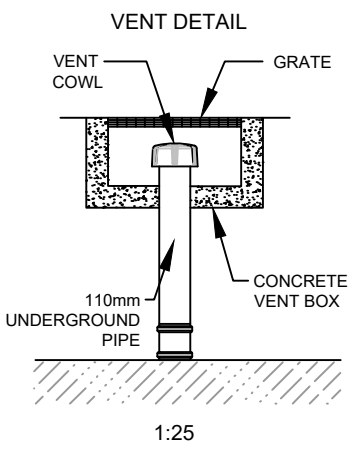
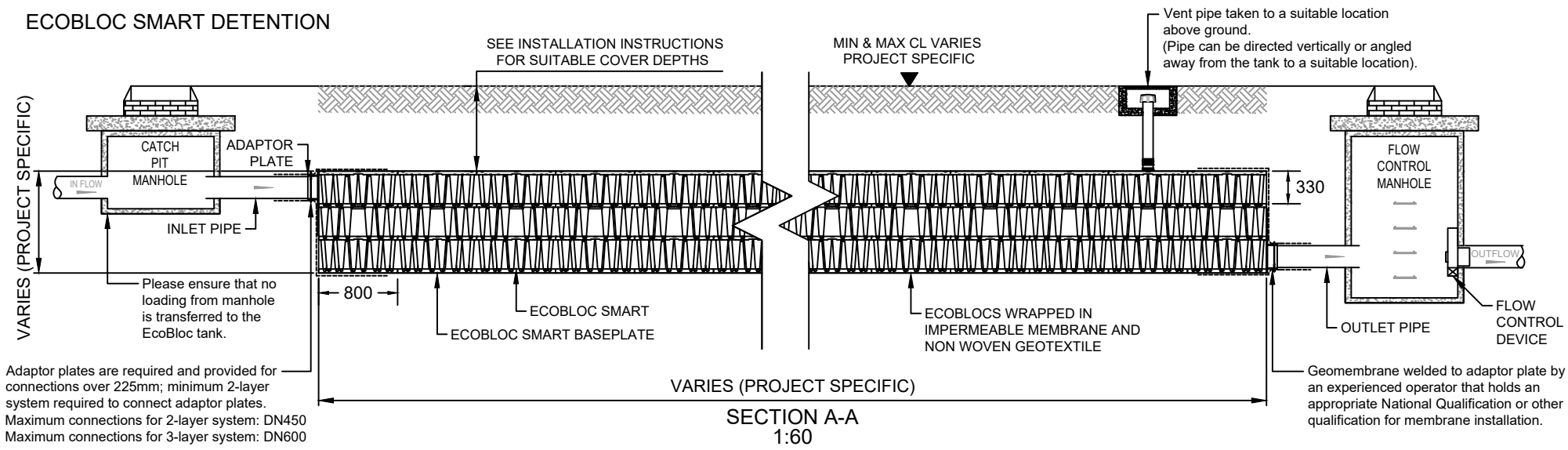


ECOBLOC SMART DETENTION



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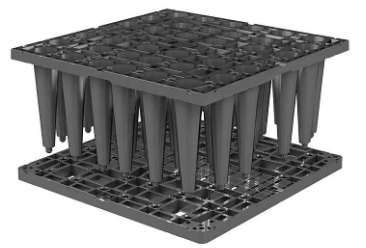
DO NOT SCALE - IF IN DOUBT ASK

Notice: This drawing is issued only as a guideline and is an estimate of the materials required to construct the drainage system, it should not be used for construction purposes.

