

CONTOURS DENOTE EXISTING GROUND LEVELS ONLY!

ALL GULLIES AND ACO DRAINS TO BE CONNECTED TO MAIN DRAINS WITH 150mm STORM PIPE @1:80 GRADIENT.

PERIMETER DRAINAGE FOR ALL PROPOSED AND ALTERATIONS TO PERIMETER DRAINAGE REFER TO ARCHITECT DETAILS

INDICATIVE ROUTE OF STORMWATER PIPE TO ADJOINING LAND SHOWN FOR REFERENCE ONLY. FINAL ALIGNMENT AND DETAILS SUBJECT TO AGREEMENT WITH RELEVANT PARTIES.

EXISTING PUMP STATION

EXISTING STORM OUT FALL TO BE MOVED TO ACCOMMODATE DEVELOPMENT

THE CONTRACTOR IS TO NOTIFY THE ENGINEER 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.

NOTE
LOCATION OF EXISTING SERVICES IS INDICATIVE ONLY AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY. ALL EXISTING LEVELS TO BE CHECKED ON SITE & CONFIRMED WITH ENGINEER BEFORE COMMENCEMENT OF WORKS.

CROCON GRADING PLAN TO BE REVIEWED IN CONJUNCTION WITH THE PROPOSED DRAINAGE SYSTEM AND MANUFACTURER TO CONFIRM ACCEPTANCE OF SAME PRIOR TO INSTALLATION OF SYSTEM

- GULLY NOTES:
1. MINIMUM DEPTH FROM THE TOP OF THE GRATING TO THE TOP OF THE GULLY OUTLET IS TO BE 750MM WHEN THE CONNECTING PIPE IS UNDER A CARRIAGEWAY OR HARD SHOULDER, AND 600MM ELSEWHERE
 2. GULLY GRATING TO COMPLY WITH IS EN 124
 3. GULLY GRATING TO BE PROVIDED WITH A LOCKING DEVICE IN ACCORDANCE WITH CLAUSE 508.4
 4. PRECAST CONCRETE GULLYS & GULLY SLABS SHALL COMPLY WITH BS 5911-4 & IS EN 191

LEGEND

PRIVATE BOUNDARIES

ADJACENT BOUNDARIES OWNED BY APPLICANT

EXISTING STORM SEWER

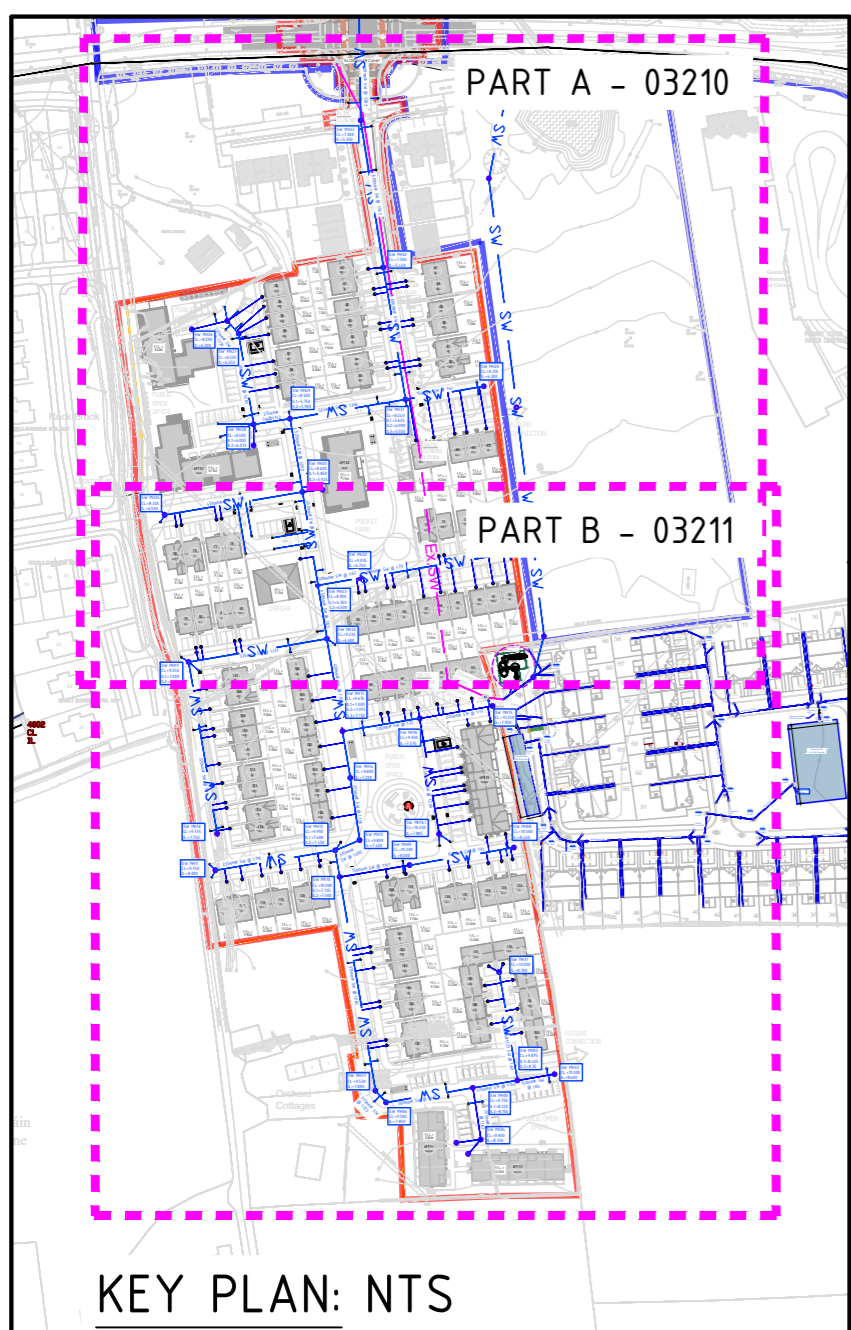
DNOTES uPVC SURFACE WATER SEWER WITH PIPE SIZE, MANHOLE REF & INVERT LEVEL. HDPE PIPE WITH STIFFNESS CLASS S16 TO BE USED FOR ALL SURFACE WATER

