

**SRC RECYCLING CENTRE,
EASTERGATE, WEST SUSSEX**

Biodiversity Metric Report

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1.0 INTRODUCTION

- 1.1 Corylus Ecology has carried out a series of ecological surveys in relation to the proposed development SRC Recycling Centre in Eastergate, Chichester, Sussex, hereinafter referred to as 'the Site'. The proposals involve the development of 80 residential units and one 'co-working hub' with associated landscaping. The Site is currently an active car salvage centre.
- 1.2 Within the design of the proposals for the Site, initial recommendations for measures to mitigate the effects of the development and enhance the Site for biodiversity have been provided. However, the scale of the proposed mitigation and enhancements need to be assessed against the predicted effects of the development in order to assess whether there will be a measurable net gain in biodiversity.
- 1.3 The Defra Biodiversity Metric 3.0 approach to quantifying biodiversity net gain, which was issued in July 2021 (Panks *et al.*, 2021) and developed in relation to biodiversity offsetting, has been used to update to the metric approach to quantifying biodiversity net gain within the proposals. The metric has been designed to provide a method of measuring whether proposed compensation for biodiversity loss can result in an overall biodiversity gain.
- 1.4 The metric calculates the value of the habitat currently present within the Site in 'biodiversity units' and then calculates the level of biodiversity gain based on the habitat types being created or restored and managed. The metric uses different multipliers depending on how long it is expected habitats will take to develop and the difficulty in developing those habitats.
- 1.5 The key principles in the updated Defra update metric are:
- **The metric does not change policy or the protection afforded to biodiversity:** *existing levels of protection afforded to protected species and to habitats are not affected by the use of this metric.*
 - **The metric sits within a decision framework based on the mitigation hierarchy:** *it informs decision-making where application of the mitigation hierarchy and good practice principles has concluded that compensation for habitat losses is justified.*
 - **The metric is a proxy for biodiversity:** *while it is underpinned by ecological evidence the metric is only a proxy for biodiversity and has been kept deliberately simple to make it of practical use.*
 - **The metric focuses on widespread species and typical habitats:** *it is a suitable proxy for widespread species found in typical examples of different habitats. Scarce and protected species are likely to need separate consideration to the biodiversity metric.*

- **The metric recognises the importance of place and connectivity:** it seeks to enhance biodiversity in the locality of impacts, so far as possible, as well as contributing to wider ecological networks by creating more, bigger, better and joined areas for biodiversity.

- **The metric informs decisions:** Decisions and management interventions need to take account of expert ecological advice and not just the biodiversity unit outputs of the metric. The historic or landscape significance of a habitat, and relevant planning policies, are also relevant.

Policy and legislation background

National biodiversity net gain policy

1.6 Existing Government policy for England on biodiversity net gain is set out in the National Planning Policy Framework (NPPF, 2021). Section 15 of the NPPF is considered particularly relevant. Paragraph 8 states: "Achieving sustainable development... (so that opportunities can be taken to secure net gains across each of the different objectives)..."

1.7 In paragraph 174 the following statement is made:

- "Planning policies and decisions should contribute to and enhance the natural and local environment by*
- *protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);*
 - *minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;*

1.8 Paragraphs 180 of the NPPF state that:

"When determining planning applications, local planning authorities should apply the following principles:

- *if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
- *development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity..."*

Local planning policy

- 1.9 Eastergate is designated as a Neighbourhood Area within the Arun District Council Local Planning Authority Area (ADC LPAA) and South Downs National Park Planning Authority (SDNP PA). The Arun Local Plan 2011 – 2031 identifies a number of ‘Strategic Allocations’ which are *“areas of land (sites) that have been identified to provide residential and commercial development to meet local housing and employment needs throughout the plan period (2011 – 2031)”*.
- 1.10 Policy ENV DM5 of the ADC LPAA states that *“development schemes shall, in the first instance, seek to achieve a net gain in biodiversity and protect existing habitats on site. They shall also however incorporate elements of biodiversity including green walls, roofs, bat and bird boxes as well as landscape features minimising adverse impacts on existing habitats (whether designated or not). Development schemes shall also be appropriately designed to facilitate the emergence of new habitats through the creation of links between habitat areas and open spaces. Together, these provide a network of green spaces which serve to reconnect isolated sites and facilitate species movement”*.
- 1.11 Aldingbourne Neighbourhood Development Plan 2020 was adopted by Arun District Council in 2021, covers the period 2019 - 2031. The policies within this plan *“accorded with higher level planning policy principally the National Planning Policy Framework (NPPF) and the Arun District Council Local Plan 2018 and the South Downs National Park Local Plan, as required by the Localism Act.”* The Development Plan has been reviewed and amended to align with the policies within the Arun District Local Plan 2018. The Development Plan is also in *“accordance with Regulation 14(a)(v) of the Neighbourhood Planning (General) Regulations 2012 (as amended) in respect of the Modification Proposal to the made Aldingbourne Neighbourhood Plan 2014-2034”*.

Environment Act 2021

- 1.12 As a result of the newly granted Environment Act 2021, schedule 14 makes provision for conditions to secure the biodiversity gain objective.

Paragraph 2 sets out the Biodiversity gain objective as:

- (1) *The biodiversity gain objective is met in relation to development for which planning permission is granted if the biodiversity value attributable to the development exceeds the pre-development biodiversity value of the onsite habitat by at least the relevant percentage.*
- (2) *The biodiversity value attributable to the development is the total of—*
 - (a) *the post-development biodiversity value of the onsite habitat,*
 - (b) *the biodiversity value, in relation to the development, of any registered offsite biodiversity gain allocated to the development, and*

(c) the biodiversity value of any biodiversity credits purchased for the development.

- (3) The relevant percentage is 10%, although this should be treated as advisory until it (is currently expected to) comes into force in December 2023.*
- (4) The Secretary of State may by regulations amend this paragraph so as to change the relevant percentage.*

1.13 This report has been prepared for the exclusive use of SRC Recycling Ltd. No part of this report should be considered as legal advice.

