
SLIGO COUNTY COUNCIL

PROVISION OF A GROUP HOUSING DEVELOPMENT ASH LANE CO. SLIGO

SCREENING FOR ENVIRONMENTAL IMPACT ASSESSMENT

DECEMBER 2023

Sligo County Council,
County Hall,
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Date December 2023	Signature 	Signature 

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SLIGO COUNTY COUNCIL
PROVISION OF A GROUP HOUSING DEVELOPMENT
ASH LANE, CO. SLIGO
SCREENING FOR ENVIRONMENTAL IMPACT ASSESSMENT
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1 INTRODUCTION

Jennings O'Donovan & Partners Limited have been commissioned by Sligo County Council to carry out an Environmental Impact Assessment Screening under (Directive 2011/92/EU), as amended by Directive 2014/52/EU under Article 6(3) for Group Housing at Ash Lane, Co. Sligo. This involves the conversion of part of the existing Glenview halting site for group housing use. The works hereafter in this report will be identified as 'the Project'.

This report provides an Environmental Impact Assessment screening for a Part 179A housing development consisting of an area of land measuring 0.998 ha, located at Ash Lane, Co. Sligo. This Part 179A process is being pursued by Sligo County Council.

The EIA Screening Report has been prepared to assess the potential impacts on the environment of the Project at the subject site. The full details of the scheme are as follows:

The proposal is for a residential development consisting of 3 no. dwellings in two 2 storey blocks: 1 block of 2 semi-detached dwellings and 1 detached house.

The above approach delivers a mixture of units (detached and semi-detached), in accordance with the Urban Housing Policy P-UHOU-3. The public open space of 20.5% provided is also in accordance with this Urban Housing Policy.

The Group Housing Scheme has been identified in Sligo County Council's Traveller Accommodation Programme 2019-2024 and in the Sligo County Council Housing Delivery Action Plan 2022-2026.

The proposed works involve the demolition of the existing halting bay service units and the construction of 3 No residential housing units (1 No detached and 2 No, semi-detached). It is also proposed to construct new boundary walls within the site to facilitate subdivision of the housing units. The proposed works also include upgrade works to an existing vehicular entrance and access road to the development site at the northwest of the site, off the N16, Ash Lane Road and upgrade works to the existing access road into the development and all associated site development and drainage works. The development will involve connection to the existing Irish Water Foul Sewer network with Storm water discharged, via a petrol interceptor, attenuation tank, and flow control hydro brake, to an existing Local Authority Storm Water pipe network. Existing boundary block walls will be retained within the Project. The redline boundary given on the drawings indicate the extents of site works for the Project. A full set of drawings are located in the Construction Methodology and EMP Report attached in Appendix I.

This report is prepared with input from Sligo County Council and Jennings O' Donovan & Partners Ltd (JOD) so that the possible effect on the environment has been examined through the process of an EIAR Screening and the most appropriate form of development delivered at this site.

1.1 Purpose of this Statement

The purpose of this Environmental Impact Assessment Screening Statement is to determine whether or not an Environmental Impact Assessment Report is required for the Project and to identify any environmental issues that might arise. It is worth noting that this Project is below any threshold, and we do not consider a Schedule 7A screening process will be required.

This report is supported and informed by accompanying documentation including an Appropriate Assessment Screening Report prepared by JOD.

1.2 Statement of Authority

This Screening for this EIA Report has been prepared by a qualified and accredited expert as follows: Dr. Monica Sullivan MCIEEM is Principal Environmental Scientist and lead ecologist with JOD. She has a Ph.D. in Environmental Sciences from Trinity College Dublin and has over 35 years' experience in the natural sciences. She is a chartered environmental scientist and has lectured since the mid 1990's – 2017 in invertebrate zoology, ecology and environmental pollution control to both masters and degree students. She has a clear understanding of the legislative framework governing the extent of environmental investigations, assessments and reports required to secure the necessary approvals on all types of projects. Dr. Sullivan has extensive experience in preparing EIA Screening and Scoping reports and works as part of a multi-disciplinary professional team, providing input to Environmental Impact Assessment Reports.

2 THE PROJECT AND ENVIRONMENTAL SENSITIVITIES

2.1 The Project

All drawings for the proposed works are outlined in the Construction Methodology and EMP Report attached in Appendix I.

In brief, overall works will include the demolition of the existing halting bay service units and the construction of 3 no. residential housing units (1 no. detached and 2 no. semi-detached) (Drawing No. S603-OCSC-XX-XX-DR-C-0605) **Figure 2.1**. It is also proposed to construct new boundary walls within the site to facilitate subdivision of the housing units. The proposed works also include upgrade works to an existing vehicular entrance and access road to the development site at the northwest of the site (Drawing No. S603-OCSC-XX-XX-DR-C-0610) **Figure 2.2**, off the N16, Ash Lane Road and upgrade works to the existing access road into the development and all associated site development and drainage works (Drawing No. S603-OCSC-XX-XX-DR-C-0620) (**Figure 2.3**). The development will involve connection to the existing Irish Water Foul Sewer network with Stormwater discharged, via a petrol interceptor, attenuation tank, and flow control hydro brake to an existing Local Authority Storm Water pipe network (Figure 2.3).

Existing boundary block walls are to be retained within the Project (Drawing No. S603-OCSC-XX-XX-DR-C-0160). The redline boundary given on the drawings indicate the extent of site works for the Project.



Figure 2.1 Layout of demolition works at Ash Lane (Technical Drawings, Appendix I)



Figure 2.2 Roads and pavement layout at Ash Lane (Technical Drawings, Appendix I)

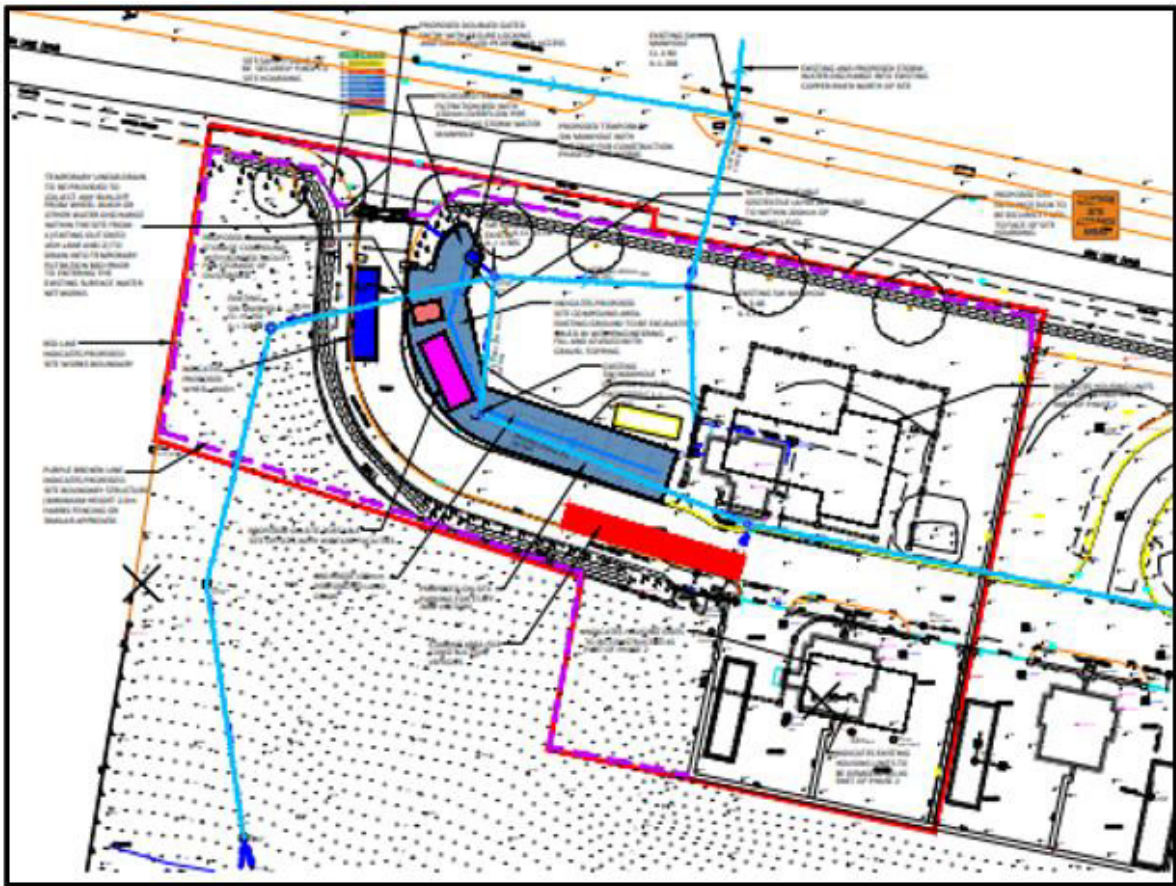


Figure 2.4 Surface Water Disposal during construction at Ash Lane (Technical Drawings, Appendix I)

Surface Water will be collected via a perforated drain constructed within the engineering fill (location of the site offices, oil compound and staff parking) and a temporary linear drain at the exit to the existing site which will flow by gravity into a filtration bed. Water is to discharge from the Filtration bed via a temporary Silt Trap Manhole into an existing local authority storm water pipe network (Figure 2.3 and 2.4, also Appendix I).

