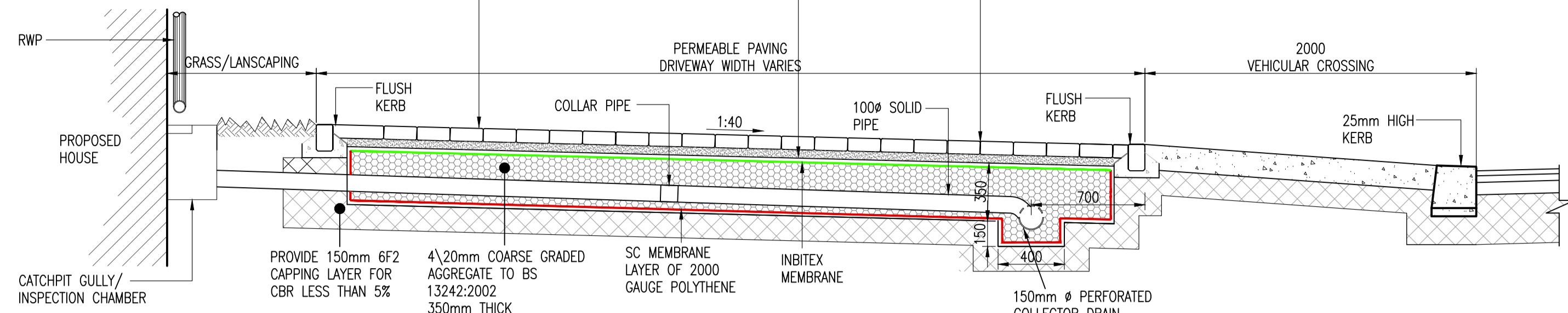


PERMEABLE PAVING:
200X100X80mm THICKNESS TOBERMORE HYDROPAVE BLOCK OR SIMILAR APPROVED LAID IN HERRINGBONE PATTERN.
MINIMUM JOINT WIDTH = 6mm AREA OF VOIDS MUST EXCEED 6% OF TOTAL PAVED SURFACE AREA

50mm THICKNESS OF GRADED 6.3 - 2.0mm GRIT TO BS 13242:2002

6mm JOINT FILLED WITH GRADED 6.3 - 2.0mm GRIT TO BS 13242:2002



TYPICAL SECTION THROUGH PRIVATE DRIVEWAY PERMEABLE PAVING
SCALE 1:25

WHAT ARE TREE PITS?
Tree pits collect stormwater runoff from small carpark areas or roads. Runoff filters through the tree roots and surrounding soil mix, trapping sediment and pollutants before flowing to a piped stormwater system.