2.0 METHODOLOGY

2.1 Background

- 2.1.1 The Defra Biodiversity Metric 3.0 is considered to be the emerging 'national standard' and has been used for this biodiversity metric. There is no existing locally derived biodiversity metric that can be applied. The Biodiversity Metric 3.0 Calculation Tool Beta Test July 2021 Update has been used for this Biodiversity Metric. The biodiversity net gain assessment method is based on the information contained in the User Guide that accompanies the Defra Biodiversity Metric 3.0 (Panks *et al*, 2021).
- 2.1.2 The on-site habitats have been assessed using the methodology outlined in the '*Handbook for Phase 1 Habitat Survey*' (JNCC, 2003), with an initial survey completed as part of a Preliminary Ecological Appraisal (PEA) in November 2020 (Corylus Ecology, January 2021). The Phase 1 Habitat categories have been converted into the habitat categories set out in the calculator which are based on the UK Habitat Classification. However, rather than just taking a straight conversion as set out in the calculator, the habitats have been reviewed and directly classified using the UK Habitat Classification definitions (UK Habitat Classification Working Group, 2018).
- 2.1.3 A further update assessment of the grassland using the Farm Environment Plan (FEP) Manual (Natural England, March 2013) was undertaken in July 2021. Update condition assessments of all habitats was also completed in July 2021 in accordance with the technical supplement provided the Defra Metric 3.0 condition assessment criteria for each of the onsite habitats.

2.2 Pre-development Biodiversity Value

- 2.2.1 The information obtained from the habitat survey, including calculations of areas and lengths of habitat features, and the condition of the habitats, are used as inputs to the Defra Biodiversity Metric 3.0. The calculator outputs the pre-development biodiversity value expressed as the number of Biodiversity Units.
- 2.2.2 To calculate the number of biodiversity units, a Microsoft Excel spreadsheet has been pre-populated with a series of formulae taking account of the following factors which are used as multipliers:
- **Extent:** the area or length of the habitat. Hedgerows and tree lines are recorded by measured length (km) whilst habitats such as grassland and woodland are measured in area (ha);
 - **Habitat distinctiveness:** an automatic ranking of the habitat (very high, high, medium, low or very low) based on a combination of its listed conservation status and value to wildlife;
 - **Habitat condition:** following condition assessment, a score (see Table 1) is automatically attributed to the inputted condition;

Table 1 - Metric Score for Habitat Condition

Habitat Condition	Metric score
N/A - Other	0
N/A - Agricultural	1
Poor	1
Fairly Poor	1.5
Moderate	2
Fairly Good	2.5
Good	3

- **Strategic significance:** whether the habitat is located in a preferred location for local biodiversity and environmental objectives, such as Nature Recovery Areas or areas identified in local plans or policies.

2.2.3 The formulae translate extent, habitat distinctiveness, habitat condition and strategic significance into a score which is presented in biodiversity units. Under version 2.0 of the metric ecological connectivity was also included in the calculations, however, this factor has been removed from the current version. The calculation tool separates areas into units for habitats, hedgerows and rivers.

2.3 Post-development Biodiversity Value

2.3.1 The proposed post-development land uses and associated habitats that are set out in the 'Landscape Strategy' Plan (HCUK Group, December 2021) landscape strategy plan has been used as the basis for the inputs to the metric calculator. The metric then outputs the post development biodiversity value, again expressed as the number of Biodiversity Units. The calculator has been pre-populated with a series of formulae that calculate the Biodiversity Units. This has specific scores and timeframes for creating the various habitats.

2.3.2 The 'total net unit change' in biodiversity value (net gain or loss) is automatically calculated by subtracting the Site's pre-development value in biodiversity units from the post-development value that is the sum of the values for the retained, created and enhanced habitats on the Site. A net percentage change is also then automatically calculated to provide a more comparable figure between the net unit change baseline units and the net unit change. Habitat area, hedge and river habitats are all calculated independently with hedgerow units and river units provided.

2.4 Assumptions and Limitations

2.4.1 It should be noted that the Defra Biodiversity Metric 3.0 is based on habitats only and it does not take account of any required species actions, such as those for legally protected species. The actions identified in the Ecological Impact Assessment (Corylus Ecology, Dec 2021) in relation to legally protected species remain relevant. The habitat types proposed within this report have taken in to account any ecology mitigation measures detailed in these reports.

- 2.4.2 The assessment does not give credit (in terms of a score or biodiversity units) to any actions that are taken as part of the development that add particular features to the Site, such as the provision of bird nesting boxes, that enhance the potential of the Site to support particular species. Such measures fall outside the scope of the metric.
- 2.4.3 The naming of natural and man-made features can differ between this document and documents prepared by other technical specialists.
- 2.4.4 It should also be noted that the metric calculator 3.0 only provides output calculations to, two decimal points (2d.p), and these output values are also automatically rounded up to the nearest 2d.p for any totals. Therefore for the purposes of the metric all habitat input values (size of each habitat/land use area) have also been rounded up to 2d.p, in order for the metric to accurately process the calculations, however this does not alter the final results as the metric would automatically round up any value automatically in any instance.

3.0 SITE DESCRIPTION AND BACKGROUND

- 3.1 The Site measures 3.27ha and consists of an active car salvage centre in the east with areas of grassland, disturbed/bare ground, scrub and ruderal in the west and south. The grassland area is used by the car salvage centre for storage of machinery and cars. There is a species-poor hedgerow with trees along the northern boundary and a species-poor hedgerow with trees in the south-western area of the Site. There is a road immediately to the east. A recently planted woodland to the north and urban development to the west and south.
- 3.2 Habitat types were identified during the Phase 1 Habitat Survey and update habitat condition assessments (Corylus Ecology 2021). These have been measured, along with the landscape and proposals plan, on AutoCAD software, scaled and matched to ensure accuracy. All measures were taken from these plans and the habitats are shown on Figure 1.

Protected Species Mitigation and Habitat Enhancements

- 3.3 The mitigation and enhancement proposals are based on the presence of habitats and species within the Site which have been identified as being affected or potentially affected by the proposals. As a result, the design process has attempted to protect the areas of highest ecological interest and enhance them where possible:

Area Habitats

- Areas of species-rich scrub will be created around the boundaries of the development and these will be near to hedgerows and treelines to enhance the connectivity and structure of these linear features;
- The species-poor grassland, areas of bare earth, scrub and ruderal habitats will be lost and areas of species-rich wildflower meadows and grassland will be created;

Linear Habitats

- The hedgerow along the northern boundary will be retained and enhanced to be species-rich;
- The majority of the hedgerow in the south-west will be retained and enhanced to be species-rich;
- The treeline along the eastern boundary will be retained and enhanced through the creation of scrub beneath.