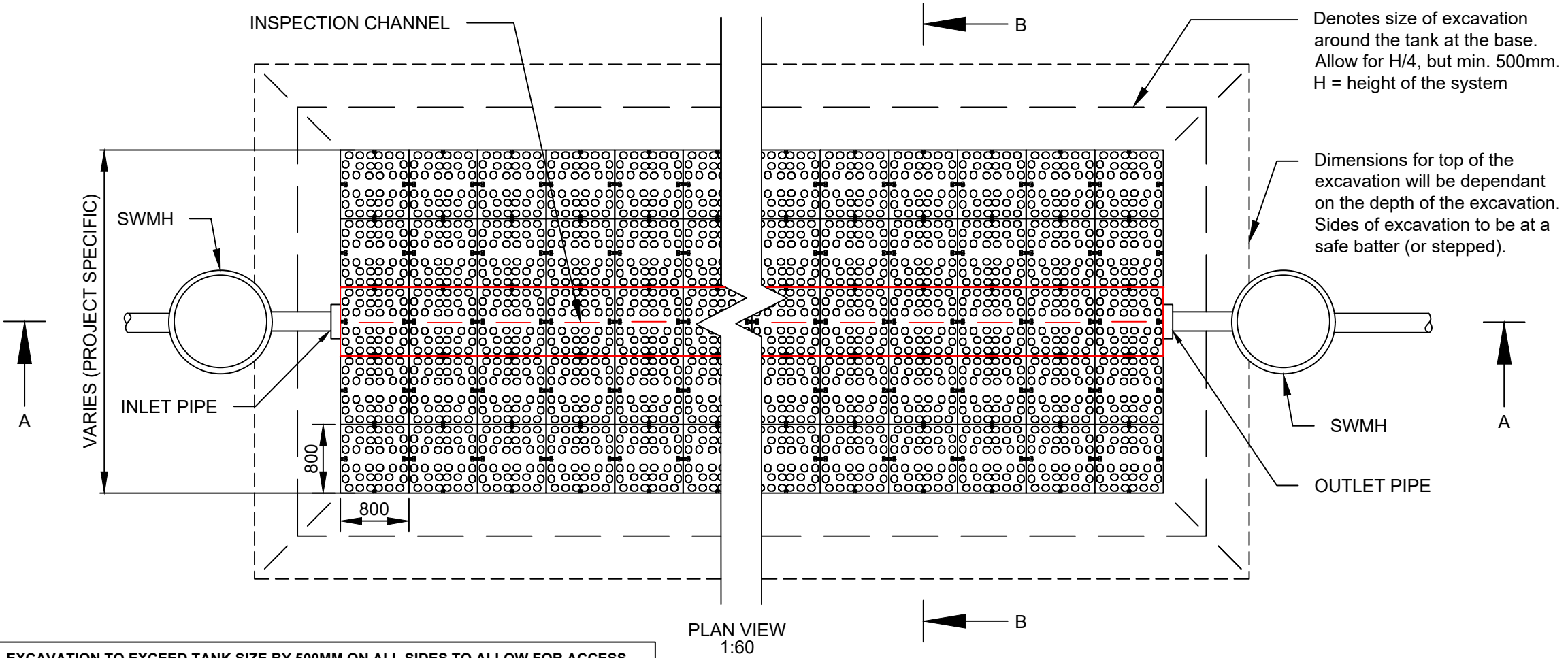
Graf Australia Pty Ltd makes no warranty or guarantee in relation to the suitability of any of the layout details shown on this drawing in relation to a particular scheme.

- NOTES:-
1. All dimensions in mm, unless otherwise stated.
 2. All dimensions are nominal and may vary within manufacturing tolerances.
 3. All site temporary enabling works by others.
 4. Graf products to be installed in strict accordance with Graf installation instructions.
 5. This drawing is intended for guidance only. Confirmation of the suitability for a particular project should be sought from the consulting engineers prior to final design or commencement of any construction works.

