



# Botley West Solar Farm

Environmental Statement

Volume 3

## Appendix 9.13: Biodiversity Net Gain Statement

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# Biodiversity Net Gain Statement for Botley West Solar Farm

Prepared for PVDP on behalf of RPS  
by  
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September-October 2025 prepared by RPS





## Introduction

This Appendix of the Environmental Statement (ES) has been prepared by RPS on behalf of Photovolt Development Partners GmbH. (PVDP) for the Applicant, SolarFive Ltd. (SolarFive).

The purpose of this technical report is to present the methodology and results of the Biodiversity Net Gain Assessment for the Project. The results of this report have been used to inform Chapter 9: Ecology and Nature Conservation of the ES.

This ~~September-October~~ 2025 version has been updated to incorporate the watercourse component of the assessment. Habitat and hedgerow calculations are all identical to that submitted with Change Request 2 at Deadline 5-account for the alterations to the Project associated with Change Request 2, as set out in the Change Request Report [EN010147/APP/16.2]. This includes the following changes:

- ~~1. Reduction in Order Limits boundary to reduce the solar installation area south west of Bladon, and removal of solar arrays on land east of Bladon and on land north of Heath Lane;~~
- ~~2. Reduction in Order Limits boundary to reduce the solar installation area near to Oxford Airport;~~
- ~~3. Refinement of Project layout and design to reposition the main Project substation and secondary substation as shown on Sheet 13b of the Works Plans [AS-005];~~
- ~~4. Reduction in Order Limits boundary to reduce solar installation on land east of Lower Road;~~
- ~~5. Refinement of Project layout and design to remove installation areas overlapping with Flood Zones 2 and 3;~~
- ~~6. Refinement of Project layout and design to include an additional installation area within Southern Site;~~
- ~~7. Reduction in Order Limits boundary to remove small parcels of land owned by Oxfordshire County Council (Estates);~~
- ~~8. Refinement of Project layout and design to reposition the Public Rights of Way currently proposed to be stopped up and diverted back to definitive alignment;~~
- ~~9. Reduction in Order Limits boundary to remove an area of land along Wharf Road;~~
- ~~10. Clarification of the role of the community educational facility; and,~~
- ~~11. Refinement of Project layout and design to secure the latest design parameters for the new National Grid substation.~~

## Project site

The Project site comprises a landscape of arable fields divided by a mature hedgerow network. In order to inform the assessment of effects on ecology receptors, the Project site has been subjected to the following biodiversity surveys reported in the following appendices of this ES:

- Appendix 9.2 Phase 1 Habitat Survey
- Appendix 9.3 Hedgerow Surveys
- Appendix 9.4 Bat Surveys
- Appendix 9.5 Great Crested Newt Surveys
- Appendix 9.6 Invertebrate Surveys
- Appendix 9.7 Reptile Surveys
- Appendix 9.8 Badger Surveys (CONFIDENTIAL)

- Appendix 9.9 Breeding Bird Surveys
- Appendix 9.10 Wintering Bird Surveys
- Appendix 9.11 Dormice Surveys
- Appendix 9.12 Arable Weed Surveys
- Appendix 9.15 Veteran Tree Surveys

## Relevant legislation

The Environment Act 2021 included provisions applying certain BNG requirements to the Nationally Significant Infrastructure Projects (NSIP) regime. At >500MW, the Botley West Project is categorised as an NSIP. A BNG requirement is proposed to be imposed on NSIP projects from November 2025, with the level of requirement detailed within a BNG statement(s) presently expected to be set at a minimum of 10%.

The consultation<sup>1</sup> sets out that projects which have been accepted for Examination prior to the November 2025 date would not be required to deliver that minimum BNG target but could choose to do so voluntarily. In this context, and noting the position remains subject to further confirmation from Government, whilst there is no legal requirement for the Project to deliver BNG, the design has been developed such that the extent of net gain possible has been maximised within the parameters of the Project.

## BNG Methodology

### BNG approach

The approach to BNG adopted with respect to the Project is in accordance with British Standards: BS 8683 - Process for Designing and Implementing Biodiversity Net Gain (BSI 2021) and BNG Guidance (Gov.uk 2024).

All calculations for BNG have been undertaken using the Statutory Biodiversity Metric (known as the Defra Metric) and associated technical guidance notes (Natural England, 2023). This enables a comparison of the biodiversity units present on site prior to development, and the post-development units to be created once the Project is complete.

The Defra Metric uses the UK Habitat Classification System (UKHab, 2023) for each habitat present and assigns a distinctiveness score to each, depending on the rarity of the habitat. Users are required to then assign an ecological condition to each habitat parcel, using the criteria provided in the Statutory Biodiversity Metric – Technical Annex 1: Condition Assessment Sheets and Methodology (GOV.UK, 2024).

The Defra Metric then calculates a habitat unit score based on these factors with those of higher distinctiveness and better ecological condition scoring highest.

The post-development calculations incorporate scaling factors that account for the difficulty of creating a habitat and the time required to establish it, ensuring these elements are reflected in the final score. The metric also accounts for planting taking place in advance of impacts occurring (resulting in a higher score) and when such planting is delayed (decreasing it).

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<sup>1</sup> The [Consultation on Biodiversity Net Gain Regulations and Implementation; Consultation outcome Government response and summary of responses. Updated 21 February 2023 \(defra.gov.uk\)](#).

### Terrestrial habitat survey

Habitats within the area were initially recorded using Phase 1 Habitat Survey methodology (JNCC 2010) as reported in **Appendix 9.2 Phase 1 Habitat Survey**.

These were then converted to the UKHab classification using the translation guidance in the Defra Metric.

### Aquatic habitat survey

Appropriate ditch condition assessments and, where necessary, River Condition Assessments were completed through spring 2025 (Appendices 1-3 of this report). Data were added to the relevant tabs of the Defra Metric.

### Post-development plans

The calculation of the post-development habitat areas is based on the indicative masterplan design at the time of submission. For full details please refer to Chapter 6 Project Description and Figures 2.1 – 2.3 in Volume 2 of the ES.

### Calculation of habitat areas and lengths

Areas and lengths of habitat were calculated from ArcGIS based on the baseline habitat surveys and post development plans. Areas were calculated from a GIS database and then converted to hectares at an accuracy of 0.001 ha. The rounding of habitat areas to this accuracy means that the before and after area calculations do not match exactly.

The BNG Assessment has considered the area of land within the three Project site areas (the Northern Site Area, the Central Site Area and the Southern Site Area). It does not consider the cable route corridors between the sites as these are either within arable land or the highway network. Since both of these habitats can readily be restored post-construction and the period of construction is less than two years, as per the BNG Guidelines (Gov.uk 2024), no BNG assessment has been completed for the cable route corridors. This position was also agreed with Natural England during pre-submission consultation.

### Strategic significance

The BNG metric includes a Strategic Significance multiplier for both the baseline and post development habitat creation and enhancement.

Strategic Significance has been assigned based on two variables:

- If the habitat is located within the Oxfordshire Nature Recovery Network (ONRN, shown on Figure 1), it is assigned a value of '*Formally identified in local strategy*'; and
- If the habitat is not located within a CTA for Oxfordshire, it is assigned a value of 'Area/compensation not in local strategy/no local strategy'.

The category 'Location ecologically desirable but not in local strategy' is usually reserved for habitat that is in a strategically significant location (i.e. along a water course or through within habitat attached to one) but not formally identified. In the case of this development, the category was not used, as all habitats were judged to fall into one of the two categories shown above.

The ONRN includes Conservation Target Areas (CTAs). In all, nine CTAs fall within 2km of the proposed development (Table 1), of which four overlap with the Project site, highlighted in Table 1.

**Table 1. Biodiversity Opportunity Areas within 2km of the proposed development**

BOA Name	Landscape type	Area (Ha)	BAP targets
Glyme & Dorn Valleys CTA*	Wooded pasture valleys & slopes	2,496	Limestone grassland, lowland meadow, fen, swamp & reedbed, parkland, lowland mixed deciduous woodland, rivers management & restoration.
Lower Cherwell Valley CTA	River meadows	609	Lowland meadow, Floodplain grazing marsh, lowland fen, reedbed, rivers management & restoration.
Oxford Meadows and Farmoor CTA*	River meadows	1,653	Lowland meadows, floodplain grazing marsh, fen / swamp, ponds, arable field margins, hedgerows, reedbeds management & restoration.
Thames & Cherwell at Oxford CTA	River meadows	660	Lowland meadows, fen / swamp, reedbed, river management & restoration.
Wytham Hill CTA*	Wooded hills	903	Lowland mixed deciduous woodland, limestone grassland, lowland fens, lowland meadow, wood pasture & parkland, floodplain grazing marsh management & restoration.
Wychwood & Lower Evenlode CTA	Wooded farmland, settled ancient pastures	4,765	Lowland mixed deciduous woodland, limestone grassland, parkland, lowland heath and dry acid grassland, hedgerows, arable field margins, ponds, traditional orchards management & restoration.
Blenheim & Ditchley Parks CTA	Wooded estateland	2,651	Parkland, wood pasture, lowland mixed deciduous woodland, arable field margins management & restoration.
Oxford Heights West CTA*	Wooded estateland	3,297	Lowland heath and dry acid grassland, fen, lowland mixed deciduous woodland, lowland meadows, lowland calcareous grassland, arable field margins management & restoration.
Upper Thames CTA	Flat riverside land	2,284	Lowland meadows, floodplain grazing marsh, reedbeds management & restoration.

\* CTA within Project site.

### Advance or delay in habitat creation

In order to account for both advance planting (i.e. that occurring in advance of development impacts) and any delay in habitat creation between impacts occurring and planting taking place, the BNG metric includes the advance/delay multiplier.

No advance planting has been identified at this stage. As such, this component of the metric is set to '0' for all habitats.

### Baseline Conditions

Baseline conditions are classified as the existing habitats present on the site prior to development. This includes the area of each baseline habitat type, along with their condition and strategic significance, where applicable.

### **Habitat and hedgerow baseline**

While the majority of the site comprises arable farmland, the two key ecology habitat features that occur within the site are the hedgerow network (comprising some 70km of both species rich and species poor native hedgerow) and the River Evenlode Corridor. Currently, this corridor comprises almost exclusively further intensively-managed arable fields within the active floodplain of the river.

Outside of the Site but very close to it are a number of blocks of ancient woodland and other water courses including the River Glyne and River Cherwell. The River Thames and associated floodplain meadows are also close to the Site. The various river systems both within and around the Site form a contiguous habitat corridor through the landscape.

Full details of the habitats present within the Project site are set out in Appendix 9.2 Phase 1 Habitat Survey. Figure 2 shows the areas impacted by the Project (i.e. those areas where a change in habitat would occur).

The completed Statutory Biodiversity Metric Tool is provided, appended to the end of this document.

Below is a breakdown of each habitat type per area and then the total length of each hedgerow type rounded to two decimal places. The total area within the BNG study area is 1,210.93Ha and the total length of hedgerows is 72.96km.

#### *Cropland*

- Cereal crops: 1,034.86Ha (comprising the largest proportion of the site)
- Arable field margins tussocky: 2.00Ha
- Arable field margins game bird mix: 1.2Ha

#### *Grassland*

- Modified grassland: 122.25Ha
- Other neutral grassland covers 3.64Ha

#### *Woodland and forest*

- Other woodland; broadleaved: 9.88Ha
- Other coniferous woodland: 0.33Ha
- Lowland mixed deciduous woodland: 0.02Ha

#### *Heathland and scrub*

- Mixed scrub: 1.99Ha

#### *Ponds and lakes*

- Ponds (non-priority habitat): 0.02Ha

#### *Sparsely vegetated land*

- Ruderal/ephemeral: 3.03Ha

#### *Urban*

- Developed land; sealed surface: 2.94Ha

- Bare ground: 0.87Ha

The baseline habitats score for the BNG study area is **2,558.08** habitat units.

#### *Hedgerows*

Overall, there are 67.88km of hedgerow across the site. These are categorised into habitats as follows:

- Native hedgerows: 31.78km
- Native hedgerows with trees: 6.68km
- Species-rich native hedgerow: 21.85km
- Species-rich native hedgerow with trees: 7.57km

The baseline hedgerows score for the BNG study area is **561.30** hedgerow units.

#### Watercourses

Overall, there were 31.2km of ditch and 5.6km of other rivers and streams. The baseline value of these watercourses was 158.40 watercourse units.

## Habitat and hedgerow creation and enhancement plan

### Overall objectives

The landscape for the Project has been designed to ensure an overall enhancement for biodiversity and to ensure that any impacts as a result of the Project are fully mitigated.

The biodiversity objectives are to protect, manage, enhance and monitor the nature conservation value of the site, creating a biodiversity rich environment – in line with the aims of the Oxfordshire Nature Recovery Network (ONRN). All biodiversity objectives are listed in Section [7](#) ~~Error! Reference source not found.~~ of the Outline Landscape and Ecology Management Plan (oLEMP) (Doc Ref EN010147/APP/7.6.3), including the provision of designated Biodiversity Enhancement Areas, which are areas designed for ecology and have low human intervention.

The management of the site shall seek to balance the Sites operational objectives within the existing vegetation and context of the locality. It will lead to the retention, enhancement and management of the existing hedgerows and trees; particularly strengthening and maintaining hedgerow boundaries. The management aims will ensure longevity of new tree and hedge planting, and the establishment of grasslands, woodlands and most notably a landscape-scale wetland corridor along the River Evenlode.

The River Evenlode Corridor will be restored to a mosaic of Floodplain Meadow to comprise a matrix of grasslands and wetland features to provide enhanced habitat for a range of species including bats, birds and invertebrates. The area will be restored through a comprehensive restoration plan, based on the principles set out in the oLEMP. The ultimate goal of the Corridor will be to manage it in such a manner that it contributes significantly to the increase in floodplain habitat within Oxfordshire and, in time, be of at least Local Wildlife Site quality.

The connectivity between the Site and surrounding woodlands will be enhanced through the provision of over 26.5km of new hedgerow. In particular, these will provide links in the Northern Site Area between Tackley Wood and the Blenheim Estate, the Central Site Area between the Blenheim Estate and Bladon and Burleigh Woods and the various woodlands in the Southern Site Area including the SSSI at Wytham.

Areas of former arable land around the Site that are to be protected to preserve the underground archaeology will be managed as meadow grassland to provide wildlife nodes within the Site. These will be managed to provide a continuity of habitat for breeding and wintering birds.

In addition to the strategic enhancements, the grassland management within and around the solar arrays will be subject to a new conservation grazing regime. These areas will be seeded to a modified grassland habitat type, once established these areas will be grazed (primarily by sheep).

Note that the Project has committed to the inclusion of a 10m buffer on all watercourses across the Project site. As such, any encroachment (including due to arable land) within this riparian zone will be removed as a result of the implementation of the Project. This, inherently, results in an enhancement to the condition of the on-site watercourses in BNG terms, moving them from moderate/major encroachment of the riparian zone to no encroachment.

In summary, the habitat creation and enhancement plan will include the following key elements:

- Circa 100ha of new Floodplain mosaic habitats along the River Evenlode Corridor;
- At least 26.5km of new species rich hedgerow;
- Over 25km of enhanced hedgerows
- Circa 5ha of new native woodland creation;

- Wildflower grasslands to be managed for wintering and breeding birds;
- Tussocky grasslands alongside hedgerows. Hedgerow buffers will range from 5m to 25m, depending on whether such features are important bat flight lines;
- Flood attenuation features to north of Cassington;
- Additional mixed scrub habitats alongside hedgerows; and
- A range of grasslands within the solar arrays to be managed for conservation value.

### **Habitat and hedgerow condition targets**

Newly created or enhanced habitats would be required to meet a target condition that is considered achievable within the establishment and management plan. Tracking the condition progress of each habitat throughout the lifetime of the solar farm will be a key component to the overall biodiversity monitoring strategy. Each developing habitat must satisfy the relevant condition assessment criteria outlined in *'Condition Assessment Criteria for Created and Enhanced Habitats.'*



## Habitat and hedgerow creation

Habitat Creation involves establishing entirely new habitats in an area where they did not previously exist. This process may include activities such as planting native vegetation, sowing new grasslands, or excavating wetland features, such as ponds. The goal is to increase the overall habitat availability, diversity, and connectivity.

The completed Statutory Biodiversity Metric Tool is provided, appended to the end of this document.

Below is a breakdown of the habitat types to be created per area, in accordance with the UKHab classification:

### *Cropland*

- Cereal crops: 0.10Ha

### *Grassland*

- Other neutral grassland: 151.71Ha
- Floodplain wetland mosaic and CFGM: 92.65Ha
- Modified grassland: 855.26Ha

### *Woodland and forest*

- Other woodland; broadleaved: 4.45Ha

### *Heathland and scrub*

- Mixed scrub: 2.19Ha

### *Urban*

- Developed land; sealed surface: 4.98Ha
- Bare ground or artificial, unvegetated, unsealed surface: 27.07Ha

The habitat units delivered for creating habitat within the BNG study area is **4,428.97** habitat units.

### *Hedgerows*

Below is a breakdown of the hedgerow types to be created per length, in accordance with the UKHab classification:

- Native species rich hedgerow: 30.54km

The hedgerow units for created hedgerows within the BNG study area is 239.87 hedgerow units.

## Habitat and hedgerow enhancement

Habitat enhancement involves improving the condition of existing habitats or converting them into habitats of higher distinctiveness. This can include activities such as adjusting management practices, increasing native plant diversity, removing invasive species, or enhancing soil health.

For habitats, a total of 26.09Ha of poor condition modified grassland is to be enhanced to 10.81Ha of moderate condition modified grassland and 10.22Ha of good condition other neutral grassland.

The habitat units delivered for enhancing habitats within the BNG study area (Figure 1) is **112.74** habitat units. Figure 1 shows the new areas of habitat to be enhanced throughout the site, in map format.

For hedgerows, a total of 21.12km of native hedgerows is to be enhanced from poor or moderate condition to good condition. As per the oLEMP, these will be enhanced to species rich hedgerows with some mature trees. On a precautionary basis, this calculation only captures the hedgerows that are to be specifically enhanced, often for landscape mitigation purposes. In reality, the management of all hedgerows on site will be as per the principles set out in the oLEMP which should result in any that are currently in poor or moderate condition becoming in good condition with any that lack mature trees (i.e. are native/native species rich hedgerows rather than native/native species rich hedgerows with trees) allowed to develop such features. On a precautionary basis, the uplift in hedgerow BNG that would result from such management has not been captured within the BNG metric at this stage in order that the minimum uplift that the Project would deliver is demonstrated.

The hedgerow units for enhanced hedgerows within the BNG study area is **268.43** hedgerow units. Figure 1 shows the new areas of hedgerows to be enhanced throughout the site, in map format.

The completed Statutory Biodiversity Metric Tool is provided, appended to the end of this document.

### Modified grassland - Target condition: Good

To achieve modified grassland – good condition, the habitat is required to pass 6 or 7 of the below criteria including passing essential criterion A.

- **Criterion A:** There are 6-8 vascular plant species per m<sup>2</sup> present, including at least 2 forbs (these may include those listed in Footnote 1).
- Note - this criterion is essential for achieving Moderate or Good condition.
- **Criterion B:** Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for vertebrates and invertebrates to live and breed.
- **Criterion C:** Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble *Rubus fruticosus agg.* may be present).  
Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.
- **Criterion D:** Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.
- **Criterion E:** Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens).
- **Criterion F:** Cover of bracken *Pteridium aquilinum* is less than 20%.
- **Criterion G:** There is an absence of invasive non-native plant species<sup>3</sup> (as listed on Schedule 9 of WCA4).

### Modified grassland - Target condition: Moderate

To achieve modified grassland – moderate condition, the habitat is required to pass 4 or 5 of the above criteria including passing essential criterion A.

### Modified grassland - Target condition: Poor

To achieve modified grassland – poor condition, the habitat is required to pass 3 or less of the above criteria.

### Floodplain wetland mosaic and CFGM - Target condition: Good

To achieve modified grassland – good condition, the habitat is required to pass 5 or 6 of the below core criteria, including criterion A and additional criterion J.

- **Criterion A:** The water table is at, or near the surface throughout the year - this could be open water or saturation of soil at the surface. There is no artificial drainage, unless specifically to maintain water levels as specified above.  
Note - this criterion is essential for achieving Good condition.
- **Criterion B:** The parcel represents a good example of its specific habitat type - the appearance and composition of the vegetation closely matches its UKHab description, with vascular and non-vascular characteristic indicator species consistently present.
- **Criterion C:** The water supplies (groundwater, surface water and or rainwater) to the wetland are of good water quality, with clear water (low turbidity) indicating no obvious signs of pollution.

- **Criterion D:** Cover of scrub and scattered trees are less than 10%.
- **Criterion E:** Cover of bare ground is less than 5%.
- **Criterion F:** There is an absence of invasive non-native plant species (as listed on Schedule 9 of WCA3) and species indicative of suboptimal condition<sup>4</sup> make up less than 5% of ground cover.
- **Criterion J:** All ditches recorded within the habitat achieve Good condition as assessed using the Ditch condition sheet below.

### Ditches – Target condition: Good

To achieve ditches – good condition, the habitat is required to pass all 8 of the below criteria.

- **Criterion A:** The ditch is of good water quality, with clear water (low turbidity) indicating no obvious signs of pollution.
- **Criterion B:** A range of emergent, submerged and floating-leaved plants are present. As a guide >10 species of emergent, floating or submerged plants present in a 20 m ditch length.
- **Criterion C:** There is less than 10% cover of filamentous algae and or duckweed *Lemna spp.* (these are signs of eutrophication).
- **Criterion D:** A fringe of aquatic marginal vegetation is present along more than 75% of the ditch.
- **Criterion E:** Physical damage is evident along less than 5% of the ditch, with examples of damage including: excessive poaching, damage from machinery use or storage, or any other damaging management activities.
- **Criterion F:** Sufficient water levels are maintained - as a guide a minimum summer depth of approximately 50 cm in minor ditches and 1 m in main drains.
- **Criterion G:** Less than 10% of the ditch is heavily shaded.
- **Criterion H:** There is an absence of non-native plant and animal species.

### Mixed scrub - Target condition: Good

To achieve mixed scrub – good condition, the habitat is required to pass all 5 of the below criteria.

- **Criterion A:** The parcel represents a good example of its habitat type - the appearance and composition of the vegetation closely matches its UKHab description (where in its natural range).
  - At least 80% of scrub is native.
  - There are at least three native woody species,
  - No single species comprises more than 75% of the cover (except hazel *Corylus avellana*, common juniper *Juniperus communis*, sea buckthorn *Hippophae rhamnoides* (only in its restricted native range), or box *Buxus sempervirens*, which can be up to 100% cover).
- **Criterion B:** Seedlings, saplings, young shrubs and mature (or ancient or veteran) shrubs are all present.
- **Criterion C:** There is an absence of invasive non-native plant species<sup>4</sup> (as listed on Schedule 9 of WCA5) and species indicative of suboptimal condition make up less than 5% of ground cover.
- **Criterion D:** The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.
- **Criterion E:** There are clearings, glades or rides present within the scrub, providing sheltered edges.

### **Ponds (non-priority habitat) - Target condition: Good**

For woodland ponds to achieve good condition, all 7 of the below core criteria must be passed. For non-woodland ponds to achieve good condition, all 7 of the core criteria and the additional 2 criteria must be passed.

*Core Criteria - applicable to all ponds (woodland and non-woodland):*

- **Criterion A:** The pond is of good water quality, with clear water (low turbidity) indicating no obvious signs of pollution. Turbidity is acceptable if the pond is grazed by livestock
- **Criterion B:** There is semi-natural habitat (moderate distinctiveness or above) completely surrounding the pond, for at least 10 m from the pond edge for its entire perimeter.
- **Criterion C:** Less than 10% of the water surface is covered with duckweed *Lemna spp.* or filamentous algae.
- **Criterion D:** The pond is not artificially connected to other waterbodies, such as agricultural ditches or artificial pipework.
- **Criterion E:** Pond water levels can fluctuate naturally throughout the year. No obvious artificial dams, pumps or pipework.
- **Criterion F:** There is an absence of listed non-native plant and animal species.
- **Criterion G:** The pond is not artificially stocked with fish. If the pond naturally contains fish, it is a native fish assemblage at low densities.
- *Additional Criteria - must be assessed for all non-woodland ponds:*
- **Criterion H:** Emergent, submerged or floating plants (excluding duckweed) cover at least 50% of the pond area which is less than 3 m deep.
- **Criterion I:** The pond surface is no more than 50% shaded by adjacent trees and scrub.

### **Ponds (non-priority habitat) - Target condition: Moderate**

For woodland ponds to achieve moderate condition, 5-6 of the above 7 core criteria must be passed. For non-woodland ponds to achieve moderate condition, 6-8 of the 9 criteria above must be passed.

### **Other broadleaved woodland - Target condition: Moderate**

To achieve Other broadleaved woodland – moderate condition, the habitat must be assessed to reach a total score of 26 to 32 on the woodland condition assessment table (Table 2).

Table 2. woodland condition assessment table

Indicator	Good (3 points)	Moderate (2 points)	Poor (1 point)
<b>A</b> Age distribution of trees	Three age-classes present.	Two age-classes present.	One age-class present.
<b>B</b> Wild, domestic and feral herbivore damage	No significant browsing damage evident in woodland.	Evidence of significant browsing pressure is present in less than 40% of whole woodland.	Evidence of significant browsing pressure is present in 40% or more of whole woodland.
<b>C</b> Invasive plant species	No invasive species present in woodland.	<i>Rhododendron ponticum</i> or cherry laurel <i>Prunus laurocerasus</i> not present, and other invasive species <10% cover.	<i>Rhododendron</i> or cherry laurel present, or other invasive species ≥10% cover.
<b>D</b> Number of native tree species	Five or more native tree or shrub species found across woodland parcel.	Three to four native tree or shrub species found across woodland parcel.	Two or less native tree or shrub species across woodland parcel.
<b>E</b> Cover of native tree and shrub species	>80% of canopy trees and >80% of understory shrubs are native.	50 - 80% of canopy trees and 50 - 80% of understory shrubs are native.	<50% of canopy trees and <50% of understory shrubs are native.
<b>F</b> Open space within woodland	10 - 20% of woodland has areas of temporary open space. Unless woodland is <10ha, in which case 0 - 20% temporary open space is permitted <sup>7</sup> .	21 - 40% of woodland has areas of temporary open space.	<10% or >40% of woodland has areas of temporary open space. But if woodland <10ha has <10% temporary open space, please see Good category.
<b>G</b> Woodland regeneration	All three classes present in woodland; trees 4 - 7 cm Diameter at Breast Height (DBH), saplings and seedlings or advanced coppice regrowth.	One or two classes only present in woodland.	No classes or coppice regrowth present in woodland.
<b>H</b> Tree health	Tree mortality 10% or less, no pests or diseases and no crown dieback.	11% to 25% tree mortality and or crown dieback or low-risk pest or disease present.	Greater than 25% tree mortality and or any high-risk pest or disease present <sup>8</sup> .
<b>I</b> Vegetation and ground flora	Recognisable NVC plant community at ground layer present, strongly characterised by ancient woodland flora specialists.	Recognisable woodland NVC plant community at ground layer present.	No recognisable woodland NVC plant community at ground layer present.
<b>J</b> Woodland vertical structure	Three or more storeys across all survey plots, or a complex woodland.	Two storeys across all survey plots.	One or less storey across all survey plots.
<b>K</b> Veteran trees	Two or more veteran trees per hectare.	One veteran tree per hectare.	No veteran trees present in woodland.
<b>L</b> Amount of deadwood	50% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, branch stubs and stumps, or an abundance of small cavities.	Between 25% and 50% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities.	Less than 25% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities.
<b>M</b> Woodland disturbance	No nutrient enrichment or damaged ground evident.	Less than 1 hectare in total of nutrient enrichment across woodland area, and or less than 20% of woodland area has damaged ground.	1 hectare or more of nutrient enrichment, and or 20% or more of woodland area has damaged ground.

**Hedgerows (all) – Target condition: Good**

To achieve hedgerows – good condition, the habitat must not fail more than two of the below criteria (e.g., A1 & C2), and must not fail more than one of the functional group criteria (e.g., failing both A1 and A2 would not achieve Good condition),

- **Criterion A1:** Height >1.5 m average along length  
"The average height of woody growth estimated from base of stem to the top of the shoots, excluding any bank beneath the hedgerow, any gaps or isolated trees. Newly laid or coppiced hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice). A newly planted hedgerow does not pass this criterion (unless it is >1.5 m height)."
- **Criterion A2:** Width >1.5 m average along length  
"The average width of woody growth estimated at the widest point of the canopy, excluding gaps and isolated trees. Outgrowths (such as blackthorn *Prunus spinosa* suckers) are only included in the width estimate when they are >0.5 m in height. Laid, coppiced, cut and newly planted hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice)."
- **Criterion B1:** Gap - hedge base  
Gap between ground and base of canopy <0.5 m for >90% of length      "This is the vertical 'gappiness' of the woody component of the hedgerow, and its distance from the ground to the lowest leafy growth. Certain exceptions to this criterion are acceptable (see page 65 of the Hedgerow Survey Handbook)."
- **Criterion B2:** Gap - hedge canopy continuity  
"Gaps make up <10% of total length; and No canopy gaps >5 m" "This is the horizontal 'gappiness' of the woody component of the hedgerow. Gaps are complete breaks in the woody canopy (no matter how small). Access points and gates contribute to the overall 'gappiness' but are not subject to the >5 m criterion (as this is the typical size of a gate)."
- **Criterion C1:** Undisturbed ground and perennial vegetation  
">1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length;· Measured from outer edge of hedgerow; and· Is present on one side of the hedgerow (at least)."
- **Criterion C2:** Nutrient-enriched perennial vegetation  
Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.      The indicator species used are nettles *Urtica* spp., cleavers *Galium aparine* and docks *Rumex* spp. Their presence, either singly or together, does not exceed the 20% cover threshold.
- **Criterion D1:** Invasive and neophyte species  
>90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (including those listed on Schedule 9 of WCA3) and recently introduced species. Recently

introduced species refer to plants that have naturalised in the UK since AD 1500 (neophytes). Archaeophytes count as natives. For information on archaeophytes and neophytes see the JNCC website<sup>4</sup>, as well as the BSBI website<sup>5</sup> where the 'Online Atlas of the British and Irish Flora'<sup>6</sup> contains an up-to-date list of the status of species. For information on invasive non-native species see the GB Non-Native Secretariat website.

- **Criterion D2: Current damage**  
>90% of the hedgerow or undisturbed ground is free of damage caused by human activities. "This criterion addresses damaging activities that may have led to or lead to deterioration in other attributes. This could include evidence of pollution, piles of manure or rubble, or inappropriate management practices (for example, excessive hedgerow cutting)."

*Additional group - applicable to hedgerows with trees only*

- **Criterion E1: Tree class**  
There is more than one age-class (or morphology) of tree present (for example: young, mature, veteran and or ancient<sup>8</sup>), and there is on average at least one mature, ancient or veteran tree present per 20 - 50m of hedgerow. This criterion addresses if there are a range of age-classes or morphologies which allow for replacement of trees and provide opportunities for different species.
- **Criterion E2: Tree health**  
At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity. This criterion identifies if the trees are subject to damage which compromises the survival and health of the individual specimens.

### **Hedgerows (all) – Target condition: Good**

To achieve hedgerows – moderate condition, the habitat must not fail more than four of the above criteria and it must not fail both attributes in more than one functional group (e.g., failing both A1 and A2, and B1 and B2, would not achieve moderate condition).

### **Watercourse (all) – Target condition: no riparian encroachment**

To achieve the watercourse target, all watercourses within the Project site will have 10m buffers comprising rough grassland and scrub that will ensure that there is no riparian encroachment present.

### **Biodiversity Net Gain calculation**

The total area of broad habitat types lost and gained as a result of the Project are provided in Table 3 together with the value of these habitats based on the Defra metric.

The area of habitat impacted by the Project had a before development score of 2,558.08 habitat units. Post-development, the same area scores 4,637.37 units, a net gain of 2,079.29 units or 81.28%.

The watercourse component shows that, pre development, the Project had a score of 158.40 watercourse units and, post development, this would score 202.34 units, a gain of 43.95 units or 27.74%.



The completed Statutory Biodiversity Metric Tool is provided, appended to the end of this document.

**Table 3. BNG results headline summary**

On-site baseline	<i>Habitat units</i>	2558.08	
	<i>Hedgerow units</i>	561.30	
	<i>Watercourse units</i>	0.00	
On-site post-intervention (Including habitat retention, creation & enhancement)	<i>Habitat units</i>	4637.37	
	<i>Hedgerow units</i>	893.49	
	<i>Watercourse units</i>	0.00	
On-site net change (units & percentage)	<i>Habitat units</i>	2079.29	81.28%
	<i>Hedgerow units</i>	332.19	59.18%
	<i>Watercourse units</i>	0.00	0.00%
On-site baseline	<i>Habitat units</i>	2558.08	
	<i>Hedgerow units</i>	561.30	
	<i>Watercourse units</i>	158.40	
On-site post-intervention (Including habitat retention, creation & enhancement)	<i>Habitat units</i>	4637.37	
	<i>Hedgerow units</i>	893.49	
	<i>Watercourse units</i>	202.34	
On-site net change (units & percentage)	<i>Habitat units</i>	2079.29	81.28%
	<i>Hedgerow units</i>	332.19	59.18%
	<i>Watercourse units</i>	43.95	27.74%

The original application considered two options for the provision of the National Grid substation.

- Sheet 13a of the Works Plans [AS-005] identifies the existing layout of the main Project substation alongside the New National Grid Substation, if the new National Grid substation is to be delivered under the DCO.
- Sheet 13b of the Works Plans [AS-005] identifies the layout of the main Project substation and secondary substation and additional solar array, if the new National Grid substation is to be delivered by National Grid on adjacent land to the west beyond the Order Limits. The current layout shows the additional solar array directly in place of the land reserved for the new National Grid substation and the main Project substation remaining to the east of that land parcel.

Proposed Change 3 includes the following.

- Relocation of the main Project substation and secondary substation in the event that the National Grid substation is delivered on adjacent land, as shown on Sheet 13b of the Works Plans (updated and submitted alongside this Change Request). The main Project substation and secondary substation would be relocated to the western side of the land parcel within the Order Limits, closer to where the new National Grid substation may be relocated (just beyond the western edge of the Order Limit in this location).
- Redefining the solar installation area. Whilst the original Project description in Chapter 6 of the ES (APP-043) assessed the scenario with the new National Grid substation moved beyond the

Order Limits and assumed replacement of the area formerly occupied by the substation with solar arrays, Proposed Change 3 replaces and updates that scenario.

- There would be no change in the Order Limits as a result of this proposed change.

Note that the assessment presented here is on the basis of the new National Grid Substation being included within the Order Limits, from an extent of natural habitat perspective, this is a worst-case scenario with the hard standing associated with this substation present within the Project site. The scenario where the new National Grid substation is located outside the Order Limits has also been calculated and would be more or less neutral in terms of the BNG habitat score, changing from 81.28% to 81.17% since, although there would be less hard standing, there would be slightly less other neutral grassland because of the site layout.

Proposed Change 3 relates to an amended layout for the scenario where the new National Grid substation is located outside the Order Limits. The Applicant proposes a repositioning of the solar array in this area for the scenario where the new National Grid substation is located beyond the Order Limits. Proposed Change 3 would alter the layout of the solar installation but would not change the overall area of solar installation proposed. The impact on the BNG score associated with the scenario would be neutral, as there is no net change in the area affected by the revised layout.

## References

Department for Environment, Food & Rural Affairs (2024a). Statutory Biodiversity Metric Calculation Tool. GOV.UK. Available at: <https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides>.

