Ecological Baseline Conditions

Shorts Park, Cardington

July 2020

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Quality Assurance – Approval Status

This document has been prepared and checked in accordance with
Waterman Group's IMS (BS EN ISO 9001: 2015, BS EN ISO 14001: 2015 and BS EN ISO 45001:2018)

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First	June 2020	[redacted]	[redacted]	[redacted]
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Comments

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We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above.

This report is confidential to the client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at its own risk.

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1. Introduction

1.1. This report has been prepared by Waterman Infrastructure & Environment Ltd (Waterman IE) on behalf of Gallagher Developments (hereafter referred to as the 'Client'). It outlines the existing baseline conditions at Shorts Park, Cardington, Bedford (hereafter referred to as the 'Site'). The location and extent of the Site is provided within **Figure 1**.

1.2. The Site is centred on approximate grid reference TL 0848 4662 and is approximately 14.49ha in size. The Site is dominated by semi-improved neutral grassland, with areas of hard-standing and ephemeral / tall ruderal vegetation also present. An attenuation pond, which is surrounded by newly planted linear scrub lies within the north of the Site, together with an area of newly planted woodland installed to provide a screening buffer from the EMA to several parcels of land proposed for development known as the Eastern Land Parcel (ELP) and South Eastern Land Parcel (SELP).

1.3. The Site is bound by:

- An access road to the north, further north of which lies the ELP and SELP for which several historic planning permissions have been granted, with a new full planning application for these parcels to be submitted in 2020;
- To the south and east by an Ecological Mitigation Area (EMA) that has be partially constructed and is associated with the Western Land Parcel (WLP), for which planning permission was granted in 2019 (ref. 10/01745/MAR), as well as the ELP and SELP developments; and
- To the west by further areas of semi-improved grassland and hardstanding as well as the RAF Cardington Hangers.

1.4. The purpose of this report is to provide ecological information with regard to the Site as part of a 'Vision Document' to be submitted to Bedford Borough Council as part of its forthcoming Local Plan review.

2. Methodology

2.1. This report is based on the results of an 'Extended' Phase 1 Habitat Survey which was undertaken across the wider former RAF Cardington site (which included the site itself) in September 2019, as well as the results of previous ecological data searches, including a review of online data sources such as the Multi-Agency Geographic Information for Countryside (MAGIC) website and Bedford Borough Council interactive policies maps.

Ecological Data Search

2.2. A previous ecological data search was undertaken in April 2018 to collate any records for protected and notable species of fauna and flora submitted since the previous ecological data search was undertaken for the Site in 2011.

2.3. A 1km radial search was undertaken for non-statutory designated sites as well as protected and other notable species of fauna and flora. Records were obtained from the Bedfordshire & Luton Biodiversity Recording and Monitoring Centre (BRMC) and the Bedfordshire Bat Group.

2.4. Whilst obtaining existing records is an important part of the evaluation process, as it provides additional information that may not be apparent during a site survey, given its age and that no new records for designated sites (including following a review of MAGIC and the Bedford Borough Council interactive policies maps), or protected or notable species which would be affected by the Development were returned, a further updated ecological data search was not considered to be required in this instance given our long standing knowledge of the site.

2.5. A summary of the ecological data search results has been included within this Technical Note where relevant. Full results can be made available on request, subject to permission from the copyright holder.

'Extended' Phase 1 Habitat Survey

2.6. An 'Extended' Phase 1 Habitat Survey was undertaken across the wider former RAF Cardington site (including the Site itself) on 11th September 2019, based on the Joint Nature Conservancy Council (JNCC, 2010) standard 'Phase 1' survey technique. The Phase 1 Habitat Survey methodology was 'Extended' by undertaking an assessment of the Assessment Site to support protected and notable floral and faunal species. All habitat types within the Assessment Site were mapped with target notes (**Figure 1**) where appropriate.

2.7. The 'Extended' Phase 1 Habitat Survey was conducted within of the optimal season (April-September) when the majority of plant species are visible, and the timing of the survey was considered appropriate for the purpose of this report and given Waterman IE's previous involvement and the extensive knowledge of the Site.

2.8. The 'Extended' Phase 1 Habitat Survey was undertaken by an experienced and suitably qualified ecologist with over nine years' ecological consultancy experience and who is also a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM).

2.9. The Site does not contain any buildings, or mature trees suitable for supporting roosting bats and therefore a ground based Preliminary Roost Assessment (PRA) for bats was not required in this instance.

3. Results

Ecological Data Search

Designated Sites

3.1. No new statutory or non-statutory sites designated for nature conservation interest were returned from the update ecological data search (including a review of MAGIC and the Bedford Borough Council interactive policies maps). The nearest statutory designated site is Southill Lake and Woods SSSI, located approximately 6km south-east from the nearest Site boundary. The nearest the non-statutory designated Local Wildlife Site (LWS) Old Warren Dis-used Railway, located approximately 1km south-east from the nearest Site boundary. It should be noted that an undesignated section of this dis-used railway line runs along the north-eastern boundaries of the ELP and SELP.

Species Records

3.2. No new records for species that have the potential to be impacted upon by any future development beyond those identified as part of previous survey work undertaken across the wider former RAF Cardington site were returned within the Development's potential Zone of Influence (considered to be a 1km radius).

Habitats

3.3. The following habitat descriptions should be read in conjunction with the Habitat Features Plan provided within **Figure 1** and the photographs (Plates) provided within **Appendix C**.

Semi-Improved Grassland

3.4. Semi-improved grassland dominates the Site (**Appendix C**, Plate 1). Species recorded include Yorkshire fog *Holcus lanatus*, false oat-grass *Arrhenatherum elatius*, common bent *Agrostis capillaris*, creeping bent *Agrostis stolonifera*, cocksfoot *Dactylis glomerata*, common cat's ear *Hypochaeris radicata*, bird's-foot trefoil *Lotus corniculatus*, yarrow *Achillea millefolium*, black knapweed *Centaurea nigra*, creeping cinquefoil *Potentilla reptans*, autumn hawkbit *Scorzoneroides autumnalis*, ribwort plantain *Plantago lanceolata* small-leaved timothy *Phleum bertolonii*, common couch *Elymus repens*, and St John's wort *Hypericum sp*.

3.5. Historically the Site has been regularly manged to between 50-100mm to maintain its purpose as an airfield. Recently (from approximately 2018) this management has changed, and it is currently understood to be subject to a regular management regime. This management regime comprises maintaining a c.20m buffer between the Site and the EMA through maintaining this area <100mm by cutting every 3-4weeks, with the remainder of the Site cut 2 / 3 times per year.

