Units 1-4 Darley Yard, Worsborough Bridge, Barnsley, S70 4SB

Preliminary Ecological Appraisal

Prepared on behalf of

Smartwater Utilities

Final Report

08 December 2023

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Preliminary Ecological Appraisal

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Provided no significant changes are made to the proposals or on the site subsequent to the report's issue; this report can be considered valid for 18 months from the date of issue, in line with CIEEM's Advice Note on The Lifespan of Ecological Reports and Surveys (2019).

As part of membership to our professional body (CIEEM) we are required to provide our biological results to applicable biological record centres. As such, it is our intention to supply biological data collected as part of this assessment to the relevant centre unless directly instructed in writing not to do so by the client.

Units 1-4 Darley Yard, Worsborough Bridge, Barnsley, S70 4SB
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NON-TECHNICAL SUMMARY

- This report outlines the baseline ecological condition of the site, and measures which will ensure a net gain for Biodiversity as part of the proposed development. The site is located at Units 1-4 Darley Yard, Worsborough Bridge, Barnsley, S70 4SB (Grid Reference SE 35979 04020).

- The proposals for the site include clearance of the existing industrial buildings and construction of two new residential properties with associated gardens and garages.

- The site is comprised primarily of hardstanding, and four industrial units.

- Mitigation regards construction impacts, light spill and disturbance to foraging and commuting bats, and regards nesting bird habitat is given in Section 4.

- In line with the National Planning Policy Framework and Local Plan Policy, draft recommendations have been given to minimise impacts and provide net gains for biodiversity such as the installation of swift and sparrow boxes, bat boxes, bee bricks, hedgehog access and the planting of suitable food sources for mammals and insects.

Units 1-4 Darley Yard, Worsborough Bridge, Barnsley, S70 4SB
Preliminary Ecological Appraisal

Contents

1. INTRODUCTION

1.1 This report outlines the baseline ecological condition of the site, and measures which will ensure a net gain for Biodiversity as part of the proposed development. The site is located at Units 1-4 Darley Yard, Worsborough Bridge, Barnsley, S70 4SB (Grid Reference SE 35979 04020).

1.2 The proposals for the site include clearance of an area of wasteland and concrete slabs, and construction of a battery store. There will be drainage ponds and excess soil retained as embankments, which can be enhanced for biodiversity in the area.

Site Description

1.3 The site is located within a small industrial estate in Worsborough, to the south-east of Barnsley. The industrial estate is bounded on the north-eastern aspect and the south-eastern aspect by residential property. The south-western and north-western aspects of the site are both bounded with recreational fields. In the wider area there is more residential housing. There are tree lines in the immediate vicinity of the site, which are isolated within the wider landscape.

Scope

1.4 The purpose of the Preliminary Ecological Appraisal (PEA) is to identify habitats currently present within and around the site in order to obtain baseline ecological information for the site. The PEA also assessed the potential of the site to support species which receive legal protection (at a UK level) and species that are otherwise notable including Species of Principal Importance and Birds of Conservation Concern (BoCC).

1.5 The PEA comprises two main elements: a) A desktop review of the ecology and policy context; and b) a field survey of the proposed development site, and where possible, other areas to be affected.

1.6 Where relevant, legislative and policy considerations are highlighted, including.

- The Conservation of Habitats and Species Regulations 2017 (as amended);
- The Wildlife and Countryside Act (WCA) 1981 (as amended);
- The Countryside and Rights of Way (CROW) Act 2000;
- The Natural Environment and Rural Communities (NERC) Act 2006;
- The Protection of Badgers Act 1992;
- Hedgerow Regulations 1997;
- Wild Mammals (Protection) Act 1996;
- The National Planning Policy Framework (NPPF) (2023); and
- Barnsley Local Plan (2019).

1.7 In addition to the above, biodiversity objectives detailed in the following documents have been considered:

- Biodiversity 2020: A Strategy for England's Wildlife and Ecosystem Services;
- Biodiversity and Geodiversity Supplementary Planning Document (2019); and
- Barnsley Biodiversity Action Plan.

2. METHODOLOGY

2.1 This Ecological Appraisal was undertaken in accordance with the guidance in the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Preliminary Ecological Appraisal (PEA) and Guidelines for Ecological Impact Assessment in the UK (2018, Version 1.1).

Zone of Influence

2.2 The study area encompassed the Zone of Influence of the Project. The Zone of Influence is defined as "… the area over which ecological features may be impacted by biophysical changes as a result of the proposed project and associated activities" (CIEEM, 2018). Further information regarding classification for the Zone of Influence is provided in Appendix IV.

2.3 The Zone of Influence, and the study area, is broadly considered to extend across the site, or just beyond the site boundary in most cases, with the potential for up to or exceeding 5 kilometres with regards to designated sites.

Table 1: Summary of predicted changes and Zone of Influence

Predicted Change	Zone of Influence
Vegetation/habitat clearance	Site
Generation of dust during site clearance and construction	Site and immediate surrounds (200m)
Acoustic disturbance and vibration from construction activities	Site and immediate surrounds (Typically up to 300m)
Increased traffic-related air pollution and potential to impact upon sensitive habitats during both construction and operational phase	Habitats within approximately 200m of affected roads
Lighting (during construction and in long term)	Site and immediate surrounds
Changes to local hydrology, including surface water runoff and groundwater	Likely to include watercourses that receive surface water discharges, and downstream habitats
Landscape planting and habitat creation / Green Infrastructure creation	Site

Desk Study

2.4 Barnsley Biological Record Centre (BRRC) provided protected species records within two kilometres of the site, and details of any non-statutory designated sites. The Multi-Agency Geographical Information for the Countryside (MAGIC) website was used to provide information on any statutory designated sites within five kilometres of the proposed development.

