Columbia Estates Management Limited c/o Ben Mong,
Garland Consulting Engineers,
Garland House,
28-30 Rathmines Park,
Dublin 6

29 May 2019

Uisce Éireann
Bosca OP 448
Oifig Sheachadta
na Cathrach Theas
Cathair Chorcaí

Irish Water
PO Box 448
South City
Delivery Office
Cork City

www.water.ie

Re: Design Submission for Housing Development at Magee Barracks, Dublin Road, Kildare (the "Development") (the "Design Submission") / Cust17398/CUSTO182467.

Dear Ben,

Many thanks for your recent Design Submission.

We have reviewed your proposal for the connection(s) at the Development. Based on the information provided, which included the documents outlined in Appendix A to this letter, Irish Water has no objection to your proposals.

This letter does not constitute an offer, in whole or in part, to provide a connection to any Irish Water infrastructure. Before you can connect to our network you must sign a connection agreement with Irish Water. This can be applied for by completing the connection application form at www.water.ie/connections. Irish Water's current charges for water and wastewater connections are set out in the Water Charges Plan as approved by the Commission for Regulation of Utilities (CRU) (https://www.cru.ie/document_group/irish-waters-water-charges-plan-2018/).

You the Customer (including any designers/contractors or other related parties appointed by you) is entirely responsible for the design and construction of all water and/or wastewater infrastructure within the Development which is necessary to facilitate connection(s) from the boundary of the Development to Irish Water's network(s) (the "**Self-Lay Works**"), as reflected in your Design Submission. Acceptance of the Design Submission by Irish Water does not, in any way, render Irish Water liable for any elements of the design and/or construction of the Self-Lay Works.

If you have any further questions, please contact your Irish Water Representative

Name: Fionán Ginty
Phone: 01 8925734
Email: fginty@water.ie

Yours sincerely,

Maria O'Dwyer

Connections and Developer Services

Appendix A

Document Title & Revision

- R1831-1000-A Phase 1 Overall Site Foul Sewer Strategy Layout
- R1831-1001-A Foul Sewer Network 1 and 2 Layout
- R1831-1003-A Phase 1 Water main Layout
- R1831-1010-A Phase 1 Foul Network 1 Longitudinal Sections
- R1831-1012-A Phase 1 Foul Network 2 Longitudinal Sections
- R1831-1015-1st Phase 1 Overall Site Foul Sewer Strategy Layout
- R1831-A0-1st Site Location Layout
- GAR-ISD-101-A Infrastructure Standard Details (WW-03/ WW-04)
- GAR-ISD-104-A Infrastructure Standard Details (WW-12/ WW-13)

Standard Details/Code of Practice Exemption: N/A

For further information, visit ***www.water.ie/connections***

Notwithstanding any matters listed above, the Customer (including any appointed designers/contractors, etc.) is entirely responsible for the design and construction of the Self-Lay Works. Acceptance of the Design Submission by Irish Water will not, in any way, render Irish Water liable for any elements of the design and/or construction of the Self-Lay Works.

QUALITY
I.S. EN ISO 9001:2008
NSAI Certified

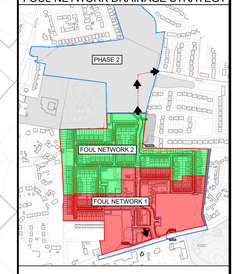
NOTES

1. DO NOT SCALE, USE FIGURED DIMENSIONS ONLY.
2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND ALL RELEVANT ARCHITECTS AND SERVICES ENGINEERS DRAWINGS.
3. TEMPORARY PROPPING TO BE THE RESPONSIBILITY OF THE MAIN CONTRACTOR.
4. ALL REDUNDANT SERVICES (PIPES, MANHOLES, CHAMBERS, GULLIES ETC.) TO BE REMOVED.
5. ALL EXISTING MANHOLE COVERS & ROOFS TO BE ADJUSTED TO SUIT NEW GROUND LEVELS.
6. RECESSED MANHOLES TO BE USED IN ALL AREAS WITH PAVIORS.
7. ALL STORMWATER & FOUL SEWERS WITHIN 1200mm OF FINISHED GROUND LEVEL TO BE ENCASED IN MINIMUM 150mm 20N10 CONCRETE.
8. THE EXISTING SERVICES SHOWN ARE INDICATIVE BEFORE CONSTRUCTION WORK COMMENCES THE CONTRACTOR IS TO CAREFULLY LOCATE AND PROTECT ALL UNDERGROUND SERVICES IN AREAS OF PROPOSED WORKS, AS PER SERVICE PROVIDERS GUIDANCE AND SPECIFICATION.
9. INDIVIDUAL WASTEWATER SERVICE CONNECTIONS TO BE PROVIDED TO EACH PROPERTY BOUNDARY IN ACCORDANCE WITH IRISH WATER DETAILS STD-WW-03 AND STD-WW13.
10. ALL WORKS TO BE IN COMPLIANCE WITH IRISH WATER CODE OF PRACTICE FOR WASTEWATER INFRASTRUCTURE AND WASTEWATER INFRASTRUCTURE STANDARD DETAILS.
11. REFER TO DRAWINGS R1831 - 1010 FOR FOUL NETWORK 1 LONGITUDINAL SECTIONS, R1831 - 1011 AND 1012 FOR FOUL NETWORK 2 LONGITUDINAL SECTIONS AND R1831 - 1013 FOR ALL FOUL AND SURFACE WATER STRUCTURE DATA TABLES AND INFORMATION.
12. REFER TO DRAWING R1831 - 1001 FOR FOUL SEWER NETWORK 1 AND 2 LAYOUT AND DRAWING R1831 - 1009 FOR 600mm DIA AND 2 NO. 50mm RISING MAIN DIVERSION LAYOUT.
13. UNPLASTICISED PVC PIPES AND FITTINGS SHALL COMPLY WITH THE PROVISIONS IS EN 1401 2009/2012. PIPES TO BE APPLICATION AREA CODE "UD", STIFFNESS CLASS 8 KN/m². PROVISION FOR JETTING SHALL BE BASED ON THE WRC SEWER JETTING CODE OF PRACTICE, JUNE 1997. PIPES TO BE CAPABLE OF RESISTING A MAXIMUM JETTING PUMP PRESSURE OF 2,600 PSI (180 BAR) WITHOUT DAMAGE.
14. CONCRETE SEWER PIPES WITH SPIGOT AND SOCKET JOINTS AND RUBBER RING FITTINGS SHALL COMPLY WITH IS EN 1916 (2002), BS 5911, PART 1 (2002-2010) AND IS 6 (2004) OR EQUIVALENT STANDARD, STRENGTH CLASS 120 WITH MINIMUM CRUSHING LOADS IN ACCORDANCE WITH TABLE 8 OF BS 5911-1 (2002-2010). ALL PIPES AND FITTINGS SHALL HAVE GASKET TYPE JOINTS OF SPIGOT AND SOCKET OR REBATED FORM.

LEGEND

NEW uPVC FOUL SEWER, DIAMETER AND SLOPE INDICATED ON LAYOUT	
FOUL SEWER DIVERSION Ø 600mm	
2 NO. Ø 50 mm FOUL RISING MAIN DIVERSION, DUCTILE IRON PN16	
EXISTING FOUL SEWERS	
NEW FOUL MANHOLE	
NEW PRIVATE INSPECTION CHAMBER AND DRAINAGE	
PIPE LABELS	1.000; 1:200 (PIPE REFERENCE NO.); (PIPE SLOPE)

FOUL NETWORK DRAINAGE STRATEGY



REV	DATE	DESCRIPTION	DWG BY	APP/ CHK
A	20/05/19	IRISH WATER DESIGN QA COMMENTS	BM	CR

CLIENT:
BALLYMOUNT PROPERTIES LTD.

