



## Ecological Mitigation and Management Framework - Update

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### 1.0 INTRODUCTION

- 1.1 This Ecological Mitigation and Management Framework (EMMF) Update (hereafter referred to as "EMMF Update") has been prepared as an appendix to the Land at Lotmead Farm, Swindon (the Site), Environmental Statement (ES) Addendum, Chapter 8 - Ecology. The ES Addendum has been produced to assess the impacts of an amended Drainage Strategy and FRA Addendum, which is proposed for the site.
- 1.2 The Site was previously subject to Outline planning consent (ref. S/OUT/19/0582). This original Outline application included the submission of an Original ES Chapter<sup>1</sup> from 2019. Supplementing the Original ES Chapter was an EMMF<sup>2</sup>. The following paraphrased quote taken from the EMMF outlines the original scope:
- "This EMMF has been produced to address determination comments recently provided by the SBC Planning Ecologist during consideration of the application. In summary, further clarity/information on the broad principles for ecological mitigation and the broad areas where such mitigation would occur was required to inform determination." Thereby "to ensure that the overall Application Site supports ecological features of Local to District-level nature conservation value, thereby ensuring the overall Application Site makes a positive net contribution to local biodiversity."*
- 1.3 During the writing of the ES Addendum, based on the amended Drainage Strategy and FRA Addendum it became clear that minor elements of the EMMF were now out of date/incorrect. This EMMF update therefore highlights the information that is now considered out of date and provides up to date information as means of correcting any discrepancies.
- 1.4 It is worth noting that only minor information from the EMMF is considered out of date. This EMMF Update highlights specific paragraphs/sections that are now considered out of date. Where specific

<sup>1</sup> Turley (2019). Environmental Statement Land at Lotmead Farm, Swindon. Accessed via: <https://pa.swindon.gov.uk/publicaccess/> (Accessed 01.08.2023).

<sup>2</sup> EDP (2019). Ecological Mitigation and Management Framework land at Lotmead Farm, Swindon. Accessed via: <https://pa.swindon.gov.uk/publicaccess/> (Accessed 04.09.2023).

elements of the EMMF are not discussed in this Update it is considered that they remain current, i.e. that the amended Drainage Strategy and FRA Addendum does not impact these areas.

1.5 The following document is divided into two sections: Habitats (Biodiversity Net Gain (BNG)); and Protected Species. Specific passages from the EMMF that require updating are given *in Blue Italics* and cited with the relevant paragraph number. They are then corrected using current proposals based on the information discussed within Chapter 8 – Ecology of the ES Addendum.

1.6 Accompanying this EMMF update are a number of Figures as follows:

- *Figure 1* – Baseline habitats
- *Figure 2* – Proposed habitats
- *Figure 3* – Habitat retention
- *Figure 4* - Ecology Mitigation Strategy: Habitat Retention and Creation of Priority Habitats – Update
- *Figure 5* - Ecology Mitigation Strategy: Species Measures - Update

## **2.0 HABITATS (BIODIVERSITY NET GAIN)**

### **BNG**

#### **Scope of Original EDP EMMF – Paragraph 2.13**

2.1 *“The overall aim of this EMMF (and subsequent LEAMPs) is: “to ensure that the overall Application Site supports ecological features of Local to District-level nature conservation value, thereby ensuring the overall Application Site makes a positive net contribution to local biodiversity.”*

2.2 Following changes to the drainage scheme biodiversity net gain was re-calculated using Outline Surface Water Drainage Strategy 22006-HYP-P0-XX-DR-C-221-P02, resulting in an overall 17.48% gain.

2.3 Since the previous calculations were submitted the biodiversity net gain metric has been updated to version 4.0 and UK Habitats Classification System has been updated to version 2.0. The calculations have been amended to include these updates. Baseline habitats were remapped accordingly – see *Figure 1*.

2.4 As hedges and rivers remain unchanged since the previous calculations were submitted these have been excluded from the updated calculations, which focus on area habitats.

2.5 Phase 1 of the development has been submitted for reserve matters as a separate application. These calculations do not include the more specific habitats set out in the detailed plans for Phase 1 but rather use site wide plans to determine habitats.

#### **Baseline habitats**

2.6 The site was found to be dominated by modified grassland, much of which was in poor condition due to low species count. This is a low distinctiveness scoring habitat but given the large area, 139ha, it delivers a total of 308.56 habitat units.

2.7 Other neutral grassland was present in parcels across the site with the largest area in the north west. Where rough grassland was left largely unmanaged this habitat was found to be in poor condition however the area around the pond in the north west was species rich and considered to be in good condition. Altogether there is 3.18ha of other neutral grassland on site, delivering 25.53 habitat units.