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Department for Environment, Food & Rural Affairs (2024c). The Statutory Biodiversity Metric – Technical Annex 1: Condition Assessment Sheets and Methodology. GOV.UK. Available at: <https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides>. July 2024.

UKHab Ltd (2023). UK Habitat Classification Version 2.0 [REDACTED]

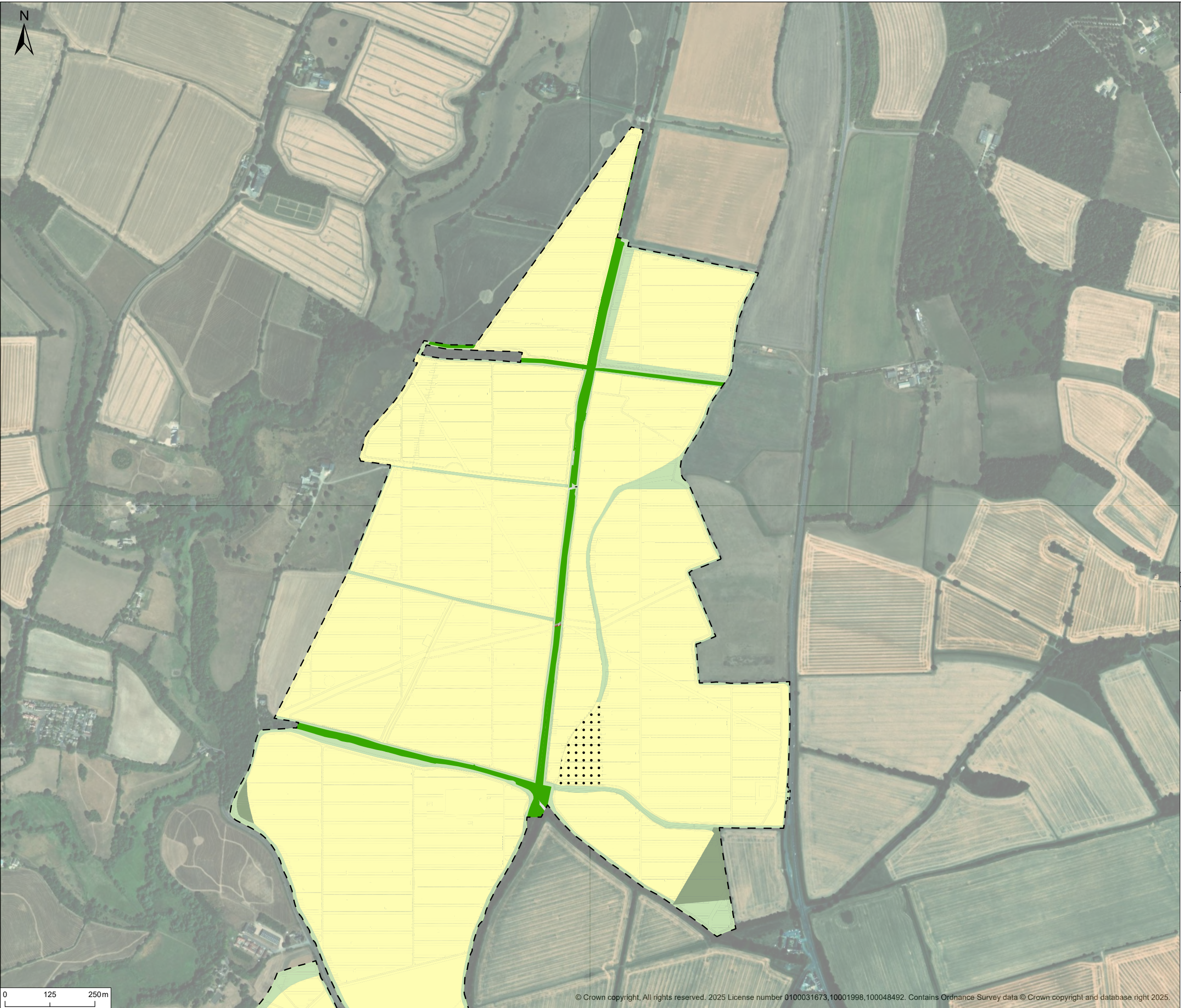
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## **Figures**

**Figure 1 Map displaying all baseline habitats impacted by the project**



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- Legend**
- BNG study area
  - Cropland - Arable field margins game bird mix - Condition Assessment N/A
  - Cropland - Arable field margins tussocky - Condition Assessment N/A
  - Cropland - Cereal crops - Condition Assessment N/A
  - Grassland - Modified grassland - Moderate
  - Grassland - Modified grassland - Poor
  - Grassland - Other neutral grassland - Poor
  - Heathland and shrub - Mixed scrub - Moderate
  - Lakes - Ponds (non-priority habitat) - Poor
  - Sparsely vegetated land - Ruderal/ephemeral - Moderate
  - Sparsely vegetated land - Ruderal/ephemeral - Poor
  - Urban - Bare ground - Poor
  - Woodland and forest - Felled - Good
  - Woodland and forest - Other coniferous woodland - Moderate
  - Woodland and forest - Other woodland; broadleaved - Moderate
  - Woodland and forest - Lowland mixed deciduous woodland - Moderate

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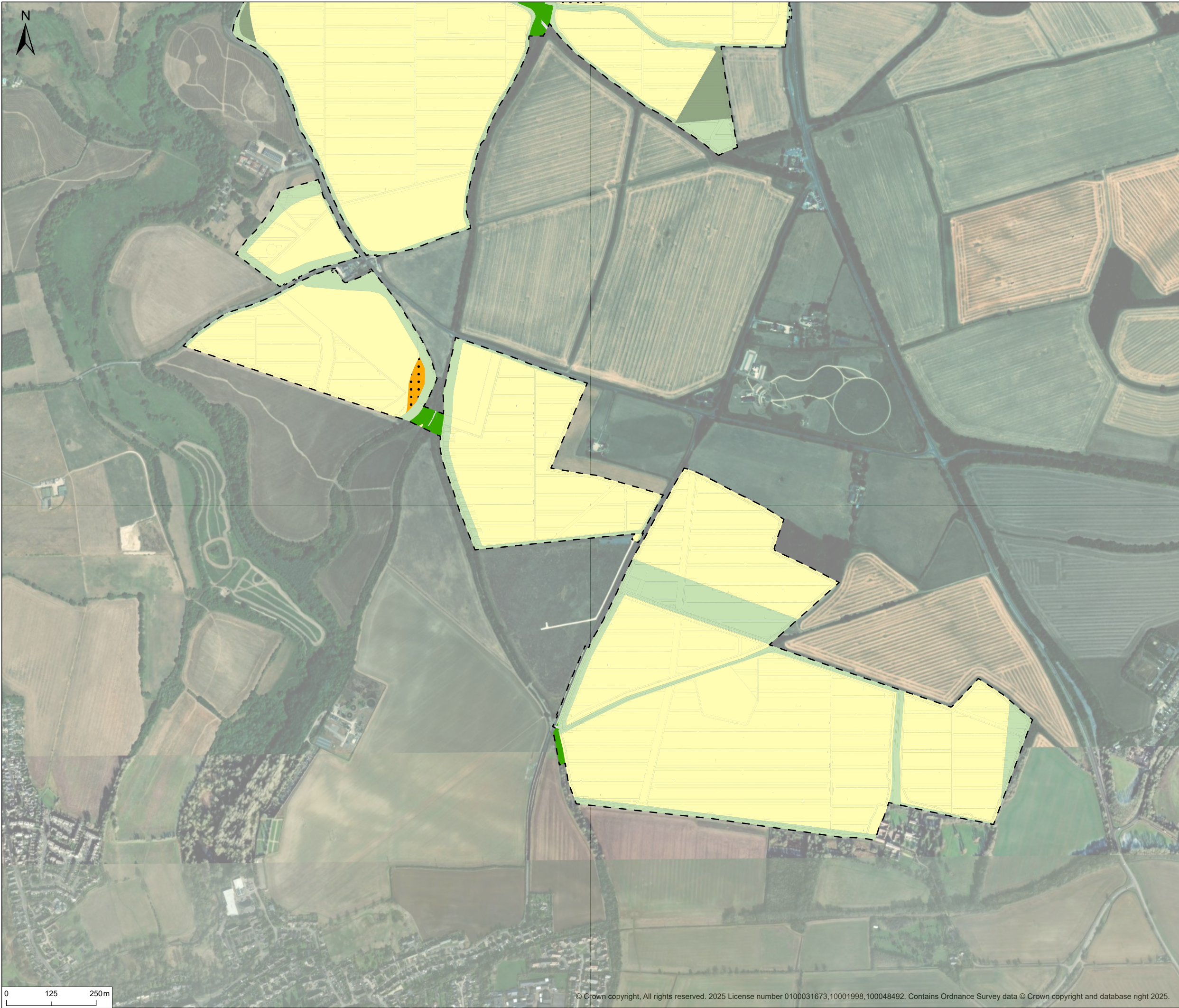


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Client	PVDP		
Project	Botley West Solar Farm		
Title	Pre development habitats		
Status	Drawn By	PM/Checked By	
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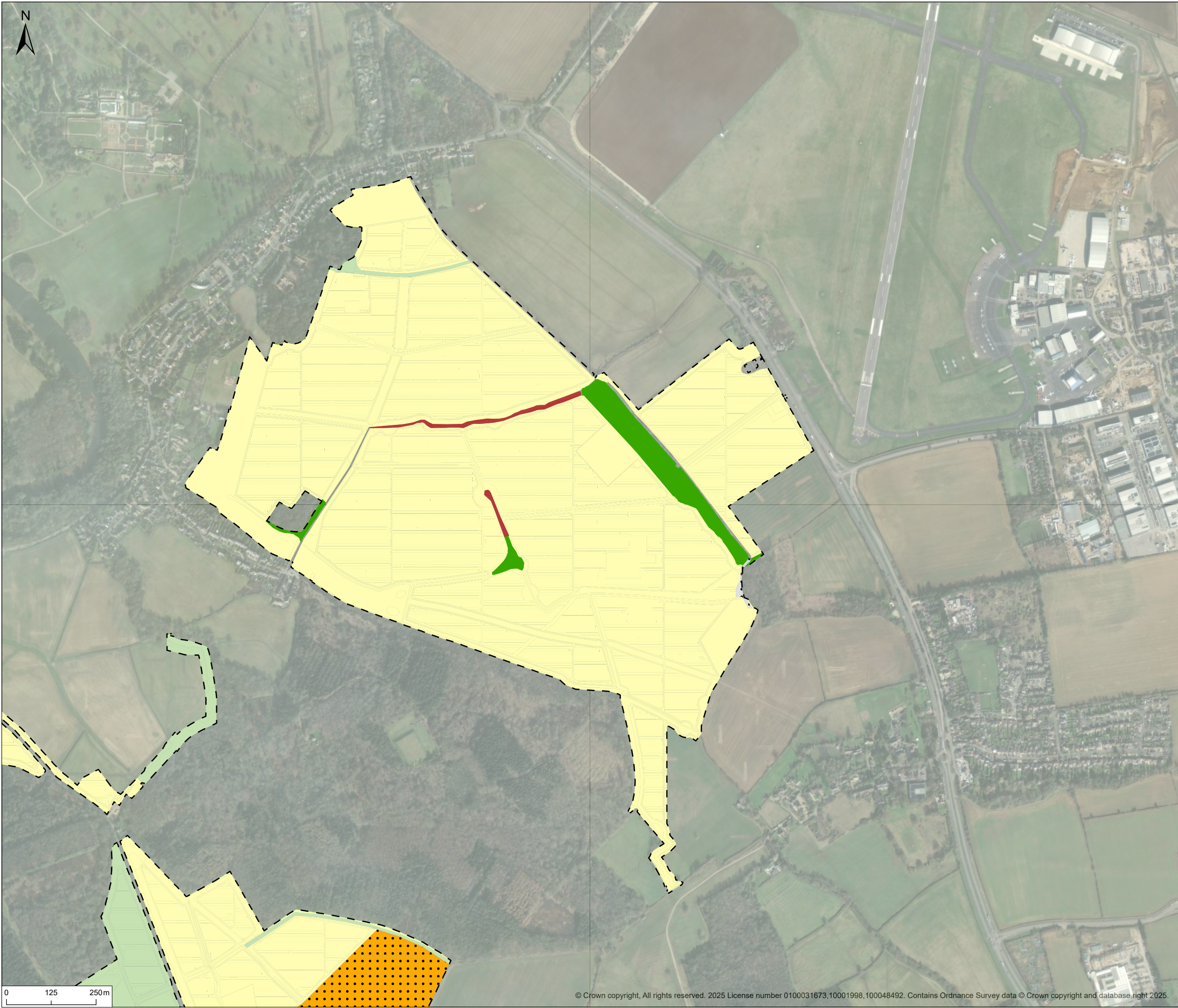


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**Legend**

BNG study area

Cropland - Arable field margins game bird mix - Condition Assessment N/A

Cropland - Arable field margins tussocky - Condition Assessment N/A

Cropland - Cereal crops - Condition Assessment N/A

Grassland - Modified grassland - Moderate

Grassland - Modified grassland - Poor

Grassland - Other neutral grassland - Poor

Heathland and shrub - Mixed scrub - Moderate

Lakes - Ponds (non-priority habitat) - Poor

Sparsely vegetated land - Ruderal/ephemeral - Moderate

Sparsely vegetated land - Ruderal/ephemeral - Poor

Urban - Bare ground - Poor

Woodland and forest - Felled - Good

Woodland and forest - Other coniferous woodland - Moderate

Woodland and forest - Other woodland; broadleaved - Moderate

Woodland and forest - Lowland mixed deciduous woodland - Moderate

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Project      Botley West Solar Farm

Title      Pre development habitats

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Figure Number  
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**AC**

Scale @ A3  
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PM/Checked By  
**BJ**

Date Created  
**SEP 2025**

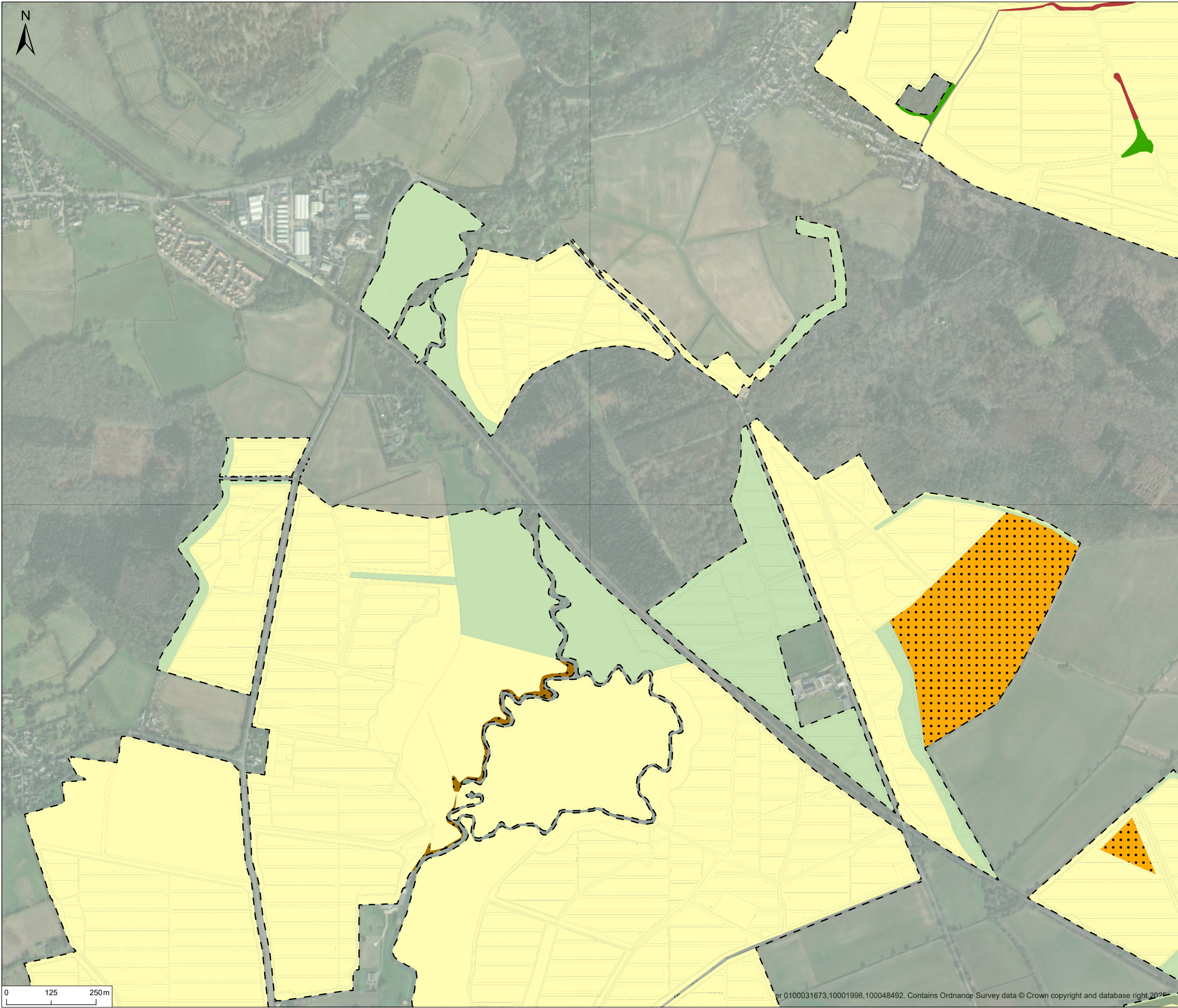
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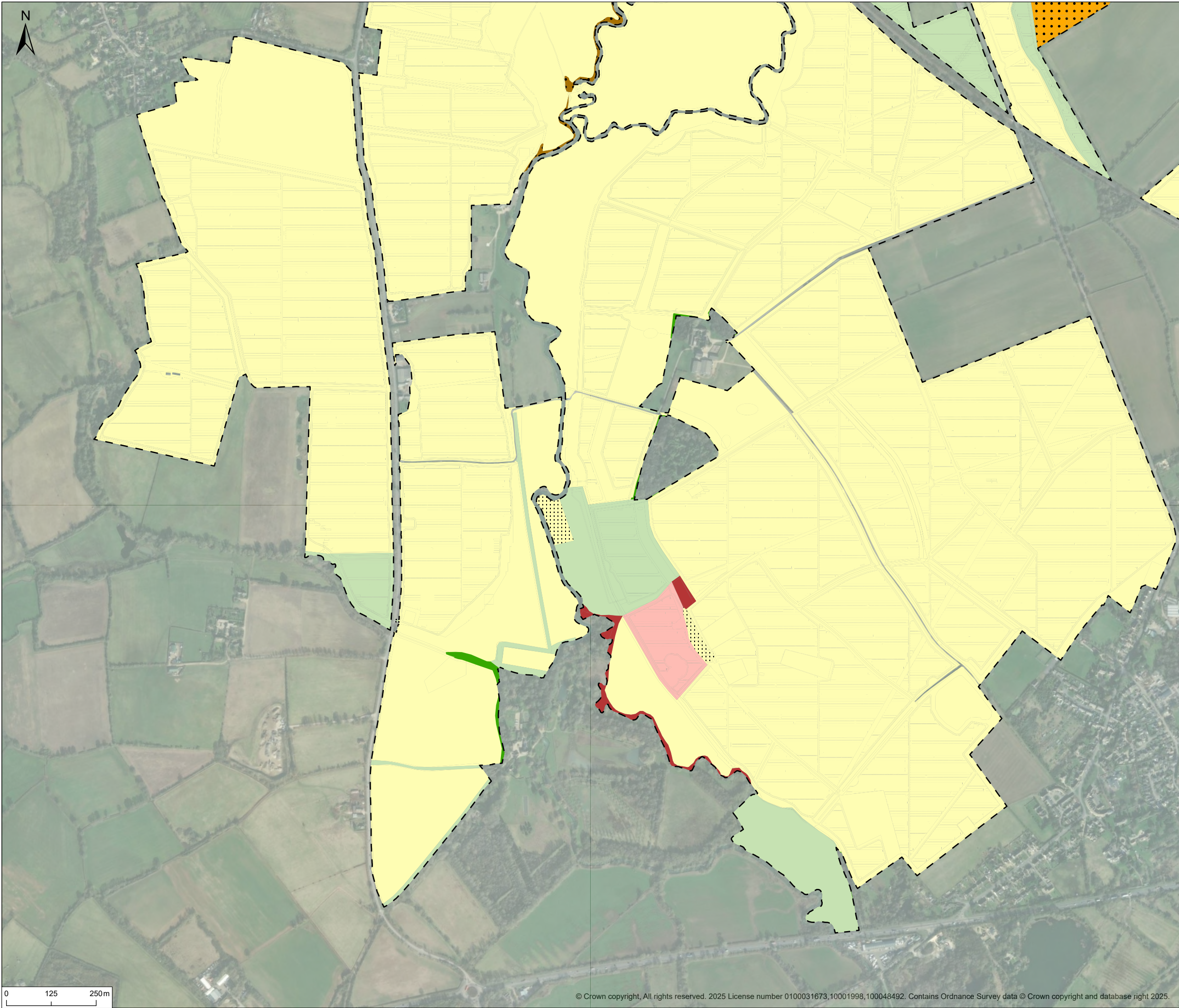
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Project Botley West Solar Farm

Title Pre development habitats

Status <b>FINAL</b>	Drawn By AC	PM/Checked By BJ
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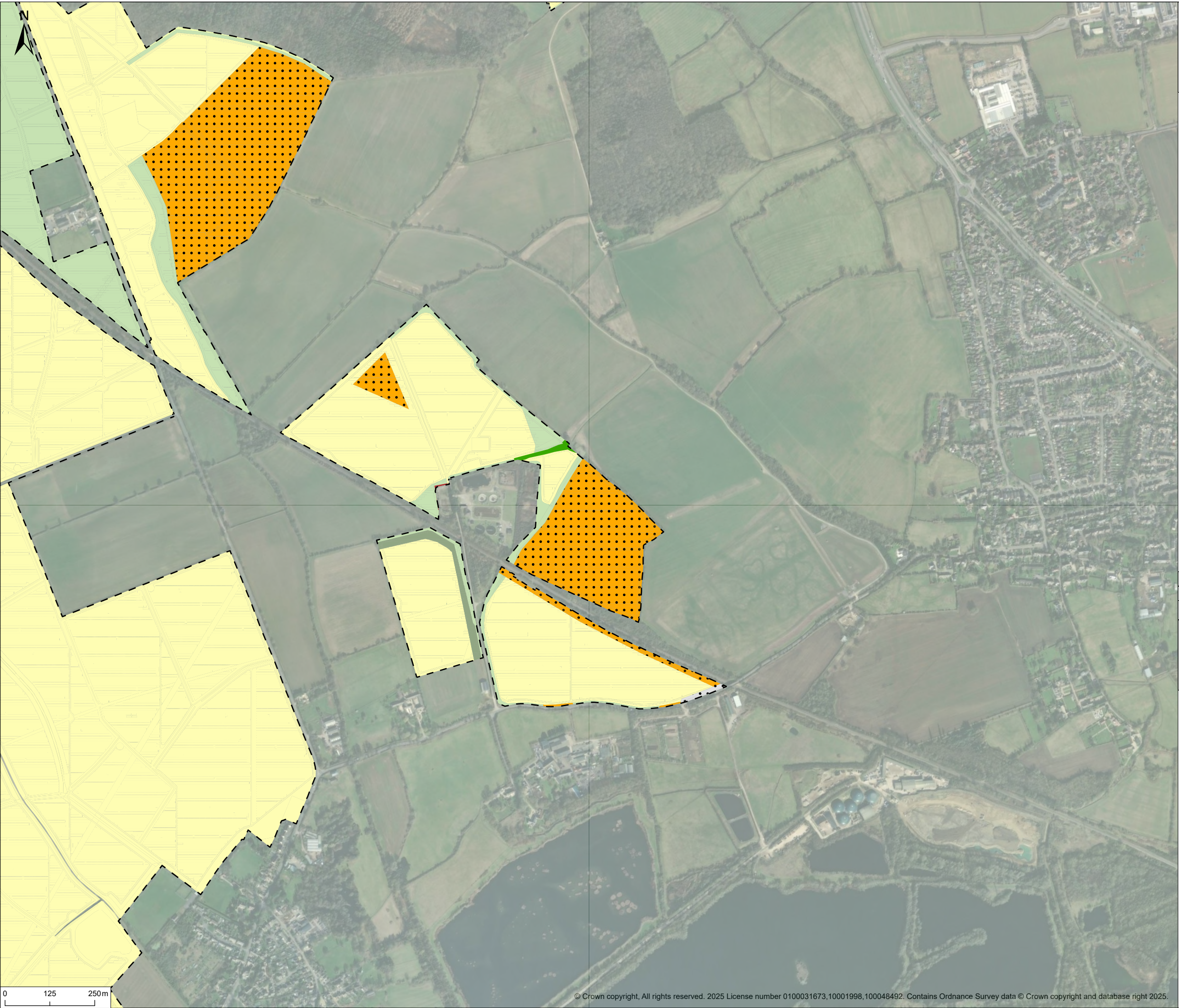


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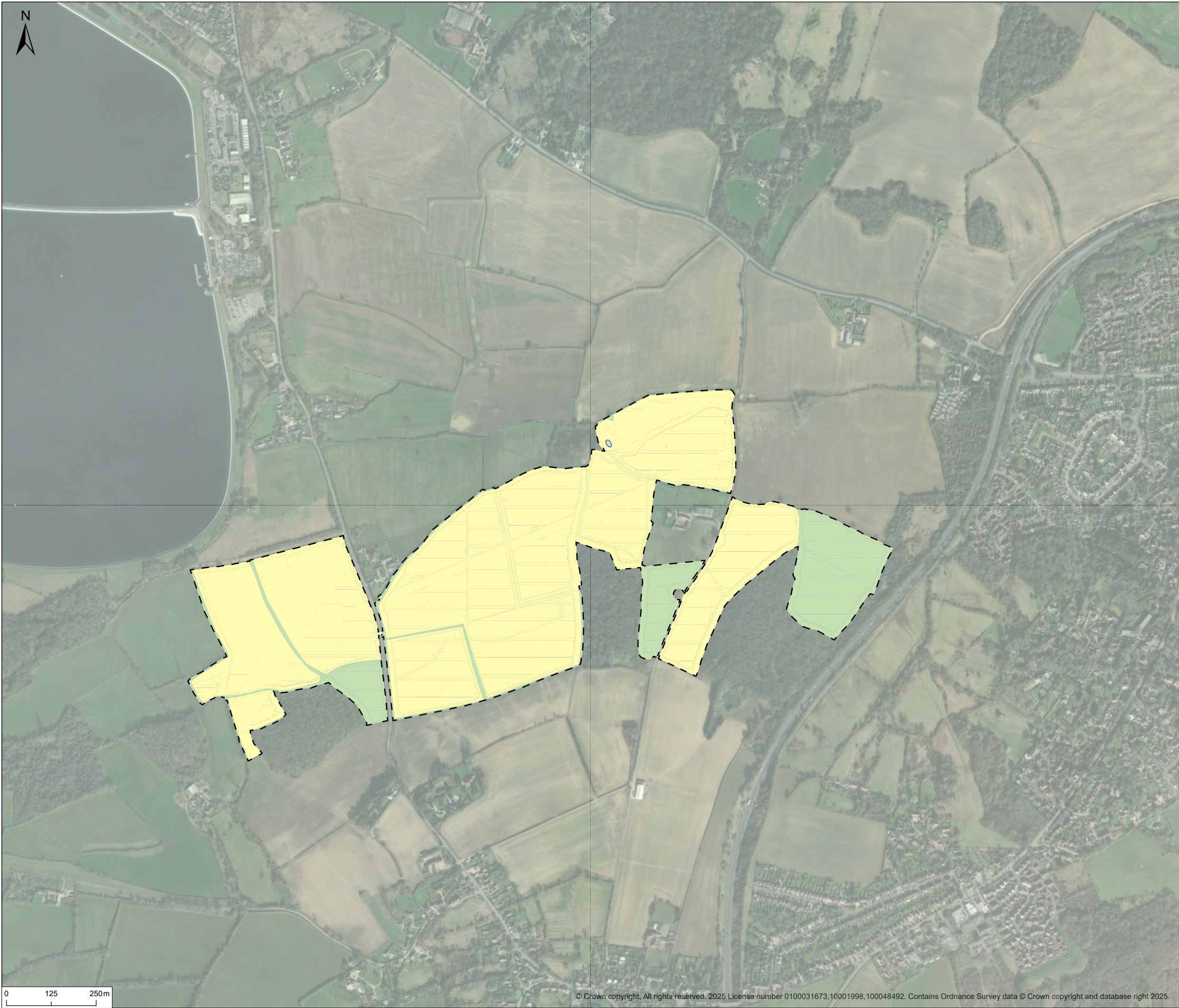
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  - Cropland - Arable field margins tussocky - Condition Assessment N/A
  - Cropland - Cereal crops - Condition Assessment N/A
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  - Grassland - Modified grassland - Poor
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  - Heathland and shrub - Mixed scrub - Moderate
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Rev	Description	By	CB	Date



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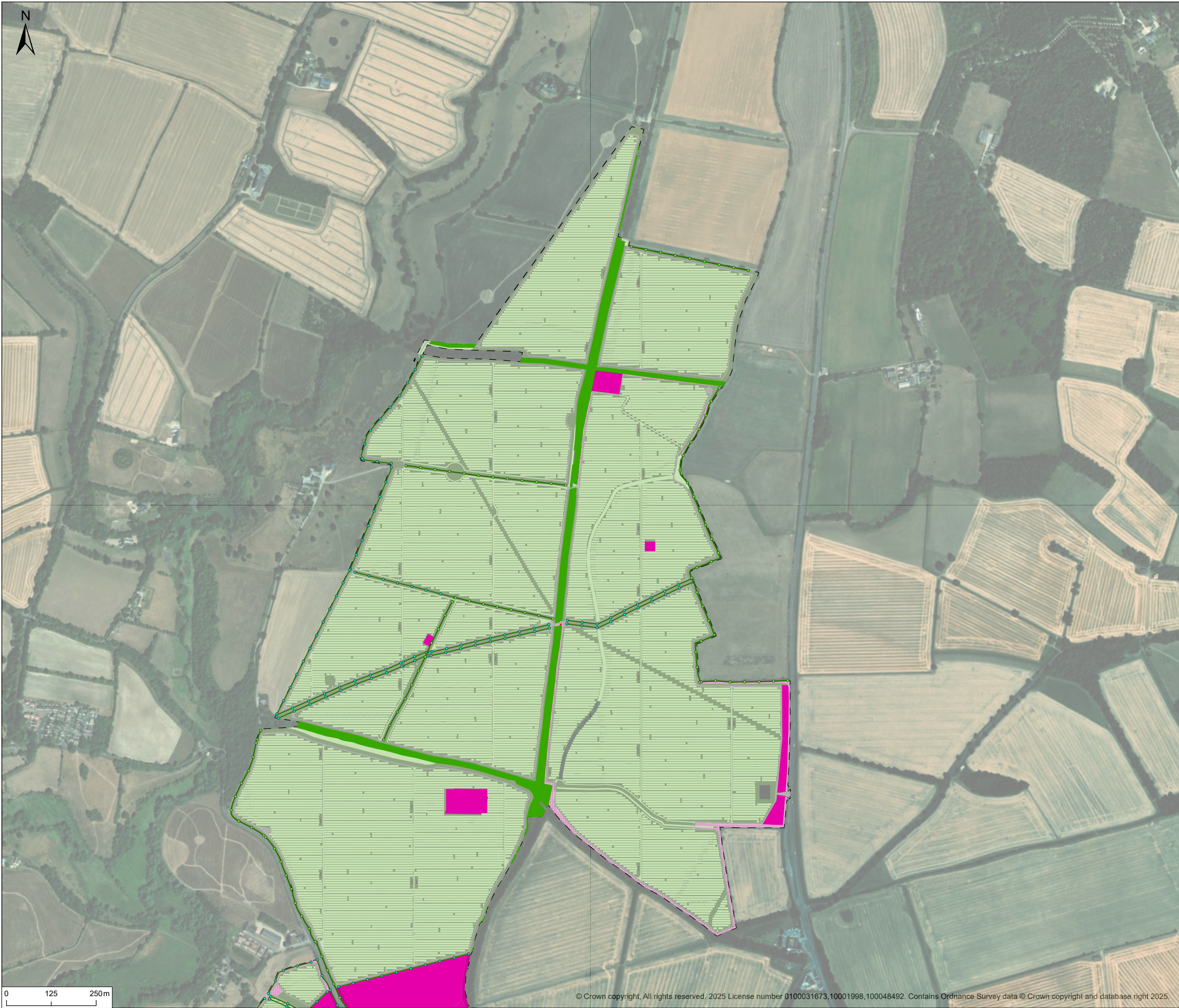
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**Figure 2 Map displaying all created habitats throughout the site.**





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- Legend**
- BNG study area
  - Grassland - Floodplain wetland mosaic and CFGM - Good
  - Grassland - Modified grassland - Moderate
  - Enhanced - Grassland - Modified grassland - Moderate
  - Grassland - Modified grassland - Poor
  - Grassland - Other neutral grassland - Good
  - Enhanced - Grassland - Other neutral grassland - Good
  - Grassland - Other neutral grassland - Moderate
  - Enhanced - Grassland - Other neutral grassland - Moderate
  - Urban - Allotments - Moderate
  - Heathland and shrub - Mixed scrub - Moderate
  - Urban - Artificial unvegetated, unsealed surface - N/A - Other
  - Urban - Developed land; sealed surface - Condition Assessment N/A
  - Woodland and forest - Other woodland; broadleaved - Moderate
  - Woodland and forest - Lowland mixed deciduous woodland - Moderate
  - Woodland and forest - Other coniferous woodland - Moderate
  - Lakes - Ponds (non-priority habitat) - Poor
  - Hedgerow created
  - Hedgerow enhanced