The proposed site area is 0.998 ha.

The storm drainage for the entire development has been designed in accordance with the Greater Dublin Strategic Drainage Study (GSDSDS) and incorporates normal sustainable drainage systems (SuDS) measures. The storm drainage network will be watertight to prevent leaks which could contaminate the groundwater in the area and is designed to cater for surface water from hard surfaces in the Project including roadways, footpaths and the proposed.

2.2 Location

The Project is located on Ash Lane off the main N16 road (Figure 2.4). It is located within Sligo town with the Atlantic Technological University to the north, Stephen Mc Donagh Place to the west, Sligo General Hospital to the east and Greenfort Park to the south (Figure 2.5).

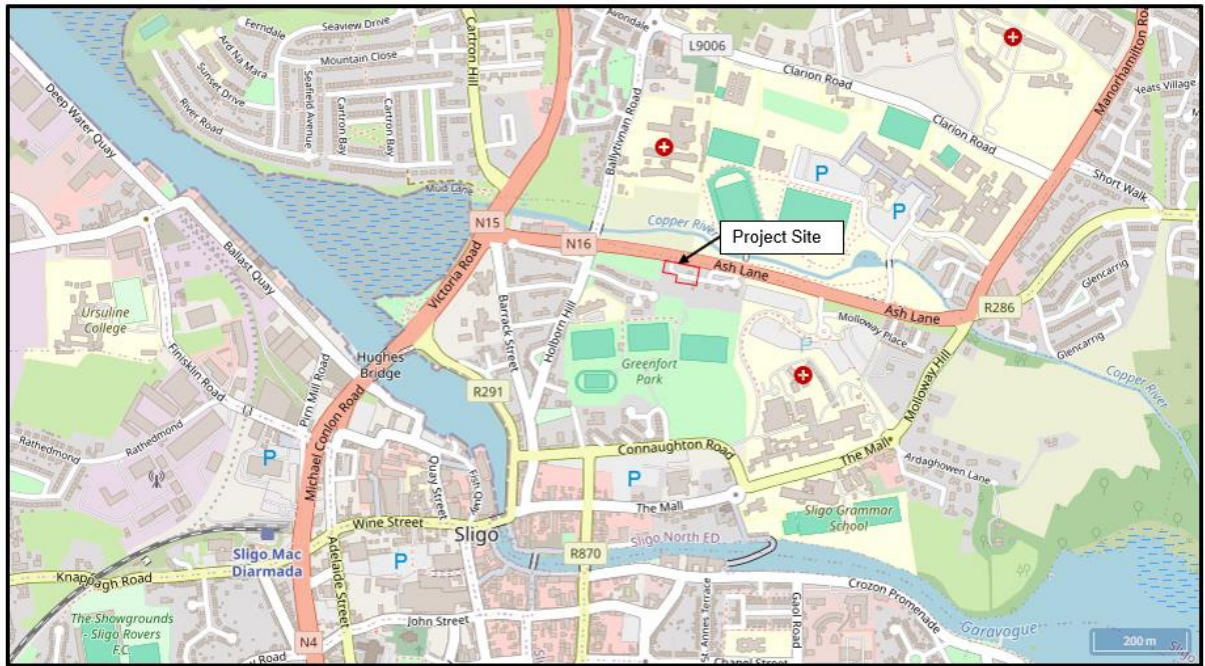


Figure 2.5 General location of the Project



Figure 2.6 Orthographic view of the Project showing surrounding landscape

The site is in an existing halting site outlined in Red in Figure 2.5 above and Figure 2.6 below. The existing halting bay site includes 2 no. halting bays and 1 no. caretakers' unit (temporarily used as an additional halting site) with associated services with an existing entrance from the N16 Ash Lane Road. The key driver in the provision of site access and egress will be to ensure that safety of the public and the Contractor's staff is maintained at all times. It is envisaged that access will be via the existing site entrance located at the northwest of the site off the N16 Ash Lane Road, as outlined in Figure 2.7.



Figure 2.7 General location of the Project (from Section 3.3.4, Construction Methodology and EMP, 2023, Appendix I)

The Project is located north of the town (approximately a five-minute walk from Sligo town centre) and the Garavogue River. Sligo General Hospital and new parking facilities are located east/ southeast of the Project. There are several football playing fields to the south/southwest.

Molloway Place residential estate is located east of the Project while Stephen McDonagh Place and Sligo Northside Community Partnership Limited are located west of the Project. Copper River flows in a westerly direction north of Ash Lane and the N16. Sligo ATU properties are located just north of the Copper River. St. John's Community hospital is also located north of the Project.

Ash lane and the ATU is served by regular Bus Éireann routes which leave Sligo town regularly during the daytime.

The local landscape is largely urban with a network of roads and residential and commercial dwellings. The Garavogue river is located approx. 500m southwest of the Project. This River feeds in Sligo Bay and the Atlantic Ocean (the site is relatively near the coast- approx. 500m).

Beyond the urban landscape, it is largely agricultural (Figure 2.8). Land ownership is generally delineated by walls /fencing in the urban area with treelines and hedgerows and stone walls in the wider more agricultural areas.

The Project area is small covering an area of approximately 0.998 hectares.



Figure 2.8 Local landscape in the environs of the Project.

2.3 Land, Soils and Flooding

The quaternary sediments at the site of the Project are classified as 'till derived from Namurian sandstones and shales'.

The Project is located within the Glencar Limestone Formation. This bedrock formation is described by the Geological Survey of Ireland as 'dark fine limestone & calcareous shale'. Corine 2018 denote this area as *artificial non-agricultural vegetated areas*.

Office of Public Works (OPW) website and the CFRAM study were accessed (May 2023) to determine flood areas within and near the Project. Fluvial (river based) and coastal risk assessments were undertaken by the Office of Public Works under the Catchment of Flood Risk Assessment and Management (CFRAM) Study. Whilst the CFRAM maps show that Ash Lane is at risk of periodic flooding, the existing Glenview Park halting site is unaffected by flooding. The Project itself has no surface or groundwater records of flooding events (including winter 2015/2016 Geological Survey Ireland surface water flooding records). The nearest historical previous flood event occurred north of Ash Lane in the property grounds of the Sligo Atlantic Unit, approximately 34 metres northeast of the Project. Due to the elevated aspect of the site, there have been no historic flood events and there is no foreseen risk of a flood event extending to the Project in the future. The Site is elevated above the areas indicated in the CFRAM maps River/Fluvial and coastal risk of flooding.

The Geological Survey Ireland (GSI) Groundwater Flooding Probability Maps were also examined (December 2023) to determine if there was an existing risk from groundwater flooding at the site. The groundwater flood mapping confirmed that the site is not at risk from groundwater flooding with the closest historic record of groundwater flooding to the Project also approximately 34 metres northeast of the Project. Given that the entirety of bedrock at the work area is of 'Glencar Limestone Formation', there is not a high risk of groundwater flooding.