4.0 BIODIVERSITY METRIC CALCULATION

4.1 Summary

- 4.1.1 The headline results of the metric calculation are shown in Appendix 1 and the attached metric spreadsheet / calculation tool should be considered alongside this report. The distinctiveness bands for the habitats are based on an assessment of their features, including consideration of species richness and rarity, and are in preassigned bands ranging from very low (scoring 0) for habitats with little or no value, to very high (scoring 8) for priority habitats that are highly threatened, internationally scarce and require conservation action.

4.2 Baseline Units

- 4.2.1 Within the biodiversity metric there is a conversion of habitats from the Phase 1 habitat system to the UK Habitats Classification system. Table 2 below shows the habitats, hedgerows and treelines present within the Site. For example, semi-improved grassland is classed as modified grassland under the UK Habitats Classification system. Once the habitat types have been identified, the condition of these habitats needs to be determined. The Defra metric is currently subject to consultation and changes may be made. The classification and condition of the various habitats on Site are provided in Table 2 below and condition scores provided in Appendix 2 - 6.

Table 2 - Site Habitat and Hedgerow/Treeline Baseline

Phase 1 Habitat	Metric Habitat – UK Habitat Classification	Species list / description	Justification of Habitat Condition
Scattered Scrub	Heathland and shrub – Bramble scrub	There is an area of scrub south-east of the Site. This scrub is pre-dominantly (>75%) bramble <i>Rubus fruticosus</i> sp., with elder. In the north-east there is an area of scrub dominated by bramble with common ivy <i>Hedera helix</i> ssp., <i>helix</i> , elder and butterfly bush <i>Buddleja davidii</i> .	Bramble represents >75% of the scrub. Poor – fails all five criteria.
Semi-improved species-poor grassland	Grassland – Modified Grassland (low distinctiveness)	The grass species assemblage is dominated by perennial rye-grass <i>Lolium perenne</i> with frequent white clover <i>Trifolium repens</i> . The majority of herbaceous species were recorded to occur rarely across the grassland and there is a high cover of undesirable species. 8 species per m ² was recorded.	Poor Passes 3 of 7 criteria of the condition criteria. Average of 8 species per m ² Cover of bracken is <20% Cover of scrub is <20%
Grassland	Bracken	Adjacent to the western boundary is an area dominated by bracken <i>Pteridium aquilinum</i> .	Poor – no assessment required; condition fixed at Poor
Urban	Vacant/derelict/bare ground	Along sections of the northern, eastern and southern boundaries is a vegetated earth bund. There is also vegetated bund covered in tall ruderal that supports the hedgerow the south-west of the Site. The earth bunds are dominated by common nettle <i>Urtica dioica</i> with stinking iris <i>Iris foetidissima</i> , hogweed <i>Heracleum sphondylium</i> , cleavers <i>Galium aparine</i> and white dead-nettle <i>Lamium album</i> .	Poor Passes one criteria: Diverse range of flowering plant species, providing nectar sources for insects. These species are beneficial to wildlife.
Urban	Vacant/derelict/bare ground	In the west is heavily disturbed ground with ephemeral species present including common mouse-ear <i>Cerastium fontanum</i> , common nettle, cleavers, ground-ivy	Poor Passes one criteria:

		<i>Glechoma hederea</i> , prickly sow-thistle <i>Sonchus asper</i> and Canadian fleabane <i>Conyza canadensis</i> .	Diverse range of flowering plant species, providing nectar sources for insects. These species are beneficial to wildlife.
Urban	Vacant/derelict/bare ground	In the west there are large areas of bare ground as a result of the active car salvage centre.	Poor Fails all three criteria
Hardstanding / Buildings	Urban – Developed Land; Sealed Surface	In the east there are six buildings (B1 – B6) located on concrete hardstanding.	N/A - Other
Defunct, Species-Poor Hedgerow with trees	Native species-poor hedgerow with trees	The hedgerow is species-poor and not Important under the Hedgerow Regulations Formed of hawthorn <i>Crataegus monogyna</i> , English elm <i>Ulmus procera</i> , holly <i>Ilex aquifolium</i> , bramble, leyland cypress, dog-rose <i>Rosa canina</i> and elder.	Poor Fails > 5 attributes Fails both attributes in >1 functional group
Species-Poor Hedgerow with Trees	Native Species-poor hedgerow with trees	The hedgerow is species-poor and is not Important under the Hedgerow Regulations. Dominated by hawthorn with pedunculate oak <i>Quercus robur</i> and elder.	Moderate No more than 5 failures Does not fail both attributes in >1 functional group
Scattered trees	Line of trees	Along the eastern boundary of the site is a line of mature Leyland cypress <i>Cupressus x leylandii</i> trees. These trees have been recently cut with the crowns and branches/foliage removed.	This is a line of trees where the base of the canopy is >2m from the group and the gap between each tree canopy is <20m to create a linear feature. It does not comprise any native species and the ground layer is heavily disturbed. Poor – Fails four criteria.

4.2.2 The distinctiveness and strategic significance scores of each of the above habitats, their strategic significance and their resulting baseline habitat unit scores are shown in Table 3 below. The overall biodiversity unit score for the existing Site (pre-development) is 5.52 habitat units and 1.80 hedgerow units.

Table 3 - Site Habitat and Hedge Baseline

Site Habitat Baseline Score			
Habitat Type	Distinctiveness Score	Strategic Significance Score	Unit Score
Heathland and shrub – Bramble scrub	Medium	Low	0.24
Modified Grassland	Low	Low	3.66
Bracken	Low	Low	0.06
Vacant/derelict/bareground	Low	Low	0.54
Vacant/derelict/bareground	Low	Low	0.06
Vacant/derelict/bareground	Low	Low	0.96
Urban – Developed Land; Sealed Surface	Very Low	Low	0.00
Total habitat units			5.52
Site Habitat Baseline Score			
Native species-poor hedgerow with trees	Medium	Medium	0.88
Native Species-poor hedgerow with trees	Medium	Medium	0.79
Line of trees	Low	Low	0.12
Total hedgerow units			1.80

4.3 Post-Invention

4.3.1 The main habitat to be lost as a result of the proposals is modified grassland.

4.3.2 Post intervention the following habitat enhancements within the Site have been calculated:

- Enhancement of retained hedgerows: one along the northern boundary and one in the south-west of the Site.
- Enhancement of retained treeline along the eastern boundary.

