
DISCHARGE OF CONDITION 4B

THE FACTORY

REF. 119890/VO/2018

PUBLIC REALM



DOCUMENT CONTROL

FILE NAME
PL1803-ID-023-00 THE FACTORY - DISCHARGE OF CONDITION 4B

PREPARED BY (INITIALS) TF		
CHECKED BY (INITIALS) AM		
LANDSCAPE ARCHITECT PLANIT	TRANSPORT VECTOS	
ACCESS DAVID BONNETT	LIGHTING AND MEP BDP	
CIVILS AND STRUCTURAL ENGINEER BURO HAPPOLD	ARCHITECT OMA/RYDER ARCHITECTURE	
SECURITY SQR/ASP LIMITED	PROJECT MANAGEMENT MANCHESTER CITY COUNCIL	
COST CONSULTANT GARDINER & THEOBALD/TURNER & TOWNSEND	PLANNING DELOITTE	

Condition 4B

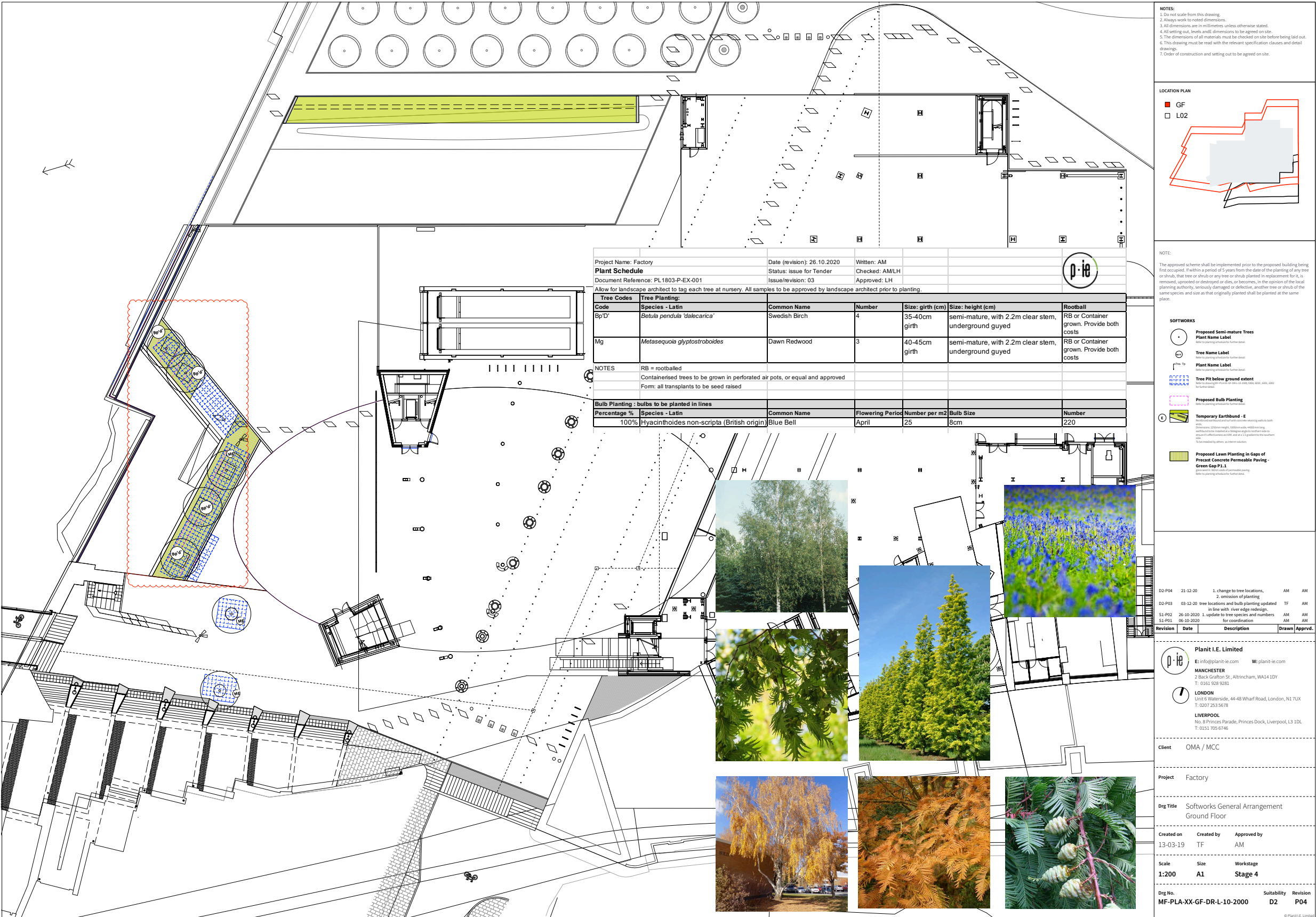
Notwithstanding the details submitted with the application within 6 months of the granting of this consent a programme for submission of final details of the public realm works as shown in Factory Public Realm Design Document dated December 2016 by OMA and dwg numbered XX200 shall be submitted and approved in writing by the City Council as Local Planning Authority. The programme shall include an implementation timeframe and details of when the following details will be submitted:

