GENERAL NOTES

1. 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 (HENS) OR, FOR PRODUCTS NOT COVERED BY THE HENS, 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 RECOMMENDATIONS (SRS) WHICH SET OUT APPROPRAITE MINIMUN PERFORMANCE LEVELS FOR SPECIFIC INTENDED USES OF THE PRODUCT IN IRELAND. NSAI HOST THIS INFORMATION AT WWW.NSAI.IE
2. CONTRACTOR IS TO REFER TO GENERAL NOTES-STRUCTURAL DRAWING FOR DETAILS RELATING TO EXCAVATIONS, FOUNDATIONS & BACKFILLING, CAST IN-SITU CONCRETE ETC.
3. ALL DIMENSIONS IN METERS UNLESS SPECIFIED OTHERWISE.
4. ALL CO-ORDINATES ARE TO IRISH TRASVERSE MERCATOR.
5. ALL LEVELS ARE TO ORDNANCE DATUM (MALIN HEAD).
6. THE CONTRACTOR SHALL CONFIRM ALL EXISTING DRAINAGE / MANHOLE INVERT LEVELS & THE LOCATION OF ALL EXISTING SERVICES ON SITE PRIOR TO COMMENCEMENT OF THE WORKS.
7. UISCE EIREANN
   - 7.1. ALL WATER SUPPLY WORKS TO BE IN ACCORDANCE WITH UISCE EIREANN “CODE OF PRACTICE FOR WATER INFRA-STRUCTURE”. THE CONTRACTOR IS TO REFER TO UISCE EIREANN "WATER INFRASTRUCTURE STANDARD DETAILS".
   - 7.2. ALL FOUL DRAINAGE WORKS TO BE IN ACCORDANCE WITH UISCE EIREANN “CODE OF PRACTICE FOR WASTEWATER INFRASTRUCTURE”. THE CONTRACTOR IS TO REFER TO UISCE EIREANN "WATER INFRASTRUCTURE STANDARD DETAILS".
   - 7.3. PRIOR TO 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.
   - 7.4. WITH REFERENCE TO UISCE EIREANN QUALITY ASSURANCE FIELD INSPECTION REQUIREMENTS MANUAL, BMCE WILL PROVIDE THE SERVICES AS LISTED FOR THE “DEVELOPER'S DESIGN ENGINEER”.
   - 7.5. THE CONTRACTOR IS TO INCLUDE FOR ALL SERVICES AS LISTED FOR THE “DEVELOPER'S CONSTRUCTION ENGINEER” AND ALL LIASIONS WITH UISCE EIREANN FIELD 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 / UISCE EIREANN FIELD ENGINEERS) THAT THE WATER AND/OR WASTEWATER IFRASTRUCTURE HAS BEEN APPROPRIATELY TESTED ON SITE.
8. LOCAL AUTHORITY SURFACE WATER
   - 8.1. ALL SURFACE WATER DRAINAGE WORKS ARE TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL AUTHORITY CODE OF PRACTICE AND GDSDS.
   - 8.2. THE CONTRACTOR IS RESPONSIBLE FOR ALL APPLICATIONS TO THE LOCAL AUTHORITY FOR TEMPORARY ROAD OPENING LICENCES, TEMPORARY DRAINAGE CONNECTIONS ETC.
   - 8.3. THE CONTRACTOR IS RESPONSIBLE FOR ALL LIASIONS WITH THE LOCAL AUTHORITY RELATING TO DRAINAGE INSPECTIONS / FINAL SIGN-OFF.
9. GREEN / BLUE ROOFS
   - 9.1. THE MAIN CONTRACTOR (AND/OR THEIR APPOINTED SPECIALIST ROOF SUBCONTRACTOR) SHALL BE RESPONSIBLE FOR THE DETAILED DESIGN, COORDINATION, SPECIFICATION, DETAILING, INSTALLATION, INSPECTION, BCAR CERTIFICATION, WARRANTING AND MAINTENANCE SPECIFICATIONS FOR ALL GREEN/BLUE ROOFS AND PODIUM BUILD UP.
   - 9.2. 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 'TYPICAL' GREEN BLUE ROOF BUILD UPS THIS SHALL NOT BE CONSTRUED AS A 'DESIGN' BY BMCE, AND IS DEMONSTRATIVE PURPOSES ONLY.
   - 9.3. FOR FURTHER INFORMATION REFER TO BMCE SUDS STRATEGY DRAWING FOR "GREEN BLUE ROOF & PODIUM BUILD-UPS - SuDS PERFORMANCE SPECIFICATION".
10. FIRE CERT & FIRE FIGHTING STRATEGY
   - (i) BMCE ARE NOT RESPONSIBLE FOR THE DEVELOPMENT FIRE CERT APPLICATION OR THE FIRE FIGHTING STRATEGY FOR THE SITE / DEVELOPMENT, WE NOTE UISCE 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.
   - (ii) THE CLIENT / PROJECT FIRE CONSULTANT ARE TO SATISFY THEMSELVES THAT ALL EXISTING AND PROPOSED FIRE HYDRANTS WILL PROVIDE SUFFICIENT FLOWS FOR FIRE FIGHTING PURPOSES.
   - (iii) BMCE WILL INDICATE THE EXISTING AND PROPOSED WATERMAIN LAYOUT FOR THE SITE INCLUDING THE LOCATION OF EXISTING AND PROPOSED FIRE HYDRANTS, HOWEVER AS OUTLINED ABOVE, WILL TAKE NO RESPONSIBILITY FOR THE PERFORANCE FOR FIRE FIGHTING PURPOSES.
11. CONSTRUCTION TRAFFIC MANAGEMENT
   - (i) THE CONTRACTOR IS RESPONSIBLE FOR THE MANAGEMENT OF ALL CONSTRUCTION TRAFFIC.
   - (ii) THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING AND ALTERING ROAD SPECIFICATIONS IF INTENDED TO BE USED AS TEMPORARY CONSTRUCTION ROUTES.
12. STORM WATER BURIED ATTENUATION TANKS TO BE DESIGNED AND SUPPLIED BY SPECIALIST SUBCONTRACTOR AND APPROVED VIA TECHNICAL 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

