Milton Park Local Development Order 2022: Biodiversity Strategy

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Milton Park, Oxfordshire

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Section 1: Introduction

Instruction

1.1. This Biodiversity Strategy has been prepared by Tyler Grange Group Ltd on behalf of MEPC Milton GP Ltd in respect of Milton Park, Oxfordshire OX14 4RY (hereafter referred to as the 'site'). The site is centred on National Grid Reference SU 49082 91821 and is illustrated on Figure 1.

1.2. A local development order (LDO) was adopted by the Vale of White Horse District Council (VoWH) in 2012 to simplify the planning controls at Milton Park (a c. 100-hectare business park, comprising a mix of uses including, office, industrial logistics and research and development uses) over a 15-year period. This LDO is being updated to respond to changes in national and local policy and to extend the LDO period to 2040 and respond to the changing market demand.

1.3. The capacity for regeneration within the business park has also been reviewed and the LDO is being updated to increase the overall amount of permitted floorspace (from 370,000 sq. m to 390,000 sq. m), including identifying some opportunity for increased building heights in certain areas. All of the supporting technical work has been updated to inform the new LDO and its revised development parameters. The new LDO will be subject to statutory consultation and once adopted by the Council, will replace the LDO 2012.

1.4. This Biodiversity Strategy has been produced to support the update to the LDO.

Figure 1: Aerial photograph of the site courtesy of Google maps.

Site Context

1.5. The site is located immediately to the west of Didcot in Oxfordshire, off the A34 to the south of Oxford. It is a major employment centre within Oxfordshire and supports multiple businesses at the forefront of science and technology research.

1.6. Full details of the existing site are provided in Section 2 of this report but in summary, the site predominantly comprises buildings and hardstanding with associated landscape planting; the

blue and green infrastructure within the park comprises a network of waterbodies with linking watercourses as well as Moor Ditch and associated semi-mature and mature trees running along the northern boundary. In addition, hedgerow planting and seeding of wildflower grassland has been undertaken within development parcels that have come forward under the LDO. Kelaarts Field, a large area of species rich lowland grassland designated as a proposed Local Wildlife Site (LWS) for its botanical interest, is located northeast of the site, outside of the red line boundary.

1.7. In summary, the site is of predominantly low ecological importance, though there are some ecologically important features that have the potential to be impacted by development.

1.8. Updated local and national planning policy that has been adopted since the adoption of the original LDO now requires a net gain to be delivered on new developments (refer to **Appendix 1**). It was agreed with the VoWH Specialist Team leader (Ecology) that a comprehensive Biodiversity Strategy would be required to accompany the LDO as part of this, delivery of a minimum 10% biodiversity net gain would be expected on all new developments.

Purpose of Biodiversity Strategy

1.9. This strategy describes the guiding principles for future development under the LDO to provide the required certainty that the impacts of the proposed development at the site can be mitigated, and that the Milton Park LDO 2022 will deliver a minimum of 10% biodiversity net gain.

1.10. Therefore, this report:

- Describes and evaluates, using available background data and results of field surveys, the ecological features present within the likely 'zone of influence' (ZoI)[1] of the Milton Park LDO 2022 (Section 2);
- with reference to policy and legislation listed in **Appendix 1**, describes the ecological issues and opportunities that might arise as a result of development (Section 3);
- Details the principles of mitigation and enhancement for the LDO to inform pre-development notifications and strategic landscaping, including requirements to achieve biodiversity net gain, to ensure conformity with policy and legislation listed in **Appendix 1 (**Section 4**)**; and
- Outlines constraints to management and a Landscape and Ecological Management Plan (LEMP) for retained and newly created habitats as well as monitoring requirements for the lifetime of the LDO (Section 5).

Scope of the Biodiversity Strategy

1.11. The Biodiversity Strategy has been designed in consultation with the VoWH Specialist Team leader (Ecology) and describes the ecological issues, design rationale, likely impacts and requirement for mitigation, mitigation and enhancement proposals including how a minimum of 10% net gain will be delivered as a result of all new development within the updated LDO, a management strategy to ensure delivery and a mechanism to monitor and update the strategy.

[1] Defined as the area over which ecological features may be subject to significant effects as a result of activities associated with a project and associated activities (CIEEM, 2018).

1.12. Any part of the site area could be put forward for re-development during the lifetime of the LDO and potential future 'plots' are undefined therefore principles have been designed to enable flexibility whilst delivering development in conformity with policy.

1.13. This document should be read in conjunction with the Milton Park LDO Design Guidelines (Milton Park, Perkins and Will and VoWH, 2021) which provides high level guidance for implementation of future development with the site boundary.

Funding and Responsibility for Delivery

1.14. As landowner, MEPC Milton GP Ltd will have the responsibility of implementing the Biodiversity Strategy across the wider site and any strategic landscaping undertaken outside of individual plots.

1.15. For individual plots it will be the individual developer's responsibility to implement the mitigation, management and monitoring, in accordance with this Biodiversity Strategy and the Milton Park Local Developer Order 2022 Design Guide.

Quality Control

1.16. This report was prepared and reviewed by members of the Chartered Institute of Ecology and Environmental Management (CIEEM) who abide by the Institute's Code of Professional Conduct.

Section 2: Ecological Features and Evaluation

2.1 As part of the existing Milton Park LDO, detailed habitat surveys have been undertaken every two years by Liz McKay (2014, 2016, 2018 and 2020) and she also undertook great crested newt (GCN) and water vole surveys in 2021. These have been used to inform this Biodiversity Strategy and, where relevant, are referenced below and the most recent reports are included within **Appendices 2 and 3**.

Protected Sites

Statutorily protected sites

2.2 The site is not the subject of a statutory designation. There are two European statutory sites of ecological interest within 10km of the site; Little Wittenham Special Area of Conservation (SAC) and Cothill Fen SAC. These are designated for the Annex II species great crested newt (GCN) *Triturus cristatus* and the Annex I habitats Alkaline Fena and Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae) respectively. By virtue of their designation these sites are considered to be of **international ecological importance**.

2.3 There are no Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNRs) or Local Nature Reserves (LNRs) located within 2km of the site.

Non - Statutorily protected sites

2.4 The site is not the subject of a non- statutory designation; however, Kelaarts Field immediately adjacent to part of the northern boundary but outside the red line is designated as a prosed Local Wildlife Site (LWS) due to its botanical interest (*pers. comm.* Dominic Lamb 29/07/2021). LWSs are designated on account of their ecological importance at a county level and hence they are considered to be of **county ecological importance**.

Habitats and Flora

2.5 Full details of the current on-site habitats are provided **Appendix 2**, with a summary provided In Table 2.1 below including level of ecological importance and relevant legal protection.

Habitat	Description	Importance	Legal Protection
Buildings, hard standing and ornamental planting/introduced shrub	The majority of the site currently comprise buildings with associated hardstanding (car park and roads) and aesthetic landscaping dominated by ornamental planting/introduced shrub. These habitats have limited inherent ecological importance (their ability to support protected and priority fauna is discussed in Table 2.3).	Negligible	None
Amenity grassland	There are areas of close mown amenity grassland throughout the site predominantly used for recreation.	Negligible	None
Neutral grassland (wildflower grassland planting)	There are small areas of wildflower grassland seeding around the site, mostly associated with waterbodies and stream/hedgerow corridors. These areas do provide some increased diversity within the site, but they are limited and fragmented in nature.	Site	None
Neutral grassland (section of Kelaarts Field within the site)	To the north of the LDO boundary Kelaarts Field is as the priority habitat Lowland meadow (see light green shading in **Figure 2**) and likely meets the selection criteria for LWS within the county for supporting a good element of MG5 Common Knapweed - Crested Dog's-Tail Meadow (Thames Valley Environmental Records Centre (TVERC) and Buckinghamshire & Milton Keynes Environmental Records Centre (BMERC) (2018)) and is considered by the LPA as a pLWS. However, the section of Kelaarts field within the site boundary is less diverse and more disturbed than the remainder of Kelaart's field. In 2016 it was seeded with grass lay crop and since then it has been allowed to recolonise naturally with limited management in place resulting in a tall sward dominated by common grasses with pockets of undesirable species including broadleaved dock *Rumex obtusifolius*, creeping thistle *Cirsium arvense* and ragwort *Jacobaea vulgaris* and therefore would not meet the description of priority Lowland meadow habitat, nor would it meet the criteria for LWS selection.	Site	NERC for the section of Kelaarts Field north of the site boundary. None for the remaining field area.
Standing water	There are ten waterbodies across the site which all form part of the drainage system for Milton Park. Levels are informally managed, and the majority are immediately surrounded by scrub, semi-mature trees and grassland. All support some aquatic vegetation with dominant species including reedmace *Typha latifolia* and marsh marigold *Caltha palustris*.	Site	None
Watercourses (excluding Moor Ditch)	There are some watercourses connecting the waterbodies which have been modified and culverted in places and generally offer limited inherent ecological interest.	Site	None
Moor Ditch	Moor Ditch runs along the northern site boundary and provides connectivity off site. It is lined with semi-mature trees and scrub with dominant species including goat willow *Salix caprea*, crack willow *Salix × fragilis*, ash *Fraxinus excelsior* and hawthorn *Crataegus monogyna*. In some areas it is overshaded and Himalayan balsam *Impatiens glandulifera* is present along its length.	Local	None
Hedgerows and Trees	There are several native hedgerows associated with Milton Park, primarily associated with the north-east corner of the site on roadsides. They are predominantly mature with the exception of the hedgerow on the northern boundary of the site which has been planted in recent years; however they do provide connectivity to the wider area. As shown on **Figure 2** below, within the site boundary there is a small area of trees designated as priority deciduous woodland habitat on the southern boundary with further areas designated immediately adjacent to the western boundary (shown in dark green). The habitat description for Lowland deciduous woodland priority habitat a great variety of species composition in both the canopy and the ground flora and the following species would be expected; field maple *Acer campestre*, lime *Tilia sp.*, elm *Ulmus sp.*, hornbeam *Carpinus betulus*, wych elm *Ulmus glabra*, ash *Fraxinus excelsior* and oak *Quercus robur* (BRIG ed. Anthony Maddock, 2008). The area on site showing as priority woodland habitat Is around Waterbody 1 and comprises immature and semi-mature crack willow *Salix fragilis*, weeping willow *Salix babylonica*, goat willow *Salix caprea*, alder *Alnus glutinosa*, ash, Poplar *Populus sp*, Dogwood *Cornus sanguinea*, hawthorn *Crataegus monogyna*, hazel *Corylus avellana* and ornamental shrubs planted on regularly mown amenity grassland. This habitat would therefore not be considered deciduous woodland priority habitat.	Local	NERC
Tall ruderal vegetation	The area of the site to the south of the A4130 used to be grassland; however it has been become overgrown and is now dominated by tall ruderal vegetation.	Site	None

Table 2.1: Existing habitats and level of importance based on existing baseline information. NERC denotes Habitats and Species of Principal Importance, as defined in the Natural Environment and Rural Communities Act 2006; WCA denotes Wildlife and Countryside Act, 1981 (as amended); Habitats Regulations denotes Conservation of Habitats and Species Regulations 2017 (as amended).

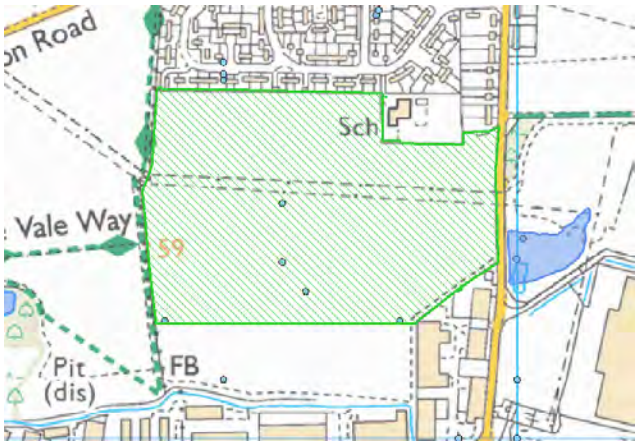

Figure 2: Lowland meadow priority habitat and pLWS boundary adjacent to the site boundary.

Fauna

2.6 Full details of the fauna on site are provided **Appendix 2**, with a summary provided In Table 2.2 below including ecological importance and relevant legal protection.

Species	Description	Importance	Legal Protection
Amphibians	The waterbody on site have been identified as offering suitable habitat to support breeding great crested newt *Triturus cristatus* (GCN) particularly given there is a known population at Sutton Courtenay Filed Centre immediately to the east of Milton Park. GCN presence/absence surveys undertaken in 2012 only recorded smooth newt *Lissotriton vulgaris* in waterbody 8 and eDNA surveys undertaken in 2021 (**Appendix 2**) of all waterbodies also returned negative results, indicating the GCN are not present on site.	Negligible	Habitats Regulations; WCA; NERC
Badgers	Historically, in 2012, a disused badger sett has been identified on the boundary of MP5; however all subsequent surveys including most recently in 2020 recorded no signs of badger on the site.	Negligible	Protection of Badgers Act 1992
Bats	The majority of trees on site are ornamental and not sufficiently mature to support features suitable for roosting bats although some of the semi-mature trees along Moor Ditch do support features. Furthermore, the majority of on-site buildings are largely unsuitable comprising well sealed modern structures or open warehouses. Two existing units have been Identified as supporting bat roost potential - 18 and 11 - but no surveys have been undertaken to date. The on-site hedgerows, stream corridors, Moor Ditch and Kelaarts field to the northeast all provide suitable commuting and foraging habitat for bats; however, the majority of the site has limited semi-natural habitat and is subject to artificial lighting which reduces suitability.	Local	Habitats Regulations; WCA; NERC
Birds	The semi-natural habitats on site all provide opportunities for common urban bird species including wood pigeon *Columba palumbus*, robin *Erithacus rubecula* and blackbird *Turdus merula*. Skylark *Alauda arvensis,* a BoCC4 Red List species (Eaton *et al*, 2015) have been recorded on Kelaarts field on the north-eastern boundary during every survey undertaken since 2021; the LDO site is not suitable for them.	Local	Red list, NERC
Reptiles	Prior to development, two common lizard *Zootoca vivipara* were recorded in the section of the site to the south of the railway line. Furthermore, a population of common lizard is present on Kelaarts Field. As part of a mitigation strategy for the existing LDO, the population of common lizard identified in areas to the south of the railway line were translocated into the northern section of Kelaarts Field.	Local	WCA
Water voles	Water vole *Arvicola amphibius* have been recorded on Moor Ditch historically (most recently in 2007). However, subsequent surveys carried out in 2012 and 2021 have not recorded any signs of the species so they are currently considered to be absent from the site.	N/A	WCA

Table 2.1: Existing species and level of importance based on existing baseline information. NERC denotes Habitats and Species of Principal Importance, as defined in the Natural Environment and Rural Communities Act 2006; WCA denotes Wildlife and Countryside Act, 1981 (as amended); Habitats Regulations denotes Conservation of Habitats and Species Regulations 2017 (as amended

2.7 The on-site habitats are not considered suitable to support any other protected or priority fauna and no field signs of other species have been identified during surveys undertaken.

Section 3: Ecological Issues and Requirement for Mitigation

Proposed Development and Planning Policy Context

3.1. As outlined in Section 2 , features of ecological importance exist on site that are protected by the legislation and planning policy documented in **Appendix 1.**

3.2. Any part of the site area could be put forward for re-development during the lifetime of the LDO. Furthermore, potential future 'plots' are undefined. Consequently, the nature and magnitude of potential impacts to identified important features are unknown.

3.3. In addition to development, Milton Park will undertake a number of strategic green infrastructure works (habitat improvements and landscaping projects) during the lifetime of the LDO that are likely to mitigate (at least in part) the impacts of development, though again, the nature of such works is yet to be determined.

3.4. Issues affecting those ecologically important features, and their legal and policy protection identified in Section 2, above, and how they would be mitigated, are described below.

3.5. This Biodiversity Strategy sets out guiding principles for how development can be designed in accordance with the mitigation hierarchy, with impacts assessed and mitigation and enhancement designed and controlled to deliver a minimum 10% biodiversity net gain to be in conformity with planning policy (National Planning Policy Framework (NPPF) paragraphs 174 – 182, VoWH Core Policy 46 Conservation and Improvement of Biodiversity and the vision outlined in the Oxfordshire Plan 2050).

Requirement for Up-to-date Survey Data

3.6. The following assessment of potential impacts was informed by survey data obtained from 2012 - 2021. Given the duration of the LDO and the dynamic nature of ecological features, periodically, update surveys will be required prior to works (including to inform development of individual development plots). Such surveys will be undertaken once every two years as required by the LDO Condition 2 and will be organised by MEPC Milton GP Ltd.

3.7. Survey requirements will be dependent upon the nature of a given development plot and should be determined by a suitably qualified ecological consultant (and member of CIEEM) and agreed with the VoWH Specialist Team leader (Ecology) where required. As a minimum, they should involve an update 'extended' phase I habitat survey, undertaken in accordance with good practice guidance (JNCC, 2010 and Butcher et al, 2020) to update habitat mapping and habitat condition and identify presence of, or potential for, legally protected species. Where potential exists (for instance, buildings or trees that could support roosting bats), then more detailed surveys should be undertaken, at the appropriate time of year, as required.

Impacts to Protected Sites

3.8. Given the nature of development, the reasons for notification of the SACs within 10km of the site and the distances involved, no direct or indirect pathways for impact have been identified therefore adverse effects would not be anticipated on any of the statutorily designated sites identified in Section 2 above.

3.9. As part of the evolving LDO design, the section of Kelaarts Field to the north of the site boundary which Is a pLWS has been deliberately excluded to ensure potential for direct impacts as a result of future development are avoided. This area is already used by members of the public for recreation including dog walking and running and as a result there are informal pathways already present with a formal tarmac pathway on the western boundary. There is potential for indirect impacts on the pLWS such as littering and soil erosion as a result of increased footfall due to the expansion of office space on the site.

3.10. Furthermore, as Kelaarts Field is currently largely unmanaged (subject to an annual cut), opportunities for improvement and enhancement exist.

3.11. Therefore, embedded into the proposed LDO is a 30m buffer from the southern edge of Kelaarts Field which will accommodate 15m of landscaping and a further 15m no build zone (refer to the Milton Park Design Guide). Furthermore, to improve the quality and diversity of Kelaarts Field, the grassland management regime will be modified as part of the Biodiversity Strategy (as detailed in the below sections).

