

GENERAL NOTES

- ALL WORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CIVIL ENGINEERING SPECIFICATION AND STANDARD CONSTRUCTION DETAILS. CONSTRUCTION PRODUCTS SUPPLIED ON THIS PROJECT ARE TO BE IN ACCORDANCE WITH THE EU CONSTRUCTION PRODUCTS REGULATION (NO.305/2011-CPR). PRODUCTS ARE TO BEAR THE CE MARKING LABEL & ARE TO BE IN ACCORDANCE WITH THE HARMONISED EUROPEAN STANDARDS (ENHS OR, FOR PRODUCTS NOT COVERED BY THE ENHS, ARE TO BE IN ACCORDANCE WITH THE EUROPEAN ASSESSMENT DOCUMENTS (EADs)). THE NATIONAL STANDARDS AUTHORITY OF IRELAND (NSAI) HAS PRODUCED ADDITIONAL GUIDANCE TO SOME HENS IN THE FORM OF NATIONAL ANNEXES OR STANDARD REQUIREMENTS (RSs) WHICH SET OUT APPROPRIATE MINIMUM PERFORMANCE LEVELS FOR SPECIFIC INTENDED USES OF THE PRODUCT IN IRELAND. NSAI HOST THIS INFORMATION AT WWW.NSAI.IE
- CONTRACTOR IS TO REFER TO GENERAL NOTES-STRUCTURAL DRAWING FOR DETAILS RELATING TO EXCAVATIONS, FOUNDATIONS & BACKFILLING, CAST-IN-SITU CONCRETE ETC.
- ALL DIMENSIONS IN METERS UNLESS SPECIFIED OTHERWISE.
- ALL CO-ORDINATES ARE TO IRISH TRANSVERSE MERCATOR.
- ALL LEVELS ARE TO ORDNANCE DATUM (MAIN HEAD).
- ALL EXISTING LEVELS, EXISTING SITE TOPOGRAPHY AND SURROUNDING SITE TOPOGRAPHY HAS BEEN TAKEN FROM MURPHY GEOSPATIAL SURVEY DRAWING REF: MSG24824_1_ITM_RWD DATED 21-09-2021.
- THE CONTRACTOR SHALL CONFIRM ALL EXISTING DRAINAGE / MANHOLE INVERT LEVELS & THE LOCATION OF ALL EXISTING SERVICES ON SITE PRIOR TO COMMENCEMENT OF THE WORKS.
- USICE EIREANN
 - ALL WATER SUPPLY WORKS TO BE IN ACCORDANCE WITH USICE EIREANN 'CODE OF PRACTICE FOR WATER INFRASTRUCTURE'. THE CONTRACTOR IS TO REFER TO USICE EIREANN 'WATER INFRASTRUCTURE STANDARD DETAILS'.
 - ALL FOUL DRAINAGE WORKS TO BE IN ACCORDANCE WITH USICE EIREANN 'CODE OF PRACTICE FOR WASTEWATER INFRASTRUCTURE'. THE CONTRACTOR IS TO REFER TO USICE EIREANN 'WATER INFRASTRUCTURE STANDARD DETAILS'.
 - FOR THE COMMENCEMENT OF WORKS ON SITE, THE CONTRACTOR IS TO CARRY OUT A FLOW TEST ON ALL EXISTING FIRE HYDRANTS ON THE SITE AND WITHIN 15m OF THE SITE BOUNDARY. TEST RESULTS ARE TO BE CIRCULATED TO THE PROJECT FIRE CONSULTANT AND BMCE FOR REVIEW.
 - WITH REFERENCE TO USICE EIREANN QUALITY ASSURANCE FIELD INSPECTION REQUIREMENTS MANUAL, BMCE WILL PROVIDE THE SERVICES AS LISTED FOR THE 'DEVELOPER'S DESIGN ENGINEER'.
 - THE CONTRACTOR IS TO INCLUDE FOR ALL SERVICES AS LISTED FOR THE 'DEVELOPER'S CONSTRUCTION ENGINEER' AND ALL LIAISONS WITH THE LOCAL AUTHORITY ENGINEER. THIS INCLUDES ALL TESTING AND COMMISSIONING OF THE WATER AND/OR WASTEWATER INFRASTRUCTURE AND CONFIRMATION OF THE RESULTS OF ALL TESTING AND COMMISSIONING BY WAY OF ANCILLARY CERTIFICATES AND TEST RESULT CERTIFICATES, IN RESPECT OF THE ON-SITE, OFF-SITE TESTING AND COMMISSIONING OF THE WATER AND/OR WASTEWATER INFRASTRUCTURE. BMCE'S RESPONSIBILITY WILL BE LIMITED TO A DESKTOP REVIEW OF THE TESTING RECORDS CONDUCTED AND WITNESSED BY OTHERS (LOCAL AUTHORITY / USICE EIREANN FIELD ENGINEERS) THAT THE WATER AND/OR WASTEWATER INFRASTRUCTURE HAS BEEN APPROPRIATELY TESTED ON SITE.