1. 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 COARSE AND FINE AGGREGATE BATCHED SEPARATELY, OR AN 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	
	NOMINAL MAXIMUM SIZE	
	40mm	20mm
75mm	100	-
37.5mm	95-100	100
20mm	45-80	80-100
5mm	30-40	35-45
600 µm	8-30	10-35
150 µm	0-6	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 28 DAY CUBE STRENGTHS OF NOT LESS THAN 10N/mm² AND NOT MORE THAN 20N/mm². CURING OF LEAN-MIX ROAD BASE SHALL BE BY BUTUMINOUS SPRAYING TO CLAUSE 920 SPECIFICATION FOR ROAD WORKS

2. 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 ENVIROMENT. THE BINDER SHOULD BE CUTBACK 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), CUBICAL IN SHAPE AND SHOULD COMPLY WITH THE REQUIREMENTS OF TABLE 4 OF THE MANUAL.

3. 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 CBR (%)	MINIMUM CAPPING LAYER THICKNESS (mm)
* LESS THAN 2	(SEE FOOTNOTE)
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 COMPACTION SHOULD BE THE STATIC COMPACTION METHOD 2, AS SPECIFIED IN PARAGRAPH 7.2.3.3 OF BS 1377: PART 4. UNLESS NOTED OTHERWISE CBR TESTS TO BE TAKEN AT 25m Crs. AT FORMATION LEVEL ALONG THE ROAD CENTRELINE.

4. 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.

TABLE 4.1 SUB–BASE MATERIAL – RANGE OF GRADING

SIEVE SIZE IS 24	PERCENTAGE BY MASS PASSING
75mm	100
37.5mm	80-100
10mm	40-70
5mm	25-45
600 µm	8-22
75 µm	0-10

PARTICLE SIZE DISTRIBUTION SHOULD BE DETERMINED BY THE WASHING AND SIEVING METHOD OF BS 812: PART 103. ALL MATERIAL USED SHOULD BE FROST RESISTANT.

MATERIAL PASSING THE 425 mm SIEVE, WHEN TESTED IN ACCORDANCE WITH BS 1377, SHOULD BE NON-PLASTIC.

THE MATERIAL SHOULD HAVE A TEN PERCENT FINES VALUE OF 100kN, OR MORE, WHEN TESTED IN ACCORDANCE WITH BS 812.

THE SUB-BASE SHOULD BE LAID AND COMPACTED TO THE REQUIREMENTS OF CLAUSE 802 OF THE SPECIFICATION FOR ROADWORKS, WITHOUT DRYING OUT, OR SEGREGATION.

(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 75 MICRON SHOULD BE 10%. THE MATERIAL SHOULD BE WELL GRADED THRO'UGHOUT ALL SIZES.

SELECTED DEMOLITION MATERIALS WHICH MEET THE ABOVE REQUIREMENTS MAY ALSO BE USED, SUBJECT TO APPROVAL.

5. CONCRETE FOR ROAD PAVEMENTS:

PAVING QUALITY CONCRETE SHOULD BE 40 N/mm² AIR ENTRAINED CONCRETE MADE FROM NATURAL AGGREGATES. CEMENT, WATER AND AIR ENTRAINING AGENT. AGGREGATES SHOULD BE NATURAL MATERIALS COMPLYING WITH IS 5. CEMENT SHOULD BE NORMAL PORTLAND CEMENT, COMPLYING WITH IS 1. THE AIR ENTRAINING AGENT SHOULD COMPLY WITH BS 5075. OTHER ADMIXTURES MAY BE USED, SUBJECT TO APPROVAL. THE CONSTITUENTS SHOULD BE PROPORTIONED AS SET OUT IN TABLE 5.1 BELOW:

TABLE 5.1 CONSTITUENTS FOR PAVING QUALITY CONCRETE

MINIMUM CEMENT CONTENT	325kg/m³
MAXIMUM FREE WATER/CEMENT RATIO	0.55
MAXIMUM AGGREGATE SIZE	20mm
MINIMUM FINE AGGREGATE CONTENT	30%
AIR CONTENT	3.5 - 6.5 %
SLUMP	50mm

