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5000-01-001	General Drawing Notes	Α4	0	0											
5000-01-002	General Drainage Notes	Α4	0	0											
5000-02-009	Trench Backfill and Bedding	A3	0	0											
5000-02-010	Concrete Protection Slab, Bed, Haunch and Surround to Pipes	А3	0	0											
		А3	0	0											
5000-02-070	Access Junction .	А3	Α	Α											
5000-02-110	Drainage Precast Concrete Gully	Α4	0	0											
5000-02-112	Drainage Gully Grating	Α4	0	0											
5000-03-550	Foundation/Excavation Detail	Α4	0	0											
5005-101	Drainage Layout	A3	В	В											
5005-102	Drainage Layout	A3	В	В											
5005-105	Drainage Details Sheet 3	Α4	В	В											
5005-106	Drainage Details Sheet 4	A3	Α	Α											
5005-RT-001	Drainage Impact Assessment	Α4	Α	Α											
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Page 1 of 1



GENERAL DRAWING NOTES:

- Drawings are not to be scaled.
- 2. All dimensions are in millimeters unless noted otherwise.
- 3. All levels are in meters unless noted otherwise.
- 4. All levels to be checked on site.
- 5. Figured dimensions only to be used.
- 6. All dimensions to be site checked.
- All drawings are to be read in conjunction with all other Tender, Construction, Contract and Detail Drawings, Specifications, Bill of Quantities and Documents.
- 8. The Contractor shall be responsible for checking all dimensions and levels shown against all other drawings which pertain to this part of the works.
- 9 The Contractor is to ensure that all works are to be undertaken in accordance with good building practice and current Building Regulations (including Technical Guidance Documents A to M inclusive and all relevant amendments).
- 10. The Contractor is to refer to Project Standard Details in addition to the drawings and specifications.
- Use information, setting out, dimensions etc. from Hard copies & PDF files of Drawings issued by DJF. All other file types including AutoCad and Revit are issued for information purposes only.
- 12. If in doubt, request clarification from DJF.

- These Notes are to be read in conjunction with all other Tender, Construction and Contract Drawings, Details, Specifications, Bill of Quantities and Documents.
- The Contractor is to ensure that all works will be undertaken in accordance with good building practice and current Building Regulations (including Technical Guidance Documents A to M inclusive and all relevant amendments). If in doubt, request clarification from DJF



Status	CONSTRUCTION	
Client	40.00	
	DETAILS	

Project Title	Notes
Drawing Title General	Drawing Notes

0 REV	ISSUED FOR CONSTRUCTION DETAILS	FN SN 26.03.21
	wing No. 000-01-001	Rev 0
Sca N.1		-A4



DRAINAGE NOTES:

- Refer to architectural drawings for all setting out of internal below ground drainage & for cover & invert levels.
- The Contractor shall be responsible for checking all 2 dimensions and levels shown against all other drawings pertaining to this part of the works.
- 3. Refer to architects drawings for locations of rainwater downpipes, soil vent pipes and soil stacks.
- 4 All internal pipework to be concrete encased.
- All external pipework with less than 900mm cover to crown in 5. unpaved areas and 1200mm cover to crown in paved areas to be concrete encased.
- 6. Concrete encasement to consist of minimum 150mm grade C12/15 leanmix concrete.
- 7. Rocker pipes should be provided at all locations where:
 - 7.1. A pipe enters or leaves a manhole, pumping station or other rigid structure.
 - 7.2. A pipe enters or leaves a concrete encasement.
 - 7.3. At any location as directed by the Engineer.
 - 7.4. Rocker pipe joint to be located no more than 150mm from the outside face of the structure to which the pipework is serving.

The effective length of the rocker pipe should be:

- Pipe diameter 150mm to 600mm:
- Pipe diameter 600mm to 750mm: 1.00m
- Pipe diameter greater than 750mm: 1.25m
- 8. All rocker pipes are to be formed by cutting and 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.
- All manholes shown are precast concrete with minimum 9. 150mm concrete surround unless noted otherwise.
- 10 Road gullies to be precast concrete with "LION" lockable type covers, with ductile iron grating D400 to comply with I.S. EN 124:2015-2.
- All lines to road gullies to be 150mm ø UPVC pipes unless 11. noted otherwise.
- 12 All foul pop-ups to be 100mmØ UPVC unless noted otherwise.
- 13. All foul spurs to pop-ups to be 100mm Ø UPVC SN4 @ 1:40 falls unless noted otherwise.
- All internal manholes to have lockable double sealed covers & frames.(KMHD 600L in stainless steel by Richmond Trading or equivalent)
- 15. All manhole covers to be Class D Heavy Duty ductile iron cover. Cover and frame to I.S. EN 124:2015-2.
- Channel drain to be type ACO Multi Drain Heelguard with stainless steel QuickLock Grating or equivalent. Load Class B125 at front doors, Load Class C250 everywhere else.
- All spurs to rainwater pipes to be 100mm Ø UPVC SN4 @ 17. 1:40 falls unless noted otherwise.
- Storm lines between manholes to be 225mm Ø Ridgidrain ADS Polyethylene Pipes or equivalent unless noted
- Foul lines between manholes to be 150mm Ø UPVC SN8 19. Unless Noted Otherwise. All internal foul lines to be 100mm Ø UPVC SN4 @ 1:40 falls unless noted otherwise.
- All foul lines from internal gullies to be 100mm Ø UPVC SN4 20. @ 1:40 falls unless noted otherwise.
- All foul lines from inspection chamber at site boundary to mainline to be 100mm Ø UPVC SN8 @ 1:40 falls unless noted otherwise.
- 22 All spur connections shown on lines to be 45° 'Y' bends unless noted otherwise.
- All French Drains to be 150mm Ø perforated UPVC pipe wrapped in geotextile typically laid above retaining wall footings and surrounded in minimum 200mm of clean washed stone unless noted otherwise.
- All drainage materials and workmanship to comply with local authority & DJF Specification.