- LOCAL AUTHORITY SURFACE WATER
 - ALL SURFACE WATER DRAINAGE WORKS ARE TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL AUTHORITY 'CODE OF PRACTICE FOR LOCAL AUTHORITY SURFACE WATER'. THE CONTRACTOR IS TO REFER TO THE LOCAL AUTHORITY FOR TEMPORARY ROAD OPENING LICENCES, TEMPORARY DRAINAGE CONNECTIONS ETC.
 - THE CONTRACTOR IS RESPONSIBLE FOR ALL LIAISONS WITH THE LOCAL AUTHORITY RELATING TO DRAINAGE INSPECTIONS / FINAL SIGN-OFF.
- GREEN / BLUE ROOFS
 - THE MAIN CONTRACTOR (AND/OR THEIR APPOINTED SPECIALIST ROOF SUBCONTRACTOR) SHALL BE RESPONSIBLE FOR THE DETAILED DESIGN, COORDINATION, SPECIFICATION, DETAILING, INSTALLATION, INSPECTION, SIGN CERTIFICATION, WARRANTIES AND MAINTENANCE SPECIFICATIONS FOR ALL GREEN/BLUE ROOFS AND PODIUM BUILD UP.
 - FOR THE AVOIDANCE OF DOUBT BMCE ARE NOT RESPONSIBLE FOR THESE ELEMENTS. AS CIVIL ENGINEERS, BMCE ROLE IN THESE ELEMENTS, RELATES SOLELY TO THEIR USE AS SUDS DEVICES (WHERE APPLICABLE). WHERE BMCE INDICATE A 'TYPICAL GREEN BLUE ROOF' BUILD UPS THIS SHALL NOT BE CONSTRUED AS A DESIGN BY BMCE, AND IS DEMONSTRATIVE PURPOSES ONLY.
 - FOR FURTHER INFORMATION REFER TO BMCE SUDS SPECIALIST DRAWING FOR 'GREEN BLUE ROOF & PODIUM BUILD UPS - SUDS PERFORMANCE SPECIFICATION'.
- FIRE CERT & FIRE FIGHTING STRATEGY
 - BMCE ARE NOT RESPONSIBLE FOR THE DEVELOPMENT FIRE CERT APPLICATION OR THE FIRE FIGHTING STRATEGY FOR THE SITE / DEVELOPMENT. WE NOTE USICE EIREANN'S CODE OF PRACTICE FOR WATER INFRASTRUCTURE (JULY 2020 REVISION 2) CLAUSE 1.17 RELATING TO FIRE AUTHORITY LIAISON. WE NOTE ALL RESPONSIBILITIES RELATING TO 'THE DEVELOPER' ARE NOT WITHIN BMCE'S SCOPE OF WORKS. WE ALSO NOTE RESPONSIBILITY FOR ANY 'LIAISONS WITH THE FIRE AUTHORITY AND AGREEING ALL ARRANGEMENTS FOR THE PROVISION OF FIRE FLOW FOR FIRE FIGHTING PURPOSES' AS OUTLINED IN CLAUSE 1.17 ARE ALSO NOT PART OF BMCE'S SCOPE OF WORK.
 - THE CLIENT / PROJECT FIRE CONSULTANT ARE TO SATISFY THEMSELVES THAT ALL EXISTING AND PROPOSED FIRE HYDRANTS WILL PROVIDE SUFFICIENT FLOW FOR FIRE FIGHTING PURPOSES.
 - BMCE WILL INDICATE THE EXISTING AND PROPOSED WATER MAIN LAYOUT FOR THE SITE INCLUDING THE LOCATION OF EXISTING AND PROPOSED FIRE HYDRANTS, HOWEVER AS OUTLINED ABOVE, WILL TAKE NO RESPONSIBILITY FOR THE PERFORMANCE FOR FIRE FIGHTING PURPOSES.
- CONSTRUCTION TRAFFIC MANAGEMENT
 - THE CONTRACTOR IS RESPONSIBLE FOR THE MANAGEMENT OF ALL CONSTRUCTION TRAFFIC.
 - THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING AND ALTERING ROAD SPECIFICATIONS IF INTENDED TO BE USED AS TEMPORARY CONSTRUCTION ROUTES.
 - STORM WATER BURIED ATTENTION TECHNICALS TO BE DESIGNED AND SUPPLIED BY SPECIALIST SUBCONTRACTOR AND APPROVED VIA TENDERS. SUBMITTAL. ALL TANKS TO BE DESIGNED FOR FIRE TENDER VEHICULAR LOADING UNLESS NOTED OTHERWISE.

