



MACGREGOR SMITH LIMITED

READING INTERNATIONAL
PHASE 3, READING,
BERKSHIRE

Ecological Assessment

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CONTENTS

1	INTRODUCTION	1
2	SURVEY METHODOLOGY	2
3	ECOLOGICAL FEATURES	5
4	WILDLIFE USE OF THE SITE	9
5	ECOLOGICAL EVALUATION	12
6	POLICY BACKGROUND	18
7	SUMMARY AND CONCLUSIONS	21

PLANS

PLAN ECO1	Site Location and Ecological Designations
PLAN ECO2	Ecological Features

PHOTOGRAPHS

PHOTOGRAPH 1	Existing Hardstanding
PHOTOGRAPH 2	Re-Colonising Ground
PHOTOGRAPH 3	Tree Belt
PHOTOGRAPH 4	Building B1 and Surrounding Gravel
PHOTOGRAPH 5	Building B2
PHOTOGRAPH 6	Scrub

APPENDICES

APPENDIX 1	Information downloaded from Multi-Agency Geographic Information for the Countryside (MAGIC)
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1. INTRODUCTION

1.1. Background

- 1.1.1. Ecology Solutions was originally commissioned by Macgregor Smith Limited in July 2010 to undertake an ecological assessment of Reading International Phase 3, Reading, Berkshire (see Plan ECO1), hereinafter referred to as the Site.
- 1.1.2. In November 2018 Ecology Solutions was instructed to complete a review of the Site and update the ecological assessment accordingly.

1.2. Site Characteristics

- 1.2.1. The Site is approximately 3.6 hectares in size, and located to the south of Reading in the county of Berkshire. The wider landscape comprises a mixture of existing business and residential development, major infrastructure and agricultural land (see Plan ECO1).
- 1.2.2. The Site is bound to the north by existing development in the form of the A33 with business development beyond. The eastern and western boundaries are formed by Eastern Access Road and Western Access Road respectively, whilst beyond are again further business developments including a large Tesco distribution centre.
- 1.2.3. The Site has been cleared of the previous buildings and is dominated by hardstanding. There is a small tree belt in the north and north-east of the Site which is associated with a small watercourse. Additional features within the Site include small areas of tall ruderal vegetation, scattered scrub, amenity grassland, amenity planting and individual trees. On account of limited activity across the Site since the demolition and clearance works were completed a number of re-colonising and opportunistic species have colonised areas of the Site.

1.3. Ecological Assessment

- 1.3.1. This document assesses the ecological interest of the site. The importance of the habitats within the site is evaluated with due consideration given to the guidance published by the Chartered Institute of Ecology and Environmental Management (CIEEM)¹.
- 1.3.2. Where necessary mitigation measures are recommended so as to safeguard any significant existing ecological interest within the site and, where appropriate, potential enhancement measures are put forward and reference made to Species and Habitats of Principal Importance for Conservation in England (formerly referred to as Biodiversity Action Plan Habitats and Species).

¹ CIEEM (2018). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal*. Chartered Institute of Ecology and Environmental Management, Winchester.

2. SURVEY METHODOLOGY

- 2.1. The methodology utilised for the survey work can be split into three areas, namely desk study, habitat survey and faunal survey. These are discussed in more detail below.

2.2. Desk Study

- 2.2.1. In order to compile background information on the Site and its immediate surroundings information was sourced from the Thames Valley Environmental Resources Centre (TVERC), Binfield Badger Group and Berkshire and South Buckingham Bat Group.
- 2.2.2. Further information on designated sites from a wider search area was obtained from the online Multi-Agency Geographic Information for the Countryside (MAGIC)² database. This information is reproduced at Appendix 1, and where appropriate illustrated on Plan ECO1.

2.3. Habitat Survey Methodology

- 2.3.1. **Extended Phase 1 Habitat Survey.** The Site was surveyed based around an extended Phase 1 survey methodology³, as recommended by Natural England in July 2010 and November 2018, whereby the habitat types present are identified and mapped (see Plan ECO2). This technique provides an inventory of the basic habitat types present and allows identification of areas of greater potential which require further survey. Any such areas identified can then be examined in more detail.
- 2.3.2. Using the above method, the Site was classified into areas of similar botanical community types, with a representative species list compiled for those habitats present.
- 2.3.3. All of the species that occur in each habitat would not necessarily be detectable during survey work carried out at any given time of the year, since different species are apparent at different seasons. The original survey work was undertaken during the optimum period for habitat surveys. The species and habitats apparent during the November 2018 survey have allowed for a detailed and robust review of the status of the Site to be completed.
- 2.3.4. Given the above it is considered that overall an accurate and robust assessment of the intrinsic value of the Site can be made.

2.4. Faunal Survey

- 2.4.1. General faunal activity observed during the course of the survey was recorded, whether visually or by call. Specific attention was paid to the potential presence of any protected, rare, notable or priority species.

Bats

² <http://www.magic.gov.uk>

³ Joint Nature Conservation Committee (2010). *Handbook for Phase 1 Habitat Survey – a Technique for Environmental Audit*. England Field Unit, Nature Conservancy Council, reprinted JNCC, Peterborough.