(b) Details of the proposed tree species within the public realm including proposed size, species and planting specification including tree pits and design;

and details shall then be submitted and approved in writing by the City Council as local planning authority in accordance with the programme as agreed above.

The approved scheme shall be implemented prior to the proposed building being first occupied. If within a period of 5 years from the date of the planting of any tree or shrub, that tree or shrub or any tree or shrub planted in replacement for it, is removed, uprooted or destroyed or dies, or becomes, in the opinion of the local planning authority, seriously damaged or defective, another tree or shrub of the same species and size as that originally planted shall be planted at the same place.

1.1



Trees provide a vertical framework and seasonal colour to animate the space throughout the year. The majority of the trees are planted informally along the river's edge .

Overall trees will be provided within the public realm scheme, and this contributes to the biodiversity and greening of the site whilst also providing an appropriate replacement for the four trees lost as a result of the proposals (two of which were moderate quality and two of low quality). There are no further existing trees that will require to be retained.

Tree species have been selected for their suitability to cope within an urban and windy site environment. Sites within these locations are associated with higher stress levels resulting from poorer access to nutrients and water, greater pollution and higher temperatures. The trees located on low points are in addition able to cope with short periods of flooding should a flood event occur, otherwise they are able to cope with periods of drought.

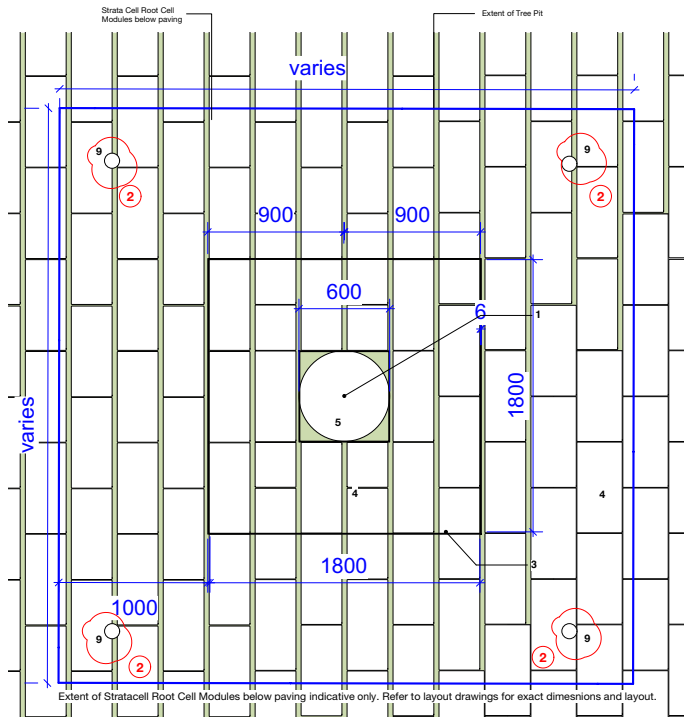
Festival Square to the north of the site is being framed by tree planting from the adjacent development.

A small area of grass planting is proposed along the river between concrete paving to provide a softer edge. We are proposing to accompany the grass planting with some Bluebell bulb planting within the gaps.