ARCHITECT:
RKD ARCHITECTS
59 NORTHUMBERLAND ROAD
DUBLIN 4

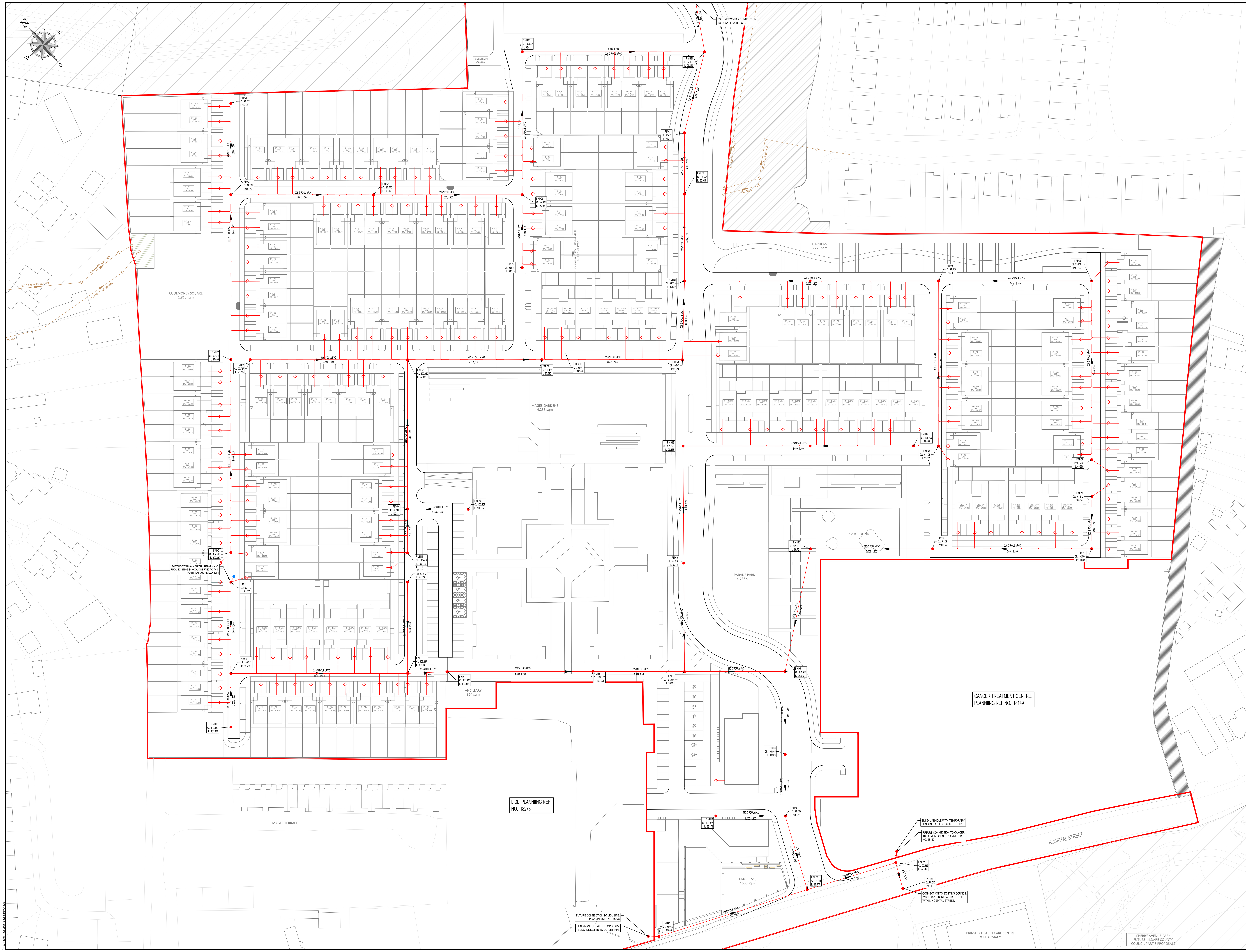
GARLAND
DUBLIN T: +353 1 4964322 E: info@garlandconsultancy.com
LIMERICK T: +353 61 319708
WATERFORD T: +353 51 876511
INTERNATIONAL T: +353 61 319708
W: www.garlandconsultancy.com

PROJECT:
RESIDENTIAL AND NEIGHBOURHOOD CENTRE DEVELOPMENT (PHASE 1) AT FORMER MAGEE BARRACKS

TITLE:
PHASE 1
OVERALL SITE FOUL SEWER STRATEGY LAYOUT

STATUS:
PLANNING APPLICATION

DRAWN: SL	DES. BY: BM
CHK. BY: BM	APP. BY: CR
DATE: 17/04/19	JOB No. R1831
AO SCALE: 1:500 @ A0	
DRG. No. 1000	REV. A



QUALITY
I.S. EN ISO 9001:2008
NSAI Certified

NOTES

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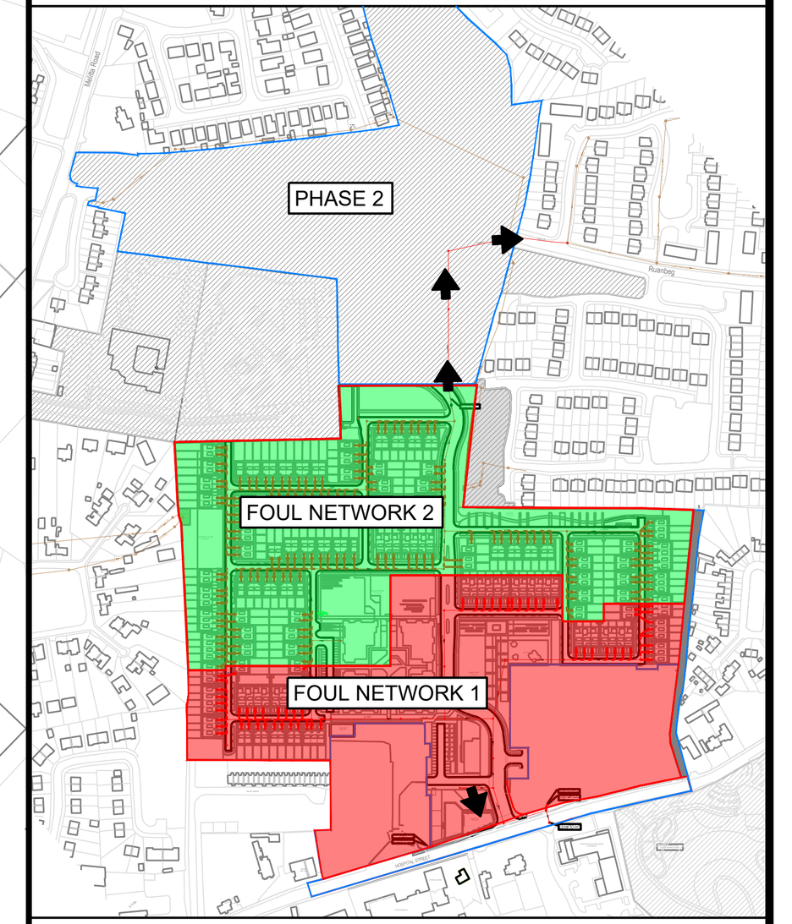
6. RECESSED MANHOLES TO BE USED IN ALL AREAS WITH PAVIORS.
7. ALL STORMWATER & FOUL SEWERS WITHIN 1200mm OF FINISHED GROUND LEVEL TO BE ENCASED IN MINIMUM 150mm 20N10 CONCRETE.
8. THE EXISTING SERVICES SHOWN ARE INDICATIVE BEFORE CONSTRUCTION WORK COMMENCES THE CONTRACTOR IS TO CAREFULLY LOCATE AND PROTECT ALL UNDERGROUND SERVICES IN AREAS OF PROPOSED WORKS, AS PER SERVICE PROVIDER'S GUIDANCE AND SPECIFICATION.
9. INDIVIDUAL WASTEWATER SERVICE CONNECTIONS TO BE PROVIDED TO EACH PROPERTY BOUNDARY IN ACCORDANCE WITH IRISH WATER DETAILS STD-WW-03 AND STD-WW13.
10. ALL WORKS TO BE IN COMPLIANCE WITH IRISH WATER CODE OF PRACTICE FOR WASTEWATER INFRASTRUCTURE AND WASTEWATER INFRASTRUCTURE STANDARD DETAILS.
11. REFER TO DRAWINGS R1831 - 1010 FOR FOUL NETWORK 1 LONGITUDINAL SECTIONS, R1831 - 1011 AND 1012 FOR FOUL NETWORK 2 LONGITUDINAL SECTIONS AND R1831 - 1013 FOR ALL FOUL AND SURFACE WATER STRUCTURE DATA TABLES AND INFORMATION.
12. REFER TO DRAWING R1831 - 1000 FOR OVERALL FOUL SEWER STRATEGY LAYOUT.
13. UNPLASTICISED PVC PIPES AND FITTINGS SHALL COMPLY WITH THE PROVISIONS IS EN 1401 2009/2012. PIPES TO BE APPLICATION AREA CODE "UD", STIFFNESS CLASS 8 kN/m^2. PROVISION FOR JETTING SHALL BE BASED ON THE WRC SEWER JETTING CODE OF PRACTICE, JUNE 1997. PIPES TO BE CAPABLE OF RESISTING A MAXIMUM JETTING PUMP PRESSURE OF 2,600 PSI (180 BAR) WITHOUT DAMAGE.
14. CONCRETE SEWER PIPES WITH SPIGOT AND SOCKET JOINTS AND RUBBER RING FITTINGS SHALL COMPLY WITH IS EN 1916 (2002), BS 5911, PART 1 (2002-2010) AND IS 6 (2004) OR EQUIVALENT STANDARD, STRENGTH CLASS 120 WITH MINIMUM CRUSHING LOADS IN ACCORDANCE WITH TABLE 8 OF BS 5911-1 (2002-2010). ALL PIPES AND FITTINGS SHALL HAVE GASKET TYPE JOINTS OF SPIGOT AND SOCKET OR REBATED FORM.

LEGEND

NEW uPVC FOUL SEWER, DIAMETER AND SLOPE INDICATED ON LAYOUT	
EXISTING FOUL SEWERS	
NEW FOUL MANHOLE	
NEW PRIVATE INSPECTION CHAMBER AND DRAINAGE	
PIPE LABELS	1.000, 1:200 (PIPE REFERENCE NO.), (PIPE SLOPE)

FOUL NETWORK DRAINAGE STRATEGY



REV	DATE	DESCRIPTION	DWG BY	APP/ CHK
A	17/05/'19	IRISH WATER DESIGN QA COMMENTS	BM	CR

CLIENT:
BALLYMOUNT PROPERTIES LTD.

