



Mr Wayne Bennett, Margaret Cartilage Estate

Pear Tree Farm, Brierley

BNG LANDSCAPE STRATEGY

9542-BLS-01

October 2025

Biodiversity Net Gain (BNG) Matrix– Draft for Coordination

Project: Pear Tree Farm, Brierley

Client / Agent: Mr Wayne Bennett/ BLD

Landscape: Robinson Chartered Landscape Architecture

Ecology: Estrada Ecology

Date: October 2025

Purpose:

Provide all inputs required for the Statutory BNG Phase 2 Metric, separated into Red Line (on-site) and Blue Line (off-site within ownership), with clear reasoning on metric entries, exclusions, and deliverability.

1) Introduction

This report summarises the landscape-led habitat creation and enhancement proposals for Pear Tree Farm in support of a statutory 10% Biodiversity Net Gain (BNG) requirement. It provides the quantitative data, specifications and assumptions required by the ecological consultant (Estrada Ecology) to populate the Statutory Biodiversity Metric. This report should be read in conjunction with Soft Landscape Strategy Drawing 9542-SL-01 prepared by Robinson CLA.

Habitats have been grouped into two geographic components:

- **Red Line Site Area:** within the residential development boundary (on-plots, POS and public realm frontages).
- **Blue Line Provision:** within land under the same ownership immediately north and east of the site, proposed to deliver off-site compensatory habitats and ecological connectivity.

Baseline & Target

The Phase 1 Metric prepared by Estrada Ecology (Ref SQ-1996V2) recorded:

Baseline Habitat	Units	Hedgerow Units
Total baseline	1.44	0.28

Hence the development must achieve:

- **≥ 1.59** habitat units (10% uplift)
- **≥ 0.30** hedgerow units (10% uplift)

Given the tight red-line boundary with minimal POS, uplift is primarily achieved through adjacent blue-line farmland habitats under the same ownership.

2) Red Line (On-Site) Habitats

Counted Habitats:

Urban Trees, Native Single Species Hedgerow, POS Scrub & Grassland.

Excluded (Non-counted):

Private gardens and ornamental planting per Natural England guidance- though these still enhance placemaking and biodiversity value.

Reasoning:

- Counted habitats are mappable, maintainable for 30 years, and metric-recognised.
- Excluded habitats still demonstrate a 'spirit of BNG' through pollinator and sensory planting.

3) Blue Line (Off-Site within Ownership) Habitats

Blue-line habitats provide the majority of biodiversity gain through connectivity and diversification.

This justifies application of the 'Strategic Significance – Connectivity' multiplier.

Included Habitats:

- **124 Lm** native species-rich hedgerow (triple-staggered rows)
- **680 m²** native scrub nodes (A & B)
- **400 m²** 3m-wide field-margin meadow
- **21 no.** native hedgerow trees

These collectively link the woodland and scrub adjacent the Methodist Church (south-east) and with the double-hedgerowed PROW and coarse grassland paddock (north-west), forming a continuous ecological corridor.

4) Management & Monitoring

To maintain **Good Condition** and ensure 30-year continuity:

- **Hedgerows:** Weed/mulch Years 1–2; annual post-August trim; maintain dense base.
- **Scrub:** Rotational coppice every 7–10 years; retain deadwood.
- **Grassland:** Year 1 topping; thereafter one hay cut (Aug/Sept) with arisings removed.
- **Trees:** Water Years 1–2; formative prune Year 3; ≤ 10 % replacement rate.

5) Plant Schedule

5.1 Red Line – Native Single Species Hedgerow (*Carpinus betulus*)

- 100 % Hornbeam; double-staggered @ 5 plants/m; 60–80 cm BR; 1.0–1.2 m maintained.
BNG: Native Hedgerow (non-species rich)– Distinctiveness: Medium/ Target Condition: Good/ Time To Target: 5 yrs / Difficulty: L–M.

