



Niftylift

Mason Way, Platts Common
Biodiversity Impact Assessment

May 2022

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1.0 INTRODUCTION

- 1.1 FPCR were commissioned by Niftylift to undertake a biodiversity impact assessment (BIA) of the proposed development to extend the external yard area at Niftylift Ltd, Platts Common Industrial Estate, Hoyland, S74 9TG.
- 1.2 This report details the results of an UKHab Survey, which was used to inform biodiversity offsetting calculations, using the DEFRA Biodiversity Metric 3.0. The scope of the Survey included the planning application boundary (hereafter referred to as 'the Site') and two areas of offsite land immediately to the north and South-East (referred to as 'Offsite Compensation Land'). The report goes on to outline habitat enhancement measures, within the offsite compensation land to be implemented as part of the proposals, which provide a measurable net gain to biodiversity.
- 1.3 The site is approximately 0.48ha, situated to the north of the town of Hoyland, in the Metropolitan Borough of Barnsley at central OS grid reference SE 36802 01521. The Site is an existing area of unmanaged grassland and scrub, immediately to the North and West of the existing Niftylift property.

Proposals

- 1.4 The proposal seeks full planning permission for the formation of a new hard standing area to extend the existing external yard associated with Niftylift's existing operation. Associated ground clearance and making good is also required. These works are proposed to the immediate north of the existing Site and will connect to the existing external yard to increase the capacity of the applicant's existing operation.

2.0 METHODOLOGY

Field Survey – Baseline habitats

- 2.1 Baseline habitats were identified and mapped by using the UKHab Classification system¹ which is used to determine broad habitat types in the wider countryside. This involved a systematic walk over of the survey area during which an associated plant species lists were compiled for each habitat mapped along with additional notes regarding the current 'condition' of the habitat, based on the criteria outlined within The Biodiversity Metric 3.0 Technical Supplement². Vascular plant nomenclature followed Stace (2019)³.
- 2.2 This survey was undertaken on 22nd February 2022 by Ian Hunter (BSBI Field Identification Skills Certificate Level 5), a suitably experienced Principal Ecologist from FPCR, with over thirteen years' relevant experience in habitat surveying. He is a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM). He was assisted by an experienced GIS technician.

¹ UK Habitat Classification Working Group (2018). UK Habitats Classification User Manual at <https://ukhab.org/>

² Natural England Joint Publication JP039 The Biodiversity Metric 3.0 auditing and accounting for biodiversity Technical Supplement. Access [online] Available at: <http://publications.naturalengland.org.uk/publication/6049804846366720>

³ Stace, C (2019) New Flora of the British Isles. 4th edn. C&M Floristics

Biodiversity Net Gain Calculation

- 2.3 The development Site was surveyed and mapped, as described above. Habitats were defined using the UK Habitat Classification, with each habitat parcel described by its location, area, distinctiveness and condition. This information was then used to calculate the baseline value of each habitat.
- 2.4 Full details of the calculation methodology are provided in Biodiversity Metric 3.0 – User Guide⁴.

Limitations

- 2.5 The UKHab habitat map 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.
- 2.6 The aim of biodiversity offsetting is to compensate for adverse impacts on biodiversity identified after appropriate avoidance, minimisation and on-site rehabilitation measures have been taken, according to the mitigation hierarchy as required by the NPPF.
- 2.7 The UKHab survey was undertaken in February which is a sub-optimal time for habitat surveying with many plant species already in their dormant state and many habitats having undergone some degree of vegetation removal in the previous year, as part of their regular management regimes. However, given the unmanaged nature of the Site and the habitat types encountered, it was considered that accurate habitat classification was possible with a high degree of accuracy.
- 2.8 Some of the condition assessments for grassland habitats would, where appropriate, be supported by the collection of quantitative quadrat data, which was not possible in this instance due to seasonal constraints. This data is principally used in the condition assessment to determine the presence/absence, relative frequency, and percentage cover of specific plant species. This constraint is acknowledged and in order to mitigate for this, for some of the habitat classification and condition assessments, a cautious approach has been taken and a decision reached based on the species recorded during the surveys, previous survey work undertaken to inform the planning application and surveyor experience. Where these decisions have been made, they are stated within the relevant habitat section below and the author would welcome any comments or corrections on these matters from consultees in order that an appropriate baseline value of the site is agreed. However, despite these constraints, it is considered that a representative record of the habitat conditions has been achieved for the site.
- 2.9 No other limitations specific to this report influenced this assessment.

⁴ Stephen Panks A, Nick White A, Amanda Newsome A, Jack Potter A, Matt Heydon A, Edward Mayhew A, Maria Alvarez A, Trudy Russell A, Sarah J. Scott B, Max Heaver C, Sarah H. Scott C, Jo Treweek D, Bill Butcher E And Dave Stone A. 2021. Biodiversity metric 3.0: Auditing and accounting for biodiversity – User Guide. Natural England.

3.0 BASELINE CONDITIONS

Strategic Significance

- 3.1 The Site sits within the Dearne Valley Green Heart Nature Improvement Area, as identified in Local Plan policy G11 Green Infrastructure⁵. The aim of the Dearne Valley Green Heart Nature Improvement Area (NIA) is to help restore and enhance the ecological networks of the river, its floodplain, and its link to habitats on surrounding slopes and hills. As such it is considered appropriate that the Sites location within the NIA is sufficient to increase the strategic significance of the pre and post intervention habitats within both the Site and the Offsite compensation areas to **High** (1.15 multiplier).

Field Survey – Baseline habitats (Figure 1)

- 3.2 Each habitat within the Site and the offsite compensation areas have been described below using their corresponding UKHab classification followed by condition assessment (where required).
- 3.3 Appendix A includes the botanical species lists of the habitats recorded. Figure 1 shows the baseline habitats recorded during the survey, together with the parcel reference codes.

On-site Habitats

Other Neutral Grassland: g3c5 - *Arrhenatherum* Grassland (Polygon 1)

- 3.4 The majority of the Site comprised an unmanaged grassland community characterised by tall grasses particularly cock's-foot *Dactylis glomerata* and Yorkshire fog *Holcus lanatus*, with false oat grass *Arrhenatherum elatius*, and common couch *Elymus repens* occasional to locally frequent. Herbaceous species were largely limited to ruderal species including locally frequent common hogweed *Heracleum sphondylium* and occasional cow parsley *Anthriscus sylvestris*, broad-leaved dock *Rumex obtusifolius* and mugwort *Artemisia vulgaris*. Indicators of semi-improved neutral grassland were present throughout the sward albeit at low frequencies, with only common knapweed *Centaurea nigra* noted at occasional and yarrow *Achillea millefolium*, meadow buttercup *Ranunculus acris*, common sorrel *Rumex acetosa*, meadow vetchling *Lathyrus pratensis* and pignut *Conopodium majus* recorded rarely.
- 3.5 Scattered self-sown scrub was noted across this habitat comprising saplings and small trees of hawthorn *Crataegus monogyna*, ash *Fraxinus excelsior*, downy- *Betula pubescens* and silver birch *Betula pendula* and blackthorn *Prunus spinosa*.
- 3.6 This community is representative of UKHab community G3c5 - *Arrhenatherum* Grassland, a common community typical of unmanaged fields. This community was classified as being in poor condition, as outlined in the table below.