Impacts to Habitats and Flora

3.12. Although the majority of potential impacts to habitats are an unknown, the following will occur:

- Moor Ditch along the northern boundary will be retained. The wider ditch corridor will also be subject to further enhancements such as tree and hedgerow planting as part of the mitigation for landscape and heritage impacts although full details are not currently known;
- The on-site waterbodies and associated stream corridors provide an important drainage system for the site will be retained within green and blue corridors. If this requirement changes, this will need to be assessed as part of the specific plot causing the impact (see Section 4); and
- Hedgerows and trees on site will be retained where possible but if their removal is required, they will be replaced as a minimum on a like for like basis either strategically, on plots or a combination of both.

3.13. Although direct adverse impacts to Moor Ditch, the waterbodies and associated watercourses would not be anticipated, there is potential for indirect effects on these habitats during the construction phase, e.g. as a result of pollution or inappropriate vehicle movements.

3.14. Although unknown currently, any loss of existing buildings, hardstanding, introduced shrub, amenity grassland, tall ruderal and neutral grassland will not trigger the legislation; however, in line with the NPPF and Core Policy 46: Conservation and Improvement of Biodiversity in the VoWH Local Plan, additional habitat creation will be required to ensure a minimum of 10% net gain.

Fauna

Amphibians

3.15. The majority of the site comprises built development, hardstanding, amenity grassland and introduced shrub, all of which are sub-optimal for GCN. GCN are not currently present within the site boundary, nor have they been since 2012 despite the proximity of a known population immediately to east of the site. Therefore, adverse impacts would not be anticipated. However, there is potential that GCN may colonise the site during the lifetime of the LDO, consequently if loss of any waterbody or suitable terrestrial habitat, within 250m of the known GCN population, is proposed as part of any future development further surveys will be required to confirm absence.

Badgers

3.16. The majority of the site is largely unsuitable for badgers with only the southern section of Kelaarts Field and the areas to the south of the A4310 offering suitable foraging habitat. Badgers are not currently thought to be present within the site; however the presence of a disused sett in the area to the south of the A4130 and the fact that they are a mobile species means they could colonise the site at any time therefore further surveys will be required where suitable habitat is present. There is potential for the killing or injury of badger during construction If excavations are left open or chemicals left unlocked.

3.17. Whilst the potential reduction of foraging habitat in the north-east of the site and south of the A4130 exists, given the abundance of suitable badger habitat within the wider landscape no mitigation is considered necessary. If any security fencing is required, this should be designed to allow access for badgers.

Bats

3.18. There are only two existing plots on site which have been recorded as having buildings with potential to support roosting bats - 11 and 18 (refer to **Appendix 2**) and the majority of trees on site are immature with only those lining Moor ditch with potential to support roosting features. Within the lifetime of the LDO there is potential for roosts to establish in these or other features that could be affected new development. These will need to be subject to a preliminary roost assessment (PRA) to inform the potential requirement for further surveys and mitigation.

3.19. Moor Ditch Is considered to the most important feature for commuting and foraging bats and this will be retained with a minimum 10m buffer from new development. The majority of the site is already well lit; however, any new lighting will need to be designed to be sensitive to habitats likely to be used by commuting and foraging bats.

Birds

3.20. All wild birds, their nests and eggs are afforded protection under the WCA 1981 (as amended). As such the removal of woody vegetation and demolition of the buildings could trigger this legislation, which protects birds while actively nesting.

3.21. Any vegetation clearance and potential building clearance has the potential to impact on nesting birds though the requirement for habitat creation in order to achieve a minimum 10% biodiversity net gain will ensure these losses are compensated for.

Reptiles

3.22. Kelaarts field Is known to support common lizard and the area to the south of the A4130 also previously supported this species. Therefore, during vegetation clearance in these areas there Is potential for killing and Injury to Individuals which would be in breach of legislation.

Water vole

3.23. Water voles are not currently present along Moor Ditch so no specific mitigation would be required. However, this species could re-colonise during the lifetime of the LDO. Update surveys for development that could affect the bankside habitats are Moor Ditch would be required and mitigation devised accordingly, if required.

Section 4: Mitigation and Enhancement Strategy

Overview

4.1. This section:

- Outlines the strategy for achieving biodiversity net gain within future development plots and strategic landscaping, the details of which are currently unknown;
- Outlines further detail of the embedded mitigation and enhancement for Kelaarts Field pLWS during construction and operation;
- Outlines proposed mitigation and enhancement for retained habitats during construction and operation;
- Outlines the principles of mitigation and enhancement during construction and operation for new development plots and strategic landscaping;
- Outlines mitigation and enhancement for fauna likely to be using the site during construction and operation; and
- Outlines the mechanisms for control, including the relevant LDO conditions, monitoring and review.

Strategy for delivering biodiversity net gain

4.2. MEPC Milton GP Ltd are committed to the delivery of a minimum of 10% biodiversity net gain across all new developments within the LDO. Given the exact locations and extent of impacts of new developments and strategic landscaping are an unknown, each new development must outline their individual biodiversity strategies for their plot by implementing the approach below:

- At the pre-development notification stage, developers would be required to submit a "Biodiversity Statement". This document must be produced by a suitably qualified ecologist and should comprise the scope of required ecological surveys (as required by LDO Condition 3), including protected species surveys (informed by the existing ecology baseline surveys. This may highlight the requirement for an additional site walkover if the ecological baseline surveys are considered likely to be out of date in line with CIEEM guidance[2] or to obtain current information on habitat condition. It will also include a brief outline of how the developer intends to achieve a minimum of 10% net gain on their plot (e.g. use of green roof, habitat creation through site landscaping, etc).
- Prior to the commencement of any development including site preparation and clearance, where the Biodiversity Statement submitted as part of the pre-development notification states habitat and protected species surveys are required, those protected species surveys

[2] https://cieem.net/wp-content/uploads/2019/04/Advice-Note.pdf

should be completed by an appropriately qualified ecologist and in an appropriate season in line with LDO Condition 3.

- Prior to plot construction, the developer will need to produce a plot specific Biodiversity Strategy in line with LDO condition 4 to provide certainty on how the net gain will be achieved, including the provision of their own Natural England Biodiversity Metric 3.0. This will need to be undertaken in line with South Oxfordshire and the VoWH – Guidance to Developers and Ecological Consultants on the use of Biodiversity Metrics[3]. Details required include;

    - The existing plot habitat baseline (recorded in line with the UK Habitat Classification). An additional site walkover may be required to obtain the information required in line with the UK Habitat Classification, the need for this will be highlighted in the Biodiversity Statement;

    - A Biodiversity Impact Plan showing the areas covered by each habitat type in hectares;

    - Proposed on plot habitat creation and enhancements, including provision of a Proposed Habitats Plan, to be in line with the LDO Biodiversity Strategy, LDO conditions and the Milton Park LDO 2022 Design Guide;

    - If a minimum of 10% net gain cannot be achieved on site liaison with MEPC Milton GP Ltd should be undertaken to determine whether any strategic landscaping projects are coming forward in the same timescale as the plot and if so whether additional habitats units are available that can be "drawn down" from; and

    - If a minimum of 10% biodiversity net gain can still not be achieved, details of a financial contribution for off-site compensation provided (for example through the Trust for Oxfordshire's Environment (TOE) scheme or The Berks, Bucks and Oxon Wildlife Trust (BBOWT) and Finance Earth).

4.3. A 'master' Natural England Biodiversity Metric 3.0 will be held by MEPC Milton GP Ltd and each new development will be recorded on this master metric to demonstrate how a minimum of 10% net gain is delivered across all new development.

4.4. This process is summarised in Figure 3 below.

[3]https://www.whitehorsedc.gov.uk/wp-content/uploads/sites/3/2021/10/S-and-V-BIC-Guidance_October_2021.pdf

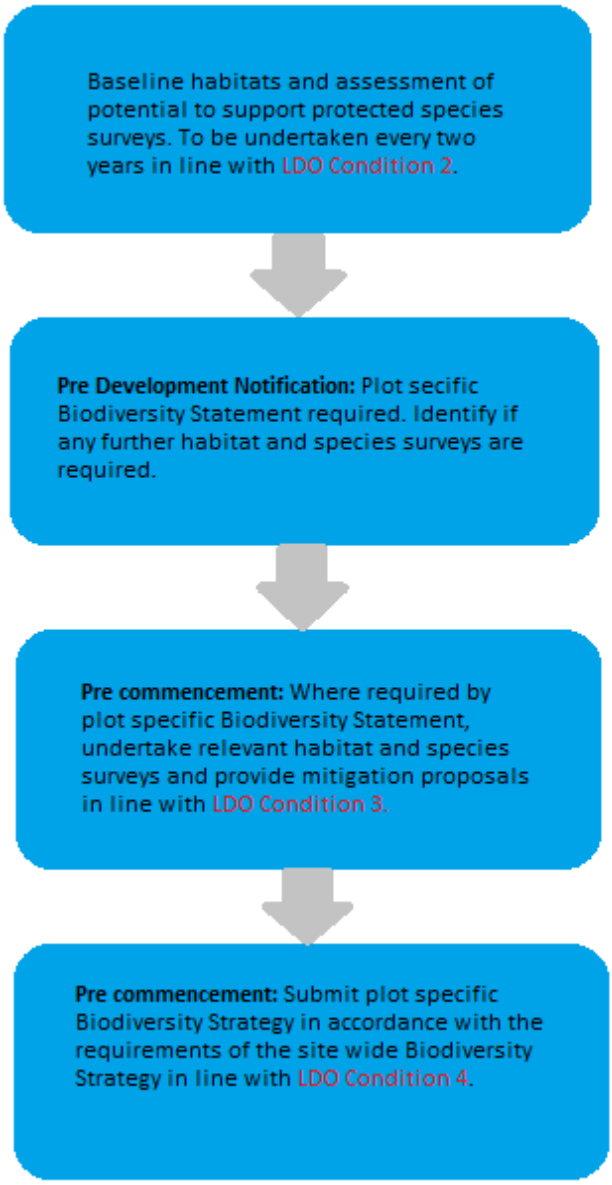

Figure 3: Flow chart detailing steps in the Biodiversity Strategy.

Protected Sites

Construction

4.5. For development plots in Milton Park North (refer to the Design Guide) within the southern section of Kelaarts field, protective fencing (Heras or similar) will need to be installed for the duration of construction to ensure no vehicular movements or material storage occurs on the retained pLWS.

Furthermore, pollution prevention controls will need to comply with the environmental good practice on site guide (fourth edition) produced by CIRIA in 2015.

Operation

4.6. To minimise the potential of impacts as a result of increased recreation, additional information boards on Kelaarts field, pLWS (the area to the north of the existing LDO boundary), demarcating existing permissive footpaths and encouraging their use rather than the wider habitats, will be installed.

4.7. An additional cut: one in late August (to 45-70mm) to avoid potential impacts on breeding skylark and one between October and November to mow regrowth, controlling grasses and allowing wildflowers to persist will be introduced. Any arisings should be left *in situ* for 3 -4 days to allow seeds to drop but then they must be removed to avoid increasing soil fertility. Both cuts should be considerate of the potential for reptiles to be present (see below).

4.8. There is potential for additional improvements such as hedgerow planting on the western boundary which may potentially come forward as part of a strategic landscaping project. However, this is yet to be determined.

Habitats

Construction

4.9. Where features of ecological importance are being retained but have the potential to be impacted by development proposals (Moor Ditch, waterbodies, hedgerows and trees) protection measures must be put in place for the duration of construction to ensure the potential for damage or destruction is minimised. For trees and hedgerows this will need to be in line with best practice guidance detailed in BS 5837:2012 'Trees in relation to design, demolition and construction'. Furthermore, pollution prevention controls will need to comply with the Environmental good practice on site guide (fourth edition) produced by CIRIA in 2015.

Operation

4.10. The southern section of Kelaarts field within the existing LDO boundary (outside the pLWS) will be developed in the future; however, timescales are currently unknown. Prior to development, this area will be managed to ensure its importance and potential to support protected fauna remains unchanged, which includes one annual cut only.

4.11. Moor Ditch will be retained on the northern boundary with a minimum 10m buffer implemented and will be subject to selective scrub clearance to reduce shading and removal of invasive species.

4.12. The existing waterbodies on site will be retained and where possible should be subject to the following enhancements:

- Selective scrub control to ensure they do not become overshaded;
- Control of invasive species;
- Monitoring and control of aquatic vegetation cover;

- Relaxing of management of surrounding semi-natural habitats where it does not conflict with landscaping requirements in order to increase available habitat for fauna on site;
- Where waterbodies have limited semi-natural habitat surrounding them, opportunities should be sought to create habitats wildflower grassland and hedgerows.

4.13. Retained hedgerows should be subject to enhancements through gap planting where necessary and additional hedgerow planting should be sought within strategic landscaping and across development plots where it Is likely to deliver the most ecological benefit.

4.14. New habitats proposed will need to be appropriate for the site and should comprise a combination of the following:

- Green roof and green walls;
- Sustainable Urban Drainage Systems (SuDS);
- Neutral wildflower grassland;
- Amenity grassland and ornamental planting/introduced shrub;
- Mixed scrub;
- Tree planting; and
- Hedgerows.

4.15. Management of the proposed habitats should be in line with the management prescriptions outlined in Section 5 of this Biodiversity Strategy and the Milton Park LDO Design Guide.

Fauna

4.16. The mitigation and enhancements measures outlined below are applicable to all future development plots and strategic landscaping proposed by MEPC Milton GP Ltd.

Amphibians

4.17. If any plot development requires direct loss or direct impacts on any of the on-site waterbodies or suitable terrestrial habitat within 250m of the known GCN population to the east of the site, an eDNA survey will need to be undertaken during the appropriate time by a suitability qualified person in order to confirm GCN absence. If absence is confirmed, no further action would be required. If presence is confirmed, an appropriate mitigation strategy would need to be devised in consultation with the VoWH Technical Specialist (Ecology) and Natural England if required. Depending on potential impacts, this may include the requirement for a European Protected Species licence (EPSL).

Badger

4.18. If considered necessary (i.e. the presence of suitable habitat), an update badger survey in advance of site clearance will be undertaken. If new sett(s) found and would be affected by development

an appropriate mitigation strategy and, if relevant, licence from Natural England would be required.

4.19. During construction, all excavations will be covered or left with suitable egress to allow animals to escape.

Bats

4.20. If building demolition or tree removal is required a further check by a licensed bat ecologist will be required. If potential for roosts is identified, further surveys and an appropriate mitigation strategy and licence from Natural England may be required.

4.21. Furthermore, all construction works to be undertaken during daylight hours and no additional lighting during the construction period will be used.

4.22. As outlined in the Artificial Lighting Impact Assessment (Ensafe, 2021), lighting proposed on new development plots that has the potential to impact upon bat commuting and foraging corridors (i.e., along Moor Ditch, around the existing waterbodies and watercourses and hedgerows) if they are not already lit. Parameters for new lighting within the LDO have been designed in line with guidance for bats and lighting (ILP, 2014) and are detailed in Section 5.3 of the Lighting Impact Assessment.

4.23. Bat boxes should also be incorporated into development plots, dependent on their location and likelihood of use. The siting of the bat boxes should take into consideration surrounding habitats, with boxes fronting on to, or adjacent to, Moor Ditch, waterbodies, hedgerows and scattered trees and should avoid areas that will be heavily lit at night.

Birds

4.24. Woody vegetation clearance will be undertaken outside of nesting bird season (March to August inclusive). If this is not possible, vegetation will be checked by the ECoW prior to clearance. If an active nest is present, an exclusion zone will be set up and no clearance will take place until the young have fledged.

4.25. Bird boxes should also be Incorporated Into development plots dependent on their location and likelihood of use. Ideally, they should be sited close to hedgerow/tree habitat or waterbodies.

Reptiles

4.26. Where the potential for reptiles exists (this will primarily be in relation to the area south of Kelaarts Field in Milton Park North and the area to the south of the A410 in Milton Park Gateway), the following Precautionary Working Method Statement (PWMS) should be implemented:

- A toolbox talk will be provided to all contractors on site by a suitably qualified ecologist identifying the reptiles present on site and what they should do if they encounter one on site;
- Hibernacula to be installed within retained boundary habitats (locations to be agreed with suitably qualified ecologist) prior to any vegetation clearance down to ground/grubbing out of roots occurring;
- Hand search by a suitably qualified ecologist of any suitable habitat to be cleared;

- Clearance of suitable habitat to be undertaken during the active season for reptiles (March to September inclusive). This may conflict with breeding bird season so checks by a suitably qualified ecologist will need to be undertaken if this is the case. To avoid this, clearance over the winter period should be down to c.30cm to make habitats unsuitable for breeding birds but not adversely impact upon hibernating reptiles;

- Clearance will be undertaken in a phased manner with vegetation initially being strimmed from 30cm to 15cm, left at least overnight to allow individuals present to move of their own volition;

- Any reptiles identified during these works will be moved in a suitable container by the suitably qualified ecologist to retained suitable habitats;

- Once the suitably qualified ecologist has confirmed that the site is clear of reptiles ensure that thereafter the site is kept close mown;

- All works to be undertaken under the supervision of the suitably qualified ecologist. If the suitably qualified ecologist considers that numbers being found during the above process are too high for the methodology to be effective work will cease, and the suitably qualified ecologist will produce an updated strategy.

4.27. Where tree works are undertaken, arisings will be left in piles within the 30m buffer from the southern edge of Kelaarts Field and within the 10m buffers from Moor Ditch to create additional habitat piles for reptiles and other fauna.

4.28. Retention and management of suitable habitat to support reptiles within Kelaarts Field and additional habitat to be provided along the stream corridor should improve opportunities for reptiles.

Water vole

4.29. There is currently no requirement for a mitigation strategy in relation to this species. However, if the species re-colonises a mitigation strategy would be required.

Mechanism for Control, Monitoring, Review and LDO Conditions

4.30. The mechanism for control of the Biodiversity Strategy is as follows:

- At the pre-development notification stage, each developer must instruct a suitably qualified ecologist to produce their 'Biodiversity Statement' (see above). The ecologist can either be instructed directly by the developer or via MEPC Milton GP Ltd. prior to being submitted to the VoWH;

- The data from the plot specific Biodiversity Strategy for each new development will be incorporated into MEPC Milton GP Ltd.'s master Biodiversity metric for the LDO area to demonstrate that a minimum of 10% net gain is delivered.

- The master Biodiversity metric will be administered by a suitability qualified ecologist, to be retained by MEPC Milton GP Ltd. They will also be instructed to advice on strategic ecology

and landscaping outside of development plots and, if required, off-site BNG providers. They can also advise developers on plot-specific strategies if they do not instruct their own ecologist, subject to a fee being paid to MEPC Milton GP Ltd.

