THE STRATHMORE CENTRE SITE STRATHMORE ROAD TEDDINGTON

PRELIMINARY ECOLOGICAL APPRAISAL

Paragon Asra
PA Housing

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ACD ENVIRONMENTAL

Ecology
Archaeology
Arboriculture
Landscape Architecture

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1 EXECUTIVE SUMMARY

1.1. In April, 2019, ACD Environmental Ltd carried out a Preliminary Ecological Appraisal (PEA) of a parcel of land at The Strathmore Centre Site, Strathmore Road, Teddington, TW11 8UH, hereafter referred to as the 'Application Site'.

1.2. The PEA comprised a desk study and an extended Phase 1 Habitat Survey combined with a visual assessment of buildings and trees for roosting bats and a visual survey for badger.

1.3. The Application Site is approximately 0.6 hectares of brownfield land, which is a dominated by buildings and hardstanding. Other habitats present include species poor intact hedgerow, species poor hedgerow with trees, dense scrub, improved grassland, tall ruderal vegetation, ephemeral short/perennial, scattered trees amenity grassland and bare ground. The habitats on-site are of inherently low ecological value, with the most notable habitat being the scattered trees, as tree standards are referred to within Richmond Upon Thames Borough Local Plan.

1.4. The Application Site will be subject to a planning application for demolition of the existing buildings, with a new childcare centre and residential properties to be constructed with the associated private and communal soft landscaping with The Richmond Borough Council.

1.5. There are no designated sites within the Application Site and none nearby that would be impacted by the proposed development owing to spatial separation, small scale of the proposals and nature of the local non-statutory designations.

1.6. An endoscope survey is to be undertaken of the small brick-built building (building 2) which has been assessed to be of low suitability for roosting bats due to the presence of potential roosting features, such as a hole in the soffit and suitable entry/egress features into its interior. The results of the endoscope survey will be incorporated within this PEA report and will determine whether further bat surveys, in the form of dusk emergence/dawn re-entry surveys are required prior to planning submission. Whilst undertaking the endoscope survey an internal inspection will also be undertaken of the building to search for any evidence of bats and suitable roosting features.

1.7. The endoscope survey and internal inspection of building 2 recorded no evidence of bat activity. No further surveys are required and this PEA is therefore sufficient to support the planning application.

1.8. Additional protected species potential on-site includes foraging and commuting bats, nesting birds and reptiles. In accordance to NPPF, recommendations have been made within this report to ensure the protection of these legally protected species and their long-term retention on-site. Mitigation has also been recommended for other notable species (hedgehog, fox and stag beetle), which are not afforded the same level of protection.

1.9. Protected species such as badger, great crested newt and hazel dormouse have been scoped out of the assessment and no further mitigation or compensation measures are required.

1.10. The development proposals offer significant opportunities to provide compensatory roosting bat and nesting bird habitat and to enhance the floral diversity of the Application Site. This includes, the installation of bat and bird boxes, new pollinator friendly shrub and tree planting and creation of green walls.

2 INTRODUCTION, CONTEXT AND PURPOSE

Introduction

2.1. In April, 2019, ACD Environmental Ltd was commissioned by Living Architects on behalf of Paragon Asra Housing to carry out a PEA of a parcel of land at The Strathmore Centre Site, Strathmore Road, Teddington, TW11 8UH (OS Grid Reference TQ 15131 71782).

2.2. The Application Site is located immediately adjacent to existing residential development on all sides. The site is bordered by residential streets to the north and east.

2.3. The Application Site is approximately 0.6 hectares of brownfield land, which is primarily hardstanding and buildings with species poor intact hedgerow, species poor hedgerow with trees, dense scrub, improved grassland, tall ruderal vegetation, ephemeral short/perennial, amenity grassland and bare ground (**Image 1**).

Image 1: Application Site location and approximate boundary shown in red[1]

[1] Google maps (2019). Accessed on 30.05.2019.

Context

2.4. Plans are being drawn up to re-develop the Application Site for demolition of the existing buildings, with a new childcare centre being proposed in a similar location to that of the existing 'Scamps' building. New residential properties are proposed in a similar location to the existing redundant buildings which were originally part of The Strathmore Centre. Associated communal landscaping and parking is proposed within the development and the majority of the trees are anticipated for retention. This will form the basis of a planning application with Richmond Borough Council in the near future.

Image 2: The layout of the proposed development[2]

[2] Living-architects (2018). Outline Design – Ground Floor Plan. *The Strathmore Centre, Strathmore Road, Teddington, TW11 8UH, Drawing No.: 1003/OD200, dated August 2018*

Purpose

2.5. The purpose of this assessment is to:

- Ascertain the general ecological value of the Application Site by:
    - Identifying and assessing the main habitats and plant communities; and
    - Assessing the potential for protected species to use the Application Site;
- Inform refinements to the masterplan/proposals on this basis; and
- Assess any ecological impacts of the proposed scheme and recommend appropriate mitigation, compensation and enhancements.

3 METHODOLOGY

Names and Qualifications of Surveyors

3.1. The Phase 1 survey was carried out by Matt Ward and Rosie Tobin-Moss of ACD Environmental Ltd. Matt is a Graduate Ecologist and has been involved in a range of surveys including extended Phase 1 Habitat Surveys and Phase 2 surveys for protected species. Rosie is a Graduate Ecologist and has been involved in a wide range of surveys including extended Phase 1 Habitat Surveys and Phase 2 surveys for protected species and reports including PEAs, Ecological Impact Assessments (EcIAs) and management plans.

3.2. This report was checked by Sophie Lancaster of ACD Environmental Ltd. Sophie is a Senior Ecologist with six years' experience working for commercial consultancies. Sophie has been involved in a wide range of surveys including Extended Phase 1 Habitat Surveys and Phase 2 surveys for protected species and reports including PEAs, Ecological Impact Assessments (EcIAs), European Protected Species (EPS) licence applications and management plans. Sophie holds Natural England Class Licences for great crested newt *Triturus cristatus* and bats. Sophie is an Associate Member of the Chartered Institute of Ecology and Environmental Management (CIEEM).

3.3. The endoscope and internal inspection survey of building number 2 was carried out by Brian Hicks of ACD Environmental. Brian is an Ecologist and has been involved in a wide range of surveys including Extended Phase 1 Habitat Surveys and Phase 2 surveys for protected species and reports including PEAs and Ecological Impact Assessments (EcIAs). Brian is a Full Member of the Chartered Institute of Ecology and Environmental Management (CIEEM) and holds Natural England Class Licences for bats (class 2 licence number 2015-14880-CLS-CLS), hazel dormouse *Muscardinus avellanarius* and great crested newt *Triturus cristatus*.

Background Data Search

3.4. The data search involves researching existing ecological knowledge of a site, such as biological records, and any relevant ecological information from the surrounding area.

3.5. The data search has been carried out for a 5km radius around the Application Site for statutory designated nature conservation sites and a 2km radius around the

Application Site for non-statutory protected sites and protected species records.

3.6. The following data sources/organisations and, where relevant, the information provided has been incorporated with acknowledgement within this report:

- The Multi-Agency Geographic Information for the Countryside (MAGIC) website[3] (5km statutory designated nature conservation sites and 2km for granted EPS licence applications); and
- Greenspace Information for Greater London (GIGL, 2km non-statutory protected sites and protected species).

Habitat Survey

3.7. The Application Site was surveyed on 23rd April 2019, using a technique based upon Phase I survey methodology[4]. This 'extended' Phase I technique provides an inventory of the basic habitat types present and allows identification of areas of greater potential that require further survey. Any such areas identified can then be examined in more detail. The vegetation present was clearly visible and allowed an accurate assessment to be made.

3.8. Using the above method, the Application Site was classified into areas of similar botanical community types with a representative sample of those species present at the time of the survey being described.

Fauna

3.9. Incidental records of fauna were made during the survey and the habitats identified were evaluated for their potential to support legally protected species and other species of conservation concern, including species listed on the UK Post-2010 Biodiversity Framework (which supersedes UK Biodiversity Action Plan), and mammals assessed as being of conservation concern[5].

3.10. As part of the extended Phase 1 Habitat Survey, the following species surveys were carried out:

- Badger *Meles meles* - visual survey;
- Bats - Preliminary Roost Assessment (PRA), Ground Level Assessment

[3] Available at: http://www.natureonthemap.naturalengland.org.uk/MagicMap.aspx
[4] JNCC, (2010), *Handbook for Phase 1 habitat survey - a technique for environmental audit.* JNCC, Peterborough.
[5] The Mammal Society (2018). *Britain's Mammals 2018: The Mammals Society's Guide to their Population and Conservation Status*. The Mammal Society, London.

(GLA);

- Birds - evidence of nesting birds recorded during PRA and any incidental bird observations/birds heard was noted; and

Badger

3.11. Where possible, the Application Site was systematically surveyed for evidence of badgers, in the form of:

- Setts - comprising either single isolated holes or a series of holes, which may be link to each other underground;
- Faeces - badgers deposit faeces in characteristic excavated pits, concentrations of which (latrine sites) are typically found at home range boundaries, field boundaries and around setts;
- Paths - worn paths used by badger, often linked to setts or foraging grounds;
- Scratching posts - typically at the base of tree trunks;
- Snuffle holes - scrapes where badgers have searched for food;
- Day nests - bundles of grass and other vegetation where badgers may sleep above ground); and
- Hairs - usually found outside setts or caught under fencing.