										
Project Name: Factory				Date (revision): 26.10.2020		Written: AM				
Plant Schedule				Status: issue for Tender		Checked: AM/LH				
Document Reference: PL 1803-P-EX-001				Issue/revision: 03		Approved: LH				
Allow for landscape architect to tag each tree at nursery. All samples to be approved by landscape architect prior to planting.										
Tree Codes	Tree Planting:									
Code	Species - Latin	Common Name	Number	Size: girth (cm)	Size: height (cm)		Rootball			
Bp'D'	<i>Betula pendula 'dalecarica'</i>	Swedish Birch	4	35-40cm girth	semi-mature, with 2.2m clear stem, underground guyed		RB or Container grown. Provide both costs			
Mg	<i>Metasequoia glyptostroboides</i>	Dawn Redwood	3	40-45cm girth	semi-mature, with 2.2m clear stem, underground guyed		RB or Container grown. Provide both costs			
NOTES	RB = rootballed									
	Containerised trees to be grown in perforated air pots, or equal and approved									
	Form: all transplants to be seed raised									
Bulb Planting : bulbs to be planted in lines										
Percentage %	Species - Latin	Common Name	Flowering Period	Number per m2	Bulb Size		Number			
100%	Hyacinthoides non-scripta (British origin)	Blue Bell	April	25	8cm		220			



Design Intent: Provide Fabrication Drawings for Landscape Architects Approval



4 Plan - Semi-mature Tree in Hard Landscape (Green Gap Paving)
Scale: 1:20

1. Semi-Mature Tree Rootball and Wrapped
Refer to planting schedule for details

2. 1168mm Deep Tree Pit Trench
300mm topsoil to BS3882:2007, 600mm subsoil to BS8601:2013, 50-100mm drainage layer

3. Tree Grille
Concrete Tree Grille Unitsto potentially sit on steel frame subject to further detail
Size: 1.8m x 1.8m
Structural steel frame if required to tree grille - to take vehicular loading (BS EN 124 Class D400), anchored to concrete strip foundation.

4. Concrete Grass Gap Slab Paving - P1
Refer to drawing MF-PLA-XX-GF-DR-L-10-5000 for detail.

5. Gravel Mulch
Aperture in tree grille to base of tree to have aggregate fill, to be built up in graduated layers as follows:
Bottom layer - lightly hand-compacted open graded aggregate 8-20mm gauge
Middle layer - lightly hand-compacted intermediate dense graded stone aggregate 2-8mm gauge
Upper layer - 10mm gravel mulch. Supplier: CED oea. Installed to suppliers' instructions, submit proposals. Colour dark grey, subject to final detail design.

6. Irrigation System
100mm diameter heavy cast aluminium inlet and swivel vented lid. 60mm square. Cap to sit flush with surrounding surface material.

7. Geotextile
Terram 2000 Membrane.

8. Stratacell Root Cell Modules - 60 series
Dimension: 500 x 500 x 250mm
2 modules deep, backfilled with subsoil, (or equal and approved). General installation and load bearing requirements to be in accordance with manufacturer's recommendations. Final layout to allow min. 12-14.5m3 soil volume and to be adjusted on site if required. Manufacturer to produce layout for approval.

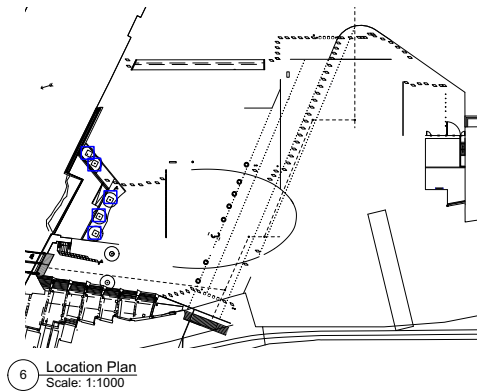
9. Aeration System
Cap to sit flush with surrounding surface material.
To be Greenleaf Precinct Watering System RRRPRECINCT1-version fit for application on tree pit cover, or equivalent 100mm diameter heavy cast aluminium inlet and swivel vented lid - 'RootRain Arborvent 150'. 60mm square circuit and vertical pipes.

