

WATERMAIN NOTES:

1. WATER MAIN LAYOUTS SHALL BE ARRANGED IN LOOPS OR RINGS SO AS TO AVOID 'DEAD ENDS' OR TERMINAL POINTS. ALL MAINS SHALL TERMINATE IN A LOOP OR RING TO ACCOMMODATE ONE-DIRECTIONAL FLUSHING OF THE NETWORK. LOOPS SHALL HAVE A MINIMUM OF 4 HOUSES AND 1 HYDRANT.
2. THE MINIMUM PIPE SIZE SHALL BE 100mm INTERNAL DIAMETER IN HOUSING DEVELOPMENTS OF 40 AND UP TO 100 HOUSES. DEVELOPMENTS OF 100 HOUSES AND ABOVE SHALL HAVE A MINIMUM PIPE SIZE OF 150mm INTERNAL DIAMETER SPINE AND 100mm BRANCH MAINS. NOMINAL INTERNAL DIAMETERS OF 80mm AND LESS MAY BE ALLOWED IN SMALLER DEVELOPMENTS BUT NOT WHERE HYDRANTS ARE LOCATED AND ONLY AFTER PRIOR WRITTEN AGREEMENT FROM IRISH WATER.
3. THE MINIMUM PIPE SIZE SHALL BE 150mm IN INDUSTRIAL OR COMMERCIAL DEVELOPMENTS.
4. EVERY PREMISES SHOULD HAVE A SEPARATE SERVICE CONNECTION. THE USE OF COMMON SERVICE PIPES IS NOT ALLOWED. SERVICE CONNECTIONS SHALL BE AS SHORT AS REASONABLY POSSIBLE. LONG SERVICE CONNECTIONS (IN EXCESS OF 15m) WILL NOT BE ALLOWED. A RIDER MAIN AT THE OPPOSITE SIDE OF THE ROAD TO THE MAIN WATER MAIN MAY BE REQUIRED SUBJECT TO APPROVAL FROM IRISH WATER. SERVICE CONNECTIONS SHALL BE A MINIMUM PIPE SIZE OF 25mm OUTSIDE DIAMETER, 20mm INTERNAL DIAMETER.
5. WATER MAINS SHOULD BE LAID TO PROVIDE THE OPTIMUM CIRCULATION IN THE LOCAL WATER NETWORK. WATER MAINS MAY TERMINATE IN A DEAD END ONLY WITH IRISH WATER APPROVAL, IN WHICH CASE A DUCK-FOOT WASHOUT HYDRANT SHALL BE PROVIDED AT THE DEAD END, LOCATED WITHIN A CHAMBER OR KIOSK.
6. VALVES SHALL BE ARRANGED IN SUCH A MANNER TO ALLOW THE NETWORK TO BE MANAGED TO ENSURE THAT NO MORE THAN 40 PROPERTIES LOSE WATER FROM A BURST ON THE SYSTEM, AT ANY ONE TIME.
7. NO DOMESTIC PROPERTY SHALL BE MORE THAN 46m FROM A HYDRANT. HYDRANT DETAILS AND LOCATIONS SHALL BE SUBJECT TO THE APPROVAL OF THE RELEVANT LOCAL AUTHORITY FIRE DEPARTMENT.
8. WATER SUPPLY MAINS SHALL BE LAID IN COMMON AREAS AND NOT THROUGH INDIVIDUAL PRIVATE GARDENS OR DRIVEWAYS ETC.
9. A THREE-WAY VALVE ARRANGEMENT SHALL BE PROVIDED AT ALL JUNCTIONS, AS A MINIMUM.
10. THE WATER MAIN PIPEWORK TO NEW DEVELOPMENTS SHOULD BE LOCATED AT THE RIGHT HAND SIDE OF THE ENTRANCE TO THE NEW DEVELOPMENT (FROM A VIEW FACING INTO THE DEVELOPMENT) IF POSSIBLE AND WHERE THE PROPERTIES ARE EQUALLY AND REASONABLY DISTRIBUTED AT BOTH SIDES OF THE ESTATE ROADWAY.
11. AIR VALVES TO BE LOCATED AT POINTS WHERE AIR IS LIKELY TO BUILD UP.
12. THE DEVELOPER IS TO LIAISE WITH THE FIRE SERVICES AUTHORITY IN ORDER TO ENSURE FIRE FLOWS ARE AVAILABLE THROUGHOUT THE DEVELOPMENT.
13. BULK FLOW METERS SHALL BE FITTED IN ALL DEVELOPMENTS WITH A DEMAND IN EXCESS OF 20m³ PER DAY. BULK FLOW METERS SHALL HAVE A FACTORY FITTED AMR AND INSTALLED IN A SUITABLY SIZED CHAMBER. DEVELOPMENTS WITH DEMAND OF LESS THAN 20m³ PER DAY SHALL BE PROVIDED WITH DEDICATED BYPASS PIPEWORK AND CHAMBER TO ACCOMMODATE LOCATION OF TEMPORARY NIGHT FLOW METER.
14. WATERMANS TO BE LOCATED IN GRASS VERGE. IF GRASS VERGE IS NOT AVAILABLE, WATERMANS TO BE LOCATED UNDER FOOTPATH AWAY FROM KERB. REFER TO STD-W-11 FOR TYPICAL UTILITY LAYOUT.