6. REINFORCEMENT FOR CONCRETE SLABS SHOULD BE LONG MESH STEEL FABRIC, COMPLYING WITH BS 4483 AND SHOULD BE FREE FROM LOOSE MILL SCALE, RUST, DIRT, 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 350mm 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

7. 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 ¼ & ⅓ 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 / PAVIOURS

8. DOWEL BARS AND TIE BARS SHOULD BE GRADE 250 STEEL, COMPLYING WITH BS 4449 AND SHOULD BE FREE FROM OIL, DIRT, LOOSE SCALE AND RUST. DOWEL BARS SHOULD BE STRAIGHT, FREE OF BURRS AND OTHER IRREGULARITIES, WITH THE SLIDING END SAWN. DOWEL 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.

9. 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 PATTEERN AND STRUCTURAL DEGIGN IS TO BE IN ACCORDANCE WITH BS 7533

10. CLAY AND CALCIUM SILICATE PAVIOURS 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 PAVIOURS SHOULD COMPLY WITH BS 6717: PART 1, TYPE R. 200 x 100 x 80mm THICK FOR TRAFFICED AREAS & 60mm 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 PAVIOURS AND THE LAYING COURSE FROM MIGRATING OUTWARDS AND LOSING INTERLOCK.

CLAY AND CALCIUM SILICATE PAVIOURS SHOULD BE LAID IN ACCORDANCE WITH BS 6677: PARTS 2 & S.

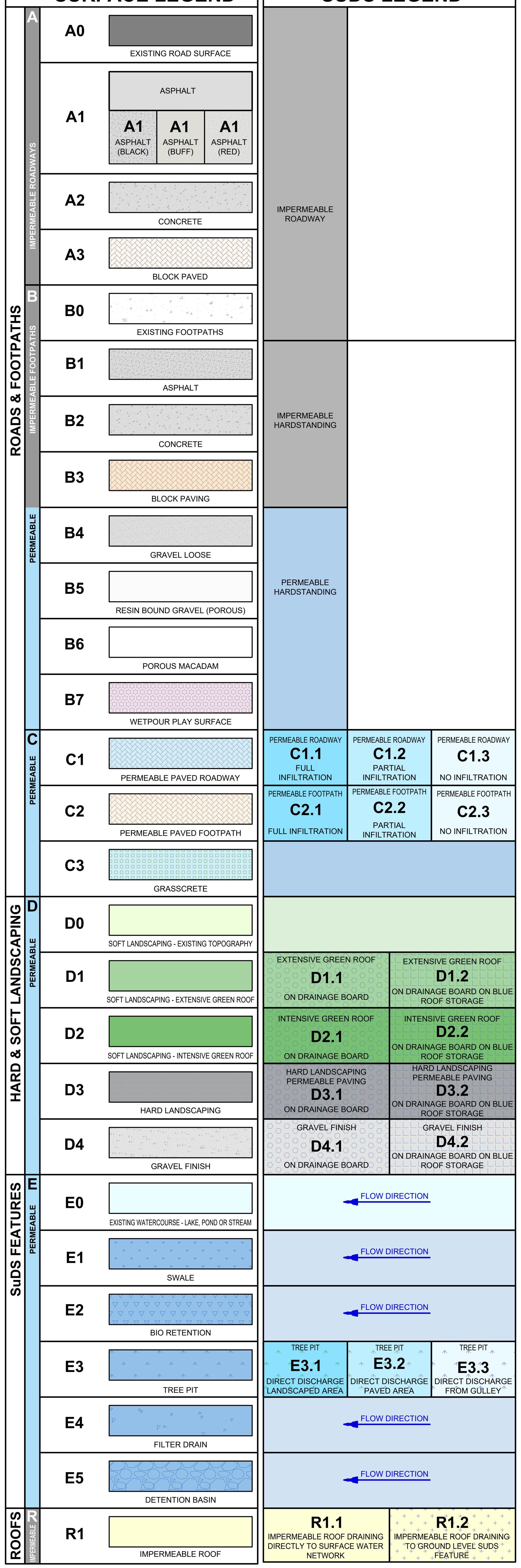
CONCRETE BLOCK PAVIOURS SHOULD BE LAID IN ACCORDANCE WITH BS 6717: PART 3.

11. 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 AHS 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 UNTILL IT DRIES SUFFICIENTLY TI ALLOW BLOCK LAYING TO PROCEED.