Bats

Preliminary Roost Assessment

3.12. The buildings were subject to a Preliminary Roost Assessment (PRA) with reference to guidance published by the Bat Conservation Trust [6]. This is an external inspection survey, the purpose of which is to search for bats/evidence of bats and assess the likelihood of bats being present and the need for further survey and/or mitigation.

3.13. The building inspection included searching for the following evidence of roosting bats:

- Roosting bats within crevices or free-hanging;
- Bat droppings beneath roosting features;
- Feeding remains e.g. moth/butterfly *Lepidoptera* spp. wings and beetle

[6] Collins J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn)*. The Bat Conservation Trust, London.

Coleoptera spp. wing casings;

- Scratch marks and characteristic staining from urine and/or fur oil beneath roosting features;
- 'Clean' gaps associated with bat roosts;
- Bat-fly *Nycteribiid* spp. pupal cases;
- Droppings, corpses, feeding remains and/or bat-fly pupal cases; and

3.14. The following equipment was used for the bat survey:

- Binoculars;
- Collection pots and labels for corpses and droppings;
- Camera to record evidence and potential roosting sites; and
- Personal protective equipment (e.g. boots, gloves, helmet, mobile telephone).

Ground Level Assessment of Trees

3.15. The trees were searched for bats/evidence of bats and assessed for their potential to support roosting bats. The evidence searched for is as detailed above with regard to buildings. The features that bats use were searched for on the trees with reference to the Bat Tree Habitat Key[7]. These are as follows:

- Longitudinal splits;
- Crevices;
- Rot-hollows;
- Transverse cracks;
- Loose bark; and
- Ivy *Hedera helix*.

3.16. The endoscope survey was carried out on the 25th October 2019. The surveyor used a torch, ladder, camera and Ridgid CA-350 endoscope.

Birds

[7] Andrews H. (2018*). Bat Roosts in Trees - A Guide to Identification and Assessment for Tree-care and Ecology professionals: Bat Tree Habitat Key*. Pelagic Publishing, Exeter.

3.17. Evidence of nesting birds recorded during the PRA and any incidental bird observations/birds heard were noted.

Habitats and Species Evaluation and Impact Assessment

3.18. The habitats and species evaluations are made with reference to CIEEM's guidelines for Ecological Report Writing[8] and Guidelines for Preliminary Ecological Appraisal[9]. The PEA provides the results of the extended Phase 1 Habitat Survey. The report is used to identify further ecological surveys necessary to inform an EcIA, to identify ecological constraints to a project, make recommendations for design changes, and to highlight opportunities for ecological enhancement. It can be used as a scoping report, but unless it can be determined that the project would have no significant ecological effects, no mitigation is required and no further surveys are necessary, should be superseded by an EcIA report.

3.19. These guidelines aim to give a degree of consistency in approach to evaluating the importance of the ecological features within a site and any effects or impacts a scheme will have upon them.

3.20. Firstly, the species or habitats must be valued and a commonly used framework involves assigning a level of geographical importance to ecological receptors. This framework incorporates a wide range of legislation and governmental guidance in assessing each feature's value.

3.21. Next, the impacts of the proposed scheme have to be predicted, taking into account different stages and activities within the development process. These impacts then have to be assessed for their significance, based upon the value of the species or habitat in question. The assessment of impact significance is done before and after any proposed mitigation to give an overall indication of significance.

3.22. The value of specific ecological receptors (sites, habitats or species) is assigned according to their level of importance using the following terms:

- International value;

[8] CIEEM (2015). *Guidelines on Ecological Report Writing*. Chartered Institute for Ecology and Environmental Management, Winchester.
[9] CIEEM (2017). *Guidelines for Preliminary Ecological Appraisal. 2nd Edition*. Chartered Institute for Ecology and Environmental Management, Winchester.

- UK value;
- National value (i.e. England/Northern Ireland/Scotland/Wales);
- Regional value;
- County value;
- District value (or Unitary Authority, City, or Borough);
- Local or Parish value; and
- Of value within the Site.

4 RESULTS AND EVALUATION

4.1. Set out below are the results of the background data searches and field surveys.

Context

4.2. The Application Site is located within a heavily built-up location, south of Twickenham. Open space is present within the local landscape in the form of a cemetery and golf courses, however, the Application Site itself is bounded by existing residential development south, east and west and a school to the north beyond Strathmore Road.

Data Search Results

Designated Sites

4.3. Statutory designated sites are the most significant ecological receptors and include Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and RAMSAR sites, which are all of **International Value**, and Special Scientific Interest (SSSIs) and National Nature Reserves (NNRs), which are of **National Value**.

4.4. Local Nature Reserves (LNRs) are notified under Section 21 of the National Parks and Access to the Countryside Act 1949 (as amended) by local authorities and are of **Local Value**. They are intended for public appreciation and enjoyment of wildlife. The LNR designation does not afford special protection; however, LNRs are protected under legislation and planning policy.

4.5. The statutory designated sites within 5km of the Application Site are shown in **Table 1**.

Table 1: Statutory designated sites within 5km of the Application Site.

Name of statutory designated sites	Approximate distance from Application Site	Reason for designation
Bushy Park and Home Park (SSSI)	750m South	Bushy Park and Home Park SSSI is a nationally important site due to its veteran tree assemblage, acid grassland communities, and saproxylic (dead and decaying wood associated) invertebrate assemblage.

Ham Lands (LNR)	1,280m East	Ham Lands LNR is a complex mosaic of habitats and is of high value for recreation and education projects by students and nature groups.
Crane Park Island (LNR)	2,415m North-West	Crane Park Island LNR provides homes for many rare species including kingfisher and water vole in its complex mosaic of habitats.
Ham Common (LNR)	2,800m East	Ham Common is a designated LNR for its birch and oak woodland and acid grassland habitats. Notable plant, invertebrate and bird species are present at this site.
Oak Avenue Hampton (LNR)	2,880m West	Oak Avenue Hampton was previously a site of old greenhousesand now consists of native hedgerows, wild flower meadows and communal walkways.
Pevensey Road (LNR)	3,060m North-West	Pevensey Road LNR features meadow scrubland, woodland and wetlands.
South West London Waterbodies (SPA)	3,140m West	The South West London Waterbodies are water reservoirs, former gravel pits, and wetland sites protected under SPA because of their importance as roosting and feeding habitat for rare and vulnerable over-wintering waterfowl.
South West London Waterbodies (Ramsar)	3,140m West	Designation same as detailed above for South West London Waterbodies SPA.

Kempton Park Reservoirs (SSSI)	3,140m West	The Kempton Park Reservoirs are designated SSSI because of the wetland habitat and the importance of this habitat for rare and vulnerable wetland birds.
Kempton Nature Reserves (LNR)	3,140m West	The Kempton Nature Reserves LNR are designated because of the sensitive wetland habitat and the importance of this habitat for rare and vulnerable wetland birds.
Hounslow Heath (LNR)	3,200m North-West	Hounslow Heath is a designated LNR because of its mix of heathland and acid grassland, meadows, scrub, woodland and marshland, that supports heathland flora, reptiles, scrubland birds and invertebrates.
Richmond Park (SPA)	3,540m East	Richmond Park is England's largest National Nature Reserve, and the ancient trees and grasslands support a range of rare plant, fungi, invertebrate and bird species.
Richmond Park NNR	3,540m East	Designated for reasons detailed in Richmond Park SPA, above.
Richmond Park SSSI	3,540m East	Designated for reasons detailed in Richmond Park SPA, above.
Isleworth Ait (LNR)	4,024m North-East	Isleworth Ait LNR is a small relatively undisturbed island sanctuary consisting of tall woodland. This regularly flooded area provides habitat for many rare bird, invertebrate and mollusc species.
Knight & Bessborough	4,230m South-West	Knight & Bessborough Reservoirs are designated because of the sensitive wetland habitat and the importance of this

Reservoirs (SSSI)		habitat for rare and vulnerable wetland birds
Molesly Heath (LNR)	4,610m South-West	Molesly Heath LNR was previously a gravel pit and a reclaimed landfill site that has since been colonised by rough grassland and scrub and now hosts a diverse community of birdlife.
Syon Park (SSSI)	4,750 North-East	Syon Park SSSI a mosaic of fen, marsh and swamp, and hosts rare species of fungi and lichen, and the ancient trees and deadwood habitat provides sanctuary for many birds, bats, and invertebrates.

4.6. In the London Boroughs of Hounslow and Richmond, local sites are termed Sites of Importance for Nature Conservation (SINC), and are of **County Value**.

4.7. The local sites within 2km of the Application Site are shown in **Table 2**.

Table 2 Non-statutory designated sites within 2km of the Application Site.

Name of SINC	Approximate distance from Application Site	Nature Conservation Interest
Teddington Cemetery	130m East	This cemetery contains many mature trees that provide good habitat for common bird species, and wild flower species bloom between the graves in the grassland areas.
Strawberry Hill Golf Course	200m North	This is an important area for birds and butterflies that favour woodland edge habitat.
River Thames and tidal tributaries	1,150m East	The River Thames and tidal tributaries comprise of valuable habitats not found elsewhere in London, and

		support many species from freshwater, estuarine and marine communities. The site is of particular interest for waterfowl and wading birds.
St James' Churchyard, Hampton Hill	1,240m South West	This site contains many mature trees and a developing woodland ground flora. The grassland is managed as a wildflower meadow with many wild flower species.
Fulwell and Twickenham Golf Courses	1,360m West	The golf courses consist of acid grassland and small areas of woodland and scrub that support many plant and animal species.
Ham Lands	1,400m East	Ham Lands is an area of scrub and grassland beside the River Thames well known for its diverse plant and animal communities.
Churchyard of St Mary with St Alban, Teddington	1,400m South East	The churchyard is a mix of managed and natural landscapes holding a range of flowering plants and mature trees.
Longford River in Richmond	1,670m West	This site supports diverse vegetation on the river bank, and the river itself hold good populations of native fish.
Twickenham Junction Rough	1,680m North	This area is an island of wildlife habitat surrounded by railway lines, containing a mix of grassland, scrub and woodland.
Twickenham Cemetery	1,900m North West	The Twickenham Cemetery is an important wildlife resource due to its

		size and diversity of habitats, which many bird and invertebrate species use.
Duke of Northumberland's River south of Kneller Road	1,930m North	This section of the river is straight, shallow and gravelly, and provides habitat for many fish species and a variety of aquatic flora.

