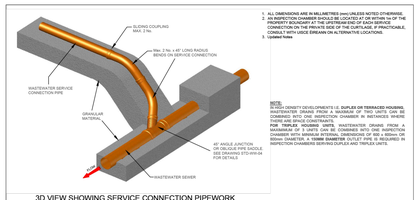
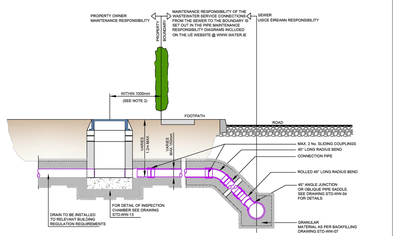


3D VIEW SHOWING SERVICE CONNECTION PIPEWORK

1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. AN INSPECTION CHAMBER SHOULD BE LOCATED AT OR WITHIN 1M OF THE PROPERTY BOUNDARY TO FACILITATE ACCESS FOR MAINTENANCE. CONNECTION ON THE PRIVATE SIDE OF THE CURTILAGE, IF PRACTICABLE, CONSULT WITH UISCE EIREANN ON ALTERNATIVE LOCATIONS.
3. Updated Notes

NOTES:
FOR MULTI DENSITY DEVELOPMENTS I.E. DUPLEX OR TERRACED HOUSING, WASTEWATER DRAINS FROM a MAXIMUM OF TWO UNITS CAN BE COMBINED INTO ONE INSPECTION CHAMBER IN INSTANCES WHERE PRACTICAL AND PHYSICALLY POSSIBLE.
FOR TRIPLEX HOUSING UNITS, WASTEWATER DRAINS FROM A MAXIMUM OF 3 UNITS CAN BE COMBINED INTO ONE INSPECTION CHAMBER WHERE PRACTICAL AND PHYSICALLY POSSIBLE. FOR A MINIMUM 500mm DIAMETER, A 150MM DIAMETER OUTLET PIPE IS REQUIRED IN INSPECTION CHAMBERS SERVING DUPLEX AND TRIPLEX UNITS.



SECTION SHOWING DRAIN AND SERVICE CONNECTION PIPEWORK

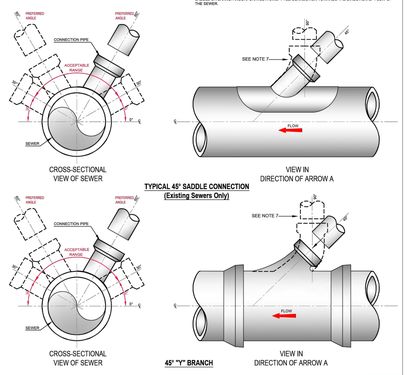
PIPE SIZE (mm)	GRADIENT
100 - 150mm Ø	1:40 - 1:60

CONNECTIONS AND DEVELOPER SERVICES
STANDARD DETAILS - WASTEWATER

Rev	Date	Drn	Chk	Description	App
3	30/10/09	BMc		Updated Notes	GP
2	07/09/09	TOC		Name consists magically except Uisce and a bit of bullshit	MEC
1	11/11/07	AKT	TOC	Updated Notes	MEC
0	09/10/07	AKT	TOC	Initial Issue	SL