The associated ground waterbody (GWB) Drumcliff-Strandhill (EPA Code IE_WE_G_0044) is Poorly productive bedrock" and covers an overall area of approximately 96km². The Water Framework Directive (WFD) latest status for this GWB is 'Not at risk'. The 2016-2021 overall groundwater status is 'Good', indicating no change from the previous monitoring periods 2013-2018, 2010-2015 and 2007-2012 status.

Ground investigations were carried out by Causeway Geotech in 2023 and indicate that groundwater strikes vary throughout the site (Section 3.3.10, Construction Methodology and EMP Report, Appendix I). If groundwater is encountered during excavations, the water will be pumped from the excavation and discharged through a pumped main into the filtration bed.

The scheme consists of a residential development consisting of 3 no. dwellings in two 2 storey blocks: 1 block of 2 semi-detached dwellings and 1 detached house. The proposed use of natural resource of land will not be significantly different to the existing land use situation. A halting site already exists on site that currently supports 3 no. halting bays with associated services.

Improved agricultural grassland habitat currently dominates the greenfield aspect of the site and is located due west and north of the proposed dwellings. Much of this grassland is tightly grazed by a horse/s and has been modified in the past with grasses now dominating the vegetative composition. Wet grassland is located west of the access road into the site and also south of the current boundary wall on steeply sloping ground. The grassland is also tightly grazed by horses leaving conspicuous stands of yellow iris (*Iris pseudacorus*) amongst bare ground terracing. There are limited areas (approx. 10m²) where gravel has been laid on site as an artificial surface; this is becoming increasingly colonised by encroaching vegetation from nearby grassland. The dwellings, roads (largely tarmac), yards and pathways onsite all come under this category of artificial manmade surfaces. Artificial substrates will again contribute to the new Project space in the form of dwellings, roads, bays, paving etc. There are also several walls bordering different aspects of the site that are finished in pebbledash with cement capping, reach up to 3.5m tall and are devoid of vegetation. Perimeter walls will be retained onsite. Hedgerows/treelines are a conspicuous habitat type along the majority of the northern margin of the Project with the exception of a road access break. The hedgerows/treelines delineate the northern boundary of the site. It is variable in structure, but generally dense and continuous and is largely unmanaged (particularly on the northern internal site aspect; some pruning has occurred externally along the footpath and the N16 road). A dense linear continuous hedgerow (generally approx. 2-3m

tall) has been planted along the northwestern internal road. It is overgrown and unmanaged. There are several cultivars in the mixture with some native species such as elder (*Sambucus nigra*), willow (*Salix spp.*), ash (*Fraxinus excelsior*), blackthorn (*Prunus spinosa*) and hawthorn (*Crataegus monogyna*). Understorey includes common figwort (*Scrophularia nodosa*), ivy (*Hedera hibernica*), willowherb (*Epilobium spp.*), pignut (*Conopodium majus*) and herb Robert (*Geranium robertianum*). *Galium aparine* cleaver and bramble (*Rubus fruticosus* agg.) are both utilising the hedgerow structure to spread. The treeline and hedgerow will be enhanced with native trees sourced strictly from Irish nurseries.

The landscape architect design for the Project includes soft landscaping including:

- Scrapping of existing topsoil to allow natural recolonisation and concurrently applying native Irish seed. This habitat will require low maintenance into the future: two moving session a year spring and autumn.
- Native trees and shrubs (sourced in Ireland only and not imported) to enhance biodiversity. Planting to follow the IW Document No I1-AMT-GL-021 Biodiversity Guidance for Irish Water which will help deliver maximum benefit for biodiversity through the project delivery.
- Seeding of grass

Sligo County Council are astutely aware of the necessity to avoid the introduction of foreign pathogens and invasive alien species into Ireland and thus are attentive in this Project to plant native sourced trees/shrubs where possible, to enhance the overall biodiversity of the site.

The Project will entail similar habitat types, leaving open green grassland areas, perimeter walls, buildings, roads, paving, etc. There will be little change in habitat type as a result of this Project. Landscaping of the Project is likely to lead to further planted flowerbeds, shrubbery and trees that could enhance biodiversity in this area.

The construction or operation of the Project (with no basements proposed) will not use such a quantity of soils or water to result in significant adverse effects on the local urban environment.

Groundwater, Stormwater and Foul Drainage

The groundwater vulnerability at the site is classified as 'Moderate to High'. Currently, the groundwater in the area has no significant underlying pressures, including waste abstraction, agriculture, anthropogenic, aquaculture, atmospheric, extractive industry, hydro morphology, invasive species, urban runoff or otherwise (EPA Water Maps, accessed May 25th, 2023). The Project is however within a groundwater area denoted as SAC habitat sensitive SAC species sensitive and SPA Habitats sensitive (EPA Maps website, accessed May 2023). The Project is also within the Carrowmore East groundwater body for the abstraction of drinking water (Article 7- EPA code IEPA1_WE_G_0042).

The EPA Maps (Water) website was also accessed (May 2023) to examine the Project area and its environs for nitrate and phosphorus loading and Pollutant Impact Potential (PIP). PIP maps for Nitrogen

(N) and Phosphorus (P) have been generated by the EPA to show the highest risk areas in the landscape for losses of N and P to waters. The PIP model estimates the annual nutrient losses from agricultural land at specific locations, using spatial data from farm management, soils and hydrogeology. This model estimates loads at an annual temporal resolution.

The area immediately surrounding the Project encompasses Sligo town and more locally, an area where educational, medical and residential use prevails. The wider surrounding landscape is largely comprised of the Sligo urban landscape with Ash Lane to the north, residential estates to the west, urban amenities to the south, while the east has the carpark of Sligo General Hospital.

The land associated with the Project has been highly modified in the past; it was landscaped to provide residential dwellings and is now a mix of both a brownfield and greenfield site. The Project and immediate surrounding lands do not have a Phosphorus ranking. The wider area has phosphorus rankings between 2, 4, 6 and 7 (7 being the lowest impact ranking). Pollution Impact Potential Nitrate (PIP N) for the lands within and surrounding the Project also do not have a ranking. The Site is on a north facing, relatively steep slope (3,500 north rising to 8,500 at the northwest tip). There is a steep vegetated embankment rising directly from southern boundary of the site reaching up to over 18,000 (Drawing Site Layout.). The lack of an overall ranking for these parameters likely reflects little fertiliser use on the Project land in the past, with low-level or no stock. Overall, the Critical Source Areas Maps for the Project and adjacent lands do not indicate a Site where either phosphorus or nitrates are a significant issue.

The Project is within the WFD River Sub Basin Garavogue_010. Currently, there are no significant nitrogen or phosphorus pressures from the Project site on this RSB.

The nature of the Project will generate a demand for water, but this is for residential use and is not considered significant. Adherence to best practice Construction and Environmental Management during the construction phase will ensure that the Project would not result in pollution of groundwater or any surface water.

Management of surface water for the Project has been designed to comply with the policies and guidelines outlined in the *Greater Dublin Strategic Drainage Study (GDSDS)* and with the requirements of the Sligo City Council (Figure 2.9).

Storm drainage for the entire development will be designed in accordance with the *Recommendations for Site Development Works for Housing Areas* and also the recommendations of the GDSDS. Section 2.1 above outlines the Proposed drainage layout (Figure 2.3) and the surface water drainage (Figure 2.4) at the Site. All associated drawings and summary of drainage procedures are outlined in Appendix I. The storm water drainage design has been designed to cater for surface water from hard surfaces in the Project including roadways, footpaths, bays and the proposed buildings.

