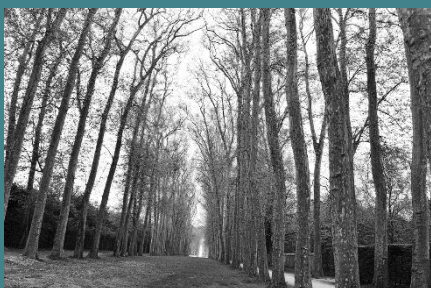


FPCR | environment
& design



Habitat Management and Monitoring Plan

Client

Indurent Management Ltd

Project

**Plot H4, Heywood Distribution Park, Pilsworth Road, Heywood,
Rochdale**

Date

July 2025

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Rev	Issue Status	Prepared/Date	Reviewed / Date
B	Issue	IH / 15.07.25	AJB / 15.07.25
	Final	IH / 29.08.25	

1.0 NON-TECHNICAL SUMMARY

Background information
- FPCR were commissioned by Indurent Management Ltd to prepare a Habitat Management and Monitoring Plan (HMMP) to discharge Condition 25 of the planning application granted by Rochdale Borough Council on the 30th May 2025 (planning reference 24/00805/OUT). - The HMMP establishes the habitat creation and management prescriptions that will achieve target habitat types and conditions throughout a 30-year management period. - The Site is located within Heywood Distribution Park, in the Metropolitan Borough of Rochdale (Central grid reference: SD837095). - The Biodiversity Net Gain calculations have been finalised to inform the Biodiversity Gain plan and this HMMP. The BNG baseline within the redline boundary has been valued at 21.44 area habitat units and 0.41 hedgerow units. The habitat retention, enhancement and creation measures secured by this HMMP will lead to on-site post-intervention value of 8.74 habitat units and 3.7 hedgerow units, effectively achieving a <u>59.26% net loss in habitat units and an 808.01% gain in hedgerow units</u>. The additional 14.85 of habitat units required to deliver a 10% gain will be secured from the Environment Bank, from a local habitat bank.
Habitats to be Created / Managed
- Other Neutral Grassland in 'Moderate' condition will be created to the east of the Site, comprising wet grassland within the Sustainable Urban Drainage System (SuDS) basin and typical meadow type grassland surrounding the SUDS basin. Achieved through use of a nutrient poor substrate and seeding target areas with appropriate seed mixes. Management will involve 1-2 cuts per year with arisings removed. - To create an area of Mixed Scrub in Moderate Condition through the planting of an appropriate mix of native shrub species and managed to develop a range of ages and maintain a diverse mixture of species. - An area of other broadleaved woodland will be created in moderate condition, achieved through the planting of a diverse mix of native canopy and understorey trees and managed to develop a varied structure. - To create and enhance areas of modified grassland in 'Moderate' condition through seeding target areas with either a flowering lawn or a shaded lawn seed mix. Management will involve regular mowing with the grasslands left unmown for 4-8 weeks in May-June to allow flowering. - To plant individual trees across the Site targeting 'Moderate' condition by the end of the 30-year management period. The trees will be minimally managed to allow for the trees to mature naturally. - To create three species rich native hedgerows in moderate condition and one native hedgerow in poor condition. - Aftercare following establishment and/or enhancement of habitats will be carried out in accordance with this HMMP for each habitat type.
Timescales for Actions
Works are likely to commence in 2025, however the specific time scales for implementation of habitat creation works, and the full duration of the management activities are yet to be confirmed.
Monitoring Requirements
Monitoring will be undertaken in years 1, 2, & 5 during habitat establishment. Following this, monitoring will be undertaken every five years until at least the end of the 30-year management period. The key aim of monitoring will be to track the success of targets for habitat creation/enhancement and to trigger remedial measures, where necessary.
Funding
Funding is to be provided by Indurent Management Ltd.
Legal Agreement
Secured by planning condition

2.0 INTRODUCTION

2.1 The following Habitat Management and Monitoring Plan (HMMP) has been prepared by FPCR Environment & Design Ltd. (FPCR) on behalf of Indurent Management Ltd in relation to an approved development at Plot H4, Heywood Distribution Park, Pilsworth Road, Heywood, Rochdale herein referred to as 'the Site'

2.2 Planning approval for the proposed development – 'Outline application with all matters reserved for the development of land within Use Classes E(g)(iii) (industrial processes), B2 (general industrial), B8 (storage and distribution) and removal of existing structures and hard standing and associated works' – was granted by Rochdale Borough Council on 30th May 2025 (planning reference 24/00805/OUT). Condition 25 of the planning application requires submission of HMMP as follows:

"The development shall not commence until a Habitat Management and Monitoring Plan (the HMMP) for any habitat areas to be provided on-site in accordance with the Biodiversity Gain Plan approved pursuant to the statutory biodiversity gain condition has been prepared in accordance with the approved Biodiversity Gain Plan and including:

(a) a non-technical summary;

(b) the roles and responsibilities of the people or organisation(s) delivering the HMMP;

(c) the planned habitat creation and enhancement works to create or improve habitat to achieve the biodiversity net gain in accordance with the approved BNG Plan;

(d) the management measures to maintain habitat in accordance with the approved BNG Plan for a period of 30 years from the completion of development; and the monitoring methodology and frequency in respect of the created or enhanced habitat to be submitted to the local planning authority, has been submitted to and approved in writing by the Local Planning Authority.

The development shall thereafter be undertaken in accordance with the approved HMMP."

2.3 This HMMP details the creation and management prescriptions for enhanced and created habitat which are relied upon to demonstrate how target habitat type and condition will be achieved throughout the 30-year management period.

Site location

2.4 The Site is located within Heywood Distribution Park, in the Metropolitan Borough of Rochdale (Central grid reference: SD837095).

2.5 The Site is approximately 10.69 hectares in area. Habitats recorded within the Site comprised predominantly areas of developed land and associated formal landscaping. An area of rush dominated wet grassland was recorded within an undeveloped plot to the north, together with unmanaged neutral grassland recorded in mosaic with scrub and woodland noted at the plot edges

Summary of Biodiversity Net Gain (BNG)

2.6 Detailed results of the UKHab survey and assessment undertaken to establish a robust baseline value for the Site are presented in the Biodiversity Net Gain Report (FPCR, June, 2024), submitted with the Outline application.

- 2.7 The Biodiversity Net Gain calculations have been finalised to inform the Biodiversity Gain plan and this HMMP, with final calculations based on the proposed habitats specified within the submitted detailed landscape design (10662-FPCR-XX-XX-DR-L-0002-0004-P06-Landscape Planting Plan).
- 2.8 The BNG baseline within the redline boundary has been valued at 21.44 area habitat units and 0.41 hedgerow units. The habitat retention, enhancement and creation measures secured by this HMMP will lead to on-site post-intervention value of 8.74 habitat units and 3.7 hedgerow units, effectively achieving a 59.26% net loss in habitat units and an 808.01% gain in hedgerow units. The additional 14.85 of habitat units required to deliver a 10% gain will be secured from the Environment Bank, from a local habitat bank.

3.0 ROLES AND RESPONSIBILITIES

Land ownership and management

- 3.1 The Site is owned by Indurent Management Ltd and who is responsible for operating the wider Heywood Distribution Centre. As such, it oversees all day-to-day management activities including maintenance, safety, legal compliance and overall Site management.
- 3.2 Should changes to the land ownership occur within the life of the HMMP, this responsibility will fall to the future owner and/or land manager to ensure the long-term sustainability of the management plan.

Funding

- 3.3 The funding for the proposed development has been secured through the financial success of the Indurent Management Limited wider business operations across the country.

Landscape management

- 3.4 During the construction phase, Indurent Management Ltd or their appointed contractor(s) will be responsible for the creation/enhancement of the habitats, with landscaping for the development subsequently maintained by a Management Company appointed by Indurent Management Ltd. Monitoring of the successful establishment will be the responsibility of the Management Company.
- 3.5 The responsibility for long-term management of the habitats covered within this HMMP will be passed to the appointed Management Company.
- 3.6 Their contractor(s) will be suitably qualified and experienced, capable of delivering the management measures outlined in this report.

Monitoring and Review

- 3.7 Management of created habitats on Site will run for a period of 30 years following initial creation (year 1). The site will be monitored annually for the first two years, by competent ecologists to review how the establishment of the proposed habitats is progressing. The key observations during this period will be to determine whether habitats are successfully establishing and whether or not replacement planting or reseedling may be required.
- 3.8 Following establishment longer-term management will take place, with monitoring also be undertaken every 5 years from year 5. The key elements of this monitoring will be to review whether the long-term management practices are achieving (and then maintaining) the

targeted condition scores for the proposals. During this period, adaptive management measures will be reviewed to determine whether there are any opportunities to alter management to encourage additional habitat enhancements.