Ephemeral and Tall Ruderal Vegetation

3.6. Along the eastern boundary of the Site is a recently created (c.2018) bund which has been created in association with works undertaken as part of the wider former RAF Cardington development. This bund predominantly comprises bare ground with course grasses as well as being interspersed with ephemeral and tall ruderal species. Species recorded comprise bristly ox-tongue *Helminthotheca echioides*, spear thistle *Cirsium vulgare*, ribwort plantain *Plantago lanceolata*, ragwort *Jacobaea vulgaris*, fleabane ***Pulicaria dysenterica***, willowherb *Epilobium* sp., broad-leaved dock *Rumex obtusifolius*, teasel ***Dipsacus fullonum***, weld *Reseda luteola* and hogweed

Heracleum sphondylium.

Attenuation Pond

3.7. In line with the previous granted planning permissions for the wider former RAF Cardington site, an attenuation pond has been constructed within the north of the Site. At the time of survey, small areas of standing water were present, with no outfalls recorded. Aquatic vegetation in the form of common reedmace ***Typha*** *latifolia*and rush sp. *Juncus sp.* has become established (**Appendix C**, Plate 2).

Scrub

3.8. Newly planted (c.2018) linear scrub planting in the form of whips has been planted around the attenuation pond (**Appendix C**, Plate 3). Species planted comprise hawthorn *Cratagous monogyna*, blackthorn *Prunus spinosa*, guelder rose *Vibernum opulus* and dog rose *Rosa canina*.

Screen Buffer Planting

3.9. Within the north of the Site is part of an area of woodland planting in the form of whips and immature tree and understorey species, installed to provide a screening buffer from the EMA to the ELP and SELP (**Appendix C**, Plate 4). Species planted include silver birch *Betula pendula*, field maple *Acer campestre*, crab apple *Malus sylvestris*, wild cherry *Prunus avium*, English oak *Quercus rober*, deodar cedar *Cidrus deodara*, yew *Taxus baccata*, dogwood *Cornus sanguinea*, hazel *Corylus avellana*, holly *Ilex aquifolium*, privet *Ligustrum vulgare* and blackthorn.

Invasive Plant Species

3.10. No invasive plant species were incidentally recorded during the update Ecological Walkover survey.

Protected and Notable Fauna

3.11. The following descriptions should be read in conjunction with the Habitat Features Plan provided within **Figure 1**; **Appendix B**, which provides a summary of those historical ecological assessments undertaken to date as part of the wider former RAF Cardington development; and the photographs (Plates) provided within **Appendix C**.

Amphibians

3.12. The Site provides suitable aquatic and terrestrial habitat for amphibians, including great crested newt *Triturus cristatus*. A new attenuation pond is present within the north of the Site, and a newly created Attenuation Pond and wildlife pond (which is yet to be planted) is present within the EMA (c. 50m south and 150m south-east of the Site boundary respectively). However, no other waterbodies suitable for supporting great crested newt occur within 500m of the Site. In addition, given the findings of those surveys previously undertaken for this species (**Appendix B**), and the distance and intervening habitats between the Site and known populations within the local area (such as at Harrowden House located approximately 680m north-west of the Site), great crested newt are considered likely to be absent from the Site. It should also be noted that no great crested newts were found as part of a reptile translocation exercise and subsequent destructive search and vegetation clearance undertaken in 2018 as part of the wider former RAF Cardington development.

Badger

3.13. Whilst badger *Meles meles* are known to occur within proximity of the Site, no evidence of this species (other than unidentified mammal pathways) was recorded during the 'Extended' Phase 1 Habitat Survey. Given the topography of the Site, being flat and low lying the Site provides limited sett building opportunities. The bund present along the eastern Site boundary offers limited sett building opportunities, with the soil being unlikely to be compacted enough for a significant sett to become established within it. The Site offers suitable foraging and commuting habitat for this species.

Bats

3.14. The Site is lacking in any optimal commenting habitat for bats, such as linear features which connect to the wider area. However, the habitats present so provide foraging opportunities for bats which are likely to utilise the Site on an opportunistic basis.

3.15. No buildings are present on Site and those trees present within the area of screen buffer planting are too immature to provide suitable roosting features. The Site therefore offers no suitable roosting features for bats.

Brown hare

3.16. Several individuals were disturbed at the time of survey. The Site provides optimal habitat for this species.

Birds

3.17. The Site provides suitable foraging opportunities for birds, including barn owl *Tyto alba* and provides nesting habitat for ground nesting farmland species such as skylark *Alauda arvensis*, meadow pipit, *Anthus pratensis* grey partridge *Perdix perdix* and pheasant *Phasianus colchicus*.

3.18. The immature tree and scrub planting currently offers negligible nesting habitat for birds.

3.19. It should also be noted that a peregrine falcon *Falco peregrinus* nesting box (monitored by the RSPB) is located upon the north-eastern end of Shed 2 of the RAF Cardington Hangers, which are situated outside of but adjacent to the Site boundary.

Invertebrates

3.20. The habitats on Site provide opportunities for a range of invertebrate species. Invertebrates recorded at the time of survey include common blue *Polyommatus icarus*, small skipper *Thymelicus sylvestris* and large white *Pieris brassicae* butterflies and grasshoppers *Acridomorpha sp*. However, any invertebrate species are likely to be limited to common UK invertebrate species only with any significant populations of protected or notable invertebrate species unlikely to be present.

Reptiles

3.21. In 2018 a reptile translocation was undertaken to relocate those populations of common lizard *Zootoca vivipara* previously recorded within the WLP and ELP a receptor site created within the south of the EMA, south of the Site.

3.22. Whilst a c.20m buffer between this receptor area and the Site has been created by maintaining the grassland within this buffer area to >100mm, in order to dissuade reptiles from entering the Site,

the potential for common reptile species to be present on Site remains. Nevertheless, the Site is not currently considered to provide optimal habitat for reptiles, lacking in a rank grassland sward, associated scrub cover, and basking opportunities.

Other Protected and Notable Species

3.23. The Site is considered to be of limited value any other protected and notable species.

4. Opportunities and Constraints

4.1. A Concept Plan for the site is provided in **Appendix D**.

Construction Environmental Management Plan

4.2. A Construction Environmental Management Plan (CEMP) should be produced and implemented to allow any development proposals to be implemented whilst minimising impacts to any retained habitats on-Site and adjacent habitats of value such as retained trees, those features which have been created within the EMA, and those habitats present within the local area.

