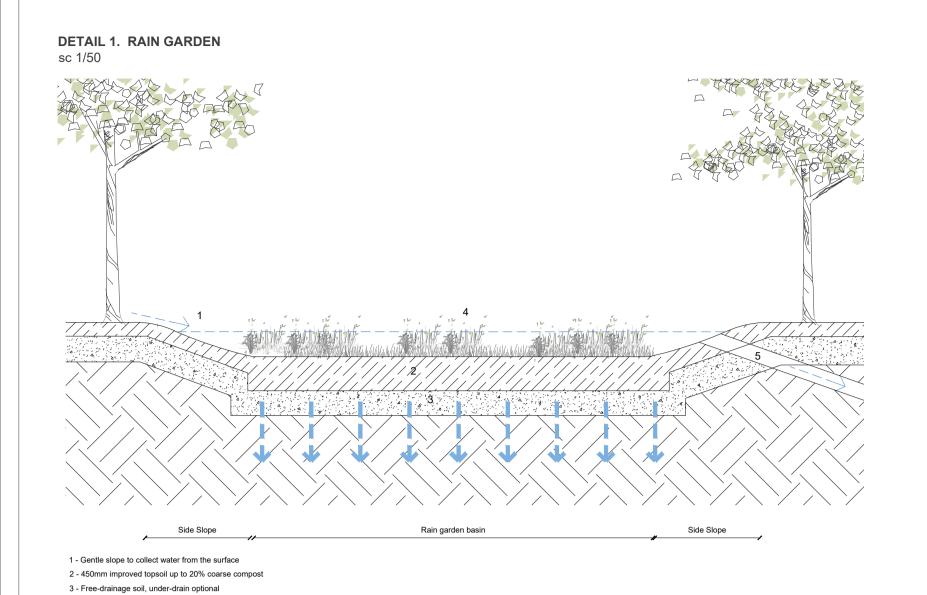
BARNHILL GARDEN VILLAGE

4 - Adapted vegetation, tolerant to wet soil and submersion

5 - Overflow in case of heavy rain or impeded drainage

Sustainable Drainage Systems - Details



DETAIL 2 . PERMEABLE PAVING

1 - Proposed permeable paving

3 - Natural soil

4 - Vegetation area

2 - Open graded sub-base providing c.30% structural strength volume for water storage

sc 1/50

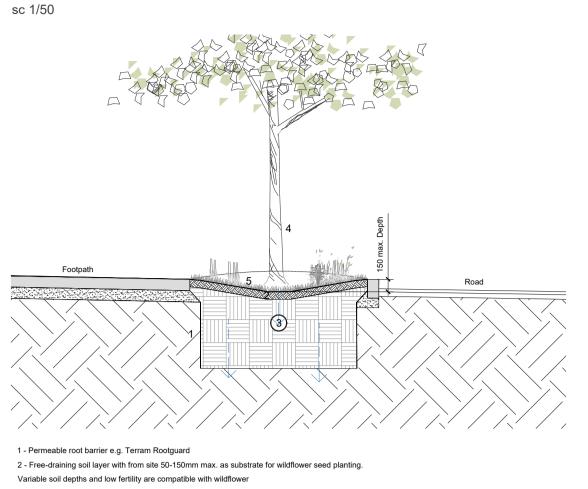
2 - 100mm minimum soil depht with 30-40% water storage capacity 3 - Water proof membrane and root barrier (if needed)

