JAMES BLAKE ASSOCIATES

Biodiversity Enhancement Strategy

for

Land at Worthing Road, Southwater, West Sussex

on behalf of

Churchill Retirement Living (South East Region)

May 2024

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Revision	Purpose	Originated	Checked	Authorised	Date
		SW	NP	JBA	May 2024
Job Number: 21/420		JAMES BLAKE ASSOCIATES **Title:** Biodiversity Enhancement Strategy for Land at Worthing Road, Southwater, West Sussex			

Disclaimer

James Blake Associates Ltd have made every effort to meet the client's brief. However, no survey ensures complete and absolute assessment of the changeable natural environment. The findings in this report were based on evidence from thorough survey: It is important to remember that evidence can be limited, hard to detect or concealed by site use and disturbance. When it is stated that no evidence was found or was evident at that point in time, it does not mean that species are not present or could not be present at a later date: The survey was required because habitats are suitable for a given protected species, and such species could colonise areas following completion of the survey.

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Non-technical Summary

Site:	Land at Worthing Road, Southwater, West Sussex
Ordnance Survey National Grid Reference:	TQ 1569 2708
Report Commissioned by:	Churchill Retirement Living (South East Region)
Date of report:	May 2024

Considerations	Description	Potential impacts
Production of an ecological enhancement strategy	Enhancement measures include proposed tree and hedgerow planting, grassland and shrub planting, and provision of bat and bird boxes.	Improvement of conditions on site for bats, birds, great crested newts, small mammals and invertebrates.
Discharge of conditions relating to ecology	This report should enable the discharge of Condition 6	N/A

1. INTRODUCTION

Background

1.1 James Blake Associates Ltd. (JBA) was commissioned by Churchill Retirement Living (South East Region)to provide an ecological enhancement strategy for the proposed development site at land at Worthing Road, Southwater, West Sussex (Ordnance Survey National Grid Reference: TQ 1569 2708, taken from the centre of the site).

1.2 This letter report addresses Condition 6 of DC/22/0096 (Horsham District Council). The condition is as follows:

Pre-Commencement Slab Level Condition: No development above ground floor slab level of any part of the development hereby permitted shall take place until a Biodiversity Enhancement Layout, providing the finalised details and locations of the enhancement measures contained within the Bat Survey Note (Tyler Grange, January 2023) and the Preliminary Ecological Appraisal and Ecological Impact Assessment ((Tyler Grange, January 2022) shall be submitted to and approved in writing by the local planning authority.

The enhancement measures shall be implemented in accordance with the approved details prior to occupation and all features shall be retained in that manner thereafter.

Reason: To conserve and enhance protected and Priority species and allow the LPA to discharge its duties under the Conservation of Habitats and Species Regulations 2017 (as amended), the Wildlife & Countryside Act 1981 as amended and s40 of the NERC Act 2006 (Priority habitats & species) and Policy 31 of the Horsham Development Framework.

1.3 The site has planning permission (planning application ref: DC/22/0096) for the '*demolition of existing buildings and erection of 36 Retirement Living Apartments and 6 Retirement Cottages, including a Lodge Manager's office, communal facilities, a guest suite, parking and landscaping'*.

