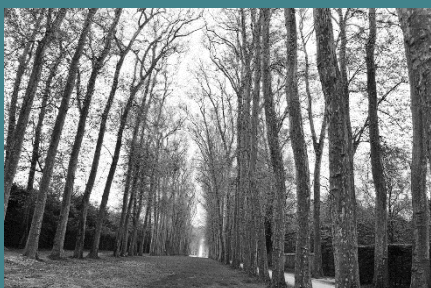


FPCR | environment  
& design



# Ecological Impact Assessment and Biodiversity Net Gain

Client

**Indurent Management Ltd**

Project

**Heywood Development Primary Substation**

Date

**May 2025**

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## **1.0 NON-TECHNICAL SUMMARY**

- 1.1 An Ecological Impact Assessment (EclA) was undertaken following published guidelines on the likely effects upon biodiversity as a result of proposals for a Substation within Heywood Distribution Park.
- 1.2 The assessment draws from a desk study covering the site and surrounding area, as well as a UKHab survey and preliminary protected species survey of the Site and surrounding area which was carried out in 2024.
- 1.3 The Site comprised a section of a wider modified grassland compartment.
- 1.4 The assessment identified no Important Ecological Features which could be affected by proposals or warrant consideration due to the legal protection afforded them.
- 1.5 Proposals will require the loss of the entirety of the modified grassland recorded within the Site boundary. The Biodiversity Net Gain Calculations have determined that this will result in a loss of 0.17 Biodiversity Units. Therefore 0.18 units will be required to deliver a 10% gain for the Site, which can be achieved via habitat enhancement within the wider Heywood Distribution Park or by the purchasing of offsite units from a third party supplier.

## 2.0 INTRODUCTION

- 2.1 This Ecological Impact Assessment and Biodiversity Net Gain Report has been prepared by FPCR Environment and Design Limited on behalf of Indurent Management Ltd for a planning application at Heywood Distribution Park, Pilsworth Road, Heywood, Rochdale
- 2.2 This EclA has been prepared with reference to the Chartered Institute of Ecology and Environmental Management's (CIEEM) EclA Guidelines. In line with this guidance, the EclA describes the assessment methodology; establishes the baseline conditions, currently existing at the Site and surroundings; the likely significant environmental effects associated with the proposed development; the mitigation measures required to prevent or reduce any impacts; the likely residual effects after these measures have been employed; the compensation measures required to offset any residual effects; and identifies opportunities available within the proposals to deliver ecological enhancement.
- 2.3 The report goes on to provide an illustrative Biodiversity Net Gain Calculation in order to demonstrate that the delivery of a 10% net gain is feasible for the project.

### Site Context

- 2.4 The Site is located within Heywood Distribution Park, in the Metropolitan Borough of Rochdale (Central grid reference: SD 840 093). See Figure 1 for the Site location.
- 2.5 The Site is approximately 0.08 hectares in extent and features regularly managed grassland. Located offsite to the south was a balancing pond, fringed by woodland. To the south-west is a rectangular drainage feature which featured standing water set well below ground level and fenced around the margins.

### 3.0 LEGISLATION

3.1 The national policy and legislation most relevant to the Site in relation to the EclA are:

- Environment Act 2021;
- Conservation of Habitats and Species Regulations 2017 (as amended) and Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (The Habitat Regulations) relevant here in relation to Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and European Protected Species (EPS);
- The Wildlife and Countryside Act 1981 (as amended) (WCA) relevant here in relation to Sites of Special Scientific Interest (SSSIs) and WCA protected species;
- Protection of Badgers Act 1992;
- Natural Environmental and Rural Communities (NERC) Act 2006 in relation to various priority species and habitats;
- Hedgerow Regulations 1997 made under Section 97 of the Environment Act 1995;
- National Planning Policy Framework (NPPF) (2024<sup>1</sup>);
- Local Planning Policy contained within the Rochdale Borough Council Local Plan and associated Supplementary Planning Documents (SPD) and within the Places for Everyone Joint Development Plan 2022 to 2039 (2024).

#### **The Environment Act**

- 3.2 In England, biodiversity net gain is now required under statutory frameworks introduced by Schedule 7A of the Town and Country Planning Act 1990 (inserted by the Environment Act 2021). Under this framework, every grant of planning permission will be deemed to have been granted subject to a general biodiversity gain condition. This will require an objective for developments to deliver at least a 10% increase in biodiversity value relative to the pre-development biodiversity value of all onsite habitats.
- 3.3 This is a pre-commencement condition requiring the provision of a Biodiversity Gain Plan to be submitted and approved before works can be commenced, but after full planning permission, or reserved matters has been granted.
- 3.4 In principle, the grant of planning permission is not within the scope of BNG, however it is important to consider as part of the consenting body's decision-making process how a scheme will be able to demonstrate BNG after permission is granted. Therefore, this biodiversity net gain report presents the results of a Biodiversity Net Gain assessment that has been completed in order to demonstrate how the proposals will be compliant with the requirements of the Environment Act.

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<sup>1</sup> Ministry of Housing, Communities and Local Government (2024) National Planning Policy Framework, December 2024.

## Biodiversity Net Gain Hierarchy

- 3.5 The statutory framework allows for the 10% biodiversity gain to be delivered through onsite biodiversity gains, registered offsite biodiversity gains or statutory biodiversity credits. However, as set out in Articles 37A and 37D of the Town and Country Planning (Development Management Procedure) (England) Order 2015, development must consider the biodiversity net gain hierarchy when designing scheme proposals. This sets out hierarchy of actions as follows:
- First, for all medium, high and very high distinctiveness habitats, the avoidance of any adverse effects.
  - Where these can't be avoided, mitigating any adverse effects on medium, high and very high distinctiveness habitats.
  - Then, for all onsite habitats (including low distinctiveness), adverse effects should be compensated by in accordance with the following hierarchy:
    - Prioritising the enhancement of existing habitats; then
    - Creation of onsite habitats;
    - Allocation of registered offsite unit gains; then
    - Purchase of biodiversity credits.
- 3.6 Proposals must demonstrate how the biodiversity hierarchy has been applied to or provide the reasons for any deviation. This biodiversity net gain hierarchy is distinct from the mitigation hierarchy set out in paragraph 193(a) of the National Planning Policy Framework (2024) which is addressed in the accompanying Ecological Impact Assessment where relevant.

