
Biodiversity Impact Assessment

Parkhill Avenue,
Crumpsall
Ref: P.1957.24

Date: August 2024
(See revision dates below)

Rev	Date	Details

P.1957.24

Biodiversity Impact Assessment

Of

Parkhill Avenue, Crumpsall

For

Great Places Housing Group

22nd August 2024

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Appendix 1 Drawing *P.1957.24.E03 Baseline Condition Assessment*

Appendix 2 Drawing P.1957.24.L01 Planting Plan

EXECUTIVE SUMMARY

This report presents an assessment study of effects on biodiversity in connection with the proposed development at Parkhill Avenue, Crumpsall.

This report calculates 'biodiversity units' using DEFRA's Statutory Biodiversity Metric, February 2024 and following the methods set out in the *The Statutory Biodiversity Metric: User Guide 2024*. The units are calculated based on the area (or length), condition and distinctiveness of habitats found on the site. Pre-development and post-development biodiversity values are calculated and compared to identify any change in the biodiversity value of the site.

Mandatory biodiversity net gain is set out in the Environment Act 2021 and will apply in England and Wales as a requirement to demonstrate net gain as the result of a new development.

Based on the current proposals there will be a loss of **-0.16 (-9.32%) habitat units** and **+0.04 (+12.97%) hedgerow units** within the proposed development area demonstrating that a net gain has not been achieved within the site in line with National Planning Policy (NPPF) and Places for Everyone Joint Development Plan (adopted 2024).

The current proposals have a deficit of 0.31 habitat units; however, it is expected that this shortfall will be able to be met on-site, through working with Manchester City Council and continuing the on-going discussions on this matter.

1.0 Introduction

1.1 Purpose of this report

Ascerta has been instructed by Great Places Housing Group to carry out a Biodiversity Impact Assessment of the land at Parkhill Avenue, Crumpsall. The site OS grid reference is SD 84940 02726 and the What3Words reference is slot.sushi.suffer. This assessment has been prepared to support a planning application for the proposed redevelopment of the site.

1.2 Ecological background

The proposed development site has been subject to a Preliminary Ecological Appraisal and bat surveys.

The site currently comprises other woodland; broadleaved, modified grassland, other woodland; mixed, bramble scrub and native hedgerows.

The site lies in Crumpsall, Manchester and is enclosed by woodland to the north and east, residential to the west and Delaunys Road to the south.

2.0 Methods

2.1 Field Survey

A walkover survey of the site was conducted on 27th February 2024, when the habitat types and features of ecological interest were identified and mapped. An extended phase one habitat survey was undertaken along with a habitat condition assessment (*Natural England Farm Environment Plan (FEP) Manual, 3rd Edition, March 2010*).

2.2 Biodiversity Baseline Methods

To calculate a biodiversity baseline, this study used methods detailed within *The Statutory Biodiversity Metric*, February 2024 and following the methods set out in the *The Statutory Biodiversity Metric: User Guide 2024*. Initially, habitats were digitised in GIS using field notes. Areas were measured in hectares and linear features in kilometres. The biodiversity unit value for each habitat was then calculated by multiplying the habitat area (or length) by its distinctiveness score and then by its condition score, both described below. The unit values for each habitat were then totalled to produce the biodiversity baseline. Linear habitats were assessed separately to areas.

2.2.1 Habitat distinctiveness

Habitats identified are entered into DEFRA's *Statutory Biodiversity Metric* which then assigns a pre-determined distinctiveness value. Habitat distinctiveness is a collective measure of biodiversity and includes parameters such as species-richness, diversity, rarity, and the degree to which a habitat supports species rarely found in other habitats.

2.2.2 Habitat Condition

The condition of the habitats present has been assessed during the site visits using *The Statutory Biodiversity Metric: User Guide 2024*.

The post-development biodiversity units were calculated using information from the Planting Plan drawing number P.1957.24.L01 in Appendix 2. To calculate the post-development biodiversity units the habitat areas are multiplied by the distinctiveness and condition values and then divided by a multiplier based on the difficulty of creating the proposed habitat and the time needed to achieve the proposed condition. The baseline biodiversity units were then subtracted from the post development units to determine any change in biodiversity value of the site as a result of the development. The target condition of the habitats is based on guidance set out within the *Statutory Biodiversity Metric: User Guide 2024* which may require ecological input and/or guidance to ensure the target conditions are achieved.

