

# Assessment of Biodiversity

Version 2  
11.04.2024

Prepared for: Exemplar

Site: Barnsley

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## **1. Introduction**

- 1.1 Background to the Project
- 1.2 Site Location and Context
- 1.3 Purpose and scope of this Report

## **2. Survey method**

- 2.1 Vegetation and habitats
- 2.2 Limitations
- 2.3 Evaluation

## **3. Survey Results**

- 3.1 History of site
- 3..2 Site description and assessment of habitats

## **4. Evaluation and Assessment (including habitat creation methods)**

## **5. Conclusions**

## **6. References**

### **Appendix**

- Appendix 1 Extended phase one habitat plan
- Appendix 2 landscape plans
- Appendix 3 Habitat Condition Assessment and BNG Metric

## 1. Introduction

### 1.1 Background to the project

The client is proposing the re development of the Springfield Street site in Barnsley comprising of a new healthcare facility constructed on an existing hard standing site with some areas of scrub developing within the site.

### 1.2 Site location and context

The Preliminary Ecological Appraisal stated:

“The site is located within the Kingstone area of Barnsley in an urban environment and enclosed by existing residential land uses. The habitat on site comprises of scrub habitat growing within areas of hard standing”.

The total area of the site is approximately 0.25 hectare.

### 1.3 Report purpose and scope

1.3.1 This assessment was requested by the client for the purposes of supporting a planning application for the site’s development in line with The Environment Act 2021, including Part 6 of the Environment Act 2021 ‘nature and biodiversity’, which allows for biodiversity gain in the planning system. Schedule 14 of the Environment Act 2021 has been brought into force and there are current regulations legally mandating BNG. Some Local Planning Authorities have already adopted, in their local plans, a 10% biodiversity gain to be a condition of planning permission.

The British Standard BS 8683:20211 defines BNG as “a specific, quantifiable outcome from project activities that deliver demonstrable benefits for biodiversity compared to the baseline situation.”

The National Planning Policy Framework 2021 (NPPF) emphasises the importance of protecting and enhancing the natural environment. The NPPF approach to BNG is set out in Paragraph 179b, which is to “promote the conservation, restoration and enhancement of priority habitats, ecological

networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity”.

1.3.2 A Preliminary Ecological Appraisal confirmed habitats present. Therefore, the habitats present are confirmed and using the UK Habitats Classification System (UKHAB) it is possible that the appropriate habitat classification is used in the BNG Calculator.

1.3.3 The scope of the Assessment is therefore:

- Assessment of the habitats within the site in accordance with the UK Habitats Classification (UK Habitats Classification Working Group, 2018).
- Completion of Condition Assessments of each habitat in accordance with those presented in The Biodiversity Metric.
- An assessment of BNG using The Statutory Biodiversity Metric 4.0 Feb 24

## **2. Survey Methods**

### **2.1 Vegetation and Habitats**

2.1.1 An extended phase one habitat survey plan (in accordance with JNCC, 2010) is provided in appendix 2 which confirmed the habitats present. Appendix 3 is the habitat mapping based on is based on the UK Habitat Classification system (UK Habitats Classification Working Group, 2018) which details modified grassland, scattered trees and bramble scrub.

2.1.2 The UKHAB scheme has been designed to function at two scales: fine and large scaling. It has been considered for the purposes of this survey that the finer scale is appropriate for the classification of habitats using the measurement of 25m square.

2.1.3 Whilst on the site the habitat survey searched for all plants including those that are considered rare, uncommon or are statutorily protected such as those listed in schedule 9 of the *Wildlife and Countryside Act 1981* (as amended).

## 2.2 Limitations

2.2.1 The survey was conducted inside the optimal survey period for vascular plants as determined by JNCC, 2010 and broad species and habitats are identifiable.

## 2.3 Evaluation

2.3.1 Habitats have been assessed to determine whether they meet those described in the UK Biodiversity Action Plan – Priority Habitat descriptions which are used to form Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.

2.3.2 <https://www.daftlogic.com/projects-google-maps-area-calculator-tool.htm> has been used to measure habitat size and all habitats are calculated as areas.

2.3.3 The BNG Assessment tool “The Biodiversity Metric 4.0 – Natural England Feb 24) is used for the evaluation and condition assessment is made using the technical support provided by Natural England.

2.3.4 There are no high or very high value distinctiveness habitats and as such habitat connectivity is not calculated.

2.3.5 Other government advice on wildlife such as the National Planning Policy Framework (NPPF) or the Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2017, is referenced where applicable and any impacts on protected species are evaluated in accordance with current guidance.

## 3. Survey results

### 3.1 History of site

3.1.1 The recent history of the site can be examined using historic aerial imagery. From 2000 to 2019 the site has been car park (urban sealed surfacing) with subsequent scrub development in the , and little change has occurred since 2019.

3.1.2 An examination of <https://magic.defra.gov.uk/MagicMap.aspx> indicates no priority habitat present on site.

### 3.2. Site description and assessment of habitats

3.2.1 The site is best described as a neglected introduced shrub border to the periphery of an urban sealed surfacing site.

3.2.2 A condition assessment for the scrub is provided below and in appendix 5. The condition habitat assessment scored a poor condition.