Protected Species Records

4.8. The relevant protected species records are incorporated into the Fauna section, below, with due acknowledgement.

Survey Results

Habitats

4.9. The Application Site supports the following habitats:

- Amenity Grassland (J1.2)
- Buildings (J3.6) and Hardstanding;
- Bare ground (J4);
- Dense scrub (A2.1);
- Ephemeral/short perennial (J1.3)
- Hedgerow:
  - Intact species-poor (J2.1)
  - Native species poor hedgerow with trees (J2.3);
- Improved grassland (B4);
- Scattered trees (A3.3)
- Tall ruderal vegetation (C3.1).

4.10. For ease of reference, habitat types have been described alphabetically, below. All the features described are shown on the Ecological Features Plan at **Appendix 1**.

Amenity Grassland (J1.2)

4.11. The amenity grassland dominates the southern end of the Application site and appears to be used intensively for recreational purposes, and is intensively managed by mowing.

4.12. The amenity grassland is dominated by perennial ryegrass *Lolium perenne*, and is therefore considered to be of **negligible ecological value**.

Photograph 1: View of amenity grassland at the southern end of the Application Site.

Buildings (J3.6) and Hardstanding

4.13. Buildings and hardstanding dominate the Application Site. There are 9 buildings on the Application Site, which have been numbered for ease of reference (shown on the Ecological Features Plan in **Appendix 1)**. The largest building (Building 1) is a multi-storey teaching facility which is no longer in use for teaching purposes, but is being used as storage and office space for a construction company. Building 1 is in the northern end of the Application site and is flat roofed, and is built of brick, concrete, PVC window frames and metal railings.

Photograph 2: View of hardstanding and northern elevation of Building 1 at the northern end of the Application Site.

Photograph 3: View of hardstanding and western elevation of Building 1 at the northern end of the Application Site.

4.14. Building 2 is a small brick building with a wooden barn-style door and an open window on the western flank of the Application Site. Building 2 has a tin roof that rises to a small pitch, and the window framings are PVC. The south-facing window of the building

is broken. The wooden soffit box surrounding the building is degraded and there is a wooden barn-style door at the north face of this building.

Photograph 4: View of Building 2 with the open window at the western border of the Application Site.

4.15. There are three smaller buildings (Building 3, Building 4, Building 5) in the middle of the site which appeared to be old classrooms. These buildings are in a state of disrepair and were unsafe to enter. Windows were broken and there were cracks and holes in the walls. Buildings 3 and 4 rise to a small peak. The roof of the southern-most building (Building 5) had collapsed and the interior of the building was exposed. The triplet of classroom buildings are constructed of a pebbled wall material with ply interiors and PVC window framing.

Photograph 5: View of the collapsed roof of Building 5 in the middle of the Application Site.

4.16. Building 6 is the large nursery building at the south of the Application site. Building 6 is tin-roofed with ply exteriors and has what appears to be a wooden panelling exterior. The building has metal gutters and drain pipes, and the roof rises to a few small peaks in areas. This building was still in use at the time of surveying as a nursery for small children. Building 6 is flanked by three small wooden ship-lap sheds with pitched felt roofs (Building 7, Building 8, Building 9).

Photograph 6: View of Building 6, the large nursery building in the southern end of the Application Site accompanied by the three small wooden sheds (Buildings 7, 8 and 9).

4.17. The hard-standing on-site is mostly roading asphalt, driveways, and parking lots, with sections of pathways. There is also a medium sized section of astro-turf in the southern end of the Application Site.

Photograph 7: View of astroturf at the south-west end of the Application Site.

Photograph 8: View of hardstanding at the eastern edge of the Application Site looking north.

4.18. All of the buildings and hardstanding and are considered to be of low intrinsic ecological value, and overall these habitats are considered to be of **negligible ecological value.** The buildings are considered separately in terms of their potential for bats and birds.

Bare Ground (J4)

4.19. Bare ground is present in the northern section of the Application Site underneath the larger ornamental trees, and also on the western edge of the site near the three small buildings in the centre of the Application site.

4.20. The bare ground is mostly absent of flora and therefore, is considered to be of **negligible ecological value**. This habitat is considered separately in terms of its potential for foraging badger.

Photograph 9: View of bare ground at the western edge of the Application Site.

Dense Scrub (A2.1)

4.21. Dense scrub is located in two areas within the Application Site, the largest patch is along the western boundary. A small scrub patch is also present in the north-east corner of the Application Site near Building 1. The scrub community is not well developed, and currently consists of bramble *Rubus fruticosus* agg., common nettle *Urtica dioica*, perennial ryegrass *Lolium perenne*. Trees are also present within the scrub, which includes beech *Fagus sylvatica,* and hazel *Coryllus avellana*. There is an abundance of building debris and refuse scattered throughout the scrub (See **Appendix 1, Target Note 3)**.

4.22. The dense scrub is assessed as being of **site value**. This habitat is considered separately for its potential for foraging and commuting bats, nesting birds, reptiles, fox *Vulpes Vulpes* and hedgehog *Erinaceus europaeus*.

Photograph 10: View of scrub in the mid-section of the Application Site.

Photograph 11: View of scrub on the western border of the Application Site.

Ephemeral/Short Perennial (J1.3)

4.23. There is an area of ephemeral/short perennial habitat at the northern border of the Application Site under a row of conifer trees and the ornamental *Acer* and Maidenhair tree *Gingko biloba*, and also several small sections of this habitat type situated between Building 3 and 4, and between Building 4 and 5, in the mid-section of the Application Site. The ephemeral/short perennial habitat is sparsely populated by desiccated grass species, Spanish bluebell *Hyacinthoides hispanica*, meadow buttercup *Ranunculus acris*, common nettle *Urtica dioica*, red dead nettle *Lamium purpureum*, white dead nettle *L. album*, cleavers *Galium aparine*, dandelion *Taraxacum officinale* agg., greater plantain *Plantago major*, ribwort plantain *P. lanceolata* and yarrow *Achillea millefolium*. There is also a small population of tree saplings which are growing in this area, including hazel, yew *Taxus baccata*, hawthorn *Crataegus monogyna*, holly *Ilex aquifolium* and sycamore *A. platanoides*.

4.24. The ephemeral/short perennial habitat on the Application Site is considered to be of **negligible ecological value** due to the lack of structure, presence of common and widespread species only and small area of coverage.

Photograph 12: View of ephemeral/short perennial habitat in the northern area of the Application Site underneath the ornamental sycamore trees.

Photograph 13: View of ephemeral/short perennial habitat in one of the areas between Building 3 and Building 4 in the mid-section of the Application Site.

Hedgerow Intact Species-Poor (J2.1)

4.25. At the north boundary of the Application Site is a hedgerow of leyland cypress *Cypress leylandii.* This habitat is also present in the centre of the Application Site, surrounding the car park of Scats Nursery. This habitat is comprised of a common and widespread tree species and is therefore assessed as being of intrinsically low ecological value, and is of **site value.**

Photograph 14: View of species-poor intact leylandii hedgerow surrounding Scats Nursery car park.

Native Species-Poor Hedgerow with Trees (J2.3)

4.26. A native species-poor hedgerow with trees is present along the southern portion of the west Application Site boundary. Species present include: sycamore *Acer pseudoplatanus*, yew *Taxus baccata*, common ivy *Helix hedera,* holly *Ilex aquifolium*, cherry *Prunus spp.,* and ash *Fraxinus excelsior.*

Photograph 15: View of hedgerow and trees along the west boundary.

4.27. Due to the common and widespread species present, this habitat is assessed as being of intrinsically low ecological value, and overall, considered to be of **site value**.

Improved Grassland (B4)

4.28. There is an area of improved grassland at the north-west corner of the Application Site. Additionally, a small area of this habitat type is present adjacent to the scrub habitat in the centre of the Application Site. This habitat is perennial rye grass *Lolium perenne* dominated, and also included field daisy *Leucanthemum vulgare*, cleavers *Galium aparine*,Spanish bluebell *Hyacinthoides hispanica*, cut-leaved cranes bill *Geranium dissectum*, smooth sow thistle *Sonchus oleraceus*, and dandelion.

Photograph 16: View of the improved grassland at the north-west corner of the Application Site.

4.29. The species present within the improved grassland habitat are common and widespread, therefore, this habitat is assessed as being of **negligible ecological value,** and is not considered further in this report.

Scattered Trees (A3.1)

4.30. There are 30 scattered trees within the Application Site, which include: three large sycamore; three maidenhair trees; and, three silver birches *Betula pendula*. Other

trees of note are a mature common beech; a red oak tree *Quercus rubra* on the western border of the Application Site; and, a large common oak *Q. robur* at the southern boundary.