TITLE: DRAIN AND SERVICE CONNECTION PIPEWORK
SCALE: NOT TO SCALE | DATE: SEPT. 2015
DRAWING No.: STD-WW-03 | REV: 3

1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. 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 SERVICE CONNECTION TO THE PROPERTY BOUNDARY. WHERE PRACTICABLE, THE INSPECTION CHAMBER AND SEAL THE UPSTREAM END UNTIL THE CONNECTION IS REQUIRED.
3. THE VERTICAL ANGLE BETWEEN THE SERVICE CONNECTING PIPE AND THE HORIZONTAL SHALL BE WITHIN THE ACCEPTABLE RANGE OF 30° to 90°.
4. WHERE THE SERVICE PIPE CONNECTION WITHIN THE FOOTPRINT OF THE BELF LAY AGREEMENT IS BEING MADE TO A SEWER WITH A NOMINAL DIAMETER OF 300mm DIAMETER OR LESS, CONNECTIONS SHALL BE MADE USING KP WIDGE JUNCTIONS.
5. WHERE THE CONNECTION IS BEING MADE TO A SEWER WITH A NOMINAL INTERNAL DIAMETER GREATER THAN 300mm, THE FOLLOWING SHALL APPLY :
   a. WHERE 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 PORT, OR,
   B. WHERE 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 GRANDA FITTING WITH A 45 DEG. SLOW BEND TO FORM THE CONNECTION TO THE WORKS.
6. CONNECTION USING SADDLES MAY ONLY BE USED IN EXCEPTIONAL CIRCUMSTANCES AND ONLY TO WHERE THE CONNECTION IS TO AN EXISTING SEWER. CONNECTIONS MADE WITH SADDLE FITTINGS SHALL BE MADE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. THE SADDLE SHALL BE FIXED TO THE SEWER PIPE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS TO ENSURE A WATERTIGHT JOINT. THE CONNECTING PIPE SHALL NOT PROTRUDE INTO THE SEWERS.
7. THE USE OF 90 °Y" BRANCH OR SADDLE CONNECTIONS TO THE SEWER MAY BE ALLOWED, PROVIDED THE SADDLE OR BRANCH INCORPORATES A SWEEP TEE CONNECTION TOWARDS THE DIRECTION OF FLOW OF THE SEWER.



CONNECTIONS AND DEVELOPER SERVICES
STANDARD DETAILS - WASTEWATER

Rev	Date	Drn	Chk	Description	App
3	30/10/09	TOC		Updated connection detail & notes	MEC
2	07/09/09	TOC		Updated connection detail & notes	MEC
1	11/11/07	AKT	TOC	Initial Issue	SL

TITLE: TYPICAL SEWER / SERVICE PIPE CONNECTION
SCALE: NOT TO SCALE | DATE: SEPT. 2015
DRAWING No.: STD-WW-04 | REV: 2

1. SEPARATION DISTANCES BETWEEN SEWERS ASSOCIATED WITH THE WORKS FROM OTHER UTILITY PIPES AND ACCESSORIES SHALL BE IN ACCORDANCE WITH SECTION 3.6.3 TO 3.6.21 OF THE CODE OF PRACTICE. SEPARATION DISTANCES FOR ALL NEW INSTALLATIONS FROM EXISTING IRISH WATER PIPES SHALL BE AS OUTLINED IN SECTION 3.25 OF THE CODE OF PRACTICE.
2. SPECIFIC SEPARATION CLEARANCE DISTANCES IN EXCESS OF THESE MINIMA SHALL BE PROVIDED FOR WHERE THE PROPOSED SEWER IS TO BE LAID IN THE VICINITY OF ANY OTHER UTILITY PIPELINE. THE PARTICULAR UTILITY PROVIDERS SHALL BE CONSULTED TO DETERMINE THESE MINIMUM SEPARATION DISTANCES AND EVIDENCE OF THIS CONSULTATION WITH THE SPECIFIED SEPARATION DISTANCES, SHALL BE PROVIDED TO UISCE EIREANN AT DESIGN STAGE.
3. NOTIFICATION IN WRITING IS REQUIRED SHOULD WORKS BE WITHIN THE FOLLOWING DISTANCES FROM AN EXISTING WATER MAIN OR WASTEWATER RISING MAIN UNDER THE JURISDICTION OF THE EXISTING INFRASTRUCTURE OWNER (IRISH WATER):
   - 10 METRES
   - 5m OF EITHER SIDE OF AN EXISTING PIPE LESS THAN 200mm IN DIAMETER;
   - 2m AT EITHER SIDE OF AN EXISTING PIPE OF 200mm TO 300mm IN DIAMETER;
   - 5m AT EITHER SIDE OF AN EXISTING PIPE OF 300mm OR GREATER IN DIAMETER;

