

Delivering Engineering Excellence

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Index

1.0	INTRODUCTION.....	3
2.0	PLANTING SCHEMES.....	4
2.1	Rainwater Gardens/Planters.....	4
2.2	Detention Basin & Grassed Rill.....	4
3.0	BIODIVERSITY ENHANCEMENT STRUCTURES.....	6
3.1	Hibernacula	6
5.0	REFERENCES.....	7

Table of Tables

Table 1: Recommended Rainwater Garden/Planter Plants	4
Table 2: Recommended Wetland Plants	5

Table of Figures

Figure 1: Hibernaculum example section	6
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1.0 INTRODUCTION

This document sets out the recommended planting scheme for individual SUDs devices to be constructed at the new agricultural building development at Marcholws, Peniel, SA32 7AA.

The purpose of this document is to set out the appropriate species for each SUDs component. This is to ensure that both the adoptable and non-adoptable features will have suitable flora and fauna.

The species listed in this document are generic to the relative SuDS types and are purely recommendations. The final planting scheme for each SUDs feature (e.g. pond) will be developed by the approved landscape contractor.

2.0 PLANTING SCHEMES

2.1 Rainwater Gardens/Planters

Common Name	Scientific Name	Habitat	Sunlight and Aspect	Origin
Guelder Rose	Viburnum Opulus	Perennial shrub	Any	Native
Dogwood	Comus Sanguinea	Perennial shrub	Any	Native
Stinking Hellebore	Helleborus foetidus	Herbaceous perennial	Full sun or partial shade	Native
Bugle	Ajuga reptans	Rhizomatous perennial	Partial shade	Native
Hemp Agrimony	Eupatorium cannabinum	Herbaceous perennial	Full sun or partial shade	Native
Bellflower	Campanula glomerata	Herbaceous perennial	Full sun or partial shade	Native
Purple Loosestrife	Lythrum salicaria	Herbaceous perennial	Full sun or partial shade	Native
Yellow Flag	Iris pseudocorus	Rhizomatous perennial	Full sun or partial shade	Native
Water Mint	Mentha aquatica	Herbaceous perennial	Full sun or partial shade	Native
Soft Rush	Juncus effusus	Evergreen perennial	Full sun or partial shade	Native
Pendulous Sedge	Carex pendula	Rhizomatous perennial	Full sun or partial shade	Native
Ragged Robin	Lychnis flos-cuculi	Herbaceous perennial	Full sun or partial shade	Native
Marsh Woundwort	Stachys palustris	Rhizomatous perennial	Full sun or partial shade	Native
Royal Fern	Osmunda regalis	Deciduous fern	Any	Native
Male Fern	Dryopteris felix-mas	Deciduous or evergreen fern	Full sun or partial shade	Native
Broad Buckler Fern	Dryopteris dilatata	Deciduous or evergreen fern	Full sun or partial shade	Native

Table 1: Recommended Rainwater Garden/Planter Plants

Please refer to HCE 'Surface Water Drainage Plan for planting locations [Ref. 1].

2.2 Detention Basin & Grassed Rill

Submerged/aquatic plants produce oxygen during the day and provide cover for aquatic life.

Marginal/Emergent plants are ornamental in flower and foliage and soften the harsh outlines of pools. They are also valuable for shading pool margins where algae may otherwise multiply in the warm, shallow water. For small pools, plant separately in 15cm (6in) containers and re-pot when overcrowded.

Common Name	Scientific Name	Habitat	Preferred depth	Origin
Flowering rush	Butomus umbellatus	Emergent	5-15cm	Native
Sedge species	Carex spp	Emergent	Varies	Varies
Yellow iris	Iris pseudacorus	Emergent	Wetland margins	Native
Rush species	Juncus spp	Emergent	Varies	Varies
Reed canary grass	Phalaris arundinacea	Emergent	Wetland margins	Native
Common reed	Phragmites australis	Emergent	Wetland margins	Native
Arrowhead species	Sagittarius spp	Emergent	Varies	Varies
Clubrush species	Schoenoplectus spp	Emergent	Varies	Varies
Common reedmace		Emergent	Up to 30cm	
Duckweed species	Lemna spp	Aquatic	Varies	Varies
Water milfoil species	Myriophyllum spp	Aquatic	Varies	Varies
Lesser spearwort	Ranunculus flammula	Aquatic	15-30cm	Native

Table 2: Recommended Wetland Plants

Please refer to HCE 'Surface Water Drainage Plan' for general planting locations [Ref.1].