### Exemptions

- 3.7 There are a number of circumstances where a Site will be exempt from biodiversity net gain including:
- Development impacting habitat of an area below a 'de minimis' threshold of 25m<sup>2</sup>, or 5m for linear habitats.
  - Householder applications (as defined within article 2(1) of the Town and Country Planning (Development Management Procedure) (England) Order 2015).
  - Self-build and custom-build applications (no more than 9 dwellings, site no larger than 0.5 ha and consists exclusively of self-build/ custom dwellings).
  - Biodiversity gain sites (where habitats are being enhanced for wildlife only).
  - Previously developed land with a baseline score of zero (exempted via the metric).
- 3.8 The proposals for the Site do not fall under any of the above criteria and this report has therefore been prepared in order to aid the Planning Authority in their decision-making process.

## 4.0 METHODOLOGY

### Assessment Approach

- 4.1 This assessment has been prepared with reference to The Guidelines for Ecological Impact Assessment (EclA) in the United Kingdom published in 2018 by CIEEM.

- 4.2 Baseline information and potential impacts have been quantified as far as practical to inform the assessment, supported by professional judgement and experience as appropriate. Where uncertainties exist, a precautionary approach has been adopted and a 'worse case' scenario approach assumed for the purposes of assessing impacts and recommending mitigation.
- 4.3 In summary, the process involves:
- Establish Baseline – this is based on desk study and field surveys which describes the existing and potential Important Ecological Features (IEFs) within the zones of influence specified.
  - Determine the Scale of Importance of Ecological Features - importance is determined using geographical frames of reference. This assessment is based on a variety of factors, including statutory protection, statutory designation, conservation status, abundance and rarity. Features with a value of Local or above were considered to represent an 'Important Ecological Feature' (IEF). Those features not meeting the criteria for IEF's were classified as having either lower than local level (immediate zone of influence) or negligible ecological importance.
    - International and European;
    - National;
    - Regional;
    - County (Greater Manchester); and
    - Local (Rochdale).
  - Assess Significant Ecological Effects –based on the importance of the ecological feature, magnitude of the effect and sensitivity of the features considered. This is description-based rather than applying a matrix which considers construction and operation effects only where relevant. The assessment assumes the proposed layout, intrinsic mitigation and routine ecological mitigation normally conditioned, and these are outlined clearly.
  - Mitigation – This will be based on the mitigation hierarchy – avoidance, mitigation, compensation and enhancement. Any further mitigation measures required will be outlined to ensure residual effects are lowered to a level considered acceptable. Enhancements will seek biodiversity net gain in line with the NPPF and Local Plan Policy - Core Strategy Policy CS17. Monitoring will be considered where applicable.
  - Future Baseline and Residual Effects – final conclusionary statements for the short, medium and long term.
- 4.4 This EclA considers statutory and non-statutory protected sites, habitats including hedgerows, EPS and WCA protected species with focus on badgers, bats, breeding and wintering birds and great crested newts, and consideration has been given to NERC Section 41 species, any rare or notable species or habitats and any non-native plants listed under WCA Schedule 9.
- 4.5 The main source of information for this assessment are:
- Biological records obtained from the Local Records Centre.
  - Online sources of ecological data.
  - Review of legislation and land-use policies.

- An initial habitat and preliminary protected species survey conducted in 2022, with an update survey and detailed botanical survey in 2024.

### Field Survey - Habitats

- 4.6 The Site was first surveyed on 17<sup>th</sup> May 2022 by a suitably experienced ecologist (Botanical Society of Britain and Ireland's (BSBI) Field Identification Skills Competency (FISC) Level 5). An Update survey was undertaken on the 30<sup>th</sup> May 2024, during which detailed botanical data was collected for the grassland.
- 4.7 Baseline habitats were identified and mapped by broadly following the UKHab Classification system, with minor departures from this methodology to allow for compatibility with the Defra metric where applicable. The survey comprised a walkover of the site, mapping the principal habitat types present and identifying a representative species list for each habitat along with additional notes regarding the current condition as per the Statutory Metric User Guide.
- 4.8 Vascular plant nomenclature followed Stace (2019)<sup>2</sup> and assessment of abundance for plants was made using the DAFOR scale:
- D - Dominant
  - A - Abundant
  - F - Frequent
  - O - Occasional
  - R - Rare
  - L - Locally (e.g. LF = Locally Frequent or LA = Locally Abundant)
- 4.9 This was supplemented by the collection of detailed botanical information to inform the condition assessments of habitats. For the grassland habitats, this involved recording the plant species present within a series of 1m x 1m quadrats, which were used to inform the habitat classification selected and the corresponding condition assessment undertaken. Quadrats were placed within what were visually considered to be stands of homogenous vegetation where the vegetation was considered to potentially be representative of a distinct community type. Five quadrats were collected within the grassland.
- 4.10 Where species are referred to in the text, the common name for the species is used, with the associated scientific name provided within the botanical species lists for the Site in Appendix A.

### Habitat Condition Assessments

- 4.11 Defra has developed a metric based on evaluating each individual habitat's value within the Statutory Biodiversity Metric. All habitats/habitat compartments on site have been assessed using the technical guidance document provided by Defra for use with their biodiversity metric. The guidance provides a list of criteria for a range of broad habitat types which are used to determine whether habitat fall into a 'poor', 'fairly poor', 'moderate', 'fairly good' or 'good' condition score.