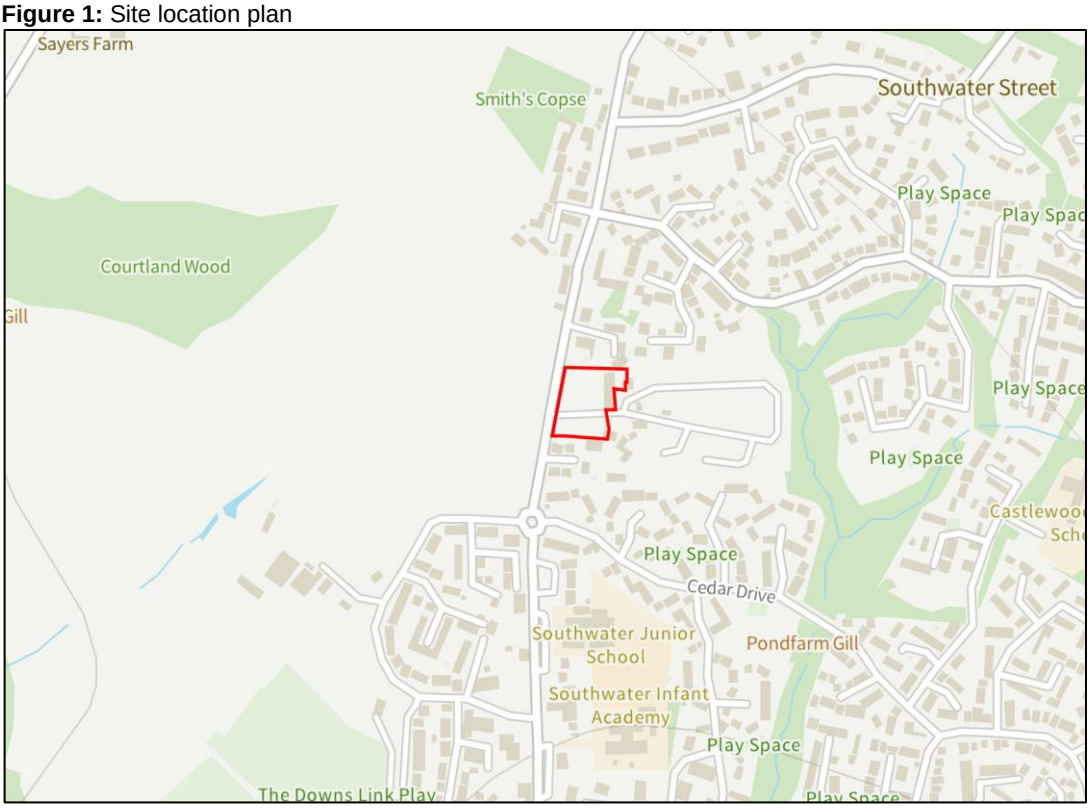
1.4 Tyler Grange Group Ltd. produced an Ecological Impact Assessment in 2022 which included finding from an 'extended' Phase I habitat survey and a Preliminary Bat Roost Assessment (undertaken on the 8th December 2021). The survey concluded that the site consisted of hardstanding, bare earth and buildings; one of which was assessed as holding 'moderate' bat roost potential (BRP). Further surveys were therefore undertaken in 2022 for the 'moderate' BRP building however results concluded the likely absence of a bat roost (Tyler Grange, 2023).

1.5 This report covers the application site (red-line boundary) and the requirement to provide further details regarding ecological enhancements.

Site Location

1.6 The development site located to the east off Worthing Road, north-west of Southwater, West Sussex (see Figure 1). The site is surrounded to the north, east and south by extensive residential houses and associated gardens. The wider landscape includes the village of Southwater, arable land and large pockets of woodland.

Figure 1: Site location plan



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Aims and objectives

1.7 The aim of this report is to provide an ecological enhancement plan for the site to be used in support of the development to enable the discharge of Condition 6 on the grant of planning permission (ref: DC/22/0096).

Wildlife Legislation and Planning Policy

1.8 The relevant wildlife legislations and planning policies are listed below:

- Wildlife and Countryside Act, 1981 (as amended) (WCA). [Amended by the Countryside and Rights of Way Act (2000)].
- The Natural Environment and Rural Communities Act, 2006 (NERC).
- The Wild Mammals (Protection) Act, 1996.

2. BIODIVERSITY ENHANCEMENT STRATEGY

Purposes and conservation objectives for the proposed works

2.1 The purpose of the proposed works outlined within this document is to enhance the site for wildlife following construction.

2.2 The conservation objectives for the proposed works are to provide an element of native plant species and habitats within the landscape design for open spaces and to provide bat and bird boxes on proposed new buildings, where appropriate. These measures will contribute to the biodiversity interest of the area in the long term.

Measures during construction

2.3 A timetable for the implementation of ecological enhancement works has been drawn up (see Appendix A); this also includes general precautionary measures.

2.4 During construction:

- All trenches left open overnight to be covered or an escape ramp provided to enable hedgehogs, other small mammals etc. to climb out.
- Tree protection fencing, particularly to the north of the site, should be installed and left in situ for the duration of the development. This will ensure offsite trees are protected as necessary.
- Security lighting will be kept to a minimal level (as necessary for safety and security), to be set on short times, and to be sensitive to large moving objects only.
- Bat and bird boxes to be integrated on/into new proposed buildings. Boxes should not be lit by security lighting.
- Initial landscape planting to take place.

Detailed design to achieve the stated objectives

2.5 The detailed soft landscape design for the development has been drawn up by James Blake Associates (JBA, 2024). See Appendix B for detailed landscaping proposals.

2.6 There is scope for ecological enhancements to be incorporated within proposed public open spaces, boundary treatments and buildings. The enhancements are based on the recommendations detailed within the ecological survey reports produced by Tyler Grange Group Ltd.. The enhancements proposed were as follows:

- *It is recommended that two general purpose bat boxes (Ibstock Type C or similar) and two bat tiles will be installed on suitable areas of the proposed building on a south or*

south westerly aspects. This would provide new roosting opportunities for crevice dwelling species which could utilise the site, such as common pipistrelles.

