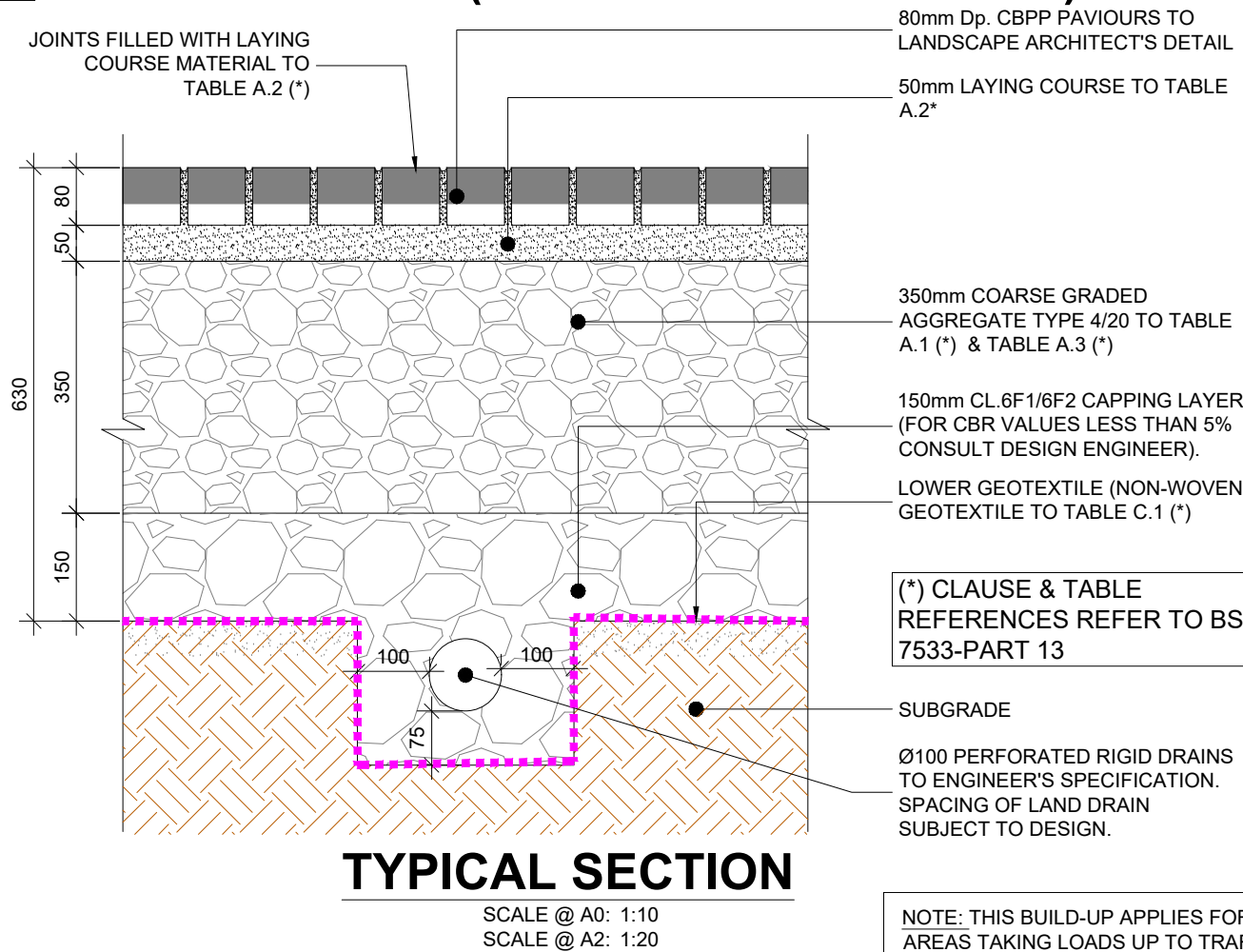


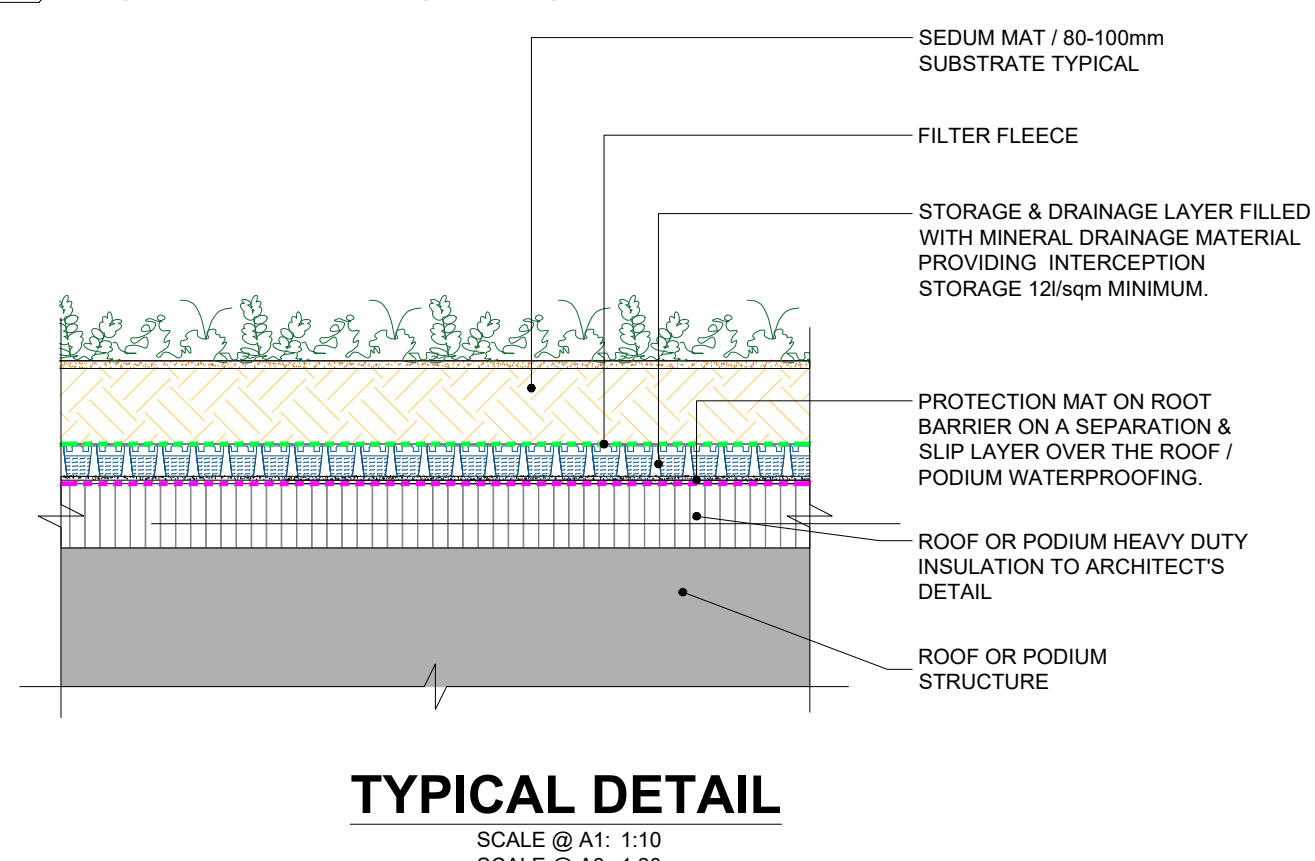
C2 C2 PERMEABLE PAVING TO PARKING AREAS

C2.2 SYSTEM 'B' PERMEABLE PAVING TO CAR PARKING (PARTIAL INFILTRATION)