4.3. Measures which should look to be included within the CEMP comprise:

- any trees to be retained on-Site and adjacent to the Site during the Works should be appropriately protected in accordance with BS 5837:2012 - "*Trees in relation to design, demolition and construction – Recommendations*"[1];
- works to be undertaken during daylight hours or lighting to be controlled to ensure there is minimal light spill on adjacent habitats during construction works;
- the use of British Standards Best Practice Guidelines to reduce disturbance resulting from noise, surface run-off and vibration during construction works;
- careful siting and appropriate bunding of storage facilities for fuel and hazardous materials;
- delivery of oils and fuels to be supervised at all times;
- dust build up and mud deposits should be avoided and stockpiled material to be covered or stored within a contained area to enable run-off to be treated;
- use of drip trays when filling smaller containers from tanks or drums to avoid spillage entering the ground or drainage systems;
- provision of an Emergency Response Procedure;
- drainage outlets into the water course should be located, sealed and periodically checked to prevent surface runoff entering the water course;
- measures should be put in place to minimise debris, dust and contaminants entering the water courses and flowing downstream via placement of interceptors (and appropriately treated / filtered) and watering down the buildings and machinery during works; and
- Contractors should be made aware of the presence of protected and notable faunal species on Site and trained in their identification and those actions that should be undertaken should any such species be discovered during works.

Habitats

4.4. In line with the forthcoming Environment Bill, any future development should look to include at least a 10% gain for biodiversity, either though the provision and/or enhancement of suitable habitats both with and, if necessary, off-Site. Furthermore, enhancement measures should also comply with relevant Local Plan policies, and the Local Biodiversity Action Plan. The Concept Plan highlights a number of features that can be designed to provide the required biodiversity as well as creating ecological habitat:

- Residential green space which maximises opportunities for biodiversity;
- Creation of diverse wetland habitat using the SuDS basins and open swales, benefiting

[1] BSI (2012); 'BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations'.

biodiversity;

- A Site boundary treatment which is ecologically valuable and provides opportunities for wildlife with links to the off-site Ecological Management Area (EMA);
- Retention and enhancement of areas of grassland where appropriate;
- The use of native species or species of benefit to wildlife within any proposed landscape scheme to provide foraging opportunities for birds, bats, invertebrates and other fauna is recommended to enhance the Site for wildlife;
- New tree planting, including of native species;
- Provision of screen buffer planting similar to that within the north of the Site between the Site itself and the EMA;
- Provision of enhanced green infrastructure providing connectivity to adjacent off-site habitats;
- Artificial habitats for bats, bird and invertebrates are also recommended (see fauna section below) to enhance the Site for these species' groups; and
- Where new landscaping is to be undertaken as part of the Development proposals horticultural practice should include the use of peat-free composts, mulches and soil conditioners. The use of pesticides (herbicides, insecticides, fungicides and slug pellets) will be discouraged to prevent fatal effects on the food chain particularly invertebrates, birds and/or mammals. Any pesticides used should be non-residual.

4.5. Refer to the Concept Plan in **Appendix D** for an overview of strategic locations identified for the enhancement measures described above.

Protected and Notable Fauna

Amphibians

4.6. Great crested newt are considered likely to be absent from the Site and consequently no further survey is considered to be required with regards to this species. In the unlikely event that great crested newt are discovered during works, all works should cease, and a suitably qualified ecologist immediately contacted for further advice.

Badger

4.7. No setts have been recorded on Site to date and the level of use is currently considered to be limited to commuting and sporadic foraging. Update badger surveys should be undertaken as required to inform any forthcoming planning applications.

4.8. Any future development proposals should also look to incorporate a wildlife friendly lighting strategy.

Bats

4.9. The Site provides no suitable opportunities for roosting bats. Low levels of foraging and commuting activity by bats has been recorded during previous bat activity surveys undertaken across the wider RAF Cardington site (**Appendix A**), and it is likely that similar levels of opportunistic bat activity are present within the Site itself. Consequently, no bat activity surveys are considered to be required in this instance, however this should be agreed with Bedford Borough Council.

4.10. Enhancement measures for bats through appropriate landscaping and the provision of artificial

roosting opportunities within newly created buildings should look to be provided.

Brown hare

4.11. Brown hare *Lepus europaeus* are known to be present on Site and can have between two and four litters of young a year, usually between February and September. Forms which are used to give birth to young are often created in the shelter of a grass tussock. Given the extent of suitable habitat for this species which would likely be lost as a result of any future development proposals, the requirement for further survey for this species should be scoped and agreed with Bedford Borough Council.

4.12. Enhancements and habitat provision for this species should be provided as far as practicable.

4.13. In addition, sensitive working methodologies should be employed during Site clearance works should such activities occur within the breeding months.

Birds

4.14. The Site offers suitable habitat to support farmland species of ground nesting birds and barn owl (**Appendix A**). As such, a further breeding bird survey should be undertaken at the Site to inform any future development proposals and mitigation/compensation measures that may be required. Site clearance works should look to be undertaken outside of the nesting bird season (March to August inclusive), or in conjunction with nesting bird checks undertaken by a suitably experienced ecologist.

4.15. Any landscape proposals should look to incorporate seed/berry/fruit producing species, together with species of value to invertebrates in order to provide a foraging resource for birds. Additional nesting opportunities for birds should look to be provide through the provision of artificial nesting features within newly created buildings, together with the provision of a barn owl nest box (either standing alone or incorporated into a suitable newly constructed building) additional to that provided within the EMA as part of the ELP and SELP developments.

4.16. 'Wild areas' comprising native shrub and understorey planting should also look to be created within the Site to provide 'hunting areas' for cats to attempt to reduce cat predation levels upon ground nesting bird species within the EMA.

Invertebrates

4.17. Only common UK invertebrate species are considered to utilise the Site's habitats. As such, any loss of these habitats is not considered to impact any protected or notable invertebrate species.

4.18. Whilst it is considered that no further survey for invertebrates would be required in this instance, this should be agreed with Bedford Borough Council. Any future development should look to replace and enhance those opportunities for invertebrates to be lost as far as possible. Landscape proposals should aim to incorporate nectar and pollen producing species of value to invertebrates. This in turn would also create a foraging resource for birds and bats. Sheltering and overwintering opportunities for invertebrates could also be provided in the form of insect boxes.

Reptiles

4.19. As previously mentioned, an exercise to translocate those populations of common lizard from the WLP and ELP to a receptor area create within the south of the EMA was undertaken in 2018 and there is potential for reptiles to be opportunistically present within the Site. Whilst it is considered that no further survey for reptiles is required in this instance, this should be agreed with Bedford

Borough Council.