Rev	Description	By	CB	Date



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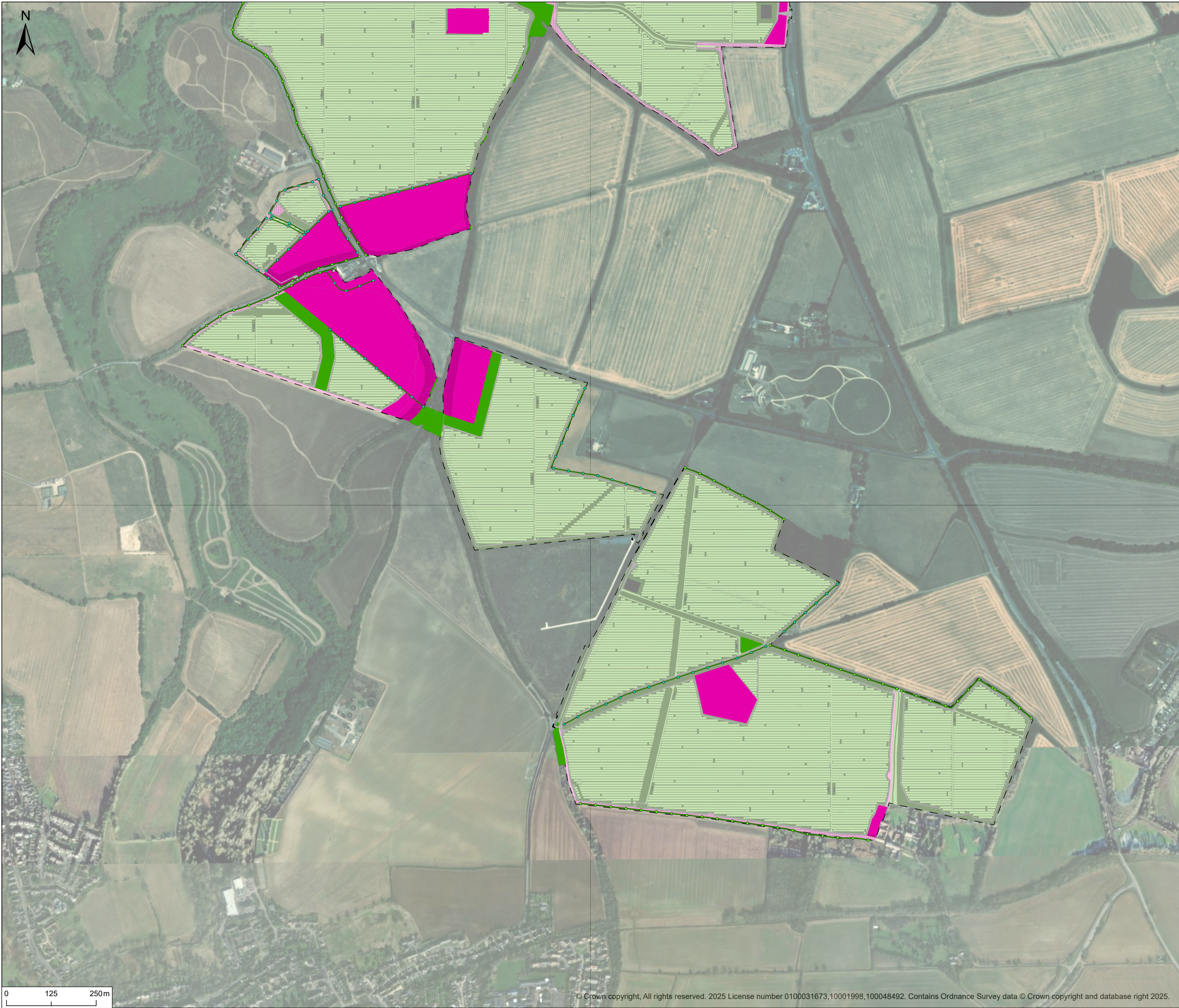
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Client	PVDP	
Project	Botley West Solar Farm	
Title	Nget Out - Post development habitats	
Status	Drawn By	PM/Checked By
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Project Number	Scale @ A3	Date Created
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  - Enhanced - Grassland - Modified grassland - Moderate
  - Grassland - Modified grassland - Poor
  - Grassland - Other neutral grassland - Good
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  - Lakes - Ponds (non-priority habitat) - Poor
  - Hedgerow created
  - Hedgerow enhanced

Rev	Description	By	CB	Date



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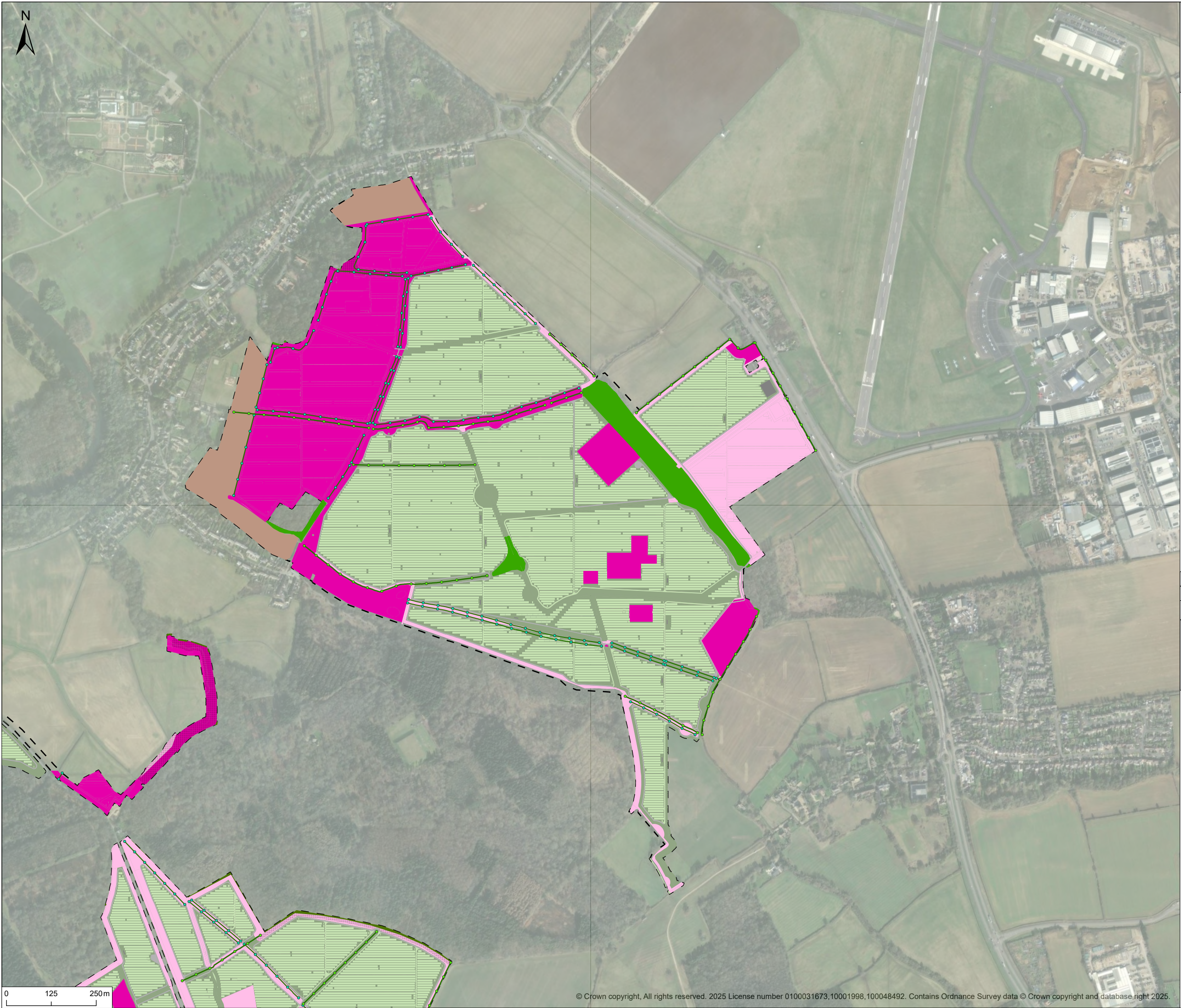


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Client	PVDP	
Project	Botley West Solar Farm	
Title	Nget Out - Post development habitats	
Status	Drawn By	PM/Checked By
FINAL	AC	BJ
Project Number	Scale @ A3	Date Created
NP12426	1:10,000	SEP 2025
Figure Number	Rev	
1.2	01	

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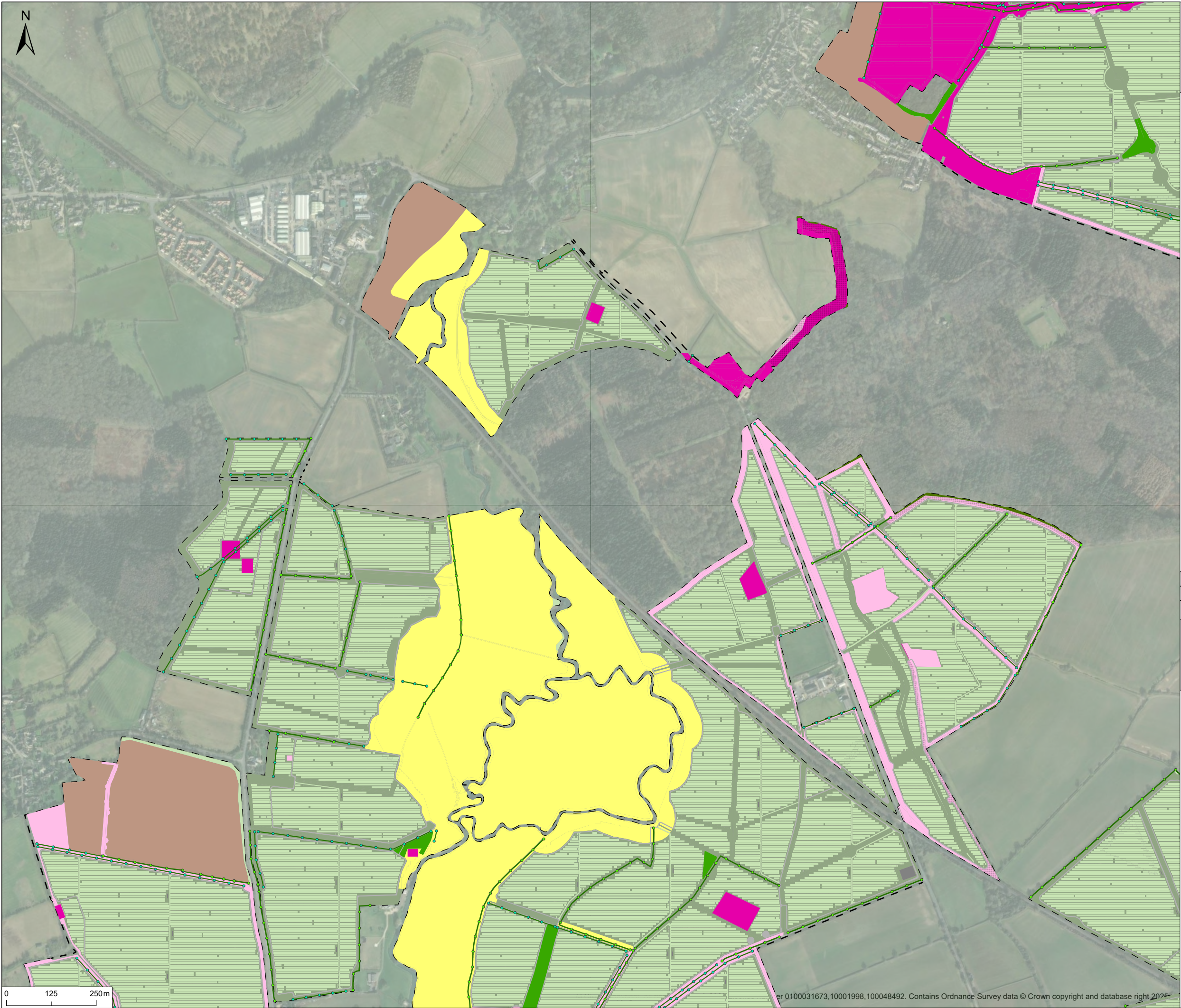


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Figure Number	Rev	
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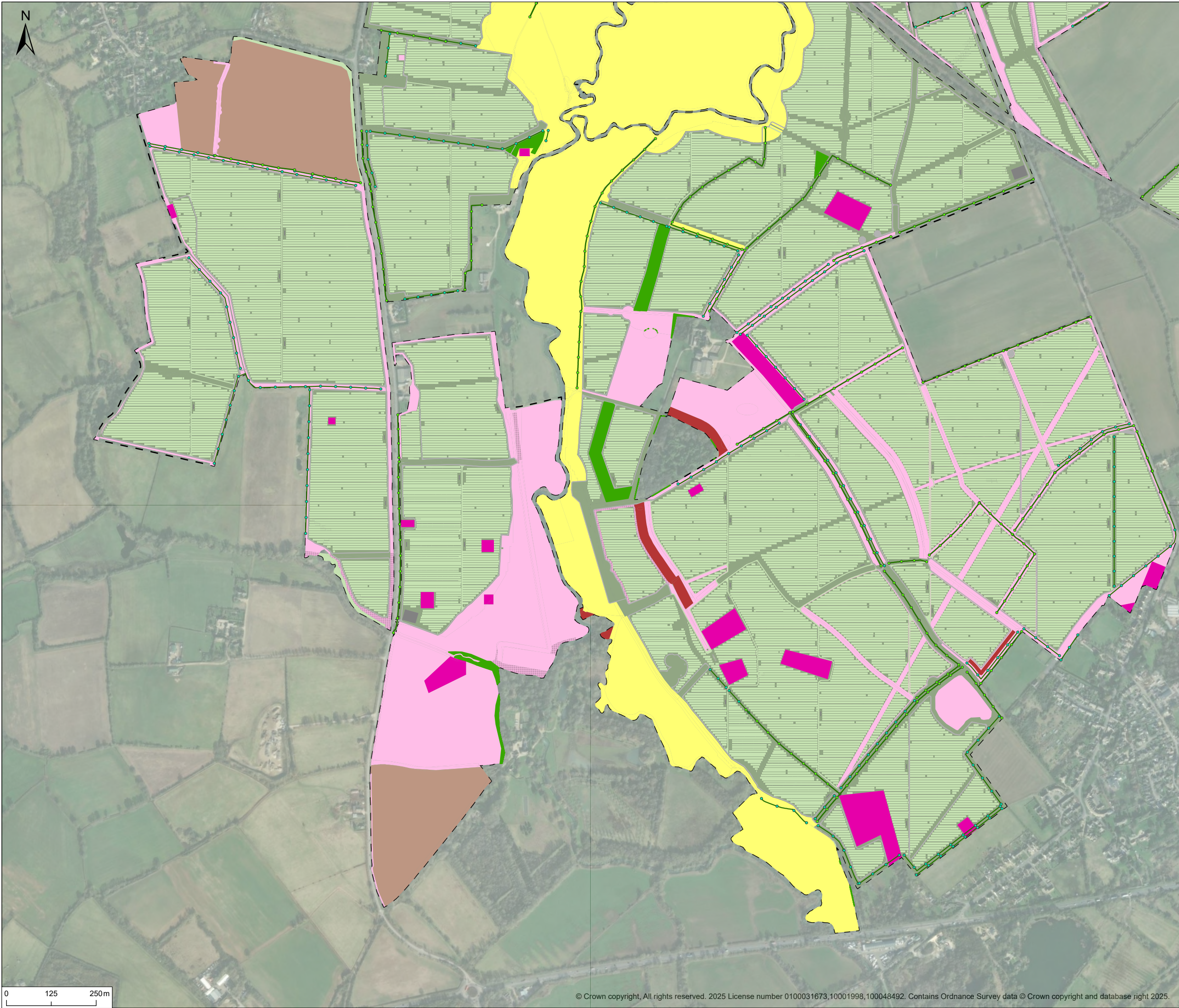
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Figure Number	Rev			
1.4	01			

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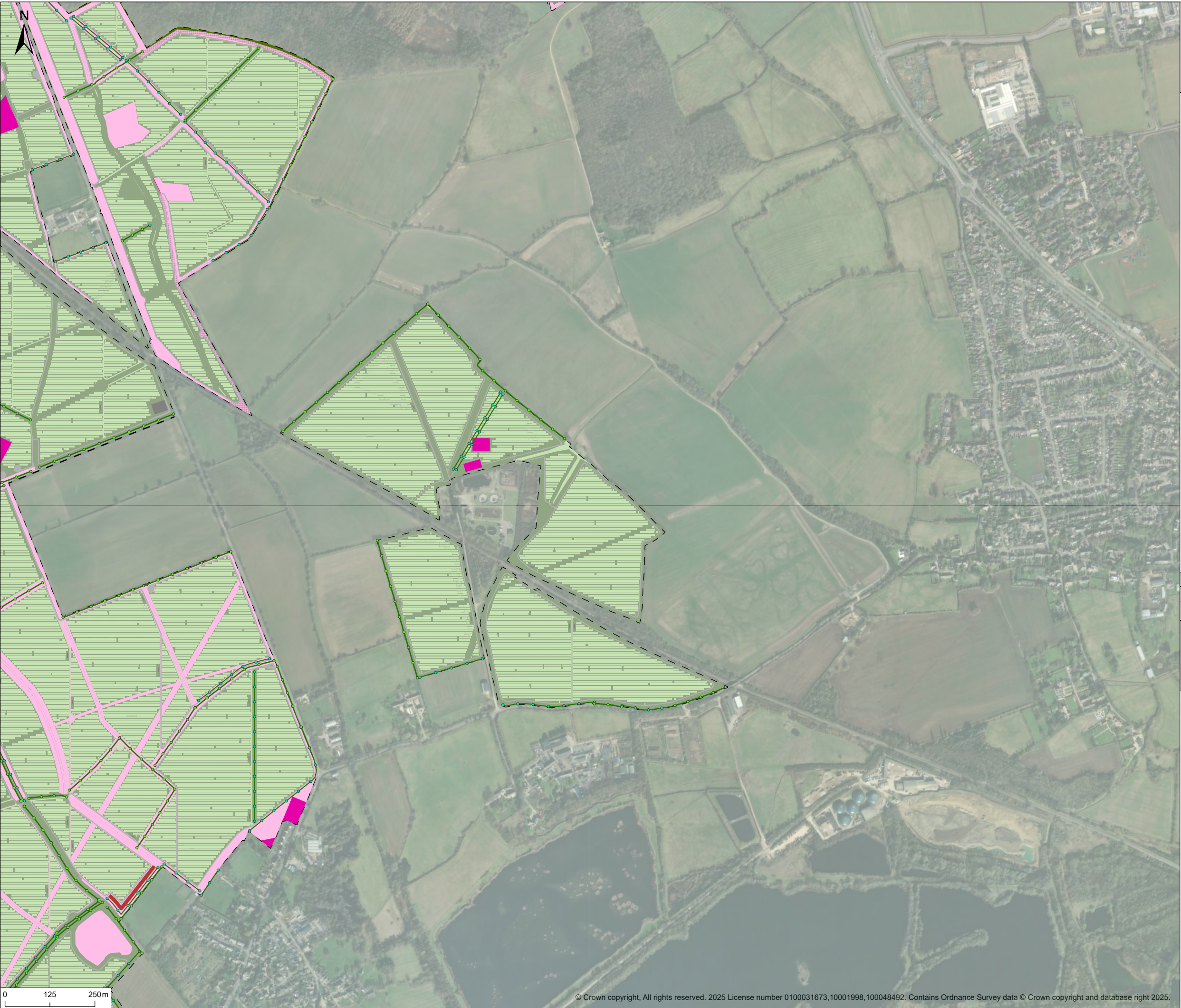
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Figure Number	Rev		
1.5	01		

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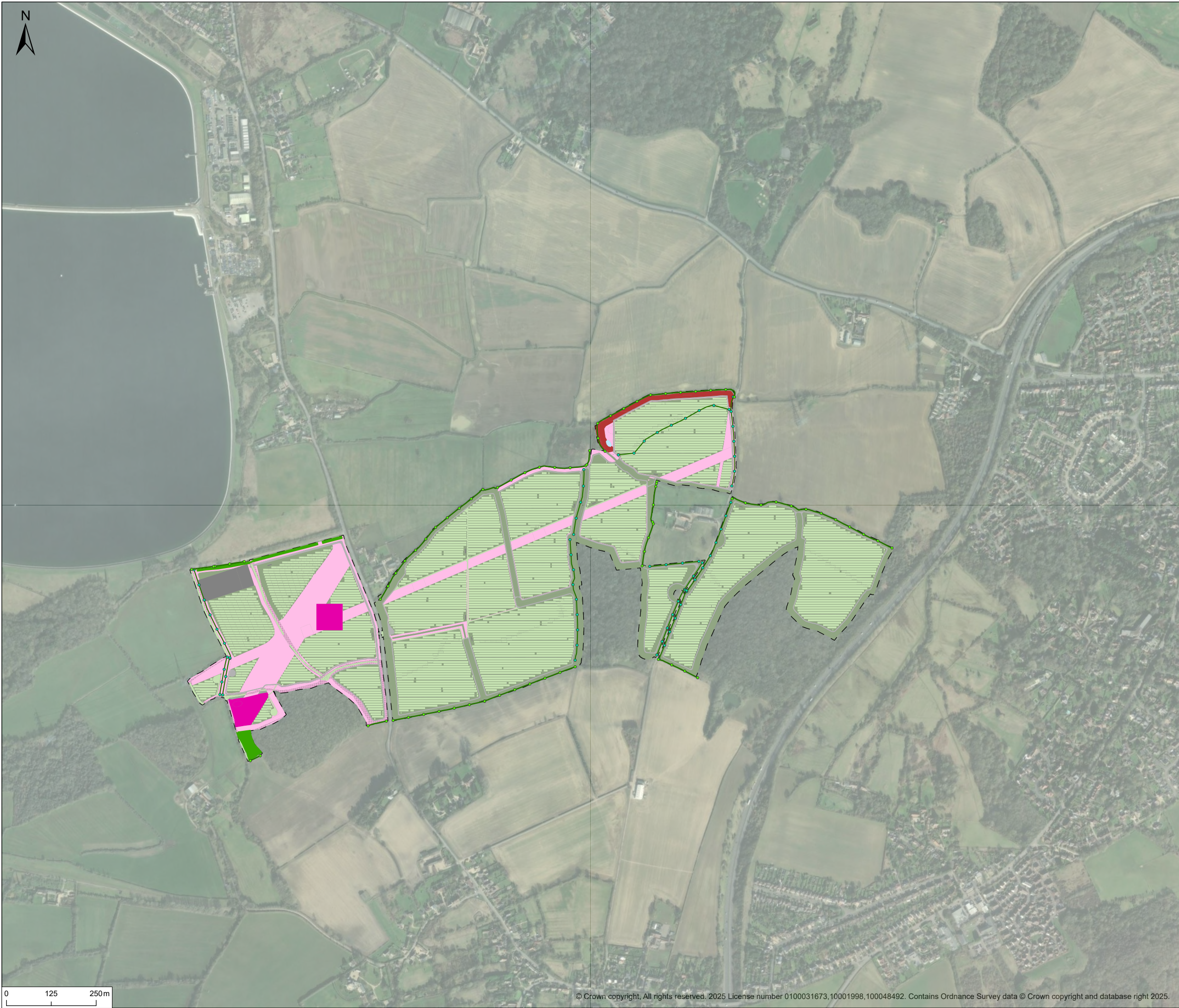
Rev	Description	By	CB	Date
				

Client	PVDP		
Project	Botley West Solar Farm		
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NP12426	1:10,000	SEP 2025	
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**Legend**

BNG study area

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Grassland - Modified grassland - Poor

Grassland - Other neutral grassland - Good

Enhanced - Grassland - Other neutral grassland - Good

Grassland - Other neutral grassland - Moderate

Enhanced - Grassland - Other neutral grassland - Moderate

Urban - Allotments - Moderate

Heathland and shrub - Mixed scrub - Moderate

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Lakes - Ponds (non-priority habitat) - Poor

Hedgerow created

Hedgerow enhanced

Rev	Description	By	CB	Date

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Client      **PVDP**

Project     **Botley West Solar Farm**

Title        **Nget Out -  
Post development habitats**

Status  
**FINAL**

Project Number  
**NP12426**

Figure Number  
**1.7**

Drawn By  
**AC**

Scale @ A3  
**1:10,000**

PM/Checked By  
**BJ**

Date Created  
**SEP 2025**

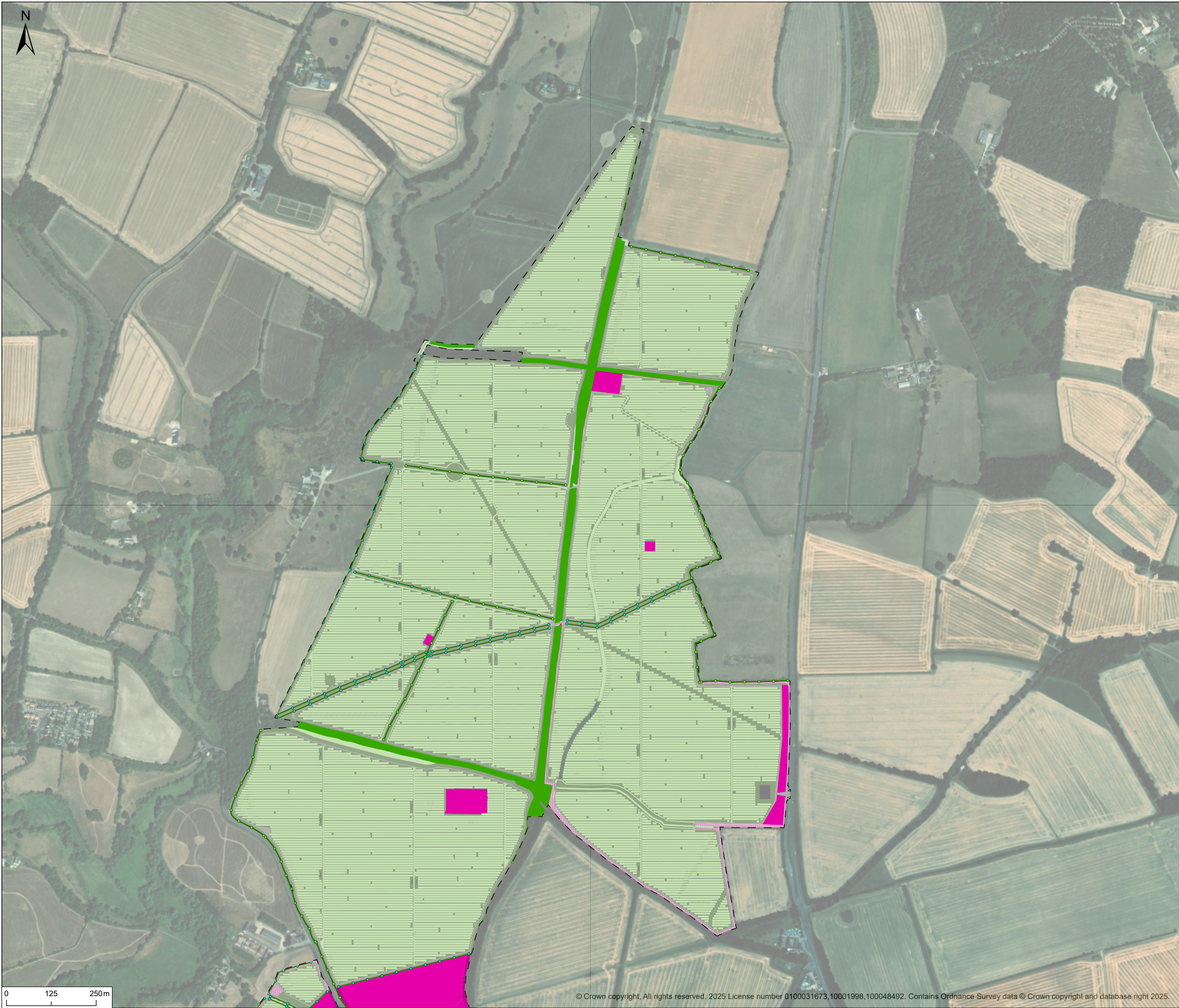
Rev  
**01**

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Rev	Description	By	CB	Date



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Client PVDP

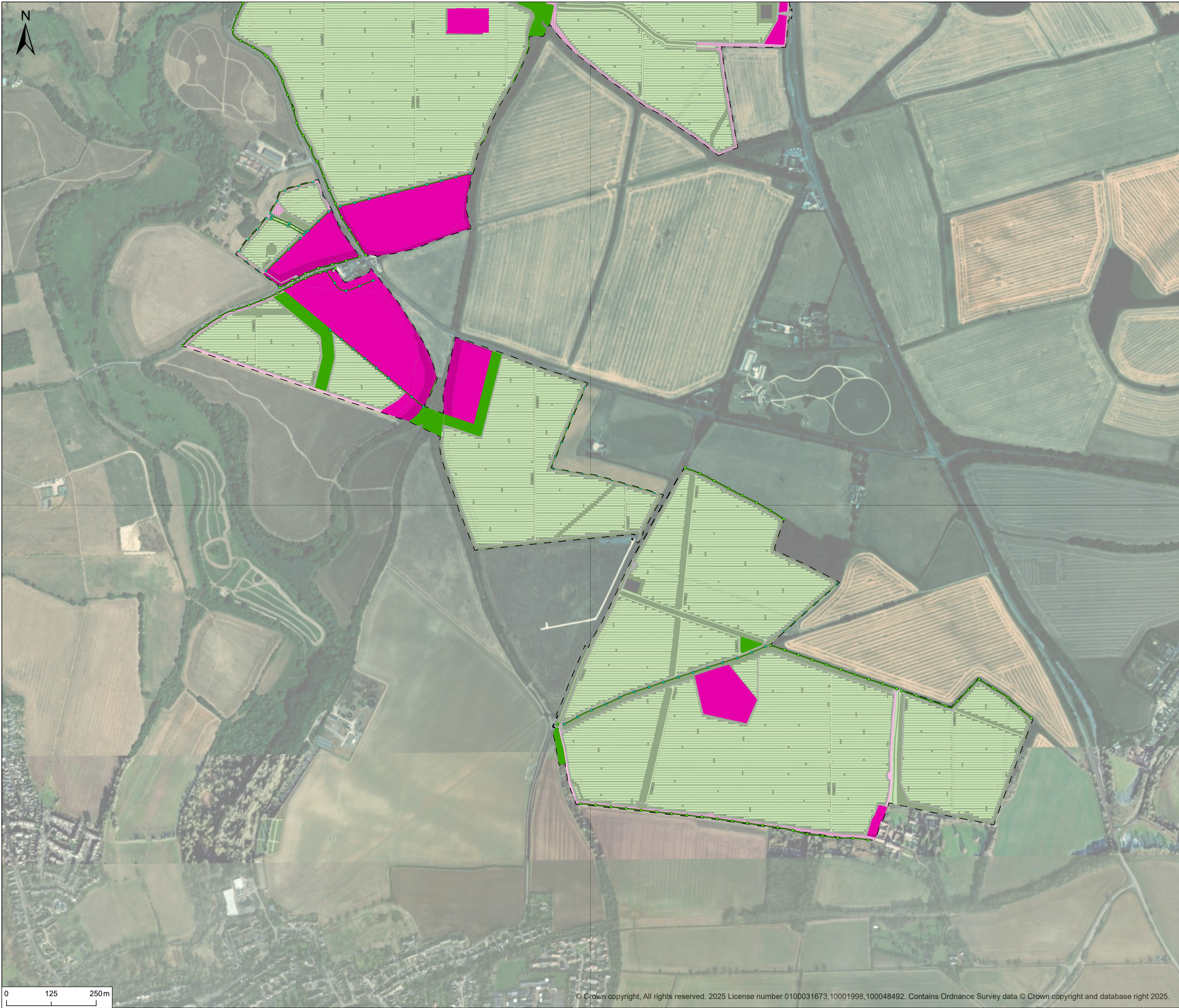
Project Botley West Solar Farm

Title Nget In - Post development habitats

Status <b>FINAL</b>	Drawn By <b>AC</b>	PM/Checked By <b>BJ</b>
Project Number <b>NP12426</b>	Scale @ A3 <b>1:10,000</b>	Date Created <b>SEP 2025</b>
Figure Number <b>1.1</b>		Rev <b>01</b>

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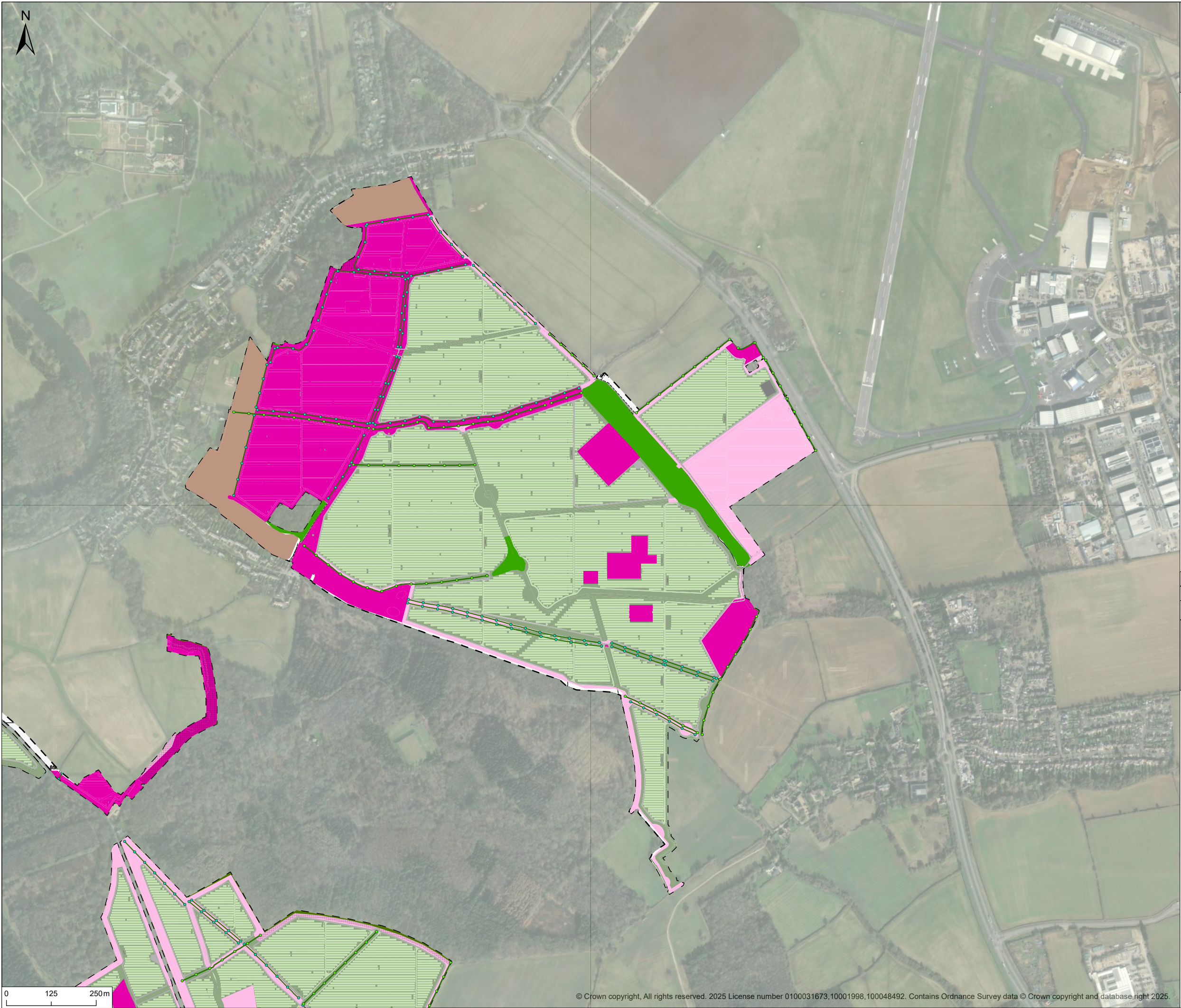
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Client	PVDP		
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FINAL	AC	BJ	
Project Number	Scale @ A3	Date Created	
NP12426	1:10,000	SEP 2025	
Figure Number		Rev	
1.2		01	