Field Study

2.5 The survey employed techniques based on the UK Habitat Classification System. Botanical information was collected, focussing on the dominant and/or key indicator species for each habitat, to enable allocation of habitats to hierarchy levels 3 and/or 4, and where relevant to identify any priority habitats which are present on site. The conditions of the habitats on the site were assessed in line with the technical sheets supplied alongside DEFRA Metric 4.0. This is to inform future

Biodiversity Metric calculations if required. A map of the baseline habitats on site is provided in Appendix 1.

2.6 The survey also employed techniques based on the Phase 1 habitat survey methodology (JNCC, 2010) to assist with other assessments. A detailed walkover survey was undertaken on 5th December 2023 in suitable weather conditions, directly searching for legally protected and invasive species of plant, and categorising any habitats of ecological value that were encountered. A general description of the vegetation was also noted, listing species encountered and scoring their abundance using the DAFOR scale:

- Dominant (D)
- Abundant (A)
- Frequent (F)
- Occasional (O)
- Rare (R)
- Local (L, used as a prefix to any of the above)

Protected Species Assessment

2.7 Habitats and features were assessed for their potential to support protected species. In many cases determining the presence, distribution and population size of protected species will require additional, specialist surveys.

Amphibians

2.8 Consideration was given to the presence of habitat potentially suitable for supporting amphibians including water bodies (ponds, ditches), woodland, scrub, rough grassland and features such as log piles that might provide hibernation areas. Where appropriate, effort to gather direct evidence of amphibians was undertaken using a preliminary search for eggs by examining vegetation within reach of the margins of water bodies, and for resting animals on land by looking under potential refuges such as stones, wood and rubbish near to water bodies.

2.9 Great crested newts are known to forage up to at least 500m from their breeding water bodies and suitable habitats that fall within 250m must be considered even in situations where the breeding site itself will not be affected.

Reptiles

2.10 Habitat considered potentially suitable for supporting reptiles was recorded. This includes areas providing basking and foraging areas, hibernation and breeding sites such as rough grassland and scrub, banks, burrows, rubble piles, compost heaps, hedge banks and water bodies.

Birds

2.11 Any birds seen whilst carrying out the survey were recorded and the type and quality of habitats available for birds was considered, including vegetation suitable for nesting and habitat with the potential to support valued species including breeding and wintering birds.

Bats

Buildings

2.12 Bats roost in a wide variety of sites within buildings, with many species roosting in cracks and crevices, within rubble stone or cavity walls, under slates and within timber beam joints where they are difficult to see. Bats often access buildings at key areas such as the gable end, soffits, barge boards, ridge tiles, between double lintels or around window frames.

2.13 The presence of roosting bats can be spotted through signs such as accumulations of moth/butterfly wings or bat droppings and staining around potential entrance and exit points. The absence of these cannot, however, be treated as conclusive evidence that bats are not using the buildings.

2.14 An assessment was therefore also made of the potential of the building to support bats based on professional judgement and the scale presented in Table 2 below, adapted from the Good Practice Guidelines (Collins, 2023):

Table 2: Criteria for assessing bat roosting potential of structures

Suitability	Description
Confirmed Roost	Evidence of bat occupation found
High Roosting Potential	A structure 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. These structures have the potential to support high conservation status roosts e.g. maternity or classic cool/stable hibernation site.
Moderate Roosting Potential	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status
Low Roosting Potential	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats.
Negligible Roosting Potential	No obvious features on site likely to be used by roosting bats, however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.
None	No habitat features on site likely to be used by any roosting bats at any time of year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels)

2.15 A direct search for evidence of bats was therefore conducted on the 5th December 2023 by Elizabeth Davies (licensed bat worker). This included viewing the external features of the property with close-focusing binoculars and a search for evidence of bats was undertaken of the flat surfaces around the external property. Internally the building was searched thoroughly, and any samples of droppings collected and sent for DNA analysis, where found.

2.16 The survey methodology was undertaken with the Bat Conservation Trust's Good Practice Guidelines (Collins, 2023) in mind.

Trees

2.17 Bats often roost in trees. Features such as old woodpecker holes, splits, cavities and rot holes, loose or flaking bark and ivy creepers will be exploited by bats to roost. Any trees present on site were therefore assessed for their potential to support roosting bats by searching for such features. The presence of roosting bats can be spotted through signs such as accumulations of moth or butterfly wings, staining, bat droppings, or bats themselves.

2.18 The absence of these cannot, however, be treated as conclusive evidence that bats are not present, and therefore an assessment was made of the potential of the trees to support bats based on the scale presented in Table 3 below, adapted from the Survey Guidelines (Collins, 2023). Further bat tree surveys, either ground level tree assessment or PRF aerial assessments may be required following the initial assessment.

Table 3: Criteria for assessing bat roosting potential of trees

Suitability	Description
None	Either no Potential Roosting Features (PRFs) in the tree, or highly unlikely to be any
FAR	Further assessment required to establish if PRFs are present in the tree
PRF	A tree with at least one PRF present

2.19 A direct search for evidence of bats was therefore conducted on 5th December 2023 by Elizabeth Davies (licensed bat worker).