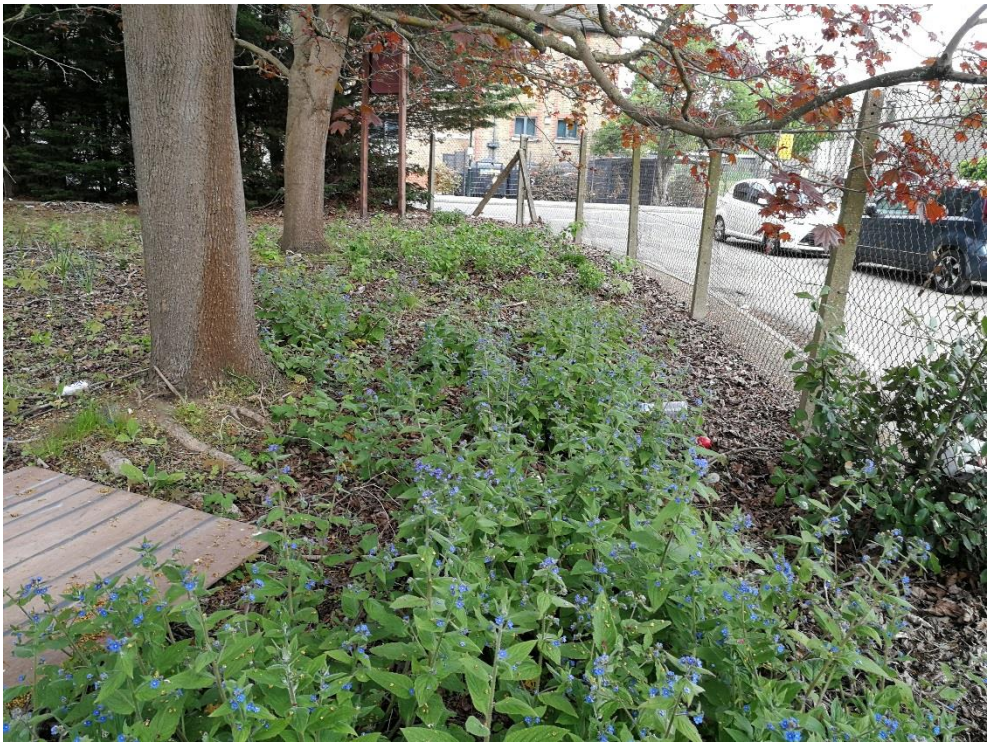
4.31. Scattered trees are referred to within Local Planning Policy 16 within the London Borough of Richmond Upon Thames Local Plan as habitat of conservation significance. The assemblage of scattered trees is largely comprised of mature native species, however, none of the trees are feature trees, and although many trees are mature none of them are considered veteran or ancient trees. Subsequently, the scattered trees on site are assessed to be of **site value.** The scattered trees are considered separately in terms of bats and nesting birds.

Photograph 17: View of scattered trees within the Application Site

Tall Ruderal Vegetation (C3.1)

4.32. There is an area of tall ruderal vegetation in the north-east corner of the Application Site. This habitat type is characterised by a dense cover of herbaceous. The herbs present included green alkanet *Pentaglottis sempervirens*, white dead nettle, greater celandine *Chelidonium majus*, herb Robert *Geranium robertianum*, dove's-foot cranesbill *G. molle*, common sedge *Carex nigra*, dandelion, red valerian *Centranthus ruber*, and sow-thistle *Sonchus spp*.

4.33. The tall ruderal vegetation is assessed to be of **site ecological value** as it does not support a notable flora diversity and covers a small area but a reasonable variety of flowering species present.



Photograph 18: View of the tall ruderal vegetation

Fauna

4.34. For ease of reference, descriptions of the fauna have been described alphabetically, below.

Amphibians

4.35. One record of great crested newt was recorded within a 2km radius of the Application Site. This is a record from April 2018, and included eleven adults located approximately 1.1km south-west of the Application Site. There is a dated record of palmate newt *Lissotriton helveticus* from 2008 located approximately 800m west of the Application Site. Common toad *Bufo bufo* and common frog *Rana temporaria* were also recorded as being within 2km of the Application Site since 2018.

4.36. A review of OS mapping and aerial imagery revealed one waterbody within 500m of the Application Site, in the form of drainage ponds within a garden centre located 490m west. There are many barriers between the potential amphibian breeding habitat and the Application Site, including a train line and dense residential development. If great

crested newts are present in the local area, there is no reason for them to migrate eastwards (towards the Application Site), as beyond the Application Site is dense residential development, which does not provide valuable terrestrial or aquatic habitat for this species and acts as a barrier for dispersal. Thus, colonisation of amphibians onto the Application Site is considered highly unlikely.

4.37. Overall, amphibians, including great crested newt, are considered **likely absent** from the Application Site and are not considered further in this report.

Badger

4.38. There are no records of badger within a 2km radius of the Application Site, however the data search is not a conclusive estimate of badger population in the local area.

4.39. No evidence of badger presence was recorded within the Application Site during the survey. The Application Site is small in size, contained and located within dense residential development. Colonisation of badger onto site is considered highly unlikely, as the Application Site is fragmented from suitable wildlife corridors such as railway line (100m north), which provides connectivity to the golf courses beyond and the cemetery (80m east) within the local landscape.

4.40. Overall, there is potential for badger to be present within the open spaces within the local landscape, however, the Application Site itself is too isolated from these habitats for badger to colonise. Overall, this species is assessed as **likely absent** within the Application Site and are not considered further in this report.

Bats - Roosting

4.41. The data search revealed a number of recently recorded bat species within a 2km radius of the Application Site. The most recent record is for pipistrelle *Pipistrellus sp.* bat located 289m east of the Application Site in August 2018. There is also a recent record for unidentified Myotis *Myotis spp.* located 1km north-east of the Application site in September 2017. The closest record returned from the data search was for unconfirmed bat species located 233m south of the Application Site in July 2008. The data search also returned records of Daubenton's bat *Myotis daubentonii*, Natterer's bat *Myotis nattererii*, Leisler's bat *Nyctalus leisleri*, noctule *Nyctalus noctula*, Nathusius' pipistrelle *P. nathusii*, soprano pipistrelle *P. pygmaeus*, common pipistrelle *P. pipistrellus* and brown long-eared bat *Plecotus auritus* within 2km of the Application

Site within the last decade.

4.42. One EPS mitigation licence in relation to bats was identified within a 2km radius of the site, located approximately 1.8km east of the Application Site. This licence was granted in 2016 (Natural England Ref: 2014-274-EPS-MIT) for the destruction of a non-breeding soprano pipistrelle roost.

4.43. There are a total of nine buildings within the Application Site. An external building inspection was undertaken in order to determine the potential for roosting bats, and due to the absence of roof voids; roofs absent of tiles; and the majority of which comprising flat roofs; brick elevations in good condition; and, shiplap elevations, eight out of the nine buildings were assessed as being of **negligible suitability** for roosting bats.

4.44. The building not scoped out for roosting bats is Building 2, the small brick building with a wooden barn-style door. This is due to the presence of an open window which was free of cobwebs allowing bats to enter/egress the interior of the building; a degraded soffit box proving a potential roosting feature (**See Appendix 1, Target Note 1**); and, a barn-style door made of wood which had open access to the interior of the building.

4.45. Overall, Building 2, the small brick building is assessed to be of **low suitability** for roosting bats.

Photograph 16: Degraded soffit box on the corner of Building 2 on the Application Site.

Photograph 17: Rear door to Building 2 on the Application Site.

4.46. The endoscope inspection and interior inspection of building 2 recorded no evidence of bat activity. The interior of the building is lacking in features suitable for crevice dwelling bats and the southern part of the building is well lit by the open window (photographs 18 and 19). The soffit box is shallow (approx. 10cm) and had no evidence of bat activity. Based on the lack of bat evidence, it is considered that the building is not used by bats. It was possible to inspect all potential roosting features and no further surveys are considered necessary.

Photograph 18: Interior of building 2

Photograph 19: Interior of building 2

4.47. The trees on site do not feature any of the characteristics favoured by roosting bats, such as flaking bark, cankers, or rot holes. For these reasons, the scattered trees on site are assessed as being of **negligible suitability** for roosting bats.

Bats – Foraging and Commuting

4.48. The scattered trees and scrub habitats within the Application Site are suitable for foraging bats, however they are not sufficient to support this species group in isolation. The Application Site is not directly connected to valuable foraging and commuting habitat; however, the bounding rear gardens do offer some foraging value for bats. The nearest potential high value habitat for foraging and commuting bats is the railway line located approximately 100m north of the Application Site, the golf courses beyond, and the cemetery approximately 80m east.

4.49. Overall, due to the small size of the Application Site, light pollution associated with the surrounding dense development and fragmentation from high quality foraging and commuting habitat, the Application Site itself is assessed as being of **low suitability** for foraging and commuting bats.

Birds

4.50. The data search returned a number of bird records within 2km of the Application Site. These species have been grouped by their UK conservation status according to the RSPB, where birds are split into conservation priority from red (most critical group), amber (next most critical group) to green (least critical group) as follows:

- Red listed species[10]: lesser spotted woodpecker *Dendrocopus minor*, herring gull *Larus argentatus*, linnet *Linaria cannabina*, grey wagtail *Motacilla cinerea*, spotted flycatcher *Muscicapa striata*, house sparrow *Passer domesticus*, tree sparrow *Passer montanus*, whinchat *Saxicola rubetra*, turtle dove *Streptopelia turtur*, starling *Sturnus vulgaris* and song thrush *Turdus philomelos*.