BOUNDARY BOX NOTES:

15. THE BOUNDARY BOX IS TO BE IN ACCORDANCE WITH THE IRISH WATER SPECIFICATION, INCORPORATING A G1.5 MANIFOLD, STOP-TAP, FROST PLUG & NON-RETURN VALVE.
16. THE BOUNDARY BOX SHALL BE POSITIONED IN PUBLIC SPACE & AS CLOSE AS POSSIBLE TO THE PROPERTY BOUNDARY BUT NO PART OR FITTING TO BE WITHIN 225mm OF THE PROPERTY LINE.
17. THE BOUNDARY BOX SHALL BE LOCATED WHERE IT IS SAFE TO OPEN THE COVER & ACCESS THE STOP TAP OR VISUALLY READ THE METER, i.e. ON A FOOTPATH OR VERGE, & NOT IN A CARRIAGEWAY.
18. THE SURFACE BOX COVER ON THE BOUNDARY BOX SHOULD BE NOT LESS THAN GRADE C (BS 684-2:2011) & THE BOUNDARY BOX SHOULD BE LOCATED SUCH THAT HEAVIER GRADES OF COVER WOULD NOT BE REQUIRED.
19. THE SHAFT OF THE BOUNDARY BOX IS TO BE INSTALLED VERTICALLY, & THE SURFACE BOX COVER INCLINED TO MATCH THE SURFACE GRADIENT.
20. THE BOUNDARY BOX IS TO BE INSTALLED AT A MINIMUM DEPTH OF 600mm (+/- 25mm) TO THE CROWN OF THE INLET & OUTLET FITTINGS ON THE OUTSIDE OF THE BOX.
21. THE SERVICE CONNECTION PIPE SHALL NOT BE WRAPPED AROUND THE SHAFT OF THE BOUNDARY BOX OR BENT IN ANY RADIUS LESS THAN THAT APPROVED BY THE MANUFACTURER.
22. THE PIPE FITTINGS TO THE BOUNDARY BOX SHALL BE APPROVED BY THE BOUNDARY BOX MANUFACTURER.
23. THE BOUNDARY BOX SHALL BE INSTALLED HYGIENICALLY & LEFT CLEAN & FREE OF CONSTRUCTION WASTE OR DIRT FOR LATER METER INSTALLATION BY IRISH WATER.
24. BOX TO BE FOUNDED ON 100mm DEPTH OF C12/15 CONCRETE AND SURROUNDED WITH CLAUSE 808 GRANULAR MATERIAL.
25. THE DESIRABLE MINIMUM COVER FROM THE FINISHED GROUND LEVEL TO THE EXTERNAL CROWN OF A SERVICE CONNECTION SHALL BE 750mm WITH AN ABSOLUTE MINIMUM DEPTH OF 600mm FOR SHORT DISTANCES (SUBJECT TO IRISH WATER AGREEMENT). THE DESIRABLE MAXIMUM COVER FOR A SERVICE CONNECTION PIPE SHOULD BE 1200mm, WHERE PRACTICABLE.
26. CUSTOMER'S DISTRIBUTION PIPEWORK WITHIN THE PREMISES SHOULD BE SUITABLY SIZED TO ACCOMMODATE FLOW FROM 20mm INTERNAL DIAMETER SERVICE PIPE.

| RESIDENTIAL DEV. AT RAILWAY ST. PORTLAOISE | | |
|--|----------|-----------------------|
| UNITS BREAKDOWN | | |
| | Quantity | Unit Type Description |
| APARTMENT & BLOCKS | 4 | APT 01 32 BED |
| | 4 | APT 02 32 BED |
| | 4 | APT 03 32 BED |
| | 4 | APT 04 32 BED |
| 9 | | TOTAL |
| HOUSE & BLOCKS | 5 | APT A 32 BED |
| | 4 | APT B 32 BED |
| | 4 | APT C 32 BED |
| | 4 | APT D 32 BED |
| 17 | | TOTAL |
| HOUSES | 15 | HTR1 32 BED |
| | 2 | HTR2 32 BED |
| | 3 | HTR3 32 BED |
| | 2 | HTR4 32 BED |
| | 5 | HTR5 32 BED |
| | 1 | HTR6 32 BED |
| 30 | | TOTAL |
| 67 | | TOTAL UNITS |

ALL MARKER POSTS AND PLATES IN ACCORDANCE WITH IW STANDARD DETAIL STD-W-27. ALL WATERMAIN THRUST AND SUPPORT BLOCKS IN ACCORDANCE WITH IW STANDARD DETAIL STD-W-28.