- *Nesting opportunities would be created through the provision of nest boxes incorporated into the new buildings, with such features positioned so as to provide easy access to linear features or grouped as some bird species prefer. This would include house sparrow terraces (such as Vivara Pro Woodstone Terrace or similar) installed as per manufacturer's instructions on a northern aspect.*

2.7 As part of the landscape proposals (JBA, 2024) 23 trees, are proposed mainly around the boundary of the site. Species include; European hornbeam (*Carpinus betulus*), silver birch (*Betula pendula*), European crab apple (*malus sylvestris*), field maple (*acer campestre*), small-leaved lime (T*ilia cordata*), midland hawthorn (*Crataegus laevigata*) and callery pear (*Prunus calleryana*). Although not all native species, the trees will provide suitable nesting and foraging habitats for a variety of species such as birds and invertebrates. As well as connecting habitat around the site boundary.

2.8 Approximately 144m of species-rich native hedging is proposed, as well as 116m of ornamental hedges to be planted around the buildings, which will also provide suitable nesting and foraging areas. Native species include: common dogwood (*Cornus sanguinea*), dog rose (*Rosa canina*), guelder-rose (*Viburnum opulus*), field rose (*Rosa arvensis*), common holly (*Ilex aquifolium*) and wild privet (*Ligustrum vulgare*).

2.9 The plant species diversity of formal landscaped areas will be increased by the planting of grasses, sedges, bulbs, shrubs and climbers; although the majority of these will be non-native.

Extent and location of works on scale plans

2.10 The suggested locations of selected biodiversity enhancements are given in the proposed site layout mark-up (see Appendix C). The plan base is produced by JBA: drawing number JBA21/420-01 (2024).

Type and source of material to be used where appropriate, e.g. native species of local provenance

2.11 The following bird and bat boxes are recommended. Please note that these can be replaced with similar products if not available at time of construction (to be agreed with ecologist prior to purchase).

To be erected:

- 2 no. general purpose bat boxes (Ibstock Type C or similar) on proposed new buildings. These should be south-east to south-west facing and at least 4m high.

- 2 no. bat tiles will be installed on suitable areas of the proposed building on a south or south-west aspect. Any tiles supplied by www.nhbs.com are considered suitable.
- 4 no. Vivara Pro Woodstone Terrace or 1SP Schwegler Sparrow terraces (or similar); terraces should be erected on new buildings, north-west to north-east facing and at least 3m high.

2.12 The final locations may need be determined by an Ecological Clerk of Works (ECoW) during construction.

2.13 Planting should include trees and shrubs of local provenance where possible.

Timetable to implementation demonstrating that works are aligned with the proposed phasing of development

2.14 A timetable for the implementation of ecological works has been drawn up (see Appendix A).

Persons responsible for implementing the works

2.15 Initial construction works and installing the various forms of enhancement to be implemented by the Site Management Team and suitable appointed contractors, such as landscape contractors, fencers, brick layers etc.

Details of initial after care and long-term maintenance

2.16 All bat boxes proposed are 'self-cleaning' and would not require annual cleaning; however, these should be inspected annually from the ground for any damages and should be replaced if broken, following ecologist advice.

2.17 Bird boxes should be inspected and cleaned annually outside of the breeding season; the breeding season is deemed to be between March and September. Damaged boxes should be replaced as and when required.

3. CONCLUSIONS

3.1 A Biodiversity Enhancement Strategy has been drawn up which will increase the potential of the proposed development site to support wildlife by the addition of new landscaping such as the planting of new hedgerows, trees and shrubs, and the provision of bat and bird boxes.

3.2 Suggestions for the management of enhancements are included.

3.3 The Biodiversity Enhancement Strategy was required by the grant of planning permission; this report should enable Condition 6 to be discharged.

References

JBA (2024) *Detailed Landscape Proposals for Worthing Road, Southwater, RH12 9JF.* Drawing number: JBA 21/420-01. On behalf of Churchill Retirement Living.

Tyler Grange (2023) *Bat Survey Note – Roundstone Caravan Depot, Worthing Road, Southwater, Horsham, RH13 9JF*. On behalf of Planning Issues Ltd. Report ref: 14243_R03_AH_CW

Tyler Grange (2022) *Ecological Impact Assessment – Roundstone Caravan Depot, Worthing Road, Southwater, Horsham*. On behalf of Planning Issues Ltd. Report ref: 14243_R02_SC_CW.