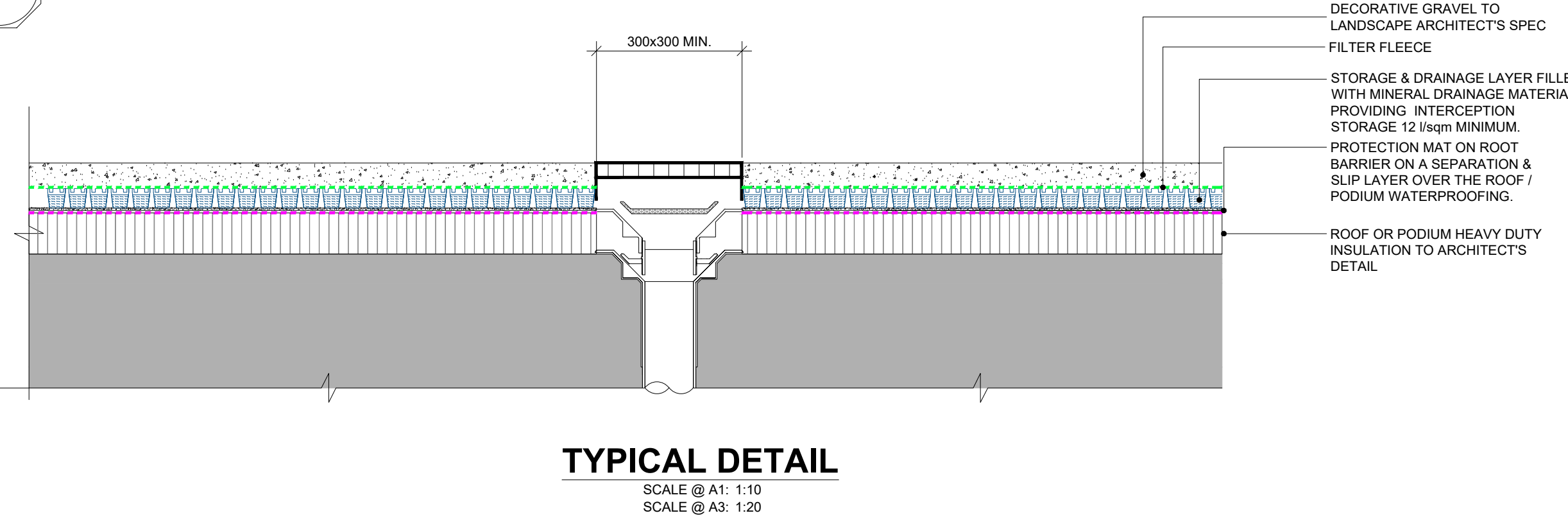
D1 SOFT LANDSCAPING EXTENSIVE GREEN ROOF

D1.1 SOFT LANDSCAPING - EXTENSIVE GREEN ROOF ON DRAINAGE BOARD



D4 GRAVEL FINISH

D4.1 GRAVEL FINISH ON DRAINAGE BOARD



- NOTES:
1. DETAILED DESIGN & SPECIFICATION OF BLUE & GREEN ROOF OR PODIUM SYSTEMS BY THE SUPPLIER, SUBJECT TO APPROVAL.
 2. ALL MEMBRANES / SHEETS TO BE UV STABILISED & ROT PROOF.

MAINTENANCE REQUIREMENTS FOR GREEN ROOFS

REGULAR INSPECTIONS ANNUALLY AND AFTER SEVERE STORMS. INSPECT ALL COMPONENTS INCLUDING SOIL SUBSTRATE, VEGETATION, DRAINS, IRRIGATION SYSTEMS (IF APPLICABLE), MEMBRANES AND ROOF STRUCTURE FOR PROPER OPERATION, INTEGRITY OF WATERPROOFING AND STRUCTURAL STABILITY. INSPECT SOIL SUBSTRATE FOR EVIDENCE OF EROSION CHANNELS AND IDENTIFY ANY SEDIMENT SOURCES. INSPECT DRAIN INLETS TO ENSURE UNRESTRICTED RUNOFF FROM THE DRAINAGE LAYER TO THE CONVEYANCE OR ROOF DRAIN SYSTEM. INSPECT UNDERSIDE OF ROOF FOR EVIDENCE OF LEAKAGE.

REGULAR MAINTENANCE REMOVE DEBRIS AND LITTER TO PREVENT CLOGGING OF INLET DRAINS AND INTERFERENCE WITH PLANT GROWTH. SIX MONTHLY AND ANNUALLY OR AS REQUIRED. MONTHLY (BUT USUALLY DURING ESTABLISHMENT (I.E. YEAR ONE), REPLACE DEAD PLANTS AS REQUIRED. MONTHLY (BUT USUALLY RESPONSIBILITY OF MANUFACTURER) POST ESTABLISHMENT, REPLACE DEAD PLANTS AS REQUIRED (WHERE > 5% OF COVERAGE) ANNUALLY (IN AUTUMN). REMOVE FALLEN LEAVES AND DEBRIS FROM DECIDUOUS PLANT FOLIAGE. SIX MONTHLY OR AS REQUIRED REMOVE NUISANCE AND INVASIVE VEGETATION, INCLUDING WEEDS SIX MONTHLY OR AS REQUIRED. MOW GRASSES, PRUNE SHRUBS AND MANAGE OTHER PLANTING (IF APPROPRIATE) AS REQUIRED. CLIPPINGS SHOULD BE REMOVED AND NOT ALLOWED TO ACCUMULATE. SIX MONTHLY OR AS REQUIRED

REMEDIAL ACTIONS IF EROSION CHANNELS ARE EVIDENT, THESE SHOULD BE STABILISED WITH EXTRA SOIL SUBSTRATE SIMILAR TO THE ORIGINAL MATERIAL, AND SOURCES OF EROSION DAMAGE SHOULD BE IDENTIFIED AND CONTROLLED. FREQUENCY AS REQUIRED. IF DRAIN INLET HAS SETTLED, CRACKED OR MOVED, INVESTIGATE AND REPAIR AS APPROPRIATE. FREQUENCY AS REQUIRED.

NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL ENGINEERS & ARCHITECTS DRAWINGS FIGURED DIMENSIONS ONLY (NOT SCALING) TO BE USED, WHERE A CONFLICT OF INFORMATION EXISTS OR IF IN ANY DOUBT - ASK.
2. CONSULTANTS TO BE INFORMED IMMEDIATELY OF ANY DISCREPANCIES BEFORE WORK PROCEEDS.

NOTES:

1. NON-WOVEN GEOTEXTILE SPECIFICATION, THE GEOTEXTILE SHALL:
 - SUSTAIN A TENSILE LOAD OF NOT LESS THAN 50kN AT BREAK AND HAVE A MINIMUM FAILURE STRAIN OF 10%.
 - WHEN DETERMINED IN ACCORDANCE WITH BS EN ISO 10276.
 - HAVE A MINIMUM PUNCTURE RESISTANCE OF 1200 N WHEN DETERMINED IN ACCORDANCE WITH BS EN ISO 12236.
 - HAVE A SIZE DISTRIBUTION OF PORE OPENINGS SUCH THAT THE APPARENT OPENING SIZE 980 WHEN DETERMINED IN ACCORDANCE WITH BS EN ISO 12236, 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/m² UNDER A CONSTANT HEAD OF WATER OF 100mm AND A MAXIMUM BREAKTHROUGH HEAD OF 50mm WHEN DETERMINED IN ACCORDANCE WITH BS EN ISO 10568.
2. PLAN AREA OF THE BIO-RETENTION AREA SHOULD BE 2-4% OF THE OVERALL AREA DRAINED. MAXIMUM WIDTH 10m UNLESS NOTED OTHERWISE.

MAINTENANCE REQUIREMENTS FOR PERMEABLE PAVEMENTS

REGULAR MAINTENANCE BRUSHING AND VACUUMING (STANDARD COSMETIC SWEEP OVER WHOLE SURFACE), ONCE A YEAR, AFTER AUTUMN LEAF FALL, OR, REDUCED FREQUENCY AS REQUIRED, BASED ON SITE-SPECIFIC OBSERVATIONS OF CLOGGING OR MANUFACTURER'S RECOMMENDATIONS - PAY PARTICULAR ATTENTION TO AREAS WHERE WATER RUNS ONTO PAVEMENT SURFACE FROM ADJACENT IMPERMEABLE AREAS AS THIS AREA IS MOST LIKELY TO COLLECT THE MOST SEDIMENT. STABILISE AND MOW CONTRIBUTING AND ADJACENT AREAS. FREQUENCY - AS REQUIRED. REMOVAL OF WEEDS OR MANAGEMENT USING GLYPHOSPHATE APPLIED DIRECTLY INTO THE WEEDS BY AN APPLICATOR RATHER THAN SPRAYING. FREQUENCY - AS REQUIRED - ONCE PER YEAR OR LESS FREQUENTLY USED PAVEMENTS.