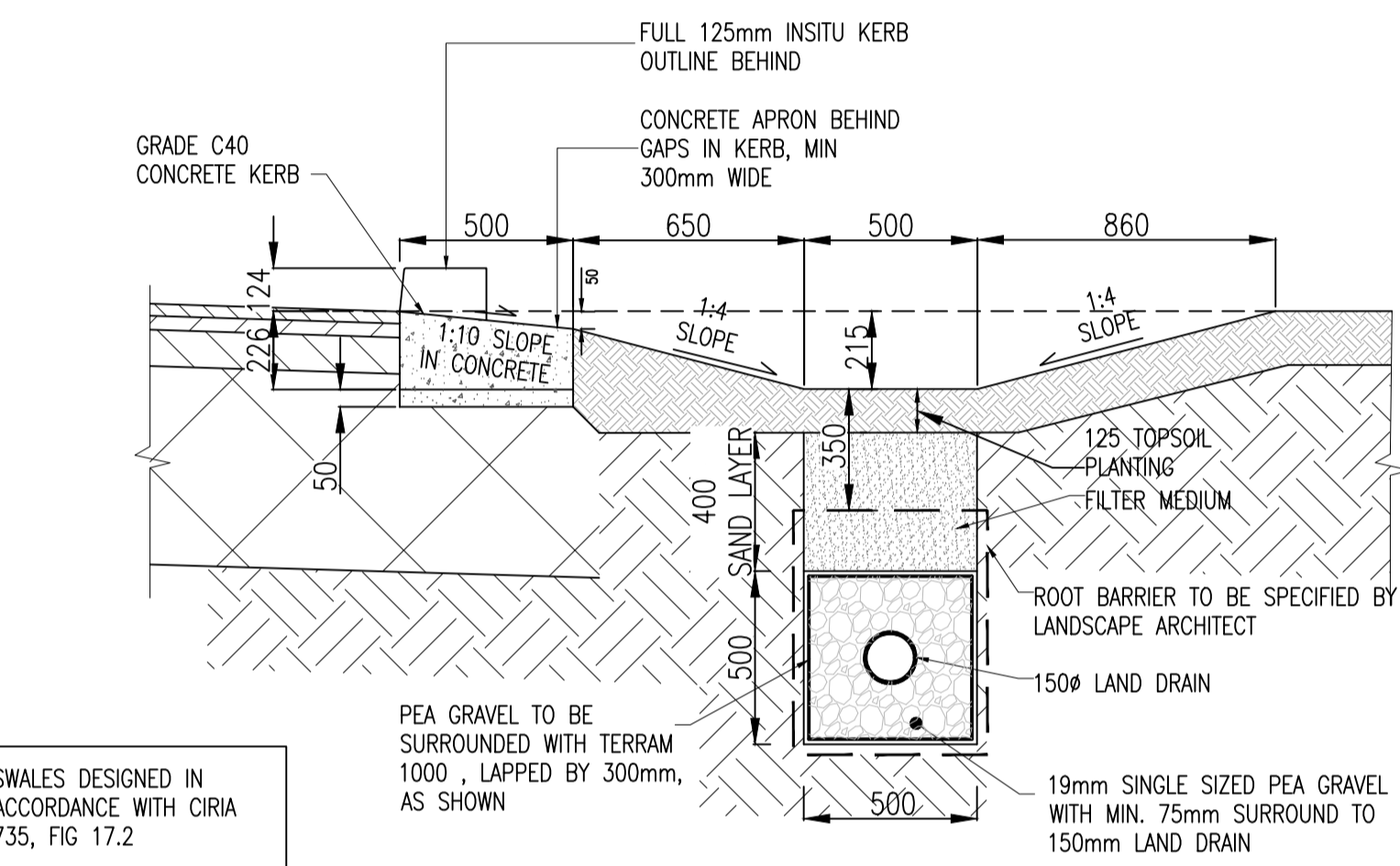
TREE PITS Construction Guide
STORMWATER DEVICE INFORMATION SERIES

ELEVEN KEY COMPONENTS OF TREE PITS

- 1. Kerb and channel**
Channels stormwater flows from road or surrounding hard surface to tree pit.
- 2. Kerb inlet**
Large opening in kerb to direct water to tree pit. May be a side entry splay pit built into footpath.
- 3. Plant covers**
Grate or similar at base of tree trunk to protect roots.
- 4. Plants**
Usually one large shrub or tree to help filter runoff, look attractive, and withstand extreme wet and dry periods.
- 5. Ponding area**
Area around tree set lower than surrounding ground where stormwater ponds before filtering through soil.
- 6. Mulch layer (if included)**
Prevents weeds and helps soils stay moist.
- 7. Plant soil**
Mix of sand, topsoil and compost, without clay and silt to drain well.
- 8. Root barrier (if included)**
Specially manufactured free-draining geotextile fabric used to line tree pit, preventing roots growing outside area and causing damage to utility services, building foundations and roadways.
- 9. Waterproof lining (if included)**
Used to avoid saturating tree pit in areas of poor draining soils or where groundwater lies close to ground surface.
- 10. Underdrain**
Set in base of pit to collect water draining through pit and direct to stormwater network.
- 11. Overflow and observation well (if included)**
Is a standpipe or channel grate to divert higher than usual flows from tree pit to piped stormwater network. Observation well, similar to capped riser, to monitor water depth and drainage rates in pit. Discharge and overflow pipes may also have clean-out and inspection points, usually capped.