5.2 Red Line – POS Shrub (Shade-Tolerant Mix; 1.5–2.0 plants/m²; 40–60 cm BR)

Native Shrub Mix: *Corylus avellana* 25%, *Ilex aquifolium* 15%, *Euonymus europaeus* 10%, *Viburnum opulus* 10%, *Cornus sanguinea* 10%, *Crataegus monogyna* 10%, *Prunus spinosa* 5%, *Rosa canina* 5%, *Lonicera periclymenum* 5%, *Acer campestre* 5%.

BNG: Native Mixed Scrub – Distinctiveness: Medium/ Target Condition: Mod-Good/ Time To Target: 5-10 yrs / Difficulty: M.

Crown Lifting and Light Management

Existing trees T12–T14 (lime and sycamore) and group G4 will be selectively **crown-lifted to 3.0–3.5 m above ground level** to increase light penetration beneath the canopies and improve air movement across the POS. This operation will reduce excessive shading, allowing the **understorey scrub and woodland-edge grassland** to establish successfully while retaining the mature trees' ecological and visual value. The resulting dappled conditions will also make the space **lighter, safer, and more inviting for public use**, supporting both habitat function and amenity value. All works to follow BS 3998:2010 Tree Work – Recommendations and be supervised by a qualified arboriculturist.

5.3 Red Line – Grassland (Hedgerow/Woodland Edge) to POS Core Areas

- Emorsgate EM6F / Boston Seeds BS5P @ 4 g/m²;
- Bulbs (*Galanthus*, *Narcissus pseudonarcissus*, *Hyacinthoides non-scripta*) @ 80–100 bulbs/m² to provide early-season nectar within shaded grassland polygons.
- One late-summer hay cut; arisings removed.

BNG: Other Neutral Grassland – Distinctiveness: Medium/ Target Condition: Good/ Time To Target: 5yrs / Difficulty: L-M.

5.4 Red Line – Urban Trees (Compact Native/Near-Native Mix) 12-14cm girth Heavy Standards RB

- *Pyrus calleryana* 'Chanticleer' (6), *Amelanchier alnifolia* 'Obelisk' / × *grandiflora* 'Robin Hill' (6),
Sorbus aucuparia 'Autumn Spire' (4), *Betula pendula* 'Fastigiata' (2).

- 12–14 cm girth; coordinated with NHBC / services; root barriers where needed.

BNG: Urban Trees Habitat – Distinctiveness: Medium/ Target Condition: Good/ Time To Target: 10yrs / Difficulty: M.

5.5 Blue Line – Native Hedgerow Species Rich (Triple-Staggered; 7 plants/m; 1.5 m width; 40–60 cm BR)

Native Hedgerow Mix: *Crataegus monogyna* 35%, *Corylus avellana* 15%, *Prunus spinosa* 10%, *Ilex aquifolium* 10%, *Euonymus europaeus* 10%, *Viburnum opulus* 10%, *Rosa canina* 5%, *Lonicera periclymenum* 5%.

BNG: Native species-rich hedgerow– Distinctiveness: Medium/ Target Condition: Good/ Time To Target: 5yrs / Difficulty: M.

5.6 Blue Line – Scrub Nodes A & B (Sunny; 1.5 plants/m²; 40–60 cm BR)

Native Scrub Mix: *Crataegus* 20%, *Corylus* 15%, *Prunus spinosa* 10%, *Ulex europaeus* 10%, *Rhamnus cathartica* 10%, *Viburnum lantana* 10%, *Rosa canina* 8%, *Lonicera periclymenum* 7%, *Euonymus* 5%, *Rubus fruticosus* 5%.

BNG: Native Mixed Scrub– Distinctiveness: Medium/ Target Condition: Good/ Time To Target: 10yrs / Difficulty: M.