Information and Data Used to Inform the Biodiversity Net Gain Calculation

The following information was used to inform the Biodiversity Unit Calculations. GIS layers of:

- The site;
- The habitats classified under Phase 1 and baseline habitat condition; and
- Drawing P.1957.24.L01.

3.0 Biodiversity Baseline

This section establishes the biodiversity baseline for the site based on the preliminary ecological appraisal of the proposed development site and the proposed compensatory site.

4.0 Impacts on biodiversity

4.1 Biodiversity Baseline for habitats on site

The *Baseline Condition Assessment*, drawing P.1957.24.E03 at Appendix 1 has been used to identify four habitat area types within the development site. The phase 1 habitat categories have translated into UKHab habitat classification (*UK Habitat Classification User Manual* 2018) using the UKHab/Phase 1 translation tool within the *Statutory Biodiversity Metric* (February 2024) and following the methods set out in the *Statutory Biodiversity Metric: User Guide 2024* and biodiversity scores have been calculated and assessed, as displayed in Table 1 and 2 below.

Table 1: Baseline Habitat Areas Biodiversity Calculation for onsite habitats

Phase 1/UK Hab Habitat	Total Area (ha)	Distinctiveness (score)	Condition	Biodiversity Score	Area retained	Area enhanced
Woodland and forest – Other woodland; broadleaved	0.276	Medium (4)	Poor	1.10	0	0.0765
Woodland and forest – Other woodland; mixed	0.067	Medium (4)	Moderate	0.54	0.067	0
Grassland – Modified grassland	0.032	Low (2)	Poor	0.06	0	0
Heathland and shrub – Bramble scrub	0.032	Medium (4)	Condition Assessment N/A	0	0	0
Total Site Area (ha)	0.38	Habitat Areas Biodiversity Units		1.71	0.067	0.0765

Table 2: Baseline Hedgerow Areas Biodiversity Calculation for onsite habitats

Phase 1/UK Hab Habitat	Length (km)	Distinctiveness (score)	Condition	Biodiversity Score	Length retained
Native hedgerow	0.047	Low (2)	Moderate	0.19	0
Native hedgerow	0.021	Low (2)	Moderate	0.08	0
Total Site Area (ha)	0.38	Habitat Areas Biodiversity Units		0.27	0

4.2 Post-development biodiversity value of the proposed development site

Drawing P.1957.L01, Appendix 2, has been used to identify five new habitat area types. Habitat areas, distinctiveness and condition scores have been calculated and assessed and are displayed in Table 3 and 4 below.

Table 3: Post Development Habitat Areas Biodiversity Calculation for Onsite Habitats

Phase 1/ UKHab Habitat	Total Area (ha)	Distinctiveness (score)	Condition (score)	Biodiversity Score
Urban – Vegetated garden	0.0289	Low (2)	Condition Assessment N/A	0.06
Heathland and shrub – Mixed scrub	0.052	Medium (4)	Moderate	0.35
Urban – Developed land; sealed surface	0.046	V. Low (0)	N/A - Other	0
Urban – Developed land; sealed surface	0.0372	V. Low (0)	N/A – Other	0
Urban – Developed land; sealed surface	0.0776	V. Low (0)	N/A – Other	0
Individual trees – Urban tree	0.0287	Medium (4)	Moderate	0.07
Habitat Areas Biodiversity Units				0.49

Table 4: Baseline Habitat Areas Biodiversity Calculation for onsite habitats

Phase 1/UK Hab Habitat	Total Length (km)	Distinctiveness (score)	Condition	Biodiversity Score
Native Hedgerow	0.0828	Low (2)	Moderate	0.28
Species-rich native hedgerow	0.0052	Medium (4)	Moderate	0.03
Total Site Area (ha)	0.09	Habitat Areas Biodiversity Units		0.31

4.3 Change in biodiversity value

Based on the current proposals there will be a loss of **-0.16 (-9.32%) habitat units** and **+0.04 (+12.97%) hedgerow units** within the proposed development area demonstrating that a net gain has not been achieved within the site in line with National Planning Policy (NPPF) and Places for Everyone Joint Development Plan (adopted 2024).

The current proposals have a deficit of 0.31 habitat units; however, it is expected that this shortfall will be able to be met on-site, through working with Manchester City Council and continuing the on-going discussions on this matter.

5.0 References

JNCC (2010), Handbook for Phase 1 habitat survey - a technique for environmental audit. JNCC, Peterborough

Department for Environment Food and Rural Affairs (DEFRA) (2024). *Statutory Biodiversity metric: User Guide*. Natural England.