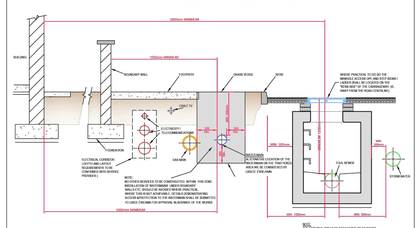
   WHERE DUCTS OR PIPES ARE TO BE LAID CLOSE TO AN EXISTING WATERMAIN OR SEWER IN THE OWNERSHIP OF UISCE EIREANN, NOTIFICATION IN WRITING SHALL BE PROVIDED A MINIMUM OF 10 DAYS AHEAD OF ACKNOWLEDGMENT OF THE WORK. THIS ALSO APPLIES WHERE THE DEPTH OF THE UISCE EIREANN WATERMAIN OR SEWER EXCEEDS 1.5m. IN ALL OF THESE INSTANCES, SPECIFIC WRITTEN APPROVAL WILL BE REQUIRED FROM UISCE EIREANN BEFORE PROCEEDING WITH THE WORK.

   NOTIFICATION IN WRITING IS REQUIRED SHOULD WORKS BE WITHIN 1.5m DISTANCE OF A WASTEWATER SEWER.

   REQUIREMENTS SHALL ALSO APPLY TO TRIAL HOLES OR BELF TRENCHES TO LOCATE THE MAIN OR GAIN GROUND INFO DATA.

   LARGER DIAMETERS >300mm DISTRIBUTION AND TRUNK MAINS, UISCE EIREANN MUST BE NOTIFIED AT LEAST 1 MONTH IN ADVANCE.

   DEVELOPERS SHALL ALSO COMPLY WITH ANY NOTIFICATION REQUIREMENTS OF OTHER UTILITY PROVIDERS (ESB, GAS MAIN, TELECOMMUNICATION ETC.)
4. DETAILED PROPOSALS, INCLUDING WORK METHOD STATEMENTS, INSURANCE CONFIRMATION AND DETAILS OF WORK COMPLETED OF A SIMILAR NATURE MUST BE SUBMITTED TO UISCE EIREANN FOR ITS CONSIDERATION BEFORE AGREEMENT WILL ISSUE. ALL SUCH WORKS IN THE VICINITY OF ARTERIAL WATER MAINS AND SEWERS SHALL BE CARRIED OUT UNDER A WRITTEN AGREEMENT WITH UISCE EIREANN BEFORE CONSTRUCTION COMMENCES ON SITE. THIS AGREEMENT SHALL ALSO INCLUDE ANY NECESSARY PROTECTION FOR WATER MAINS.
5. ANY DAMAGE SHALL BE NOTIFIED IMMEDIATELY TO UISCE EIREANN. THE PERSON WHO CAUSES THE DAMAGE TO A SEWER MAIN OR FITTING WILL BE DEEMED TO HAVE COMMITTED AN OFFENCE UNDER SECTION 46 OF THE WATER SERVICES ACT 2007.
6. UNDER NO CIRCUMSTANCES WILL UISCE EIREANN ACCEPT SEWER MAIN INSTALLATIONS UNDER STRUCTURES, EXISTING OR PROPOSED, OR IN CLOSE PROXIMITY TO ANY EXISTING STRUCTURES OR FEATURES THAT WILL INHIBIT ACCESS FOR POST INSTALLATION MAINTENANCE AND ACCESS.
7. THE MINIMUM CLEAR HORIZONTAL DISTANCES SHOWN BELOW WILL BE INCREASED IF THE DEPTH OF THE SEWER EXCEEDS 3m OR IF THE DIAMETER IS GREATER THAN 375mm. THE MINIMUM CLEAR DISTANCES FOR PIPE DIAMETERS OF 400mm AND GREATER OR FOR DEPTHS EXCEEDING 4.5m SHALL BE BASED ON SPECIFIC CONSULTATION WITH UISCE EIREANN. THESE SEPARATION DISTANCES SHALL ALSO APPLY TO SEPARATION FROM EXISTING STRUCTURES, INCLUDING ATTENUATION TANKS AND SWALES.
8. THE EXTERNAL FACES OF MANHOLES SHALL BE AT LEAST 0.5m FROM THE EXTERNAL FACE OF THE NEW LINE.
9. THE EXTERNAL WALL OF THE SEWER IS TO BE AT LEAST 1.5m FROM THE EXTERNAL FACE OF THE NEW LINE.
10. WHERE DESIGN DEVIATES FROM TYPICAL DETAILS, THE LAYOUT SHALL BE SUBMITTED TO UISCE EIREANN FOR REVIEW AND AGREEMENT, WHICH IS TO BE OBTAINED IN WRITING BEFORE WORK COMMENCES.

