious weeds

Under the Weeds Act 1959 any land owner or occupier may be required prevent the spread of certain 'injurious weeds' including (but not limited to):

- Spear thistle *Cirsium vulgare*
- Creeping thistle *Cirsium arvense*
- Curled dock *Rumex crispus*
- Broad-leaved dock *Rumex obtusifolius*
- Common ragwort *Senecio jacobaea*

It is a criminal offence to fail to comply with a notice requiring such action to be taken. The Ragwort Control Act 2003 establishes a ragwort control code of practice as common ragwort is poisonous to horses and other livestock. This code provides best practice guidelines and is not legally binding.

NATIONAL PLANNING POLICY (ENGLAND)**National Planning Policy Framework**

The National Planning Policy Framework promotes sustainable development. The Framework specifies the need for protection of designated sites and priority habitats and species. An emphasis is also made on the need for ecological infrastructure through protection, restoration and re-creation. The protection and recovery of priority species (considered likely to be those listed as UK Biodiversity Action Plan priority species) is also listed as a requirement of planning policy.

In determining a planning application, planning authorities should aim to conserve and enhance biodiversity by ensuring that: designated sites are protected from harm; there is appropriate mitigation or compensation where significant harm cannot be avoided; opportunities to incorporate biodiversity in and around developments are encouraged; and planning permission is refused for development resulting in the loss or deterioration of irreplaceable habitats including aged or veteran trees and also ancient woodland.

The Natural Environment and Rural Communities Act 2006 and the Biodiversity Duty

Section 40 of the Natural Environment and Rural Communities (NERC) Act, 2006, requires all public bodies to have regard to biodiversity conservation when carrying out their functions. This is commonly referred to as the 'biodiversity duty'.

Section 41 of the Act (Section 42 in Wales) requires the Secretary of State to publish a list of habitats and species which are of 'principal importance for the conservation of biodiversity.' This list is intended to assist decision makers such as public bodies in implementing their duty under Section 40 of the Act. Under the Act these habitats and species are regarded as a material consideration in determining planning applications. A developer must show that their protection has been adequately addressed within a development proposal.