2.20 A preliminary evaluation was also undertaken of the habitat on the site for the quality of potential commuting and foraging habitat for the local bat populations. Bats navigate using linear features in the landscape such as hedgerows and these can be important features for local roosts. The site itself may also provide important foraging habitat and support local bat roosts.

2.21 An assessment was therefore made of the potential of the habitat to offer suitable flight paths and foraging habitats based on the scale presented in Table 4 below, adapted from the Survey Guidelines (Collins, 2023):

Table 4: Criteria for assessing potential flight paths and foraging habitats

Habitat potential	Description
High	Continuous, high quality habitat that is well connected to the wider landscape and likely to be regularly used by bats for flight-paths, such as river valleys, streams, hedgerows, lines of trees and woodland edge. High quality habitat that is well connect to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree lined watercourses and grazed parkland. Site is connected to a known roost.
Moderate	Continuous habitat connected to the wider landscape that could be used by bats for flight-paths such as lines of trees and scrub, or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
Low	Habitat that could be used by small numbers of bats as flight-paths, such as a gappy hedgerow or unvegetated stream, but isolated i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Negligible	No obvious habitat features on site likely to be used as flight paths or by foraging bats; however, a small element of uncertainty remains in order to account for non-standard bat behaviour.
None	No habitat features on site likely to be used by any commuting or foraging bats at any time of year) i.e. no habitats that provide continuous lines of shade/protection for flight-lines, or generate/shelter insect populations available to foraging bats).

Badgers

2.22 Consideration was given to the presence of habitat potentially suitable for supporting badgers including woodland, scrub and grassland. Potential evidence of the presence of badgers was noted including earthworks that might be badger setts, signs such as dung pits, mammal pathways through ground vegetation and under fences and hairs on fences.

Dormouse

2.23 The habitat on the site was assessed for the potential to support dormice which are found in habitats such as woodlands, scrub and hedgerows with good connectivity and suitable food plants. Satellite images were used to assess the connectivity of any suitable habitat present on the site to other areas of woodland and hedgerow networks.

Constraints

2.24 The survey was undertaken in the autumn, outside of the peak survey season for flora and fauna. Some flowering plants may not have been recorded; however, it is considered that despite this a robust assessment of the habitat could be made given the types of habitats present on site.

3. RESULTS

Designated sites

Statutory sites

Internationally important sites

3.1 There are no Internationally important Protected Sites within the search area.

Nationally important sites

3.2 There are two Nationally important Sites of Special Scientific Interest (SSSIs) within 5km of the site:

- Stairfoot Brickworks SSSI, designated for exposures of Aegiranum Marine Band, which marks the Duckmantian-Bolsovian stage boundary of the Westphalian Series. The Stairfoot Brickworks SSSI is 100% unfavourable – declining condition, and is located 2.3km north east of the site.

- Dearne Valley Wetlands SSSI, designated for nationally important populations of breeding gadwall *Mareca strepera*, shoveler *Spatula clypeata,* garganey *Spatula querquedula*, pochard *Aythya farin*a, bittern *Botarus stellaris*, black-headed gull *Chroicocephalus ridibundus* and willow tit *Poecile montanus kilenschmidti*. The SSSI is also designated for non-breeding gadwall and shoveler, and diverse assemblages of breeding birds of lowland damp grasslands, lowland scrub and a mixed assemblage of lowland open waters and their margins and lowland fens. The Dearne Valley Wetlands SSSI is in 100% favourable condition, and is located 525m south of the site.

3.3 The Stairfoot Brickworks SSSI is considered to be of sufficient distance from the site that no impacts are likely to occur as a result of the development proposals and are therefore considered to be outside of the zone of influence.

3.4 The Dearne Valley Wetlands SSSI is considered to be within the zone of influence of the site due to the close proximity. This is discussed further in Section 4.

County Important sites

3.5 There are four Local Nature Reserves (LNRs) within the search area:

- Dearne Valley Park LNR comprised of acidic oak woodland with a mosaic of wetland habitats, located 2.45km north;

- Potter Holes Plantation comprised of semi-ancient woodland developed in an around old bell-pits, plus newer, planted woodland adjacent on a reclaimed colliery site, located 4.22km south west;

- Worsborough Country Park comprised of a reservoir, willow carr, managed grassland/meadowland, reed bed and woodland, located 415m south; and

- Elsecar Reservoir comprised of willow carr and wetland habitats, located 4.8km south east.

3.6 There are five Local Wildlife Sites (LWS) within 2km of the site:

- Bell Bank Wood and Woolley Bank Wood LWS which is a linear woodland extending along steeply-sloping ground on the south-eastern edge of the Dove Valley. Bell Bank Wood and Woolley Bank Wood LWS is located 550m south of the site.

- Kendal Green Scrub LWS which is an area of land adjacent to the railway embankment which is dominated by species-rich modified neutral grassland. The variety of species could be due to a varying substrate. The Kendal Green Scrub LWS is located 1.7km west of the site;

- Worsborough Reservoir LWS which is a large site between Worsborough and the route of the M1 motorway. The large waterbody of the Worsborough Reservoir forms the major feature of Worsborough Country Park. Other habitats on site include semi-natural broadleaved woodland, stream courses, scrub and modified grassland. The Worsborough Reservoir LWS is located 1.1km south west of the site.