- 2.4.2. The Site is largely devoid of buildings following the demolition works. The remaining buildings and trees within the Site were assessed for their potential to support roosting bats. The buildings were subject to an external examination to check for features that could be used for roosting or access. Binoculars were used where necessary.
- 2.4.3. The probability of a building being used by bats as a summer roost site increases if it:
- is largely undisturbed,
 - dates from pre 20c,
 - has a large roof void with unobstructed flying spaces,
 - has access points for bats (though not too draughty),
 - has wooden cladding or hanging tiles,
 - is in a rural setting and close to woodland or water.
- 2.4.4. Conversely, the probability decreases if a building is of a modern or pre-fabricated design / construction, is in an urban setting, has small or cluttered roof voids, has few gaps at the eaves or is a heavily disturbed premises.
- 2.4.5. The main requirements for a winter / hibernation roost site is that it maintains a stable (cool) temperature and humidity. Sites commonly utilised by bats as winter roosts include cavities / holes in trees, underground sites and parts of buildings. Whilst different species may show a preference for one of these types of roost site, none are solely dependant on a single type.
- 2.4.6. For a tree to be classed as having potential for roosting bats, it must usually have one or more of the following characteristics:
- Obvious holes, e.g. rot holes and old woodpecker holes;
 - Dark staining on the tree below a hole;
 - Tiny scratch marks around a hole from bats' claws;
 - Cavities, splits and/or loose bark from broken or fallen branches, lightning strikes etc;
 - Very dense covering of mature ivy over trunk.
- 2.4.7. The Site was also appraised for its likely value to any locally present foraging or dispersing bats.

Badgers

- 2.4.8. Particular attention was paid during the survey to evidence the use of the Site by Badgers. This comprised two main elements. Firstly, searching for Badger setts. For any sett encountered, the following information was recorded:
- i) The number and location of well used or very active entrances; these are clear from any debris or vegetation and are obviously in regular use and may, or may not, have been excavated recently.
 - ii) The number and location of inactive entrances; these are not in regular use and have debris such as leaves and twigs in the entrance or have plants growing in or around the edge of the entrance.

- iii) The number of disused entrances; these have not been in use for some time, are partly or completely blocked and cannot be used without considerable clearance. If the entrance has been disused for some time all that may be visible is a depression in the ground where the hole used to be and the remains of the spoil heap.

2.4.9. Secondly, any Badger activity was noted, such as well-worn paths and runs, snagged hair, footprints, latrines and foraging signs.

3. ECOLOGICAL FEATURES

3.1. The Site was subject to a habitat survey in July 2010 and November 2018. The survey was undertaken across the optimum period for habitat surveys and given the vegetation present the survey enabled the habitat types to be satisfactorily identified and an accurate assessment of the ecological interest of the habitats to be undertaken.

3.2. The following main habitat / vegetation types were identified within the Site:

- Hardstanding / Compacted Hardcore;
- Re-Colonising Ground;
- Amenity Grassland;
- Tree Belt;
- Watercourse;
- Buildings;
- Bramble Thicket;
- Trees;
- Scrub;
- Gravel; and
- Amenity Planting.

3.3. The location of these habitats is shown on Plan ECO2.

3.4. Each habitat is described below.

3.5. **Hardstanding / Compacted Hardcore**

3.5.1. The Site is dominated by hardstanding which forms the previous access and car parking areas associated with the now demolished buildings together with footprint of the previous buildings (see Photograph 1). In addition, there is an area of hardstanding / compacted hardcore in the east of the Site that has been undisturbed for a longer period, and as such has been colonised by a greater number of species (see below).

3.6. **Re-colonising Ground**

3.6.1. The areas of hardstanding within the Site are being colonised by a number of early colonising and opportunistic species. There has, as would be expected, an increase in the diversity of the species present from the 2010 to 2018 surveys. The areas of former hardstanding in the east of the Site, associated with areas of scrub, has been subject to colonisation in the absence of any management although the vegetation remains sparse and is present on a thin layer of organic substrate dominated by moss (see Photograph 2).

3.6.2. Species recorded across the areas of recolonising ground include Common Fleabane *Pulicaria dysenterica*, Perforated St John's Wort *Hypericum perforatum*, Ragwort *Senecio jacobaea*, Common Poppy *Papaver rhoeas*, Knotgrass *Polygonum aviculare*, Smooth Sow-Thistle *Sonchus oleraceus*, Canadian Fleabane *Conyza canadensis*, Common Toadflax *Linaria vulgaris*, White Melilot *Melilotus albus*, Cleavers *Galium aparine*, Round-Leaved Crane's-bill *Geranium rotundifolium*, Oxeye Daisy *Leucanthemum vulgare*, Butterfly Bush *Buddleja davidii*, Ground Ivy *Glechoma hederacea*,

Pampas Grass *Cortaderia selloana*, Wild Carrot *Daucus carota*, Great Mullein *Verbascum thapsus*, Ribwort Plantain *Plantago lanceolata*, Spear Thistle *Cirsium vulgare*, Bristly Oxtongue *Picris echioides*, Common Nettle *Urtica dioica*, Teasel *Dipsacus fullonum*, Common Chickweed *Stellaria media*, Rosebay Willowherb *Chamerion angustifolium*, Wild Carrot *Daucus carota* subsp. *carota*, Field Horsetail *Equisetum arvense*, Black Medick *Medicago lupulina*, Red Valerian *Centranthus ruber*, Sun Spurge *Euphorbia helioscopia* and Colt's-Foot *Tussilago farfara*

3.7. Amenity Grassland

- 3.7.1. There are some small discrete areas of amenity grassland within the Site (see Plan ECO2). These are associated with the frontage of the Site adjacent to the A30, and along the western portion of the Site beneath a line of semi-mature to mature trees adjacent to the Western Access Road.
- 3.7.2. Species present within the sward include Red Fescue *Festuca rubra*, False Oat Grass *Arrhenatherum elatius*, Creeping Bent *stolonifera*, Cock's-foot *Dactylis glomerata*, Yorkshire Fog *Holcus lanatus*, Annual Meadow Grass *Poa annual* and Timothy *Phleum pratense*, together with Creeping Thistle *Cirsium arvense*, Dandelion *Taraxacum* agg., Broad-leaved Dock *Rumex obtusifolius*, Ribwort Plantain, Yarrow *Achillea millefolium*, White Clover *Trifolium repens*, Red Clover *Trifolium pratense*, Creeping Buttercup *Ranunculus repens*, Cut Leaved Crane's bill *Geranium dissectum*, Oxeye Daisy and Smooth Cat's-ear *Hypochaeris glabra*.