Condition Assessment Criteria	Criterion passed (Yes or No)	Notes (such as justification)
A The parcel represents a good example of its habitat type - the appearance and composition of the vegetation closely matches its UKHab description, with vascular and non-vascular characteristic indicator species consistently present. <sup>1</sup> <b>Note - this criterion is essential for achieving Good condition.</b>	No	The vegetation does not closely match the UKHab description
B There are at least two dwarf shrub species Frequent <sup>2</sup> , and cover of dwarf shrubs is between 25-75% for lowland heathland, 50-75% for upland dry heath, or >20% for upland wet heath. <b>Note - this criterion is essential for achieving Good condition.</b>	No	
C All heather <i>Calluna vulgaris</i> age-classes (pioneer, degenerate and mature) present with at least 10% pioneer heather in the lowlands or at least 10% degenerate or mature in the uplands. <b>Note - this criterion is essential for achieving Good condition.</b>	No	No Heather present
D Unshaded bare ground is between 1-10%. <b>Note - this criterion is essential for achieving Good condition.</b>	Yes	
E There is an absence of invasive non-native plant species listed on Schedule 9 of WCA <sup>3</sup> and shallon <i>Gaultheria shallon</i> <sup>4</sup> . <b>Note - this criterion is essential for achieving Good condition.</b>	Yes	
F No signs of disturbance of sensitive areas <sup>5</sup> , including managed burns.	Yes	
G No more than 33% of heather shoots have been recently grazed, or flowering heather plants are at least Frequent <sup>2</sup> in autumn.	No	No Heather present
H The canopy cover of scattered trees and or scrub (not including gorse <i>Ulex</i> spp.) is: -less than 20% for upland heaths; -less than 15% for lowland dry heaths; and -less than 10% for lowland wet heaths.	No	
I Total gorse cover is less than 50%, with common gorse <i>Ulex europaeus</i> less than 25%.	Yes	
J The cover of bracken <i>Pteridium aquilinum</i> is less than 5% <sup>6</sup> .	Yes	
K No signs of any damaging activities <sup>7</sup> or contamination to the habitat such as: artificial drains, peat extraction, silt, leachate or eutrophication.	No	
<b>Essential criteria for achieving Good condition achieved (Yes or No)</b>	No	
<b>Number of criteria passed</b>	5	

3.2.4 Summary of area based habitat. The total area of the site is approximately 0.25 hectare.

Habitat ref	UK Habitat Classification Type	Condition Assessment Result	Ha
<b>Habitat 1</b>	Scrub (heathland)	Poor	0.06
<b>Habitat 2</b>	U1C Artificial unsealed surface	N/A	0.19

## 4. Evaluation and Assessment

### 4.1 Proposed habitat creation and enhancement

The site shall be developed as proposed in appendix 3 which shall consist of new building, access, car parking, neutral grassland, native tree planting and introduced shrub. A summary of the habitats created by the proposal is provided below. Total coverage is 0.25 hectare.

REF	LSCP DESCRIPTION	BNG DESCRIPTION	HECTARE / NO.
1	TREES	GARDEN ENVIRONMENT	6 4
2		MULTI STEM SHRUBS	13
3	WILDFLOWER	NEUTRAL GRASSLAND	0.0077
4	AMENITY GRASSLANDS	MODIFIED GRASSLAND	0.0112
5	SHRUB BEDS	URBAN INTRODUCED SHRUBS	0.0117 126LM
6	NATIVE HEDGEROWS	NATIVE HEDGEROWS	
7	BUILDING FOOTPRINT / HIGHWAYS / PATHS /	URBAN SEALED SURFACES	0.21935
		TOTAL HA:	0.2500

## Urban trees

23 small urban trees are proposed totalling 0.0936Ha.

Tree size	Number of trees and area (ha) for each condition state					
	Poor	Area	Moderate	Area	Good	Area
Small		0.0000	23	0.0936		0.0000
Medium		0.0000		0.0000		0.0000
Large		0.0000		0.0000		0.0000
Very large		0.0000		0.0000		0.0000
<b>Total</b>	<b>0</b>	<b>0.0000</b>	<b>23</b>	<b>0.0936</b>	<b>0</b>	<b>0.0000</b>

## 4.2 Habitat creation methods – Neutral grassland

Other neutral grassland contains perennial ryegrass *Lolium perenne* cover at less than 30% with 9-15 species per meter square present. Grassland will be created throughout the site in 'good' condition to an area of 0.98ha.

Recommended Seed Mixes:

- Emorsgate Seeds EM3 Special General Purpose Meadow Mixture.
- Emorsgate Seeds EH1F Wildflowers for Hedgerows – for shaded areas.
- Emorsgate Seeds EM8F Meadow Mixture for Wetlands– for wetter areas.

Considerations:

- If soil is being imported into the site, then nutrient poor soil should be used to create wildflower areas in order to support the establishment of the meadow.
- Don't add fertiliser as this will increase fertility of the soil and negatively impact the wildflower meadow.
- Reducing soil fertility: Due to the baseline conditions of the site intensive nutrient stripping techniques are not considered necessary and therefore nutrients should be removed from the grassland through silage cuts

## Creation Methodology:

- Create a fine tilth for a seedbed by digging or rotovating the soil then firming and raking.
- Sow seed mixture evenly by hand at 5g per square meter during, late summer/early autumn.