ARCHITECT:
RKD ARCHITECTS
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DUBLIN 4

GARLAND
DUBLIN T: +353 1 4964322 · LIMERICK T: +353 61 319708 · WATERFORD T: +353 51 876511 · INTERNATIONAL T: +353 61 319708
E: info@garlandconsultancy.com W: www.garlandconsultancy.com

PROJECT:
RESIDENTIAL AND NEIGHBOURHOOD CENTRE DEVELOPMENT (PHASE 1) AT FORMER MAGEE BARRACKS

TITLE:
PHASE 1
FOUL SEWER NETWORK 1 AND 2 LAYOUT

STATUS:
PLANNING APPLICATION

DRAWN:	SL	DES. BY:	BM
CHK. BY:	BM	APP. BY:	CR
DATE:	17/04/'19	JOB No.	R1831
A0 SCALE:	1:500 @ A0		
DRG. No.	1001	REV.	A

QUALITY
I.S. EN ISO 9001:2008
NSAI Certified

NOTES

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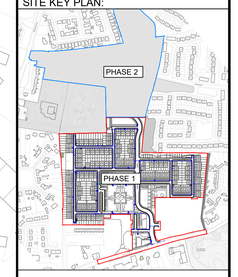
3. DRAWINGS SHALL BE CHECKED BY CONTRACTOR AND ANY DISCREPANCIES (DIMENSIONS) SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE WORK IS COMMENCED. PIPE FALLS TO BE AS SPECIFIED. ILS AND CLS SUBJECT TO SITE REVIEW.
4. TEMPORARY PROPPING TO BE THE RESPONSIBILITY OF THE MAIN CONTRACTOR.
5. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE ARCHITECTS DRAWINGS AND SPECIFICATIONS.
6. THE EXISTING SERVICES SHOWN ARE INDICATIVE BEFORE CONSTRUCTION WORK COMMENCES THE CONTRACTOR IS TO CAREFULLY LOCATE AND PROTECT ALL UNDERGROUND SERVICES IN AREAS OF PROPOSED WORKS, AS PER SERVICE PROVIDERS GUIDANCE AND SPECIFICATION.
7. ALL WORKS TO BE IN COMPLIANCE WITH IRISH WATER CODE OF PRACTICE FOR WATER AND WASTEWATER INFRASTRUCTURE AND WATER AND WASTEWATER INFRASTRUCTURE STANDARD DETAILS.
8. REFER TO DRAWING R1831-1008 FOR RELEVANT SERVICES CROSS SECTIONS.

LEGEND

EXISTING COUNCIL WATERMAIN	
NEW WATERMAIN, HDPE SDR17 PE 100	
NEW SLUICE VALVE	
NEW FIRE HYDRANT	
NEW AIR VALVE 50mm	
NEW BULK DEVELOPMENT METER	
NEW OFFLINE SCOUR VALVE AND SCOUR CHAMBER	
NEW TEMPORARY WATERMAIN BLANK END	
NEW HOUSE CONNECTION PN12.5 PE80 25mm Ø WITH BOUNDARY BOX	
NEW DUPLEX UNITS' CONNECTION PN12.5 PE80 50mm Ø WITH COMMUNAL BOUNDARY BOX	
ROAD CENTRE LINE WITH ROAD LEVEL	12.5 / 0.00
45m RADIUS COVERAGE OF FIRE HYDRANT	

SITE KEY PLAN:



REV	DATE	DESCRIPTION	DWG BY	APP'V CHK
A	17/05/19	IRISH WATER DESIGN QA COMMENTS	JC	JN

CLIENT:
BALLYMOUNT PROPERTIES LTD.

ARCHITECT:
RKD ARCHITECTS
59 NORTHUMBERLAND ROAD
DUBLIN 4

GARLAND
DUBLIN LIMERICK WATERFORD INTERNATIONAL
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E: info@garlandconsultancy.com W: www.garlandconsultancy.com

PROJECT:
RESIDENTIAL AND NEIGHBOURHOOD CENTRE DEVELOPMENT (PHASE 1) AT FORMER MAGEE BARRACKS

TITLE:
PHASE 1
WATERMAIN LAYOUT

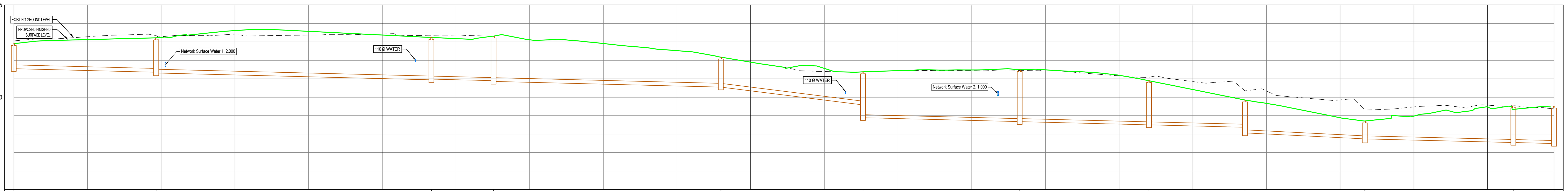
STATUS:
PLANNING APPLICATION

DRAWN: SL	DES BY: BM
CHK. BY: BM	APP. BY: CR
DATE: 17/04/19	JOB No. R1831
AO SCALE: 1:500 @ A0	
DRG. No. 1003	REV. A

Date & Time Plotted: 17/05/2019 11:49:00 | Plotted By: Sean Lynch | Plot Scale: 1:500 | Plot Size: A0 | Plot Name: 1003 - Phase 1 Layout | Plot Style: Garland.ctb | Plot Layout: 1003 - Phase 1 Layout | Plot Paper: A0

SCALES:
Horizontal 1:500
Vertical 1:100

DATUM 95.000

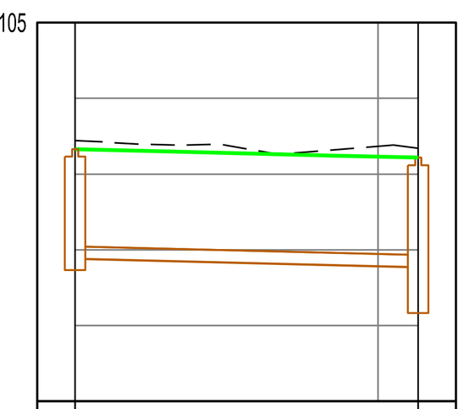


REFERENCE	F MH1	1.000	F MH2	1.001	F MH3	1.002	F MH4	1.003	F MH5	1.004	F MH6	1.005	F MH7	1.006	F MH8	1.007	F MH9	1.008	F MH10	1.009	F MH11
REFERENCE (cont.)	1.010	EX F MH1																			
DISTANCE (m)	0.000	20.000	40.000	60.000	80.000	100.000	120.000	140.000	160.000	180.000	200.000	220.000	240.000	260.000	280.000	300.000	320.000	340.000	360.000	380.000	400.000
DISTANCE (m) (cont.)	417.152																				
GROUND LEVEL	102.902	103.124	103.245	103.610	103.570	103.370	103.167	103.111	102.909	102.522	101.900	101.560	101.433	101.477	101.482	101.188	100.417	99.665	98.888	98.976	99.472
GROUND LEVEL (cont.)	99.469																				
PIPE INVERT LEVEL	101.550	101.356 101.316	100.943 100.983	100.898 100.858	100.550 100.550	99.585 98.891	98.679 98.679	98.503 98.503	98.373 98.068	97.742 97.742	97.547 97.547	97.490									
SLOPE / LENGTH	0.50% 1:200.0 38.63m	0.50% 1:200.0 74.71m	0.50% 1:200.0 16.89m	0.50% 1:200.0 61.67m	2.50% 1:40.0 38.59m	0.50% 1:200.0 42.54m	0.50% 1:200.0 35.07m	0.50% 1:200.0 26.06m	1.00% 1:100.0 32.53m	0.49% 1:205.9 40.30m	0.51% 1:195.8 11.07m										

LONGSECTION F MH 1 TO EX F MH1
FROM 0.000 TO 418.064

SCALES:
Horizontal 1:500
Vertical 1:100

DATUM 100.000

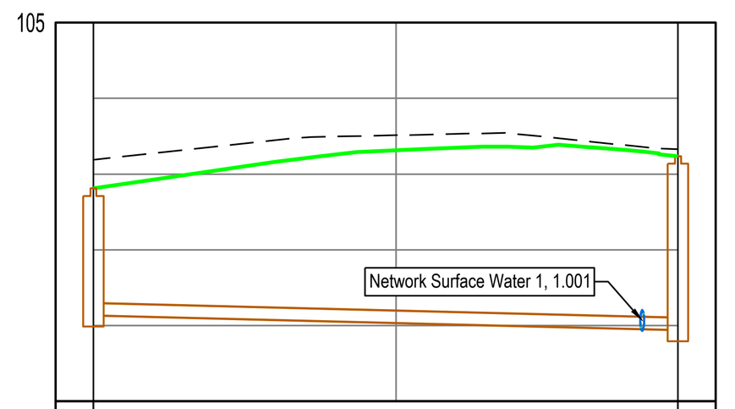


REFERENCE	F MH20	2.000	F MH2
DISTANCE (m)	0.000	20.000	22.653
GROUND LEVEL	103.330	103.230	103.217
PIPE INVERT LEVEL	101.884		101.771
SLOPE / LENGTH	0.50% 1:200.0 22.65m		