ROADS / FOOTPATH NOTES

- NOTE: ALL ROADS A PER DRAWING C-12100**
- ALTERNATIVE ROAD BASE MATERIAL:**

AS AN ALTERNATIVE TO DENSE BITUMEN MACADAM ROADBASE THE CONTRACTOR CAN USE A LEAN MIX ROADBASE 150mm THICK. AGGREGATES FOR LEAN MIX CONCRETE MAY CONSIST OF EITHER SAND AND FINE AGGREGATE (SAND SEPARATELY) OR ALL-IN-AGGREGATE, HAVING A MAXIMUM NOMINAL SIZE NOT EXCEEDING 40mm NOR LESS THAN 20mm AND SHOULD LIE WITHIN THE GRADING LIMITS SET OUT IN TABLE 1.1 BELOW.

TABLE 1.1 LEAN MIX CONCRETE - RANGE OF GRADING	
SIEVE SIZE IS 24	PERCENTAGE BY MASS PASSING
40mm	NOMINAL MAXIMUM SIZE
75mm	100
37.5mm	95-100
20mm	45-80
10mm	30-40
5mm	8-30
600µm	10-35
150µm	0-6

PARTICLE SIZE DISTRIBUTION SHOULD BE DETERMINED BY THE WASHING AND SIEVING METHOD OF BS 812: PART 103. THE RATIO, BY MASS OF CEMENT TO AGGREGATE, SHOULD BE SUCH AS TO PRODUCE 20 DAY CUBE STRENGTH OF NOT LESS THAN 10N/mm² AND NOT MORE THAN 20N/mm². CURING OF LEAN-MIX ROAD BASE SHALL BE BY BUTYMINOUS SPRAYING TO CLAUSE 920 SPECIFICATION FOR ROAD WORKS
 - USE OF ROADBASE FOR CONSTRUCTION TRAFFIC:**

THE ROADBASE MAY BE USED FOR CONSTRUCTION TRAFFIC PROVIDED IT IS INCREASED IN THICKNESS BY 50mm AND SURFACE DRESSED. SURFACE DRESSING SHOULD BE CARRIED OUT IN ACCORDANCE WITH THE MANUAL 'SURFACE DRESSING' PUBLISHED BY THE DEPARTMENT OF THE ENVIRONMENT. THE BINDER SHOULD BE CATIONIC BITUMEN OR CATIONIC BITUMEN EMULSION, COMPLYING WITH THE SPECIFICATION ISSUED BY THE DEPARTMENT OF THE ENVIRONMENT. OTHER BINDERS MAY BE USED. SUBJECT TO APPROVAL.

CUTBACK BITUMEN SHOULD BE OF THE APPROPRIATE GRADE RECOMMENDED IN THE MANUAL. CATIONIC BITUMEN EMULSION SHOULD HAVE A NOMINAL BITUMEN CONTENT OF 70%. THE BINDER SHOULD BE SPREAD AT THE APPROPRIATE RATE RECOMMENDED IN THE MANUAL. CHIPPINGS SHOULD BE OF A SINGLE SIZE (AS APPROVED BY THE LOCAL AUTHORITY). CURICAL IN SHAPE AND SHOULD COMPLY WITH THE REQUIREMENTS OF TABLE 4 OF THE MANUAL.
 - DEPTH OF SUB-BASE & CAPPING LAYER:**

THE DEPTH OF THE SUB-BASE AND CAPPING LAYERS WILL VARY WITH THE SUBGRADE STRENGTH, AS INDICATED BY THE CBR TEST RESULTS.

THE THICKNESS OF THE SUB-BASE LAYER SHOULD BE 150mm FOR ALL FORMS OF ROADWAY CONSTRUCTION.

THE THICKNESS OF THE CAPPING LAYER WILL VARY WITH THE CBR VALUE, AS INDICATED IN TABLE 3.1 BELOW. IF THE CBR VALUE OF THE SUBGRADE EXCEEDS 15%, NO CAPPING LAYER IS REQUIRED.

ROADS / FOOTPATH NOTES (Cont'd)