## Additional Methodology:

- Designate some areas of grassland for creation of a calcareous species sward with thin poor soils and good drainage. These areas should be managed in line with 'other neutral grassland' once established.
- Remove topsoil and spread limestone chippings.
- Translocation of soils from habitats within the site to be removed by development should be carried out by an experienced contractor alongside Suitably Qualified Ecologist (SQE) who can identify appropriate soils.

## Habitat creation methods – Urban trees

Recommended Species: At least 70% of trees should be native species found in the local area, taking into account the requirement to plant trees that will be appropriate for anticipated changes in climate. Species within allotment should include fruit-bearing species associated with a traditional orchard.

## Considerations:

- Trees will adapt to natural conditions. Additional watering will only be required during a particularly long dry spell or if trees are planted out with of the tree planting season (October to March inclusive).
- Up to 30% of street trees will not establish and therefore supplementary planting over the following three years will be required to achieve prescribed numbers over the longer term.

## Creation Methodology:

- Advanced nursery stock trees or larger will be planted within optimal tree planting season (October to March inclusive).
- Suitable wooden stakes will be used to support the trees.
- Weeds will be controlled around the base of the trees by applying organic mulch (10cm depth in a 50cm buffer around trees), this will also assist with water retention. This will be applied in early summer until trees are successfully established (minimum 3 years).

### **4.3 Management and monitoring**

The following section details management and monitoring methodologies for the habitats proposed to be created and retained on site

It is the responsibility of Exemplar to implement habitat creation, management and monitoring of the site for a 30 year period as per best practice guidelines or their accredited agents.

The site should be subject to a UKHAB classification survey alongside a condition assessment of the created and enhanced habitats. This survey should be carried out by a suitably qualified ecologist, starting 1 year after the project is completed, with follow up visits within year 2, 5, 10, 20, until the final visit on year 30. A report provided by an independent assessor shall be submitted to the LPA, when habitats as listed in the Biodiversity Metric are judged to have reached target condition.

A review of management of all habitats should be undertaken at years 10 and 20 with the management programme will be updated/adjusted accordingly.

#### **General Management**

The following management practices are recommended throughout the site in order to protect created habitats from harmful management practices.

- Weed control will be undertaken using non-chemical interventions wherever possible including mulching and hand pulling. Where deemed necessary, the spot application of eco-friendly herbicides may be used, avoiding areas containing waterbodies such as ponds and rivers.

- The application of fertilisers will be avoided as excessive nutrient loading will negatively alter the species composition of the habitats.
- Care should always be taken when maintaining habitats to avoid damage or disturbance to protected species such as breeding birds and water vole.
- Any arisings and/or cuttings created by maintenance will need to be removed and disposed of off-site or in a suitable location such as a designated compost heap or alternatively composted within the allotments on site.
- During site clearance and management, wood (including dead wood) should be used to create refugia in a suitable location (within native scrub, woodland, or pond edges) wherever possible.
- All areas are to be monitored for controlled and/or invasive species and appropriate action taken to remove if found.
- All areas to be monitored for fly-tipping, rubbish and litter annually (both construction and post-construction phases) with appropriate action taken to remove if found.

## **Neutral Grassland**

The created and retained other neutral grassland areas within the site will require regular monitoring and annual maintenance to achieve 'good' condition, allowing the more desirable species to flourish and to reduce the presence of unwanted species that will attempt to colonise the area. The following sets out the UKHAB criteria as to what is considered to be a good condition other neutral grassland.

Aim:

- The appearance and composition of the vegetation closely matches characteristics of UKHAB type definition. Indicator species are easily and clearly visible throughout the sward.
- Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds, and small mammals to live and breed.

- Cover of bare ground between 1% and 5% of total habitat area to provide an important resource to insects.
- There is greater than 9 species per meter squared.

#### Management:

- For the first year of growth, cut to 5cm in May, then cut every 2 months or when sward reaches approximately 15cm. Stop cutting by August to allow wildflowers to seed. Final cut to 5cm will be in October.
- From the second year onwards, cut to 5cm in March or April, then make a second cut to 5cm in October.
- From the second year onwards, designate some areas to receive a cut to 5cm during August in order to produce a more varied habitat that will encourage different species of wildflower.
- Remove all arisings from the area, dispose of in designated areas such as a compost heap.
- Remove encroaching scrub and bracken manually using hand tools.
- Annually create areas of bare ground or 'scrapes' covering 1% to 5% of total habitat area by manually scraping away vegetation with hand tools. These scrapes should be located in sunny areas such as south facing embankments, if possible.

#### Monitoring:

- Habitat will be monitored for controlled and/or invasive species annually and appropriate action taken to remove if found.
- Monitor for damage, cover of bracken and scrub.
- Monitor bare ground cover.
- Check sward height throughout the first year and cut when it reaches 15cm.

### **Modified grassland**

Modified grassland amenity areas will be created throughout the site which will require annual management to achieve 'good' condition. The following sets out the UKHAB criteria as to what is considered to be a good condition modified grassland.

#### Aim:

- There must be between 6-8 species per meter square.
- Scrub accounts for less than 20% of habitat area.
- Physical damage (such as excessive poaching, damage from machinery use or storage) is evident in less than 5% of total grassland area.
- Cover of bare ground is between 1 and 10%.
- Cover of bracken is less than 20%.
- There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981).