3.8. Tree Belt

- 3.8.1. Along the north of the Site a tree belt is present. The tree belt is seen to be semi-mature to mature in nature (see Photograph 3). Species present include Ash *Fraxinus excelsior*, Sycamore *Acer pseudoplatanus*, Crack Willow *Salix fragilis*, White Poplar *Populus alba*, Wild Privet *Ligustrum vulgare*, Elder *Sambucus nigra*, Italian Alder *Alnus cordata*, Hawthorn *Crataegus monogyna*, Dogwood *Cornus sanguinea*, Elm *Ulmus minor* subsp. *minor*, Hazel *Corylus avellana*, Butterfly Bush, Dog-rose *Rosa canina* and Honeysuckle *Lonicera periclymenum*.
- 3.8.2. The ground flora supports Creeping Thistle, Ribwort Plantain, Red Dead-Nettle *Lamium purpureum*, Cleavers, Herb Robert *Geranium robertianum*, Common Nettle, Willowherb *Epilobium* sp., *Iris* sp., Ground Elder *Aegopodium podagraria*, Wall Lettuce *Mycelis muralis*, Upright Hedge Parsley *Torilis japonica*, Yarrow, Broad-leaved Dock, *Clematis* sp., Bramble, Oxeye Daisy and Ivy *Hedera helix*.
- 3.8.3. It is noted that the majority of the tree belt is subject to a Tree Preservation Order (TPO).

3.9. Watercourse

- 3.9.1. A small watercourse, both narrow and shallow, flows within the tree belt to the north of the Site. The watercourse is heavily shaded by the tree belt canopy and as such there is little aquatic or emergent vegetation associated with the watercourse.

3.10. Building

3.10.1. Two small buildings / structures are present within the Site these are labelled B1 and B2 on Plan ECO2 and described below.

3.10.2. B1 is located in the north of the Site. The building is a single storey brick building with a flat felted roof. The building is in a state of disrepair, the doors that appear to have provided access to the building have been removed and some of the brick work is collapsing (see Photograph 4).

3.10.3. B2 is a large metal shipping container used for storage (Photograph 5).

3.11. **Bramble Thicket**

3.11.1. A Bramble thicket is present along the northern boundary of the hardstanding (see Plan ECO2). The Bramble has developed through a lack of management as the Bramble is encroaching from the tree belt to the north.

3.12. **Trees**

3.12.1. In addition to the trees present within the tree belt to the north of the Site there are also a number of semi-mature to mature trees within the Site. These are largely associated with the western Site boundary and comprise Turkey Oak *Quercus cerris*, Crack Willow, Sycamore, Oak, Cherry *Prunus* sp. and Hawthorn.

3.12.2. Some semi-mature amenity trees are planted within the car park area within the south of the Site. Species here include London Plane *Platanus hispanica* and Silver Birch *Betula pendula*.

3.12.3. A number of the amenity trees present during the 2010 surveys have since been removed from within the former car park areas in the south of Site.

3.12.4. It is understood that a number of trees along the western Site boundary are subject to TPOs.

3.13. **Scrub**

3.13.1. Areas of scrub are present across the Site in scattered form whilst more continuous areas of scrub area associated with the north-eastern area of the Site (see Photograph 6).

3.13.2. Scrub species present across the Site include Crack Willow, Butterfly Bush, Cotoneaster, White Poplar, Dogwood, Silver Birch, Downy Birch, Alder, Ash and Bramble.

3.14. **Amenity Planting**

3.14.1. There are very limited areas of amenity planting within the Site. Areas are associated with the car park area in the south of the Site (see Plan ECO2) and include Rose-of-Sharon *Hypericum calycinum* and *Elaeagnus* sp..

3.15. **Gravel**

3.15.1. A small area of loose gravel surrounds the building in the north-east of the

Site (see Photograph 3). The gravel is being colonised by Crack Willow which is providing pioneering scrub in this area.

3.16. Background Records

- 3.16.1. Records sourced from the TVERC show no records for any rare / notable or specially protected plant species occurring within the Site. Although there are several records for rare / notable plant species occurring within the wider search area.

4. WILDLIFE USE OF THE SITE

- 4.1. General observations were made during the surveys of any faunal use of the Site with specific attention paid to the potential presence of protected species.