⁵ Barnsley MBC (2019) Barnsley Local Plan (Adopted January 2019) (<https://www.barnsley.gov.uk/media/17249/local-plan-adopted.pdf>)



Photograph 1: g3c5 grassland central area



Photograph 2: g3c5 grassland western boundary

Condition Assessment

Condition Criteria	Score
1 The appearance and composition of the vegetation closely matches characteristics of the specific grassland habitat type (see UKHab definition). Wildflowers, sedges and indicator species for the specific grassland habitat type are very clearly and easily visible throughout the sward.	Fail – Representative of g3c5, but indicator species with low cover
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 – Majority of sward is over 7cm
3 Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.	Fail – bare ground only present along tracks
4 Cover of bracken less than 20% and cover of scrub (including bramble) less than 5%.	Fail – Cover of scrub > 5%
5 There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981). Combined cover of undesirable species 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.	Pass – Some dumping and undesirable species, but less than 5% cover.
Total Fails	4
Condition	Poor

g3c6 - Other neutral Grassland: *Lolium*-*Cynosurus* grassland (Polygon 2)

- 3.7 To the West of the site the tall grass species which predominate the grassland habitats across the wider survey area decreased in abundance and a community dominated by the fine leaved grasses red fescue *Festuca rubra* and common bent *Agrostis capillaris* was noted. Here the sward was shorter, although still unmanaged, and featured a number of neutral grassland indicators at low frequencies, including: common knapweed, common vetch *Vicia sativa*, meadow buttercup, meadow vetchling, yarrow and pignut. Scrub cover in this area was over 5% but largely comprised more recently established hawthorn and gorse *Ulex europaeus* seedlings and saplings.
- 3.8 This community was considered to be broadly representative of UKHab community G3c6 - *Lolium*-*Cynosurus* grassland, a common community typical of managed meadows and pastures. This community was likely widespread across the site, prior to the reduction of management, which has resulted in the *Arrhenatherum* community achieving dominance across the site. This community was classified as being in poor condition, as outlined in the table below.



Photograph 3: g3c6 grassland (polygon 2)

Condition Assessment

Condition Criteria	Score
1 The appearance and composition of the vegetation closely matches characteristics of the specific grassland habitat type (see UKHab definition). Wildflowers, sedges and indicator species for the specific grassland habitat type are very clearly and easily visible throughout the sward.	Fail - Representative of g3c6, but indicator species with low cover
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.	Pass – Variable sward height
3 Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.	Fail – No bare ground
4 Cover of bracken less than 20% and cover of scrub (including bramble) less than 5%.	Fail – Scrub cover greater than 5%
5 There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981). Combined cover of undesirable species 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.	Fail – Localised areas of dumping at habitat margins greater than 5%
Total Fails	4
Condition	Poor

Mixed Scrub: h3h (Polygons 3 & 4)

- 3.9 Two areas of mixed scrub were noted within the Site Boundary. The first was present along the boundary of the site to the south (polygon 3). The northern extent of the habitat was characterised by gorse, present in an open scrub community, with small glades present through the habitat. Further south this graded into an area of young birch, interspersed with Italian alder *Alnus cordata*, goat willow *Salix caprea* and hazel *Corylus avellana*.
- 3.10 Further north, within the area of g3c5 - *Arrhenatherum* Grassland, one discrete area was assessed as having ~continuous canopy cover of scrub and was mapped as an area of mixed scrub.

Hawthorn and downy birch comprised the majority of the canopy, together with a single young Norway maple *Acer platanoides*. The ground flora throughout this habitat was broadly similar to the g3c5 grassland described above, with the additional incidence of lesser celandine *Ficaria verna*.



Photograph 3: h3h Mixed Scrub (polygon 3)



Photograph 4: h3h Mixed Scrub (polygon 4)

Condition Assessment

Condition Criteria	Polygon 3	Polygon 4
1 Habitat is representative of UKHab description (where in its natural range). There are at least three woody species, with no one species comprising more than 75% of the cover (except common juniper, sea buckthorn or box, which can be up to 100% cover).	Fail	Fail
2 There is a good age range – all of the following are present: seedlings, young shrubs and mature shrubs.	Fail	Fail – only young shrubs and saplings
3 There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981) and undesirable species ¹ make up less than 5% of ground cover.	Pass	Pass
4 The scrub has a well-developed edge with scattered scrub and tall grassland and/or herbs present between the scrub and adjacent habitat(s).	Pass	Fail
5 There are clearings, glades or rides present within the scrub, providing sheltered edges.	Pass	Fail
Total Fails	2	4
Condition	Moderate	Poor

Offsite Compensation Areas

g4 Modified Grassland (Polygon 5)

- 3.11 A strip of modified grassland was recorded offsite to the south-east of the existing Niftylift building, along Mason Way. The grassland was frequently managed and featured a sward characterised by red fescue, perennial rye-grass *Lolium perenne* and cock's-foot. Common vetch, broad-leaved dock and dandelion *Taraxacum officinale* agg. were frequent throughout, with curled dock *Rumex crispus*, common ragwort *Jacobaea vulgaris* and daisy *Bellis perennis* occasional. The grassland

did feature some herbs indicative of neutral conditions, particularly to the south where oxeye daisy *Leucanthemum vulgare* was present in locally frequent patches together with yarrow, red clover *Trifolium pratense* and ribwort plantain *Plantago lanceolata* at low frequencies.

- 3.12 There was evidence of herbicide use along the pathways and fence lines.



Photograph 5: g4 modified grassland (polygon 5)

Condition Assessment

Condition Criteria	Score
1 There must be 6-8 species per m2. Note - if a grassland has 9 or more species per m2 it should be classified as a moderate distinctiveness grassland habitat type. NB - this criterion is non-negotiable for achieving good condition.	Pass – Precautionary pass, relatively species rich for a modified grassland.
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 – Frequent mowing resulting in consistent sward height
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.	Fail – Damage from herbicide use along margins of habitat
5 Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.	Fail – No 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) and undesirable species make up less than 5% of ground cover.	Fail – No invasive species but docks frequent.
Total Fails	4
Condition	Poor

Other Neutral Grassland: g3c5 - *Arrhenatherum* Grassland (Polygon 1)

- 3.13 The *Arrhenatherum* grassland, described above, which was recorded within the Site boundary, extends northwards into the Offsite compensation area. The habitat classification and condition assessment for this habitat are consistent with that described for the Onsite habitat i.e. poor condition.

Mixed Scrub: h3h (Polygons 6 & 7)

- 3.14 Immediately offsite to the north an area of mixed scrub was noted (polygon 6). The community featured scattered standard trees of Norway maple and silver birch, interspersed with hawthorn, hazel and a large dense stand of blackthorn. Bramble *Rubus fruticosus* agg. formed extensive patches in places, encroaching into the unmanaged grassland, which formed open glades between stands of scrub.
- 3.15 Further to the North-east an extensive area of mixed scrub was recorded. Hawthorn was frequent amongst the extensive bramble patches, together with broom *Cytisus scoparius*, dog-rose *Rosa canina* and silver birch. Again, scattered standard trees were present within the community, in this instance a mature pedunculate oak *Quercus robur* and a mature alder *Alnus glutinosa*, with goat willow and Norway maple. Bracken *Pteridium aquilinum* formed locally frequent patches with the ground flora between scrub patches being broadly consistent with the *Arrhenatherum* grassland community described above.



