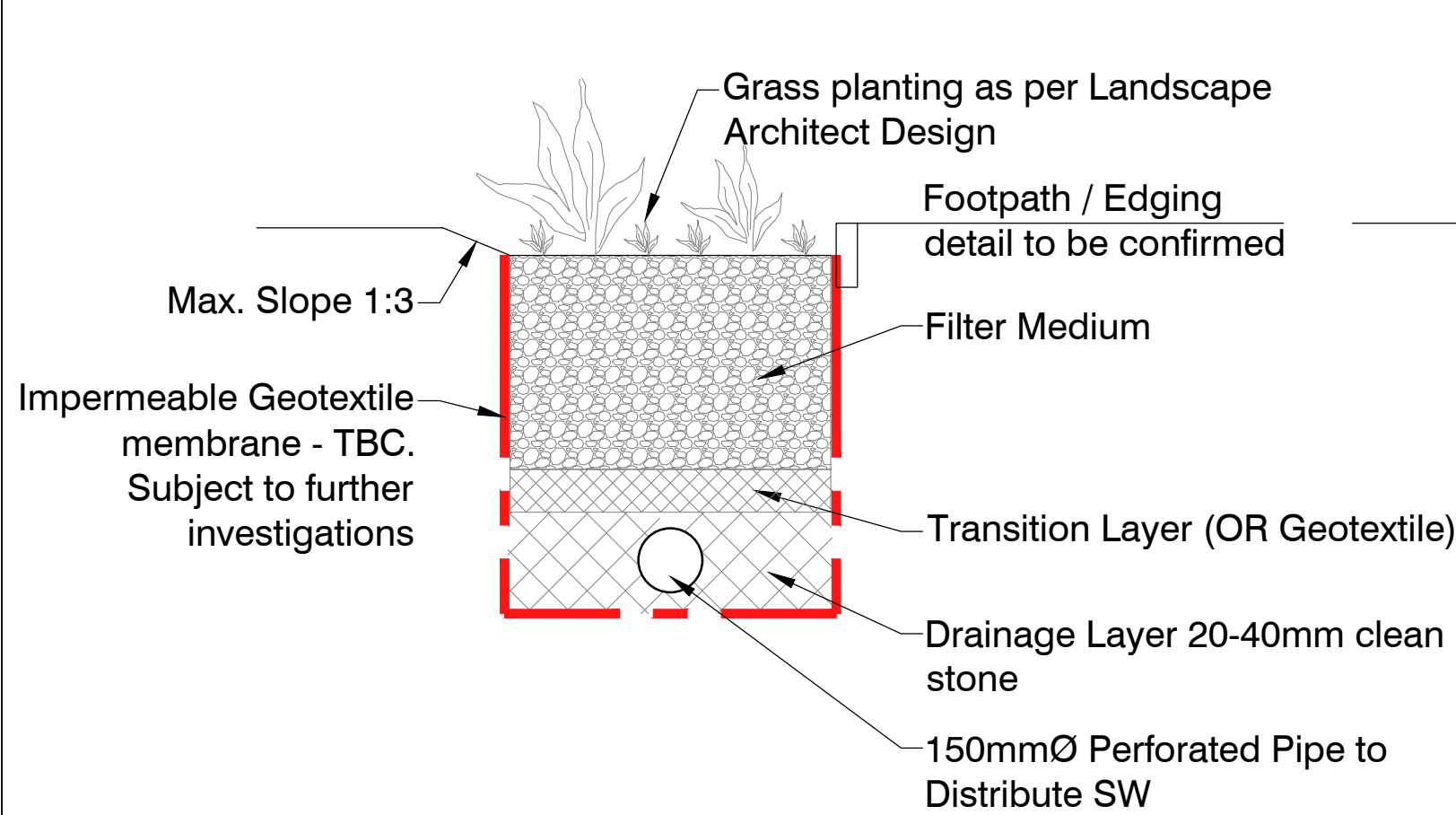
