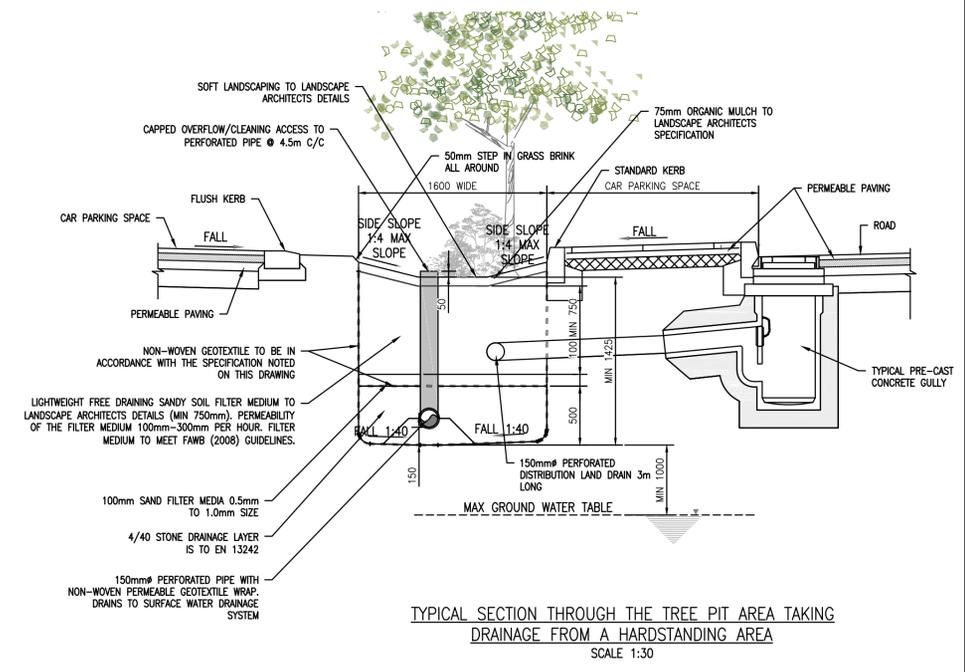
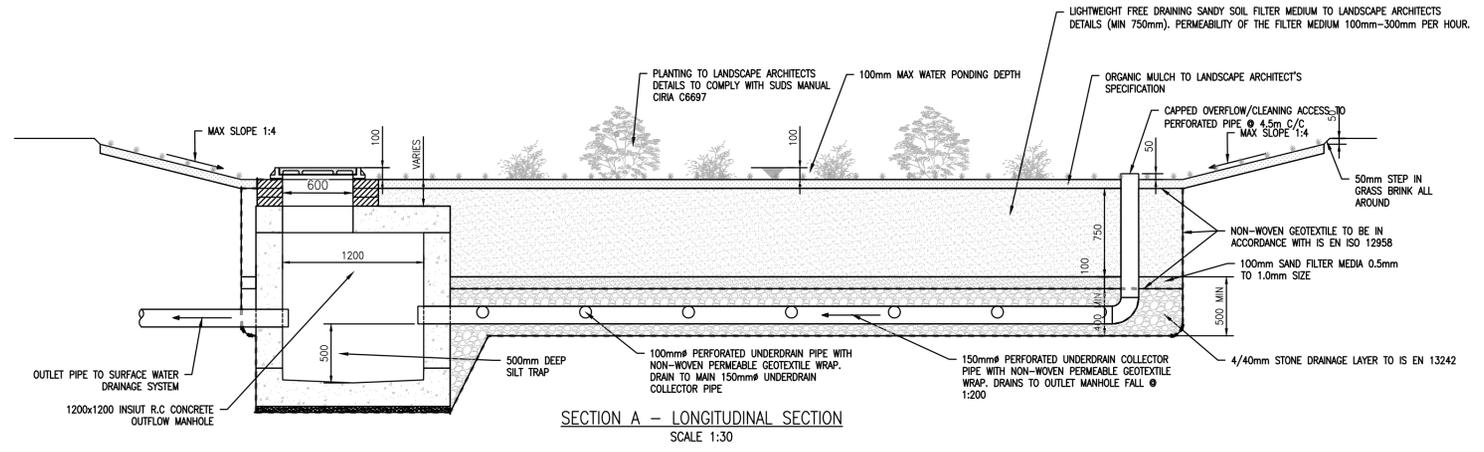


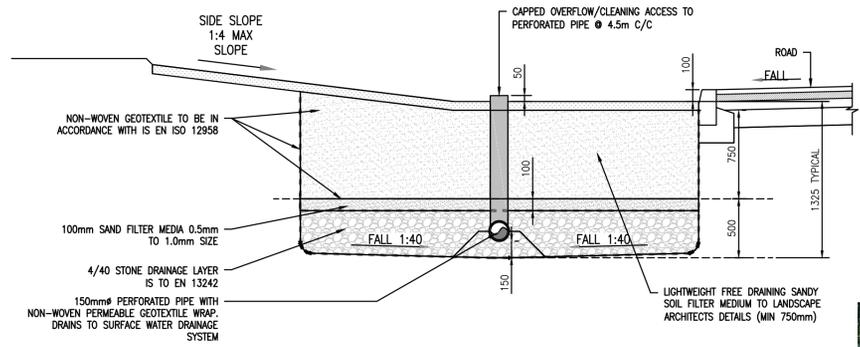
TYPICAL PLAN DETAIL OF BIO-RETENTION AREA FOR SURFACE WATER MANAGEMENT  
SCALE 1:30



