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Dwg.Cat: Part 8

Signed: Tony Dalessandro

### DRAWING / DOCUMENT REGISTER & ISSUE SHEET - CIVIL

Project: 20 Social Housing Units at Dargan, Chancery Lane Tullamore, Co. Offaly		Issue Date and Revision No.				Sheet: 1 of: 1				
Job No. Project No. 20KK019		Day	01							
Drawing/ Document No.		Drawing / Document title	Scale							
C-001	Levels & Watermain Layout	As Shown	PL1							
C-002	Traffic Signs & Road Markings Layout	As Shown	PL1							
C-003	Build Up Layout	As Shown	PL1							
C-010	Foul Drainage Layout	As Shown	PL1							
C-020	Storm Drainage Layout	As Shown	PL1							

Copies issued to:	Number of Copies :
Client (Offaly County Council)	E
<b>Issued by TD</b>	1A3

\* , P1, T1, C1 ..... : Designates Drawings and/or Revisions Issued

**LEGEND:**

	PROPOSED SPOT LEVEL
	PROPOSED WATERMAIN
	EXISTING WATERMAINS
	SLUICE VALVE
	SCOUR VALVE
	AIR VALVE
	THRUST BLOCK
	WATER METER
	PROPOSED HYDRANT
	BOUNDARY BOX

1. ALL WATERMAINS SHALL BE 100mm Ø HDPE PE100 (16 BAR) TYPE WATERMAIN U.N.O.
2. ALL WATERMAINS SHOULD BE LOOPED TO AVOID DEAD ENDS.
3. ONLY USE ALL FLANGED T'S & ALL FLANGED VALVES.
4. USE ANTI-CLOCKWISE (LEFT-HAND CLOSING) SLUICE VALVES.
5. DO NOT USE DUCTILE IRON TAILS - USE FLANGE ADAPTORS WHERE APPLICABLE.
6. ONLY USE SCREW TYPE HYDRANTS.
7. THE DEPTH OF THE SLUICE VALVE SPINDLE CAP BELOW FINISHED GROUND LEVEL SHOULD NOT EXCEED 300mm.
8. THE DEPTH OF THE HYDRANT OUTLET BELOW FINISHED GROUND LEVEL, SHOULD NOT EXCEED 200mm.
9. AN APPROVED MARKER TAPE CONTAINING A TRACER WIRE, SHOULD BE AFFIXED TO THE TOP SURFACE OF ALL WATERMAINS.
10. NO PIPE, CABLE, CONDUIT OR OTHER SERVICE SHOULD BE LAID LONGITUDINALLY OVER THE LINE OF A WATERMAIN.
11. ENSURE MARKER PLATES ARE IN PLACE.
12. ALL WATERMAINS SHOULD BE TESTED AT 1.5 TIMES THE WORKING PRESSURE FOR ONE HOUR IN THE PRESENCE OF A MEMBER OF STAFF FROM THE WATERWORKS DEPARTMENT. DETAILS OF TESTING PROCEDURE TO BE DISCUSSED ON SITE WITH CONTRACTOR.
13. ALL HYDRANTS TO BE PUT IN, IN ACCORDANCE WITH TECHNICAL GUIDANCE DOCUMENT B OF THE BUILDING REGULATIONS 2000/2007 S.S 5.1.6 T.G.D.B & B.5.1 T.G.B.D & THE D.O.E. "RECOMMENDATIONS FOR SITE DEVELOPMENT WORKS FOR HOUSING AREAS".
14. HYDRANTS TO BE LOCATED IN ACCORDANCE WITH THE FIRE OFFICER'S RECOMMENDATIONS.
15. PROVIDE THRUST BLOCKS AT ALL CHANGES IN DIRECTION.
16. ALL CONNECTIONS POINTS TO BUILDING TO BE SERVICED WITH PE-X-100 HDPE PIPE WITH AN SDR RATING OF 11.
17. ALL WATERMAINS, METERS, HYDRANTS & VALVES TO BE INSTALLED, TESTED & CLEANED IN ACCORDANCE WITH IRISH WATER SPECIFICATIONS.
17. BUTT FUSION WELDING AND ELECTRO FUSION JOINTING OF PIPES SHALL ONLY BE CARRIED OUT BY TRAINED OPERATIVES IN POSSESSION OF A CURRENT TRAINING CERTIFICATE, USING FULLY AUTOMATIC APPROVED JOINTING MACHINE/RIGS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. THE IDENTITY OF THE HDPE PIPELINE MANUFACTURER SHALL BE MADE KNOWN TO IRISH WATER PRIOR TO COMMENCEMENT OF THE INSTALLATION.
18. ALL TESTING (PRESSURE CHLORINATION & BACTERIAL) TESTS TO BE IN ACCORDANCE WITH LOCAL AUTHORITIES SPECIFICATION. THE ENGINEER IS TO INSPECT THE PRESSURE TEST AFTER THE WATER CONTROL METRES ARE INSTALLED. ALL HYDRANTS & VALVES ARE TO BE INCLUDED IN THE TEST.
19. CERTIFICATION AND TESTING (INCLUDING INDEPENDENT THIRD PARTY CERTIFICATION) SHALL BE PROVIDED TO CONFIRM QUALITY ASSURANCE COMPLIANCE. EACH JOINT SHALL BE CLEARLY MARKED WITH THE JOINT LOGGED AUTOMATICALLY ON THE JOINTING MACHINE.
20. A PRINTOUT OF THE JOINT DETAILS, WITH A GPS LOCATION OF EACH JOINT, SHALL BE PROVIDED AND RETAINED FOR QUALITY ASSURANCE PURPOSES.
21. CONNECTING TO EXISTING MAINS IS TO BE CARRIED OUT BY IRISH WATER OR AN APPROVED IRISH WATER AGENT.
22. WHEN EXISTING AC WATERMAINS ARE PRESENT A SPECIFIC METHOD STATEMENT SHALL BE SUBMITTED TO IRISH WATER PRIOR TO WORKS TAKING PLACE AND SUBJECT TO WRITTEN APPROVAL, DETAILING THE PROTECTION TO BE PUT IN PLACE TO EXISTING MAINS, METHOD OF REMOVAL OF EXISTING AC, METHOD OF DISPOSAL OF EXISTING AC AND METHOD OF CONNECTION TO EXISTING AC.