4.20. Notwithstanding the above, sensitive vegetation clearance would be required as part of any Site clearance works in order to prevent the contravention of legislation with regard to reptile species. Alternatively, the current management of this area should be through increasing the number of cuts to maintain the grassland present within the Site to <100mm throughout the year following a winter cut 2020.

4.21. 'Wild areas' comprising native shrub and understorey planting should also look to be created within the Site to provide 'hunting areas' for cats to attempt to reduce cat predation levels upon reptile species within the EMA.

5. Conclusions

5.1. The Site is dominated by semi-improved neutral grassland, with areas of hard-standing and ephemeral / tall ruderal vegetation also present. An attenuation pond, which is surround by newly planted linear scrub lies within the north of the Site, together with an area of newly planted woodland installed to provide a screening buffer from the EMA to the ELP and SELP.

5.2. As part of any future planning application for the Site a full Preliminary Ecological Appraisal, including an update data search and 'Extended' Phase 1 Habitat Survey should be undertaken. Whilst it is currently considered that further surveys for badger and breeding birds only would be required in this instance to support any future planning application, the requirement for further surveys should be scoped and agreed with Bedford Borough Council.

5.3. The results of any such surveys should be detailed as part of an Ecological Impact Assessment (EcIA) or Ecology Chapter as part of and Environmental Statement (Environmental Impact Assessment requirements dependent).

5.4. In order to prevent the contravention of legislation afforded to those species present on Site, mitigation measures associated with Site preparation and construction activities will be required to be implemented. Measures likely to be required have been outlined within this report and should be detailed within an appropriate Biodiversity Mitigation and Enhancement Strategy.

5.5. The Concept Plan includes many opportunities for biodiversity enhancement and habitat creation and will link effectively with existing off-site habitats and public open space. Additional enhancement measures have been recommended which can be designed and incorporated within scheme proposals. Based on this the scheme can provide the opportunity to achieve a 10% net gain on ecological biodiversity.

FIGURES

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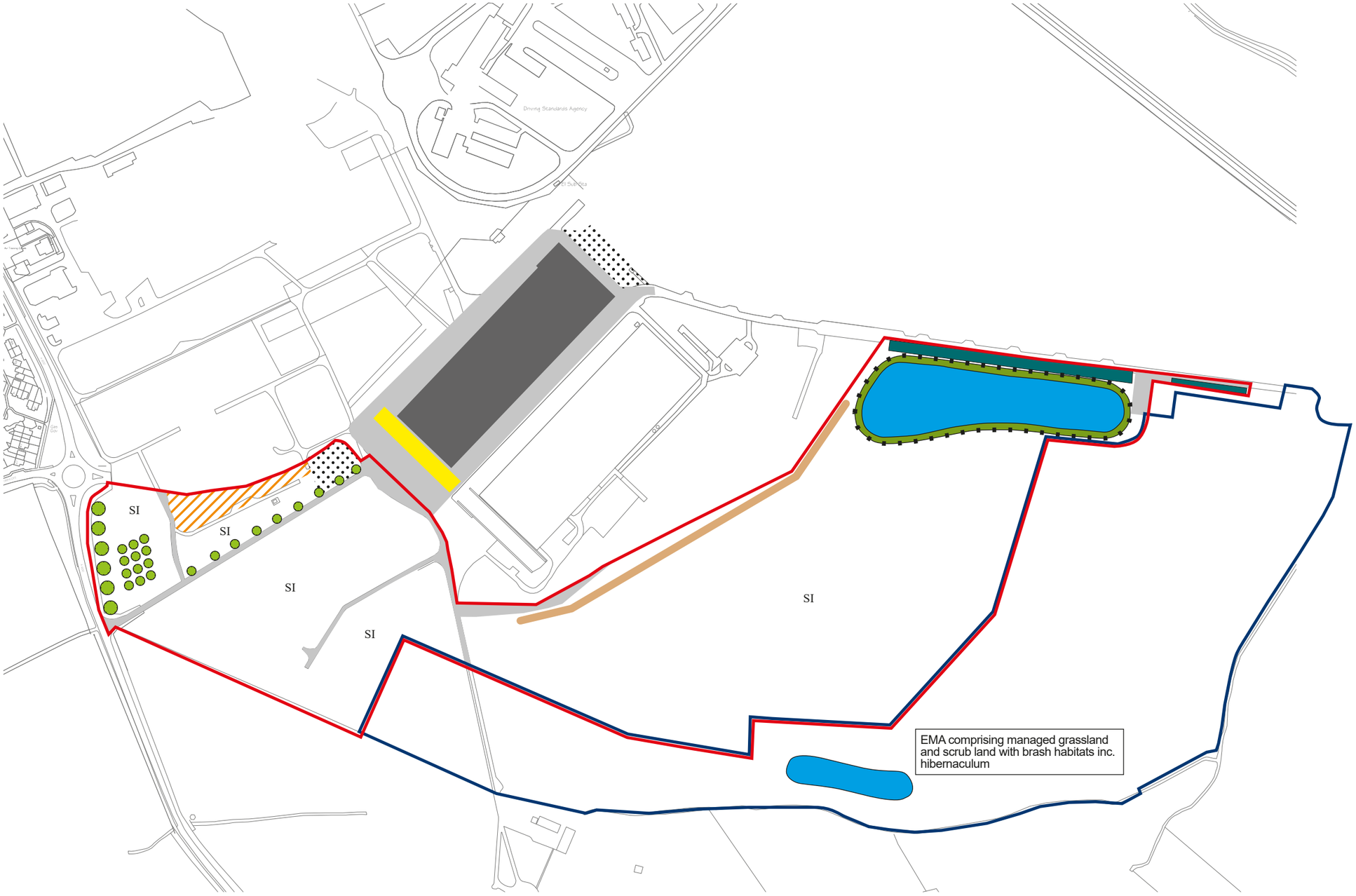

- Survey Boundary
- Ecological Mitigation Area
- Building
- Hardstanding
- Amenity Grassland
- Tall Ruderal Vegetation
- SI — Semi-improved Grassland
- Attenuation Pond
- Bare Ground
- Tree
- Woodland Screen Buffer Planting
- Bund
- Post and Rail Fencing
- Scrub / Hedgerow

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Project Details	WIE15662-109 : Cardington Airfield, Bedford
Figure Title	Figure 1: Habitat Features Plan
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APPENDICES

A. Relevant Current Planning Policy and Legislation

National Planning Policy

National Planning Policy Framework, 2019

The National Planning Policy Framework[2] (NPPF) was published in July 2018. Section 15 (outlined below) of the NPPF, 'Conserving and Enhancing the Natural Environment', replaces Section 11 of the previous NPPF 2012 revision[3]. However, Government Circular 06/2005[4] - "Biodiversity and Geological Conservation: Statutory Obligations and Their Impact within the Planning System", remains valid and is referenced within the NPPF.