<sup>2</sup> Stace, C (2019) New Flora of the British Isles. 4th edn. C&M Floristics

## Field Survey - Fauna

4.12 During the UKHab survey, observations, identification and signs of any species protected under the following list of Acts and Regulations (collectively referred to herein as 'Protected Species') were recorded:

- Schedule 1 of the Wildlife and Countryside Act 1981 (as amended);
- The Protection of Badgers Act 1992.
- The Conservation of Habitats and Species Regulations 2017 (as amended).
- Consideration has also been given to the existence and use of the Site by other fauna listed as one or more of the following (collectively referred to herein as 'Notable Species'):
  - Species of Principal Importance (SPI) for the conservation of biodiversity in England on the Natural Environment and Rural Communities (NERC) Act, Section 41 (S41).
  - Species listed on any Local Biodiversity Action Plan (LBAP) initiatives.
  - Red Data Book (RDB) species.

4.13 The likely presence or absence of protected and notable species has been assessed by a number of factors including the availability or suitable habitat, connectivity, known species distribution, local records and an understanding of the ecology and habitats requirement of the individual species assessed.

### Limitations

4.14 The UKHab map (Figure 2) has been reproduced from detailed field notes and informed by aerial imagery, OS mapping and Site maps provided by the client. The accuracy of this figure is therefore ultimately guided by the accuracy of these sources and can only be relied upon to a certain degree of resolution.

4.15 There are no other limitations specific to this assessment.

## 5.0 ECOLOGICAL BASELINE

### Designated Sites

- 5.1 Rochdale Canal, which is designated at an international level as a Special Area of Conservation (SAC) is located 4.1km to the east of the Site and is designated for its population of the annex II species floating water-plantain *Luronium natans*. Given the distance of the Site and the SAC no direct or indirect impact pathways are considered likely, and this important ecological feature is scoped out of further assessment.
- 5.2 No further designated sites were noted within the project zone of influence.

### Non-Statutory Sites

- 5.3 Two Sites of Biological Interest (SBI) lie within 1km of the site, the Railway Cutting at Heywood and Pilsworth. The railway cutting SBI is located approximately 520m north-west of the Site. It comprises c.6 ha of a mosaic of habitats which include neutral grassland, heathland, tall ruderal vegetation, scrub and young semi-natural broadleaved woodland. The lowland heath habitat is a UK Priority habitat and broadleaved woodland is a Greater Manchester Priority Habitat.
- 5.4 A second SBI, Pilsworth is located c. 890m south-west of the Site. It comprises of c.6 ha of ponds and lodges designated for their marginal vegetation and bird interest. These are a UK and local priority habitat. Other habitats present include broadleaved woodland, scrub and tall ruderal.
- 5.5 The two non-statutory sites recorded within the Zone of influence are each of importance at a County scale.
- 5.6 However, both Railway Cutting at Heywood and Pilsworth SBI's are separated from the Site by a significant distance (the closest point being 520m from the site boundary) and the Site does not share direct hydrological connectivity to the SBI. As such, no pathway for effect has been identified as part of this assessment and it is considered effects on this statutory site would be Neutral.

### Protected/Notable Species

No records were returned for the Site. No records of great crested newts were returned for within 1km of the Site. Table 1 below summarises the protected and notable species returned from the desk study.

Table 1: Consultation Records within 2km

| Species                                             | Conservation Status        | Total Number of Records within 2km |
|-----------------------------------------------------|----------------------------|------------------------------------|
| Bats                                                |                            |                                    |
| Common pipistrelle <i>Pipistrellus pipistrellus</i> | Regs, WCA Sch 5, LBAP,     | 79                                 |
| Soprano pipistrelle <i>Pipistrellus pygmaeus</i>    | Regs, WCA Sch 5, LBAP, SPI | 17                                 |
| Pipistrelle species <i>Pipistrellus sp</i>          | Regs, WCA Sch 5, LBAP,     | 15                                 |
| Daubenton's bat <i>Myotis daubentonii</i>           | Regs, WCA Sch 5, LBAP,     | 11                                 |
| Myotis sp <i>Myotis sp</i>                          | Regs, WCA Sch 5, LBAP,     | 1                                  |

| Species                                           | Conservation Status        | Total Number of Records within 2km |
|---------------------------------------------------|----------------------------|------------------------------------|
| Noctule <i>Nyctalus noctula</i>                   | Regs, WCA Sch 5, LBAP, SPI | 8                                  |
| Other mammals                                     |                            |                                    |
| Water vole <i>Arvicola amphibius</i>              | SPI, WCA Sch5, LBAP        | 2                                  |
| Hedgehog <i>Erinaceus europaeus</i>               | SPI, WCA Sch6,             | 6                                  |
| Brown hare <i>Lepus europaeus</i>                 | SPI                        | 3                                  |
| Lepidoptera                                       |                            |                                    |
| Small heath<br><i>Coenonympha pamphilus</i>       | SPI, BCP: High             | 1                                  |
| White-letter hairstreak<br><i>Satyrus w-album</i> | SPI, BCP: High             | 18                                 |
| Wall <i>Lasiommata megera</i>                     | SPI, BCP: High             | 2                                  |
| Latticed heath <i>Chiasmia clathrata</i>          | SPI                        | 1                                  |
| Cinnabar <i>Tyria jacobaeae</i>                   | SPI                        | 15                                 |
| Amphibians                                        |                            |                                    |
| Great Crested Newt <i>Triturus cristatus</i>      | Regs, WCA Sch 5, LBAP, SPI | 19                                 |
| Common toad <i>Bufo bufo</i>                      | SPI                        | 4                                  |

Status Key: Regs = The Conservation of Habitats and Species Regulations 2017 (As amended), WCA = Wildlife and Countryside Act 1981 (as amended), Sch5 = Schedule 5 of WCA, SPI = Species of Principal Importance, as listed under the Natural Environment and Rural Communities Act (2006), BCP Butterfly Conservation Priority.