[10] The UK's birds are split in to three categories of conservation importance - red, amber and green. Red is the highest conservation priority, with species needing urgent action. Amber is the next most critical group, followed by green. Red List criteria include species which are: globally threatened; have been subject to historical population decline in UK during 1800–1995. Amber list criteria include species which are: in unfavourable conservation status in Europe.

- Amber listed species: swift *Apus apus*, stock dove *Columba eons*, dunnock *Prunella modularis* and bullfinch *Pyrrhula pyrrhula*.
- Green listed species: Rook *Corvis frugilegus* and swallow *Hirundo rustica*.

4.51. The buildings, scattered trees, hedgerows and dense scrub habitat within the Application Site are suitable for nesting birds. The Application Site also offers some foraging potential for urban residing bird species. Extensive suitable nesting habitat is present within the local landscape in the form of residential gardens; golf courses to the north and west; and the cemetery to the east.

4.52. Due to the absence of suitable habitat within the Application Site for ground nesting birds and limited habitat available for over-wintering birds these are not considered further in this report.

4.53. Overall, there is potential for a low number of birds to nest and forage on-site, thus, the Application Site is assessed to be of **site value** for nesting and foraging birds.

Reptiles

4.54. There are two recent records of reptiles within a 2km radius of the Application Site; three slow worm *Anguis fragilis* were recorded in 2012, approximately 1.3km east of the Application Site; and 14 grass snake *Natrix helvetica helvetica* were recorded in 2017 approximately 1.4km south-west of the Application Site. The data search is not a conclusive estimate of the population of widespread species of reptile within the local area.

4.55. The Application Site does offers suitable sheltering and hibernating habitat for reptiles in the scrub habitat and within the multiple refuse and log piles on site (**see Appendix 1, Target Note 3**). The tall ruderal vegetation also provides small amount of sub-optimal sheltering opportunities. The hedgerows on-site are unsuitable for reptiles as the base is bare and offers no sheltering opportunities. Reptiles are often found to use the verges along railway lines, one of which lies approximately 110m north of the Application Site. The golf courses and the cemetery within 500m of the Application Site may also provide habitat for reptile species.

4.56. Slow-worm are known to utilise residential gardens, therefore, there is minor potential for a low population of slow-worm to be present on-site, colonising from the adjacent gardens.

4.57. Overall, due to habitats available on site, and suitable habitat within reasonable proximity to enable colonisation, the Application Site is assessed to be of **site value** for widespread species of reptile.

Other Wildlife

4.58. Hedgehog *Erinaceus europaeus* have been recorded within the local area, most recently in 2017 approximately 1.4km north-west of the Application Site. Hedgehogs are a species of principal importance under Section 41 of the NERC Act, and a Biodiversity Action Plan (BAP) [11] species that are threatened and require conservation action. It is possible for hedgehogs to both forage and hibernate on site, making use of the scrub and hedge habitat and refuse/log piles. Due to the suitable habitat available, there is the possibility that hedgehogs are present within the Application Site.

4.59. There are numerous records of stag beetle *Lecanus cervus* within 2km of the Application Site, the most recent of which was recorded in 2017 approximately 1.3km north-west. Stag beetles are protected under Schedule 5 of the Wildlife and Countryside Act 1981. Suitable stag beetle habitat includes deadwood in the form of mature trees with deadwood, rotting fence posts and fallen deadwood. As the site has numerous log piles and habitat that has been purposely constructed as bug hotels (**See Appendix 1, Target Note 4),** there is the possibility that stag beetle are present within the Application Site.

4.60. A fox cub *Vulpes vulpes* was spotted on-site during the survey, and there is evidence of a fox den on site that is currently being used – this fox den has multiple entrances underneath Building 3, Building 4 and Building 5 (**Photograph 18, also see Appendix 1, Target Note 2**). All animals, irrespective of their conservation status, are subject to protection from cruelty under the Animal Welfare Act 2006 and wild mammals are also protected from cruelty under the Wild Mammals Protection Act 1996.

[11] UK BAP was superseded in 2012 by the UK Post-2010 Biodiversity Framework. However, UKBAP it is still referred to as the species and habitats agreed under UK BAP still form the basis of conservation action today.

Photograph 18: entrance to the fox den under Building 3 at the Application Site.

4.61. A number of invertebrate species of principle importance under Section 41 of the NERC Act, were also recorded within 2km of site such as small heath butterfly *Coenonympha pamphilus* and marbled white butterfly *Melanargia galathea* however, these species are highly unlikely to utilise the Application Site as they are typically found in heathland and unimproved grassland, which are not present in the Application Site. Overall, the Application Site is therefore unsuitable to support any notable invertebrate species or assemblages.

4.62. Overall, the Application Site is assessed to be of **site value** for hedgehog, fox and invertebrates.

Conclusion

4.63. The Extended Phase One Habitat Survey and protected species surveys have identified that the following ecological receptors should be brought forward for further assessment:

- Designations: **N/A**
- Habitats: **Scattered trees**

4.64. The following species will require additional consideration: **foraging and commuting bats, nesting birds, reptiles, hedgehog, stag beetle and foxes.**

4.65. The following habitats, which are of **site value or lower**, have been **scoped out** of the assessment process and will not be discussed any further within this report: **buildings; hardstanding and bare ground; dense scrub; amenity grassland; semi-improved grassland; species-poor hedgerow with trees; intact species-poor hedgerow; tall ruderal vegetation; and, ephemeral/short perennial.** However, mitigation measures during the development process will still be required to safeguard the protected species associated with these habitats in order to comply with current wildlife legislation and best practice guidelines.

4.66. Although the scattered trees on the Application Site are considered to be of **site value,** as per the habitats listed in Paragraph 4.64 above, they have been put forward for further assessment as they are of greater inherent ecological value, for reasons explained within Section 6.

4.67. The following species have been **scoped out** of the assessment process and will not be discussed any further within this report: **amphibians, including great crested newt, roosting bats** and **badger.**

5 LEGISLATION AND PLANNING POLICY

5.1. This section summarises the legislation and national, regional and local planning policies, as well as other reference documents, relevant to the baseline ecology results.

Legislation

5.2. Specific habitats and species receive legal protection in the UK under various pieces of legislation, including:

- The Conservation of Habitats and Species Regulations 2017;
- The Natural Environment and Rural Communities Act 2006;
- The Wildlife and Countryside Act (WCA) 1981 (as amended);
- The Countryside and Rights of Way (CROW) Act 2000;

5.3. Where relevant, the assessment takes account of the legislative protection afforded to specific habitats and species.

5.4. The Conservation of Habitats and Species Regulations 2017 affords protection to European sites, such as SACs, and EPS, which are detailed further within this report with regard to designated sites and specific species respectively.

5.5. The WCA 1981 (as amended) lists invasive plant and animal species under Schedule 9[12]. This means that it is an offence to plant or allow species on this list to be released into the wild. It is also an offence for animals not ordinarily resident or a regular visitor to Great Britain or listed on Schedule 9 to be released into the wild.

5.6. The UK Post-2010 Biodiversity Framework, which supersedes UK Biodiversity Action Plan (UK BAP) priority habitats and species, provides the 'broad enabling structure for action across the UK', which in England is interpreted into Biodiversity 2020: A strategy for England's wildlife and ecosystem services; however, some authorities do still refer to BAPs. Protecting habitats and species listed on Section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act 2006 is an outcome of this strategy. The lists of priority habitats and species in England required under S41 were published by Natural England in May 2014[13]. These measures are given due acknowledgement where relevant.

[12] Available at: https://www.legislation.gov.uk/ukpga/1981/69/schedule/9
[13] Available at: http://publications.naturalengland.org.uk/publication/4958719460769792

Fauna

5.7. All animals, irrespective of their conservation status, are subject to protection from cruelty under the Animal Welfare Act 2006 and wild mammals are also protected from cruelty under the Wild Mammals Protection Act 1996.

European Protected Species

5.8. EPS are protected under the Conservation of Habitats and Species Regulations 2017 as well as the WCA 1981 (as amended), which are specifically under Regulation 42[14] and Schedule 5[15] respectively. The Countryside and Rights of Way Act 2000 amended the WCA 1981 and added 'or recklessly' to existing mentions of 'intentionally' as detailed below. These species include great crested newt, ***all*** bat species, hazel dormouse and otter. This level of protection for these species (at all stages of their life cycle) makes it an offence to do the following:

- Intentionally or recklessly capture or kill a wild animal of an EPS;
- Intentionally or recklessly disturb any such animal;
- Intentionally or recklessly to take or destroy the eggs of such an animal;
- Intentionally or recklessly to damage or destroy a breeding site or resting place of such an animal; or
- To keep, transport, sell or exchange, or offer for sale or exchange, any live or dead wild animal of an EPS, or any part of, or anything derived from, such an animal.

Non-European Protected Species

5.9. All wild birds[16] and their nests, irrespective of their conservation status, are protected under the WCA 1981 (as amended). It is an offence to:

- Intentionally or recklessly kill, injure or take any wild bird;
- Intentionally or recklessly take, damage or destroy the nest of any wild bird whilst it is in use or being built;
- Intentionally or recklessly take or destroy the egg of any wild bird;

[14] Available at: https://www.legislation.gov.uk/uksi/2017/1012/regulation/42/made
[15] Available at: http://jncc.defra.gov.uk/PDF/waca1981_schedule5.pdf
[16] Available at: https://www.gov.uk/wild-birds-protection-surveys-and-licences

- Have in one's possession or control any wild bird, dead or alive, or any part of a wild bird, which has been taken in contravention of the Act or the Protection of Birds Act 1954;
- Have in one's possession or control any egg or part of an egg which has been taken in contravention of the Act or the Protection of Birds Act 1954;
- Use traps or similar items to kill, injure or take wild birds; or
- Have in one's possession or control any bird of a species occurring on Schedule 4[17] of the Act unless registered, and in most cases ringed, in accordance with the Secretary of State's regulations.