Photograph 6: h3h Mixed Scrub (polygon 6)



Photograph 7: h3h Mixed Scrub (polygon 7)

Condition Assessment

Condition Criteria	Polygon 6	Polygon 7
1 Habitat is representative of UKHab description (where in its natural range). There are at least three woody species, with no one species comprising more than 75% of the cover (except common juniper, sea buckthorn or box, which can be up to 100% cover).	Pass	Fail
2 There is a good age range – all of the following are present: seedlings, young shrubs and mature shrubs.	Pass	Fail
3 There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981) and undesirable species make up less than 5% of ground cover.	Pass	Pass

Condition Criteria	Polygon 6	Polygon 7
4 The scrub has a well-developed edge with scattered scrub and tall grassland and/or herbs present between the scrub and adjacent habitat(s).	Fail	Pass
5 There are clearings, glades or rides present within the scrub, providing sheltered edges.	Pass	Pass
Total Fails	1	2
Condition	Moderate	Moderate

4.0 PROPOSED HABITATS (FIGURE 2)

- 4.1 The proposed habitats are shown in Figure 2, with the proposed habitat distinctiveness and condition shown on Figure 5. Figure 3 shows the habitat retention and enhancement across the on Site of offsite compensation area. Due to the nature of proposals, no habitats are being retained within the red line boundary of the Site.
- 4.2 The areas included within the Offsite compensation areas are proposed for enhancement of existing habitats. Enhancement of grassland habitats will be achieved through the initial introduction of wildflower seeds and the ongoing management through 1-2 cuts per year.
- 4.3 The existing scrub will be enhanced through additional planting of appropriate native scrub species, the yearly cutting of glades and periodic trimming and coppicing to promote structural diversity.
- 4.4 The tables below set out the proposed habitat creation and management objectives along with an action plan for delivery of the habitat creation and enhancement, in order to demonstrate that proposals will meet the specified habitat creation and condition criteria required.

Habitat Creation and Management Objectives

Table 1: Off-site Habitat Objectives

FEATURE	OBJECTIVE	INDICATOR THAT OBJECTIVE HAS BEEN ACHIEVED
1. Existing Modified Grassland proposed for enhancement to Neutral Grassland	To enhance existing grassland so it meets the definition of 'Grassland – Other Neutral Grassland' within the Defra Guidance (Defra, July 2019) with a condition change of 'Poor to Moderate', as determined by survey in accordance with the Defra UK Habitats guidance and data analysis methodologies.	The following criteria in bold are targeted with allowance for minor variance. Habitat enhancement and management are targeting Moderate condition: 1 The appearance and composition of the vegetation closely matches characteristics of the specific grassland habitat type (see UKHab definition). Wildflowers, sedges and indicator species for the specific grassland habitat type are very clearly and easily visible throughout the sward. 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. 3 Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens. 4 Cover of bracken less than 20% and cover of scrub (including bramble) less than 5%. 5 There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981). Combined cover of undesirable species 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.
2. Enhancement of Other Neutral Grassland	To enhance existing Other Neutral Grassland with a condition change of 'Poor to Good', as determined by survey in accordance with the Defra UK Habitats guidance and data analysis methodologies.	The following criteria in bold are targeted with allowance for minor variance. Habitat enhancement and management are targeting Good condition: 1 The appearance and composition of the vegetation closely matches characteristics of the specific grassland habitat type (see UKHab definition). Wildflowers, sedges and indicator species for the specific grassland habitat type are very clearly and easily visible throughout the sward. 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. 3 Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens. 4 Cover of bracken less than 20% and cover of scrub (including bramble) less than 5%. 5 There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981). Combined cover of undesirable species and physical damage (such as excessive poaching, damage

FEATURE	OBJECTIVE	INDICATOR THAT OBJECTIVE HAS BEEN ACHIEVED
		from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area.
3. Enhancement of Mixed Scrub	To enhance existing Mixed Scrub with a condition change of 'Moderate to Good', as determined by survey in accordance with the Defra UK Habitats guidance and data analysis methodologies.	The following criteria in bold are targeted with allowance for minor variance. Habitat enhancement and management are targeting Good condition: 1 Habitat is representative of UKHab description (where in its natural range). There are at least three woody species, with no one species comprising more than 75% of the cover (except common juniper, sea buckthorn or box, which can be up to 100% cover). 2 There is a good age range – all of the following are present: seedlings, young shrubs and mature shrubs. 3 There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981) and undesirable species make up less than 5% of ground cover. 4 The scrub has a well-developed edge with scattered scrub and tall grassland and/or herbs present between the scrub and adjacent habitat(s). 5 There are clearings, glades or rides present within the scrub, providing sheltered edges.

Habitat Creation, Enhancement and Management Action Plan

Table 2: Management Action Plan

MANAGEMENT TO ACHIEVE OBJECTIVES
Enhancement - Offsite
1. Modified Grassland to Other Neutral Grassland
<u>a) Grassland Enhancement year one management</u> i) Dig out or spot treat undesirable weeds as necessary and mow hard between July and September with arisings removed. ii) after a September/October cut, rake or harrow the grassland to expose >50% bare earth. iii) Broadcast a 100% wildflower mix suitable for sowing into existing grassland. The wildflower mix should include yellow rattle (such as Boston Seeds 'Traditional Wildflower Seed BS1P 100%' (or similar)) at rate of 4g/m². iv) Where yellow rattle has established well from an autumn sowing cut and remove any early lush growth in spring to a height of 70-100mm (high enough to miss young yellow rattle plants) (after establishment only). v) Follow first flowering, mow grass hard in late August or early September, to less than 50mm, removing arisings to reduce soil nutrients. vi) Mow re-growth once during November/December, to less than 50mm, removing arising. <u>b) On going management.</u> i) Avoid use of herbicides along path and fence lines. ii) Following establishment mow during February or March to around 50mm, removing arisings after they have dried (around 48 hours after cutting) to reduce soil nutrients (year 2 onwards). ii) Mow re-growth in September or October (to around 50mm) to remove excess growth and take away arisings (year 2 onwards). iii) No more than 2 cuts per year (after first year) as per above timings. iv) Dig out or spot treat pernicious weeds as necessary.
2. Other Neutral Grassland - Enhancement
<u>a) Grassland Enhancement year one management</u> i) Dig out or spot treat undesirable weeds as necessary and mow hard between July and September with arisings removed. ii) Fell existing scattered scrub to achieve <5% scrub cover, undertaken in September / October. Timber and arisings removed from site or stacked within scrub areas as deadwood habitat. iii) After a September/October cut, rake or harrow the grassland to expose >50% bare earth. iv) Broadcast a 100% wildflower mix suitable for sowing into existing grassland. The wildflower mix should include yellow rattle (such as Boston Seeds 'Traditional Wildflower Seed BS1P 100%' (or similar)) at rate of 4g/m².

MANAGEMENT TO ACHIEVE OBJECTIVES

- v) Where yellow rattle has established well from an autumn sowing cut and remove any early lush growth in spring to a height of 70-100mm (high enough to miss young yellow rattle plants) (after establishment only).
- vi) Follow first flowering, mow grass hard in late August or early September, to less than 50mm, removing arisings to reduce soil nutrients (year 1 onwards).
- vii) Mow re-growth once during November/December, to less than 50mm, removing arising (year 1 onwards).
- viii) Dig out or spot treat pernicious weeds as necessary (year 1 onwards).

b) Management.

- i) Following establishment mow after flowering in July (with late June- August acceptable) to around 50mm, removing arisings after they have dried (1-7 days) to reduce soil nutrients. Leave 15% of grassland unmown every year on rotation. Once every four years cut the grassland in September to allow late flowering species to set seed.

3. Mixed Scrub - Enhancement.**a) Scrub Enhancement year one management**

- i) Selective thinning of some dense stands of bramble.
- ii) Localised planting of native scrub species (see recommended mix below) in open areas in small irregular shaped groups of 3, 5 or 7, with clusters of the same species planted together and designed to create a naturalistic pattern. Planting protected from rabbits with spiral guards, as conditions on site require.
- iii) Initial planting to target 15-20% open space.

Common name	Latin name	Comments
Common dogwood	<i>Cornus sanguinea</i>	15% whip
Hazel	<i>Corylus avellana</i>	25% whip
Grey willow	<i>Salix cainera</i>	10% whip
Hawthorn	<i>Crataegus monogyna</i>	15% whip
Holly	<i>Ilex aquifolium</i>	5% 3 cl
Crab apple	<i>Malus sylvestris</i>	10% whip
Bird cherry	<i>Prunus padus</i>	10% whip

MANAGEMENT TO ACHIEVE OBJECTIVES

Rowan	<i>Sorbus aucuparia</i>	10% whip
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b) Ongoing management

15-20% open space should be targeted within the habitat.