4.3.3 The following habitat creation within the Site has been calculated:

- Mixed, native species-rich scrub buffers will be planted around the boundaries of the development, including beneath the retained hedgerow along the northern boundary and treeline along the eastern boundary. There will also be planting of mixed, native species-rich scrub beneath and adjacent to the retained hedgerow in the south-west;
- New tree planting;
- Creation of species-rich, neutral grassland to be created around the development;
- Creation of species-rich, wet meadows (neutral grassland) to be created to the north of the access road and around the Sustainable Urban Drainage (SUDs);
- Creation of small areas of bulb planting (modified grassland) within areas of grassland;
- SUDs;
- Creation of species-rich hedgerows around the development (total 433m);
- Creation of native hedgerow within gardens (beech *Fagus sylvatica*, total 222m);
- Developed land / sealed surface;
- Creation of amenity grassland within the areas of Public Open Space (POS);
- Creation of grassland within the residential gardens (as evidenced by 'Turf' on the Landscape Strategy Plan, HCUK 2021); and,
- Areas of introduced shrub throughout the development and within residential gardens.

4.3.4 The onsite habitat creation results in 6.87 units, which is an increase of 24.49%. The onsite hedgerow enhancement and creation results in 9.23 units, which is an increase of 413.98% hedgerow units. Combining the increase of 24.49% in habitat units with the large increase in hedgerow units results in a high total net gain in biodiversity.

5.0 HABITAT CREATION, ENHANCEMENT AND MONITORING

5.1 Overview

- 5.1.1 A critical part of the biodiversity metric is the need for monitoring: this will involve an assessment of the condition of the core habitats within the Site to determine whether the desired condition of the habitats has been achieved and therefore whether biodiversity gain has been achieved post-development.
- 5.1.2 The monitoring at the Site will require the following specific targets to be met and will be carried out over a five year period. The proposed habitat enhancements, creation and monitoring are set out below.

5.2 Onsite Hedgerow/Treeline Enhancement

Species-Rich Hedgerows

- 5.2.1 The defunct, species-poor hedgerow along the northern boundary of the Site and the species-poor hedgerow in the south will be enhanced from their current state through additional plug planting of heavily flowering and fruiting shrub species and management to create intact species-rich hedgerows. The species chosen should be locally sourced and native and could include wayfaring-tree *Viburnum lantana*, guelder rose *Viburnum opulus*, field maple *Acer campestre*, guelder rose *Viburnum opulus*, hazel *Corylus avellana* and blackthorn *Prunus spinosa* with traveller's-joy *Clematis vitalba* and honeysuckle *Lonicera periclymenum* to thicken the vegetation. The metric states that it will take five years for both hedgerows to reach target of 'good' condition. The progress of the hedgerows will be monitored in the same years alongside the scrub that is to be created (years one, two and four post-development). Where required, the hedgerow vegetation will be managed infrequently (every two to three years) outside the bird breeding period.

5.3 Onsite Habitat/Hedgerow Creation

Native Trees

- 5.3.1 Native trees will be planted around the development. Species to be planted include field maple, alder *Alnus glutiosa*, sweet chestnut *Castanea sativa*, beech, crab apple *Malus sylvestris*, wild cherry *P. avium* and pedunculate oak.

Mixed Scrub

- 5.3.2 The aim of the mixed scrub to be planted around the development boundaries is to enhance the structure of the retained hedgerows and treeline, and to provide habitat connectivity around the entire perimeter of the Site. This will be achieved by dense planting of a number of scrub species including hazel, hawthorn, holly, blackthorn, dog-rose *Rosa canina* and field rose *R. arvensis*. The aim of the management of the scrub will be to achieve scalloped margins to create a range of ecotone and openings. The metric states that this habitat creation will take seven years to reach its target of 'fairly good' condition. The scrub planting will be monitored in the same years as the hedgerows (years one, two, four and six years post

development) and any suggestions for management at this early stage will be followed. Following this, it will be managed every one to two years outside the bird breeding period.

Native Hedgerows

5.3.3 Approximately 433m of species-rich hedgerows will also be created around the development with the aim to achieve 'good' condition. The hedgerows will be planted with hazel, hawthorn, holly, blackthorn, dog-rose and spindle *Euonymus europaeus*. The target time for the new species-rich hedgerows to be created and reach target is estimated to be 12 years. Once the plants have established, the hedgerows will need to be managed regularly to encourage bushy growth. The progress of the hedgerows will be monitored in the same years alongside scrub areas (years one, two, four and six years post development) and years eight, 11 post-development and every five years after that. Once fully established and at the desired height and thickness, the hedgerow vegetation will be managed infrequently (every two to three years) outside the bird breeding period.

5.3.4 Approximately 222m of native hedgerow is to be created around the gardens. This will comprise beech only. These hedgerows will also take 12 years to achieve 'good' condition.

5.4 Grassland Creation

Wildflower Meadows

5.4.1 Areas of wildflower meadows, including one wet meadow area and marginal planting around the SUDs, will be created in the north and south-east of the development. Creation of the grassland will be achieved by sowing a species-rich meadow seed mix, as well as plug planting of appropriate species to increase cover of herbaceous species. The aim of the wildflower meadows is to create 'other neutral grassland' that is of at least 'moderate condition', aiming for 'fairly good' condition based on the condition score requirements within the Biodiversity Metric guidelines. The metric calculates it will take five years to reach 'moderate' target condition. The areas of 'other neutral grassland' are marked on Figure 2 and will not be used for amenity. This will be ensured through low picket fences along the sides to prevent members of the public trampling the grassland, and through the use of information boards to explain the management and purpose of the areas.

5.4.2 The meadow areas will be managed on a three year rotational basis (see Figure 2 for the areas). The grassland will be roughly divided into two areas and each area will be managed differently and to a range of sward heights: either not cut at all, cut once a year in late summer/autumn, or cut twice a year in spring and autumn. Once cut, arising will be removed.

Year 1

- area G1 is cut twice (May and September are ideal times of year)
- area G2 is not cut at all

Year 2

- area G1 is cut only in September (once)
- area G2 is cut twice (May and September)

Year 3

- area G1 is not cut at all
- area G2 is cut only in September (once)

- 5.4.3 The created grassland will be monitored in years two, four and six post-development to determine the habitat type and condition. This will be achieved using a combination of the Phase 1 survey technique and the methodology set out in the FEP guidelines to determine habitat type, and the biodiversity metric condition assessment. Any recommendations for additional management will be made following the monitoring surveys.