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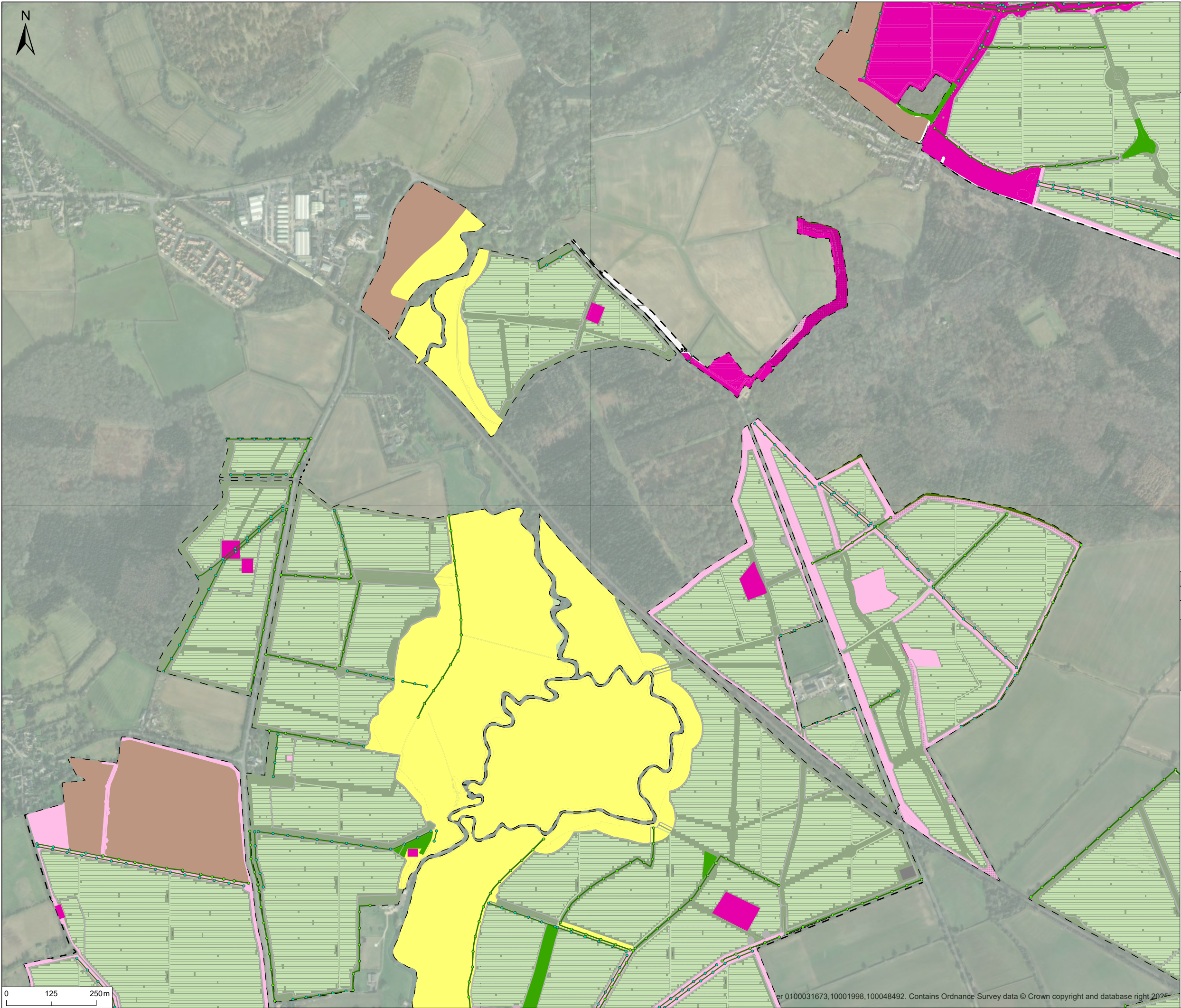


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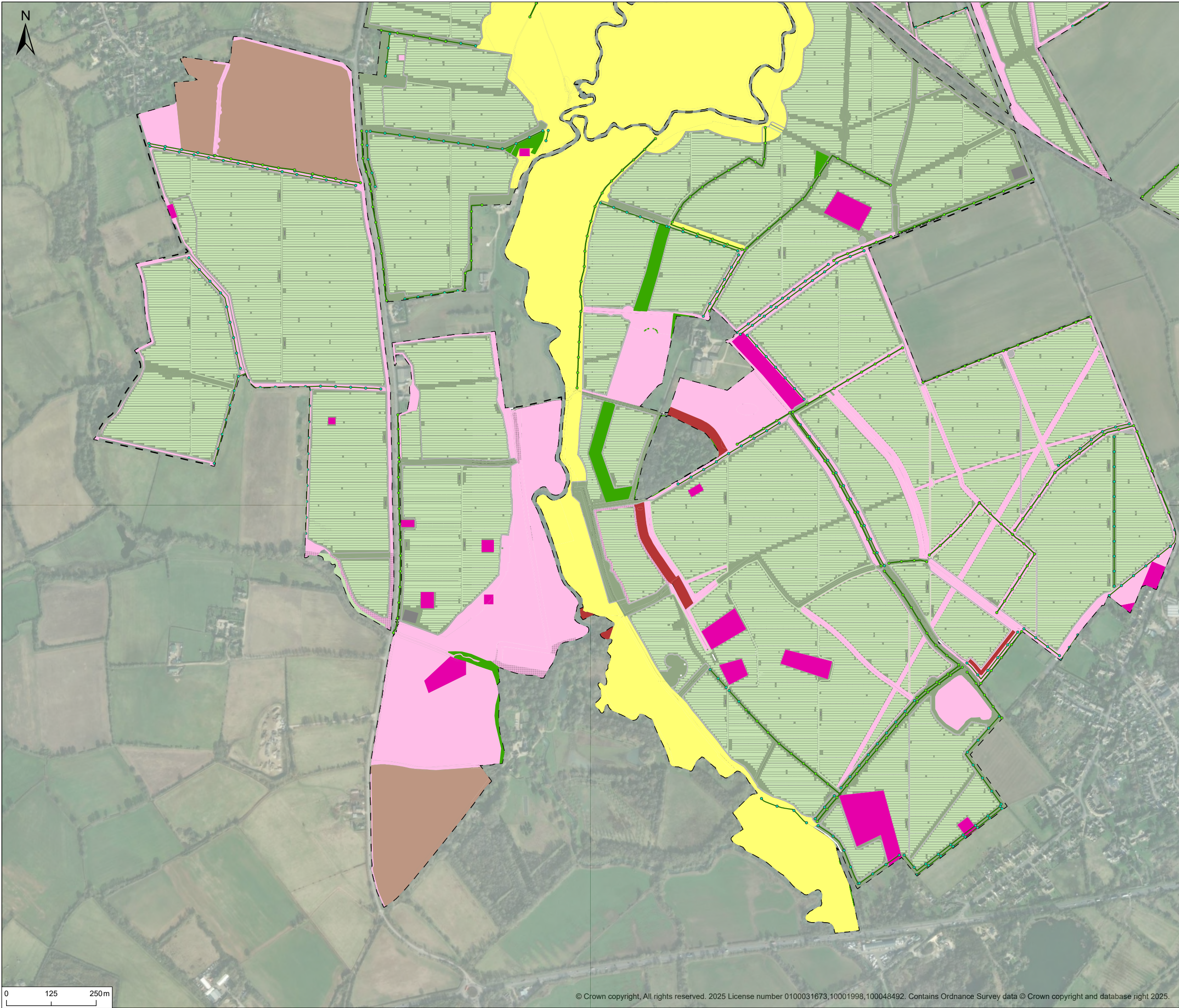


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Client      PVDP

Project     Botley West Solar Farm

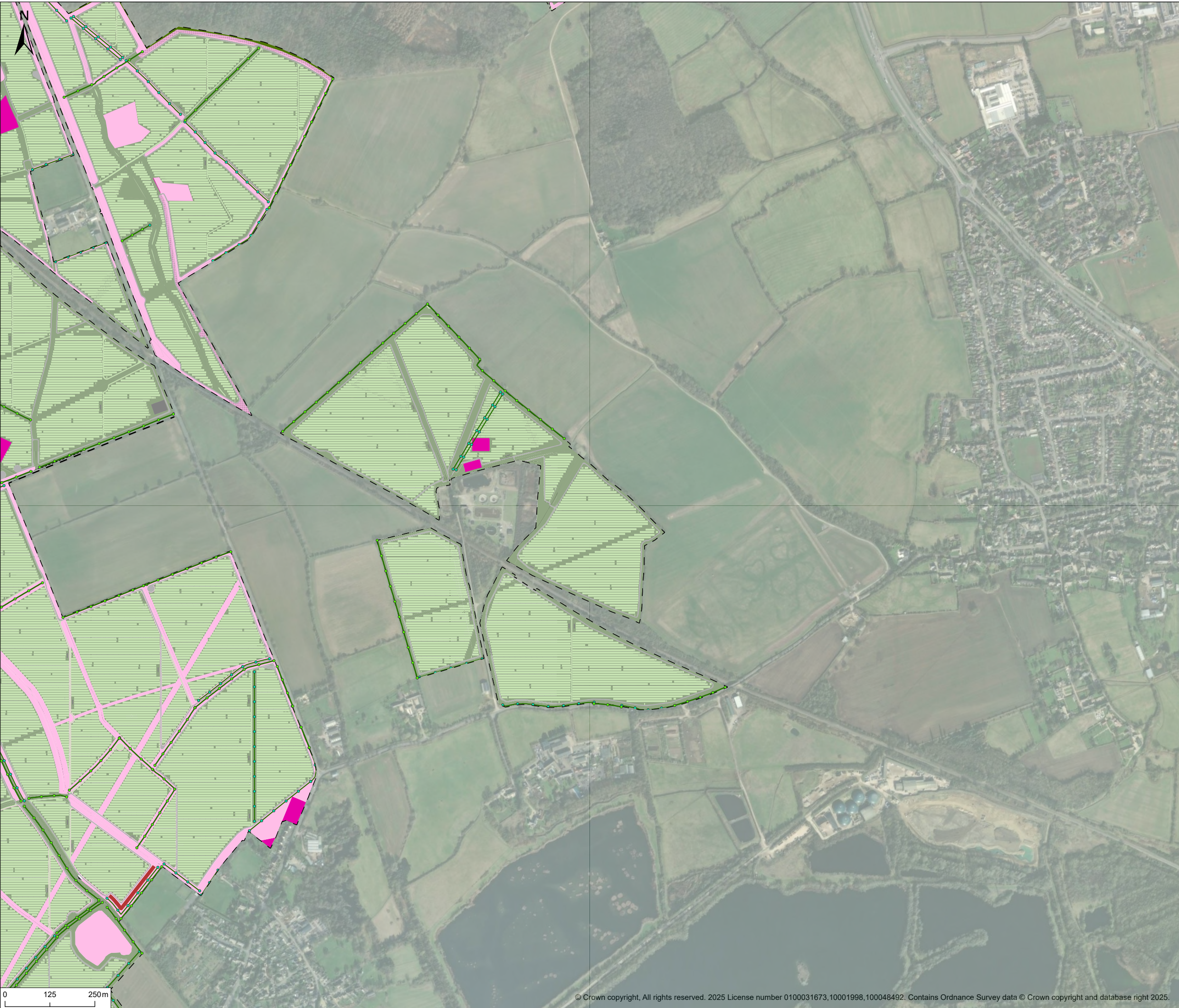
Title        Nget In - Post development habitats

Status <b>FINAL</b>	Drawn By <b>AC</b>	PM/Checked By <b>BJ</b>
Project Number <b>NP12426</b>	Scale @ A3 <b>1:10,000</b>	Date Created <b>SEP 2025</b>
Figure Number <b>1.5</b>	Rev <b>01</b>	

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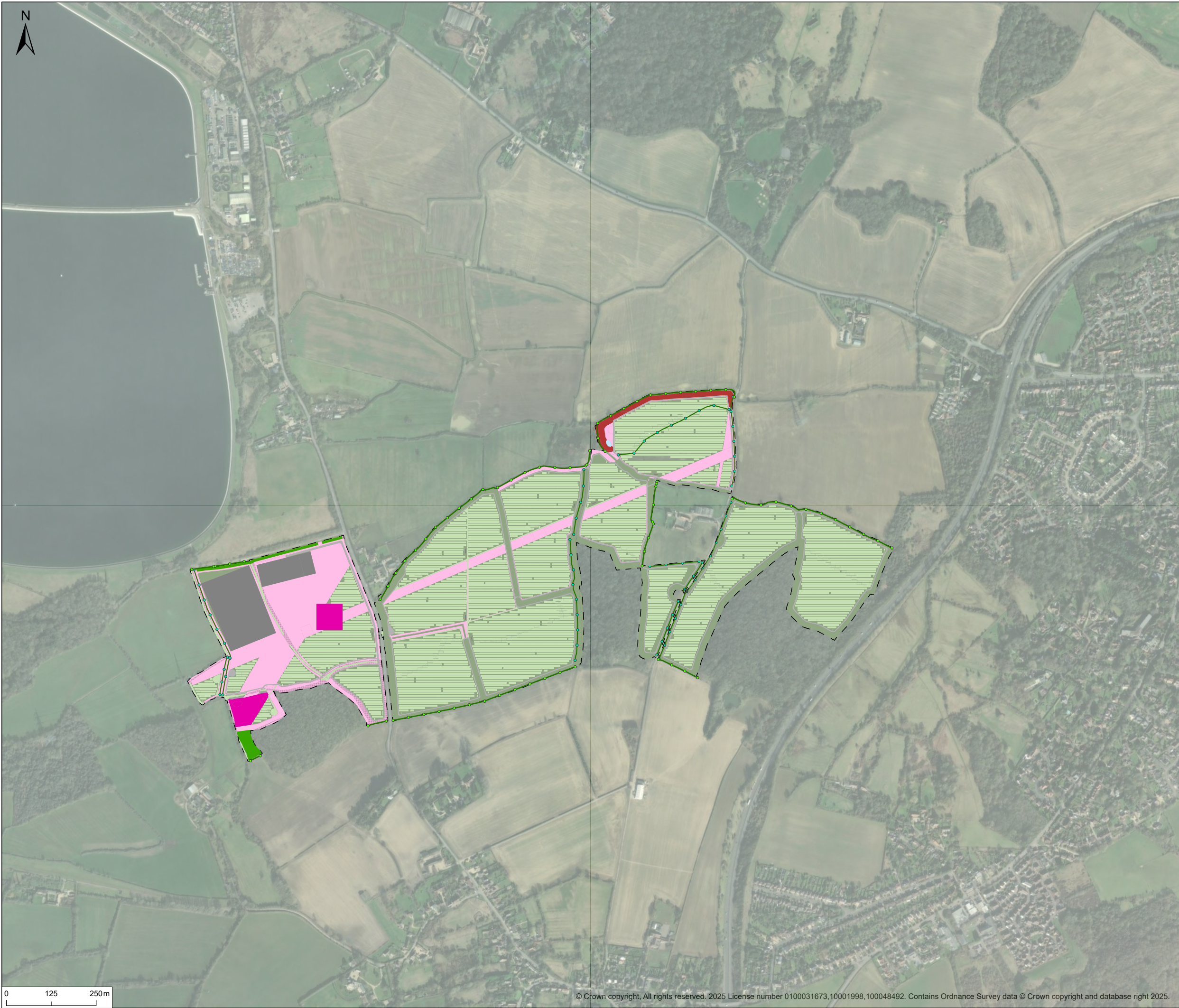
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**Legend**

BNG study area

Grassland - Floodplain wetland mosaic and CFGM - Good

Grassland - Modified grassland - Moderate

Enhanced - Grassland - Modified grassland - Moderate

Grassland - Modified grassland - Poor

Grassland - Other neutral grassland - Good

Enhanced - Grassland - Other neutral grassland - Good

Grassland - Other neutral grassland - Moderate

Enhanced - Grassland - Other neutral grassland - Moderate

Urban - Allotments - Moderate

Heathland and shrub - Mixed scrub - Moderate

Urban - Artificial unvegetated, unsealed surface - N/A - Other

Urban - Developed land; sealed surface - Condition Assessment N/A

Woodland and forest - Other woodland; broadleaved - Moderate

Woodland and forest - Lowland mixed deciduous woodland - Moderate

Woodland and forest - Other coniferous woodland - Moderate

Lakes - Ponds (non-priority habitat) - Poor

Hedgerow created

Hedgerow enhanced

Rev	Description	By	CB	Date

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Client      PVDP

Project      Botley West Solar Farm

Title      Nget In - Post development habitats

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AC

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**Appendix 1 – Ditch Condition Assessments**

# DITCH CONDITION ASSESSMENT

794-PLN-NPI-00019 Botley West Solar Farm - Biodiversity Net Gain  
Assessment

794-PLN-NPI-00019  
Botley West Solar Farm  
A  
September 2025

## REPORT

### Document status

Version	Purpose of document	Authored by	Reviewed by	Approved by	Review date
A	Draft for comment	LC	KS	KS	08/09/2025

### Approval for issue

KERRY SHAKESPEARE

08/09/2025

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### Prepared for:

**SolarFive Ltd**

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APPENDIX A Pre-development ditch’s condition Assessments

# 1 INTRODUCTION

## 1.1 Purpose and scope of this report

- 1.1.1 RPS was commissioned by SolarFive Ltd to undertake a Biodiversity Net Gain (BNG) assessment of the ditches throughout the Botley West Solar Farm site (the 'site').
- 1.1.2 The BNG assessment is in support of a planning application to include the construction of a series of solar panels, to create a solar farm.
- 1.1.3 RPS undertook the UK Habitat (UKHab) Survey in relation to the ditches in July 2025.
- 1.1.4 This report addresses Biodiversity Net Gain (BNG) for the project and provides assessment of the baseline (pre-development) ecological value of the ditches within the site.

## 1.2 Biodiversity Net Gain and Methods

- 1.2.1 Biodiversity Net Gain is defined in Baker *et al* (2019)<sup>1</sup> as:  
*"Development that leaves biodiversity in a better state than before"*
- 1.2.2 The requirement for developments to seek to achieve BNG arises from the National Planning Policy Framework (NPPF), which states in Para. 185 that:  
*"Planning policies and decisions should contribute to and enhance the natural and local environment by ... minimising impacts on and providing net gains for biodiversity."*
- 1.2.3 There is no single set method for quantifying the assessment of BNG, but one method is the use of biodiversity calculators to assess the biodiversity value of habitats pre- and post-development based on habitat type, distinctiveness and condition.
- 1.2.4 A biodiversity index is derived for the baseline and for the proposed development, and BNG is considered to be achieved where an increase in value is delivered (on or offsite), and where habitats of a higher value are not replaced exclusively with habitats of a lower value.
- 1.2.5 The Statutory BNG Metric tool has been used for the assessment in this report. The tool and associated documents were downloaded from [Statutory biodiversity metric tools and guides - GOV.UK](#).

### Condition Assessment

- 1.2.6 Using the data collected from the ditch assessment surveys, a habitat condition assessment was undertaken for the ditches present within the project boundary. The appropriate 'condition sheet' was first selected via the Table TS1-1a in the technical supplement provided in the Statutory Metric Condition Assessment Sheets .
- 1.2.7 The condition sheet was then used to assess the individual habitats by comparing how they scored against pre-set condition assessment criteria. The criteria describe what components are needed for the habitat to be of good, moderate or poor value.
- 1.2.8 Each habitat was scored the following:
  - 1 – Poor;

---

r, J., Hoskins, R. & Butterworth, T. (2019). *Biodiversity Net Gain – good practice principles for development*. Ciria, London.

- 2 – Moderate; and
- 3 – Good.

- 1.2.9 The calculator allows these to be further divided and provides categories for fairly good and fairly poor. The ecologist undertaking the assessment used their professional judgement, considering the habitat condition assessment criteria, to decide when it was suitable to use these categories.
- 1.2.10 It should be noted that some habitats with low or no ecological value are given a fixed score and do not need assessing.



## 2 PRE-DEVELOPMENT HABITATS

### 2.1 UK Habitat Survey

- 2.1.1 The UK Habitat Survey of the site was undertaken in July 2025. The survey was conducted by RPS Ecologist Lucinda Clark, and Barefoot Ecologist Nikki Hulse.
- 2.1.2 The ditches across the Botley West site are located within the borders of arable fields. Most of the ditches are located within hedgerows.
- 2.1.3 The ditches are mapped in **Figure 1**. Full pre-development watercourse assessments are provided in Appendix A.

#### Results: watercourse

##### Ditch – 50

- 2.1.4 Seventy-two ditches are present within the site redline boundary.
- 2.1.5 Seventy of the ditches are classified as a ditch of poor condition, and two of the ditches are classified as a ditch of moderate condition.
- 2.1.6 A ditch classified as a ditch of poor condition, when it passes 5 or fewer criteria as listed below. A ditch is classified as a ditch of moderate condition when it passes 6 or 7 of the criteria as listed below.
  - A. The ditch is of good water quality, with clear water (low turbidity) indicating no obvious signs of pollution.
  - B. A range of emergent, submerged and floating-leaved plants are present. As a guide >10 species of emergent, floating or submerged plants present in a 20 m ditch length.
  - C. There is less than 10% cover of filamentous algae and or duckweed *Lemna spp.* (these are signs of eutrophication).
  - D. A fringe of aquatic marginal vegetation is present along more than 75% of the ditch.
  - E. Physical damage is evident along less than 5% of the ditch, with examples of damage including: excessive poaching, damage from machinery use or storage, or any other damaging management activities.
  - F. Sufficient water levels are maintained - as a guide a minimum summer depth of approximately 50 cm in minor ditches and 1 m in main drains.
  - G. Less than 10% of the ditch is heavily shaded.
  - H. There is an absence of non-native plant and animal species.

##### Areas 1 and 2

- 2.1.7 No wet ditches were found in Areas 1 or 2.

##### Areas 3 and 4

- 2.1.8 No wet ditches were found in Area 3.

- 2.1.9 Area 4 featured 2 wet ditches, both of which are classified as ditches of poor condition. Ditch 4.2 did not present good water quality, where ditch 4.1 did. Neither ditch presented substantial marginal aquatic vegetation, sufficient water levels or a low amount of shading.
- 2.1.10 This area of Botley West is set in arable farmland and presents a flat topography. The area is heavily accessed by dog walkers.

### **Areas 5 and 6**

- 2.1.11 Ten wet ditches are found across areas 5 and 6, including one ditch the stretches across the two. All of these ditches are classified as ditches of poor condition.
- 2.1.12 None of the ditches are of good water quality, or feature a range of emergent, floating or submerged plants present. All of the ditches have less than 10% cover of aquatic algae or duckweed, aside from ditch 6.5. None of the ditches feature any physical damage, however they are all heavily shaded as they are located within hedgerows.

### **Areas 7 and 8**

- 2.1.13 Four wet ditches are found across areas 7 and 8, with all of these ditches being classified as ditches of poor condition.
- 2.1.14 These ditches do not feature sufficient water depth, and no/little relevant vegetation is present. The ditches are not of good water quality. These ditches are not heavily shaded, aside from ditch 7.4.

### **Area 9**

- 2.1.15 Six wet ditches are found across area 9. All of these ditches are classified as ditches of poor condition.
- 2.1.16 None of the ditches feature good water quality, and none of the ditches feature a range of emergent vegetation, aside from ditch 9.2. Ditch 9.2 is also the only ditch that is not heavily shaded.

### **Area 10 and 12**

- 2.1.17 Six wet ditches are found across area 9. Five of these ditches are classified as ditches of poor condition, and one ditch is classified as moderate condition.
- 2.1.18 The moderate condition ditch is ditch 10.6. Ditch 10.6 passes all of the assessment criteria, aside from the condition relating to the water quality.

### **Area 11**

- 2.1.19 Eight wet ditches are found across area 11, and all of these ditches are classified as ditches of poor condition.

### **Area 13**

- 2.1.20 Five wet ditches are found across area 13, and all of these ditches are classified as ditches of poor condition.
- 2.1.21 Three of these ditches feature good water quality, whereas two do not. All ditches feature physical damage. Sufficient water levels are not maintained in any of the ditches, and they are all heavily shaded.

### Area 14

- 2.1.22 There are seven wet ditches found in area 14, and all of these ditches are classified as ditches of poor condition.
- 2.1.23 The ditches are not of good water quality and do not feature relevant vegetation. All of the ditches have been scored with the same results, aside from ditch 14.5, which is not heavily shaded, whereas all other ditches in area 14 are.

### Area 15

- 2.1.24 Five wet ditches are found across area 15. Four of these ditches are classified as ditches of poor condition, and one ditch is classified as moderate condition.
- 2.1.25 The moderate condition ditch is ditch 15.4. Ditch 15.4 passes all of the assessment criteria, aside from the condition relating to vegetation and shade covering, as the ditch is heavily shaded.

### Area 16

- 2.1.26 There are six wet ditches found in area 16, and all of these ditches are classified as ditches of poor condition.

### Denman's Farm

- 2.1.27 Seven wet ditches were found in Denman's Farm. None of these ditches have a sufficient water level, or appropriate relevant vegetation. Therefore, all of these ditches are classified as ditches of poor condition.

### 3 CONCLUSIONS / SUMMARY

- 3.1.1 Seventy-two ditches, measuring 32km, are found across the Botley West wider site. Seventy of these ditches are classified as ditches of poor condition, whereas two ditches are classified as ditches of moderate condition. The two moderate ditches are located in area 10/12 (ditch 10.6) and area 15 (ditch 15.4).
- 3.1.2 Considering all of the above, the pre-development score for the site, in relation to the ditches, is calculated to be **101.37 watercourse units**.
- 3.1.3 As part of the ongoing development of the scheme, the Biodiversity Gain Hierarchy has been followed as to ensure that biodiversity impacts are minimised as much as possible.
- 3.1.4 **Avoidance and minimisation:** Considering the majority of the high and medium distinctiveness habitats occurred within the proposed construction area, avoidance of these habitats is unfeasible. As such, trees and scrub North and South of the works have been avoided by the proposals while other areas will be wholly compensated for on-site.
- 3.1.5 **Mitigation:** In order to mitigate for the loss of the on-site trees, ditch, scrub, ruderals and grassland, an ecological zone is proposed along the eastern site boundary. The ecological zone will compensate for all high and medium distinctiveness habitat losses and afford for low distinctiveness habitat losses.

## REFERENCES

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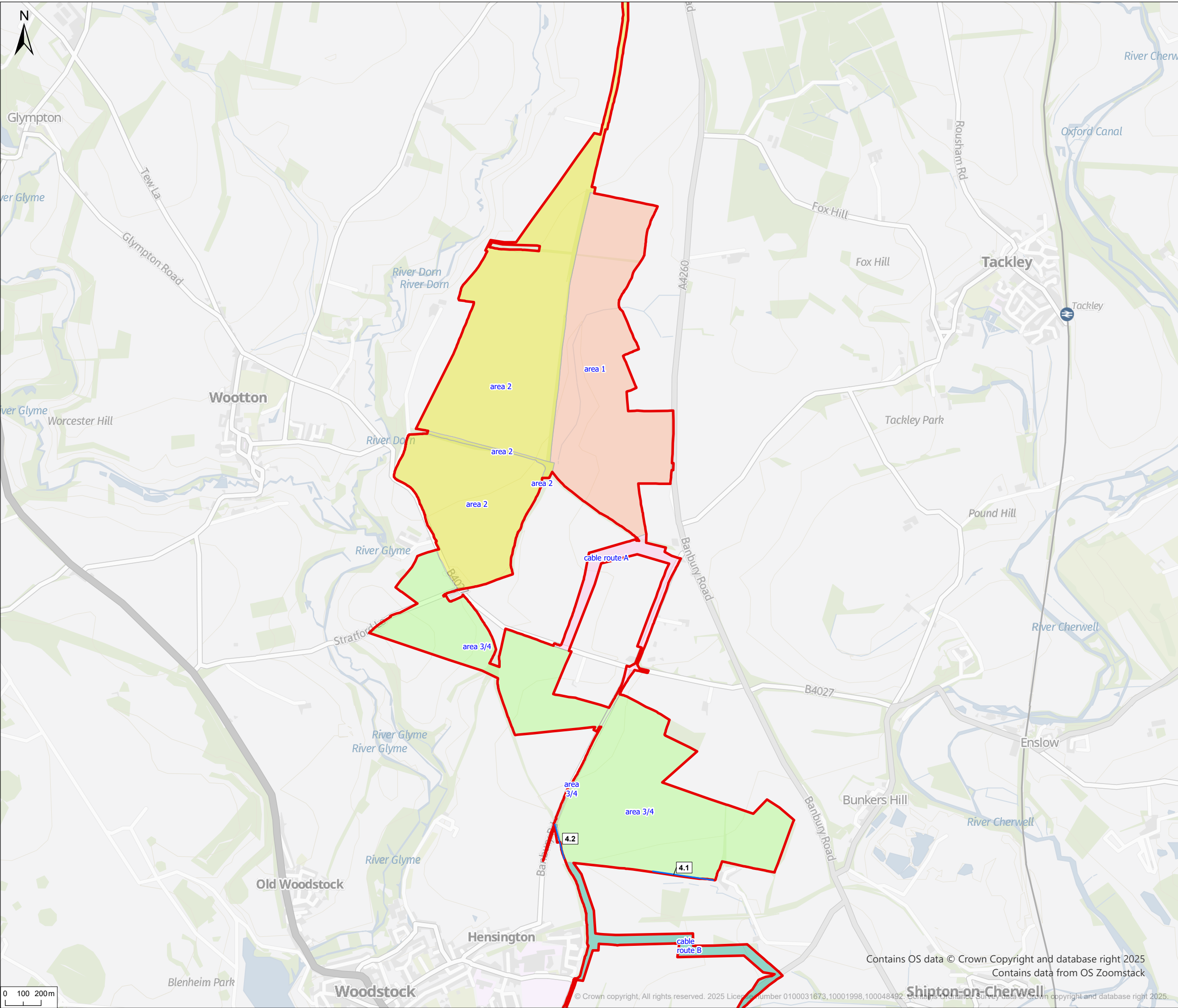
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RPS (2025). Preliminary Ecological Appraisal, RPS Abingdon.



FIGURES

**Figure 1 Ditches across the Botley West site.**



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**Legend**

Order Limits

**Ditch Condition Assessment Score (no. of ditches)**

Poor (2)

Area (refer to report)

Area 1

Area 2

Area 3/4

Cable route A

Cable route B

Rev	Description	By	CB	Date

Client

PVDP

Project

Botley West Solar Farm

Title

UKHab Ditch Condition Survey 2025

Status

Final

Drawn By

LP

PM/Checked By

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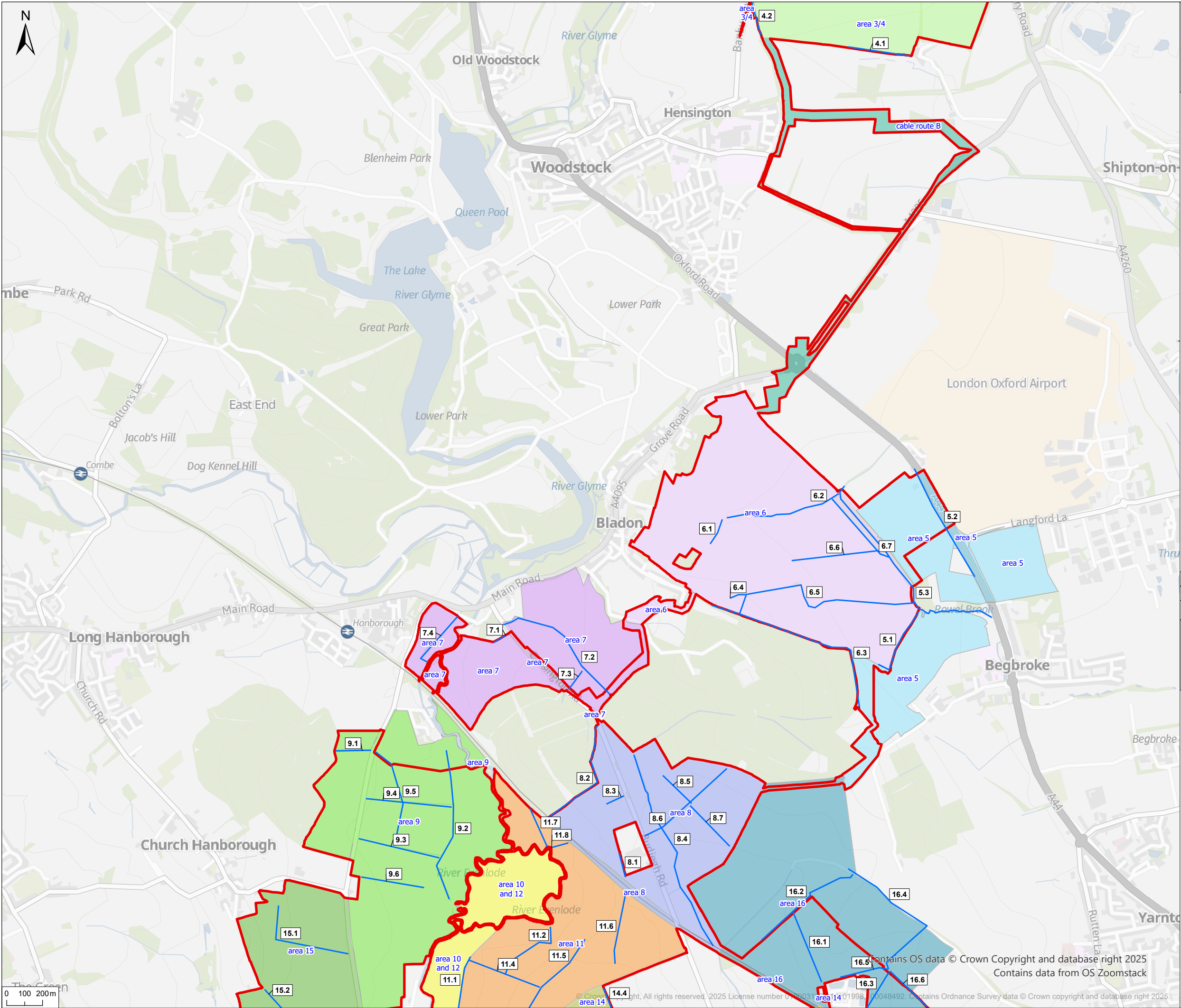
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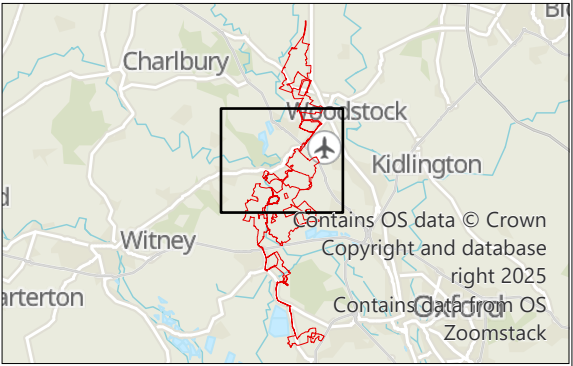


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- Legend**
- Order Limits
  - Ditch Condition Assessment Score (no. of ditches)**
  - Poor (45)
  - Area (refer to report)
  - Area 3/4
  - Area 5
  - Area 6
  - Area 7
  - Area 8
  - Area 9
  - Area 10 and 12
  - Area 11
  - Area 14
  - Area 15
  - Area 16
  - Cable route B