- i) Yearly mowing / strimming of glades and clearings in July (with late June- August acceptable) to around 50mm, removing arisings after they have dried (1-7 days) to reduce soil nutrients. Once every four years cut the grassland in September to allow late flowering species to set seed.
- ii) Control of any pernicious weeds / non-native invasive species, as required, through mechanical removal/ herbicide as appropriate and remove all cut material from site. Seek advice from specialist contractor, as necessary.
- iii) Trimming of dense scrub edges and bramble stands, to maintain a sinuous edge with a graded margin down to field layer (tapering edge from canopy height to 20cm). Trimming to take place as required (roughly 1/5 every 5-6 years). Trimming to take place outside of bird nesting season (March to August/early September) during winter months.
- iv) Selective clearing / coppicing of scrub (roughly 1/5 every 5-6 years) down to ground to reduce dominance of species such as blackthorn and hawthorn and promote regeneration of young shrubs/herb edge.
- v) Spiral guards will be removed after establishment.

Potential Factors Limiting the Achievement of Target Condition

- 4.5 'Good' condition is targeted for the enhancement of both the other neutral grassland and the mixed scrub habitat within the offsite compensation area to the north of the Site.
- 4.6 The Planning Ecologist of Barnsley Metropolitan Borough Council, in their response to the previous revision of this report, raised the following:
- Due to the presence of a public footpath adjacent to the off-site habitat creation area, is the target of enhancing the other neutral grassland habitat to a condition of good considered realistic if it may be subject to disturbance? Are there current signs of disturbance to the existing area of grassland to indicate future use and is fencing required to ensure that a condition of good can be achieved?*
- 4.7 An existing informal footpath is present which runs from Barrowfield Road to the south, through the existing Site boundary and the offsite compensation area, connecting with the Public Right of Way to the north. The route of this informal footpath can be seen on Figure 1, with photographs 2 (above) and 8 (below) showing its condition. This footpath was unsurfaced and appeared to be infrequently used, with an existing sward of moderately trampled grass. Proposals will have the effect of removing this informal access point into the offsite compensation area, with access only being possible from the PRoW.
- 4.8 The existing PRoW to the north is well defined and is separated from the area proposed for offsite mitigation by a dry ditch, which acts as a natural boundary that would limit recreational access (See photograph 9, below). One of the principal reasons for excluding the grassland habitats either side of PRoW was due to limiting factors recreational impacts might have on management objectives and contributed to the decision that the existing ditch should form the functional boundary of the grassland enhancements.
- 4.9 There was little evidence of existing disturbance within the site, the exception being some localised dumping along the existing fence line. This appeared to be from commercial sources, rather than from recreational / anti-social behaviour. As such, evidence on Site is that the primary factor in the grasslands poor condition is related specifically to the lack of regular management.
- 4.10 As a control measure, the Biodiversity Enhancement Management Plan will include monitoring triggers on disturbance impacts along with corrective measures to address these as required.



Photograph 8: Informal footpath running through polygon 4 viewed from the east.



Photograph 9: PRoW and dry ditch, viewed from the north-east

5.0 BIODIVERSITY NET GAIN CALCULATION

- 5.1 The full BIA calculator is attached, and the headline summary results are given below.
- 5.2 At present, the on-site baseline consists of 2.54 habitat units. On-site post intervention consists of 0 habitat units. The offsite compensation area baseline consists of 4.68 habitat units, with post enhancement works resulting in 7.49 habitat units. Therefore, proposals will deliver a 10.5% gain in habitat units.

On-site baseline	Habitat units	2.54
	Hedgerow units	0.00
	River units	0.00
On-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	0.00
	Hedgerow units	0.00
	River units	0.00
On-site net % change (Including habitat retention, creation & enhancement)	Habitat units	0.00%
	Hedgerow units	0.00%
	River units	0.00%
Off-site baseline	Habitat units	4.68
	Hedgerow units	0.00
	River units	0.00
Off-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	7.49
	Hedgerow units	0.00
	River units	0.00
Total net unit change (including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	0.21
	Hedgerow units	0.00
	River units	0.00
Total on-site net % change plus off-site surplus (including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	10.50%
	Hedgerow units	0.00%
	River units	0.00%

Habitat Trading

- 5.3 The habitats to be lost to proposals include Other Neutral Grassland and Mixed Scrub, which are medium distinctiveness habitats. Medium distinctiveness habitats will require compensation through creation and enhancement of habitats of the same broad habitat type. The current proposals will deliver an overall 10.5% gain in habitat units, but a cumulative loss within the medium distinctiveness grassland broad habitat type.
- 5.4 The original intention of the project was to bring an increased area of the existing grassland present to the north of the Site into favourable management, namely the sloping grassland compartment to the north of the existing Public Right of Way. However, issues with determining ownership of this area precluded these initial proposals. It was considered appropriate that the compensation strategy be adjusted to focus more on scrub enhancement as a means of delivering net biodiversity gain immediately adjacent to the site, rather than sourcing gains at an offsite location at greater distances away.
- 5.5 The below table shows the habitat trading summaries across the Site.

Table 3: Habitat Trading Summary

Trading Summary		
Distinctiveness Group	Trading Rule	Trading Satisfied?
Very High	Bespoke compensation likely to be required	N/A
High	Same habitat required	N/A
Medium	Same broad habitat or a higher distinctiveness habitat required	No
Low	Same distinctiveness or better habitat required	Yes

6.0 CONCLUSION

- 6.1 Baseline habitats were identified, mapped using the UKHab Classification system during a survey at the Site in February 2022 (Figure 1). Condition Assessments were undertaken, based on condition criteria as set out in the Defra 3.0 technical supplement, A Biodiversity Net Gain assessment was then completed for the Site, using the DEFRA Biodiversity Metric 3.0. Post-development, habitat enhancements were identified within an area of adjacent offsite land.
- 6.2 The results of the assessment show that the current baseline value of the site is 2.54 habitat units. The offsite habitat enhancement measures will deliver a total of 2.81 units, which represents a 10.5% gain for proposals.
- 6.3 The results of the assessment demonstrate that the proposed development will deliver a measurable net gain to biodiversity on Site, in accordance with the NPPF.

7.0 APPENDIX A: BOTANICAL SPECIES LISTS

On Site Habitats

Other Neutral Grassland: g3c5 - *Arrhenatherum* Grassland (Polygon 1 on Figure 1)

Common Name	Scientific Name	Abundance
Cock's-foot	<i>Dactylis glomerata</i>	F
Yorkshire-fog	<i>Holcus lanatus</i>	F
Bramble	<i>Rubus fruticosus</i> agg.	LF
Blackthorn (sapling)	<i>Prunus spinosa</i>	LF
Hogweed	<i>Heracleum sphondylium</i>	LF
Dandelion	<i>Taraxacum officinale</i> agg.	O
Broad-leaved Dock	<i>Rumex obtusifolius</i>	O
False Oat-grass	<i>Arrhenatherum elatius</i>	O
Common Bent	<i>Agrostis capillaris</i>	O
Hawthorn (Shrub)	<i>Crataegus monogyna</i>	O
Common Knapweed	<i>Centaurea nigra</i>	O
Downy birch (small tree)	<i>Betula pubescens</i>	O
Cow Parsley	<i>Anthriscus sylvestris</i>	O
Mugwort	<i>Artemisia vulgaris</i>	O
Downy birch (sapling)	<i>Betula pubescens</i>	O
Common Couch	<i>Elymus repens</i>	O LF
Common Vetch	<i>Vicia sativa</i>	R
Red Fescue	<i>Festuca rubra</i>	R
Yarrow	<i>Achillea millefolium</i>	R
Common Nettle	<i>Urtica dioica</i>	R
Common Ragwort	<i>Jacobaea vulgaris</i>	R
Spear Thistle	<i>Cirsium vulgare</i>	R
Meadow Buttercup	<i>Ranunculus acris</i>	R
Common Sorrel	<i>Rumex acetosa</i>	R
common feather-moss	<i>Kindbergia praelonga</i>	R
Pignut	<i>Conopodium majus</i>	R
A willowherb [indet.]	<i>Epilobium</i> sp.	R
Springy Turf-moss	<i>Rhytidiadelphus squarrosus</i>	R
Meadow Vetchling	<i>Lathyrus pratensis</i>	R
Bush Vetch	<i>Vicia sepium</i>	R