- 5.7 Almost 3000 records of schedule 1, BAP and red/amber list bird species were returned from the Greater Manchester Record centre within 2km of the Site. It was not possible to effectively display these records visually on the consultation plan. GMRC have asked that the location of schedule 1 species remain confidential, therefore information beyond the species present has not been included within this report. Schedule 1 species within the locality of Site include barn owl *Tyto alba*, common scoter *Melanitta nigra*, Corncrake *Crex crex*, goldeneye *Bucephala clangula*, green sandpiper *Tringa ochropus*, hobby *Falco Subbuteo*, kingfisher *Alcedo atthis*, little ringed plover *Charadrius dubius*, osprey *Pandion haliaetus*, peregrine *Falco peregrinus* and whopper swan *Cygnus cygnus*. In summary other bird species comprised 19 BAP species, 23 red list and 35 amber list species.

#### UKHab Classification Survey

- 5.8 The locations of the habitats described below are illustrated in Figure 2: Baseline Habitat Plan. Botanical species lists and Habitat condition assessments can be found in Appendix A.

#### Modified Grassland

- 5.9 The entirety of the Site comprised a portion of a more extensive regularly mown grassland community. Perennial rye-grass was frequent within the sward together with locally frequent field wood-rush and occasional Yorkshire-fog, red fescue and meadow foxtail. Floristically the most frequently recorded species, white clover, daisy and common chickweed, were indicative

of g4 modified grassland. In addition, the community also featured a number of species at low frequencies more typically associated with low nutrient neutral grasslands, most notably common bird's-foot-trefoil which was locally frequent through the central section of the wider area. Elsewhere, and notably to the NW of the wider grassland (outside the Site boundary) common knapweed, meadow buttercup, bee orchid, lesser trefoil and oxeye daisy were present as rarities.

- 5.10 The detailed botanical surveys identified an average of four species within the sampled quadrats and as a result the community was assessed as being in poor condition.
- 5.11 The intrinsic conservation value of this habitat is considered to be low and it is not considered to be important within the context of this assessment.



**Photo 1: Modified Grassland.**

### **Species and Species Groups**

#### **Bats**

- 5.12 The Site contained no structures or trees which could be used by roosting bats. Furthermore, there were no habitats within the Site which provide suitable foraging and commuting habitat for bat species.
- 5.13 As a result bats are not considered an important ecological feature in the context of this assessment.

#### **Badgers**

- 5.14 A single record of a deceased badger *Meles meles* was returned within the 1km search boundary. For confidentiality reasons the location of the record is not shown.
- 5.15 The modified grassland within the Site is considered to offer a limited foraging resource for badger. However, no evidence of the presence of badger was recorded within the Site during the survey, subsequently badgers are not considered to pose a constraint to the redevelopment of the Site and are scoped out of further assessment.

#### **Birds**

- 5.16 Habitats within the Site, which comprised wholly of short mown modified grassland, were considered to offer limited opportunities to breeding birds. As such, breeding birds are scoped out of further assessment.

### Great Crested Newts

- 5.17 The close mown grassland does not provide suitable terrestrial habitat for great crested newts. No suitable breeding habitat was present on Site.
- 5.18 Two ponds are present within 250m of the Site boundary namely, two balancing ponds located to the south-east of the Site (P2 and P3).
- 5.19 Previous aquatic and eDNA surveys for presence/absence of GCN were carried out by Waterman Infrastructure & Environment Limited in 2014 (P2 and P3) and 2016 (P1, P2, P3 and P4). Both surveys returned a negative result for GCN from all of the surveyed ponds. Smooth newts were present in P1, P2 and P3 during the 2014 aquatic survey.

Table 3 below provides a summary of the HSI scores for each pond surveyed.

| Ref. | Photo Reference                                                                     | HSI Score         | Approx. Distance from Study Boundary |
|------|-------------------------------------------------------------------------------------|-------------------|--------------------------------------|
| P2   |   | 0.74<br>-<br>Good | 19m South                            |
| P3   |  | 0.74<br>-<br>Good | 17m East                             |

### eDNA Sampling and Analysis

Water samples were taken from P2 and P3 on the 27<sup>th</sup> June 2024.

Results were returned as negative for great crested newt DNA within all ponds, confirming continued absence of great crested newts. A copy of the results from FERA can be found in Appendix B

Impacts on great crested newts are therefore scoped out of this assessment.

**Reptiles**

- 5.20 No records of reptiles were returned from the desk study consultation within the 1km search area
- 5.21 The modified grassland recorded across the site is not considered suitable to support reptile species due to the low even sward, which lacks habitat ecotones. Therefore, reptiles are scoped out of further assessment.

**6.0 ECIA CONCLUSION**

- 6.1** Section 5, above has demonstrated that, due to the limited ecological value of the Site, No Important Ecological Features were identified which could be impacted by the proposed development.

**7.0 BIODIVERSITY NET GAIN****Strategic Significance**

- 7.1 There are three levels of strategic significance:
- Highly strategically significant ('formally identified in local strategy') – pre and post development habitats are subject to a 15% multiplier;
  - Medium strategic significance (Location Ecologically Desirable but not in Local strategy) – pre and post development habitats are subject to a 10% multiplier; and,
  - Low strategic significance (Area not in local strategy) – No multiplier.
- 7.2 The Local Nature Recovery Strategy (LNRS) for the area, which is the relevant strategic policy which would define strategic significance, has been published in draft. The draft LNRS Habitat Map<sup>3</sup> includes the Site under 'Nature Recovery Opportunity Areas', which are regarded as opportunity areas for potential measures that could be undertaken. The Site is mapped under the River, Canal and Waterbody habitats opportunity layer, which states as priorities to "*Expand, create or restore waterside habitats*"
- 7.3 As proposals offer no opportunities to create or enhance waterbodies, all measures are of low strategic significance.