WATERMAINS WORKS AND DESIGN IS TO BE IN ACCORDANCE WITH IRISH WATER COP DOCUMENT IW-CDS-5020-03 & WATER STANDARD DETAILS DOCUMENT IW-CDS-5020-01

WHERE HYDRANTS ARE LOCATED IN GRASSED AREA PROVIDE CONCRETE PLINTH SURROUND AROUND COVER

**IRISH WATER QA:**

THE CONTRACTOR IS TO INCLUDE FOR THE EMPLOYMENT OF A CHARTERED ENGINEER WITH PI INSURANCE TO €6.5M TO WITNESS THE INSTALLATION OF ALL AIR TESTS AND OTHER IRISH WATER QA AS REQUIRED UNDER THE IRISH WATER QUALITY ASSURANCE (QA) FIELD INSPECTION REQUIREMENTS MANUAL, AS PER CURRENT VERSION ON IRISH WATERS WEBSITE. IT IS A REQUIREMENT OF THE MAIN CONTRACTOR TO AGREE THE REQUIRED QA WITH THE IW FIELD INSPECTORS, RETAIN ALL THE QA DOCUMENTS ON SITE AND REPAIR ANY DEFECTS. THE MAIN CONTRACTORS CHARTERED ENGINEERS AND THE MAIN CONTRACTOR ARE RESPONSIBLE FOR AGREEING ON SITE CONFORMANCE WITH IW PRIOR TO HAND OVER OF THE WORKS TO IW. THE PRICE FOR ALL THE ABOVE IS TO BE INCLUDED IN THE MAIN CONTRACTORS TENDER SUM.

1. FIRE HYDRANTS TO BE POSITIONED A MINIMUM OF 6m FROM THE PROPOSED BUILDING FOUNDATIONS.
2. LOCATIONS OF FIRE HYDRANTS AS PER FIRE CERTIFICATE DRAWINGS.
3. FIRE HYDRANTS TO BE IN ACCORDANCE WITH THE FIRE OFFICER RECOMMENDATIONS.
4. ALL FIRE HYDRANTS TO BE LOCATED IN ACCORDANCE WITH TECHNICAL GUIDANCE DOCUMENT B OF BUILDING REGULATIONS, 1997 & TECHNICAL GUIDANCE DOCUMENT B OF BUILDING REGULATIONS, 2006 STATUTORY INSTRUMENT 497 OF 1997.
5. FINAL VERIFICATION SHOULD BE SOUGHT FROM THE FIRE AUTHORITY FOR AGREED LAYOUT OF ALL HYDRANTS & THE NUMBER OF WATER SUPPLY CONNECTIONS TO THE FIRE WATER RING MAIN.

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Dwg No.	Dwg Title

Rev.	Date	Description	Desn.	Chkd.	Appvd.
PL1	01.03.22	PART 8	TD	MC	NP

**NOTES:**

1. THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, SERVICE ENGINEERS DRAWINGS & SPECIFICATIONS.
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3. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE RELEVANT BUILDING REGULATIONS.
4. DO NOT SCALE - WORK TO FIGURE DIMENSIONS ONLY.



**Drawing Title:**  
WATERMAIN & LEVELS LAYOUT

Date: 29.09.21

Scale: A1 - 1:50 / A3 - 1:100

Drawn By: T.DALESSANDRO

Checked By: M.CARR

Approved By: N.PATTERSON

**Client:**  
OFFALY COUNTY COUNCIL

Job Description:  
RESIDENTIAL DEVELOPMENT AT DARGAN DRIVE, CHANCERY LANE, TULLAMORE, Co. OFFALY

Project No: 20KK019

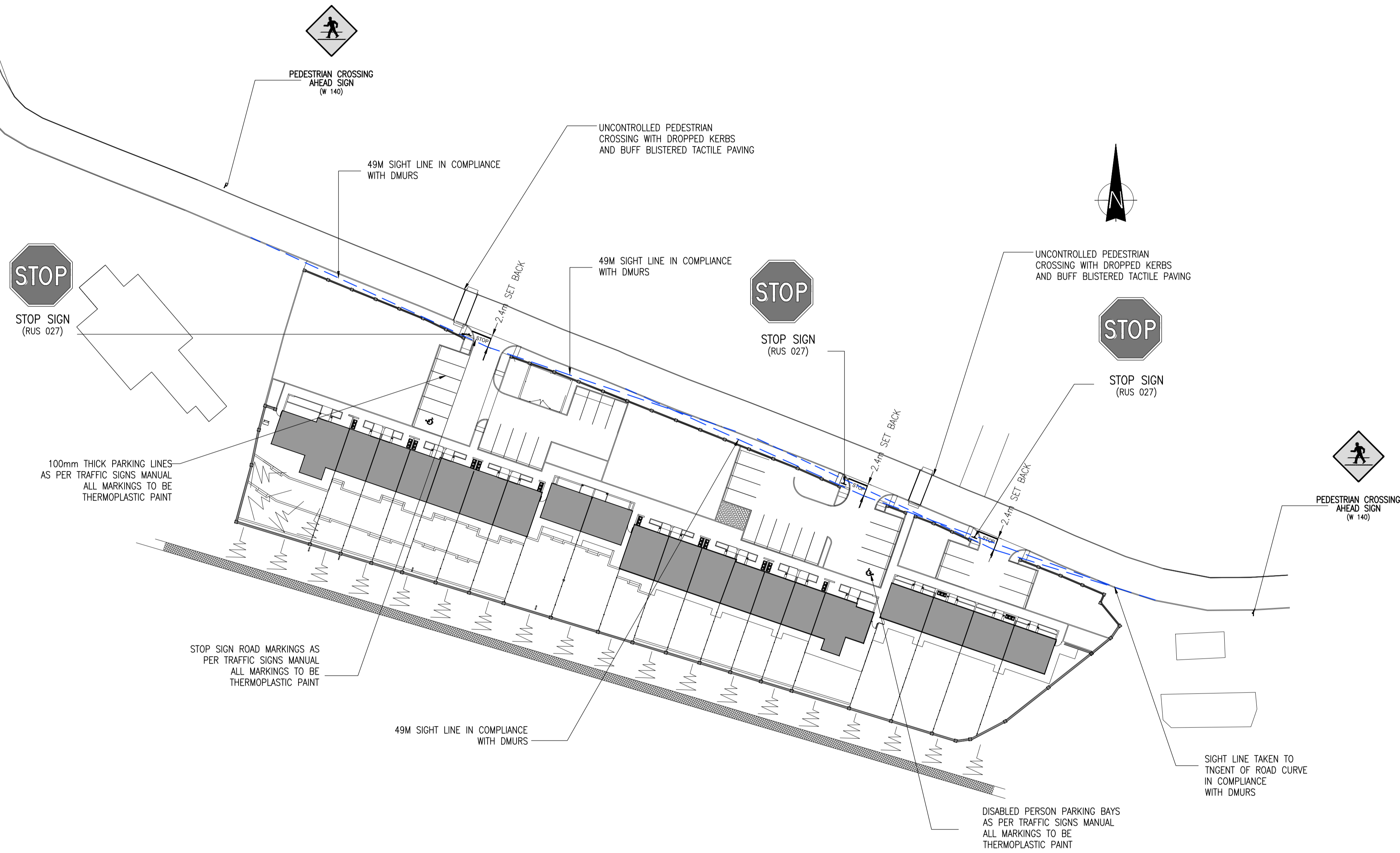
Drawing Ref: C-001

Rev: PL1

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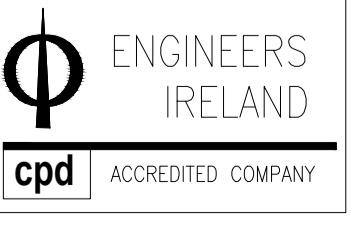
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Referenced drawings	
Dwg No.	Dwg Title