4.2. Bats

- 4.2.1. The building presents within the Site was assessed for their potential to support roosting bats in July 2010 and November 2018. The buildings are considered to offer negligible roosting opportunities.
- 4.2.2. Two trees within the Site are considered to support potential roosting features (PRF) (see Plan ECO2). An Oak tree on the western boundary has significant Ivy growth together with several rot holes and split limbs that are considered to have low to medium potential to support roosting bats. A dead tree on the northern boundary provides limited roosting opportunities through areas of peeling bark.
- 4.2.3. The Site is considered to offer limited foraging and dispersal opportunities for any local bat populations as whole. The habitats of greater interest for bat in the context of the Site are the individual trees, scrub and tree belt, whilst the scattered scrub could offer some limited opportunities.
- 4.2.4. Information received from the Berkshire and South Buckingham Bat Group shows two roosts within the search area. A Brown Long-eared *Plecotus auritus* bat roost is located 2km west of the Site, and a Pipistrelle *Pipistrellus* sp. roost is located approximately 2.1km south of the Site.

4.3. Badgers

- 4.3.1. No evidence of Badger was recorded within or immediately adjacent to the Site during the course of the survey. The Site is considered to offer extremely limited opportunities for this species largely lacking in suitable foraging habitats.
- 4.3.2. Information sourced from Binfield Badger Group identified a number of records of Badgers within the search area. However, no records are within or adjacent to the Site. The nearest record is that of a RTA from approximately 0.5 km to the west of the Site. The nearest record of a live Badger is that of a record from approximately 1.4km west of the Site.
- 4.3.3. Given the lack of evidence recorded and the nature of the Site offering extremely limited opportunities for this species, it is not considered necessary to have any further regard to Badger as part of this assessment.

4.4. Other Mammals

- 4.4.1. It is considered that a number of common mammals would utilise the Site, with a Roe Deer *Capreolus capreolus* observed walking through the Site in 2010 with continued evidence of this species during the 2018 surveys.
- 4.4.2. The watercourse is not considered to be suitable for either Water Vole *Arvicola amphibius* or Otter *Lutra lutra*, whilst no evidence for either of these species was recorded during the specific checks made during the habitat survey.

4.4.3. The Site provides some suitable habitats for Hedgehog *Erinaceus europaeus* in the form of the tree belt and areas of developed scrub.

4.4.4. Information sourced from the TVERC shows records of Water Vole from within the search area. The nearest record being located approximately 1km to the north-west of the Site.

4.5. **Birds**

4.5.1. The Site offers some opportunities for nesting and foraging birds within the tree belt, standard trees, amenity planting and areas of scattered scrub.

4.5.2. Relatively few bird species were recorded within the Site during the course of the surveys. Species present include Blackbird *Turdus merula*, Green Woodpecker *Picus viridis*, Long-Tailed Tit *Aegithalos caudatus*, Goldfinch *Carduelis carduelis*, Magpie *Pica pica*, Wren *Troglodytes troglodytes*, Blackbird *Turdus merula*, Wood Pigeon *Columba palumbus*, Blue Tit *Cyanistes caeruleus*, Great Tit *Parus major* and Chaffinch *Fringilla coelebs*. In addition, a Heron *Ardea cinerea* was recorded flying above the Site in 2010.

4.5.3. Information sourced from the TVERC shows no records of any Schedule 1 bird species occurring within the Site or immediately adjacent to the Site.

4.6. **Reptiles**

4.6.1. It is considered that the Site supports very limited opportunities for common reptiles. It is considered highly unlikely that even the more suitable habitat, namely the tree belt, would support any common reptiles on account of its isolation from other areas of suitable habitat and being within a heavily developed area.

4.6.2. Information received from the TVERC shows several records for Slow-Worm *Anguis fragilis*, Common Lizard *Zootoca vivipara* and Grass Snake *Natrix helvetica* from within the search area. The nearest such record is that of a Slow-Worm located approximately 0.3km south-east of the Site.

4.6.3. Given the lack of opportunities present within the Site and results obtained from the data search it is not considered that any further regard to common reptiles is necessary as part of this assessment.

4.7. **Amphibians**

4.7.1. There are no waterbodies within the Site boundaries.

4.7.2. There are two waterbodies adjacent to the Site and separate by existing dispersal barriers. These ponds are also considered to be ornamental in nature and considered to be of limited ecological value. Nonetheless, even in the unlikely event that the waterbodies do support breeding amphibians, it is considered the Site offers very limited opportunities for this group during their terrestrial phase.

4.7.3. Information sourced from the TVERC shows several records for Great Crested Newt *Triturus cristatus* within the search area, but well removed

from the Site. The nearest record to the Site is that of a recording from 2009 being approximately 2.7km to the south-west of the Site.

- 4.7.4. Given the above and nature of the development it is not considered that any further regard to this group is necessary as part of this assessment.

4.8. Invertebrates

- 4.8.1. The majority of the Site is considered to be of limited value for invertebrates, being principally existing areas of hardstanding.
- 4.8.2. The natural habitats within the Site are expected to support a range of common invertebrate species, although there is no evidence to suggest that any more notable species are likely to be present. It is likely that the tree belt, developed scrub and watercourse hold the most entomological interest in the context of the Site.
- 4.8.3. In the absence of active management, the Site's entomological interest is increasing through natural succession, however, the Site has not advanced sufficiently in terms of a brownfield site to offer the heightened entomological interest.
- 4.8.4. Information received from TVERC shows no records of any notable or scarce invertebrate species from within or immediately adjacent to the Site.

