

Biodiversity Compensation and Enhancement Strategy

Land at Penthorpe School, Church Street, Rudwick

July 2025

www.phlorum.com

Biodiversity Compensation and Enhancement Strategy

Land at Penthorpe School, Church Street, Rudwick

02/07/2025

Enplan
St Anne's House
111 High Street
Lewes, BN7 1XY
East Sussex, BN7 2PE

Document Control:

Project no.	Project
13014	Land at Pennthorpe School, Church Street, Rudgwick

Rev	Written by:	Checked by:	Authorised by:	Date:
V1	Amber Howie	Paul Carter	Richard Schofield	18 June 2025
V2	Amber Howie	Richard Schofield	Richard Schofield	02nd July 2025
V3	Amber Howie	Richard Schofield	Richard Schofield	02nd July 2025

This report has been prepared for the exclusive use of the commissioning party and may not be reproduced without prior written permission from Phlorum Limited.

All work has been carried out within the terms of the brief using all reasonable skill, care and diligence.

No liability is accepted by Phlorum for the accuracy of data or opinions provided by others in the preparation of this report, or for any use of this report other than for the purpose for which it was produced.

Phlorum Limited

Southern Office: Unit 12, Hunns Mere Way, Brighton, BN2 6AH

T: 01273 307 167 E: info@phlorum.com W: www.phlorum.com

Contents

1. Introduction 1
2. Objectives and Roles 3
3. Ecological Impacts & Enhancement 4
4. Long Term Maintenance 7
5. References 10

Appendices

Appendix A – Proposed Enhancement and Development Plan

Appendix B – Planting Plan

Appendix C –Bird and Bat Box Design

Appendix D – Timetable for Works

1. Introduction

Background

1.1 Phlorum Limited was commissioned by Enplan to compile a Biodiversity Compensation and Enhancement Strategy (BCES) for the development at Land at Pennthorpe School, here on referred to as 'The Site'. The site address is Pennthorpe School, Church Street, Rudgwick, RH12 3HJ. The National Grid Reference for the centre of the site is TQ 0833 2910.

1.2 This version 2 and this version (V3) have been produced to amend minor typos in the text.

Proposed Development

1.3 It is understood that the development involved the replacement and expansion of existing tennis courts to create an all-weather sports pitch. The survey area extended over approximately 0.78 hectares (ha).

1.4 The development area is shown in Appendix A.

Planning

1.5 Planning permission has been granted, subject to various conditions, which include the following ecological conditions:

- Condition 2: a Biodiversity Compensation and Enhancement Strategy is required; and
- Condition 3: appointment of a suitable qualified ecologist (ECoW) is required.

1.6 This report is focused on Condition 2 the Biodiversity Compensation and Enhancement Strategy.

1.7 Condition 2 states the following:

"Within three months of the date of the permission hereby granted, a Biodiversity Compensation and Enhancement Strategy for protected and Priority or threatened species, to include requirements of the LPA's Bat HRA Appropriate Assessment (April 2025), prepared by a suitably qualified ecologist, shall be submitted to and approved in writing by the local planning authority.

The content of the Biodiversity Compensation and Enhancement Strategy shall include the following;

a) purpose and conservation objectives for the proposed compensation and enhancement measures;

b) detailed designs or product descriptions to achieve stated objectives;

c) locations of proposed enhancement measures by appropriate maps and plans (where relevant);

d) persons responsible for implementing the compensation and enhancement measures; and

e) details of initial aftercare and long-term maintenance (where relevant).

The works shall be implemented in accordance with the approved details shall retained in that manner thereafter.

Reason: To ensure a satisfactory development that is sympathetic to the landscape and character and built form of the surroundings, and in the interests of visual amenity in accordance with Policy 33 of the Horsham District Planning Framework (2015)".

Previous Reports

1.8 This document has been developed with reference to the findings contained within the previous retrospective preliminary ecological impact assessment (PEA) compiled by Phlorum (2024). The survey area extended over approximately 0.78 hectares (ha).

1.9 The site comprised hardstanding, modified grassland, lowland mixed deciduous woodland, species rich native hedgerow and freshwater.

1.10 The site is not subject to any statutory or non-statutory designations. The closest statutory designated site is The Mens Special Areas of Conservation (SAC) which is located 8.2km to the southwest.

The BCES Report

1.11 This document has been compiled in the context of the proposals stated in this introduction and based on information made available by the client at the time. Alterations to the scheme and changes in ecological legislation may necessitate amendments to this document at a later stage.

2. Objectives, Roles and Legislation

Conservation Objectives

2.1 The conservation objectives for the development site are to avoid any negative impacts to protected species within the works area, and to enhance the biodiversity of the site wherever possible, with regard to the site potential and constraints and the nature of the proposed development.

2.2 The sites value for biodiversity will be enhanced by the installation of bat and bird boxes within the existing woodland and new planting of 10 select specimen trees within the woodland and scrub area to the east.