Issue register					
Rev.	Date	Description	Dwn.	Chkd.	Appvd.
PL1	01.03.22	PART 8	TD	MC	NP

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Drawing Title: <b>TRAFFIC SIGNS &amp; ROAD MARKINGS LAYOUT</b>	
Date: 29.09.21	Scale: A1 - 1:50 / A3 - 1:100
Drawn By: T.DALESSANDRO	Checked By: M.CARR
Approved By: N.PATTERSON	

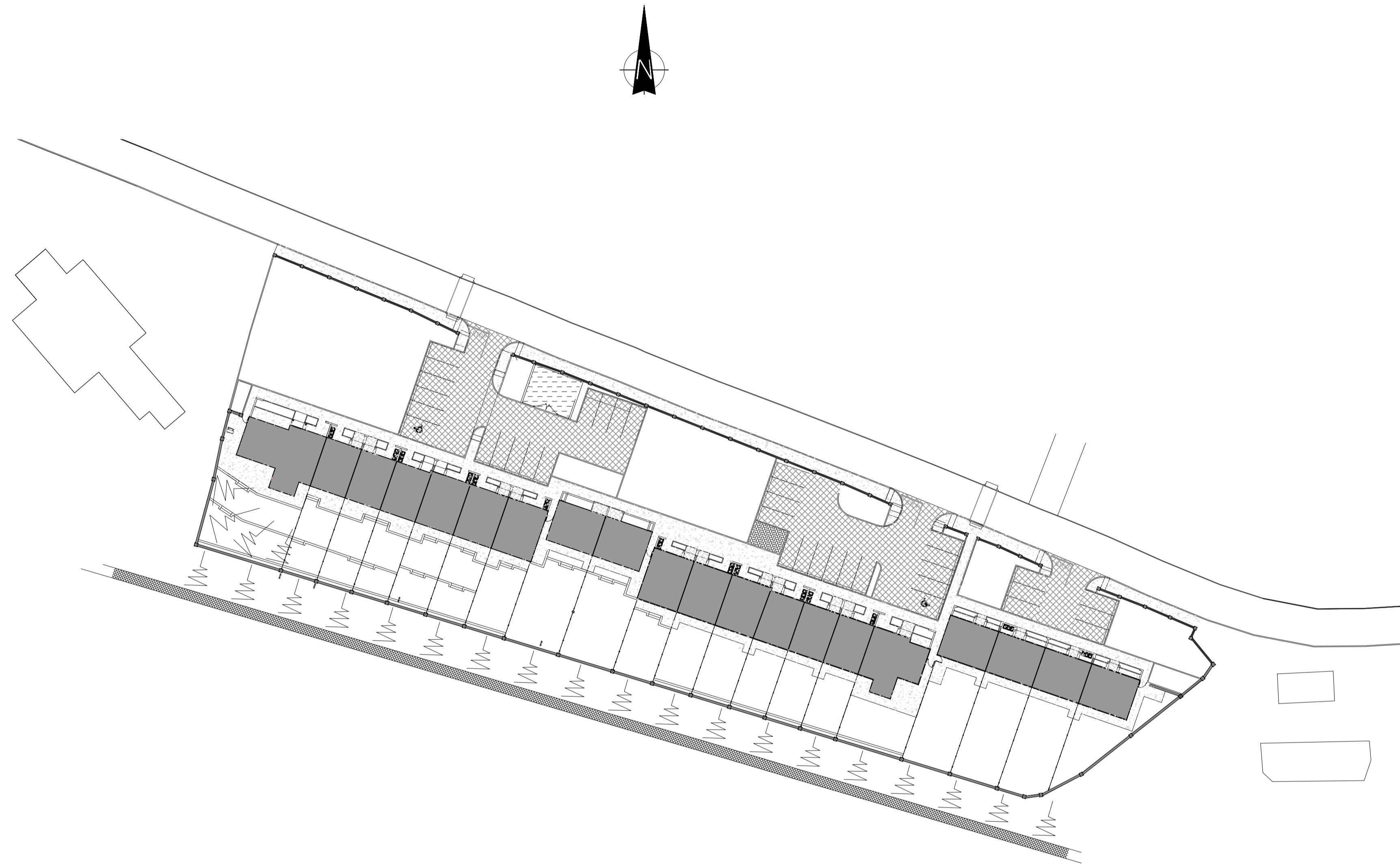
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PART 8

Client: OFFALY COUNTY COUNCIL		
Job Description: RESIDENTIAL DEVELOPMENT AT DARGAN DRIVE, CHANCERY LANE, TULLAMORE, Co. OFFALY		
Project No: 20KK019	Drawing Ref: C-002	Rev: PL1

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**LEGEND:**

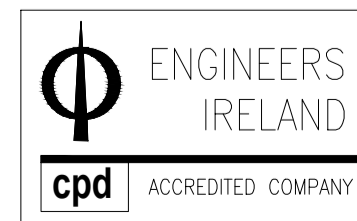
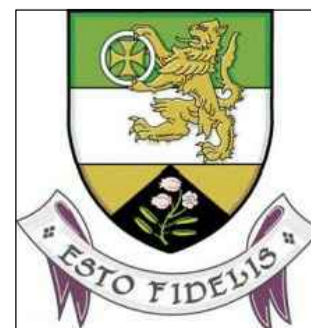
	<b>ACCESS ROAD AND PARKING BAYS</b> 45MM THICK SURFACE COURSE LAYER TO NRA SPEC (2011) CLAUSE 912 (AC 14 CLOSE SURF 70 / 100 REC) ON POLYMER MODIFIED BOND COAT AT A SPRAY RATE OF 0.5LM/2 ON 80MM THICK BINDER COURSE LAYER TO NRA SPEC (2011) CLAUSE 906 (AC 20 DENSE BIN 70 / 100 REC) ON 150mm MIN SUB-BASE SR21 ANNEX E - T1 STRUC ON 350mm MIN CAPPING SR21 ANNEX E - TO STRUC ON THRACE TG 40/40S EXTRUDED BIAXIAL POLYPROPYLENE GEOGRID ON TERRAM PRODUCT GRADE T1000
	<b>CONCRETE FOOTPATHS</b> 100mm THICK CONCRETE PATHS WITH (150MM THICK WHERE TRAFFICKED) MESH AND JOINTS TO BE IN ACCORDANCE WITH CL 2.19 AND 2.25 OF THE SITE DEVELOPMENTS WORKS MANUAL, ON C40 / 50 XF4 EXPOSURE CLASS CONCRETE ON 150mm MIN SUB-BASE SR21 ANNEX E - T1 STRUC ON 350mm MIN CAPPING SR21 ANNEX E - TO STRUC ON THRACE TG 40/40S EXTRUDED BIAXIAL POLYPROPYLENE GEOGRID ON TERRAM PRODUCT GRADE T1000
	<b>PEDESTRIAN AREA'S</b> PAVERS TO ARCHITECT SPEC ON 50MM DEEP COMPACTED PAVING SAND ON 150mm MIN SUB-BASE SR21 ANNEX E - T1 STRUC ON 350mm MIN CAPPING SR21 ANNEX E - TO STRUC ON THRACE TG 40/40S EXTRUDED BIAXIAL POLYPROPYLENE GEOGRID ON TERRAM PRODUCT GRADE T1000
	<b>CONCRETE YARD</b> 150mm THICK C40 / 50 XF4 EXPOSURE CLASS CONCRETE WITH 1 LAYER OF A393 MESH ON 150mm MIN SUB-BASE SR21 ANNEX E - T1 STRUC ON 350mm MIN CAPPING SR21 ANNEX E - TO STRUC ON THRACE TG 40/40S EXTRUDED BIAXIAL POLYPROPYLENE GEOGRID ON TERRAM PRODUCT GRADE T1000