- Short Wood and Hay Green LWS which is a small area of ancient woodland along the eastern bank of the north-east flowing Short Wood Dike, to the east of the village of Birdwell. The main area is typified by oak *Quercus robur*, bracken *Pteridum aquilinum* and bluebells *Hyacinthoides non-scripta* but the woodland extends to the northeast in a narrow strip. The Short Wood and Hay Green LWS is located 1.85km south of the site.

- Wombwell Wood LWS which is a comprise of more than 100ha of woodland and plantation which extends along a north-west to south-east axis across a largely agricultural landscape. The Wombwell Wood LWS is located 1.3km south east of the site.

3.7 The LNRs and LWS are of County Importance. Worsborough Country Park LWS and Bell Bank Wood and Woolley Bank Wood LWS are considered to be within the zone of influence of the construction impacts.

3.8 All other LNRs and LWS are considered to be outside of the zone of influence of the site.

Ecological networks

Habitats

3.9 Descriptions of the habitats recorded on site are given below, a map of the habitats is given as Appendix 1, with photographs in Appendix 2. There is NERC S41 Priority deciduous woodland 200m north of the site shown on MAGIC within the zone of influence.

Strategic significance

3.10 There are Priority habitats and potential ecological network areas within the vicinity. However, the habitats on site are poor quality, typical hard standing of a former commercial site, are not functionally linked to any Priority habitats. The site is therefore not considered to be ecologically desirable.

3.11 The site is not part of any designated site or listed on any local plan, neighbourhood plan or other policy document for ecology. It is considered to have low strategic significance (Area/compensation not in local strategy/ no local strategy).

UK Habitats

3.12 The following were recorded on the site, or immediately adjacent, and are described below:

- Developed Land- buildings, artificial sealed; and
- Sparsely vegetated land.

Developed land

3.13 The whole site is hardstanding which is considered to be artificial sealed surface.

3.14 This habitat is considered to be of "very low distinctiveness" and condition assessment is not required. There were areas which were colonised by vegetation and considered sparsely vegetated land, this is discussed in further detail below.

3.15 These habitats were of no significant ecological value.

Sparsely vegetated land-ephemeral short perennial

3.16 The hard standing was colonised with ephemeral/short perennial plants. This is sparse amongst the cracks in places and along the . This habitat is considered to be of "low distinctiveness" and these areas were in moderate condition (absence of invasive or sub-optimal species, varied structure).

3.17 Species noted included hawkbit species, petty spurge, yarrow, creeping buttercup, yarrow, nettles, willowherb species, dandelion and springy turf moss.

3.18 These habitats were of no significant ecological value.

Protected species

Plants

3.19 There are no records for protected or NERC Act S41 Priority species within the search area.

3.20 No protected or notable plant species were recorded on site. Protected plants are not considered further in this assessment.

Invertebrates

3.21 There are no records for stag beetle from the search area, and there is no habitat suitable for stag beetle larvae on site.

3.22 There are records of comma, red admiral, small copper, small tortoiseshell and common blue butterfly, as well as multiple moth NERC Act S41 Priority species.

3.23 Given the habitats and the size of the plot it is unlikely to support a significant population of a notable or protected species and invertebrates are not considered further.

Amphibians

3.24 There are no Natural England mitigation licenses, class licenses or eDNA pond results which appear to be present within the vicinity shown on MAGIC.

3.25 There was one record for great crested newt and 16 records of common toad within the data search.

3.26 The site was assessed for its suitability to support great crested newts and other amphibians- in its current state the whole working area of the site is considered unsuitable for newts due to a lack of vegetative complexity, adequate protective cover and foraging opportunities.

3.27 It is considered highly unlikely that great crested newts or other amphibians are present on site and no survey or mitigation has been recommended.

Reptiles

3.28 BBRC provided one record of common lizard and two records of grass snake within the search area.

3.29 The majority of the site is hard standing which is unsuitable for reptiles - in its current state the whole working area of the site is considered unsuitable for reptiles due to a lack of vegetative complexity, adequate protective cover and foraging opportunities.

3.30 It is considered highly unlikely that reptiles are present on site and no survey or mitigation has been recommended.

Birds

3.31 There were a number of bird records for the 2km search area of those. Those relevant ones to the site included mistle thrush (3 records), lapwing (2 records), house martin (4 records) and black cap (1 record).

3.32 The ivy cover on the building offers potential nesting and foraging opportunities for common species of bird.

3.33 Given the amount of habitat available on site it is considered unnecessary to undertake further breeding bird surveys.

3.34 Overall, the bird assemblage is assessed as likely to be of site level importance for nature conservation.

Bats

3.35 There is one Natural England roost mitigation licence in the vicinity of the site shown on MAGIC, 750m south-east of the site for soprano pipistrelle dated 2018.

3.36 The data search provided one record for common pipistrelle.

Buildings

3.37 There is a single storey industrial unit comprised of four units on the site. The building can be split into two distinct sections, unit 1 and units 2-4 are of two separate construction types. Unit 1 is a brick built extension, with a monopitch roof constructed from corrugated sheet material. There are clear panels in this, and there are some areas where the roof is damaged allowing light and water ingress. Internally unit 1 has metal beams. Units 2-4 are brick and breeze block structures, with a pitched roof constructed of corrugated sheet metal. On the rear of Unit 3 there is dense ivy cover. Over unit four the sheet roofing has been placed on top of tiles. Internally there are walls separating the units, and two enclosed rooms. There is also a fully enclosed safe room, and a basement.