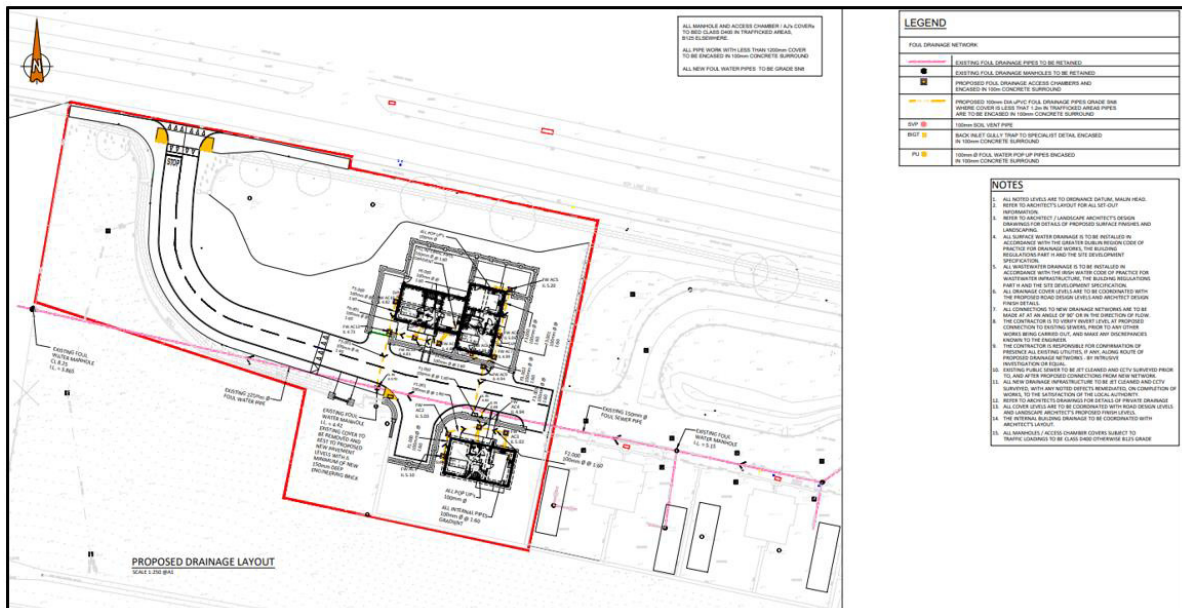


Figure 2.9 Proposed Drainage Layout for the Project (excerpt from Technical Drawings, Appendix I)

An attenuation tank is included in the design with a capacity of 55m³ (Figure 2.10). The development will involve connection to the existing Irish Water Foul Sewer network with Storm water discharged, via a petrol interceptor, attenuation tank, and flow control hydro brake, to an existing Local Authority Storm Water pipe network.

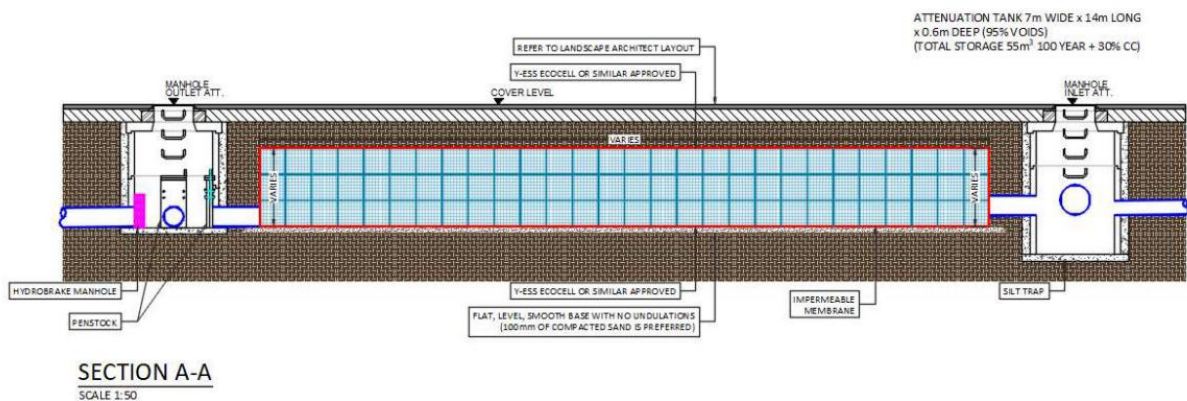


Figure 2.10 Typical Section of the Attenuation Tank System

All sewer works will be designed and constructed in accordance with the following:

- Irish Water Code of practice for wastewater infrastructure, connections and developer services, design and construction requirements for self-lay developments July 2020 (revision 2), IW-CDS-5030-03
- Irish Water Wastewater infrastructure standard details, connections and developer services, construction requirements for self-lay developments; July 2020 (revision 04), IW-CDS-5030-01

In line with Codes of Practices as outlined above, it is considered that the Project provides treatment of collected run-off, provides a SUDS treatment train approach and is low risk of pollutants. The SuDS principles that influence the planning and design process, enabling SuDS to mimic natural drainage are:

- Storing runoff and releasing it slowly (attenuation)
- Harvesting and using the rain close to where it falls
- Allowing water to soak into the ground (infiltration)
- Slowly transporting (conveying) water on the surface
- Filtering out pollutants
- Allowing sediments to settle out by controlling the flow of the water

The proposed drainage scheme takes into account a number of the above listed principles through the following measures:

- The proposed attenuation tank stores runoff and releases it slowly into the public network
- Providing open green areas to allow rainfall to naturally percolate into the ground
- Strategic placing of gullies to keep road surface gradients as gentle as possible to cater for the slow transporting of water on the surface
- Proposing a class 1 petrol/oil interceptor to remove pollutants from the system

2.4 Biodiversity

A site visit was carried out on May 24, 2023, on a cloudy dry day with an ambient temperature of 10 degrees Celsius. The survey area consisted of a stretch of approximately 52.5m along the entire northern boundary along Ash Lane N16 roadway and extending back approximately 50m southward to the most southerly boundary wall of the existing settlement. An area outside of the current southern boundary wall was also surveyed as this area will be included in this application to accommodate a horsebox/stable.

Six habitats (according to Fossitt, 2000) were noted within the survey area, namely WL1: Hedgerow/WL2: Treeline, BL3: Artificial Surfaces, ED3: Recolonising bare ground, GA1: Improved Agricultural Grassland and GS4: Wet grassland (Figure 3.3).

No rare, threatened, or protected species of plants as per the Red Data Book (Curtis and McGough, 1988) were found. No species listed in the Flora Protection Order (2022) were found to be growing within or adjacent to the Project works.

A desk study was carried out to collate the available information on the ecological environment of the Project area. The National Parks and Wildlife Service (NPWS) database was consulted concerning designated conservation areas and records of rare and protected plant and animal species in the vicinity of the Project. The National Biodiversity Data Centre (NBDC) website was also consulted. One kilometre Grid square 'G6936' incorporates the entire Project (a small area of 0.998ha) and surrounding lands and watercourses including Copper River, the Garavogue River, coastal bay areas southeast of

Cartron Bay housing development, open playing fields, hedgerows and lands boundaries etc. Twenty one protected species are recorded from the 1km² Grid including Common Frog (*Rana temporaria*), Black-headed Gull (*Larus ridibundus*), Common Kingfisher (*Alcedo atthis*), Common Redshank (*Tringa totanus*), Common Starling (*Sturnus vulgaris*), Common Wood Pigeon (*Columba palumbus*), Eurasian Curlew (*Numenius arquata*), Eurasian Oystercatcher (*Haematopus ostralegus*), Great Cormorant (*Phalacrocorax carbo*), Herring Gull (*Larus argentatus*), House Sparrow (*Passer domesticus*), Mallard (*Anas platyrhynchos*), Little Egret (*Egretta garzetta*), Mew Gull (*Larus canus*), Mute Swan (*Cygnus olor*), Northern Lapwing (*Vanellus vanellus*), Sand Martin (*Riparia riparia*), Eurasian Badger (*Meles meles*), Eurasian Pygmy Shrew (*Sorex minutus*), European Otter (*Lutra lutra*), West European Hedgehog (*Erinaceus europaeus*). These species are likely associated and utilising the varied habitats available outside of the Project site. A custom polygon was developed around (including 10m outside) the Project. None of the species above were recorded within or proximate to the site.

A pre-construction mammal survey is recommended to be carried out by a suitably qualified ecologist.

2.5 Air and Climate

The EPA designate the area as Air Zone D: Rural Ireland for Air and Climatic factors.

Co. Sligo has one air quality monitoring station located in Sligo town (54.2730°N, -8.4804°E). Particulate matter and nitrogen oxide is measured at Sligo town. The monitoring station is located at Michael Conlon Road in the grounds of the Old Mill.

In relation to the Project, the monitoring station is located approx. 500m north.