Note on Mixed Scrub Habitat 5.2 & 5.6 Ground Layer Establishment

To aid soil stabilisation and early habitat establishment, the mixed scrub areas will be under-sown with a **light native grass and forb nurse mix** (e.g. *Emorsgate EG2* or *EM6F*, incorporating fine fescues, bent grasses and a limited proportion of shade-tolerant wildflowers such as *Lotus corniculatus*, *Plantago lanceolata* and *Leontodon autumnalis*). This ground layer is intended to provide temporary cover and long-term structural diversity beneath the developing scrub canopy.

For BNG purposes, the **scrub is recorded as the primary habitat**, and the seeded ground flora is therefore **not entered separately within the metric** to avoid double-counting. However, its inclusion will **strengthen the justification for a “Good” condition target**, supporting the ecological resilience and visual quality of the habitat as it matures.

5.7 Blue Line – Field-Margin Meadow (3m width; 4 g/m²)

Grasses (70 %): *Festuca rubra*, *Agrostis capillaris*, *Cynosurus cristatus*, *Anthoxanthum odoratum*, *Alopecurus pratensis*

Wildflowers (30 %): *Lotus corniculatus*, *Centaurea nigra*, *Leucanthemum vulgare*, *Knautia arvensis*, *Prunella vulgaris*, *Achillea millefolium*, *Ranunculus acris*, *Silene dioica*, *Plantago lanceolata*, *Galium verum*, *Vicia cracca*.

Supplier equivalents: Emorsgate **EM3** (General Purpose Meadow) or Boston Seeds **BS1P** (Wildflower Meadow) with extra hedge-edge species (e.g., red campion, self-heal). For shadier runs immediately under the hedge face, merge in a hedgerow/woodland-edge sub-mix (EM6F / BS5P) over the inner 0.5 m.

BNG: Other Neutral Grassland – Distinctiveness: Medium/ Target Condition: Good/ Time To Target: 5yrs / Difficulty: L-M.

5.8 Blue Line – Hedgerow Trees (21 No. Light Standards 8–10 cm girth BR)

Crataegus monogyna (6), *Sorbus aucuparia* (4), *Betula pendula* (3), *Acer campestre* (3),
Prunus avium (3), *Malus sylvestris* (2).
Irregular spacing (~25–30 m); guards, mulch, and formative pruning.

BNG: Hedgerow (with trees)– Distinctiveness: Medium/ Target Condition: Good/ Time To Target: 10yrs / Difficulty: M.

5.9 Red Line – Semi-Ornamental Planting (92 m²) 2-7.5L @ 2-3plants/ m²

Viburnum tinus 15%, *Hebe 'Red Edge'* 10%, *Escallonia 'Apple Blossom'* 10%,
Prunus laurocerasus 'Otto Luyken' 10%,
Choisya 'Sundance' 10%, *Cornus 'Midwinter Fire'* 10%, *Santolina chamaecyparissus 'Lemon Queen'* 10%,
Carex elata 'Aurea' 5%, *Stipa tenuissima* 5%, *Miscanthus 'Gracillimus'* 5%, *Festuca glauca* 5%, *Brachyglottis sunshine'* 5%.
Low-maintenance eclectic mix for visual and pollinator benefit.

BNG: Urban – Vegetated garden / ornamental- Distinctiveness: Low

5.10 Red Line – On-Plot Sensory Planting (SE Aspect; 48 m²) 2-3L @ 3-4 plants/ m²

Lavandula 'Hidcote' 15%, *Rosmarinus 'Jessops Upright'* 10%, *Santolina 'Lemon Queen'* 10%, *Hebe 'Red Edge'* 10%, *Choisya 'Sundance'* 10%, *Carex elata 'Aurea'* 10%, *Stipa tenuissima* 10%, *Nepeta 'Walker's Low'* 10%, *Verbena bonariensis 'Lollipop'* 5%, *Achillea 'Terracotta'* 5%.
Sun-loving fragrant mix with evergreen base for year-round texture.