**NOTE:**  
ALL SITE MATERIAL THAT IS TO BE DISPOSED OFF SITE IS TO BE TESTED IN ACCORDANCE WITH ACCEPTABILITY TO A LICENSED LANDFILL.

Referenced drawings	
Dwg No.	Dwg Title

Issue register					
Rev.	Date	Description	Dwn.	Chkd.	Appvd.
PL1	01.03.22	PART 8	TD	MC	NP

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Drawing Title: <b>BUILD-UPS LAYOUT</b>	
Date: <b>29.09.21</b>	Scale: <b>A1 - 1:50 / A3 - 1:100</b>
Drawn By: <b>T.DALESSANDRO</b>	Checked By: <b>M.CARR</b>
Approved By: <b>N.PATTERSON</b>	

Client: <b>OFFALY COUNTY COUNCIL</b>		
Job Description: <b>RESIDENTIAL DEVELOPMENT AT DARGAN DRIVE, CHANCERY LANE, TULLAMORE, Co. OFFALY</b>		
Project No: <b>20KK019</b>	Drawing Ref: <b>C-003</b>	Rev: <b>PL1</b>

Status: <b>PART 8</b>	
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EXISTING 225mmØ LOCAL AUTHORITY FOUL SEWER  
 EXISTING FOUL MH (225 CONC.)  
 CL 65.140  
 IL 63.320  
 PROPOSED WASTEWATER RISING MAIN DISCHARGE MANHOLE  
 CONNECTED TO WASTEWATER VENT STACK IN ACCORDANCE  
 WITH "IRISH WATER CODE OF PRACTICE FOR WASTEWATER  
 INFRASTRUCTURE" & "IRISH WATER WASTEWATER  
 INFRASTRUCTURE STANDARD DETAILS"

Pipe Section	U/S	U/S	D/S	Pipe Dia	Note
	CL	IL	IL		
	(m)	(m)	(m)	(mm)	
F1.0 to F1.1	63.950	62.600	61.990	150	
F1.1 to F1.2	64.150	61.990	61.905	150	
F1.2 to F1.3	64.150	61.905	61.355	150	
F1.3 to F1.4	64.100	61.335	61.045	150	
F1.4 to F1.5	64.100	61.045	60.978	150	
F1.5 to PS	64.075	60.978	60.950	150	
F2.0 to F1.4	64.100	63.050	61.715	150	

**NOTE**  
 \* = CONCRETE PROTECTION WILL BE PROVIDED OVER PIPE  
 uPVC PIPES ASSUMED AS THE DRAINAGE MATERIAL,  
 BD DENOTES BACKDROP MANHOLE

FOUL DRAINAGE DESIGN TABLE

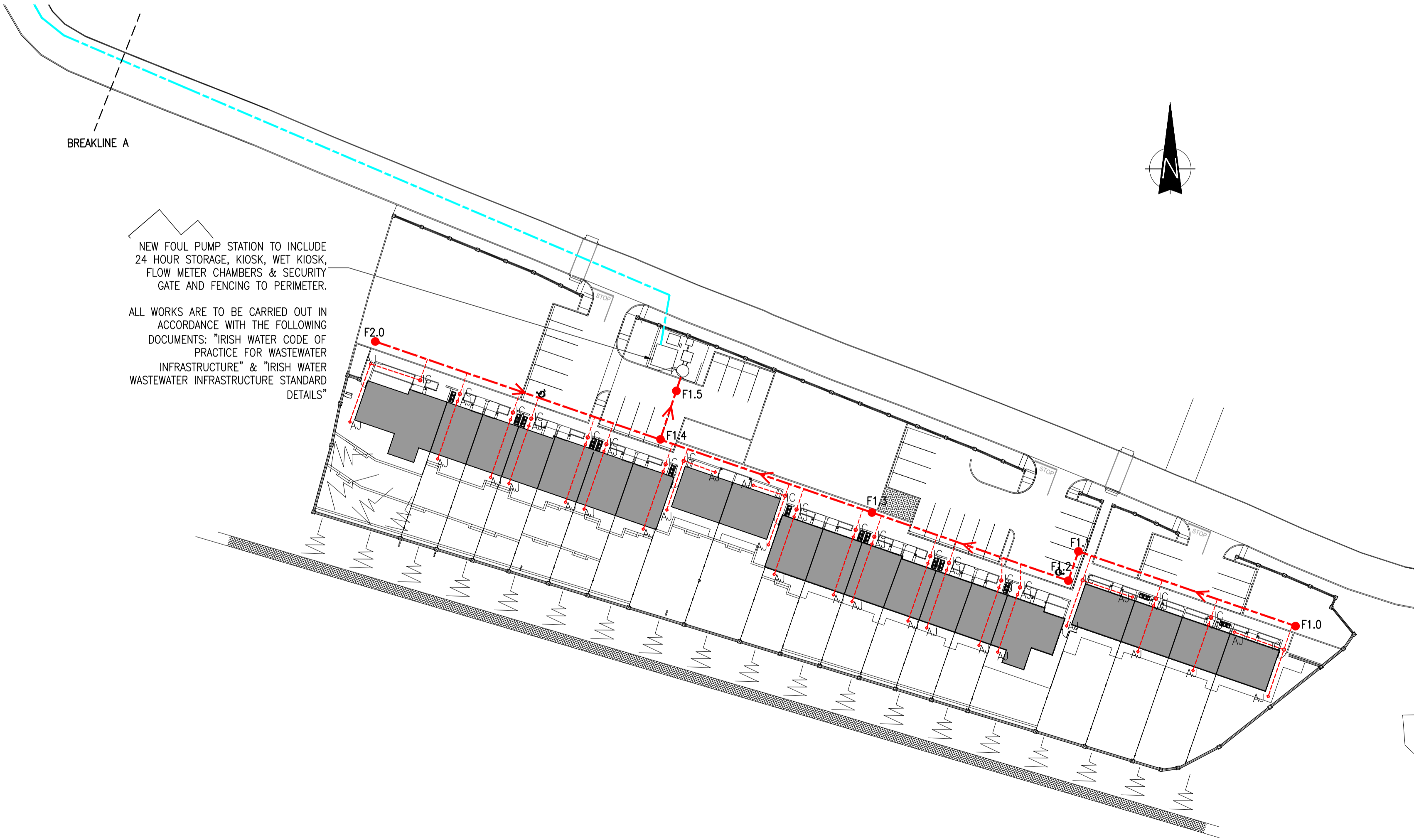
**IRISH WATER QA:**  
 THE CONTRACTOR IS TO INCLUDE FOR THE EMPLOYMENT OF A CHARTERED ENGINEER WITH PI INSURANCE TO €6.5M TO WITNESS THE INSTALLATION OF ALL AIR TESTS AND OTHER IRISH WATER QA AS REQUIRED UNDER THE IRISH WATER QUALITY ASSURANCE (QA) FIELD INSPECTION REQUIREMENTS MANUAL, AS PER CURRENT VERSION ON IRISH WATERS WEBSITE. IT IS A REQUIREMENT OF THE MAIN CONTRACTOR TO AGREE THE REQUIRED QA WITH THE FIELD INSPECTORS, RETAIN ALL THE QA DOCUMENTS ON SITE AND REPAIR ANY DEFECTS. THE MAIN CONTRACTORS CHARTERED ENGINEERS AND THE MAIN CONTRACTOR ARE RESPONSIBLE FOR AGREEING ON SITE CONFORMANCE WITH IW PRIOR TO HAND OVER OF THE WORKS TO IW. THE PRICE FOR ALL THE ABOVE IS TO BE INCLUDED IN THE MAIN CONTRACTORS TENDER SUM.