- 3.9 Throughout the period of the scheme, the achievement of management objectives through the application of detailed prescriptions should be viewed as a dynamic process, responding to the establishment and development of the habitats and species.
- 3.10 The progress of habitat creation will therefore be monitored, and management prescriptions reviewed and altered where necessary to ensure habitat targets are met. This HMMP should be informed by updated and detailed surveys of the habitats to refine the identified objectives, targets and prescriptions as necessary.
- 3.11 The condition assessments and associated monitoring reviews that have been prescribed should be undertaken by a suitably qualified and experienced ecologist.
- 3.12 The aims of future on-going management should continue to maintain the target habitats as set out within this HMMP.

Reporting

- 3.13 Reports will be submitted to Rochdale Borough Council throughout the life of the HMMP. These include written notice to the council upon HMMP implementation and completion of habitat creation/enhancement works, and monitoring reports as specified within this HMMP.
- 3.14 Submission of the above items to the LPA will be the responsibility of Indurent Management Ltd or their approved contractor(s).

4.0 BASELINE HABITATS

- 4.1 The on-site baseline biodiversity value has been recorded based on a UKHab survey conducted by FPCR on 30th May 2024 by a suitably experienced ecologist from FPCR. The surveys updated previous surveys undertaken on the Site by FPCR in 2022. Full details of The UKHab Survey and condition assessments are presented in the Biodiversity Net Gain Report (FPCR, June, 2024), submitted with the Outline application, a summary of which are provided below in Table 1.
- 4.2 Baseline habitats are shown in Figure 1, with Baseline Condition and Distinctiveness shown on Figure 4. No priority or irreplaceable habitats were identified on Site.

No signs or evidence of purposeful habitat degradation since 30th January 2020 were recorded during the survey.

Table 1: Baseline Habitats and Condition.

Ref.	Habitat Type	Condition
W1	Other woodland; broadleaved	Poor
Sc1	Mixed Scrub	Moderate
Sc2	Bramble Scrub	N/A
Sc3 Sc4	Introduced Shrub	N/A
4	Other Neutral Grassland: g3c8 Holcus-Juncus neutral grassland	Poor
2	Other Neutral Grassland: g3c5 Arrhenatherum neutral grassland	Moderate

Ref.	Habitat Type	Condition
3 5 6	Other Neutral Grassland: g3c5 Arrhenatherum neutral grassland	Poor
1	Modified Grassland	Poor
LOT1	Line of Trees	Moderate
LOT2	Line of Trees	Poor
T	Individual trees Size: 10 medium; 4 small.	Poor
N/A	Developed land; sealed surface	N/A

5.0 PROPOSED SITE HABITATS

- 5.1 The proposed habitats are specified within the submitted detailed landscape design (10662-FPCR-XX-XX-DR-L-0002-0004-P06-Landscape Planting Plan).
- 5.2 Post-development habitats (Figure 2) will comprise other neutral grassland, mixed scrub, modified grassland, broadleaved woodland, species rich hedgerows and individual trees. Figure 5 shows the condition and distinctiveness of the proposed habitats.

6.0 AIMS AND OBJECTIVES

- 6.1 Primary management objectives describe the overall ecological aims and outcomes of the project. The objectives are achieved by following the prescribed management prescriptions in this management plan. The management prescriptions will be adaptable throughout the life of the project, adjusted in response to changing conditions where necessary to achieve the objectives. The management objectives are directly connected to the habitat descriptions and condition assessments which underpin the Biodiversity Unit value of the Site. The management objectives are the deliverable outcomes which are monitored against in the monitoring plan.
- 6.2 This management plan will define the actions required to:
- Enhance existing habitats,
 - Create new habitats.
 - Provide the principles for the ongoing management to achieve the management objectives for the duration of the project.

Proposed Habitat objectives

- Other Neutral Grassland in 'Moderate' condition will be created to the east of the Site, comprising wet grassland within the Sustainable Urban Drainage System (SuDS) and typical meadow type grassland surrounding the SUDS basin. Achieved through use of a nutrient poor substrate and seeding target areas with appropriate seed mixes. Management will involve 1-2 cuts per year with arisings removed.
- To create an area of Mixed Scrub in Moderate Condition through the planting of an appropriate mix of native shrub species and managed to develop a range of ages and maintain a diverse mixture of species.
- An area of other broadleaved woodland will be created in moderate condition, achieved through the planting of a diverse mix of native canopy and understorey trees and managed to develop a varied structure.
- To create and enhance areas of modified grassland in 'Moderate' condition through seeding target areas with either a flowering lawn or a shaded lawn seed mix. Management will involve regular mowing with the grasslands left unmown for 4-8 weeks in May-June to allow flowering.
- To plant individual trees across the Site targeting 'Moderate' condition by the end of the 30-year management period. The trees will be minimally managed to allow for the trees to mature naturally.

- To create three species rich native hedgerows in moderate condition and one native hedgerow in poor condition.

6.3 The plan will deliver these habitats to the agreed condition and timespan to satisfy the requirements of biodiversity net gain.

Habitat Retention

6.4 Figure 3 provides an overview of habitat retention and enhancement associated with the proposed development.

6.5 The retained onsite habitats include the vast majority of woodland W1, with the changes to the detailed design allowing for a greater extent of this woodland to be retained than allowed for within the outline application. The Introduced shrub community Sc4 to the north of the site will be retained as well as 7 of the existing individual trees, predominantly located on the southern boundary of the Site. These habitats will be maintained in their current extent and condition.

6.6 The modified grassland surrounding retained scrub Sc4 to the north will be enhanced to moderate condition.

Significant onsite habitat enhancement

6.7 Paragraph 9 of Schedule 7A of the Town and Country Planning Act 1990 requires that where an applicant relies upon a significant increase in onsite habitat biodiversity value, the habitat enhancement ("significant onsite habitat enhancement") must be subject to a planning condition, section 106 agreement, or conservation covenant requiring the habitat enhancement to be maintained for at least 30 years after the development is completed.

6.8 The proposed creation of the introduced shrub would deliver 0.08 units and given the habitat is low distinctiveness in poor (or N/A) condition, require minimal targeted management prescriptions beyond creation to reach and maintain target condition. As such, this habitat does not constitute 'significant on-site habitat enhancement' and therefore would not be subject to 30-years management secured by this document.

7.0 HABITAT CREATION, ENHANCEMENT AND CONDITION TARGETS

7.1 Habitats in Table 2 will be created or enhanced onsite in accordance with the submitted calculations and as detailed in the following section. Onsite habitat creation provides 0.06 area habitat units, with the habitat enhancement measures securing additional 0.16 habitat units.

Table 2. Habitat creation and enhancement onsite.

Area Habitat Type	Target Distinctiveness	Target Condition	Extent (ha/m)
Other Neutral Grassland	Medium	Moderate	0.5074
Mixed Scrub	Medium	Moderate	0.0203
Other woodland; broadleaved	Medium	Moderate	0.0362
Modified Grassland	Low	Moderate	0.5809
Individual Trees	Medium	Moderate	0.3705
Species Rich Native Hedgerow	Medium	Moderate	543m

Area Habitat Type	Target Distinctiveness	Target Condition	Extent (ha/m)
Native Hedgerow	Low	Poor	36m

Other Neutral Grassland

- 7.2 In order to contribute towards the biodiversity value of the Site post development, species rich other neutral grassland of two types will be created within the eastern extent of the site. The aim for the creation and management of the neutral grassland is to create grassland that meets the definition of 'Other Neutral Grassland' under UKHab 2.0, which states: a grassland that meets at least three of these four criteria:

1. >20% cover of broadleaved herbs and sedges;
2. >8 species per m² (including forbs, grasses, sedges and rushes, and excluding bryophytes);
3. ≥1 grass species that is not generally sown for intensive agricultural production (ie. Ryegrasses *Lolium* spp., Timothy *Phleum pratense*, Cock's-foot *Dactylis glomerata*, Meadow fescue *Festuca pratensis*) is at least abundant;
4. Cover of Rye-grasses *Lolium* spp. and White Clover *Trifolium repens*, where present, is <30%.

Creation

- 7.3 The habitat will be created using retained topsoil or subsoil from the existing areas of other neutral grassland present within the Site. During site clearance sufficient topsoil and subsoil required for the creation of this habitat will be removed and stored from either parcels 2, 3 or 4 identified within Figure 1.
- 7.4 The soils will be stripped, handled and stored in accordance with the principles outlined in DEFRA's Construction Code of Practice for the Sustainable Use of Soils on Construction Sites¹. These guidelines specify the use of a Soil Resource Plan, specifying:
- topsoil and subsoil types, and the areas to be stripped and left in-situ;
 - methods for stripping, stockpiling, respreading and ameliorating the soils;
 - location of soil stockpiles and content;
 - schedules of volumes for each material; &
 - the person responsible for the soil management.
- 7.5 Topsoil and subsoil should be stripped, stockpiled and redistributed using tracked plant appropriate to the size of the site and soils handled only when below their lower plastic limit (i.e. soils are drying and friable condition) and in suitable weather conditions. Topsoil and subsoil will be stripped as uniform layers.
- 7.6 Topsoil and subsoil should be stored separately within a suitable location within the site. Soils should be stored for as short a period as possible and stockpiled in a way to create a large core of dry soil in order to avoid anaerobic conditions developing.
- 7.7 Once the re-profiling works have been completed, the stored subsoil and topsoil will be placed using the loose tipping method.