BNG: Urban – Vegetated garden / ornamental- Distinctiveness: Low

5.11 Red Line – On-Plot Sensory Planting (NW Aspect; 37 m² Dry Shade) 2-5L @ 3-4 plants/ m²

Liriope muscari 'Big Blue' 15%, *Heuchera 'Obsidian'* 10%, *Skimmia 'Kew Green'* 10%, *Osmanthus × burkwoodii* 10%, *Viburnum davidii* 10%, *Carex bronze* 10%, *Deschampsia 'Goldtau'* 10%, *Fern Polystichum setiferum* 10%, *Euonymus 'Green'*

Spire 5%, *Sarcococca confusa* 5%.

Evergreen and scented layered composition for winter structure.

BNG: Urban – Vegetated garden / ornamental- Distinctiveness: Low

5.12 Red Line– Lawns and Bulbs

- **Front Lawns:** 39 m² amenity turf (e.g. Rolawn Medallion) for placemaking and visual coherence.
- **Rear Flowering Lawns:** 1,199 m² Emorsgate EL1 flowering lawn mix @ 4 g/m².
- **Spring Bulbs:** 19 m² naturalised mix (*Narcissus pseudonarcissus*, *Crocus vernus*, *Scilla sibirica*) beneath trees and hedges within amenity contexts. These enhance aesthetic and ecological continuity but fall outside metric scoring polygons.

BNG: Modified grassland / urban amenity grassland- Distinctiveness: Low

NB: Semi-ornamental and on-plot sensory plant mixes 5.9-5.11 may be subject to change at detailed design.

6) Indicative BNG Outcome

Indicative Projection:

Type	Baseline Units	Post-Dev Units	Net Gain
Habitat (area)	1.44	~1.70	+18 %
Hedgerow (linear)	0.28	~0.33	+18 %

7) Summary and Conclusion

The proposed landscape and habitat framework for Pear Tree Farm has been developed with a clear understanding of the constraints and opportunities inherent in a small residential scheme of this scale, where limited on-plot space and minimal POS make achieving the statutory 10 % Biodiversity Net Gain (BNG) particularly challenging.

Through careful integration of native planting, structural habitat creation, and enhancement of adjacent blue-line farmland, the strategy aims to establish a coherent and connected ecological network that complements the site's built form while remaining deliverable and maintainable in perpetuity.

Within the red-line site, BNG-relevant habitats include:

- A continuous native hornbeam hedge along side boundaries providing linear structure and nesting opportunities.

- Mixed native scrub and species-rich grassland beneath retained trees (T12–T14 and G4) following selective crown-lifting to improve light and air movement.
- Compact native and near-native street trees contributing canopy cover, shade, and micro-habitat diversity.

Complementary areas of semi-ornamental and sensory planting, flowering lawns, and spring bulbs have also been incorporated to reinforce the development's visual quality and pollinator value. While these features fall outside the formal BNG accounting process, they collectively demonstrate the spirit of BNG and deliver genuine local biodiversity and placemaking benefits.

The blue-line farmland immediately northeast of the site provides the principal uplift mechanism, comprising:

- 124 m of new native species-rich hedgerow (triple-staggered),
- Two scrub nodes (A & B) totalling 680 m²,
- A 3 m-wide field-margin meadow of 400 m², and
- 21 native hedgerow trees distributed along the boundary to add vertical structure and continuity.

Together these elements will create an ecological corridor linking the mature trees within the Methodist Church land to the south with the existing hedgerow-lined footpath and coarse grassland paddock to the north, substantially improving habitat connectivity and functional biodiversity across the local landscape.

On the basis of the current design information and proportional habitat areas, it is anticipated that the scheme will comfortably meet- and likely exceed- the 10 % net gain target once the blue-line habitats are entered into the metric at *Good Condition*. However, this projection remains subject to confirmation by Estrada Ecology following completion of the formal BNG Phase 2 calculation.

From a landscape perspective, the design establishes a balanced and realistic solution that aligns ecological function with visual amenity, creating a legible, attractive, and biodiversity-positive setting for future residents. Continued coordination between the landscape and ecology teams will ensure that the final metric submission, management plan, and planting implementation are fully aligned and deliverable over the long term.