Web references:

MAGIC:
https://magic.defra.gov.uk/

Appendix A. Timetable for implementation of ecological works

Timings		Feature/species of interest	Action	Person responsible
When to Undertake	Year			
Prior to construction	From 2024	Adjacent trees	Installation of protection fencing where necessary	Site manager
During construction	From 2024	Small mammals etc.	Trenches to be covered overnight or escape ramp left to enable animals to find their way out	Site manager
During construction	From 2024	Bats and birds	Bird and bat boxes to be erected on new buildings at time of build	Site manager with advice from Ecological Clerk of Works (ECoW)
During construction - Spring/summer/autumn	From 2024	Landscaping	Preparation of substrate, sowing seed, removing any invasive weed species etc	Site manager
Post-construction	From 2026	Bats	Annual check for damages from the ground	Appointed management company. If boxes require replacing/fixing then ECoW advice should be sought
Post-construction	From 2026 (between October and February)	Birds	Annual cleaning and check for damages (outside breeding bird season)	Appointed management company.

Appendix B. Landscape proposals (JBA, 2024)

SPECIFICATION NOTES - REFER ALSO TO THE TENDER DOCUMENT.

1.0 Setting out

1.1 Planting shall be set out exactly as shown on the drawing, and measured from existing fixed points. Curved beds shall be set out using rigid arched on the ground using two pointed stakes and a line between, or with site marker paint. The junction between convex and concave curves shall be cut to form a smooth and even flowing line. Check that all setting out conforms to the plan before cultivation and planting works are carried out. Failure to do so may result in rejection of the work by the landscape architect and may require amendment at the contractor's expense.

1.2 All planting beds shall be a minimum of 1 metre wide, except where there is insufficient space, due to the constraints of walls and path edgings and their foundations. With narrow beds between walls / fences and path edgings, ensure that the bed has space free from concrete footings before planting. If the bed is sealed with concrete, then the landscape contractor shall contact the site manager or landscape architect to determine if footings are excessive and can be reduced or else, the bed can be paved. The width of all beds will be checked by the inspecting landscape architect and where the width is not as drawn, the contractor shall re-cultivate them to the specified width at his own expense.

2.0 Ground preparation

2.1 Pre-planting herbicide application:- Apply by suitable spraying apparatus, an approved translocated systemic herbicide to the manufacturer's instructions and to 1997 Control of Pesticides Regulations and 2020 COSHH regulations on all beds, except those which are both weed free and are to receive agricultural sheet mulch. Spray immediately if any weeds are present. If no weeds are showing but planting is delayed, spray after one month following cultivation, to allow dormant seed to germinate. All spraying shall be carried out by skilled and qualified operatives, using protective clothing, in suitable weather (no wind) and any damage caused by spray drift, from incorrect usage or spillage, shall be rectified at the contractor's own cost. Do not spray near a water body. Repeat as necessary to ensure complete kill and rake off all dead material from site.

2.2 Carry out the following works to the existing topsoil on site to ensure it Conforms to BS 3882:2015, being free from rocks larger than 50m diameter, concrete, all rubble, wire, brick, and have less than 20% clay. Allow for pre-application of herbicide as above. Fertilise with 70gm per meter square of Hortibase CRF (16-8-12) slow release fertiliser, in accordance with the manufacturer's instructions. For beds less than 5 metres in width, fork over thoroughly or machine rotovate soil to a depth of 450mm, ensuring that the subgrade and topsoil are completely broken up and free draining, allowing any compaction. For beds greater than 5 metres in width, break up the subgrade and topsoil using a tractor mounted subsoiler or ripper at 500mm centres to a depth of 500mm,except where there are services, or within 10 meters of tree stems or 3 meters of existing hedges. Do not rip areas where roots greater than 10mm diameter are encountered.

2.3. Determine before submitting a tender, the extent of support from the site manager with ground preparation ensure soil of all planting beds is graded to a level 65mm below adjacent grass or paved surfaces, within 40x40mm of edges to ensure bark or wood chip mulches are retained. Where grass is proposed adjacent to paving, then the soil level shall be flush with the adjacent paved surfaces, to receive rain water run off. The landscape contractor is responsible for ensuring that the final product conforms to the specification even where the developer and/or main contractor have failed to supply and spread topsoil to the recessed level. The landscape contractor shall allow for adjustment of levels, as specified above, including for re-grading subsoil and topsoil. Where beds are sloping, ensure that topsoil is graded to the specified levels below pavement & grass surfaces within 400mm of the edges of the bed. This is to allow for sheet mulch and bark or wood chip mulch so that mulch does not spill out on to pavements and also to allow surface water to drain from paths on to planted areas.

2.4 Sloping ground that is shown to be turfed where there is paving adjacent to it topsoil levels of the grass areas shall be graded to finish flush with the finished pavement level to allow surface water to drain from pavements to soft areas. Soil of grass areas should therefore never be proud of paved areas. Soil levels more than 10 mm below pavement edges will cause mower damage on cutting.