¹ DEFRA (2009) Construction Code of Practice for the Sustainable Use of Soils on Construction Sites. DEFRA

7.8 If an alternative substrate is used soil testing will be undertaken in order to determine its appropriateness. Harris et al (2014)² defines the broad characteristics of substrates suitable for neutral grassland creation, with Critchley et al. (2002)³ establishing the characteristics of the target communities. Phosphorous limitation is critical for the creation of the target species rich neutral grassland communities; with that in mind, the substrate parameters for habitat creation should follow the below specifications:

- Available phosphorous between 4-20mg l⁻¹ (Calculated using the Olsen method), with 9.6mg l⁻¹ or less being the optimum for species rich grassland;
- A lower limit of 0.2% dried weight Total Nitrogen with a provisional upper limit of 0.3-0.7%;
- pH 5.5-6.5;
- A lower limit of 4% organic matter, with a provisional upper limit of 5-14%;
- Topsoil depth should not exceed 200mm; and
- Drainage: slow.

Seeding

7.9 Once the final ground levels have been established and the required nutrient poor topsoil placed it may be necessary to cultivate the area using suitable tillage equipment, such as a power harrow, to produce a suitable soil structure. The substrate will then require a suitable seedbed to be created using a suitable harrow to create a fine tilth (<10mm aggregates).

7.10 SUDS basin. Naturescape N7 'Wetland Meadow Mixture'⁴ or similar will be sown in spring or autumn (autumn sowing is often more successful for first year germination). Following seeding, plug plants of Reed sweet-grass and Reed canary-grass will be planted in the corners on the basin as specified on the detailed landscape plan.

7.11 Meadow Grassland: The remainder of the eastern area outwith the Suds Basin will be sown with Naturescape N1 'General Purpose Meadow Mixture'⁵ or similar in spring or autumn

7.12 Sowing must be undertaken in still wind conditions when the soil is saturated but not flooded. After sowing, seed will be bedded in by rolling

Establishment Management

7.13 The sward will be kept short during the first year of establishment, ideally be kept at 100mm or below. This will entail a cut and collect approach, with arisings removed where possible without damaging the establishing sward, with up to four cuts taken during the growing season.

7.14 Cut material should be removed from the created grassland area and either taken off site or taken to a suitable composting area nearby. This should be located close to the grassland area to avoid the need of moving cut material long distances.

² Harris, P., Brearley, A. & Doick, K.J. (2014) Best Practice Guidance for Land Regeneration Note 17: Lowland Neutral Grassland Creation and management in land regeneration. Forest Research. Forestry Commission.

³ Critchley, Chambers, Fowbert, Sanderson, Bhogal & Rose (2002). Association between lowland grassland plant communities and soil properties. Biological Conservation, 105: 199–215.

⁴ <https://www.naturescape.co.uk/product/n7-wetland-meadow-mixture/>

⁵ <https://www.naturescape.co.uk/product/n1-general-purpose-meadow-mixture/>

- 7.15 The condition of the grassland should be reviewed within 6 months of seeding and any areas which have failed to establish should be re-seeded, during the appropriate season.

Long term Management

- 7.16 Low input extensive management:
- No artificial or organic manures to be applied; and
 - No herbicides to be applied with the exception of spot treatment of any undesirable or invasive species if necessary.
- 7.17 On-going management will involve a single cut when weather conditions allow on a flexible basis from July onwards after flowering (with late June- early August acceptable). All operations will be carried out using machinery appropriate to the task, cylinder, rotary or mulch mowers, with the cuts taken to a height of 50mm.
- 7.18 As above, cut material should be removed from the created grassland area and either taken off site or taken to a suitable composting area nearby. This should be located close to the grassland area to avoid the need of moving cut material long distances.
- 7.19 A second cut may be necessary, to be taken to remove the late season growth and the development of a species rich sward. The second cut should be taken when conditions allow either in autumn or early spring.
- 7.20 Areas within 1m of hedgerows or woodland/scrub boundaries should be left uncut in most years. To control scrub and bramble development these areas may need cutting every 2-3 years between October and February. This will be done on a rotational basis so that no more than half the area is cut in any one year leaving part as an undisturbed refuge.

Condition Assessment Rationale

- 7.21 A condition score of 'Moderate' is targeted as it is expected that these areas achieve at least 3 criteria, including essential criterion A, as per table 3 below. Criterion F is targeted but with allowance for failure.

Table 3: Other Neutral Grassland Condition Rationale

Condition Assessment Criteria/Objective	Targeted	Creation Approach	Management Approach
A. The parcel represents a good example of its habitat type, with a consistently high proportion of characteristic indicator species present relevant to the specific habitat type (and relative to suboptimal species* which may be listed in the UKHab description). ¹	Yes	Creation of herb rich neutral grassland communities achieved through use of a suitable nutrient poor substrate and seeding with an appropriate species rich seed mix	Ongoing management via a cut and collect approach to maintain low fertility and maintain species composition.
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 insects, birds and small mammals to live and breed.	No	Not targeted.	Not targeted.
C. Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens.	Yes	N/A	Regular monitoring can track the levels of bare ground and additional areas can be artificially introduced where necessary/appropriate.
D. Cover of bracken <i>Pteridium aquilinum</i> is less than 20% and cover of scrub (including bramble <i>Rubus fruticosus</i> agg.) is less than 5%.	Yes	N/A	Regular mowing and grazing management will prevent scrub and bracken from establishing.

Condition Assessment Criteria/Objective	Targeted	Creation Approach	Management Approach
E. Combined cover of species indicative of suboptimal condition* and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area. If any invasive non-native plant species ⁴ (as listed on Schedule 9 of WCA5) are present, this criterion is automatically failed."	Yes	The sowing of a native species-rich seed mix will introduce a diverse range of native wildflowers and grasses. This seed mix will not include any undesirable species.	Regular monitoring will track the presence of invasive non-native species or those indicative of sub-optimal condition and will trigger remedial action where necessary to remove or reduce their presence respectively.
F. There are 10 or more vascular plant species per m ² present, including forbs that are characteristic of the habitat type.	Yes	The species mixes contain diverse mixes of native grasses and wildflowers. This will introduce a range of additional wildflowers and indicator species and promote the successful establishment of a sward with at least 10 species per m ² .	Management through cutting will help to develop and maintain a diverse sward. Regular monitoring will track the number of species present and additional seed will be applied where considered necessary.

*Species indicative of suboptimal condition for this habitat type include: creeping thistle *Cirsium arvense*, spear thistle *Cirsium vulgare*, curled dock *Rumex crispus*, broad-leaved dock *Rumex obtusifolius*, common nettle *Urtica dioica*, creeping buttercup *Ranunculus repens*, greater plantain *Plantago major*, white clover *Trifolium repens* and cow parsley *Anthriscus sylvestris*. There may be additional relevant species local to the region and or site.

Mixed Scrub

- 7.22 In order to compensate for the loss of scrub within the Site an area of mixed native scrub will be incorporated into the south western section of the Site.
- 7.23 Specimens will be planted in small groups interspersed with unmanaged glades to create a mosaic of habitats that will be of particular benefit to foraging bats, invertebrates and birds. This will also complement the existing scrub and woodland planting situated outside of the eastern and western Site boundary.

Creation

- 7.24 The seedbed will be prepared as deemed the most appropriate by the management contractor, which may include cultivating the ground. Evidence of existing soil compaction will be remediated before planting to ensure the soil is able to support establishment and growth.
- 7.25 Planting will take place between November and March during the plants dormant period and protected from rabbits with tree guards as conditions on site require. Planting should be done in a naturalistic pattern at variable densities, not in straight lines. The edges of the scrub should be planted in a sinuous scalloped edge pattern.
- 7.26 Hawthorn and blackthorn will be planted in small single-species clumps towards the centre of the scrub block and sufficiently spaced apart to prevent either from dominating the canopy. The remaining species will be planted at random
- 7.27 The planting pit dug will be a shallow square, larger than the root ball of the whip. Backfilling of soil will utilise existing excavated soils only with no compost or fertiliser application. It will be important to ensure the tree is not planted lower than the surrounding ground level. The aim of planting will be to ensure that the level that the tree base meets the soil level will be slightly above ground level, aiming for 25mm above.