- | TABLE 3.1 CAPPING LAYER - MINIMUM CONSTRUCTION THICKNESS | |
|--|--------------------------------------|
| LOWEST SUBGRADE | MINIMUM CAPPING LAYER THICKNESS (mm) |
| CBR (%) | THICKNESS (mm) |
| * LESS THAN 2 | (SEE NOTE) |
| 2-5 | 300 |
| 5-15 | 150 |
| MORE THAN 15 | NO CAPPING LAYER REQUIRED |
- * FOR SUBGRADES WITH A CBR OF LESS THAN 2%, A GEOTEXTILE SEPARATOR (e.g. TERRAM 1000) SHOULD BE USED AND SPECIALIST ADVICE SOUGHT REGARDING MINIMUM THICKNESS.
- IF THE CONTRACTOR PROPOSES TO USE THE SUB-BASE FOR CONSTRUCTION TRAFFIC HE SHOULD SEEK APPROVAL FROM THE ENGINEER TO DO SO. SUCH APPROVAL WILL ONLY NORMALLY BE GIVEN ON CONDITION THAT THE SUB-BASE THICKNESS IS INCREASED. TYPICALLY FOR CBR VALUES < 4% THE SUB-BASE THICKNESS WILL HAVE TO BE INCREASED BY 150mm. FOR CBR VALUES > 4% AN INCREASE OF 80mm WILL BE SUFFICIENT. SUBGRADE STRENGTH SHOULD BE ESTABLISHED BY MEANS OF THE CALIFORNIA BEARING RATIO (CBR) TEST. IN ACCORDANCE WITH BS 1377: PART 4, SECTION 7, SAMPLES SHOULD BE TAKEN AT THE RATE OF ONE PER 100m OF ROAD AND WHERE SIGNIFICANT VARIATIONS IN SOIL TYPE ARE ANTICIPATED, EXTRA SAMPLES MAY BE REQUIRED BY THE LOCAL AUTHORITY WHERE THE DIFFERENCE IN STRENGTH BETWEEN TWO ADJACENT SAMPLES INDICATES A SIGNIFICANT VARIATION IN SOIL TYPE. IN PREPARING THE TEST SPECIMEN, THE METHOD OF COMPACTING SHOULD BE THE STATIC COMPACTION METHOD 2 AS SPECIFIED IN PARAGRAPH 7.2.3 OF BS 1377: PART 4. UNLESS NOTED OTHERWISE, CBR TESTS TO BE TAKEN AT 25mm CRS. AT FORMATION LEVEL ALONG THE ROAD CENTRELINE.
- MATERIAL SPECIFICATION FOR SUB-BASE AND CAPPING LAYER:**
 - (a) SUB-BASE: SUB-BASE MATERIAL SHOULD COMPRISE TYPE B GRANULAR MATERIAL, IN ACCORDANCE WITH CLAUSE 804 OF THE SPECIFICATIONS FOR ROADWORKS. THE MATERIAL SHOULD LIE WITHIN THE GRADING LIMITS SET OUT IN TABLE 4.1 BELOW.
 - (b) CAPPING LAYER: CAPPING LAYER MATERIAL SHOULD COMPRISE EITHER CRUSHED ROCK, NATURAL GRAVEL, CRUSHED GRAVEL OR CRUSHED CONCRETE. THE MATERIAL SHOULD HAVE A MAXIMUM SIZE OF 100mm AND THE MAXIMUM ALLOWABLE PASSING THE 75µM SIEVE SHOULD BE 10%. THE MATERIAL SHOULD BE WELL GRADED THROUGHOUT ALL SIZES.
 - SELECTED DEMOLITION MATERIALS WHICH MEET THE ABOVE REQUIREMENTS MAY ALSO BE USED, SUBJECT TO APPROVAL.
 - CONCRETE FOR ROAD PAVEMENTS:

TABLE 5.1 CONSTITUENTS FOR PAVING QUALITY CONCRETE	
MINIMUM CEMENT CONTENT	325kg/m ³
MAXIMUM FREE WATER/CEMENT RATIO	0.55
MAXIMUM AGGREGATE SIZE	20mm
MINIMUM FINE AGGREGATE CONTENT	30%
AIR CONTENT	3.5 - 6.5 %
SLUMP	50mm
 - REINFORCEMENT FOR CONCRETE SLABS SHOULD BE LONG MESH STEEL FABRIC, COMPLYING WITH BS 4483 AND SHOULD BE FREE FROM LOOSE MILL SCALE, RUST, OIL, PAINT OR GREASE. THE MINIMUM WEIGHT OF REINFORCEMENT SHOULD BE 2.61kg/m². THE REINFORCEMENT SHOULD HAVE 50mm MINIMUM COVER FROM THE SURFACE AND SHOULD TERMINATE BETWEEN 250 AND 300mm FROM ANY TRANSVERSE JOINT BETWEEN 40 AND 80mm FROM A LONGITUDINAL JOINT. THE REINFORCEMENT SHOULD TERMINATE BETWEEN 100 AND 150mm FROM THE EDGE OF THE SLAB. REINFORCING MATS SHOULD OVERLAP SUCH THAT THE TRANSVERSE WIRE OF ONE MAT WOULD LIE WITHIN THE LAST COMPLETE MESH OF THE PREVIOUS MAT AND THE OVERLAP SHOULD BE AT LEAST 450mm. TRANSVERSE CONTRACTION JOINT SPACING FOR VARIOUS MESH SIZES SHOULD BE AS FOLLOWS:

LONG MESH REINFORCEMENT TO BS 4483	MAXIMUM SPACING (m) OF CONTRACTION JOINTS
C283	15m
C385	20m
C503	25m
 - SAWING OF JOINT GROOVES SHOULD BE UNDERTAKEN AS SOON AS POSSIBLE AFTER THE CONCRETE HAS HARDENED SUFFICIENTLY TO ENABLE A SHARP EDGED GROOVE TO BE PRODUCED, WITHOUT DISRUPTING THE CONCRETE AND BEFORE RANDOM CRACKS DEVELOP IN THE SLAB. THIS WOULD BE WITHIN 6 TO 24 HOURS AFTER THE CONCRETE IS POURED. THE GROOVES SHOULD BE BETWEEN 6 & 14% OF THE DEPTH OF SLAB AND OF ANY CONVENIENT WIDTH NOT LESS THAN 3mm. THE GROOVE CAN BE WIDENED BY SAWING AT THIS STAGE, OR LATER, TO ACCOMMODATE THE JOINT SEALANT.

EXPANSION JOINT FILLER SHOULD BE COMPRESSIBLE BOARD 25mm THICK. FOR THE FULL DEPTH OF THE CONCRETE. THE TOP OF THE FILLER BOARD SHOULD BE ROUTED OUT LATER, TO A DEPTH OF 25mm, IN ORDER TO RECEIVE THE JOINT SEALANT.
 - PAVING SLABS / PAVOIRS

DOWN BARS AND THE BARS SHOULD BE GRADE 250 STEEL, COMPLYING WITH BS 4449 AND SHOULD BE FREE FROM OIL, DIRT, LOOSE SCALE AND DO NOT BE BENT OR STRAIGHT. FREE OF BURRS AND OTHER IRREGULARITIES, WITH THE SLIDING END SAWN. DOWN BARS SHOULD BE DEBONDED OVER THEIR LENGTH WITH A TOUGH, DURABLE PLASTIC SHEATH OF AVERAGE THICKNESS NOT GREATER THAN 1.25mm. FOR EXPANSION JOINTS, THE EXPANSION SPACE AVAILABLE IN THE WATERPROOF CAP SHOULD BE 10mm GREATER THAN THE THICKNESS OF THE JOINT FILLER BOARD.
 - JOINT GROOVES SHOULD BE SEALED WITH A HOT APPLIED JOINT-SEALING COMPOUND COMPLYING WITH BS 2499 TYPE A2 AND THE FINISHED SURFACE OF THE SEAL SHOULD BE 3mm BELOW THE SURFACE LEVEL OF THE CONCRETE. WHEN A MODULAR PAVEMENT IS TO BE CONSTRUCTED THE LAYOUT, LAYING PATTERN AND STRUCTURAL DESIGN IS TO BE IN ACCORDANCE WITH BS 7533.
 - CLAY AND CALCIUM SILICATE PAVOURS SHOULD COMPLY WITH BS 6677: PART 1. TYPE PB WITH CHAMFERS. 200 x 100 x 65mm FOR TRAFFICED AREAS & 50mm THICK FOR PEDESTRIAN AREAS.
 - CONCRETE BLOCK PAVOIRS SHOULD COMPLY WITH BS 6717: PART 1, TYPE R. 200 x 100 x 80mm THICK FOR TRAFFICED AREAS & 80mm THICK FOR PEDESTRIAN AREAS.

HORIZONTAL INTERLOCK SHOULD BE GIVEN TO THE PAVING EITHER BY THE USE OF SHAPED BLOCKS, OR BY LAYING RECTANGULAR BLOCKS IN HERRINGBONE FASHION, AT THE EDGE OF THE PAVEMENT. RESTRAINT SHOULD BE PROVIDED, IN ORDER TO PREVENT THE PAVOIRS AND THE LAYING COURSE FROM MIGRATING OUTWARDS AND LOSING INTERLOCK.