A – Natural England, B – Environment Agency, C – Department for Environment, Food and Rural Affairs, D – Treework Environmental Consultants Ltd, E – eCountability Ltd

UK Habitat Classification Working Group (2018). *UK Habitat Classification User Manual* at <http://ecountability.co.uk/ukhabworkinggroup-ukhab>

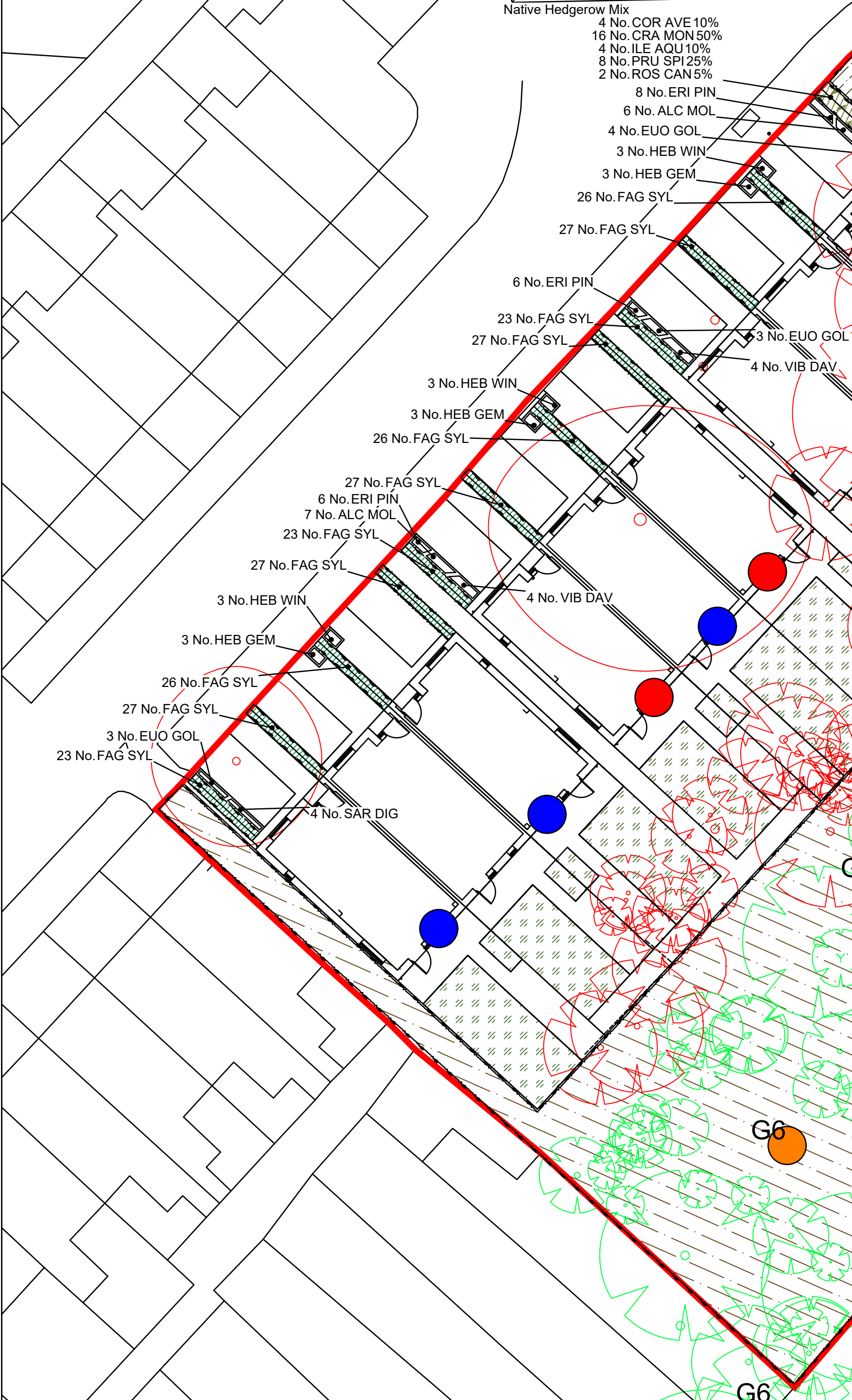
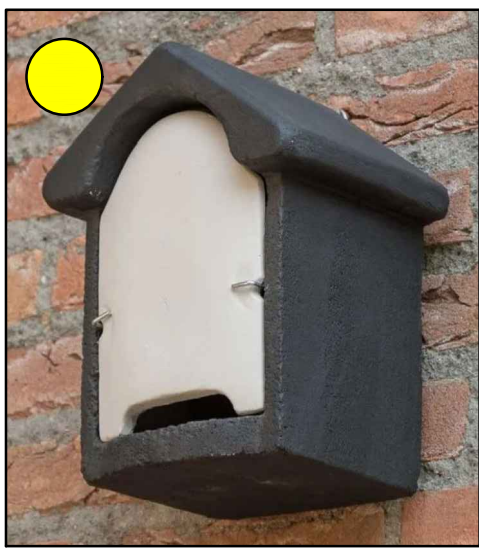
UK Habitat Classification Working Group (2018). *UK Habitat Classification – Habitat Definitions V1.0* at <http://ecountability.co.uk/ukhabworkinggroup-ukhab>