- Setting out of pop-ups internally to be coordinated by Contractor in conjunction with Architects Drawings.
- 26 All Design and Installation Forms are to be included in the Handover File.

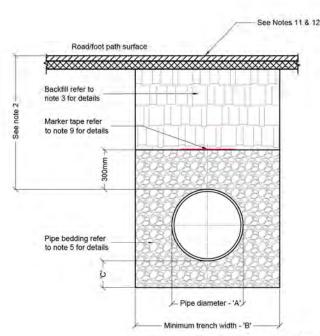
- These Notes are to be read in conjunction with all other Tender, Construction and Contract Drawings, Details, Specifications, Bill of Quantities and Documents.
- The Contractor is to ensure that all works will be undertaken in accordance with good building practice and current Building Regulations (including Technical Guidance Documents A to M inclusive and all relevant amendments). If in doubt, request clarification from DJF



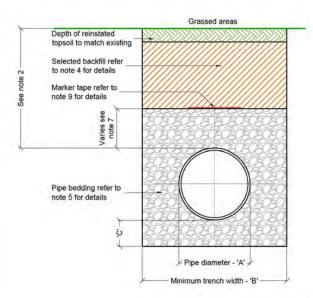
CONSTRUCTION DETAILS

Project Title	Notes	
Drawing Title General	Drainage	Notes

0 REV	ISSUED FOR CONSTRUCTION DETAILS	FM BY	SH CH'D	26.03.21 DATE
	wing No. 100-01-002			Rev 0
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Trench Backfill and Bedding Cross section in roads Scale N.T.S



Trench Backfill and Bedding Cross section in grassed areas Scale N.T.S

- All dimensions are in millimeters (mm) unless noted otherwise
- The minimum depth of cover from the finished surface to the crown of gravity pipes without protection should be as follows:
 - Gardens and pathways without any possibility of vehicular access depth not less than 0.5m. (this would normally relate to drains in private property, shallow pipes of this nature are undesirable and should be installed in accordance with the current building
 - regulations).
 Driveways, footways, parking areas and yards with height restrictions to prevent entry by vehicles with a gross vehicle weight in excess of 7.5 tonnes - depth not less than
 - Driveways, footways, parking areas and narrow streets without footways (e.g. mews developments) with limited access for vehicles with a gross vehicle weight in excess of 7.5 tonnes - depth not less than 0.9 m.
 - Depths of sewers in gated estates shall be similar to that outlined above

 - Deputs of sewers in gated estates shall be shifted to that out at duffice above.
 Agricultural land and public open space depth not less than 0.9 m.
 Other roadways, highways and parking areas with unrestricted access to vehicles with a gross vehicle weight in excess of 7.5 tonnes depth not less than 1.2m.
 Clause 804 / 808 material in accordance with the Transport Infrastructure Ireland
- specification for road works is to be used as backfill material where the sewer main is located in roads, footpaths or when the nearest part of the trench is within 1m of the paved edge of the roadway. Clause 804 / 808 is to be compacted as per clause 802 of the Transport Infrastructure Ireland specification for road works. Clause 808 is to be used within 500mm of cement bound materials, concrete pavements, concrete structures or concrete products. Otherwise clause 804 may be used. Alternative backfill material to that described above (clause 804 or clause 808) the pipe trench will only be allowed by Engineer where the roads authority in whose functional area the development is located, provides written approval to the developer to the use such alternative material evidence of this written approval to be provided to Engineer in advance of the commencement of works.
- Selected excavated material complying with the requirements of "acceptable material" as outlined on clause 601 of the TII specification for roadworks, table 6/1,class 8,class 2. May be used in green-field areas above granular pipe surround material subject to review by
- Engineer.

 Pipe bedding shall comply with WIS 4-08-02 and IGN 4-08-01. The pipe bedding granular material shall be 14mm to 5mm (d/D 2/14) graded aggregate or 10mm (d/D 4/10) single sized aggregate to is EN 13242.
- In soft ground conditions (CBR < 5) the material should be excavated and disposed of in accordance with the waste management act and clause 804 / 808 material in accordance with the Transport Infrastructure Ireland specification for road works shall replace the excavated material, wrapped in geo-textile wrapping. Alternatively, special pipe support arrangements, including piling etc. may be required where the depth of soft material is excessive. Such arrangements shall be subject to assessment by Engineer before
- advancing with the work.