10. Active Drainage
Using flexible, perforated plastic pipe within 600mm wide channel. 10-15mm gauge clean stone backfill. Subject to percolation test results and engineers detail.

11. ReRoot 2000 Linear Root Barrier
Installed around the upper 1500mm of the tree pit trench along all sides, to Supplier's specification (Green Blue Urban).

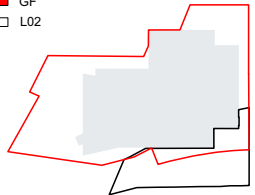
12. Drainage Layer
50-100mm clean stone. Base of tree pit trench loosened and shaped. As shown to aid root penetration and pit drainage.

13. Tree anchoring
Deadman Fixing Kit - Plati-Mat® - RF2RDMP or equal and approved.

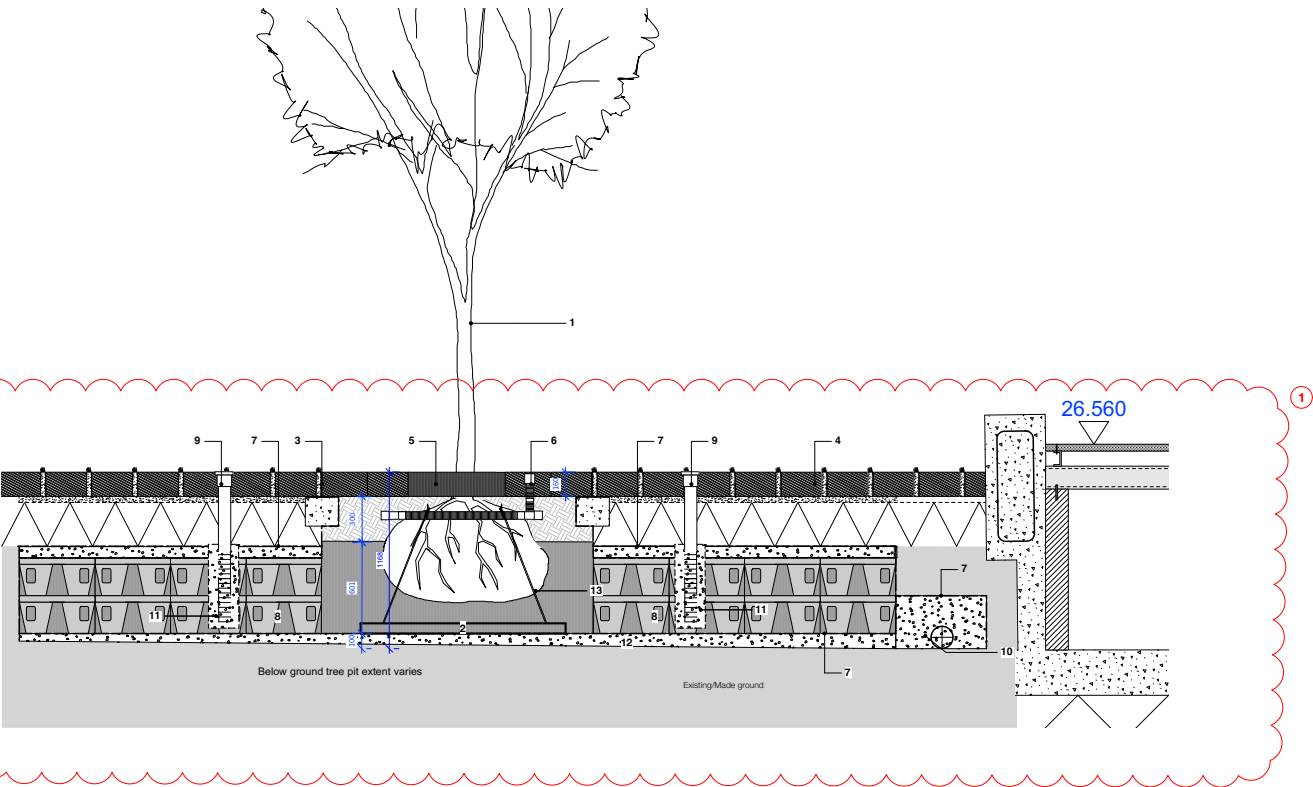


NOTES:
1. Do not scale from this drawing.
2. Always work to noted dimensions.
3. All dimensions are in millimetres unless otherwise stated.
4. All setting out, levels and dimensions to be agreed on site.
5. The dimensions of all materials must be checked on site before being laid out.
6. This drawing must be read with the relevant specification clauses and detail drawings.
7. Order of construction and setting out to be agreed on site.