3.38 The industrial units are considered to hold negligible potential for roosting bats.

3.39 There is a single storey toilet block in the corner of the site. The toilet block is constructed from breeze block and brick, and has PVC doors. The roof is tiled with no visible gaps. Internally there is a plasterboard ceiling which has fallen away in places, revealing a breathable roofing membrane liner.

3.40 The toilet block is considered to hold negligible potential for roosting bats.

Trees

3.41 None of the trees adjacent to the site had features suitable for roosting bats.

Foraging and commuting habitat

3.42 The site contains some limited suitable habitat for foraging and commuting bats, adjacent to the rear boundary of the site.

3.43 The site is isolated in the wider landscape, and the majority of the site is hardstanding. Therefore, the habitat on site is assessed as low quality.

3.44 Therefore, the bat assemblage is assessed as of local importance for nature conservation. Further recommendations regarding lighting impacts are given in Section 4.

Badger

3.45 There is one record of badger for the search area.

3.46 No field signs of badgers were noted on site. There is a no potential foraging habitat on boundaries, however it is considered likely that field signs would have been noted.

3.47 It is considered unlikely that badgers are present on site.

Dormice

3.48 There are no records of dormice within the search area. The habitat on site is not suitable for dormice, with no foraging plant species present and the isolated nature of the site in the wider landscape.

3.49 It is considered highly unlikely that dormice are present on site and no survey or mitigation has been recommended.

Other mammals

3.50 The data return included two records of West European hedgehog for the search area. The habitat on site is not suitable for foraging or commuting hedgehog. This species is listed as vulnerable on the IUCN red list and is a species of Principal Importance under Section 41 of the NERC Act.

3.51 The desk study returned one record of brown hare and one for weasel within the search area. There is no habitat suitable for these species on site.

4. CONCLUSIONS

SINC & Habitats

Impacts

4.1 There is some limited potential for damage to vegetation from construction dust, pollution from stored materials and construction traffic to the Dearne Valley Wetlands SSSI, Worsborough Country Park LWS and Bell Bank Wood and Woolley Bank Wood LWS and Priority deciduous woodland habitat in the vicinity.

Mitigation

4.2 The production and implementation of a Construction Method Statement (CMS) will ensure the Priority woodland, SSSI and LWS are protected during the proposed development. This will set out detailed methods of construction to avoid impacts to the nearby habitats, as below:

- Details of how materials / chemicals will be stored and controlled on-site to avoid pollution (for example - all plant will be fitted with drip trays in order to avoid potential pollution incidents and no re-fuelling will take place on the site).
- Details on the proposed construction methodology including factors such as construction access, methods of construction, timing of work and working hours (particularly after dark when bats may be affected).
- Construction lighting, if required, will be targeted and focused inwards away from retained vegetation.
- Dust suppression to protect the nearby high-quality habitats.
- A fenced buffer zone to protect the existing hedgerow habitats on the boundaries during construction, this will prevent damage and disturbance to nesting birds and dormice (if present).

4.3 This section details the general site prescriptions to be adhered to throughout the construction phase, which are not specific to any one ecological feature within the development area.

Breeding birds

4.4 All ivy removal should be conducted outside of the bird nesting season which is considered to run from March to September.

4.5 The roof of the building should be fixed prior to March to ensure opportunities for birds to nest inside the building on site are prevented.

4.6 Where this is not possible a suitably qualified ecologist should check potential nesting habitat immediately prior to clearance. Where nesting birds are encountered works must be postponed until the nestlings have fledged.

Bats

4.7 The production and implementation of a Construction Method Statement (CMS) will be put into place prior to the beginning of the construction phase.

4.8 The CMS being implemented will prevent any disturbance impacts to bats during the construction period.

4.9 The design has been amended to reduce the amount of boundary habitat loss to a minimum and the landscaping includes a new length of species rich native hedgerow.

Lighting

4.10 Lighting to be installed as part of the works will be in line with Guidance Note 08/23 Bats and Artificial Lighting at night. The following will be required/must be considered:

- LED lighting will be used and light levels will be kept as low as possible. Metal halide, fluorescent sources will not be used.
- Lighting will be directed to where it is required and away from the boundaries.
- Only luminaires with no light output above 90 degrees and/or an upward light ratio of 0% and with good optical control will be used, luminaires will always be mounted on the horizontal, i.e. no upward tilt.
- Any external security lighting will be set on motion-sensors and short (1min) timers.
- Internal lighting within the new rooms will be recessed where installed in proximity to windows to reduce glare and light spill.
- Light sources will emit minimal ultra-violet light, peak higher than 550nm and be of a warm white spectrum (ideally <2700 Kelvin).
- Glazing treatments (low transmission glazing treatments) can be considered.
- The use of bollard or low-level downward directional luminaires is strongly discouraged.

Opportunities for Biodiversity Gain

4.11 Recommendations for ecological enhancements to provide net gains for biodiversity across the site have been made in line with the National Planning Policy Framework (2021) and Local Plan Policy:

- Small holes (13 x 13cm) will be left in any fences separating the gardens from adjacent properties to allow hedgehogs to move freely throughout the site.
- The installation of two bat bricks/integrated bat boxes within the walls of the new buildings will enhance the habitat for the local bat population. Bat bricks/boxes should be installed at the eaves on the south or western elevation, away from windows and external light sources. These can be integrated into the cavity wall, brick faced or rendered over with just a small entrance hole visible.
- The provision of nest boxes for bird species such as swift and house sparrow on the walls of the new building will provide permanent nesting for species in decline. Swift boxes have the added benefit of being used often by other non-target species such as house sparrows.

