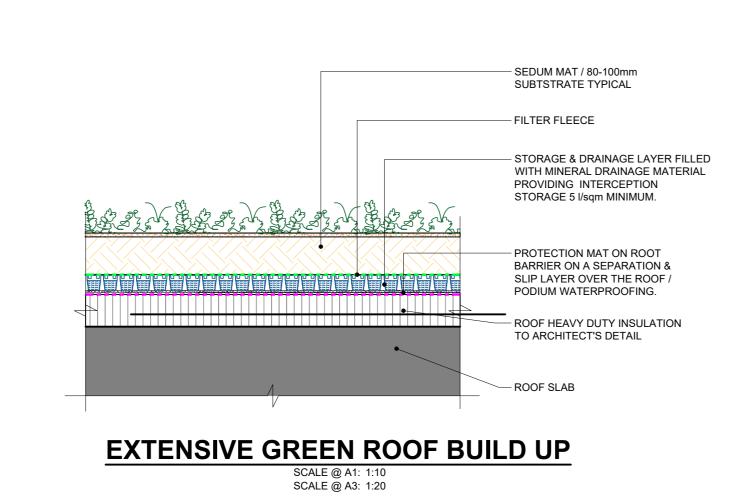
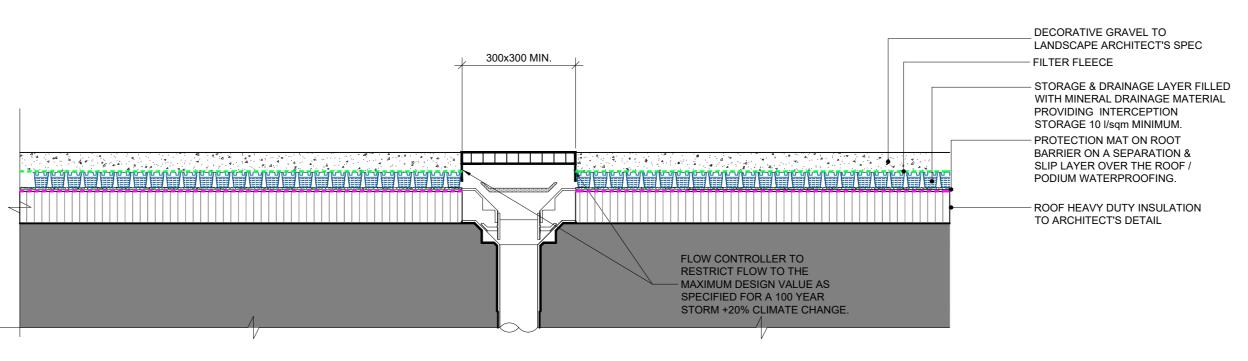


SCALE @ A0: 1:10 SCALE @ A2: 1:20





GRAVEL FINISH ON DRAINAGE BOARD (WALKWAYS OR UNDER PV PANELS) SCALE @ A1: 1:10 SCALE @ A3: 1:20

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 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 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.

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL ENGINEERS &

ARCHITECT'S DRAWINGS.FIGURED DIMENSIONS ONLY (NOT SCALING) TO BE USED. WHERE A CONFLICT OF INFORMATION EXISTS OR IF IN ANY DOUBT - `ASK'

CONSULTANTS TO BE INFORMED IMMEDIATELY OF ANY DISCREPANCIES

NOTES

## NOTES:

NON-WOVEN GEOTEXTILE SPECIFICATION. THE GEOTEXTILE SHALL: SUSTAIN A TENSILE LOAD OF NOT LESS THAN 5.0kN/m AT BREAK AND

BEFORE WORK PROCEEDS.

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 090 WHEN DETERMINED IN ACCORDANCE WITH IS EN ISO 12956, OR OTHER APPROPRIATE TEST, IS LESS THAN 300 MICRONS
- TO ITS PRINCIPAL PLANE AT A RATE OF NOT LESS THAN 10 I/m²/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.

ALLOW WATER TO FLOW THROUGH IT, IN EITHER DIRECTION, NORMAL

2. PLAN AREA OF THE BIO-RETENTION AREA SHOULD BE 2-4% OF THE OVERALL AREA DRAINED. MAXIMUM WIDTH 10m UNLESS NOTED OTHERWISE.