LOCATION PLAN
■ GF
□ L02



NOTE
PERCOLATION TEST
To be performed on tree pits and planting areas where insufficient permeability might be an issue.
Perform the test in every tree pit or agree with the landscape architect on selected representative locations.
Instructions for performing a percolation test:
1. With a spade or soil auger, dig a hole 45-60 cm deep at the bottom of the proposed tree pit. The hole diameter should be a minimum of 10 cm. The diameter of the hole should be uniform from top to bottom with the bottom being flat.
2. Pre-wetting: Fill hole with water to the top and allow to stand for at least an hour to pre-wet the soil.
3. Refill hole to within a 5 cm of the top. Don't overflow the hole.
4. To aid in measurement, place a stick across the top of the hole and use a ruler or measuring tape to mark periodic drops in water level.
5. Allow the hole to drain for at least one hour. A longer period of time (2 to 3 hours) will give a more accurate reading of average percolation rates.
6. Determine the average drop in water level per hour and refer to the table below to interpret results.
If water level in hole drops:
-- Less than 1.25 cm per hour: Poorly drained and suited to wet-site species
-- 1.25-2.50 cm per hour: Moderately well drained and acceptable for many species including wet site species
-- More than 2.5 cm per hour: Well drained and suitable for all species including sensitive species.
The site manager of the main contractor/client must be informed of the tests and must be involved in the decision of the timing prior to undertaking the tests.
Please report the results to the landscape architect and the site manager prior to filling the tree pit.



5 Semi-mature Tree in Hard Landscape Detail (Green Gap Paving)
Scale: 1:20

D2-P06	04-01-21	1. Additional Geotextile membrane added around drainage layers.	TF	AM
D2-P05	02-12-20	2. Aeration system shown on plan view	TF	AM
S1-P04	30-10-20	Tree pit locations and quantity updated	TF	AM
S1-P03	23-10-20	1. Stratacell module depth updated. 2. Paving buildup depth updated. 3. Tree pit soil depth updated to tie in with new stratacell depth.	TF	AM
S1-P02	05-10-20	1. Paving unit dimensions updated.	JH/AM	AM
S3-P01	08-01-20	2. Paving unit depth and tree pit updated. 3. Tree grille dimensions updated.	AM	AM

Revision	Date	Description	Drawn	Apprvd.
----------	------	-------------	-------	---------

Planit I.E. Limited
E: info@planit-ie.com W: planit-ie.com
MANCHESTER
2 Back Grafton St., Altrincham, WA14 1DY
T: 0161 928 9281
LONDON
Unit 6 Waterside, 44-48 Wharf Road, London, N1 7UX
T: 0207 253 5678
LIVERPOOL
No. 8 Princes Parade, Princes Dock, Liverpool, L3 1DL
T: 0151 705 6746