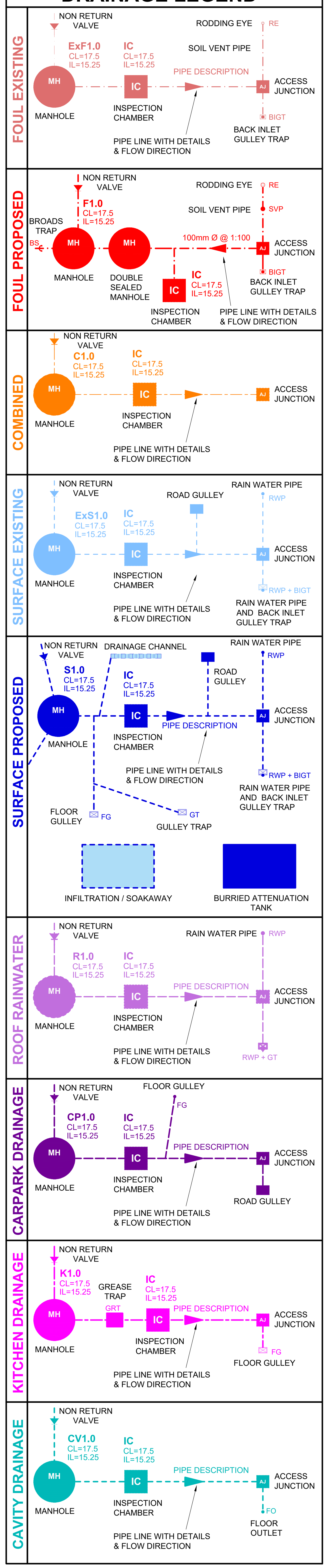
12. JOINTS BETWEEN PAVIOURS TO BE LAID TIGHT (2mm to 5mm WIDE) AND FILLED WITH FINE SAND AS PER GRADING F TABLE 5 IS 5

NOTE:
BEFORE PAVIOURS / 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 ON THIS DRAWING AND ESTABLISH INSPECTION AND TESTING REQUIREMENTS BEFORE COMENCING THE WORK