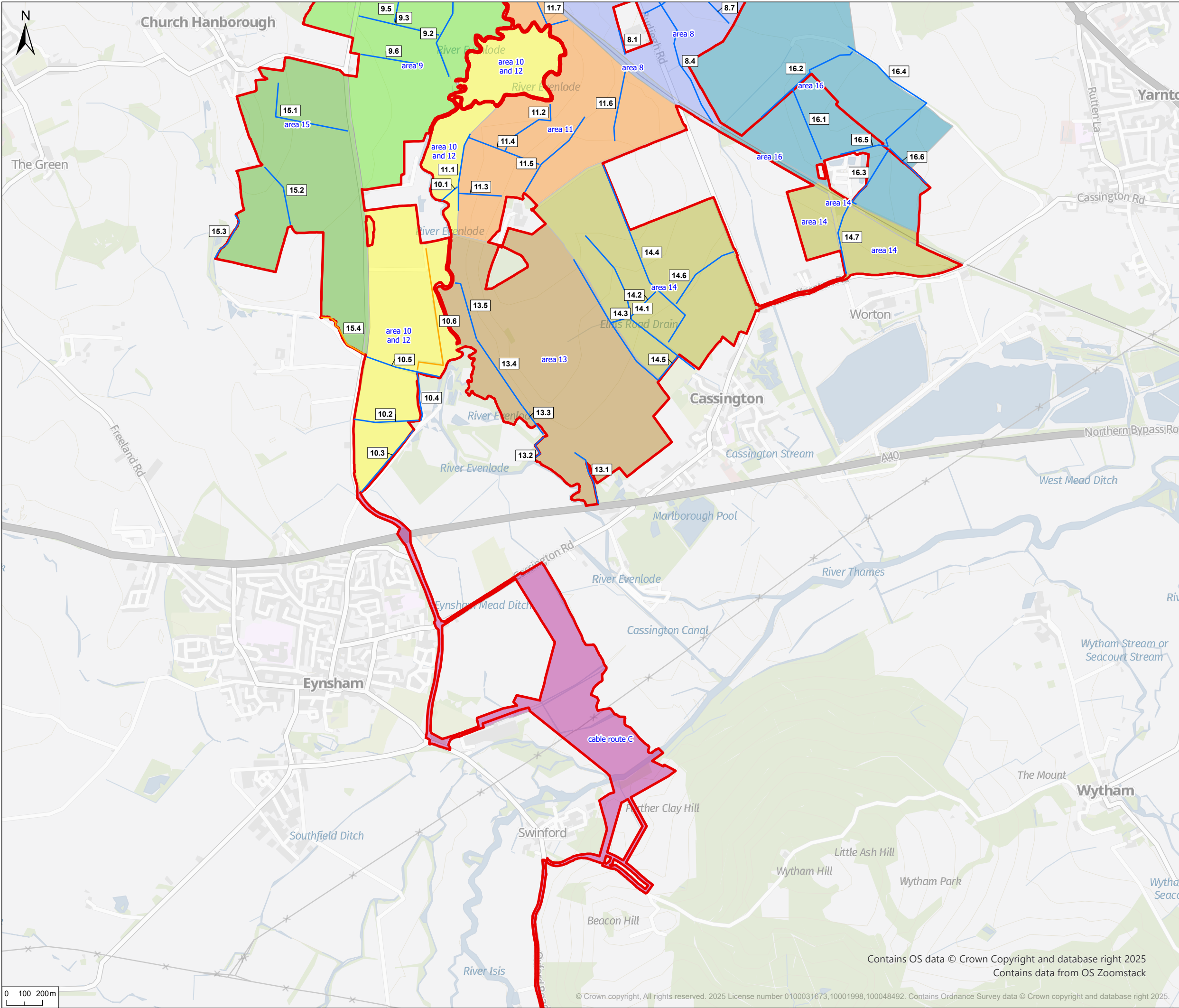
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Client	PVDP		
Project	Botley West Solar Farm		
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**Legend**

Order Limits

**Ditch Condition Assessment Score (no. of ditches)**

Moderate (2)

Poor (42)

Area (refer to report)

Area 8

Area 9

Area 10 and 12

Area 11

Area 13

Area 14

Area 15

Area 16

Cable route C

Rev	Description	By	CB	Date

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Client    PVDP

Project    Botley West Solar Farm

Title    UKHab Ditch Condition Survey 2025

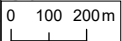
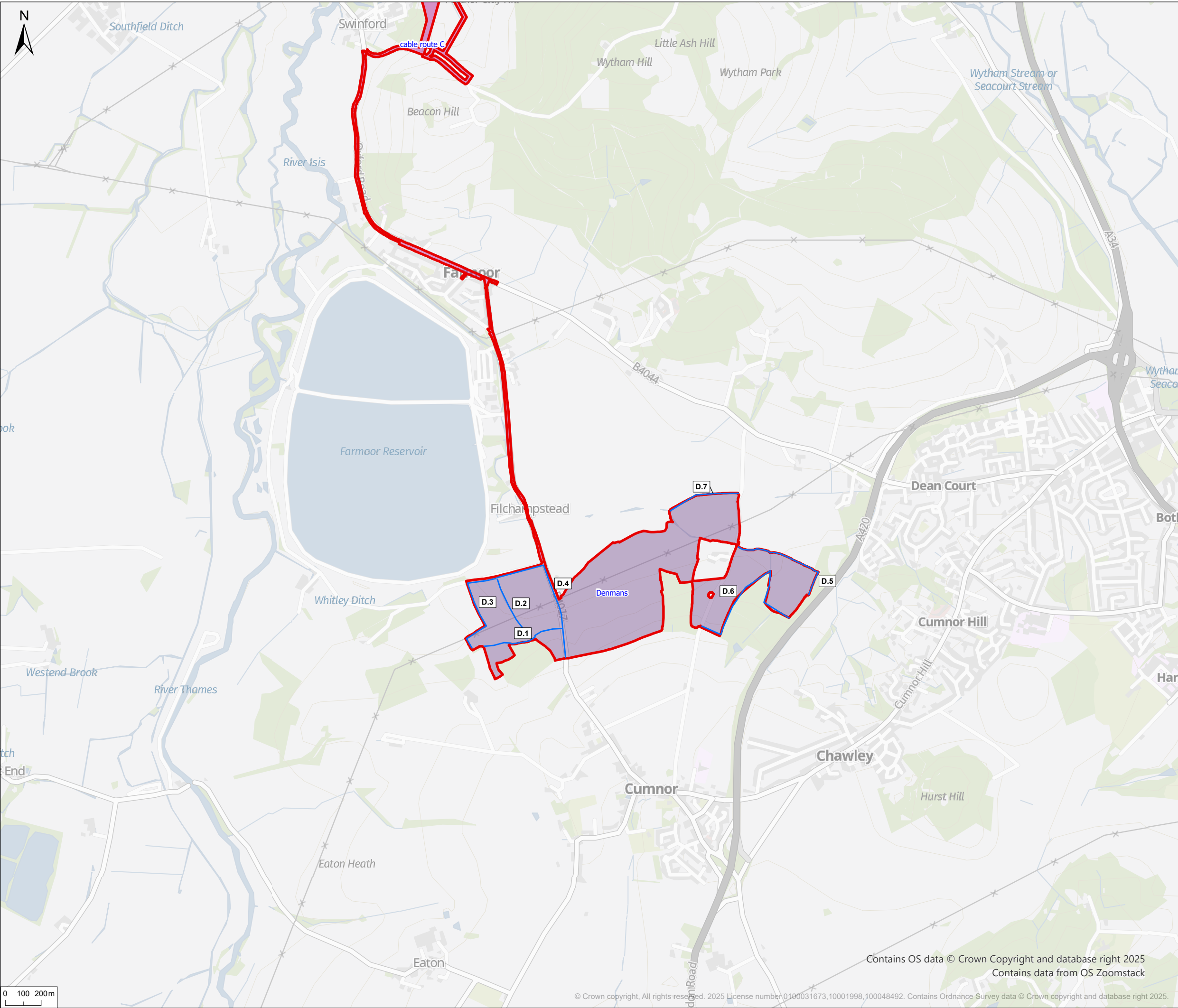
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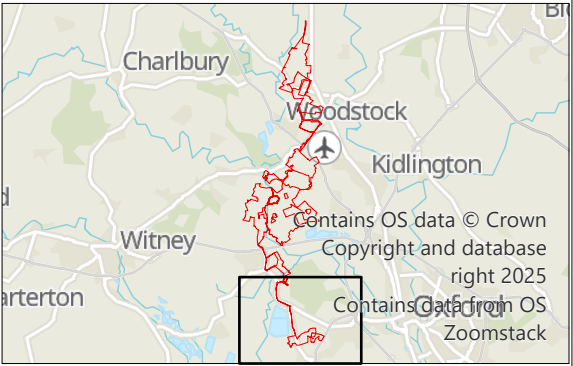
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- Legend**
- Order Limits
  - Ditch Condition Assessment Score (no. of ditches)**
    - Poor (7)
  - Area (refer to report)**
    - Denmans
    - Cable route C




Rev	Description	By	CB	Date



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Title	UKHab Ditch Condition Survey 2025		
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## Appendix A Pre-development ditch's condition Assessments

**Apx Table 1 ditch condition assessment**

No.	Criterion	Criteria Met? (Yes/ No)
A	The ditch is of good water quality, with clear water (low turbidity) indicating no obvious signs of pollution.	
B	A range of emergent, submerged and floating-leaved plants are present. As a guide >10 species of emergent, floating or submerged plants present in a 20 m ditch length.	
C	There is less than 10% cover of filamentous algae and or duckweed Lemna spp. (these are signs of eutrophication).	
D	A fringe of aquatic marginal vegetation is present along more than 75% of the ditch.	
E	Physical damage is evident along less than 5% of the ditch, with examples of damage including: excessive poaching, damage from machinery use or storage, or any other damaging management activities.	
F	Sufficient water levels are maintained - as a guide a minimum summer depth of approximately 50 cm in minor ditches and 1 m in main drains.	
G	Less than 10% of the ditch is heavily shaded.	
H	There is an absence of non-native plant and animal species.	
<b>Poor = Passes 5 or fewer criteria</b>		
<b>Moderate = Passes 6 or 7 criteria</b>		
<b>Good = Passes 8 criteria</b>		

The tables below display the ditch condition assessments for the Botley West ditches.

No wet ditches are found in areas 1, 2, or 3.

### Area 4

Ditch Number	A	B	C	D	E	F	G	H	Score
Ditch 4.1	Yes	Yes	Yes	No	Yes	No	No	Yes	Poor (5)
Ditch 4.2	No	No	Yes	No	Yes	No	No	Yes	Poor (3)

### Area 5

Ditch Number	A	B	C	D	E	F	G	H	Score
Ditch 5.1	No	No	Yes	No	Yes	No	No	Yes	Poor (3)
Ditch 5.2	No	No	Yes	No	Yes	No	No	Yes	Poor (3)
Ditch 5.3	No	No	Yes	No	Yes	No	No	Yes	Poor (3)

## Area 6

Ditch Number	A	B	C	D	E	F	G	H	Score
Ditch 6.1	No	No	Yes	No	Yes	No	No	Yes	Poor (3)
Ditch 6.2	No	No	Yes	No	Yes	No	No	Yes	Poor (3)
Ditch 6.3	No	No	No	No	Yes	No	No	Yes	Poor (2)
Ditch 6.4	No	No	Yes	No	Yes	No	No	Yes	Poor (3)
Ditch 6.5	No	No	Yes	No	Yes	No	No	Yes	Poor (3)
Ditch 6.6	No	No	Yes	No	Yes	No	No	Yes	Poor (3)
Ditch 6.7	No	No	Yes	No	Yes	No	No	Yes	Poor (3)

## Area 7

Ditch Number	A	B	C	D	E	F	G	H	Score
Ditch 7.1	No	No	Yes	No	Yes	No	Yes	Yes	Poor (4)
Ditch 7.2	No	No	Yes	No	Yes	No	Yes	Yes	Poor (4)
Ditch 7.3	No	No	Yes	No	Yes	No	Yes	Yes	Poor (4)
Ditch 7.4	No	No	Yes	No	No	No	No	Yes	Poor (2)

## Area 8

Ditch Number	A	B	C	D	E	F	G	H	Score
Ditch 8.1	No	No	Yes	No	Yes	No	No	No	Poor (2)
Ditch 8.2	No	No	Yes	No	Yes	No	No	No	Poor (2)
Ditch 8.3	No	No	Yes	No	Yes	No	Yes	Yes	Poor (4)
Ditch 8.4	Yes	Yes	Yes	No	Yes	No	No	No	Poor (4)
Ditch 8.5	No	No	Yes	No	Yes	No	No	No	Poor (2)
Ditch 8.6	No	No	Yes	No	Yes	No	No	No	Poor (2)
Ditch 8.7	No	No	Yes	No	Yes	No	No	No	Poor (2)

## Area 9

Ditch Number	A	B	C	D	E	F	G	H	Score
Ditch 9.1	No	No	Yes	No	Yes	No	No	Yes	Poor (3)
Ditch 9.2	No	Yes	Yes	No	Yes	No	Yes	Yes	Poor (5)
Ditch 9.3	No	No	Yes	No	Yes	No	No	Yes	Poor (3)
Ditch 9.4	No	No	Yes	No	Yes	No	No	Yes	Poor (3)
Ditch 9.5	No	No	Yes	No	Yes	No	No	Yes	Poor (3)
Ditch 9.6	No	No	Yes	No	Yes	No	No	Yes	Poor (3)

### Area 10/12

Ditch Number	A	B	C	D	E	F	G	H	Score
Ditch 10.1	No	No	Yes	No	Yes	No	No	Yes	Poor (3)
Ditch 10.2	No	No	Yes	No	Yes	No	Yes	Yes	Poor (4)
Ditch 10.3	Yes	No	Yes	No	Yes	No	Yes	Yes	Poor (5)
Ditch 10.4	Yes	No	Yes	No	Yes	Yes	No	Yes	Poor (5)
Ditch 10.5	No	No	Yes	No	Yes	No	No	Yes	Poor (3)
Ditch 10.6	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Moderate (7)

### Area 11

Ditch Number	A	B	C	D	E	F	G	H	Score
Ditch 11.1	No	No	Yes	No	Yes	No	No	Yes	Poor (3)
Ditch 11.2	No	No	Yes	No	Yes	No	No	Yes	Poor (3)
Ditch 11.3	No	No	Yes	No	Yes	No	No	Yes	Poor (3)
Ditch 11.4	No	No	Yes	No	Yes	No	No	Yes	Poor (3)
Ditch 11.5	No	No	Yes	No	Yes	No	No	Yes	Poor (3)
Ditch 11.6	No	No	Yes	No	Yes	No	No	Yes	Poor (3)
Ditch 11.7	No	No	Yes	No	Nos	No	No	Yes	Poor (2)
Ditch 11.8	No	No	Yes	No	Yes	No	No	Yes	Poor (3)

### Area 13

Ditch Number	A	B	C	D	E	F	G	H	Score
Ditch 13.1	No	No	No	Yes	Yes	No	No	Yes	Poor (3)
Ditch 13.2	No	No	No	Yes	Yes	No	No	Yes	Poor (3)
Ditch 13.3	No	No	Yes	No	Yes	No	No	Yes	Poor (3)
Ditch 13.4	No	No	Yes	No	Yes	No	No	Yes	Poor (3)
Ditch 13.5	No	No	Yes	No	Yes	No	No	Yes	Poor (3)

### Area 14

Ditch Number	A	B	C	D	E	F	G	H	Score
Ditch 14.1	No	No	Yes	No	Yes	No	No	Yes	Poor (3)
Ditch 14.2	No	No	Yes	No	Yes	No	No	Yes	Poor (3)
Ditch 14.3	No	No	Yes	No	Yes	No	No	Yes	Poor (3)
Ditch 14.4	No	No	Yes	No	Yes	No	No	Yes	Poor (3)
Ditch 14.5	No	No	Yes	No	Yes	No	Yes	Yes	Poor (4)
Ditch 14.6	No	No	Yes	No	Yes	No	No	Yes	Poor (3)
Ditch 14.7	No	No	Yes	No	Yes	No	No	Yes	Poor (3)

### Area 15

Ditch Number	A	B	C	D	E	F	G	H	Score
Ditch 15.1	No	No	Yes	No	Yes	No	Yes	Yes	Poor (4)
Ditch 15.2	No	No	Yes	No	Yes	No	No	Yes	Poor (3)
Ditch 15.3	Yes	No	Yes	No	Yes	Yes	No	Yes	Poor (5)
Ditch 15.4	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Moderate (6)

### Area 16

Ditch Number	A	B	C	D	E	F	G	H	Score
Ditch 16.1	No	No	Yes	No	Yes	No	No	Yes	Poor (3)
Ditch 16.2	No	No	Yes	No	Yes	No	No	Yes	Poor (3)
Ditch 16.3	No	No	Yes	No	Yes	No	No	Yes	Poor (5)
Ditch 16.4	No	No	Yes	No	Yes	No	No	Yes	Poor (3)
Ditch 16.5	No	No	Yes	No	Yes	No	No	Yes	Poor (3)

### Denman's

Ditch Number	A	B	C	D	E	F	G	H	Score
Ditch D.1	Yes	No	Yes	No	Yes	No	Yes	No	Poor (4)
Ditch D.2	No	No	Yes	No	Yes	No	No	Yes	Poor (3)
Ditch D.3	Yes	No	No	Yes	Yes	No	No	No	Poor (3)
Ditch D.4	No	No	Yes	No	Yes	No	No	Yes	Poor (3)
Ditch D.5	Yes	No	Yes	No	No	No	Yes	Yes	Poor (4)
Ditch D.6	Yes	No	Yes	No	Yes	No	No	Yes	Poor (4)
Ditch D.7	No	No	Yes	No	Yes	No	No	Yes	Poor (3)

**Appendix 2 – River Condition Assessment North Field**



# RIVER CONDITION ASSESSMENT

794-PLN-NPI-00019 Botley West Solar Farm – North Field River

794-PLN-NPI-00019  
Botley West Solar Farm  
A  
August 2025

REPORT

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Prepared for:

SolarFive Ltd

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**Appendix B:** Full Dataset

# 1 INTRODUCTION

## 1.1 Purpose and scope of this report

- 1.1.1 RPS Ecology were commissioned by SolarFive Ltd to undertake a River Condition Assessment (RCA) of the rivers within the catchment for the Botley West Solar Farm.
- 1.1.2 Due to the length of river within the redline boundary, for ease of reporting, the river has been split into multiple sections. This reports relates to an area of river north of the train tracks that run across the River Evenlode, north of Purwell Farm (OX29 4DZ). The section of river included within this report is referred to as the North Field.
- 1.1.3 The brief was to:
- Carry out a Modular River Physical Habitat (MoRPH 5) Survey of the watercourses on site. Following the survey, use the data collected along with desk-based information (River Type Assessment) to undertake a River Condition Assessment (RCA). These will be undertaken by an accredited MoRPH surveyor; and
  - Provide a report detailing the methods and results of the MoRPH 5 survey and RCA. The report will include a discussion of the results in relation to the development proposals, including any legal implications and how these may be overcome, and recommendations for any remedial actions that should be undertaken.
- 1.1.4 This report pertains to these results only; recommendations included within this report are the professional opinion of an experienced ecologist and therefore the view of RPS.

## 1.2 Development proposals

- 1.2.1 The development proposals include constructing a large-scale solar farm, which has potential to impact this section of river located to the north of the farmland.

## 1.3 Limitations

- 1.3.1 The calculations are based on the development proposals provided to RPS in August 2025. Subsequent changes to the development proposals are likely to result in a requirement to recalculate the biodiversity units for the post-development condition.

## 2 METHODS

### 2.1 Modular River Physical Habitat (MoRPH) Survey

- 2.1.1 The survey was carried out on 4<sup>th</sup> July 2025 by Lucinda Clark, a trained and accredited MoRPH surveyor. All data was collected following The MoRPH Survey Technical Reference Manual (Modular River Survey; 2022). Survey data was collected using the Modular River Surveys survey forms and uploaded to the RPS Modular River Survey Cartographer workspace.
- 2.1.2 MoRPH is a survey technique that provides a sample of the physical character of the river reach within which it is located. Five contiguous MoRPH modules are combined to produce a MoRPH5 survey to record vegetation, sediment and morphological characteristics of short subreaches.
- 2.1.3 For this site, 2 MoRPH5 surveys were recorded. In order to accurately assess the site, at least 20% of the river must be surveyed. Approximately 700 m of river is within the redline boundary at this location. Each module was 30 m, with the MoRPH survey measuring 150 m. After two MoRPH5 surveys were recorded, this meant that 300m (or 42.85%) of the river was surveyed. The locations of the modules surveyed are shown on **Figure 2.1**.
- 2.1.4 The length of modules used in MoRPH surveys vary with rivers of different sizes. The MoRPH River width is measured at a typical cross section within the sub-reach. The MoRPH River width is defined as the width of the water and any bare sediments, bars and areas of emergent aquatic plants at the water's edge. A single typical MoRPH river width was selected to apply across all modules to ensure that all MoRPH modules were the same length. The appropriate module length for different sized rivers is given in (**Table 1.1**).

**Table 1.1: River module lengths for MoRPH surveys for a typical river width.**

MoRPH River Width	Module Length
< 5 m	10 m
5 to < 10 m	20 m
10 to < 20 m	30 m
20 to < 30 m	40 m
30 m (or where channel bed is not visible)	50 m

- 2.1.5 The MoRPH module survey is designed to characterise the river channel, banks (or generally steeper areas next to the active channel) and immediate bank tops (adjacent flatter areas) up to 10 m from the bank top edge. A 10 m distance from the bank top edge is chosen to enclose features (particularly vegetation) on the bank top that may provide habitat for river organisms or may act as a pressure on the river ecosystem.
- 2.1.6 For each river module, general information on the river was recorded, followed by the physical features and vegetation properties (both natural and human-modified) for each of the following:
- Bank top / floodplain (within 10m of the bank top edge);
  - Bank faces and channel edges; and
  - Channel bed.
- 2.1.7 Where abundances were recorded, the following scale was used (as shown in **Table 1.2**):



**Table 1.2: Abundance scale used in MoRPH surveys:**

Scale	Percent Cover
Absent (A)	0 %
Trace (T)	< 5 %
Present (P)	5 – 33 %
Extensive (E)	>33 %

## General Information

- 2.1.8 For each module the following general information was recorded: River name; Reach name; Sub-reach name; Module number; Module length; Grid reference (midpoint); MoRPH river width (m); Bankfull width (m); Left bank height (m); Right bank height (m); Water width (m); and water depth (m).

## Bank top / Floodplain

- 2.1.9 For each module the following was recorded for the bank top / floodplain: Dominant and sub-dominant artificial ground cover<sup>1</sup> (type and abundance) for the left and right bank; Abundance of terrestrial vegetation types<sup>2</sup> on the left and right bank; Non-native invasive plant species (type and abundance) on the left and right bank; and Bank top water related features<sup>3</sup> (type and abundance) on the left and right bank.

## Bank Face / Channel Margin

- 2.1.10 For each module the following was recorded for the bank face and channel margin: Dominant and sub-dominant bank profile<sup>4</sup> (type and abundance) for the left and right bank; Sediment type<sup>5</sup> for the top two-thirds and bottom one-third of the bank face for the left and right bank; Extent (vertical and horizontal) of bank face reinforcement for the left and right banks; Dominant and sub-dominant bank reinforcement type<sup>6</sup>; Natural physical features<sup>7</sup> (type, abundance and sediment size<sup>8</sup>) for the left and right banks; Artificial physical features<sup>9</sup> for the left and right banks; Abundance of terrestrial

<sup>1</sup> Pedestrianised footpath, transport infrastructure, buildings (commercial/industrial), buildings (residential), storage area, landfill area, arable agriculture/allotments, permanently vegetated agriculture, permanently vegetated recreation, plantation woodland, open water.

<sup>2</sup> Unvegetated (bare soil/rock), mosses/lichens, short/creeping herbs/grasses, tall herbs/grasses, scrub/shrubs, saplings/trees, fallen trees, leaning trees, j-shaped trees, tree/shrub branches tailing into channel, large wood, predominant tree type

<sup>3</sup> Pond - disconnected from river, pond – connected to river, side channel, wetland – short non-woody vegetation, wetland – tall non-woody vegetation, wetland – shrubs and trees.

<sup>4</sup> Vertical with overhang, undercut or vertical with undercut, vertical with toe, steep (>45°), gentle (<45°), composite, reshaped, artificial two-stage, embanked, set-bank embankment, poached bank

<sup>5</sup> Artificial, bedrock, boulder, cobble, gravel-pebble, sand, silt, clay, organic, peat, earth, not visible.

<sup>6</sup> Concrete, concrete and brick, blocks or stone, brick/ laid stone/ block, sheet piling, wood piling, builders waste, riprap, gabions, willow spiling/faggot bundles, planted reeds, biotex/coir, washed out

<sup>8</sup> Unvegetated/vegetated side bar only.

<sup>9</sup> Pipes/outfalls (count), Jetty/Deflector (major, intermediate, minor, absent).

vegetation<sup>10</sup> on the bank face for the left and right banks; Abundance of aquatic vegetation<sup>11</sup> at the bank-water margin for the left and right banks; and Non-native invasive plant species (type and abundance) on the left and right bank faces.

## Channel Bed

- 2.1.11 For each module the following was recorded for the channel bed: Channel bed sediment size<sup>12</sup> (type and abundance); Channel bed reinforcement (extent and dominant/sub-dominant type<sup>13</sup>); Water surface flow patterns<sup>14</sup> (type and abundance); Channel bed natural physical features<sup>15</sup> (type and abundance); Channel bed artificial features<sup>16</sup> (type and abundance); Vegetation within the wetted channel<sup>17</sup> (type and abundance); Vegetation interacting with the wetted channel<sup>18</sup> (type and abundance); and Non-native invasive plant species (type and abundance).

## River Type Assessment

- 2.1.12 The river reach was allocated to one of 13 river types (A to M). The 13 river types are defined primarily by their planform (e.g. straight, meandering or braided) and bed material, supported by the degree to which they are confined by their valley and also the valley gradient. The 13 types represent the range of near-natural river types likely to be encountered in England.
- 2.1.13 For the purposes of MoRPH rivers greater than 20 m wide are considered to be 'large rivers' and are not surveyed using the methodology since it is considered that they will be too deep for their bed material to be assessed accurately. Canals and navigable rivers are also excluded since their modified nature prevents the assignment of an indicative 'near natural' type (Gurnell et al., 2020).
- 2.1.14 The river type for the reach within which the site is located was determined using an extended reach. The reach selected for analysis was long enough to determine its type robustly and was a length which broadly showed a similar width and planform along its length and did not include large structures (dams) or large tributaries.
- 2.1.15 For rivers which will be one of the A – M river types the following information was recorded using maps and aerial images:
- A1 – Braiding index (BI)<sup>19</sup>

<sup>10</sup> Unvegetated (bare soil/rock), mosses/lichens, short/creeping herbs/grasses, tall herbs/grasses, scrub/shrubs, saplings/trees, fallen trees, leaning trees, j-shaped trees, tree/shrub branches tailing into channel, large wood, exposed tree roots, discrete organic accumulation.

<sup>11</sup> Liverworts, mosses and lichens, emergent broad-leaved, emergent linear-leaved (inc. horsetails), amphibious, filamentous algae.

<sup>12</sup> Bedrock, boulder, cobble, gravel-pebble, sand, silt, clay, organic, peat, silt overlying coarser sediments (continuous or patchy).

<sup>13</sup> Concrete, concrete and brick, blocks or stone, brick/ laid stone/ block, sheet piling, wood piling, builders waste, rip-rap, gabions, willow spiling/faggot bundles, planted reeds, biotex/coir, washed out

<sup>14</sup> Free fall, chute, broken standing waves, unbroken standing waves, upwelling, rippled, smooth, no perceptible flow, dry

<sup>15</sup> Exposed bedrock, exposed unvegetated boulders/rocks, exposed vegetated boulders/rocks, unvegetated mid channel bar, vegetated mid channel bar, island, cascade, pool (count), riffle (count), step (count), waterfall (count)

<sup>16</sup> Large trash, weir (major, intermediate, minor – as count), bridge piers (count), bridge shadow (wide, intermediate, narrow), culvert (count)

<sup>17</sup> Unvegetated, liverworts, mosses, lichens, emergent broad-leaved, emergent linear-leaved, floating leaved (rooted), free floating, amphibious, submerged broad-leaved, submerged linear-leaved, submerged fine-leaved, filamentous algae, channel choked with plants (Y/N)

<sup>18</sup> Vegetation shading the channel, submerged tree roots, trees, shrubs, saplings growing on river bed, large wood in channel, organic material, large wood dam (count), fallen trees (count)

<sup>19</sup> Average number of distinct flowing threads counted across 10 equally-spaced cross-sections of the river corridor. Reaches may be single thread (BI <1.1) or multithread (BI >1.1)

- A2 – Sinuosity index (SI)<sup>20</sup>
- A3 – Anabranching index (AI)<sup>21</sup>
- A4 – Level of confinement<sup>22</sup> (U, PC, C)<sup>23</sup>
- A5 – Valley gradient<sup>24</sup>
- A6 - Bedrock<sup>25</sup>
- A7 – Coarsest bed material size class<sup>26</sup>
- A8 – Average alluvial bed material size class<sup>27</sup>

2.1.16 The results for the values of each of the above indicators were entered into the RPS workspace on the Cartographer data base and an indicative river type was generated.

## River Condition Assessment

- 2.1.17 The river condition was assessed using 32 condition indicators that are automatically extracted from the MoRPH5 field surveys. Each river condition indicator was assigned a score of 0 to +4 (positive indicators<sup>28</sup>), or 0 to -4 (negative indicators<sup>29</sup>). Positive indicators represent diversity (richness) and abundance (extent) of physical habitats offered by vegetation, sediment, vegetation-sediment-related physical features and hydraulic habitats. Negative indicators represent the extent and severity of local human interventions or pressures.
- 2.1.18 The Preliminary Condition Score for each MoRPH5 sub-reach was calculated as the sum of the average of the positive condition indicator scores and the average of the negative condition indicator scores for the sub-reach.
- 2.1.19 The preliminary condition score for a MoRPH5 sub-reach is translated into a final condition score (5-Good, 4-Fairly Good, 3-Moderate, 2-Fairly Poor, 1-Poor) according to the river type under consideration. The boundaries for assigning a final condition score or class, based on the numerical preliminary condition scores are presented in Table 3. For example, a Type A river scoring 1.9 or above would be classed as 'Good'. A Type B river would need to score >2.2 to be classed as Good.

<sup>20</sup> For single thread rivers (BI <1.1). The ratio of the river reach length along the centre line divided by the length of the broad river or valley course. Reaches may be straight-sinuuous (SI <1.5), or meandering (SI > 1.5)

<sup>21</sup> Average number of distinct flowing channels separated by islands, counted across 10 equally-spaced cross sections.

<sup>22</sup> Proportion of the river reach's bank length that is in contact with the valley side slopes or ancient terraces.

<sup>23</sup> U = unconfined - <10% total river bank in contact, PC = partly confined 10 – 90% contact, C = confined - >90% contact.

<sup>24</sup> Difference in elevation between the start and end of the river reach divided by the length of the broad valley course.

<sup>25</sup> Recorded where bedrock is observed as 'extensive' (i.e. >33% cover) in at least 3 survey modules or is 'extensive' in 2 modules and 'present' (i.e. 5 to 33% cover) in the remaining 3 modules of the subreach.

<sup>26</sup> Records the coarsest bed material size class that is observed as present or extensive in any module in the subreach.

<sup>27</sup> Weighted average of the alluvial bed material size classes (i.e. excludes bedrock) recorded as present or extensive in all 5 modules within the subreach

<sup>28</sup> Bank top vegetation structure, bank top tree feature richness, bank top water related features, bank face riparian vegetation structure, bank face tree feature richness, bank face natural bank profile extent, bank face natural bank profile richness, bank face natural material richness, bank face bare sediment extent, channel margin aquatic vegetation extent, channel margin aquatic morphotype richness, channel margin physical feature extent, channel margin physical feature richness, channel aquatic morphotype richness, channel bed tree features richness, channel bed hydraulic features richness, channel bed natural features extent, channel bed natural features richness, channel bed material richness.

<sup>29</sup> Bank top NNIPS cover, Bank top managed ground cover, Bank face artificial bank profile extent, bank face reinforcement extent, bank face reinforcement material severity, bank face NNIPS cover, channel margin artificial features, channel bed siltation, channel bed reinforcement extent, channel bed reinforcement severity, channel bed artificial features severity, channel bed NNIPS extent, channel bed filamentous algae extent.



- 2.1.20 Once the score or class has been assigned the Biodiversity Metric 3.1 (Natural England, undated) calculator is used to derive the baseline river units, which contribute to the overall Biodiversity Net Gain for the site. The information used to derive the baseline river units is presented in Table 7. In addition to the river condition score, it includes habitat distinctiveness based on whether it is a priority habitat under Section 41 of the Natural Environment and Rural Communities Act 2006; its strategic significance, based on whether it is a main river in the river basin management plan; and whether the development will result in encroachment into the watercourse or riparian zone.
- 2.1.21 Where abundances were recorded, the following scale was used (as shown in **Table 1.3**).

**Table 1.3: Likely best and worst preliminary condition scores for each river type, and lower condition score threshold values :**

River type	Canals / Navigable	Large	A	B	C	D	E	F	G	H	I	J	K	L	M
Likely best average condition score	1.8	2.5	2.4	2.7	2.7	2.7	2.7	2.8	3.0	2.9	3.1	2.8	2.4	2.4	2.4
Lower threshold for 'Good'	>1.4	>2.0	>1.9	>2.2	>2.2	>2.2	>2.2	>2.3	>2.5	>2.4	>2.5	>2.3	>1.9	>1.9	>1.9
Lower threshold for 'Fairly Good'	>0.7	>1.3	>1.2	>1.4	>1.4	>1.4	>1.4	>1.5	>1.6	>1.6	>1.7	>1.5	>1.2	>1.2	>1.2
Lower threshold for 'Moderate'	>-0.1	>0.3	>0.2	>0.2	>0.2	>0.2	>0.2	>0.4	>0.5	>0.5	>0.6	>0.4	>0.2	>0.2	>0.2
Lower threshold for 'Fairly Poor'	>-1.2	>-1.0	>-1.0	>-0.9	>-0.9	>-0.9	>-0.9	>-0.9	>-0.9	>-0.9	>-0.8	>-0.9	>-1.0	>-1.0	>-1.0
Likely worst average condition score	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5

**Figure 2.1: River Condition Assessment module locations (North Field river section).**



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**Legend**


Order Limits

Condition


● Evennode EL1 - Moderate

● Evennode EL2 - Moderate


Rev	Description	By	CB	Date



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### 3 RESULTS

#### 3.1 North Field MoRPH 5 Survey

- 3.1.1 The locations of the modules surveyed are shown on **Figure 2.1**, and photographs in Annex A. The full dataset is available in Annex B.
- 3.1.2 A general information recorded for each sub-reach and module is shown below in **Table 3.1** and **Table 3.2**.

**Table 3.1: General information recorded for North Field river, sub-reach 1.**

Module Name and Location					
River Name	River Evenlode				
Location / Reach Name	North Field				
Sub-reach name	1				
Module Length	30 m				
Grid Reference	SP 43901 13942	SP 43900 13906	SP 43879 13887	SP 43860 13883	SP 43858 13846
<b>Module number</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
MoRPH River Width (m)	20	20	20	20	20
Bankful width (m)	21	21	21	21	21
Left bank height (m)	0.5	0.5	0.5	0.6	0.5
Right bank height (m)	0.5	0.5	0.5	0.6	0.5
Water width (m)	20	20	20	20	20
Water depth (m)	0.5	0.5	0.5	0.5	0.5

**Table 3.2: General information recorded for North Field river, sub-reach 2.**

Module Name and Location					
River Name	River Evenlode				
Location / Reach Name	North Field				
Sub-reach name	2				
Module Length	30 m				
Grid Reference	SP 43963 14135	SP 43948 14114	SP 43937 14095	SP 43946 14093	SP 43906 14087
<b>Module number</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
MoRPH River Width (m)	19	19	20	20	20
Bankful width (m)	23	23	22	22	22
Left bank height (m)	2	2	2	2	2
Right bank height (m)	2	2	2	2	2
Water width (m)	18	18	18	18	18
Water depth (m)	0.5	0.5	0.5	0.5	0.5

#### 3.2 North Field River Type Assessment

- 3.2.1 This section of the River Evenlode is River Type F - Straight/sinuuous, coarsest CO (cobble), average GP (gravel/pebble).

### 3.3 North Field River Condition Assessment

- 3.3.1 The full results of the RCA for each indicator type are present in **Table 3.3**. The preliminary condition score for sub-reach 1 was 0.717, which gives a final river condition score of Moderate. The preliminary condition score for sub-reach 2 was 0.821, which gives a final river condition score of Moderate.