The EPA Air Quality site was accessed on August 04th, 2023 and the following ratings noted:

1. Sligo town is currently offline, the last recording had an Air Quality Index for Health (AQIH) is unknown (station currently offline and has been for the last 21 months) with latest PM₂₅ average of 107.91 µg/m³, PM₁₀ of 113.83 µg/m³ and NO₂ of 8.24 µg/m³.

Since all of the indices are high, this indicates 'Moderate' air quality. This AQIH relates to large towns, which are generally higher than rural areas.

There is no significant impact on air pollution expected from the Project outside of potential temporary dust impact. A Dust Minimisation Plan will be formulated for the construction phase of the project. Dust prevention measures shall be included for control of any site airborne particulate pollution. The Contractor shall put in place a regime for monitoring dust levels in the vicinity of the site during the works using the Bergerhoff Method. The minimum criteria to be maintained shall be the limit specified by the environmental Protection Agency (EPA) for licensed facilities in Ireland which is 350mg/m²/day as a 30-day average. The Contractor shall continuously monitor dust over the variation of weather and material disposal to ensure the limits are not breached throughout the project. The level of monitoring and adoption of mitigation measures will vary throughout the construction works depending on the type of activities being undertaken and the prevailing weather conditions at the time. Additional monitoring and mitigation such as damping down of earth mounds on site would be undertaken if the prevailing weather

conditions are dry and windy. It is noted that the stockpiling of excavated material on site is to be minimised with an immediate removal of excavated materials.

There will be small volumes of traffic generated by aspects of the construction works, particularly during the excavations and groundworks phase, it shall be a requirement that the Contractor shall ensure, where appropriate:

- A wheel wash facility shall be provided at each egress point from the site.
- All vehicles shall be required to pass through the wheel wash facility before exiting the site to the public & private road networks. The wheel wash must be kept in place and used throughout the critical dirt generating activities of the construction works.
- A temporary linear drain will be located downstream of the wheel wash facility to ensure no water use in the cleaning process exist the site and is instead diverted into the proposed filtration bed.
- Road sweepers shall be retained for the duration of the construction works with an increase in cleaning during the critical dirt/dust generating works. Regular road drain clearing will be implemented.
- Water supplies shall be recycled for use in the wheel wash. All surface waters shall be drained through appropriate pipe networks and filter material prior to discharge from the site.

Air and Climate are not likely to be significantly affected by the Project.

3 DRAFT SLIGO COUNTY DEVELOPMENT PLAN 2017-2023

The Sligo County Development Plan 2017-2023 has been consulted alongside Draft Sligo County Development Plan 2023-2029. The former CDP was adopted on the 31st of July 2017 and is the relevant CDP pertaining to the subject site in this instance.

Sligo City is identified as a City, Tier 1 in the Municipal District of Sligo which has a social housing waiting list of 770.

The CDP 2017-2023 outlines Housing Strategy Policies and Objectives that include:

Strategic housing policies

It is the policy of Sligo County Council to:

- SP-HOU-1** Encourage a balanced supply of private housing in the county, in a manner that is consistent with the Core Strategy and the Settlement Structure, and which will support the creation of sustainable communities through the provision of an appropriate range of housing types and high-quality residential environments.
- SP-HOU-2** Reserve 20% of eligible sites which are subject to new residential development (or a mix of uses including residential) for the development of social and affordable units, in accordance with the Housing Strategy and the requirements of Part V of the Planning and Development Act 2000.
- SP-HOU-3** Ensure that the needs of older people, people with disabilities and other special-needs persons and households are adequately catered for in new developments.

Strategic housing objectives

It is an objective of Sligo County Council to:

- SO-HOU-1** Implement the relevant provisions of the Sligo City and County Joint Housing Strategy 2010-2017.
- SO-HOU-2** Continue to monitor the extent of residential development in the county area to ensure that sufficient land is zoned to accommodate housing demand over the Plan period.
- SO-HOU-3** Ensure that 20% of all sites eligible for Part V is reserved for the development of new social and affordable residential units.
- SO-HOU-4** Continue with the programme of refurbishment and regeneration of existing local authority housing stock.
- SO-HOU-5** Establish a register of eligible households interested in acquiring affordable housing.

Section 4.5.3 of the Draft CDP 2017-2023 also refers to accommodation for the travelling community.

The Housing (Traveller Accommodation) Act 1998 requires all local authorities to prepare, in consultation with Travellers and the general public, a five-year Traveller accommodation programme to meet the existing and projected needs of Travellers in their area. The Traveller Accommodation Plan 2014–2018, adopted by Sligo County Council in April 2014, estimates the number of units of accommodation required to meet the needs of the Travellers Community over this period. Table 12 shows that a total of 64 households will need to be accommodated and indicates the type of accommodation proposed.

Table 12: Accommodation type to meet identified need of Traveller households

Type of accommodation	Number of households
Standard Local Authority housing	5
Group schemes	20
Serviced sites	4
Private rental and RAS	35
Total	64

The CDP 2017-2023 also notes under social housing policies to:

Provide for the accommodation needs of Travellers, as far as is reasonable and practicable, using the full range of housing options available to the Local Authorities and having regard to the policies outlined in the Traveller Accommodation Programme 2014–2018 and any subsequent programme.

This Project is in alignment with the current CDP 2017-2023 and the Traveller Accommodation Programme. It is also in alignment with the Draft County Development Plan 2024-2030.

26.2.2 Traveller accommodation Sligo County Council recognises the distinct culture and lifestyle of the Traveller community and will endeavour to provide suitable accommodation for Travellers who are indigenous to the area. The range of housing options available includes standard lettings in local authority estates, lettings in voluntary housing schemes, group housing schemes, permanent or transient halting sites, single or stand-alone housing where required. At the time of drafting this CDP (2023), Sligo County Council's Traveller Accommodation Plan estimated that 66 families would have needed accommodation during the period 2019–2024. The next iteration of the Traveller Accommodation Plan will reassess these requirements. Working with the Traveller community, its representative organisations and local communities, the Council will seek to ensure an equitable distribution of Traveller facilities throughout the Plan area. The Council recognises that the provision of appropriate associated supports is also a critical factor in ensuring that the accommodation solutions delivered for individual families are successful.

Traveller accommodation policies

It is the policy of Sligo County Council to:

- P-TA-HOU-1** Provide accommodation for Travellers, as far as is reasonable and practicable, using the full range of housing options available and having regard to the policies outlined in the *Traveller Accommodation Programme 2019–2024* and the subsequent plan(s).
- P-TA-HOU-2** Consider the submissions of Travellers, their representative organisations and those of the local communities in relation to the siting, planning and design of prospective halting sites or group housing schemes, so as to avoid social conflict and promote social inclusion.

Traveller accommodation objective

It is an objective of Sligo County Council to:

- O-TA-HOU-1** Provide accommodation for Travellers within the Sligo Town area at Alma Terrace, Glenview Park (Ash Lane), Finisklin, Cleveragh and Bundoran Road.

4 EIA SCREENING

4.1 EU Directive as Amended and Associated Transposing Regulations

The primary objective of the EIA Directives is to ensure that projects which are likely to have significant effects on the environment are subject to an assessment of their likely effects.

Directive 2014/52/EU amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment came into effect on May 16th, 2017.

The European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (S.I. No. 296 of 2018) transpose the requirements of Directive 2014/52/EU, amending previous Directive 2011/92/EU, on the assessment of the effects of certain public and private projects on the environment (the EIA Directive) into planning law with effect from 1st September 2018. The regulations amend the Planning and Development Regulations 2001.

Directive 2014/52/EU does not make any amendments to the list of projects set out in the two annexes to the 2011 Directive. In the Irish legislation, Annexes I and II are broadly transposed by way of the

Planning and Development Regulations 2001, as amended, in Schedule 5 Parts 1 and 2, with national thresholds added to certain Part 2 classes of development.

Schedule 5 Part 1 projects require EIA if the stated threshold set therein has been met or exceeded or where no thresholds are set.

Schedule 5 Part 2 projects meeting or exceeding national thresholds set out therein, or where no thresholds are set, require EIA.