SURFACE LEGEND / SUDS LEGEND



DRAINAGE LEGEND



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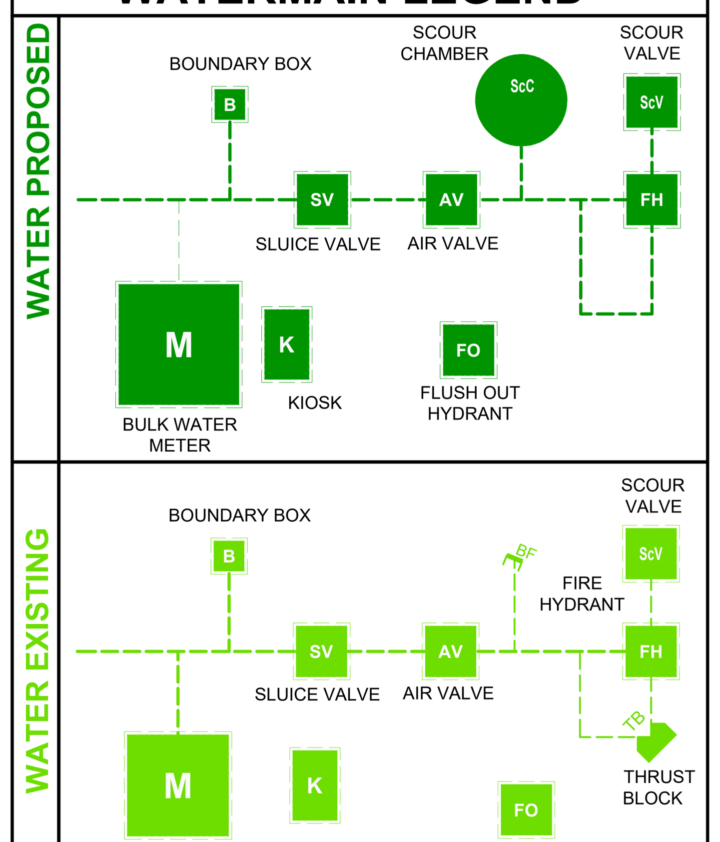
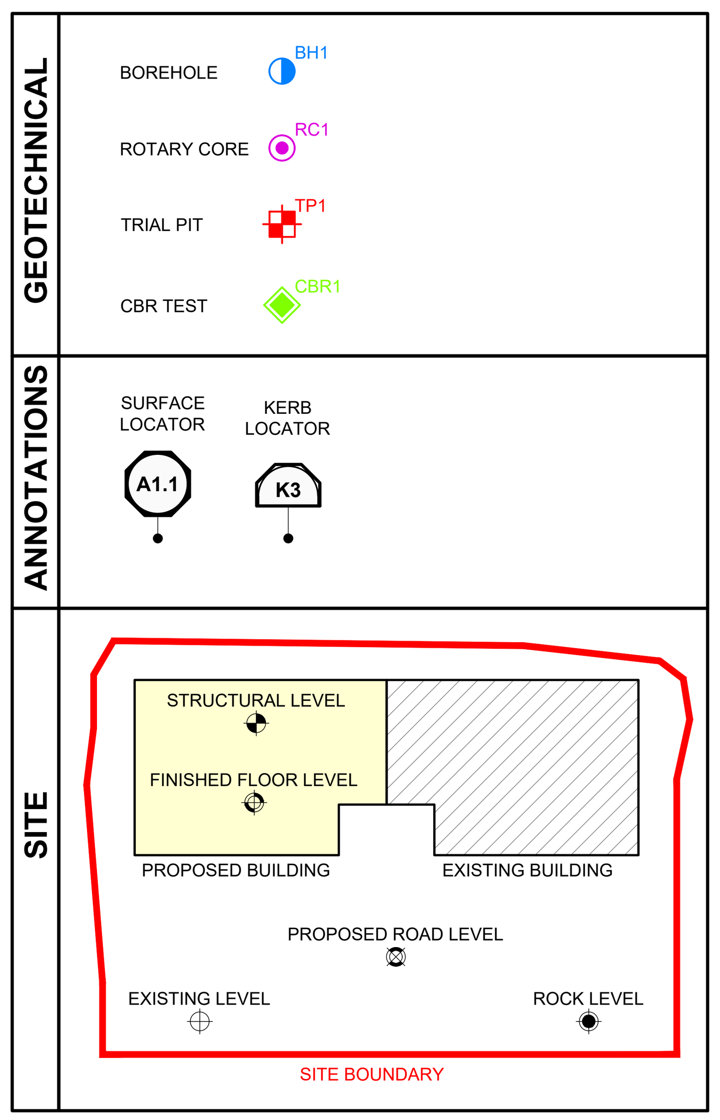
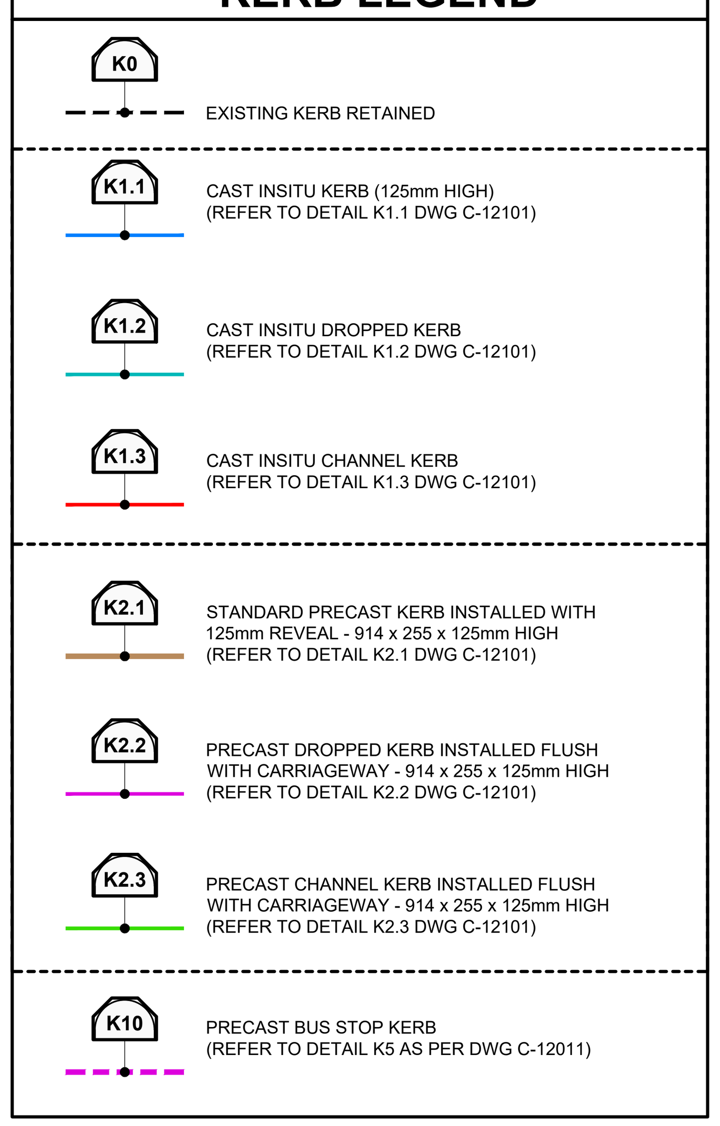