Common Name	Scientific Name	Abundance
Ash (Small tree)	<i>Fraxinus excelsior</i>	R
Norway maple (small tree)	<i>Acer platanoides</i>	R
Silver birch (small tree)	<i>Betula pendula</i>	R
Ash (Sapling)	<i>Fraxinus excelsior</i>	R
Hedge Bedstraw	<i>Galium album</i>	R

g3c6 - Other neutral Grassland: *Lolium-Cynosurus* grassland (Polygon 2 on Figure 1)

Common Name	Scientific Name	Abundance
Common Bent	<i>Agrostis capillaris</i>	F
Red Fescue	<i>Festuca rubra</i>	F
A willowherb [indet.]	<i>Epilobium sp.</i>	LF
Cock's-foot	<i>Dactylis glomerata</i>	O
Yorkshire-fog	<i>Holcus lanatus</i>	O
Common Vetch	<i>Vicia sativa</i>	O
Common Ragwort	<i>Jacobaea vulgaris</i>	O
Springy Turf-moss	<i>Rhytidiadelphus squarrosus</i>	O
Ribwort Plantain	<i>Plantago lanceolata</i>	O
Hawthorn (seedling)	<i>Crataegus monogyna</i>	O
Bramble	<i>Rubus fruticosus agg.</i>	R
Dandelion	<i>Taraxacum officinale agg.</i>	R
False Oat-grass	<i>Arrhenatherum elatius</i>	R
Hawthorn (Shrub)	<i>Crataegus monogyna</i>	R
Common Knapweed	<i>Centaurea nigra</i>	R
Common Couch	<i>Elymus repens</i>	R
Yarrow	<i>Achillea millefolium</i>	R
Common Nettle	<i>Urtica dioica</i>	R
Meadow Buttercup	<i>Ranunculus acris</i>	R
Common Sorrel	<i>Rumex acetosa</i>	R
Pignut	<i>Conopodium majus</i>	R
Meadow Vetchling	<i>Lathyrus pratensis</i>	R
Gorse (Shrub)	<i>Ulex europaeus</i>	R

Mixed Scrub: h3h (Polygon 3 on Figure 1)

Species	Latin	Intermediate	Young /Scrub	tree Regen	sapling	Seeding	Ground Flora
Gorse	<i>Ulex europaeus</i>		f		o		
Downy Birch	<i>Betula pubescens</i>	r	f	o			
Italian alder	<i>Alnus cordata</i>		r	r	r		
Hazel	<i>Corylus avellana</i>		r				
Norway maple	<i>Acer platanoides</i>		r				
Silver birch	<i>Betula pendula</i>		r				
Goat Willow	<i>Salix caprea</i>		r				
Pedunculate oak	<i>Quercus robur</i>			r			
Elder	<i>Sambucus nigra</i>			r			
Ground flora							
Common Bent	<i>Agrostis capillaris</i>						F
Red Fescue	<i>Festuca rubra</i>						F
A willowherb [indet.]	<i>Epilobium sp.</i>						LF
Cock's-foot	<i>Dactylis glomerata</i>						O
Yorkshire-fog	<i>Holcus lanatus</i>						O
Common Vetch	<i>Vicia sativa</i>						O
Common Ragwort	<i>Jacobaea vulgaris</i>						O
Springy Turf-moss	<i>Rhytidiadelphus squarrosus</i>						O
Ribwort Plantain	<i>Plantago lanceolata</i>						O
Hawthorn (seedling)	<i>Crataegus monogyna</i>						O
Bramble	<i>Rubus fruticosus</i> agg.						R
Dandelion	<i>Taraxacum officinale</i> agg.						R
False Oat-grass	<i>Arrhenatherum elatius</i>						R

Mixed Scrub: h3h (Polygon 4 on Figure 1)

Species	Latin	Young /Scrub	tree Regen	sapling	Seeding	Ground Flora
Downy Birch	<i>Betula pubescens</i>	f				
Hawthorn	<i>Crataegus monogyna</i>	f		o		
Norway maple	<i>Acer platanoides</i>	r				
Ground flora						
Yorkshire-fog	<i>Holcus lanatus</i>					F
Red Fescue	<i>Festuca rubra</i>					O
Common Couch	<i>Elymus repens</i>					O
common vetch	<i>Vicia sativa</i>					R
Lesser Celandine	<i>Ficaria verna</i>					R
Cow Parsley	<i>Anthriscus sylvestris</i>					R
Common Knapweed	<i>Centaurea nigra</i>					R
Ribwort Plantain	<i>Plantago lanceolata</i>					R

Off Site Habitats**Modified Grassland (Polygon 5 on Figure 1)**

Species	Latin	Abundance
Red Fescue	<i>Festuca rubra</i>	F
Cock's-foot	<i>Dactylis glomerata</i>	F
Common Vetch	<i>Vicia sativa</i>	F
Dandelion	<i>Taraxacum officinale agg.</i>	F
Broad-leaved Dock	<i>Rumex obtusifolius</i>	F
Perennial Rye-grass	<i>Lolium perenne</i>	F
Black Medick	<i>Medicago lupulina</i>	LF
Oxeye Daisy	<i>Leucanthemum vulgare</i>	LF
Yorkshire-fog	<i>Holcus lanatus</i>	O
False Oat-grass	<i>Arrhenatherum elatius</i>	O
Yarrow	<i>Achillea millefolium</i>	O
Curled Dock	<i>Rumex crispus</i>	O
bristly oxtongue	<i>Helminthotheca echinoides</i>	O

Species	Latin	Abundance
Daisy	<i>Bellis perennis</i>	O
Common Ragwort	<i>Jacobaea vulgaris</i>	O
Common Bent	<i>Agrostis capillaris</i>	R
Ribwort Plantain	<i>Plantago lanceolata</i>	R
Common Nettle	<i>Urtica dioica</i>	R
Meadow Buttercup	<i>Ranunculus acris</i>	R
Common Sorrel	<i>Rumex acetosa</i>	R
Spear Thistle	<i>Cirsium vulgare</i>	R
common feather-moss	<i>Kindbergia praelonga</i>	R
Rough-stalked Feather-moss	<i>Brachythecium rutabulum</i>	R
Creeping Thistle	<i>Cirsium arvense</i>	R
Pointed Spear-moss	<i>Calliergonella cuspidata</i>	R
Hairy Bitter-cress	<i>Cardamine hirsuta</i>	R
Red Clover	<i>Trifolium pratense</i>	R
Lesser Trefoil	<i>Trifolium dubium</i>	R
Perennial Sow-thistle	<i>Sonchus arvensis</i>	R
Sweet Vernal-grass	<i>Anthoxanthum odoratum</i>	R
Creeping Buttercup	<i>Ranunculus repens</i>	R
Wild teasel	<i>Dipsacus fullonum</i>	R

Mixed Scrub: h3h (Polygon 6 on Figure 1)

