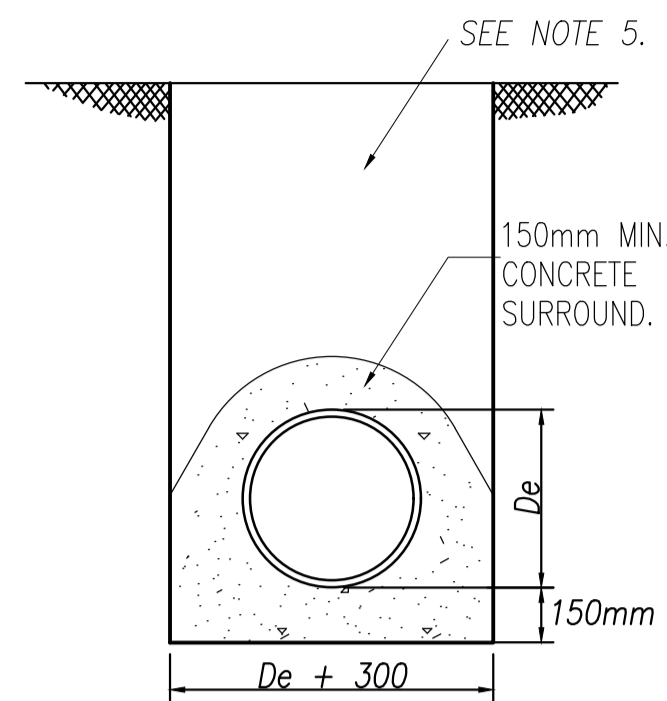
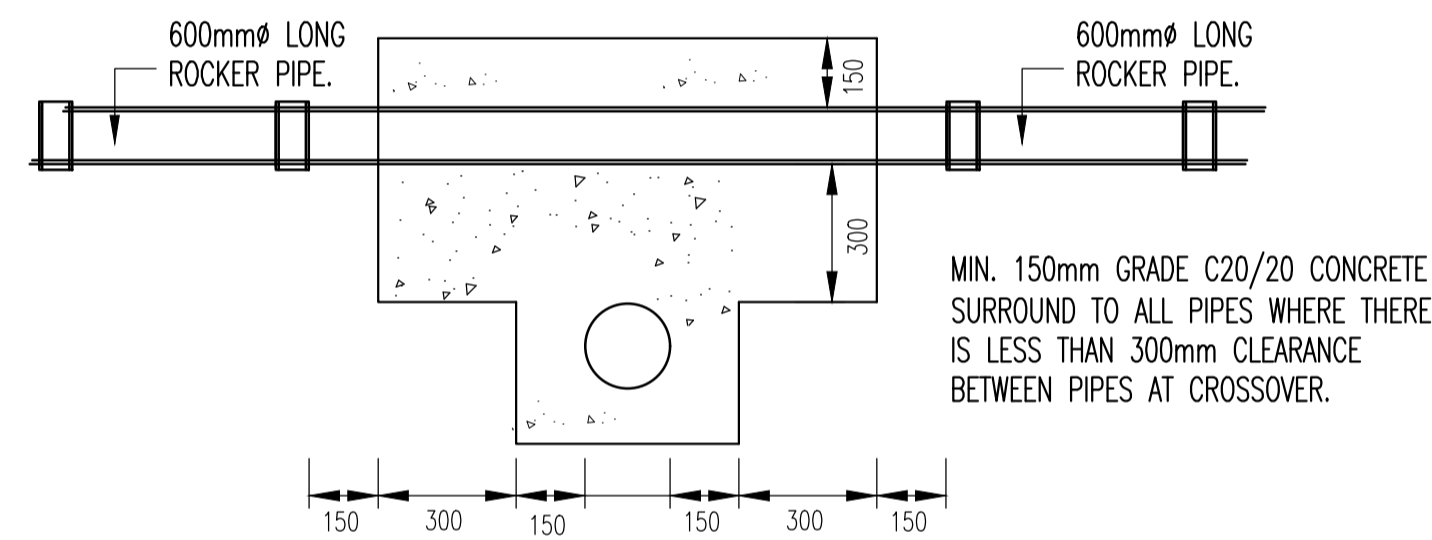