Amenity Grassland

- 5.4.4 The areas of amenity (modified) grassland and bulb planting that are to be created within the POS will be to achieve grassland of 'moderate' condition. The metric states that this will take four years to achieve.

5.5 Other Habitats

- 5.5.1 The remaining habitats to be created are as follows:

- 'Urban – Introduced shrub';
- 'Urban – Sustainable Urban Drainage (SUDs) feature'
- 'Grassland – Modified Grassland' of poor condition, (turf within gardens);
- 'Urban – Street Trees'; and
- 'Urban – Developed land; sealed surface.'

- 5.5.2 Although these areas are designed predominantly for human use, there is scope to provide habitat alongside the primary function. For example, a mix of heavily fruiting and flowering shrubs, as well as nectar-rich bedding plants, can be included as part of the landscape design. This will provide habitat for invertebrates, birds and other species groups. The planting should be appropriately managed, including formative pruning, as part of the management regime for the Site. The condition should be monitored during the monitoring visits for the other habitats proposed as part of the biodiversity net gain recommendations.

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- 5.5.3 In addition, wildlife boxes will be provided which will be of benefit to a range of species - including birds, bats and hedgehog - within areas of suitable habitat, including on the new buildings and within garden areas. The installation of wildlife boxes has also been included within the EclA (Corylus, Dec 2021).
- 5.5.4 Additional habitat features, such as log piles, can also be incorporated into suitable areas of the Site, including the areas of scrub in the north and east of the Site and at the base of the hedgerows. These types of feature are currently excluded from the metric calculation tool but would provide additional enhancements for wildlife.

6.0 CONCLUSIONS

- 6.1 The Defra biodiversity metric 3.0 has been used to quantify the biodiversity net gain for the proposed proposals at SRC Recycling Centre in Eastergate, Sussex.
- 6.2 The assessment has concluded that a biodiversity **gain of 1.35 habitat units**, which results in **a 24.49% gain**. The enhancements of the hedgerows results in an overall net gain of **7.44 hedgerow units**, or a **413.98% increase**.
- 6.3 The success of delivering these net gains will be based on a robust management and monitoring programme that falls outside the scope of this report. However, some recommendations have been made in this document to help with the detailed landscape strategy.

References

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HCUK Group, December 2021. Landscape Strategy Plan

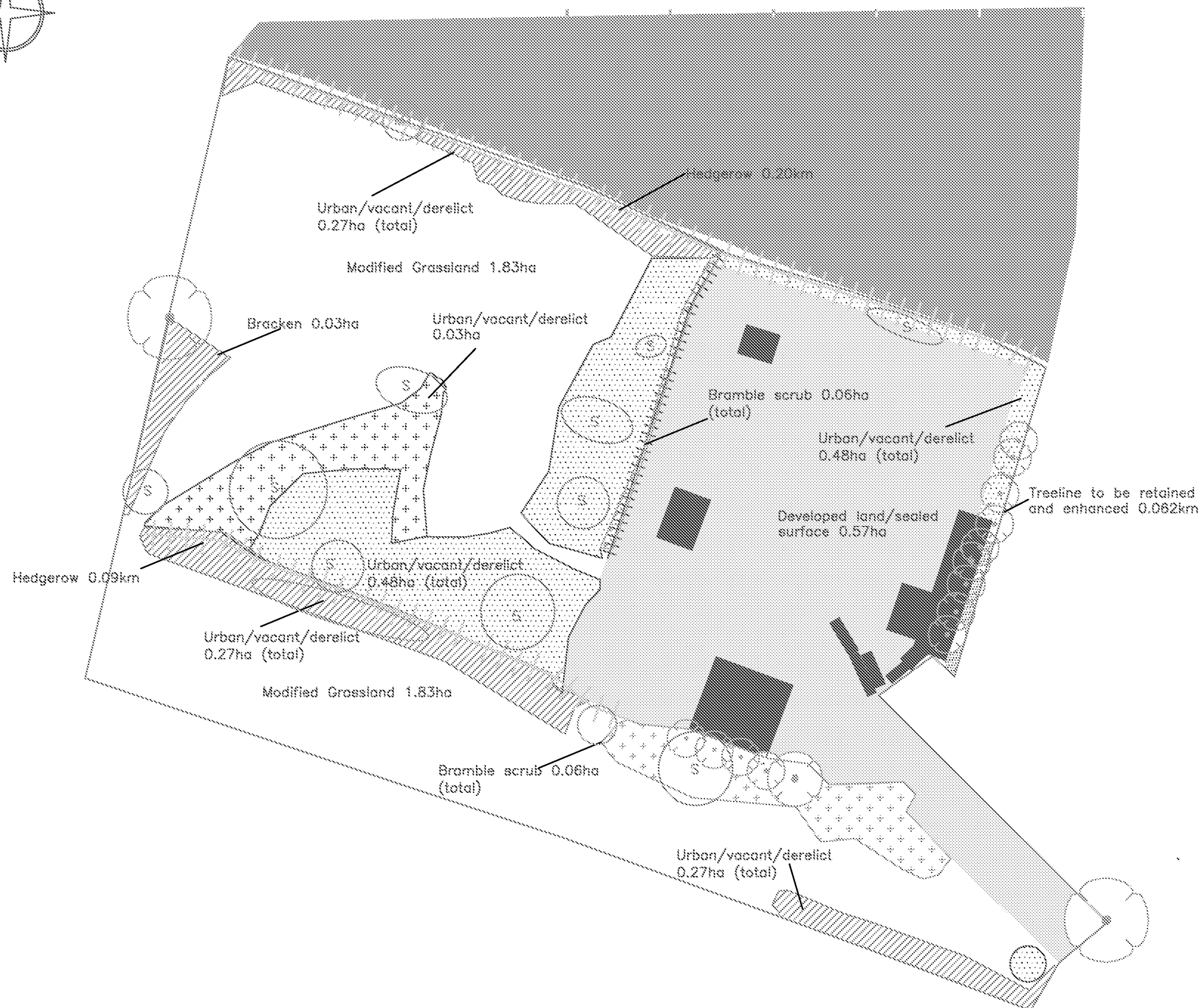
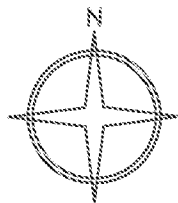
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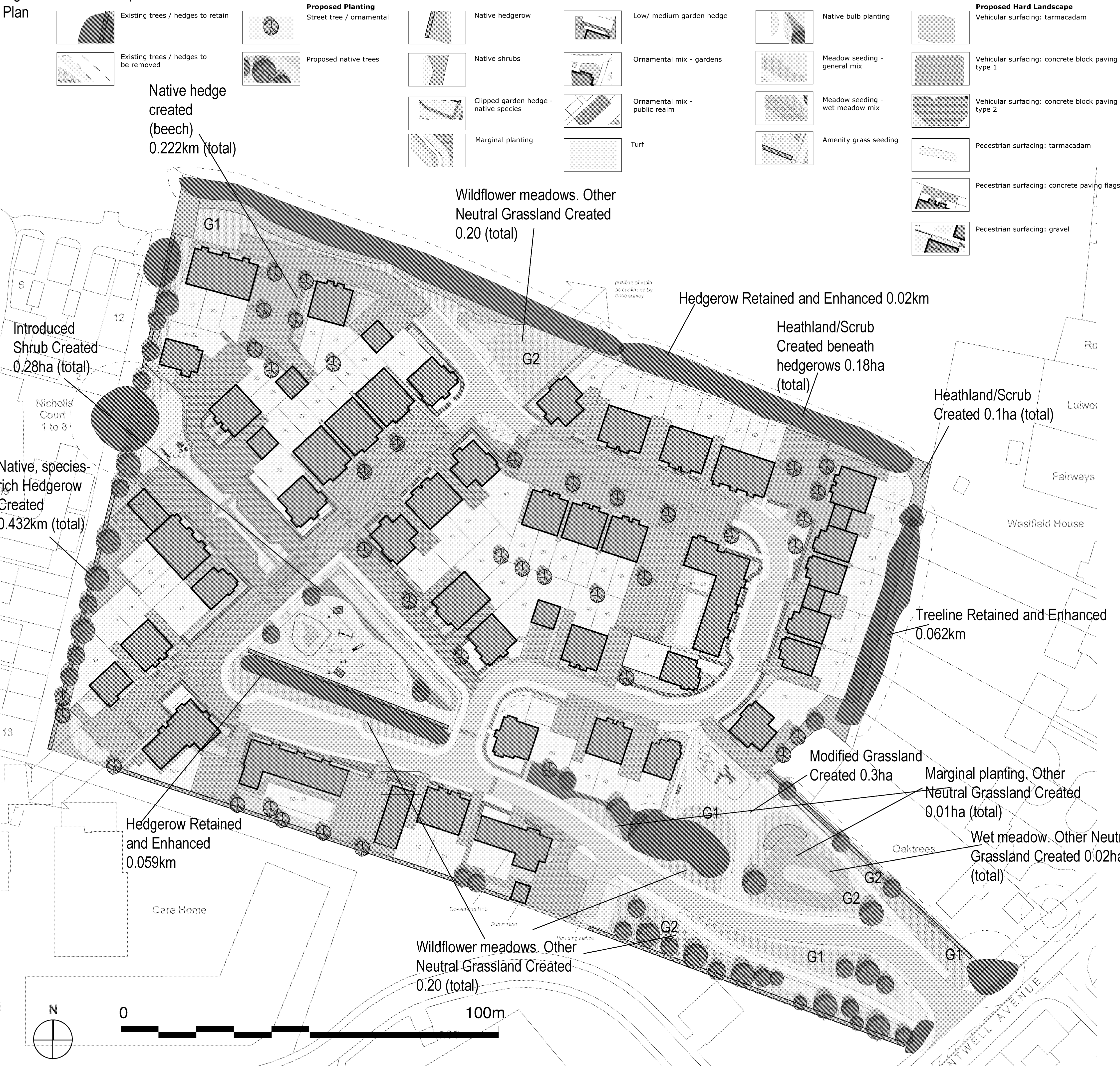