The NPPF encourages the planning system to contribute to and enhance the natural and local environment. This should be achieved by:

- *"Protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan)*;
- *recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;*
- *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 that are more resilient to current and future pressures;*
- *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 local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and*
- *remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate".*

The NPPF also stipulates that Local Planning Authorities (LPAs), when determining planning applications, should apply the following principles:

- *"If significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
- *development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that*

[2] Ministry of Housing, Communities and Local Government. (2019). *National Planning Policy Framework*.
[3] Department of Communities and Local Government. (2012). *National Planning Policy Framework.*
[4] Department of Communities and Local Government. (2005). *Circular 06/05: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System*.

make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

- *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."*

National Planning Practice Guidance, 2018

The Government's National Planning Practice Guidance[5] (NPPG) is intended to provide guidance to local planning authorities and developers on the implementation of the planning policies set out within the NPPF. The guidance of most relevance to ecology and biodiversity is the Natural Environment Chapter, which explains key issues in implementing policy to protect biodiversity, including local requirements.

Local Planning Policy

Central Bedfordshire Local Development Framework – Core Strategy and Development Management Policies, November 2009

Policy CS17: 'Green Infrastructure' requires new development to contribute towards the delivery of new green infrastructure and the management of a linked network of new and enhanced open spaces and corridors. Development that would fragment or prejudice the green infrastructure network will not be permitted.

Policy CS18: Biodiversity and Geological Conservation states that the Council will support the designation, management, and protection of biodiversity and geology including national designations (SSSI's), locally important County Wildlife Sites (CWS's) and Regionally Important Geological and Geomorphological Sites (RIGGS) as well as those local priority habitats and species identified in the Local BAP. In addition, it will support the maintenance and enhancement of habitats, identify opportunities to create buffer zones and restore and repair fragmented and isolated habitats to form biodiversity networks. Development that would fragment or prejudice the biodiversity network will not be permitted.

Policy DM15: 'Biodiversity' states that where planning applications are considered to have an impact on wildlife or where applications are close to nationally or locally designated sites or important species, advice will be sought from relevant national and local organisations and applications considered to be harmful to wildlife will be refused. Where any development is permitted within, adjacent to or in close proximity to designated sites or known locations of identified species, the developer will be expected to take steps to secure the protection of such animals and plants.

In cases where new development is unavoidable and may harm wildlife interests, mitigation is required. For developments where there is a need to protect or enhance biodiversity, developers will be required to carry out such work and/or make contributions to secure longer term benefits for wildlife. The use of native and locally appropriate species, including locally sourced plants and

[5] Department for Communities and Local Government. (2018). *National Planning Practice Guidance*. DCLG, London.

seeds and plants of local provenance, in planting schemes will be required where appropriate.

Bedford Borough Local Plan, 2030. Draft Plan for Submission, September 2018 (Including 2019 Proposed Modifications)

Policy 36S: 'Green Infrastructure' states that the existing green infrastructure in the borough shall be protected, enhanced and managed for the future benefit of the environment, people and the economy. Development shall provide a net gain in green infrastructure, while seeking to provide a high quality multi-functional green infrastructure network in accordance with the Bedford Green Infrastructure Plan.

The Council will work with developers and other partners to deliver the three strategic green infrastructure projects: the Forest of Marston Vale, the Bedford River Valley Park and the Bedford to Milton Keynes Waterway Park.

Policy 39: 'Landscaping in new development' states that where appropriate, development shall provide landscaping on site or where more suitable, landscaping shall be provided off site and the proposed scheme shall meet all of the following criteria:

i. Existing landscape features shall be recorded in a detailed site survey in accordance with the principles of the relevant industry guidance and best practice.

ii. Existing features of landscape or nature conservation value should be incorporated into the landscaping scheme.

iii. The proposed landscaping scheme should consider the character of the site, site constraints, function, diversity of existing and proposed landscaping, soil type, ecological value and resilience based on the location of the site.

iv. New tree planting as part of a proposed landscaping scheme will be selected, planted and established in accordance with current best practice guidance within the relevant British Standard and shall have regard to guidance in the Council's Trees and Development SPD.

v. Provision of the planting of hedgerows, shrub planting and other soft landscaping to include specimen trees with a mature height of 15-20 metres within both hard and soft landscaped areas.

vi. The proposed landscaping shall make a positive contribution to the streetscape and integrate with the built development and where applicable, adjoining developments.

vii. Trees within adoptable areas shall be incorporated as part of the infrastructure planning and design stage in accordance with current best practice and shall have regard to the Council's guidance in the Trees and Development SPD ensuring sustainability and longevity.

viii. The proposed landscaping should not lead to significant effects on the Natura 2000 sites of Portholme (SAC) and the Ouse Washes (SAC/SPA/Ramar), as a result of surface run-off into the River Great Ouse.

Policy 40: 'Retention of trees' states that in considering proposals for development all of the following criteria will apply:

i. Applicants shall consider opportunities to retain trees of high environmental value taking into consideration both their individual merit and their contribution as part of a group or broader landscape feature. Existing trees on and immediately adjacent to the development site shall be recorded following guidance in the relevant British Standard.

ii. Development applications shall provide details as to how the retained trees, hedges and hedge banks will be protected prior to, during and after construction.

iii. No building, hard surfacing drainage or underground works will be permitted that does not accord with the principles of the relevant British Standard unless, exceptionally, the Council is satisfied that such works can be accommodated without harm to the trees concerned or there are overriding reasons for development to proceed.

iv. Planning permission will be refused for development resulting in the loss or deterioration of ancient woodland and the loss of aged or veteran trees found outside ancient woodland (including from indirect impacts such as increased visitor pressure), unless the need for, and benefits of, the development in that location clearly outweigh the loss.

v. The council will protect existing trees through the making of Tree Preservation Orders where appropriate.

Policy 41: 'Hedgerows' states that any hedgerows should be retained on development sites, unless there are overriding benefits that justify their removal. Where removal is deemed necessary, details addressing the criteria under the Hedgerow Regulations 1997 (as amended) shall be submitted to demonstrate the validity for removal and details of the replacement hedgerows. Replacement hedgerows shall be of an equal scale, native and species-rich and should be provided where possible, elsewhere on the development site.

Where there are gaps in the existing hedgerows on the site, the development should provide for additional hedgerow planting.