Appendix 1

Appendix 2

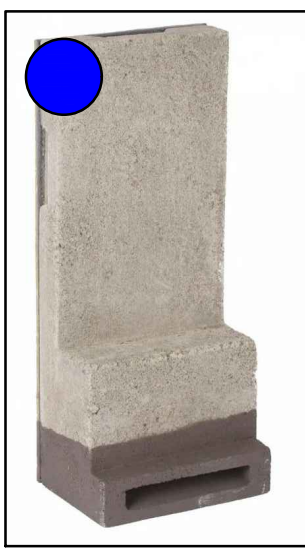
Plant Schedule									
Trees	Number of Plants	Abbreviation	Species	Specification	Height	Girth	Density		
4	BET PEN	Betula pendula	Heavy Standard: 5 brks: 3x: RB: Clear Stem 175-200cm	12-14cm	Counted				
1	PRU AVI	Prunus avium	Heavy Standard: 5 brks: 3x: RB: Clear Stem 175-200cm	350-425cm	Counted				
1	PRU PAD	Prunus padus	Heavy Standard: 5 brks: 3x: RB: Clear Stem 175-200cm	350-425cm	Counted				
1	SOR ROY	Sorbus aucuparia 'Cardinal Royal'	Selected Standard: 4 brks: 2x: RB: Clear Stem 175-200cm	350-550cm	Counted				
Total :7 -									
Shrubs	Number of Plants	Abbreviation	Species	Specification	Height	Pot Size	Density		
20	ERI PIN	Erica carnea 'Springwood Pink'	Bushy: C		3L	8mm	2.3m²		
14	EUO GOL	Eucornus fortunei 'Emerald n' Gold'	Bushy: 7 brks: C	20-25cm	3L	3mm	3.9m²		
9	HEB WIN	Hebe 'Mrs Winder'	Bushy: 5 brks: C	30-40cm	3L	3mm	2.1m²		
9	HEB GEM	Hebe 'White Gem'	Bushy: 5 brks: C	30-40cm	3L	3mm	2.1m²		
10	SAR DIG	Sarcococca hookeriana dysna	Bushy: 5 brks: C	20-30cm	3L	4mm	2.3m²		
12	VIB DAV	Viburnum daniellii	Bushy: 3 brks: C	20-30cm	3L	3mm	3.2m²		
Total :74 -									
Herbaceous	Number of Plants	Abbreviation	Species	Specification	Height	Pot Size	Density		
13	ALC MOL	Alchemilla mollis	Full Pot: C		3L	6mm	1.9m²		
Total :13 -									
Formal Hedgerow	Number	Abbreviation	Species	Specification	Height	Density	Length		
422	FAG SYL	Fagus sylvatica	2X Feathered: 2 brks: B	1.2-1.5 m	5m	82.8m			
Native Hedgerow Mix	Number	Abbreviation	Species	Specification	Height	Pot Size	Density	Percentage Contribution	Length
15	COR AVE	Corylus avellana	1+2: Transplant - seed raised: Branched: 3 brks: B	60-80cm	4Cv	20%	118.9m²		0.5m
16	CRA MON	Crataegus monogyna	1+1: Transplant - seed raised: B	60-80cm	0.3Cv Double Staggered at 0.3m offset	50%	2.6m		
12	ILE AQU	Ilex aquifolium	Bushy: 3 brks: C	40-60cm	3L	0.7Cv	10%	29.5m²	
8	PRU SPI	Prunus spinosa	1+1: Transplant - seed raised: Branched: 2 brks: B	60-80cm	0.3Cv Double Staggered at 0.3m offset	25%	1.3m		