LONGSECTION F MH20 TO F MH2
FROM 0.000 TO 22.653

SCALES:
Horizontal 1:500
Vertical 1:100

DATUM 100.000

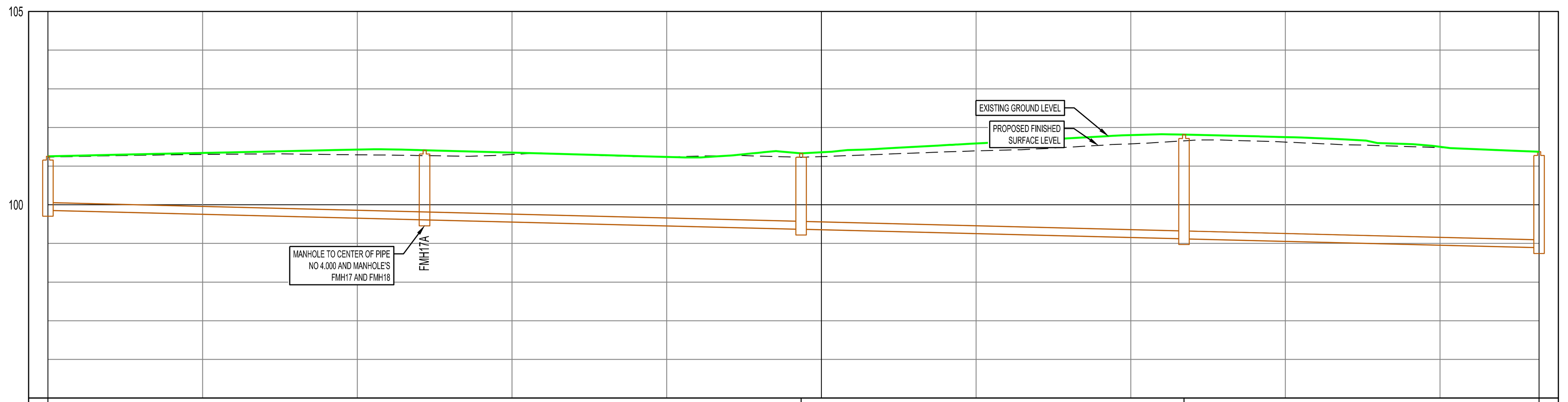


REFERENCE	F MH12	3.000	F MH3
DISTANCE (m)	0.000	20.000	38.631
GROUND LEVEL	102.812	103.313	103.237
PIPE INVERT LEVEL	101.136		100.943
SLOPE / LENGTH	0.50% 1:200.0 38.63m		

LONGSECTION F MH12 TO F MH3
FROM 0.000 TO 38.631

SCALES:
Horizontal 1:500
Vertical 1:100

DATUM 95.000

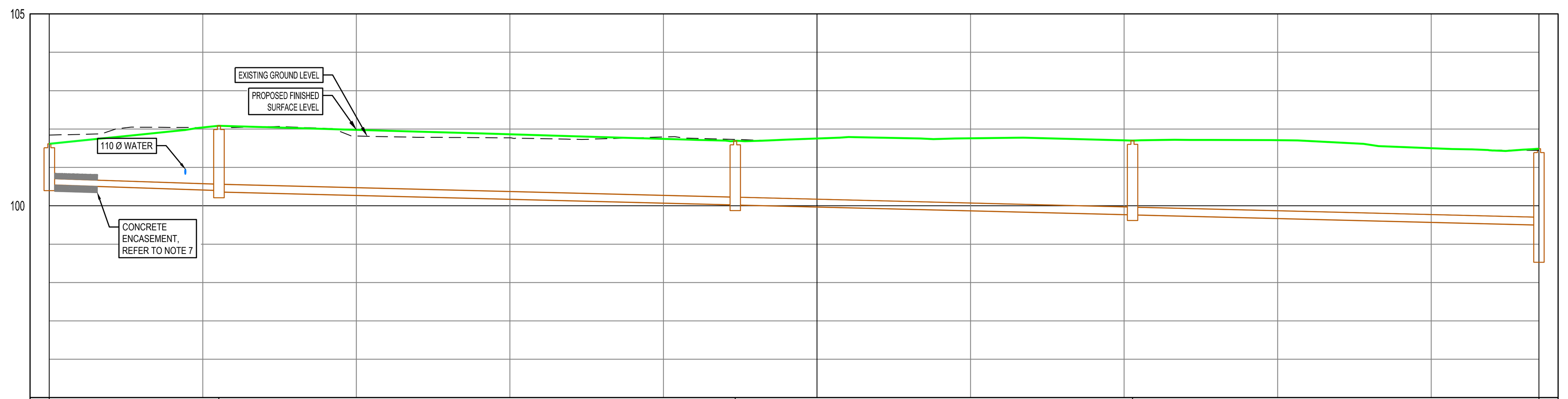


REFERENCE	F MH17	4.000	F MH18	4.001	F MH19	4.002	F MH6					
DISTANCE (m)	0.000	20.000	40.000	60.000	80.000	100.000	120.000	140.000	160.000	180.000	192.803	
GROUND LEVEL	101.255	101.341	101.427	101.348	101.236	101.329	101.358	101.586	101.801	101.816	101.752	101.500
GROUND LEVEL (cont.)	101.374											
PIPE INVERT LEVEL	99.855	99.368 99.368	99.121 99.121	98.891								
SLOPE / LENGTH	0.50% 1:200.0 97.38m	0.50% 1:200.0 49.51m	0.50% 1:200.0 45.91m									

LONGSECTION F MH17 TO F MH6
FROM 0.000 TO 192.803

SCALES:
Horizontal 1:500
Vertical 1:100

DATUM 95.000

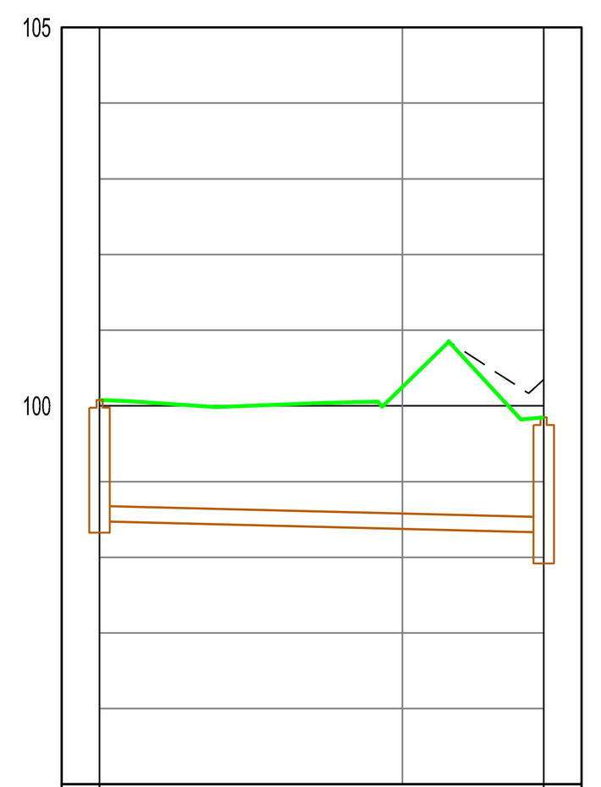


REFERENCE	F MH13	5.000	F MH14	5.001	F MH15	5.002	F MH16	5.003	F MH7		
DISTANCE (m)	0.000	20.000	40.000	60.000	80.000	100.000	120.000	140.000	160.000	180.000	194.047
GROUND LEVEL	101.612	102.042	101.979	101.862	101.744	101.753	101.757	101.706	101.710	101.500	101.487
PIPE INVERT LEVEL	100.547	100.399 100.359	100.023 100.023	99.764 99.764	99.499						
SLOPE / LENGTH	0.67% 1:149.9 22.10m	0.50% 1:200.0 67.25m	0.50% 1:200.0 51.75m	0.50% 1:200.0 52.95m							

LONGSECTION F MH13 TO F MH7
FROM 0.000 TO 194.047

SCALES:
Horizontal 1:500
Vertical 1:100

DATUM 95.000

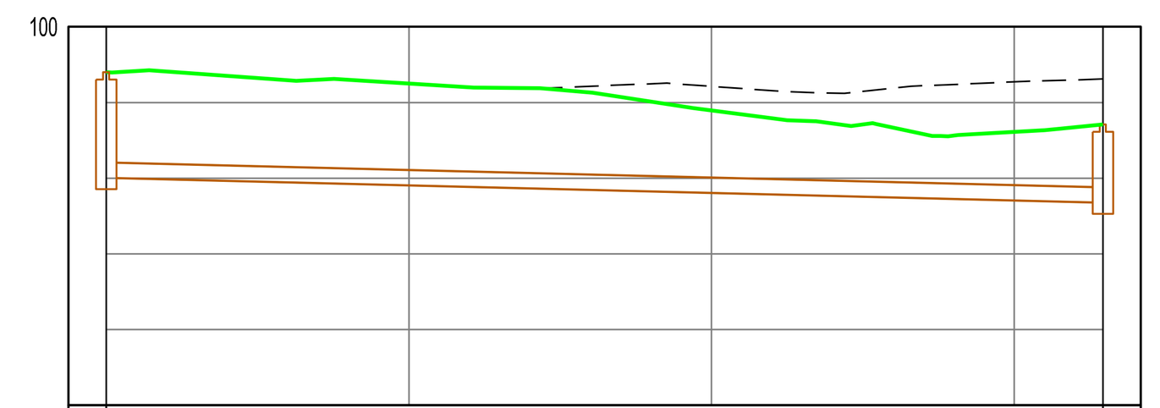


REFERENCE	F MH48	6.000	F MH9
DISTANCE (m)	0.000	20.000	29.329
GROUND LEVEL	100.077	100.248	99.849
PIPE INVERT LEVEL	98.476		98.329
SLOPE / LENGTH	0.50% 1:200.0 29.33m		

LONGSECTION F MH48 TO F MH9
FROM 0.000 TO 29.329

SCALES:
Horizontal 1:500
Vertical 1:100

DATUM 95.000



REFERENCE	F MH47	7.000	F MH10		
DISTANCE (m)	0.000	20.000	40.000	60.000	65.851
GROUND LEVEL	99.402	99.249	98.894	98.612	98.711
PIPE INVERT LEVEL	98.006				97.677
SLOPE / LENGTH	0.50% 1:200.0 65.85m				