2.5 Imported topsoil (where specified and sanctioned by the employer) for making up ground, shall conform to BS 3882: 2015, and be free from rocks (over 50mm diameter), concrete, roots, wire and bricks, and have less than greater than 20% clay. Such soil shall be cultivated as set out above. Representative samples shall first be approved by the landscape architect before being supplied to site. No imported soil shall be supplied to site without a written instruction.

3.0 Planting

3.1 All planting must be carried out in accordance with the tender document, and accompanying drawings. Refer to the tender document for the preparation of existing topsoil and required depths for planting, turfing, and trees, and also for contractual maintenance requirements.

3.2 No substitutions will be accepted without the prior agreement of the inspecting landscape architect. The contractor shall replace at once at his own cost any stock size, species or variety of plant which has not been specified on the planting plan and schedule, unless via prior written agreement, a substitution has been agreed by the inspecting landscape architect. All plants shall be true to size specified in the schedule of plants and associated notes. CL pots are 17cm diameter and 13cm deep, 3L pots are 19cm diameter and 15cm deep, 5L pots are 22.5cm diameter and 16cm deep, 10L pots are 28cm diameter and 22.2cm deep, 15L pots are 33cm diameter and 26cm deep, 20L pots are 36.5cm diameter and 30cm deep, 30L pots are 41cm diameter and 36cm deep, 40L pots are 50cm diameter and 40cm deep, 50L pots are 55cm diameter and 50cm deep.The pot sizes will be checked on site to ensure compliance with those specified. Pots will be rejected if shrubs are supplied of a size which are not fully grown into the pot e.g. a 9cm plant recently potted into a 3L container. All shrubs, shall possess a height and spread in accordance with the plant schedule. Anything less than HTA National Plant Specification standards for each species and pot size will be rejected. Plant stock shall be bushy, healthy, disease free, not pot bound, leggy or spindly. There should be a minimum of 5 breaks per shrub, This specification is the minimum standard required and any stock falling below this standard, in the sole opinion of the inspecting landscape architect, will be rejected and shall be lifted and replaced at the contractor's expense.

3.3 All shrubs, herbaceous plants, whips and transplants shall be watered in on planting with 20 litres per square metre. Trees shall be watered in with 50 litres per tree position. Water thereafter during the contract period at weekly intervals with 30 litres of water per tree position.

3.4 Proposed feathered trees to be true to the species, variety and size as specified on the planting plan, to include 1.8m long, 100mm diameter, chestnut stake above ground dimension to be 1/3 the height of the tree, stakes to be driven vertically and 1No. sackcloth or rubber tie, with spacing device, all positioned 25mm maximum from the top of the post.

3.5 Proposed standard trees to be true to the species, variety and size as specified on the planting plan, to include 2No. 2.0m long, 100mm diameter, chestnut stakes, above ground dimension to be 1/3 the height of the tree, stakes to be driven vertically, supply and fix securely (twice screwed to each end) a half round cross brace (100mm diameter) with rubber spacer block fixed between tree stem and the cross brace and secured with 1No. sackcloth or rubber tie so the tree is securely restrained and there is no chance of the tie stem chafing with the cross brace.

3.6 Turf to be of cultivated grade such as Rolawn "Mediation", or other of similar quality and source, approved by the landscape architect. The contractor shall replace at once any turf rejected by the landscape architect at his own cost, insure that the turf is laid flat and is free from hollows, lumps and bumps, cracks or brown or dried patches or other defects and that turf is well watered before before laying and again after laying. Turf areas shall be taped off using high-vis tape until well established. Access shall be only with timber scaffold planks to prevent compaction.

3.7 Self clinging climbing shrubs or wall shrubs, with "S" written after the climber name, shall be trained to the wall/fence with heavy duty, plastic coated garden wire. Training wires shall be attached vertically to the wall/fence by means of 125mm long stainless steel eye screw fittings. Position 1No. at 250mm from ground, and 1No. 250mm from top of the wall/fence, and string the wire tightly between the fixings. Train the climber to the wire with plastic coated garden wire ties.

3.8 Training varieties of climber, with "T" written after the climber's name (in specially prepared pots or general shrub beds) shall be trained to wall/ fences by mounting ready-made trellis panels 1.8 x 1.8m generally (but 1.8 x 0.6m for corners or where space is restricted), Include for adapting any panels for locations where walls or fences are lower than 1.8m. Fix trellis panels to the wall/ fences using non rusting screws 125mm long (to be approved), incorporating 50mm cube wood spacing blocks to ensure that the panel is mounted sufficiently far from the wall/ fence to allow twining of stems, Ensure that all timber is pressure impregnated with a non phytotoxic preservative and then painted with a dark brown non phytotoxic preservative wood stain such as Sadolin "Classic" Jacobean Walnut or similar and approved. Ensure that the trellis is not in contact with the ground. Train the climbing shrub to the trellis with plastic coated garden wire tags.