**PROPOSED HABITATS**

- 7.4 The habitats proposed are shown in Figure 3. The assessment has assumed that the entirety of the Site will be lost to facilitate proposals. The proposed habitats within the Site are entirely Developed land / Sealed surface.

<sup>3</sup> <https://storymaps.arcgis.com/stories/1137e2f8065f4e449cc02a685ba11ef8>

**Biodiversity Net Gain Calculation**

- 7.5 The Statutory metric for the project is attached, with the headline summary results given below.

|                                                                                    |                          |       |          |
|------------------------------------------------------------------------------------|--------------------------|-------|----------|
| On-site baseline                                                                   | <i>Habitat units</i>     | 0.17  |          |
|                                                                                    | <i>Hedgerow units</i>    | 0.00  |          |
|                                                                                    | <i>Watercourse units</i> | 0.00  |          |
| On-site post-intervention<br>(including habitat retention, creation & enhancement) | <i>Habitat units</i>     | 0.00  |          |
|                                                                                    | <i>Hedgerow units</i>    | 0.00  |          |
|                                                                                    | <i>Watercourse units</i> | 0.00  |          |
| On-site net change<br>(units & percentage)                                         | <i>Habitat units</i>     | -0.17 | -100.00% |
|                                                                                    | <i>Hedgerow units</i>    | 0.00  | 0.00%    |
|                                                                                    | <i>Watercourse units</i> | 0.00  | 0.00%    |

- 7.6 The On-site baseline value consists of 0.17 habitat units, with on-site post intervention being zero. To achieve a net gain of 10%, a total of 0.18 habitat units will be required. This can be achieved via habitat enhancement within the wider Heywood Distribution Park or by the purchasing of offsite units from a third-party supplier.

**Habitat Trading**

- 7.7 The habitats to be lost to proposals comprise of low distinctiveness modified grassland, as such there is no requirement to provide a particular habitat type to satisfy trading rules.

## APPENDIX A: SPECIES LISTS AND CONDITION ASSESSMENTS

### G4 Modified Grassland Species list

| Common Name                | Scientific Name                  | Q1 | Q2 | Q3 | Q4 | Q5 | DAFOR |
|----------------------------|----------------------------------|----|----|----|----|----|-------|
| Undesirables               |                                  |    |    |    |    |    |       |
| Perennial Rye-grass        | <i>Lolium perenne</i>            | 90 | 94 | 4  | 4  | 90 | a ld  |
| White Clover               | <i>Trifolium repens</i>          | 2  |    |    |    |    | r     |
| Broad-leaved Dock          | <i>Rumex obtusifolius</i>        |    |    |    | 1  |    | r     |
| Creeping Buttercup         | <i>Ranunculus repens</i>         |    |    | 1  | 1  | 1  | o     |
| Grasses                    |                                  |    |    |    |    |    |       |
| Yorkshire-fog              | <i>Holcus lanatus</i>            | 5  | 4  | 93 | 93 | 5  | f ld  |
| Smooth meadow-grass        | <i>Poa pratensis</i>             |    | 1  |    |    |    | r     |
| Field Wood-rush            | <i>Luzula campestris</i>         |    |    |    |    |    | lf    |
| Red Fescue                 | <i>Festuca rubra</i>             |    |    |    |    |    | o     |
| Wildflowers                |                                  |    |    |    |    |    |       |
| Cat's-ear                  | <i>Hypochaeris radicata</i>      | 4  |    |    |    |    | r     |
| Daisy                      | <i>Bellis perennis</i>           |    |    |    |    | 3  | r     |
| Ribwort plantain           | <i>Plantago lanceolata</i>       |    |    | 2  |    |    | r     |
| Dandelion                  | <i>Taraxacum officinale agg.</i> | 1  |    |    |    |    | r     |
| Lesser Trefoil             | <i>Trifolium dubium</i>          |    |    |    |    |    | r     |
| Greater Plantain           | <i>Plantago major</i>            |    |    |    |    |    | r     |
| Common Sorrel              | <i>Rumex acetosa</i>             |    |    |    |    |    | r     |
| Field Horsetail            | <i>Equisetum arvense</i>         |    |    |    |    |    | r     |
| Common Bird's-foot-trefoil | <i>Lotus corniculatus</i>        |    |    |    |    |    | lf    |
| Hairy Sedge                | <i>Carex hirta</i>               |    |    |    |    |    | lf    |
| Common chickweed           | <i>Stelaria media</i>            |    |    |    |    |    | r     |
| Meadow Buttercup           | <i>Ranunculus acris</i>          |    |    |    |    |    | r     |
| Glaucous Sedge             | <i>Carex flacca</i>              |    |    |    |    |    | r     |
| Sneezewort                 | <i>Achillea ptarmica</i>         |    |    |    |    |    | r     |
| Common Knapweed            | <i>Centaurea nigra</i>           |    |    |    |    |    | r     |
| Bee Orchid                 | <i>Ophrys apifera</i>            |    |    |    |    |    | r     |
|                            | Species/m2                       | 5  | 3  | 4  | 4  | 4  |       |

| Common Name | Scientific Name                           | Q1   | Q2 | Q3  | Q4  | Q5  | DAFOR |
|-------------|-------------------------------------------|------|----|-----|-----|-----|-------|
|             | Two forbs?                                | Yes  | No | Yes | Yes | Yes |       |
|             | % cover L. perenne & Trifiloum repens     | 92   | 94 | 4   | 4   | 90  |       |
|             | % cover Undesirables                      | 2    | 0  | 1   | 2   | 1   |       |
|             | % cover grasses                           | 95   | 99 | 97  | 97  | 95  |       |
|             | % cover wildflowers exc. Undesirables     | 5    | 0  | 2   | 0   | 3   |       |
|             | GRASSLAND LOW Average No. Species/m2      | 4    |    |     |     |     |       |
|             | Av. % cover L. perenne & Trifiloum repens | 56.8 |    |     |     |     |       |
|             | Av. % cover Undesirables                  | 1.2  |    |     |     |     |       |
|             | Av. % cover grasses                       | 96.6 |    |     |     |     |       |
|             | Av. % cover wildflowers exc.              | 2    |    |     |     |     |       |