5. ECOLOGICAL EVALUATION

5.1. The Principles of Site Evaluation

- 5.1.1. The latest guidelines for ecological evaluation produced by CIEEM propose an approach that involves professional judgement, but makes use of available guidance and information, such as the distribution and status of the species or features within the locality of the project.
- 5.1.2. The methods and standards for site evaluation within the British Isles have remained those defined by Ratcliffe (1977⁴). These are broadly used across the United Kingdom to rank sites, so priorities for Nature Conservation can be attained. For example, current SSSI designation maintains a system of data analysis that is roughly tested against Ratcliffe's criteria.
- 5.1.3. In general terms, these criteria are size, diversity, naturalness, rarity and fragility, while additional secondary criteria of typicalness, potential value, intrinsic appeal, recorded history and the position within ecological and geographical units are also incorporated into the ranking procedure.
- 5.1.4. In addition, any assessment should not judge sites in isolation from others, since several habitats may combine to make it worthy of importance to nature conservation.
- 5.1.5. Further, relying on the national criteria would undoubtedly distort the local variation in assessment and therefore additional factors need to be taken into account, e.g. a woodland type with a comparatively poor species diversity, common in the south of England may be of importance at its northern limits, say in the border country.
- 5.1.6. Habitats of local importance are often highlighted within a local Biodiversity Action Plan⁵ (BAP). The Berkshire BAP highlights a number of habitats and species within the local area that have a Biodiversity Action Plan. Where these occur within the Site they are highlighted below.
- 5.1.7. Levels of importance can be determined within a defined geographical context from the immediate site or locality through to the International level.
- 5.1.8. The legislative and planning policy context are also important considerations and have been given due regard throughout this assessment.

5.2. Habitat Evaluation

Designated Sites

- 5.2.1. **Statutory sites:** Information sourced from the TVERC together with analysis of online statutory designation maps shows that there are no statutory designated sites within or adjacent to the Site (see Plan ECO1).

⁴ Ratcliffe, D A (1977). *A Nature Conservation Review: the Selection of Sites of Biological National Importance to Nature Conservation in Britain*. Two Volumes. Cambridge University Press, Cambridge.

⁵ <http://www.ukbap.org.uk/lbap.aspx?id=484>

- 5.2.2. The closest such site is Pearman's Copse Local Nature Reserve (LNR) which is located approximately 2km east of the Site and is separated from the Site by existing development (see Plan ECO1).
- 5.2.3. It is considered that the separation of this LNR from the Site precludes any likely adverse effects as a result of any development proposals.
- 5.2.4. **Non-statutory sites:** Information sourced from the TVERC shows that there are no non-statutory designated sites within the Site although Great Lea Pond County Wildlife Site (CWS) lies approximately 0.5km to the south-west of the Site (see Plan ECO1). The CWS is separated from the Site by existing development, including the M4 motorway, and as such is considered to be adequately buffered from the Site as to be unaffected by any redevelopment works.

Habitats

- 5.2.5. The vast majority of the Site is considered to be of low intrinsic value from a nature and conservation perspective and relatively constraint free. Relative greater value can be attributed to the tree belt, individual trees and watercourse, although none of these habitats are considered to be of any significant interest. Nonetheless, on account of their perceived landscape value TPOs have been placed on the tree belt to the north and over the trees on the western Site boundary. It is advised that the tree belt and individual trees be safeguarded and retained as part of any developing proposal. All trees to be retained should be subject to the necessary protection in line with BS 5837 2012.
- 5.2.6. It is recommended that some management prescriptions are incorporated into the tree belt to improve the structure and diversity such that the ecological value can be raised accordingly.
- 5.2.7. Management should seek to complete some thinning of the tree belt and allow increased light levels to reach both the field layer and watercourse. This would aid in the establishment of aquatic and emergent vegetation within the watercourse and provide a more diverse field layer within the tree belt.
- 5.2.8. Any timber from felling / management operations should be cut and left within the tree belt as dead-wood piles to provide benefits for saproxylic organisms.
- 5.2.9. In addition to the above the watercourse's banks could be re-profiled, on agreement with the Environment Agency, such that a greater diversity of aquatic, marginal and emergent species could become established.
- 5.2.10. It is advised that where feasible any new landscaping planting seeks to utilise native species or species of known wildlife value. Where possible it may be possible to complement the retained features of ecological interest across the Site through habitat creation or bolster planting.
- 5.2.11. Any on-site attention should seek to address the hydrological requirements but also advanced the biodiversity gains through sensitive design, planting and management.

5.3. Faunal Evaluation

Bats

Legislation

- 5.3.1. All bats are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and included on Schedule 2 of the Conservation of Habitats and Species Regulations 2017 ("the Habitats Regulations"). These include provisions making it an offence to:
- Deliberately kill, injure or take (capture) bats;
 - Deliberately disturb bats in such a way as to be likely –
 - to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or to hibernate; or
 - to affect significantly the local distribution or abundance of the species concerned;
 - Damage or destroy any breeding or resting place used by bats;
 - Intentionally or recklessly obstruct access to any place used by bats for shelter or protection (even if bats are not in residence).
- 5.3.2. The words deliberately and intentionally include actions where a court can infer that the defendant knew that the action taken would almost inevitably result in an offence, even if that were not the primary purpose of the act.
- 5.3.3. The offence of damaging or destroying a breeding site or resting place (which can be interpreted as making it worse for the bat) is an absolute offence. Such actions do not have to be deliberate for an offence to be committed.
- 5.3.4. European Protected Species licences are available from Natural England in certain circumstances, and permit activities that would otherwise be considered an offence.