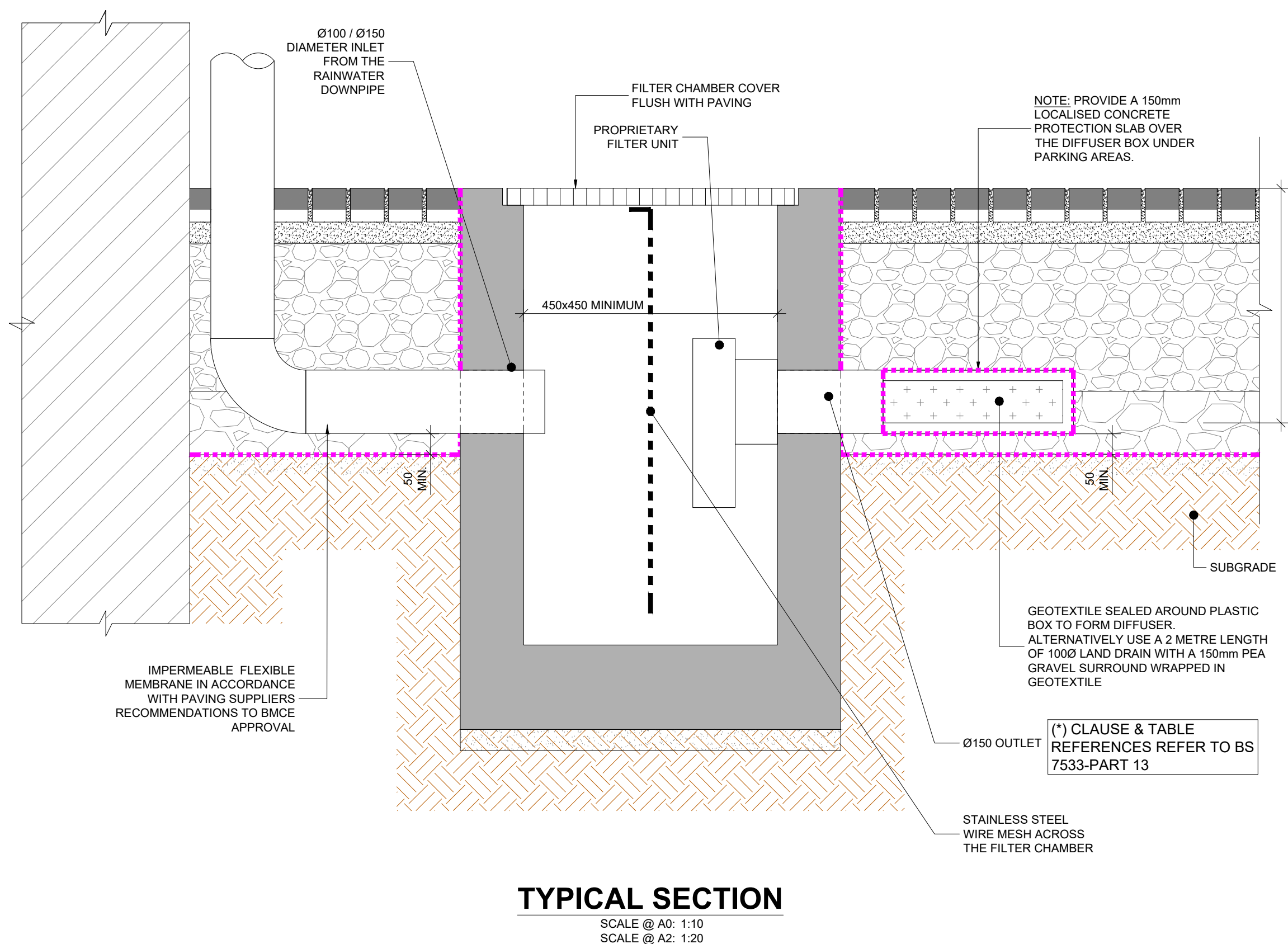
REMEDIAL ACTIONS REMEDIATE ANY LANDSCAPING WHICH, THROUGH VEGETATION MAINTENANCE OR SOIL SLIP, HAS BEEN RAISED TO WITHIN 50mm OF THE LEVEL OF THE PAVING. FREQUENCY - AS REQUIRED. REMEDIAL WORK TO ANY DEPRESSIONS, RUTTING AND CRACKED OR BROKEN BLOCKS CONSIDERED DETRIMENTAL TO THE STRUCTURAL PERFORMANCE OR A HAZARD TO USERS, AND REPLACEMENT OF LOST JOINTING MATERIAL. FREQUENCY - AS REQUIRED. REHABILITATION OF SURFACE AND UPPER SUBSTRUCTURE BY REMEDIAL SWEETING. FREQUENCY - EVERY 10 TO 15 YEARS OR AS REQUIRED IF INFILTRATION PERFORMANCE IS REDUCED DUE TO SIGNIFICANT CLOGGING.

MONITORING INITIAL INSPECTION, MONTHLY FOR THREE MONTHS AFTER INSTALLATION. INSPECT FOR EVIDENCE OF POOR OPERATION AND/OR WEED GROWTH AND IF REQUIRED, TAKE REMEDIAL ACTION. THREE MONTHLY, AS AFTER LARGE STORMS IN FIRST SIX MONTHS. INSPECT Silt ACCUMULATION RATES AND ESTABLISH APPROPRIATE BRUSHING FREQUENCIES. MONITOR INSPECTION CHAMBERS ANNUALLY.