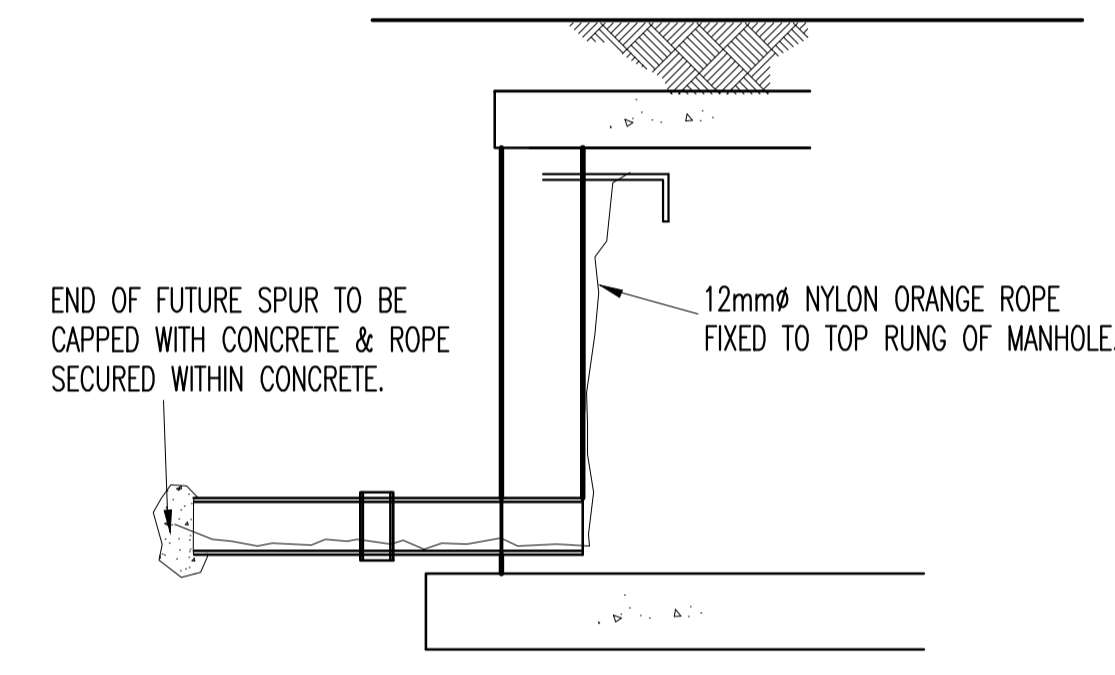
GRANULAR BED AND SURROUND



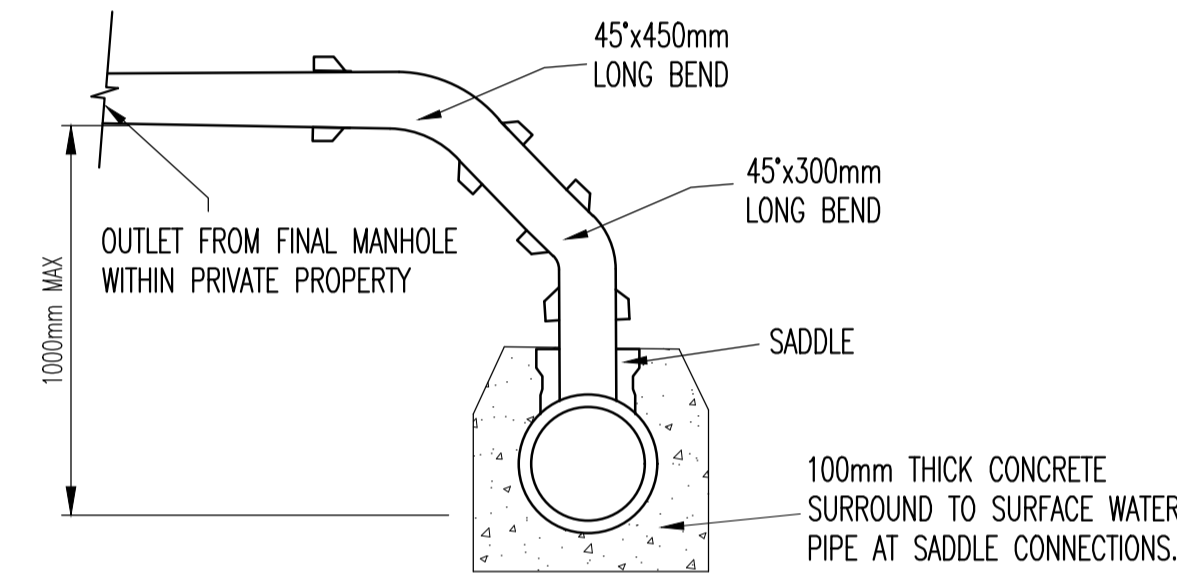
**CONCRETE BED AND SURROUND
WHEN COVER IS LESS THAN 1.2m
UNDER ROADS AND FOOTPATHS**