Policy 43S: 'Protecting biodiversity and geodiversity' states that planning applications for development are required to assess the impact of the proposal on the biodiversity and geodiversity value of the site and its surroundings. This should be carried out by a suitably qualified professional in accordance with industry standards.

A proposal which is likely to have an adverse effect on a Site of Special Scientific Interest (SSSI) or Natura 2000 site will not be permitted unless there are exceptional reasons that outweigh the harm to the site.

Development should be designed to prevent any adverse impact on locally important sites, species and habitats of principal importance contained within the Natural Environment and Rural Communities (NERC) Act 2006. However, in these circumstances where an adverse impact is unavoidable, the application shall demonstrate how the harm will be reduced through appropriate mitigation.

Where protected species or priority habitats of principal importance are adversely affected, the application will need to demonstrate how the proposed mitigation will reduce the adverse effects. If adequate mitigation is not possible, the application will need to demonstrate that the overriding reasons outweigh the impacts on the biodiversity and geodiversity of the borough otherwise the development will be refused.

Developments with potential to have an adverse impact, either alone or in-combination, on the integrity of a European Designated Site will be assessed in accordance with the requirements of the Habitats Regulations.

Policy 44: 'Enhancing biodiversity' states that development proposals should provide a net increase in biodiversity through the following:

i. Enhancement of the existing features on the site; or

ii. The creation of additional habitats on the site; or

iii. The linking of existing habitats to create links between ecological networks and where possible, with adjoining features.

Biodiversity Action Plans

UK Post-2010 Biodiversity Framework

The Environment Departments of all four governments in the UK work together through the Four Countries Biodiversity Group. Together they have agreed, and Ministers have signed, a framework of priorities for UK-level work for the Convention on Biological Diversity. Published on 17 July 2012, the 'UK Post-2010 Biodiversity Framework'[6] covers the period from 2011 to 2020. This now supersedes the UK Biodiversity Action Plan (UK BAP)[7]. However, many of the tools developed under UK BAP remain of use, for example, background information about the lists of priority habitats and species. The lists of priority species and habitats agreed under UK BAP still form the basis of much biodiversity work in the countries.

Although the UK Post-2010 Biodiversity Framework does not confer any statutory legal protection, in practice many of the species listed already receive statutory legal protection under UK and / or European legislation. In addition, the majority of priority national (English) BAP habitats and species are now those listed as Habitats of Principal Importance (HoPI) and Species of Principal Importance (SoPI) in England listed under Section 41 (S41) of the NERC Act 2006. For the purpose of this report, habitats and species listed under S41 of the NERC Act are referred to as having superseded the UK BAP. All public bodies have a legal obligation or 'biodiversity duty' under Section 40 of the NERC Act 2006 to conserve biodiversity by having particular regard to those species and habitats listed under S41.

Local Biodiversity Action Plan

At a local level, the Site is covered by the Bedfordshire and Luton Biodiversity Action plan[8] (LBAP). This document set out the framework for the protection, conservation and enhancement of wildlife (comprising both habitats and species) within Bedfordshire and Luton.

Guidance

Biodiversity 2020: A Strategy for England's Wildlife and Ecosystem Services

In October 2010, over 190 countries signed an historic global agreement in Nagoya, Japan to take urgent and effective action to halt the alarming global declines in biodiversity. This agreement recognised just how important it is to look after the natural world. It established a new global vision

[6] JNCC and DEFRA (on behalf of the Four Countries' Biodiversity Group). (2012): 'UK Post-2010 Biodiversity Framework'.

[7] HMSO. (1994): 'Biodiversity: The UK Action Plan'.

[8] https://www.bedscape.org.uk/BRMC/newsite/index.php?c=bedslife_bap

for biodiversity, including a set of strategic goals and targets to drive action. England's response to this agreement was the publication of '*Biodiversity 2020: A strategy for England's wildlife and ecosystem services*'[9]. The mission for this strategy is:

"to halt overall biodiversity loss, support healthy well-functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people."

BS 42020: 2013 Biodiversity: Code of Practice for Planning and Development

The UK commitment to halt overall loss of biodiversity by 2020 in line with the European Biodiversity Strategy and UN Aichi targets[10], is passed down to local authorities to implement, mainly through planning policy. To assist organizations affected by these commitments, BSI has published BS 42020 which offers a coherent methodology for biodiversity management.

This British Standard sets out to assist those concerned with ecological issues as they arise through the planning process in matters relating to permitted development and activities involved in the management of land outside the scope of land use planning, which could have site-specific ecological implications.

The standard has been produced with input from a number of organisations including the Chartered Institute of Ecology and Environmental Management (CIEEM) and the Association of Local Government Ecologists (ALGE) and provides:

- Guidance on how to produce clear and concise ecological information to accompany planning applications;
- recommendations on professional ethics, conduct, competence and judgement to give confidence that proposals for biodiversity conservation, and consequent decisions/actions taken, are sound and appropriate; and
- direction on effective decision-making in biodiversity management a framework to demonstrate how biodiversity has been managed during the development process to minimize impact.

Legislation

Specific habitats and species receive legal protection in England under various pieces of legislation, including:

- The Conservation of Habitats and Species Regulations 2017[11];
- The Wildlife and Countryside Act 1981 (as amended)[12];
- The Countryside and Rights of Way (CRoW) Act 2000[13];
- The Natural Environment and Rural Communities Act 2006[14];
- The Hedgerow Regulations 1997[15];
- The Protection of Badgers Act 1992[16]; and

[9] Defra. (2011) *Biodiversity 2020: A strategy for England's wildlife and ecosystem services.*
[10] https://www.cbd.int/sp/targets/
[11] HMSO (2017) The Conservation of Habitats and Species Regulations 2017.
[12] HMSO (1981) 'Wildlife and Countryside Act 1981 (as amended)'
[13] HMSO (2000) 'The Countryside and Rights of Way (CRoW) Act'
[14] ODPM (2006) 'Natural Environment and Rural Communities Act (2006)'
[15] ODPM (1997) 'The Hedgerow Regulations'
[16] ODPM (1992) 'The Protection of Badgers Act'

- Wild Mammals (Protection) Act 1996[17]

Further details of legislation in respect of legally protected and notable flora and fauna of relevance to the Site are provided below;

Amphibians

Common species of amphibian (smooth newt *Lissotriton vulgaris*, palmate newt *L. helveticus*, common frog *Rana temporaria* and common toad *Bufo bufo)* are partially protected by the WCA 1981. This prohibits the trade (i.e. sale, barter, exchange, transporting for sale and advertising to sell or to buy) of these species.