TESTING OF SEWERS

- FOUL AND SURFACE WATER SEWERS TO BE TESTED EITHER A WATER OF AIR TEST. IF THE AIR TEST IS CARRIED OUT AND THE RESULTS SHOW A FAILURE THEN A WATER TEST SHALL BE SUBSEQUENTLY CARRIED OUT TO DETERMINE ACCEPTANCE OR REJECTION.
- WATER TESTS CARRIED OUT SHALL BE TESTED IN UNDER A HEAD OF WATER IN ACCORDANCE WITH BS 8301 1995, AND CARRIED OUT FOR A MINIMUM OF 30 MINUTES.
- THE CONTRACTOR IS TO ENGAGE AN ENGINEER WITH PROFESSIONAL INDEMNITY INSURANCE TO SUPERVISE ALL AIR/WATER TESTS ON MAINS BEFORE BACKFILLING.
- ON COMPLETION OF ALL SEWERS DRAINS AND GULLIES, ALL SEWERS SHALL BE FLUSHED OUT AND LEFT FREE FROM DEFECT AND OBSTRUCTION AND SUBSEQUENTLY A CCTV SURVEY SHALL BE CARRIED OUT BY AN INDEPENDENT CONTRACTOR OF THE AS BUILT DRAINAGE. THE CCTV SURVEY SHALL INCLUDE A REPORT AND DVD AND SHALL BE SUBMITTED TO THE ENGINEER AND ARCHITECT PRIOR TO PRACTICAL COMPLETION.
- ON COMPLETION OF ALL SEWERS, DRAINS AND GULLIES AN AS-BUILT SURVEY MUST BE SUBMITTED INCLUDING LOCATION OF MANHOLES RELATIVE TO THE BUILDING OUTLINE, COVER, INVERT LEVELS AND PIPE DIAMETERS. TO THE ENGINEER AND ARCHITECT FOR THEIR REVIEW PRIOR TO PRACTICAL COMPLETION.

GENERAL NOTES:

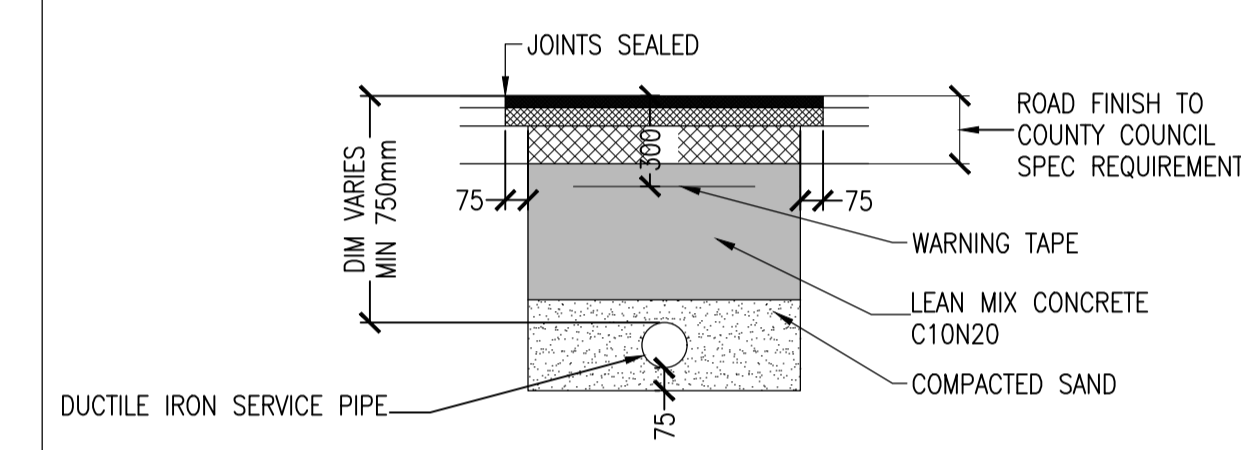
- ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE NOTED.
- ALL LEVELS ARE IN METRES ABOVE DATUM UNLESS OTHERWISE NOTED.
- ALL PIPE DIAMETERS ARE NORMAL.
- THE CONTRACTOR MUST CONTACT THE RELEVANT AUTHORITIES PRIOR TO CONSTRUCTION WORK, & SATISFY HIMSELF IN RESPECT TO THE LOCATION OF ALL EXISTING SERVICES.
- ALL SEWER & DRAIN PIPES ARE uPVC STIFFNESS CLASS SN8 (8kn/m<sup>2</sup>) UNLESS OTHERWISE STATED.
- ALL BEDDING TO SEWERS IS CLASS 'B' UNLESS OTHERWISE NOTED.
- ALL MANHOLES CAN BE EITHER PRECAST CONCRETE RING MANHOLES OR BLOCKWORK UNLESS OTHERWISE STATED.
- 600mm MAX. LENGTH ROCKER PIPES ARE TO BE PROVIDED ON SEWER WHERE:
  - A PIPE ENTERS A MANHOLE OR PUMPING STATION.
  - A PIPE LEAVES A MANHOLE.
  - A PIPE ENTERS CONCRETE ENCASEMENT.
  - A PIPE LEAVES CONCRETE ENCASEMENT.
  - ANY OTHER LOCATION AS DIRECTED BY THE ENGINEER.
- ALL SEWER ROCKER PIPES ARE TO BE FORMED BY CUTTING & TRIMMING A LENGTH OF SPIGOT & SOCKET PIPE TO FORM A SPIGOT AT THE CUT END, THEREBY FORMING SPIGOT & SOCKET JOINTS AT BOTH ENDS OF THE ROCKER PIPE.
- WHERE SEWER PIPES OR RISING MAINS CONNECT TO EXISTING MANHOLES, THE CONTRACTOR IS REQUIRED TO:
  - CONTACT THE RELEVANT AUTHORITIES PRIOR TO COMMENCING WORK.
  - MAKE GOOD THE EXISTING CHAMBER WALL AT THE PROPOSED POINT OF PENETRATION & ADJUST THE EXISTING BENCHING TO THE SATISFACTION OF THE ENGINEER.
- WHERE SEWER PIPES, RISING MAINS OR ROAD GULLY DRAINS CROSS EXISTING ROADS, THE CONTRACTOR IS REQUIRED TO:
  - CONTACT THE RELEVANT AUTHORITIES PRIOR TO COMMENCING WORK.
  - MAKE GOOD THE EXISTING ROAD TO ITS ORIGINAL SPECIFICATION AS APPROVED BY THE ENGINEER.
- MINIMUM FALLS INDICATED ON DRAINAGE PIPES, LEVELS TO BE REVISED IF MANHOLE LOCATIONS ARE MODIFIED BY CONTRACTOR.
- CONCRETE PROTECTION TO BE PROVIDED AROUND ALL PIPES WHERE COVER TO SOFFIT IS LESS THAN 1.2m.
- ALL BRANCH AND PERIMETER DRAINAGE ARE TO BE DETAILED BY ARCHITECT.