- Monitoring of the LEMP outlined in Section 5 below will involve update ecological surveys every two years by a suitably qualified ecologist. This will involve an audit of the LEMP to confirm that the objectives are being met and management prescriptions are appropriate. Should issues with the prescriptions be identified (e.g. a required change to timing of management), the VoWH will be consulted in order to determine a course of action which will be outlined in in short report which will be provided to the Council and MEPC Milton GP Ltd.

4.31. VoWH have confirmed that the requirement for a minimum 10% biodiversity net gain to be delivered may increase during the lifetime of the LDO. There will be a requirement for the LDO to be reviewed every five years so should this change occur, it can be captured and altered during the review and the new net gain requirement captured in an updated master Biodiversity Metric. MEPC Milton GP Ltd are committed to delivering the policy requirement in relation to net gain.

Section 5: Landscape and Ecological Management Plan (LEMP)

5.1. The following management prescriptions have been identified for the site, including the new development plots, and will be monitored as part of the ecological baseline surveys undertaken every two years.

Rationale	Management Prescription	Detail	Timing/Frequency	Responsibility
Kelaarts Field (outside to the north of the LDO boundary)				
Optimal management of grassland to maximise botanical interest and biodiversity and maintain current condition	Bi-annual cuts in growing season	Cut grassland to 40 – 70mm in late August and leave arisings for 3 to 4 days to allow seeds to drop and then remove. Cut to remove regrowth in November.	Biannually: one in late August and one between October and November.	MEPC Milton GP Ltd
Kelaarts Field (inside the LDO boundary)				
Management of existing habitat *in lieu* of construction to avoid new ecological issues establishing.	Consistent grassland management	Cut grassland to 30 – 50mm using cut and collect mower and dispose of arisings in dedicated composting area.	Annually: October	MEPC Milton GP Ltd
Moor Ditch				
To enhance Moor Ditch within Milton Park to contribute towards biodiversity net gain	Management of invasive species	Hand pulling of Himalayan balsam along Moor Ditch before seeds have matured. Once pulled leave plants on the ground for several days to dry out before composting.	Annually: May/June	MEPC Milton GP Ltd
	Selective scrub clearance to reduce shading	Removal of scrub/immature trees where possible to reduce shading on Moor Ditch. Clearance proposals to be reviewed and agreed by suitably qualified ecologist.	Every two years: late winter.	MEPC Milton GP Ltd
Waterbodies and watercourses (retained)				
To enhance the waterbodies and watercourses on site and increase biodiversity	Removal of invasive species	Removal of invasive species if identified during the ecology surveys undertaken every two years to update the site ecological baseline.	Every 2 years.	MEPC Milton GP Ltd
	Selective scrub/tree clearance to control shading	Trees/scrub managed to minimise leaf input, siltation and pond water enrichment. Retain some overhanging branches creating dappled shade	Every 5 years.	MEPC Milton GP Ltd
	Monitor aquatic and emergent vegetation (to be noted during updates to site ecological baseline)	Rake out excess growth to maintain 50% open water in autumn and retain on banks for 2 days before disposal.	Every 2 years.	MEPC Milton GP Ltd
	Relaxation of management of surrounding semi-natural habitat where possible	Reduction in frequency and level of grass cutting around waterbodies where there is no conflict with landscape requirements.	As and when required.	MEPC Milton GP Ltd
Hedgerows and Trees (retained)				
Management of scrub, hedgerow and trees to maintain existing features of ecological importance in current condition	Ongoing management of scrub, hedgerow and trees	Prune to remove dead, dying and diseased wood except where it can be safely retained as habitat for invertebrates and fungi (refer to birds and bats below)	Annually. November to February inclusive.	MEPC Milton GP Ltd or Individual plot developer depending on location
		Arisings from tree management to be retained in log piles within the 30m buffer from the southern edge of Kelaarts Field and within the 10m buffers from Moor Ditch. Locations to be advised by a suitably qualified ecologist.	As required.	MEPC Milton GP Ltd or Individual plot developer depending on location, advised by an Ecologist as required.
		Existing hedgerows to be cut every two years. Trimming sides and top using hand tool or hand-held machine tools to promote bushy growth.	Every two years in January/February to avoid nesting bird season and allow birds to feed off any fruiting species in autumn.	MEPC Milton GP Ltd or Individual plot developer depending on location
		Gap planting within existing hedgerows to strengthen green corridors and retain habitat connectivity.	As required.	MEPC Milton GP Ltd or Individual plot developer depending on location

Rationale	Management Prescription	Detail	Timing/Frequency	Responsibility
Green roofs and green walls				
Creation and management of green roof and green walls to increase biodiversity and contribute towards achieving biodiversity net gain	Creation of green roof/walls	Preparation and creation in line with guidance on green roof/wall seed mix chosen.	No specific timing restrictions as long as planting is order and secured ahead of the winter season.	Individual plot developer
	Management of green roof and walls	In order to achieve and maintain moderate condition, there will need to be a complete absence of invasive species, controlled through spot treatment and a diverse range of flowering plant species of benefit to wildlife will need to be present. Vegetation strimmed back to 50 – 70mm and arisings removed to prevent build-up of dead vegetation that will lead to an overall reduction in species.	Annually: late autumn.	Individual plot developer
Sustainable Urban Drainage Systems (created)				
To provide on plot drainage and to increase habitat diversity and opportunities for wildlife contributing towards achieving biodiversity net gain.	Creation of SuDS Pond and planting of seasonally wet wildflower grass mix (e.g. Emorsgate EG8)	SuDS creation and planting of wet wildflower grassland mix in line with specific seed mix instructions. Ground preparation will be particularly important given current land use, weed removal and buying or surface vegetation will be required.	No specific seasonal timing for SuDS creation but ideally before the most appropriate sowing times (so late summer or winter). Seeding best undertaken in autumn or spring either by machine or by hand.	MEPC Milton GP Ltd or Individual plot developer depending on location
	Manage SuDS to achieve moderate condition and contribute to achieving biodiversity net gain	In order to achieve and maintain moderate condition, there will need to be a complete absence of invasive species, controlled through spot treatment and a diverse range of flowering plant species of benefit to wildlife will need to be present. In the first year, mow regularly to 40 – 60mm. In subsequent years when grass is between 40-75mm high remove stones and debris exceeding 50mm in any dimension. Cut grass to approximately 35mm high. Remove and dispose of all arisings. If possible, the water table should be managed to be at or near the surface all year round either through open water or saturation of soil at the surface.	Year 1 – regular mowing as required. Year 2 onwards, biannually – wildflower grass mix to be cut in March and October. SuDS vegetation control as required. Other vegetation trimming annually as required November to February to avoid bird breeding season, if necessary, within this period management can proceed following checks by an ecologist to confirm the absence of nesting birds. The provision of later cutting would retain food source for birds over winter so should be used where practical.	MEPC Milton GP Ltd or Individual plot developer depending on location
Hedgerows and Trees (created)				
To contribute to achieving biodiversity net gain	Native hedgerow planting	Plant in double staggered row – 600mm between rows and at 450mm centres at 5 plants per linear metre. Post and wire fence to be placed along the centre of the new hedgerow to assist establishment.	As required when plots or strategic landscaping proposals come forward	MEPC Milton GP Ltd or Individual plot developer depending on location
	Native hedgerow management	Once established new hedgerows will maintain height of vegetation >1.5m, minimising any gaps, with no horizontal gaps in the canopy and no gaps of more than 0.5m from the ground to the lowest leafy growth. This would be achieved through the provision of appropriate management with cutting occurring on rotation of three or more years, with only one side of the hedgerow cut at a time. No invasive species will be allowed to grow within the hedge and cover of undesirable species including nettles, cleavers, docks will be managed to be below 20%. This would be achieved by hand removal or the targeted application of weed killer if required.	Annually (as required) -November to February to avoid bird breeding season, if necessary, within this period management can proceed following checks by an ecologist to confirm the absence of nesting birds. The provision of later cutting would retain food source for birds over winter so should be used where practical.	MEPC Milton GP Ltd or Individual plot developer depending on location, advised as necessary by an Ecologist

Rationale	Management Prescription	Detail	Timing/Frequency	Responsibility
	Tree planting management	Replacement of trees that die soon after planting or establishment	Annually in autumn	MEPC Milton GP Ltd or Individual plot developer depending on location
		Fence/guard/tube removal and replace or adjust as required. Adjustment of tree ties and stakes as required.	Once per month	MEPC Milton GP Ltd or Individual plot developer depending on location
Neutral grassland (created)				
To increase on site habitat diversity, provide additional opportunities for wildlife and contribute to achieving biodiversity net gain	Creation of neutral grassland (e.g. Emorsgate EM2)	Seeding of wildflower grassland mix in line with specific seed mix instructions. Ground preparation will be particularly important given current land use, weed removal and buying or surface vegetation will be required.	Seeding best undertaken in autumn or spring either by machine or by hand.	MEPC Milton GP Ltd or Individual plot developer depending on location
	Management of neutral grassland	Cutting (First Year) Cut to 40-60mm if there is sufficient material. Maintenance thereafter: Cut in late summer to 50mm to remove excess grass. Leave the cut material to dry for 1-7 days then remove. Once established grassland will be maintained to achieve moderate condition by: • Ensuring an absence of invasive species and keeping combined cover of undesirable species and physical damage below 5% through spot treatment and potentially controlled access of needed; • Ensuring cover of bare ground is between 1 and 5%, cover of bracken is less than 20% and cover of scrub (including bramble is less than 5%.	Sowing in autumn /spring but can be sown at other times of the year if there is sufficient warmth and moisture. Management cut annually - Regularly throughout the first year, thereafter July/August.	
Amenity grassland and ornamental planting/introduced shrub (retained and created)				
To maximise ecological opportunities and contribute to biodiversity net gain.	Creation and management of newly created and retained amenity grassland, ornamental planting and introduced shrub	Ornamental/introduced shrub to be planted and managed in line with landscape specifications. Retained and created amenity grassland to be managed to achieve at least moderate condition by: • Ensuring an absence of invasive species, that undesirable species have less than 5% cover, there is less than 20% cover of bracken and scattered scrub comprises less than 20% of the grassland area (through spot treatment where required). • Cover and bare ground and/or physical damage maintained at less than 5% through ecological baseline survey update every two years and change of management prescriptions as required if these criteria are not being met.	As required when new plots come forward.	MEPC Milton GP Ltd or Individual plot developer depending on location

Rationale	Management Prescription	Detail	Timing/Frequency	Responsibility
Mixed scrub (created)				
To increase on site habitat diversity, provide additional opportunities for wildlife and contribute to achieving biodiversity net gain	Creation and management of mixed scrub	Mixed scrub to comprise native species of benefit to wildlife and to be managed to achieve at least moderate condition by ensuring the following: • Ensuring an absence of invasive species and that undesirable species have less than 5% cover (through spot treatment where required); • Ensuring that the mixed scrub meets its UK Hab definition "*Dense scrub comprising of a mixture of species without a single species dominant*" by controlling growth to ensure no one species becomes dominant; and • Ensuring that there is a well-developed edge with scattered scrub and/or tall grassland between mixed scrub and adjacent habitats through relaxed management of edge habitats.	Creation as required when new plots come forward. Management annually (as required) - November to February to avoid bird breeding season, if necessary, within this period management can proceed following checks by an ecologist to confirm the absence of nesting birds.	MEPC Milton GP Ltd or Individual plot developer depending on location
Bats				
Maintain and enhance opportunities for bats	Avoid harm to roosting bats during management activities	Prior to management of woody vegetation, trees to be assessed for their potential to support roosting bats. Suitable roost features to be either retained of surveyed further before works to avoid impacts potential bat roosts.	Prior to tree works	MEPC Milton GP Ltd or Individual plot developer depending on location, advised as necessary by an ecologist
	Sensitive design of lighting in accordance with the Local Development Order Parameters and best practice measures outlined in the Artificial Lighting Impact Assessment for MEPC Ltd at Milton Park LDO2 (Report Reference 109807-1R1).	Lighting should be minimised along Moor Ditch and boundary features. Baffled or directional lighting away from sensitive areas. To be agreed with ecologist.	As required when new plots come forward.	MEPC Milton GP Ltd or Individual plot developer depending on location, advised as necessary by an ecologist
	Provide additional roosting sites.	Bat boxes to be positioned within fabric of newly constructed buildings or on retained trees at a height of 4 – 6 m with appropriate habitat corridors adjacent. Locations to be advised by an ecologist.	Installation as required when new plots come forward. Bat boxes that are not self-cleaning to be inspected and cleaned every two years by a licensed bat worker. These should be cleaned over winter (October – March).	MEPC Milton GP Ltd or Individual plot developer depending on location, advised as necessary by an ecologist
Birds				
Maintain and enhance opportunities for birds	Avoid harm to nesting birds during management activities	Management of woody vegetation to be undertaken sensitively. Avoid nesting bird season (March to August) or precede by a check by an ecologist to confirm no active nests are present	Avoid March to August	MEPC Milton GP Ltd or Individual plot developer depending on location, advised as necessary by an ecologist

Rationale	Management Prescription	Detail	Timing/Frequency	Responsibility
	Provide additional nest sites	Incorporate nesting opportunities into the fabric of newly constructed buildings and/or on retained mature trees. Bird boxes to be cleaned out on an annual basis outside of nesting bird season.	No timing restrictions on installation. Annually: October to February.	MEPC Milton GP Ltd or Individual plot developer depending on location, advised as necessary by an ecologist
Reptiles				
Maintain and enhance opportunities for reptiles	Maintain suitable habitat where currently exists	See above for all retained habitat management.	See above for all retained habitat management.	MEPC Milton GP Ltd or Individual plot developer depending on location
	Create hibernacula	Arisings from tree management to be retained in log piles within the 30m buffer from the southern edge of Kelaarts Field and within the 10m buffers from Moor Ditch. Locations to be advised by a suitably qualified ecologist.	As required following tree works.	MEPC Milton GP Ltd or Individual plot developer depending on location, advised as necessary by an ecologist
LEMP Monitoring				
To monitor the efficacy of the LEMP and to ensure the habitats are being managed to achieve the required net gain.	Monitoring of LEMP	This will involve an audit of the LEMP to confirm that the objectives are being met and management prescriptions are appropriate. Should any issues with any of the prescriptions outlined below be identified (e.g. a required change to timing of management), the VoWH will be consulted in order to determine a course of action which will be outlined in in short report which will be provided to the Council and MEPC Milton GP Ltd	Every two years (to be combined with ecological baseline surveys)	MEPC Milton GP Ltd

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Appendix 1: Relevant Legislation and Planning Policy

A1.1. This section summarises the legislation and national, regional and local planning policies, as well as other reference documents, relevant to the baseline ecology results.

Legislation

A1.2. Specific habitats and species receive legal protection in the UK under various pieces of legislation, including:

- The Wildlife and Countryside Act 1981 (as amended)
- The Conservation of Habitats and Species Regulations 2017 (as amended)
- The Countryside and Rights of Way Act 2000
- The Natural Environment and Rural Communities Act 2006
- The Hedgerows Regulations 1997
- The Protection of Badgers Act 1992

A1.3. The European Council Directive on the Conservation of Natural Habitats and of Wild Flora and Fauna, 1992, often referred to as the 'Habitats Directive', provides for the protection of key habitats and species considered of European importance. Annexes II and IV of the Directive list all species considered of community interest. The legal framework to protect the species covered by the Habitats Directive has been enacted under UK law through Conservation of Habitats and Species Regulations 2017 (as amended).

A1.4. In Britain, the WCA 1981 (as amended) is the primary legislation protecting habitats and species. SSSIs, representing the best examples of our natural heritage, are notified under the WCA 1981 (as amended) by reason of their flora, fauna, geology or other features. All breeding birds, their nests, eggs and young are protected under the Act, which makes it illegal to knowingly destroy or disturb the nest site during nesting season. Schedules 1, 5 and 8 afford protection to individual birds, other animals and plants.

A1.5. The CRoW Act 2000 strengthens the species enforcement provisions of the WCA 1981 (as amended) and makes it an offence to 'recklessly' disturb a protected animal whilst it is using a place of rest or shelter or breeding/nest site.

Species and Habitats of Principal Importance and the UK Biodiversity Action Plan

A1.6. The UK Post-2010 Biodiversity Framework succeeded the UK BAP partnership in 2011 and covers the period 2011 to 2020. However, the lists of Priority Species and Habitats agreed under the UKBAP still form the basis of much biodiversity work in the UK. The current strategy for England is 'Biodiversity 2020: A Strategy for England's wildlife and ecosystem services' published under the UK Post-2010 UK Biodiversity Framework. Although the UK BAP has been succeeded, Species Action Plans (SAPs) developed for the UK BAP remain valuable resources for background information on priority species under the UK Post-2010 Biodiversity Framework.

A1.7. Priority Species and Habitats identified under the UKBAP are also referred to as Species and Habitats of Principal Importance for the conservation of biodiversity in England and Wales within Sections 41 (England) and 42 (Wales) of the Natural Environment and Rural Communities (NERC) Act 2006. The commitment to preserving, restoring or enhancing biodiversity is further emphasised for England and Wales in Section 40 of the NERC Act 2006.

Planning Policy

National Planning Policy Framework (NPPF), July 2021

A1.8 The National Planning Policy Framework (NPPF) was updated in July 2021 and sets out the Government's planning policies for England and how these should be applied. It replaces the National Planning Policy Framework published in July 2019.

A1.9 Paragraph 11 states that:

"Plans and decisions should apply a presumption in favour of sustainable development."

Section 15 of the NPPF (paragraphs 174 to 182) considers the conservation and enhancement of the natural environment including habitats and biodiversity (paragraphs 179-182)

A1.10 Paragraph 174 states that planning and decisions should contribute to and enhance the natural and local environment by:

"protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (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; and

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

A1.11 Paragraph 175 states that plans should distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.

A1.12 Paragraph 179 states that in order to protect and enhance biodiversity and geodiversity, plans should:

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

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

A1.13 When determining planning applications, Paragraph 1780 states that local planning authorities should aim to conserve and enhance biodiversity by applying 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 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 improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate."

A1.14 As stated in paragraph 181 the following should be given the same protection as habitats sites:

"p*otential Special Protection Areas and possible Special Areas of Conservation;*

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

A1.15 Paragraph 182 states that the presumption in favour of sustainable development does not apply where the planned project is likely to have a significant effect on a habitat site (alone or in combination with other plans or projects) unless an appropriate assessment has concluded the plan or project will not adversely affect the integrity of the habitats site.