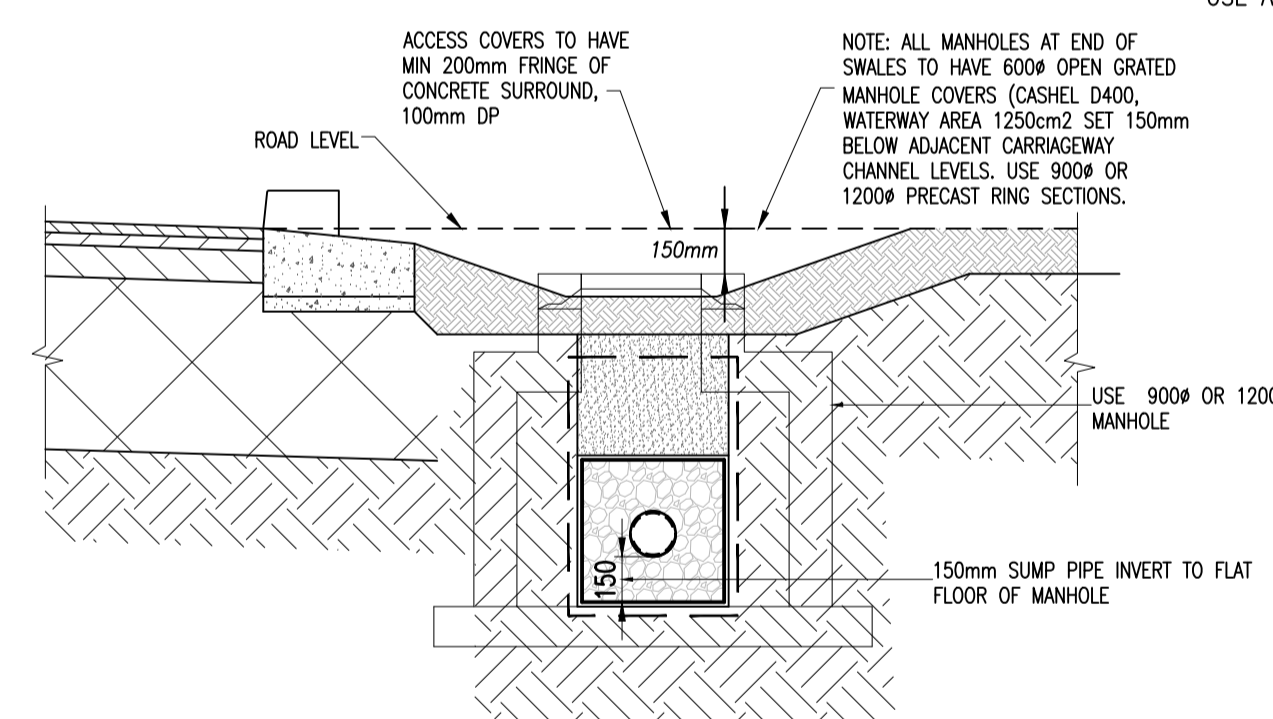
TREE PIT DETAIL (N.T.S.)

USE A PROPRIETARY BIO-RETENTION SUDS TREE PIT, OR SIMILAR APPROVED*.



SECTION OF SWALE
SCALE 1:20

SWALES DESIGNED IN ACCORDANCE WITH CIRIA 735, FIG 17.2



SECTION OF SWALE THROUGH LAND DRAIN OVERFLOW MANHOLE
SCALE 1:20

Dimensions and Weights
General arrangement drawings of all units are available for download from: <http://www.hydro-int.com/en-gb/products/StormTrain-downstream-defender/>