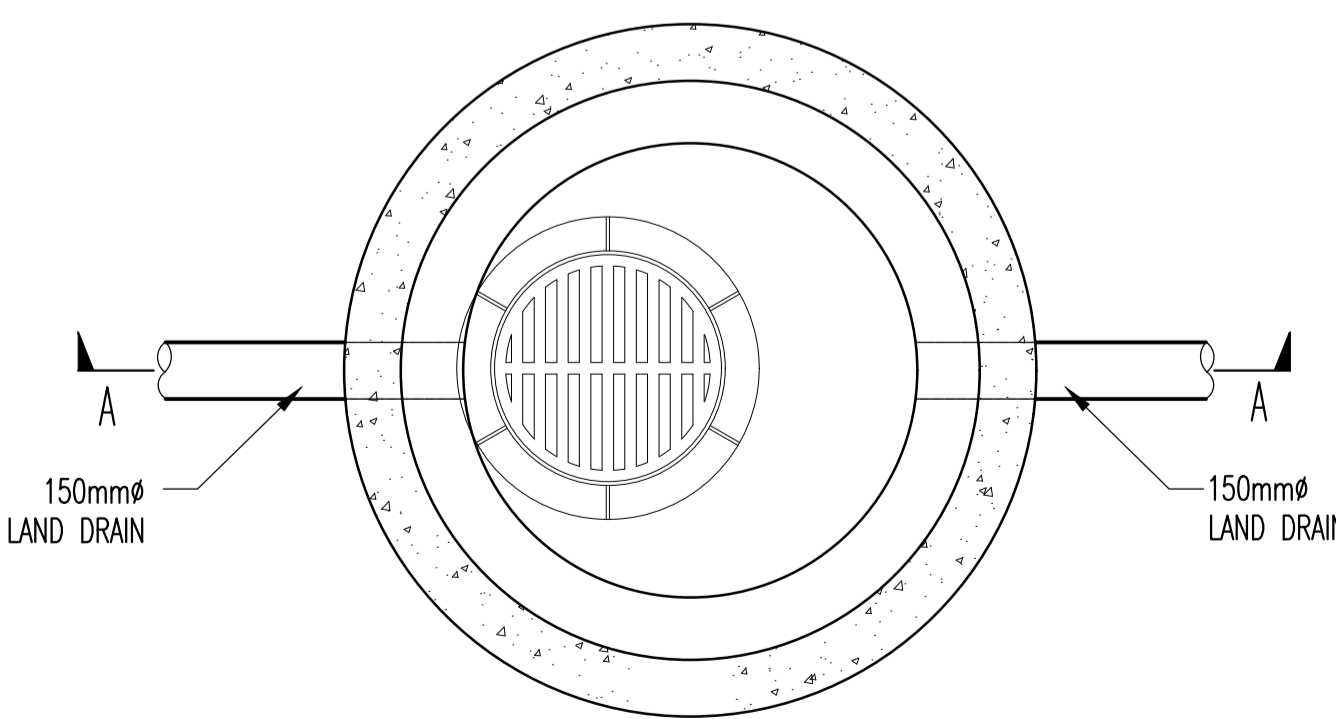
TYPICAL PIPE CROSSOVER DETAIL
Scale 1:25