DETAIL 3. GREEN ROOF

4 - Gravel

5 - Drain

sc 1/25



1 - Permeable root barrier e.g. Terram Rootguard

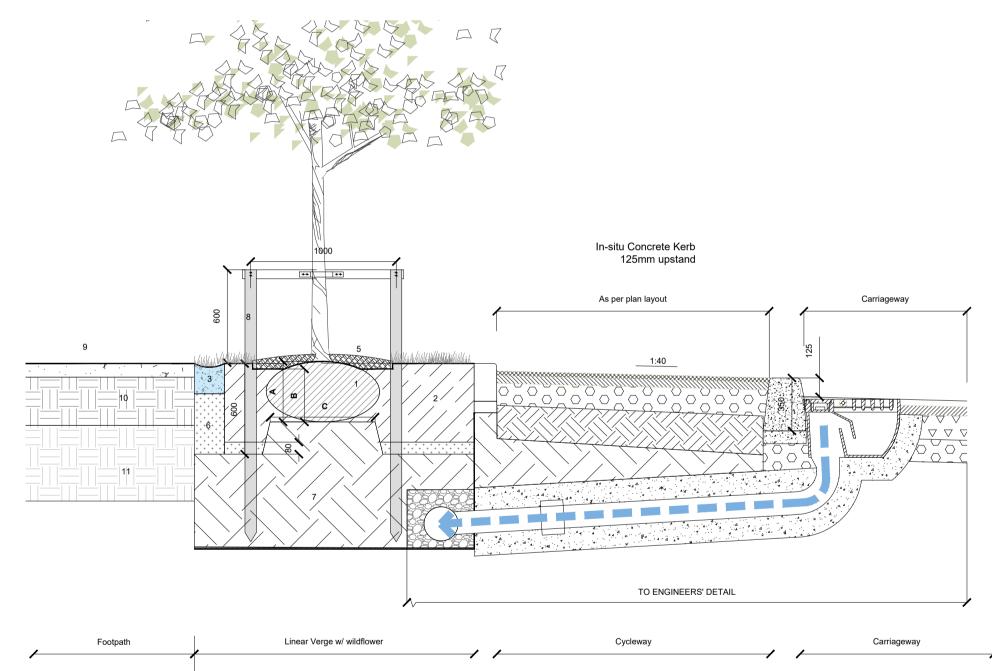
3 - Perforated Drainage Pipe with outfall to storm system (diameter / specification to Engineer's detail); Wrapped with root barrier fabric; Pipe to be centred in the trench generally, but bent around tree

DETAIL 4. INFILTRATION STRIP/ TREE PIT - CROSS SECTION

4 - Tree: rootball (nom. 450mm diameter); note - tree raised locally to elevate the rootball above the

5 - Tree Pit in accordance with current Arboricultural best practice - wide, shallow topsoil area and free-draining subsoil similar to natural soil profile; Good quality topsoil sourced from site or imported and compliant with BS3882:2015'Multipurpose Topsoil' with slow release fertiliser incorporated into backfill; 200mm depth between tree pits for grass; 450mm for shrubs/hedging stock.

DETAIL 5. SUDS - WATER DRAINAGE FROM HARD SURFACE AS WATER SOURCE FOR TREES sc 1/25



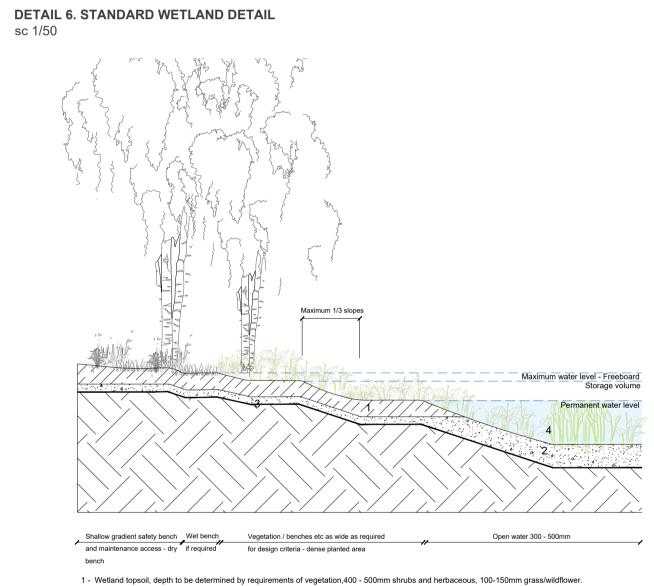
Reinforced Rubber Tree Tie strapping and flatback tree pad (70x42x22mm min.) to be attached using screws and washers.