2	ROS CAN	Rosa canina	1+1: Transplant - seed raised: Branched: 3 brks: B	60-80cm	0.3Cv Double Staggered at 0.3m offset	5%	0.3m		
Total :34 -									
Native Scrub Mix	Number	Abbreviation	Species	Specification	Height	Pot Size	Density	Percentage Contribution	Area
24	COR AVE	Corylus avellana	1+2: Transplant - seed raised: Branched: 3 brks: B	60-80cm	4Cv	20%	118.9m²		
16	CRA MON	Crataegus monogyna	1+1: Transplant - seed raised: B	60-80cm	0.3Cv Double Staggered at 0.3m offset	50%	2.6m		
12	ILE AQU	Ilex aquifolium	Bushy: 3 brks: C	40-60cm	3L	0.7Cv	10%	29.5m²	
8	PRU SPI	Prunus spinosa	1+1: Transplant - seed raised: Branched: 2 brks: B	60-80cm	0.3Cv Double Staggered at 0.3m offset	25%	1.3m		
2	ROS CAN	Rosa canina	1+1: Transplant - seed raised: Branched: 3 brks: B	60-80cm	0.3Cv Double Staggered at 0.3m offset	5%	0.3m		
123	SAM NIG	Sambucus nigra	1+1: Transplant - seed raised: Branched: 3 brks: B	60-80cm	0.7Cv	10%	29.5m²		
62	VIB OPU	Viburnum opulus	1+2: Transplant - seed raised: Branched: 3 brks: B	60-80cm	0.7Cv	5%	29.7m²		
Total :1233 -									
Understorey Native Scrub Mix	Number	Abbreviation	Species	Specification	Height	Pot Size	Density	Percentage Contribution	Area
15	COR AVE	Corylus avellana	1+2: Transplant - seed raised: Branched: 3 brks: B	60-80cm	4Cv	20%	118.9m²		
16	CRA MON	Crataegus monogyna	1+1: Transplant - seed raised: B	60-80cm	0.3Cv Double Staggered at 0.3m offset	50%	2.6m		
12	ILE AQU	Ilex aquifolium	Bushy: 3 brks: C	40-60cm	3L	0.7Cv	10%	29.5m²	
8	PRU SPI	Prunus spinosa	1+1: Transplant - seed raised: Branched: 2 brks: B	60-80cm	0.3Cv Double Staggered at 0.3m offset	25%	1.3m		
2	ROS CAN	Rosa canina	1+1: Transplant - seed raised: Branched: 3 brks: B	60-80cm	0.3Cv Double Staggered at 0.3m offset	5%	0.3m		
123	SAM NIG	Sambucus nigra	1+1: Transplant - seed raised: Branched: 3 brks: B	60-80cm	0.7Cv	10%	29.5m²		
62	VIB OPU	Viburnum opulus	1+2: Transplant - seed raised: Branched: 3 brks: B	60-80cm	0.7Cv	5%	29.7m²		
Total :77 -									