- 2.8 Within the strawberry farm there are a number of crop fields, divided in the metric into cereal and non-cereal crops. In total these arable habitats deliver 10.52 habitat units.
- 2.9 Woodland varied across the site with one parcel in the north east considered to be wet woodland (W2). The remaining areas were found to be other broadleaved woodland. Woodland was in moderate condition in all parcels across the site and delivered a total of 30.01 habitat units.
- 2.10 The two mixed scrub parcels were in moderate condition delivering a total of 3.88 habitat units. This is a habitat of medium distinctiveness.
- 2.11 Several ponds were present, all of which were non-priority ponds. Condition varied between moderate and poor with the majority being moderate. In total ponds delivered 5.21 habitat units.
- 2.12 Individual trees were present in the south of the site. Most of these were part of the block of hybrid black poplars. These were calculated as individual medium sized trees in line with the guidance in the metric 4.0. A total of 21 medium sized trees and one large tree were present. All individual trees on site were considered to be in good condition and deliver a total of 10.15 habitat units.
- 2.13 Within the site boundary there were several vegetated gardens delivering 4.13 habitat units.
- 2.14 Tall forbs is a new habitat categorisation introduced with metric version 4.0. This habitat describes the areas of vegetated manure piles. These were found to be in poor condition and delivered a total of 0.47 habitat units.
- 2.15 The remaining areas are described as artificially unsealed unvegetated surfaces or developed land; sealed surface. Neither of these habitats score in the metric.

#### Post development habitats

- 2.16 Post development habitats have been mapped – see *Figures 2 and 3*.
- 2.17 Many areas will be retained or enhanced post intervention. These are concentrated in the south and west of the site. The majority of the woodland parcels will be retained.

**Table 1: Post development habitat calculations.**

Habitat	Distinctiveness	Baseline habitat units	Baseline units retained	Baseline units enhanced	Units lost
Artificial unvegetated, unsealed surface	V. Low	0.00	0.00	0.00	0.00
Cereal crops	Low	2.27	2.27	0.00	0.00
Developed land; sealed surface	V. Low	0.00	0.00	0.00	0.00
Mixed scrub	Medium	3.88	2.90	0.00	0.98
Modified grassland	Low	308.56	28.85	0.00	279.71
Non-cereal crops	Low	8.25	8.25	0.00	0.00
Other neutral grassland	Medium	25.53	22.27	0.00	3.26
Other woodland; broadleaved	Medium	25.41	5.56	19.69	0.16
Ponds (non-priority habitat)	Medium	5.21	0.56	3.33	1.32
Rural tree	Medium	10.15	10.15	0.00	0.00
Tall forbs	Low	0.47	0.00	0.00	0.47
Vegetated garden	Low	4.13	3.73	0.00	0.40
Wet woodland	High	4.67	0.00	4.67	0.00
<b>Grand Total</b>		<b>398.53</b>	<b>84.54</b>	<b>27.69</b>	<b>286.30</b>

- 2.18 Post development much of the green infrastructure is currently unspecified. For the purposes of this report it has been calculated as other neutral grassland in moderate condition. This is an achievable target in the context of a housing estate however other pressures such as recreation and landscaping which will necessitate other habitat types in the final designs. It is important to note that the proportion of these areas that will eventually be other neutral grassland will make a significant difference to the final net gain. Other neutral grassland can deliver up to 149.88 habitat units across the site.
- 2.19 In areas managed for nature other neutral grassland will reach a higher condition score. In these limited areas a condition score of moderate has been applied. These areas will deliver 11.30 habitat units.
- 2.20 Areas of amenity grassland such as verges and sports pitches have been scored as modified grassland in poor condition. These will deliver 32.07 habitat units post-intervention.
- 2.21 Allotments will be in good condition. They will deliver 13.30 habitat units.
- 2.22 A change in the areas of sustainable urban drainage systems have been suggested. Until there are detailed planting schemes these have been assumed not to hold water year round therefore scored as SUDS rather than ponds. SUDS basins will achieve a condition score of good and will deliver a total of 18.99 habitat units.
- 2.23 A significant area of other broadleaved woodland has been specified along the eastern edge of the site and in parcels in the north. To qualify with habitat trading rules ten percent of the areas specified as woodland has been scored as mixed scrub. This will also provide a benefit to overall biodiversity through structural variation in vegetation types across the site. It has been given a precautionary score of moderate and will deliver 11.39 habitat units.
- 2.24 The remaining 15.3ha of woodland will reach a condition score of moderate within the timeframe set out in the metric. Newly created woodland will deliver 71.78 habitat units.
- 2.25 The suburban mosaic has been scored as 70% sealed surfaces and 30% vegetated gardens, as specified in the metric guidance. Sealed surfaces do not score however vegetated gardens will deliver 33.70 habitat units.
- 2.26 Similarly the exact layout of the schools has yet to be determined therefore a calculation based on likely proportions has been used. In this case 75% of the area is likely to be sealed and 25% specified as modified grassland in poor condition, delivering 2.76 habitat units.