 In green field areas, type B backfill (selected excavated material complying with the requirements of "acceptable material" as outlined on clause 601 of the Til specification for roadworks, table 674,class 8,class 2, will be allowed above the side haunch granular 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 type B material may be used as backfill above this. All rising mains in greenfield areas shall have a minimum cover of
- 300mm of granular material above the external crown of the pipe. Pipes shall not be supported on stones, rocks or any hard objects at any point along the trench, rock shall be excavated to a depth of 150mm below the actual depth of the trench with the void filled with clause 804 / 808 material in accordance with the Transport Infrastructure Ireland specification for road works. The granular material shall be laid above this void backfill material.
- Non degradable marker tape should be installed at the top of pipe bedding layer for sewers and rising mains, it should run continuously around manholes. In the case of non metal pipe material, the marker tape should incorporate a trace wire which is linked to fittings and terminated at the waste water pumping station (if provided) and the discharge manhole.
- Trench widths for pipe sizes <80mm may be <500mm, subject to consideration being given to the trench depth, health & safety & construction access requirements.

 New road construction & surface finish to be to Engineer/Irish Water requirements. 10
- Existing road reinstatement to comply with current version of "guidelines for managing openings in public roads" by the Dept. of Transport, Tourism & Sport, or Transport Infrastructure Ireland requirements

Pipe diameter 'A' (mm)	Trench width 'B' (mm)
≤80 rising main	see note 10.
100	500
150 - 200	600
>200 - 350	750
>350 - 450	900

Pipe diameter 'A' (mm)	Depth of bedding 'C (mm)
≤100	100
150 - 450	200

read in conjunction with all other Tender, Construction and Ci Specifications, Bill of Quantities and Documents to ensure that all works, will be undertaken in accordance web-it Building Regulations, (including Texture

DJF DJF ENGINEERING SERVICES LTD,
Consuling Engineers + Project Managers
Transper House, Reservation, Douglas Road, Con., T12 RID(W

DETAILS

Underground Services

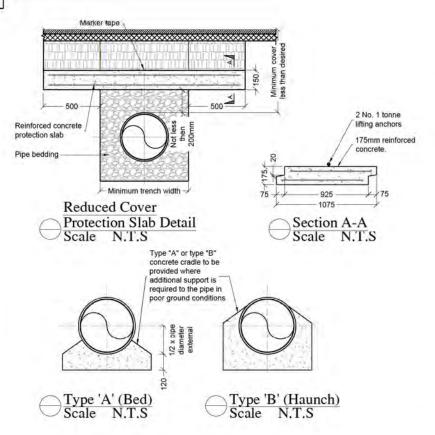
CONSTRUCTION

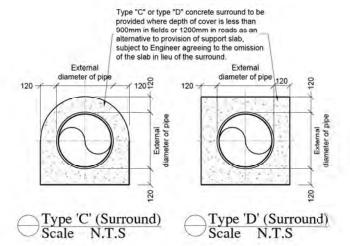
Trench Backfill and Bedding

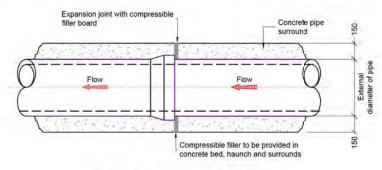
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Irish Water Detail STD-WW-07

Where services are intended to be taken in charge by a Service Provider, Service Provider Details take precedence over the above







Spigot and Socket Joint Scale N.T.S

- o science, ad in conjunction with all other Tender, Construction and Contract ecifications, Bill of Quantities and Documents insure that all works will be undertaken in accordance with good by

DJF ENGINEERING SERVICES LTD.

DETAILS

Underground Services

CONSTRUCTION

Concrete Protection Slab Bed, Haunch, and Surround, to Pipes 0 ISSUED FOR CONSTRUCT
REV DETAILS FH 005 26.03.21 BY CH'D DATE 5000-02-010 o

Irish Water Detail STD-WW-8

Where services are intended to be taken in charge by a Service Provider, Service Provider Details take precedence over the above

- For any slabbing works to be carried out within the vicinity of the pipeline, a method statement is to be submitted for review by Engineer.
- Concrete to be grade C30/35