Turf Lindum L77 Festival (Area 288.7 m2)



1 no. Vivara Pro WoodStone Bat Box

- Specification**
- Height: 250mm
 - Width: 190mm
 - Depth: 165mm
 - Weight: 4.5kg
 - Material: WoodStone



5 no. Vivara Pro WoodStone Bat Box

- Specification**
- Height: 500mm
 - Width: 210mm
 - Depth: 150mm
 - Weight: 5.6kg
 - Material: WoodStone



5 no. Vivara Pro WoodStone House Sparrow Nest Box

- Double Chamber Specification**
- Depth: 16cm
 - Height: 29cm
 - Width: 21cm
 - Weight: 7.5kg
 - Material: WoodStone



1 no. Vivara Pro Seville 32mm WoodStone Nest Box

- Specification**
- Height: 31cm
 - Width: 20cm
 - Length: 20cm
 - Entrance hole diameter: 32mm
 - Weight: 6.9kg

LANDSCAPE AND MAINTENANCE SPECIFICATION

All operations to comply with appropriate British Standards unless otherwise stated on drawings or in the specification.

GENERAL TREATMENT OF PLANTING AREAS

Ensure that planting areas are protected from consolidation by heavy construction plant.

For work near a retained tree: Refer to BS 5837 'Trees in relation to design, demolition & construction - Recommendations - Section 9 (Appendix C).

Damage to Plants to be Retained: If a plant is to be retained is damaged, the plant is to be repaired or replaced by the contractor at their own expense. 'Damaged' means:

- The destruction of a plant the breaking of branches or roots
- The dewatering of trunks or limbs
- The contamination of root zone soil or plants from drift sprays, dust or contaminated storm water
- The damage by the placement of fill or building materials within the canopy perimeter or otherwise.

Subsoil: Before receiving topsoil, subsoil shall be loosened using appropriate equipment to a depth of 300mm. This shall be done when the subsoil is dry so as to encourage soil shattering. All stones and other objects larger than 50mm shall be removed from the prepared surface. The loosened subsoil shall be roughly levelled so that an even depth of topsoil can be achieved.

Topsoil (To Comply with British Standard 3882:2015 - Specification for Topsoil): Imported topsoil shall be Multipurpose Grade as described in BS 3882:2015 and suitable for sustaining plant life. Stockpiling of soil shall be avoided wherever possible to minimise loss of physical quality, diffusion of organic and biological material. Any stockpiling shall not exceed 1.5 metres high and shall be sited so as to avoid risk of muddy water run-off into a watercourse, not exceeding 1.5 metres high. The site of the stockpile will be prepared in advance by grading, removing rubbish and ensuring no fuel or chemicals were previously stored in area. Topsoil shall be lightly consolidated in layers not exceeding 150mm using track laying machinery. Soil shall not be handled in inappropriate conditions of weather and soil moisture i.e. During or shortly after heavy precipitation. When soil is in a waterlogged condition. When the ground is frozen or covered by snow. When there are pools of water on the grounds surface. Topsoil shall be laid to the following minimum depths:

- 100mm below new grass areas
- 300mm to near gardens
- 400mm beneath new shrub areas

Finished levels, after settlement, shall be as follows:

- 20mm above adjacent paving from new grassed areas and non-mulched shrub beds
- 75mm below adjacent paving and grass for mulched planting beds.
- 150mm below damp proof courses.

2) GROUND CONDITIONS

40 litres of compost to be incorporated into the top 200mm of each square metre of topsoil for all ornamental shrub beds.

3) PLANT AND PLANTING SPECIFICATION
All plant stock, plant handling and planting to be undertaken in accordance with the following British Standard Specifications and Code of Practice: BS 5454:2014 'Trees from nursery to independence in the landscape' BS 3938: Part 1 1992 'Nursery stock (Specification for trees and shrubs)' BS 3938: Part 4 1984 'Nursery stock (Specification for forest trees)' BS 3938: Part 5 1997 'Nursery stock (Specification for bulbs, corms and tubers)' BS 3938: Part 10 1990 'Nursery stock (Specification for ground cover plants)' BS 4242: 1989 'Recommendations for general landscaping operations.' BS 4043: 1989 'Recommendations for transplanting root-balled trees (withdrum)' The Code of Practice for Plant Handling 1985. (Horticultural Trades Association).

Plant Stock: Plant stock to be supplied in accordance with the size and description specified on the plant schedule and position indicated on the most current revision of the planting plan.
Plant stock shall be healthy, vigorous, free from pests and diseases and suitably hardened off for the proposed situation of planting and fitted at time in accordance with good nursery practice. Stock shall have a well-formed fibrous root system and be free from perennial weeds. The form of trees shall be in accordance with BS 3938: Part 1:1992, Section 7, 'Form of Trees'.

Plant Handling: All plant materials shall be lifted, banded, labelled, packaged, transported, temporarily stored and planted in accordance with the procedures and methods illustrated in the publication, 'Plant Handling' (Horticultural Trades Association) and relevant sections of BS 4043: 1989 'Transplanting Root-Balled Trees'.