CONNECTION OF INDIVIDUAL UNITS WITH 25MM(O.D.) PE PIPE AND IRISH WATER APPROVED BOUNDARY BOX IN ACCORDANCE WITH IW STANDARD DETAIL STD-W-03.

ALL SLUICE VALVES TO BE IN ACCORDANCE WITH IW STANDARD DETAIL STD-W-15.

SERVICE CONNECTION TO APARTMENT BUILDING TO BE Ø100mm. FACILITIES TO MEASURE EACH INDIV. RESIDENTIAL UNIT TO BE PROVIDED AT PUBLICLY ACCESSIBLE LOCATION.

BULK FLOW WATER METER AND ITS CHAMBER TO BE IN ACCORDANCE WITH IW STANDARD DETAIL STD-W-26A. NO REQUIREMENT FOR OFF-LINE HYDRANT OR STRAINER METER TO BE SELECTED, SUPPLIED AND FITTED BY IRISH WATER.

ALL HYDRANTS IN ACCORDANCE WITH IW STANDARD DETAIL STD-W-18 (ON-LINE) OR STD-W-19 (OFF-LINE).

AIR VALVES TO BE ON-LINE IN ACCORDANCE WITH IW STANDARD DETAIL STD-W-22.

OFF-LINE SCOUR VALVE AND WASHOUT HYDRANT TO BE IN ACCORDANCE WITH IW STANDARD DETAIL STD-W-30A. TRUST BLOCK TO BE PROVIDED AS PER SECT. 3.15.4 OF WATER CODE OF PRACTICE.

AIR VALVES TO BE ON-LINE IN ACCORDANCE WITH IW STANDARD DETAIL STD-W-22.

WATER METER AND ITS CHAMBER TO BE IN ACCORDANCE WITH IW STANDARD DETAIL STD-W-26. METER TO BE SELECTED, SUPPLIED AND FITTED BY IRISH WATER.

PROPOSED WATERMAIN CONNECTED TO EXISTING Ø150mm WATERMAIN AT CHURCH STREET. CONNECTION AS PER IW DETAIL STD-W-05.

NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL ENGINEERS & ARCHITECTS DRAWINGS. FIGURED DIMENSIONS ONLY (NOT SCALING) TO BE USED. WHERE A CONFLICT OF INFORMATION EXISTS OR IF IN ANY DOUBT - ASK.
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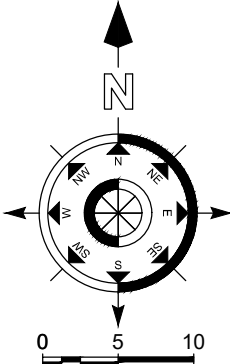
LEGEND

100mmØ MDPE (PE-80) SDR-17 WATERMAIN IN ACCORDANCE WITH IRISH WATER'S REQUIREMENTS

MDPE CUSTOMER SERVICE PIPE - MIN. 25mm OUTSIDE DIAMETER, 20mm INTERNAL DIAMETER

EXISTING 150mmØ WATERMAIN

| | |
|--|------|
| SLUICE VALVE | SV |
| AIR VALVE | AV |
| SCOUR VALVE | Sc.V |
| WASHOUT HYDRANT | WO |
| FIRE HYDRANT | H |
| MAGNETIC FLOW WATER METER | ME |
| COMMERCIAL BOUNDARY BOX AND METER COMPATIBLE WITH AUTOMATIC METER READING SYSTEM | CB |
| PROPOSED ROAD GULLY | RG |
| BLISTER TYPE TACTILE PAVING | dk |
| RESIDENTIAL UNIT | |
| PROPOSED ROADS | |
| PROPOSED PERMEABLE SURFACE PARKING SPACES | |
| PROPOSED IMPERMEABLE SURFACE PARKING SPACES | |
| PROPOSED CONCRETE FOOTPATHS | |
| PROPOSED PAVING TO ARCHITECT'S SPECIFICATION | |
| PROPOSED TARMACADAM PAVING | |
| EXISTING FOOTPATHS | |
| PROPOSED ROAD RAISED TABLE | |



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|-------|----------|-------------------------------------|------|------|
| PL08 | 02.06.20 | REVISED FOR PLANNING | A.W. | J.R. |
| PL05 | 29.05.20 | REVISED FOR PLANNING | A.W. | J.R. |
| PL04 | 26.05.20 | REVISED AS PER IRISH WATER COMMENTS | A.W. | J.R. |
| PL03 | 18.03.20 | REVISED FOR PLANNING | A.W. | J.R. |
| PL02 | 16.03.20 | ISSUED FOR PLANNING | A.W. | J.R. |
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CLIENT: ARDAIN DEVELOPMENTS

PROJECT: PROPOSED RESIDENTIAL DEVELOPMENT AT RAILWAY ST. PORTLAOISE, CO. LAOIS

TITLE: PROPOSED ROADS AND WATERMAIN LAYOUT

| | |
|---------------------------|-------------------|
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