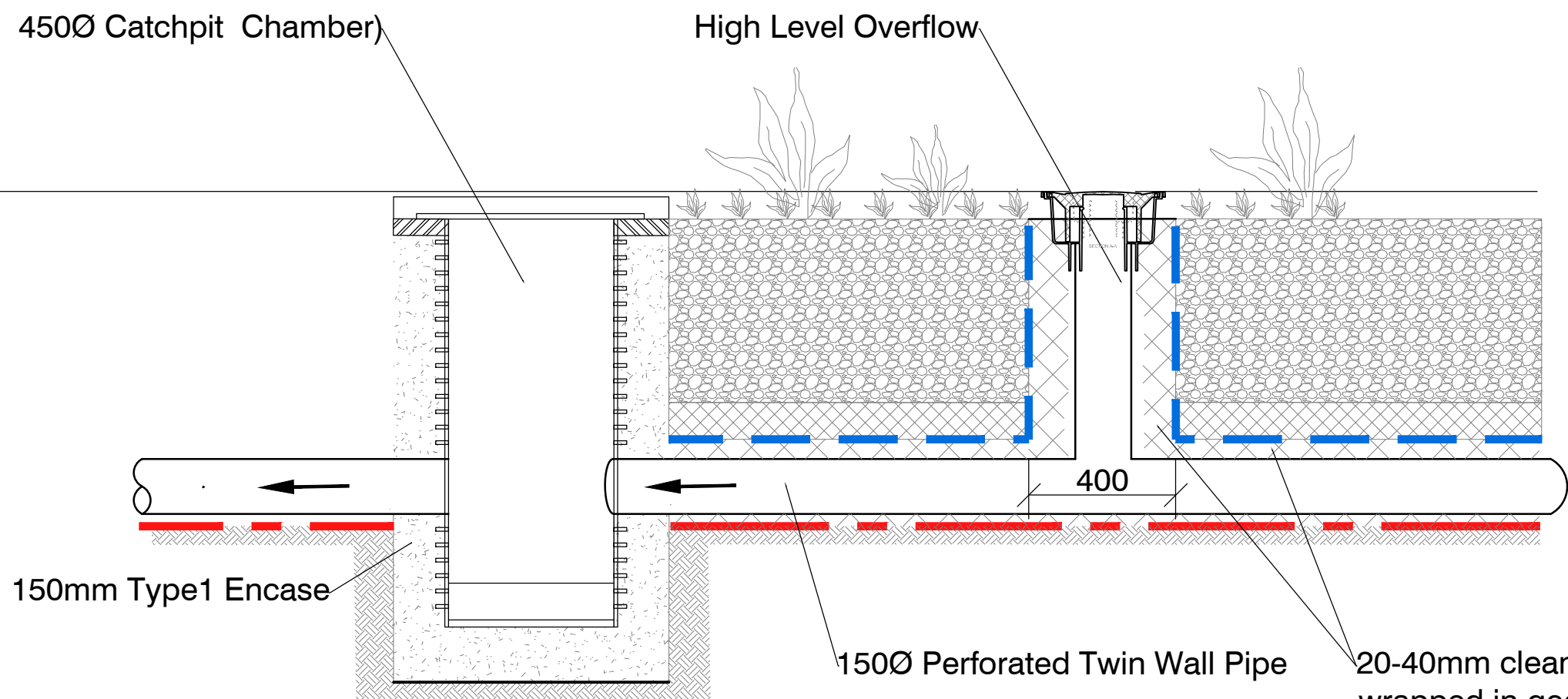
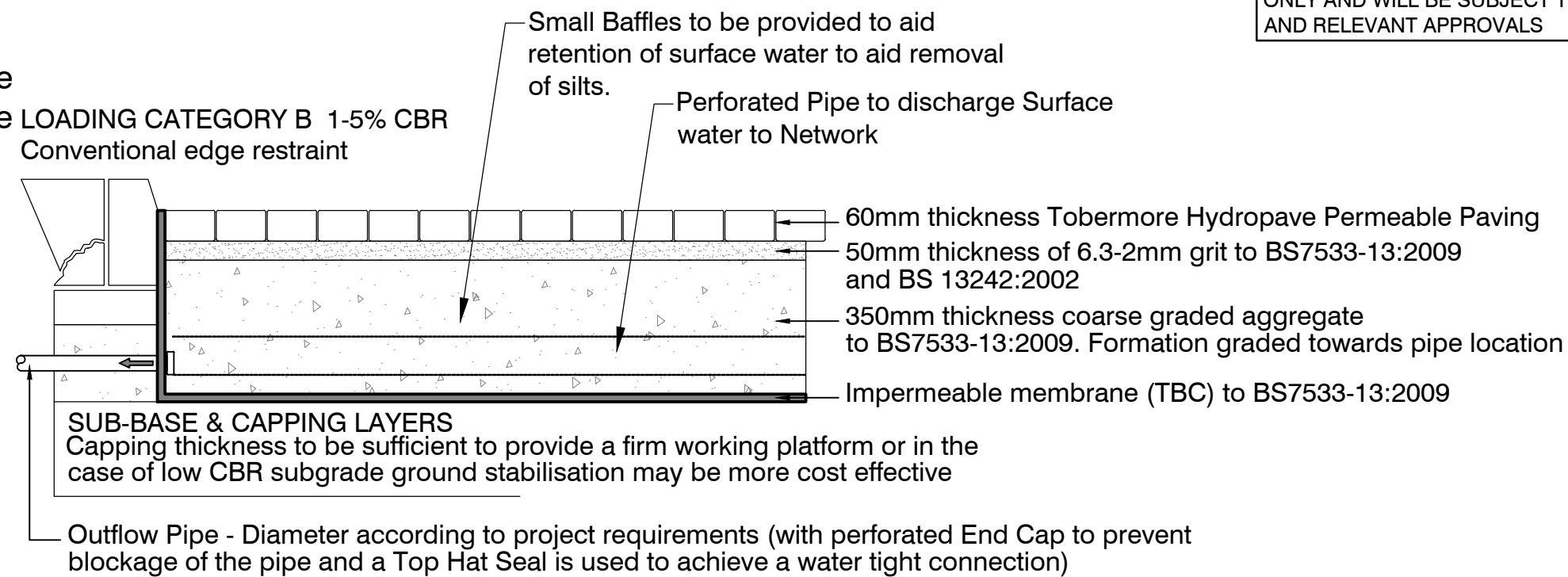