5.10. Widespread reptiles[18] (including common lizard *Zootoca vivipara*, slow-worm *Anguis fragilis*, grass snake *Natrix helvetica* and adder *Vipera berus*) are protected under the WCA 1981 (as amended). For these species, two sections of Schedule 5 applies, which are part of section 9(1) and all of section 9(5). It is therefore an offence to deliberately kill, injure, sell or trade widespread reptiles.

5.11. In addition to protection from cruelty under the Animal Welfare Act 2006 and the Wild Mammals Protection Act 1996, wild hares *Lepus* spp, wild rabbit *Oryctolagus cuniculus* and hedgehog are protected under sections of the WCA 1981 (as amended). Wild hares and rabbit are covered under sections relating to protection of other animals and prevention of poaching. Brown hare *L. europaeus* and mountain hare *L. timidus* are listed on Schedule 5A[19] and it is an offence to intentionally or recklessly kill, injure or take these animals during their 'close season', which for brown hare is 1st February - 30th September, and sale and possession is an offence for any of these animals taken unlawfully. Hedgehog is listed on Schedule 6[20], which makes it an offence to kill or take by certain methods. Brown hare, mountain hare and hedgehog are listed as a priority species under the NERC Act (2006).

Planning Policy

National Planning Policy Framework

5.12. The National Planning Policy Framework (NPPF)[21] sets out planning policies on

[17] Available at: http://jncc.defra.gov.uk/PDF/waca1981_schedule4.pdf
[18] Available at: http://naturenet.net/law/herps.html
[19] Available at: https://www.legislation.gov.uk/ukpga/1981/69/schedule/5A
[20] Available at: http://jncc.defra.gov.uk/PDF/waca1981_schedule6.pdf
[21] Ministry of Housing, Communities and Local Government (2019). *National Planning Policy Framework*. Ministry of Housing, Communities and Local Government, London.

protection of biodiversity and geological conservation through the planning system for local authorities in England. The NPPF outlines the role of the decision maker in considering the requirements of wildlife legislation to protect wildlife. A redacted summary is presented below.

5.13. The NPPF states that planning policies and decisions should contribute to and enhance the natural and local environment by:

- Protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils;
- Recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services;
- Maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
- Minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks;
- Preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve environmental conditions;
- Remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

5.14. Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.

5.15. To protect and enhance biodiversity and geodiversity, plans should:

- Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local

partnerships for habitat management, enhancement, restoration or creation; and

- Promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

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

- If significant harm resulting from a development cannot be avoided, adequately mitigated for, or, as a last resort, compensated for, then planning permission should be refused;
- Proposed development on land within or outside a SSSI, 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 SSSI;
- 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
- Development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.

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

- Potential SPAs and possible SACs;
- Listed or proposed Ramsar sites; and
- Sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential SPAs, possible SACs, and listed or proposed Ramsar sites.

5.18. 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.

5.19. The Government Circular 06/2005[22] accompanies the NPPF and sets out the application of the law in relation to planning and nature conservation in England.

Local Planning Policy

The London Borough of Richmond Upon Thames Local Plan

5.20. The London Borough of Richmond Upon Thames Local Plan was adopted on 3 July 2018 and provides a guide to development in the district over the next 15 years until until 2033.

5.21. Relevant policies relating to ecology and nature conservation are as follows:

Policy LP 9: *Floodlighting*

5.22. Impacts on biodiversity and wildlife will be taken into account when assessing floodlighting.

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[22] Office of the Deputy Prime Minister (2005). *Government Circular: Biodiversity and Geological Conservation - Statutory Obligations and their Impact within the Planning System*. Office of the Deputy Prime Minister, London

Policy LP 15: *Biodiversity*

5.23. The Council will protect and enhance the borough's biodiversity, in particular, but not exclusively, the sites designated for their biodiversity and nature conservation value, including the connectivity between habitats. Weighted priority in terms of their importance will be afforded to protected species and priority species and habitats including NNR's, SSSI's) and Other Sites of Nature Importance as set out in the Biodiversity Strategy for England, and the London and Richmond upon Thames Biodiversity Action Plans. This will be achieved by:

1. protecting biodiversity in, and adjacent to, the borough's designated sites for biodiversity and nature conservation importance (including buffer zones), as well as other existing habitats and features of biodiversity value;
2. supporting enhancements to biodiversity;
3. incorporating and creating new habitats or biodiversity features, including trees, into development sites and into the design of buildings themselves where appropriate; major developments are required to deliver net gain for biodiversity, through incorporation of ecological enhancements, wherever possible;
4. ensuring new biodiversity features or habitats connect to the wider ecological and green infrastructure networks and complement surrounding habitats;
5. enhancing wildlife corridors for the movement of species, including river corridors, where opportunities arise; and
6. maximising the provision of soft landscaping, including trees, shrubs and other vegetation that support the borough-wide Biodiversity Action Plan.

5.24. Where development would impact on species or a habitat, especially where identified in the relevant Biodiversity Action Plan at London or local level, or the Biodiversity Strategy for England, the potential harm should:

1. firstly, be avoided (the applicant has to demonstrate that there is no alternative site with less harmful impacts),
2. secondly, be adequately mitigated; or
3. as a last resort, appropriately compensated for.

Policy LP 16:
Trees, Woodlands and Landscape

5.25. The Council will require the protection of existing trees and the provision of new trees, shrubs and other vegetation of landscape significance that complement existing, or create new, high quality green areas, which deliver amenity and biodiversity benefits.

5.26. To ensure development protects, respects, contributes to and enhances trees and landscapes, the Council, when assessing development proposals, will:

- *Trees and Woodlands*

1. resist the loss of trees, including aged or veteran trees, unless the tree is dead, dying or dangerous; or the tree is causing significant damage to adjacent structures; or the tree has little or no amenity value; or felling is for reasons of good arboricultural practice; resist development that would result in the loss or deterioration of irreplaceable habitat such as ancient woodland;
2. resist development which results in the damage or loss of trees that are considered to be of townscape or amenity value; the Council will require that site design or layout ensures a harmonious relationship between trees and their surroundings and will resist development which will be likely to result in pressure to significantly prune or remove trees;
3. require, where practicable, an appropriate replacement for any tree that is felled; a financial contribution to the provision for an off-site tree in line with the monetary value of the existing tree to be felled will be required in line with the 'Capital Asset Value for Amenity Trees' (CAVAT);
4. require new trees to be of a suitable species for the location in terms of height and root spread, taking account of space required for trees to mature; the use of native species is encouraged where appropriate;
5. require that trees are adequately protected throughout the course of development, in accordance with British Standard 5837 (Trees in relation to design, demolition and construction – Recommendations). The Council may serve Tree Preservation Orders or attach planning conditions to protect trees considered to be of value to the townscape and amenity and which are threatened by development.

Policy LP 17:
Green roofs and walls

5.27. Green roofs and/or brown roofs should be incorporated into new major developments with roof plate areas of 100sqm or more where technically feasible and subject to considerations of visual impact. The aim should be to use at least 70% of any potential roof plate area as a green / brown roof. The onus is on an applicant to provide evidence and justification if a green roof cannot be incorporated. The Council will expect a green wall to be incorporated, where appropriate, if it has been demonstrated that a green / brown roof is not feasible. The use of green / brown roofs and green walls is encouraged and supported in smaller developments, renovations, conversions and extensions.

Policy LP 39:
Infill, Backland and Backgarden Development

5.28. All infill and backland development must reflect the character of the surrounding area and protect the amenity and living conditions of neighbours. In considering applications for infill and backland development the following wildlife and conservation factors should be addressed:

Retain or re-provide features important to character, appearance or wildlife, in accordance with policy LP 16 Trees and Landscape;

5.29. There is a presumption against loss of back gardens due to the need to maintain local character, amenity space and biodiversity. Back garden land which contributes either individually or as part of a larger swathe of green space to amenity of residents or provides wildlife habitats must be retained. In some cases a limited scale of back garden development may be considered acceptable if it complies with the factors set out above.

Within the London Plan, the following policy applies:

- **Policy 7.19: Biodiversity and Access to Nature:** Development proposals should:

  a) Wherever possible, make a positive contribution to the protection, enhancement, creation and management of biodiversity;

  b) Prioritise assisting in achieving targets in biodiversity action plans (BAPs), set out in Table 7.3, and/or improving access to nature in

areas deficient in accessible wildlife sites; and

c) Not adversely affect the integrity of European sites and be resisted where they have significant adverse impact on European or nationally designated sites or on the population or conservation status of a protected species or a priority species or habitat identified in a UK, London or appropriate regional BAP or borough BAP.

On Sites of Importance for Nature Conservation development proposals should:

a) Give the highest protection to sites with existing or proposed international designations (SACs, SPAs, Ramsar sites) and national designations (SSSIs, NNRs) in line with the relevant EU and UK guidance and regulations;

b) Give strong protection to sites of Metropolitan Importance for Nature Conservation (SMIs). These are sites jointly identified by the Mayor and boroughs as having strategic nature conservation importance; and

c) Give sites of Borough and Local Importance for Nature Conservation the level of protection commensurate with their importance.