Site Usage

- 5.3.5. Two trees within the Site are considered to support PRFs for bats. These are tied to the presence of significant Ivy, a series of rot holes and split limbs on an Oak tree associated with the western Site boundary. This tree is considered to have low to medium roosting potential. Further roosting opportunities are presented by a dead tree with peeling bark on the northern Site boundary. This tree is considered to have low bat roosting potential.
- 5.3.6. The Site is considered to offer some limited opportunities for foraging bats in the form of the tree belt, trees, scrub, and to a lesser extent the areas of scattered scrub and amenity planting.

Mitigation and Enhancements

- 5.3.7. The Oak tree with low to medium bat potential should be retained and protected as part of development works. Should the tree be scheduled for removal it is advised that further survey work is completed to confirm the absence of any roost prior to removal. In respect of the dead tree with low

roosting potential it is advised that the removal of this tree is completed under a soft felling technique.

- 5.3.8. It is expected that through the retention of the existing suitable foraging habitat and bolster tree planting that will be completed as part of the development proposals, net gains will be achieved over the existing situation for any local bat populations. Consideration to artificial lighting and light spill should be considered as part of the proposed lighting design. Whilst the Site is already subject to artificial lighting efforts should be made to reduce light spillage where feasible, and particularly restrict lighting on to the features of retained ecological value, namely the more mature trees and tree belt in the north of the Site.
- 5.3.9. Bat boxes (e.g. Schwegler 1FF) could be positioned on suitable locations within the tree belt / retained trees to provide opportunities for this group post development. The retention of the Oak tree with bat potential together with the provision of several bat boxes across the tree belt would present a net gain over the current situation.

Hedgehogs

Legislation

- 5.3.10. Hedgehog is a species of principal importance for the conservation of biodiversity under Section 41 (England) of the NERC Act 2006.
- 5.3.11. The NERC Act 2006 requires the Secretary of State to:
- ... take such steps as appear... to be reasonably practicable to further the conservation of the living organisms and types of habitat included in any list published under this section, or... promote the taking by others of such steps.

Site Usage

- 5.3.12. No evidence of Hedgehogs was recorded during the survey work undertaken. However, the site contains some suitable foraging, shelter / hibernation and dispersal habitats for Hedgehog.

Mitigation

- 5.3.13. It is considered that any scheme shall retain the majority of the Hedgehog habitat within the site.
- 5.3.14. Any clearance of log piles or other Hedgehog shelter features should be subject to inspection to ensure that Hedgehogs are absent. In the event that an individual is encountered, it should be carefully placed in an appropriate lidded box and immediately removed to an area of suitable habitat at the margins of the site away from working areas. Any vegetation clearance should be carried out in a systematic and controlled manner to allow Hedgehogs to disperse.
- 5.3.15. It is advised that post the development the Site remains permeable for less mobile species such as Hedgehog with access points providing in any boundary fencing.

Birds

Legislation

- 5.3.16. Section 1 of the Wildlife & Countryside Act 1981 is concerned with the protection of wild birds, whilst Schedule 1 lists species that are protected by special penalties. All species of birds receive general protection whilst nesting.

Site Usage

- 5.3.17. The Site offers opportunities for nesting birds within the tree belt, individual trees, scrub, amenity planting and to a lesser extent the areas of scattered scrub. The above habitats are also likely to provide suitable foraging habitats for a range of common bird species.

Mitigation and Enhancements

- 5.3.18. No clearance of suitable nesting habitat should be undertaken during the nesting season (March to July inclusive). Should any vegetation be required to be cleared during this nesting season then the vegetation will be first checked for any nesting birds by a suitably qualified ecologist. If any nesting birds are recorded the vegetation will be left *in situ* until, any fledglings have left the nest.
- 5.3.19. The tree belt and mature trees within the Site are understood to be retained as part of any development proposals.
- 5.3.20. It is recommended that new landscape planting within any development proposals contain native species and / or those of known benefit to wildlife. Such measures may provide enhanced nesting and foraging opportunities for a range of bird species in the local area.
- 5.3.21. Bird nesting boxes of various designs could be erected on retained trees and new buildings within the Site as appropriate to increase the nesting opportunities and potentially attract species which are currently absent from the Site.
- 5.3.22. The development also has the potential to provide new opportunities for Black Redstart *Phoenicurus ochruros*, a species that is known to be present within the local area. It is recommended that consideration is made to providing suitable opportunities on the flat roofs of the buildings. This can be simply achieved through gravelling the buildings' roofs and providing some nesting depressions. Nest boxes for this species could also be provided.
- 5.3.23. It is considered that opportunities for Swift *Apus apus* could be incorporated into the design of the new buildings within the Site. It is recommended that the feasibility of the provision of Swift nesting ledges / boxes is explored.

Invertebrates

- 5.3.24. No evidence of rare or notable invertebrate species was noted within the Site during the course of the survey, though the Site is expected to support a range of common invertebrate species.

Mitigation and Enhancements

- 5.3.25. No specific mitigation is likely to be required, though enhancements to grassland habitats and additional landscaping incorporating native species and species of known wildlife value would likely benefit this group.
- 5.3.26. It is recommended that any management of the tree belt retains wood within the tree belt as dead wood piles. The provision of dead wood will offer opportunities and benefits to saproxylic organisms.
- 5.3.27. The creation of sinuous margins of long grassland will allow for grasses and herbaceous species to flower such that benefits will arise to local invertebrate species.

6. POLICY BACKGROUND

- 6.1. The planning policy framework that relates to nature conservation in Reading is issued at two main administrative levels: nationally through National Planning Policy Framework (NPPF), and locally through the Reading Borough Core Strategy and emerging Local Plan. Any proposed development will be judged in relation to the policies contained within these documents.