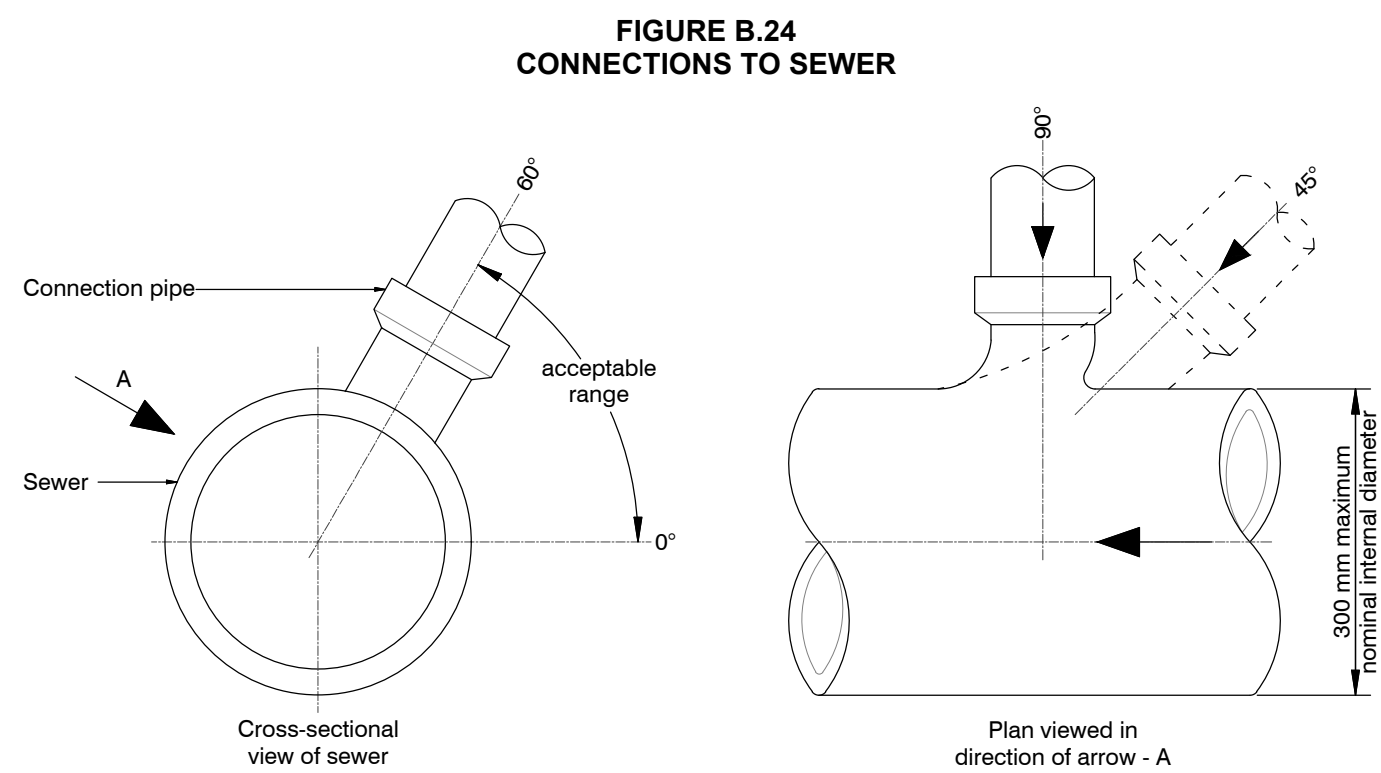