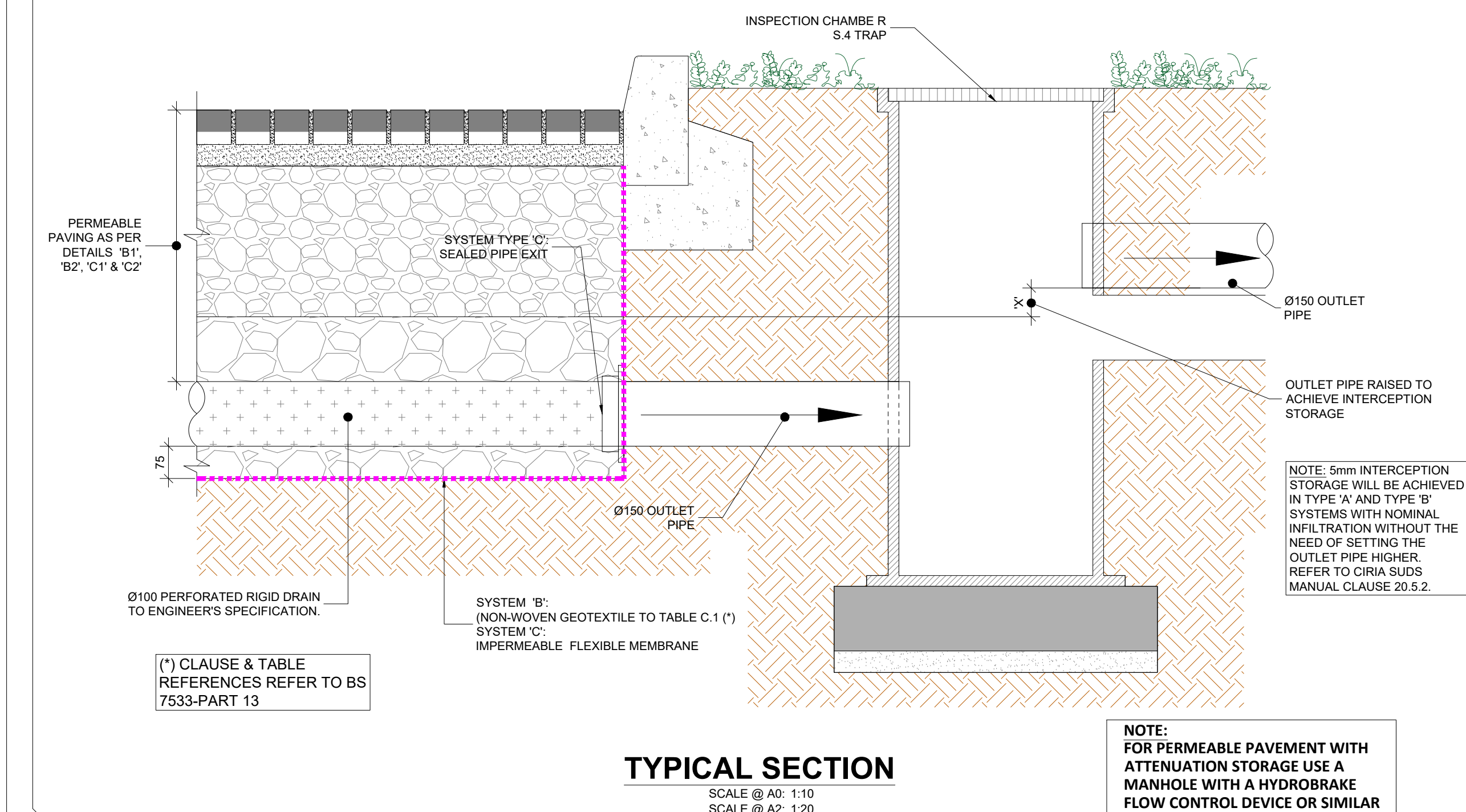
NOTE: FOR PERMEABLE PAVED AREAS WITHIN 1.5m OF BUILDING FOUNDATIONS OR 1.5 METRES OF THE SITE BOUNDARY, AN IMPERMEABLE MEMBRANE STRIP 1.5m WIDE SHOULD BE PROVIDED I.E. TYPE B1 OR B2 DETAILS WILL APPLY LOCALLY.