2

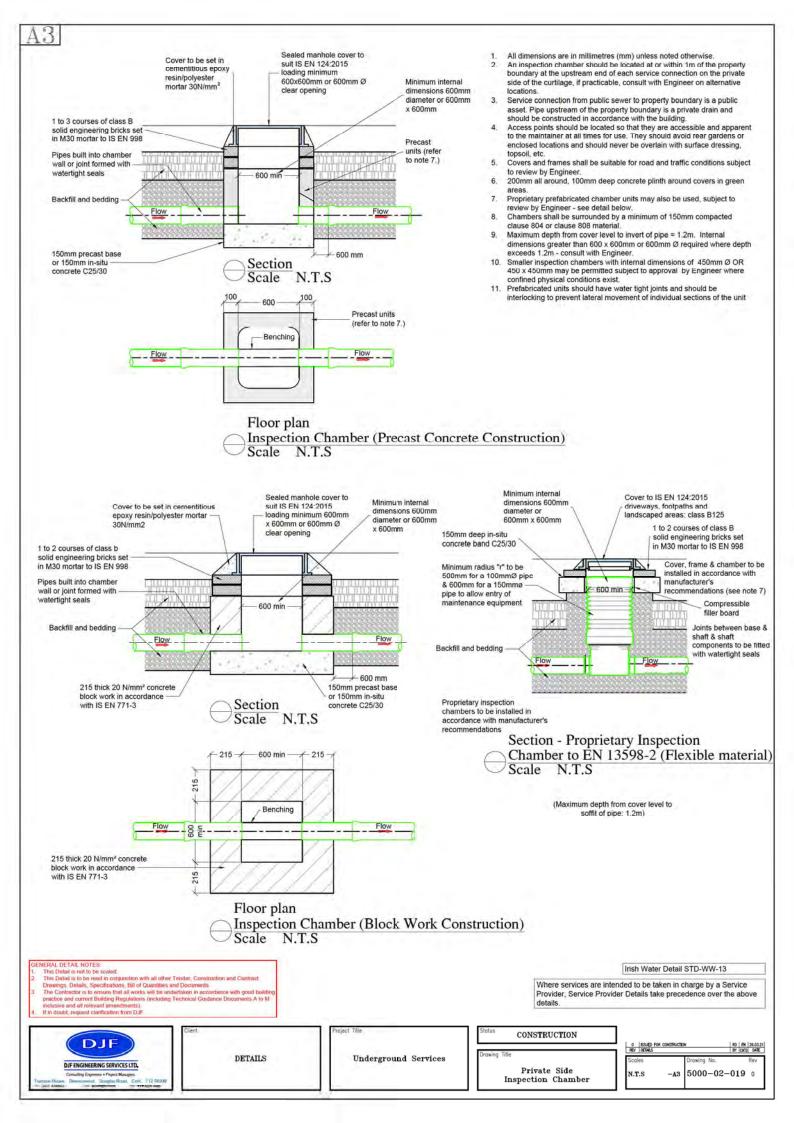
- Minimum cover to steel reinforcement = 40mm Slabs to be designed for use under a HB25 load in accordance with BS5400-2. Design to be submitted to Engineer for assessment prior

Marker tape to be placed above the slab and along the direction of

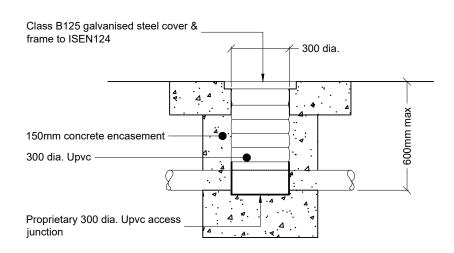
- The soil on which the slab rests must have a CBR of 4% or greater Where the CBR is less than 4% the material shall be removed and replaced with imported granular material as approved by Engineer.
- If direction of pipeline and direction of traffic flow are parallel, the direction of lay of the slab is to be against the direction of traffic flow



- If pipeline protection slab is to be used solely for impact protection & overall depth of cover is greater than 1.2m. the distance between underside of slab & top of pipe may be increased after consultation with Engineer.
 All dimensions are in millimeters (mm) unless noted otherwise.
- All dimensions are in immenees (imm) unless notes determined.
 Concrete bed and haunches may be required to provide additional support in poor ground conditions. Proposals to be provided to Engineer with geotechnical report supporting their use.
 Concrete surrounds shall have a minimum thickness of 150mm with an absolute minimum depth of cover above the external crown of the
- pipe of 750mm.
- All concrete to be in accordance with IS EN 206 and to be grade C16/20 to IS EN206
- The haunches and surrounds to be formed using form work to provide a rough cast finish. 13.
- Expansion joints in the concrete shall be provided at all pipe joints to allow for pipe flexibility, compressible filler board to be in accordance with BS EN 622-1 and BS EN 622-4, and to be 18mm thick.
- Polyethylene and uPVC pipes shall be wrapped in plastic sheeting having a composition in accordance with BS 6076 before being cast into concrete
- Bituminous material shall not be put in contact with PE or PVC pipes.







Typical Access Junction detail Scale 1:20

GENERAL DETAIL NOTES:
1. This Detail is not to be scaled.
2. This Detail is to be read in conjunction with all other Tender, Construction and Contract Drawings, Details, Specifications, Bill of Quantities and Documents.
3. The Contractor is to ensure that all works will be undertaken in accordance with good building practice and current Building Regulations (including Technical Guidance Documents A to M inclusive and all relevant amendments).
4. If in doubt, request clarification from DJF.