BIO-RETENTION TRENCH TYPICAL CROSS SECTION



BIO-RETENTION TRENCH TYPICAL LONGITUDINAL SECTION



TOBERMORE CONCRETE PRODUCTS ATTENUATION DESIGN LOADING CATEGORY B 1-5% CBR

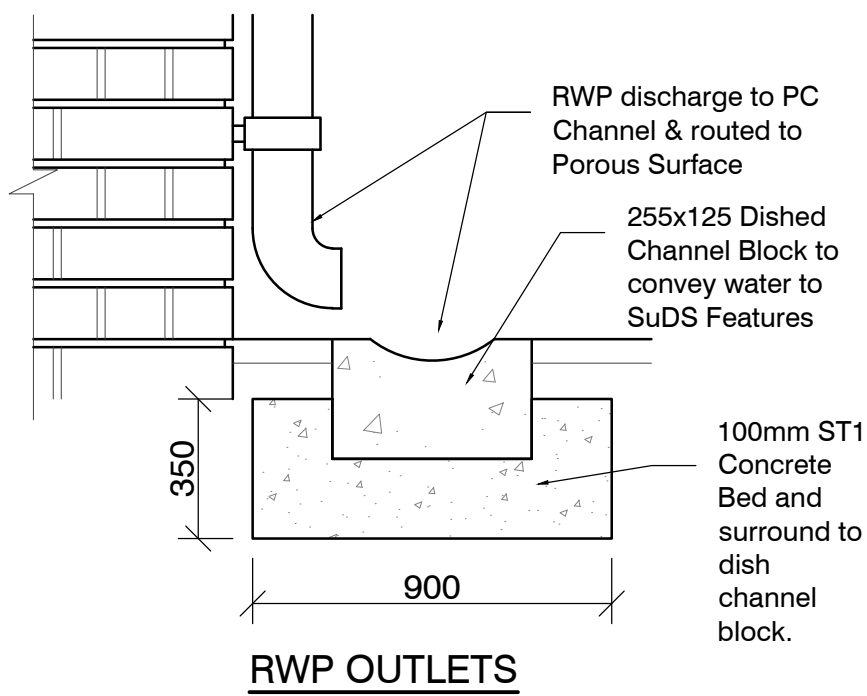
FOR ILLUSTRATIVE PURPOSES ONLY - PAVING TO BE DESIGNED BY MANUFACTURER

Bio-retention System Notes:-

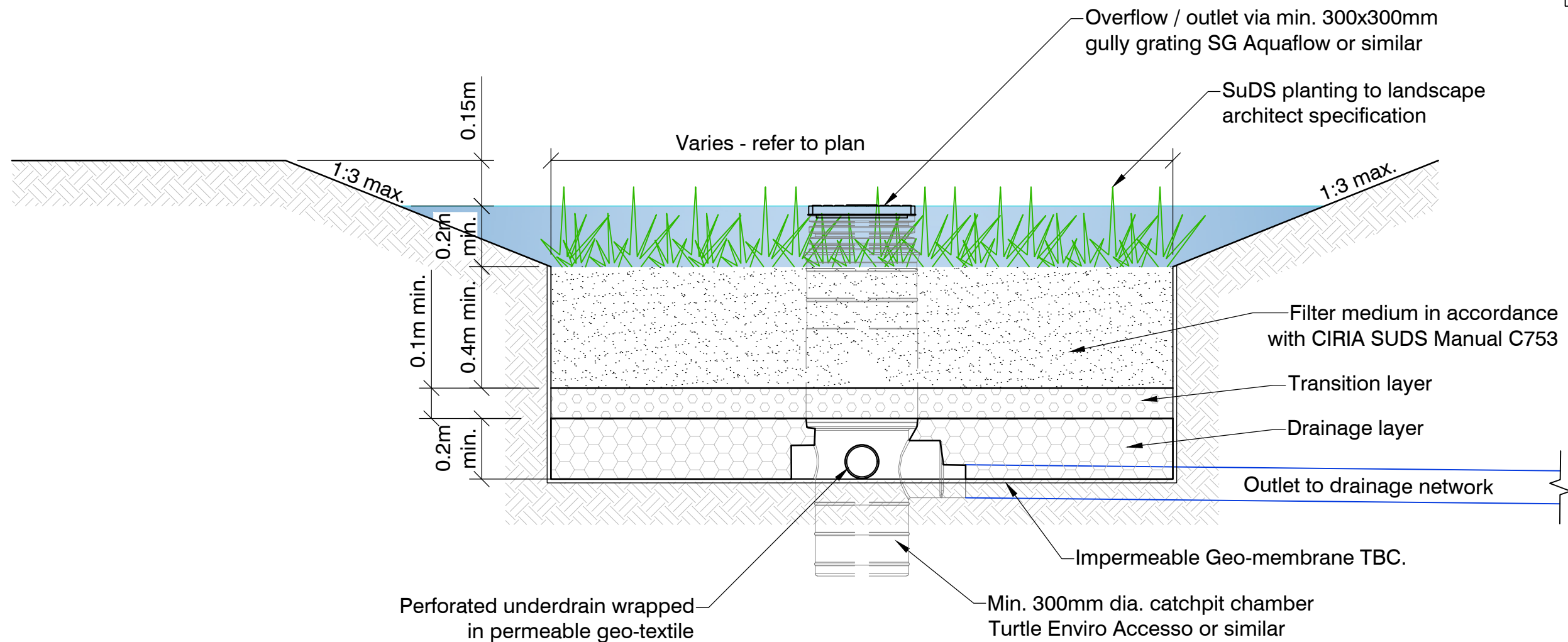
Vegetation - Vegetation influences the performance of the system through direct uptake of pollutants and by facilitating physical and chemical processes in the soil that remove nutrients. It also prevents erosion of the surface soil layers and helps maintain the permeability of the filter medium. Vegetation can have a strong influence on the amenity and bio diversity value of the system. Vegetation selection is very site specific and requires the input of landscape architects, ecologists or horticultural experts.