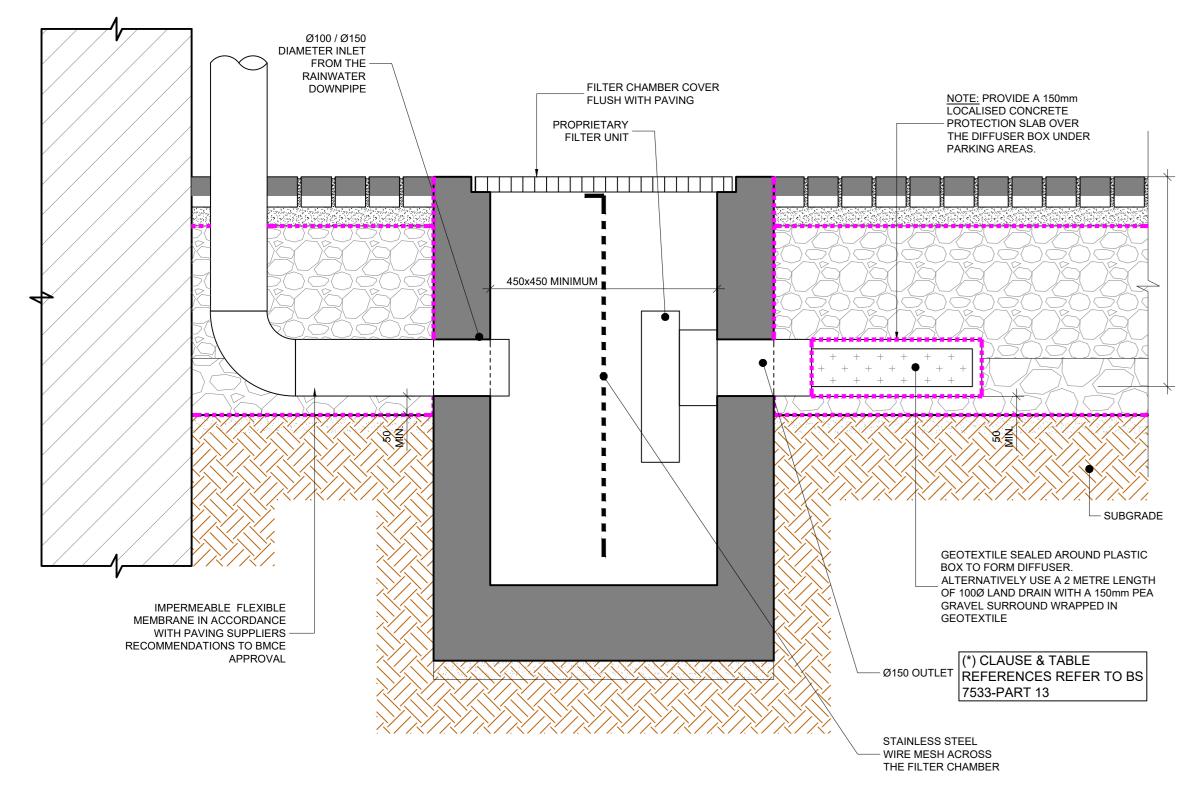
## MAINTENANCE REQUIREMENTS FOR PERMEABLE PAVEMENTS

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 PERVIOUS 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 GLYPHOSPATE APPLIED DIRECTLY INTO THE WEEDS BY AN APPLICATOR RATHER THAN SPRAYING. FREQUENCY - AS REQUIRED - ONCE PER YEAR ON LESS FREQUENTLY USED PAVEMENTS