Responsibilities

2.3 The list below provides information on the roles and responsibilities for the ecological works and design on site.

- The Site owner, or site manager, will be responsible for ensuring that the long term maintenance is carried out as specified in this document.
- The Architect and Planner will be responsible for the implementing the BCES designs into the plans for the site.
- The principal contractor on site will be responsible for ensuring that the BCES designs during the construction phase are implemented.
- Phlorum Limited will be responsible for providing ecological assistance to the project, as and when required.

Legislation

2.1 The contractors will be required to comply with all relevant environmental legislation and Best Practice guidance during their work.

2.2 Protected species, including, species of reptiles and amphibians, all UK bats, the hazel dormouse dormice, otter, water voles and nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended). Some rare bird species also receive protection under Schedule 1 of the Act. European protected species also receive protection under the Conservation of Habitats and Species Regulations 2010 (as amended). [redacted]

3. Ecological Design

Ecological Impacts

3.1 Design proposals were for the replacement and expansion of an existing tennis court with an all-weather sports pitch. The proposed plans showed no impact on the hedgerows and no artificial lights were introduced. It is understood that trees were removed from the area of lowland mixed deciduous woodland as part of the development and spoil was deposited on the bund to the east of the site adjacent to the underground drainage ditch.

3.2 The proposed development resulted in the loss of some trees from within the area of lowland mixed deciduous woodland at the east and spoil was deposited on the bund to the east of the site adjacent to the underground drainage ditch.

3.3 As the works were undertaken prior to a site survey it is not known if the trees that were removed, on site were considered suitable for bats roosts. However, some of the surrounding vegetation is considered to be suitable for foraging bats. The loss of some trees may reduce potential breeding birds sites.

Ecological Enhancement

3.4 The main areas of the ecological enhancement will include the following:

- 4 Bat boxes;
- 4 Bird boxes; and
- Wildlife planting including replacement of trees to provide enhanced connectivity around the site.

Bat Boxes

3.5 Four bat boxes will be installed on mature trees within the onsite woodland at the east to compensate for the loss of any potential roosting features.

3.6 There are several types of bat boxes. However, the Woodcrete or WoodStone (such as Schwegler) are simple to install, and are built to last at least 25 years against damage by weather, rot or natural predators. However, wooden untreated bat boxes, using rough wood, can be just as effective, although may need replacing after ten years.

3.7 The bat boxes will be positioned on suitable mature trees, installed at appropriate locations in sheltered positions but exposed to the sun for part of the day. These are normally with south-east, south, or south-west facing aspects, although south and south-west orientation is normally best. They will be installed at least between 3-6m from ground level. There will be a clear flight path to the box. The area must not be installed in areas impacted by artificial lights.

3.8 Bat boxes do not need annual inspection/cleaning, and once installed it is important that the bat boxes are not disturbed, unless by a suitable qualified bat person. Where the bat boxes have not been used, the possibility of re-siting them to more suitable areas will be explored and advice sought from the project ecologist.

3.9 Specific locations and installation of the bat boxes will be decided once all works have been completed to avoid any unnecessary disturbance to roosting bats.

Habitat Regulations Assessment (Bats)

3.10 A Habitats Regulation Assessment (HRA) was prepared by the local council in regard to the potential impacts of the development on Nationally designated sites within proximity of the site.

3.11 The main impacts considered within the report related to the impact of the development on local designated sites with Barbastelle bats as their qualifying species and assessed the impact of the development and connectivity with the designated sites.

3.12 The Mens SAC and Ebernoe Common are both designated for Barbastelle bats and Backsteins bats, with maternity roosts present for both species. The conservation objectives of these designated sites include the reduction of further loss of connective habitat, with key vulnerabilities listed as habitat fragmentation and habitat connectivity, including foraging and commuting routes for the designated bat species.

3.13 Habitat which provided suitable areas for foraging and commuting bats was lost due to the development. Therefore, mitigation is required including compensatory/replacement planting.

3.14 New planting is proposed for the woodland/scrub along the east of the site including planting of ten new trees, in order to replace the habitat lost due to the development. Furthermore the area will be enhanced with the planting of 620 whips of native species. All existing hedgerows and remaining trees will be retained.

3.15 The HRA also concluded that disturbance due to lighting may be likely. It is understood that under current proposals no lighting has been proposed or installed.

Bird Boxes

3.16 As a measure to enhance the biodiversity value of the site additional breeding bird provision will be installed throughout the survey area. This will include the installation and siting of 4 bird boxes, suitable for vulnerable local species such as sparrows, starlings and swifts.

3.17 There are several types of bird boxes. However, the Woodcrete or WoodStone (such as Schwegler) are simple to install, inspect and clean and are built to last at least 25 years against damage by weather, rot or natural predators. However, wooden untreated bird boxes can be just as effective, although may need replacing after ten years.