**Table 3.3: MoRPH5 data for North Field section of river.**

MoRPH River Width	Indicator Type	North Field Baseline Condition Score	
		1	2
Bank Top	B1: Vegetation Structure	1	1
	B2: Tree feature richness	0	0
	B3: Water related features	0	0
	B4: NNIPS cover	0	0
	B5: Managed ground cover	-3	-3
Bank Face	C1: Riparian vegetation structure	2	2
	C2: Tree feature richness	0	0
	C3: Natural bank profile extent	3	3
	C4: Natural bank profile richness	2	2
	C5: Natural bank material richness	1	1
	C6: Bare sediment extent	0	1
	C7: Artificial bank profile extent	0	0
	C8: Reinforcement extent	0	0
	C9: Reinforcement material severity	0	0
	C10: NNIPS cover	0	0
Channel Water Margin	D1: Aquatic vegetation extent	4	2
	D2: Aquatic morphotype richness	2	2
	D3: Physical feature extent	0	0
	D4: Physical feature richness	0	0
	D5: Artificial features	0	0
Channel Bed	E1: Aquatic morphotype richness	3	2
	E2: tree related features	0	0
	E3: Hydraulic feature richness	0	0
	E4: Natural features extent	0	0
	E5: Natural features richness	0	0
	E6: Material richness	2	0
	E7: Siltation	0	0

MoRPH River Width	Indicator Type	North Field Baseline Condition Score	
		1	2
	E8: Reinforcement extent	0	0
	E9: Reinforcement severity	0	0
	E10: Artificial features severity	0	0
	E11: NNIPS extent	0	0
	E12: Filamentous algae extent	0	0
	<b>Average of Positive Indicators</b>	<b>1.052</b>	<b>0.947</b>
	<b>Average of Negative Indicators</b>	<b>-0.230</b>	<b>-0.230</b>
	<b>Preliminary Condition Score</b>	<b>0.821</b>	<b>0.717</b>
	<b>Final Condition Score</b>	<b>Moderate</b>	<b>Moderate</b>

## 4 CONCLUSIONS

### 4.1 North Field MoRPH 5 Survey

- 4.1.1 Two MoRPH5 surveys was undertaken on the North Field section of the River Evenlode. The sub-reach has a final condition score of Moderate.
- 4.1.2 Within the metric, the North and South Field sections of the River Evenlode have been combined. The pre-development score for the River Evenlode is calculated to be **57.037 watercourse units**.
- 4.1.3 The final condition score is derived from the sum of the positive and negative indicators.
- 4.1.4 The highest scoring indicators include those relating to the channel margin vegetation, and the bank face bank profile and tree feature richness. This means that the highest scoring indicators of the survey come from factors relating to the bank face and channel margin vegetation.
- 4.1.5 The lowest scoring indicators include the bank top managed ground cover. Due to the rivers location within farmland, there is a level of man-made factors and bank top management.
- 4.1.6 As previously stated, the sub-reach has a final condition score of Moderate.



## REFERENCES

Modular River Survey (2022). *The MoRPh Survey Technical Reference Manual 2022 version.* [REDACTED]  
[REDACTED]

**Appendix A** North Field  
Module  
Photographs



Mid-point of Sub-reach 1, Module 1.



Mid-point of Sub-reach 1, Module 2.





Mid-point of Sub-reach 1, Module 3.



Mid-point of Sub-reach 1, Module 4.





Mid-point of Sub-reach 1, Module 5.



Mid-point of Sub-reach 2, Module 1.





Mid-point of Sub-reach 2, Module 2.



Mid-point of Sub-reach 2, Module 3.





Mid-point of Sub-reach 2, Module 4.



Mid-point of Sub-reach 2, Module 5.

**Appendix B Full Dataset**



Recorded: Date	River Name	Reach Name	Subreach Name	Module Number	INDEX 1: Number of flow types	INDEX 2: Highest energy flow type	INDEX 3: N
14/07/2025	Evenlode	EvenlodeBW1	EL1	5	1	Smooth	2
14/07/2025	Evenlode	EvenlodeBW1	EL1	4	1	Smooth	2
14/07/2025	Evenlode	EvenlodeBW1	EL1	3	1	Smooth	2
14/07/2025	Evenlode	EvenlodeBW1	EL1	2	1	Smooth	2
14/07/2025	Evenlode	EvenlodeBW1	EL1	1	1	Smooth	2
14/07/2025	Evenlode	EvenlodeBW1	EL2	1	1	Smooth	2
14/07/2025	Evenlode	EvenlodeBW1	EL2	2	1	Smooth	2
14/07/2025	Evenlode	EvenlodeBW1	EL2	3	1	Smooth	2
14/07/2025	Evenlode	EvenlodeBW1	EL2	4	1	Smooth	2
14/07/2025	Evenlode	EvenlodeBW1	EL2	5	1	Smooth	2

**INDEX 4: C INDEX 5: A INDEX 6: A INDEX 7: E INDEX 8: C INDEX 9: N INDEX 10: INDEX 11: INDEX 12: INDEX 13: INDEX 14: Non-native invasive plant extent**

Gravel-Pet -2.500	Gravel-Pet 0.000	1.250	2	2.083	4.000	6.000	0.000	0.000
Gravel-Pet -2.500	Gravel-Pet 0.000	1.250	2	2.083	4.000	6.000	0.000	0.000
Gravel-Pet -2.500	Gravel-Pet 0.000	1.250	2	2.083	4.000	6.000	0.000	0.000
Gravel-Pet -2.500	Gravel-Pet 0.000	1.250	2	2.083	4.000	6.000	0.000	0.000
Gravel-Pet -2.500	Gravel-Pet 0.000	1.250	2	2.083	4.000	6.000	0.000	0.000
Gravel-Pet -2.500	Gravel-Pet 0.000	1.250	0	1.667	4.000	6.000	0.000	0.000
Gravel-Pet -2.500	Gravel-Pet 0.000	1.250	1	1.667	4.000	6.000	0.000	0.000
Gravel-Pet -2.500	Gravel-Pet 0.000	1.250	0	1.667	4.000	6.000	0.000	0.000
Gravel-Pet -2.500	Gravel-Pet 0.000	1.250	0	1.667	4.000	6.000	0.000	0.000
Gravel-Pet -2.500	Gravel-Pet 0.000	1.250	2	1.667	1.000	6.000	0.000	0.000



Recorded: Date	River Name	Reach Name	Subreach Name	Module Number	Project Name	MoRPh Co	Module Le	Midpoint Location: NGR	Survey Bank	Bed Visible
14/07/2025	Evenlode	EvenlodeBW1	EL1	5	Botley West	EL1	30	SP 43907 14087	Right bank	FALSE
14/07/2025	Evenlode	EvenlodeBW1	EL1	4	Botley West	EL1	30	SP 43946 14093	Right bank	FALSE
14/07/2025	Evenlode	EvenlodeBW1	EL1	3	Botley West	EL1	30	SP 43937 14095	Right bank	FALSE
14/07/2025	Evenlode	EvenlodeBW1	EL1	2	Botley West	EL1	30	SP 43948 14114	Right bank	FALSE
14/07/2025	Evenlode	EvenlodeBW1	EL1	1	Botley West	EL1	30	SP 43963 14135	Right bank	FALSE
14/07/2025	Evenlode	EvenlodeBW1	EL2	1	Botley West	EL1	30	SP 43901 13942	Left bank	FALSE
14/07/2025	Evenlode	EvenlodeBW1	EL2	2	Botley West	EL1	30	SP 43900 13906	Left bank	FALSE
14/07/2025	Evenlode	EvenlodeBW1	EL2	3	Botley West	EL1	30	SP 43879 13887	Left bank	FALSE
14/07/2025	Evenlode	EvenlodeBW1	EL2	4	Botley West	EL1	30	SP 43860 13883	Left bank	FALSE
14/07/2025	Evenlode	EvenlodeBW1	EL2	5	Botley West	EL1	30	SP 43858 13846	Left bank	FALSE

Adverse Conditions?	Location of	Location of	Location of	Location of	Location of	MoRPh Riv	Left Bank	Right Bank	Bankfull W	Water Wid	Water Dep	Notes
FALSE	51.82369	-1.36435	443907	214087	SP 43906	120.000	2.000	2.000	22.000	18.000	0.500	
FALSE	51.82375	-1.36377	443947	214094	SP 43946	120.000	2.000	2.000	22.000	18.000	0.500	
FALSE	51.82377	-1.36391	443937	214096	SP 43937	120.000	2.000	2.000	22.000	18.000	0.500	
FALSE	51.82394	-1.36373	443949	214115	SP 43948	119.000	2.000	2.000	23.000	18.000	0.500	
FALSE	51.82411	-1.36353	443963	214135	SP 43963	119.000	2.000	2.000	23.000	18.000	0.500	
FALSE	51.82239	-1.36444	443902	213943	SP 43901	120.000	0.500	0.500	21.000	20.000	0.500	
FALSE	51.82206	-1.36447	443900	213906	SP 43900	120.000	0.500	0.500	21.000	20.000	0.500	
FALSE	51.82189	-1.36478	443879	213887	SP 43879	120.000	0.500	0.500	21.000	20.000	0.500	
FALSE	51.82187	-1.36505	443860	213884	SP 43860	120.000	0.600	0.600	21.000	20.000	0.500	
FALSE	51.82152	-1.36509	443858	213846	SP 43858	120.000	0.500	0.500	21.000	20.000	0.500	



Recorded: Date	River Nam	Reach Nar	Subreach	Module N	Artificial G	Artificial G	Artificial G	Artificial G	Artificial G	Artificial G	Artificial G	Artificial G	Artificial G	Terrestrial
14/07/2025	Evenlode	EvenlodeB'	EL1	5	Extensive	Extensive	Arable agri	Arable agri	Absent	Absent				Absent
14/07/2025	Evenlode	EvenlodeB'	EL1	4	Extensive	Extensive	Arable agri	Arable agri	Absent	Absent				Absent
14/07/2025	Evenlode	EvenlodeB'	EL1	3	Extensive	Extensive	Arable agri	Arable agri	Absent	Absent				Absent
14/07/2025	Evenlode	EvenlodeB'	EL1	2	Extensive	Extensive	Arable agri	Arable agri	Absent	Absent				Absent
14/07/2025	Evenlode	EvenlodeB'	EL1	1	Extensive	Extensive	Arable agri	Arable agri	Absent	Absent				Absent
14/07/2025	Evenlode	EvenlodeB'	EL2	1	Extensive	Extensive	Arable agri	Arable agri	Absent	Absent				Absent
14/07/2025	Evenlode	EvenlodeB'	EL2	2	Extensive	Extensive	Arable agri	Arable agri	Absent	Absent				Absent
14/07/2025	Evenlode	EvenlodeB'	EL2	3	Extensive	Extensive	Arable agri	Arable agri	Absent	Absent				Absent
14/07/2025	Evenlode	EvenlodeB'	EL2	4	Extensive	Extensive	Arable agri	Arable agri	Absent	Absent				Absent
14/07/2025	Evenlode	EvenlodeB'	EL2	5	Extensive	Extensive	Arable agri	Arable agri	Absent	Absent				Absent

Terrestrial	Terrestrial	Terrestrial	Terrestrial	Terrestrial	Terrestrial	Terrestrial	Terrestrial	Terrestrial	Terrestrial	Terrestrial	Terrestrial	Terrestrial	Terrestrial	Terrestrial
Absent	Trace	Trace	Extensive	Extensive	Trace	Trace	Trace	Trace	Absent	Absent	Absent	Absent	Absent	Absent
Absent	Trace	Trace	Extensive	Extensive	Trace	Trace	Trace	Trace	Absent	Absent	Absent	Absent	Absent	Absent
Absent	Trace	Trace	Extensive	Extensive	Trace	Trace	Trace	Trace	Absent	Absent	Absent	Absent	Absent	Absent
Absent	Trace	Trace	Extensive	Extensive	Trace	Trace	Trace	Trace	Absent	Absent	Absent	Absent	Absent	Absent
Absent	Trace	Trace	Extensive	Extensive	Trace	Trace	Trace	Trace	Absent	Absent	Absent	Absent	Absent	Absent
Absent	Trace	Trace	Extensive	Extensive	Trace	Trace	Trace	Trace	Trace	Trace	Absent	Absent	Absent	Absent
Absent	Trace	Trace	Extensive	Extensive	Trace	Trace	Trace	Trace	Trace	Trace	Absent	Absent	Absent	Absent
Absent	Trace	Trace	Extensive	Extensive	Trace	Trace	Trace	Trace	Trace	Trace	Absent	Absent	Absent	Absent
Absent	Trace	Trace	Extensive	Extensive	Trace	Trace	Trace	Trace	Trace	Trace	Absent	Absent	Absent	Absent
Absent	Trace	Trace	Extensive	Extensive	Trace	Trace	Trace	Trace	Absent	Absent	Absent	Absent	Absent	Absent





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Recorded:	River Nam	Reach Nar	Subreach I	Module Nu	Profile: Do	Profile: Do	Profile: Do	Profile: Do	Profile: Su	Profile: Su	Profile: Su	Profile: Su	Natural Mz	Natural Mz
14/07/202	Evenlode	EvenlodeB	EL1	5	Extensive	Extensive	Gentle (< 4	Gentle (< 4	Absent	Present			Composite Earth (i.e. r	Earth (i.e. r
14/07/202	Evenlode	EvenlodeB	EL1	4	Extensive	Extensive	Gentle (< 4	Gentle (< 4	Absent	Present			Composite Earth (i.e. r	Earth (i.e. r
14/07/202	Evenlode	EvenlodeB	EL1	3	Extensive	Extensive	Gentle (< 4	Gentle (< 4	Absent	Present			Composite Earth (i.e. r	Earth (i.e. r
14/07/202	Evenlode	EvenlodeB	EL1	2	Extensive	Extensive	Gentle (< 4	Composite	Absent	Present			Gentle (< 4 Earth (i.e. r	Earth (i.e. r
14/07/202	Evenlode	EvenlodeB	EL1	1	Extensive	Extensive	Gentle (< 4	Composite	Absent	Present			Gentle (< 4 Earth (i.e. r	Earth (i.e. r
14/07/202	Evenlode	EvenlodeB	EL2	1	Extensive	Extensive	Steep (> 4	Steep (> 4	Absent	Absent			Earth (i.e. r	Earth (i.e. r
14/07/202	Evenlode	EvenlodeB	EL2	2	Extensive	Extensive	Steep (> 4	Gentle (< 4	Absent	Absent			Earth (i.e. r	Earth (i.e. r
14/07/202	Evenlode	EvenlodeB	EL2	3	Extensive	Extensive	Steep (> 4	Steep (> 4	Absent	Absent			Earth (i.e. r	Earth (i.e. r
14/07/202	Evenlode	EvenlodeB	EL2	4	Extensive	Extensive	Steep (> 4	Steep (> 4	Absent	Absent			Earth (i.e. r	Earth (i.e. r
14/07/202	Evenlode	EvenlodeB	EL2	5	Extensive	Extensive	Steep (> 4	Steep (> 4	Absent	Absent			Earth (i.e. r	Earth (i.e. r



[illegible]

[illegible]



[illegible]

[illegible]



[illegible]

[illegible]



Nuisance | Nuisance | Nuisance | Nuisance | Nuisance | Nuisance | Notes

Absent      Absent

Absent      Absent

Absent      Absent

Absent      Absent

Absent      Absent

Absent      Absent

Absent      Absent

Absent      Absent

Absent      Absent

Absent      Absent

Recorded:	River	Nam	Reach	Nar	Subreach	Module	Ni	Natural M	Natural M	Natural M	Natural M	Natural M	Natural M	Natural M	Natural M	Natural M
14/07/202	Evenlode	EvenlodeB	EL1		5	Absent	Absent	Trace	Extensive	Present	Absent	Absent	Absent	Absent	Absent	Absent
14/07/202	Evenlode	EvenlodeB	EL1		4	Absent	Absent	Trace	Extensive	Present	Absent	Absent	Absent	Absent	Absent	Absent
14/07/202	Evenlode	EvenlodeB	EL1		3	Absent	Absent	Trace	Extensive	Present	Absent	Absent	Absent	Absent	Absent	Absent
14/07/202	Evenlode	EvenlodeB	EL1		2	Absent	Absent	Trace	Extensive	Present	Absent	Absent	Absent	Absent	Absent	Absent
14/07/202	Evenlode	EvenlodeB	EL1		1	Absent	Absent	Trace	Extensive	Present	Absent	Absent	Absent	Absent	Absent	Absent
14/07/202	Evenlode	EvenlodeB	EL2		1	Absent	Absent	Trace	Extensive	Present	Absent	Absent	Absent	Absent	Absent	Absent
14/07/202	Evenlode	EvenlodeB	EL2		2	Absent	Absent	Trace	Extensive	Present	Absent	Absent	Absent	Absent	Absent	Absent
14/07/202	Evenlode	EvenlodeB	EL2		3	Absent	Absent	Trace	Extensive	Present	Absent	Absent	Absent	Absent	Absent	Absent
14/07/202	Evenlode	EvenlodeB	EL2		4	Absent	Absent	Trace	Extensive	Present	Absent	Absent	Absent	Absent	Absent	Absent
14/07/202	Evenlode	EvenlodeB	EL2		5	Absent	Absent	Trace	Extensive	Present	Absent	Absent	Absent	Absent	Absent	Absent



[illegible]

[illegible]

[illegible]



Interacting	Interacting	Interacting	Interacting	Interacting	Interacting	Interacting	Interacting	Interacting	Interacting	Interacting	Interacting	Nuisance I	Nuisance I	Nuisance I	Nuisance I
Absent	Absent	Absent	Absent	Trace	Absent	Absent	Absent	Absent	0	0	Absent	Absent	Absent	Absent	
Absent	Absent	Absent	Absent	Trace	Absent	Absent	Absent	Absent	0	0	Absent	Absent	Absent	Absent	
Absent	Absent	Absent	Absent	Trace	Absent	Absent	Absent	Absent	0	0	Absent	Absent	Absent	Absent	
Absent	Absent	Absent	Absent	Trace	Absent	Absent	Absent	Absent	0	0	Absent	Absent	Absent	Absent	
Absent	Absent	Absent	Absent	Trace	Absent	Absent	Absent	Absent	0	0	Absent	Absent	Absent	Absent	
Absent	Absent	Absent	Absent	Absent	Absent	Absent	Trace	Absent	0	0	Absent	Absent	Absent	Absent	
Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	0	0	Absent	Absent	Absent	Absent	
Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	0	0	Absent	Absent	Absent	Absent	
Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	0	0	Absent	Absent	Absent	Absent	
Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	0	0	Absent	Absent	Absent	Absent	

**Nuisance | Nuisance | Nuisance | Nuisance | Notes**

Absent                      Absent

Absent Absent

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Absent Absent

Absent Absent

ngr	timestamp	riverName	reachName	subreachName	projectName	projectCode	surveyType	scenarioName	moduleNumber	preliminary	riverShape	averageWidth
SP 43943	12025-07-13T23:00:00Z	Evenlode	Evenlode, I	Evenlode, I	Botley Wes	EL1	pre-project		1 to 5	0.821862	7.84	19.6
SP 43880	12025-07-13T23:00:00Z	Evenlode	Evenlode, I	Evenlode, I	Botley Wes	EL1	pre-project		1 to 5	0.716599	19.60784	20



Positive	Not Positive	A6	A7	A8	B1	B2	B3	B4	B5	C1	C2	C3	C4	C5	
1.052632	-0.23077	FALSE	GP	GP		1	0	0	0	-3	2	0	3	2	1
0.947368	-0.23077	FALSE	GP	GP		1	0	0	0	-3	2	0	3	2	1

C6	C7	C8	C9	C10	D1	D2	D3	D4	D5	E1	E2	E3	E4	E5	
	0	0	0	0	0	4	2	0	0	0	3	0	0	0	0
	1	0	0	0	0	2	2	0	0	0	2	0	0	0	0

E6	E7	E8	E9	E10	E11	E12	
	2	0	0	0	0	0	0
	2	0	0	0	0	0	0



ngr	timestamp	riverName	reachName	subreachName	moduleNum	projectName	projectCode	wfdWaterLevel	surveyType	index1
SP 43937 14095	2025-07-13T23:00:00Z	Evenlode	Evenlode, I	Evenlode, EvenlodeBW1, EL1	3	Botley Wes EL1			pre-project	1
SP 43946 14093	2025-07-13T23:00:00Z	Evenlode	Evenlode, I	Evenlode, EvenlodeBW1, EL1	4	Botley Wes EL1			pre-project	1
SP 43907 14087	2025-07-13T23:00:00Z	Evenlode	Evenlode, I	Evenlode, EvenlodeBW1, EL1	5	Botley Wes EL1			pre-project	1
SP 43901 13942	2025-07-13T23:00:00Z	Evenlode	Evenlode, I	Evenlode, EvenlodeBW1, EL2	1	Botley Wes EL1			pre-project	1
SP 43900 13906	2025-07-13T23:00:00Z	Evenlode	Evenlode, I	Evenlode, EvenlodeBW1, EL2	2	Botley Wes EL1			pre-project	1
SP 43879 13887	2025-07-13T23:00:00Z	Evenlode	Evenlode, I	Evenlode, EvenlodeBW1, EL2	3	Botley Wes EL1			pre-project	1
SP 43860 13883	2025-07-13T23:00:00Z	Evenlode	Evenlode, I	Evenlode, EvenlodeBW1, EL2	4	Botley Wes EL1			pre-project	1
SP 43963 14135	2025-07-13T23:00:00Z	Evenlode	Evenlode, I	Evenlode, EvenlodeBW1, EL1	1	Botley Wes EL1			pre-project	1
SP 43948 14114	2025-07-13T23:00:00Z	Evenlode	Evenlode, I	Evenlode, EvenlodeBW1, EL1	2	Botley Wes EL1			pre-project	1
SP 43858 13846	2025-07-13T23:00:00Z	Evenlode	Evenlode, I	Evenlode, EvenlodeBW1, EL2	5	Botley Wes EL1			pre-project	1

index2	index3	index4	index5	index6	index7	index8	index9	index10	index11	index12	index13	index14	himalayanjapaneseK
SM		2 GP		-2.5 GP		0	1.25	2 2.083333	4	6	0	0 A	A
SM		2 GP		-2.5 GP		0	1.25	2 2.083333	4	6	0	0 A	A
SM		2 GP		-2.5 GP		0	1.25	2 2.083333	4	6	0	0 A	A
SM		2 GP		-2.5 GP		0	1.25	0 1.666667	4	6	0	0 A	A
SM		2 GP		-2.5 GP		0	1.25	1 1.666667	4	6	0	0 A	A
SM		2 GP		-2.5 GP		0	1.25	0 1.666667	4	6	0	0 A	A
SM		2 GP		-2.5 GP		0	1.25	0 1.666667	4	6	0	0 A	A
SM		2 GP		-2.5 GP		0	1.25	2 2.083333	4	6	0	0 A	A
SM		2 GP		-2.5 GP		0	1.25	2 2.083333	4	6	0	0 A	A
SM		2 GP		-2.5 GP		0	1.25	2 1.666667	1	6	0	0 A	A

**giantHogw floatingPennywort**

A                      A

A                      A

A                      A

A                      A

A                      A

A                      A

A                      A

A                      A

A                      A

A                      A



Location (ngr)	Date	riverName	reachName	projectName	projectCode	riverCategory	a1	a2	a3
SP 43943 14094	14.07.2025	River Thames	River Thames, River Thames Tributary	Botley West	EL1	Other	1	0.962963	1
SP 43880 13888	14.07.2025	River Thames	River Thames, River Thames Tributary	Botley West	EL1	Other	1	0.962963	1

a4	a5	a6	a7	a8	calculatedRiverType	overridder	finalRiver1	morph5Ri\	morph5Re	morph5Su	morph5Mc	morph5Su
Confined	0.00963	FALSE	GP	GP	F		F	Evenlode	Evenlode, l	Evenlode, l	1 to 5	pre-project
Confined	0.00963	FALSE	GP	GP	F		F	Evenlode	Evenlode, l	Evenlode, l	1 to 5	pre-project

	morph5Sc	morph5Ri	morph5Av	preliminar	final	ConditionClass
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:	7.84	19.6	0.821862	Moderate		
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:	19.60784	20	0.716599	Moderate		
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**Appendix 3 – River Condition Assessment South Field**

# RIVER CONDITION ASSESSMENT

794-PLN-NPI-00019 Botley West Solar Farm – South Field River

794-PLN-NPI-00019  
Botley West Solar Farm  
A  
August 2025

REPORT

Document status					
Version	Purpose of document	Authored by	Reviewed by	Approved by	Review date
A	Draft, for comment	LC	KS	KS	04/09/2025

Approval for issue	
Name KERRY SHAKESPEARE	4 September 2025

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Prepared for:

SolarFive Ltd



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**Appendix B:** Full Dataset

# 1 INTRODUCTION

## 1.1 Purpose and scope of this report

- 1.1.1 RPS Ecology were commissioned by SolarFive Ltd to undertake a River Condition Assessment (RCA) of the rivers within the catchment for the Botley West Solar Farm.
- 1.1.2 Due to the length of river within the redline boundary, for ease of reporting, the river has been split into multiple sections. This reports relates to an area of river south of the train tracks that run across the River Evenlode, within the wider Purwell Farm (OX29 4DZ). The section of river included within this report is referred to as the South Field.
- 1.1.3 The brief was to:
- Carry out a Modular River Physical Habitat (MoRPH 5) Survey of the watercourses on site. Following the survey, use the data collected along with desk-based information (River Type Assessment) to undertake a River Condition Assessment (RCA). These will be undertaken by an accredited MoRPH surveyor; and
  - Provide a report detailing the methods and results of the MoRPH 5 survey and RCA. The report will include a discussion of the results in relation to the development proposals, including any legal implications and how these may be overcome, and recommendations for any remedial actions that should be undertaken.
- 1.1.4 This report pertains to these results only; recommendations included within this report are the professional opinion of an experienced ecologist and therefore the view of RPS.

## 1.2 Development proposals

- 1.2.1 The development proposals include constructing a large scale solar farm, which has potential to impact this section of river within the south of the farmland.

## 1.3 Limitations

- 1.3.1 The calculations are based on the development proposals provided to RPS in August 2025. Subsequent changes to the development proposals are likely to result in a requirement to recalculate the biodiversity units for the post-development condition.

## 2 METHODS

### 2.1 Modular River Physical Habitat (MoRPH) Survey

- 2.1.1 The survey was carried out on multiple dates in July 2025 by Lucinda Clark, a trained and accredited MoRPH surveyor. All data was collected following The MoRPH Survey Technical Reference Manual (Modular River Survey; 2022). Survey data was collected using the Modular River Surveys survey forms and uploaded to the RPS Modular River Survey Cartographer workspace.
- 2.1.2 MoRPH is a survey technique that provides a sample of the physical character of the river reach within which it is located. Five contiguous MoRPH modules are combined to produce a MoRPH5 survey to record vegetation, sediment and morphological characteristics of short subreaches.
- 2.1.3 For this site, 9 MoRPH5 surveys were recorded. In order to accurately assess the site, at least 20% of the river must be surveyed. Approximately 5.5 km of river is within the redline boundary at this location. Each module was 30 m, with the MoRPH survey measuring 150m. After nine MoRPH5 surveys were recorded, this meant that 1350 m (or 24.54%) of the river was surveyed. The locations of the modules surveyed are shown on **Figure 2.1**.
- 2.1.4 The length of modules used in MoRPH surveys vary with rivers of different sizes. The MoRPH River width is measured at a typical cross section within the sub-reach. The MoRPH River width is defined as the width of the water and any bare sediments, bars and areas of emergent aquatic plants at the water's edge. A single typical MoRPH river width, was selected to apply across all modules to ensure that all MoRPH modules were the same length. The appropriate module length for different sized rivers is given in (**Table 1.1**).

**Table 1.1: River module lengths for MoRPH surveys for a typical river width.**

MoRPH River Width	Module Length
< 5 m	10 m
5 to < 10 m	20 m
10 to < 20 m	30 m
20 to < 30 m	40 m
30 m (or where channel bed is not visible)	50 m

- 2.1.5 The MoRPH module survey is designed to characterise the river channel, banks (or generally steeper areas next to the active channel) and immediate bank tops (adjacent flatter areas) up to 10 m from the bank top edge. A 10 m distance from the bank top edge is chosen to enclose features (particularly vegetation) on the bank top that may provide habitat for river organisms or may act as a pressure on the river ecosystem.
- 2.1.6 For each river module, general information on the river was recorded, followed by the physical features and vegetation properties (both natural and human-modified) for each of the following:
- Bank top / floodplain (within 10m of the bank top edge);
  - Bank faces and channel edges; and
  - Channel bed.
- 2.1.7 Where abundances were recorded, the following scale was used (as shown in **Table 1.2**):



**Table 1.2: Abundance scale used in MoRPH surveys:**

Scale	Percent Cover
Absent (A)	0 %
Trace (T)	< 5 %
Present (P)	5 – 33 %
Extensive (E)	>33 %

## General Information

- 2.1.8 For each module the following general information was recorded: River name; Reach name; Sub-reach name; Module number; Module length; Grid reference (midpoint); MoRPH river width (m); Bankfull width (m); Left bank height (m); Right bank height (m); Water width (m); and water depth (m).

## Bank top / Floodplain

- 2.1.9 For each module the following was recorded for the bank top / floodplain: Dominant and sub-dominant artificial ground cover<sup>1</sup> (type and abundance) for the left and right bank; Abundance of terrestrial vegetation types<sup>2</sup> on the left and right bank; Non-native invasive plant species (type and abundance) on the left and right bank; and Bank top water related features<sup>3</sup> (type and abundance) on the left and right bank.

## Bank Face / Channel Margin

- 2.1.10 For each module the following was recorded for the bank face and channel margin: Dominant and sub-dominant bank profile<sup>4</sup> (type and abundance) for the left and right bank; Sediment type<sup>5</sup> for the top two-thirds and bottom one-third of the bank face for the left and right bank; Extent (vertical and horizontal) of bank face reinforcement for the left and right banks; Dominant and sub-dominant bank reinforcement type<sup>6</sup>; Natural physical features<sup>7</sup> (type, abundance and sediment size<sup>8</sup>) for the left and right banks; Artificial physical features<sup>9</sup> for the left and right banks; Abundance of terrestrial

<sup>1</sup> Pedestrianised footpath, transport infrastructure, buildings (commercial/industrial), buildings (residential), storage area, landfill area, arable agriculture/allotments, permanently vegetated agriculture, permanently vegetated recreation, plantation woodland, open water.

<sup>2</sup> Unvegetated (bare soil/rock), mosses/lichens, short/creeping herbs/grasses, tall herbs/grasses, scrub/shrubs, saplings/trees, fallen trees, leaning trees, j-shaped trees, tree/shrub branches tailing into channel, large wood, predominant tree type

<sup>3</sup> Pond - disconnected from river, pond – connected to river, side channel, wetland – short non-woody vegetation, wetland – tall non-woody vegetation, wetland – shrubs and trees.

<sup>4</sup> Vertical with overhang, undercut or vertical with undercut, vertical with toe, steep (>45°), gentle (<45°), composite, reshaped, artificial two-stage, embanked, set-bank embankment, poached bank

<sup>5</sup> Artificial, bedrock, boulder, cobble, gravel-pebble, sand, silt, clay, organic, peat, earth, not visible.

<sup>6</sup> Concrete, concrete and brick, blocks or stone, brick/ laid stone/ block, sheet piling, wood piling, builders waste, riprap, gabions, willow spiling/faggot bundles, planted reeds, biotex/coir, washed out

<sup>7</sup>

<sup>8</sup> Unvegetated/vegetated side bar only.

<sup>9</sup> Pipes/outfalls (count), Jetty/Deflector (major, intermediate, minor, absent).

vegetation<sup>10</sup> on the bank face for the left and right banks; Abundance of aquatic vegetation<sup>11</sup> at the bank-water margin for the left and right banks; and Non-native invasive plant species (type and abundance) on the left and right bank faces.

## Channel Bed

- 2.1.11 For each module the following was recorded for the channel bed: Channel bed sediment size<sup>12</sup> (type and abundance); Channel bed reinforcement (extent and dominant/sub-dominant type<sup>13</sup>); Water surface flow patterns<sup>14</sup> (type and abundance); Channel bed natural physical features<sup>15</sup> (type and abundance); Channel bed artificial features<sup>16</sup> (type and abundance); Vegetation within the wetted channel<sup>17</sup> (type and abundance); Vegetation interacting with the wetted channel<sup>18</sup> (type and abundance); and Non-native invasive plant species (type and abundance).

## River Type Assessment

- 2.1.12 The river reach was allocated to one of 13 river types (A to M). The 13 river types are defined primarily by their planform (e.g. straight, meandering or braided) and bed material, supported by the degree to which they are confined by their valley and also the valley gradient. The 13 types represent the range of near-natural river types likely to be encountered in England.
- 2.1.13 For the purposes of MoRPH rivers greater than 20m wide are considered to be 'large rivers' and are not surveyed using the methodology since it is considered that they will be too deep for their bed material to be assessed accurately. Canals and navigable rivers are also excluded since their modified nature prevents the assignment of an indicative 'near natural' type (Gurnell et al., 2020).
- 2.1.14 The river type for the reach within which the site is located was determined using an extended reach. The reach selected for analysis was long enough to determine its type robustly and was a length which broadly showed a similar width and planform along its length and did not include large structures (dams) or large tributaries.
- 2.1.15 For rivers which will be one of the A – M river types the following information was recorded using maps and aerial images:
- A1 – Braiding index (BI)<sup>19</sup>

<sup>10</sup> Unvegetated (bare soil/rock), mosses/lichens, short/creeping herbs/grasses, tall herbs/grasses, scrub/shrubs, saplings/trees, fallen trees, leaning trees, j-shaped trees, tree/shrub branches tailing into channel, large wood, exposed tree roots, discrete organic accumulation.

<sup>11</sup> Liverworts, mosses and lichens, emergent broad-leaved, emergent linear-leaved (inc. horsetails), amphibious, filamentous algae.

<sup>12</sup> Bedrock, boulder, cobble, gravel-pebble, sand, silt, clay, organic, peat, silt overlying coarser sediments (continuous or patchy).

<sup>13</sup> Concrete, concrete and brick, blocks or stone, brick/ laid stone/ block, sheet piling, wood piling, builders waste, rip-rap, gabions, willow spiling/faggot bundles, planted reeds, biotex/coir, washed out

<sup>14</sup> Free fall, chute, broken standing waves, unbroken standing waves, upwelling, rippled, smooth, no perceptible flow, dry

<sup>15</sup> Exposed bedrock, exposed unvegetated boulders/rocks, exposed vegetated boulders/rocks, unvegetated mid channel bar, vegetated mid channel bar, island, cascade, pool (count), riffle (count), step (count), waterfall (count)

<sup>16</sup> Large trash, weir (major, intermediate, minor – as count), bridge piers (count), bridge shadow (wide, intermediate, narrow), culvert (count)

<sup>17</sup> Unvegetated, liverworts, mosses, lichens, emergent broad-leaved, emergent linear-leaved, floating leaved (rooted), free floating, amphibious, submerged broad-leaved, submerged linear-leaved, submerged fine-leaved, filamentous algae, channel choked with plants (Y/N)

<sup>18</sup> Vegetation shading the channel, submerged tree roots, trees, shrubs, saplings growing on river bed, large wood in channel, organic material, large wood dam (count), fallen trees (count)

<sup>19</sup> Average number of distinct flowing threads counted across 10 equally-spaced cross-sections of the river corridor. Reaches may be single thread (BI <1.1) or multithread (BI >1.1)

- A2 – Sinuosity index (SI)<sup>20</sup>
- A3 – Anabranching index (AI)<sup>21</sup>
- A4 – Level of confinement<sup>22</sup> (U, PC, C)<sup>23</sup>
- A5 – Valley gradient<sup>24</sup>
- A6 - Bedrock<sup>25</sup>
- A7 – Coarsest bed material size class<sup>26</sup>
- A8 – Average alluvial bed material size class<sup>27</sup>

2.1.16 The results for the values of each of the above indicators were entered into the RPS workspace on the Cartographer data base and an indicative river type was generated.