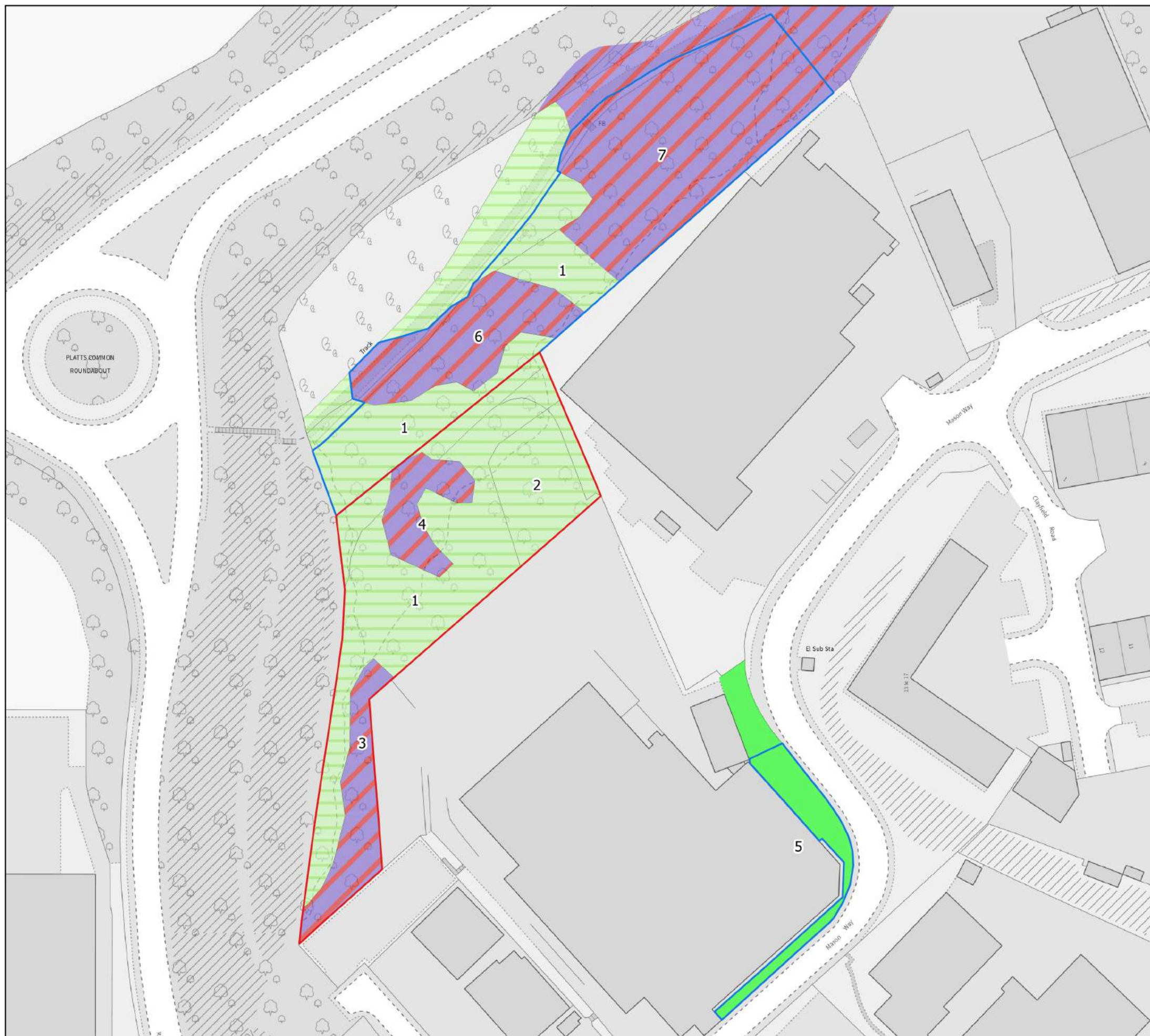
Woody Species	Latin	Intermediate	Yng /Scrb	tree Regen	sapling	Seeding	Ground Flora
Norway maple	<i>Acer platanoides</i>	O			R		
Hawthorn	<i>Crataegus monogyna</i>		O		O		
Silver birch	<i>Betula pendula</i>	O			R		
Downy Birch	<i>Betula pubescens</i>				R		
Pedunculate oak	<i>Quercus robur</i>			R	R		
Ash	<i>Fraxinus excelsior</i>			R			
Blackthorn	<i>Prunus spinosa</i>		R	LF	LF	O	

Woody Species	Latin	Intermediate	Yng /Scrb	tree Regen	sapling	Seeding	Ground Flora
Hazel	<i>Corylus avellana</i>		R		R		
Ground Flora (as per polygon 1 with DAFOR below characteristic and additional spp.)							
Cock's-foot	<i>Dactylis glomerata</i>						F
Bramble	<i>Rubus fruticosus</i> agg.						LA
A willowherb	<i>Epilobium</i> sp.						O
Wild teasel	<i>Dipsacus fullonum</i>						O
Common Bent	<i>Agrostis capillaris</i>						R
Creeping Bent	<i>Agrostis stolonifera</i>						R
Broad-leaved Dock	<i>Rumex obtusifolius</i>						R

Mixed Scrub: h3h (Polygon 7 on Figure 1)

Woody Species	Latin	Old	Intermediate	Yng /Scrb	tree Regen	Ground Flora
Hawthorn	<i>Crataegus monogyna</i>			F		
A rose (spineless) [indent]	<i>Rosa</i> sp.			LF	O	
Silver birch	<i>Betula pendula</i>			O		
Norway maple	<i>Acer platanooides</i>		O	R		
Pedunculate oak	<i>Quercus robur</i>	R		R	R	
Broom	<i>Cytisus scoparius</i>			R		
Goat Willow	<i>Salix caprea</i>			R		
Alder	<i>Alnus glutinosa</i>	R				
Dog Rose	<i>Rosa canina</i>				O	
Ground Flora (as per polygon 1 with DAFOR below characteristic and additional spp.)						
Cock's-foot	<i>Dactylis glomerata</i>					F
Bramble	<i>Rubus fruticosus</i> agg.					LA

Woody Species	Latin	Old	Intermediate	Yng /Scrb	tree Regen	Ground Flora
A willowherb [indent]	<i>Epilobium sp.</i>					O
Wild teasel	<i>Dipsacus fullonum</i>					O
Common Bent	<i>Agrostis capillaris</i>					R
Creeping Bent	<i>Agrostis stolonifera</i>					R
Broad-leaved Dock	<i>Rumex obtusifolius</i>					R