3.18 The boxes will be installed at appropriate locations which are generally given to be facing north-east or north-west, although this matters little providing that the box entrance is sheltered from the prevailing wind and rain and sheltered from direct sunlight, and at least 2m from ground level. It is advised that the bird boxes are installed on mature trees along the boundary.. This will result in net gain of potential nesting opportunities across the site.

3.19 Once installed the boxes will be inspected annually outside of the main nesting bird season: between September and February, for evidence of nesting birds (evidence may include presence of an old nest and eggs, feathers and/or bird droppings). If old bird nests are found, these will be removed and where possible, the nest box cleaned with warm water.

3.20 Where the bird boxes have not been used, the possibility of re-siting them to more suitable areas will be explored and advice sought from the project ecologist.

3.21 Specific locations and installation of the bird boxes will be decided once all works have been completed to avoid any unnecessary disturbance to breeding birds.

Wildlife Planting

3.22 The lost habitats will be replaced for the site particularly associated with improving the connectivity for bats.

3.23 Appendix A shows the proposed enhancement and development plan, including location for the new planting. A planting list is provided in Appendix A.

3.24 The new planting will include the following:

- 10 Native Trees; and
- 620 Whips, Native species.

3.25 A full species list is detailed in the landscaping plans shown in the appendix A, but the ten trees will be a mix of field maple *(Acer campestre),* Alder *(Alnus glutionsa),* oak *(Quercus robur),* rowan *(Sorbus aucuparia),* broad leaved hawthorn *(Crataegus prunifolia),* and wild cherry *(Prunus avium).*

3.26 The whips will include a mix of Alder *(Alnus glutionsa),* silver birch *(Betula pendula),* hornbeam *(Carpinus betulus),* common dogwood *(Cornus sanguinea),* hazel *(Corylus avellana),* hawthorn *(Crataegus monogyna),* wild cherry *(Prunus avium),* wild cherry plum *(Prunus cerasifera),* blackthorn *(Prunus spinosa),* grey willow *(Salix cinerea),* elder *(Sambucus nigra)* and rowan *(Sorbus aucuparia).*

Timings

3.27 The proposed timing for these works, and the ongoing maintenance, are shown in Appendix D.

4. Monitoring and Maintenance

Monitoring

4.1 As stated earlier the proposed habitat enhancement measures, their management and maintenance will be undertaken by the client or their appointed contractors.

Bat Boxes

4.2 Bat boxes do not need annual inspection/cleaning, and will be left alone unless under the supervision of a suitably licenced bat ecologist.

Bird Boxes

4.3 Old birds nests should be left in boxes to break down naturally as they provide habitat for a range of invertebrates.

4.4 Inspection, and cleaning if necessary, must only be undertaken annually, and should be undertaken outside of the main bird nesting season which runs from March to August inclusive[1].

Wildlife Planting

4.5 Regular inspection of the wildlife planted area will need to be carried out. The trees and hedges will be annually monitored.

Remedial Measures, Monitoring and Long-Term Maintenance

4.6 The newly planted areas will need regular watering especially in dry periods. The arisings from pruning and maintenance work undertaken to maintain trees and shrubs will be responsibly disposed of by the contractors appointed to carry out these works by the client.

Trees and Whips

4.7 These will need inspection to ensure they are not damaged. Any dead/broken or infected branches may need to be removed.

4.8 The paragraphs below include prescriptions for new tree planting included in the design proposals within the footprint of the works.

Aims

- To establish areas of new planting;

[1] It should be noted that this is the main breeding period. Breeding activity may occur outside this period (depending on the particular species and geographical location of the site) and thus due care and attention should be given when undertaking potentially disturbing works at any time of year.

- To promote new healthy growth;
- To increase biodiversity within the site; and
- To create feeding and sheltering opportunities for wildlife.

Actions

- Plant all trees in suitable holes in the ground, being aware of the trunk flare.
- Place the tree at the appropriate height and straighten the tree in the hole;
- Fill the hole gently, but firmly with soil;
- Stake the tree if necessary; and
- Mulch the base of the tree.

Monitoring and Maintenance

- Water as necessary to secure healthy establishment and to avoid the need for replacement due to dry periods (less than 30mm rainfall at the end of a four week period);
- Collars in soil at base of tree stems, created by tree movement shall be broken up by fork, avoiding damage to roots. Backfill with topsoil and re-firm;
- Check all trees for firmness and stability in the ground. Check and adjust tree ties, replacing if necessary;
- At all times prevent rubbing of ties and adjust to accommodate growth and prevent chafing. Where chafing has occurred, reposition or replace ties to prevent further chafing. Damage to bark to be cut back neatly with a sharp knife; to prevent further damage;
- Inspect trees regularly for stem wounds, pests and diseases and treat early;
- Prune dead, dying, crossing, rubbing and damaged branches and encourage new leader as necessary;
- Check aeration pipes regularly and clear debris as necessary;
- Replace any failures of plants within the establishment period with immediate effect with the same species and size.
- Any tree works shall be carried out by a skilled, qualified and approved Arboricultural Contractor in accordance with BS3998: 2010 'Tree Work - Recommendations'. Where possible, and where health and safety constraints permit, and with prior approval of the Project Manager and Ecologist; arisings may be formed into habitat piles within the POS spaces, and standing dead wood maybe left within the woodland to provide additional dead wood habitats to maximise invertebrate biodiversity.