Table 4: Scrub Planting list

Common Name	Scientific Name-	Percentage
Dogwood	<i>Cornus sanguinea</i>	10
Hazel	<i>Corylus avellana</i>	20
Hawthorn	<i>Crataegus monogyna</i>	30
Spindle	<i>Euonymus europaeus</i>	10
Holly	<i>Ilex aquifolium</i>	5
Blackthorn	<i>Prunus spinosa</i>	5
Field-rose	<i>Rosa arvensis</i>	10
Guelder-rose	<i>Viburnum opulus</i>	10

Management

- 7.28 Scrub planting to be attended to annually for years 1-5. At each visit the following operations are to be carried out.

- All plants shall be checked and firmed up in the ground as necessary;
- Planting guards (if fitted) shall be checked at each visit and removed if no longer required, stakes firmed up as necessary, and ties adjusted.
- Any dead trees and shrubs shall be removed and replaced within the first 5 years.
- Trimming following establishment period (by year 5 or 6) including maintenance of a sinuous edge with a graded margin down to field layer.

7.29 Selective thinning / coppicing of the scrub will be undertaken to allow light to reach ground flora and promote regeneration of young shrubs. This will be undertaken every seven years (in years 7, 14, 21 and 28) with a maximum of 1/5th of the stand thinned/coppiced. This will include selective clearing of scrub edge down to ground to maintain scalloped edges. Individual specimens will be selected for thinning/coppicing to maintain a diverse age and species range within the scrub.

7.30 To control scrub and bramble development within the grass margin these areas may need cutting every 2-3 years between October and February. This will be done on a rotational basis so that no more than half the area is cut in any one year leaving part as an undisturbed refuge.

Condition Assessment Rationale

7.31 A condition score of 'Moderate' is targeted, which requires 3-4 criteria to be met, as per table 5 below.

Table 5: Mixed Scrub Condition Rationale

Condition Assessment Criteria		Targeted	Creation approach	Management Approach
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 comprising more than 75% of the cover (except hazel <i>Corylus avellana</i> , common juniper <i>Juniperus communis</i> , sea buckthorn <i>Hippophae rhamnoides</i> or box <i>Buxus sempervirens</i> , which can be up to 100% cover).	Yes	This will be achieved by planting a minimum of five native shrub species.	Once established, the scrub will be managed by periodic thinning and coppicing to maintain a diverse mixture of species and ages.
B	Seedlings, saplings, young shrubs and mature (or ancient or veteran) shrubs are all present.	Yes	N/A	Targeted thinning, coppicing and management will be implemented to develop and maintain a diverse age range plants.
C	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA) and species indicative of suboptimal condition make up less than 5% of ground cover.	Yes	No fertiliser will be used during any site management practices to prevent eutrophication.	Regular monitoring will track the presence of invasive non-native species or those indicative of sub-optimal condition and will trigger remedial action where necessary to remove or reduce their presence respectively.

Condition Assessment Criteria		Targeted	Creation approach	Management Approach
D	The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.	No	To aid in the establishment of diverse edges, hawthorn and blackthorn (which do not respond well to coppicing) should be planted more centrally within scrub blocks	Rotational coppicing / thinning of the margins scrub blocks will aim to create scalloped edges and bays along the boundaries between scrub and grasslands to maximise the ecotone habitats present. Scrub edges and glades will be cut or strimmed on an 2-3 year basis.
E	There are clearings, glades or rides present within the scrub, providing sheltered edges.	No	N/A	N/A

Broadleaved Woodland

- 7.32 In order to further compensate for the loss of 0.03 units of woodland within the site, a new parcel of native woodland is proposed within the south-western boundary of the Site.

Creation

- 7.33 The soil will be harrowed to create an even bed and the parcel planted in the period November to March with a mixture of native 60-80cm and 150-175 specimens, to introduce structural diversity at an early stage. Species are to be planted at random planted at random, selected from the woodland planting list from table 4 below.
- 7.34 Trees are not to be planted lower than the surrounding ground level, with the aim of planting to ensure that the tree base meets the soil level will be slightly above ground level, aiming for 25mm above.
- 7.35 Tree guards to be installed around establishing whips, as required to prevent them becoming browsed.

Establishment

- 7.36 Woodland planting to be attended to annually for years 1-5. At each visit the following operations are to be carried out.
- All plants shall be checked and firmed up in the ground as necessary;
 - Planting guards (if fitted) shall be checked at each visit and removed if no longer required, stakes firmed up as necessary, and ties adjusted.
 - Any dead trees and shrubs shall be removed and replaced within the first 5 years in accordance with the tree planting species in the table below and prescriptions above.

Management

- 7.37 Selective thinning / coppicing will be undertaken to allow light to reach ground flora, diversify the structure and promote regeneration. This will be undertaken every seven years (in years 7, 14, 21 and 28)
- 7.38 Thinning. In the period October to February, mark roughly 5% of trees, focusing on selecting poorly grown, diseased or crowded trees. Ring-bark roughly one third of the marked trees near the base of the trunk where it is safe to have standing dead-wood. Fell two-thirds of the marked trees and stack the cordwood into deadwood piles and chip the brash and remove from site.
- 7.39 Coppicing In the period November-early March, coppice no more than 5% of understorey shrubs and 5% of trees, focusing on margins.
- 7.40 Species that respond well to coppicing are limited to: field maple, hazel and holly
- 7.41 Stools subject to coppice management will be cut just above ground level with clean, slightly sloping cuts to encourage water to drain off the cut surfaces. Stack the cordwood into deadwood piles and chip the brash and remove from site.

Table 6: Woodland Planting Mix

Common Name	Scientific Name	Percentage	Height/Form
Field maple	<i>Acer campestre</i>	2	150-175cm Feathered
Field maple	<i>Acer campestre</i>	10	60-80cm transplant
Silver birch	<i>Betula pendula</i>	2	150-175cm Feathered
Hazel	<i>Corylus avellana</i>	20	60-80cm transplant
Spindle	<i>Euonymus europaeus</i>	10	60-80cm transplant
Holly	<i>Ilex aquifolium</i>	5	60-80cm leader with laterals
Crab apple	<i>Malus sylvestris</i>	2	150-175cm Feathered
Wild cherry	<i>Prunus avium</i>	2	150-175cm Feathered
Sessile oak	<i>Quercus petraea</i>	10	60-80cm transplant
Rowan	<i>Sorbus aucuparia</i>	10	60-80cm transplant
Rowan	<i>Sorbus aucuparia</i>	2	150-175cm Feathered
Guelder-rose	<i>Viburnum opulus</i>	20	60-80cm transplant

Condition Assessment Rationale

Condition assessment rational and targets are provided in Table 7 below, with the aim of achieving a minimum score of 26 points in total to target 'Moderate' condition.

Table 7. Broadleaved Woodland Condition Rationale..

Condition Assessment Criteria		Target score	Creation Approach	Management Approach
A	Age Distribution of Trees 3 - three age classes 2 - two age classes 1 - one age class	1-2	Planting of a range of native tree species, with different growth rates. A mixture of 60-80cm and 150-175cm specimens will be planted initially.	Periodic thinning of canopy on a seven year cycle. At the end of the 30-year management period two age classes of tree should be present.
B	Herbivore Damage 3 - no significant browsing 2 - significant browsing pressure <40% 1 - significant browsing pressure >40%	2-3	Tree guards around newly planted trees should keep herbivore damage to a minimum.	Monitoring to ensure continued absence of significant browsing pressure
C	Invasive Plant Species 3 - No invasive species 2 - invasive species <10% cover AND NO rhododendron or Cherry Laurel Present 1 - invasive species >10% cover or/and Rhododendron or cherry laurel present.	3	N/A	Monitoring to ensure continued absence of invasive species and corrective measures undertaken if recorded.
D	Number of Native Species 3 - 5+ native trees and/or shrubs 2 - 3-4 native trees and/or shrubs 1 - 2- native trees and/or shrubs	3	Planting mix used will ensure 5+ species. Trees expected to be +5m high after 30 years	N/A
E	Cover of Native Species 3 - >80% of canopy & understorey native 2 - 50-80% of canopy & understorey native 1 - <50% of canopy & understorey native	3	Planting mix used will ensure >80% native cover	N/A

Condition Assessment Criteria		Target score	Creation Approach	Management Approach
F	Open Space 3 - 10-20% temporary open space If woodland area <10ha 0-20% temporary open space = Good 2 - 21-40% temporary open space 1 - <10% or >40% temporary open space	3	N/A	Selective felling will ensure 0-20% open space.
G	Woodland Regeneration 3 - 3 age classes 2 - 1-2 age classes 1 - No classes or coppice regrowth	2	N/A	Selective felling and coppicing to encourage natural regeneration of gaps. Monitoring to ensure the continuing presence of 1-2 classes within the woodland.
H	Tree Health 3 - <10% mortality, no pests/disease, no dieback 2 - 11-25% mortality, low risk pest or disease present 1 - >25% mortality, high risk pest or disease present	3	Establishment management include provision to replace any dead or dying trees.	Selective felling and ringbarking will target any dead or diseased trees.
I	Vegetation & Ground Flora 3 - Recognisable NVC community including ancient flora specialists 2 - Recognisable NVC community at ground level 1 - No recognisable NVC community	1	Not Targeted	Not Targeted