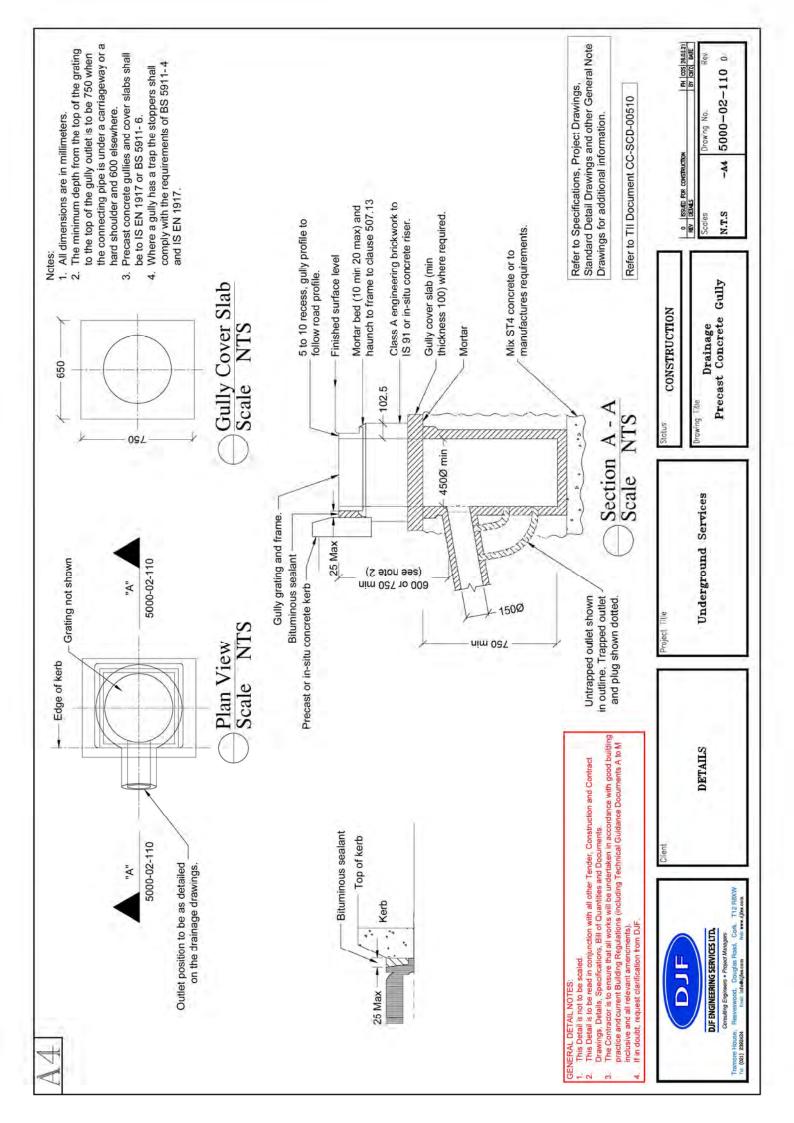


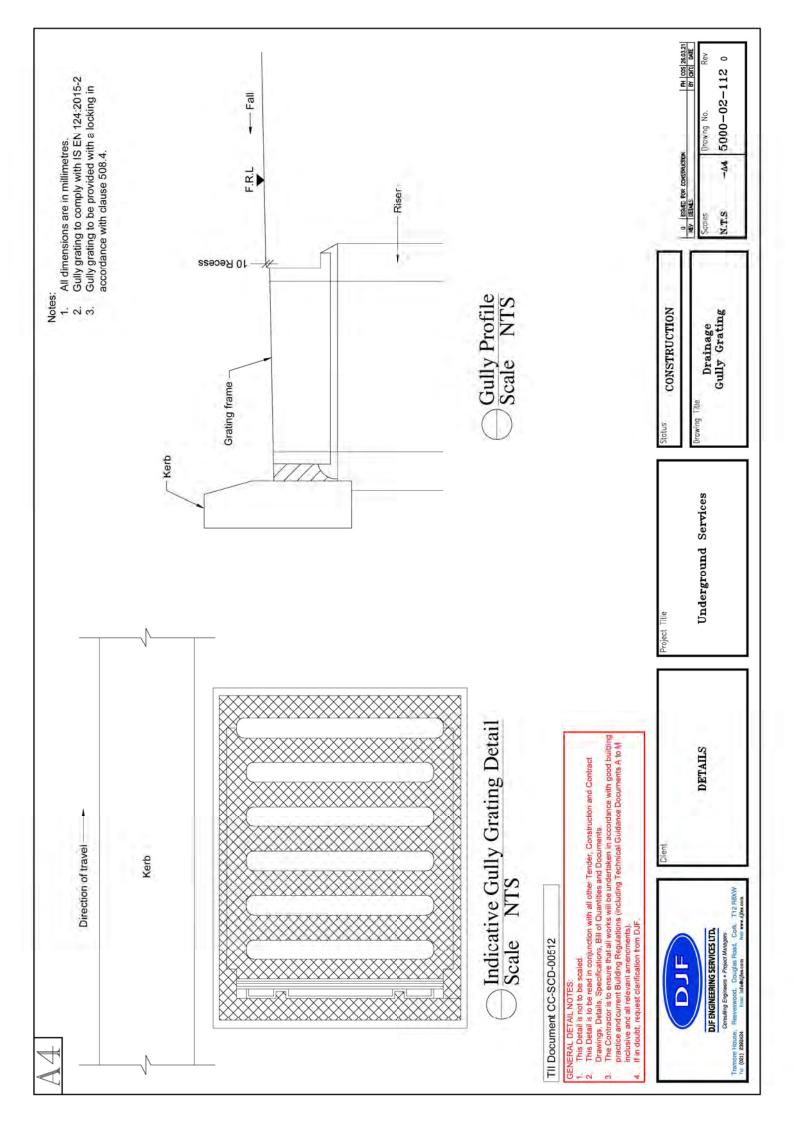
DETAILS

Project Title Underground Services

Status	INFORMATION						
Drawing	Title Access Junction						

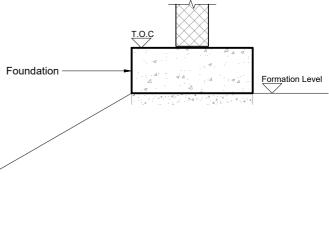
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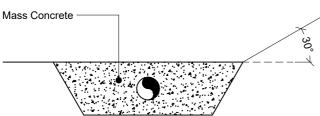




NOTE:

It is essential to check that all ground within a 30° line extending down and away from all foundations is undisturbed or when disturbed is removed entirely and backfilled with mass concrete. This detail shows a typical method of complying with this requirement which should be checked for all future works in addition to existing works. Alternatively a lower formation level to the foundation may be achieved by upfilling with mass concrete. In either case, the lower formation should be excavated and backfilled before the higher.