Schedule 5 Part 2 Sub-threshold projects require screening for EIA, except in cases where the likelihood of significant effects can be readily excluded.

The new Annex II A, is transposed into the Planning and Development Regulations 2001 as amended by the insertion of schedule 7A – *“information to be provided by the applicant or developer for the purposes of screening sub-threshold development for environmental impact assessment.”*

Art 92 of the Planning and Development Regulations 2001 as amended provides that;

“sub-threshold development” means development of a type set out in Part 2 of Schedule 5 which does not equal or exceed, as the case may be, a quantity, area or other limit specified in that Schedule in respect of the relevant class of development”.

4.2 Planning and Development Regulations 2001-2019 and Considerations of the 2001-2021 (unofficial consolidation)

The first stage of EIA screening is provided in Article 120 of the Planning and Development Regulations 2001 as amended (S.I. No. 296/2018 - European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018).

Art 120 (1) (a) provides that; *“where the authority proposes to carry out a subthreshold development, the authority shall carry out a preliminary examination of, at the least, the nature, size or location of the development”.*

Art 120 (1) (b) provides that after the preliminary examination is carried out, and where the local authority concludes, based on such preliminary examination, that—

- “(i) there is no real likelihood of significant effects on the environment arising from the proposed development, it shall conclude that an EIA is not required,
- (ii) there is significant and realistic doubt in regard to the likelihood of significant effects on the environment arising from the proposed development, it shall prepare, or cause to be prepared, the information specified in Schedule 7A for the purposes of a screening determination, or
- (iii) there is a real likelihood of significant effects on the environment arising from the proposed development, it shall—

- (I) conclude that the development would be likely to have such effects, and
- (II) prepare, or cause to be prepared, an EIAR in respect of the development.”

Accordingly, Schedule 7A is triggered if there is significant and realistic doubt in regard to the likelihood of significant effects on the environment. Subsection (1b) in summary provides where the local authority prepares, or causes to be prepared, the information specified in Schedule 7A, then the information shall be accompanied by any further relevant information and may be accompanied by a description of the features, if any, of the Project and the measures, if any, envisaged to avoid or prevent what might otherwise have been significant adverse effects on the environment of the development.

The Regulations provide that where any person considers that a development proposed to be carried out by a local authority would be likely to have significant effects on the environment, he or she may, at any time before the expiration of 4 weeks beginning on the date of publication of the notice apply to the Board for a screening determination as to whether the development would be likely to have such effects.

4.3 Criteria for Determining Whether the Proposed Part 179A Housing Development at Glenview, Ash Lane Should be Subject to an Environmental Impact Assessment.

Schedule 7 provides the following criteria for assessment:

1. Characteristics of the Proposed Development

The characteristics of proposed development, in particular:

- (a) the size and design of the whole of the proposed development,
- (b) cumulation with other existing development and/or development the subject of a consent for proposed development for the purposes of section 172(1A) (b) of the Act and/or development the subject of any development consent for the purposes of the Environmental Impact Assessment Directive by or under any other enactment,
- (c) the nature of any associated demolition works,
- (d) the use of natural resources, in particular land, soil, water and biodiversity,
- (e) the production of waste,
- (f) pollution and nuisances, EIA Screening Report 6
- (g) the risk of major accidents, and/or disasters which are relevant to the project concerned, including those caused by climate change, in accordance with scientific knowledge, and
- (h) the risks to human health (for example, due to water contamination or air pollution).

2. Location of the Proposed Development

The environmental sensitivity of geographical areas likely to be affected by the proposed development, with particular regard to:

- (a) the existing and approved land use,
- (b) the relative abundance, availability, quality and regenerative capacity of natural resources (including soil, land, water and biodiversity) in the area and its underground,
- (c) the absorption capacity of the natural environment, paying particular attention to the following areas:
 - (i) wetlands, riparian areas, river mouths;
 - (ii) coastal zones and the marine environment;
 - (iii) mountain and forest areas;
 - (iv) nature reserves and parks;
 - (v) areas classified or protected under legislation, including Natura 2000 areas designated pursuant to the Habitats Directive and the Birds Directive and;
 - (vi) areas in which there has already been a failure to meet the environmental quality standards laid down in legislation of the European Union and relevant to the project, or in which it is considered that there is such a failure;
 - (vii) densely populated areas;
 - (viii) landscapes and sites of historical, cultural or archaeological significance

3. Types and characteristics of potential impacts:

The likely significant effects on the environment of the Proposed Development in relation to criteria set out under paragraphs 1 and 2, with regard to the impact of the project on the factors specified in paragraph (b)(i)(I) to (V) of the definition of 'environmental impact assessment report' in section 171A of the Act, taking into account:

- (a) the magnitude and spatial extent of the impact (for example, geographical area and size of the population likely to be affected),
- (b) the nature of the impact,
- (c) the transboundary nature of the impact,

- (d) the intensity and complexity of the impact,
- (e) the probability of the impact,
- (f) the expected onset, duration, frequency and reversibility of the impact,
- (g) the cumulation of the impact with the impact of other existing and/or development, the subject of a consent for proposed development for the purposes of section 172(1A)(b) of the Act and/or development the subject of any development consent for the purposes of the Environmental Impact Assessment Directive by or under any other enactment, and
- (h) the possibility of effectively reducing the impact.

4.4 Section 28 Guidelines for Environmental Impact Assessment

The revised Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment August 2018 were issued under section 28 of the Planning and Development Act 2000, as amended, replacing the 2013 Guidelines, and accordingly planning authorities and An Bord Pleanála are required to have regard to them in the performance of their planning functions.

The Guidelines provides a glossary as follows:

Screening

The process of determining if development of a class prescribed in Part 2 of Schedule 5 to the 2001 Regulations that does not equal or exceed a threshold specified in that Schedule in respect of that class is likely to have significant effects on the environment and should be made the subject of EIA.

Source-Pathway-Target Model

A model identifying the source of likely significant impacts, if any, the environmental factors which will potentially be affected and the route along which those impacts may be transferred from the source to the receiving environmental factors.

2001 Regulations

The Planning and Development Regulations 2001–2018 (as amended by the Transposing Regulations, S.I. No. 296 of 2018).

The Guidelines provide that for all sub-threshold developments listed in Schedule 5 Part 2, where no EIAR is submitted or EIA determination requested, a screening determination is required to be undertaken by the competent authority unless, on preliminary examination it can be concluded that there is no real likelihood of significant effects on the environment. This is initiated by the competent authority following the receipt of a planning application or appeal. The examination should have regard to the criteria set out in Schedule 7 to the 2001 Regulations. A preliminary examination is

undertaken, based on professional expertise and experience, and having regard to the 'Source – Pathway – Target' model as defined above.

4.5 Sub threshold development and the Proposed Part 179A proposal

Sub-threshold projects in Schedule 5, Part 2 require screening for EIA, except in cases where the likelihood of significant effects can be readily excluded.

Schedule 5 Part 2 outlines Annex II discretionary thresholds determined by Ireland (each EU Member State) which if met or exceeded require a mandatory EIA. It includes Infrastructure projects:

- (a) Industrial estate development projects where area would exceed 15 ha.
- (b) (i) Construction of more than 500 dwelling units.
- (ii) Construction of a carpark providing more than 400 spaces, other than a car-park provided as part of, and incidental to the primary purpose of, a development.
- (iv) Urban development which would involve an area greater than 2 hectares in the case of a business district, 10 hectares in the case of other parts of a built-up area and 20 hectares elsewhere.

Having regard to the above thresholds, this application for 3 dwelling Units on a site of 0.998 ha (with below threshold parking incidental to the development) may be described as a sub threshold development.