ECOBLOC SMART



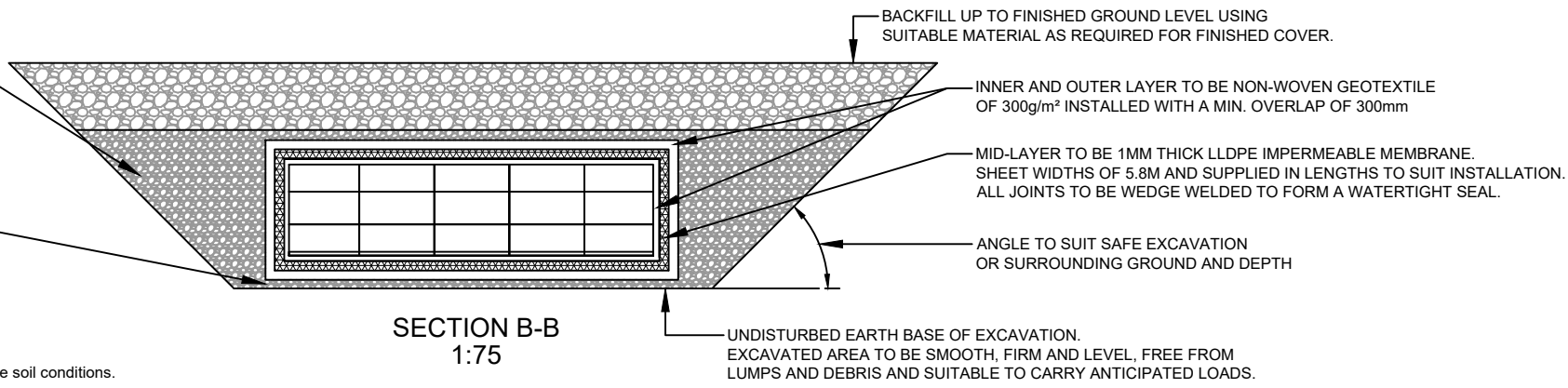
	Ecobloc	Baseplate
Dimensions (mm)	800 x 800 x 330	800 x 800 x 40
Gross Volume	0.211m³	0.024m³
Net Volume	0.203m³	0.021m³
Material	Polypropylene	Polypropylene
Weight	9.9kg	4.0kg
Void Ratio	>96% depending on number of layers	
Inspectable	Yes	
Comply to load requirements of AS5100. For further information, see installation instructions.		



NOTE: EXCAVATION TO EXCEED TANK SIZE BY 500MM ON ALL SIDES TO ALLOW FOR ACCESS

NON-COHESIVE, COMPRESSIBLE GRANULAR MATERIAL (GRAVEL, CRUSHED STONE, SAND, ETC.) *
MAX. PARTICLE SIZE 63mm
MIN. FRICTION ANGLE 32°
MAX. BULK UNIT WEIGHT 20kN/m³

MIN. 80mm BASE LAYER TO BE GRANULAR MATERIAL (GRAVEL, CRUSHED ROCKS, SAND, ETC.) *
MAX. PARTICLE SIZE 63mm



* Cohesive soils (loam/clay, etc.) are NOT suitable backfilling materials.
Please contact GRAF Technical Department for more details on installation in cohesive soil conditions.