#### Management:

- Manage turf using supplier's instructions for first year of growth.
- Regularly cut grassland to required length for its amenity usage.
- Remove encroaching scrub and bracken manually using hand tools.
- Annually create areas of bare ground or 'scrapes' covering 1% to 5% of total habitat area by manually scraping away vegetation with hand tools. These scrapes should be located in sunny areas such as south facing embankments if possible.

#### Monitoring:

- Habitat will be monitored for controlled and/or invasive species annually and appropriate action taken to remove if found.
- Monitor for damage, cover of bracken and scrub.
- Monitor bare ground cover.


## 5. Conclusions

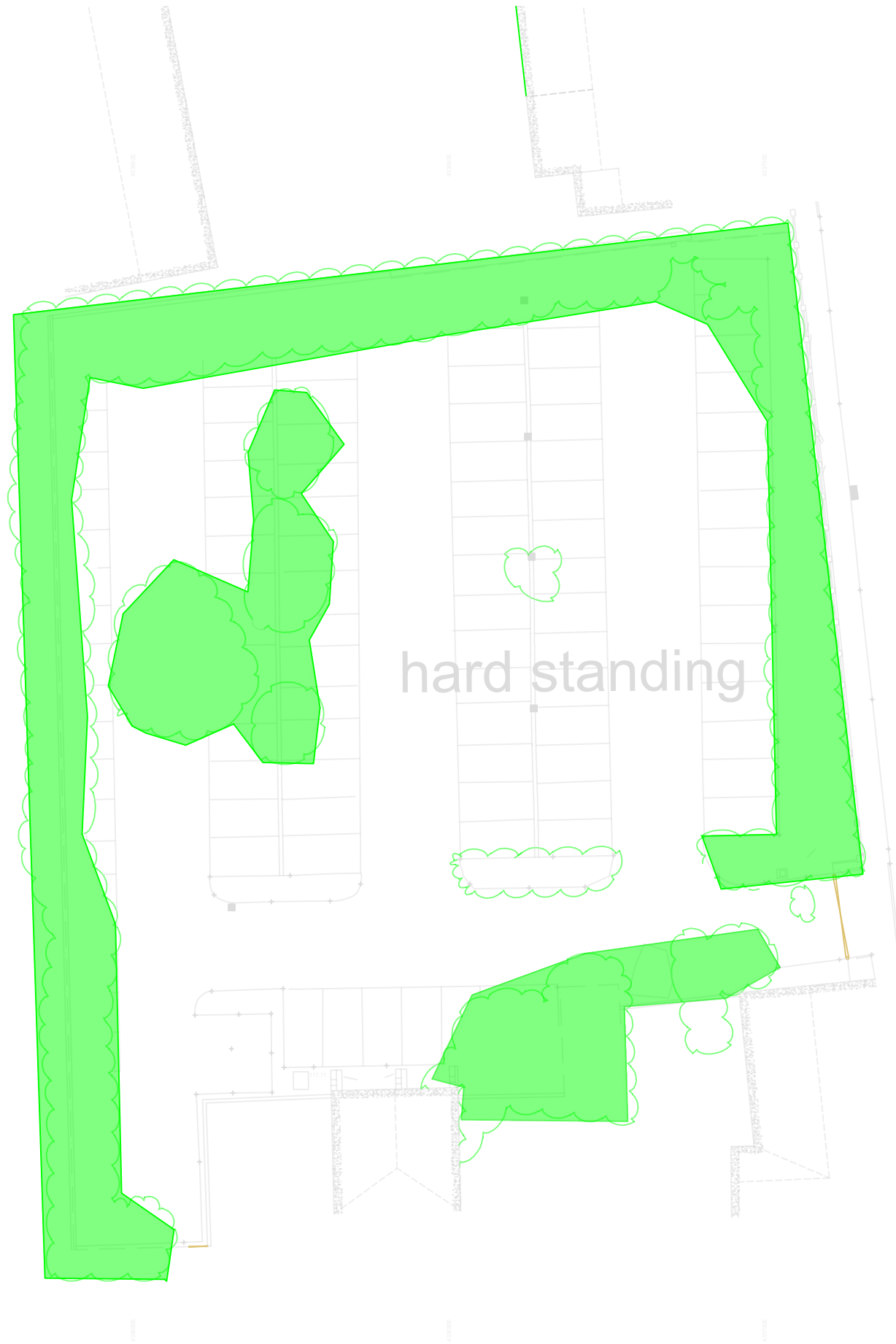
5.1 In accordance with the habitats present within the site and the proposals for the site's redevelopment the BNG Assessment predicts a change of +66.31% and in 0.16 habitat units. It is not possible to replace the medium distinctiveness habitat (scrub) on the site and therefore the trading rules can't be satisfied in relation to scrub habitat.