Condition Assessment Criteria		Target score	Creation Approach	Management Approach
J	Woodland Vertical Structure 3 - Three or more storeys or a complex woodland 2 - Two storeys 1 - One or no defined storeys	1-2	Planting of a range of native tree and shrub species, with different growth rates.	Selective felling to encourage natural regeneration of gaps. At end of 30-year management period two storeys of should be present
K	Veteran Trees 3 - 2+ veteran trees per ha 2 - 1 veteran tree per ha 1 - no veterans	1	Not targeted.	Not targeted.
L	Amount of Deadwood 3 - 50%+ of plots have deadwood 2 - 25-50% of plots have deadwood 1 - <25% of plots have deadwood	2	N/A	Retain deadwood in situ following thinning / coppicing works. Ringbark selected trees to allow for standing deadwood habitat.
M	Disturbance and enrichment 3 - No nutrient enrichment or damaged ground 2 - <1ha of nutrient enrichment and /or less than 20% of woodland has damaged ground 1 - >1ha of nutrient enrichment and/or >20% of woodland has damaged ground	1	Not targeted.	N/A
	Total (condition)	26-29 (Moderate)		

Modified grassland

- 7.42 The formal grassland areas around the will be seeded with an appropriate flowering lawn seed mix including a range of grasses and herbs. that responds well to regular mowing.

Creation

- 7.43 The areas to be sown will be raked or harrowed to produce a medium fine tilth. The areas should be seeded with an appropriate flowering lawn seed mix including a range of grasses and herbs. that responds well to regular mowing (Naturescape N14 'Flowering Lawn Mixture'⁶ [or similar]).
- 7.44 Seeding to take place in Autumn or spring selecting a time when the soil is moist and can be worked and avoiding periods of extended drought. Sowing must be undertaken in still wind conditions when the soil is saturated but not flooded. After sowing, seed will be bedded in by rolling.
- 7.45 In order to discourage more robust plant species, no top-soil or fertiliser will be used in the creation of the grassland.
- 7.46 Where grassland is to be seeded from bare soil, it will require a longer period to establish and may require reseeding in the second year.

Enhancement

- 7.47 The existing modified grassland to be enhanced should be cut short and chain harrowed to open up 50%+ bare ground. Sowing to follow the prescriptions outlined above.

Management – first year

- 7.48 Cut to a height of 40-60mm, 6-8 weeks after germination and subsequently mow to this height as required, but not more regularly than once every four weeks until such a time as a knitted turf is established. This will gradually develop a good sward structure, help maintain balance between faster growing grasses and slower developing wildflowers, and control annual weeds.
- 7.49 Cut material should be removed from the created grassland area and either taken off site or taken to a suitable composting area nearby. This should be located close to the grassland area to avoid the need of moving cut material long distances.

Management once established

- 7.50 To provide the formal appearance desired, following the initial year of its creation, the management of the grassland will include the following.
- 7.51 Once established, the frequency of cuts shall remain flexible in order to accommodate growth rates and weather conditions, but with the most important principle being that cutting will be suspended for a six to eight-week period during May-June to allow for a suitable flowering period. Outside of this eight-week period, the grassland can be cut up to once per month through the growing season. If grass growth proves to be vigorous, the frequency of cutting can be increased, following consultation with the project ecologist, to two times per month, up to a maximum of 12 cuts per annum.
- 7.52 All operations will be carried out using machinery appropriate to the task, cylinder, rotary or mulch mowers, with the cuts taken to a height of 50mm. All grass cuttings will be removed

⁶ <https://www.naturescape.co.uk/product/n14-flowering-lawn-mixture/>

immediately to prevent soil enrichment detrimental to floristic diversity and to minimise thatching.

- 7.53 Mowing operation will only be carried out during appropriate weather conditions avoiding sustained periods of rain, or heavy frost, snow, and waterlogging.

Condition Assessment Rationale

- 7.54 A condition score of 'Moderate' is targeted for Modified Grassland. It is expected that these areas achieve at least 4 criteria, including essential criterion A (see Table 8).

Table 8. Modified Grassland Condition rationale.

Condition Assessment Criteria/Objective	Targeted	Creation / Enhancement Approach	Management Approach
There are 6-8 vascular plant species per m ² 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.	Yes	Creation of a flowering lawn achieved through seeding with an appropriate species rich flowering lawn seed mix.	Ongoing management to maintain low fertility and maintain species composition by using a cut and collect method.
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.	No	N/A	N/A
Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble <i>Rubus fruticosus agg.</i> may be present).	Yes	N/A	Regular monitoring and mowing regime to control encroachment
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.	Yes	N/A	Regular monitoring and resowing of areas where necessary
Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens) ² .	No	N/A	N/A
Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.	Yes		Regular mowing regime to prevent bracken from establishing Regular monitoring to track where bracken encroachment has occurred which will trigger remedial action where necessary.

Condition Assessment Criteria/Objective	Targeted	Creation / Enhancement Approach	Management Approach
There is an absence of invasive non-native plant species ³ (as listed on Schedule 9 of WCA ⁴).	Yes	Native seed mix will be used to create a flowering lawn	Regular monitoring will track the presence of invasive non-native species and will trigger remedial action where necessary to remove their presence.

Individual Trees

- 7.55 In total, 91 new individually planted trees are proposed. The species planted will be native species, or cultivars of native species intending to compensate for the loss of individual trees in the baseline and increase the diversity of tree species within the Site.
- 7.56 Table 9 below outlines the species that will be included within the scheme.

Table 9. Proposed Tree Composition.

Woody species	Scientific name	No. of Trees
Field maple 'Elsrijk'	Acer campestre 'Elsrijk'	5
Field maple Nanum'	Acer campestre Nanum'	5
Alder	Alnus glutinosa	6
Silver birch	Betula pendula	12
Hawthorn	Crataegus monogyna	4
Cherry	Prunus 'Accolade'	3
Wild cherry	Prunus avium	11
Rowan	Sorbus aucuparia	25

Creation

- 7.57 Native trees of local provenance, where possible, will be planted between November and March. Tree guards will be installed around establishing standards and whips to prevent them becoming browsed.
- 7.58 The planting pit dug will be a shallow square, larger than the root ball of the standard. Planting holes should be lightly dressed with bone meal and a slow-release fertiliser to promote root growth and early establishment.
- 7.59 It will be important to ensure the tree is not planted lower than the surrounding ground level. The aim of planting will be to ensure that the level that the tree base meets the soil level will be slightly above ground level, aiming for 25mm above.
- 7.60 Trees will be planted at least 2m apart.

Management

- 7.61 Newly planted trees should be watered during periods of prolonged dry weather between April and October.
- 7.62 Trees should be regularly inspected with the base of trees kept weed and grass free. Over-vigorous weeds such as brambles and nettles are to be removed.
- 7.63 Appropriate precautionary measures must be undertaken to protect trees against damage from mowing equipment.
- 7.64 For the first five years all dead and dying specimens are to be replaced with a tree of either the same species or similar species as those existing. This is to allow some flexibility and to avoid problems encountered with 'Same Tree Disease'.
- 7.65 Long-term tree management will include the regular checking and adjustment of tree supports by the Management Contractor.

- 7.66 Any stakes or ties showing signs of damage should be removed and replaced as necessary and mulch levels will be topped up where necessary. Any stakes, which show movement or instability, shall be secured or repositioned. Tree stakes/ties/guards will be removed once trees have established well, and surfaces disturbed will be made good, with any resulting holes filled with suitable topsoil.
- 7.67 Works will seek to retain tree heights where possible with trees left unmanaged unless otherwise dictated for reasons of public safety or to benefit the tree health.
- 7.68 Any tree works are to be undertaken only by a suitably skilled and qualified arboriculturalist.
- 7.69 Trees will be inspected annually in late autumn/winter by a suitably qualified arboriculturalist for signs of stress, disease or damage and appropriate remedial action taken.
- 7.70 Any branches requiring removal should ideally be cut leaving 50-80mm of main stem and ensuring that all cuts are clean to encourage healing and water shedding.
- 7.71 Any diseased wood will be pruned back to sound wood. Any diseased wood will be removed from the site to discourage the further spread of disease. No burning will be undertaken on site.

Condition Assessment Rationale

- 7.72 Condition assessment rational and targets are provided in Table 10 below, with the aim of meeting 3-4 criteria in total to target 'Moderate' condition.

Table 10. Individual Trees Condition Rationale.