Office of the Deputy Prime Minister (ODPM) Circular 06/2005: Biodiversity and Geological Conservation - Statutory Obligations and their Impact within the Planning System

A1.16 ODPM Circular 06/05 was prepared to accompany PPS9, however continues to be valid, and material in the consideration of planning applications since PPS9's replacement by the NPPF.

A1.17 ODPM Circular 06/05 provides guidance on applying legislation in relation to nature conservation and planning in England. Part I considers the legal protection and conservation of internationally designated sites (namely candidate Special Areas of Conservation (cSACs), SACs, potential Special Protection Areas (pSPAs), SPAs and Ramsar sites) and Part II considers the legal protection and conservation of nationally designated sites, namely Sites of Special Scientific Interest (SSSIs).

A1.18 Part III considers the protection of habitats and species outside of designated areas (particularly UK Biodiversity Action Plan species and habitats, which it states are capable of being a material consideration in the preparation of local development documents and the making of planning decisions.

A1.19 Part IV considers species protected by law and states that the presence of a protected species is a material consideration in the consideration of a development proposal that, if carried out, would

be likely to result in harm to the species or its habitat and that it is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted.

Local Planning Policy

Oxfordshire Plan 2050

A1.20 The Oxfordshire Plan 2050 is a Joint Statutory Spatial Plan (JSSP) and is currently being consulted upon. It comprises a strategic planning document outlining how the six planning authorities in Oxfordshire will commit to the Housing and Growth Deal to deliver new homes, infrastructure and employment across the counties while protecting the natural environment and tackling climate change.

Vale of White Horse Local Plan

A1.21 The VoWH has a Local Plan split into two parts; Local Plan 2031 Part 1 was adopted in full by the Council in December 2016 and Local Plan 2031 Part 2 was adopted in full by the Council in October 2019.

A1.22 Relevant policies are outlined below:

Core Policy 45: Green Infrastructure

A net gain in Green Infrastructure, including biodiversity, will be sought either through on-site provision or off-site contributions and the targeted use of other funding sources. A net loss of Green Infrastructure, including biodiversity, through development proposals, will be resisted.

Proposals for new development must provide adequate Green Infrastructure in line with the Green Infrastructure Strategy. All major applications must be accompanied by a statement demonstrating that they have taken into account the relationship of the proposed development to existing Green Infrastructure and how this will be retained and enhanced. Proposals will be required to contribute to the delivery of new Green Infrastructure and/or the improvement of existing assets including Conservation Target Areas in accordance with the standards in the Green Infrastructure Strategy and the Habitats Regulations Assessment.

Core Policy 46: Conservation and Improvement of Biodiversity

Development that will conserve, restore and enhance biodiversity in the district will be permitted. Opportunities for biodiversity gain, including the connection of sites, large-scale habitat restoration, enhancement and habitat re-creation will be actively sought, with a primary focus on delivery in the Conservation Target Areas. A net loss of biodiversity will be avoided.

The highest level of protection will be given to sites and species of international nature conservation importance (Special Areas of Conservation and European Protected Species). Development that is likely to result in a significant effect, either alone or in combination, on such sites and species will need to satisfy the requirements of the Habitat Regulations.

Development likely to result in the loss, deterioration or harm to habitats or species of importance to biodiversity or of importance for geological conservation interests, either directly or indirectly, will not be permitted unless:

i. the need for, and benefits of, the development in the proposed location outweighs the adverse effect on the relevant biodiversity interest;

ii. it can be demonstrated that it could not reasonably be located on an alternative site that would result in less or no harm to the biodiversity interests; and

iii. measures can be provided (and are secured through planning conditions or legal agreements), that would avoid, mitigate against or, as a last resort, compensate for, the adverse effects likely to result from development.

The habitats and species of importance to biodiversity and sites of geological interest considered in relation to points i) to iii) comprise:

- *Sites of Special Scientific Interest (SSSI)*
- *Local Wildlife Sites*
- *Local Nature Reserves*
- *Priority Habitats and species listed in the national and local Biodiversity Action Plan*
- *Ancient Woodland and veteran trees*
- *Legally Protected Species*
- *Locally Important Geological Sites*

The level of protection and mitigation should be proportionate to the status of the habitat or species and its importance individually and as part of a wider network. It is recognised that habitats/areas not considered above (i.e. Nationally or Locally designated and not priority habitats) can still have a significant biodiversity value within their local context, particularly where they are situated within a Conservation Target Area and/or they have good potential to be restored to priority habitat status or form/have good potential to form links between priority habitats or act as corridors for priority species. These habitats will be given due weight in the consideration of planning applications. If significant harm to these sites cannot be avoided (through locating on an alternative site with less harmful impacts) it will be expected that mitigation will be provided to avoid a net loss in biodiversity or, as a last resort, compensation will be required to offset the impacts and achieve a net gain in biodiversity.

Appendix 2: Updated Ecological Surveys, Milton Park LDO Milton Park, Didcot Oxfordshire November 2020

Updated Ecological Surveys
Milton Park LDO
Milton Park
Didcot
Oxfordshire

November 2020

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CONTENTS

ECOLOGICAL SURVEYS – MILTON PARK LDO - MILTON PARK – DIDCOT - OXFORDSHIRE

EXECUTIVE SUMMARY

Elizabeth McKay Consultant Ecologist was instructed by MEPC Milton Park to undertake baseline ecological and protected species surveys for Milton Park, Oxford.

The Milton Park Local Development Order (LDO) is a partnership between Vale of White Horse District Council as the local planning authority, and MEPC Milton Park as the landowner. Terence O'Rourke Ltd were instructed by MEPC to help coordinate the LDO process.

The purpose of the Milton Park LDO is to enable a vibrant business area, promoting employment-generating uses at the business park, to maximise the success of the Science Vale UK Enterprise Zone and give greater confidence to business to invest in Milton Park. It was prepared in accordance with the Town and Country Planning (Development Management Procedure) (England) Order 2010.

The Milton Park LDO will simplify planning control to give greater flexibility for businesses to develop new premises and facilities or adapt existing premises, whilst maintaining a successful and diverse mix of employment generating uses.

Development will only be permitted where the local authority is satisfied that it is in accordance with the permitted uses and development parameters set out in the Order. Development proposals not in accordance with the provisions of the Order will be determined by a planning application.

The LDO has been designed to be effective for a period of 15 years to reflect the typical timescale of business leases and give greater certainty for potential investors.

The ecological baseline information for the LDO area will be kept up-to-date by a regular review of the baseline surveys by a professional ecologist, not less than every two calendar years from date of adoption of the Order. The surveys shall be submitted to and approved to the local planning authority. Should the review identify changes in the baseline conditions, the relevant ecological survey(s) will be undertaken by a professional ecologist and submitted to the local planning authority prior to the commencement of further development in the survey area(s). Significant changes in the ecological baseline will require review of the provisions of the LDO and/ or screening in accordance with the Town and Country Planning (Environmental Impact Assessment) Regulations 2011.

The surveys detailed in this report were designed to give baseline survey data for the whole of the Milton Park LDO and also provide legally protected species information as appropriate. The original baseline studies showed that parts of the site had suitability for Great Crested Newts and Reptiles; the findings of these surveys were detailed below. The Reptile Surveys were undertaken by Patricia Vaux of Sedgehill Ecology Services.

The report also includes a desk data search undertaken by Thames Valley Environmental Records Centre.

The results of these surveys showed that a small population of Common Lizards were present within areas MP8 and MP9. Because these species receive legal

protection, a mitigation strategy was detailed in the separate reptile report (Sedgehill Ecology Services). This included translocation of reptiles from MP8 and the affected areas of MP9 into the unaffected areas of MP9, with suitable enhancements to habitat. MP8 has since been completely redeveloped.

Approximately 75% of MP9 was identified as valuable neutral semi-improved grassland – which is a UK Biodiversity Action Plan Priority Habitat, with UK BAP Priority Species – Skylarks – also present. This area will now not be the subject of development.

A residual population of the legally protected Water Vole were also previously present along Moors Ditch – which forms the northern boundary of the site – whilst no evidence has been found in recent years this habitat also will be protected from the effects of development because of its value to nesting birds, foraging bats, invertebrate species and other wildlife. Natural linear habitats provide good corridors for wildlife.

No evidence of Water Voles was found in other water bodies around the site.

No evidence of Great Crested Newts was found as a result of the surveys but the pools, and water courses in general were identified as being valuable habitats for birds, foraging bats and invertebrates. A small population of Smooth Newts were found in Pool 8 but these are protected against sale only.

Hedges and treelines around the site were also identified as being valuable habitat for birds and foraging bats.

None of these habitats will be affected by the proposals for the LDO. Two buildings were identified as having roosting potential for bats but these will also remain unaffected by the LDO proposals.

On the basis of thorough survey effort it is not considered that there will be any other protected species issues affecting the proposals or that there will be any habitats of value adversely impacted provided the recommendations of these surveys are followed as detailed below.

The following report includes update baseline ecological surveys carried out in June / July 2014, May 2016, May 2018 and May 2020. No significant changes have taken place.

BASELINE ECOLOGICAL SURVEYS

1. INTRODUCTION

The original baseline surveys of the existing Milton Park were undertaken on the 14th and 18th of February 2011. Surveys of areas MP5 and MP9 were undertaken on the 30th of July 2012. An update to the June 2007 survey of MP8 was also undertaken on the 11th of May 2012. These reports have been combined below.

The baseline survey of the whole site was also updated - 24th June and 31st July 2014 and the revisions incorporated below.

In addition a more detailed survey of MP7 was undertaken also on the 31st of July 2014, specific to proposed redevelopment – this is detailed separately. No changes were noted from previous surveys in 2014. By May 2016 the site was under construction and is now largely redeveloped (May 2020).

Redevelopment of MP2 & MP3 had also occurred by 2014. MP3 is also the subject of separate prior ecological survey (101 – 102 Milton Park).

The baseline survey of the whole site was updated again on the 13th and 25th of May 2016 and the 17th and 24th of May 2018, also on the 7th of May and 14th of May 2020.

MP1 (155 Milton Park) is now redeveloped (subject to a prior ecological report). This was previously hard standing but had most recently been used as a site maintenance depot. The removal of materials was supervised by a suitably qualified Ecologist and two grass snakes translocated to Moors Ditch – early September 2014. Works were carried out in consultation with the Local Authority Ecologist Dominic Lamb.

A bridge has now been constructed over Moors Ditch adjacent to 155 Milton Park to facilitate access to the southern part of MP9 – Kelarts Field – proposed for development. Some thinning of trees and clearance of scrub has taken place to facilitate this in consultation with BBOWT. This is the subject of a separate Baseline Ecological Survey – Elizabeth Mckay Consultant Ecologist June 2016 and updated in May 2018.

MP6 – Park Drive East - is now redeveloped and is the subject of a separate ecological report August 2016.

MP4 (172 Milton Park) has also been redeveloped. A separate ecological survey report also exists for this site – field work undertaken June 2014.

95 Milton Park has now also been redeveloped. An ecological survey was undertaken in August 2016 and this is the subject of a separate report.

In 2018 126 Milton Park was also rebuilt and refurbished with associated landscaping and is the subject of a separate ecological report - September 2018.

Also in 2019 136 Milton Park was refurbished and recommendations for ecological enhancement were made – October 2019.

In addition 140 Milton Park was refurbished with associated landscaping – ecological report dated May 2019.

In the winter of 2020 repair works had to be undertaken to a septic tank at Milton Gate (formerly MP8 – now fully developed) involving a haul road across the remaining undeveloped easternmost section of MP9. An ecological report with recommendations for protection and enhancement was also produced in association with these works.

MP5 remains currently undeveloped (May 2020).

The baseline report includes a site description, an assessment of the potential of the site to contain protected species, conclusions and recommendations.

Site photographs have been included as appendix 1 as well as site plans (figures 1A-1C).

A desk data search carried out by the Thames Valley Environmental Records Centre has also been included – appendix 2.

2. METHODOLOGY

The survey work has been undertaken using the extended Phase 1 habitat survey methodology. This is based on the Phase 1 habitat survey methodology developed by the former Nature Conservancy Council (1990), a nationally accepted standard method for baseline ecological survey. Phase 1 habitat survey codes are used to classify habitats in the text below.

The surveys of the site were carried out by Elizabeth Mckay, a Consultant Ecologist of 27 years standing.

3. SITE DESCRIPTION

Overview

The existing Milton Park is a business and industrial Park, near Didcot in Oxfordshire, made up mostly of modern office blocks and large warehouse style industrial units with areas of car parking and other hard standing. Surrounding these areas and along most of the access road around the Park are areas of closely mown grass and ornamental shrubs and trees varying from young to semi-mature.

To the north of Milton Park is a large rough grass field - Kelart's Field MP9 - and further west arable land. To the east is Sutton Courtenay Field Centre (described below) and Didcot Power Station.

Delineating the southern boundary of Milton Park is the railway line with site 1 - MP8 – also described below – to the south and further areas of mainly arable land and occasional pasture, bordered by hedgerows. MP5 is located to the south of the A4130 to Didcot adjacent to McDonald's.

To the west of Milton Park is pasture land and the A34 dual carriageway. Ponds and streams are present in the surrounding landscape.

The more natural and naturalised habitats of greater value for wildlife at Milton Park are described below and target noted on the site plan as well as specific descriptions for MP5 and MP9.

Pools

G1 Standing Water / F2.1 Marginal Vegetation / B2.2 Neutral Grassland – Semi-improved / C3.1 Ruderal / A2.1 Dense Scrub A3.1 Scattered Broad-Leaved Trees

Pool 1 (Figure 1A) is lined with trees on its south, east and western sides - at the top of the banks. These trees include Crack Willow *Salix fragilis*, Weeping Willow *Salix babylonica*, Goat Willow *Salix caprea*, Alder *Alnus glutinosa*, Ash *Fraxinus excelsior*, Poplar *Populus sp*, Dogwood *Cornus sanguinea*, Hawthorn *Crataegus monogyna,* Hazel *Corylus avellana* and ornamental shrubs.

Aquatic vegetation consists mainly of Reedmace *Typha latifolia*, Yellow Flag Iris *Iris pseudacorus* Sedges *Carex sp*. and occasional Hard Rush *Juncus inflexus*, but essentially the pool itself is quite large and open. It has gently sloping sides and some grassy banks on the northern and southern sides. These are regularly mown particularly on the northern bank. However on the south bank there are small areas of less regularly mown semi-improved grass, which have greater diversity than the regularly mown areas. Herbaceous species include St John's-wort *Hypericum sp*., Ox-eye Daisy *Leucanthemum vulgare*, Cowslip *Primula veris*, Lady's Bedstraw *Galium verum* Creeping Buttercup *Ranunculus repens,* Germander Speedwell Veronica chamaedrys Meadow Buttercup *Ranunculus acris* and Ribwort Plantain *Plantago lanceolata*.

No change was noted in July 2014. On the 13th May 2016 when the pool was revisited de-silting had taken place quite recently with most marginal vegetation removed, although some limited areas of Sedges and Reedmace remained. There were otherwise no other changes apart from some limited removal of shrubs at the eastern end to facilitate access.

In May 2018 marginal vegetation had recovered with stands of Reedmace, Iris and Sedges. Some scrub clearance had taken place on the north and east banks. Otherwise there were no changes.

When the pool was revisited in May 2020 no further changes had taken place with no management works having taken place recently.

Pool 2 is mainly surrounded by semi-mature trees, close to the waters edge, creating a more shaded habitat lacking in aquatic vegetation apart from a limited area of Sedges. The margins are gently sloping on the west bank and much steeper on the southern and eastern banks. This is the largest pool within Milton Park. Trees include Ash, Crack Willow and Goat Willow.

There is rough grass and ruderal vegetation to the west of pool 2. The ruderal habitat consists of Nettle *Urtica dioica*, Teasel *Dipsacus fullonum*, Creeping Thistle *Cirsium arvense* and Broad-leaved Dock *Rumex obtusifolius*.

Between this and the pool is a small area of semi-natural grassland exhibiting a fine-leaved sward of common grasses and other herbaceous species. Herbs include St John's-wort, Creeping Buttercup, Cowslip *Primula veris* and Ground Ivy *Glechoma hederacea*.

Since management has been adjusted to allow more time for plants to flower and set seed a Pyramidal orchid was noted on the banks of the lagoon (24th June 2014). Otherwise no change was noted to the lagoon itself.

On the 13th of May 2016 the lagoon had been recently de-silted with one mid aged tree removed. Inevitably the de-silting operation had caused some limited damage to the west bank of the lagoon however reinstatement was planned with wild flower re-seeding.

Meadowsweet, *Filipendula ulmaria,* Cowslip *Primula veris,* Bluebell *Hyacinthoides non-scripta,* Lady's Bedstraw *Galium verum* and Meadow Cranesbill *Geranium pratense* were still apparent. Silt had been deposited in the area of ruderal habitat to the west of lagoon which was of low botanical interest.

No changes were noted when the area was resurveyed in May 2018. Additional flowering plants noted on the western bank of the lagoon in addition to those detailed above included Bugle, Ragged Robin and Lady's Bedstraw.

When the lagoon was revisited in May 2020 it appeared to have been recently dredged. A new walkway has also been introduced adjacent.

Pool 3 is much smaller, shallower and more open. The aquatic vegetation was dominated by Reedmace with some Great Willowherb *Epilobium hirsutum* around the margins, after dredging aquatic vegetation started to re-colonised. There is some limited tree and shrub cover on the south-facing bank including Alder and Goat Willow and Silver Birch *Betula pendula.*

Further to the survey undertaken on the 24th of June 2014 the Reedmace had re-colonised well. There is also a mix of Ox-eye daisy, Meadowsweet and Common Figwort, which has colonised on the west boundary of pool 3.

This remained the case in May 2016 with the pool dominated by Reedmace and some Marsh Marigold *Caltha palustris.* Meadowsweet, Cowslip and Ox-eye Daisy were present on the west bank.

No changes were noted when the site was resurveyed in May 2018. This remained the case when the Pool was revisited in May 2020.

Pool 4 is shaded and has steeper banks. Dominant trees and shrubs are Crack Willow, Silver Birch and Dogwood. There is some Reedmace, Yellow Flag Iris and Sedges *Carex sp*. on the east side of the pool where it is more open.

In June 2014 certain Birch trees had been removed. The lagoon and surrounds remained unchanged when resurveyed in May 2016, May 2018 and May 2020.