LONGSECTION F MH47 TO F MH10
FROM 0.000 TO 65.851

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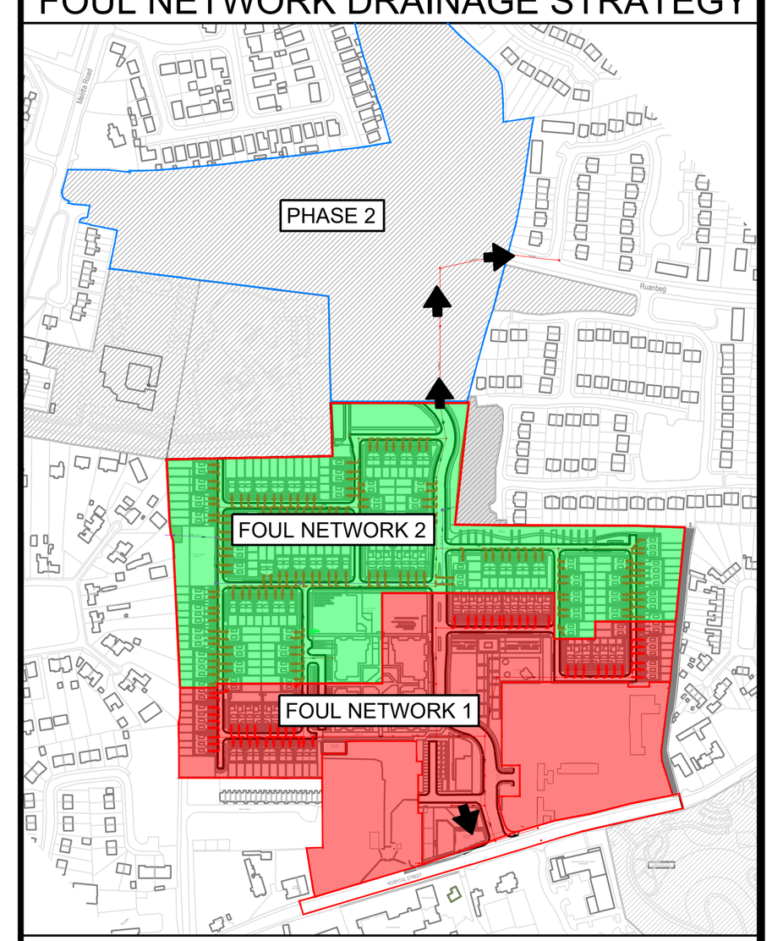
3. TEMPORARY PROPPING TO BE THE RESPONSIBILITY OF THE MAIN CONTRACTOR.
4. REFER TO DRAWING R1831 - 1001 FOR PHASE 1 FOUL NETWORK 1 AND 2 LAYOUT.
5. ALL EXISTING MANHOLE COVERS & ROOFS TO BE ADJUSTED TO SUIT NEW GROUND LEVELS.
6. RECESSED MANHOLES TO BE USED IN ALL AREAS WITH PAVERS.
7. ALL SURFACE WATER & FOUL SEWERS WITHIN 1200mm OF FINISHED GROUND LEVEL TO BE ENCASED IN MINIMUM 150mm 20N10 CONCRETE.
8. ALL WORKS TO BE IN COMPLIANCE WITH IRISH WATER CODE OF PRACTICE FOR WASTEWATER INFRASTRUCTURE AND WASTEWATER INFRASTRUCTURE STANDARD DETAILS.

LEGEND

EXISTING GROUND LEVEL	(green line)
PROPOSED FINISHED SURFACE LEVEL	— — — —

FOUL NETWORK DRAINAGE STRATEGY



REV	DATE	DESCRIPTION	DWG BY	APP/ CHK
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E: info@garlandconsultancy.com W: www.garlandconsultancy.com

PROJECT:
RESIDENTIAL AND NEIGHBOURHOOD CENTRE DEVELOPMENT (PHASE 1) AT FORMER MAGEE BARRACKS

TITLE:
PHASE 1
FOUL NETWORK 1
LONGITUDINAL SECTIONS

STATUS:
PLANNING APPLICATION

DRAWN: SL		DES. BY: BM	
CHK. BY: BM		APP. BY: CR	
DATE: 17/04/'19		JOB No. R1831	
A0 SCALE: 1:500			
DRG. No. 1010		REV. A	

R1831-1010 Foul Network 1 Longitudinal Sections Rev A.dwg

QUALITY I.S. EN ISO 9001:2008 NSAI Certified

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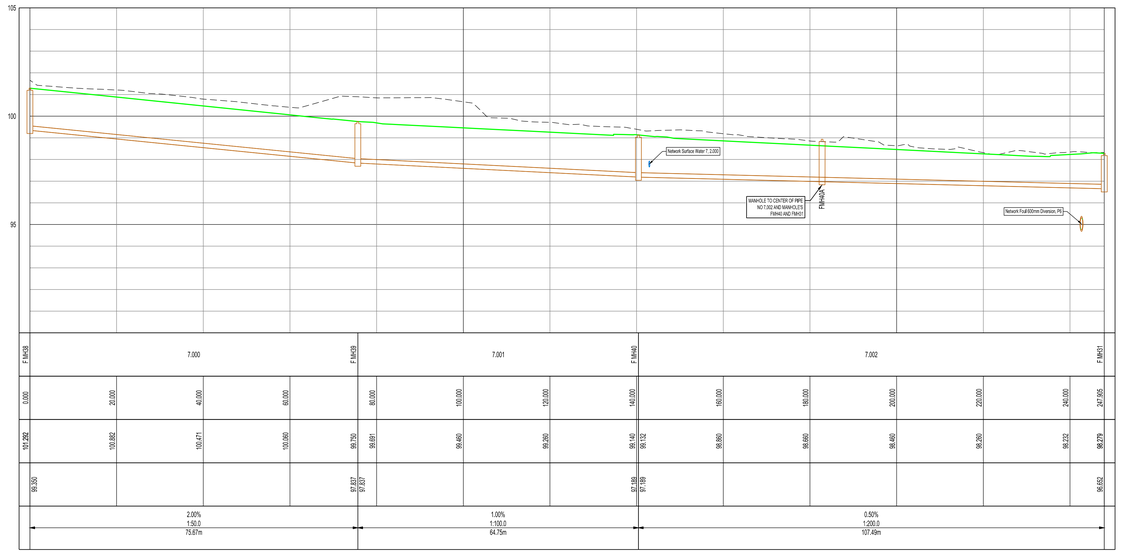
1. DO NOT SCALE, USE FIGURED DIMENSIONS ONLY.
2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND ALL RELEVANT ARCHITECTS AND SERVICES ENGINEERS DRAWINGS.
3. TEMPORARY PROPPING TO BE THE RESPONSIBILITY OF THE MAIN CONTRACTOR.
4. REFER TO DRAWING R1831 - 1001 FOR PHASE 1 FOUL NETWORK 1 AND 2 LAYOUT.
5. ALL EXISTING MANHOLE COVERS & ROOFS TO BE ADJUSTED TO SUIT NEW GROUND LEVELS.
6. RECESSED MANHOLES TO BE USED IN ALL AREAS WITH PAVERS.
7. ALL SURFACE WATER & FOUL SEWERS WITHIN 1200mm OF FINISHED GROUND LEVEL TO BE ENCASED IN MINIMUM 150mm 20N/15 CONCRETE.
8. ALL WORKS TO BE IN COMPLIANCE WITH IRISH WATER CODE OF PRACTICE FOR WASTEWATER INFRASTRUCTURE AND WASTEWATER INFRASTRUCTURE STANDARD DETAILS.

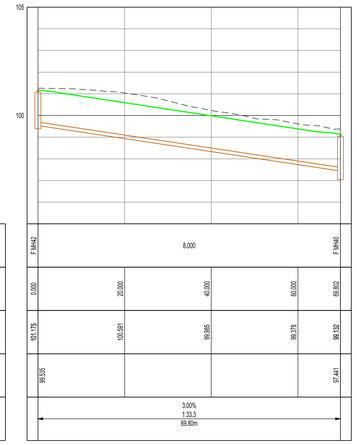


SCALES:
Horizontal 1:500
Vertical 1:100

DATUM 90.000

REFERENCE	F MH38	7.000	F MH39	7.001	F MH40	7.002	F MH31
DISTANCE (m)	0.000	20.000	40.000	60.000	80.000	100.000	120.000	140.000	160.000	180.000	200.000	220.000	240.000	247.905
GROUND LEVEL	107.262	102.662	102.411	100.060	99.750	99.691	99.460	99.260	99.145	99.102	98.860	98.660	98.460	98.260	98.232	98.279
PIPE INVERT LEVEL	99.300				97.837	97.837			97.695	97.695						96.832
SLOPE / LENGTH	2.00% 1:50.0 75.67m					1.00% 1:100.0 64.75m			0.50% 1:200.0 107.49m							

LONGSECTION F MH38 TO F MH31
FROM 0.000 TO 247.905

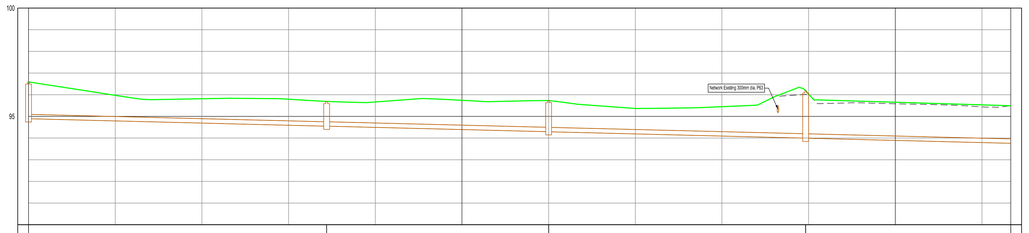


SCALES:
Horizontal 1:500
Vertical 1:100

DATUM 95.000

REFERENCE	F MH42	8.000	F MH40
DISTANCE (m)	0.000	20.000	40.000	60.000	69.802
GROUND LEVEL	101.175	100.501	99.995	99.378	99.132
PIPE INVERT LEVEL	99.535				97.441
SLOPE / LENGTH	3.00% 1:33.3 69.80m				