3.0 BIODIVERSITY ENHANCEMENT STRUCTURES

3.1 Hibernacula

A hibernaculum will provide a safe space for amphibians and reptiles such as frogs, newts, lizards and snakes to hibernate/brumate over winter.

To construct a hibernaculum:

- In a sunny spot, dig a hole (circular) about 50cm deep and 1~1.5m across.
- Fill with logs, branches, bricks and rocks, leaving plenty of gaps in between.
- Insert entrance tubes (drainpipes) at ground level into the hole.
- Cover the pile with soil (to about 50cm high).
- Plant meadow seeds or long grasses over the mound to provide for summer pollinators.

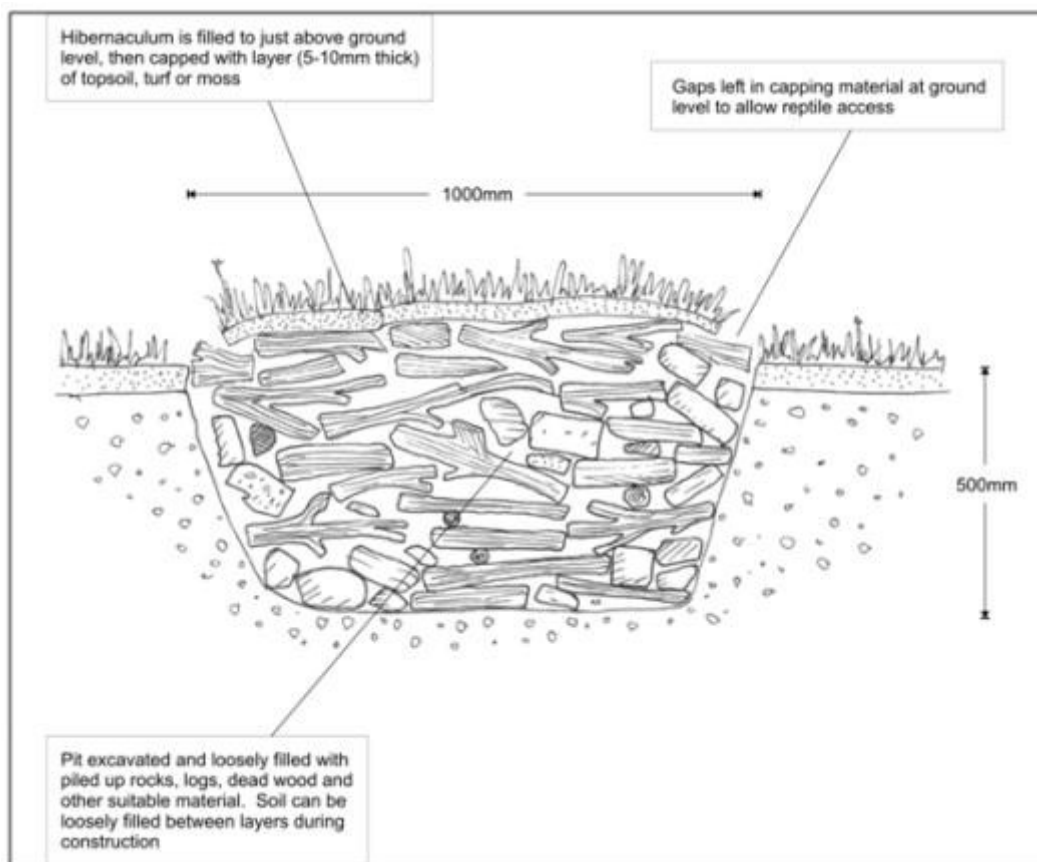


Figure 1: Hibernaculum example section

Hibernacula must be positioned a minimum of 0.5m from and water retention areas (e.g. ponds or wetland). Please refer to HCE 'Surface Water Drainage Plan Sheet' for general locations [Ref.1].

5.0 REFERENCES

1. HCE 'Surface Water Drainage Plan' – HCE-1841-CVD-002-R01
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