KERB LEGEND



DETAIL No.	UISCE EIREANN - WASTEWATER DETAILS	REV
STD-WW-01	WASTEWATER SERVICE CONNECTION MAINTENANCE RESPONSIBILITY	2
STD-WW-02	TYPICAL LAYOUT FOR SEWER WITHIN NEW DEVELOPMENTS	2
STD-WW-03	DRAIN & SERVICE CONNECTION PIPEWORK	2
STD-WW-04	TYPICAL SEWER / SERVICE PIPE CONNECTION	2
STD-WW-05	TYPICAL SERVICE LAYOUT INDICATING SEPARATION DISTANCES	2
STD-WW-05A	WASTEWATER SERVICE CONNECTION VERTICAL SEPARATION DISTANCES	0
STD-WW-06	RESTRICTIONS ON WASTEWATER INFRASTRUCTURE WORKS ADJACENT TO TREES	2
STD-WW-06A	RESTRICTIONS ON NEW TREES/SHRUBS PLANTING ADJACENT TO SEWERS	1
STD-WW-07	TRENCH BACKFILL & BEDDING	2
STD-WW-08	CONCRETE PROTECTION SLAB, BED, HAUNCH & SURROUND TO WASTEWATER PIPES	1
STD-WW-09	BLOCKWORK MANHOLE (<450MM DIA.)	3
STD-WW-10	PRE-CAST CONCRETE MANHOLE WITH CAST IN-SITU BASE	3
STD-WW-10A	PRE-CAST CONCRETE MANHOLE WITH PRE-CAST BASE	0
STD-WW-10B	PRE-CAST CONCRETE PUMPING STATION INLET MANHOLE WITH CAST IN-SITU CONCRETE BASE	0
STD-WW-10C	PRE-CAST CONCRETE PUMPING STATION INLET MANHOLE WITH PRECAST CONCRETE BASE	0
STD-WW-11	IN-SITU CONCRETE MANHOLE	3
STD-WW-11A	CAST IN-SITU CONCRETE PUMPING STATION INLET MANHOLE	0
STD-WW-12	BACKDROP AND CASCADE MANHOLES	3
STD-WW-13	PRIVATE SIDE INSPECTION CHAMBER	3
STD-WW-14	THRUST BLOCKS FOR RISING MAINS	2
STD-WW-15	SCOUR VALVE CHAMBER (FOUL RISING MAIN ≤200MM DIA.)	3
STD-WW-16	SLUICE VALVE DETAILS FOR RISING MAINS DUCTILE IRON (D.I.) PIPE (≤200MM DIA.) (SHEET 1 OF 2)	4
STD-WW-17	SLUICE VALVE DETAILS FOR RISING MAINS POLYETHYLENE (P.E.) PIPE (≤200MM DIA.) (SHEET 2 OF 2)	3
STD-WW-18	AIR VALVE CHAMBER (FOUL RISING MAIN ≤200MM DIA.)	3
STD-WW-19	DUCT CHAMBER	3
STD-WW-20	EMERGENCY OVERFLOW STRUCTURE & EMERGENCY OVERFLOW TO STORM SEWER	2
STD-WW-21	TYPICAL DITCH/STREAM CROSSING FOR GRAVITY SEWER (SHEET 1 OF 2)	2
STD-WW-22	TYPICAL DITCH/STREAM CROSSING FOR DUCTILE IRON RISING MAIN (SHEET 2 OF 2)	2
STD-WW-22A	TYPICAL DITCH/STREAM CROSSING FOR POLYETHYLENE RISING MAIN	0
STD-WW-23	TYPICAL BRIDGE CROSSING FOR RISING MAIN (SHEET 1 OF 2)	2
STD-WW-24	TYPICAL BRIDGE CROSSING FOR RISING MAIN (SHEET 2 OF 2)	2
STD-WW-24A	TYPICAL CULVERT AND SERVICES CROSSING DETAILS FOR RISING MAIN	0
STD-WW-25	SECURITY GATE & FENCING PALISADE OPTION (PREFERRED)	0
STD-WW-25A	SECURITY GATE & FENCING WIRE MESH OPTION	3
STD-WW-26	INDICATIVE PUMPING STATION SITE LAYOUT – ACCESS VIA LAY-BY	1
STD-WW-26A	INDICATIVE PUMPING STATION SITE LAYOUT – DIRECT ACCESS FROM PUBLIC ROAD	0
STD-WW-27	FLOW METER CHAMBER (FOUL RISING MAIN ≤200MM DIA.) CAST IN-SITU CONCRETE OPTION	3
STD-WW-27A	FLOW METER & VALVE CHAMBER (FOUL RISING MAIN ≤200MM DIA.) CAST IN-SITU CONCRETE OPTION	0
STD-WW-27B	FLOW METER & VALVE CHAMBER (FOUL RISING MAIN ≤200MM DIA.) PRE-CAST CONCRETE OPTION	0
STD-WW-27C	FLOW METER & VALVE CHAMBER (FOUL RISING MAIN ≤200MM DIA.) PRE-CAST CONCRETE OPTION	0
STD-WW-28	CAST IN-SITU INDICATIVE SUBMERSIBLE PUMPING STATION	3
STD-WW-28A	INDICATIVE PRE-CAST CONCRETE SUBMERSIBLE PUMPING STATION WITH CAST IN-SITU VALVE CHAMBER	2
STD-WW-28B	INDICATIVE PRE-CAST CONCRETE SUBMERSIBLE PUMPING STATION AND PRE-CAST VALVE CHAMBER	0
STD-WW-29	RISING MAIN DISCHARGE STAND-OFF MANHOLE	3
STD-WW-30	TYPE 1 PUMPING STATION CONTROL KIOSK	3
STD-WW-30A	TYPE 2 AND TYPE 3 PUMPING STATION CONTROL KIOSK	0
STD-WW-31	PUMPING STATION WET KIOSK	3
STD-WW-31A	PUMPING STATION WET KIOSK WATER SERVICE CONNECTION ARRANGEMENT	0
STD-WW-32	HARDSTANDING AREA PUMPING STATION (PERMEABLE & IMPERMEABLE)	2
STD-WW-33	LAMP BOLLARD & LAMP STANDARD	2
STD-WW-34	VENT STACK	2
STD-WW-35	RISING MAIN RODDING CHAMBER IN-SITU CONCRETE OPTION	0
STD-WW-35A	RISING MAIN RODDING CHAMBER PRE-CAST CONCRETE OPTION	0
STD-WW-36	MARKER POSTS/PLATES	0
STD-WW-37	SECTION SHOWING WASTEWATER SERVICES SEPARATION DETAILS IN HIGH DENSITY DEVELOPMENTS 2.5M WIDE FOOTPATHS WITH 6.0M WIDE CARRIAGEWAY	0
STD-WW-38	LAYOUT PLAN SHOWING BELOW GROUND SERVICES SEPARATION DETAILS IN HIGH DENSITY DEVELOPMENTS 2.5M WIDE FOOTPATHS WITH 6.0M WIDE CARRIAGEWAY	0
STD-WW-39	SECTION SHOWING WASTEWATER SERVICES SEPARATION DETAILS IN HIGH DENSITY DEVELOPMENTS 1.8M WIDE FOOTPATHS, 2.5M WIDE PARALLEL PARKING BAYS WITH 6.0M WIDE CARRIAGEWAY.	0
STD-WW-40	LAYOUT PLAN SHOWING BELOW GROUND SERVICES SEPARATION DETAILS IN HIGH DENSITY DEVELOPMENTS 1.8M WIDE FOOTPATHS, 2.5M WIDE PARALLEL PARKING BAYS WITH 6.0M WIDE CARRIAGEWAY.	0