Where mowing has been relaxed and the grass re-seeded on the west facing bank a diverse mix of flora has developed including; Black Knapweed *Centaurea nigra*, Cowslip *Primula veris*, Germander Speedwell *Veronica chamaedrys* Ox-eye Daisy *Leucanthemum vulgare*, Yarrow *Achillea millefolium*, Red Campion *Silene dioica* Perforate St Johns-wort *Hypericum perforatum* – May 2020.

Pool 5 had some shrub cover on its western bank consisting of Goat Willow, Alder and ornamental shrubs but was otherwise open with Reedmace and Common Reed *Phragmites australis* dominating the aquatic vegetation in large swathes. The western banks are steeper with gently sloping margins on the east side.

In June 2014 it was apparent the pool had been dredged with aquatic cover removed. Some trees had also been removed. In May 2016 the pool had re-

vegetated with Reedmace and Common Reed having recolonised but with plenty of areas of open water. Goat Willow was present on the western bank.

In May 2018 the Reed was dominant again in large swathes, otherwise the pool remained unchanged. This remained the case when the survey was updated in May 2020. The grass banks had also colonised with Cowslips, Red Campion, Ox-eye Daisy and Black Knapweed. Pendulous Sedge *Carex pendula* had also colonised around the lagoon margins.

Pool 6 consists mainly of open water. There is a limited area of Sedges and Hard Rush as well as some Yellow Flag Iris. A line of trees is present on the south and east side of the pool consisting of Silver Birch, Crack Willow, Goat Willow and Alder. This pool has quite steeply sloping sides.

No change was observed in June 2014 or May 2016.

In May 2018 the Crack Willows had been pollarded making the pool more open. No changes were observed when the pool was re-surveyed in May 2020.

Pool 7 is a shallow isolated pond in the south-east corner of the site. It was originally well vegetated with Reedmace and Watercress *Rorippa nasturtium-aquaticum*. There is Goat Willow scrub on the south side of the pool, which is otherwise open. The pool has very shallow sides on its south bank but the north bank is lined with gabion baskets, these were replaced in 2012 and the pool dredged so that it was lacking in vegetation in 2012.

By June 2014 the lagoon was starting to re-vegetate. In May 2016 the pool had re-vegetated with some Water Cress and some limited Common Reed.

In May 2018 the pool had become more shaded with scrub but was otherwise unchanged. This remained the case when the lagoon was re-surveyed in May 2020.

Pool 8 is also shallow with very gently sloping margins. It is dominated by Reedmace, Yellow Flag Iris and there are also Sedges and Marsh Marigold *Caltha palustris* has also colonised. On the north side of the pool are Crack Willows and ornamental shrubs.

No particular changes was observed in June 2014, May 2016, May 2018 or May 2020.

All these pools are part of the drainage system for Milton Park and are therefore linked via culverts and streams with inlets and outlets to each lagoon. Water levels therefore fluctuate.

Adjacent to the A34 roundabout and the entrance slip road to Milton Park is a large lagoon which takes surface water drainage from surrounding roads (Pool 9). This had also been dredged in 2012 and was lacking in aquatic vegetation. By May 2016 some vegetation had recolonised in the form of Bulrush *Schoenoplectus lacustris* but there were large areas of open water. There are trees surrounding the lagoon but set back from the water's edge.

The pool remained the same when resurveyed in May 2018. Lady's Mantle, Alchemilla vulgaris, Bluebell Hyacinthoides non scripta and Ox-eye Daisy

Leucanthemum vulgare were noted to have colonised by the entrance to the lagoon to the north-west. The pool remained unchanged when re-surveyed in May 2020.

At the eastern end of MP8 – now redeveloped - a small lagoon was created (2012), lined with gabion baskets. This was open and lacking in marginal / aquatic vegetation in 2012 (Pool 10). Marginal vegetation had started to colonise by May 2016. By May 2018 Reedmace, Marsh Marigold, Soft Rush and Bulrush had colonised. Surrounding habitat is ruderal with occasional trees.

This remained unchanged in May 2020 except that adjacent a haul road had been created in order to repair the nearby septic tank, involving some limited damage to the lagoon on the southern margin and disturbance to adjacent ruderal vegetation.

Streams

G2 Running Water / F2 Marginal Vegetation / A2.1 Dense Scrub / A3.1 Scattered Trees

Moors Ditch

Delineating the northern boundary of Milton Park is a natural stream corridor lined with trees and scrub – Moors Ditch. Species include Goat Willow, Crack Willow, Ash, Hazel, Hawthorn, Blackthorn, Bramble *Rubus fruticosus* and occasional mature Oak *Quercus robur*. Hedgerow ground flora evident at the time of survey included Dog's Mercury *Mercurialis perennis* and Lord's and Ladies *Arum maculatum*. There were occasional sedges along the stream corridor, but this was mainly shaded.

At the eastern end of Moors Ditch where it flows immediately to the north of unit 174 the brook is lined with Crack Willow on its north bank but is open on its south bank. Large sedges are present along this section. There is an open concrete culvert at the eastern end of this section lacking in vegetation.

No change to the vegetation of Moors Ditch was noted as a result of the 2014 update survey.

When the survey was updated in May 2016 some clearance / thinning had taken place alongside 155 Milton Park – MP1 - with advice from BBOWT. This is detailed in a separate report " Baseline Ecological Survey – Proposed Bridge over Moors Ditch – Elizabeth Mckay Consultant Ecologist – June 2016. Also updated in May 2018".

Otherwise Moors Ditch remained unchanged in May 2016, May 2018 and May 2020.

Stream Corridor Linking Pools 2, 3 and 4

A stream corridor flows into the site part way along the southern boundary from a culvert under the railway line. It then flows east into pool 2. It has been straightened in this section but has natural earth banks (steep in places). It then flows through a short underground culvert and into the pool. The straightened section was dominated by scrub at the western end. Species included Hawthorn and Dogwood.

Moving further east there is a line of Aspen with Goat Willow, Silver Birch and Ash adjacent to the stream corridor.

No changes were noted as a result of the update surveys in 2014. However in May 2016 the stream corridor between Lagoons 1 and 2 had been de-silted and the Goat Willow, Dogwood and Snowberry scrub thinned. The Hawthorn, Aspen and other trees remained. Yellow flag Iris had started to colonise in the stream. Sedges were also apparent on May 2018.

In May 2018 large areas of scrub had been removed from the north bank of the stream between lagoons 1 & 2. By May 2020 a tarmac walkway had been introduced as shown in the photographs – appendix 1.

Between pools 2 and 3 there is an underground culvert where the stream goes under an access road. The stream flows briefly alongside pool 3, which is online and then through another culvert under a road and into pool 4.

To the north of pool 4 the stream corridor has steep banks and this has been straightened with artificial reinforcements in places. The east bank is lined with trees and scrub with more limited scrub on the west bank. Species include Alder, Dogwood, Hazel, Goat Willow, Ash and Hawthorn.

No change was noted to these stream corridor sections as a result of the 2014, 2016, 2018 and 2020 update surveys.

The stream then flows into a fairly lengthy underground culvert before joining Moors Ditch. Above this culvert (or either side of it) are closely mown grassland areas, semi-mature trees and ornamental shrubs including Hazel, Ash, Dogwood, Elder, Snowberry and Sycamore *Acer pseudoplatanus*.

Some of the ornamental shrub areas have now been replanted with native species including Blackthorn, Hazel, Hawthorn, Holly, Dogwood, Hornbeam, Field Maple, Box, Guelder Rose and Buddleia as well as additional similar areas of native hedgerow planting – June 2014.

In 2016, 2018 and 2020 the above areas were noted to be growing well.

Adjacent to the hedge at the northern end near Moors Ditch, wildflower grass seeding also took place. Ox-eye Daisy *Leucanthemum vulgare*, Cowslip *Primula veris*, Black Knapweed *Centaurea nigra* , Birds foot Trefoil *Lotus corniculatus* and False Brome *Brachypodium sylvaticum* were evident in May 2016. However these were not evident in May 2020.

There were two further similar areas of wildflower seeding further south between Lagoon 4 and Moors Ditch. These were not evidence in May 2018 - species poor rough grass only was evident. However in May 2020 the area on the banks of Lagoon 4 was noted to be flowering well.

Stream Corridor to the South of Pool 5

Much of this stream corridor is culverted under roads and buildings but it appears to flow south to north across Milton Park and into Moors Ditch. A short section is above ground including and to the south of Pool 5. It has been straightened with artificially re-inforced vertical banks. It is lined with trees and ornamental shrubs including Horse Chestnut *Aesculus hippocastanum*, Alder and Snowberry.

Some clearance of Snowberry was noted – June 2014. No further changes had taken place when the area was revisited in May 2016, May 2018 and May 2020.

Ditch to South of Brook Drive – Eastern End

A short section of ditch exists to the south of Brook Drive in the north – east part of the site. This is well vegetated with sedges and Reedmace and has scrub on its northern bank including Crack Willow, Hawthorn, Dogwood and Elder. The section remained unchanged throughout the surveys (May 2016, May 2018 and May 2020).

Hedgerow and Tree Boundaries

J2.1.2 Intact Hedge – Native Species Poor / A.2.2 Scattered Scrub / A3.1 Scattered Broad-Leaved Trees

Alongside unit 177 and delineating the boundary between this and Kelart's field is a mature unmanaged hedge dominated by Hawthorn *Crataegus monogyna*, with some Blackthorn *Prunus spinosa*, Elder *Sambucus nigra* and Bramble *Crataegus monogyna* (H1).

Along the eastern boundary of Milton Park is a hedgerow / tree line containing Hawthorn, Blackthorn, Ash *Fraxinus excelsior*, Crack Willow *Salix fragilis*, English Elm *Ulmus procera* and Dogwood *Cornus sanguinea*. (H2).

Further south alongside pool 6 (H3) is a Leylandii hedge with Crack Willow, Hawthorn and Elder growing on the inside of the hedge alongside a dry ditch.

In the north-west section of the site adjacent to the west side of unit 36 is a small area of semi-mature trees including Ash, Beech *Fagus sylvatica*, Silver Birch and Cherry Prunus sp. (T1).

To the north of unit 37 is a line of deciduous trees and shrubs including Silver Birch, Cherry, Ash, Alder *Alnus glutinosa*, Holly *Ilex aquifolium* and also Cherry Laurel *Prunus laurocerasus* (T2).

The above areas remain unchanged – 2014, 2016, 2018 and 2020 update surveys.

In the south-west corner of the site between the Milton Park entry slip road and unit 2 is an embankment vegetated with young trees and scrub. This includes Hawthorn, Blackthorn, Ash and Cherry. (T3).

A linear section of scrub has been removed at the base of this slope – to create railway access (outside Milton Park ownership) – July 2014. No further changes had taken place in May 2016, May 2018 and May 2020.

MP 8 - Site 1

C3.1 Ruderal / J2.2 Intact Hedge – Species Poor / G1 Open Water / F2 Marginal Vegetation

Surveys of MP8 were undertaken in June 2007 and subsequently updated in May 2012.

MP8 consisted of two fields, unmanaged. (Formerly arable and pasture). The larger western-most field (field 1) consisted entirely of ruderal habitat including Great Willowherb *Epilobium hirsutum*, Creeping Thistle *Cirsium arvense*, Broad-leaved Dock, Weld and Prickly Sow-thistle *Sonchus asper*. There were earth mounds, rubble and brash piles in certain parts of the site.

These areas were then cleared for development, with ruderal habitat and earth mounds remaining in some areas – July 2014. By May 2016 this area had been partly developed or was under construction and included a Public House and a Car Dealership. By May 2018 the area was entirely re-developed.

Young trees are still present on the embankment, which separates the field from the Milton Park Slip Rd to the west – May 2016, May 2018 and May 2020.

Field 2 to the east was smaller and triangular. This triangular area was hollowed out and an earth embankment created on all sides. The hollowed area had colonised with ruderal species similar to field 1. There is a shallow marshy area towards the western end where the hollowed out area is deeper. This has been colonised with Soft Rush *Juncus effusus* and Reedmace. A small triangular pool has also been created in the south-west corner of this area using gabion baskets and stones.

A short line of semi-mature Plane *Platanus x hispanica* trees exists in this field adjacent to the railway embankment on the northern boundary.

These areas remain – July 2014, May 2016, May 2018 and May 2020.

In winter / spring 2020 a haul road needed to be created through the ruderal habitat habitat past lagoon 10 and parallel with the hedgerow alongside the southern boundary in order to repair a septic tank to the east. This caused some disturbance to ruderal vegetation but the lagoon remains intact as well as the southern boundary hedgerow.

The southern boundary hedgerow had been removed because of Highways works, some replanting has taken place. This hedge remained in place and was growing well in May 2016, May 2018 and May 2020 albeit there were some gaps towards the eastern end. Trees on the northern boundary of the site remain – May 2020.

MP5

B6 Poor Semi-improved Grassland / C3.1 Ruderal / J2.1.2 Intact Hedges - Species Poor

MP5 consists of a small field with a Petrol Station, Hotel and McDonald's restaurant to the north, and areas of ruderal habitat / disturbed ground to the east (formerly a quarry). To the south is further ruderal habitat and to the south-west the A34 dual carriageway.

The field consists of a rough grass / ruderal habitat with areas of scattered Bramble *Rubus fruticosus* scrub.

Dominant ruderal species include Teasel *Dipsacus fullonum*, Nettle *Urtica dioica*, Great Willowherb *Epilobium hirsutum*, Creeping Thistle *Cirsium arvense*, Prickly Sow Thistle *Sonchus asper*, Broad Leaved Dock *Rumex obtusifolius*, Ragwort *Senecio jacobaea*, Lesser Burdock *Arctium minus*, Common Thistle *Cirsium vulgare* and Common Comfrey *Symphytum officinale*.

Dominant grasses include Yorkshire Fog *Holcus lanatus*, Perennial Rye-grass *Lolium perenne*, Red Fescue *Festuca rubra*, Smooth Meadow-grass *Poa pratensis* and Common Bent *Agrostis capillaris*.

Other flowering plants consist of Self Heal *Prunella vulgaris,* Field Forget-me-knot *Myosotis arvensis*, Cut Leaved Cranesbill *Geranium dissectum*, Lesser Trefoil *Trifolium dubium*, Perforate St John's-wort *Hypericum perforatum*, Common Mouse-ear *Cerastium fontanum*, Creeping Buttercup *Ranunculus repens*, White Clover *Trifolium repens*, Germander Speedwell *Veronica chamaedrys,* and occasional Common Centaury *Centaurium erythraea*, Agrimony *Agrimonia eupatoria*, Ox-eye Daisy *Leucanthemum vulgare*, Wild Carrot *Daucus carota,* Wild Parsnip *Pastinaca sativa,* Tormentil *Potentilla erecta,* Meadow Vetchling *Lathyrus pratensis* Common Dog Violet *Viola riviniana*, Primrose *Primula vulgaris* Birds Foot Trefoil *Lotus corniculatus*, Yarrow *Achillea millefolium,* and Lady's Mantle *Alchemilla vulgaris*.

The eastern boundary of the site (H1 – Figure 1B) consists of a dry ditch enclosed by scrub. The scrub is Hawthorn *Crataegus monogyna*, Blackthorn *Prunus spinosa* and Elder *Sambucus nigra* dominated. Nettle *Urtica dioica* dominates the field layer.

The southern boundary of site consists of a Hawthorn, Elder and Blackthorn hedge (H2) with a single mid-aged Ash *Fraxinus excelsior* tree. This is discontinuous in the south-east corner.

Hedge 2 then adjoins a hedge planted more recently alongside the A34 (H3) which is Hawthorn dominated.

On the north-west boundary of the site (H4) is a more formal hedge boundary with the MacDonald's car park. This has been planted with Hazel *Corylus avellana*, Hawthorn, Field Maple *Acer campestre*, Guelder Rose *Viburnum opulus*, Field Rose *Rosa arvensis* and Elder.

MP5 remained unchanged – July 2014. In 2016 some construction site huts (for works at the Milton Roundabout with the A34) had been placed in the central northern area of the site in areas of short grass with low botanical diversity (with prior consultation with Elizabeth Mckay Consultant Ecologist). MP5 remained otherwise unchanged.

Likewise in May 2018 MP5 remained largely unchanged. However a central area was being used for depositing tree and hedgerow brash and grass trimmings from Milton Park. This was enclosed by fencing but this was partially broken in one location. The situation remained unchanged in May 2020.

MP9

B2.2 Neutral Semi-improved Grassland / J2.1.2 Intact Hedges – Species Poor

Site MP9 or Kelart's Field is a large open field immediately to the north of Milton Park. The southern boundary is delineated by Moors Ditch. To the north of the field is the village of Sutton Courtenay and to the east areas of marshy habitat and scrub adjacent to the Didcot Power Station. To the west is arable land.

The central and northern parts of Kelart's Field consist of species diverse neutral semi-improved grassland. These will not now be the subject of development in light of ecological and archaeological interest.

Dominant grasses consist of Red Fescue, Yorkshire Fog, Creeping Bent *Agrostis stolonifera*, False Oat-grass *Arrhenatherum elatius*, Perennial Rye-grass, Meadow Foxtail *Alopecurus pratensis*, Cock's-foot *Dactylis glomerata*, Sweet Vernal-grass *Anthoxanthum odoratum* and Crested Dogs-tail *Cynosurus cristatus*.

Other flowering plants include Field Scabious *Knautia arvensis*, Wild Carrot, Black Knapweed *Centaurea nigra*, Lady's Bedstraw *Galium verum*, Ox-eye Daisy, Creeping Buttercup *Ranunculus repens*, Meadow Buttercup *Ranunculus acris,* Self Heal, Dandelion, Bird's-foot Trefoil *Lotus corniculatus*, Lesser Trefoil *Trifolium dubium*, Bush Vetch *Vicia sepium*, Agrimony, Cowslip, White Clover, Red Clover *Trifolium pratense*, Yarrow *Achillea millefolium*, Perforate St John's-wort *Hypericum perforatum*, Ribwort Plantain *Plantago lanceolata*, Common Centaury and Cut Leaved Cranesbill.

Development will now be confined to the southern-most quarter of the field, which was much poorer quality habitat, less diverse and more disturbed. Common grass species were abundant dominated by False Oat-grass, Yorkshire Fog, Red Fescue, Perennial Rye-grass, Crested Dog's-tail and Cock's-foot *Dactylis glomerata* with ruderal species such as Great Willowherb, Teasel, Field Horsetail *Equisetum arvense*, Broad-leaved Dock, Creeping Thistle and Ragwort common. Wild Carrot was abundant with Red Clover, White Clover, Ox-eye Daisy, Lesser Trefoil and Black Knapweed was present in much smaller quantities.