Condition Assessment Criteria/Objective	Targeted	Creation Approach	Management Approach
The tree is a native species (or at least 70% within the block are native species).	Yes No – Cultivars (13 trees)	Planting will consist only of native species Any replacement of failed specimens required will be completed using native species only	N/A
The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion).	Yes	Trees will be planted as individuals throughout the Site where they will not compete with neighbouring trees or scrub, allowing them to grow a full and continuous canopy. Only healthy heavy / selected standards will be planted.	Trees will be monitored for any signs of damage, with restorative pruning undertaken where required.
The tree is mature (or more than 50% within the block are mature).	No	N/A This criterion will not be targeted due to the limited time frame available within this management plan (30 years) which will not be sufficient to allow a tree to grow to full maturity.	
There is little or no evidence of an adverse impact on tree health by human activities (such as vandalism, herbicide or detrimental agricultural activity). And there is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.	Yes	Trees will be mulched to prevent weed growth.	There will be no pruning or management outside of removal of diseased or failed species. No herbicides shall be used in the planting and establishment process.
Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	No	This criterion will not be targeted as it is unlikely that young, planted trees will be guaranteed to achieve this within the 30-year management period.	N/A
More than 20% of the tree canopy area is oversailing vegetation beneath.	Yes	All trees will be planted oversailing vegetation.	

Hedgerows

- 7.73 New native species hedgerow and native hedgerow planting will be established. In total, 543m of species rich hedgerow and 42m of native hedgerow planting is proposed. The planting composition will be based on the species-mix provided in Table 11 and will ensure that at least five species are present within a given 30m section, thereby providing new habitat of principal importance under the Natural Environment and Rural Communities Act (2006).

Table 11: Hedgerows Species Mix

Common Name	Scientific Name	Percentage
Species rich Native Hedgerow		
Field maple	<i>Acer campestre</i>	8
Dogwood	<i>Cornus sanguinea</i>	3
Hazel	<i>Corylus avellana</i>	8
Hawthorn	<i>Crataegus monogyna</i>	60
Holly	<i>Ilex aquifolium</i>	8
Blackthorn	<i>Prunus spinosa</i>	10
Dog rose	<i>Rosa canina</i>	3
Native Hedgerow		
Yew	<i>Taxus baccata</i>	100

Creation

- 7.74 The hedgerow would be planted in double staggered rows, at 30cm spacings, with spiral guards used as required. Planting will be undertaken between November and March during the plants dormant period and protected from rabbits with tree guards as conditions on site require.
- 7.75 A mulch layer comprising 50mm of composted bark/woodchips will be applied immediately after planting but leaving 150mm clear around stems.

Management

- 7.76 Any protective spiral guards used will be removed once shrubs are established.
- 7.77 The base of the hedgerows would be kept weed-free for at least three years to ensure a good plant establishment and growth rate.
- 7.78 Like-for-like replacement of failed saplings will be undertaken until the hedgerow is mature and established.
- 7.79 Until new planting is established, formative pruning will be undertaken to keep the hedgerows tidy and encourage dense, bushy growth, with competitive species cut back using hand tools.
- 7.80 Hedgerows will be cut on a three-year cycle, during late winter, after fruiting and prior to the bird nesting season (March).
- 7.81 The hedges should be mechanically trimmed to gradually develop a flat topped A-shape to a height of at least 1.5m with a width of 1.5m, allowing height and width to increase a little each

time. If a hard knuckle forms at cutting height, raise height over subsequent cuts. The exception is the native yew hedge which will be managed to maintain a shorter and narrower structure.

- 7.82 Where species die back in the hedge and gaps form, they should be replaced on a like for like basis to maintain woody species diversity.
- 7.83 A strip of at least 1m of grassland closest to the hedge should be left uncut in most years. To control scrub and bramble development these areas may need strimming every 2-3 years between October and February. This will be done on a rotational basis so that no more than half the area is cut in any one year leaving part as an undisturbed refuge.

Condition Assessment Rationale

- 7.84 Detailed management interventions and targets are provided in Table 12 below. The Species Rich native hedgerows are proposed in moderate condition allowing no more than 4 failures in total and no more than 1 failure in any functional group.

Table 12: Hedgerow Condition Rationale

Condition Assessment Criteria/Objective		Targeted	Creation Approach	Management Approach
A1.	>1.5 m average along length	Yes Native hedge - no	N/A Maintained through management	Management will support and promote the growth of the hedgerow structure and diversity. This will target bushy hedgerows. Hedgerows will be managed through cutting one year in three. Management by side trimming in 'A' profile and shaped to promote the development of wide, healthy hedgerow bases
A2.	>1.5 m average along length	Yes Native hedge - no		
B1.	Gap between ground and base of canopy <0.5 m for >90% of length	Yes		
B2.	Gaps make up <10% of total length; and No canopy gaps >5 m	Yes	Planting methods will ensure minimal gaps	Management to ensure species diversity is maintained along the hedgerow length, replacing specimens on a like-for-like basis where failures occur or gaps form.
C1.	>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).	Yes	Initial planting of hedges within areas of open space with adjacent seeding of species rich grassland.	A buffer of at least 1m of ground cover either side of the hedgerow will be left unmown most years.
C2.	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.	No	While it is considered that the appropriate management will help to limit undesirable species, this criterion has not been targeted due to the inherent risks associated with achieving it.	
D1.	>90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (including those listed on Schedule 9 of WCA ³) and recently introduced species.	Yes	N/A	Regular monitoring and management will be implemented to ensure non-native and invasive species do not grow within the hedgerows.
D2.	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities.	Yes		Regular monitoring with remedial action taken as required..

8.0 RISK AND REMEDIAL MEASURES

8.1 Table 13 provides details of site-wide risks associated with creating, enhancing and managing proposed habitat types. Remedial measures to ensure delivery of the management plan objectives are also provided.

Table 13. Habitat Creation and Management – Risk Register and Remedial Measures.

Habitat Type	Risk Factor	Trigger for Action	Remedial Measure
All habitats	Establishment of invasive non-native species.	Monitoring identifies the presence of any invasive non-native species.	Initiate a programme of eradication of invasive non-native species. Specialist advice should be sought to ensure the appropriate eradication for any species identified.
Other Neutral Grassland	Vigorous grass growth limiting species diversity.	Sward 'collapsing' due to lushness prior to cutting or palatable/productive grasses are identified as dominating the sward (over 50%):	Remove early spring re-growth of grass by taking an additional cut, in March/April (if ground conditions allow). If further monitoring shows continued vigorous grass growth introduce yellow rattle seed: 1) after the hay cut chain harrow the grassland three times in immediate succession and in a different direction each time. 2) Broadcast yellow rattle seed at a rate of 2.5kg/ha, then roll immediately with a flat roller. 3) If there is sufficient grass growth following sowing, take another cut before the end of year removing arisings.
Other Neutral Grassland	Poor species diversity	Less than 10 species per average m ²	Initiate a second round of seeding following the prescriptions provided for the grassland field compartment(s) which are falling short of this target.
Other Neutral Grassland	Establishment of species indicative of sub-optimal condition	Where species indicative of sub-optimal comprise >5% of sward	Initiate a programme of spot-spraying species indicative of sub-optimal condition using glyphosate herbicide.
All Grassland	Failed areas of seeding	Greater than 10% bare ground during years 2-5.	Apply additional seed in areas of failed establishment. Appropriate seed mix to be used for the compartment where reseeding is required.
All Grassland	Scrub or bracken encroachment	Scrub or bracken cover greater than 20% (modified) or 5% (Other Neutral) of total grassland area.	Initiate programme of scrub and/or bracken removal as required. This can either be through mechanical removal or spot spraying with herbicide.
Modified grassland	Poor species diversity	Less than 6 species per average m ² .	Initiate a second round of seeding following the prescriptions provided for grassland parcels falling short of this target.

Habitat Type	Risk Factor	Trigger for Action	Remedial Measure
Mixed Scrub	Insufficient variation of age classes	One or more age class missing across the habitat type.	Selective thinning of scrub to allow natural regeneration to occur. Where natural regeneration is unsuccessful, additional planting of native species should be introduced.
Mixed Scrub	Overdominance of one species within the canopy	Where one species of scrub within a scrub block represents more than 75% of canopy cover.	Selective thinning of dominant species to allow other species to establish within the canopy. Supplementary planting to be undertaken where necessary.
Mixed Scrub	Encroachment of scrub into adjacent grasslands	Where the edges of scrub begin to creep into grasslands to an extent that they begin to reduce the overall extent of grasslands onsite. This may be a particular problem with blackthorn suckering	Initiate a program of dense scrub removal where this habitat has begun to creep into grassland habitats. This should not be undertaken where only scattered scrub is present at the edges of the boundaries between these habitats and should only be undertaken where more dense scrub is established.
Individual trees	Failed specimens	Failed specimens observed during years 2-5.	Replacement planting with like for like species of failed specimens
Broadleaved woodland	Failed specimens / diseased trees	Failed specimens observed during years 2-5. Or diseased trees throughout management period	Replacement planting with like for like species of failed / diseased specimens.
Hedgerow and tree planting	Newly planted whips failing to establish from drought etc	10% of newly planted trees found to be dead during years 1-10.	Undertake a second round of planting, replacing failed specimens on a like-for-like basis

9.0 MONITORING STRATEGY

9.1 The Site will be monitored at varying degrees from establishment and through its long-term management. Monitoring and subsequent reporting should be undertaken by a suitably experienced ecologist. Initially, during the establishment period the Site will be monitored in years 1, 2, & 5. The year 1 review will confirm the initial creation and enhancement works have been completed as prescribed, with the years 2 and 5 monitoring periods assessing how the establishment of the proposed habitat creation and enhancement is progressing. The key observations during this period will be to determine whether habitats are successfully establishing and improving and whether replacement planting or reseedling may be required.