DETAIL No.	UISCE EIREANN - WATER SUPPLY DETAILS	REV
STD-W-01	WATER SERVICE CONNECTION RESPONSIBILITY	1
STD-W-02	TYPICAL LAYOUT FOR WATERMAINS WITHIN DEVELOPMENTS	2
STD-W-03	CUSTOMER CONNECTION AND BOUNDARY BOX (25MM OD PIPE)	4
STD-W-04	GENERAL PIPE CONNECTIONS (SHEET 1 OF 7)	4
STD-W-05	GENERAL PIPE CONNECTIONS (SHEET 2 OF 7)	3
STD-W-06	GENERAL PIPE CONNECTIONS (SHEET 3 OF 7)	3
STD-W-07	GENERAL PIPE CONNECTIONS (SHEET 4 OF 7)	2
STD-W-08	GENERAL PIPE CONNECTIONS (SHEET 5 OF 7)	2
STD-W-09	GENERAL PIPE CONNECTIONS (SHEET 6 OF 7)	2
STD-W-10	GENERAL PIPE CONNECTIONS (SHEET 7 OF 7)	2
STD-W-11	TYPICAL SERVICE LAYOUT INDICATING SEPARATION DISTANCES	2
STD-W-12	RESTRICTIONS ON WATER INFRASTRUCTURE WORKS ADJACENT TO EXISTING TREES	2
STD-W-12A	RESTRICTIONS ON NEW TREES / SHRUBS PLANTING ADJACENT TO WATER MAINS	0
STD-W-13	TRENCH BACKFILL / BEDDING & REDUCED COVER PROTECTION SLAB DETAIL	2
STD-W-14	SLUICE VALVE FOR DUCTILE IRON (D.I.) PIPE (<350MM DIA.) (SHEET 1 OF 2)	4
STD-W-15	SLUICE VALVE FOR POLYETHYLENE (P.E.) PIPE (<350MM DIA.) (SHEET 2 OF 2)	3
STD-W-16	ON-LINE HYDRANT FOR DUCTILE IRON (D.I.) PIPE (SHEET 1 OF 4)	3
STD-W-17	OFF-LINE HYDRANT FOR DUCTILE IRON (D.I.) PIPE (SHEET 2 OF 4)	4
STD-W-18	ON-LINE HYDRANT FOR POLYETHYLENE (P.E.) PIPE (SHEET 3 OF 4)	3
STD-W-19	OFF-LINE HYDRANT FOR POLYETHYLENE (P.E.) PIPE (SHEET 4 OF 4)	4
STD-W-20	ON-LINE AIR VALVE FOR DUCTILE IRON (D.I.) PIPE (SHEET 1 OF 4)	3
STD-W-21	OFF-LINE AIR VALVE FOR DUCTILE IRON (D.I.) PIPE (SHEET 2 OF 4)	4
STD-W-22	ON-LINE AIR VALVE FOR POLYETHYLENE (P.E.) PIPE (SHEET 3 OF 4)	3
STD-W-23	OFF-LINE AIR VALVE FOR POLYETHYLENE (P.E.) PIPE (SHEET 4 OF 4)	4
STD-W-24	PRESSURE REDUCING / SUSTAINING VALVE CHAMBER IN-SITU R.C. OPTION	3
STD-W-25	BOOSTER PUMP STATION ARRANGEMENT	2
STD-W-26	ELECTROMAGNETIC METER CHAMBER (DN80 - DN250MM DIA.)	4
STD-W-26A	CHAMBER FOR FLANGED MECH. METER WITHOUT STRAINER (DN40 - DN250MM DIA.)	1
STD-W-26B	CHAMBER FOR FLANGED MECH. METER (DN100 - DN250MM DIA.) WITH SEPARATE STRAINER CHAMBER	0
STD-W-26C	THREADED ROTARY PISTON FLOW METER CHAMBER (DN30 - DN40MM DIA.) IN-SITU CONCRETE OPTION	0
STD-W-26D	THREADED ROTARY PISTON FLOW METER CHAMBER (DN30 - DN40MM DIA.) PRECAST CONCRETE OPTION	0
STD-W-26E	THREADED ROTARY PISTON FLOW METER CHAMBER (DN30 - DN40MM DIA.) BLOCKWORK OPTION	0
STD-W-26F	BY-PASS FLOW METER CHAMBER (25-32MM O.D. DIA) FOR DEVELOPMENTS WITH <20M3/DAY WATER USE	0
STD-W-26G	FLOW METER CHAMBER (25-32MM O.D. DIA.)	0
STD-W-27	MARKER POSTS / PLATES	3
STD-W-28	WATER MAIN THRUST AND SUPPORT BLOCKS	1
STD-W-29	DUCT CHAMBER	3
STD-W-30	SCOUR CHAMBER AND HEAD WALL ARRANGEMENTS	4
STD-W-30A	WASHOUT HYDRANT	3
STD-W-30B	SCOUR CHAMBER TO STORM SEWER ARRANGEMENTS	0
STD-W-31	TYPICAL DITCH / STREAM CROSSING FOR WATERMAIN DUCTILE IRON OPTION	2
STD-W-31A	TYPICAL DITCH / STREAM CROSSING FOR WATERMAIN POLYETHYLENE OPTION	0
STD-W-32	TYPICAL BRIDGE CROSSING FOR WATERMAIN (SHEET 1 OF 2)	1
STD-W-33	TYPICAL BRIDGE CROSSING FOR WATERMAIN (SHEET 2 OF 2)	2
STD-W-33A	TYPICAL CULVERT AND SERVICES CROSSING DETAILS FOR WATER MAIN	0
STD-W-34	SECURITY GATE AND FENCING PALISADE OPTION (PREFERRED)	0
STD-W-34A	SECURITY GATE AND FENCING WIRE MESH OPTION	3
STD-W-35	PIPE REPAIR TO EXISTING MAINS	2
STD-W-36	FLOW METER KIOSK	3
STD-W-36A	PRV / PSV CONTROL KIOSK	0
STD-W-37	LAMP BOLLARD AND LAMP STANDARD	2
STD-W-38	WATERMAIN LOOP DETAIL DUCTILE IRON OPTION	0
STD-W-39	WATERMAIN LOOP DETAIL POLYETHYLENE OPTION	0
STD-W-40	SECTION SHOWING WATER SERVICES SEPARATION DETAILS IN HIGH DENSITY DEVELOPMENTS 2.5M WIDE FOOTPATHS WITH 6.0M WIDE CARRIAGEWAY	0
STD-W-41	LAYOUT PLAN SHOWING BELOW GROUND SERVICES SEPARATION DETAILS IN HIGH DENSITY DEVELOPMENTS 2.5M WIDE FOOTPATHS WITH 6.0M WIDE CARRIAGEWAY	0
STD-W-42	SECTION SHOWING WATER SERVICES SEPARATION DETAILS IN HIGH DENSITY DEVELOPMENTS 1.8M WIDE FOOTPATHS, 2.5M WIDE PARALLEL PARKING BAYS WITH 6.0M WIDE CARRIAGEWAY.	0
STD-W-43	LAYOUT PLAN SHOWING BELOW GROUND SERVICES SEPARATION DETAILS IN HIGH DENSITY DEVELOPMENTS 1.8M WIDE FOOTPATHS, 2.5M WIDE PARALLEL PARKING BAYS WITH 6.0M WIDE CARRIAGEWAY.	0