**Table 2: Calculation of BNG.**

<b>Habitats</b>	Baseline Habitat Units	398.53
	Post Intervention Habitat Units	466.33
	Change	+67.79 <b>(+17.48%)</b>

- 2.27 Please note that as plans are not finalised these figures should not be treated as definitive however they demonstrate that a net gain of **over 10%** will be achieved.
- 2.28 Based on the information above it is concluded that the Proposed Development as a whole will still provide a BNG in accordance with current best practice guidelines and national planning policy. The amendments to the Drainage Strategy and FRA Addendum will not have negative implications in terms of BNG delivery.



## **Habitats more broadly**

### **Scope of Original EDP EMMF Paragraphs 5.1 – 5.51**

- 2.29 The revised Drainage Strategy and FRA Addendum will require a reduction of 0.68ha from what was originally proposed as Lowland Meadow within the central Biodiversity Zone. Three additional attenuation basins will now comprise part of the previously designated central Biodiversity Zone.
- 2.30 The three additional attenuation basins will be designed and implemented in accordance with the approved parameters, as defined within the previously approved EMMF in Section 5 - Habitat Retention, Enhancement and Creation (paragraphs 5.1 – 5.51). This area of the site will continue to function, post development, for the two ecologically significant features (GCN and grass snake) that were identified there (see below).

### **3.0 PROTECTED SPECIES**

- 3.1 The revised Drainage Strategy and FRA Addendum will require a reduction of 0.68ha from what was originally proposed as Lowland Meadow within the central Biodiversity Zone. This reduction will be mitigated in two ways, through DLL for GCN and creation and management of on site habitat for both, GCN and Grass snake.
- 3.2 For GCN, mitigation during construction phase includes DLL plus a Reasonable Avoidance Measures and Exclusion and during the operation phase it consists of creation and management of habitat on site. RAMs will be specified through the conditioned CEMP accompanying GCN sensitive areas of the site, as appropriate, when these areas are brought forward for Reserved Matters.
- 3.3 For grass snake during construction phase mitigation will be delivered through a CEMP (trapping, capture and exclusion) and during operation phase mitigation will consist of creation and management of dedicated receptor site. All of the above will be conducted in accordance with the approved EMMF.
- 3.4 *Figures 4 and 5 summarise the proposed approach to habitat and protected species.*

### **Amphibians Including Great Crested Newt**

#### **Scope of Original EDP EMMF – Paragraph 4.32**

*“There is not currently a district licence in place across the Swindon area to allow for developers to mitigate and offset potential impacts upon great crested newts. However, this remains a viable mechanism for mitigating great crested newt impacts should it become available in advance of the development.”*

- 3.5 Currently the Swindon Borough Council has adopted the District Level Licence scheme for GCN hence two Natural England District Level Licences (DLL) are in preparation to ensure that the Proposed Development may proceed in a legally compliant manner with respect GCN. A DLL is currently in preparation for Phase 1 (and a small area of associated land) and a countersigned IACPC agreement from Natural England has been received. Further to this, a phased DLL is in preparation that will cover all remaining phases of the Proposed Development.
- 3.6 In the ES GCN was assessed as district value at outline. The 2022 eDNA survey showed continued presence in P4 and an absence in pond P3. In 2023, P3 was resurveyed and again the result was negative. Remain assessed as local value. GCN present on site will be protected from accidental harm during construction through Reasonable Avoidance Measures (RAMs) during clearance of sensitive areas of the Site, namely those close to Ponds 3 and 4. These works will be conducted

simultaneously with the grass snake measures (discussed below) and may therefore involve a degree of incidental (from a GCN perspective) exclusion measures from the development area during construction.

- 3.7 There will be creation and management of habitat suitable for GCN on site following the implementation of the DLL. Three additional drainage basins are proposed as part of the amended Drainage Strategy and FRA Addendum, hence providing more suitable habitat for GCN. These will be created and managed as per the agreed EMMF.

#### **Scope of Original EDP EMMF – Paragraph 4.34**

*“Prior to the commencement of any site clearance works, a great crested newt ‘receptor site’ comprising the two existing breeding ponds and a zone of suitable terrestrial habitat around the ponds, will be identified, retained and enhanced, see Section 5 and Plan EDP 1.”*

- 3.8 The DLL will ensure offsite habitat compensation in targeted areas to ensure the favourable conservation status of GCN in these offsite areas will remain. There is no requirement as part of DLL to mitigate/compensate for GCN on site. Nevertheless, the previously discussed central Biodiversity Zone will provide good habitat for any GCN present on site in this area – this will comprise of a matrix of habitats created, namely the newly installed attenuation basins and associated grassland. Likewise, Green Space habitat provision, in accordance with the approved parameters will provide suitable good habitat for GCN and other amphibians present on Site. There are no changes resulting from the amended Drainage Strategy and FRA Addendum that would alter the residual effect of the Proposed Development on GCN during operation. Consequently, the assessment of effects remains as set out in the Original ES Chapter.
- 3.9 It is also noted that the requirement for exclusion fencing, pitfall traps and translocation methods (as per EMMF Paragraphs 4.35 – 4.44) will no longer be required due to the change in approach in favour of DLL.