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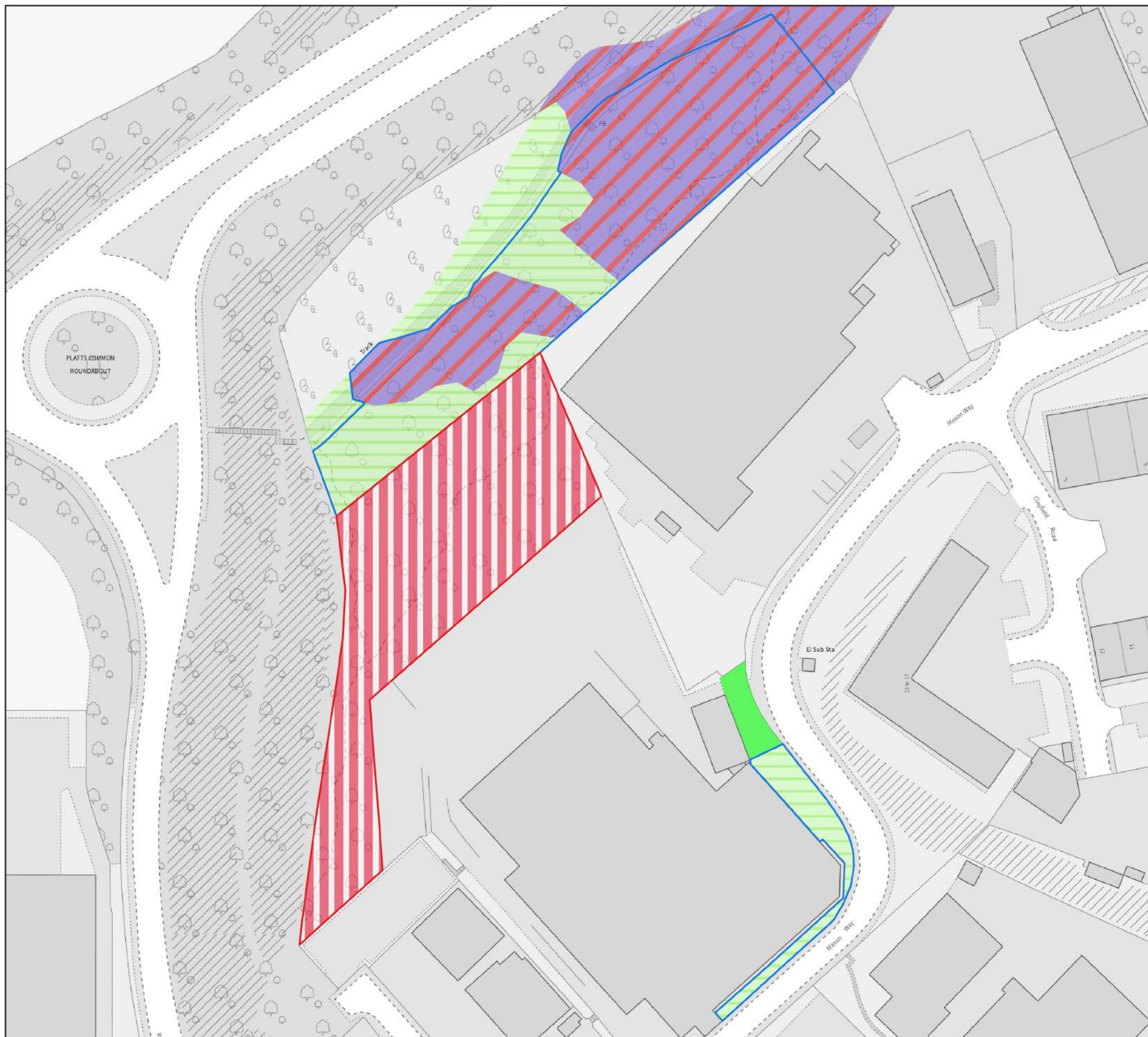
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Key

- Red Line Boundary
- Offsite Compensation Area Boundary

Habitats Baseline

- Mixed scrub
- Modified grassland
- Other neutral grassland



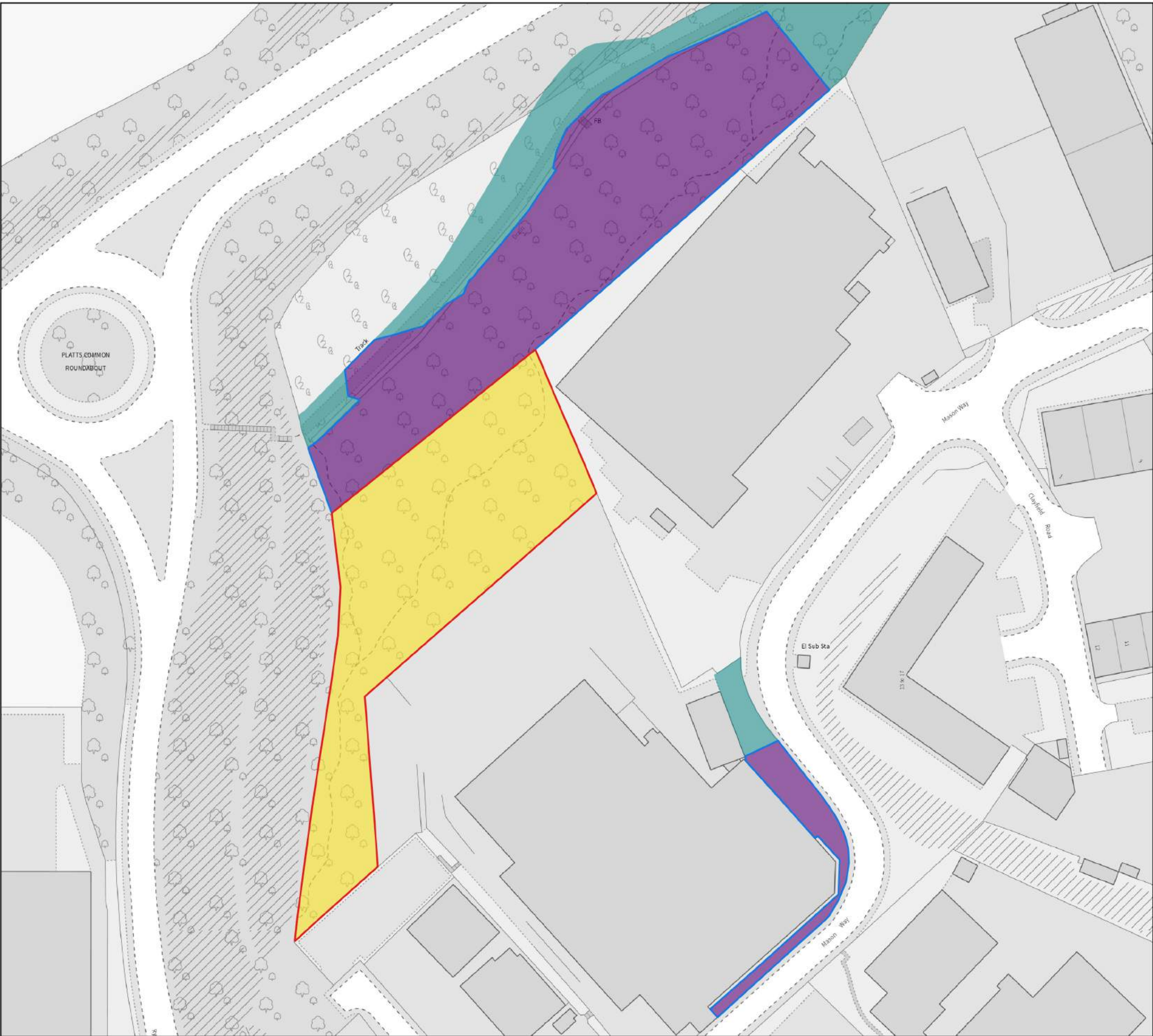
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Key

- Red Line Boundary
- Offsite Compensation Area Boundary
- Habitats Proposed
 - Developed land; sealed surface
 - Mixed scrub
 - Modified grassland
 - Other neutral grassland