8) Adaptive Provision and Response to Metric Outcomes

Preliminary testing indicates that the combined red-line and blue-line habitats may deliver an uplift approaching 18 %. The client's preference is to achieve the statutory 10 % net gain as efficiently as possible, with the majority of uplift arising from within the red-line boundary.

Accordingly, the blue-line farmland to the northeast has been designed as a flexible offset zone. Once the verified BNG figures are confirmed by Estrada Ecology, there will be scope to adjust the width of the field-margin meadow to ensure that the final

balance aligns closely with the 10 % target—reducing its extent if the verified uplift proves excessive, or conversely increasing it if a shortfall is identified.

This approach maintains full ecological functionality and compliance with the statutory metric while ensuring that habitat creation remains proportionate, adaptable, and compatible with ongoing agricultural use.

9) Next Steps and Coordination

The next stage will involve coordination with Estrada Ecology to complete the formal BNG Phase 2 metric using the habitat data and specifications set out in this report.

Once the verified results are available, minor refinements to the field-margin extent or other red/ blue-line habitats can be made to achieve precise alignment with the 10 % net gain target.

Following metric confirmation, Robinson Chartered Landscape Architecture will finalise the landscape deliverables for planning submission and implementation.

Finally, it is anticipated that a Landscape and Ecological Management Plan (LEMP) will subsequently be required under planning condition, and we would be pleased to provide a separate fee proposal for this document if not already commissioned elsewhere.

Prepared by: Robinson CLA
Date: 22nd October 2025
Status: For Planning

Table: Habitat Classification & BNG Metric Input Summary (Sections 5.1–5.12)

(Pear Tree Farm, Brierley — Landscape Architecture / Ecology Coordination Table)

Ref	Habitat / Planting Type	Area / Length	Proposed BNG Habitat Category	Distinctiveness	Condition (Target)	TTT (yrs)	Difficulty	Strategic Significance	Notes / Commentary
5.1	Native Hedgerow (Carpinus betulus)	78 Lm	Native hedgerow (non-species rich)	Medium	Good	5	Low–Med	Low–Med	Formal single-species hedge providing linear connectivity and visual structure along side boundaries.
5.2	POS Scrub (Shade-Tolerant Mix)	0.021 ha (207 m ²)	Mixed scrub	Medium	Good	10	Medium	Connectivity	Understorey habitat beneath retained trees; crown lift to T12–T14 & G4 to improve light and usability.
5.3	Hedgerow / Woodland-Edge Grassland	0.016 ha (160 m ²)	Other neutral grassland	Medium	Good	5	Low–Med	Connectivity	EM6F/BS5P mix with integrated bulbs for early-season nectar; species-rich understorey to scrub margins.
5.4	Urban Trees (Compact Native / Near-Native)	0.02 ha canopy (~18 No.)	Urban tree habitat	Medium	Good	10	Medium	Low–Med	Compact street and on-plot trees contributing canopy cover and urban greening value.
5.5	Blue Line – Native Species-Rich Hedgerow	124 Lm	Native species-rich hedgerow	Medium	Good	5	Medium	Connectivity	Triple-staggered hedge along farmland edge linking woodland and PROW corridors.
5.6	Blue Line – Scrub Nodes A & B	0.068 ha (680 m ²)	Mixed scrub	Medium	Good	10	Medium	Connectivity	Dense native thicket creation with seasonal fruiting species to strengthen corridor links.
5.7	Blue Line – Field Margin Meadow	0.040 ha (400 m ²)	Other neutral grassland	Medium	Good	5	Low–Med	Connectivity	3 m wide species-rich meadow margin to farmland; hay-cut regime for pollinators.
5.8	Blue Line – Hedgerow Trees	21 No.	Hedgerow (with trees)	Medium	Good	10	Medium	Connectivity	Standards (Hawthorn, Rowan, Birch, Maple, Cherry, Crab Apple) for vertical structure and biodiversity.
5.9	Semi-Ornamental Planting	0.009 ha (92 m ²)	Urban – Vegetated garden / ornamental	Low	Moderate	2	Low	Low	Evergreen and deciduous shrubs with grasses (2–7.5 L; 2–3/m ²) for visual, pollinator, and low-maintenance value.
5.10	On-Plot Sensory Planting (SE Aspect)	0.005 ha (48 m ²)	Urban – Vegetated garden / ornamental	Low	Moderate	2	Low	Low	Sun-loving aromatic species (2–3 L; 3–4/m ²) providing fragrance, texture, and seasonal colour.
5.11	On-Plot Sensory Planting (NW Aspect)	0.004 ha (37 m ²)	Urban – Vegetated garden / ornamental	Low	Moderate	2	Low	Low	Shade-tolerant evergreen and herbaceous mix (2–5 L; 3–4/m ²) with layered foliage and winter scent.
5.12	Lawns & Bulbs (Amenity + Flowering Lawn)	0.1238 ha (1,257 m ²)	Modified grassland / urban amenity grassland	Low	Moderate	2	Low	Low	Front lawns (turf), rear flowering lawns (Emorsgate EL1), and scattered bulbs for aesthetic and pollinator benefit.