#### **Scope of Original EDP EMMF – Paragraph 5.41**

*“The intrinsic primary mitigation designed into the proposed development involves retaining and enhancing the two GCN breeding ponds on site and retaining and enhancing a core area of terrestrial habitat around the ponds in the centre of the site. The ponds will also continue to be connected to a wider green network (occurring on-site) to ensure newts do not become isolated by the proposed development.”*

- 3.10 As mentioned previously, only pond 4 has GCN, they are absent in Pond 3. However, the proposed basins will work in tandem with the two existing ponds (P3 and P4), providing a matrix of wet, marginal and grassland habitats. The area will remain functional as a Biodiversity Zone.
- 3.11 The basins will experience periodical flooding, but otherwise the embankments and some of the base will be dry for much of the year. The vegetation in these ephemeral (from a flood perspective) areas will function in much the same way as a lowland meadow with the right management prescriptions (which are described in the agreed EMMF).

#### **Reptiles Including Grass Snake**

#### **Scope of Original EDP EMMF – Paragraph 4.45 & 4.46**

*“The combination of capture and translocation and ‘habitat manipulation/passive dispersal’ techniques described above will also be suitable for reptiles.”*

*There will be a period of careful, progressive vegetation clearance followed by careful destructive searching at an appropriate time of year (between mid-March and mid-October) within construction areas where suitable terrestrial habitats occur and will be supervised by the Ecological Clerk of Works. Any reptiles encountered will be translocated by hand by the Ecological Clerk of Works to nearby suitable terrestrial habitat.”*

- 3.12 A combination of “capture and translocation and ‘habitat manipulation/passive dispersal techniques”, as per the original EMMF will be conducted for grass snake. The only difference being an increased (by 0.68ha to accommodate the three additional attenuation basins) area is now proposed for clearance. Measures will be outlined in the future corresponding CEMP. The following guidelines will be adhered to when specifying habitat clearance for reptiles in the CEMP:
- 3.13 Removal of potential reptile habitat will be completed during the active reptile season when temperatures are above 10oC.
- Ecological Clerk of Works (ECoW) will be contacted prior to works to arrange Site presence for supervision.
  - Toolbox talk will be given prior to works.
  - The area will first be walked over and hand searched by the by the ECoW to thoroughly search for reptiles, and potential hibernacula (if present) moved to the Site boundary.
  - The habitat will be strimmed from the centre of the area to be cleared towards retained habitat in two cuts, allowing reptiles to move from these areas into retained habitats. The first cut will be to 200mm and the second to 50mm 2 hours later.
- 3.14 If the timeline of works does not allow for clearance during the active reptile season, the developable area will be made unsuitable for reptiles during the active reptile season. The following measures will be taken:
- Vegetation in the developable area will be cut to no less than 200mm in height. A second cut to 50mm will be made and vegetation then managed as such until clearance takes place.
- 3.15 Removal of suitable reptile habitat in the winter is discouraged and will only take place following a fingertip search by the ECoW. If a hibernating reptile is encountered, it shall be left in situ if possible, or if not, it shall be carefully moved into or along with appropriate cover, on the boundary.
- 3.16 Once removed habitat will be managed as unsuitable in the lead up to construction.
- 3.17 There will be creation and management of habitat suitable for Grass snake on site.
- 3.18 Grass snake are a species which favours marginal and riparian habitats. The addition of the three attenuation basins in the central Biodiversity Zone close to Ponds 3 and 4 is therefore expected to provide an enhancement during the operation phase.

#### **Scope of Original EDP EMMF – Paragraph 5.48**

*“The intrinsic primary mitigation designed into the proposed development involves retaining, enhancing and managing a range of existing habitats across the site, and space within which to create new suitable habitats including Lowland Meadows as described above.”*

- 3.19 Most of the Green Space forming the northern boundary of the Site will be managed as a meadow with infrequent mowing and access provided in the most part by mown paths. In any case, it is considered that this area would function much better as a lowland meadow, than the aforementioned central Biodiversity Zone, due to its better connectivity to the wider landscape,

proximity to the riparian corridor on the northern boundary and the other Biodiversity Zone/ Nature Reserve located in the northwest of the site.