Foundation/Excavation Detail Scale N.T.S

GENERAL DETAIL NOTES:

- This Detail is not to be scaled.
- This Detail is to be read in conjunction with all other Tender, Construction and Contract Drawings, Details, Specifications, Bill of Quantities and Documents.
- The Contractor is to ensure that all works will be undertaken in accordance with good building practice and current Building Regulations (including Technical Guidance Documents A to M inclusive and all relevant amendments).

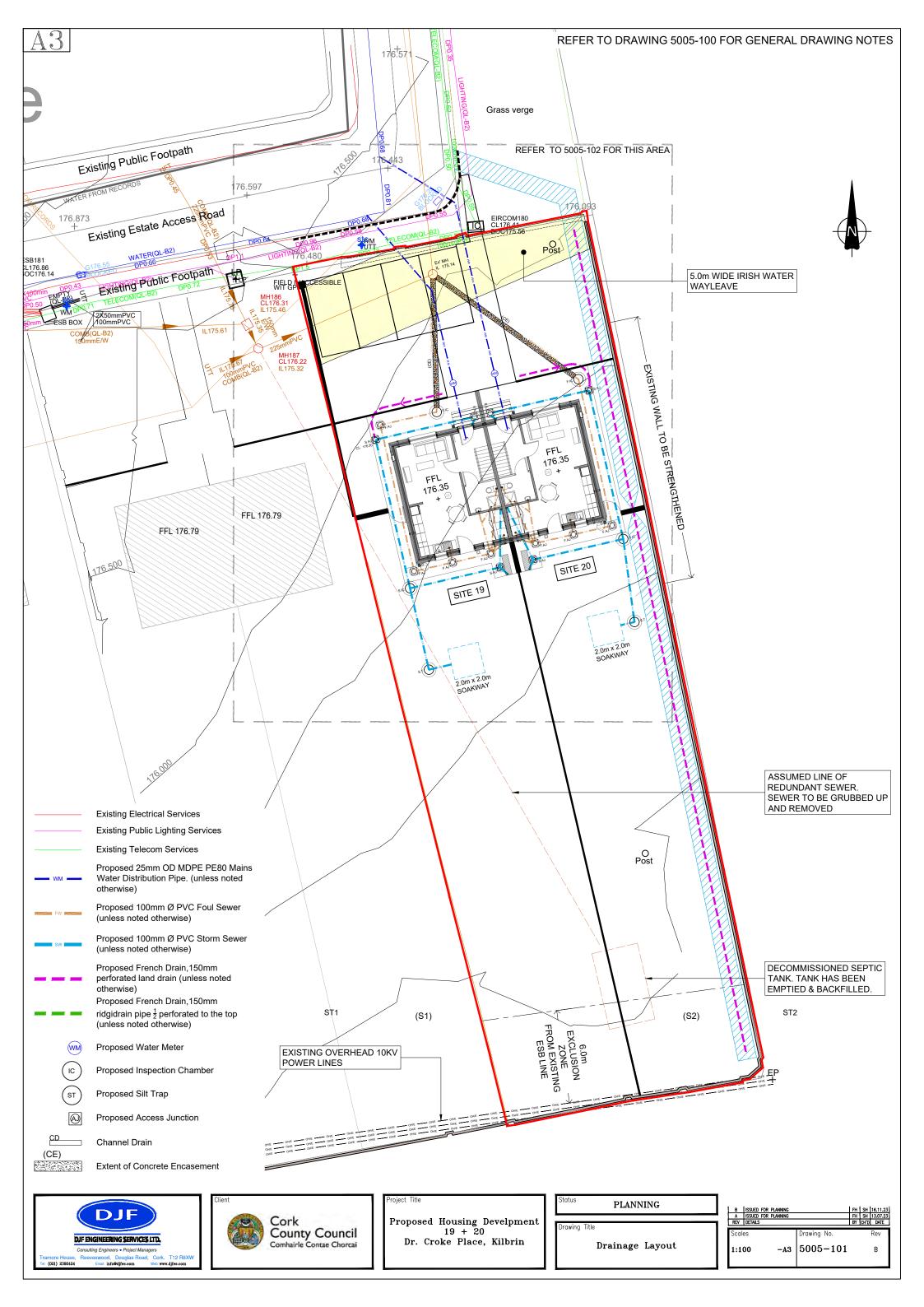
 If in doubt, request clarification from DJF