2		AW	10.09.2024
1		MV	14.09.2022
REV.	DESCRIPTION	BY	DATE

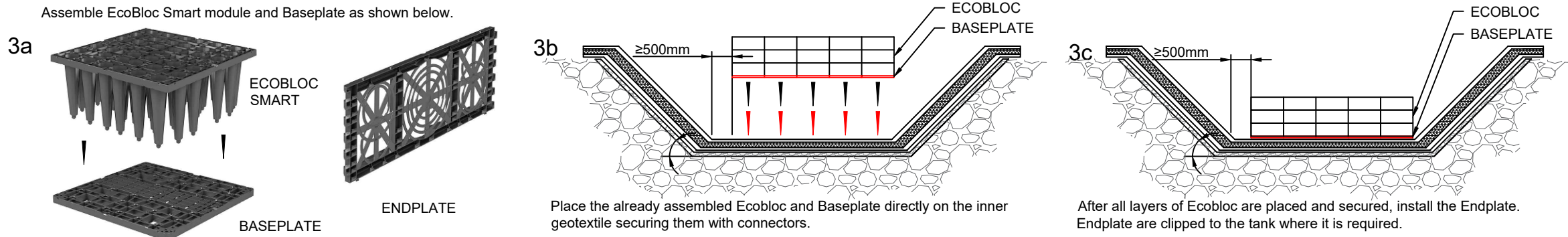
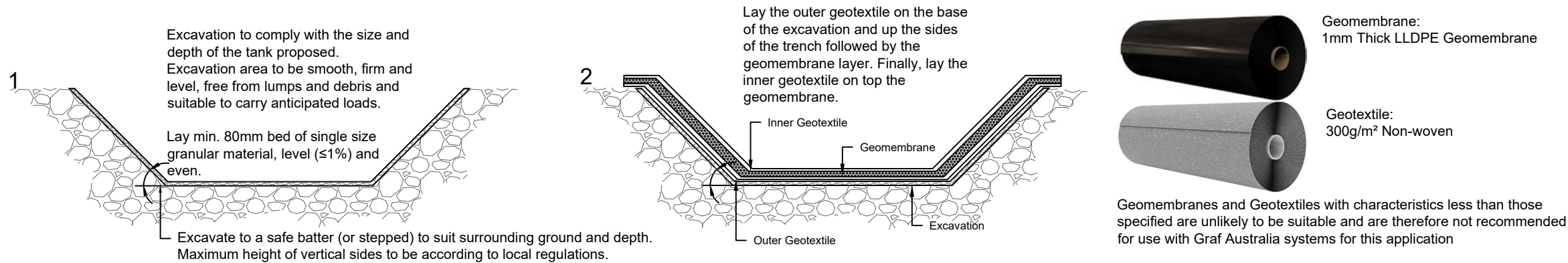
GRAF GRAF Australia Pty Ltd

GRAF Australia Pty Ltd, 43b Sparks Road (rear building), Henderson 6166 WA

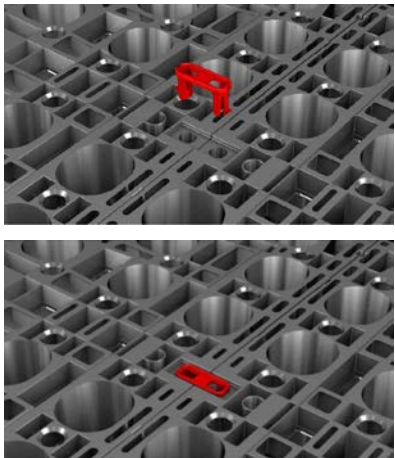
T: +61 1300 131 971 F: +61 8 6499 2688
E: info@grafaustalia.com.au www.grafaustalia.com.au