- Once established, trees will then be pruned annually between September and February inclusive;
- It is preferable to maintain a dense canopy. Pruning outer branches regularly will promote this;
- Pruning trees between September and February inclusive is outside the breeding bird season, which is taken to run between March and August, and will therefore avoid disturbance to nesting birds and their young; and
- It is important to note however that birds can nest outside this period if weather conditions are suitable and due care must be taken when undertaking tree works at any time of the year. If breeding birds or their nests are suspected, or discovered, the pruning of trees in the vicinity of the nest must be postponed until young birds have fledged and the nest is no longer in use.

Retained Hedges

4.9 These will need cutting once or twice a year to maintain their shape.

Waste

4.10 Any waste generated will be disposed of in accordance with current legislation. The waste will be segregated as required, and stored in suitable containers. All waste removed off site will have an appropriate Transfer Note, or Consignment Note, as required.

4.11 Where possible the waste hierarchy will be followed:

- Waste prevention;
- Reuse;
- Recycle/ composting;
- Other recovery; and
- Disposal.

4.12 Limited vegetative waste will be generated. However, vegetative waste will be composted where possible, although if there are diseased plants then these will be removed from site, and not composted, where appropriate.

5. References

- ILP – Institute of Lighting Professionals (2018). *Guidance Note 08/18 Bats and artificial lighting in the UK. Bats in the built environment series.* ILP and the Bat Conservation Trust [on-line]. Available from: https://www.bats.org.uk/news/2018/09/new-guidance-on-bats-and-lighting
- Enplan (2024) *Planting Schedule. Land at Penthorpe School, Rudgwick.* Unpublished report.
- Phlorum (2024) *Preliminary Ecological Assessment. Land at Penthorpe School, Rudgwick.* Unpublished report.
- Place Services (2025) Habitats Regulation Assessment HRA. *Land at Penthorpe School, Rudgwick.* Unpublished report.
- Schwegler (2016). *Bird and Nature Conservation Products* [on-line]. Available from http://www.schwegler-natur.de/pdf/Katalog/CatalogueEN_HQ.pdf

Figures and Appendices

Appendix A

Proposed Enhancement and Development Plan



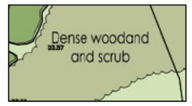
N

The material contained in this document has been reproduced from an Ordnance Survey map with permissionof the Controller of Her Majesty's Stationery Office, Crown Copyright Licence number AL100035542

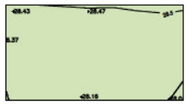
KEY

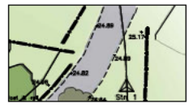

Existing trees


Retaining Wall

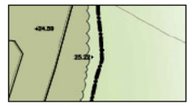


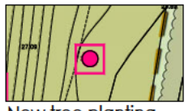
Existing dense scrub


Grassed areas

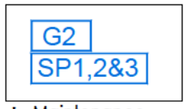

Footpath


New scrub planting


Fence line


New tree planting


All weather pitch



* Maintenance prescriptions

* Note: Refer to Report No. 02-897-700 Rev A Landscape Management and Miantenance Plan (2025) for prescription detail and annual maintenance regimes.

Rev A Text update LMMP 02-897-700 Rev A 28.03.25 MD
revision / date / description / drawn

St Anne's House
111 High Street
Lewes
East Sussex
BN7 1XY
T 01273 007807
W www.enplan.net

client

project
Pennthorpe School
Rudgwick, Horsham

scale
1:500 @ A3

date
Feb 25

title
Landscape Maintenance Plan

drawn
MD

checked
MC

drawing number
02-897-600

revision
A

issue
Planning

DO NOT SCALE FROM THIS DWG | DRAWING SUBJECT TO COPYRIGHT©

Appendix B

Planting Plan



N

Note:
The material contained in this document has been reproduced from an Ordnance Survey map with permissionof the Controller of Her Majesty's Stationery Office. Crown Copyright Licence number AL100035542

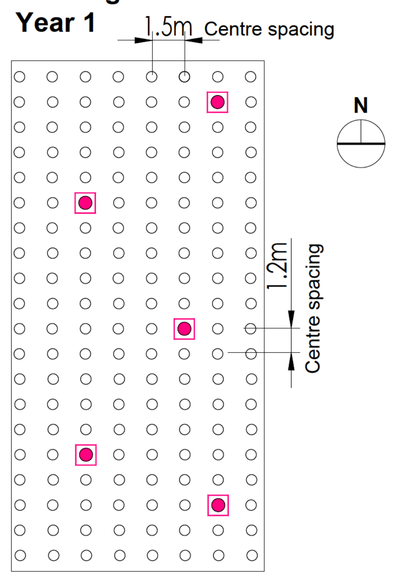
Planting Schedule (Planting Area: 1180m²)