Key

- Site Survey Area
- Tree
- Broad-leaved Woodland
- Scattered Scrub
- Grassland
- Tall Ruderal
- Spoil
- Ephemeral Grassland
- Species Poor Hedge with Trees
- Fence
- Building
- Hard Standing
- Bare Ground
- Mammal Hole

revision	description	date	checked by
	Corylus Ecology Ltd, Unit A3, Speldhurst Business Park, Went Farm, Langton Road, Speldhurst, Kent TN3 0NR Corylus Ecology is the trading name of Corylus Ecology Ltd registered in England, No 5005563. Registered Office: Hemwood House, Hemwood, Ashford, Kent TN24 6DH		
Project: 20142 SRC Recycling Centre			
Title: Pre-development Habitat Plan			
drawing no.		Figure 1	
scale	size	date	drawn
NTS	A3	13.12.2021	LR
checked		AW	
CAD filename			
Figure_1.dwg			

Figure 2. Post Development Habitat Plan



GENERAL NOTES:
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2. Drawing is for the intended purpose as stated in the status box of the title block.
3. HCUK accept no liability arising from any variation to this drawing without prior approval obtained.
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7. To be read in conjunction with HCUK Landscape Specification dwg 6369-02.

Landscape Strategy

Design Principles and Objectives

- To reinforce existing trees and hedges to the site boundaries with native vegetation, to integrate the site with the wider rural setting and landscape character and reinforce the screening to neighbouring properties
- To create a network of multifunctional green space through the development that provides for sustainable drainage, play and informal recreation
- To create well-defined character areas within the development through the creation of shared streets, enhancing views onto POS and using hedges and signature tree species to create a strong green framework to streets
- To create POS and public realm of varying character
- To include wildlife attracting plant species within ornamental plant mixes to contribute to biodiversity.

Proposals

Planted SUDs waterbody enhances the main access into the Site. A natural play area is created within the setting of existing retained trees and a newly created meadow. The edge of the waterbody is clearly defined by planting and is designed with gentle gradients and shallow edges.

Central green space with a formal LEAP play area (layout is indicative and subject to detailed design). Grass safety surface to retain the green setting. Picnic benches and litter bins to be provided. Existing retained native hedge on the southern side to be managed to remove deadwood and pruned and to be supplemented with a new dense native hedgerow to provide a tidy easily maintained edge. Planting will clearly define the edge of the swale on the north side and the gradients will be gently sloping to provide a safe margin.

Green corridor through the shared street enhancing the vista towards the large retained oak tree on the western boundary. A quite reflective space for informal recreation, with carved log seating and shadey meadow/ woodland perennial planting under the tree and to the margins.