DRAWN :	AW	DATE :	10.09.2024
CHECKED :	KH	SCALE :	VARIOUS@A3

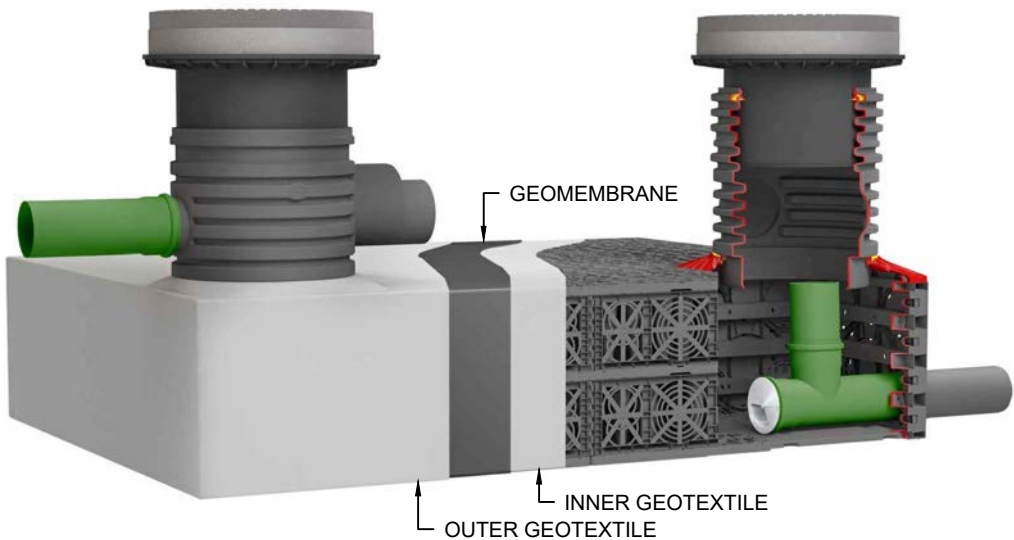
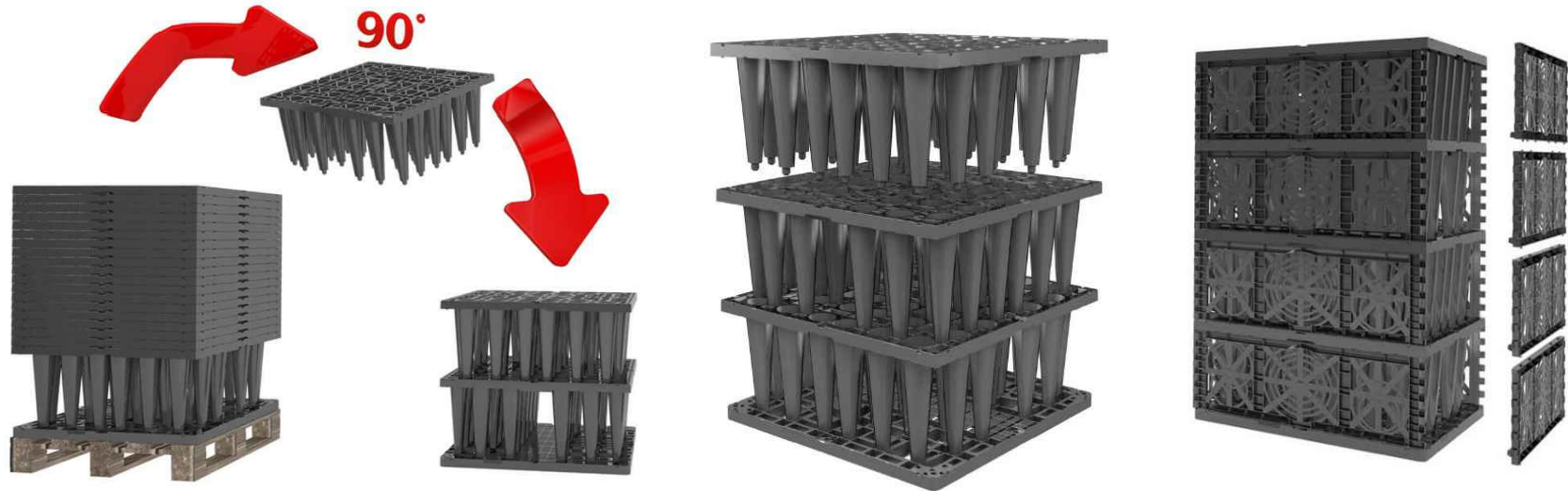
PROJECT	GRAF STANDARD DETAILS
DESCRIPTION	DETENTION TANK using GRAF ECOBLOC SMART
DRAWING No.	DWG-358
REV.	2 (Pg.1)



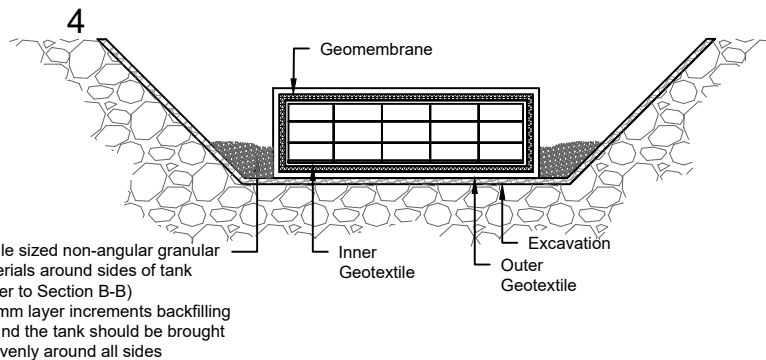
Before installing the next layer, ensure that the connector clips are clipped locking the Ecobloc together.