SPECIES	Common Name	Code	Form	Size	cs (see matrix)	Number
Acer campestre	Field Maple	Ac S/S	S/Standard	10-12cm BR	AS SHOWN	2
Alnus glutinosa	Alder	Ag S/S	S/Standard	10-12cm BR	AS SHOWN	1
Quercus robur	Oak	Qr S/S	S/Standard	10-12cm BR	AS SHOWN	1
Sorbus aucuparia	Rowan	Sa S/S	S/Standard	10-12cm BR	AS SHOWN	2
Crateagus prunifolia	Broad-leaved Hawthorn	Cp S/S	S/Standard	10-12cm BR	AS SHOWN	2
Prunus avium	Wild cherry	Pa S/S	S/Standard	10-12cm BR	AS SHOWN	2
Alnus glutinosa	Alder	Ag	Transplant (1+1)	60-80 cm BR	1.5mx1.2m c/s	25
Betula pendula	Silver Birch	Bp	Transplant (1+1)	60-80 cm BR	1.5mx1.2m c/s	50
Carpinus betulus	Hornbeam	Cb	Transplant (1+1)	60-80 cm BR	1.5mx1.2m c/s	25
Cornus sanguinea	Common Dogwood	Cs	Transplant (1+1)	60-80 cm BR	1.5mx1.2m c/s	100
Corylus avellana	Hazel	Ca	Transplant (1+1)	60-80 cm BR	1.5mx1.2m c/s	100
Crateagus monogyna	Hawthorn	Cm	Transplant (1+1)	60-80 cm BR	1.5mx1.2m c/s	100
Prunus avium	Wild Cherry	Pa	Transplant (1+1)	60-80 cm BR	1.5mx1.2m c/s	50
Prunus cerasifera	Wild Cherry Plum	Pc	Transplant (1+1)	60-80 cm BR	1.5mx1.2m c/s	25
Prunus spinosa	Blackthorn	Ps	Transplant (1+1)	60-80 cm BR	1.5mx1.2m c/s	25
Salix cinerea	Grey Willow	Sc	Transplant (1+1)	60-80 cm BR	1.5mx1.2m c/s	25
Sambucus nigra	Elderberry	Sn	Transplant (1+1)	60-80 cm BR	1.5mx1.2m c/s	25
Sorbus aucuparia	Rowan	Sa	Transplant (1+1)	60-80 cm BR	1.5mx1.2m c/s	50

Planting Specification

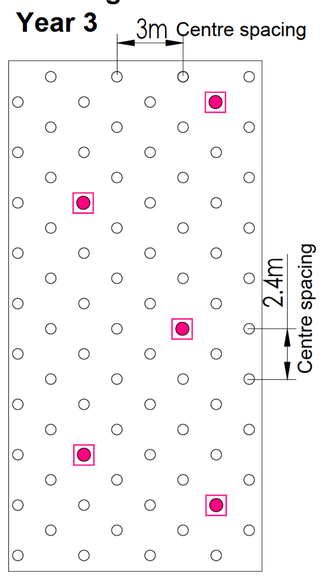
Year 1: Pit Plant Selected Standard trees (refer to drawings 02-897-400 and 02-897-401 for Treepit Details). Notch plant Transplant stock in groups of 3, 5 qnd 7 of the same species in a grid, 1.5m x 1.2m as per Matrix 1.
Year 3: Thin out area of Transplants by removing every other plant as per Matrix 2 to allow healthy spread and growth of established plants. Remove and replace dead plants with spare, healthy stock already removed preferably within the dormant season (mid November through to mid Febraury). Pit plant replacements reusing excavated soil as backfill in pits large enough to accommodate root system. Top up 500-600mm dia, weed-free circles around standard trees with a layer of medium sized bark mulch to a depth of 50mm leaving a 120mm mulch free collar around the base of each tree.

Planting Matrix 1
Year 1



○ Transplant Planting (grid).
● Selected Standard Tree 10-12cm girth Position randomly as shown on plan

Planting Matrix 2
Year 3



○ Established plants (staggered rows).
● Selected Standard Tree 10-12cm girth Position randomly as shown on plan

NTS. Diagramatic only

Rev B Planting Schedule/Spec amendments 28.03.25 MD
Rev A Selected Standard trees added 15.10.24 MD
revision / date / description / drawn