Client OMA / MCC

Project Factory

Drg Title Typical Tree Pit Details
TP1

Created on 16-09-19 Created by TF Approved by AM

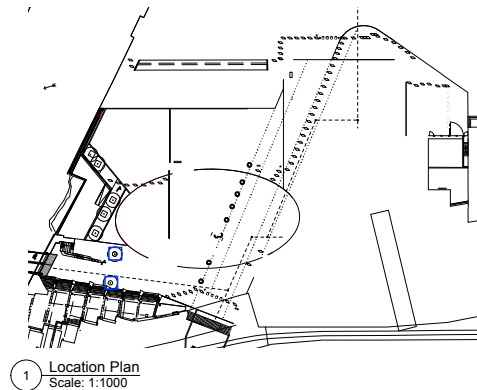
Scale 1:20 Size A1 Workstage Stage 4

Drg No. MF-PLA-XX-GF-DR-L-10-6001 Suitability D2 Revision P06

© Planit I.E. Limited

Diagram illustrating the layout of a circular Stratacell Root Cell Module. The module is circular with a diameter of 1500. It features a central circular area with a diameter of 600, which is further divided into four quadrants. The outer ring of the module is labeled "varies" and has a diameter of 1500. The inner circle is labeled "600" and has a diameter of 600. The outer ring is divided into four quadrants, with the top-right quadrant labeled "1" and the bottom-right quadrant labeled "3". The bottom-left quadrant is labeled "4" and the top-left quadrant is labeled "2". The central area is labeled "6" and has a diameter of 600. The diagram is enclosed in a blue rectangular frame with dimensions 1500 by 1500. The text "varies" is written in blue at the top and bottom of the frame. The text "1500" is written in blue at the top of the frame. The text "600" is written in blue at the top of the inner circle. The text "6" is written in blue at the top of the central area. The text "1", "2", "3", and "4" are written in black at the top-right, top-left, bottom-right, and bottom-left of the inner circle respectively.

- 9. Aeration System - Arboret**
Cap to sit flush with surrounding surface material.
To be Greenleaf Precinct Watercovering or RRP/REINCT1-version fit for application on tree pit cover, or equivalent 100mm diameter heavy cast aluminium inlet and swivel vented lid - 'RootRain Arboret 150'.
60mm diameter circuit and vertical pipes.
- 10. Active Drainage**
Using a flexible, perforated plastic pipe within 600mm wide channel.
10-15mm gauge clean stone backfill. Subject to pecculation test results and engineers detail.
- 11. ReRoot 2000 Linear Root Barrier**
Installed around the upper 1500mm of the tree pit trench along two sides, to Supplier's specification (Green Blue Urban).
- 12. Drainage Layer**
100mm clean stone. Base of tree pit trench loosened and shaped. As shown to aid root penetration and pit drainage.
- 13. Tree anchoring**
Deadman Fixing Kit - Plati-Mat® - RF2RDMp or equivalent and approved.
- 14. Resin-bound gravel**
50mm depth, subject to confirmation by engineer if depth suitable for vehicular overrun suitable to class D400.
colour subject to further detail.
- 15. Type 3 MOT**
no fine or lime content.
to make up levels between concrete foundation to tree grille and topsoil.



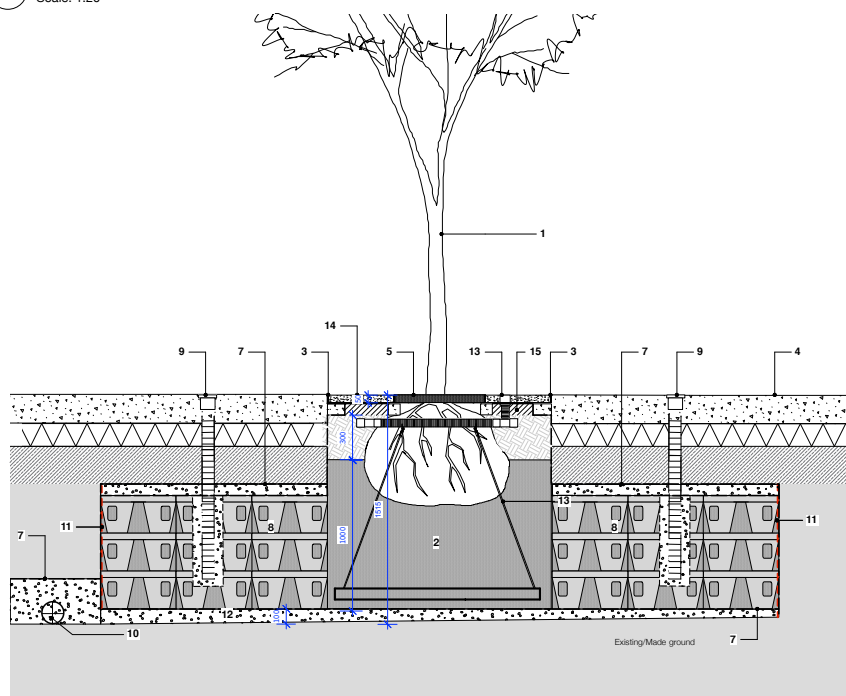
NOTES:

1. Do not scale from this drawing.
2. Always work to noted dimensions.
3. All dimensions are in millimetres unless otherwise stated.
4. All setting out, levels and ϕ dimensions to be agreed on site.
5. The dimensions of all materials must be checked on site before being laid out.
6. This drawing must be read with the relevant specification clauses and detail drawings.
7. Order of construction and setting out to be agreed on site.