Great crested newts *Triturus cristatus* are protected under the Conservation of Habitats and Species Regulations 2010 (as amended) and the WCA 1981. In summary, taken together, it is an offence to deliberately, intentionally or recklessly:

- Kill, injure or capture a great crested newt;
- Disturb great crested newts in such a way as to be likely significant to affect
- (i) the ability of any significant group of great crested newts to survive, breed, or rear / nurture their young; or
- (ii) the local distribution of great crested newts;
- Damage or destroy any breeding or resting place used by great crested newts; or
- Obstruct access to any place used by great crested newts for shelter or protection and disturbing great crested newts while occupying such as place.

Badger

The Protection of Badgers Act, 1992 aims to protect badgers from persecution, rather than being a response to an unfavourable conservation status. As well as protecting the animal itself, the 1992 Act makes the intentional or reckless destruction, damage or obstruction of a badger sett an offence. A sett is defined as "*any structure or place which displays signs indicating current use by a badger*". In accordance with Natural England guidance, 'current use' is not synonymous with current occupation[18]. In addition, the intentional elimination of sufficient foraging area to support a known social group of badgers may, in certain circumstances, be construed as an offence by constituting 'cruel ill treatment'. Badgers are also protected under the WCA 1981 (as amended).

Bats

In summary, all UK bat species are protected by the Conservation of Habitats and Species Regulations 2017 and by the WCA 1981. Taken together it is an offence to deliberately, intentionally or recklessly:

- Kill, injure or capture a bat;
- Disturb bats in such a way as to be likely significant to affect

  (i) the ability of any significant group of bats to survive, breed, or rear / nurture their young; or

  (ii) the local distribution of that species;
- Damage or destroy any breeding or resting place used by bats; or

[17] HMSO. (1996). *Wild Mammals (Protection) Act*.
[18] Natural England (2009): 'Guidance on 'Current Use' in the definition of a Badger Sett'. Natural England

- Obstruct access to any place used by bats for shelter or protection and disturbing bats while occupying such as place.

Birds

The level of protection afforded under the law varies from species to species. Identified game and pest species may lawfully be hunted and killed, usually under licence, whilst the most threatened or rarest species are listed on Schedule 1 of the WCA 1981 and are protected by special penalties for offences.

All of the native bird species of Britain are additionally covered by the European Union (EU) Directive on the Conservation of Wild Birds 2009 ('The Birds Directive'). The EU Birds Directive (79/409/EEC) resulted in the designation of Special Protection Areas (SPAs) for rare or vulnerable bird species listed on Annex 1 (The species listed in Annex I of the Birds Directive are, according to the Directive, those in danger of extinction, rare, vulnerable to specific changes in their habitat or requiring particular attention for reasons of the specific nature of their habitat) of the Directive and for regularly occurring migratory species. The Birds Directive applies to all wild birds, their eggs, nests and habitats, and provides for the protection, management and control of all species of birds naturally occurring within each member state of the European Union. It requires the UK to take measures to ensure the preservation of sufficient diversity of habitats to maintain populations of all wild birds at ecologically and scientifically sustainable levels. The requirements of the Birds Directive are implemented in the UK primarily through the Wildlife & Countryside Act 1981 (as amended 1985) and Conservation of Habitats and Species Regulations 2017.

The Secretary of State has agreed an update of the Habitats and Species listed in Section 41 of the Natural Environment and Rural Communities Act (NERC) 2006. These are known as Habitats and Species of Principal Importance in England. There are currently 49 species of birds listed under section 41 of the NERC Act (2006).

In addition to statutory protection, the bird species of Britain are also subject to various conservation designations intended to indicate their rarity, population status and conservation priority. These do not have statutory force but may be instrumental in determining local, regional and national planning and development policy. The main categories of designation comprise the British Trust for Ornithology (BTO) 'Species Alert' lists, the Royal Society for the Protection of Birds (RSPB) 'Birds of Conservation Concern' lists and species listed in the UK and local Biodiversity Action Plans (BAPs).

The BTO Conservation Alert System lists of 'Birds of Conservation Concern' including a 'Red List' for birds of high conservation concern. Red List species are those that are globally threatened according to the International Union for Conservation of Nature (IUCN) criteria; those whose population or range has declined rapidly in recent years; and those that have declined historically and not shown a substantial recent recovery, including:

- Globally threatened according to the IUCN;
- Historical population decline in UK during 1800-1995;
- Rapid (>50%) decline in UK breeding population over the last 25 years; and
- Rapid (>50%) contraction of UK breeding range over the last 25 years.

The BTO Conservation Alert System lists 'Birds of Conservation Concern' including an 'Amber List' for birds of medium conservation concern. 'Amber List' species are those with an unfavourable conservation status in Europe; those whose population or range has declined moderately in recent years; those whose population has declined historically but made a substantial recent recovery; rare breeders; and those with internationally important or localised populations, including:

- Historical population decline during 1800-1995, but recovering: population size has more than doubled over last 25 years;
- Moderate (25-49%) decline in UK breeding population over the last 25 years;
- Moderate (25-49%) contraction of UK breeding range over the last 25 years;
- >50% of UK breeding population in 10 or fewer sites;
- >20% of European breeding population in UK;
- Species with unfavourable conservation status in Europe; and
- It is important to note that certain 'Red list' species also qualify for 'Amber List' criteria.

The trends of bird species that depend on farmland habitat for breeding are being tracked since 1980 by the Pan-European Common Bird Monitoring Scheme[19]. The European Union (EU) Farmland Bird Index is an indicator for common farmland birds and is based on data from 23 EU countries and tracks 37 species that are declining or scarce.

Invertebrates

The majority of invertebrate species are not legally protected. However, a total of seventy-two terrestrial and aquatic invertebrate species are protected under the WCA 1981. Certain species of invertebrate are also protected under the Conservation of Species and Habitats Regulations 2010 (as amended).

Reptiles

All four common native species of British reptile are protected by law under the *WCA 1981* (as amended). This includes the common lizard, slow worm *Anguis fragilis*, adder *Vipera berus* and grass snake *Natrix natrix,* making it illegal to kill, injure or sell these animals.

[19] http://www.ebcc.info/pecbm.html

B. Ecology Background

To inform previously granted planning permissions for the wider former RAF Cardington development, a number of historical further ecological assessments beyond initial and update 'Extended' Phase 1 Habitat Surveys have been undertaken. A summary of the findings of these further assessments is provided below:

Invasive Plant Species

An invasive plant species walkover survey was undertaken along the dis-used railway line adjacent to the northern Site boundary. No evidence of invasive plant species was recorded at the time of survey and no invasive plant species have been recorded on Site to date.