Oter Neutral and Modified Grassland

- 9.2 During the establishment phase (Years 1, 2 & 5) grassland monitoring will focus on determining the DAFOR abundances of plants present throughout the sward and whether a sufficient number of species within the seed mix used has established.
- 9.3 During years 10-30, grasslands will be monitored via the following methods. The grassland communities will be mapped broadly following the UKHab classification system and assessed for their condition using methodology as detailed within The Statutory Biodiversity Metric (or current industry best practice, if agreed with LPA).

- 9.4 To achieve this the entire habitat will be walked and the following recorded:
- a comprehensive species list of the vascular plant species present, along with a measure of abundance using DAFOR;
 - representative photos, including photos from fixed points;
 - Percentage cover of scrub/bracken;
 - Percentage cover of species indicative of sub-optimal condition;
 - Sward height diversity (a visual judgement on the % cover less than 7cm and % cover greater than 7cm);
 - Level of poaching or trampling damage;
 - Presence of non-native invasive species; &
 - Any other factor which could be limiting condition
- 9.5 The walkover will be supplemented by recording the plant species present within a series of 1m x 1m quadrats. Quadrats will be placed within what were visually considered to be stands of homogenous vegetation, which are representative of the wider community and the following recorded:
- the percentage cover for each species within the quadrat;
 - the percentage cover of bare ground within the quadrat;
 - average height of the sward within the quadrat; &
 - the location of the quadrat and a photo of the quadrat.
- 9.6 Grassland monitoring will be undertaken between May and August during Years 1, 2 & 5 and then at 5 years intervals, beginning at year 10 until at least year 30.

Mixed Scrub

- 9.7 During years 1,2 & 5 of the management plan period, individual specimen scrub plants will be monitored for their health. The abundance of species indicative of sub-optimal condition and the presence of non-native invasive species will also be reviewed.
- 9.8 For the remainder of the management period, during each monitoring visit the scrub will be recorded by making a comprehensive species list should be made of the woody components, split into upper canopy, lower canopy and regeneration, together with a comprehensive species list of the ground flora. Each element should have an associated DAFOR measure of abundance.
- 9.9 The following will also be recorded, along with representative photos:
- The percentage cover of scrub canopy species;
 - The percentage cover of various age ranges of scrub;
 - Percentage cover of species indicative of sub-optimal condition
 - Presence of non-native invasive species;
 - The character of edge habitats;
 - The presence and character of scalloped edges, clearings, glades and rides

Individual trees

- 9.10 During years 1, 2 & 5 of the management plan period, individual trees will be monitored for their health. The abundance of species indicative of sub-optimal condition and the presence of non-native invasive species will also be reviewed.
- 9.11 Throughout the remainder of management period, individual trees will be monitored for:
- Trees achieving maturity
 - Any vandalism or adverse impacts from human activity
 - Pruning activities
 - Presence of vegetation under the tree canopy area
- 9.12 Surveys to be completed between May and August during years 1, 2 & 5, and then at 5 years intervals beginning at year 10 until at least year 30.

Broadleaved woodland

- 9.13 During years 1, 2 & 5 of the management plan period, the woodland will be monitored for its number and cover of native tree and scrub species. The presence of invasive non-native species will also be reviewed.
- 9.14 Throughout the remainder of management period, woodlands will be monitored for:
- Presence of herbivore damage
 - Presence of non-native invasive species
 - Number and cover of native tree and scrub species
 - Percentage cover of open space
 - Evidence of regeneration
 - Tree health
 - Presence of woodland ground flora
 - Woodland vertical structure
 - Percentage of plots with deadwood
 - Evidence of disturbance
- 9.15 Woodland surveys to be completed between May and August during years 1, 2 & 5 and then at 5 years intervals, beginning at year 10 until at least year 30.

Hedgerows

- 9.16 During years 1, 2 & 5 of the management plan period, hedgerow planting will be monitored for their health. The abundance of species indicative of sub-optimal condition and the presence of non-native invasive species will also be reviewed.
- 9.17 Throughout the remaining management plan period, the existing hedgerows will be monitored for:
- Hedgerow structure (Height and width)
 - Hedgerow gaps

- Grassland buffer size
- Nutrient enrichment
- Invasive and neophyte species presence
- Signs of damage (including excessive browsing and grassland poaching)

10.0 MONITORING REPORTS

- 10.1 Indurent Management Ltd will be responsible for issuing a written notice to the LPA upon the implementation of the HMMP. Upon completion of habitat creation and enhancement works in year 1, Indurent Management Ltd or their appointed contractor(s) will issue a report to the LPA evidencing the completed habitat works, following a monitoring inspection by a suitably experienced ecologist.
- 10.2 Monitoring reports will be submitted for a review to Rochdale Borough Council following each monitoring visit by a suitably experienced ecologist, as outlined above (i.e. years 1, 2, 5, 10, 15, 20, 25 and 30). The organisation responsible for submitting the monitoring reports is to be confirmed, however this will be the responsibility of Indurent Management Ltd or their appointed contractor(s).
- 10.3 Monitoring reports will be submitted to the LPA in December of each year the monitoring has been conducted presenting an overview of the progress on site. Table 8 below summarises the monitoring report schedule.

Table 8. Monitoring Report Schedule.

Project Year	Month report to be submitted	Month management plan to be reviewed	Comments
Y1	December	September-November	Report on results of initial habitat creation measures.
Y2	December	September-November	Report on results of habitat establishment and identify any remedial measures.
Y5	December	September-November	Review of success of habitat establishment. Depending on progress of habitats – review management techniques and the need for any amendments to the HMMP or remedial measures.
Y6-Y30	December	September-November	TBC



N

050100 m

Red Line Boundary

Baseline Habitats

Bramble scrub

Developed land; sealed surface

Introduced shrub

Mixed scrub

Modified grassland

Other neutral grassland

Other woodland; broadleaved

Baseline Hedgerow

Line of trees

Baseline Individual Trees

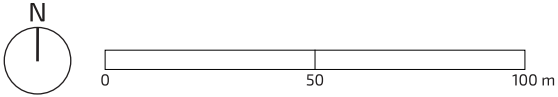
Existing medium urban tree

Existing small urban tree

date	29/08/25	drwn/chkd	DV / IH
client	Indurent Management Ltd		
project	Plot H4, Heywood Distribution Park		
title	BASELINE HABITAT PLAN	scale	1:1,800 @ A3
number	FIGURE 1	rev	-