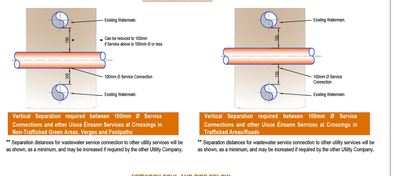


CONNECTIONS AND DEVELOPER SERVICES
STANDARD DETAILS - WASTEWATER

Rev	Date	Drn	Chk	Description	App
3	30/10/09	BMc		Separation distances to Watermain Clarified	GP
2	07/09/09	TOC		Separation distances to sewers added, updated notes	MEC
1	11/11/07	AKT	TOC	Updated notes	MEC
0	09/10/07	AKT	TOC	Initial Issue	SL

TITLE: TYPICAL SERVICE LAYOUT INDICATING SEPARATION DISTANCES
SCALE: NOT TO SCALE | DATE: SEPT. 2015
DRAWING No.: STD-WW-05 | REV: 3

SERVICE CONNECTIONS



Vertical Separation required between 100mm Ø Service Connections and other Uisce Eireann Services at Crossings in Non-Trafficked Green Areas, Verges and Footpaths

** Separation distances for wastewater service connection to other utility services will be as shown, as a minimum, and may be increased if required by the other Utility Company.

Vertical Separation required between 100mm Ø Service Connections and other Uisce Eireann Services at Crossings in Trafficked Areas/Roads

** Separation distances for wastewater service connection to other utility services will be as shown, as a minimum, and may be increased if required by the other Utility Company.

NETWORK FOUL AND PIPE BELOW

Sewer Crossings (Foul & Storm). Minimum Pipe Bedding under Upper Pipe to be Achieved. Applies to Non-Trafficked Areas Only

** Separation distances for wastewater service connection to other utility services will be as shown, as a minimum, and may be increased if required by the other Utility Company.

Sewer Crossings (Foul & Storm). Minimum Pipe Bedding under Upper Pipe to be Achieved. Applies to Trafficked Areas

** Separation distances for wastewater service connection to other utility services will be as shown, as a minimum, and may be increased if required by the other Utility Company.

	Separation distance between Service Connection above and Uisce Eireann pipe below.	Separation distance between Service Connection below and Uisce Eireann pipe above if pipe is 100mm Ø or less.	Separation distance between Service Connection below and pipe above if pipe exceeds 100mm Ø.	Separation distance between Network Sewer above and pipe below.	Separation distance between Network Sewer below and pipe above.
Non Trafficked Areas	100mm	100mm	150mm	Pipe bedding depth of the upper pipe.	Pipe bedding depth of the pipe below.
Trafficked Areas	150mm	150mm	150mm	300mm	300mm

** Separation distances for wastewater service connection to other utility services will be as shown, as a minimum, and may be increased if required by the other Utility Company.

CONNECTIONS AND DEVELOPER SERVICES
STANDARD DETAILS - WASTEWATER

Rev	Date	Drn	Chk	Description	App
0	07/02/20	TOC		Initial Issue	MEC

TITLE: WASTEWATER SERVICE CONNECTION VERTICAL SEPARATION DISTANCES
SCALE: NOT TO SCALE | DATE: FEB. 2020
DRAWING No.: STD-WW- 05A | REV: 0

METHOD STATEMENTS
ALL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH BS 5837 AND INFORMED BY NJUG VOLUME 4

PRECAUTION AREA:

EXCAVATIONS FOR PIPEWORK SHOULD NOT BE UNDERTAKEN WITHIN THIS AREA, UNLESS AGREED WITH UISCE EIREANN.