TREE PIT DIMENSIONS:

A. Depth equal to rootball diameter
 B. Rootball diameter *minus* 50mm to accommodate root flare
 C. Width equal to diameter of rootball

SuDS Concept: Water drains from paths to provide water source for trees and other planting in pit. Water rises through subsoil through capillary action and becomes available for use by the trees.

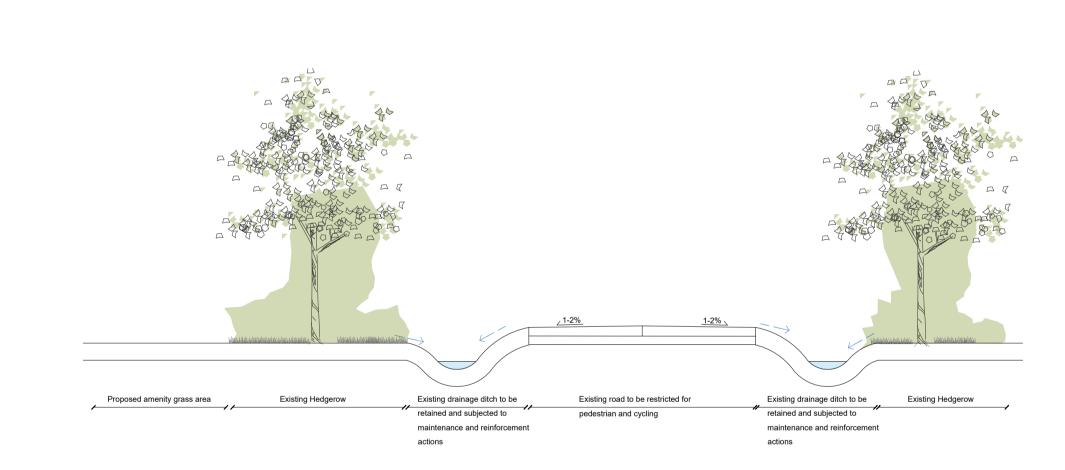
integrated if required; water collected in gullies and fed into tree pit through perforated pipe; otherwise as above.



2 - Layer of subsoil or gravel

3 - Geo-textil liner layer 4 - Water plants

DETAIL 7. EXISTING DITCHES sc 1/100



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17 Rathfarnham Road, D6W

June 2022

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G	27/06/22	SuDS - Details		PS/AP	JG	
REV	DATE	REVISION		DRAWN	CHECKE	
CLIE	ENT					
Ala	anna Home	s & Alcove Irelan	d Four Ltd.			
PRO	JECT TITLE					
		en Village - Propo silla, Co.Dublin	sed develo	pment a	at	
PRO	JECT ARCHITEC	т				
CD	P Architects	s / CWOB Architect	ts / Delphi De	esign		
SHE	ET TITLE					
Su	stainable U	Irban Drainage S	ystems Deta	ails		
SHEET NO.			SHE	SHEET SIZE		
21154_LP_G_SuDS_D			A1	A1		
SCALE			REVI	REVISION		
as shown			G	G		
STAGE				DATE		

Planning Stage

Tree rootball (nom. 450mm diameter); note - tree raised locally to elevate the rootball above the rain garden level. Good quality topsoil sourced from site with slow release fertiliser incorporated into backfill; 200mm depth between tree pits for grass; 450mm for shrubs/hedging

stock.

Filter drain with 200mm topsoil to direct water into subsoil (4).

Free Draining Fill / Subsoil (to proposed levels and falls).

Bark mulch, 75mm depth.

80mm layer of farmyard manure or a suitable compost material as approved by ER.

Free draining subsoil / structural subsoil with drainage capacity.

Double stake and crossbar; timber uprights 75mm dia. and crossbar min. 75x35mm; crossbar attached to uprights with timber screws; 40mm min. Nylon

Concrete Paving to engineer's detail
 As-Built Linear Tree Pit Structural Fill (Built to original road layout)
 As-Built Linear Tree Pit Structural Tree Soil (can function as additional rooting space).

Above detail developed with input from Arborist based on recent research and experience.