- Both swift and house sparrows are colonial species and therefore the bricks will be fitted in groups with a minimum of three within proximity to each other to form colonies. The provision of groups of swift bricks on site will enhance the habitat for the local bird population. Swift bricks will be fixed no less than two storeys (4.5-5m) above ground level and nest boxes can be sited on any aspect of a building except the southern side (unless shaded by the eaves) to prevent the young becoming heat stressed. Numbers will be agreed once plans are available. Three groups of three swift boxes, and four sparrow terrace boxes, are proposed for the development.

- Installation of bee bricks within the walls of the new buildings (two per unit). Provision of bee bricks can provide excellent alternative habitat for solitary non-stinging bees. These bricks will be erected 1 metre above ground level within the brickwork.

5. REFERENCES

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Appendix I: Site Boundary and Habitat Map

Legend

Habitat map

- Building
- Hardstanding
- Site boundary

Project:
Units 1-4 Darley Yard

Drawing:
Figure 1: Site location and habitat map

Date: 10/12/2023 Version: Final

Author: ED

LIZ ECOLOGY

Appendix II: Proposed Site Plan

Appendix III: Photographs

Photograph 1: Units 1 – 4

Photograph 2: Rear buildings showing ivy cover

Photograph 3: Side of Unit 4

Photograph 4: Side of Unit 1

Photograph 5: Toilet block

Photograph 6: Inside Unit 4

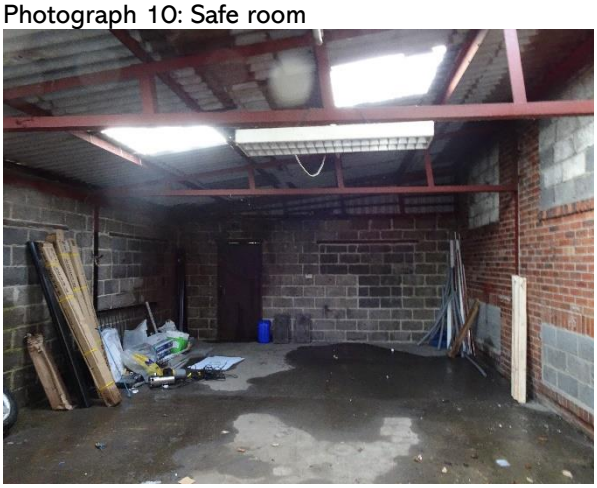
Photograph 7: Inside enclosed room

Photograph 8: Inside enclosed room

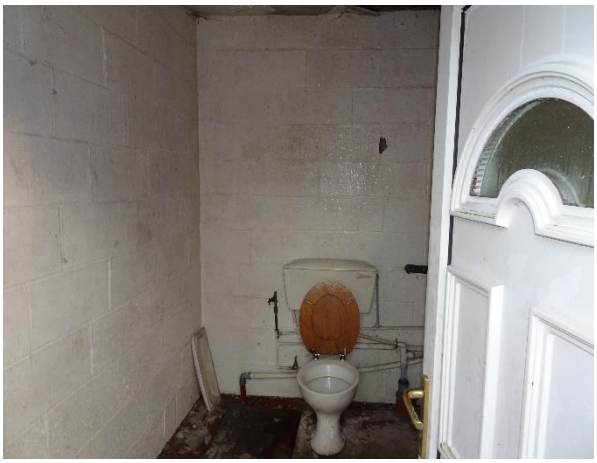
Photograph 9: Roof of Unit 2

Photograph 10: Safe room

Photograph 11: Inside Unit 2

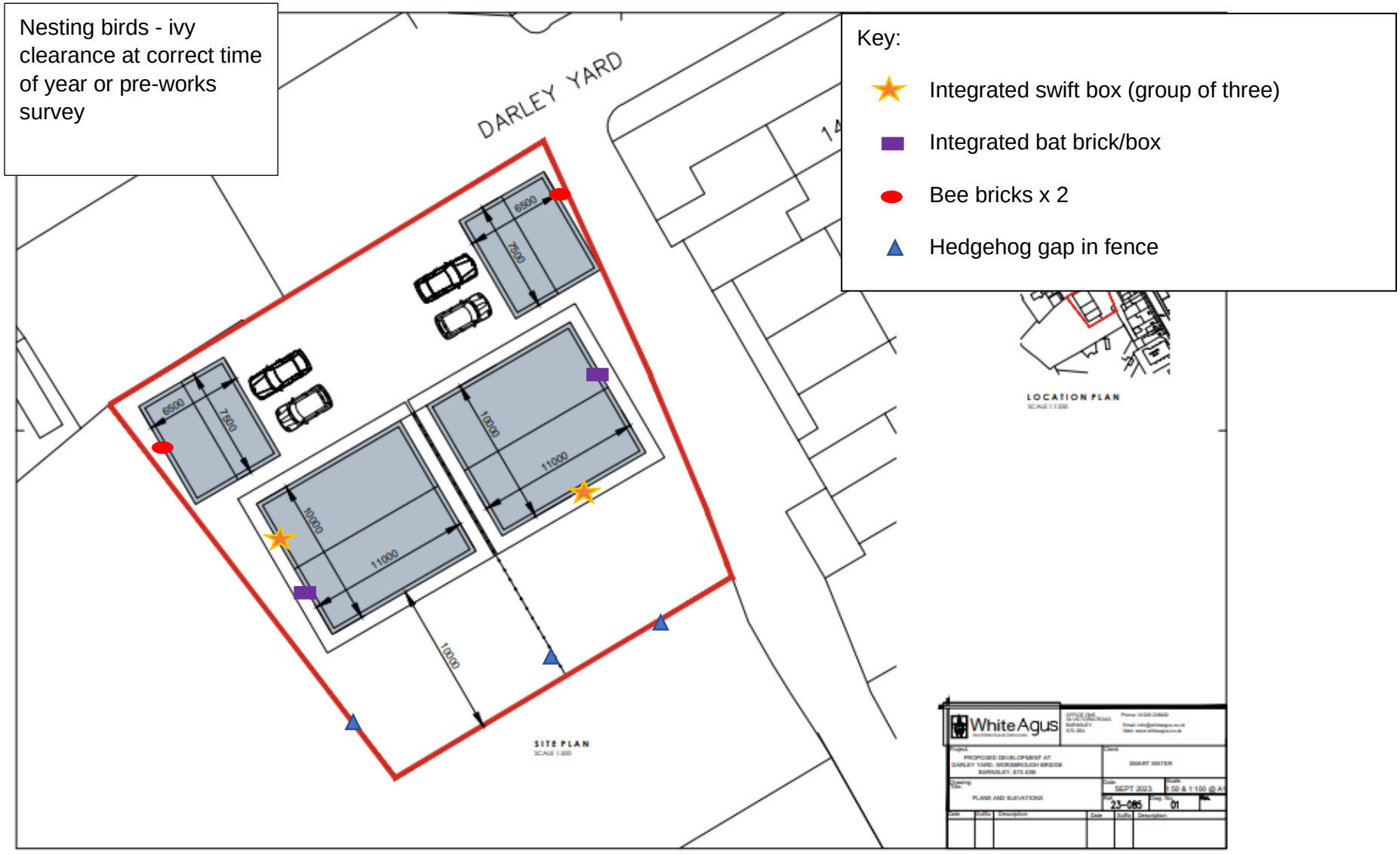


Photograph 12: Inside Unit 1



Photograph 13: Inside toilet block

Appendix IV: Mitigation and Enhancements



Appendix V: Legislation

Important notice: This section contains details of legislation and planning policy applicable in Britain only (i.e. not including the Isle of Man, Northern Ireland, the Republic of Ireland or the Channel Islands) and is provided for ge11neral guidance only. While every effort has been made to ensure accuracy, this section should not be relied upon as a definitive statement of the law.

A NATIONAL LEGISLATION AFFORDED TO SPECIES

The objective of the EC Habitats Directive[1] is to conserve the various species of plant and animal which are considered rare across Europe. The Directive is transposed into UK law by The Conservation of Habitats and Species Regulations (2017) (formerly The Conservation of Habitats and Species Regulations 2010 (as amended)) and The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended).

The Wildlife and Countryside Act 1981 (as amended) is a key piece of national legislation which implements the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and implements the species protection obligations of Council Directive 2009/147/EC (formerly 79/409/EEC) on the Conservation of Wild Birds (EC Birds Directive) in Great Britain.