CLAY AND CALCIUM SILICATE PAVOURS SHOULD BE LAID IN ACCORDANCE WITH BS 6677: PARTS 2 & 5.
 - CONCRETE BLOCK PAVOIRS SHOULD BE LAID IN ACCORDANCE WITH BS 6717: PART 3.
 - LAYING COURSE SAND AND JOINTING SAND SHOULD COMPLY WITH GRADINGS C & F IN TABLE 5 OF IS 5 RESPECTIVELY. AS A GUIDE TO MOISTURE CONTENT, AFTER THE MATERIAL HAS BEEN SQUEEZED IN THE HAND AND THE HAND IS OPENED THE LAYING COURSE MATERIAL SHOULD BIND TOGETHER WITHOUT SHOWING FREE MOISTURE ON ITS SURFACE. WHERE LAYING COURSE MATERIAL IS STORED ON SITE IT SHOULD BE COVERED TO REDUCE MOISTURE LOSS DUE TO EVAPORATION, OR SATURATION FROM RAINFALL. IF THE LAYING COURSE MATERIAL BECOMES SATURATED AFTER LAYING THEN IT SHOULD BE REMOVED AND REPLACED WITH LAYING COURSE MATERIAL IN A CONDITION SUITABLE FOR THE BLOCK LAYING OPERATION. ALTERNATIVELY THE LAYING COURSE CAN BE LEFT IN PLACE UNTIL IT DRIES SUFFICIENTLY TO ALLOW BLOCK LAYING TO PROCEED.
 - JOINTS BETWEEN PAVOIRS TO BE LAID TIGHT (2mm to 5mm WIDE) AND FILLED WITH FINE SAND AS PER GRADING F TABLES 5 & 5
- NOTE:** BEFORE PAVOIRS / PAVEMENT WORKS ARE COMMENCED THE CONTRACTOR IS TO ESTABLISH IF THESE WORKS ARE TO BE TAKEN IN CHARGE BY THE LOCAL AUTHORITY. IF THIS IS THE CASE THE CONTRACTOR IS TO GET APPROVAL FROM THE LOCAL AUTHORITY FOR THE DETAILS SHOWN IN THIS DRAWING AND ESTABLISH INSPECTION AND TESTING REQUIREMENTS BEFORE COMMENCING THE WORK.

SURFACE LEGEND

A0	EXISTING ROAD SURFACE
A1	ASPHALT (BLACK)
A1	ASPHALT (BUFF)
A1	ASPHALT (RED)
A2	CONCRETE
A3	BLOCK PAVED
B0	EXISTING FOOTPATHS
B1	ASPHALT
B2	CONCRETE
B3	BLOCK PAVING
B4	GRAVEL LOOSE
B5	RESIN BOUND GRAVEL (POROUS)
B6	WETPOUR PLAY SURFACE
B7	POROUS MACADAM
C1	PERMEABLE PAVED ROADWAY
C2	PERMEABLE PAVED FOOTPATH
C3	GRASSCRETE
D0	SOFT LANDSCAPING - EXISTING TOPOGRAPHY
D1	SOFT LANDSCAPING - EXTENSIVE GREEN ROOF
D2	SOFT LANDSCAPING - INTENSIVE GREEN ROOF
D3	HARD LANDSCAPING
D4	GRAVEL FINISH
E0	EXISTING WATERCOURSE - LAKE, POND OR STREAM
E1	SWALE
E2	BIO RETENTION
E3	TREE PIT
E3.1	DIRECT DISCHARGE LANDSCAPED AREA
E3.2	DIRECT DISCHARGE PAVED AREA
E3.3	DIRECT DISCHARGE FROM GULLY
E4	FILTER DRAIN
E5	DETENTION BASIN
R1	IMPERMEABLE ROOF

SUDS LEGEND

IMPERMEABLE ROADWAYS	IMPERMEABLE ROADWAY			
IMPERMEABLE HARDSTANDING	IMPERMEABLE HARDSTANDING			
PERMEABLE ROADWAY	PERMEABLE ROADWAY	PERMEABLE ROADWAY	C1.1	FULL INFILTRATION
			C1.2	PARTIAL INFILTRATION
			C1.3	NO INFILTRATION
PERMEABLE FOOTPATH	PERMEABLE FOOTPATH	PERMEABLE FOOTPATH	C2.1	FULL INFILTRATION
			C2.2	PARTIAL INFILTRATION
			C2.3	NO INFILTRATION
IMPERMEABLE ROOF	IMPERMEABLE ROOF	IMPERMEABLE ROOF	D1.1	EXTENSIVE GREEN ROOF ON DRAINAGE BOARD
			D1.2	EXTENSIVE GREEN ROOF ON DRAINAGE BOARD ON BLUE ROOF STORAGE
			D2.1	INTENSIVE GREEN ROOF ON DRAINAGE BOARD
			D2.2	INTENSIVE GREEN ROOF ON DRAINAGE BOARD ON BLUE ROOF STORAGE
			D3.1	HARD LANDSCAPING PERMEABLE PAVING ON DRAINAGE BOARD
			D3.2	HARD LANDSCAPING PERMEABLE PAVING ON DRAINAGE BOARD ON BLUE ROOF STORAGE
			D4.1	GRAVEL FINISH ON DRAINAGE BOARD
			D4.2	GRAVEL FINISH ON DRAINAGE BOARD ON BLUE ROOF STORAGE
PERMEABLE ROADS	PERMEABLE ROADS	PERMEABLE ROADS	E3.1	TREE PIT
			E3.2	TREE PIT
			E3.3	TREE PIT
IMPERMEABLE ROOF DRAINING DIRECTLY TO SURFACE WATER NETWORK	IMPERMEABLE ROOF DRAINING DIRECTLY TO SURFACE WATER NETWORK	IMPERMEABLE ROOF DRAINING DIRECTLY TO SURFACE WATER NETWORK	R1.1	IMPERMEABLE ROOF DRAINING DIRECTLY TO SURFACE WATER NETWORK
			R1.2	IMPERMEABLE ROOF DRAINING TO GROUND LEVEL SUDS FEATURE