DNOTES PRIVATE SIDE STORM ACCESS JUNCTION IN ACCORDANCE WITH IRISH WATER STANDARD DETAIL STD-WW-13 BACKDROP TO BE PROVIDED AT ALL CHAMBERS TO AVOID CLASH WITH EIR & ESB.

- NOTES:
1. FOR SETTING OUT REFER TO ARCHITECT'S DRAWINGS.
 2. THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL OTHER ARCHITECTURAL AND ENGINEERING DRAWINGS AND ALL OTHER RELEVANT DRAWINGS AND SPECIFICATIONS.
 3. FOR UNDER FLOOR DRAINAGE ARRANGEMENT PLEASE REFER TO ARCHITECT'S DRAWINGS.
 4. DO NOT SCALE THIS DRAWING. USE FIGURE DIMENSIONS ONLY.
 5. ALL SURFACE WATER SEWERS SHALL BE CARRIED OUT STRICTLY IN ACCORDANCE WITH THE RECOMMENDATIONS CONTAINED IN "RECOMMENDATIONS FOR SITE DEVELOPMENT WORKS FOR HOUSING AREAS" AS PUBLISHED BY DEPARTMENT OF ENVIRONMENT AND LOCAL GOVERNMENT AND IRISH WATER STANDARD DETAILS FOR WASTE WATER INFRASTRUCTURE.
 6. ALL FOWL SEWER WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE IRISH WATER CODE OF PRACTICE FOR WASTEWATER INFRASTRUCTURE & IRISH WATERS WASTE WATER INFRASTRUCTURE STANDARD DETAILS
 7. GROUND LEVELS, COVER LEVELS AND INVERT LEVELS ARE APPROXIMATE ONLY. EXACT LEVELS TO BE CONFIRMED ON SITE.
 8. THE DEVELOPMENT SHALL BE CONNECTED TO THE PUBLIC SEWER TO THE SATISFACTION OF THE LOCAL AUTHORITY AND IRISH WATER. THE MINIMUM COVER TO ANY SEWER PIPE SHALL BE 1.2m IN ROAD AND 0.9m IN OPEN SPACES AND FOOTPATHS NOT ADJACENT TO CARRIAGEWAYS, WHERE IT IS NOT POSSIBLE TO ACHIEVE THESE MINIMUM COVERS, PIPES SHALL BE BEDDED AND SURROUNDED IN CONCRETE 150KH.
 9. THE SEWERS AND MANHOLES SHALL BE LAID AND TESTED TO THE SATISFACTION OF IRISH WATER AND THE LOCAL AUTHORITY. LAYING, BEDDING AND BACK FILLING OF SEWERS SHALL BE IN ACCORDANCE WITH THE IRISH WATER STANDARD DETAILS.
 10. ALL SERVICE TRENCHES IN ROADS SHALL BE BACK FILLED AND PROPERLY COMPACTED WITH GRANULAR MATERIAL IN ACCORDANCE WITH IRISH WATER STANDARD DETAILS FOR WASTEWATER INFRASTRUCTURE.
 11. GULLIES A) ALL GULLIES AND MANHOLES LOCATED IN THE PUBLIC ROAD SHALL BE LOCKING TYPE. GULLIES TO BE PROVIDED AT ALL ROAD SAG CURVES AND CUL DE SACS WHERE INDICATED. SEPARATE CONNECTIONS SHALL BE PROVIDED FOR EACH GULLY.