NEW FOUL PUMP STATION TO INCLUDE  
 24 HOUR STORAGE, KIOSK, WET KIOSK,  
 FLOW METER CHAMBERS & SECURITY  
 GATE AND FENCING TO PERIMETER.

ALL WORKS ARE TO BE CARRIED OUT IN  
 ACCORDANCE WITH THE FOLLOWING  
 DOCUMENTS: "IRISH WATER CODE OF  
 PRACTICE FOR WASTEWATER  
 INFRASTRUCTURE" & "IRISH WATER  
 WASTEWATER INFRASTRUCTURE STANDARD  
 DETAILS"

**NOTE ON LOCATING SERVICES IN CARRIAGEWAY:**  
 THE EXISTING SURFACE SHALL BE CUT TO ITS FULL DEPTH WITH A SUITABLE SAW TO FORM A CLEAN VERTICAL EDGE TO EACH SIDE OF THE TRENCH.  
 THE CONTRACTOR SHALL MAKE AN ADDITIONAL SAW CUT OF 75mm TO THE TRENCH SIDES BEFORE LAYING THE REINSTATEMENT COURSES.  
 CUT EDGE TO BE PAINTED WITH HOT MASTIC ASPHALT IN THE CASE OF MACADAM REINSTATEMENT.  
 ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH THE RELEVANT CLAUSES OF THE N.R.A. SPECIFICATION FOR ROADWORKS PUBLISHED IN 2000.  
 EXISTING SERVICES IN ROADS SHALL BE WRAPPED IN 12mm NEOPRENE RUBBER OR SIMILAR BEFORE BACKFILLING.  
 CLEARANCE BETWEEN SERVICES SHALL BE A MINIMUM OF 300mm, BOTH HORIZONTAL AND VERTICAL.  
 IT IS THE RESPONSIBILITY OF THE APPLICANT TO LOCATE AND SAFEGUARD ALL EXISTING SERVICES DURING THE COURSE OF CONSTRUCTION. THE CONTRACTOR SHALL BE LIABLE FOR ALL DAMAGE AND CONSEQUENTIAL DAMAGE TO SAME.  
 THE 75mm SAND BEDDING MIN CLEARANCE TO THE PIPE SHALL BE INCREASED TO 150mm IN ROCK.  
 WARNING TAPE COLOUR, MINIMUM WIDTH 125mm  
 ELECTRICITY – YELLOW, TELECOMMUNICATIONS – GREEN  
 GAS – RED, WATER SUPPLY – BLUE, SEWAGE – BROWN  
 ALL OTHERS – BLACK  
 A CONTINUOUS STAINLESS STEEL WIRE/STRIP SHALL BE PLACE WITH THE WARNING TAPE.



MINIMUM WIDTH OF TRENCH 450mm  
 MINIMUM CLEARANCE FROM SERVICE TO EDGE OF TRENCH 75mm  
**TYPICAL DETAIL TO BE PROVIDED WHERE SERVICES ARE LOCATED IN EXISTING CARRIAGEWAY**  
 (SCALE 1:25)

- DRAWING LEGEND:**
- F1.0 → PROPOSED 225Ø FOUL DRAINAGE & ACCESS CHAMBER
  - IC → DENOTES PROPOSED INSPECTION CHAMBER AS PER IRISH WATER DETAILS
  - PROPOSED 100Ø HDPE FOUL RISING MAIN
  - EXISTING FOUL DRAINAGE MAINTAINED

ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH 'RECOMMENDATIONS FOR SITE DEVELOPMENT WORKS FOR HOUSING AREAS', DEPARTMENT OF THE ENVIRONMENT.

CONCRETE PROTECTION WILL BE PROVIDED OVER PIPES WHERE THE DEPTH OF COVER TO PIPES UNDER ROADS IS LESS THAN 1200MM & 900MM UNDER GRASSED/PAVED AREAS.

**NOTE:**  
 ALL PERIMETER DRAINAGE TO ARCHITECTS DETAILS

FOUL SEWER PIPES TO BE THERMOPLASTIC STRUCTURED WALL PIPE STIFFNESS CLASS 8kn/m<sup>2</sup> IN ACCORDANCE WITH "IRISH WATER CODE OF PRACTICE FOR PIPE MATERIAL SECTION 3.13"

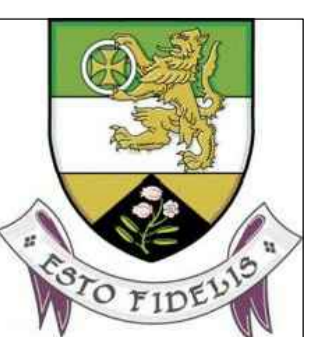
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Referenced drawings	
Dwg No.	Dwg Title

Issue register					
Rev.	Date	Description	Desn.	Chkd.	Appvd.
PL1	01.03.22	PART 8	TD	MC	NP

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- DO NOT SCALE – WORK TO FIGURE DIMENSIONS ONLY.