Easement - no tree planting. Grass, meadow, bulbs and low ornamental planting.

North Boundary - adjacent hedge H12
To be supplemented with native shrub planting on the south side and reinforce by gapping up within the hedgeline where necessary.

North boundary - adjacent H15
To be supplemented with native shrub planting on the south side and reinforce by gapping up within the hedgeline where necessary.

East boundary - along retained hedgeline H16
Cypress hedge retained and supplemented with native shrub planting, including holly to provide evergreen screening.

North boundary (east section)
Existing poor quality heavily pruned trees and gappy cypress hedges (Hedges H6 and H4 and tree group G5) to be removed and replaced with a hedgerow and small native hedgerow trees of edible species, to provide informal foraging opportunities for residents (nuts, berrying and fruiting species). To provide a good quality boundary treatment appropriate to the wider rural setting.

Southern boundary - native hedgerow and tree planting for softening of views and to enhance landscape character and biodiversity.

Western boundary - existing large oak and hawthorn group retained. Native hedgerow planting, supplemented with native shrubs and native tree planting for the softening/ screening of views, to enhance landscape character and biodiversity.

Note: The original of this drawing was produced in colour - a monochrome copy should not be relied upon.

Revision	Description	Date	By	Chk.
-	First issue	23/9/21	CB	SH
A	Update site plan	14/10/21	CB	SH
B	Updated baseplan	21/11/21	CB	SH
C	Meadow areas updated	2/12/21	CB	SH



Client:
SRC Recycling Limited
Project:
Land at SRC Recycling, Eastergate
Description:
Landscape Strategy

Status: FOR PLANNING	Scale: 1:500 @A1	Drawn I CB	Checked SH	Date: 02/12/2021
Job Number: 6369	Drawing Number: 01	Revision: C		

W: www.hcukgroup.co.uk

Farm Environment Plan (FEP) grassland survey		Site name: SRC Recycling Centre	Date: 14/7/2021
Field parcel/s: Grassland	Other relevant info:		

This form is designed to help follow the FEP key 2a (overleaf) to identify species-rich, semi-improved and improved grassland. It is useful to identify grassland type on site, then use the biodiversity metric condition assessment (overleaf) to determine condition. For species-rich grassland a more detailed condition assessment may be needed (in the FEP handbook, different questions need answering depending on the grassland type, which may require collection of additional information per quadrat and overall).

Section 1 – Percentage cover of rye-grasses and white clover (other undesirable species are recorded as presence only in section 2)												
Quadrat number	1	2	3	4	5	6	7	8	9	10	Total	Average %
e.g. White clover	20	15	30	15	25	40	10	5	20	5	185	18.5
Perennial rye-grass	50	50	40	5	30	90	30	90	0	90	475	47.5
Italian rye-grass												
Other rye-grasses												
White clover	2	2	0	0	2	0	20	0	5	10	41	4.1
Total % cover of rye-grasses and white clover (use answer for question 1 in summary table at bottom of page)											516	51.6
Undesirables*	5	30	10	10	30	10	40	10	40	0	185	18.5

* total % cover of creeping thistle, spear thistle, curled dock, broad-leaved dock, common ragwort and common nettle.

Section 2 – Presence of other species in each quadrat (including grasses and other undesirable species/injurious weeds, recorded as presence only)												
Quadrat number	1	2	3	4	5	6	7	8	9	10	Total	F, O or R**
Creeping thistle							✓		✓		2	R
Spear thistle												
Curled dock												
Broad-leaved dock												
Common nettle												
Creeping buttercup		✓		✓	✓				✓		4	O
Cock's foot	✓		✓		✓		✓				4	O
Creeping bent	✓	✓	✓			✓		✓			5	F
Rough meadow grass	✓	✓	✓	✓		✓		✓		✓	7	F
Greater plantain	✓				✓	✓			✓		4	O
Yorkshire-fog	✓		✓	✓		✓	✓		✓		6	F
Smooth hawk's beard	✓			✓							2	R
False-oat grass		✓	✓	✓			✓		✓		5	F
White campion		✓									1	R
Prickly sow-thistle		✓									1	R
Dove's-foot crane's-bill		✓									1	R
Hoary willowherb									✓		1	R
Hairy bittercress		✓									1	R
Forget-me-not		✓									1	R
Lesser stitchwort			✓	✓	✓						3	O
Fumitory		✓									1	R
Bird's-foot trefoil		✓									1	R
Black medick		✓									1	R
Hedge bedstraw			✓								1	R
Mouse-ear chickweed		✓	✓								2	R
Field bindweed			✓					✓			2	R
Hogweed				✓	✓		✓				3	O
Common stork's-bill			✓				✓				2	R
Common vetch				✓				✓			2	R
Ground-ivy				✓							1	R
Scentless mayweed					✓						1	R
Total no. of species***	8	15	11	10	8	5	8	5	7	3	Total	Average no.
Average number of species per m ² including grasses (use answer for question 2 in summary table at bottom of page)											80	8

** frequent (F) = 5 or more; occasional (O) = 3 or 4; rare (R) = 1 or 2. ***Count total number of species per quadrat, including all species listed in Sections 1 & 2 above.

Section 3 – Total percentage cover of grasses vs herbs/sedges or bare ground per quadrat												
Quadrat number	1	2	3	4	5	6	7	8	9	10	Total	Average %
Total % cover of grasses	95	70	50	70	60	95	95	95	95	95	820	82
Total % cover of herbs****	5	30	50	30	40	5	5	<5%	<5%	1	176	17.6
Total % of bare ground	0	5	0	0	0	0	0	0	0	0	5	0.5

**** including sedges but excluding undesirable species (white clover, creeping buttercup, creeping thistle, spear thistle, curled dock, broad-leaved dock, common ragwort and common nettle). Use answer for question 3 in table below.