LONGSECTION F MH42 TO F MH40
FROM 0.000 TO 69.802



SCALES:
Horizontal 1:500
Vertical 1:100

DATUM 90.000

REFERENCE	F MH35	1.007	F MH43	1.008	F MH44	1.009	F MH45	1.010	F MH46
DISTANCE (m)	0.000	20.000	40.000	60.000	80.000	100.000	120.000	140.000	160.000	180.000	200.000	220.000	226.646
GROUND LEVEL	96.466	95.572	95.814	95.791	95.689	95.666	95.743	95.774	95.994	96.449	96.178	96.005	95.531	95.490
PIPE INVERT LEVEL	94.803			94.546	94.546		94.293	94.293		93.997	93.997			93.760
SLOPE / LENGTH	0.50% 1:200.0 68.79m			0.50% 1:200.0 51.21m		0.50% 1:200.0 59.32m		0.50% 1:200.0 47.33m	

LONGSECTION F MH35 TO F MH46
FROM 0.000 TO 226.646

LEGEND

EXISTING GROUND LEVEL	———
PROPOSED FINISHED SURFACE LEVEL	– – – – –

FOUL NETWORK DRAINAGE STRATEGY

REV	DATE	DESCRIPTION	DWG BY	APP'D CHK
A	17/05/19	IRISH WATER DESIGN QA COMMENTS	JC	BM

CLIENT:
BALLYMOUNT PROPERTIES LTD.

ARCHITECT:
RKD ARCHITECTS
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PROJECT:
RESIDENTIAL AND NEIGHBOURHOOD CENTRE DEVELOPMENT (PHASE 1) AT FORMER MAGEE BARRACKS

TITLE:
PHASE 1
FOUL NETWORK 2
LONGITUDINAL SECTIONS (SHEET 2 OF 2)

STATUS:
PLANNING APPLICATION

DRAWN:	SL	DES. BY:	BM
CHK. BY:	BM	APP. BY:	CR
DATE:	17/04/*19	JOB No.	R1831
A0 SCALE:	1:500 @ A0		
DRG. No.	1012	REV.	A

QUALITY I.S. EN ISO 9001:2008 NSAI Certified

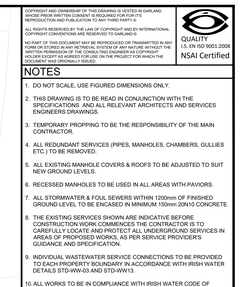
NOTES

1. DO NOT SCALE, USE FIGURED DIMENSIONS ONLY.
2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND ALL RELEVANT ARCHITECTS AND SERVICES ENGINEERS DRAWINGS.
3. TEMPORARY PROPPING TO BE THE RESPONSIBILITY OF THE MAIN CONTRACTOR.
4. ALL REDUNDANT SERVICES (PIPES, MANHOLES, CHAMBERS, GULLIES ETC.) TO BE REMOVED.
5. ALL EXISTING MANHOLE COVERS & ROOFS TO BE ADJUSTED TO SUIT NEW GROUND LEVELS.
6. RECESSED MANHOLES TO BE USED IN ALL AREAS WITH PAVIORS.
7. ALL STORMWATER & FOUL SEWERS WITHIN 1200mm OF FINISHED GROUND LEVEL TO BE ENCASED IN MINIMUM 150mm 20N/10 CONCRETE.
8. THE EXISTING SERVICES SHOWN ARE INDICATIVE BEFORE CONSTRUCTION WORK COMMENCES THE CONTRACTOR IS TO CAREFULLY LOCATE AND PROTECT ALL UNDERGROUND SERVICES IN AREAS OF PROPOSED WORKS, AS PER SERVICE PROVIDER'S GUIDANCE AND SPECIFICATION.
9. INDIVIDUAL WASTEWATER SERVICE CONNECTIONS TO BE PROVIDED TO EACH PROPERTY BOUNDARY IN ACCORDANCE WITH IRISH WATER DETAILS STD-WW-03 AND STD-WW13.
10. ALL WORKS TO BE IN COMPLIANCE WITH IRISH WATER CODE OF PRACTICE FOR WASTEWATER INFRASTRUCTURE AND WASTEWATER INFRASTRUCTURE STANDARD DETAILS.
11. REFER TO DRAWINGS R1831 - 1010 FOR FOUL NETWORK 1 LONGITUDINAL SECTIONS, R1831 - 1011 AND 1013 FOR FOUL NETWORK 2 LONGITUDINAL SECTIONS AND R1831 - 1013 FOR ALL FOUL AND SURFACE WATER STRUCTURE DATA TABLES AND INFORMATION.
12. REFER TO DRAWING R1831 - 1001 FOR FOUL SEWER NETWORK 1 AND 2 LAYOUT AND DRAWING R1831 - 1009 FOR 600mm DIA AND 2 NO. 50mm RISING MAIN DIVERSION LAYOUT.
13. UNPLASTICISED PVC PIPES AND FITTINGS SHALL COMPLY WITH THE PROVISIONS IS EN 1401 2009/2012. PIPES TO BE APPLICATION AREA CODE 'UD', STIFFNESS CLASS 8 kN/m². PROVISION FOR JETTING SHALL BE BASED ON THE WRC SEWER JETTING CODE OF PRACTICE, JUNE 1997. PIPES TO BE CAPABLE OF RESISTING A MAXIMUM JETTING PUMP PRESSURE OF 2,600 PSI (180 BAR) WITHOUT DAMAGE.
14. CONCRETE SEWER PIPES WITH SPIGOT AND SOCKET JOINTS AND RUBBER RING FITTINGS SHALL COMPLY WITH IS EN 1916 (2002), BS 5911: PART 1 (2002-2010) AND IS 6 (2004) OR EQUIVALENT STANDARD. PIPES SHALL BE MANUFACTURED WITH MINIMUM CRUSHING LOADS IN ACCORDANCE WITH TABLE 5 OF BS 5911-1 (2002-2010). ALL PIPES AND FITTINGS SHALL HAVE GASKET TYPE JOINTS OF SPIGOT AND SOCKET OR REBATED FORM.

LEGEND

NEW uPVC FOUL SEWER	
FOUL SEWER DIVERSION Ø 600mm	
2 NO. Ø 50 mm FOUL RISING MAIN DIVERSION	
EXISTING FOUL SEWERS	
NEW FOUL MANHOLE	
NEW PRIVATE INSPECTION CHAMBER AND DRAINAGE	
PIPE LABELS	1.200, 1.200 (PIPE REFERENCE NO.) (PIPE SLOPE)

FOUL NETWORK DRAINAGE STRATEGY



REV.	DATE	DESCRIPTION	DWG BY	APP'T CHK.

CLIENT:
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RKO ARCHITECTS
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PROJECT:
RESIDENTIAL AND NEIGHBOURHOOD CENTRE DEVELOPMENT (PHASE 1) AT FORMER MAGEE BARRACKS