4.6 Methodology

The following screening has had regard to the following:

- Planning and Development Act 2000 as amended
- Planning and Development Regulations 2018 (as amended)
- Planning and Development (Housing) and Residential Tenancies Act 2016 (as amended)
- Directive 2011/92/EU
- Directive 2015/52/EU
- Directive 2014/52/EU of 16 April 2014 amending Directive 2011/92/EU
- Transposition of 2014 EIA Directive (2014/52/EU) in the Land Use Planning and EPA Licensing
- Directive 2015/52/EU
- Systems – Key Issues Consultation Paper (2017; DoHPCLG)

- Preparation of guidance documents for the implementation of EIA directive (Directive 2011/92/EU as amended by 2014/52/EU) – Annex I to the Final Report (COWI, Millieu; April 2017)
- The European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (S.I. No. 296 of 2018)
- Draft Guidelines on the information to be contained in Environmental Impact Assessment Reports, Environmental Protection Agency, 2017
- Environmental Impact Assessment of Projects: Guidance on Screening, European Commission, 2017
- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment August 2018, DoHPLG.
- Environmental Impact Assessment (EIA) Guidance for Consent Authorities regarding Subthreshold Development 2003, DoHPLG.
- Interpretation of definitions of project categories of Annex I and II of the EIA Directive (EU, 2015)
- Circular Letter: PL 05/2018 27th August 2018 Transposition into Planning Law of Directive 2014/52/EU amending Directive 2011/92/EU on the effects of certain public and private projects on the environment (the EIA Directive) and Revised Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment.
- Circular Letter: PL 10/2018 22 November 2018 Public notification of timeframe for application to An Bord Pleanála for screening determination in respect of local authority or State authority development.

4.7 Part 179A Assessed Against Criteria

The 'Environmental Impact Assessment (EIA) Guidance for Consent Authorities Regarding Sub-Threshold Development' groups criteria for deciding whether or not a proposed development would be likely to have significant effects on the environment under three main headings (with sub-headings) which correspond to the updated Schedule 7 are outlined in Section 4.3 above. The Proposed Development will be assessed under these headings hereunder, namely Section 4.7.1, 4.7.2 and 4.7.3.

4.7.1 Characteristics of the Proposed Development

The characteristics of the Proposed Development, in particular:

- (a) the size and design of the whole of the Proposed Development,

The proposed residential development will consist of two building types; 1 no. detached and 2 no. semidetached. The total number of bedrooms will be 9. Each house is a 3 bed unit, (same plan) but one of the bedrooms has facility for 3 beds: 7 persons per house. Estimate facilities for 21 persons.

The proposed site area is approximately 0.998 ha.

The development will involve connection to the existing Irish Water Foul Sewer network with Storm water discharged, via a petrol interceptor, attenuation tank, and flow control hydro brake, to an existing Local Authority Storm Water pipe network.

An attenuation tank is proposed under the green area, and it will have a capacity of 55m³.

- (b) cumulation with other existing development and/or development the subject of a consent for the Project for the purposes of section 172(1A)(b) of the Act and/or development the subject of any development consent for the purposes of the Environmental Impact Assessment Directive by or under any other enactment.

4.7.1.1 Application site

Sligo County Council will be using the SECTION 179a Notice under the Planning and Development (Section 179A) Regulations 2023 of the Planning and Development Act 2000, as amended to allow for the accelerated delivery of this Project.

The Project will comprise 2 buildings providing 3 no. dwellings: consisting of 1 no. detached and 2 no. semi-detached. The total number of bedrooms will be 9. Each house is a 3-bed unit, (same plan) but one of the bedrooms has facility for 3 beds, catering for 7 persons per house. Estimate facilities to accommodate 21 persons.

4.7.1.2 Wider area

The accompanying Appropriate Assessment Screening considered that while the effects on European Sites were not expected as a result of the construction and operation of the Project, the potential for cumulative effects on these designated sites due to other plans and projects acting in-combination with the Project were considered. Sligo County Council on-line planning application portal was used to search planning applications close to the Project. A five-year search timeframe was assessed. Retention refused and withdrawn planning applications were excluded. In the wider area (within 1000m), there are a number of permissions for domestic extensions and small-scale commercial developments. Table 5.1 outlines seven applications in close proximity to the Project in the last 5 years.

Table 5.1 Planning applications in close proximity to the Project.

Planning Reference	Description of Development	Site Address	Decision Date	Distance from Site
22444	development consisting of installation of 320 no. photovoltaic (PV) panels on south facing pitched roofs of the existing hospital building and all associated works	St. John's Hospital, Ballytivnan, Sligo	23/02/2023	approx. 210m from the project site
19517	for development consisting of (a) construct a two-storey extension to side of dwelling house, (b) remove existing rear extension and construct a single storey extension to rear of dwellinghouse, (c) construct a porch to front of dwelling house, (d) construct an off street car parking area adjacent to the public road	34 St. John's Terrace, Sligo	18/02/2020	approx. 253m from the project site
20199	development consisting of the construction of an LPG gas compound consisting of 3 x 2 Tonne underground gas storage tanks with connection to existing boiler houses, truck set down/filling area and 4 additional car park spaces on the site at Markievicz House, Barrack Street, Rathquarter, Sligo. Constance Markievicz House is a Protected Structure on the site and the proposed development lies within its curtilage	Markievicz House, Barrack Street, Rathquarter, Sligo	20/08/2020	approx. 435m from the project site
19344	development consisting of the pay-to-use waste portable compactor for dry recyclables and a pay-to-use portable waste compactor for residual waste and food waste	Circle K Service Station, Cartron Hill, Sligo, F91 HH2Y	18/06/2020	approx. 438m from the project site
22258	development consisting of construction of detached single storey garden room with all associated works	Ard na Greine, Rosses Point Road, Cartron Hill, Sligo	13/09/2022	approx. 496m from the project site

Planning Reference	Description of Development	Site Address	Decision Date	Distance from Site
2046	Development consisting of the construction of a new part single storey/part 2 storey 12 bed residential Hospice Facility extension adjoining Connaught Road, including associated support accommodation. Refurbishment and minor demolitions of the existing hospice facility including existing house and inpatient areas to become support accommodation. The development involves the construction of an undercroft car park, reconfiguration of existing associated car park, extensive landscape scheme to west and south and general minor associated works. The new extension is within the curtilage of a protected structure.	Sligo University Hospital, The Mall, Sligo	31/03/2020	approx. 423m from the project site
21407	development consisting of the demolition of derelict sheds, provide new yard area, build new bathroom, and a new entrance door. Provide new metal gate to match existing in rebuilt yard wall and all necessary ancillary works. The building is on R.P.S no 216SE	The Masonic Lodge, The Mall, Sligo	01/12/2021	approx. 438m from the project site

There were no other planning applications in the area at the time of writing (August 2023).

Having regard to the scale of the permitted developments in the vicinity, the AA Screening Assessment noted that there will be no in-combination effects with local planning applications.

(c) the nature of any associated demolition works,

The site is currently an occupied site; demolition works are proposed. The proposed works involve the demolition of the existing halting bay service units and the construction of 3 No residential housing units (1 No detached and 2 No, semi-detached).

- (d) the use of natural resources, in particular land, soil, water and biodiversity,
The site is currently a mix of a brownfield and greenfield site, with existing buildings onsite.

The nature of the proposed residential development will generate a demand for water, but this is for residential use and is not considered significant as there are persons already dwelling in the Project area. Sustainable urban drainage systems (SUDS) will be incorporated into the public drainage network. The storm drainage for the entire Project will be designed in accordance with the *Recommendations for Site Development Works for Housing Areas* and also the recommendations of the *Greater Dublin Strategic Drainage Study (GDSDS)*.

Adherence to best practice Construction and Environmental Management during the construction phase will ensure that development will not result in pollution of groundwater or surface water.

The site was surveyed by Jennings O'Donovan and Partners Limited lead-chartered ecologist, Dr. Monica Sullivan MCIEEM CEnv in 2023. She noted that there was no evidence of ground level animal pathways or any tree /ground nesting birds onsite.

Where it is proposed that any vegetation will be removed (including during the operation phase), Sligo County Council are keenly aware that it is important to plant compensatory native species (sourced only from Irish nurseries). Where possible, any removal of vegetation will take place outside of the nesting season (i.e. March 1st to August 31st). Where vegetation is to be removed, a suitably qualified ecologist will carry out a pre-removal survey to determine if there are any ground nesting or scrub/tree nesting birds onsite. No tree nesting birds were noted on site in 2023.