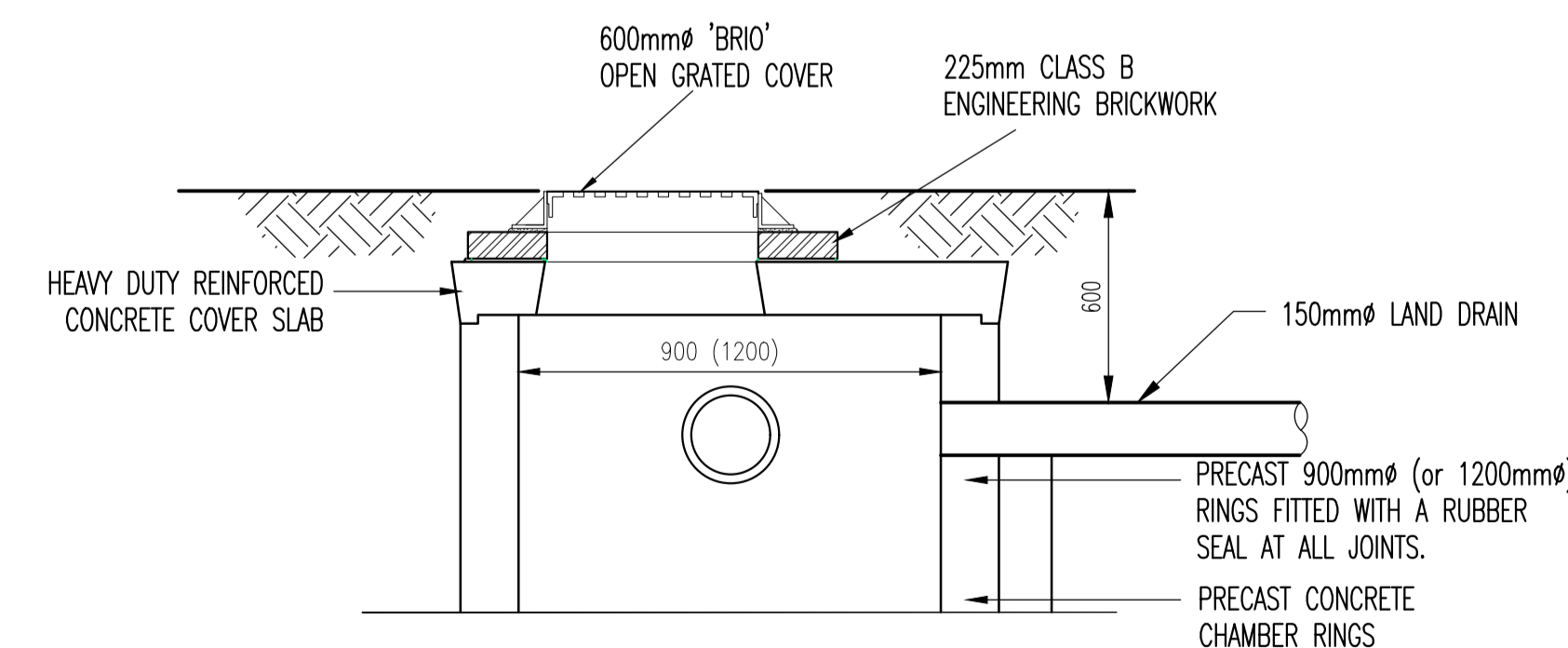
TYPICAL END-CAP DETAIL
Scale 1:25



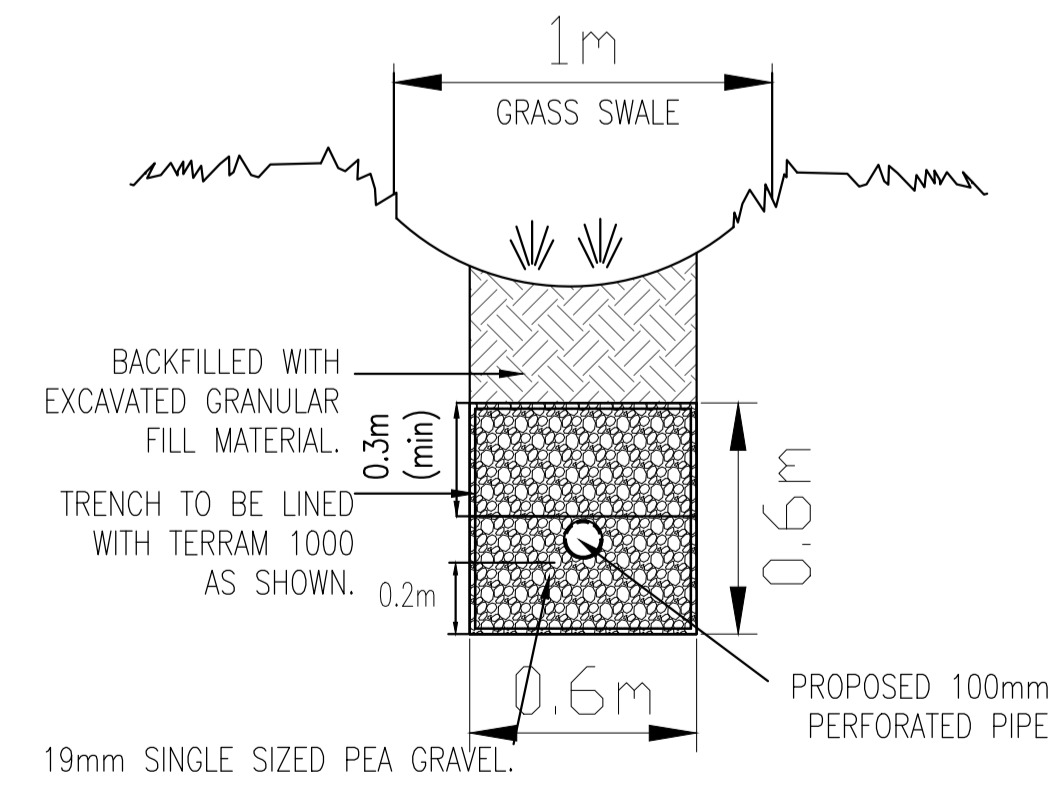
**TYPICAL SADDLE CONNECTION
DETAIL TO PUBLIC SEWER**
Scale 1:25