TYPICAL SECTION THROUGH THE TREE PIT AREA TAKING DRAINAGE FROM A HARDSTANDING AREA  
SCALE 1:30



SECTION A - LONGITUDINAL SECTION  
SCALE 1:30



SECTION B - TYPICAL SECTION THROUGH BIO-RETENTION AREA TAKING DRAINAGE FROM A HARDSTANDING AREA  
SCALE 1:30

NOTES:

- NON-WOVEN GEOTEXTILE SPECIFICATION. THE GEOTEXTILE SHALL: SUSTAIN A TENSILE LOAD OF NOT LESS THAN 5.0kN/m AT BREAK AND HAVE A MINIMUM FAILURE STRAIN OF 10% WHEN DETERMINED IN ACCORDANCE WITH IS EN ISO 10319; HAVE A MINIMUM PUNCTURE RESISTANCE OF 1200 N WHEN DETERMINED IN ACCORDANCE WITH IS EN ISO 12236; HAVE A SIZE DISTRIBUTION OF PORE OPENINGS SUCH THAT THE APPARENT OPENING SIZE Ø90 WHEN DETERMINED IN ACCORDANCE WITH IS EN ISO 12956, OR OTHER APPROPRIATE TEST, IS LESS THAN 300 MICRONS; ALLOW WATER TO FLOW THROUGH IT, IN EITHER DIRECTION, NORMAL TO ITS PRINCIPAL PLANE AT A RATE OF NOT LESS THAN 10 l/m<sup>2</sup>/s, UNDER A CONSTANT HEAD OF WATER OF 100mm AND A MAXIMUM BREAKTHROUGH HEAD OF 50mm WHEN DETERMINED IN ACCORDANCE WITH IS EN ISO 12958.
- PLAN AREA OF THE BIO-RETENTION AREA SHOULD BE 2-4% OF THE OVERALL AREA DRAINED. MAXIMUM WIDTH 10m UNLESS NOTED OTHERWISE.
- SHOULD A LEVEL SURFACE BE REQUIRED FOR OTHER AMENITIES, AN AREA WITH TREE GRILLS CAN BE INSTALLED
- WHERE PERMEABLE PAVING IS LOCATED THE TREE PITS ACT AS AN OVERFLOW RESPONSE.

MAINTENANCE REQUIREMENTS FOR BIORETENTION SYSTEMS & TREE PITS

**REGULAR INSPECTIONS**  
INSPECT INFILTRATION SURFACES FOR SILTING AND PONDING, RECORD DE-WATERING TIME OF THE FACILITY AND ASSESS STANDING WATER LEVELS IN UNDERDRAIN (IF APPROPRIATE) TO DETERMINE IF MAINTENANCE IS NECESSARY. FREQUENCY - QUARTERLY  
CHECK OPERATION OF UNDERDRAINS BY INSPECTION OF FLOWS AFTER RAIN. FREQUENCY - ANNUALLY  
ASSESS PLANTS FOR DISEASE INFECTION, POOR GROWTH, INVASIVE SPECIES ETC AND REPLACE AS NECESSARY. FREQUENCY - QUARTERLY  
INSPECT INLETS AND OUTLETS FOR BLOCKAGE. FREQUENCY - QUARTERLY

**REGULAR MAINTENANCE**  
REMOVE LITTER AND SURFACE DEBRIS AND WEEDS. FREQUENCY - QUARTERLY (OR MORE FREQUENTLY FOR TIDINESS OR AESTHETIC REASONS)  
REPLACE ANY PLANTS, TO MAINTAIN PLANTING DENSITY. FREQUENCY - AS REQUIRED  
REMOVE SEDIMENT, LITTER AND DEBRIS BUILD-UP FROM AROUND INLETS OR FROM FOREBAYS. FREQUENCY - QUARTERLY TO BIANNUALLY  
INFILL ANY HOLES OR SCOUR IN THE FILTER MEDIUM, IMPROVE EROSION PROTECTION IF REQUIRED. FREQUENCY - AS REQUIRED  
REPAIR MINOR ACCUMULATIONS OF SILT BY RAKING AWAY SURFACE MULCH, SCARIFYING SURFACE OF MEDIUM AND REPLACING MULCH. FREQUENCY - AS REQUIRED

**REMEDIAL ACTIONS**  
REMOVE AND REPLACE FILTER MEDIUM AND VEGETATION ABOVE. FREQUENCY - AS REQUIRED BUT LIKELY TO BE > 20 YEARS

**ROOTSPACE SUPPORT STRUCTURE UNDER COVERED / GRILLED TREE PITS.**  
IN ALL COVERED / GRILLED TREE PITS AND IN ALL INSTANCES WHERE THE TREE PIT SOIL EXTENDS BENEATH THE FOOTPATH / PAVEMENT, A PROPRIETARY ROOTSPACE PAVEMENT SUPPORT SYSTEM BY GREENLEAF IRELAND, OR EQUAL APPROVED, SHALL BE INTEGRATED ACROSS THE FULL EXTENT OF THE TREE PIT. REFER TO LANDSCAPE ARCHITECTS DRAWING FOR TREE PIT SOIL EXTENTS.



01	07.07.23	FOR INFORMATION	MB	AG	DG
00	23.08.22	FOR INFORMATION	MB	AG	DG
Rev	Date	Description	By	Chk	App

**BYRNE LOOBY**  
AN ayesa COMPANY

CLIENT  
GEDV MONKSTOWN OWNER LIMITED

PROJECT  
RESIDENTIAL DEVELOPMENT ON LANDS OF DALGUISE HOUSE

DRAWING TITLE  
TYPICAL DETAILS  
BIO-RETENTION AREA & TREE PITS

STATUS  
FOR INFORMATION

Date: 19/08/22	Scale: AS SHOWN	Drawn: MB	Chk: AG	App: DG
Project No: W3683	Dwg. No: W3683-DR-1030			Rev: 01