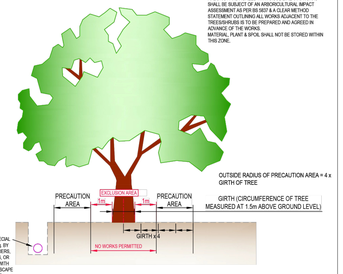
WORKS WITHIN THE PRECAUTION ZONE MUST BE SUPERVISED BY A QUALIFIED ARBORIST. WORKS SHALL BE SUBJECT OF A CLEAR METHOD STATEMENT OUTLINING ALL WORKS ADJACENT TO THE TREES/SHRUBS WHICH IS TO BE PREPARED & AGREED IN ADVANCE OF THE WORKS.

MATERIAL, PLANT & SPOIL SHALL NOT BE STORED WITHIN THIS ZONE.

EXCLUSION AREA:

WORKS IN THIS AREA ARE TO BE AVOIDED, UNLESS ABSOLUTELY NECESSARY & AGREED WITH UISCE EIREANN.

EXCAVATIONS FOR PIPEWORK SHOULD NOT BE UNDERTAKEN WITHIN THIS AREA, UNLESS NECESSARY AND NO OTHER OPTIONS AVAILABLE. WORKS WITHIN THE EXCLUSION ZONE MUST BE SUPERVISED BY A QUALIFIED ARBORIST AND AGREED WITH UISCE EIREANN. WORKS SHALL BE SUBJECT OF AN ARBORICULTURAL IMPACT ASSESSMENT AS PER BS 5837 & A CLEAR METHOD STATEMENT OUTLINING ALL WORKS ADJACENT TO THE TREES/SHRUBS WHICH IS TO BE PREPARED AND AGREED IN ADVANCE OF THE WORKS.
MATERIAL, PLANT & SPOIL SHALL NOT BE STORED WITHIN THIS ZONE.



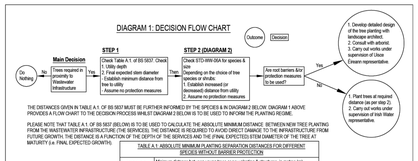
EXISTING PLANTING:

CONNECTIONS AND DEVELOPER SERVICES
STANDARD DETAILS - WASTEWATER

Rev	Date	Drn	Chk	Description	App
2	30/10/09	TOC		Revised to suit CL recommendations	MEC
1	07/09/09	TOC		Added new section & notes	MEC
0	09/10/07	AKT	TOC	Initial Issue	SL

TITLE: RESTRICTIONS ON WASTEWATER INFRASTRUCTURE WORKS ADJACENT TO TREES
SCALE: NOT TO SCALE | DATE: SEPT. 2015
DRAWING No.: STD-WW-06 | REV: 2

DIAGRAM 1: DECISION FLOW CHART



THE DISTANCES GIVEN IN TABLE A.1 OF BS 5837:2012 MUST BE FURTHER INFORMED BY THE SPECIES & IN DIAGRAM 2 BELOW. DIAGRAM 2 ABOVE PROVIDES A FLOW CHART TO THE DECISION PROCESS WHILST DIAGRAM 2 BELOW IS TO BE USED TO INFORM THE PLANTING REGIME.

PLEASE NOTE THAT TABLE A.1 OF BS 5837 (BELOW) IS TO BE USED TO CALCULATE THE ABSOLUTE MINIMUM DISTANCE BETWEEN NEW TREE PLANTING FROM THE WASTEWATER INFRASTRUCTURE (THE SERVICES). THE DISTANCE IS REQUIRED TO AVOID DIRECT DAMAGE TO THE INFRASTRUCTURE FROM FUTURE GROWTH. THE DISTANCE IS A FUNCTION OF THE DEPTH OF THE SERVICES AND THE FINAL EXPECTED STEM DIAMETER OF THE TREE AT MATURITY (i.e. FINAL EXPECTED GROWTH).