On-site baseline	<i>Habitat units</i>	0.24
	<i>Hedgerow units</i>	0.00
	<i>Watercourse units</i>	0.00
On-site post-intervention <small>(Including habitat retention, creation &amp; enhancement)</small>	<i>Habitat units</i>	0.40
	<i>Hedgerow units</i>	0.42
	<i>Watercourse units</i>	0.00
On-site net change <small>(units &amp; percentage)</small>	<i>Habitat units</i>	0.16
	<i>Hedgerow units</i>	0.42
	<i>Watercourse units</i>	0.00
Off-site baseline	<i>Habitat units</i>	0.00
	<i>Hedgerow units</i>	0.00
	<i>Watercourse units</i>	0.00
Off-site post-intervention <small>(Including habitat retention, creation &amp; enhancement)</small>	<i>Habitat units</i>	0.00
	<i>Hedgerow units</i>	0.00
	<i>Watercourse units</i>	0.00
Off-site net change <small>(units &amp; percentage)</small>	<i>Habitat units</i>	0.00
	<i>Hedgerow units</i>	0.00
	<i>Watercourse units</i>	0.00
Combined net unit change <small>(Including all on-site &amp; off-site habitat retention, creation &amp; enhancement)</small>	<i>Habitat units</i>	0.16
	<i>Hedgerow units</i>	0.42
	<i>Watercourse units</i>	0.00
Spatial risk multiplier (SRM) deductions	<i>Habitat units</i>	0.00
	<i>Hedgerow units</i>	0.00
	<i>Watercourse units</i>	0.00
<b>FINAL RESULTS</b>		
Total net unit change <small>(Including all on-site &amp; off-site habitat retention, creation &amp; enhancement)</small>	<i>Habitat units</i>	0.16
	<i>Hedgerow units</i>	0.42
	<i>Watercourse units</i>	0.00
Total net % change <small>(Including all on-site &amp; off-site habitat retention, creation &amp; enhancement)</small>	<i>Habitat units</i>	66.31%
	<i>Hedgerow units</i>	N/A
	<i>Watercourse units</i>	0.00%

# PHASE ONE HABITAT MAP

## KEY

 A.2. Scrub



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Client:  
**Exemplar Healthcare**

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Project:  
**Barnsley**

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Detail:  
**Phase One Habitat Map**

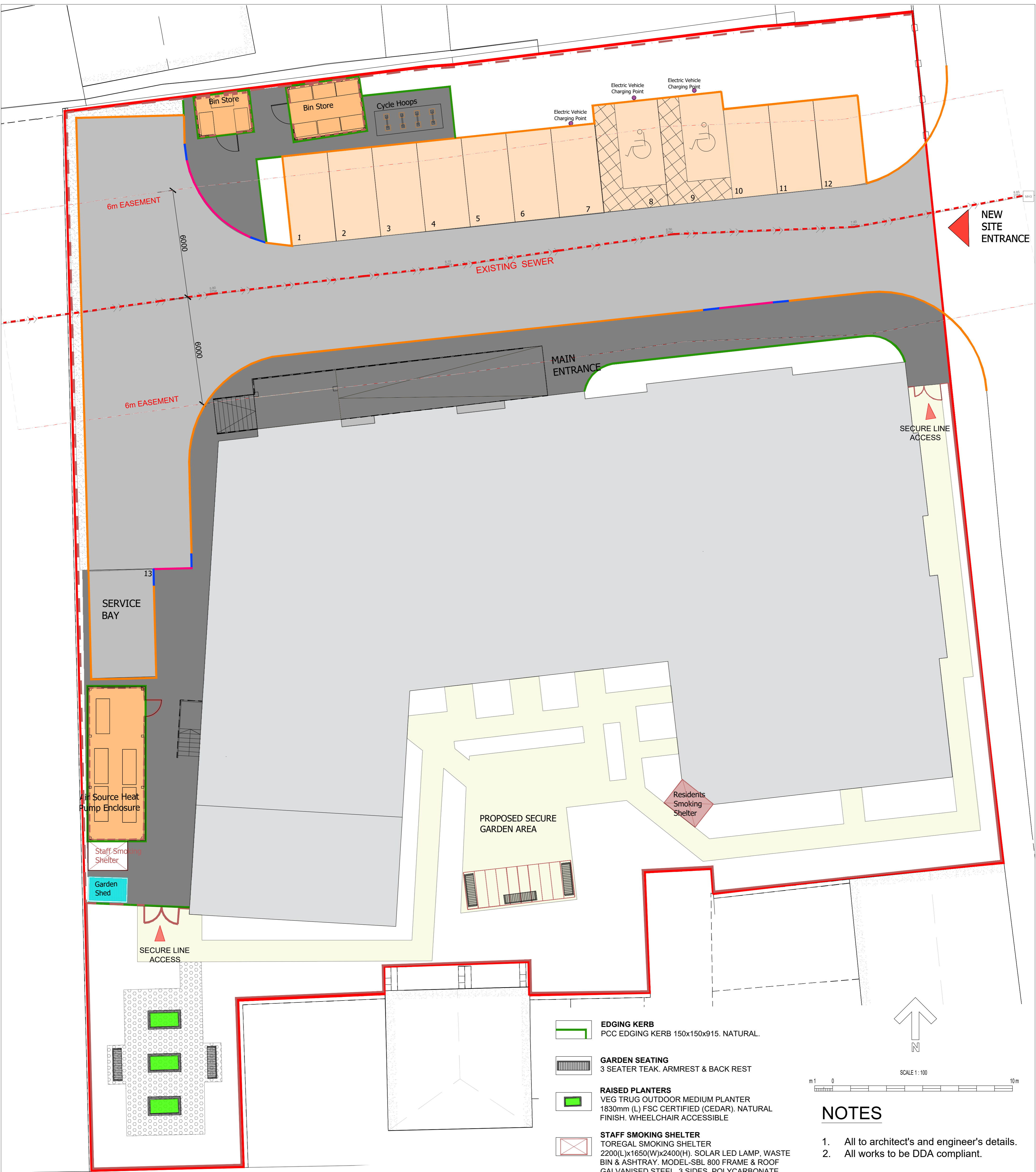
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Drawn By:	Date:	Scale:
SB	22.03.2023	NTS