Since the passing of the Wildlife & Countryside Act 1981, various amendments have been made, details of which can be found on www.opsi.gov.uk. Key amendments have been made through the Countryside and Rights of Way (CRoW) Act (2000).

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

- Deer Act 1991;
- Countryside and Rights of Way (CRoW) Act 2000;
- Natural Environment & Rural Communities (NERC) Act 2006;
- Protection of Badgers Act 1992:
- Wild Mammals (Protection) Act 1996.

1 Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora

Species and species groups that are protected or otherwise regulated under the aforementioned domestic and European legislation, and that are most likely to be affected by development activities, include herpetofauna (amphibians and reptiles), badger, bats, birds, dormouse, invasive plant species, otter, plants, red squirrel, water vole and white clawed crayfish.

Explanatory notes relating to species protected under The Conservation of Habitats and Species Regulations (2017) (which includes smooth snake, sand lizard, great crested newt and natterjack toad), all bat species, otter, dormouse and some plant species) are given below. These should be read in conjunction with the relevant species sections that follow.

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 Conservation of Habitats and Species Regulations (2017) does 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': i) 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; ii) that there is no satisfactory alternative and iii) that the action authorised will not be detrimental to the maintenance of the species concerned at a favourable conservation status in their natural range.

Bats

All species of bat are fully protected under The Conservation of Habitats and Species Regulations (2017) through their inclusion on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species (e.g. all bats)
- Deliberate disturbance of bat species as:
    - to impair their ability:
        - to survive, breed, or reproduce, or to rear or nurture young;
        - to hibernate or migrate3
    - b) to affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place
- Keeping, transporting, selling, exchanging or offering for sale whether live or dead or of any part thereof.

Bats are also currently protected under the Wildlife and Countryside Act 1981 (as amended) 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
- Selling, offering or exposing for sale, possession or transporting for purpose of sale.

How is the legislation pertaining to bats liable to affect 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 a bat roost 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, rear young and hibernate). 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.