#### Modified Grassland Condition Assessment

| Condition Criteria                                                                                                                                                                                                                               | 7                               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| 1 " There are 6-8 vascular plant species per m2 present, including at least 2 forbs . Note - this criterion is essential for achieving Moderate or Good condition.                                                                               | Fail – Average of 4 in quadrats |
| 2 Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.                     | Fail – Regularly mown           |
| 3 Some scattered scrub (including bramble) may be present, but scrub accounts for less than 20% of total grassland area. Note - patches of shrubs with continuous (more than 90%) cover should be classified as the relevant scrub habitat type. | Pass – No scrub                 |
| 4 Physical damage evident in less than 5% of total grassland area, such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities.                                     | Pass                            |
| 5 Cover of bare ground between 1% and 10%, including localised areas, for example, rabbit warrens.                                                                                                                                               | Fail less than 1% bare ground   |
| 6 Cover of bracken less than 20%.                                                                                                                                                                                                                | Pass                            |
| 7 There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981).                                                                                                                                                     | Pass                            |
| Total Passes                                                                                                                                                                                                                                     | 4 – Fails essential criterion 1 |
| Condition                                                                                                                                                                                                                                        | Poor                            |

## **APPENDIX B: GREAT CRESTED NEWT EDNA RESULTS.**

**FPCR Environment and Design Ltd**

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Company No. 07128076. [T] 01509 672772 [E] [mail@fpcr.co.uk](mailto:mail@fpcr.co.uk) [W] [www.fpcr.co.uk](http://www.fpcr.co.uk)

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172 Chester Road  
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Tel: 01159 229249  
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Sample ID: ADAS-6497      Condition on Receipt: Good      Volume: Passed  
Client Identifier: Pond 2, 10622      Description: pond water samples in preservative  
Date of Receipt: 01/07/2024      Material Tested: eDNA from pond water samples

| Determinant                                                           | Result                 | Method        | Date of Analysis |
|-----------------------------------------------------------------------|------------------------|---------------|------------------|
| Inhibition Control <sup>†</sup>                                       | 2 of 2                 | Real Time PCR | 11/07/2024       |
| Degradation Control <sup>§</sup>                                      | Within Limits          | Real Time PCR | 11/07/2024       |
| Great Crested Newt*                                                   | 0 of 12 (GCN negative) | Real Time PCR | 11/07/2024       |
| Negative PCR Control<br>(Nuclease Free Water)                         | 0 of 4                 | Real Time PCR | As above for GCN |
| Positive PCR Control (GCN<br>DNA 10 <sup>-4</sup> ng/μL) <sup>#</sup> | 4 of 4                 | Real Time PCR | As above for GCN |

Report Prepared by: Dr Helen Rees      Report Issued by: Dr Ben Maddison

Signed:

Signed:

Position: Director: Biotechnology      Position: MD: Biotechnology

Date of preparation: 12/07/2024      Date of issue: 12/07/2024

*eDNA analysis was carried out in accordance with the stipulated methodology found in the Technical Advice Note (WC1067 Appendix 5 Technical Advice Note) published by DEFRA and adopted by Natural England.*

*\* If all PCR controls and extraction blanks give the expected results a sample is considered: negative for great crested newt if all of the replicates are negative; positive for great crested newt if one or more of the replicates are positive.*

*<sup>†</sup> Recorded as the number of positive replicate reactions at expected C<sub>t</sub> value. If the expected C<sub>t</sub> value is not achieved, the sample is considered inhibited and is diluted as per the technical advice note prior to amplification with great crested newt primer and probes.*

*<sup>§</sup> No degradation is expected within time frame of kit preparation, sample collection and analysis.*

*<sup>#</sup> Additional positive controls (10<sup>-1</sup>, 10<sup>-2</sup>, 10<sup>-3</sup> ng/μL) are also routinely run, results not shown here.*

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Sample ID: ADAS-6499 Condition on Receipt: Good Volume: Passed  
Client Identifier: Pond 3, 10622 Description: pond water samples in preservative  
Date of Receipt: 01/07/2024 Material Tested: eDNA from pond water samples

| Determinant                                                           | Result                 | Method        | Date of Analysis |
|-----------------------------------------------------------------------|------------------------|---------------|------------------|
| Inhibition Control <sup>†</sup>                                       | 2 of 2                 | Real Time PCR | 12/07/2024       |
| Degradation Control <sup>§</sup>                                      | Within Limits          | Real Time PCR | 12/07/2024       |
| Great Crested Newt*                                                   | 0 of 12 (GCN negative) | Real Time PCR | 12/07/2024       |
| Negative PCR Control<br>(Nuclease Free Water)                         | 0 of 4                 | Real Time PCR | As above for GCN |
| Positive PCR Control (GCN<br>DNA 10 <sup>-4</sup> ng/μL) <sup>#</sup> | 4 of 4                 | Real Time PCR | As above for GCN |

Report Prepared by: Dr Helen Rees Report Issued by: Dr Ben Maddison

Signed:

Signed:

Position: Director: Biotechnology Position: MD: Biotechnology

Date of preparation: 11/07/2024 Date of issue: 11/07/2024

*eDNA analysis was carried out in accordance with the stipulated methodology found in the Technical Advice Note (WC1067 Appendix 5 Technical Advice Note) published by DEFRA and adopted by Natural England.*

*\* If all PCR controls and extraction blanks give the expected results a sample is considered: negative for great crested newt if all of the replicates are negative; positive for great crested newt if one or more of the replicates are positive.*

*<sup>†</sup> Recorded as the number of positive replicate reactions at expected C<sub>t</sub> value. If the expected C<sub>t</sub> value is not achieved, the sample is considered inhibited and is diluted as per the technical advice note prior to amplification with great crested newt primer and probes.*

*<sup>§</sup> No degradation is expected within time frame of kit preparation, sample collection and analysis.*

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## Appendix 1: Interpretation of results

### Sample Condition

Upon sample receipt we score your samples according to quality: good, low sediment, medium sediment, high sediment, white precipitate, and presence of algae.