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Drg No:	Revision:
TR-01	V1

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**NEW SITE ENTRANCE**

**MAIN ENTRANCE**

**EXISTING SEWER**

**6m EASEMENT**

**6m EASEMENT**

**SECURE LINE ACCESS**

**SERVICE BAY**

**Air Source Heat Pump Enclosure**

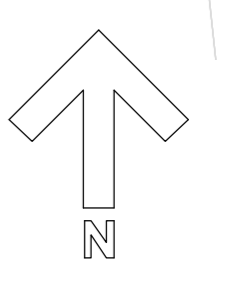
**Staff Smoking Shelter**

**Garden Shed**

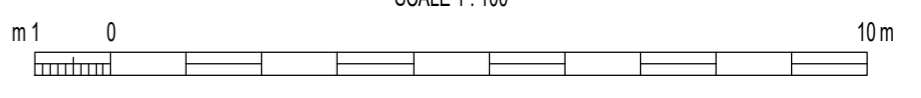
**SECURE LINE ACCESS**

**PROPOSED SECURE GARDEN AREA**

**Residents Smoking Shelter**



SCALE 1:100



**NOTES**

1. All to architect's and engineer's details.
2. All works to be DDA compliant.

**KEY**

- BOUNDARY MARKER**
- SECURE PERIMETER FENCE**  
2.1m HIGH CLOSE BOARDED TIMBER FENCE. BOARDING TO FACE INWARDS INTO SECURE AREA. DOUBLE SIDED WHERE FACING PUBLIC SPACE
- BOUNDARY FENCE**  
1.8m HIGH CLOSE BOARDED TIMBER FENCE. BOARDING TO FACE INWARDS. DOUBLE SIDED WHERE FACING PUBLIC SPACE
- TIMBER FENCE**  
1.8m HIGH CLOSE BOARDED TIMBER FENCE.
- CONTROLLED ACCESS POINT**  
CONTROLLED ACCESS POINT
- ESTATE ROAD/PARKING**  
BLACK MACADAM TO ENGINEER'S DETAILS
- FOOTPATHS/ACCESS**  
BLACK MACADAM TO ENGINEER'S DETAILS

- INTERNAL PATHS AND PATIOS**  
TOBERMORE MAYFAIR SILVER PAVIORS 400x400x40mm
- STEPS**  
TOBERMORE MAYFAIR STEP FLAG WITH CONTRASTING NOSING. SILVER 600x400x50mm. MAYFAIR SILVER RISER TO ENGINEER'S DETAIL
- RAMP & ENTRANCE**  
TOBERMORE MAYFAIR SILVER PAVIOR 600x400x50mm
- KITCHEN GARDEN**  
TOBERMORE MANHATTEN PAVO MIX, MANHATTEN SILVER. MANHATTEN MID GREY & MANHATTEN SILVER TO SUPPLIERS MIX RATIOS. PAVIORS 600x150x80mm. GRAPHITE BAND TO PERIMETER
- SERVICE ENCLOSURES**  
BRUSHED CONCRETE WITH PCC EDGINGS
- STANDARD KERB**  
PCC KERB 125x255x195. NATURAL
- STANDARD TRANSITION KERB**  
PCC TRANSITION KERB 125-255x150x915. NATURAL.
- STANDARD DROPPED KERB**  
PCC CENTRE DROPPED KERB 125x150x915. NATURAL.

**EDGING KERB**  
PCC EDGING KERB 150x150x915. NATURAL.

**GARDEN SEATING**  
3 SEATER TEAK. ARMREST & BACK REST

**RAISED PLANTERS**  
VEG TRUG OUTDOOR MEDIUM PLANTER 1830mm (L) FSC CERTIFIED (CEDAR). NATURAL FINISH. WHEELCHAIR ACCESSIBLE

**STAFF SMOKING SHELTER**  
TOREGAL SMOKING SHELTER 2200(L)x1650(W)x2400(H). SOLAR LED LAMP. WASTE BIN & ASHTRAY. MODEL-SBL 800 FRAME & ROOF GALVANISED STEEL. 3 SIDES. POLYCARBONATE

**RESIDENTS SMOKING SHELTER**  
TOREGAL SMOKING SHELTER 2200(L)x1650(W)x2400(H). SOLAR LED LAMP. EMERGENCY CALL, WASTE BIN & FIXED ASHTRAY. E-CIG CHARGER. MODEL-SBL 800 FRAME & ROOF GALVANISED STEEL. 3 SIDES. POLYCARBONATE

**GARDEN SHED**  
DANCOVER LEAN TO SHED-ARROW 2.03(L)x1.24(W)x2.08(H)M. ANTHRACITE GALVANISED STEEL. GROUND FIXED

**PERGOLA**  
JACKSONS FENCING 2.1m PERGOLA. 2 No. UNITS. 2.1x1.83m EACH. 25 YR GUARANTEED JACKURED SOFTWOOD. PLANED FINISH. GROUND FIXED INTO GALVANISED SHOES

**HANDRAILS**  
STANDARD PEDESTRIAN GUARD RAIL 1100mm HIGH.FRAME 50x30x25mm RHS WITH VISIBLTY GAP. 12mmØ SOLID INFILL BARS MAX 100mm GAP. POWDER COATED BLACK, RAKED TO SUIT STEPS