**PLAN OF ATTENUATION AREA
SURCHARGE MANHOLE**
Scale 1:25

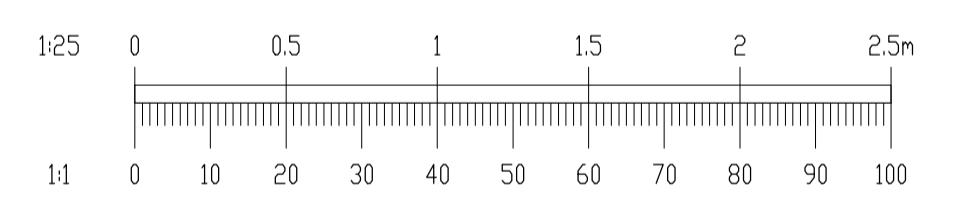


**SECTION A-A
SWALE AREA SURCHARGE MANHOLE
ACCESS CHAMBER & COVER**
Scale 1:25



TYPICAL SECTION THROUGH PROPOSED SWALE
SCALE 1:25

- NOTES:
- DO NOT SCALE. USE FIGURED DIMENSIONS ONLY.
 - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ARCHITECTURAL AND ENGINEERING DRAWINGS.
 - TYPE A GRANULAR FILL SHALL CONSIST OF WASHED PEA GRAVEL. ALL MATERIAL SHALL PASS A 19mm B.S. TEST SIEVE AND SHALL BE RETAINED BY A 4.75mm B.S. TEST SIEVE.
 - SELECTED FILL SHALL BE FREE FROM STONES GREATER THAN 25mm IN SIZE, BUILDERS RUBBISH, VEGETABLE MATTER AND LUMPS OF CLAY GREATER THAN 75mm IN SIZE AND SHALL BE COMPACTED IN 150mm LAYERS.
 - IN OPEN SPACES BACKFILL SHALL CONSIST OF SUITABLE SELECTED EXCAVATED MATERIAL. UNDER PAVED AREAS BACKFILL SHALL CONSIST OF SUITABLE APPROVED GRANULAR FILL. GENERAL BACKFILL SHALL BE COMPACTED IN LAYERS NOT EXCEEDING 300mm THICK.
 - CONCRETE BED AND SURROUND SHALL BE USED ON ALL PIPES WHERE COVER TO THE SOFFIT OF THE PIPE IS LESS THAN 1.2m IN ROADS, FOOTPATHS AND GRASS MARGINS AND 0.9m IN OPEN SPACES AND FIELDS.
 - ALL CONCRETE FOR PIPE BEDDING, HAUNCHING AND SURROUNDS SHALL BE GRADE 20N/20.
 - ALL PIPE TRENCHES/EXCAVATIONS SHALL BE BACKFILLED AND COMPACTED STRICTLY IN ACCORDANCE WITH REQUIREMENTS OF CLAUSE 505, DEPARTMENT OF THE ENVIRONMENT, SPECIFICATION FOR ROAD WORKS.
 - CLASS H PIPES TO BE USED ON CLASS B BEDDING WITH BEDDED FACTOR OF 1.9. APPROVAL MUST BE OBTAINED FROM THE ENGINEER FOR USE OF PIPES WITH A LOWER STRENGTH CLASS.
 - ALL MANHOLES SHALL BE WATERTIGHT TO THE SATISFACTION OF THE ENGINEER.
 - FORMWORK TO REINFORCED CONCRETE AND MASS CONCRETE SHALL BE CLASS F2.
 - CLASS U2 FINISH TO THE TOP OF SLABS. REINFORCEMENT TO SLABS TO ENGINEERS DETAILS.
 - 200mm THICK CL. 30/20 MASS CONCRETE FOUNDATIONS. 225thk. PRECAST R.C. ROOF SLAB IN CL. 30/20 CONCRETE. COVER TO STEEL TO BE 40mm.