## FIGURES

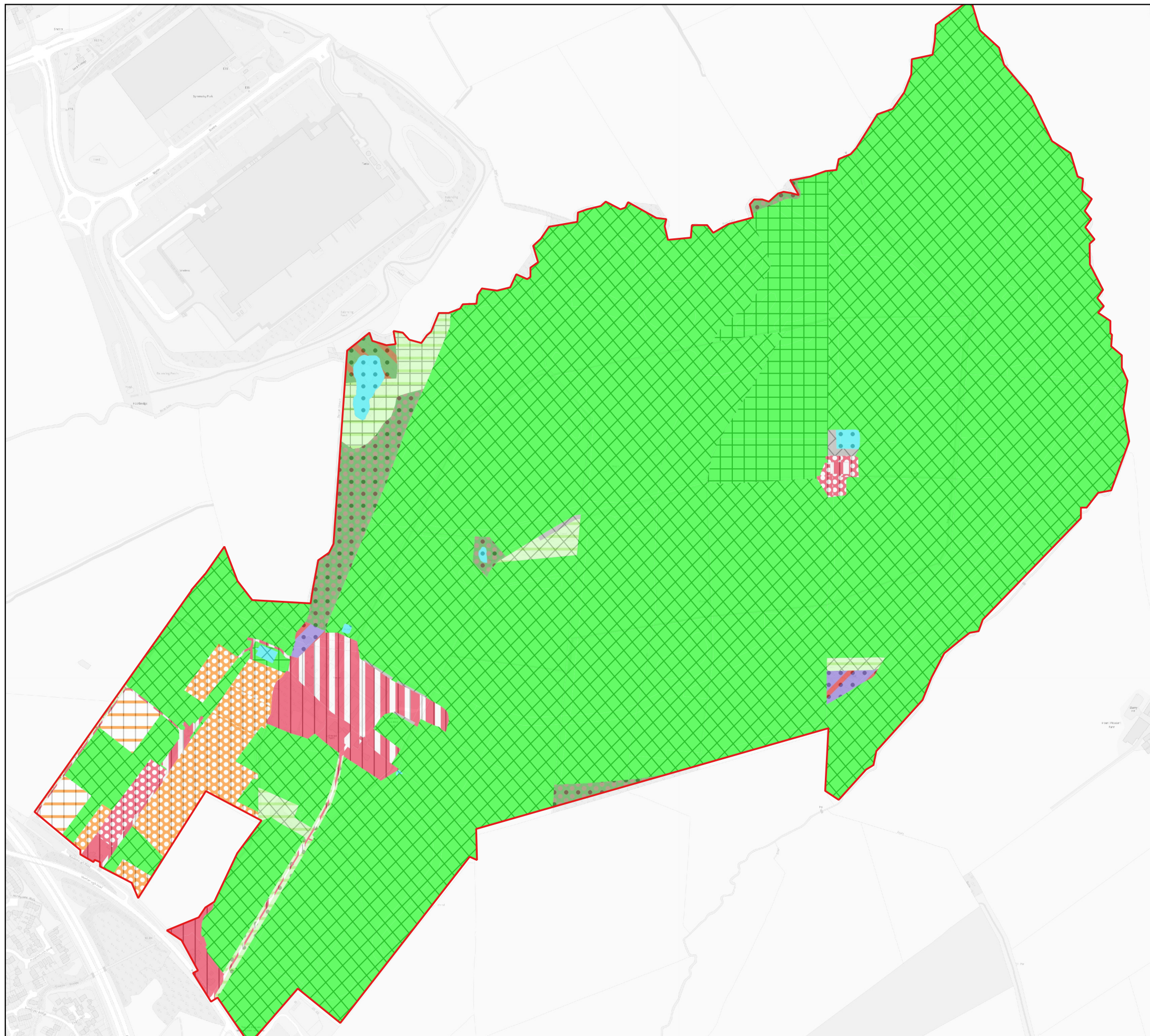
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## Key

Red Line Boundary

### Baseline Habitats

Artificial unvegetated, unsealed surface

Cereal crops

Developed land; sealed surface

Mixed scrub

Modified grassland

Non-cereal crops

Other neutral grassland

Other woodland; broadleaved

Ponds (non-priority habitat)