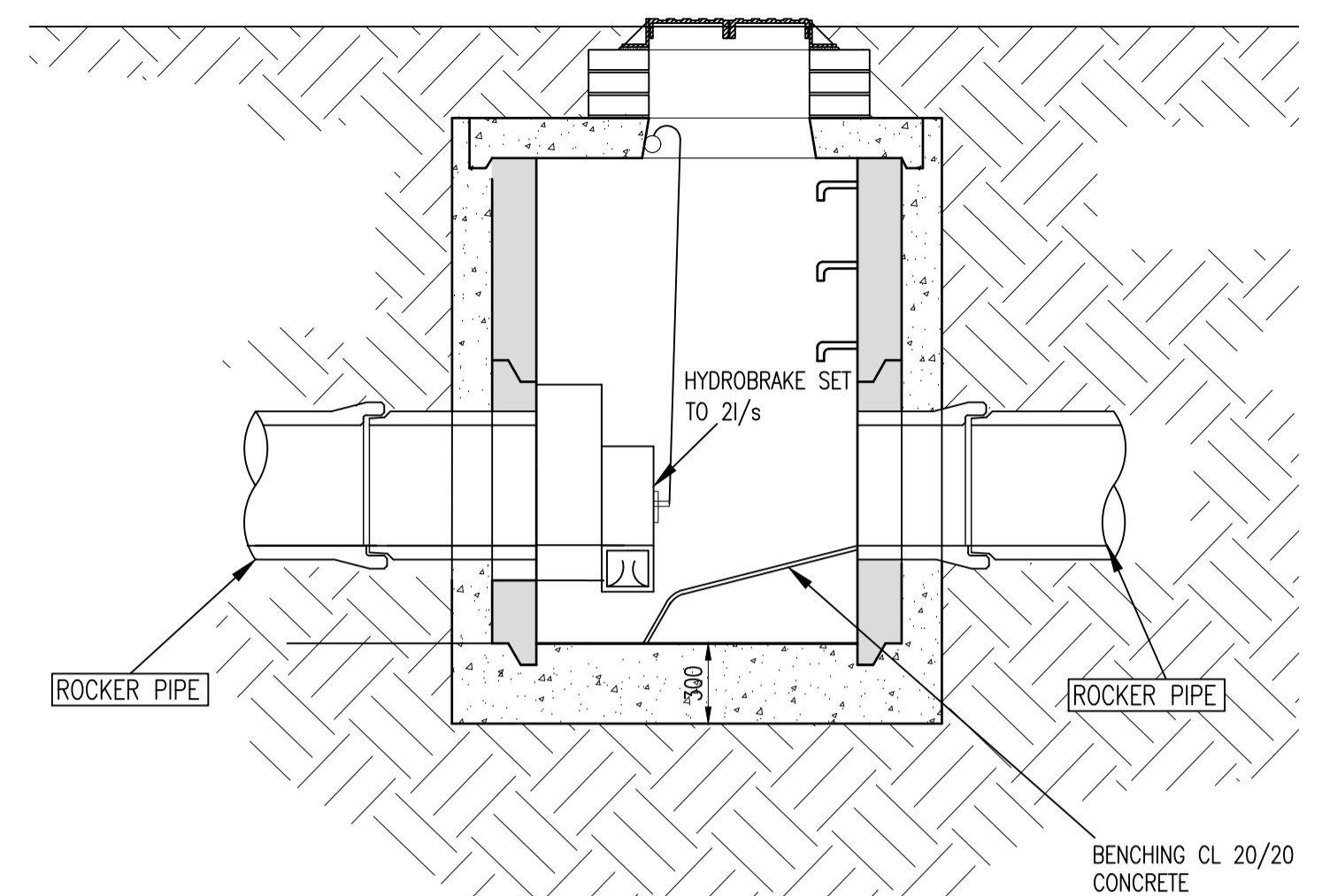
Unit	External Diameter of Unit (mm)	Inlet & Outlet Pipe Diameter (mm)	Depth (m)		Lift Weight (t)	
			A	B		
1.2 m Sealed Manhole System with HD Cover Slab	1460	300	1.910	2.600	2.830	
HD Cover Slab (a)					0.230	0.6
Base Section					0.825	1.5
1.8 m Sealed Manhole System with HD Cover Slab	2160	450	2.510	3.800	4.050	
HD Cover Slab (a)					0.280	1.4
Base Section					1.235	5.0
2.5 m System with HD Cover Slab	2850	600	2.950	4.750	4.950	
HD Cover Slab (a)					0.200	2.8
Base Section					1.750	8.0
3.0 m System with HD Cover Slab	3350	750	3.125	5.000	5.200	
HD Cover Slab (a)					0.200	4.6
Base Section					2.200	12.5