PERMEABLE PAVING TYPICAL DETAILS

CX.1 TYPICAL PERMEABLE PAVING ROOF RAINWATER PIPE INLET

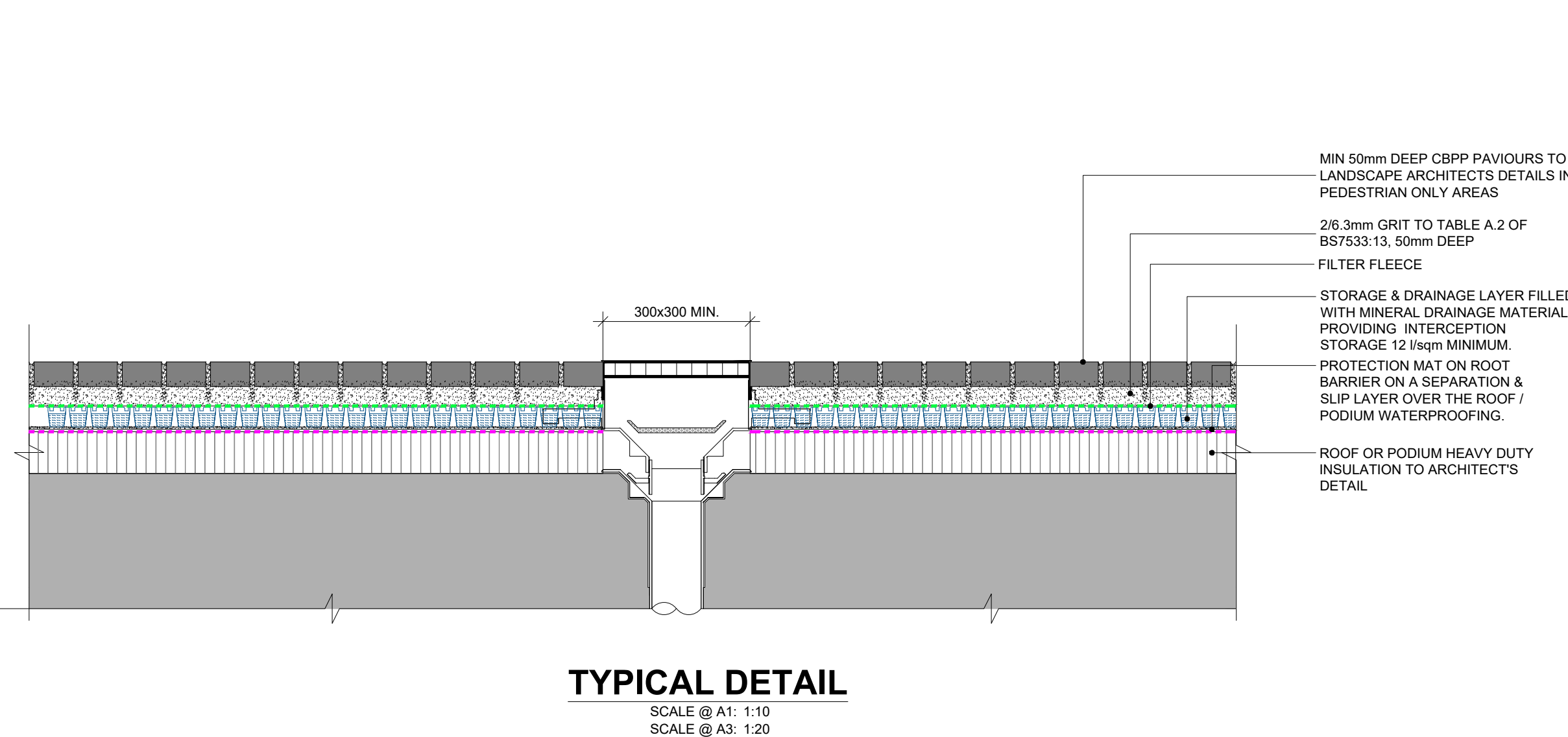


CX.2 TYPICAL PERMEABLE PAVING OUTLET DETAIL, APPLICABLE TO SYSTEMS 'B' & 'C.'