 - TOE HOLES TO BE PROVIDED IN BENCHING OF SEWERS GREATER THAN 450mm DIAMETER FOR ACCESS TO INVERT. SAFETY CHAIN ON SEWERS 600mm DIA. OR GREATER. MILD STEEL SAFETY CHAIN SHALL BE 10mm. NOMINAL SIZE GRADE M(H) NON-CALIBRATED CHAIN. TYPE 1, COMPLYING WITH BS4942 PART 2.
 - WHEN DEPTH OF MANHOLES TO INVERT IS GREATER THAN 3.5m, LADDERS SHALL BE USED INSTEAD OF RUNGS. FIXED LADDERS SHOULD MEET THE DIMENSIONAL REQUIREMENTS OF B.S.4211 EXCEPT THAT STRINGERS SHOULD NOT BE LESS THAN 65x20mm IN SECTION AND RUNGS 25mm IN DIAMETER.
 - LADDER STRINGERS SHOULD BE ADEQUATELY SUPPORTED FROM THE MANHOLE WALL AT INTERVALS OF NOT MORE THAN 3m. STRINGERS SHOULD BE BOLTED TO CLEATS TO FACILITATE RENEWAL.
 - ALL LADDERS, RUNGS, HANDRAILS, SAFETY CHAIN ETC. SHALL BE HOT-DIPPED GALVANISED TO B.S.729.
 - ALL DRAINAGE WORKS IN PUBLIC AREAS SHALL BE CONSTRUCTED STRICTLY IN ACCORDANCE WITH THE COUNCILS REQUIREMENTS FOR TAKING IN CHARGE. SURFACE WATER DRAINAGE DETAILS ONLY. FOR FOUL DRAINAGE REFER TO IRISH WATER STANDARD DETAILS FROM: WWW.WATER.IE/CONNECTIONS/DEVELOPER-SERVICES/



A	02/10/20	SHD APPLICATION ISSUE	MK	IS
~	18/03/20	SHD PRE-APPLICATION ISSUE	MK	IS
REV.	DATE	AMENDMENT	DRN	APPD
CAD REF: M:\Projects\12-081A - Dunshaughlin Phase 2 - CIVIL\Drawings\Waterman Moylan\Civil\Planning\Autocad Drawings\12-081A-P231-Drainage Construction Details_Sheet 2 of 2.dwg				

STATUS **FOR SHD APPLICATION**

Waterman Moylan
Engineering Consultants
BLOCK 5, EASTPOINT BUSINESS PARK, ALFIE BYRNE ROAD,
DUBLIN D03 H3F4 IRELAND.
Tel: (01) 664 8900 Fax: (01) 861 3618
Email: info@waterman-moylan.ie www.waterman-moylan.ie

CLIENT **CASTELTHORN CONSTRUCTION ULC**
ARCHITECT **O'MAHONY PIKE ARCHITECTS**
PROJECT **PROPOSED PHASE 2 RESIDENTIAL DEVELOPMENT AT DUNSHAUGHLIN, CO. MEATH**

TITLE **SURFACE WATER CONSTRUCTION DETAILS SHEET 2 OF 2**

DRAWN MK	DESIGNED JU	APPROVED IS	DATE MARCH 2020
SCALE As Shown @A1	JOB NO. 12-081A	DRG. NO. P231	REVISION A