TITLE:
PHASE 1
OVERALL SITE FOUL SEWER STRATEGY LAYOUT

STATUS:
FOR INFORMATION

DRAWN:	SL	DES. BY:	BM
CHK. BY:	BM	APP. BY:	CR
DATE:	17/05/19	JOB No.	R1831
A0 SCALE:	1:500 @ A0		
DRG. No.	1015	REV.	1st

QUALITY
I.S. EN ISO 9001:2008
NSAI Certified

NOTES

Melitta Road

PHASE 2

PHASE 1

Ruanbeg

MELITTA ROAD

CANCER TREATMENT CENTRE, PLANNIING REF NO. 18149

LIDL PLANNIING REF NO. 18273

HOSPITAL STREET

CURRAGH ROAD

HOSPITAL STREET

REV	DATE	DESCRIPTION	DWG BY	APP/ CHK

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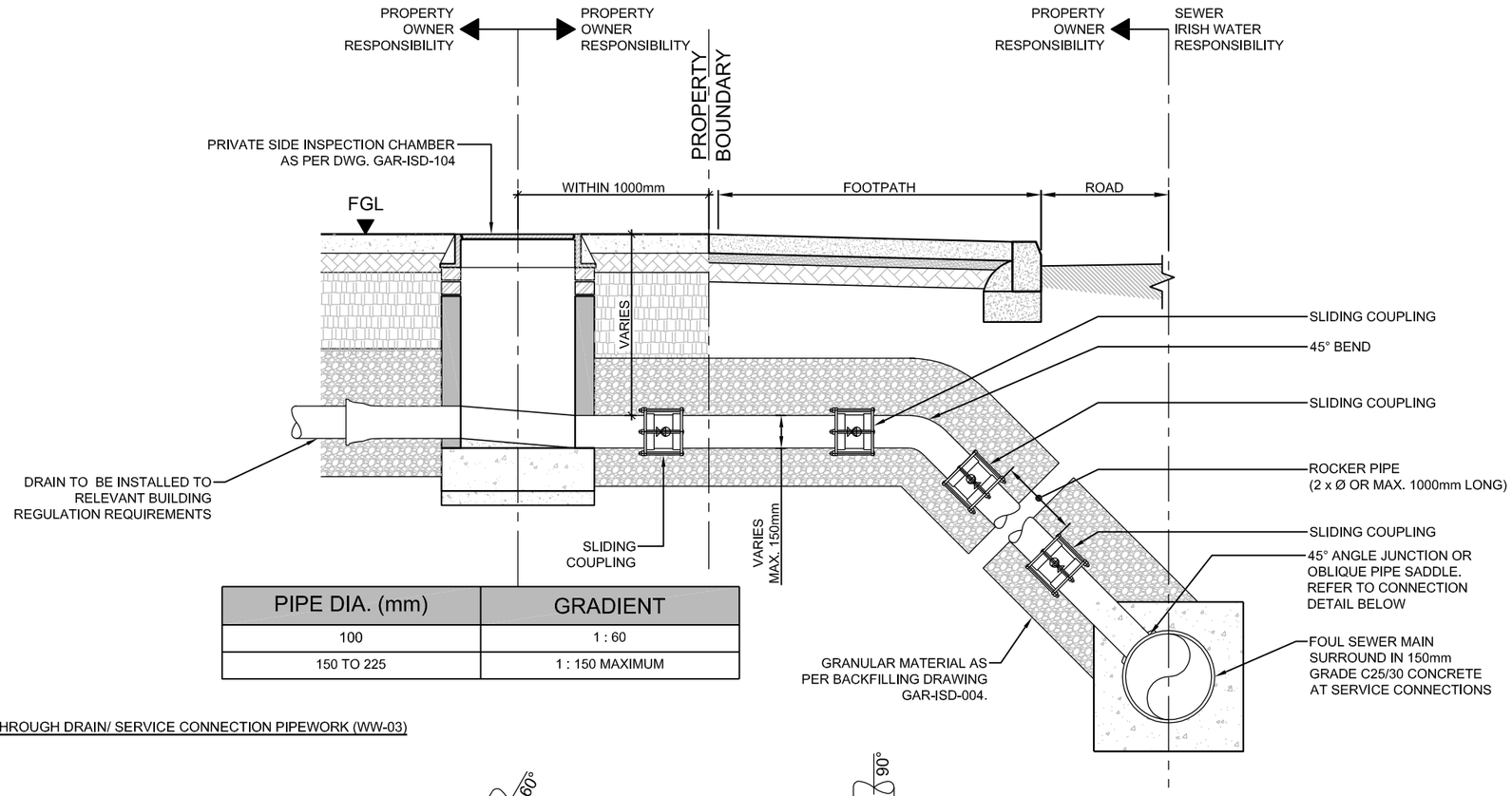
PROJECT:
RESIDENTIAL AND NEIGHBOURHOOD CENTRE DEVELOPMENT (PHASE 1) AT FORMER MAGEE BARRACKS

TITLE:
SITE LOCATION LAYOUT

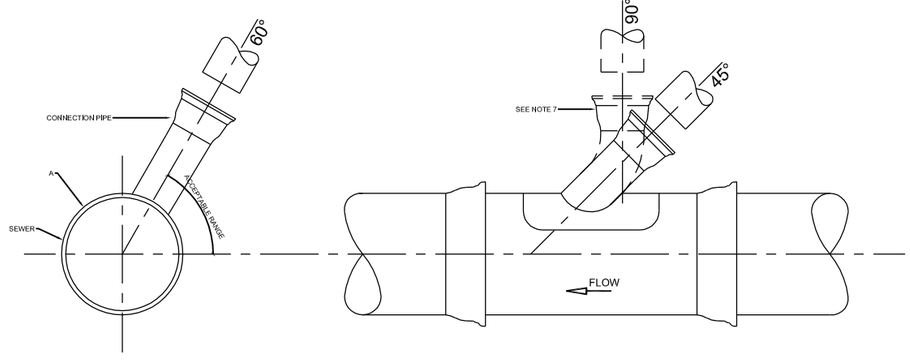
STATUS:
FOR INFORMATION

DRAWN: SL	DES. BY: BM
CHK. BY: BM	APP. BY: CR
DATE: 17/04/19	JOB No. R1831
AS SCALE: 1:1000	
DRG. No.	REV.
A0	1st



PIPE DIA. (mm)	GRADIENT
100	1 : 60
150 TO 225	1 : 150 MAXIMUM

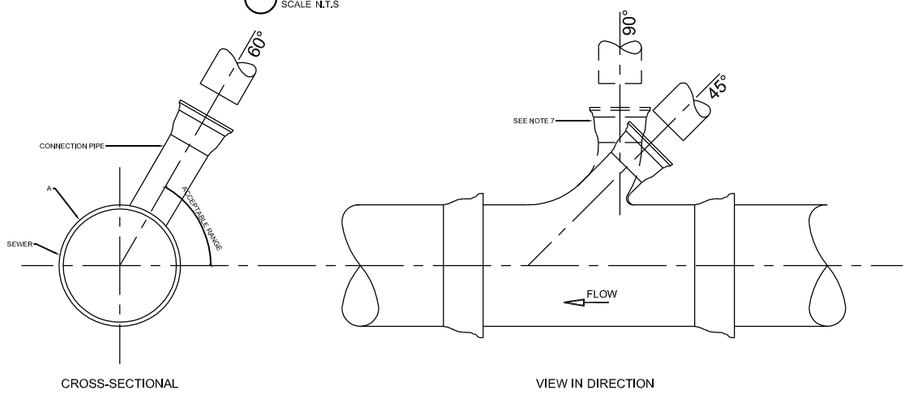
TYPICAL SECTION THROUGH DRAIN/ SERVICE CONNECTION PIPEWORK (WW-03)
SCALE N.T.S



CROSS-SECTIONAL VIEW OF SEWER

VIEW IN DIRECTION OF ARROW "A"

APPROVED 45° SADDLE CONNECTION
SCALE N.T.S



CROSS-SECTIONAL VIEW OF SEWER

VIEW IN DIRECTION OF ARROW "A"

TYPICAL SEWER/ SERVICE PIPE CONNECTION (WW-04)
SCALE N.T.S

45° JUNCTION CONNECTION
SCALE N.T.S

DETAIL NOTES

DRAIN AND SERVICE CONNECTIONS (WW-003)

1. AN INSPECTION CHAMBER SHOULD BE LOCATED AT OR WITHIN 1m OF THE PROPERTY BOUNDARY AT THE UPSTREAM END OF EACH SERVICE CONNECTION ON THE PRIVATE SIDE OF THE CURTILAGE, IF PRACTICABLE, CONSULT WITH IW ON ALTERNATIVE LOCATIONS.

2. ANY PIPE AND ASSOCIATED ACCESS UPSTREAM OF THE POINT OF CONNECTION TO A PUBLIC SEWER WITHIN THE CONFINES OF A PRIVATE BOUNDARY IS A PRIVATE DRAIN AND SHOULD BE CONSTRUCTED IN ACCORDANCE WITH BUILDING REGULATIONS.

TYPICAL SEWER/SERVICE PIPE CONNECTION (WW-004)

3. AS FAR AS PRACTICABLE, JUNCTIONS AND SERVICE CONNECTIONS SHALL BE BUILT IN FOR ALL PLANNED USERS WHEN THE SEWER IS BEING CONSTRUCTED. WHERE IT IS NECESSARY TO MAKE A POST-CONSTRUCTION CONNECTION THE DEVELOPER SHALL BRING THE SEWER TO THE INSPECTION CHAMBER, INSTALL THE INSPECTION CHAMBER AND SEAL THE UPSTREAM END UNTIL THE CONNECTION IS REQUIRED.

4. THE VERTICAL ANGLE BETWEEN THE SERVICE CONNECTING PIPE AND THE HORIZONTAL SHALL BE GREATER THAN 0° AND NOT MORE THAN 60°.

5. WHERE THE CONNECTION IS BEING MADE TO A SEWER WITH A NOMINAL INTERNAL DIAMETER OF 300mm DIAMETER OR LESS, CONNECTIONS SHALL BE MADE USING 45° ANGLE JUNCTIONS.

6. WHERE THE CONNECTION IS BEING MADE TO A SEWER WITH A NOMINAL INTERNAL DIAMETER GREATER THAN 300mm :

A) IF THE DIAMETER OF THE CONNECTING PIPE IS GREATER THAN HALF THE DIAMETER OF THE SEWER, AN ACCESS MANHOLE SHALL BE CONSTRUCTED TO FORM THE CONNECTION POINT; OR,

B) IF THE DIAMETER OF THE CONNECTING PIPE IS LESS THAN OR EQUAL TO HALF THE DIAMETER OF THE SEWER, THEN THE CONNECTION SHALL BE MADE USING A PREFORMED SADDLE FITTING WITH A SLOW BEND BETWEEN THE SADDLE AND THE CONNECTING SEWER/DRAIN .

7. CONNECTIONS MADE WITH SADDLE FITTINGS SHALL BE MADE BY CUTTING AND SAFELY REMOVING A CORE FROM THE PIPE AND JOINTING THE SADDLE FITTING TO THE PIPE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS TO ENSURE A WATERTIGHT JOINT. THE CONNECTING PIPE SHALL NOT PROTRUDE INTO THE SEWERS.

8. THE USE OF 90° CONNECTIONS TO THE SEWER MAY BE ALLOWED SUBJECT TO IRISH REVIEW, PROVIDED THE SADDLE OR BRANCH INCORPORATES A SWEPT TEE CONNECTION TOWARDS THE DIRECTION OF FLOW.