There are three reasons as to why sediment should be avoided:

1. It is possible for DNA to persist within the sediment for longer than it would if it was floating in the water which could lead to a false positive result i.e. in this case GCN not recently present but present a long time ago
2. In some cases sediment can cause inhibition of the PCR analysis used to detect GCN eDNA within samples which could lead to an indeterminate result.
3. In some cases sediment can interfere with the DNA extraction procedure resulting in poor recovery of the eDNA which in turn can lead to an indeterminate result.

Algae can make the DNA extraction more difficult to perform so if it can be avoided then this is helpful.

Sometimes samples contain a white precipitate which we have found makes the recovery of eDNA very difficult. This precipitate can be present in such high amounts that it interferes with the eDNA extraction process meaning that we cannot recover the degradation control (nor most likely the eDNA itself) at sufficient levels for the control to be within the acceptable limits for the assay, therefore we have to classify these type of samples as indeterminate.

### What do my results mean?

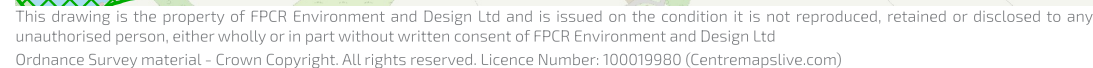
A positive result means that great crested newts are present in the water or have been present in the water in the recent past (eDNA degrades over around 7-21 days).

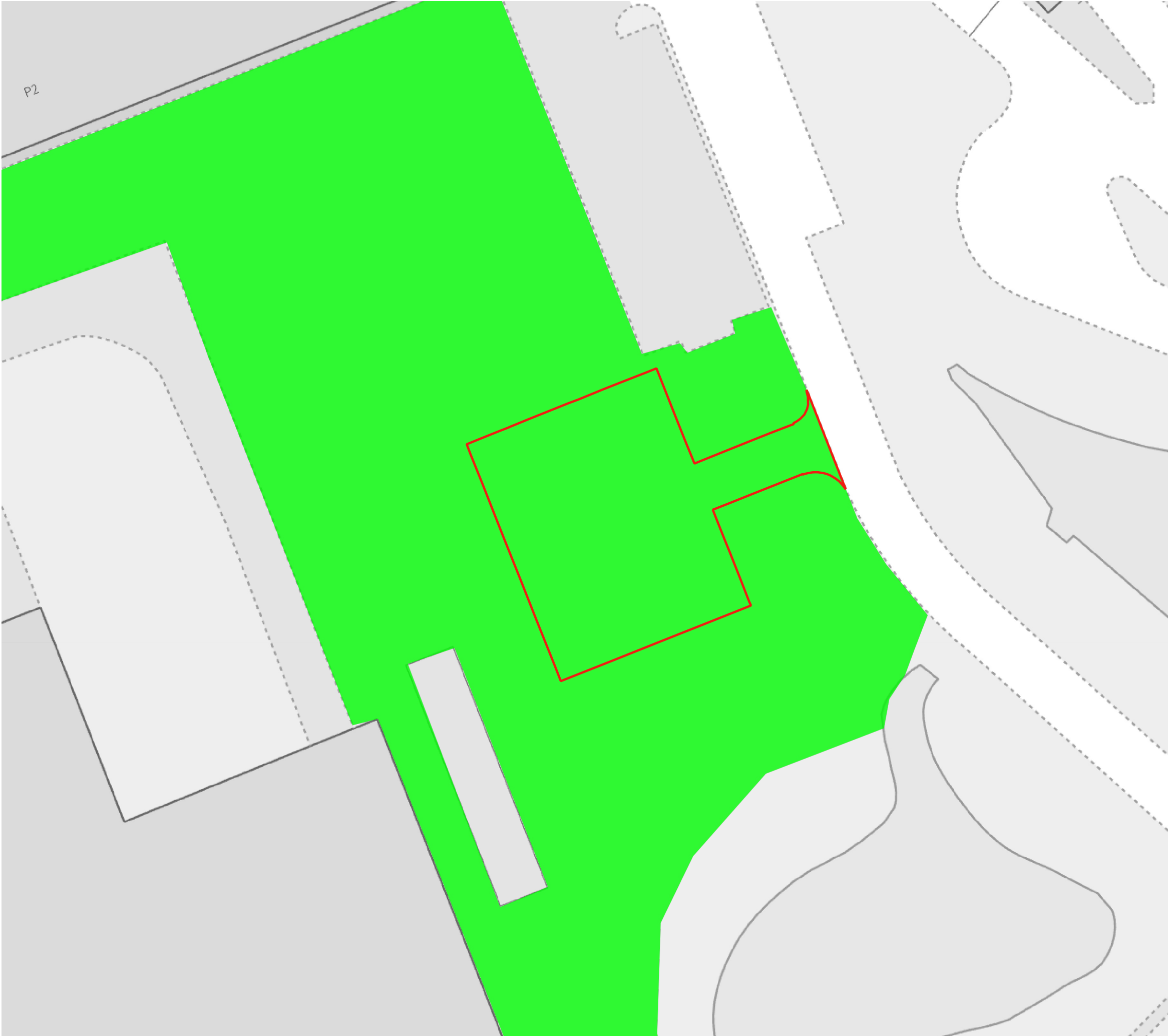
A negative result means that DNA from the great crested newt has not been detected in your sample.