Tree Planting: Trees to be pit planted following supplier recommendations. Minimum pit size: Selected standard tree 750 x 750 x 700. Heavy standard tree 1000 x 1000 x 1000mm. Pits to be prepared to base and sides of pit to be further scaffolded. Trees to be double staked using two stakes (70mm dia.), driven into ground 400mm below bottom of pit. Trees to be centrally located and stem placed in an upright position. Pit to be backfilled with 300-400mm (dependent on depth of pit due to size of tree) of a mix of subsoil with a 7/10 mix of sharp sand. Irrigation pipe to be put around bottom of rootball with 50mm of pipe sloping up to put the bark mulch level. Backfill remaining area of pit with 400mm of a 3:1 mix of an approved topsoil with compost. Backfill firmly to 50mm above previous ground level and creating a slightly domed shape with the highest point being at the centre of the tree to assist drainage and settlement. Tree pits in grass to contain a 600mm diameter circle of medium grade bark mulch to a settled depth of 75mm. Water each tree sufficiently in same day of planting, amount of water dependent on soil and soil conditions. All works shall be carried out to the minimum standard according to BS 3938: 1992 Part 1 'Nursery Stock' Specification for Trees and Shrubs. BS 4043: 1989 'Recommendations for transplanting root-balled trees'.

Staking: Double stake all trees with two stakes, a crossbar, a spacer and webbing. Stakes to be round timber with chamfered tops. Position stake close to tree on windward side and drive vertically at least 400mm into bottom of pit before planting. Backfilling: consolidate material around stake. Height of stakes: cut to approximately 600mm above ground level, taking care not to damage the bark. Ties: Webbing with a spacer. Tying: secure tree firmly to crossbar with spacer and webbing.

Mulch: All shrub beds shall be spread with a medium grade bark mulch to a settled depth of 75mm. Tree locations in grass should have a 600mm diameter circle of medium grade bark mulch to a settled depth of 75mm. Mulch to be free from fines, weeds, disease and contaminants.

Ornamental shrub planting: To be set out carefully and evenly over indicated areas. Remove plants from pots and plastic containers, plant and water in thoroughly. Shrubs shall be individually pit planted in prepared pits sized to accommodate full spread of roots. Plants shall be evenly spaced over the planting area. Backfill each plant with a 3:1 mix of an approved topsoil with compost. Middle centre area of plant beds to be 50mm above previous ground level creating a slightly domed shape to assist drainage and settlement. Planting beds to be covered with a medium grade bark mulch to a settled depth of 75mm. Firm backfill by treading, ensuring the ground is not overly compacted and that each plant is positioned upright.

Native scrub planting and understorey native scrub planting
Bare root stock shall be 1+1 each planted between November and March. Plants to be planted in groups of 5, 7 or 9 of the same species. Plants shall be evenly spaced over the planting area. Ensure plants are planted to the correct depth to correspond to the soil mark on main stems. Planting area to be covered with a medium grade bark mulch to a settled depth of 75mm. Undertake formative pruning if necessary. Each plant to be protected with a cane or timber stake and tied with cable tie or wire.

New formal hedges
Consistent in species, cultivar and clone to ensure a uniform hedge. To be planted in a previous prepared planting bed 1 metre wide. Plant stock to be planted in a single row 300mm (spacing 30 no. per linear metre). The outer line or centre line of plant stems must be at least 300mm away from the pavement edge or kerb. Trench backfilled with 300mm of a 3:1 mix of an approved topsoil with compost. Backfill firmly to 50mm above previous ground level and creating a slightly domed shape with the highest point being along the hedge line centre line of the trench to assist drainage and settlement. Planting beds to be covered with a medium grade bark mulch to a settled depth of 75mm. Ensure plants are planted to the correct depth to correspond to the soil mark on main stems.

New mixed native hedgerows - Double staggered
Bare root stock (container stock for Common Holly) shall be planted between November and March. Consistent in species, cultivar and clone to ensure a uniform hedge. Plants to be planted in groups of 3, 5 or 7 of the same species. To be planted in a previously prepared planting trench 300mm deep and up to 1metre wide. Backfill trench with 300mm of a 3:1 mix of an approved topsoil with compost. Backfill firmly to 50mm above previous ground level and creating a slightly domed shape with the highest point being at the centre line of the trench to assist drainage and settlement. Planting beds to be covered with a medium grade bark mulch to a settled depth of 75mm. Prune back to a height of 1 metre.

Mycorrhizae: For specimen trees as root ball stock, ornamental shrubs in containers, and holly in containers for native hedgerow mix - Apply Mycorrhiza Endo & Ecto Mycorrhizal Transplanter as per manufacturers specification before backfilling. Apply 1gm of Transplanter per litre of rootball. Either, dust the powder lightly over the root ball, mix Mycorrhiza Transplanter with water and drench the root ball, or place Mycorrhizal Transplanter in the bottom of the planting pit or mix with the backfill that will come into contact with the feeder roots.