TABLE A.1 ABSOLUTE MINIMUM PLANTING SEPARATION DISTANCES FOR DIFFERENT SPECIES WITHOUT BARRIER PROTECTION

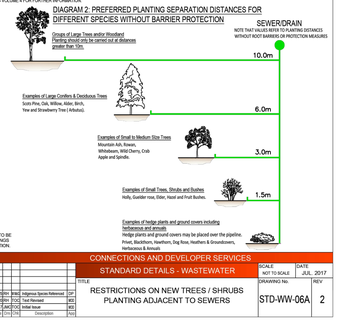
TABLE A.1 BS 5837	Minimum distance between young trees or new planting & structures, in metres (m)			
	Final stem dia. < 300mm	Final stem dia. 300mm to 600mm	Final stem dia. > 600mm	
Services				
< 1m deep	0.5	1.5	3.0	
> 1m deep	1	1.0	2.0	

THUS, FOR EXAMPLE:
- FOR A SERVICE LESS THAN 1 METRE DEEP, THE MINIMUM DISTANCE IS TO BE 1.5m FOR A TREE BETWEEN 300 AND 600mm STEM DIAMETER AT MATURITY.
- FOR A SERVICE GREATER THAN 1 METRE DEEP, THE MINIMUM DISTANCE IS TO BE 1.0m FOR A TREE BETWEEN 300 AND 600mm STEM DIAMETER AT MATURITY.

NOTE: RESTRICTIONS RELATE TO INFRASTRUCTURE WITHOUT ROOT INTRUSION PROTECTION.

THE DESIGN OF LANDSCAPING WILL BE UNDERTAKEN IN CONJUNCTION WITH THE DESIGN OF WASTEWATER INFRASTRUCTURE, ETC. THE TREE/BUSH/SHRUB SHALL NOT BE LOCATED CLOSER TO THE WASTEWATER INFRASTRUCTURE THAN INDICATED ABOVE, EXCEPT WHERE SPECIAL PROTECTION MEASURES ARE PROVIDED. WHERE THERE IS A RISK OF TREE/ROOT INTRUSION INTO SEWERS, THE DESIGNER SHALL ENSURE THAT TREES ARE NOT PLANTED CLOSER TO THE SEWER THAN 3 METRES, JOINTS, OR ANY USE OF POLYETHYLENE WITH WELDED JOINTS FOR SEWER MAINS, THE LANDSCAPE DESIGN SHALL INCLUDE ALTERNATIVE SPECIAL PROTECTION MEASURES MUST BE AGREED WITH UISCE EIREANN.
A TREE SHALL NOT BE PLANTED DIRECTLY OVER WASTEWATER INFRASTRUCTURE. WHERE EXCAVATION OF THE INFRASTRUCTURE WOULD REQUIRE REMOVAL OF THE TREE UNLESS SUCH PLANTING IS AGREED WITH UISCE EIREANN AND IN GENERAL ONLY SHALL LOW ROOTING SHRUBS SHALL BE PLANTED CLOSE TO WASTEWATER INFRASTRUCTURE.
PLEASE ENSURE THAT THESE DISTANCES ARE ADHERED TO IN ORDER TO PROTECT THE TREES FROM ANY FUTURE MAINTENANCE. REFERENCE SHOULD ALSO BE MADE TO BS 5837, BS 8545 AND THE NJUG GUIDELINES VOLUME 4 FOR FURTHER INFORMATION.

DIAGRAM 2: PREFERRED PLANTING SEPARATION DISTANCES FOR DIFFERENT SPECIES WITHOUT BARRIER PROTECTION



NOTE:
OTHER SPECIES NOT NAMED TO BE PLANTED TO THE SAME SPACINGS DEPENDING ON ROOT FORMATION.