Badger Surveys

Evidence of badger utilising the Site has previously been recorded during badger activity surveys undertaken in 2004; as part of further survey work (including update 'Extended' Phase 1 Habitat surveys); and during various Ecological Clerks of Work to facilitate works associated with previously granted planning permissions. This evidence has been in the form of footprints, pathways and dung-pits. No setts have been recorded on Site to date.

Bat Activity Surveys

Low levels of foraging and commuting activity by common *Pipistrellus pipistrellus* and soprano pipistrelle *Pipistrellus pygmaeus* bats were recorded during bat activity surveys undertaken in 2011, though these did not incorporate the Site itself. The most encountered species recorded was common pipistrelle, with only two recordings of soprano pipistrelles (both recorded during the same survey) being made. In total 66 bat passes were recorded throughout the surveys undertaken in 2011 and it is likely that these would have been made by a small number of individuals commuting and foraging over the wider former RAF Cardington site, amounting to low levels of bat activity. Many of the bat recordings made were within the WLP and ELP where a greater number of trees and scrub were present. Noctule *Nyctalus noctula* bats were also recorded during previous bat surveys undertaken in 2004.

Breeding Bird Survey

The most recent breeding bird survey undertaken in 20115, which included the Site itself, recorded a total of 48 species of bird using the Site. This included a pair of peregrine falcons, a bird species listed under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) who, at the time of survey nested in a nest box upon the north-eastern end of RAF Cardington Hanger 1 (now re-located to Hanger 2). The wider former RAF Cardington site, including the Site, also supported a good population of skylark.

In addition, the following 'red listed' species of bird were recorded in 2011: grasshopper warbler *Locustella naevia*, herring gull *Larus argentatus*, house sparrow, linnet *Linaria cannabina*, starling *Sturnus vulgaris*, song thrush *Turdus philomelos*, yellowhammer *Emberiza citrinella* and yellow wagtail *Motacilla flava*. The following 'amber listed' species were also recorded: dunnock *Prunella modularis*, green woodpecker *Picus viridis*, kestrel, mallard *Anas platyrhynchos*, meadow pipit,

mistle thrush *Turdus viscivorus*, reed bunting *Emberiza schoeniclus*, stock dove *Columba oenas*, swallow *Hirundo rustica*, swift *Apus apus*, willow warbler *Phylloscopus trochilus* and whitethroat *Sylvia curruca*.

During previous surveys undertaken in 2004, additional Schedule 1 species were recorded including kingfisher *Alcedo atthis*, barn owl and black redstart *Phoenicurus ochruros*. Notable species were also recorded in 2003 (but no Schedule 1 species) including grey partridge and turtle dove *Streptopelia turtur*, both of which are red listed and Section 41 of the NERC Act species. None of these species were recorded during the 2011 surveys or have been recorded on Site to date.

Great Crested Newt Surveys

An update great crested newt survey was undertaken in 2010 on the piling pits situated within the WLP, 20m north of the Spine Road as well as several semi-permanent waterbodies located along the dismantled railway line which are outside of the Site boundary, to the north of the ELP and SELP.

No great crested newt were recorded within these waterbodies during the 2010 survey, however, this species was recorded as being present within the piling pits in 2004 (two females with no eggs) and in 2007 (one female with no eggs). The 2010 surveys recorded a peak count of 69 smooth newt *Lissotriton vulgaris* within the piling pits with one female smooth newt with no eggs being recorded within the waterbodies located along the dismantled railway line. Common frog *Rana temporaria* and common toad *Bufo bufo* were also recorded during the survey.

In light of the findings of the 2010 and previous surveys, it is considered likely that small numbers of great crested newt have been present within the WLP in the past, due to the site's location on the fringe of good populations within the surrounding area, notably Harrowden House to the north west of the Site. The prevention of any small-scale emigration from the Harrowden House pond by site clearance of the intervening land and erection of exclusion fencing as part of a housing development (which is now complete) adjacent to the WLP is considered likely to be the reason for negative results during the 2010 survey.

Invertebrates

Few observations of invertebrates have been made on Site. However, butterflies noted during previous surveys undertaken across the wider former RAF Cardington site include small skipper, large skipper *Ochlodes venata*, marbled white *Melanargia galathea*, small tortoiseshell *Aglais urticae*, common blue, peacock *Inachis io* and meadow brown *Manjola jurtina*. Common field grasshopper *Chorthippus brunneus*, meadow grasshopper *Chorthippus parallelus* and common blue damselflies *Enallagma cyathigerum* have also been observed.

Reptile Surveys

A reptile survey undertaken in 20106 recorded a 'good' population of common lizard within the ELP and a 'small' population of common lizard within WLP. Juveniles were also recorded indicating the presence of breeding populations.

The update reptile survey in 20183 undertaken to inform the reptile translocation exercise which

has now been completed recorded the presence of ‘Good’ populations of common lizard within both the WLP and ELP. A maximum count of 10 individuals was made within the WLP and a maximum count of 5 individuals within the ELP.

In 2018 an exercise was undertaken to translocate those populations of common lizard present within the WLP and ELP to a suitable receptor area within the EMA. The translocation exercise was undertaken in accordance with the Ecological Mitigation Strategy (EMS) that was produced in order to discharge conditions associated with previous planning applications. A total of 38 common lizards were caught and relocated to within the south of the EMA where suitable reptile habitat including bunds, hibernacula and brash pile had been created.

Grass snake have also been incidentally recorded at the Site in the past, however, no individuals were recorded during the 2018 reptile surveys or translocation exercise.

Brown Hare

Whilst no specific surveys have been undertaken, a population of brown hare are present on Site.

Other

Evidence of deer Cervidae sp. has been noted on Site.

C. Photographs

Plate 1: Semi-improved grassland

Plate 2: Attenuation pond within north of the Site

Plate 3: Scrub planting around attenuation pond

Plate 4: Screen buffer planting within north of the Site

D. Development Proposals

The scaling of this drawing cannot be assured

- Site Boundary
- Residential Development
- Main Infrastructure
- Main Access (Right of way in control of Applicant)
- Emergency Access
- Proposed Bus Route
- Pedestrian / Cycle Corridor
- Pedestrian / Cycle Entrance
- Public Open Space
- Equipped / Natural Play Area
- Long Distance Views
- Green Links
- Wet Land
- Swale
- Proposed Planting
- Ecological Mitigation Area
- Boundary controlled by the applicant

N

PROJECT
Land South of Cardington Hangars

DRAWING TITLE
Concept Plan

DATE	SCALE	DRAWN BY	CHECK BY
24.03.2020	1:5000@A2	DR	MV

PROJECT NO	DRAWING NO	REVISION
31550	-	H

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