When considering proposals that would affect directly, indirectly or cumulatively a site of recognised nature conservation interest, the following hierarchy will apply:

a) Avoid adverse impact to the biodiversity interest;

b) Minimize impact and seek mitigation; and

c) Only in exceptional cases where the benefits of the proposal clearly outweigh the biodiversity impacts, seek appropriate compensation.

Boroughs should:

a) Use the procedures in the Mayor's Biodiversity Strategy to identify and secure the appropriate management of sites of borough and local

importance for nature conservation in consultation with the London Wildlife Sites Board;

b) Identify areas deficient in accessible wildlife sites and seek opportunities to address them;

c) Include policies and proposals for the protection of protected/priority species and habitats and the enhancement of their populations and their extent via appropriate BAP targets;

d) Ensure sites of European or National Nature Conservation Importance are clearly identified; and

e) Identify and protect and enhance corridors of movement, such as green corridors, that are of strategic importance in enabling species to colonise, re-colonise and move between sites.

6 DISCUSSION AND RECOMMENDATIONS

Statutory Designated Sites

6.1. There are no statutory designated sites within or immediately adjacent to the Application Site. The closest designated site is Bushy Park and Home Park SSSI located 750m south. Therefore, this designated site, and the others within the 5km radius of the Application Site, will not be impacted by the proposed development owing to spatial separation, lack of habitat connections and limited quantum of development (0.6 ha).

6.2. The site is not located within a Natural England Sites of Special Scientific Interest Impact Risk Zones (SSSI IRZ) that requires residential development to fulfil specific criteria. Therefore, no consultation with Natural England is considered necessary for this planning application.

6.3.

Non-Statutory Designated Sites

6.4. There are no non-statutory designated sites within or immediately adjacent to the Application Site. The nearest non-statutory designation is Teddington Cemetery located 130m east and the second nearest is Strawberry Hill Golf Course located 200m north, with all other non-statutory designations are greater than 1km from the Application Site. The proposals are highly unlikely to impact the non-statutory designations within 1km as the golf course is only accessible to members and any minor increase in recreational pressure on the cemetery will be minimal and unlikely to impact the qualifying reasons for its designation.

Habitats

6.5. The works will be carried out in accordance with Guidance for Pollution Prevention (GPPs)[23] to prevent pollutants from entering habitats and to appropriately deal with any pollution incidents should they arise.

<u>Scattered Trees (A3.3)</u>

6.6. Trees are referred to within the Local Plan and are considered a valuable habitat within Richmond Upon Thames. The site does have a native-rich tree species assemblage,

[23] Available at: http://www.netregs.org.uk/environmental-topics/pollution-prevention-guidelines-ppgs-and-replacement-series/guidance-for-pollution-prevention-gpps-full-list/

and the Local Biodiversity Action Plan highlights the importance of linking and preserving 'micro-sites' within the Borough; the trees on site have inherent ecological value and are the most valuable ecological assets on site.

6.7. The proposals are to be designed with the aim to preserve the existing trees on-site. Any trees lost as a result of the development is to be replaced with a species of local provenance.

6.8. With the proposed recommendations and mitigation, the impacts of the loss of this habitat will be negligible.

Fauna

6.9. Care must be taken during clearance/groundworks to ensure wildlife is not harmed and in the event any protected species are found when the ecologist is not in attendance, works must stop, they must not be handled and ACD Environmental Ltd contacted in the first instance.

6.10. Any excavations should be covered when works are not taking place to ensure that they do not fill with water and prevent the potential for wildlife to become trapped.

Bats – Roosting

6.11. The development proposal will result in the demolition of Building 2, the brick-built building with wooden barn doors, which was assessed to support potential roosting bat features in the form of open entry via the doors and broken window and hole in a soffit box (**See Appendix 1, Target Note 1)**. Overall, due to the small size of the building and absence of a roof void, there are limited roosting opportunities available and thus, it is assessed to be of low suitability for roosting bats.

6.12. The current Bat Conservation Trust guidelines[24] state in paragraph 5.2.9 that "*If the structure has been classified as having low suitability for bats, an ecologist should make a professional judgement on how to proceed based on all of the evidence available*". The potential for roosting bats is considered low due to the limited extent of suitable roosting features. However, as roosting bat suitability cannot be ruled out completely, and the features are readily accessible via ladder, an endoscopic survey by a licenced

[24] Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The Bat Conservation Trust, London.

bat worker is recommended. The outcome of the endoscopic survey is to be incorporated into this report to support the planning application.

6.13. The endoscope survey and internal inspection of building 2 recorded no evidence of roosting bats. The building has no features suitable for crevice roosting bats and the open window ensures that the southern part of the building is well lit. The soffit box is shallow with no evidence of bat activity. Based on the lack of bat evidence, it is considered that the stable building is not used by bats. It was possible to inspect all potential roosting features and no further surveys are considered necessary.

6.14. The properties within the proposals do provide sufficient opportunities for compensatory roosting bat habitat. To compensate for the loss of suitable roosting bat features it is recommended that two Schwegler 2FN bat boxes are installed some 3-5m high on suitably sized trees proposed for retention. The boxes are to be installed in locations where they are sheltered form strong winds, preferably positioned facing south or south-west.

6.15. The residual impacts on roosting bats are considered to be **negligible with the potential to be non-significant positive.**

Bats – Foraging and Commuting

6.16. The Application Site is assessed to be of low suitability for foraging and commuting bats as it is dominated by buildings and hardstanding, is small size and is located within a built-up setting.

6.17. The proposals are not anticipated to negatively impact the Application Site and the immediate surrounding habitats suitability for foraging and commuting bats, due to the existing light pollution and limited existing greenery on-site with the majority of trees present proposed for retention.

6.18. There is a potential for the proposals to provide an enhancement for foraging and commuting bats through the planting of native species-rich hedgerow along the western boundary and additional soft landscaping enhancements.

6.19. Light pollution is detrimental to bats, as well as other wildlife and therefore, is to be avoided where feasible. Where lighting is required there are mitigation options for both external and internal luminaires to reduce luminance (brightness) and illuminance (light spill), as follows:

6.20. External lighting mitigation options:

- Careful aiming, positioning and selection of luminaires. LEDs with no UV component are to be installed and it's preferable to distance lights from 'dark zones/wildlife corridors' than to have the lights installed immediately behind, as the brightness of a luminaire is a deterrent even where there is no light spill and directional lights can still result in a small amount of light spill behind;
- Luminaires are to be directed away from ecological receptors such as the trees, 'wildlife corridors' and bird and bat roosting provisions.
- Avoid white light and warm colour recommended. Preferable colours are 3000°k to 2700°k (where feasible) with peak wavelengths greater than 550nm;
- 0% upward light output and no tilting of the light head;
- Change luminaire to one with more suitable luminous intensity distribution;
- Consideration of column heights to reduce light spill;
- Motion sensors for security lighting;
- For street lighting consider part night lighting and dimming, the latter viable with LED's only; and
- As a last resort, the incorporation of shields, baffles and cowls fitted to the luminaires.

6.21. Internal lighting mitigation options:

- Revise window locations, height and size;
- Reconsider site layout;
- Install recessed luminaires or install luminaires above the window head height. Studies have identified the incorporation of recessed luminaires within properties have reduced the extent of light spill from 30m to 8m; and
- Automatic blinds via a timer or photo electric cells within the proposed child nursery building.

6.22. With the proposed mitigation and compensation, the impacts on foraging and commuting bats will be **negligible with the potential to be non-significant positive.**

<u>Birds</u>

6.23. Given the protection afforded to all nesting birds, any works impacting upon the hedgerows, trees, dense scrub and buildings should ideally be undertaken during September to February (inclusive), which is outside of the main bird breeding season. Demolition/removal during March-August would require a nesting bird check by a suitably experienced ecologist within 24 hours prior to the works being carried out. If any active bird nests are found then works should stop in the area and an appropriate buffer zone (as determined by the ecologist) must be established around the nest and the nest left until the young have fledged.

6.24. The proposals will include an increase in greenery via hedgerow planting, trees and shrubs. As the soft landscaping matures it will provide suitable nesting bird habitat.

6.25. Overall, provided that the mitigation measures detailed above are adhered to, the residual impact on nesting birds is anticipated to be **negligible with the potential to be non-significant positive**.

6.26.

Reptiles

6.27. The, dense scrub with refuse-tips (**See Appendix 1**) and tall ruderal vegetation within the Application Site are suitable for low numbers of widespread species of reptile.

6.28. Due to the small extent of the suitable reptile habitat present, reptile surveys are deemed unnecessary and precautionary measures are recommended to prevent the risk of harming reptiles during the construction phase.

6.29. Inherent compensation is included within the proposals via the planting of a native species hedgerow and introduced shrub planting.

6.30. The tall ruderal vegetation removal will be undertaken during winter months (November to February), without the requirement for precautionary clearance measures as this habitat is not considered suitable for hibernating reptiles.

6.31. Dense scrub clearance is restricted to the month's reptiles are active due to the presence of refuse-tips throughout the habitat which provide potential hibernacula for reptiles. The active reptile months extend between mid-March and October. Dense scrub clearance is to be undertaken using hand tools, gradually cutting the vegetation down to ground level and thus, allowing reptiles to leave of their own accord. This is to be undertaken during suitable weather conditions when reptiles are active, with an ecologist in attendance, who will also combine this precautionary measure with a nesting bird check. Optimal conditions are dry and sunny with air temperatures between 9 and 18˚C. The refuse-tips are to be taken apart by hand between the months of April and September inclusive, with an ecologist in attendance.