3.9 Climbers specified outside proposed shrub beds shall have specially prepared climber pits. Climber pits shall be 400mm x 400mm and 400mm deep (minimum size), and be backfilled with topsoil (from site - where considered acceptable) Ensure the base of the pit is thoroughly broken up and free draining before back filling with topsoil. Ensure no damage to foundations and services, and make good all structures and surfaces disturbed. Fertilise with 50g of Hortibase CRF (16-8-12) slow release fertilizer, Water with 20 litres of water per climber pit.

LANDSCAPE PROGRAMMING

DUE TO NATIONAL PLANT SHORTAGE: PLANTS MAY TAKE UP TO 4 WEEKS TO BE DELIVERED. EARLY LEAD-IN FOR SOFT LANDSCAPE IS ESSENTIAL.

GENERAL NOTES

-ALL DIMENSIONS IN MILLIMETRES
-DO NOT SCALE OFF THIS DRAWING
-ALL DIMENSIONS TO BE CHECKED ON SITE

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4.0 Mulch

4.1 Supply and spread suitable biodegradeable sheet mulch over planting beds, previously, cultivated, graded and fertilized topsoil before planting, and prep trees at a minimum of 500mm centres, (300mm at edges) and beds less than 1m wide. Pegging this densely is essential to prevent flaps of material becoming exposed. Refer to the specification for biodegradable sheet mulch on plan.

4.2 Following planting, supply and spread evenly Chunky Chip Longevity® available from Suffolk Woodchips Ltd to a depth of 50mm evenly spread over all planted areas. Finished mulch levels shall be no higher than 15mm below pavement or grass levels. 300-400mm of bed edges, to avoid any spillage onto pavements or lawns. N.B. no substitution of mulch type will be accepted. It is essential to have a non-fibrous, large particled, brown wood chip to reduce weed growth, reduce wind blow and prevent break down and loss.

5.0 BS codes

5.1 All work/materials and materials shall conform to the following codes:-
5.1.1 General landscape operations (excluding hard surfaces) - BS 4428:1989.
5.1.2 Trees in relation to construction- BS 5837: 2012 and BS 6549:1999, BS 3998:2010 (recommendations for tree works) unless otherwise specified, Arboricultural Association - Standard Conditions of Contract and Specifications of Tree Works 1996.
5.1.3 Nursery stock in accordance with latest horticultural trade association nursery stock specification entitled "National Plant Specification 2010",
Plants shall conform to:
-BS 8545 : 2014 Trees from Nursery to Independence in the Landscape
-BS 3936-1 :1992 Nursery Stock - Specification for trees and shrubs,
-BS 3936-2 : 1990 Nursery Stock- Specification for roses + AMD 6626,
-BS 3936-4 : 2007 Nursery stock- Specification for forest trees,
-BS 3936-9 : 1998 Nursery Stock- Specification forbulbs, corms and tubers,
-BS 3936-10 : 1992 Nursery stock- Specification for grass and turf,
-CPSE-Committee for Plant Establishment, Handling and establishing landscape plants 1996, Part 3, paragraphs 6.2 to 6.6,
5.1.4 Glossary for Landscape Works BS 4428 :1989
5.1.5 Turf - BS 3969:1998 + A1:2013 - recommendations for turf for general purposes,
5.1.6 Seeding - EEC Regulations 1974, Use blue labelled certified varieties to EC purity and germination regulations, When requested, submit an official seed Testing Station Certificate of germination, purity and composition.
5.1.7 Topsoil - BS 3882: 2015
5.1.8 Pesticides: Control of Pesticides Regulations 1997,The Health and Safety at Work Act 1974(2005); the COSHH Regulation 2030 and the product COSHH sheet, The Water Act 2014, the Floods and Water Amendment (EU Exit) Regulations 2019, Control of Pollution Act 1974, Hedgerow ACT 1997; Wildlife and Countryside Act 1981; Countryside and Rights of way Act 2000,

GENERAL NOTES FOR THE DEVELOPER.