Notes:
a) Base and Top Section component depths are shown as the total height during transportation / before assembly on site. The total depth is the depth of the assembled unit.
b) Cover slabs are heavy duty, suited for highways loading and are supplied with one or two access openings for maintenance.
c) Inlets and outlets are supplied with cast-in holes only. No stub pipes are provided.

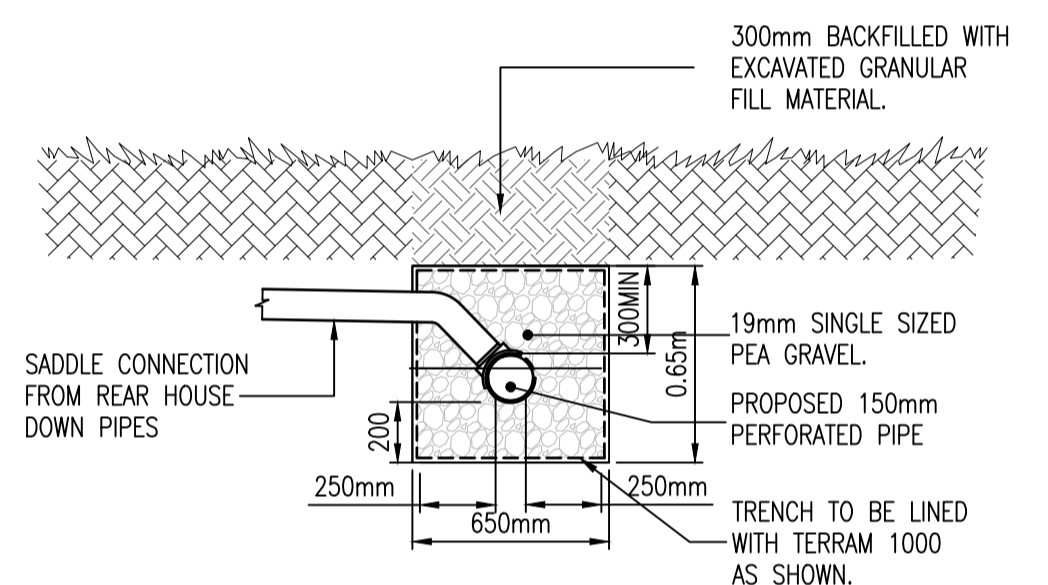
Dimensional Tolerances: Height ± 25 mm; Diameter ± 12 mm; Wall Thickness ± 10 mm

Table 2 - Downstream Defender® dimensions and weights.

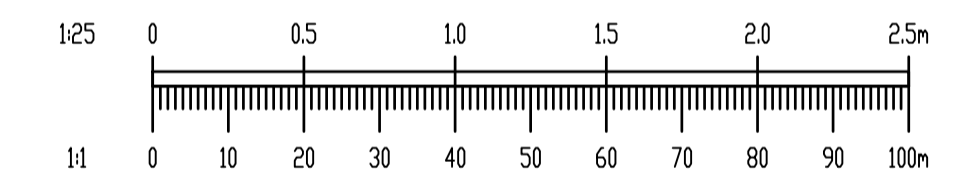
NOTES:
1. DO NOT SCALE. USE FIGURED DIMENSIONS ONLY.
2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ARCHITECTURAL AND ENGINEERING DRAWINGS.