In May 2016 it was noted that this latter section of the field had been reseeded with a grass ley crop. This section remained as arable land in May 2018 and May 2020.

Along the eastern boundary of Kelart's Field is a Hawthorn and Elder hedge (H1 (Figure 1C) with Nettle, Ivy *Hedera helix* and Bramble dominating the field layer.

The western boundary has a discontinuous hedge (H4) consisting of Hawthorn, Blackthorn, Elder, immature Oak *Quercus robur* and Ash.

Along the southern boundary is Moors Ditch, described separately, above.

MP9 remained unchanged – June 2014. In May 2016 MP9 was noted to be more dominated by Meadow Foxtail than previously and the sward was a little more rank and dominated by coarse grasses. The species diverse areas of the field remained otherwise unchanged (visited 25th May 2016).

This remained the case when the site was revisited on the 17th of May 2018 and May 14th 2020.

By May 2018 landscape tree and hedge planting had taken place on the boundary between the southern-most section to be developed and the rest of the field. A native hedge had been planted including; Blackthorn, Hawthorn, Hazel, Dogwood and Guelder Rose.

Some native and non-native tree planting had also taken place including Oak, Sycamore, Elm, Aspen, Rowan and Beech. This all remained in place when the site was revisited in May 2020.

4. DESK DATA SEARCH

A desk data search for the site and surrounding area was obtained by contacting Thames Valley Environmental Records Centre.

This revealed a local Wildlife Trust Nature Reserve – The Sutton Courtenay Field Centre immediately to the east of Milton Park, adjacent to the Didcot Power Station. This contains areas of wetland, woodland and stream corridors. There are records for Frog, Toad, Smooth Newt and Great Crested Newt as well as Water Vole and a range of invertebrate and bird species at this site.

There are also Water Vole records for Moors Ditch, which delineates the northern boundary of Milton Park, and for other streams to the north and west of Milton Park.

Bird records also exist for Drayton Gravel Pit to the north-west of Milton Park and Milton Pond just to the north of the Park.

There are Pipistrelle Bat records for Milton Park, Milton Village immediately to the north and Steventon to the west. Also Myotis bat records for Milton Park and Milton Heights adjacent to the west.

5. FAUNA

The Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulation 2017 (as amended) provides protection for the following species against killing, injury, disturbance or sale. It also protects their places of shelter, protection, breeding and resting sites.

Bats

The hedgerows, stream corridors, semi-improved grassland and pools provide good foraging habitat for bat species. Mature trees with cavities in unlit locations such as along Moors Ditch also provide potential opportunities for roosting bats.

Lighting along access road and around buildings is likely to be deterring to bats and many trees around the Park are insufficiently mature to contain cavities, which might be suitable for roosting.

Only two buildings appear to contain potential opportunities for roosting. These are unit 18 which has a pitched tiled roof and weather boarding externally and unit 11 which has a pitched roof but is likely to be more lit up at night. Neither building is affected by the LDO. All other buildings are of a modern construction, often warehouse style or modern office blocks and are largely unsuitable.

This remained the case when the site was resurveyed including the update survey undertaken in May 2020.

Birds

The pools, stream corridors, hedgerows and trees all provide good nesting and foraging habitat for birds. However opportunities for hole and chamber nesting birds are fairly lacking due to the lack of suitable mature trees and suitable buildings.

This remained the case when update surveys were undertaken in May 2020.

Three pairs of ground nesting Skylarks were observed associated with the middle and northern sections of Kelart's Field in July 2012. Greater numbers were observed on a previous site visit in the spring of 2008. The poor weather conditions in the spring and early summer of 2012 should be borne in mind.

Skylarks were also observed on subsequent visits in May 2016 and May 2018 but not in May 2020.

Badgers

- Badgers are protected under the protection of Badgers act 1992.

A disused badger sett was noted within the scrub associated with the eastern boundary of MP5 – several sett entrances (H1). The setts appear to have been disused for some time. Rabbit warrens were also observed associated with this same boundary.

No evidence of fresh activity was noted during the update survey undertaken July 2014. However dense vegetation makes the above area difficult to search. No fresh activity was noted when the surveys were updated in May 2016, May 2018 and May 2020.

No other evidence of badgers was found anywhere within the Milton Park LDO area.

Amphibians

The eight pools around Milton Park were identified as being potentially suitable for amphibians to breed (particularly the smaller pools) with the possible exception of pools 2 and 4 which are more shaded and which have been stocked with fish. (Fish predate newt larvae). Amphibians also need terrestrial habitat around their breeding ponds in the form of rough grass, scrub etc for foraging and shelter. This is present around some pools.

Based on the close proximity of Great Crested Newt records at the Sutton Courtenay Field Centre and the suitable habitat within Milton Park a dedicated Great Crested Newt survey was undertaken (April / May 2012) the results of which are detailed in part 2 of the report, below. However no GCN were found. Smooth Newts were however noted in pond 8.

Water Voles

Water Voles have been recorded along Moors Ditch and in surrounding water courses in the past - most recently March 2007. However the habitat is now very sub-optimal having become shaded and overgrown with scrub. Water Voles need grassy habitat adjacent to the water-course for feeding.

Moors Ditch does however provide valuable habitat for other species such as nesting birds, foraging bats, invertebrates, reptiles and other wildlife.

In the course of the Great Created Newt Surveys carried out in April / May 2012 it was possible to establish that Water Voles are not present in the lagoons around the Milton Park Site and have not been noted subsequently since.

There are no recent records for Water Vole activity along Moors Ditch.

Reptiles

Casual observations of 2 Common Lizards where made in June 2009 on site MP8 as part of a site walkover. As this site as well as MP5 and MP9 were identified as being suitable for reptiles a dedicated reptile survey was undertaken in August / September 2012. Rough grass / ruderal habitats for basking with scrub or hedgerows for shelter often provide a suitable combination for reptile species. The results of this survey are detailed in section 3 below.

GREAT CRESTED NEWT SURVEY

1. INTRODUCTION

As suitable habitat for Great Crested Newts was identified a Great Crested Newt Survey was undertaken of eight lagoons within the Milton Park Business Park and two further lagoons immediately outside the Park were also assessed. These are described above in the habitat report and also shown on figure 1A.

Detailed below are the results of this survey carried out in April / May 2012. Site photographs are included in appendix 1.

2. METHODS AND SURVEY CONSTRAINTS

The fieldwork was undertaken by Elizabeth Mckay a Consultant Ecologist of 20 years standing and licenced Great Crested Newt Surveyor. The survey techniques used were as per the Great Crested Newt Mitigation Guidelines (English Nature August 2001). This requires three methods of surveying a water body, selected from: day time egg searches; night time torchlight surveys; overnight bottle trapping; and day and/or night time sweep netting with four visits to be undertaken during the recognised survey period to establish presence / absence.

A combination of bottle trapping, torch counts, netting and egg searching techniques were employed.

Lagoon 1 was not bottle trapped because it was known to contain fish. Lagoon 2 was only bottle trapped on one occasion because it was known to contain fish. Lagoon 9 and 10 were also considered to have a low likelihood of containing Great Crested Newts and were also not bottle trapped.

An appropriate 1 million-candle power torch was used for the torch counts.

Timing

At least three visits were conducted between mid April and mid May 2012 (in keeping with recognised guidance). Survey dates were as detailed below.

Weather Conditions

1. 27th April – Cloudy, still, dry. Air temperature 9 degrees at sunset.
2. 28th April – Cloudy / light rain, light breeze. Air temperature 7 degrees at sunrise. Overnight minimum 7 degrees.
3. 4th May – Still, 100% cloud, dry. Air temperature 8 degrees at sunset.
4. 5th May – Still, 100% cloud, dry. Air temperature 6 degrees at sunrise. Overnight minimum 5 degrees.
5. 11th May – Light breeze, clear skies, dry. Air temperature 12 degrees at sunset.
6. 12th May – Clear skies, dry, still. Air temperature 6 degrees at sunrise. Overnight minimum 5 degrees.
7. 18th May – 100% cloud, still, dry, warm. Air temperature 13 degrees at sunset.
8. 19th May – 100% cloud, still, dry, warm. Air temperature 11 degrees at sunrise. Overnight minimum 10 degrees.

3. RESULTS

Lagoon 1

Visit 1	27th April 2012	
	Survey Type	Results
	Egg Searching	0
	Netting	0
	Torch Count	0
Visit 2	4th May 2012 / 5th May 2012	
	Survey Type	Results
	Egg Searching	0
	Bottle Trapping (15 traps)	0
	Torch Count	0
Visit 3	11th May 2012	
	Survey Type	Results
	Egg Searching	0
	Netting	0
	Torch Count	0
Visit 4	18th May 2012	
	Survey Type	Results
	Egg Searching	0
	Netting	0
	Torch Count	0 Large Carp observed.

Lagoon 2

Visit 1	27th April 2012	
	Survey Type	Results
	Egg Searching	0
	Netting	0
	Torch Count	0 Large Carp observed.
Visit 2	4th May 2012	
	Survey Type	Results
	Egg Searching	0
	Netting	0
	Torch Count	0
Visit 3	11th May 2012	
	Survey Type	Results
	Egg Searching	0
	Netting	0
	Torch Count	0
Visit 4	18th May 2012	
	Survey Type	Results
	Egg Searching	0
	Netting	0
	Torch Count	0 Large Carp observed.

Lagoon 3

Visit 1	27th April / 28th April 2012	
	Survey Type	Results
	Egg Searching	0
	Bottle Trapping – 10 Traps	0
	Torch Count	0 – Large Carp observed.
Visit 2	4th / 5th May 2012	
	Survey Type	Results
	Egg Searching	0
	Bottle Trapping 10 Traps	0
	Torch Count	0 – Large Carp observed.
Visit 3	11th / 12th May 2012	
	Survey Type	Results
	Netting	0
	Bottle Trapping – 10 Traps	0
	Torch Count	0
Visit 4	18th / 19th May 2012	
	Survey Type	Results
	Netting	0
	Bottle Trapping – 10 Traps	0
	Torch Count	0

Lagoon 4

Visit 1	27th April / 28th April 2012	
	Survey Type	Results
	Egg Searching	0
	Bottle Trapping – 10 Traps	0
	Torch Count	0
Visit 2	4th / 5th May 2012	
	Survey Type	Results
	Egg Searching	0
	Bottle Trapping 10 Traps	0
	Torch Count	0 – Large Carp observed, Sticklebacks.
Visit 3	11th / 12th May 2012	
	Survey Type	Results
	Egg Searching	0
	Bottle Trapping – 10 Traps	0
	Torch Count	0
	Egg Search	0
Visit 4	18th / 19th May 2012	
	Survey Type	Results
	Egg Searching	0
	Bottle Trapping – 10 Traps	0
	Torch Count	0 - Sticklebacks

Lagoon 5

Visit 1	27th April / 28th April 2012	
	Survey Type	Results
	Egg Searching	0
	Bottle Trapping – 10 Traps	0 - Sticklebacks

	Torch Count	0
Visit 2	4th / 5th May 2012	
	Survey Type	Results
	Egg Searching	0
	Bottle Trapping 10 Traps	0
	Torch Count	0
Visit 3	11th / 12th May 2012	
	Survey Type	Results
	Egg Searching	0
	Bottle Trapping – 10 Traps	0
	Torch Count	0
Visit 4	18th / 19th May 2012	
	Survey Type	Results
	Egg Searching	0
	Bottle Trapping – 10 Traps	0
	Torch Count	0 - Sticklebacks

Lagoon 6

Visit 1	27th April / 28th April 2012	
	Survey Type	Results
	Egg Searching	0
	Bottle Trapping – 10 Traps	0
	Torch Count	0
Visit 2	4th / 5th May 2012	
	Survey Type	Results
	Egg Searching	0
	Bottle Trapping 10 Traps	0
	Torch Count	0 - Sticklebacks
Visit 3	11th / 12th May 2012	
	Survey Type	Results
	Netting	0
	Bottle Trapping – 10 Traps	0
	Torch Count	0
Visit 4	18th / 19th May 2012	
	Survey Type	Results
	Netting	0
	Bottle Trapping – 10 Traps	0
	Torch Count	0 - Sticklebacks

Lagoon 7

Visit 1	27th April / 28th April 2012	
	Survey Type	Results
	Netting	0
	Bottle Trapping – 10 Traps	0
	Torch Count	0
Visit 2	4th / 5th May 2012	
	Survey Type	Results
	Netting	0
	Bottle Trapping 10 Traps	0
	Torch Count	0
	11th / 12th May 2012	

Visit 3	Survey Type	Results
	Netting	0
	Bottle Trapping – 10 Traps	0
	Torch Count	0
Visit 4	18th / 19th May 2012	
	Survey Type	Results
	Netting	0
	Bottle Trapping – 10 Traps	0
	Torch Count	0

Lagoon 8

Visit 1	27th April / 28th April 2012	
	Survey Type	Results
	Egg Searching	0
	Bottle Trapping – 10 Traps	1 Male & 1 Female Smooth Newt, Sticklebacks
	Torch Count	0
Visit 2	4th / 5th May 2012	
	Survey Type	Results
	Egg Searching	2 Smooth Newt Eggs
	Bottle Trapping 10 Traps	0
	Torch Count	1 Female Smooth Newt, Sticklebacks
Visit 3	11th / 12th May 2012	
	Survey Type	Results
	Egg Searching	0
	Bottle Trapping – 10 Traps	1 Female Smooth Newt, Sticklebacks
	Torch Count	1 Female Smooth Newt, Sticklebacks
Visit 4	18th / 19th May 2012	
	Survey Type	Results
	Egg Searching	0
	Bottle Trapping – 10 Traps	1 Female Smooth Newt, Sticklebacks
	Torch Count	0 Sticklebacks

Lagoon 9

Visit 1	27th April 2012	
	Survey Type	Results
	Egg Searching	0
	Netting	0
	Torch Count	0
Visit 2	4th May 2012	
	Survey Type	Results
	Egg Searching	0
	Netting	0
	Torch Count	0
Visit 3	11th May 2012	
	Survey Type	Results
	Egg Searching	0
	Netting	0
	Torch Count	0
Visit 4	18th May 2012	
	Survey Type	Results

	Egg Searching	0
	Netting	0
	Torch Count	0

Lagoon 10

Visit 1	27th April 2012	
	Survey Type	Results
	Egg Searching	0
	Netting	0
	Torch Count	0
Visit 2	4th May 2012	
	Survey Type	Results
	Egg Searching	0
	Netting	0
	Torch Count	0
Visit 3	11th May 2012	
	Survey Type	Results
	Egg Searching	0
	Netting	0
	Torch Count	0
Visit 4	18th May 2012	
	Survey Type	Results
	Egg Searching	0
	Netting	0
	Torch Count	0

REPTILE SURVEY

Summary

The reptile survey was undertaken by Patricia Vaux of Sedgehill Ecology Services (September 2012) and the findings have been detailed in a separate report .

However in summary two individual Common Lizards were found during surveys of MP8 (prior to development) and two further individual Common Lizards were also found during surveys of MP9.

The conclusions and recommendations resulting from this survey have been summarised below.

CONCLUSIONS

The pools and associated scrub / grassland habitat provide a suitable environment for birds, foraging bats and invertebrates as well as other wildlife.

The stream corridors also provide good environments for birds, bats and small mammals. The tree lined corridors and hedgerows also provide further habitat for birds and foraging bats in particular.

The above areas are largely unaffected by the proposals for the LDO.

There are no mature trees, which might contain roosting opportunities for bats, affected by the proposals for the LDO.

Only two buildings appear to contain potential opportunities for roosting bats. These are unit 18 which has a pitched tiled roof and weather boarding externally and unit 11 which has a pitched roof but is likely to be more lit up at night. Neither building is affected by the LDO. All other buildings are of a modern construction, often warehouse style or modern office blocks and are largely unsuitable.

No current badger activity was found within the current LDO area.

Based on thorough survey effort at an appropriate time of year, under suitable weather conditions and as per guidance, no evidence of Great Crested Newts was found in any of the 10 lagoons. A small population of Smooth Newts was found in lagoon 8, however these do not receive the same level of legal protection.

In spite of the records for Great Crested Newts for the adjacent Sutton Courtenay Field Centre immediately to the east of Milton Park, it is apparent than the lagoons do not provide suitable habitat. Whilst most contained suitable vegetation for egg laying, all the lagoons within Milton Park were found to contain fish, which have a tendency to predate Newt larvae.

All these lagoon are also linked via ditches and culverts and form the drainage system for Milton Park, therefore the lagoons have a slow flow of running water through them, rather than being standing water. Water levels also fluctuate. All this is also discouraging to Great Crested Newts. These factors combined appear to have precluded them.

Lagoon 9 is isolated in the landscape being surrounded by very busy roads and a railway line, and is used to take surface water drainage. The lagoon is also lacking in suitable vegetation for egg laying currently. So once again GCN’s were not found to be present.

Lagoon 10 is also rather isolated from the other water bodies. No evidence was found, of amphibian life.

Therefore it is not considered that Great Crested Newts pose a constraint to proposed development / redevelopment works at Milton Park and no further survey has been recommended.

MP5, MP8 and MP9 were identified as being suitable habitats for reptiles. Subsequent dedicated surveys revealed a small population of Common Lizards associated with MP8 and MP9. It was proposed that prior to development a translocation exercise would be undertaken to transfer Common Lizards from M8 and

affected areas of MP9 to unaffected areas of MP9. Habitat enhancements for reptiles were also to occur on these unaffected areas of MP9. The translocation exercise was subsequently undertaken successfully.

The greater part of Kelart's Field (MP9) provides an example of good quality neutral semi-improved grassland habitat. The majority of this type of habitat has been lost over the last 60 years mainly due to agricultural intensification and development. The habitat would now be considered scarce at European level. It is included in the UK Biodiversity Action Plan, which identifies priority habitats, and species, which have declined significantly, and puts in place strategies for reversing this decline.

The Natural Environment and Rural Communities Act (NERC Act 2006) required Local Authorities and Statutory organisations to take account of these habitats and species in their decision making processes.

Based on survey evidence, the central and northern sections of Kelart's Field also provide nesting habitat for Skylarks, which are also a UK Biodiversity Action Plan priority species.

Semi-improved grasslands also typically contain a high invertebrate diversity, although no specific studies have been undertaken here.

In light of the ecological value of the central and northern parts of the field and also archaeological interest, no development will now take place in these areas.