Sheet Title:
INFRASTRUCTURE STANDARD DETAILS (WW-03/ WW-04)

Sheet No.
GAR-ISD-101

Rev.
A

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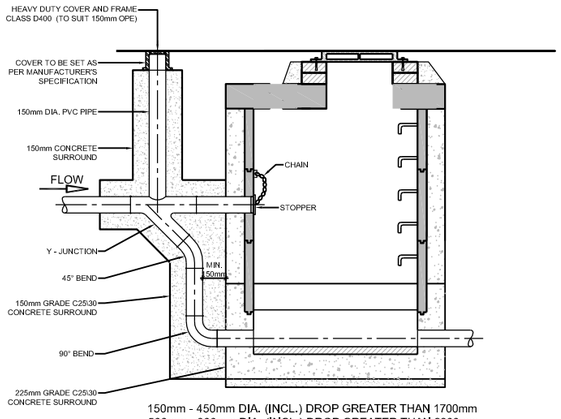
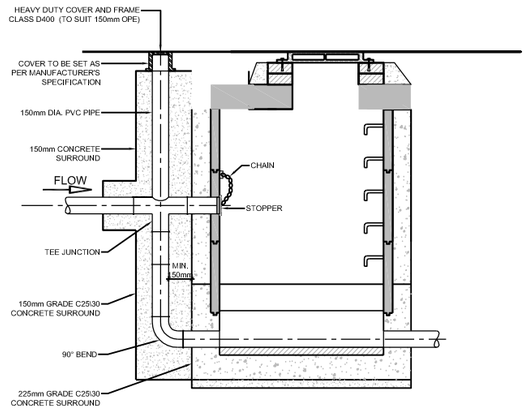


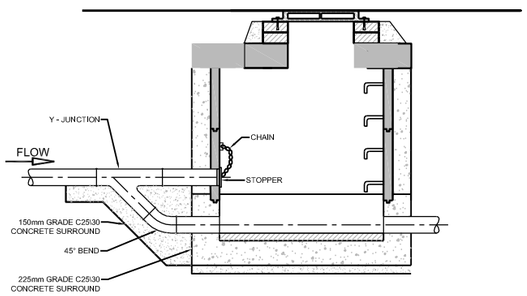
150mm - 450mm DIA. (INCL.) DROP GREATER THAN 1700mm
500mm - 900mm DIA. (INCL.) DROP GREATER THAN 2300mm

BACKDROP MANHOLES - TYPE 1
SCALE N.T.S



150mm - 450mm DIA. (INCL.) DROP GREATER THAN 900mm AND LESS THAN 1700mm
500mm - 900mm DIA. (INCL.) DROP GREATER THAN 1300mm AND LESS THAN 2300mm

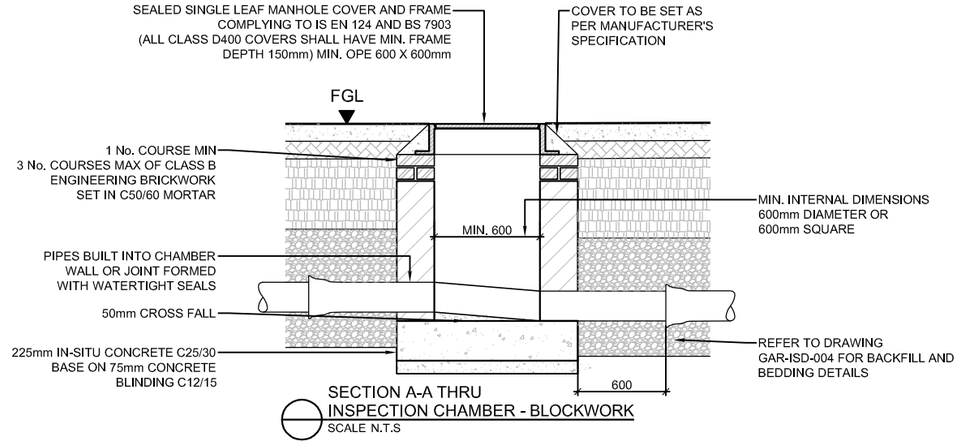
BACKDROP MANHOLES- TYPE 2
SCALE N.T.S



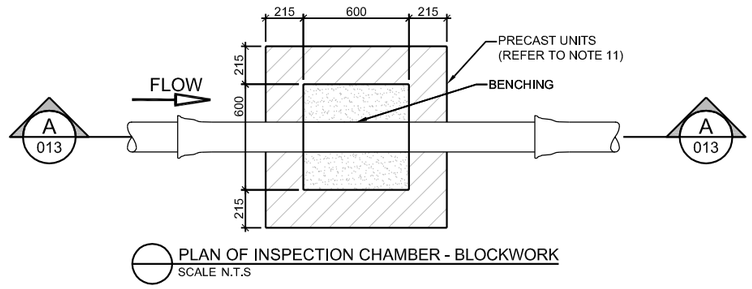
150mm - 450mm DIA. (INCL.) DROP GREATER THAN 600mm AND LESS THAN 900mm
500mm - 900mm DIA. (INCL.) DROP GREATER THAN 600mm AND LESS THAN 1300mm

BACKDROP MANHOLES - TYPE 3
SCALE N.T.S

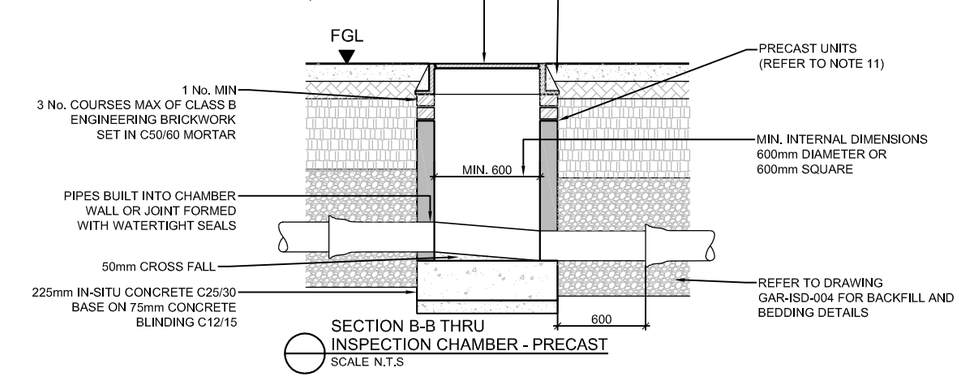
BACKDROP MANHOLES (WW- 12)
SCALE N.T.S



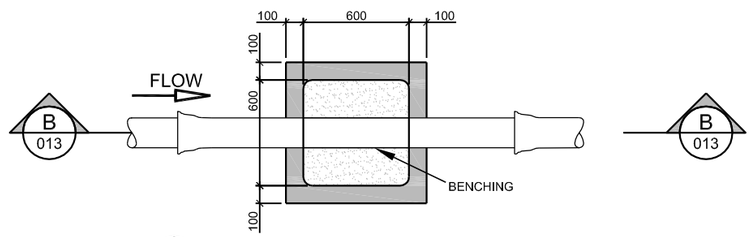
SECTION A-A THRU
INSPECTION CHAMBER - BLOCKWORK
SCALE N.T.S



PLAN OF INSPECTION CHAMBER - BLOCKWORK
SCALE N.T.S



SECTION B-B THRU
INSPECTION CHAMBER - PRECAST
SCALE N.T.S



PLAN OF INSPECTION CHAMBER - PRECAST
SCALE N.T.S

PRIVATE SIDE INSPECTION CHAMBER (WW- 13)
SCALE N.T.S

DETAIL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. RODDING EYE CHAMBER SHALL BE COVERED WITH APPROVED HEAVY DUTY METAL COVERS TO IS 261 AND BS 5834. COVER AND FRAME SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS AND IS SUBJECT TO REVIEW BY IRISH WATER.
3. ALL CHAMBERS TO BE CHECKED FOR UPLIFT BY THE DEVELOPER BASED ON GROUND CONDITIONS WITHIN THE SITE. SHOULD ANTI-FLOATATION MEASURES BE REQUIRED THEY SHALL BE SUBJECT TO REVIEW BY IRISH WATER.
4. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.
5. MANHOLE DETAILS TO BE IN ACCORDANCE WITH GAR-ISD-102 &103.
6. AN INSPECTION CHAMBER SHOULD BE LOCATED AT OR WITHIN 1m OF THE PROPERTY BOUNDARY AT THE UPSTREAM END OF EACH SERVICE CONNECTION ON THE PRIVATE SIDE OF THE CURTILAGE, IF PRACTICABLE, CONSULT WITH IW IN ALTERNATIVE LOCATIONS.
7. ANY PIPE AND ASSOCIATED ACCESS UPSTREAM OF THE POINT OF CONNECTION TO A PUBLIC SEWER IS A PRIVATE DRAIN AND SHOULD BE CONSTRUCTED IN ACCORDANCE WITH THE BUILDING REGULATIONS.
8. ACCESS POINTS SHOULD BE LOCATED SO THAT THEY ARE ACCESSIBLE AND APPARENT TO THE MAINTAINER AT ALL TIMES FOR USE. THEY SHOULD AVOID REAR GARDENS OR ENCLOSED LOCATIONS AND THEY SHOULD NEVER BE OVERLAIN WITH SURFACE DRESSING, TOPSOIL, ETC.
9. COVERS AND FRAMES SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS SUBJECT TO REVIEW BY IRISH WATER.
10. 200mm ALL AROUND, 100mm DEEP CONCRETE PLINTH AROUND COVERS IN GREEN AREAS.
11. PROPRIETARY PREFABRICATED CHAMBER UNITS MAY ALSO BE USED, SUBJECT TO REVIEW BY IRISH WATER.
12. CONCRETE CHAMBERS SHALL BE SURROUNDED BY A MINIMUM OF 150mm COMPACTED CLAUSE 808 MATERIAL AS PER GAR-ISD-004.

Sheet Title:
INFRASTRUCTURE STANDARD DETAILS
(WW-12/ WW-13)

Sheet No. GAR-ISD-104 Rev. A

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