PROPOSED HYDROBRAKE MANHOLE
SCALE 1:25
NOTE: FOR FURTHER DETAILS ON MANHOLE CONSTRUCTION PLEASE REFER TO DRAWING 13-119 P4210 & 4211 FOR DETAILS



FILTER DRAIN DETAIL
SCALE 1:25 @ A1



REV.	DATE	AMENDMENT	DRN	APPD

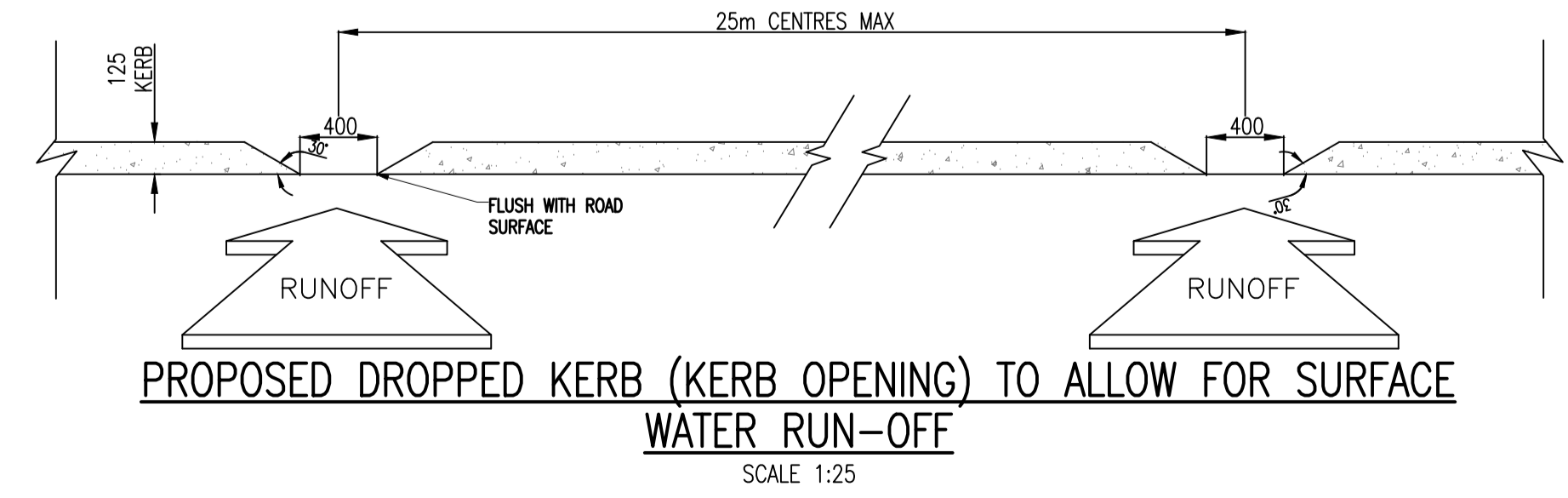
STATUS **FOR PLANNING NOT FOR CONSTRUCTION**

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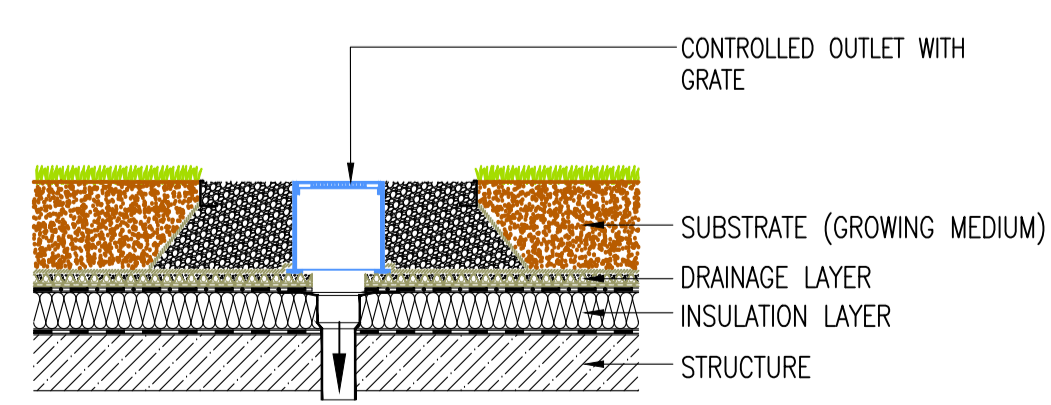
CLIENT **GERARD GANNON PROPERTIES**
ARCHITECT **CONROY CROWE KELLY / WILSON ARCHITECTURE**
PROJECT **PROPOSED STRATEGIC HOUSING DEVELOPMENT AT BELCAMP, DUBLIN 17**