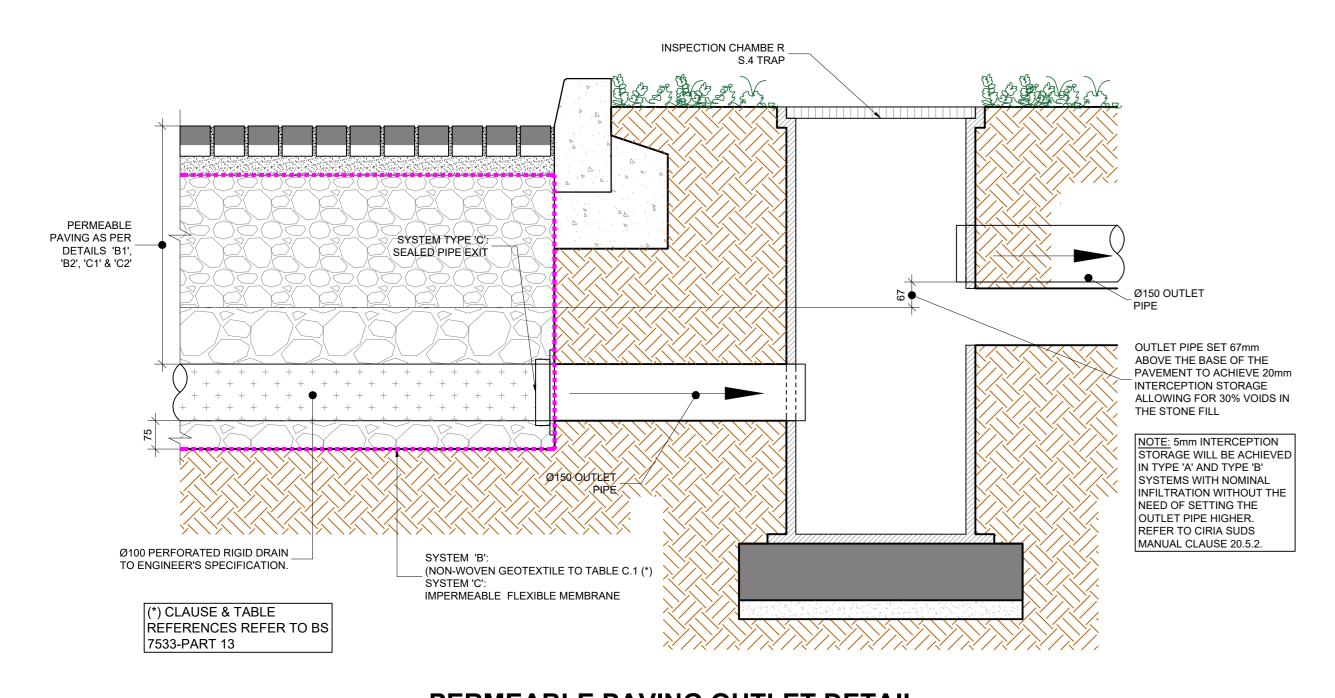
REMEDIAL ACTIONS
REMEDIATE ANY LANDSCAPING WHICH, THROUGH VEGETATION MAINTENANCE OR SOIL SLIP, HAS BEEN RAISED TO WITHIN 50mmOF THE LEVEL OF THE PAVING. FREQUENCY - AS REQUIRED REMEDIAL WORK TO ANY DEPRESSIONS, RUTTING AND CRACKED OR BROKEN BLOCKS CONSIDERED DETRIMENTAL TO THE STRUCTURAL PERFORMANCE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

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, 48 H AFTER LARGE STORMS IN FIRST SIX MONTHS: INSPECT SILT ACCUMULATION RATES AND ESTABLISH APPROPRIATE BRUSHING FREQUENCIES. MONITOR INSPECTION CHAMBERS ANNUALLY

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 IE. TYPE B1 OR B2 DETAILS WILL APPLY LOCALLY.



## PERMEABLE PAVING ROOF RAINWATER PIPE INLET DETAIL SCALE @ A0: 1:10 SCALE @ A2: 1:20



PERMEABLE PAVING OUTLET DETAIL

SCALE @ A0: 1:10
SCALE @ A2: 1:20

PLANNING COMPLIANCE Sandwith House, 52-54 Lower Sandwith Street, Dublin 2, Ireland. Tel: (01) 677 3200 Fax: (01) 677 3164 London Office: 5th Floor, Mill House, 8 Mill Street, London SE1 2BA, United Kingdom BARRETT MAHONY Tel: (0044) 20 3750 3530 Consulting Engineers, Civil . Structural . Project Management.E-mail: bmce@bmce.ie Web: www.bmce.ie of Structural <sup>1</sup>Engineers ARDSTONE HOMES LIMITED BM PROJECT No. CARRIGMORE WOODS 21.226 SUITABILITY REVISION **SuDS DETAILS:** PERMEABLE PAVING & GREEN ROOF CWD-BMCE-ZZ-ZZ-DR-C-12300

DESCRIPTION

Project Director: MH

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