6.0 Tree protection
6.1 Any existing trees to be retained, are the responsibility of the main contractor on site who shall take all necessary protective measures set out in BS 5837:2012 to ensure no damage to stems or roots, to prevent compaction from vehicles or storage of materials, contamination of soil from spillages, scorching from fires and instability or stress from changes of soil level, The landscape contractor is however responsible for ensuring that neither plant, materials or labour are cause of any damage to existing trees, and like the employer, the landscape contractor shall replace at once any tree damaged on site, supplying and planting a tree of the same species and size, at his own cost, Protection barriers will comprise a scaffold framework in accordance with Figure 2 of BS 5837:2012 (The BS),
The framework will consist of vertical and horizontal scaffolds with vertical tubes spaced at no more than 3m
intervals and driven into the ground, Weld mesh (Heras or similar) panels will be securely fixed on to this
framework with wire or scaffold clamps, Tubes will be driven into the ground to a minimum depth of 600mm,
Supporting struts will be fixed to the inside of the barrier to ensure maximum rigidity.

6.2 Ground work

6.2.1 Soil levels: soil levels for shrub beds and grass areas should have any compacted subgrade thoroughly broken up by machine before instructing the ground worker to spread topsoil or the landscape contractor to commence work or the beds will become waterlogged in wet weather and the plants and turf will die.

6.2.2 Top soil depth: Topsoil spread from the site should be to the following minimum depths:- Shrub beds: 450mm, Grass areas 150mm, allow for excavation of 415mm of the subgrade for shrub beds to leave beds 65mm below finished pavement or grass areas in order to receive sheet and bark mulch, Tree pits will be dug by the landscape contractor, Top soil for turf areas shall be spread to a level 10mm below paving inorder to receive the turf, Topsoil for grass seed areas, the soil level shall be flush with any finished paved surfaces after settlement to allow for rain water to drain onto soft surfaces, Settlement shall be no greater than 5mm or problems will be encountered with mowing (the blades in danger of touching concrete edgings) or where soil is proud of a pavements, then drainage problems will be encountered.

6.3 Existing topsoil and imported soil shall conform to BS 3882:2015, and be free from compaction, rocks/bricks greater than 50mm diameter, concrete, wire, roots, debris, oil, cement and builders rubble, Soil shall have a clay content of less than 20%.

7.0 Hardworks

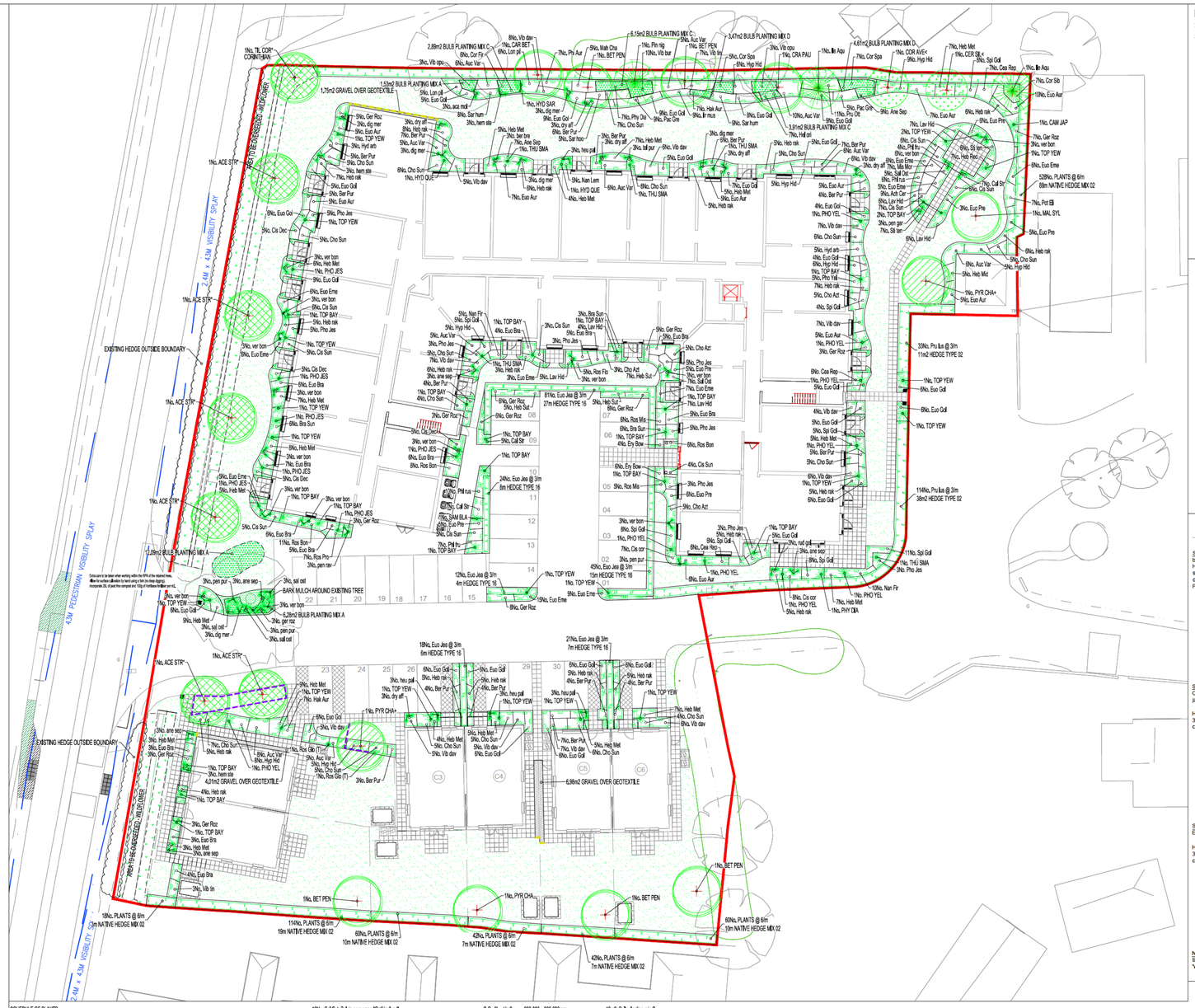
7.1 Hard works, unless otherwise agreed, shall be carried out by the developer or main contractor, and all materials and workmanship shall be in accordance with the construction details and the layout plan.