**GRAVEL INFILL**  
GREY PEA SHINGLE

**AIR SOURCE HEAT PUMP ENCLOSURE**  
ENCLOSURE - 1.8m HIGH VERTICAL HIT & MISS FENCE WITH GATE TO MATCH.

r4] Updated to PERSE-WBA-SI-ZZ-DR-A-PL_600-WIP	14/02/2024	AP
r3] Updated to PERSE-WBA-SI-ZZ-DR-A-90_003-P1	20/07/2023	AP
r2] Updated to PERSE-WBA-SI-ZZ-DR-A-90_003	12/07/2023	AP
r1] Issued for comment	19/05/2023	AP

NOTE:  
1. Do not scale from this drawing.  
2. All setting out, levels and dimensions to be agreed on site.  
3. The dimensions of all materials must be checked on site before being laid out.

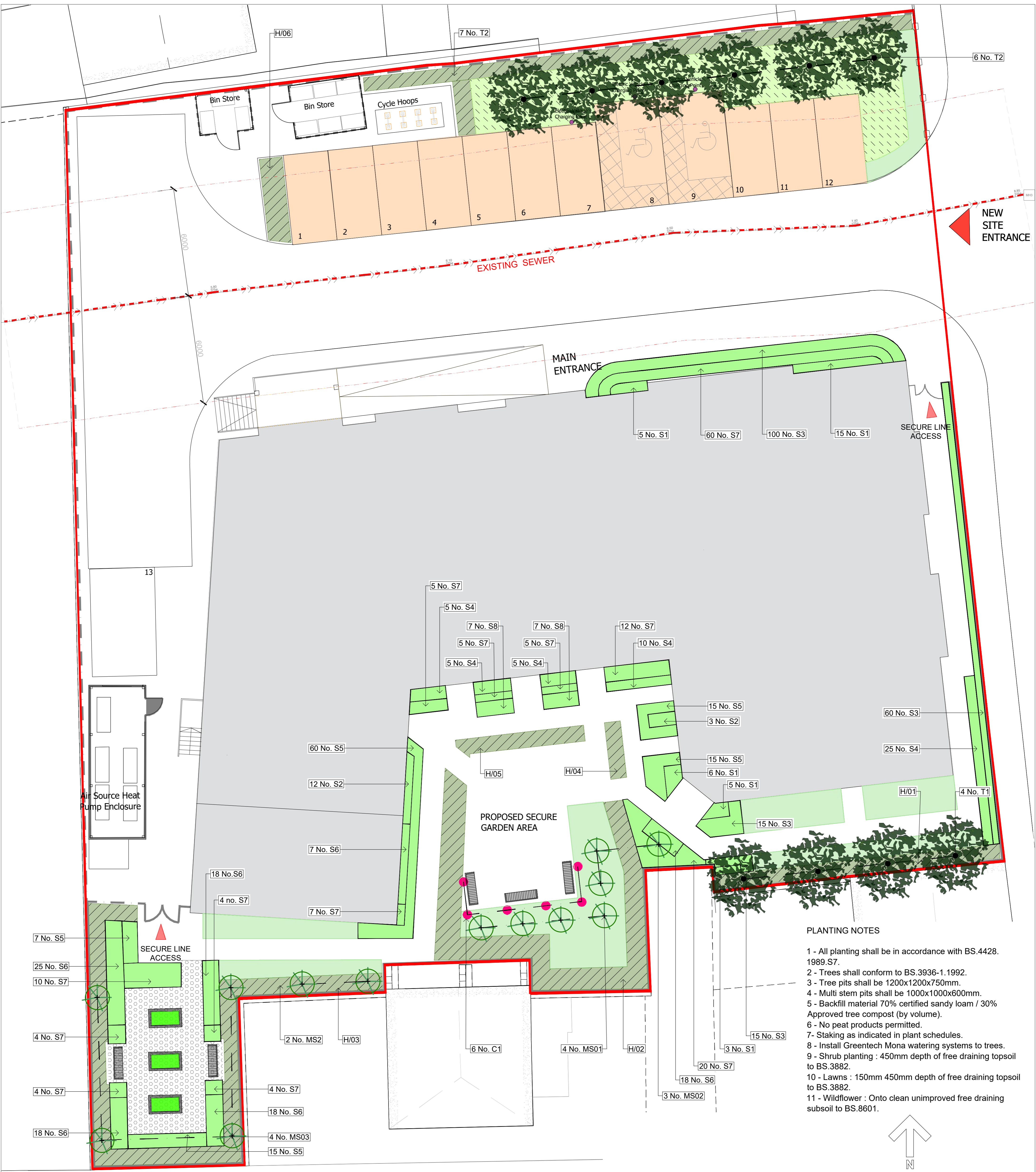
Project: **Perserverance Street Barnsley**

Title: **Hardworks and Boundary Treatments**

**AMENITYTREE**  
ENVIRONMENTAL PLANNING CONSULTANTS  
Willow Cottage, School Lane, Burdwarley, CH3 9NX. 01829 770 075

Status: **Comment**

First Issued: **MAY 2023** Drawn: **AP**  
Scale: **1:100** Size: **A1**  
Drawing No.: **AT.23.1253.100.r4**