6.2. National Policy

National Planning Policy Framework

- 6.2.1. Guidance on national policy for biodiversity and geological conservation is provided by the NPPF, published in March 2012 and revised on 24 July 2018. It is noted that the NPPF continues to refer to further guidance in respect of statutory obligations for biodiversity and geological conservation and their impact within the planning system provided by Circular 06/05 (DEFRA / ODPM, 2005) accompanying the now-defunct Planning Policy Statement 9 (PPS9).
- 6.2.2. The key element of the NPPF is that there should be “a *presumption in favour of sustainable development*” (paragraphs 10 to 11). It is important to note that this presumption “*does not apply where development requiring Appropriate Assessment because of its potential impact on a habitats site is being planned or determined*” (paragraph 177). ‘Habitats site’ has the same meaning as the term ‘European site’ as used in the Habitats Regulations 2017.
- 6.2.3. A Government consultation is currently underway to address the difficulty presented by paragraph 177 in light of the People Over Wind case, which is considered further below. Paragraphs 39 to 42 of the consultation paper⁶ are as follows:

“39. Following the ruling of the European Court of Justice on case C323/17 (People over Wind, Peter Sweetman v Coillte Teoranta), we propose to make one additional clarification to national planning policy.

40. The effect of the ruling is that appropriate assessment of habitats impacts is required in plan-making and decision-making whenever there is a potential impact on a habitats site, regardless of any mitigation measures proposed.

41. One of the measures which the National Planning Policy Framework takes to protect habitats sites is to disengage the presumption in favour of sustainable development where there is potential for harm to these sites. However the judgment means that sites with suitable mitigation are now excluded from the application of the presumption, which was not the intention of the policy.

42. To rectify this we propose to amend paragraph 177 of the Framework to make clear that the presumption is disapplied only where an appropriate

⁶ Ministry of Housing, Communities and Local Government (2018). *Technical consultation on updates to national planning policy and guidance*. HMSO, London.

assessment has concluded that there is no suitable mitigation strategy in place. The revised paragraph would read:

177. 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 there will be no adverse effect from the plan or project on the integrity of the habitats site."

- 6.2.4. Hence the direction of Government policy is clear; that is, the presumption in favour of sustainable development is to apply in circumstances where there is potential for an effect on a European site, if it has been shown that there will be no adverse effect on that designated site as a result of the development in prospect.
- 6.2.5. A number of policies in the NPPF are comparable to those in PPS9, including reference to minimisation of impacts to biodiversity and provision of net gains to biodiversity where possible (paragraph 170).
- 6.2.6. The NPPF also considers the strategic approach that Local Authorities should adopt with regard to the protection, maintenance and enhancement of green infrastructure, priority habitats and ecological networks, and the recovery of priority species.
- 6.2.7. Paragraphs 174 to 176 of the NPPF comprise a number of principles that Local Authorities should apply, including encouraging opportunities to incorporate biodiversity in and around developments; provision for refusal of planning applications if significant harm cannot be avoided, mitigated or compensated for; applying the protection given to European sites to potential SPAs, possible SACs, listed or proposed Ramsar sites and sites identified (or required) as compensatory measures for adverse effects on European sites; and the provision for the refusal for developments resulting in the loss or deterioration of 'irreplaceable' habitats – unless there are 'wholly exceptional reasons' (for instance, infrastructure projects where the public benefit would clearly outweigh the loss or deterioration of habitat) and a suitable compensation strategy exists.
- 6.2.8. National policy therefore implicitly recognises the importance of biodiversity and that with sensitive planning and design, development and conservation of the natural heritage can co-exist and benefits can, in certain circumstances, be obtained.

6.3. Local Policy

Reading Borough Local Development Framework (Core Strategy) (adopted January 2008)

- 6.3.1. The Borough of Reading Core Strategy was adopted in January 2008. The Core Strategy sets out the planning framework for the Borough of Reading. Two policies relate in whole or part to nature conservation.
- 6.3.2. Policy CS36 relates to biodiversity and geology. It states that development should retain, protect and incorporate features of biodiversity. It goes on to state that development will not be permitted on sites with recognised biodiversity value, unless a need is demonstrated, or appropriate mitigation

is provided. No development will be permitted for a development that will adversely affect an LNR, CWS or established wildlife link. Where applicable, development should aim to protect, extend and enhance the network of wildlife links and corridors.

- 6.3.3. Policy CS38 regards trees, hedges and woodlands and states that individual trees, groups of trees, hedges and woodland will be protected from damage or removal. It also states that the Borough's vegetation cover should be extended as part of development.

Reading Borough Local Plan Pre-Submission Draft (November 2017)

- 6.3.4. This document has been sent to the Secretary of State for approval. Although not currently adopted, this draft Local Plan will shape the future of decision making within the borough. The two policies regarding nature conservation have been carried across to the new Local Plan, with a few amendments.
- 6.3.5. Policy EN12 relates to biodiversity and the Green Network. It states that the identified Green Network shall be maintained, protected, extended and enhanced. Development will not be permitted where it affects sites with identified interest or fragments the Green Network. It also states that on all sites, development should not result in a loss of biodiversity, and protect features of biodiversity interest and provide new wildlife friendly landscaping and ecological enhancements.
- 6.3.6. Policy EN14 relates to trees, hedges and woodlands and states that individual trees, groups of trees, hedges and woodland will be protected from damage or removal where they are of importance. New development should include new tree planting so as to improve the vegetation cover of the Borough.