7.2 All paths and edgings shall be set out properly to lines and radii, with all curves scribed on the ground using painted pegs and string or site marker paint, achieving flowing natural arcs, Setting out shall be agreed with the landscape contractor and subsequently the landscape architect.

7.3 Hard surfaces shall be constructed after suitable base courses have been laid, taking full account of local site conditions, soft spots and substrata, The indicative depths of base courses are minimum depths assuming suitable substrate conditions.

7.4 All metalwork shall be finished hot dipped galvanized in accordance with BS EN ISO1460, The galvanizer shall be responsible for the thorough removal of all galvanizing smuts (fettling) to the complete satisfaction of the Landscape Architect, The decorating contractor shall prepare the galvanized surface by washing with detergent and water and scrubbing with a scouring pad until all dirt, grease, white rust & substrates have been removed & then allowed to dry thoroughly. Supply and paint Nosed 66307 from Silva Ltd (tel. 01707 374444) applied with a turfwheel brush strictly in accordance with the manufacturers instructions, COSHH regulations and the product COSHH sheet, Apply 2No. coats of paint with a dry film thickness of 100 microns per coat, Apply paint only when atmospheric conditions are dry at temperatures above five degrees celsius and in any event above the current dew point temperature, Paint work will be subject to inspection by experts and if found wanting, shall be stripped off, re-prepared and applied entirely at the decorating contractors own cost,

7.5 All wood work shall be pressure treated with Tanalith "E" water based wood preservative, applied by vacuum pressure, The timber shall then be stained with 3No. coats of Sadolin "Classic," colour "Jacobean Walnut" strictly in accordance with the manufacturers instructions, COSHH Regulations 2020 and product COSHH sheet,


1No. TL 2200 CORINTHIAN
1.75m2 GRAVEL OVER GEOTEXTILE
1.53m2 BULB PLANTING MIX A
2.89m2 BULB PLANTING MIX C
3.47m2 BULB PLANTING MIX D
5.15m2 BULB PLANTING MIX C
4.61m2 BULB PLANTING MIX D
3.91m2 BULB PLANTING MIX C
4.0m WIDE PEDESTRIAN VISIBILITY SPLAY
2.4M x 43M VISIBILITY SPLAY
EXISTING HEDGE OUTSIDE BOUNDARY
1No. ACE STR
1No. BET PEN
1No. PYR CHA
1No. PYR CHA+
1No. TOP YEW
1No. TOP BAY
1No. PHO YEL
1No. PHO JES
1No. PHO MEL
1No. PHO PEN
1No. PHO PRE
1No. PHO ACT
1No. PHO SUT
1No. PHO ROS
1No. PHO BRA
1No. PHO SUL
1No. PHO SUP
1No. PHO SPI
1No. PHO CRA
1No. PHO CRA+
1No. PHO CHA
1No. PHO CHA+
1No. PHO CHE
1No. PHO HEL
1No. PHY DIA
1No. PHY DIA+
1No. PHY CHA
1No. PHY CHA+
1No. PHY CHE
1No. PHY HEL
1No. PHY HEL+
1No. PHY PHA
1No. PHY PHA+
1No. PHY PHE
1No. PHY PHE+
1No. PHY PHI
1No. PHY PHI+
1No. PHY PHO
1No. PHY PHO+
1No. PHY PHY
1No. PHY PHY

Appendix C. Proposed site layout – enhancement mark-up (plan base is produced by JBA)