Vegetated garden

Wet woodland

Tall forbs

### Baseline Habitat Condition

Good

Moderate

Poor

N/A - Other

Condition Assessment N/A

0 50 100 m

client  
Countryside Sovereign Swindon LLP

project  
Lotmead Villages,  
Swindon

drawing title  
BASELINE HABITATS  
Appendix 8.7

scale @ A3  
1:7,000

drawn  
JGW / JRM

issue date  
24/8/2023

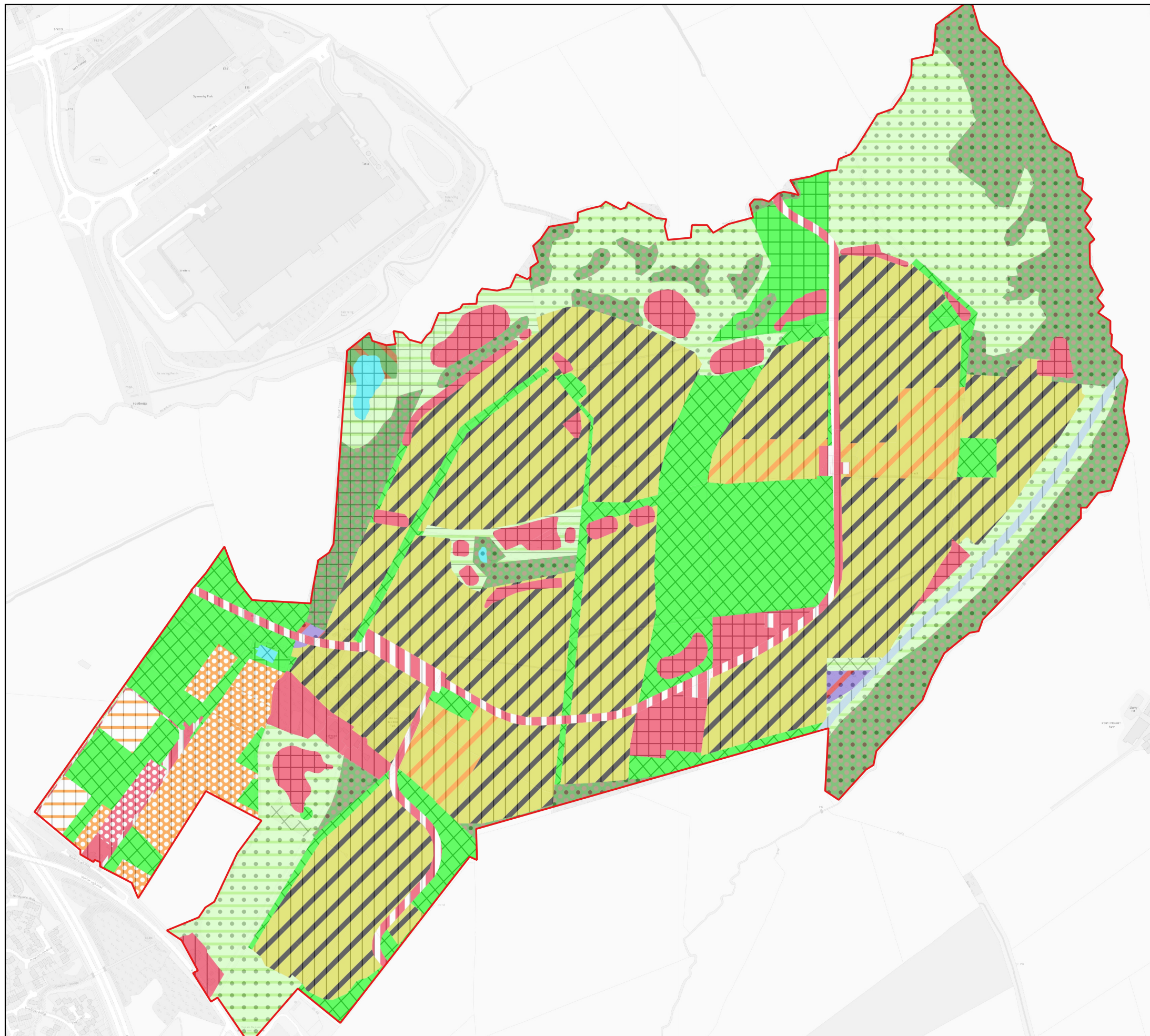
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**Figure 1**