On occasion an inconclusive result will be issued. This occurs where the DNA from the great crested newt has not been detected but the controls have indicated that either: the sample has been degraded and/or the eDNA was not fully extracted (poor recovery); or the PCR inhibited in some way. This may be due to the water chemistry or may be due to the presence of high levels of sediment in samples which can interfere with the DNA extraction process. A re-test could be performed but a fresh sample would need to be obtained. We have successfully performed re-tests on samples which have had high sediment content on the first collection and low sediment content (through improved sample collection) on the re-test. If water chemistry was the cause of the indeterminate then a re-test would most likely also return an inconclusive result.

The results will be recorded as indeterminate if the GCN result is negative and the degradation result is recorded as:

1. evidence of decay - meaning that the degradation control was outside of accepted limits
2. evidence of degradation or residual inhibition - meaning that the degradation control was outside of accepted limits but that this could have been due to inhibitors not being removed sufficiently by the dilution of inhibited samples (according to the technical advice note)





0

Red Line Boundary

Baseline Habitats

Modified grassland

date  
27/05/25

drwn/chkd  
XXX / XXX

client  
**Indurent Management Ltd**

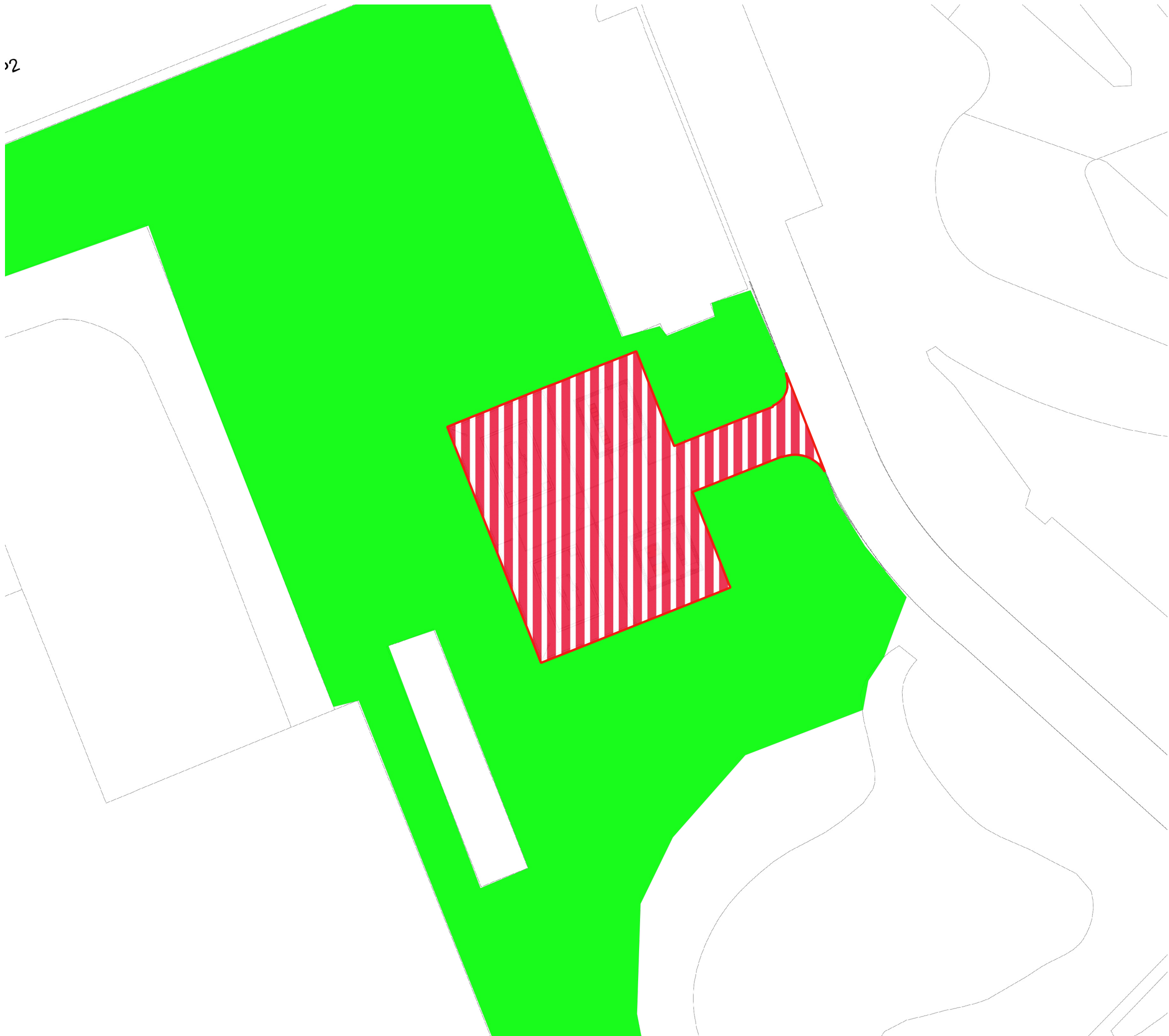
project  
**Heywood Development Primary Substation**

title  
**BASELINE HABITAT PLAN**

scale  
1:450 @ A3

number  
**FIGURE 2**

rev  
-



N

0

Red Line Boundary

Proposed Habitats

Developed land; sealed surface

Modified grassland

|         |                                        |           |            |
|---------|----------------------------------------|-----------|------------|
| date    | 27/05/25                               | drwn/chkd | IH         |
| client  | Indurent Management Ltd                |           |            |
| project | Heywood Development Primary Substation |           |            |
| title   | PROPOSED HABITAT PLAN                  | scale     | 1:450 @ A3 |
| number  | FIGURE 3                               | rev       | -          |