- PLANTING NOTES**
- 1 - All planting shall be in accordance with BS.4428. 1989.S7.
  - 2 - Trees shall conform to BS.3936-1.1992.
  - 3 - Tree pits shall be 1200x1200x750mm.
  - 4 - Multi stem pits shall be 1000x1000x600mm.
  - 5 - Backfill material 70% certified sandy loam / 30% Approved tree compost (by volume).
  - 6 - No peat products permitted.
  - 7 - Staking as indicated in plant schedules.
  - 8 - Install Greentech Mona watering systems to trees.
  - 9 - Shrub planting : 450mm depth of free draining topsoil to BS.3882.
  - 10 - Lawns : 150mm 450mm depth of free draining topsoil to BS.3882.
  - 11 - Wildflower : Onto clean unimproved free draining subsoil to BS.8601.

**PLANT SCHEDULE p4**

REF.	TREE PLANTING	NO.	GIRTH cm	%	HEIGHT cm	TYPE	DENSITY per m <sup>2</sup>	NOTES
<b>1.0 TREE PLANTING</b>								
T1	Prunus amaranogawa	4	14-16	NA	325-375	RB	NA	Underground geyed / GreenMax - AirMax & AquaMax Systems to be installed as specified
T2	Pinus chalcidica	6	18-20	NA	325-375	RB	NA	Underground geyed / GreenMax - AirMax & AquaMax Systems to be installed as specified
<b>2.0 MULTI STEM SHRUB</b>								
MS01	Acer palmatum Blood good	4	NA	NA	15-175	RB	NA	Underground geyed / GreenMax - AirMax & AquaMax Systems to be installed as specified
MS02	Betula utilis Doornbos	5	NA	NA	15-175	RB	NA	Underground geyed / GreenMax - AirMax & AquaMax Systems to be installed as specified
MS03	Prunus serotina tibetica	4	NA	NA	15-175	RB	NA	Underground geyed / GreenMax - AirMax & AquaMax Systems to be installed as specified
<b>2.0 SHRUBS / ORNAMENTAL GRASS / GROUND COVER PLANTS</b>								
S1	Cornus alba Autumn Fire	34	NA	NA	45-60	3L	3	
S2	Ceanothus coccineus	15	NA	NA	45-60	3L	3	
S3	Eunymphaea tortuosa Silver Queen	150	NA	NA	25-30	3L	5	
S4	Hebe Red Edge	48	NA	NA	25-30	3L	5	
S5	Lavandula intermedia Phenomenal	112	NA	NA	25-30	3L	5	
S6	Plachytanthesis tenuifolia	99	NA	NA	15-20	3L	7	
S7	Stipa tenuissima	141	NA	NA	45-60	3L	3	
S8	Verbena rigida Santos	15	NA	NA	25-30	3L	5	
<b>3.0 HEDGES</b>								
H Hedge Plants								
	Alexis graminosa	>	NA	5	100	BR	NA	100cm biodegradable grow tube / stake
	Acer campestre	>	NA	20	100	BR	NA	100cm biodegradable grow tube / stake
	Betula pubescens	>	NA	20	100	BR	NA	100cm biodegradable grow tube / stake
	Caprinus betulus	>	NA	30	100	BR	NA	100cm biodegradable grow tube / stake
	Corylus avellana	>	NA	20	100	BR	NA	100cm biodegradable grow tube / stake
	Ilex aquifolium	>	NA	5	75	2L	NA	50cm biodegradable grow tube / stake
All hedges planted in a double staggered row at 45cm cts.								
<b>4.0 WILDFLOWER</b>								
4.1	EMORGATE EM4 Wildflower Mix, for Clayey Soils @ 4gms / m <sup>2</sup> .							
<b>5.0 AMENITY LAWN</b>								
5.1	Rowlawn Medalion Turf, or similar approved.							
<b>6.0 CLIMBERS</b>								
C1	Ceanothus coccineus	6						

**KEY**

- TREES - 18-20cm GIRTH
- MULTI STEM SHRUBS - 175-200cm GIRTH
- HEDGE
- SHRUB/ORNAMENTAL GRASSES
- AMENITY LAWNS
- WILDFLOWER
- HERBS: BASIL, CHIVES, LEMON BALM, SAGE, CORIANDER, GARLIC (3 No. 2L PLANTS.) ONLY 2 PLANTERS TO BE PLANTED; THE OTHER IS FOR RESIDENTS.

**NOTES**

1. All to architect's and engineer's details.
2. All works to be DDA compliant.

**SCALE 1:100**

**PROJECT:** Persverance Street Barnsley

**TITLE:** Softworks - Planting Plan

**AMENITYTREE**  
ENVIRONMENTAL PLANNING CONSULTANTS

Willow Cottage, School Lane, Burdwarley, CH3 9NX. 01829 770 075

**Status:** Comment

First Issued: MAY 2023 Drawn: AP  
Scale: 1:100 Size: A1  
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**REVISIONS:**

r4	Updated to PERSE-WBA-SI-ZZ-DR-A-PL_600-WIP	14/02/2024	AP
r3	Updated to PERSE-WBA-SI-ZZ-DR-A-90_003-P1	20/07/2023	AP
r2	Updated to PERSE-WBA-SI-ZZ-DR-A-90_003	12/07/2023	AP
r1	Issued for comment	19/05/2023	AP