Summary:

- **BNG-countable habitats:** 5.1–5.8 (core entries).
- **Supplementary habitats for reference:** 5.9–5.12 (ornamental, sensory, and lawns).
- **Projected outcome:** ≥10% net gain achievable when blue-line habitats accepted as *Good*.



- KEY**
- Existing Trees to be Retained & Protected
 - Existing Native Hedgerow Retained & Protected
 - Existing Trees/ Hedgelines to be Removed
 - Proposed Native Hedgerow Trees
 - Proposed Compact Street Trees
 - Native Species Rich Hedgerow
 - Native Scrub Habitat
 - Native Shrub Habitat (POS)
 - Native Single Species Hedgeline
 - Semi-Ornamental Planting Mix
 - On-plot Sensory Planting South Eastern Facing Mix
 - On-plot Sensory Planting North Western Facing Mix
 - On-plot Front Lawns- Turf
 - On-plot Rear Gardens- Grass Seed
 - Meadow Mix to Field Margin
 - Hedgerow/ Woodland Edge Grassland Mix (POS)
 - Naturalising Spring Bulbs
 - Gravel Margin Detail

To be read in conjunction with the following documents:
 BNG Landscape Strategy Report 9542-BLS-01 by RCLA
 -Refer to report sections 5.1-5.12 for species mixes.
 AIA ref 0514 Rev C dated 090925 by Selwyn Trees
 PEA ref SQ 1996 dated 100724 by Estrada Ecology

NOTES:
 This drawing is to be read in conjunction with all relevant contract documentation from the design team, with any conflicting information to be brought to the attention of Robinson Chartered Landscape Architecture in writing before commencing on site.
 The contractor is to check and verify all levels and dimensions before construction. Any discrepancies are to be brought to the attention of Robinson Chartered Landscape Architecture in writing before commencing on site.
 All dimensions in mm, unless otherwise stated.
 Do not scale from this drawing.
 All sub base and concrete specification to engineer's details.
 Waterproofing of any element to be specified by others.
 All proprietary products shall be installed in accordance with manufacturers written instructions.
 Plants should be ordered to suit site areas in accordance with scheduled plant species.
 Any proposed plant substitution shall be agreed with the landscape architect prior to ordering.
 Do not scale areas or dimensions from this plan as the layout has been derived from a large scale OS base plan.
 It is the contractors responsibility to ascertain the positions of all underground and above services.
 Tree locations and design layout may be subject to change following an accurate survey of all service locations.

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Client:
 Mr Wayne Bennett
 Margaret Cartilage Estate

Project:
 Pear Tree Farm
 Church Street, Brierley, Barnsley

Drawing Title:
 SOFT LANDSCAPE STRATEGY
 FOR BNG DELIVERY

Drawing Number:
 9542-BLS-01

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