Filter Medium - This material is normally sand based with some source of organic matter and slow release plant nutrients to maintain healthy plant growth. It filters out pollutants and controls the rate at which water is filtered through the system, which is a key influence on the effectiveness. It is normally 750-1000mm deep, although for very small catchments it can be less than this (eg where a raised planter is draining only small area of roof). An absolute minimum of 400mm is recommended, and in such situations the system should only contain ground cover plants. Proprietary filter media that have enhanced performance may be used to reduce the area and depth of filter medium required.

Transition Layer - This is required to prevent the washing of fines from the filter medium into the drainage layer. To achieve this it should be at least 100mm deep and should be designed using standard geotechnical filter criteria (Chapter 30 - CIRIA SuDS Manual). Alternatively a Geotextile membrane can be used.

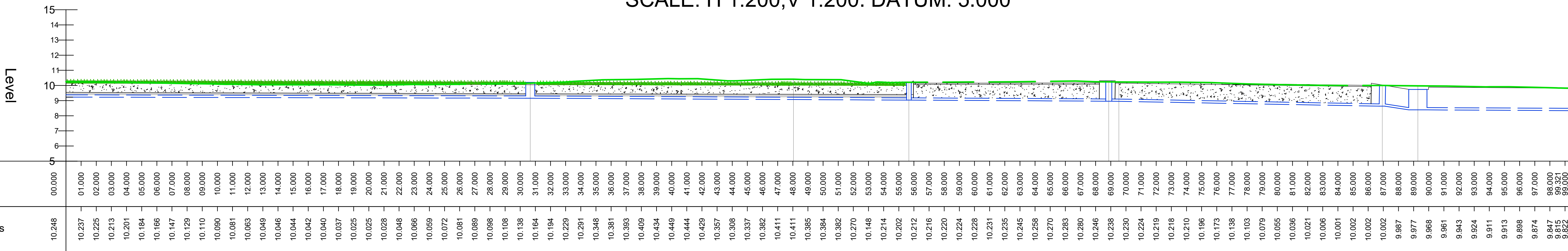


RWP OUTLETS



TYPICAL RAIN GARDEN SECTION SCALE 1:20

BIORETENTION TRENCH TO DISCHARGE LOCATION LONGSECTION SCALE: H 1:200,V 1:200. DATUM: 5.000



- GENERAL NOTES
1. This drawing is to be read in conjunction with and checked against all other drawings, engineering details, specifications and any structural, geotechnical or other specialist document provided.
 2. Any discrepancies within all relevant drawings are to be reported to QuadConsult Ltd immediately.
 3. All dimensions and levels are in metres, U.N.O..
 4. Do not scale from this drawing - use figured dimensions only.
 5. This drawing is schematic for clarity only, positions of pipe runs and manholes may vary on site due to site conditions.
 6. Surface water drainage subject to S104 / SAB approval where appropriate with the relevant authority.
 7. Foul Drainage subject to S104 approval with relevant water authority.
 8. All private drainage to be installed in accordance with Part H of building regulations and the developers warranty provider.
 9. The contractor is at risk if construction is progressed without relevant S104, S106, S278, S38, OWC etc agreement being in place with the relevant authorities.

NOTE - THESE ARE FOR ILLUSTRATIVE PURPOSES ONLY AND WILL BE SUBJECT TO DETAIL DESIGN AND RELEVANT APPROVALS

- PRELIMINARY -

Rev	Date	Description	By
Dimensions to be verified on site. This drawing should not be scaled. Use figured dimensions only. Any discrepancies should be referred to the Engineer prior to work being put in hand. This drawing is copyright.			
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Project Coverack Road Phase 2
Title Preliminary
Typical SuDS & Drainage Details

Drawing Status Preliminary

Designed by	Drawn by	Checked by	Date	Scale @ A1 size
JH	JH	ACV	JAN 25	AS SEEN

Drawing No 23005-SK-005-0