DRAINAGE LEGEND

FOUL EXISTING	FOUL PROPOSED	COMBINED	SURFACE EXISTING	SURFACE PROPOSED	CARPARK DRAINAGE	KITCHEN DRAINAGE	CAVITY DRAINAGE

WATERMAIN LEGEND

WATER PROPOSED	WATER EXISTING	GEO-TECHNICAL	ANNOTATIONS	SITE
<h3 style="text-align: center;">KERB LEGEND</h3>				

DETAIL No.	USICE EIREANN - WASTEWATER DETAILS
STD-WW-01	WASTEWATER SERVICE CONNECTION MAINTENANCE RESPONSIBILITY
STD-WW-02	TYPICAL LAYOUT FOR WASTEWATER SERVICE CONNECTION DEVELOPMENTS
STD-WW-03	OVERHEAD SERVICE CONNECTION WITH SPACED DEVELOPMENTS
STD-WW-04	TYPICAL SERVICE LAYOUT WITH SPACED DEVELOPMENTS
STD-WW-05A	WASTEWATER SERVICE CONNECTION VERTICAL SEPARATION DETAILS
STD-WW-05B	RESTRICTIONS ON NEW TREES/PLANTS ADJACENT TO SERVICES
STD-WW-06A	RESTRICTIONS ON NEW TREES/PLANTS ADJACENT TO SERVICES
STD-WW-07	TRINCH INSTALLATION
STD-WW-08	CAST IN SITU CONCRETE MANHOLE WITH HANGING & SUPPORT TO WASTEWATER PIPES
STD-WW-09	BLOCKING MANHOLE (HANGING & SUPPORT)
STD-WW-10A	PRE-CAST CONCRETE MANHOLE WITH HANGING & SUPPORT
STD-WW-10B	PRE-CAST CONCRETE MANHOLE WITH PRE-CAST BASE
STD-WW-10C	PRE-CAST CONCRETE MANHOLE WITH HANGING & SUPPORT
STD-WW-11	PRE-CAST CONCRETE MANHOLE WITH HANGING & SUPPORT
STD-WW-12	CAST IN SITU CONCRETE MANHOLE WITH HANGING & SUPPORT
STD-WW-13	PRE-CAST CONCRETE MANHOLE WITH HANGING & SUPPORT
STD-WW-14	CAST IN SITU CONCRETE MANHOLE WITH HANGING & SUPPORT
STD-WW-15	SCOUR VALVE CHAMBER FLOOR RESING MANHOLE DETAIL
STD-WW-16	SECURITY GATE AND FENCING WIRE RESING OPTION
STD-WW-17	SECURITY GATE AND FENCING WIRE RESING OPTION
STD-WW-18	SECURITY GATE AND FENCING WIRE RESING OPTION
STD-WW-19	SECURITY GATE AND FENCING WIRE RESING OPTION
STD-WW-20	EMERGENCY OVERFLOW STRUCTURE & EMERGENCY OVERFLOW TO STORM SEWER
STD-WW-21	TYPICAL CROSSING FOR WATERMAIN OVER RAILWAY
STD-WW-22	TYPICAL CROSSING FOR WATERMAIN OVER RAILWAY
STD-WW-23	TYPICAL CROSSING FOR WATERMAIN OVER RAILWAY
STD-WW-24	SECURITY GATE AND FENCING WIRE RESING OPTION
STD-WW-25	SECURITY GATE AND FENCING WIRE RESING OPTION
STD-WW-26	SECURITY GATE AND FENCING WIRE RESING OPTION
STD-WW-27	SECURITY GATE AND FENCING WIRE RESING OPTION
STD-WW-28	SECURITY GATE AND FENCING WIRE RESING OPTION
STD-WW-29	SECURITY GATE AND FENCING WIRE RESING OPTION
STD-WW-30	SECURITY GATE AND FENCING WIRE RESING OPTION
STD-WW-31	SECURITY GATE AND FENCING WIRE RESING OPTION
STD-WW-32	SECURITY GATE AND FENCING WIRE RESING OPTION
STD-WW-33	SECURITY GATE AND FENCING WIRE RESING OPTION
STD-WW-34	SECURITY GATE AND FENCING WIRE RESING OPTION
STD-WW-35	SECURITY GATE AND FENCING WIRE RESING OPTION
STD-WW-36	SECURITY GATE AND FENCING WIRE RESING OPTION
STD-WW-37	SECURITY GATE AND FENCING WIRE RESING OPTION
STD-WW-38	SECURITY GATE AND FENCING WIRE RESING OPTION
STD-WW-39	SECURITY GATE AND FENCING WIRE RESING OPTION
STD-WW-40	SECURITY GATE AND FENCING WIRE RESING OPTION