St Anne's House
111 High Street
Lewes
East Sussex
BN7 1XY
T 01273 007807
W www.enplan.net

enplan

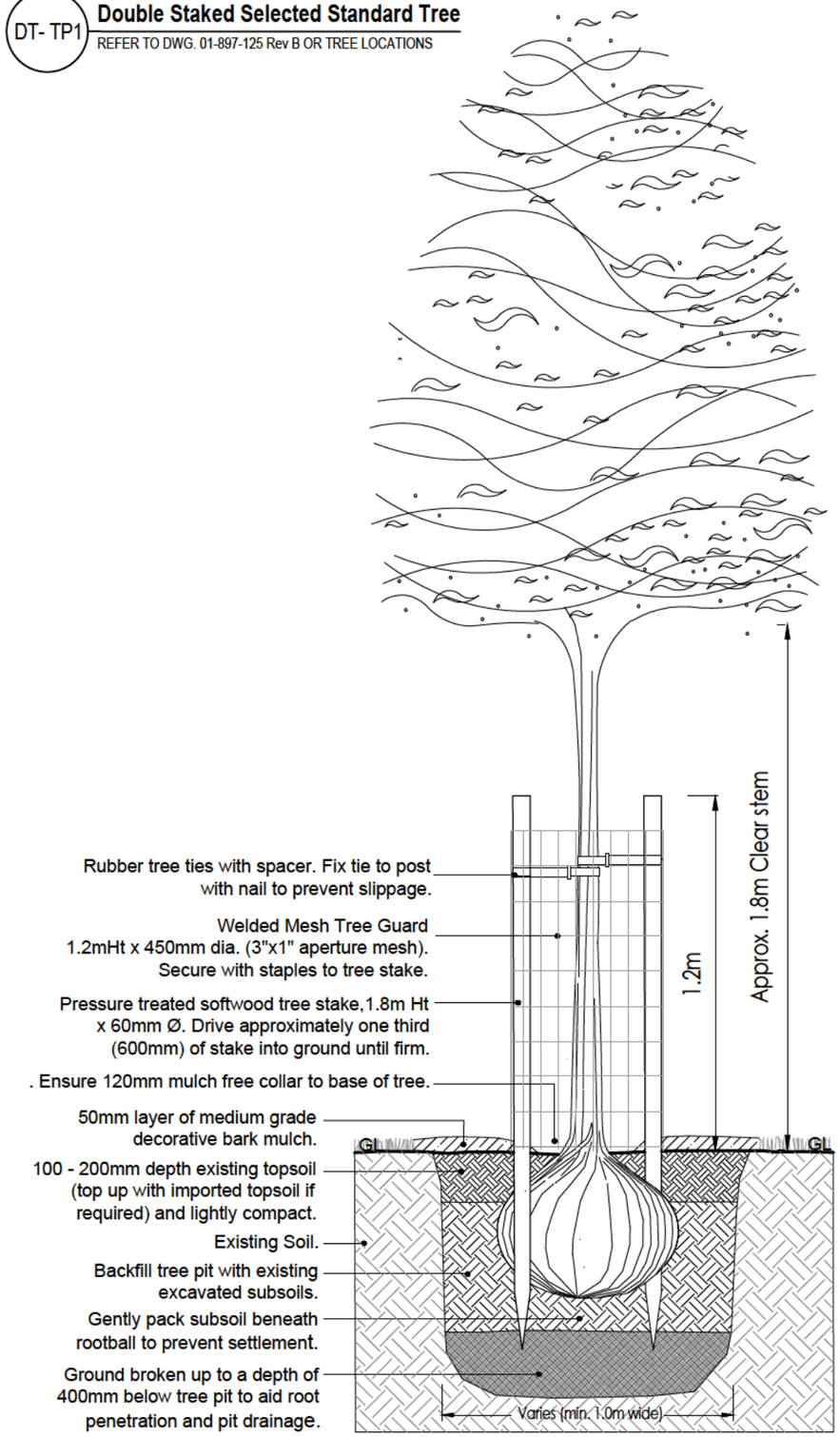
client

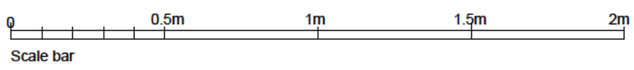
project	scale
Pennthorpe School Rudgwick, Horsham	1:250 @ A1
	date Apr 24
title Proposed Planting Plan	drawn MD
	checked MC
drawing number 02-897-125	revision B
issue	Planning