Development will now be confined to the southern-most quarter of Kelart's Field (see figure 1C), which was more disturbed and less diverse and would not be classified in the above category. This would be classified as a more species poor ruderal / rough grassland habitat. This section has subsequently been ploughed and sown with a grass ley crop.

Likewise MP5 and MP8 were classified as a more disturbed rough grassland / ruderal habitat. Whilst there was a wide range of species, providing habitat for invertebrates, these species and the species assemblages were common and widespread meaning that these areas did not have the same habitat value as the neutral semi-improved grassland habitat of Kelart's Field.

The invertebrate records contained in appendix 2, detail invertebrate records for the nearby Sutton Courtenay Field Centre and other locations within a km radius however these species are quite common and associated with food plants that are also widespread. So there are no notable species, which might suggest that surveys for invertebrates would be necessary in the area.

MP8 has subsequently been redeveloped and MP5 remains undeveloped as previously – May 2020.

Otherwise Milton Park consists of modern industrial and office buildings surrounded by closely mown grassland, ornamental shrubs and young trees. These areas are also well lit at night and are of limited value to wildlife except birds and invertebrates. This remained the case – May 2020.

It is not considered that any other protected species would be affected by the proposals.

Since the 2012 surveys were undertaken, maintenance / dredging has been carried out in lagoons; 1, 2, 3, 4, 5, 6, 7 and 9 at different times.

Scrub removal has also taken place along the stream corridor between lagoons 1 and 2 after dredging of the stream. A public walkway is now also in place – May 2020.

Native hedgerow / shrub planting has occurred between Lagoon 4 and Moors Ditch and is now growing well. This is partly to compensate for loss of a section of hedge when MP3 was developed.

Wildflower meadow seeding also took place between Lagoon 4 and Moors Ditch as part of the BREEAM assessment for MP3 but only the area adjacent to lagoon 4 is growing successfully. Re-instatement of appropriate management would now be necessary to restore botanical interest – May 2020

MP1, MP2, MP3, MP4, MP6, MP7 and MP8 have now been largely redeveloped – with the southern section of MP9 yet to be developed May 2018 / May 2020.

In 2018 126 Milton Park was also rebuilt and refurbished with associated landscaping and is the subject of a separate ecological report - September 2018.

Also in 2019 136 Milton Park was refurbished and recommendations for ecological enhancement were made – October 2019.

In addition 140 Milton Park was refurbished with associated landscaping – ecological report dated May 2019.

In the winter of 2020 repair works had to be undertaken to a septic tank at Milton Gate (formerly MP8 – now fully developed) involving a haul road across the remaining undeveloped easternmost section of MP9. An ecological report with recommendations for protection and enhancement was also produced in association with these works.

Otherwise the site remains largely unchanged – May 2020.

RECOMMENDATIONS

MP5 MP9 and Moors Ditch

1. MP9 needs to be managed appropriately to protect reptiles, ground nesting birds and to preserve the botanical interest. These recommendations have also been made in the separate reptile report. A brief management plan for this site is also recommended. However in summary the grassland should be cut once year in mid-winter November / December to avoid disturbance to reptiles and nesting birds during the active season. Cuttings should be removed to help preserve botanical interest. Piles of grass clippings could be used around the peripheries of of the site to create reptile refugia, provided they are left undisturbed.

2. It is recommended that Moors Ditch is appropriately buffered from development impacts (including buildings, car parking and other areas of hard standing). A three metre buffer is recommended from the edge of the current tree canopy to allow for tree growth and to preserve a relatively undisturbed corridor for wildlife.

3. Careful attention also needs to be paid to lighting to ensure that this is sufficiently muted or directional so that the stream corridor is not lit at night. This is because bright lighting is deterring to nesting birds, foraging bats and other wildlife.

4. Dredging of Moors Ditch is not recommended for conservation purposes. However should it be necessary for other reasons, works should be undertaken at an appropriate time of year and staggered so that the Ditch is not dredged all at once. Supervision may also be required.

5. It should be ensured that there are no adverse discharges into the ditches or lagoons around Milton Park during construction works.

6. There remains an opportunity to plant the western boundary of Kelarts Field with a native hedgerow to increase the biodiversity value of the site. Suggested species would be Hawthorn, Blackthorn, Hazel, Holly, Dogwood, and Field Maple. This would benefit nesting birds in particular.

7. It is also recommended that the reptile survey is updated prior to any development of MP5 as the habitat is suitable.

8. With respect to MP5 it is recommended that the brash / grass clippings present in the central area are cleared by hand under the supervision of a suitability qualified Ecologist prior to development because of the possibility that reptiles may be present (fencing around the enclosure is broken). Reptiles commonly use such habitats for shelter and hibernation.

Hedgerows, Grassland and Pools

9. It is recommended that hedgerows bordering MP5 and MP9 are retained because of their value to nesting birds, foraging bats and other wildlife. Hedges and treelines around the Milton Park LDO in general should also be protected.

10. There is an opportunity to gap up hedges with native hedge planting around MP9 and MP5, as an enhancement measure.

11. It is recommended that hedgerow planting and gapping up be undertaken around the site peripheries of MP8 wherever possible. Recommended species include Field Maple, Hawthorn, Dogwood, Ash, Holly, Hazel, Buckthorn and Spindle.

12. Wildflower meadow seeding could also be undertaken at the eastern end of MP8 where there is currently ruderal habitat as an enhancement measure to encourage invertebrate species.

13. It is recommended that wildflower meadow seeding is reinstated to the north of Lagoon 4 between this and Moors Ditch and managed by mowing twice a year July and September (clippings removed) to enhance species diversity and allow invertebrate species associated with the plants to flourish. A layer of topsoil may need to be removed to decrease fertility of the soil before sowing.

14. It is recommended that mowing is reduced around lagoons 1, 2 and 3 in the same way and mown in July and September (clippings removed) to enhance botanical species diversity.

15. Enhancement measures designed to protect and improve the ecology of the Milton Park site in general are detailed in the Baseline Ecological Survey for Milton Park carried out in March 2011. These include measures to protect and enhance the pools located within the site.

Birds and Bats

16. Development within the existing Milton Business Park should be mindful of the need to protect existing trees and undertake compensatory planting where necessary. Mature trees should be protected because of their habitat value for birds, bats and invertebrates.

17. No mature trees should be felled without being first checked by a qualified Ecologist for their potential to contain roosting bats.

18. Any scrub areas and trees to be lost should be cleared during the winter months or checked for nesting birds by a suitably qualified Ecologist during the nesting season – March to August inclusive.

19. The above recommendations are still applicable – November 2020.

REFERENCES

JNCC (1993). *Handbook for Phase 1 Habitat Survey.* English Nature, Peterborough, UK.

English Nature (2001) *Great Crested Newt Mitigation Guidelines*. English Nature, Peterborough, UK.

APPENDIX 1 – SITE PHOTOGRAPHS

PHOTO 1 - LAGOON 1 - MAY 2020

PHOTO 2 – LAGOON 2 – MAY 2020

PHOTO 3 – LAGOON 2 – MAY 2020

PHOTO 4 – LAGOON 3 – MAY 2020

PHOTO 5 – LAGOON 4 – MAY 2020

PHOTO 6 – LAGOON 5 – MAY 2020

PHOTO 7 – STREAM CORRIDOR TO SOUTH OF LAGOON 5 – MAY 2018 / 2020

PHOTO 8 – LAGOON 6 – MAY 2020

PHOTO 9 – LAGOON 7 - MAY 2020

PHOTO 10 – LAGOON 8 – MAY 2020

PHOTO 11 - LAGOON 9 – MAY 2020
PHOTO 12 - LAGOON 10 – MAY 2020

PHOTO 13 – LAGOON 10 - MAY 2020

PHOTO 14 – STREAM CORRIDOR BETWEEN LAGOONS 1 & 2 – MAY 2020

PHOTO 15 – STREAM CORRIDOR BETWEEN POOL 1 & 2 – 2020
PHOTO 16 - STREAM CORRIDOR BETWEEN POOL 1 & 2 - 2020

PHOTO 17 - CORRIDOR BETWEEN LAGOON 4 & MOORS DITCH 2020

PHOTO 18 – CORRIDOR BETWEEN LAGOON 4 AND MOORS DITCH 2020

PHOTO 19 - MOORS DITCH CLOSE TO 155 MILTON PARK 2020

PHOTO 20 - MOORS DITCH – EASTERN SECTION – MAY 2020

PHOTO 21 - HEDGEROW ALONG EASTERN SIDE OF KELARTS FIELD 2020

PHOTO 22 - SECTION OF DITCH SOUTH OF BROOK DRIVE - EAST END 2020

PHOTO 23 – HEDGE 2 MILTON PARK – 2018 / 2020
PHOTO 24 – TREELINE 1 – MAY 2018 / 2020

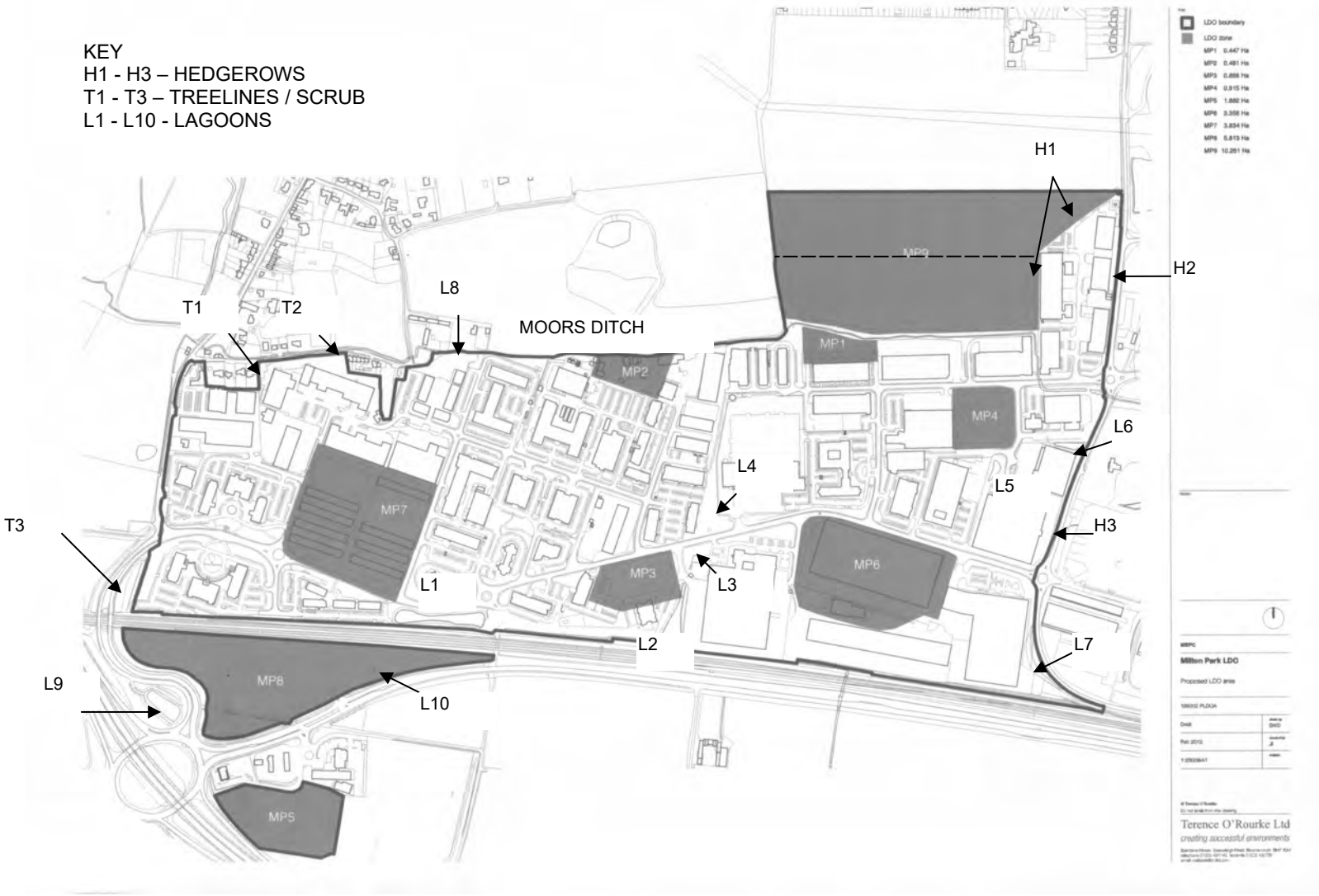
PHOTO 25 -TREELINE 2 - MAY 2018 / 2020

PHOTO 26 – TYPICAL ACCESS ROAD MILTON PARK

PHOTO 27 - MP5 - LOOKING SOUTH – MAY 2018 / MAY 2020
PHOTO 28 – KELARTS FIELD – MP9 – MAY 2018 / MAY 2020

FIGURE 1A

FIGURE 1A – LOCATION OF HABITATS OF VALUE – WITHIN MILTON PARK – ALSO SHOWING PROPOSED LDO DEVELOPMENT AREAS



Appendix 3: Updated Water vole and Great Crested Newt Surveys, Milton Park, Didcot, Oxfordshire July 2021

Updated Water Vole and Great Crested Newt Surveys
Milton Park
Didcot
Oxfordshire

July 2021

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CONTENTS

UPDATED GREAT CRESTED NEWT AND WATER VOLE SURVEYS – MILTON PARK

1. INTRODUCTION

This report presents the results of updated Great Crested Newt and Water Vole Surveys of all water bodies and water courses at Milton Park Business Park. SU493916.

The report includes methodology, site descriptions, results and conclusions for both surveys. Site photographs are included in appendix 1. A site plan is also included as figure 1A.

2. METHODOLOGY

All water bodies and water courses within the Milton Park ownership boundary were checked for evidence of water voles, including the lagoons, streams (Moors Ditch) and drainage ditches.

These water courses were check for evidence of water vole latrines, feeding signs, trackways and burrows.

The water vole survey was undertaken on the 28th of May 2021 during daylight hours.

The Great Crested Newt survey was undertaken via eDNA testing; a water testing technique, whereby water samples were taken from each lagoon and sent for laboratory analysis. The laboratory analysis then determined whether Great Crested Newt DNA was found to be present in each of the lagoons.

The water samples were taken on the 19th of May and 24th of May 2021 during daylight hours.

All surveys were undertaken with recognised survey windows according to relevant survey guidance.

The surveys were undertaken by Elizabeth McKay an Ecologist of 28 years standing, trained in all relevant survey techniques, also a licence Great Crested Newt surveyor.

3. EXISTING INFORMATION

A desk data search was carried out for the Business Park in March 2011 by Thames Valley Environmental Records Centre.

This revealed a local Wildlife Trust Nature Reserve – The Sutton Courtenay Field Centre immediately to the east of Milton Park, adjacent to the Didcot Power Station. This contains areas of wetland, woodland and stream corridors. There are records for Frog, Toad, Smooth Newt and Great Crested Newt as well as Water Vole and a range of invertebrate and bird species at this site. This is just under 1km from site 101/102.

There are also Water Vole records for Moors Ditch, which delineates the northern boundary of Milton Park, (approximately 400m to the north of the site) and for other streams to the north and west of Milton Park.

Bird records also exist for Drayton Gravel Pit to the north-west of Milton Park and Milton Pond just to the north of the Park.

There are Pipistrelle Bat records for Milton Park, Milton Village immediately to the north and Steventon to the west. Also Myotis bat records for Milton Park and Milton Heights adjacent to the west.

4. SITE DESCRIPTION

Lagoons

G1 Standing Water / F2.1 Marginal Vegetation / B2.2 Neutral Grassland – Semi-improved / C3.1 Ruderal / A2.1 Dense Scrub A3.1 Scattered Broad-Leaved Trees

Lagoon 1 is lined with trees on its south, east and western sides - at the top of the banks. These trees include Crack Willow *Salix fragilis*, Weeping Willow *Salix babylonica*, Goat Willow *Salix caprea*, Alder *Alnus glutinosa*, Ash *Fraxinus excelsior*, Poplar *Populus sp*, Dogwood *Cornus sanguinea*, Hawthorn *Crataegus monogyna,* Hazel *Corylus avellana* and ornamental shrubs.

Aquatic vegetation consists mainly of Reedmace *Typha latifolia*, Yellow Flag Iris *Iris pseudacorus* Sedges *Carex sp*. and occasional Hard Rush *Juncus inflexus*, but essentially the pool itself is quite large and open. It has gently sloping sides and some grassy banks on the northern and southern sides. These are regularly mown particularly on the northern bank. However on the south bank there are small areas of less regularly mown semi-improved grass, which have greater diversity than the regularly mown areas. Herbaceous species include St John's-wort *Hypericum sp*., Ox-eye Daisy *Leucanthemum vulgare*, Cowslip *Primula veris*, Lady's Bedstraw *Galium verum* Creeping Buttercup *Ranunculus repens,* Germander Speedwell Veronica chamaedrys Meadow Buttercup *Ranunculus acris* and Ribwort Plantain *Plantago lanceolata*.

On the 13th May 2016 when the pool was revisited de-silting had taken place quite recently with most marginal vegetation removed, although some limited areas of Sedges and Reedmace remained. There were otherwise no other changes apart from some limited removal of shrubs at the eastern end to facilitate access.

In May 2018 marginal vegetation had recovered with stands of Reedmace, Iris and Sedges. Some scrub clearance had taken place on the north and east banks. No further changes were noted when the lagoon was resurveyed in May 2020.

Pool 2 is mainly surrounded by semi-mature trees, close to the waters edge, creating a more shaded habitat lacking in aquatic vegetation apart from a limited area of Sedges. The margins are gently sloping on the west bank and much steeper on the southern and eastern banks. This is the largest pool within Milton Park. Trees include Ash, Crack Willow and Goat Willow.

There is rough grass and ruderal vegetation to the west of pool 2. The ruderal habitat consists of Nettle *Urtica dioica*, Teasel *Dipsacus fullonum*, Creeping Thistle *Cirsium arvense* and Broad-leaved Dock *Rumex obtusifolius*.

Between this and the pool is a small area of semi-natural grassland exhibiting a fine-leaved sward of common grasses and other herbaceous species. Herbs include St John's-wort, Creeping Buttercup, Cowslip *Primula veris* and Ground Ivy *Glechoma hederacea*.

Since management has been adjusted to allow more time for plants to flower and set seed a Pyramidal orchid was noted on the banks of the lagoon (24th June 2014). Otherwise no change was noted to the lagoon itself.