**FOUL DRAINAGE LAYOUT**

Date: 29.09.21  
 Scale: A1 - 1:50 / A3 - 1:100

Drawn By: T.DALESSANDRO  
 Checked By: M.CARR  
 Approved By: N.PATTERSON

Client: OFFALY COUNTY COUNCIL

Job Description: RESIDENTIAL DEVELOPMENT AT DARGAN DRIVE, CHANCERY LANE, TULLAMORE, Co. OFFALY

Project No: 20KK019  
 Drawing Ref: C-010  
 Rev: PL1

Part 8

**Hayes Higgins Partnership**  
 Gas House Lane, Kilkenny.

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**GENERAL NOTES:**

- ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE NOTED.
- ALL LEVELS ARE IN METRES ABOVE DATUM UNLESS OTHERWISE NOTED.
- ALL PIPE DIAMETERS ARE NORMAL.
- THE CONTRACTOR MUST CONTACT THE RELEVANT AUTHORITIES PRIOR TO CONSTRUCTION WORK, & SATISFY HIMSELF IN RESPECT TO THE LOCATION OF ALL EXISTING SERVICES.
- ALL SEWER & DRAIN PIPES ARE CLASS 'C' uPVC UNLESS OTHERWISE STATED.
- ALL BEDDING TO SEWERS IS CLASS 'B' UNLESS OTHERWISE NOTED.
- ALL MANHOLES CAN BE EITHER PRECAST CONCRETE RING MANHOLES OR BLOCKWORK UNLESS OTHERWISE STATED.
- 600mm MAX. LENGTH ROCKER PIPES ARE TO BE PROVIDED ON SEWER WHERE:
  - A PIPE ENTERS A MANHOLE OR PUMPING STATION.
  - A PIPE LEAVES A MANHOLE.
  - A PIPE ENTERS CONCRETE ENCASUREMENT.
  - A PIPE LEAVES CONCRETE ENCASUREMENT.
  - ANY OTHER LOCATION AS DIRECTED BY THE ENGINEER.
- ALL SEWER ROCKER PIPES ARE TO BE FORMED BY CUTTING & TRIMMING A LENGTH OF SPIGOT & SOCKET PIPE TO FORM A SPIGOT AT THE CUT END, THEREBY FORMING SPIGOT & SOCKET JOINTS AT BOTH ENDS OF THE ROCKER PIPE.
- WHERE SEWER PIPES OR RISING MAINS CONNECT TO EXISTING MANHOLES, THE CONTRACTOR IS REQUIRED TO:
  - CONTACT THE RELEVANT AUTHORITIES PRIOR TO COMMENCING WORK.
  - MAKE GOOD THE EXISTING CHAMBER WALL AT THE PROPOSED POINT OF PENETRATION & ADJUST THE EXISTING BENCHING TO THE SATISFACTION OF THE ENGINEER.
- WHERE SEWER PIPES, RISING MAINS OR ROAD GULLY DRAINS CROSS EXISTING ROADS, THE CONTRACTOR IS REQUIRED TO:
  - CONTACT THE RELEVANT AUTHORITIES PRIOR TO COMMENCING WORK.
  - MAKE GOOD THE EXISTING ROAD TO ITS ORIGINAL SPECIFICATION AS APPROVED BY THE ENGINEER.
- MINIMUM FALLS INDICATED ON DRAINAGE PIPES, LEVELS TO BE REVISED IF MANHOLE LOCATIONS ARE MODIFIED BY CONTRACTOR.
- CONCRETE PROTECTION TO BE PROVIDED AROUND ALL PIPES WHERE COVER TO SOFFIT IS LESS THAN 1.2m.
- ALL BRANCH AND PERIMETER DRAINAGE ARE TO BE DETAILED BY ARCHITECT.

**TESTING OF SEWERS**

- FOUL AND SURFACE WATER SEWERS TO BE TESTED EITHER A WATER OF AIR TEST. IF THE AIR TEST IS CARRIED OUT AND THE RESULTS SHOW A FAILURE THEN A WATER TEST SHALL BE SUBSEQUENTLY CARRIED OUT TO DETERMINE ACCEPTANCE OR REJECTION.
- WATER TESTS CARRIED OUT SHALL BE TESTED IN UNDER A HEAD OF WATER IN ACCORDANCE WITH BS 8301 1995, AND CARRIED OUT FOR A MINIMUM OF 30 MINUTES.
- THE CONTRACTOR IS TO ENGAGE AN ENGINEER WITH PROFESSIONAL INDEMNITY INSURANCE TO SUPERVISE ALL AIR/WATER TESTS ON MAINS BEFORE BACKFILLING.
- ON COMPLETION OF ALL SEWERS DRAINS AND GULLIES, ALL SEWERS SHALL BE FLUSHED OUT AND LEFT FREE FROM DEFECT AND OBSTRUCTION AND SUBSEQUENTLY A CCTV SURVEY SHALL BE CARRIED OUT BY AN INDEPENDENT CONTRACTOR OF THE AS-BUILT DRAINAGE. THE CCTV SURVEY SHALL INCLUDE A REPORT AND DVD AND SHALL BE SUBMITTED TO THE ENGINEER AND ARCHITECT PRIOR TO PRACTICAL COMPLETION.
- ON COMPLETION OF ALL SEWERS, DRAINS AND GULLIES AN AS-BUILT SURVEY MUST BE SUBMITTED INCLUDING LOCATION OF MANHOLES RELATIVE TO THE BUILDING OUTLINE, COVER, INVERT LEVELS AND PIPE DIAMETERS. TO THE ENGINEER AND ARCHITECT FOR THEIR REVIEW PRIOR TO PRACTICAL COMPLETION.

**DRAWING LEGEND:**

-  PROPOSED 225mm $\phi$  STORM DRAINAGE
-  PROPOSED FILTER DRAIN
-  PROPOSED STORM GULLY
-  PROPOSED ACO DRAIN (REFER TO NOTE)

ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH 'RECOMMENDATIONS FOR SITE DEVELOPMENT WORKS FOR HOUSING AREAS', DEPARTMENT OF THE ENVIRONMENT.