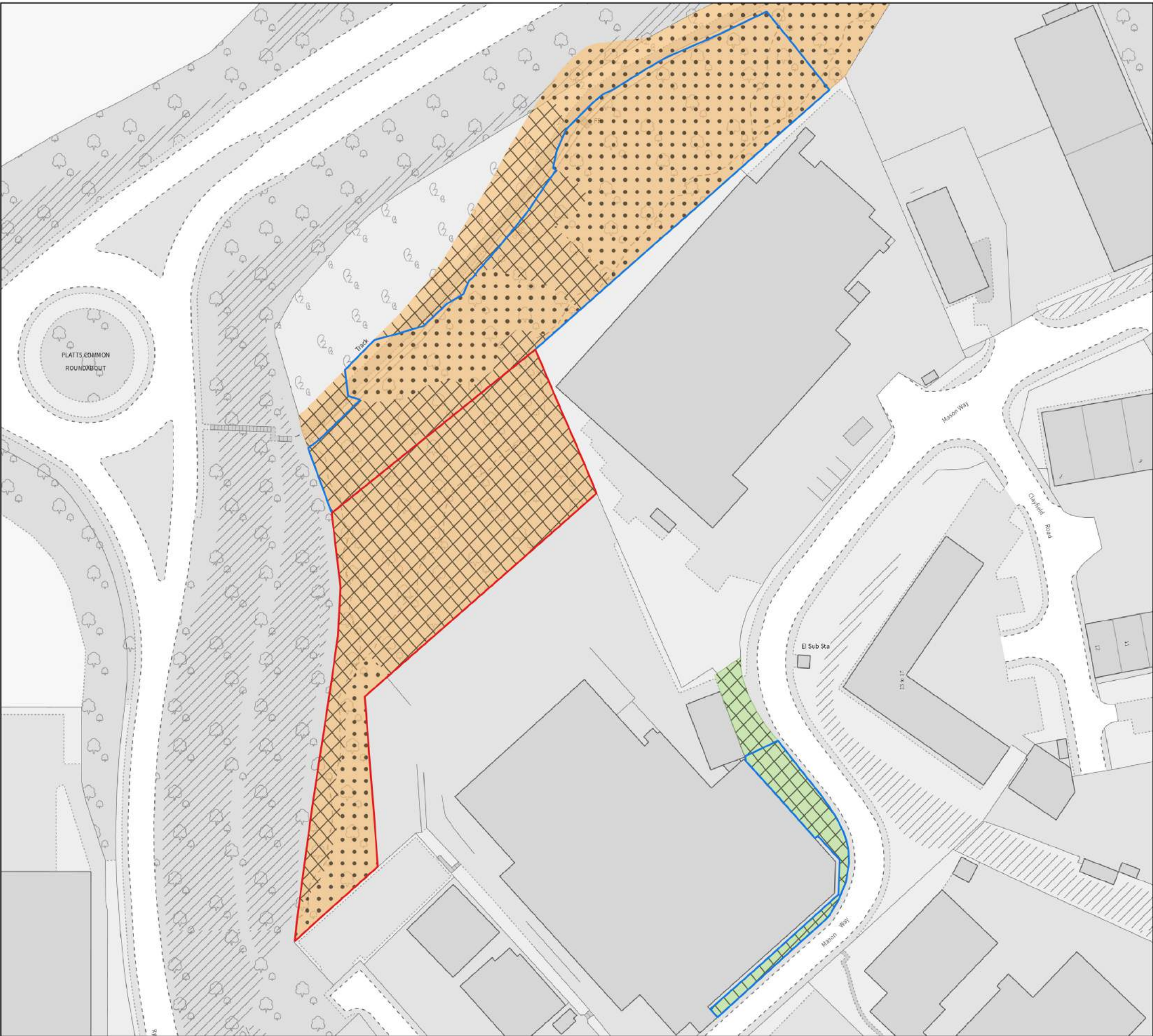
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Key

- Red Line Boundary
- Offsite Compensation Area Boundary
- Habitats Retention
 - Enhanced
 - Retained
 - Lost



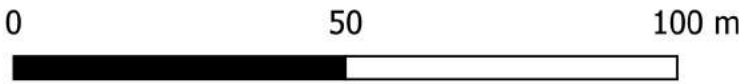
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Key

- Red Line Boundary
- Offsite Compensation Area Boundary
- Baseline Habitat Condition
 - Moderate
 - Poor
- Baseline Habitat Distinctiveness
 - Medium
 - Low

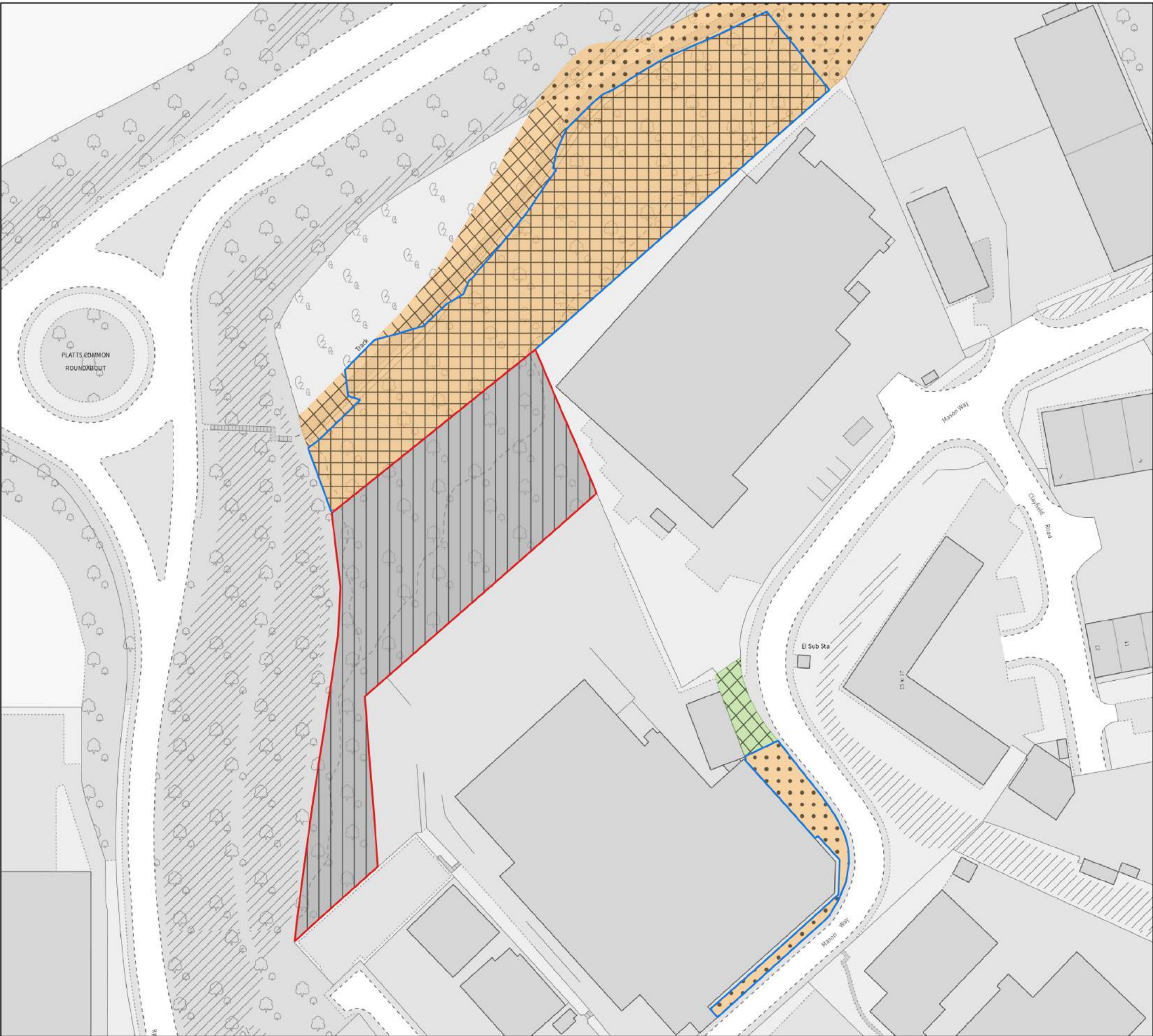




client
Niftylift
project
Mason Way, Platts Common
drawing title
Baseline Condition / Distinctiveness Plan
scale @ A3
1:1138
drawing / figure number
Figure 4

drawn
IH

date
10/5/2022



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Key

- Red Line Boundary
- Offsite Compensation Area Boundary
- Proposed Habitats Condition
 - Good
 - Moderate
 - Poor
 - N/A - Other
- Proposed Habitats Distinctiveness
 - Medium
 - Low
 - V.Low