CONNECTIONS AND DEVELOPER SERVICES
STANDARD DETAILS - WASTEWATER

Rev	Date	Drn	Chk	Description	App
3	30/10/09	BMc		Indigenous Species Referenced	GP
2	07/09/09	TOC		Tree Removed	MEC
1	11/11/07	AKT	TOC	Initial Issue	MEC
0	09/10/07	AKT	TOC	Initial Issue	SL

TITLE: RESTRICTIONS ON NEW TREES / SHRUBS PLANTING ADJACENT TO SEWERS
SCALE: NOT TO SCALE | DATE: JUL. 2017
DRAWING No.: STD-WW-06A | REV: 2

1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. THE MINIMUM DEPTH OF COVER FROM THE FINISHED SURFACE TO THE CROWN OF GRAVITY PIPES **WITHOUT PROTECTION** SHOULD BE AS FOLLOWS:
   A) ROADWAYS (INCLUDING ESTATE ROADS) POSSIBILITY OF VEHICULAR ACCESS - DEPTH NOT LESS THAN 0.9 M. (THIS WOULD NORMALLY RELATE TO DRAINS LAID IN ROADWAYS OF ESTATES WHERE HOUSES ARE UNDERGRAUD AND SHOULD BE INSTALLED IN ACCORDANCE WITH THE CURRENT BUILDING REGULATIONS). ROADWAYS OF ESTATES WHERE HOUSES ARE NOT LIKELY TO HAVE RESTRICTIONS TO PREVENT ENTRY BY VEHICLES WITH A GROSS VEHICLE WEIGHT IN EXCESS OF 7.5 TONNES SHALL BE DEEMED TO BE ROADS.
   B) DRIVEWAYS, FOOTWAYS, PARKING AREAS AND HARDCORE STREETS WITHOUT FOOTWAYS (E.G. MEWS DEVELOPMENTS) DEPTH NOT LESS THAN 0.6 M. (THIS WOULD NORMALLY BE WAIVED OF F 2.0 TONNES - DEPTH NOT LESS THAN 0.6 M.
   C) DEPTHS OF SEWERS IN GATED ESTATES SHALL BE SIMILAR TO THOSE IN ROADWAYS.
   D) AGRICULTURAL LAND AND PUBLIC OPEN SPACE - DEPTH NOT LESS THAN 1.0 M.
   F) OTHER ROADWAYS, HIGHWAYS AND PARKING AREAS WITH UNRESTRICTED ACCESS BY VEHICLES - DEPTH NOT LESS THAN 0.9 M.
   EXCEPT IN CASE OF ROADS OF ESTATES SHALL BE SIMILAR TO
   3. CLAUSE 804 / 806 MATERIAL IN ACCORDANCE WITH THE TRANSPORT INFRASTRUCTURE IRELAND SPECIFICATION FOR ROAD WORKS. CLAUSE 804 MAY BE USED AS BACKFILL MATERIAL WHERE THE SEWER IS NOT LOCATED IN ROADS. FOOTPATHS OR WHEN THE NEAREST PART OF THE TRENCH IS WITHIN 1m OF THE PAVED EDGE OF A ROAD. CLAUSE 804 / 806 MATERIAL IN ACCORDANCE WITH THE TRANSPORT INFRASTRUCTURE IRELAND SPECIFICATION FOR ROAD WORKS. CLAUSE 806 IS TO BE USED WITHIN 500mm OF CEMENT BOUND MATERIAL (I. CONCRETE PAVEMENTS, CEMENT BOUND SUBBASE, CEMENT BOUND BASE, ETC.). CEMENT BOUND CLAUSE 804 MAY BE USED. ALTERNATIVE BACKFILL MATERIAL TO THAT DESCRIBED ABOVE (CLAUSE 806 OR CLAUSE 806) OF THE PRE TRENCH FILL ONLY BE ALLOWED IF SPECIFICALLY DESIGNED AND APPROVED BY THE ROAD AUTHORITY. IN THIS AREA THE DEVELOPMENT IS LOCATED, PROVIDED **WRITTEN APPROVAL** TO THE DEVELOPER TO THE USE SUCH ALTERNATIVE MATERIAL EVIDENCE OF THIS WRITTEN APPROVAL SHALL BE PROVIDED TO UISCE EIREANN IN ADVANCE OF THE COMMENCEMENT OF WORKS.