☒ GF
☐ L02



2 Plan - Semi-mature Tree in Hard Landscape (In-situ Concrete)
Scale: 1:20



3 Semi-mature Tree in Hard Landscape Detail (In-situ Concrete)
Scale: 1:20

NOTE

PERCOLATION TEST

To be performed on tree pits and planting areas where insufficient permeability might be an issue.

Perform the test in every tree pit or agree with the landscape architect on selected representative locations.

Instructions for performing a percolation test:

1. With a spade or soil auger, dig a hole 45-60 cm deep at the bottom of the proposed tree pit. The hole diameter should be a minimum of 10 cm. The diameter of the hole should be uniform from top to bottom with the bottom being flat.
2. Pre-wetting: Fill hole with water to the top and allow to stand for at least an hour to pre-wet the soil.
3. Refill hole to within a 5 cm of the top. Don't overflow the hole.
4. To aid in measurement, place a stick across the top of the hole and use a ruler or measuring tape to mark periodic drops in water level.
5. Allow the hole to drain for at least one hour. A longer period of time (2 to 3 hours) will give a more accurate reading of average percolation rates.

6. Determine the average drop in water level per hour and refer to the table below to interpret results.

If water level in hole drops

- Less than 1.25 cm per hour: Poorly drained and suited to wet-site species
- 1.25-2.50 cm per hour: Moderately well drained and acceptable for many species including wet site species
- More than 2.5 cm per hour: Well drained and suitable for all species including sensitive species.

The site manager of the main contractor/client must be informed of the tests and must be involved in the decision of the timing prior to undertaking the tests.

Please report the results to the landscape architect and the site manager prior to filling the tree pit.

D2-P06	09-02-21	Planning	AM	AM
D2-P05	04-01-21	Additional Geotextile membrane added around drainage layers.	TF	AM
S1-P03	2020-10-26	1. update to build up depth and tree grill detail	AM	AM
S1-P02	2020-10.05	-	JH/AM	AM
S3-P01	08-01-20	for comment	AM	AM

Revision	Date	Description	Drawn	Apprvd.
----------	------	-------------	-------	---------



Planit I.E. Limited

E: info@planit-ie.com **W:** planit-ie.com

MANCHESTER

2 Back Grafton St, Altrincham, WA14 1DY
T: 0161 928 9281

LONDON

Unit 6 Waterside, 44-48 Wharf Road, London, N1 7UX
T: 0207 253 5678

LIVERPOOL

No. 8 Princes Parade, Princes Dock, Liverpool, L3 1DL
T: 0151 705 6746

OMA / MCC

Client	OMA / MCC
--------	-----------

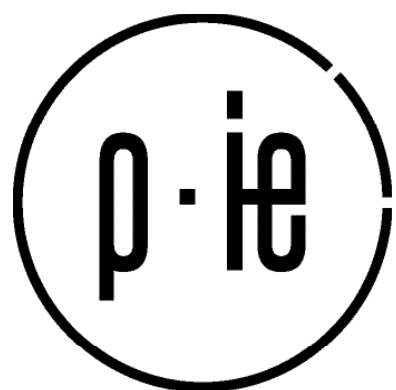
Project	Factory
---------	---------

Drg Title Typical Tree Pit Details
Ground Floor

Created on	Created by	Approved by
16-09-19	TF	AM

Scale	Size	Workstage
1:20	A1	Stage 4

Drg No.	Suitability	Revision
MF-PLA-XX-GF-DR-L-10-6002	D2	P06



MANCHESTER

2 Back Grafton Street
Altrincham,
WA14 1DY
+44 (0)161 928 9281

LONDON

Waterside, 44-48 Wharf Road
London,
N1 7UX
+44 (0)207 253 5678

LIVERPOOL

Tempest 5.3, 12 Tithebarn Street,
Liverpool,
L2 2DT
+44 (0)151 363 1230