Summary questions to identify grassland type		Species-rich		Semi-improved		Improved	
Tick one option for each question	1. Cover of rye-grasses and white clover	< 10%		< 30%		> 30%	✓
	2. Average number of species per m ²	> 15		9-15		≤ 8	✓
	3. Cover of broadleaved herbs and sedges	> 30%		≥ 10%	✓	≤ 10%	

Grassland type (circle one, based on answering 2 questions for 1 grassland type above) = species-rich semi-improved improved

Appendix 2 Scrub Condition Score

Target note	Condition assessment criteria					Result	Score
	1	2	3	4	5		
	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	There is a good age range – all of the following are present: seedlings, young shrubs and mature shrubs.	There is an absence of invasive non-native species (as listed on Sch 9 of WCA 1981) and undesirable species make up less than 5% of the ground cover.	The scrub has a well-developed edge with scattered scrub and tall grassland and/or herbs present between the scrub and adjacent habitats.	There are clearings, glades or rides present within the scrub, providing sheltered edges.		
South-east	No	No	No	No	No	0	Poor
North-east	No	No	No	No	No	0	Poor

Condition Assessment Result	Condition Score
Passes 5 of 5 criteria	Good (3)
Passes 3 or 4 of 5 criteria	Moderate (2)
Passes 0, 1 or 2 of 5 criteria	Poor (1)

Appendix 3 Condition Score for Grassland with Low distinctiveness

Grassland Type	Condition assessment criteria							Result	Score
	1	2	3	4	5	6	7		
	There must be 6-8 spp/m2.	Sward height is varied. 20% of the sward is less than 7cm and at least 20% is more than 7cm	Scrub accounts for less than 20% of total grassland area	Physical damage evident in less than 5% of total grassland area	Cover of bare ground between 1% and 5%	Cover of bracken less than 20%	invasive non-native species and undesirable species less than 5%		
Modified Grassland	Yes - 8	No	Yes	No	No - 0.5%	Yes	No - 18.5%	3	Poor

Condition Assessment Result	Condition Score
Passes 6 or 7 of 7 criteria including non negotiable criterion 7	Good (3)
Passes 4 or 5 of 7 criteria, or passes 6 of 7 criteria excluding criterion 7	Moderate (2)
Passes 0 – 3 of 7 criteria	Poor (1)

Appendix 4 Urban - Vacant / derelict land / bare ground

Target note	Condition assessment criteria			Result	Score
	1	2	3		
	Vegetation structure is varied, providing opportunities for insects, birds and bats to live and breed. A single ecotone (i.e. scrub, grassland, herbs) should not account for more than 80% of the total habitat area.	There is a diverse range of flowering plant species, providing nectar sources for insects. These species may be either native, or non-native but beneficial to wildlife	Invasive non-native species (Schedule 9 of WCA) cover less than 5% of total vegetated area. NB - To achieve GOOD condition, criterion 3 must be satisfied by a complete absence of invasive non-native species (rather than <5% cover).		
Tall ruderal	No	Yes	No	Poor	1
Ephmeral	No	Yes	No	Poor	1
Bare ground	No	No	No	Poor	1

Condition Assessment Result	Condition Score
Passes 3 of 3 core criteria; AND meets requirements for food condition within criteria 2 and 3	Good (3)
Passes 2 of 3 core criteria; OR Passes 3 of 3 core criteria but doesn't meet requirements for good condition within criteria 2 and 3	Moderate (2)
Passes 0 or 1 of 3 core criteria	Poor (1)

Appendix 5 Condition Assessment For Hedgerow with trees

Hedgerow Reference Number	A1 Height	A2 Width	B1 Gap - hedge base	B2 Gap Hedge Continuity	C1 Undisturbed ground and perennial vegetation	C2 Undesirable perennial vegetation	D1 Invasive and neophyte species	D2 Current Damage	Additional group - applicable to hedges with trees		Condition Score
									E1 - Tree Age	E2 - Tree Health	
	>1.5m average along length	>1.5m average along length	Gap between ground and base of canopy <0.5m for >90% of length (unless a line of trees)	Gaps make up <10% of total length AND no canopy gaps >5m	>1m width of undisturbed ground with perennial herbaceous veg for >90% of length measured from outer edge of hedgerow and is present on one side of the hedge (at least)	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground	>90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities	At least 1 mature tree per 30m stretch of hedgerow. A mature tree is one that is at least 2/3 expected fully mature height for the species.	At least 95% of hedgerow trees are healthy condition(exc veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock, wild animals pests or diseases or human activity	
H1 - Northern boundary	Yes	Yes	No	No	No	No	No	No	Yes	No	Poor
H2 - South-eastern	Yes	Yes	Yes	Yes	Yes	No	No	No	Yes	No	Moderate

Condition Assessment Result	Condition Score
Good	No more than 2 failures in total; AND
	No more than 1 failure in any functional group
Moderate	No more than 5 failures in total; AND
	Does not fail both attributes in more than 1 functional group
Poor	Fails a total of more than 5 attributes; OR
	Fails both attributes in more than 1 functional group

Appendix 6 Condition Assessment For Treeline

Treeline Reference Number	1. More than 70% of trees are native species	2. Tree canopy is predominantly continuous with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide	3. Includes one or more mature or veteran tree.	There is an undisturbed naturally vegetated strip of at least 6 m on both sides to protect the line of trees from farming and other anthropogenic operations.	At least 95% of the trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of any adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	Condition Score
Treeline	No	Yes	No	No	No	Poor

Condition Assessment Result	Condition Score
Good	Passes 5 of 5 criteria
Moderate	Passes 3 or 4 of 5 criteria
Poor	Passes 0, 1 or 2 of 5 criteria

SRC Recycling

Headline Results

Return to
results menu

On-site baseline	<i>Habitat units</i>	5.52
	<i>Hedgerow units</i>	1.80
	<i>River units</i>	0.00
On-site post-intervention (Including habitat retention, creation & enhancement)	<i>Habitat units</i>	6.87
	<i>Hedgerow units</i>	9.23
	<i>River units</i>	0.00
On-site net % change (Including habitat retention, creation & enhancement)	<i>Habitat units</i>	24.49%
	<i>Hedgerow units</i>	413.98%
	<i>River units</i>	0.00%
Off-site baseline	<i>Habitat units</i>	0.00
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Off-site post-intervention (Including habitat retention, creation & enhancement)	<i>Habitat units</i>	0.00
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Total net unit change (including all on-site & off-site habitat retention, creation & enhancement)	<i>Habitat units</i>	1.35
	<i>Hedgerow units</i>	7.44
	<i>River units</i>	0.00
Total on-site net % change plus off-site surplus (including all on-site & off-site habitat retention, creation & enhancement)	<i>Habitat units</i>	24.49%
	<i>Hedgerow units</i>	413.98%
	<i>River units</i>	0.00%
Trading rules Satisfied?	Yes	