SURFACE WATER LAYOUT: PART B

SCALE 1:500



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.

CHANNEL DRAIN NOTES:

01. SPECIFIC SITE CONDITIONS MAY REQUIRE AN INCREASE IN THE DIMENSIONS OR REINFORCEMENT SHOWN. IT IS THE CLIENTS RESPONSIBILITY TO ENSURE THE CONCRETE ENCASEMENT IS DESIGNED FOR THE APPLICATION.
02. A MINIMUM CONCRETE STRENGTH OF 25 MPa IS RECOMMENDED. THE CONCRETE SHOULD BE VIBRATED TO ELIMINATE AIR POCKETS.
03. THE FINISHED LEVEL OF THE CONCRETE, ASPHALT OR BRICK PAVERS MUST BE APPROX. 3mm ABOVE THE TOP OF THE CHANNEL EDGE.
04. EXPANSION & CRACK CONTROL JOINTS ARE RECOMMENDED TO PROTECT THE CHANNEL & CONCRETE SURROUND.
05. FOR BRICK PAVERS, THE PAVER COURSE ADJACENT TO THE CHANNEL EDGE MUST BE FULLY BONDED TO THE CONCRETE SURROUND. FOR BRICKSLOT DRAINS, THE PAVER COURSE ADJACENT TO THE CHANNEL EDGE MUST BE FULLY BONDED TO BRICKSLOT & CONCRETE SURROUND USING AN EPOXY OR POLYMER MODIFIED MORTAR.
06. FOR ASPHALT SURFACES, THE HAUNCH MUST SLOPE AWAY AT A RATIO OF 1:4 OR 15" APPROX.
07. REFER TO ACO OR SIMILAR APPROVED SUPPLIERS LATEST INSTALLATION INSTRUCTIONS FOR COMPLETE DETAILS.

IRISH WATER STANDARD DETAILS AND CODE OF PRACTICE

ALL SITE WATER SERVICES TO BE IN ACCORDANCE WITH CURRENT IRISH WATER INFRASTRUCTURE STANDARD DETAILS REFER TO IRISH WATER STANDARD DETAILS DOCUMENT NO. IW-CDS-5020-01

INFRASTRUCTURE STANDARD DETAILS. REFER TO IRISH WATER STANDARD DETAILS DOCUMENT NO. IW-CDS-5020-01-

- STD-W-02 - LAYOUT DETAILS
- STD-W-03 - HOUSE CONNECTION AND BOUNDARY BOX
- STD-W-04 T010 - PIPE CONNECTIONS
- STD-W-11 - SERVICES LAYOUT
- STD-W-13 - TRENCH BACKFILLING AND BEDDING
- STD-W-15 - SLUICE VALVE
- STD-W-18-19 - HYDRANT
- STD-W-22-23 - AIR VALVE
- STD-W-26 - METER CHAMBER
- STD-W-27 - MARKER POSTS AND PLATES
- STD-W-28 - TRUST AND SUPPORT BLOCKS
- STD-W-30 - SCOUR CHAMBER AND HEADWALL
- STD-W-30A-37 - OTHER

ALL WATER SERVICES INFRASTRUCTURE TO BE IN ACCORDANCE WITH IRISH WATER CODE OF PRACTICE FOR WASTE WATER INFRASTRUCTURE. IRISH WATER DOCUMENT NUMBER: IW-CDS-5020-03

HYDRANTS TO COMPLY WITH BS 750, TYPE 2 SCREW DOWN TYPE.

HYDRANT INDICATOR PLATES TO COMPLY WITH BS 3251.