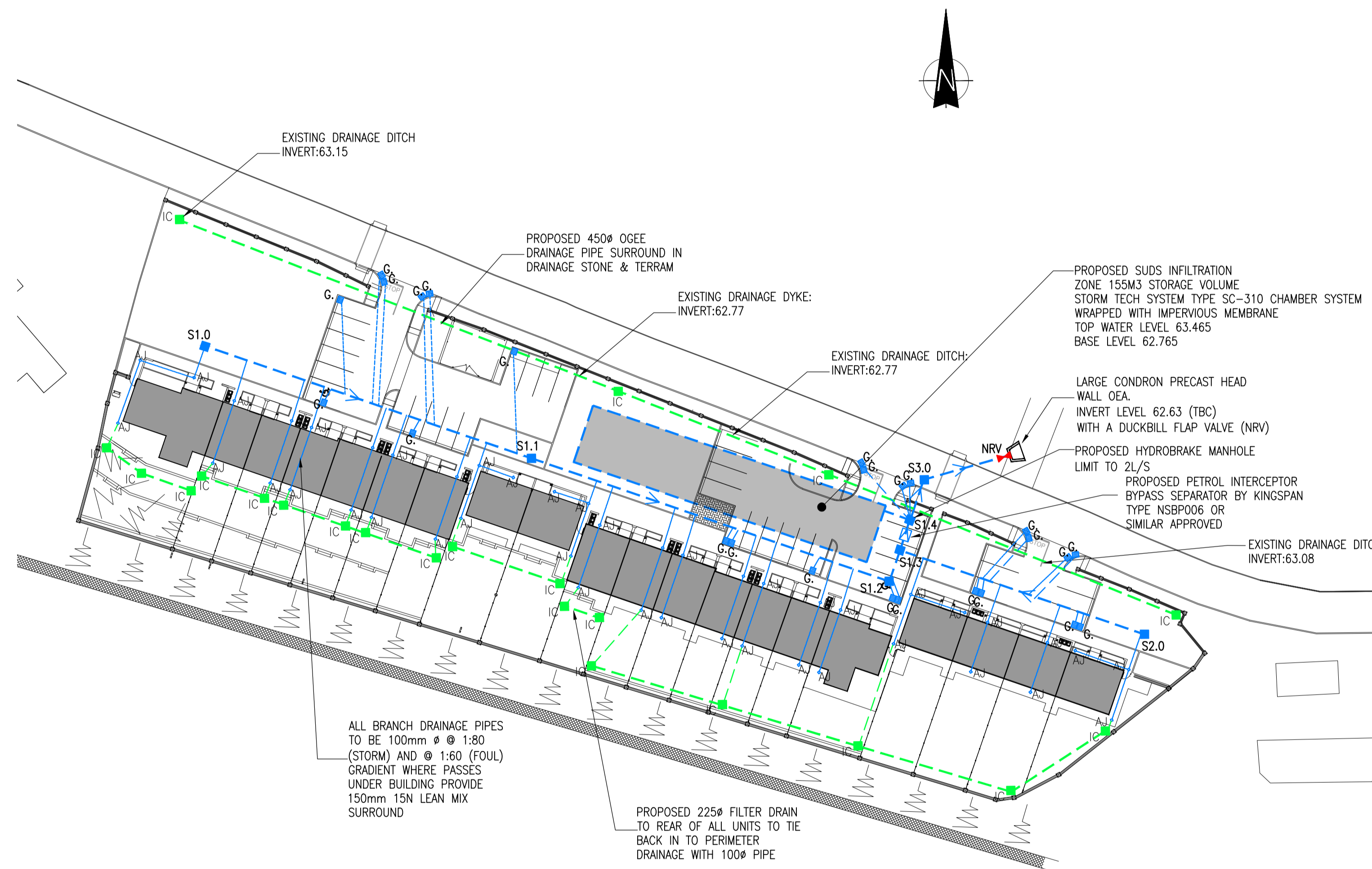
CONCRETE PROTECTION WILL BE PROVIDED OVER PIPES WHERE THE DEPTH OF COVER TO PIPES UNDER ROADS IS LESS THAN 1200MM & 900MM UNDER GRASSED/PAVED AREAS.

**NOTE:**  
ALL PERIMETER DRAINAGE TO ARCHITECTS DETAILS

LAND DRAINS AT THE BASE OF ALL RETAINING WALLS TO BE CONNECTED TO THE STORM PROPOSED STORM DRAINAGE NETWORK WITH 225MM $\phi$  STORM DRAINAGE PIPE AT 1:150 GRADIENT.

**ACO CHANNEL SPEC:**  
ALL ACO DRAINS OTHER THAN DOORWAYS TO CONSIST OF ACO MULTIDRAIN D400 200MM WIDE, WITH GRATINGS TO ARCHITECTS DETAILS WITH CONSTANT DEPTH DRAINAGE CHANNELS WITH GALVANISED STEEL EDGE RAIL WITH PERFORATED GALVANISED STEEL HEEL GUARD GRATING WITH GULLY ASSEMBLY AND BUCKET FOR 110mm DISCHARGE PIPE TO MAIN SYSTEM. THE SYSTEM IS TO BE FULLY CERTIFIED AND CE MARKED TO BS EN 1433:2002 OR EQUIVALENT. ACO MULTIDRAIN D400 200MM WIDE BY ACO OR EQUIVALENT APPROVED  
ALL ACO CHANNELS TO HAVE HEEL GUARD PROTECTION ON THE GRATING.

ALL GULLIES / ACO DRAINS TO BE CONNECTED TO MAIN DRAINS WITH 150mm $\phi$  STORM PIPE @ 1:80 GRADIENT.



Pipe Section	US MH CL	US MH IL	DS MH IL	Pipe
				Diameter
	[mod]	[mod]	[mod]	[mm]
* S1.0 to S1.1	64.100	63.265	63.095	300
* S1.1 to S1.2	64.100	63.095	62.905	300
* S1.2 to S1.3	64.150	62.905	62.885	300
* S1.3 to S1.4	64.150	62.885	62.785	300
* S1.4 to ATT	64.175	62.785	62.765	300
* S2.0 to S1.3	63.950	63.015	62.885	300
* S1.4 to S3.0	64.175	62.765	62.715	225
* S3.0 to Outfall	64.200	62.715	62.650	225

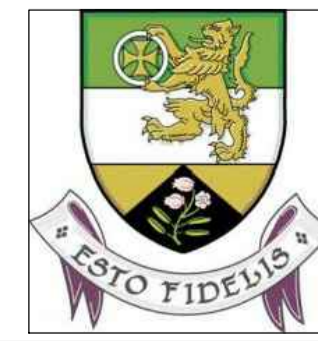
**NOTES:**  
uPVC PIPES ASSUMED AS THE DRAINAGE MATERIAL, PLEASE NOTIFY ENGINEER IF DIFFERENT  
\* = CONCRETE PROTECTION WILL BE PROVIDED OVER PIPES

STORM DRAINAGE DESIGN TABLE

Dwg No.	Dwg Title
PL1	PART 8

Rev.	Date	Description	Dwn.	Chkd.	Appvd.
PL1	01.03.22	PART 8			

- NOTES:**
- THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, SERVICE ENGINEERS DRAWINGS & SPECIFICATIONS.
  - ALL LEVELS ARE STRUCTURAL UNLESS NOTED OTHERWISE.
  - ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE RELEVANT BUILDING REGULATIONS.
  - DO NOT SCALE - WORK TO FIGURE DIMENSIONS ONLY.



**STORM DRAINAGE LAYOUT**

Date: 29.09.21  
Scale: A1 - 1:50 / A3 - 1:100

Drawn By: T.DALESSANDRO  
Checked By: M.CARR  
Approved By: N.PATTERSON

**OFFALY COUNTY COUNCIL**

Job Description:  
RESIDENTIAL DEVELOPMENT AT DARGAN DRIVE, CHANCERY LANE, TULLAMORE, Co. OFFALY

Project No: 20KK019  
Drawing Ref: C-020  
Rev: PL1

**Hayes Higgins Partnership**  
Gas House Lane, Kilkenny.

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011 8612321 011 8628004