DO NOT SCALE FROM THIS DWG I DRAWING SUBJECT TO COPYRIGHT©

DT- TP1 Typical Tree Pit Detail: Double Staked Selected Standard Tree

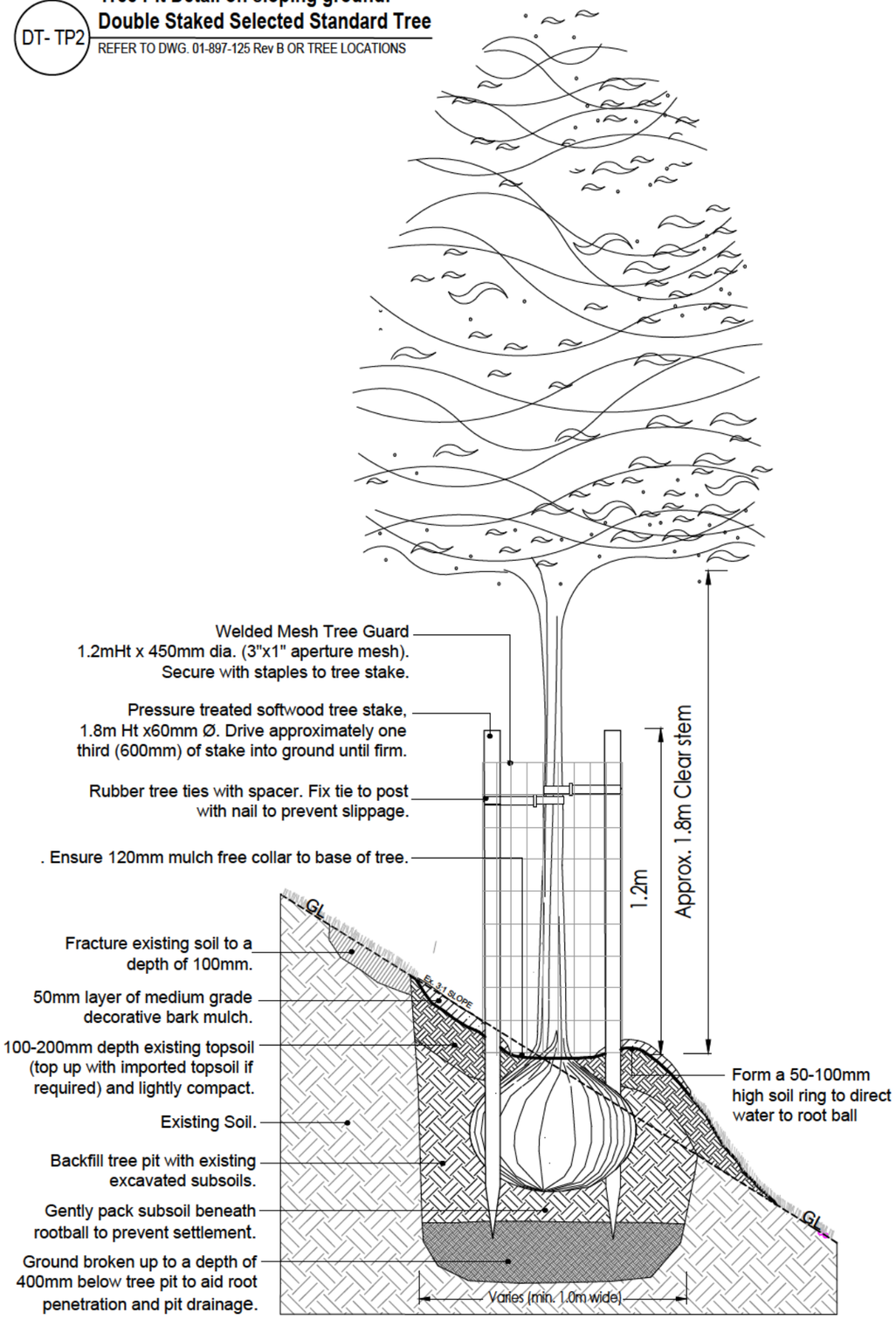
REFER TO DWG. 01-897-125 Rev B OR TREE LOCATIONS





DT- TP2 Tree Pit Detail on sloping ground: Double Staked Selected Standard Tree

REFER TO DWG. 01-897-125 Rev B OR TREE LOCATIONS



IMPORTED TOPSOIL SPECIFICATION
All topsoils that are to be considered for use in this scheme are to be sampled and analysed in accordance with **BS3882:2015** *Specification for Topsoil and requirements for use*
Sample Description: a dark brown friable loamy sand with a single grain structure, gree of perrenial weeds and virtually stone free.

WATERING
Immediately after planting and proir to application of mulch layer, wet full depth of topsoil evenly around the rootball area. Spread medium grade bark mulch to a depth of 50mm to aid moisture retention. Watering frequency: as necessary to ensure establishment and continued thriving of tree.

Notes:
1. All measurements are in millimeters, unless stated otherwise.
2. Double staked tree fixing applicable to trees with boles 10-12cm girth and/or smaller.
3. See Dwg 02-897-125 Rev B for position and detail of trees.