ALL WATERMAIN PIPE MATERIALS TO BE IN ACCORDANCE WITH SECTION 3.9 OF THE CODE OF PRACTICE

FOUL & SURFACE WATER NOTES:

1. FOR SETTING OUT REFER TO ARCHITECT'S DRAWINGS.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL OTHER ARCHITECTURAL AND ENGINEERING DRAWINGS AND ALL OTHER RELEVANT DRAWINGS AND SPECIFICATIONS.
3. FOR UNDER FLOOR DRAINAGE ARRANGEMENT PLEASE REFER TO ARCHITECT'S DRAWINGS.
4. DO NOT SCALE THIS DRAWING. USE FIGURE DIMENSIONS ONLY.
5. ALL SURFACE WATER SEWERS SHALL BE CARRIED OUT STRICTLY IN ACCORDANCE WITH THE RECOMMENDATIONS CONTAINED IN "RECOMMENDATIONS FOR SITE DEVELOPMENT WORKS FOR HOUSING AREAS" AS PUBLISHED BY DEPARTMENT OF ENVIRONMENT AND LOCAL GOVERNMENT AND IRISH WATER STANDARD DETAILS FOR WASTE WATER INFRASTRUCTURE.
6. ALL FOUL SEWER WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE IRISH WATER CODE OF PRACTICE FOR WASTEWATER INFRASTRUCTURE & IRISH WATERS WASTE WATER INFRASTRUCTURE STANDARD DETAILS
7. GROUND LEVELS, COVER LEVELS AND INVERT LEVELS ARE APPROXIMATE ONLY. EXACT LEVELS TO BE CONFIRMED ON SITE.
8. THE DEVELOPMENT SHALL BE CONNECTED TO THE PUBLIC SEWER TO THE SATISFACTION OF THE LOCAL AUTHORITY AND IRISH WATER. THE MINIMUM COVER TO ANY SEWER PIPE SHALL BE 1.2m IN ROAD AND 0.9m IN OPEN SPACES AND FOOTPATHS NOT ADJACENT TO CARRIAGEWAYS, WHERE IT IS NOT POSSIBLE TO ACHIEVE THESE MINIMUM COVERS, PIPES SHALL BE BEDDED AND SURROUNDED IN CONCRETE 150KH.
9. THE SEWERS AND MANHOLES SHALL BE LAID AND TESTED TO THE SATISFACTION OF IRISH WATER AND THE LOCAL AUTHORITY. LAYING, BEDDING AND BACK FILLING OF SEWERS SHALL BE IN ACCORDANCE WITH THE IRISH WATER STANDARD DETAILS.
10. ALL SERVICE TRENCHES IN ROADS SHALL BE BACK FILLED AND PROPERLY COMPACTED WITH GRANULAR MATERIAL IN ACCORDANCE WITH IRISH WATER STANDARD DETAILS FOR WASTEWATER INFRASTRUCTURE.
11. GULLIES A) ALL GULLIES AND MANHOLES LOCATED IN THE PUBLIC ROAD SHALL BE LOCKING TYPE. GULLIES TO BE PROVIDED AT ALL ROAD SAG CURVES AND CUL DE SACS WHERE INDICATED. SEPARATE CONNECTIONS SHALL BE PROVIDED FOR EACH GULLY.

REVISION	DATE	BY	DETAILS
3	09/25	AH	Site Layout revised
2	06/25	CW	Revised Existing Storm Sewer
1	02/25	CW	Revised Manholes
0	11/24	AH	Issue 0

THIS DRAWING IS COPYRIGHT © Crocon Engineers Ltd. All rights reserved. No part of this drawing may be reproduced without the prior written permission of Crocon Engineers Ltd. This drawing is the property of Crocon Engineers Ltd. and shall remain the property of Crocon Engineers Ltd. if it is used for any other project without the prior written permission of Crocon Engineers Ltd.

Drawn By: AH, Checked By: CC, Approved By: CC, Date: 19/09/25, Scale: 1/500 @A1, Purpose: P03, Revision: 3, Stage: Planning

Crocon Engineers Ltd.
Consulting Engineers
Unit 1, Building 6500, Avenue 6000,
Cork Airport Business Park, Cork
E: info@crocon.ie Tel: (021) 431 0709

Project: 22240 - CRO - X - XXX - DR - CE - 03211

Client: Roscspring Properties Ltd
Project: Baneshane, Middleton LRD
Title: Surface Water Layout (Sheet 2)