   4. SELECTED EXCAVATED MATERIAL COMPLYING WITH THE REQUIREMENTS OF "ACCEPTABLE MATERIAL" AS OUTLINED ON CLAUSE 801 OF THE TS SPECIFICATION FOR ROADWORKS, TABLE B1 CLASS 6.3,6.4&6.5 (MIXT 6B) USED IN GREEN-FIELD AREAS ABOVE GRANULAR PIPE SURROUND MATERIAL SUBJECT TO REVIEW BY UISCE EIREANN.
   5. PIPE BEDDING SHALL COMPLY WITH IW-WW-04-06-02 AND IW-WW-04-06-01. THE PIPE BEDDING GRANULAR MATERIAL SHALL BE 14mm TO 5mm (B.S.) GRADED AGGREGATE IN ACCORDANCE WITH TABLE 10 OF I.S. EN 13242 AND CLAUSE 804 OF THE CONCRETE BED, HAUNCH, & SURROUND, WHERE REQUIRED, SHALL BE TO ST3 STRENGTH.
   6. IN SOFT GROUND CONDITIONS (CBR < 5) THE MATERIAL SHOULD BE WRAPPED IN A SUITABLE GEOTEXTILE IN ACCORDANCE WITH THE WASTEWATER MANAGEMENT ACT AND CLAUSE 806 / 806. THIS SHOULD BE IN ACCORDANCE WITH THE TRANSPORT INFRASTRUCTURE IRELAND SPECIFICATION FOR ROAD WORKS. IN ROCK, THE PIPE SHALL BE WRAPPED IN A SUITABLE GEO-TEXTILE WRAPPING. ALTERNATIVELY, GRIDCAL TYPE SUPPORT ARRANGEMENTS, INCLUDING PILING ETC. MAY BE REQUIRED WHERE PRACTICAL. THE USE OF THE GEO-TEXTILE WRAPPING OR SUPPORT ARRANGEMENTS SHALL BE SUBJECT TO ASSESSMENT BY UISCE EIREANN BEFORE ADVANCING WITH THE WORK.
   7. PIPE BEDDING SHALL COMPLY WITH IW-WW-04-06-01 BACKFILL (SELECTED EXCAVATED MATERIAL COMPLYING WITH THE REQUIREMENTS OF "ACCEPTABLE MATERIAL" AS OUTLINED ON CLAUSE 801 OF THE TS SPECIFICATION FOR ROADWORKS, TABLE B1 CLASS 6.3,6.4&6.5 (MIXT 6B) USED IN GREEN-FIELD AREAS ABOVE GRANULAR PIPE SURROUND MATERIAL. IN THE CASE OF RIGID PIPES, A GRANULAR SURROUND OF A MINIMUM DEPTH OF 150mm ABOVE THE CROWN OF THE PIPE IS REQUIRED FOR FLEXIBLE PIPES AND THIN 8 MM WALL PIPES, A GRANULAR SURROUND OF A MINIMUM DEPTH OF 300mm IN GREEN AREAS SHALL HAVE A MINIMUM COVER OF 300mm OF GRANULAR MATERIAL ABOVE THE EXTERNAL CROWN OF THE PIPE.
   8. IN ROCK, THE PIPE SHALL BE BEDDED IN SOFT STONES, ROCKS OR ANY HARD OBJECTS AT ANY POINT ALONG THE TRENCH. ROCK SHALL BE ENCAPSULATED IN SOFT MATERIAL TO A MINIMUM DEPTH OF 150mm. ROCK SHALL BE REPLACED WITH SUITABLE FILL MATERIAL IN ACCORDANCE WITH THE TRANSPORT INFRASTRUCTURE IRELAND SPECIFICATION FOR ROAD WORKS. CLAUSE 804 / 806 MATERIAL SHALL BE LAID ABOVE THIS VOID BACKFILL MATERIAL.
   9. MARKER TAPE SHALL COMPLY WITH IW-WW-04-06-03 AND SHALL BE INSTALLED AT THE TOP OF PIPE BEDDING LAYER FOR SEWERS AND RISING MAINS. IT SHOULD BE CONTINUOUSLY AROUND MANHOLES. IN THE CASE OF NON METAL PIPE MATERIAL, THE MARKER TAPE SHOULD BE PLACED ABOVE THE CROWN OF THE PIPE. THE FITTINGS AND TERMINATED AT THE WAST