For bare root whips for native hedgerow mix and native scrub mix planting - Apply Mycorrhiza Endo Ecto Mycorrhizal Whip Dip as per manufacturers specification. Apply as a root dip just before planting. 100g is sufficient to make Dip for 220 whips. Add 100 grammes of Whip Dip and 12 litres of water per hectare to 3.6 litres of water while stirring (the actual hydrolytic gel and water required will depend upon water hardness and plant root mass) Dip the bare roots of the whips into the paste just before planting (if dipped offsite, cover the roots in plastic during transport).

Products to be supplied by Green-teach or similar approved.

Turfed Areas in rear gardens and shared garden:
To be specified and laid in accordance with BS. 3938:1998 'Recommendations for turf for general purposes. Turf to be Lindum L77 Festival Landscape Turf (or similar approved). Hardwearing with a dense sward containing a mixture of 25% perennial ryegrass, 55% fescues and 20% smooth stalked meadow grass. This mix is easy to maintain and will recover well from general wear. Turf to be laid in suitable weather conditions on a prepared bed with no weeds and a suitable slow release fertiliser applied to bed prior to laying. Turf to be watered regularly until it is well established. Topsoil in rear gardens to be supplied as per ground preparation and soil specification to a depth of 300mm, after gentle compaction and to be left bare in rear gardens.

4) MAINTENANCE AND MANAGEMENT

Plant stock and soft landscaped areas shall be maintained for a period of five years via the developers' agent or appointed Management Company during which time the following operations shall be carried out:

Regular visits:

Monthly maintenance visits to include the following operations:

- Hand weed planting beds
- Remove litter
- Sweep mulch spillage
- Re-firming plant stock to ensure the new planting is all planting to upright positions.
- Adjust stakes and ties as necessary
- Prune plant stock as required to encourage good form
- Check all plant stock and report signs of pests, disease, death and damage

Mulch:

Top up mulch levels (using matching material) surrounding trees and within beds to 75mm at the end of the maintenance period.

Watering:

Plant stock to receive the following quantities of water:
Trees: Regularly water each tree per month dependant on size, soil conditions and weather conditions between April and September.
Shrubs and transplants: 5 litres/plant on three occasions throughout growing season.
Watering to be undertaken during the first 24 months as needed to maintain plant health.

Grass Maintenance:
Grass shall be cut throughout the growing season to maintain a sward of approximately 38mm. Shall be edged, watered as necessary and clippings removed.

Native Scrub Maintenance
Beating up: After year 2 any dead trees to be removed and replaced. An assessment to be undertaken at this time to ensure replacement species are ones which have proven so far successful in the rest of the planted area.
Thinning: After 10 years scrub to be thinned out by selective removal of 15-20% of establishing scrub. An assessment will be made to identify suitable trees for removal based on health form and success of adaptation to site conditions.
Coppicing: Hazel (Corylus Avellana) in scrub to be coppiced after 10 years and thereafter every 7 years on selective cycles.

New Tree/Shrub Planting:
Weed control by hand to ensure planting area is weed free. Check stakes and guards are in place and replace where necessary. Prune, thin and remove suckers, seedlings, dead, damaged, or diseased branches annually between October and January to avoid the bird nesting season. Replace dead / dying stock in winter.

Plant replacements:

All dead, dying and vandalised plant stock shall be replaced, at the end of each growing season during the maintenance period.

Fertilising:

Apply Pro Flora Tablets to all plants, as per manufacturers specification. Apply once during years 2 and 4 after planting.

Application rate as follows:

- Transplant - 30-120cm Tree Height - 2 per plant - 30g
 - Selected Standard - 300-360cm Tree Height - 7 per plant - 105g
 - Heavy Standard - 360-425cm Tree Height - 8 per plant - 120g
- Application rate for shrubs
- 10-20 height - 1 per plant - 15g
 - 20-40 height - 2 per plant - 30g
 - 40-60 height - 3 per plant - 45g
 - 60-80 height - 4 per plant - 60g
 - 80-100 height - 5 per plant - 75g
 - 100+ height - 5 per plant - 75g

Fertilising products to be supplied by Green-teach or similar approved.

DO NOT SCALE

ALL COORDINATES RELATED TO LOCAL GRID LOCATED TO OSN BY BEST FIT TO DATA EXTRACTED FROM OS DIGITAL DATA.

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Planting Plan Key:

Site Boundary

Existing trees to be retained and protected during the works.

Existing trees to be removed.

Proposed ornamental planting on 400