SUDS DETAILS

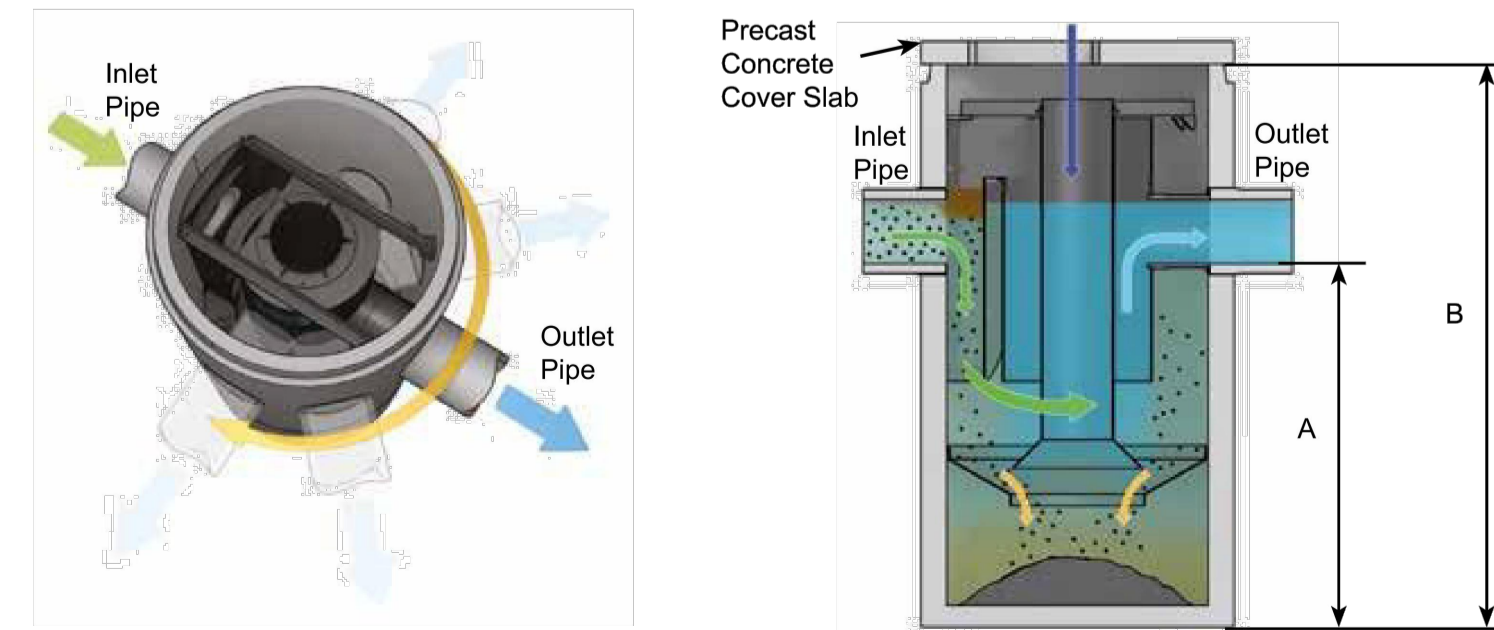
DRAWN PJD	DESIGNED DA	APPROVED MD	DATE APRIL 2022
SCALE AS SHOWN @ A1	JOB NO. 19-114	DRG. NO. P2320	REVISION



PROPOSED DROPPED KERB (KERB OPENING) TO ALLOW FOR SURFACE WATER RUN-OFF
SCALE 1:25



GREEN ROOF PODIUM OUTLET
SCALE 1:25



DOWN STREAM DEFENDER
N.T.S.