DETAIL No.	USICE EIREANN - WATER SUPPLY DETAILS
STD-W-01	WATER SERVICE CONNECTION MAINTENANCE RESPONSIBILITY
STD-W-02	TYPICAL LAYOUT FOR WATERMAIN WITH DEVELOPMENTS
STD-W-03	CUSTOMER CONNECTION AND BOUNDARY BOX (20mm OD PIPE)
STD-W-04	GENERAL PIPE CONNECTIONS (SHEET 1 OF 7)
STD-W-05	GENERAL PIPE CONNECTIONS (SHEET 2 OF 7)
STD-W-06	GENERAL PIPE CONNECTIONS (SHEET 3 OF 7)
STD-W-07	GENERAL PIPE CONNECTIONS (SHEET 4 OF 7)
STD-W-08	GENERAL PIPE CONNECTIONS (SHEET 5 OF 7)
STD-W-09	GENERAL PIPE CONNECTIONS (SHEET 6 OF 7)
STD-W-10	GENERAL PIPE CONNECTIONS (SHEET 7 OF 7)
STD-W-11	TYPICAL SERVICE LAYOUT INCLUDING SEPARATION DEVELOPMENTS
STD-W-12	RESTRICTIONS ON NEW TREES/PLANTS ADJACENT TO EXISTING TREES
STD-W-13A	RESTRICTIONS ON NEW TREES/PLANTS ADJACENT TO WATER MAINS
STD-W-13B	RESTRICTIONS ON NEW TREES/PLANTS ADJACENT TO WATER MAINS
STD-W-14	SLUCE VALVE DETAILS FOR POLYETHYLENE PIPE (SHEET 1 OF 2)
STD-W-15	SLUCE VALVE DETAILS FOR POLYETHYLENE PIPE (SHEET 2 OF 2)
STD-W-16	SLUCE VALVE DETAILS FOR POLYETHYLENE PIPE (SHEET 3 OF 2)
STD-W-17	SLUCE VALVE DETAILS FOR POLYETHYLENE PIPE (SHEET 4 OF 2)
STD-W-18	SLUCE VALVE DETAILS FOR POLYETHYLENE PIPE (SHEET 5 OF 2)
STD-W-19	SLUCE VALVE DETAILS FOR POLYETHYLENE PIPE (SHEET 6 OF 2)
STD-W-20	SLUCE VALVE DETAILS FOR POLYETHYLENE PIPE (SHEET 7 OF 2)
STD-W-21	SLUCE VALVE DETAILS FOR POLYETHYLENE PIPE (SHEET 8 OF 2)
STD-W-22	SLUCE VALVE DETAILS FOR POLYETHYLENE PIPE (SHEET 9 OF 2)
STD-W-23	SLUCE VALVE DETAILS FOR POLYETHYLENE PIPE (SHEET 10 OF 2)
STD-W-24	PRESSURE REDUCING SUBSTANTIALLY VALVE CHAMBER IN SUDS OPTION
STD-W-25	ELECTROMAGNETIC WATER METER (200MM DIA)
STD-W-26	ELECTROMAGNETIC WATER METER (200MM DIA)
STD-W-27	ELECTROMAGNETIC WATER METER (200MM DIA)
STD-W-28	ELECTROMAGNETIC WATER METER (200MM DIA)
STD-W-29	ELECTROMAGNETIC WATER METER (200MM DIA)
STD-W-30	ELECTROMAGNETIC WATER METER (200MM DIA)
STD-W-31	ELECTROMAGNETIC WATER METER (200MM DIA)
STD-W-32	ELECTROMAGNETIC WATER METER (200MM DIA)
STD-W-33	ELECTROMAGNETIC WATER METER (200MM DIA)
STD-W-34	ELECTROMAGNETIC WATER METER (200MM DIA)
STD-W-35	ELECTROMAGNETIC WATER METER (200MM DIA)
STD-W-36	ELECTROMAGNETIC WATER METER (200MM DIA)
STD-W-37	ELECTROMAGNETIC WATER METER (200MM DIA)
STD-W-38	ELECTROMAGNETIC WATER METER (200MM DIA)
STD-W-39	ELECTROMAGNETIC WATER METER (200MM DIA)
STD-W-40	ELECTROMAGNETIC WATER METER (200MM DIA)