Rev B Tree Pit on sloping ground added 31.03.25 MD
Rev A Scale bar added 28.02.25 MD
revision / date / description / drawn

St Anne's House
111 High Street
Lewes
East Sussex
BN7 1XY
T 01273 007807
W www.enplan.net

client

project: Pennthorpe School, Rudgwick, Horsham
scale: 1:20@A3
date: Nov 2024
title: Tree Pit Detail
drawn: MD
checked: MC
drawing number: 02-897-400
revision: B
issue: For Planning

DO NOT SCALE FROM THIS DWG I DRAWING SUBJECT TO COPYRIGHT©

Appendix C

Bird ad Bat Box Design

Bird and Bat Box Designs

Bird Boxes

Example	Type	Dimension D x W x H (cm)	Target Species	Location
	**1SP Schwegler sparrow terrace**	24.5 x 43 x 20	House sparrow	The terrace can be fixed on to the surface of a suitable wall or incorporated into the wall. It is suitable for all types of houses in built-up areas, and on industrial and agricultural buildings such as barns, sheds and factories. Due to its weight (15kg), it is not suitable for fences or garden sheds. Ideally place the terrace two metres or more above the ground. Either install on the surface of the wall using the plugs and screws provided, or install directly into the wall.
	**3S Schwegler starling box** 45mm entrance hole The large diameter nesting chamber (140mm) also helps to encourage occupation.	28 x 19 x 20cm	Starlings	On an external wall or tree at a height of at least 1.5m. Near to vegetation if possible as this will provide additional protection and cover. Starlings are gregarious birds and prefer to nest in colonies, so grouping several boxes together will encourage occupancy.

Example	Type	Dimension D x W x H (cm)	Target Species	Location
	**Schwegler 1MF double swift box**	43 x 46 x 22.5	Swift	will be positioned at least 5m above the ground, ideally under the eaves.
	**Schwegler Nest Box 1B** Hole-fronted 32mm entrance hole	16 x 16 x 23	Multipurpose, including: great tit, blue tit, marsh tit, coal tit, crested tit, redstart, nuthatch, collared flycatcher, pied flycatcher, wryneck, tree sparrows, house sparrows, and bats.	Suitable on walls or semi-mature/mature trees and shrubs; attached to a tree trunk or hung from branches. Ideal points include discrete areas away from predators, such as against walls, plant and metal supports.

Bat Boxes

Example	Type	Dimension D x W x H (cm)	Target Species	Location
	**2FN Schwegler Bat Box**	36 x 16 x 16	Suitable for woodland species particularly Noctule, and Bechstein's bats. But also successful for Lesser noctule, Daubenton's and Nathusius pipistrelle.	This model has two entrances, one at the rear against the tree trunk and one at the front. Bats often creep into the rear entrance but leave by the front. It has a domed roof to form clusters and an increased internal height. It is effective against small predators and excludes draughts and light. This model is particularly suitable for use in parks and forests. **Please note that once bats have inhabited a roost site they may only be disturbed by licensed bat workers.**

Example	Type	Dimension D x W x H (cm)	Target Species	Location
	**1FFH Schwegler Universal Bat Box**	19 x 24.5 x 87.5	Suitable summer roost for all woodland species. Rear compartment: larger species e.g. noctule and Leisler's. Front compartment: crevice-dwelling species, e.g. Nathusius' pipistrelle, Natterer's and Bechstein's.	On trees, masts, towers and flat surfaces at a height of 3 to 6m. In open sunny positions and in groups of 3 to 5 facing different directions. **Please note that once bats have inhabited a roost site they may only be disturbed by licensed bat workers.**
	**2F Schwegler Bat Box (General Purpose) with or without Double Front Panel**	16 x 16 x 33	**Without panel:** Particularly successful with brown long-eared bat. Also used by noctule. **With panel:** Ideal for crevice-dwelling species: pipistrelles, *Myotis* species (particularly Daubenton's), Leisler's and serotine.	On trees or buildings and at a height of 3 to 6m. In open sunny positions and in groups of 3 to 5 facing different directions. **Please note that once bats have inhabited a roost site they may only be disturbed by licensed bat workers.**

Appendix D

Timetable of Works

Timetable of Works

Activity	Timing	Comments	Person Responsible
Install bat and bird boxes	ASAP post development	The project ecologist can provide advice	Landowner (with advice from project ecologist)
Tree and whip planting	ASAP	Ecological watching brief required	Gardening team/landowner
Post development- Bat boxes inspection/cleaning		Annually, if required. **Only by a licensed ecologist**	Landowner, with assistance from the project ecologist
Post development- Bird boxes inspection/cleaning	March or September each year	Annually	Gardening team/landowner
Post development- shrub and tree maintenance – pruning/replacement of failed plants	April-September each year	As required	Gardening team/landowner



Phlorum Limited

Head Office & Registered Office:
Unit 12
Hunns Mere Way
Woodingdean
Brighton
East Sussex
BN2 6AH
T: 01273 307 167

Northern Office:
Ground Floor
Adamson House
Towers Business Park
Wilmslow Road
Didsbury
Manchester
M20 2YY
T: 0161 955 4250

Western Office:
One Caspian Point
Pierhead Street
Cardiff Bay
Cardiff
CF10 4DQ
T: 029 2092 0820

info@phlorum.com
www.phlorum.com

Registered in England & Wales. Reg No. 4967256