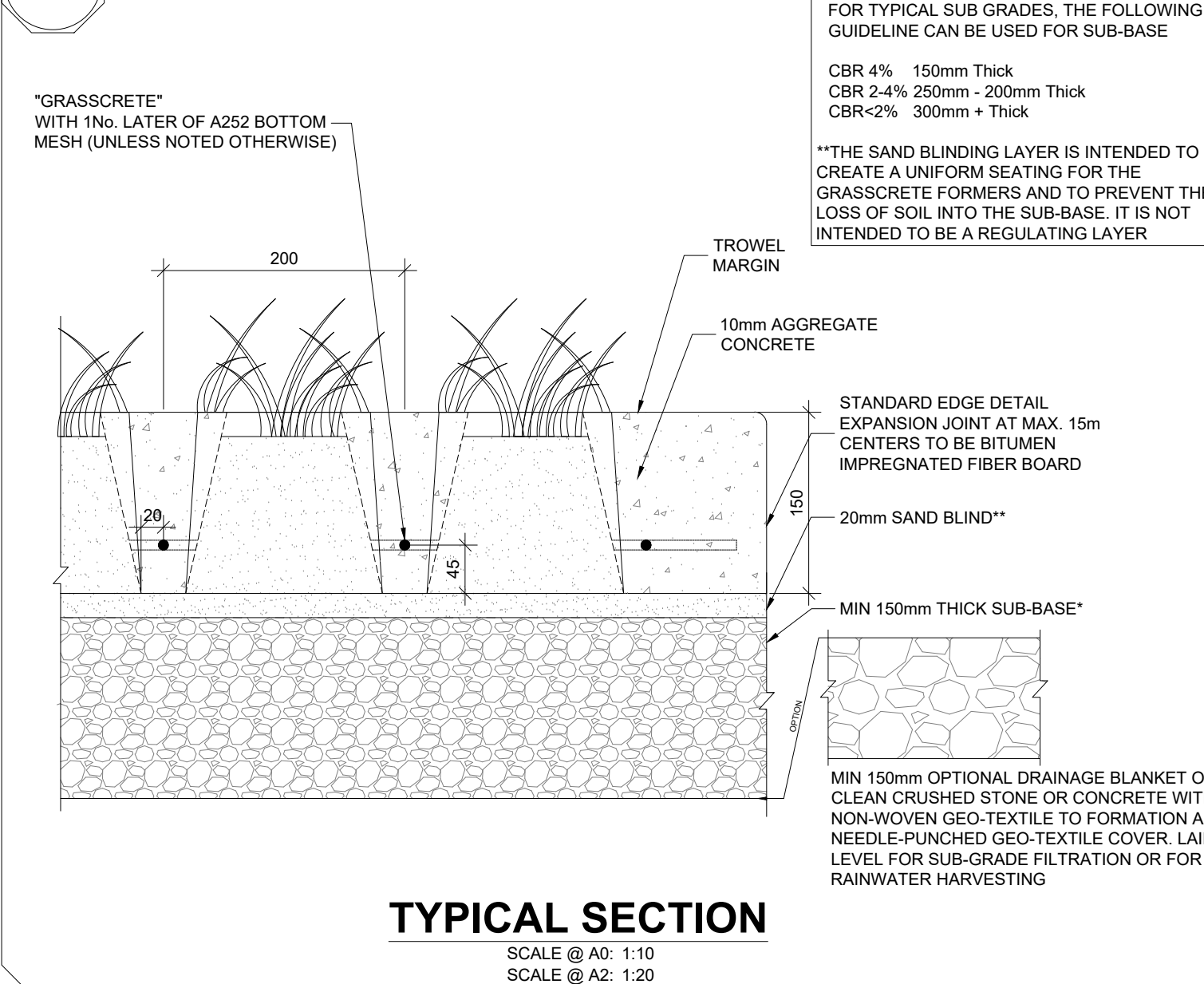
D3 HARD LANDSCAPING INTENSIVE GREEN ROOF ON PODIUM

D3.1 HARD LANDSCAPING - PERMEABLE PAVING ON DRAINAGE BOARD



C3 GRASSCRETE

C3.1 150mm GRASSCRETE



PL2	24.01.20	ISSUED FOR PLANNING	AO
PL1	28.08.24	ISSUED FOR PLANNING	AO
ISSUE	DATE	DESCRIPTION	BY

Project Engineer: Peter O'Dwyer Project Director: Brian Mahony

BM STAGE

PLANNING

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ACEI
Association of Consulting Engineers

CLIENT: LAND DEVELOPMENT AGENCY

PROJECT TITLE: LDA WILTON Sarsfield Road LRD

BM PROJECT No: 23.215

PROPOSED: 23215-BMD-ZZ-ZZ-M2-C-DETAILS

DRAWING TITLE: TYPICAL SUDS DETAILS PERMEABLE PAVING & GREEN ROOF

DRAWING REFERENCE: 23215-BMD-ZZ-ZZ-DR-C-12300

STATUS: PL2