6.32. It is recommended that suitable hibernacula is reinstated on-site through the creation of log piles. Furthermore, compost bins can be incorporated within the proposals. Wooden slat compost bins are favoured over the pre-formed plastic compost bins as they are easier for reptiles and small mammals (e.g. hedgehogs) to access.

6.33. Provided the mitigation measures above are followed, the proposals will have **no significant effect**

Other Wildlife

6.34. No impacts on hedgehog (if present) are anticipated provided that the mitigation measures detailed above for reptiles are adhered to.

6.35. Mammal species not of primary conservation importance such as foxes receive a degree of protection from cruelty within the Wild Mammals (Protection) Act 1996 and the Animal Welfare Act 2006. This includes offences that have implications for site clearance (particularly in the case of burrowing species such as rabbits *Oryctolagus cuniculus* and foxes) such as crushing or asphyxiation of any wild mammal with intent to cause unnecessary suffering. It is recommended that the den is carefully excavated or efforts to exclude foxes from the den are taken place to avoid offences under these Acts. Furthermore, the clearance of the den should avoid the months when fox cubs are reliant on their mother.

6.36. There is potential for stag beetle larvae to be present within the log piles located within the dense scrub. To compensate for the potential loss of suitable stag beetle habitat a stag beetle loggery is to be created within an area of proposed dense shrub planting and out of sight of residents. To be created by sourcing large logs (10-50cm in diameter) or hardwood (e.g. oak, beech, sycamore, or ash) with bark still attached sunk c60cm into the ground;

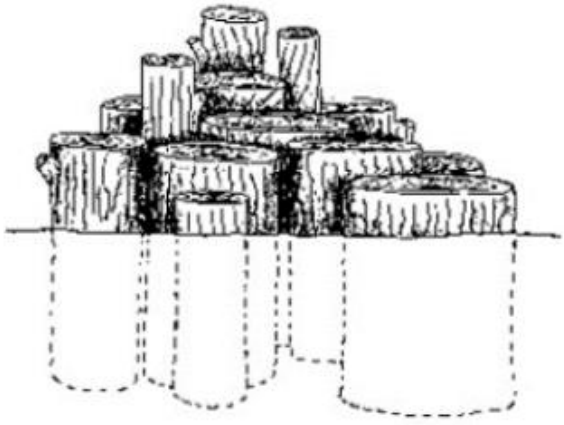

Figure 1: Example of a stag beetle loggery

6.37. With the proposed mitigation and compensation, the impacts on hedgehog, fox and stag beetle will be **non-significant negative**.

Enhancements

6.38. The NPPF encourages development to provide net gains in biodiversity where possible.

6.39. It is recommended that the following additional enhancements are provided:

- Roosting bat provisions can be incorporated into the Application Site via the installation of two integrated bat boxes such as Habibat Bat Boxes onto the proposed buildings. The integrated bat boxes are to be installed on north, east or southern elevations at least 4-5m high;
- Nesting bird provisions can be incorporated into the Application Site via the installation of two integrated bird boxes such as Ecosurv sparrow and starling boxes onto the proposed buildings. The integrated bat boxes are to be installed on north or eastern elevations at least 4-5m high;

- Green walls are to be created on-site using climbers, which can provide nesting sites for birds and be a haven for insects. Native climbing plants include ivy, traveller's joy *Clematis vitalba*, honeysuckle *Lonicera periclymenum* and wild rose *Rosa acicularis*. Care must be taken to ensure these do not damage the structure and are acceptable from a Health and Safety point of view;
- A suitable enhancement includes the sowing of a wildflower lawn mixture within the proposed communal garden. A suitable mixture includes EL1 - Flowering Lawn Mixture by Emorsgate Seeds;
- The trees should include varieties of benefit to pollinators and foraging birds, such as, wild cherry *Prunus avium* and rowan *Sorbus aucuparia* should be favoured over non-native varieties; and
- It is recommended that the landscape plan provides all-year round food source for pollinators, as warmer winters are disturbing hibernating patterns of insects. The Royal Horticultural Society[25] provide an extensive list of pollinator plants that flower by season.

[25] [25] Royal Horticultural Society. RHS Perfect for Pollinators Plant List. *Available at: https://www.rhs.org.uk/science/pdf/conservation-and-biodiversity/wildlife/rhs_perfectforpollinators_plantlist-jan15.pdf*

7 CONCLUSIONS

7.1. There are no designated sites within the Application Site and none nearby that would be impacted by the proposed development owing to spatial separation, nature of the non-statutory designations and small scale of the proposals.

7.2. The Application Site is assessed to be of inherently low ecological value. The habitat of greatest ecological value is the scattered trees, with Policy 16 of the Local Plan and advising that loss of trees is resistant in planning. The proposals have significant opportunities to compensate for the loss of floral diversity.

7.3. Protected species potential on-site includes roosting bats within Building 2 on the western boundary. Further surveys in the form of an endoscope survey and internal inspection of the building is required to determine presence/likely absence. The results of the endoscope survey are to be included within this report (see below).

7.4. The endoscope survey and internal inspection of building 2 recorded no evidence of bat activity. Based on the lack of bat evidence, it is considered that the stable building is not used by bats. It was possible to inspect all potential roosting features and no further surveys are considered necessary.

7.5. Additional protected species potential on-site includes foraging and commuting bats reptiles and nesting birds. In accordance to NPPF, recommendations have been made within this report to ensure the protection of these legally protected species and their long-term retention on-site. Mitigation has also been recommended for other notable species (hedgehog, fox and stag beetle), which are not afforded the same level of protection.

7.6. Measures to mitigate for likely impacts have been set out along with recommendations for enhancement of the Application Site's ecological value.

7.7. Implementing all of the above recommendations will ensure that there are no significant impacts upon protected species and that the proposals will be in conformity with relevant legislation and policy, which includes Richmond Upon Thames Local Plan and London Local Plan.

APPENDIX 1: ECOLOGICAL FEATURES PLAN

Lines
- Red Line
- Hedges and trees
- Fence

Habitat
- Dense Scrub
- Improved Grassland
- Tall Ruderal Herb
- Hardstanding
- Ephemeral/Short Perennial
- Amenity Grassland
- Buildings (numbered)
- Bare Ground

Target Notes
- Tree
- Target Notes (Numbered)
  1: Low Potential Bat Roost
  2: Fox Den Entrance
  3: Refuse Pile
  4: Bug Hotel

ACD ENVIRONMENTAL

Paragon Asra PA Housing

scheme: The Strathmore Centre
client: Living Architects LTD
drawing: Ecological Features Plan
date: 30/05/19
scale: NTS

APPENDIX 2: GLOSSARY OF KEY TERMS

A summary of key terms from the Chartered Institute of Ecology and Environmental Management (CIEEM).[26]

"Avoidance
See mitigation.

Baseline Conditions
The conditions that would pertain in the absence of the proposed project at the time that the project would be constructed/operated/decommissioned. The definition of these baseline conditions should be informed by changes arising from other causes (e.g. other consented developments).

Compensation
Measures taken to make up for the loss of, or permanent damage to, biological resources through the provision of replacement areas. Any replacement area should be similar to or, with appropriate management, have the ability to reproduce the ecological functions and conditions of those biological resources that have been lost or damaged.

Connectivity
A measure of the functional availability of the habitats needed for a particular species to move through a given area. Examples include movements of migratory fish from feeding grounds to spawning grounds or linking areas of appropriate habitat needed by some slow colonising species if they are to spread.

Cumulative Impact
Impacts caused either by a number of separate developments in the same area or those caused by increasing the size of arrays of marine renewable units or other developments.

Effect
These guidelines use the word impact rather than effect when referring to how ecological resources might be affected by a project.

Enhancement
The genuine enhancement of the natural heritage interest of a site or area because the project includes improved management or new habitats or features, which are better than the prospective management, or the habitats or features present there now. There is, therefore, a net or new benefit to the natural heritage.

Habitat
A place in which a particular plant or animal lives. Often used in the wider sense referring to major assemblages of plants and animals found together.

Impact
The way in which an ecological resource/receptor is affected by a project (see effect).

Mitigation
Measures taken to avoid or reduce negative impacts. Measures may include: locating the development and its working areas and access routes away from areas of high ecological interest, or timing works to avoid sensitive periods. See also compensation (which is separate from mitigation).

Network
An interconnected system of corridors.

Net Ecological Gain
The point at which the quality and quantity of habitats or species improves compared to their original condition. i.e. improvements over and above those required for mitigation/compensation.

[26] Available at: https://www.cieem.net/glossary

Population
A collection of individuals (plants or animals), all of the same species and in a defined geographical area.

Receptor
Any ecological or other defined feature (e.g. human beings) that is sensitive to or has the potential to be affected by an impact.

Replacement
The creation of a habitat that is an acceptable replacement for the habitat which has been lost.

Resource
Any ecological or other environmental component affected by an impact.

Restoration
The active re-establishment of a damaged or degraded system or habitat to a close approximation of its pre-degraded condition.

Zone of Influence
The areas/resources that may be affected by the biophysical changes caused by activities associated with a project."

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ECOLOGICAL SURVEYS * PROTECTED SPECIES LICENSING * MITIGATION * IMPACT ASSESSMENT
ARBORICULTURAL SITE MONITORING AND SUPERVISION * ARCHAEOLOGY
LANDSCAPE & VISUAL IMPACT ASSESSMENT * LANDSCAPE AUDIT * PROJECT MANAGEMENT
EXPERT WITNESS* LANDSCAPE DESIGN & PLANNING LANDSCAPE MANAGEMENT