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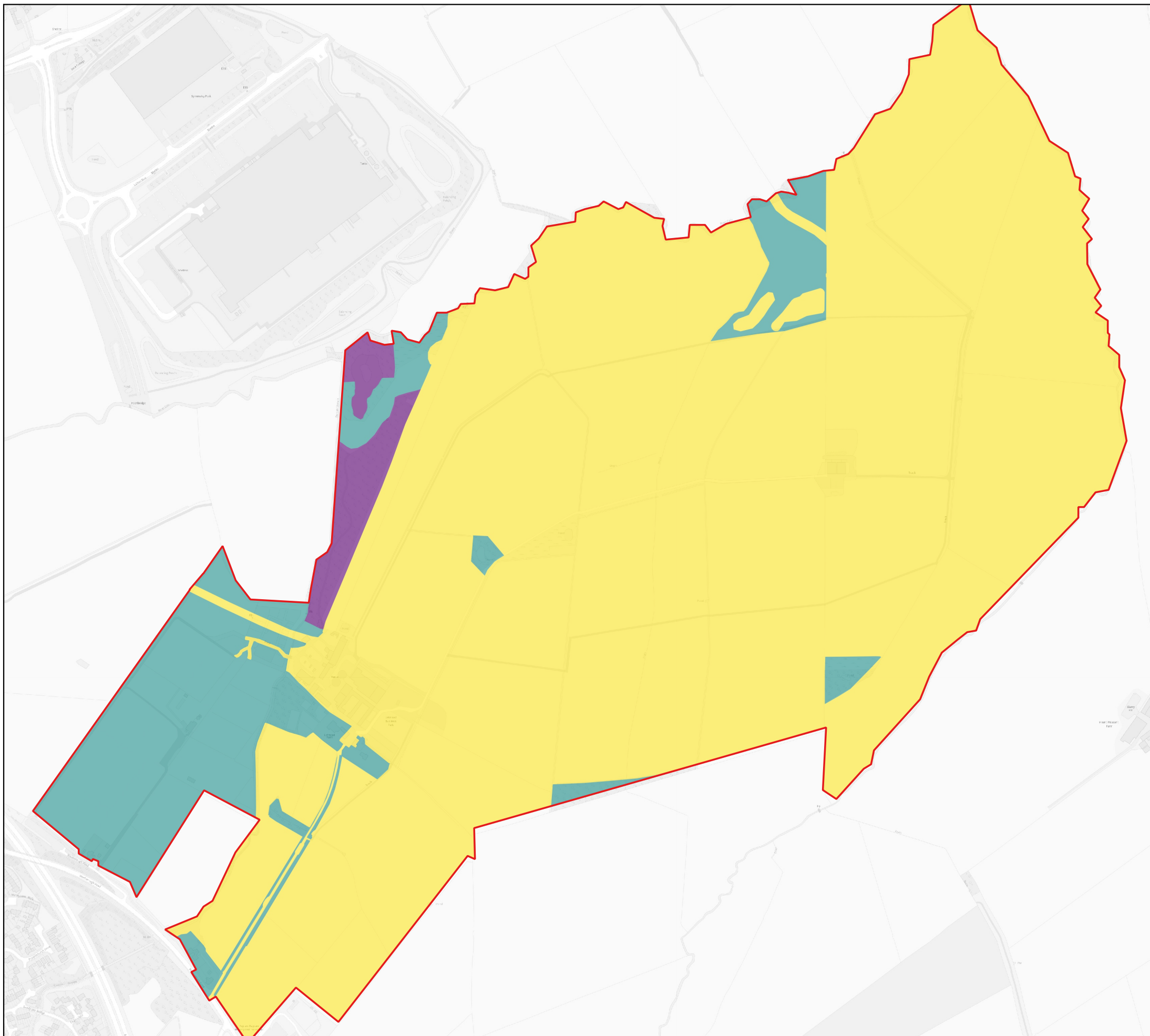
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## Key

- Red Line Boundary**
- Proposed Habitats**
- Allotments**
- Artificial unvegetated, unsealed surface**
- Cereal crops**
- Developed land; sealed surface**
- Mixed scrub**
- Modified grassland**
- Non-cereal crops**
- Other neutral grassland**
- Other woodland; broadleaved**
- Ponds (non-priority habitat)**
- Watercourse footprint**
- Sustainable drainage system**
- Vegetated garden**
- Wet woodland**
- Residential**
- School**
- Proposed Habitat Condition**
- + **Good**
- **Fairly Good**
- **Moderate**
- X **Poor**
- | **N/A - Other**
- | **Condition Assessment N/A**





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### Key

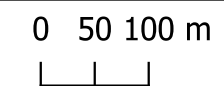
 **Red Line Boundary**

### Habitat Retention

 **Enhanced**

 **Retained**

 **Lost**



client  
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project  
Lotmead Villages,  
Swindon