Though there is no case law to date, the legislation may also be interpreted such that, in certain circumstances, important foraging areas and/or commuting routes can be regarded as being afforded de facto protection, for example, where it can be proven that the continued usage of such areas is crucial to maintaining the integrity and long-term viability of a bat roost[2].

Birds

All wild birds, their nests and eggs are protected under Sections 1-8 of the Wildlife and Countryside Act 1981 (as amended). Among other things, this makes it an offence to:

- Intentionally kill, injure or take any wild bird;
- Intentionally take, damage or destroy 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.

2 Garland & Markham (2008) Is important bat foraging and commuting habitat legally protected? Mammal News, No. 150. The Mammal Society, Southampton.

Certain species of bird, for example the barn owl, black redstart, hobby, bittern and kingfisher receive additional special protection under Schedule 1 of the Act and Annex 1 of the European Community Directive on the Conservation of Wild Birds (2009/147/EC). 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.

How is the legislation pertaining to birds liable to affect development works?

To avoid contravention of the Wildlife and Countryside Act 1981 (as amended), 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 breeding season which typically runs from March to August[3]. Where this is not feasible, it will be necessary to have any areas of suitable habitat thoroughly checked for nests prior to vegetation clearance.

Those species of bird listed on Schedule 1 are additionally protected against disturbance during the breeding 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 and great crested newt Triturus cristatus receive full protection under The Conservation of Habitats and Species Regulations (2017) through their inclusion on Schedule 2. The pool frog Pelophylax lessonae is also afforded full protection under the same legislation. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of species listed on Schedule 2
- Deliberate disturbance of any Schedule 2 species as:
    - to impair their ability:
        - (i) to survive, breed, or reproduce, or to rear or nurture young;

3 It should be noted that this is the main breeding period. Breeding activity may occur outwith this period (depending on the particular species and geographical location of the site) and thus due care and attention should be given when undertaking potentially disturbing works at any time of year.

        - (ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate
    - to affect significantly the local distribution or abundance of the species
- Deliberate taking or destroying of the eggs of a Schedule 2 species
- Damage or destruction of a breeding site or resting place
- Keeping, transporting, selling, exchanging or offering for sale whether live or dead or of any part thereof.

With the exception of the pool frog, these species are also currently listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). 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
- Selling, offering or exposing for sale, possession or transporting for purpose of sale.

Other native species of herpetofauna are protected solely under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). Species such as the adder *Vipera berus*, grass snake *Natrix natrix*, common lizard *Zootoca vivipara* and slow-worm *Anguis fragilis* are listed in respect to Section 9(1) & (5). For these species, it is prohibited to:

- Intentionally (or recklessly in Scotland) kill or injure these species
- Sell, offer or expose for sale, possess or transport for purpose of sale these species, or any part thereof.

Common frog Rana temporaria, common toad Bufo bufo, smooth newt Lissotriton vulgaris and palmate newt L. helveticus are listed in respect to Section 9(5) only which affords them protection against sale, offering or exposing for sale, possession or transport for the purpose of sale.

How is the legislation pertaining to herpetofauna liable to affect 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 of those amphibian and reptile species protected under The Conservation Habitats and Species Regulations 2010 (as amended). 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 Wildlife and Countryside Act 1981 (as amended).

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.

B NATIONAL PLANNING POLICY

The National Planning Policy Framework (NPPF)

The National Planning Policy Framework sets out the Government's planning policies for England and how these should be applied in local-level policy and decision making. The National Planning Framework was re-issued in July 2018 and updated in February 2019, July 2021 and September 2023. Key points relevant to the Natural Environment are given below.

> *8. Re: Sustainable development. The NPPF recognizes "that the planning system has three overarching objectives, which are interdependent and need to be pursued in mutually supportive ways (so that opportunities can be taken to secure net gains across each of the different objectives).*

These are the economic objective, the social objective, and the environmental objective; the full text of paragraph c) relating to this third objective reads as follows:

> *"to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy."*

174. Planning policies and decisions should contribute to and enhance the natural and local environment by:

a) Protecting and enhancing valued landscapes, sites of biodiversity … (in a manner commensurate withy the statutory status or identified quality in the development plan)

b) Recognising the intrinsic character and beauty of the countryside, and the wider benefits form natural capital and ecosystem services.

d) minimising impacts on and providing net gains for biodiversity, including establishing coherent ecological networks that are more resilient to current and future pressures.

175. Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value.

176. Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to these issues. The conservation and enhancement of wildlife and cultural heritage are also important considerations in these areas, and should be given great weight in National Parks and the Broads. The scale and extent of development within these designated areas should be limited, while development within their setting should be sensitively located and designed to avoid or minimise adverse impacts on the designated areas.

177. permission should be refused for major development other than in exceptional circumstances, and where it can be demonstrated that the development is in the public interest. Consideration of such applications should include an assessment of:

a) the need for the development, including in terms of any national considerations, and the impact of permitting it, or refusing it, upon the local economy;

b) the cost of, and scope for, developing outside the designated area, or meeting the need for it in some other way; and

c) any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated.

180. When determining planning applications, local planning authorities should apply the following principles:

> *a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
>
> *b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;*
>
> *c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and*

d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

181. The following should be given the same protection as habitats sites:

a) potential Special Protection Areas and possible Special Areas of Conservation;

b) listed or proposed Ramsar sites; and

c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

182. The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site."