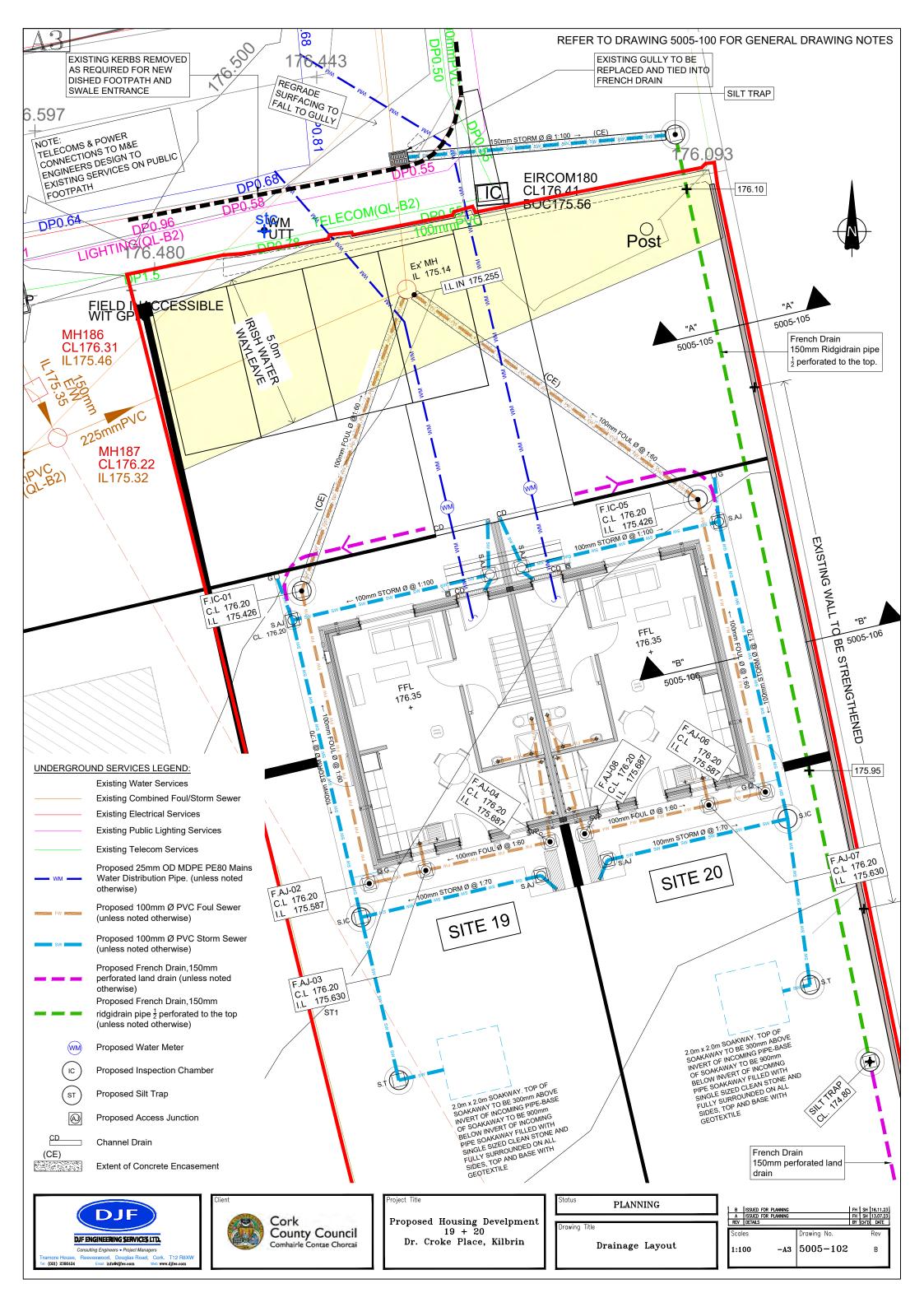


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Client				
DETAILS				

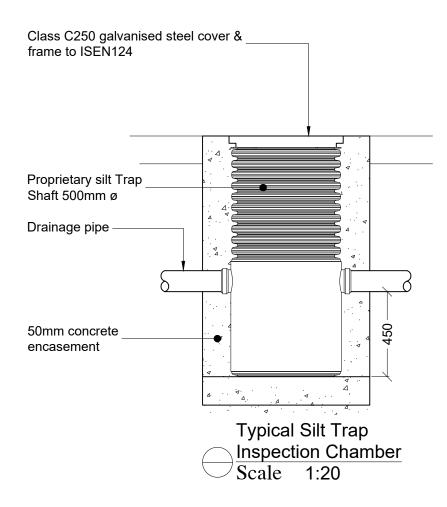
	Project Title Site Structures				
П	Drawing Title				
	Foundation/Excavation				
	Detail				