## River Condition Assessment

- 2.1.17 The river condition was assessed using 32 condition indicators that are automatically extracted from the MoRPH5 field surveys. Each river condition indicator was assigned a score of 0 to +4 (positive indicators<sup>28</sup>), or 0 to -4 (negative indicators<sup>29</sup>). Positive indicators represent diversity (richness) and abundance (extent) of physical habitats offered by vegetation, sediment, vegetation-sediment-related physical features and hydraulic habitats. Negative indicators represent the extent and severity of local human interventions or pressures.
- 2.1.18 The Preliminary Condition Score for each MoRPH5 sub-reach was calculated as the sum of the average of the positive condition indicator scores and the average of the negative condition indicator scores for the sub-reach.
- 2.1.19 The preliminary condition score for a MoRPH5 sub-reach is translated into a final condition score (5-Good, 4-Fairly Good, 3-Moderate, 2-Fairly Poor, 1-Poor) according to the river type under consideration. The boundaries for assigning a final condition score or class, based on the numerical preliminary condition scores are presented in Table 3. For example, a Type A river scoring 1.9 or above would be classed as 'Good'. A Type B river would need to score >2.2 to be classed as Good.

<sup>20</sup> For single thread rivers (BI <1.1). The ratio of the river reach length along the centre line divided by the length of the broad river or valley course. Reaches may be straight-sinuuous (SI <1.5), or meandering (SI > 1.5)

<sup>21</sup> Average number of distinct flowing channels separated by islands, counted across 10 equally-spaced cross sections.

<sup>22</sup> Proportion of the river reach's bank length that is in contact with the valley side slopes or ancient terraces.

<sup>23</sup> U = unconfined - <10% total river bank in contact, PC = partly confined 10 – 90% contact, C = confined - >90% contact.

<sup>24</sup> Difference in elevation between the start and end of the river reach divided by the length of the broad valley course.

<sup>25</sup> Recorded where bedrock is observed as 'extensive' (i.e. >33% cover) in at least 3 survey modules or is 'extensive' in 2 modules and 'present' (i.e. 5 to 33% cover) in the remaining 3 modules of the subreach.

<sup>26</sup> Records the coarsest bed material size class that is observed as present or extensive in any module in the subreach.

<sup>27</sup> Weighted average of the alluvial bed material size classes (i.e. excludes bedrock) recorded as present or extensive in all 5 modules within the subreach

<sup>28</sup> Bank top vegetation structure, bank top tree feature richness, bank top water related features, bank face riparian vegetation structure, bank face tree feature richness, bank face natural bank profile extent, bank face natural bank profile richness, bank face natural material richness, bank face bare sediment extent, channel margin aquatic vegetation extent, channel margin aquatic morphotype richness, channel margin physical feature extent, channel margin physical feature richness, channel aquatic morphotype richness, channel bed tree features richness, channel bed hydraulic features richness, channel bed natural features extent, channel bed natural features richness, channel bed material richness.

<sup>29</sup> Bank top NNIPS cover, Bank top managed ground cover, Bank face artificial bank profile extent, bank face reinforcement extent, bank face reinforcement material severity, bank face NNIPS cover, channel margin artificial features, channel bed siltation, channel bed reinforcement extent, channel bed reinforcement severity, channel bed artificial features severity, channel bed NNIPS extent, channel bed filamentous algae extent.



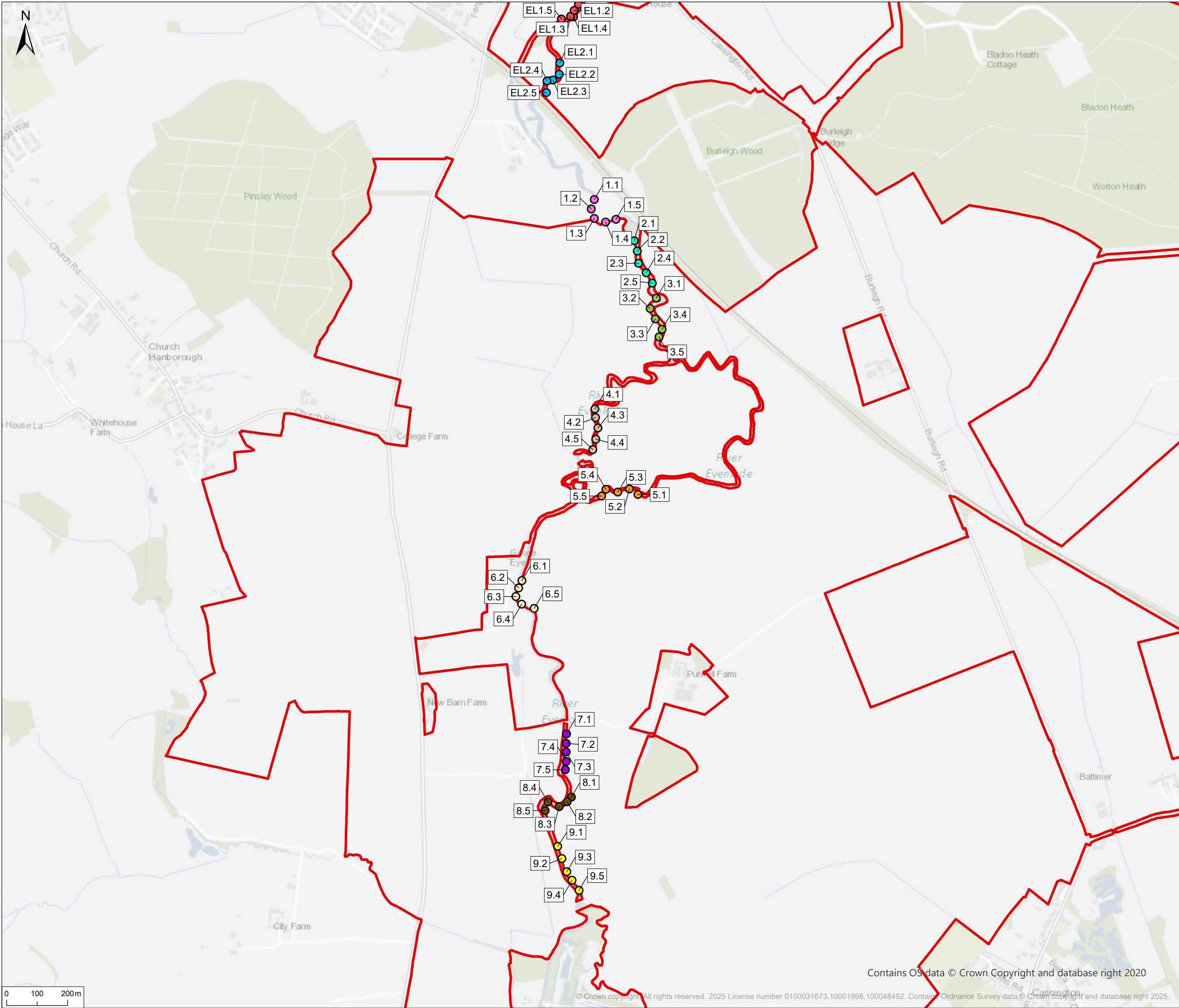
- 2.1.20 Once the score or class has been assigned the Biodiversity Metric 3.1 (Natural England, undated) calculator is used to derive the baseline river units, which contribute to the overall Biodiversity Net Gain for the site. The information used to derive the baseline river units is presented in Table 7. In addition to the river condition score, it includes habitat distinctiveness based on whether it is a priority habitat under Section 41 of the Natural Environment and Rural Communities Act 2006; its strategic significance, based on whether it is a main river in the river basin management plan; and whether the development will result in encroachment into the watercourse or riparian zone.
- 2.1.21 Where abundances were recorded, the following scale was used (as shown in **Table 1.3**).

**Table 1.3: Likely best and worst preliminary condition scores for each river type, and lower condition score threshold values :**

River type	Canals / Navigable	Large	A	B	C	D	E	F	G	H	I	J	K	L	M
Likely best average condition score	1.8	2.5	2.4	2.7	2.7	2.7	2.7	2.8	3.0	2.9	3.1	2.8	2.4	2.4	2.4
Lower threshold for 'Good'	>1.4	>2.0	>1.9	>2.2	>2.2	>2.2	>2.2	>2.3	>2.5	>2.4	>2.5	>2.3	>1.9	>1.9	>1.9
Lower threshold for 'Fairly Good'	>0.7	>1.3	>1.2	>1.4	>1.4	>1.4	>1.4	>1.5	>1.6	>1.6	>1.7	>1.5	>1.2	>1.2	>1.2
Lower threshold for 'Moderate'	>-0.1	>0.3	>0.2	>0.2	>0.2	>0.2	>0.2	>0.4	>0.5	>0.5	>0.6	>0.4	>0.2	>0.2	>0.2
Lower threshold for 'Fairly Poor'	>-1.2	>-1.0	>-1.0	>-0.9	>-0.9	>-0.9	>-0.9	>-0.9	>-0.9	>-0.9	>-0.8	>-0.9	>-1.0	>-1.0	>-1.0
Likely worst average condition score	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5

**Figure 2.1: River Condition Assessment module locations (South Field river section).**





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**Legend**

Order Limits


Condition

- Evennode EL1 - Moderate
- Evennode EL2 - Moderate
- EvennodeBWS 1 - Moderate
- EvennodeBWS 2 - Moderate
- EvennodeBWS 3 - Moderate
- EvennodeBWS 4 - Moderate
- EvennodeBWS 5 - Moderate
- EvennodeBWS 6 - Moderate
- EvennodeBWS 7 - Moderate
- EvennodeBWS 8 - Moderate
- EvennodeBWS 9 - Moderate


Rev	Description	By	CB	Date



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Project     Botley West Solar Farm

Title        Location of MoRPH Survey 2025:  
Southern Field

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### 3 RESULTS

#### 3.1 South Field MoRPH 5 Survey

- 3.1.1 The locations of the modules surveyed are shown on **Figure 2.1**, and photographs in Annex A. The full dataset is available in Annex B.
- 3.1.2 A general information recorded for each sub-reach and module is shown below in **Tables 3.1 to 3.9**.

**Table 3.1: General information recorded for South Field River, sub-reach 1.**

Module Name and Location					
River Name	River Evenlode				
Location / Reach Name	South Field				
Sub-reach name	1				
Module Length	30 m				
Grid Reference	SP 44014 13496	SP 44004 13465	SP 44014 13433	SP 44051 13422	SP 44086 13431
Module number	1	2	3	4	5
MoRPH River Width (m)	13	12	12	12	13
Bankful width (m)	15	14	14	14	15
Left bank height (m)	1.4	1.2	1.2	1.2	1.5
Right bank height (m)	1.4	1.2	1.2	1.2	1.5
Water width (m)	12.5	11	11	11	12
Water depth (m)	0.6	0.6	0.6	0.6	0.6

**Table 3.2: General information recorded for South Field River, sub-reach 2.**

Module Name and Location					
River Name	River Evenlode				
Location / Reach Name	South Field				
Sub-reach name	2				
Module Length	30 m				
Grid Reference	SP 43963 14135	SP 43948 14114	SP 43937 14095	SP 43946 14093	SP 43906 14087
Module number	1	2	3	4	5
MoRPH River Width (m)	14	13	13	13	13
Bankful width (m)	16	15	15	15	15
Left bank height (m)	1.5	1.5	1.5	1.5	1.5
Right bank height (m)	1.5	1.5	1.5	1.5	1.5
Water width (m)	13	12	12	12	12
Water depth (m)	0.6	0.6	0.6	0.6	0.6

**Table 3.3: General information recorded for South Field River, sub-reach 3.**

Module Name and Location					
River Name	River Evenlode				
Location / Reach Name	South Field				
Sub-reach name	3				
Module Length	30 m				
Grid Reference	SP 44218 13173	SP 44197 13139	SP 44215 13105	SP 44236 13070	SP 44226 13045
Module number	1	2	3	4	5
MoRPH River Width (m)	12	11	11	11	12
Bankful width (m)	14	13	13	13.5	13.5
Left bank height (m)	1.4	1.4	1.4	1.6	1.8
Right bank height (m)	1.5	1.5	1.5	1.6	1.8
Water width (m)	9	9	9	9.5	11
Water depth (m)	0.5	0.5	0.5	0.5	0.6

**Table 3.4: General information recorded for South Field River, sub-reach 4.**

Module Name and Location					
River Name	River Evenlode				
Location / Reach Name	South Field				
Sub-reach name	4				
Module Length	30 m				
Grid Reference	SP 44016 12808	SP 44019 12781	SP 44026 12748	SP 44019 12711	SP 44010 12676
Module number	1	2	3	4	5
MoRPH River Width (m)	12	12	12	12	12
Bankful width (m)	11	11	10	10.5	11
Left bank height (m)	2.2	2.2	2.2	2.2	2
Right bank height (m)	2.2	2.2	2.2	2.2	2
Water width (m)	9	9	9	9	10
Water depth (m)	0,5	0.5	0.5	0.5	0.7



**Table 3.5: General information recorded for South Field River, sub-reach 5.**

Module Name and Location					
River Name	River Evenlode				
Location / Reach Name	South Field				
Sub-reach name	5				
Module Length	30 m				
Grid Reference	SP 44158 12530	SP 44130 12548	SP 44091 12538	SP 44053 12547	SP 44038 12524
Module number	1	2	3	4	5
MoRPH River Width (m)	12	12	12	12	12
Bankful width (m)	2.5	2.5	2.5	2.5	2.5
Left bank height (m)	2.5	2.5	2.5	2.5	2.5
Right bank height (m)	2.5	2.5	2.5	2.5	2.5
Water width (m)	10	10	10	10	10
Water depth (m)	0.5	0.5	0.5	0.5	0.5

**Table 3.6: General information recorded for South Field River, sub-reach 6.**

Module Name and Location					
River Name	River Evenlode				
Location / Reach Name	South Field				
Sub-reach name	6				
Module Length	30 m				
Grid Reference	SP 43778 12247	SP 43766 12223	SP 43757 12195	SP 43777 12170	SP 43817 12156
Module number	1	2	3	4	5
MoRPH River Width (m)	17	17	17	17	18
Bankful width (m)	19	19	19	19	19
Left bank height (m)	1	1	1	1	1
Right bank height (m)	1	1	1.2	1.2	1
Water width (m)	17.5	17.5	17.5	17.5	17.5
Water depth (m)	1	1	1	1	1

**Table 3.7: General information recorded for South Field River, sub-reach 7.**

Module Name and Location					
River Name	River Evenlode				
Location / Reach Name	South Field				
Sub-reach name	7				
Module Length	30 m				
Grid Reference	SP 43924 11746	SP 43922 11714	SP 43923 11686	SP 43923 11656	SP 43920 11628
Module number	1	2	3	4	5
MoRPH River Width (m)	17	17	17	17	18
Bankful width (m)	19	19	19	19	19
Left bank height (m)	1	1	1	1	1
Right bank height (m)	1	1	1.2	1.2	1
Water width (m)	17.5	17.5	17.5	17.5	17.5
Water depth (m)	1	1	1	1	1

**Table 3.8: General information recorded for South Field River, sub-reach 8.**

Module Name and Location					
River Name	River Evenlode				
Location / Reach Name	South Field				
Sub-reach name	8				
Module Length	30 m				
Grid Reference	SP 43940 11538	SP 43926 11524	SP 43900 11508	SP 43862 11523	SP 43854 11495
Module number	1	2	3	4	5
MoRPH River Width (m)	17	19	19	19	19
Bankful width (m)	20	22	22	22	21
Left bank height (m)	1.4	1.2	1.2	1.2	1.2
Right bank height (m)	1.4	1.2	1.2	1.2	1.2
Water width (m)	16	18	18	18	18
Water depth (m)	1	1	1	1	1

**Table 3.9: General information recorded for South Field River, sub-reach 9.**

Module Name and Location					
River Name	River Evenlode				
Location / Reach Name	South Field				
Sub-reach name	9				
Module Length	30 m				
Grid Reference	SP 43895 11377	SP 43909 11338	SP 43924 11295	SP 43941 11267	SP 43965 11233
<b>Module number</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
MoRPH River Width (m)	20	20	20	20	20
Bankful width (m)	22	22	22	22	22
Left bank height (m)	1.2	1.2	1.2	1.2	1.2
Right bank height (m)	1.2	1.2	1.2	1.2	1.2
Water width (m)	19	19	19	19	19
Water depth (m)	1	1	1	1	1

## 3.2 South Field River Type Assessment

- 3.2.1 This section of the River Evenlode is river type is River Type F - Straight/sinuuous, coarsest average GP (gravel/pebble), average GP (gravel/pebble).

## 3.3 South Field River Condition Assessment

- 3.3.1 The full results of the RCA for each indicator type are present in **Table 3.10**. The preliminary condition score for sub-reach 1 was 0.822, which gives a final river condition score of Moderate. The preliminary condition score for sub-reach 2 was 1.032, which gives a final river condition score of Moderate. The preliminary condition score for sub-reach 3 was 0.927, which gives a final river condition score of Moderate. The preliminary condition score for sub-reach 4 was 0.717, which gives a final river condition score of Moderate. The preliminary condition score for sub-reach 5 was 0.665, which gives a final river condition score of Moderate. The preliminary condition score for sub-reach 6 was 0.506, which gives a final river condition score of Moderate. The preliminary condition score for sub-reach 7 was 0.506, which gives a final river condition score of Moderate. The preliminary condition score for sub-reach 8 was 0.559, which gives a final river condition score of Moderate. The preliminary condition score for sub-reach 9 was 0.453, which gives a final river condition score of Moderate.



Table 3.10: MoRPH5 data for the South Field section of river.

MoRPH River Width	Indicator Type	South Field Baseline Condition Score								
		1	2	3	4	5	6	7	8	9
Bank Top	B1: Vegetation Structure	1	2	1	1	1	1	1	1	1
	B2: Tree feature richness	1	0	0	0	0	0	0	0	0
	B3: Water related features	0	0	0	0	0	0	0	0	0
	B4: NNIPS cover	0	0	0	0	0	0	0	0	0
	B5: Managed ground cover	-3	-3	-3	-3	-3	-3	-3	-3	-3
Bank Face	C1: Riparian vegetation structure	2	3	2	2	1	1	1	2	1
	C2: Tree feature richness	1	1	0	0	0	0	0	0	0
	C3: Natural bank profile extent	3	3	3	3	3	3	3	3	3
	C4: Natural bank profile richness	1	2	3	1	1	1	1	2	1
	C5: Natural bank material richness	1	1	1	1	1	1	1	1	1
	C6: Bare sediment extent	0	1	0	0	0	0	0	0	0
	C7: Artificial bank profile extent	0	0	0	0	0	0	0	0	0
	C8: Reinforcement extent	0	0	0	0	0	0	0	0	0
	C9: Reinforcement material severity	0	0	0	0	0	0	0	0	0
	C10: NNIPS cover	0	0	0	0	0	0	0	0	0
Channel Water Margin	D1: Aquatic vegetation extent	2	2	3	3	3	2	2	2	2
	D2: Aquatic morphotype richness	1	2	2	2	2	1	1	1	1
	D3: Physical feature extent	1	1	1	0	0	0	0	0	0
	D4: Physical feature richness	1	1	1	0	0	0	0	0	0

## REPORT

MoRPH River Width	Indicator Type	South Field Baseline Condition Score								
		1	2	3	4	5	6	7	8	9
	D5: Artificial features	0	0	0	0	0	0	0	0	0
Channel Bed	E1: Aquatic morphotype richness	3	3	3	3	3	2	2	1	1
	E2: tree related features	0	0	0	0	0	0	0	0	0
	E3: Hydraulic feature richness	0	0	0	0	0	0	0	0	0
	E4: Natural features extent	0	0	0	0	0	0	0	0	0
	E5: Natural features richness	0	0	0	0	0	0	0	0	0
	E6: Material richness	2	2	2	2	2	2	2	2	2
	E7: Siltation	0	0	0	0	0	0	0	0	0
	E8: Reinforcement extent	0	0	0	0	0	0	0	0	0
	E9: Reinforcement severity	0	0	0	0	0	0	0	0	0
	E10: Artificial features severity	0	0	0	0	0	0	0	0	0
	E11: NNIPS extent	0	0	0	0	0	0	0	0	0
	E12: Filamentous algae extent	0	0	0	0	0	0	0	0	0
	<b>Average of Positive Indicators</b>	<b>1.053</b>	<b>1.263</b>	<b>1.158</b>	<b>0.947</b>	<b>0.895</b>	<b>0.737</b>	<b>0.737</b>	<b>0.789</b>	<b>0.684</b>
	<b>Average of Negative Indicators</b>	<b>-0.231</b>	<b>-0.231</b>	<b>-0.231</b>	<b>-0.231</b>	<b>-0.231</b>	<b>-0.231</b>	<b>-0.231</b>	<b>-0.231</b>	<b>-0.231</b>
	<b>Preliminary Condition Score</b>	<b>0.822</b>	<b>1.032</b>	<b>0.927</b>	<b>0.717</b>	<b>0.664</b>	<b>0.506</b>	<b>0.506</b>	<b>0.559</b>	<b>0.453</b>
	<b>Final Condition Score</b>	<b>Moderate</b>	<b>Moderate</b>	<b>Moderate</b>	<b>Moderate</b>	<b>Moderate</b>	<b>Moderate</b>	<b>Moderate</b>	<b>Moderate</b>	<b>Moderate</b>

## 4 CONCLUSIONS

### 4.1 South Field MoRPH 5 Survey

- 4.1.1 Nine MoRPH5 surveys was undertaken on the South Field section of the River Evenlode. The sub-reach has a final condition score of Moderate.
- 4.1.2 The final condition score is derived from the sum of the positive and negative indicators.
- 4.1.3 The highest scoring indicators include those relating to the channel margin vegetation, and the bank face bank profile and tree feature richness. This means that the highest scoring indicators of the survey come from factors relating to the bank face and channel margin vegetation.
- 4.1.4 The lowest scoring indicators include the bank top managed ground cover. Due to the rivers location within farmland, there is a level of man-made factors and bank top management.
- 4.1.5 As previously stated, the sub-reach has a final condition score of Moderate.



## REFERENCES

Modular River Survey (2022). *The MoRPh Survey Technical Reference Manual 2022 version.* [REDACTED]  
[REDACTED]

**Appendix A** South Field  
Module  
Photographs



A photograph from sub-reach 1.



A photograph from sub-reach 2.





A photograph from sub-reach 3.



A photograph from sub-reach 4.





A photograph from sub-reach 5.



A photograph from sub-reach 6.





A photograph from sub-reach 7.



A photograph from sub-reach 8.





A photograph from sub-reach 9.

Appendix B Full Dataset

Recorded: Date	River Name	Reach Name	Subreach Name	Module Number	INDEX 1: N	INDEX 2: H	INDEX 3: N	INDEX 4: C	INDEX 5: A	INDEX 6: A	INDEX 7: E
14/07/2025	Evenlode	EvenlodeBWS	1	1	1	Smooth	2	Gravel-Pet -2.500	Gravel-Pet 0.000		
14/07/2025	Evenlode	EvenlodeBWS	1	2	1	Smooth	2	Gravel-Pet -2.500	Gravel-Pet 0.000		
14/07/2025	Evenlode	EvenlodeBWS	1	3	1	Smooth	2	Gravel-Pet -2.500	Gravel-Pet 0.000		
14/07/2025	Evenlode	EvenlodeBWS	1	4	1	Smooth	2	Gravel-Pet -2.500	Gravel-Pet 0.000		
14/07/2025	Evenlode	EvenlodeBWS	1	5	1	Smooth	2	Gravel-Pet -2.500	Gravel-Pet 0.000		
14/07/2025	Evenlode	EvenlodeBWS	2	5	1	Smooth	2	Gravel-Pet -2.500	Gravel-Pet 0.000		
14/07/2025	Evenlode	EvenlodeBWS	2	4	1	Smooth	2	Gravel-Pet -2.500	Gravel-Pet 0.000		
14/07/2025	Evenlode	EvenlodeBWS	2	3	1	Smooth	2	Gravel-Pet -2.500	Gravel-Pet 0.000		
14/07/2025	Evenlode	EvenlodeBWS	2	2	1	Smooth	2	Gravel-Pet -2.500	Gravel-Pet 0.000		
14/07/2025	Evenlode	EvenlodeBWS	2	1	1	Smooth	2	Gravel-Pet -2.500	Gravel-Pet 0.000		
14/07/2025	Evenlode	EvenlodeBWS	3	5	1	Smooth	2	Gravel-Pet -2.500	Gravel-Pet 0.000		
14/07/2025	Evenlode	EvenlodeBWS	3	4	1	Smooth	2	Gravel-Pet -2.500	Gravel-Pet 0.000		
14/07/2025	Evenlode	EvenlodeBWS	3	3	1	Smooth	2	Gravel-Pet -2.500	Gravel-Pet 0.000		
14/07/2025	Evenlode	EvenlodeBWS	3	2	1	Smooth	2	Gravel-Pet -2.500	Gravel-Pet 0.000		
14/07/2025	Evenlode	EvenlodeBWS	3	1	1	Smooth	2	Gravel-Pet -2.500	Gravel-Pet 0.000		
14/07/2025	Evenlode	EvenlodeBWS	4	5	1	Smooth	2	Gravel-Pet -2.500	Gravel-Pet 0.000		
14/07/2025	Evenlode	EvenlodeBWS	4	4	1	Smooth	2	Gravel-Pet -2.500	Gravel-Pet 0.000		
14/07/2025	Evenlode	EvenlodeBWS	4	3	1	Smooth	2	Gravel-Pet -2.500	Gravel-Pet 0.000		
14/07/2025	Evenlode	EvenlodeBWS	4	2	1	Smooth	2	Gravel-Pet -2.500	Gravel-Pet 0.000		
14/07/2025	Evenlode	EvenlodeBWS	4	1	1	Smooth	2	Gravel-Pet -2.500	Gravel-Pet 0.000		
14/07/2025	Evenlode	EvenlodeBWS	5	5	1	Smooth	2	Gravel-Pet -2.500	Gravel-Pet 0.000		
14/07/2025	Evenlode	EvenlodeBWS	5	4	1	Smooth	2	Gravel-Pet -2.500	Gravel-Pet 0.000		
14/07/2025	Evenlode	EvenlodeBWS	5	3	1	Smooth	2	Gravel-Pet -2.500	Gravel-Pet 0.000		
14/07/2025	Evenlode	EvenlodeBWS	5	2	1	Smooth	2	Gravel-Pet -2.500	Gravel-Pet 0.000		
14/07/2025	Evenlode	EvenlodeBWS	5	1	1	Smooth	2	Gravel-Pet -2.500	Gravel-Pet 0.000		
14/07/2025	Evenlode	EvenlodeBWS	6	1	1	Smooth	2	Gravel-Pet -2.395	Gravel-Pet 0.000		
14/07/2025	Evenlode	EvenlodeBWS	6	2	1	Smooth	2	Gravel-Pet -2.395	Gravel-Pet 0.000		
14/07/2025	Evenlode	EvenlodeBWS	6	3	1	Smooth	2	Gravel-Pet -2.395	Gravel-Pet 0.000		
14/07/2025	Evenlode	EvenlodeBWS	6	4	1	Smooth	2	Gravel-Pet -2.395	Gravel-Pet 0.000		
14/07/2025	Evenlode	EvenlodeBWS	6	5	1	Smooth	2	Gravel-Pet -2.395	Gravel-Pet 0.000		
14/07/2025	Evenlode	EvenlodeBWS	7	1	1	Smooth	2	Gravel-Pet -2.395	Gravel-Pet 0.000		



14/07/2025	Evenlode	EvenlodeBWS 7	2	1	Smooth	2	Gravel-Pet -2.395	Gravel-Pet 0.000
14/07/2025	Evenlode	EvenlodeBWS 7	3	1	Smooth	2	Gravel-Pet -2.395	Gravel-Pet 0.000
14/07/2025	Evenlode	EvenlodeBWS 7	4	1	Smooth	2	Gravel-Pet -2.395	Gravel-Pet 0.000
14/07/2025	Evenlode	EvenlodeBWS 7	5	1	Smooth	2	Gravel-Pet -2.395	Gravel-Pet 0.000
14/07/2025	Evenlode	EvenlodeBWS 8	1	1	Smooth	2	Gravel-Pet -2.395	Gravel-Pet 0.000
14/07/2025	Evenlode	EvenlodeBWS 8	2	1	Smooth	2	Gravel-Pet -2.395	Gravel-Pet 0.000
14/07/2025	Evenlode	EvenlodeBWS 8	3	1	Smooth	2	Gravel-Pet -2.395	Gravel-Pet 0.000
14/07/2025	Evenlode	EvenlodeBWS 8	4	1	Smooth	2	Gravel-Pet -2.395	Gravel-Pet 0.000
14/07/2025	Evenlode	EvenlodeBWS 8	5	1	Smooth	2	Gravel-Pet -2.395	Gravel-Pet 0.000
14/07/2025	Evenlode	EvenlodeBWS 9	1	1	Smooth	2	Gravel-Pet -2.395	Gravel-Pet 0.000
14/07/2025	Evenlode	EvenlodeBWS 9	2	1	Smooth	2	Gravel-Pet -2.395	Gravel-Pet 0.000
14/07/2025	Evenlode	EvenlodeBWS 9	3	1	Smooth	2	Gravel-Pet -2.395	Gravel-Pet 0.000
14/07/2025	Evenlode	EvenlodeBWS 9	4	1	Smooth	2	Gravel-Pet -2.395	Gravel-Pet 0.000
14/07/2025	Evenlode	EvenlodeBWS 9	5	1	Smooth	2	Gravel-Pet -2.395	Gravel-Pet 0.000

INDEX 8: C INDEX 9: N INDEX 10: INDEX 11: INDEX 12: INDEX 13: INDEX 14: Non-native invasive plant extent						
1.250	2	1.667	3.000	6.000	0.000	0.000
1.250	2	1.667	3.000	6.000	0.000	0.000
1.250	2	1.667	3.000	6.000	0.000	0.000
1.250	2	1.667	3.500	6.000	0.000	0.000
1.250	2	2.167	4.500	6.000	0.000	0.000
1.250	2	2.167	3.500	6.000	0.000	0.000
1.250	2	2.167	3.500	6.000	0.000	0.000
1.250	2	2.167	3.500	6.000	0.000	0.000
1.250	2	1.667	4.000	6.000	0.000	0.000
1.250	2	1.667	6.500	6.000	0.000	0.000
1.250	2	1.667	4.500	6.000	0.000	0.000
1.250	2	1.667	4.500	6.000	0.000	0.000
1.250	2	1.667	3.000	6.000	0.000	0.000
1.250	2	1.667	3.500	6.000	0.000	0.000
1.250	2	2.333	3.000	6.000	0.000	0.000
1.250	2	1.667	5.000	6.000	0.000	0.000
1.250	2	1.667	5.000	6.000	0.000	0.000
1.250	2	1.667	5.000	6.000	0.000	0.000
1.250	2	1.667	4.000	6.000	0.000	0.000
1.250	2	1.667	4.000	6.000	0.000	0.000
1.250	2	1.667	3.000	6.000	0.000	0.000
1.250	2	1.667	3.000	6.000	0.000	0.000
1.250	2	1.667	3.000	6.000	0.000	0.000
1.250	2	1.667	3.000	6.000	0.000	0.000
1.250	2	1.667	3.000	6.000	0.000	0.000
1.250	1	1.667	2.000	6.000	0.000	0.000
1.250	1	1.667	2.000	6.000	0.000	0.000
1.250	1	1.667	2.000	6.000	0.000	0.000
1.250	1	1.667	3.000	6.000	0.000	0.000
1.250	1	1.667	2.500	6.000	0.000	0.000
1.250	0	1.667	2.000	6.000	0.000	0.000

[illegible]



Recorded: Date	River Name	Reach Name	Subreach Name	Module Number	Project Name	MoRPh Co	WFD Wate	SurveyType	Riverfly Sit	Riverfly Sit	Module Le
14/07/2025	Evenlode	EvenlodeBWS	1	1	Botley Wes	ELS		Pre-project	FALSE		30
14/07/2025	Evenlode	EvenlodeBWS	1	2	Botley Wes	ELS		Pre-project	FALSE		30
14/07/2025	Evenlode	EvenlodeBWS	1	3	Botley Wes	ELS		Pre-project	FALSE		30
14/07/2025	Evenlode	EvenlodeBWS	1	4	Botley Wes	ELS		Pre-project	FALSE		30
14/07/2025	Evenlode	EvenlodeBWS	1	5	Botley Wes	ELS		Pre-project	FALSE		30
14/07/2025	Evenlode	EvenlodeBWS	2	5	Botley Wes	ELS		Pre-project	FALSE		30
14/07/2025	Evenlode	EvenlodeBWS	2	4	Botley Wes	ELS		Pre-project	FALSE		30
14/07/2025	Evenlode	EvenlodeBWS	2	3	Botley Wes	ELS		Pre-project	FALSE		30
14/07/2025	Evenlode	EvenlodeBWS	2	2	Botley Wes	ELS		Pre-project	FALSE		30
14/07/2025	Evenlode	EvenlodeBWS	2	1	Botley Wes	ELS		Pre-project	FALSE		30
14/07/2025	Evenlode	EvenlodeBWS	3	5	Botley Wes	ELS		Pre-project	FALSE		30
14/07/2025	Evenlode	EvenlodeBWS	3	4	Botley Wes	ELS		Pre-project	FALSE		30
14/07/2025	Evenlode	EvenlodeBWS	3	3	Botley Wes	ELS		Pre-project	FALSE		30
14/07/2025	Evenlode	EvenlodeBWS	3	2	Botley Wes	ELS		Pre-project	FALSE		30
14/07/2025	Evenlode	EvenlodeBWS	3	1	Botley Wes	ELS		Pre-project	FALSE		30
14/07/2025	Evenlode	EvenlodeBWS	4	5	Botley Wes	ELS		Pre-project	FALSE		30
14/07/2025	Evenlode	EvenlodeBWS	4	4	Botley Wes	ELS		Pre-project	FALSE		30
14/07/2025	Evenlode	EvenlodeBWS	4	3	Botley Wes	ELS		Pre-project	FALSE		30
14/07/2025	Evenlode	EvenlodeBWS	4	2	Botley Wes	ELS		Pre-project	FALSE		30
14/07/2025	Evenlode	EvenlodeBWS	4	1	Botley Wes	ELS		Pre-project	FALSE		30
14/07/2025	Evenlode	EvenlodeBWS	5	5	Botley Wes	ELS		Pre-project	FALSE		30
14/07/2025	Evenlode	EvenlodeBWS	5	4	Botley Wes	ELS		Pre-project	FALSE		30
14/07/2025	Evenlode	EvenlodeBWS	5	3	Botley Wes	ELS		Pre-project	FALSE		30
14/07/2025	Evenlode	EvenlodeBWS	5	2	Botley Wes	ELS		Pre-project	FALSE		30
14/07/2025	Evenlode	EvenlodeBWS	5	1	Botley Wes	ELS		Pre-project	FALSE		30
14/07/2025	Evenlode	EvenlodeBWS	6	1	Botley Wes	ELS		Pre-project	FALSE		30
14/07/2025	Evenlode	EvenlodeBWS	6	2	Botley Wes	ELS		Pre-project	FALSE		30
14/07/2025	Evenlode	EvenlodeBWS	6	3	Botley Wes	ELS		Pre-project	FALSE		30
14/07/2025	Evenlode	EvenlodeBWS	6	4	Botley Wes	ELS		Pre-project	FALSE		30
14/07/2025	Evenlode	EvenlodeBWS	6	5	Botley Wes	ELS		Pre-project	FALSE		30
14/07/2025	Evenlode	EvenlodeBWS	7	1	Botley Wes	ELS		Pre-project	FALSE		30