drawing title  
HABITAT RETENTION  
Appendix 8.7

scale @ A3  
1:7,000

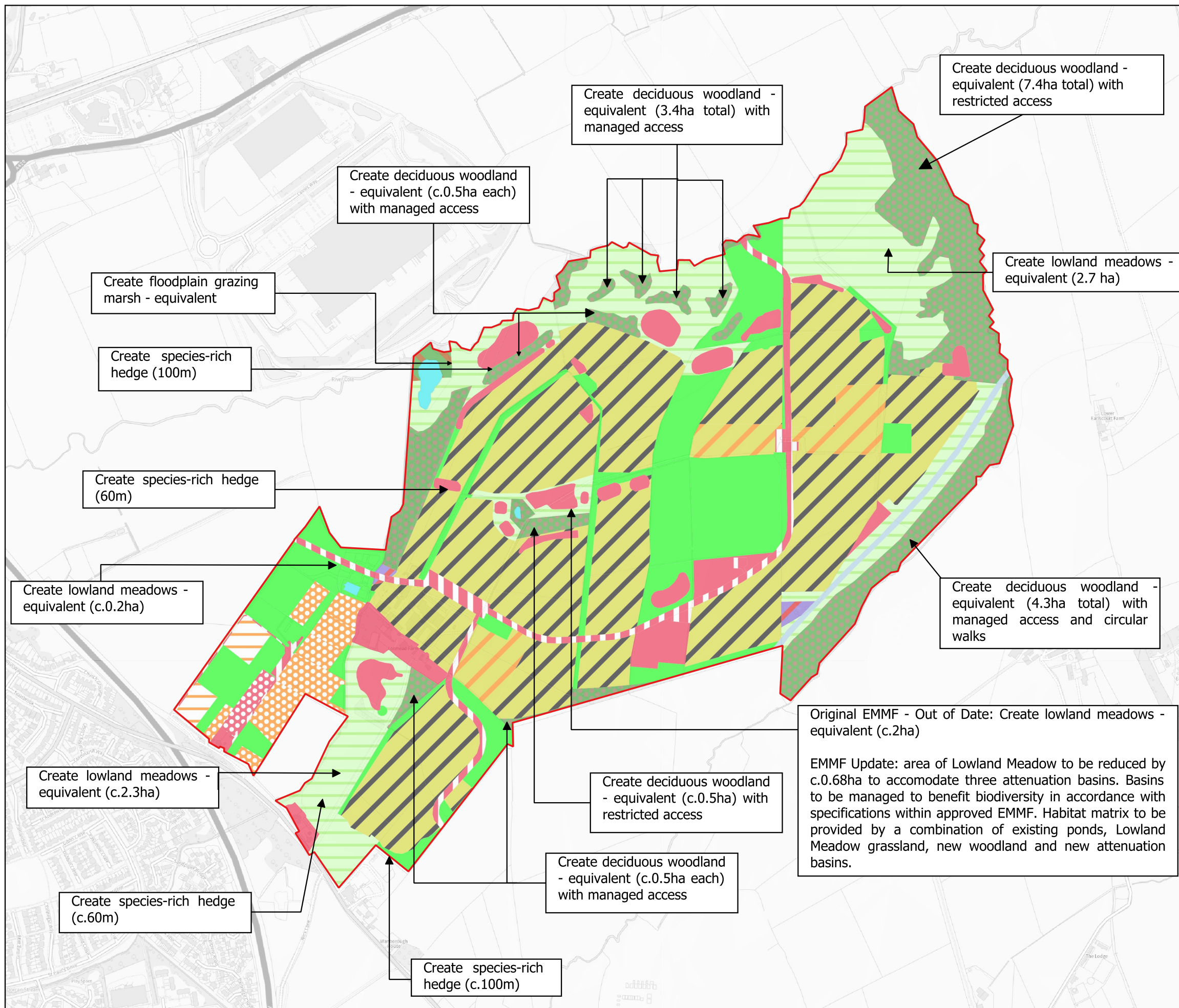
drawn  
JGW / JRM

issue date  
24/8/2023



drawing / figure number  
**Figure 3**





**Key**

- Red Line Boundary
- Proposed Habitats**
- Allotments
- Artificial unvegetated, unsealed surface
- Cereal crops
- Developed land; sealed surface
- Mixed scrub
- Modified grassland
- Non-cereal crops
- Other neutral grassland
- Other woodland; broadleaved
- Ponds (non-priority habitat)
- Watercourse footprint
- Sustainable drainage system
- Vegetated garden
- Wet woodland
- Residential
- School

**Notes:**

Out of date information from the original EMMF is preceded by "Original EMMF - Out of Date".

Changes from original EMMF are preceded by "EMMF Update".

No preceding comment should be read as no proposed change from the original EMMF.

Original EMMF - Out of Date: Create lowland meadows - equivalent (c.2ha)

EMMF Update: area of Lowland Meadow to be reduced by c.0.68ha to accommodate three attenuation basins. Basins to be managed to benefit biodiversity in accordance with specifications within approved EMMF. Habitat matrix to be provided by a combination of existing ponds, Lowland Meadow grassland, new woodland and new attenuation basins.

client  
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project  
Lotmead Villages

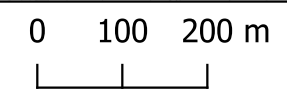
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Ecology Mitigation Strategy: Habitat Retention and Creation of Priority Habitats Update

**Appendix 8.7**

drawn  
LPL /JGW / JRM

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5/9/2023

drawing / figure number  
**Figure 4**





### Key

- Red Line Boundary
- Proposed Habitats**
- Allotments
- Artificial unvegetated, unsealed surface
- Cereal crops
- Developed land; sealed surface
- Mixed scrub
- Modified grassland
- Non-cereal crops
- Other neutral grassland
- Other woodland; broadleaved
- Ponds (non-priority habitat)
- Watercourse footprint
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