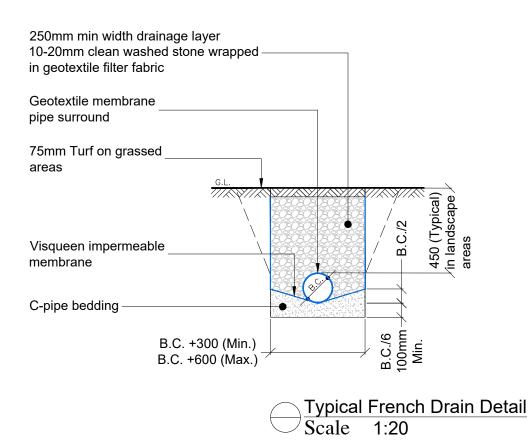
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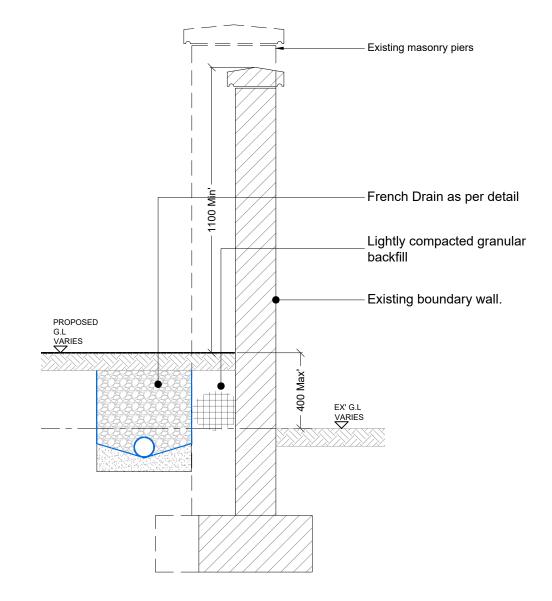








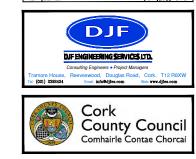




Section A-A Through Existing Side Boundary

Retaining 0-400mm Max'

Scale 1:20



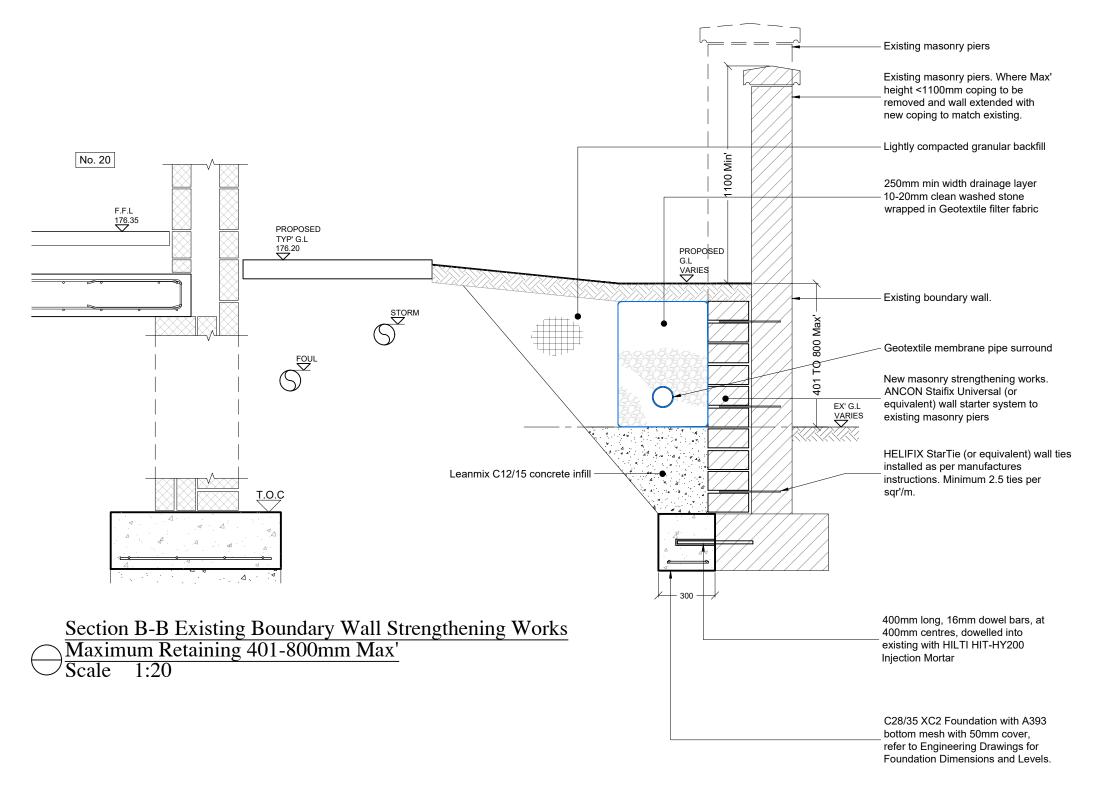
Status PLANNING

Project Title
Proposed Housing
Development
Dr. Croke Place, Kilbrin

Drawing Titl

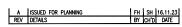
Drainage Details Sheet 3

A3



NOTES

- The contractor shall be responsible for checking all dimensions and all levels shown against all other drawings pertaining to this part of works.
- Clauses referred to on this drawing are the clauses in the national roads authority's latest specification for road and bridge works U.N.O.
- All drainage materials and workmanship to comply with local authority specification.
- All dimension in millimetres unless noted otherwise.
- Any reference to National Authority Standards should include any amendments, revisions, or updates relevant to that standard.







Status PLANNING

Project 1

Proposed Housing
Development
Dr. Croke Place, Kilbrin

Drawing T

Drainage Details Sheet 4

Scales Drawing No. Rev 5005-106 A