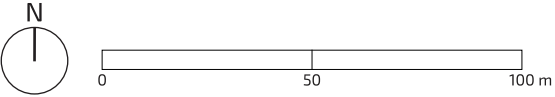
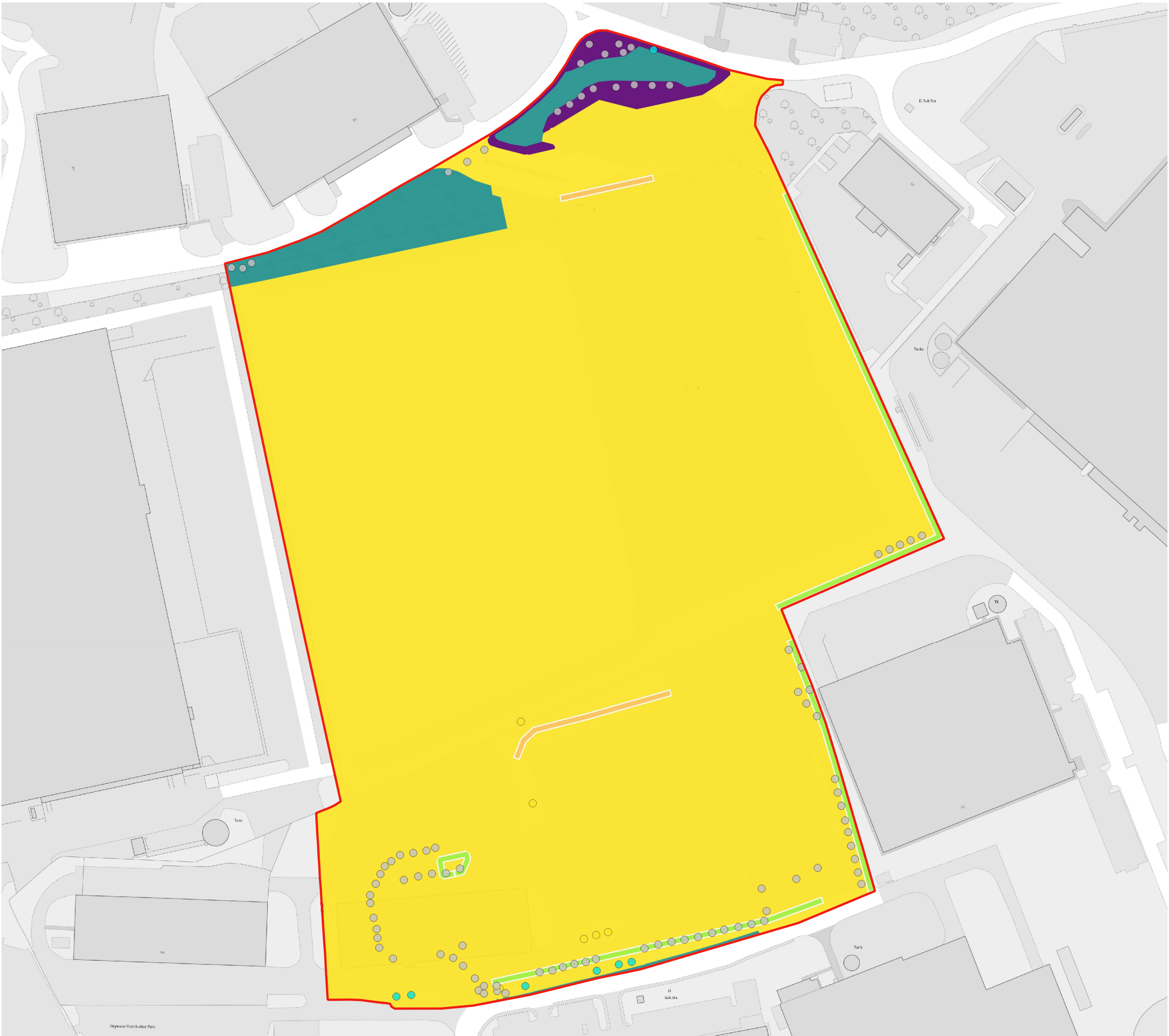
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- Red Line Boundary
- Proposed Habitats
 - Developed land; sealed surface
 - Introduced shrub
 - Mixed scrub
 - Modified grassland
 - Other neutral grassland
 - Other woodland; broadleaved
- Proposed Hedgerows
 - Native hedgerow
 - Species-rich native hedgerow
- Proposed Individual Trees
 - Proposed small rural tree
 - Retained medium urban tree
 - Retained small urban tree

date	29/08/25	drwn/chkd	DV / IH
client	Indurent Management Ltd		
project	Plot H4, Heywood Distribution Park		
title	PROPOSED HABITAT PLAN	scale	1:1,800 @ A3
number	FIGURE 2	rev	-



- Red Line Boundary
- Habitats**
 - Enhanced
 - Retained
 - Lost
- Hedgerows**
 - Created
 - Lost
- Individual Trees**
 - Created
 - Retained
 - Proposed Lost

date	29/08/25	drwn/chkd	DV / IH
client	Indurent Management Ltd		
project	Plot H4, Heywood Distribution Park		
title	HABITAT RETENTION PLAN	scale	1:1,800 @ A3
number	FIGURE 3	rev	-



N

0

50

100 m

Red Line Boundary

Baseline Habitat Condition

Moderate

Poor

N/A - Other

Condition Assessment N/A

Baseline Habitat Distinctiveness

Medium

Low

V.Low

Baseline Hedgerow Condition

Moderate

Poor

Baseline Hedgerow Distinctiveness

Low

Baseline Individual Tree Condition

Poor

Baseline Individual Tree Distinctiveness

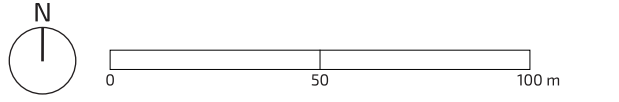
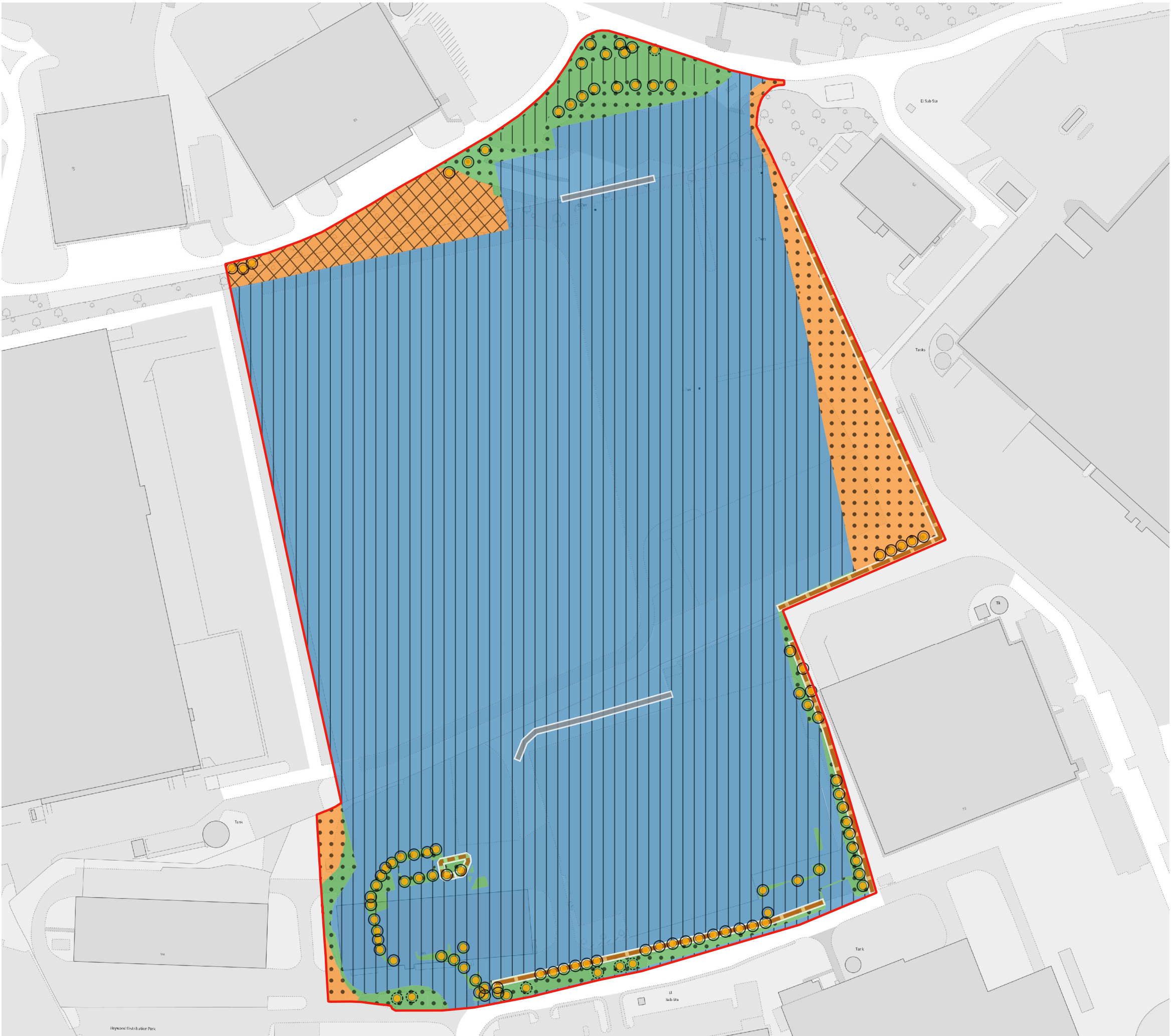
Medium

date	29/08/25	drwn/chkd	DV / IH
client	Indurent Management Ltd		
project	Plot H4, Heywood Distribution Park		
title	BASELINE HABITAT CONDITION AND DISTINCTIVENESS PLAN	scale	1:1,800 @ A3
number	FIGURE 4	rev	-

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- Red Line Boundary
- Proposed Habitat Condition
 - Moderate
 - Poor
 - N/A - Other
 - Condition Assessment N/A
- Proposed Habitat Distinctiveness
 - Medium
 - Low
 - V.Low
- Proposed Hedgerow Condition
 - Moderate
 - Poor
- Proposed Hedgerow Distinctiveness
 - Medium
 - Low
 - N/A
- Proposed Individual Tree Condition
 - Poor
 - Moderate
- Proposed Individual Tree Distinctiveness
 - Medium

date 29/08/25 drwn/chkd DV / IH

client Indurent Management Ltd

project Plot H4, Heywood Distribution Park

title PROPOSED HABITAT CONDITION AND DISTINCTIVENESS PLAN scale 1:1,800 @ A3

number FIGURE 5 rev -