On the 13th of May 2016 the lagoon had been recently de-silted with one mid aged tree removed. Inevitably the de-silting operation had caused some limited damage to the west bank of the lagoon however reinstatement was planned with wild flower re-seeding.

Meadowsweet, *Filipendula ulmaria,* Cowslip *Primula veris,* Bluebell *Hyacinthoides non-scripta,* Lady's Bedstraw *Galium verum* and Meadow Cranesbill *Geranium pratense* were still apparent. Silt had been deposited in the area of ruderal habitat to the west of lagoon which was of low botanical interest.

No changes were noted when the area was resurveyed in May 2018. Additional flowering plants noted on the western bank of the lagoon in addition to those detailed above included Bugle, Ragged Robin and Lady's Bedstraw.

When the lagoon was revisited in May 2020 it appeared to have been recently dredged. A new walkway has also been introduced adjacent.

Pool 3 is much smaller, shallower and more open. The aquatic vegetation was dominated by Reedmace with some Great Willowherb *Epilobium hirsutum* around the margins, after dredging aquatic vegetation started to re-colonised. There is some limited tree and shrub cover on the south-facing bank including Alder and Goat Willow and Silver Birch *Betula pendula.*

Further to the survey undertaken on the 24th of June 2014 the Reedmace had re-colonised well. There is also a mix of Ox-eye daisy, Meadowsweet and Common Figwort, which has colonised on the west boundary of pool 3.

This remained the case in May 2016 with the pool dominated by Reedmace and some Marsh Marigold *Caltha palustris.* Meadowsweet, Cowslip and Ox-eye Daisy were present on the west bank.

No changes were noted when the site was resurveyed in May 2018. This remained the case when the Pool was revisited in May 2020.

Pool 4 is shaded and has steeper banks. Dominant trees and shrubs are Crack Willow, Silver Birch and Dogwood. There is some Reedmace, Yellow Flag Iris and Sedges *Carex sp*. on the east side of the pool where it is more open.

In June 2014 certain Birch trees had been removed. The lagoon and surrounds remained unchanged when resurveyed in May 2016, May 2018 and May 2020.

Where mowing has been relaxed and the grass re-seeded on the west facing bank a diverse mix of flora has developed including; Black Knapweed *Centaurea nigra*, Cowslip *Primula veris*, Germander Speedwell *Veronica chamaedrys* Ox-eye Daisy *Leucanthemum vulgare*, Yarrow *Achillea millefolium*, Red Campion *Silene dioica* Perforate St Johns-wort *Hypericum perforatum* – May 2020.

Pool 5 had some shrub cover on its western bank consisting of Goat Willow, Alder and ornamental shrubs but was otherwise open with Reedmace and Common Reed

Phragmites australis dominating the aquatic vegetation in large swathes. The western banks are steeper with gently sloping margins on the east side.

In June 2014 it was apparent the pool had been dredged with aquatic cover removed. Some trees had also been removed. In May 2016 the pool had re-vegetated with Reedmace and Common Reed having recolonised but with plenty of areas of open water. Goat Willow was present on the western bank.

In May 2018 the Reed was dominant again in large swathes, otherwise the pool remained unchanged. This remained the case when the survey was updated in May 2020. The grass banks had also colonised with Cowslips, Red Campion, Ox-eye Daisy and Black Knapweed. Pendulous Sedge *Carex pendula* had also colonised around the lagoon margins.

Pool 6 consists mainly of open water. There is a limited area of Sedges and Hard Rush as well as some Yellow Flag Iris. A line of trees is present on the south and east side of the pool consisting of Silver Birch, Crack Willow, Goat Willow and Alder. This pool has quite steeply sloping sides.

No change was observed in June 2014 or May 2016.

In May 2018 the Crack Willows had been pollarded making the pool more open. No changes were observed when the pool was re-surveyed in May 2020.

Pool 7 is a shallow isolated pond in the south-east corner of the site. It was originally well vegetated with Reedmace and Watercress *Rorippa nasturtium-aquaticum*. There is Goat Willow scrub on the south side of the pool, which is otherwise open. The pool has very shallow sides on its south bank but the north bank is lined with gabion baskets, these were replaced in 2012 and the pool dredged so that it was lacking in vegetation in 2012.

By June 2014 the lagoon was starting to re-vegetate. In May 2016 the pool had re-vegetated with some Water Cress and some limited Common Reed.

In May 2018 the pool had become more shaded with scrub but was otherwise unchanged. This remained the case when the lagoon was re-surveyed in May 2020.

Pool 8 is also shallow with very gently sloping margins. It is dominated by Reedmace, Yellow Flag Iris and there are also Sedges and Marsh Marigold *Caltha palustris* has also colonised. On the north side of the pool are Crack Willows and ornamental shrubs.

No particular changes was observed in June 2014, May 2016, May 2018 or May 2020.

All these pools are part of the drainage system for Milton Park and are therefore linked via culverts and streams with inlets and outlets to each lagoon. Water levels therefore fluctuate.

Adjacent to the A34 roundabout and the entrance slip road to Milton Park is a large lagoon which takes surface water drainage from surrounding roads (Pool 9). This had also been dredged in 2012 and was lacking in aquatic vegetation. By May 2016 some vegetation had recolonised in the form of Bulrush *Schoenoplectus lacustris* but there were large areas of open water. There are trees surrounding the lagoon but set back from the water's edge.

The pool remained the same when resurveyed in May 2018. Lady's Mantle, Alchemilla vulgaris, Bluebell Hyacinthoides non scripta and Ox-eye Daisy Leucanthemum vulgare were noted to have colonised by the entrance to the lagoon to the north-west. The pool remained unchanged when re-surveyed in May 2020.

At the eastern end of MP8 – now redeveloped - a small lagoon was created (2012), lined with gabion baskets. This was open and lacking in marginal / aquatic vegetation in 2012 (Pool 10). Marginal vegetation had started to colonise by May 2016. By May 2018 Reedmace, Marsh Marigold, Soft Rush and Bulrush had colonised. Surrounding habitat is ruderal with occasional trees.

This remained unchanged in May 2020 except that adjacent a haul road had been created in order to repair the nearby septic tank, involving some limited damage to the lagoon on the southern margin and disturbance to adjacent ruderal vegetation.

Streams

G2 Running Water / F2 Marginal Vegetation / A2.1 Dense Scrub / A3.1 Scattered Trees

Moors Ditch

Delineating the northern boundary of Milton Park is a natural stream corridor lined with trees and scrub – Moors Ditch. Species include Goat Willow, Crack Willow, Ash, Hazel, Hawthorn, Blackthorn, Bramble *Rubus fruticosus* and occasional mature Oak *Quercus robur*. Hedgerow ground flora evident at the time of survey included Dog's Mercury *Mercurialis perennis* and Lord's and Ladies *Arum maculatum*. There were occasional sedges along the stream corridor, but this was mainly shaded.

At the eastern end of Moors Ditch where it flows immediately to the north of unit 174 the brook is lined with Crack Willow on its north bank but is open on its south bank. Large sedges are present along this section. There is an open concrete culvert at the eastern end of this section lacking in vegetation.

No change to the vegetation of Moors Ditch was noted as a result of the 2014 update survey.

When the survey was updated in May 2016 some clearance / thinning had taken place alongside 155 Milton Park – MP1 - with advice from BBOWT. This is detailed in a separate report " Baseline Ecological Survey – Proposed Bridge over Moors Ditch – Elizabeth Mckay Consultant Ecologist – June 2016. Also updated in May 2018".

Otherwise Moors Ditch remained unchanged in May 2016, May 2018 and May 2020.

Stream Corridor Linking Pools 2, 3 and 4

A stream corridor flows into the site part way along the southern boundary from a culvert under the railway line. It then flows east into pool 2. It has been straightened in this section but has natural earth banks (steep in places). It then flows through a short underground culvert and into the pool. The straightened section was dominated by scrub at the western end. Species included Hawthorn and Dogwood.

Moving further east there is a line of Aspen with Goat Willow, Silver Birch and Ash adjacent to the stream corridor.

No changes were noted as a result of the update surveys in 2014. However in May 2016 the stream corridor between Lagoons 1 and 2 had been de-silted and the Goat Willow, Dogwood and Snowberry scrub thinned. The Hawthorn, Aspen and other trees remained. Yellow flag Iris had started to colonise in the stream. Sedges were also apparent on May 2018.

In May 2018 large areas of scrub had been removed from the north bank of the stream between lagoons 1 & 2. By May 2020 a tarmac walkway had been introduced as shown in the photographs – appendix 1.

Between pools 2 and 3 there is an underground culvert where the stream goes under an access road. The stream flows briefly alongside pool 3, which is online and then through another culvert under a road and into pool 4.

To the north of pool 4 the stream corridor has steep banks and this has been straightened with artificial reinforcements in places. The east bank is lined with trees and scrub with more limited scrub on the west bank. Species include Alder, Dogwood, Hazel, Goat Willow, Ash and Hawthorn.

No change was noted to these stream corridor sections as a result of the 2014, 2016, 2018 and 2020 update surveys.

The stream then flows into a fairly lengthy underground culvert before joining Moors Ditch. Above this culvert (or either side of it) are closely mown grassland areas, semi-mature trees and ornamental shrubs including Hazel, Ash, Dogwood, Elder, Snowberry and Sycamore *Acer pseudoplatanus*.

Some of the ornamental shrub areas have now been replanted with native species including Blackthorn, Hazel, Hawthorn, Holly, Dogwood, Hornbeam, Field Maple, Box, Guelder Rose and Buddleia as well as additional similar areas of native hedgerow planting – June 2014.

In 2016, 2018 and 2020 the above areas were noted to be growing well.

Adjacent to the hedge at the northern end near Moors Ditch, wildflower grass seeding also took place. Ox-eye Daisy *Leucanthemum vulgare*, Cowslip *Primula veris*, Black Knapweed *Centaurea nigra* , Birds foot Trefoil *Lotus corniculatus* and False Brome *Brachypodium sylvaticum* were evident in May 2016. However these were not evident in May 2020.

There were two further similar areas of wildflower seeding further south between Lagoon 4 and Moors Ditch. These were not evidence in May 2018 - species poor rough grass only was evident. However in May 2020 the area on the banks of Lagoon 4 was noted to be flowering well.

Stream Corridor to the South of Pool 5

Much of this stream corridor is culverted under roads and buildings but it appears to flow south to north across Milton Park and into Moors Ditch. A short section is above ground including and to the south of Pool 5. It has been straightened with artificially re-inforced vertical banks. It is lined with trees and ornamental shrubs including Horse Chestnut *Aesculus hippocastanum*, Alder and Snowberry.

Some clearance of Snowberry was noted – June 2014. No further changes had taken place when the area was revisited in May 2016, May 2018 and May 2020.

Ditch to South of Brook Drive – Eastern End

A short section of ditch exists to the south of Brook Drive in the north – east part of the site. This is well vegetated with sedges and Reedmace and has scrub on its northern bank including Crack Willow, Hawthorn, Dogwood and Elder. The section remained unchanged throughout the surveys (May 2016, May 2018 and May 2020).

5. RESULTS

The Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (as amended) provide protection for the following species against killing, injury, disturbance or sale. It also protects their places of shelter, protection, breeding and resting sites.

Water Voles

All of the water courses and water bodies described above were thoroughly surveyed by an experienced surveyor on the 28th of May 2021 for evidence of water voles in the form of burrows, latrines, feeding remains and trackways and none found.

Some limited evidence of possible old burrows was noted occasionally along Moors Ditch where it forms the northern boundary of Milton Park, but there was no fresh evidence of usage.

The stream corridor on the northern boundary is now quite densely wooded and of low suitability for water voles which prefer more open grassy habitat. It is possible that these burrows date from a time when the stream corridor was more open.

Great Crested Newts

Water samples were taken of each of the 10 lagoons in and immediately adjacent to Milton Park Business Park on the 19th and 24th of May 2021 by a trained Ecologist, following recognised survey techniques.

These were then sent for laboratory analysis by Surescreen Scientifics to test for presence of Great Crested Newt DNA in each of the lagoons.

However a negative result was returned for each of the lagoons.

The results provided by Surescreen Scientifcs are included separately.

6. CONCLUSIONS

No evidence of Great Crested Newt or Water Vole surveys was found as a result of the surveys undertaken at an appropriate time of year (May 19th, 24th and 28th 2021)

Despite thorough survey effort, a few possible older Water Vole burrows were found only with no fresh evidence of usage of the water bodies or water courses around Milton Park.

The water courses are mainly wooded and with Water Voles preferring more open, grassy conditions, the stream corridors and ditches are mainly unsuitable. Whilst there are historic records for Water Voles it appears that the habitat is no longer suitable. However the wooded stream corridors do nevertheless provide good wildlife corridors for other species such as birds, bats, invertebrates and reptiles.

Whilst the lagoons provide more open habitats – their relative isolation within the Milton Park Business Park means that Water Voles would find it more difficult to travel between the suitable lagoons. Connectively is therefore to some extent an issue.

This may also be a factor with regard to Great Crested Newts which were not found to be evident in any of the lagoons, despite suitable habitat being available.

Smooth Newt only was found to be present during previous surveys conducted in 2012 in lagoon 8.

No further survey is recommended.

Once again the lagoons provide suitable habitat for other amphibians and invertebrates as well as bird species and are very suitable environments for foraging bats.

7. REFERENCES

Nature Conservancy Council (1993). *Handbook for Phase 1 Habitat Survey.* JNCC, Peterborough, UK.

Strachan Rob (1998) Water Vole Conservation Hand Book, English Nature, UK.

APPENDIX 1 – SITE PHOTOGRAPHS

PHOTO 1 - LAGOON 1

PHOTO 2 – LAGOON 2

PHOTO 3 – LAGOON 2

PHOTO 4 – LAGOON 3

PHOTO 5 – LAGOON 4

PHOTO 6 – LAGOON 5

PHOTO 7 – STREAM CORRIDOR TO SOUTH OF LAGOON 5

PHOTO 8 – LAGOON 6

PHOTO 9 – LAGOON 7

PHOTO 10 – LAGOON 8

PHOTO 11 - LAGOON 9
PHOTO 12 - LAGOON 10

PHOTO 13 – LAGOON 10

PHOTO 14 – STREAM CORRIDOR BETWEEN LAGOONS 1 & 2

PHOTO 15 – STREAM CORRIDOR BETWEEN POOL 1 & 2
PHOTO 16 - STREAM CORRIDOR BETWEEN POOL 1 & 2

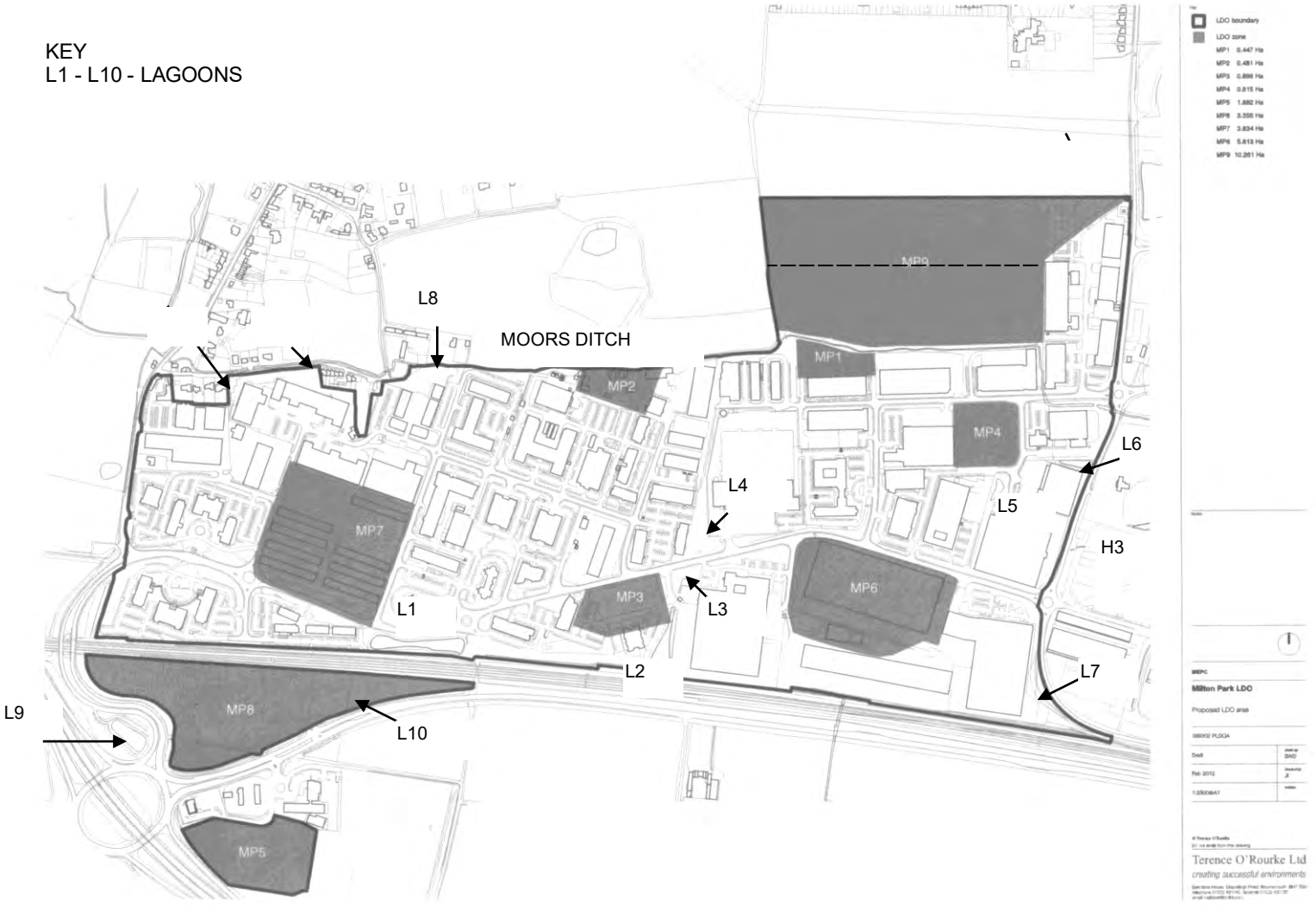
PHOTO 17 - MOORS DITCH CLOSE TO 155 MILTON PARK

PHOTO 18 - MOORS DITCH – EASTERN SECTION

PHOTO19 - SECTION OF MOORS DITCH SOUTH OF BROOK DRIVE - EAST END

FIGURE 1A

FIGURE 1A – LOCATION OF LAGOONS AND STREAMS WITHIN MILTON PARK



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