Connector clips are Red for illustration purposes only and are Grey in colour



Finally, wrap the blocs with the inner geotextile followed by the geomembrane ensuring it is heat welded then wrap with the outer geotextile to protect the geomembrane. Geomembrane must be joined by an experienced operator that holds an appropriate National Qualification or other qualification for membrane installation.



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INSTALLATION METHOD:

- Excavate the trench with a safe batter (or stepped) ensuring the footprint allows for sufficient space between tank and the sides (height of the system divided by 4, but at least 500mm around all sides of the tank).
 - Mark out the position of the tank including pipe connections.
 - Lay min. 80mm of single sized non-angular granular material (max. 63 mm) as a base for the tank. This can be laid to a maximum fall of 1%.
- Lay the outer geotextile over the base of the excavation and up the sides of the trench, overlapping any joins by a minimum of 300mm.
 - Lay the geomembrane on top of the outer geotextile.
 - Geomembrane must be joined by thermal fusion heated wedge welding by an experienced operator that holds an appropriate National Qualification or other qualification for membrane installation. It is recommended that the Dual Seam method is used as this generates an un-welded channel which can be pressured with air to check the integrity of the weld.
 - Lay the inner geotextile over the geomembrane.
 - The geomembrane and geotextile used must meet the specification stated on the drawing.
- Assemble EcoBloc Smart and Baseplate, position leg ends into corresponding holes in the Baseplate. The bloc will only fit in the correct orientation. Push down firmly to ensure the EcoBloc is located correctly.
 - Install already assembled EcoBloc Smart and Baseplate onto the inner geotextile according to inspection orientation until the first layer is complete. Insert retaining clips into each adjacent bloc.
 - To install the next layer of bloc, remove from the stack and turn 90° and position directly above the bloc below. Push down firmly to ensure the bloc is located correctly.
 - Continue until all EcoBloc Smart have been installed, ensuring clips are used to secure each bloc.
 - Fit Endplate to the sides of each bloc by positioning the bottom in place then pushing firmly on the top section.
- Fix adaptor plates to the sides of the bloc in the required position for the pipe connections if required.
 - Cut a hole in the geomembrane and geotextile for pipe connections.
 - Pull geomembrane up around the sides and fully wrap the bloc, securing the top in place by heated wedge welding to the side panels.
 - Cover the top and sides with outer geotextile to protect the geomembrane.
 - Install vent pipe connections into the top layer of the tank and direct to suitable locations.
 - Backfill around the tank in 300mm layer increments using non-cohesive, compressible granular material (gravel, crushed rock, sand, etc. with max. particle size of 63mm). The backfill should be brought up evenly around all sides.
 - Connect pipe connections and weld/glue them to be watertight.
 - It is recommended that stormwater treatment system or pre-filtration is installed upstream of the tank to reduce debris, silt, etc. entering the tank. These should be regularly maintained.

N.B. Installation method may vary depending on depth of the tank and is project specific. For more information or technical questions, please contact our Technical Department at Graf Australia Pty Ltd.

2		AW	10.09.2024
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REV.	DESCRIPTION	BY	DATE

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DRAWN :	AW	DATE :	10.09.2024
CHECKED :	KH	SCALE :	VARIOUS@A3

PROJECT	GRAF STANDARD DETAILS
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DESCRIPTION	DETENTION TANK using GRAF ECOBLOC SMART
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DRAWING No.	DWG-358	REV.	2 (Pg.2)
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