6.4. Discussion

- 6.4.1. It is considered that the Site is intrinsically low in ecological interest. The habitats of interest within the context of the Site, namely the tree belt and more mature trees are likely to be protected and retained. There are no statutory or non-statutory sites in close proximity to the site. Redevelopment of the site presents the opportunity to implement local biodiversity enhancements. In summary, it is considered that the relevant policy requirements will be met.

7. SUMMARY AND CONCLUSIONS

- 7.1. Ecology Solutions was commissioned by Macgregor Smith Limited to undertake an ecological assessment of Reading International Phase 3, Reading, Berkshire.
- 7.2. In order to compile background information on the Site and its immediate surroundings information was sourced from Thames Valley Environment Resource Centre, Binfield Badger Group and Berkshire and South Buckingham Bat Group.
- 7.3. The 3.6 ha Site was subject to surveys in July 2010 and November 2018 in order to identify the main habitats, the broad plant species present and to determine their ecological significance.
- 7.4. General faunal activity observed during the course of the survey was recorded, whether visually or by call. Specific attention was paid to the potential presence of any protected, rare, notable or priority species. Furthermore, specific surveys were carried out in respect of bats and Badgers in July 2010 and repeated in November 2018.
- 7.5. There are no statutory designated sites within or adjacent to the Site. The closest such site is Pearman's Copse Local Nature Reserve (LNR) which is located approximately 2km east of the Site and is separated from the Site by existing development and shall not be impacted upon as the result of any redevelopment of the Site.
- 7.6. There are no non-statutory designated sites within the Site, the nearest such site is that of Great Lea Pond County Wildlife Site (CWS) located approximately 0.5km south-west of the Site. The CWS is separated from the Site by the M4 motorway and existing development. As such, it is considered this non-statutory designated site is sufficiently buffered as to be unaffected by any redevelopment of the Site.
- 7.7. The Site is of low intrinsic value from an ecological perspective, although the tree belt, trees and watercourse are considered to be of greater ecological value within the context of the Site as a whole. All of the features of ecological merit within the Site are to be fully safeguarded and retained as part of the development proposals.
- 7.8. It is expected that increases in the Site's floristic richness and diversity can be obtained through the implementation of the sensitively designed landscape scheme and future management prescriptions. It is recommended that a diverse mixture of native species be used in any new planting to provide biodiversity gains and increase the nature conservation value of the Site accordingly. Additional recommendations have been made in order to improve existing habitats and seek to increase their floristic diversity and value.
- 7.9. In regard to protected species the Site has been subject to specific species surveys. The Site supports two trees that are considered to provide some (low to medium) roosting potential for bats. One of these trees, with elevated interest should be retained as part of the development or otherwise subject to further survey work. The dead tree providing limited potential should be removed via soft felling techniques. In addition, the Site is likely to support foraging and commuting bats and birds whilst nesting. The scheme should seek to protect and retain features of greatest interest for these groups. In addition, new habitat

creation and sensitive management of both new and retained habitats would provide net gains for species currently present and seek to attract new species into the Site post development.

- 7.10. No issues have been identified which would provide an insurmountable constraint to development at the Site, and as such it is considered that the Site could come forward for redevelopment in so far as ecological issues are concerned. Moreover through the redevelopment of the Site it is expected that the Site's ecological value can be raised accordingly with net benefits achieved for biodiversity.

PLANS

PLAN ECO1

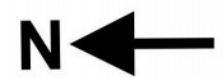
Site Location and Ecological Designations

PLAN ECO2

Ecological Features



- KEY:**
- SITE BOUNDARY
 - TREE
 - HARDSTANDING / COMPACTED HARDCORE
 - RE-COLONISING GROUND
 - TREE BELT
 - WATERCOURSE
 - BRAMBLE THICKET
 - AMENITY GRASS
 - SCRUB
 - SCATTERED SCRUB
 - BUILDING
 - AMENITY PLANTING
 - SECURITY FENCING
 - GRAVEL
 - TREE WITH POTENTIAL TO ROOSTING BATS



7695: READING INTERNATIONAL
BP PHASE 3, READING,
BERKSHIRE

PLAN ECO2: ECOLOGICAL
FEATURES

PHOTOGRAPHS

PHOTOGRAPH 1: Existing Hardstanding



PHOTOGRAPH 2: Re-Colonising Ground



PHOTOGRAPH 3: Tree Belt



PHOTOGRAPH 4: Building B1 and Surrounding Gravel



PHOTOGRAPH 5: Building B2



PHOTOGRAPH 6: Scrub



APPENDICES

APPENDIX 1

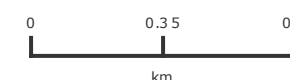
Information downloaded from Multi-Agency
Geographic Information for the Countryside (MAGIC)



Legend

- Local Nature Reserves (England)
- National Nature Reserves (England)
- Ramsar Sites (England)
- Proposed Ramsar Sites (England)
- Sites of Special Scientific Interest (England)
- Special Areas of Conservation (England)
- Possible Special Areas of Conservation (England)
- Special Protection Areas (England)
- Potential Special Protection Areas (England)
- Ancient Woodland (England)**
 - Ancient and Semi-Natural Woodland
 - Ancient Replanted Woodland

Projection = OSGB36
 xmin = 466400
 ymin = 166700
 xmax = 476400
 ymax = 171700



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ecology solutions

ecology solutions ltd • cokenach estate • barkway • royston • hertfordshire • SG8 8DL
t 01763 848084 e east@ecologysolutions.co.uk w www.ecologysolutions.co.uk

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