ALL FOUL AND SURFACE WATER DRAINAGE & WATER SUPPLY DETAILS ARE TO BE IN ACCORDANCE WITH UISCE EIREANN STANDARD DETAILS UNLESS NOTED OTHERWISE.

CODE OF PRACTICE:
https://www.water.ie/docs/connections/faqs/Water-Code-of-Practice.pdf

WATER INFRASTRUCTURE STANDARD DETAILS:
https://www.water.ie/docs/connections/faqs/Water-Standard-Details.pdf

WASTEWATER INFRASTRUCTURE STANDARD DETAILS:
https://www.water.ie/docs/connections/faqs/Wastewater-Standard-Details.pdf

ISSUE	DATE	DESCRIPTION	DRN / ORIG	P.E. / P.D.
PL1	08.08.25	ISSUED FOR PLANNING	RP / RP	CF / CK

DRAWING STAGE: **PLANNING**

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PROJECT TITLE	BM PROJECT No.	
KILWOGHAN WOODS, CELBRIDGE, CO KILDARE	24.283	
MODEL REFERENCE	MODEL REV.	SUITABILITY
-	0	S0

DRAWING TITLE: **CIVIL GENERAL NOTES**

DRAWING No.	ISSUE
KWW-BMD-00-XX-DR-C-10000	PL1