14/07/2025	Evenlode	EvenlodeBWS 7	2	Botley Wes ELS	Pre-project FALSE	30
14/07/2025	Evenlode	EvenlodeBWS 7	3	Botley Wes ELS	Pre-project FALSE	30
14/07/2025	Evenlode	EvenlodeBWS 7	4	Botley Wes ELS	Pre-project FALSE	30
14/07/2025	Evenlode	EvenlodeBWS 7	5	Botley Wes ELS	Pre-project FALSE	30
14/07/2025	Evenlode	EvenlodeBWS 8	1	Botley Wes ELS	Pre-project FALSE	30
14/07/2025	Evenlode	EvenlodeBWS 8	2	Botley Wes ELS	Pre-project FALSE	30
14/07/2025	Evenlode	EvenlodeBWS 8	3	Botley Wes ELS	Pre-project FALSE	30
14/07/2025	Evenlode	EvenlodeBWS 8	4	Botley Wes ELS	Pre-project FALSE	30
14/07/2025	Evenlode	EvenlodeBWS 8	5	Botley Wes ELS	Pre-project FALSE	30
14/07/2025	Evenlode	EvenlodeBWS 9	1	Botley Wes ELS	Pre-project FALSE	30
14/07/2025	Evenlode	EvenlodeBWS 9	2	Botley Wes ELS	Pre-project FALSE	30
14/07/2025	Evenlode	EvenlodeBWS 9	3	Botley Wes ELS	Pre-project FALSE	30
14/07/2025	Evenlode	EvenlodeBWS 9	4	Botley Wes ELS	Pre-project FALSE	30
14/07/2025	Evenlode	EvenlodeBWS 9	5	Botley Wes ELS	Pre-project FALSE	30

Midpoint L	Midpoint L	Midpoint L	Midpoint L	Midpoint L	Survey Bar	Bed Visible	Adverse C	Adverse C	Location o	Location o	Location o	Location o	Location o
51.81837	-1.36286	444015	213496	SP 44014	1Right bank	FALSE	FALSE		51.81837	-1.36286	444015	213496	SP 44014
51.81809	-1.36300	444005	213465	SP 44004	1Right bank	FALSE	FALSE		51.81809	-1.36300	444005	213465	SP 44004
51.81781	-1.36286	444015	213434	SP 44014	1Right bank	FALSE	FALSE		51.81781	-1.36286	444015	213434	SP 44014
51.81770	-1.36233	444052	213422	SP 44051	1Right bank	FALSE	FALSE		51.81770	-1.36233	444052	213422	SP 44051
51.81778	-1.36183	444086	213431	SP 44086	1Right bank	FALSE	FALSE		51.81778	-1.36183	444086	213431	SP 44086
51.81589	-1.36013	444205	213222	SP 44204	1Right bank	FALSE	FALSE		51.81589	-1.36013	444205	213222	SP 44204
51.81619	-1.36042	444185	213256	SP 44185	1Right bank	FALSE	FALSE		51.81619	-1.36042	444185	213256	SP 44185
51.81647	-1.36078	444160	213287	SP 44160	1Right bank	FALSE	FALSE		51.81647	-1.36078	444160	213287	SP 44160
51.81683	-1.36083	444156	213327	SP 44155	1Right bank	FALSE	FALSE		51.81683	-1.36083	444156	213327	SP 44155
51.81714	-1.36097	444146	213361	SP 44145	1Right bank	FALSE	FALSE		51.81714	-1.36097	444146	213361	SP 44145
51.81430	-1.35984	444227	213046	SP 44226	1Right bank	FALSE	FALSE		51.81430	-1.35984	444227	213046	SP 44226
51.81453	-1.35969	444237	213071	SP 44236	1Right bank	FALSE	FALSE		51.81453	-1.35969	444237	213071	SP 44236
51.81483	-1.36000	444215	213105	SP 44215	1Right bank	FALSE	FALSE						SP 44215
51.81514	-1.36025	444198	213139	SP 44197	1Right bank	FALSE	FALSE		51.81514	-1.36025	444198	213139	SP 44197
51.81545	-1.35995	444218	213173	SP 44218	1Right bank	FALSE	FALSE		51.81545	-1.35995	444218	213173	SP 44218
51.81100	-1.36303	444010	212677	SP 44010	1Left bank	FALSE	FALSE		51.81100	-1.36303	444010	212677	SP 44010
51.81131	-1.36288	444020	212711	SP 44019	1Left bank	FALSE	FALSE		51.81131	-1.36288	444020	212711	SP 44019
51.81164	-1.36278	444027	212748	SP 44026	1Left bank	FALSE	FALSE		51.81164	-1.36278	444027	212748	SP 44026
51.81195	-1.36289	444019	212782	SP 44019	1Left bank	FALSE	FALSE		51.81195	-1.36289	444019	212782	SP 44019
51.81220	-1.36291	444017	212810	SP 44016	1Left bank	FALSE	FALSE		51.81219	-1.36293	444016	212809	SP 44016
51.80963	-1.36263	444039	212525	SP 44038	1Left bank	FALSE	FALSE		51.80963	-1.36263	444039	212525	SP 44038
51.80983	-1.36242	444053	212547	SP 44053	1Left bank	FALSE	FALSE		51.80983	-1.36242	444053	212547	SP 44053
51.80975	-1.36186	444092	212538	SP 44091	1Left bank	FALSE	FALSE		51.80975	-1.36186	444092	212538	SP 44091
51.80983	-1.36131	444130	212548	SP 44130	1Left bank	FALSE	FALSE		51.80983	-1.36131	444130	212548	SP 44130
51.80967	-1.36090	444158	212530	SP 44158	1Left bank	FALSE	FALSE		51.80967	-1.36090	444158	212530	SP 44158
51.80716	-1.36645	443778	212248	SP 43778	1Left bank	FALSE	FALSE		51.80716	-1.36645	443778	212248	SP 43778
51.80695	-1.36661	443767	212224	SP 43766	1Left bank	FALSE	FALSE		51.80695	-1.36661	443767	212224	SP 43766
51.80670	-1.36675	443758	212196	SP 43757	1Left bank	FALSE	FALSE		51.80670	-1.36675	443758	212196	SP 43757
51.80647	-1.36647	443777	212171	SP 43777	1Left bank	FALSE	FALSE		51.80647	-1.36647	443777	212171	SP 43777
51.80634	-1.36588	443818	212157	SP 43817	1Left bank	FALSE	FALSE		51.80634	-1.36588	443818	212157	SP 43817
51.80264	-1.36440	443924	211746	SP 43924	1Left bank	FALSE	FALSE		51.80264	-1.36440	443924	211746	SP 43924



51.80236	-1.36442	443923	211715	SP 43922 1	Left bank	FALSE	FALSE	51.80236	-1.36442	443923	211715	SP 43922 1
51.80211	-1.36442	443923	211687	SP 43923 1	Left bank	FALSE	FALSE	51.80211	-1.36442	443923	211687	SP 43923 1
51.80183	-1.36442	443923	211656	SP 43923 1	Left bank	FALSE	FALSE	51.80183	-1.36442	443923	211656	SP 43923 1
51.80159	-1.36447	443920	211629	SP 43920 1	Left bank	FALSE	FALSE	51.80159	-1.36447	443920	211629	SP 43920 1
51.80078	-1.36419	443940	211539	SP 43940 1	Left bank	FALSE	FALSE	51.80078	-1.36419	443940	211539	SP 43940 1
51.80064	-1.36440	443926	211524	SP 43926 1	Left bank	FALSE	FALSE	51.80064	-1.36440	443926	211524	SP 43926 1
51.80050	-1.36477	443900	211508	SP 43900 1	Left bank	FALSE	FALSE	51.80050	-1.36477	443900	211508	SP 43900 1
51.80064	-1.36531	443863	211523	SP 43862 1	Left bank	FALSE	FALSE	51.80064	-1.36531	443863	211523	SP 43862 1
51.80039	-1.36544	443854	211495	SP 43854 1	Left bank	FALSE	FALSE	51.80039	-1.36544	443854	211495	SP 43854 1
51.79933	-1.36486	443895	211378	SP 43895 1	Left bank	FALSE	FALSE	51.79933	-1.36486	443895	211378	SP 43895 1
51.79897	-1.36467	443909	211338	SP 43909 1	Left bank	FALSE	FALSE	51.79897	-1.36467	443909	211338	SP 43909 1
51.79858	-1.36444	443925	211295	SP 43924 1	Left bank	FALSE	FALSE	51.79858	-1.36444	443925	211295	SP 43924 1
51.79833	-1.36420	443942	211267	SP 43941 1	Left bank	FALSE	FALSE	51.79833	-1.36420	443942	211267	SP 43941 1
51.79803	-1.36387	443965	211234	SP 43965 1	Left bank	FALSE	FALSE	51.79803	-1.36387	443965	211234	SP 43965 1

MoRPh River Width	Left Bank I	Right Bank	Bankfull W	Water Wid	Water Dep Notes
13.000	1.400	1.400	15.000	12.500	0.600
12.000	1.200	1.200	14.000	11.000	0.600
12.000	1.200	1.200	14.000	11.000	0.600
12.000	1.200	1.200	14.000	11.000	0.600
13.000	1.500	1.500	15.000	12.000	0.600
13.000	1.500	1.500	15.000	12.000	0.600
13.000	1.500	1.500	15.000	12.000	0.600
13.000	1.500	1.500	15.000	12.000	0.600
14.000	1.500	1.500	16.000	13.000	0.600
12.000	1.800	1.800	13.500	11.000	0.600
11.000	1.600	1.600	13.500	9.500	0.500
11.000	1.400	1.500	13.000	9.000	0.500
11.000	1.400	1.500	13.000	9.000	0.500
12.000	1.400	1.500	14.000	9.000	0.500
12.000	2.000	2.000	11.000	10.000	0.700
10.000	2.200	2.200	10.500	9.000	0.500
10.000	2.200	2.200	10.000	9.000	0.500
10.000	2.200	2.200	11.000	9.000	0.500
10.000	2.200	2.200	11.000	9.000	0.500
12.000	2.500	2.500	11.000	10.000	0.500
12.000	2.500	2.500	11.000	10.000	0.500
12.000	2.500	2.500	11.000	10.000	0.500
12.000	2.500	2.500	11.000	10.000	0.500
12.000	2.500	2.500	11.000	10.000	0.500
17.000	1.000	1.000	19.000	17.500	1.000
17.000	1.000	1.000	19.000	17.500	1.000
17.000	1.000	1.200	19.000	17.500	1.000
17.000	1.000	1.200	19.000	17.500	1.000
18.000	1.000	1.000	19.000	17.500	1.000
18.000	1.000	1.000	19.000	17.500	1.000

18.000	1.000	1.000	19.000	17.500	1.000
18.000	1.000	1.000	19.000	17.500	1.000
18.000	1.000	1.000	19.000	17.500	1.000
18.000	1.000	1.000	19.000	17.500	1.000
17.000	1.400	1.400	20.000	16.000	1.000
19.000	1.200	1.200	22.000	18.000	1.000
19.000	1.200	1.200	22.000	18.000	1.000
19.000	1.200	1.200	22.000	18.000	1.000
19.000	1.200	1.200	21.000	18.000	1.000
20.000	1.200	1.200	22.000	19.000	1.000
20.000	1.200	1.200	22.000	19.000	1.000
20.000	1.200	1.200	22.000	19.000	1.000
20.000	1.200	1.200	22.000	19.000	1.000
20.000	1.200	1.200	22.000	19.000	1.000



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14/07/202	Evenlode	EvenlodeB 7	2	Extensive	Extensive	Arable agri	Arable agri	Absent	Absent	Absent	Absent
14/07/202	Evenlode	EvenlodeB 7	3	Extensive	Extensive	Arable agri	Arable agri	Absent	Absent	Absent	Absent
14/07/202	Evenlode	EvenlodeB 7	4	Extensive	Extensive	Arable agri	Arable agri	Absent	Absent	Absent	Absent
14/07/202	Evenlode	EvenlodeB 7	5	Extensive	Extensive	Arable agri	Arable agri	Absent	Absent	Absent	Absent
14/07/202	Evenlode	EvenlodeB 8	1	Extensive	Extensive	Arable agri	Arable agri	Absent	Absent	Absent	Absent
14/07/202	Evenlode	EvenlodeB 8	2	Extensive	Extensive	Arable agri	Arable agri	Absent	Absent	Absent	Absent
14/07/202	Evenlode	EvenlodeB 8	3	Extensive	Extensive	Arable agri	Arable agri	Absent	Absent	Absent	Absent
14/07/202	Evenlode	EvenlodeB 8	4	Extensive	Extensive	Arable agri	Arable agri	Absent	Absent	Absent	Absent
14/07/202	Evenlode	EvenlodeB 8	5	Extensive	Extensive	Arable agri	Arable agri	Absent	Absent	Absent	Absent
14/07/202	Evenlode	EvenlodeB 9	1	Extensive	Extensive	Arable agri	Arable agri	Absent	Absent	Absent	Absent
14/07/202	Evenlode	EvenlodeB 9	2	Extensive	Extensive	Arable agri	Arable agri	Absent	Absent	Absent	Absent
14/07/202	Evenlode	EvenlodeB 9	3	Extensive	Extensive	Arable agri	Arable agri	Absent	Absent	Absent	Absent
14/07/202	Evenlode	EvenlodeB 9	4	Extensive	Extensive	Arable agri	Arable agri	Absent	Absent	Absent	Absent
14/07/202	Evenlode	EvenlodeB 9	5	Extensive	Extensive	Arable agri	Arable agri	Absent	Absent	Absent	Absent

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14/07/2025	Evenlode	EvenlodeB' 7	2	Extensive	Extensive	Steep (> 4%	Steep (> 4%	Absent	Present	Earth (i.e. r
14/07/2025	Evenlode	EvenlodeB' 7	3	Extensive	Extensive	Steep (> 4%	Steep (> 4%	Absent	Present	Earth (i.e. r
14/07/2025	Evenlode	EvenlodeB' 7	4	Extensive	Extensive	Steep (> 4%	Steep (> 4%	Absent	Present	Earth (i.e. r
14/07/2025	Evenlode	EvenlodeB' 7	5	Extensive	Extensive	Steep (> 4%	Steep (> 4%	Absent	Present	Earth (i.e. r
14/07/2025	Evenlode	EvenlodeB' 8	1	Extensive	Extensive	Gentle (< 4%	Steep (> 4%	Absent	Present	Earth (i.e. r
14/07/2025	Evenlode	EvenlodeB' 8	2	Extensive	Extensive	Gentle (< 4%	Steep (> 4%	Absent	Present	Earth (i.e. r
14/07/2025	Evenlode	EvenlodeB' 8	3	Extensive	Extensive	Gentle (< 4%	Steep (> 4%	Absent	Present	Earth (i.e. r
14/07/2025	Evenlode	EvenlodeB' 8	4	Extensive	Extensive	Steep (> 4%	Gentle (< 4%	Absent	Present	Earth (i.e. r
14/07/2025	Evenlode	EvenlodeB' 8	5	Extensive	Extensive	Steep (> 4%	Gentle (< 4%	Absent	Present	Earth (i.e. r
14/07/2025	Evenlode	EvenlodeB' 9	1	Extensive	Extensive	Steep (> 4%	Steep (> 4%	Absent	Present	Earth (i.e. r
14/07/2025	Evenlode	EvenlodeB' 9	2	Extensive	Extensive	Steep (> 4%	Steep (> 4%	Absent	Present	Earth (i.e. r
14/07/2025	Evenlode	EvenlodeB' 9	3	Extensive	Extensive	Steep (> 4%	Steep (> 4%	Absent	Present	Earth (i.e. r
14/07/2025	Evenlode	EvenlodeB' 9	4	Extensive	Extensive	Steep (> 4%	Steep (> 4%	Absent	Present	Earth (i.e. r
14/07/2025	Evenlode	EvenlodeB' 9	5	Extensive	Extensive	Steep (> 4%	Steep (> 4%	Absent	Present	Earth (i.e. r

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14/07/202	Evennode	EvennodeB 7	2	Absent	Absent	Absent	Extensive	Present	Absent	Absent	Absent	Absent	Absent
14/07/202	Evennode	EvennodeB 7	3	Absent	Absent	Absent	Extensive	Present	Absent	Absent	Absent	Absent	Absent
14/07/202	Evennode	EvennodeB 7	4	Absent	Absent	Absent	Extensive	Present	Absent	Absent	Absent	Absent	Absent
14/07/202	Evennode	EvennodeB 7	5	Absent	Absent	Absent	Extensive	Present	Absent	Absent	Absent	Absent	Absent
14/07/202	Evennode	EvennodeB 8	1	Absent	Absent	Absent	Extensive	Present	Absent	Absent	Absent	Absent	Absent
14/07/202	Evennode	EvennodeB 8	2	Absent	Absent	Absent	Extensive	Present	Absent	Absent	Absent	Absent	Absent
14/07/202	Evennode	EvennodeB 8	3	Absent	Absent	Absent	Extensive	Present	Absent	Absent	Absent	Absent	Absent
14/07/202	Evennode	EvennodeB 8	4	Absent	Absent	Absent	Extensive	Present	Absent	Absent	Absent	Absent	Absent
14/07/202	Evennode	EvennodeB 8	5	Absent	Absent	Absent	Extensive	Present	Absent	Absent	Absent	Absent	Absent
14/07/202	Evennode	EvennodeB 9	1	Absent	Absent	Absent	Extensive	Present	Absent	Absent	Absent	Absent	Absent
14/07/202	Evennode	EvennodeB 9	2	Absent	Absent	Absent	Extensive	Present	Absent	Absent	Absent	Absent	Absent
14/07/202	Evennode	EvennodeB 9	3	Absent	Absent	Absent	Extensive	Present	Absent	Absent	Absent	Absent	Absent
14/07/202	Evennode	EvennodeB 9	4	Absent	Absent	Absent	Extensive	Present	Absent	Absent	Absent	Absent	Absent
14/07/202	Evennode	EvennodeB 9	5	Absent	Absent	Absent	Extensive	Present	Absent	Absent	Absent	Absent	Absent

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<b>ngr</b>	<b>riverName</b>	<b>reachName</b>	<b>subreachName</b>	<b>projectName</b>	<b>projectCode</b>	<b>surveyType</b>	<b>scenarioName</b>	<b>moduleNu</b>
SP 44029 13429	Evenlode	Evenlode, EvenlodeBWS	Evenlode, EvenlodeBWS, 1	Botley West	ELS	pre-project		1 to 5
SP 44164 13281	Evenlode	Evenlode, EvenlodeBWS	Evenlode, EvenlodeBWS, 2	Botley West	ELS	pre-project		1 to 5
SP 44212 13109	Evenlode	Evenlode, EvenlodeBWS	Evenlode, EvenlodeBWS, 3	Botley West	ELS	pre-project		1 to 5
SP 44025 12742	Evenlode	Evenlode, EvenlodeBWS	Evenlode, EvenlodeBWS, 4	Botley West	ELS	pre-project		1 to 5
SP 44096 12539	Evenlode	Evenlode, EvenlodeBWS	Evenlode, EvenlodeBWS, 5	Botley West	ELS	pre-project		1 to 5
SP 43768 12181	Evenlode	Evenlode, EvenlodeBWS	Evenlode, EvenlodeBWS, 6	Botley West	ELS	pre-project		1 to 5
SP 43923 11687	Evenlode	Evenlode, EvenlodeBWS	Evenlode, EvenlodeBWS, 7	Botley West	ELS	pre-project		1 to 5
SP 43893 11510	Evenlode	Evenlode, EvenlodeBWS	Evenlode, EvenlodeBWS, 8	Botley West	ELS	pre-project		1 to 5
SP 43923 11298	Evenlode	Evenlode, EvenlodeBWS	Evenlode, EvenlodeBWS, 9	Botley West	ELS	pre-project		1 to 5



preliminaryConditionScore	riverShape	averageWidth	PositiveIndexAverage	NegativeIndexAverage	A6	A7	A8	B1	B2
0.822	6.5263157	12.4	1.053	-0.231	FALSE	GP	GP	1	1
1.032	6.285714	13.2	1.263	-0.231	FALSE	GP	GP	2	0
0.927	5.5882354	11.4	1.158	-0.231	FALSE	GP	GP	1	0
0.717	3.851852	10.4	0.947	-0.231	FALSE	GP	GP	1	0
0.664	4	12	0.895	-0.231	FALSE	GP	GP	1	0
0.506	8.6	17.2	0.737	-0.231	FALSE	GP	GP	1	0
0.506	9	18	0.737	-0.231	FALSE	GP	GP	1	0
0.559	8.303572	18.6	0.789	-0.231	FALSE	GP	GP	1	0
0.453	9.090909	20	0.684	-0.231	FALSE	GP	GP	1	0

B3	B4	B5	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	D1	D2	
	0	0	-3	2	1	3	1	1	0	0	0	0	0	2	1
	0	0	-3	3	1	3	2	1	1	0	0	0	0	2	2
	0	0	-3	2	0	3	3	1	0	0	0	0	0	3	2
	0	0	-3	2	0	3	1	1	0	0	0	0	0	3	2
	0	0	-3	1	0	3	1	1	0	0	0	0	0	3	2
	0	0	-3	1	0	3	1	1	0	0	0	0	0	2	1
	0	0	-3	1	0	3	1	1	0	0	0	0	0	2	1
	0	0	-3	2	0	3	2	1	0	0	0	0	0	2	1
	0	0	-3	1	0	3	1	1	0	0	0	0	0	2	1

D3	D4	D5	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	E12	
	1	1	0	3	0	0	0	0	2	0	0	0	0	0	0
	1	1	0	3	0	0	0	0	2	0	0	0	0	0	0
	1	1	0	3	0	0	0	0	2	0	0	0	0	0	0
	0	0	0	3	0	0	0	0	2	0	0	0	0	0	0
	0	0	0	3	0	0	0	0	2	0	0	0	0	0	0
	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0
	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0
	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0
	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0

ngr	riverName	reachName	subreachName	moduleNumber	projectName	projectCode	waterf	surveyType	index1	index2	index3
SP 44004	1 Evenlode	Evenlode, I	Evenlode, EvenlodeBWS, 1	2	Botley West	ELS		pre-project	1	SM	2
SP 44014	1 Evenlode	Evenlode, I	Evenlode, EvenlodeBWS, 1	3	Botley West	ELS		pre-project	1	SM	2
SP 44051	1 Evenlode	Evenlode, I	Evenlode, EvenlodeBWS, 1	4	Botley West	ELS		pre-project	1	SM	2
SP 44086	1 Evenlode	Evenlode, I	Evenlode, EvenlodeBWS, 1	5	Botley West	ELS		pre-project	1	SM	2
SP 44014	1 Evenlode	Evenlode, I	Evenlode, EvenlodeBWS, 1	1	Botley West	ELS		pre-project	1	SM	2
SP 44160	1 Evenlode	Evenlode, I	Evenlode, EvenlodeBWS, 2	3	Botley West	ELS		pre-project	1	SM	2
SP 44155	1 Evenlode	Evenlode, I	Evenlode, EvenlodeBWS, 2	2	Botley West	ELS		pre-project	1	SM	2
SP 44145	1 Evenlode	Evenlode, I	Evenlode, EvenlodeBWS, 2	1	Botley West	ELS		pre-project	1	SM	2
SP 44185	1 Evenlode	Evenlode, I	Evenlode, EvenlodeBWS, 2	4	Botley West	ELS		pre-project	1	SM	2
SP 44204	1 Evenlode	Evenlode, I	Evenlode, EvenlodeBWS, 2	5	Botley West	ELS		pre-project	1	SM	2
SP 44218	1 Evenlode	Evenlode, I	Evenlode, EvenlodeBWS, 3	1	Botley West	ELS		pre-project	1	SM	2
SP 44197	1 Evenlode	Evenlode, I	Evenlode, EvenlodeBWS, 3	2	Botley West	ELS		pre-project	1	SM	2
SP 44215	1 Evenlode	Evenlode, I	Evenlode, EvenlodeBWS, 3	3	Botley West	ELS		pre-project	1	SM	2
SP 44236	1 Evenlode	Evenlode, I	Evenlode, EvenlodeBWS, 3	4	Botley West	ELS		pre-project	1	SM	2
SP 44226	1 Evenlode	Evenlode, I	Evenlode, EvenlodeBWS, 3	5	Botley West	ELS		pre-project	1	SM	2
SP 44019	1 Evenlode	Evenlode, I	Evenlode, EvenlodeBWS, 4	2	Botley West	ELS		pre-project	1	SM	2
SP 44010	1 Evenlode	Evenlode, I	Evenlode, EvenlodeBWS, 4	5	Botley West	ELS		pre-project	1	SM	2
SP 44016	1 Evenlode	Evenlode, I	Evenlode, EvenlodeBWS, 4	1	Botley West	ELS		pre-project	1	SM	2
SP 44026	1 Evenlode	Evenlode, I	Evenlode, EvenlodeBWS, 4	3	Botley West	ELS		pre-project	1	SM	2
SP 44019	1 Evenlode	Evenlode, I	Evenlode, EvenlodeBWS, 4	4	Botley West	ELS		pre-project	1	SM	2
SP 44130	1 Evenlode	Evenlode, I	Evenlode, EvenlodeBWS, 5	2	Botley West	ELS		pre-project	1	SM	2
SP 44091	1 Evenlode	Evenlode, I	Evenlode, EvenlodeBWS, 5	3	Botley West	ELS		pre-project	1	SM	2
SP 44038	1 Evenlode	Evenlode, I	Evenlode, EvenlodeBWS, 5	5	Botley West	ELS		pre-project	1	SM	2
SP 44053	1 Evenlode	Evenlode, I	Evenlode, EvenlodeBWS, 5	4	Botley West	ELS		pre-project	1	SM	2
SP 44158	1 Evenlode	Evenlode, I	Evenlode, EvenlodeBWS, 5	1	Botley West	ELS		pre-project	1	SM	2
SP 43817	1 Evenlode	Evenlode, I	Evenlode, EvenlodeBWS, 6	5	Botley West	ELS		pre-project	1	SM	2
SP 43757	1 Evenlode	Evenlode, I	Evenlode, EvenlodeBWS, 6	3	Botley West	ELS		pre-project	1	SM	2
SP 43777	1 Evenlode	Evenlode, I	Evenlode, EvenlodeBWS, 6	4	Botley West	ELS		pre-project	1	SM	2
SP 43766	1 Evenlode	Evenlode, I	Evenlode, EvenlodeBWS, 6	2	Botley West	ELS		pre-project	1	SM	2
SP 43778	1 Evenlode	Evenlode, I	Evenlode, EvenlodeBWS, 6	1	Botley West	ELS		pre-project	1	SM	2
SP 43923	1 Evenlode	Evenlode, I	Evenlode, EvenlodeBWS, 7	4	Botley West	ELS		pre-project	1	SM	2



SP 43922	1	Evenlode	Evenlode, I Evenlode, EvenlodeBWS, 7	2	Botley West	ELS	pre-project	1	SM	2
SP 43924	1	Evenlode	Evenlode, I Evenlode, EvenlodeBWS, 7	1	Botley West	ELS	pre-project	1	SM	2
SP 43923	1	Evenlode	Evenlode, I Evenlode, EvenlodeBWS, 7	3	Botley West	ELS	pre-project	1	SM	2
SP 43920	1	Evenlode	Evenlode, I Evenlode, EvenlodeBWS, 7	5	Botley West	ELS	pre-project	1	SM	2
SP 43854	1	Evenlode	Evenlode, I Evenlode, EvenlodeBWS, 8	5	Botley West	ELS	pre-project	1	SM	2
SP 43862	1	Evenlode	Evenlode, I Evenlode, EvenlodeBWS, 8	4	Botley West	ELS	pre-project	1	SM	2
SP 43900	1	Evenlode	Evenlode, I Evenlode, EvenlodeBWS, 8	3	Botley West	ELS	pre-project	1	SM	2
SP 43926	1	Evenlode	Evenlode, I Evenlode, EvenlodeBWS, 8	2	Botley West	ELS	pre-project	1	SM	2
SP 43940	1	Evenlode	Evenlode, I Evenlode, EvenlodeBWS, 8	1	Botley West	ELS	pre-project	1	SM	2
SP 43965	1	Evenlode	Evenlode, I Evenlode, EvenlodeBWS, 9	5	Botley West	ELS	pre-project	1	SM	2
SP 43941	1	Evenlode	Evenlode, I Evenlode, EvenlodeBWS, 9	4	Botley West	ELS	pre-project	1	SM	2
SP 43895	1	Evenlode	Evenlode, I Evenlode, EvenlodeBWS, 9	1	Botley West	ELS	pre-project	1	SM	2
SP 43924	1	Evenlode	Evenlode, I Evenlode, EvenlodeBWS, 9	3	Botley West	ELS	pre-project	1	SM	2
SP 43909	1	Evenlode	Evenlode, I Evenlode, EvenlodeBWS, 9	2	Botley West	ELS	pre-project	1	SM	2

index4	index5	index6	index7	index8	index9	index10	index11	index12	index13	index14	himalayan	japanese	K giant	Hogw floating	Pei
GP	-2.5	GP	0	1.25	2	1.666667	3	6	0	0 A	A	A	A		
GP	-2.5	GP	0	1.25	2	1.666667	3	6	0	0 A	A	A	A		
GP	-2.5	GP	0	1.25	2	1.666667	3.5	6	0	0 A	A	A	A		
GP	-2.5	GP	0	1.25	2	2.166667	4.5	6	0	0 A	A	A	A		
GP	-2.5	GP	0	1.25	2	1.666667	3	6	0	0 A	A	A	A		
GP	-2.5	GP	0	1.25	2	2.166667	3.5	6	0	0 A	A	A	A		
GP	-2.5	GP	0	1.25	2	1.666667	4	6	0	0 A	A	A	A		
GP	-2.5	GP	0	1.25	2	1.666667	6.5	6	0	0 A	A	A	A		
GP	-2.5	GP	0	1.25	2	2.166667	3.5	6	0	0 A	A	A	A		
GP	-2.5	GP	0	1.25	2	2.166667	3.5	6	0	0 A	A	A	A		
GP	-2.5	GP	0	1.25	2	2.333333	3	6	0	0 A	A	A	A		
GP	-2.5	GP	0	1.25	2	1.666667	3.5	6	0	0 A	A	A	A		
GP	-2.5	GP	0	1.25	2	1.666667	3	6	0	0 A	A	A	A		
GP	-2.5	GP	0	1.25	2	1.666667	4.5	6	0	0 A	A	A	A		
GP	-2.5	GP	0	1.25	2	1.666667	4.5	6	0	0 A	A	A	A		
GP	-2.5	GP	0	1.25	2	1.666667	4	6	0	0 A	A	A	A		
GP	-2.5	GP	0	1.25	2	1.666667	5	6	0	0 A	A	A	A		
GP	-2.5	GP	0	1.25	2	1.666667	4	6	0	0 A	A	A	A		
GP	-2.5	GP	0	1.25	2	1.666667	5	6	0	0 A	A	A	A		
GP	-2.5	GP	0	1.25	2	1.666667	5	6	0	0 A	A	A	A		
GP	-2.5	GP	0	1.25	2	1.666667	3	6	0	0 A	A	A	A		
GP	-2.5	GP	0	1.25	2	1.666667	3	6	0	0 A	A	A	A		
GP	-2.5	GP	0	1.25	2	1.666667	3	6	0	0 A	A	A	A		
GP	-2.5	GP	0	1.25	2	1.666667	3	6	0	0 A	A	A	A		
GP	-2.5	GP	0	1.25	2	1.666667	3	6	0	0 A	A	A	A		
GP	-2.5	GP	0	1.25	2	1.666667	3	6	0	0 A	A	A	A		
GP	-2.5	GP	0	1.25	2	1.666667	3	6	0	0 A	A	A	A		
GP	-2.39535	GP	0	1.25	1	1.666667	2.5	6	0	0 A	A	A	A		
GP	-2.39535	GP	0	1.25	1	1.666667	2	6	0	0 A	A	A	A		
GP	-2.39535	GP	0	1.25	1	1.666667	3	6	0	0 A	A	A	A		
GP	-2.39535	GP	0	1.25	1	1.666667	2	6	0	0 A	A	A	A		
GP	-2.39535	GP	0	1.25	1	1.666667	2	6	0	0 A	A	A	A		
GP	-2.39535	GP	0	1.25	1	1.666667	2	6	0	0 A	A	A	A		

[illegible]

nnywort



ngr	riverName	reachName	projectName	projectCo	wfdWaterI	riverCateg	a1	a2	a3	a4	a5	a6
SP 44029	1 Evenlode	Evenlode, EvenlodeBWS	Botley West	ELS		Other	1	0.962963		1 Confined	0.00963	FALSE
SP 44164	1 Evenlode	Evenlode, EvenlodeBWS	Botley West	ELS		Other	1	0.962963		1 Confined	0.00963	FALSE
SP 44212	1 Evenlode	Evenlode, EvenlodeBWS	Botley West	ELS		Other	1	0.962963		1 Confined	0.00963	FALSE
SP 44025	1 Evenlode	Evenlode, EvenlodeBWS	Botley West	ELS		Other	1	0.962963		1 Confined	0.00963	FALSE
SP 44096	1 Evenlode	Evenlode, EvenlodeBWS	Botley West	ELS		Other	1	0.962963		1 Confined	0.00963	FALSE
SP 43768	1 Evenlode	Evenlode, EvenlodeBWS	Botley West	ELS		Other	1	0.962963		1 Confined	0.00963	FALSE
SP 43923	1 Evenlode	Evenlode, EvenlodeBWS	Botley West	ELS		Other	1	0.962963		1 Confined	0.00963	FALSE
SP 43893	1 Evenlode	Evenlode, EvenlodeBWS	Botley West	ELS		Other	1	0.962963		1 Confined	0.00963	FALSE
SP 43923	1 Evenlode	Evenlode, EvenlodeBWS	Botley West	ELS		Other	1	0.962963		1 Confined	0.00963	FALSE

a7	a8	calculated	overridder	finalRiver1	morph5RiverName	morph5ReachName	morph5SubreachName	morph5ModuleNumbers
GP	GP	F	F	Evenlode	Evenlode, EvenlodeBWS	Evenlode, EvenlodeBWS, 1	1 to 5	
GP	GP	F	F	Evenlode	Evenlode, EvenlodeBWS	Evenlode, EvenlodeBWS, 2	1 to 5	
GP	GP	F	F	Evenlode	Evenlode, EvenlodeBWS	Evenlode, EvenlodeBWS, 3	1 to 5	
GP	GP	F	F	Evenlode	Evenlode, EvenlodeBWS	Evenlode, EvenlodeBWS, 4	1 to 5	
GP	GP	F	F	Evenlode	Evenlode, EvenlodeBWS	Evenlode, EvenlodeBWS, 5	1 to 5	
GP	GP	F	F	Evenlode	Evenlode, EvenlodeBWS	Evenlode, EvenlodeBWS, 6	1 to 5	
GP	GP	F	F	Evenlode	Evenlode, EvenlodeBWS	Evenlode, EvenlodeBWS, 7	1 to 5	
GP	GP	F	F	Evenlode	Evenlode, EvenlodeBWS	Evenlode, EvenlodeBWS, 8	1 to 5	
GP	GP	F	F	Evenlode	Evenlode, EvenlodeBWS	Evenlode, EvenlodeBWS, 9	1 to 5	

morph5SurveyType	morph5ScenarioName	morph5RiverShape	morph5AverageWidth	preliminar	finalConditionClass
pre-project		6.5263157	12.4	0.821862	Moderate
pre-project		6.285714	13.2	1.032389	Moderate
pre-project		5.5882354	11.4	0.927126	Moderate
pre-project		3.851852	10.4	0.716599	Moderate
pre-project		4	12	0.663968	Moderate
pre-project		8.6	17.2	0.506073	Moderate
pre-project		9	18	0.506073	Moderate
pre-project		8.303572	18.6	0.558704	Moderate
pre-project		9.090909	20	0.453441	Moderate

**Botley West Statutory Biodiversity Metric**