Biodiversity Net Gain. Ireland is experiencing a biodiversity crisis and there are high level objectives to halt and ameliorate biodiversity loss. Sligo County Council propose to enhance biodiversity by planting new native trees and shrubs along the hedgerows and Project boundaries where gaps currently exist for biodiversity net gain - promoting wildlife, planting new wildflowers, shrubs and native trees and to showcase best practice in relation to biodiversity and climate change.

- (e) the production of waste
The Project of 3 no. housing units will generate general household waste. Operational waste for the residential development will be controlled by each housing unit. In terms of the production of waste, measures will be outlined to maximise the quantity of waste recycled by providing sufficient waste recycling infrastructure, waste reduction initiatives and waste collection and waste management information to the residents of the Project.

The National Construction and Demolition Waste Council (NCDWC) published 'Best Practice Guidelines for the Preparation of Waste Management Plans for Construction and Demolition Projects' in 2006 in conjunction with the Department of the Environment, Heritage, and Local Government (DoEHLG). The Guidelines outline the issues that need to be addressed at the pre-planning stage of a development all the way through to its completion. These Guidelines were followed in the preparation of the Construction Methodology and EMP document for this Project and include the following elements:

- Predicted C&D wastes and procedures to prevent, minimise, recycle, and reuse wastes
- Waste disposal/recycling of C&D wastes at the site
- Provision of training for waste manager and site crew
- Details of proposed record keeping system
- Details of waste audit procedures and plan
- Details of consultation with relevant bodies i.e., waste recycling companies, Sligo County Council etc.

There is the potential for hazardous materials to be uncovered, particularly during the demolitions and excavations phases of the project as discussed below:

- **Contaminated Soil** The building works will require excavations to facilitate foundation construction, together with installation of below ground services. Given the greenfield / brownfield nature of the site, there is little potential for the soil to have elements of contaminant contained within it. An initial assessment of the site will be undertaken by OCSC to classify the materials to be encountered on site from a waste soils perspective. The Main Contractor will be responsible for the classification of all material to be removed from site and compliant disposal in accordance with the Waste Management Act 1996 as amended and all relevant Regulations.
- **Fuels/Oils** There will be no site storage of fuels or oils during the demolition, excavation, or construction phases of the project. Provided that these requirements are adhered to, and site crew are trained in the appropriate refuelling techniques, it is not expected that there will be any fuel/oil wastage at the site.

Waste materials generated will be segregated on site where it is practical. Where the on-site segregation of certain waste types is not practical, off-site segregation will be carried out. There will be skips and receptacles provided to facilitate segregation at source. All waste receptacles leaving site will be covered or enclosed. The appointed waste contractor will collect and transfer the wastes as receptacles are filled. Any soil removed off-site will be carried by contractors licensed under the Waste Management Acts 1996 - 2008, the Waste Management (Collection Permit) Regulations 2007 and Amendments and the Waste Management (Facility Permit & Registration) Regulations 2007 and Amendments. Waste arising shall be handled by an approved waste contractor holding a current waste collection permit. All waste arising requiring disposal off-site will be

disposed of at a facility holding the appropriate licence or permit, as required. Written records will be maintained by the contractor(s) detailing the waste arising throughout the construction and demolition phases, the classification of each waste type, the contact details and waste collection permit number of all waste contractors who collect waste from the site and the end destination and waste facility permit or licence number for all waste removed and disposed off-site. Dedicated bunded storage containers will be provided for hazardous wastes such as batteries, paints, oils, chemicals etc., if required.

Records will be kept for each waste material, which leaves the site, either for reuse on another site, recycling, or disposal. A system will be put in place to record the construction waste arisings on site. The Waste Manager or a member of his team will record the following:

- Waste taken for Reuse off-site (i.e., for capping of landfill cells or at another site)
- Waste taken for Recycling
- Waste taken for Disposal
- Reclaimed waste materials brought on-site for reuse.

For each movement of waste on- or off-site, the Waste Manager will obtain a signed docket from the contractor, detailing the weight and type of the material and the source and destination of the material. This will be carried out for each material type. This system will also be linked with the delivery records. In this way, the percentage of construction waste generated for each material can be determined. The system will allow the comparison of these figures with the targets established for the recovery, reuse, and recycling of construction waste and to highlight the successes or failures against these targets.

As is standard practice the scale of the waste production in conjunction with the use of licensed waste disposal facilities and contractors will not cause concern for likely significant effects on the environment.

(f) pollution and nuisances

Noise, vibration, lighting and dust arising from construction activities and construction traffic have the potential for pollution or nuisance.

It is probable that minor impacts of noise pollution during the construction phase will occur. However, plant machinery and motorised vehicles on local roads within the area are not unexpected or out of character. Working hours will be limited to hours set by the planning conditions. Minor impacts identified will occur predominately during the construction phase in terms of construction related noise, dust and traffic. The frequency of impacts will vary throughout the construction phase, but it still not considered to be significant. The minor impacts will be temporary and will not lead to long term residual impacts.

Currently, there is street lighting along Ash Lane and the northern boundary of the site. Proposed lighting within the development has been designed to adhere to the best practice lighting standards provided in the Institute of Lighting Professionals (ILP) guidance document Guidance Note 08/18 – Bats and Artificial Lighting in the UK (2018).

Bat species are not qualifying features of the surrounding European Sites.

Any risk of surface water pollution can be avoided by adherence to best practice Construction and Environmental Management during the construction phase which will ensure that the Proposed Development would not result in pollution of groundwater or surface water.

The Project is primarily for a small residential development. Accordingly, there are no significant expected significant residues or emissions. Aspects of energy efficiency are incorporated into the modern energy efficient design of the buildings.

- (g) the risk of major accidents, and/or disasters which are relevant to the project concerned, including those caused by climate change, in accordance with scientific knowledge.

Standard construction practices will be employed throughout the construction phase to mitigate the potential of any major accidents or disasters from occurring. The Project will result in no particular risk of accidents arising from substances or technologies used. Traffic will be generated during the construction period, but for a temporary and defined period only.

The Project will have a certain amount of construction traffic to facilitate the works. The construction access strategy to serve the site will still need to be developed by the Main Contractor in a manner taking cognisance of the existing road junction and access road of both pedestrian and vehicular traffic on the N16 road adjacent to the site. It is envisaged that construction will be via the existing site entrance at the northwest of the site.

It is envisaged that traffic will be generated for the duration of the works by the Project. This will be from a number of sources:

- Hauling of excavated material off site;
- Hardcore and Small Volumes of Concrete deliveries;
- Deliveries of reinforcement & formwork to site;
- Deliveries of prefabricated structural steel elements if required;
- Deliveries of Timber Products
- Deliveries of building services equipment to site;
- Construction Workers.

Designated parking for construction workers will be provided within the site adjacent to the main site compound(s). The levels of construction traffic will vary during the weeks with peak volumes predicted to be during the following activities:

- Foundations

The foundation excavation work will require hauling of spoil off site. This will occur in tandem with deliveries for concrete and reinforcement for the foundations.

- Concrete pours

Concrete pours will be required throughout the works, with the size/volume of same dependant on the final structural form selected. The concrete works will be required to be carefully planned, sequenced, and managed by the Main Contractor to ensure that works can be undertaken without undue disruption to the neighbourhood.

- Deliveries of Prefabricated structural elements

The selection of the chosen structural form for the roof may necessitate the delivery of prefabricated steel / timber elements. These deliveries will need to be carefully planned, sequenced, and managed by the Main Contractor to ensure that they are undertaken at the appropriate time in the works sequence so as not to cause undue disruption to the neighbourhood.

- Vehicle Maintenance and Refuelling

All site plant is to be inspected at the beginning of each day prior to use. Defective plant shall not be used until the defect is satisfactorily fixed. All major repair and maintenance operations will take place off site. Vehicles will never be left unattended during refuelling. Plant refuelling methodology will be overseen, and methodology agreed with by an ecological Clerk of Works. Only dedicated trained and competent personnel will carry out refuelling operations and plant refuelling procedures shall be detailed in the contractor's method statements.

Construction Phase Traffic Management Plan

The Construction Phase Traffic Management Plan will be prepared by the appointed Contractor and shall identify:

- Primary Contact Name;
- Primary Contact Mobile Phone Number;
- Secondary Contact Name;
- Secondary Contact Mobile Phone Number.

The primary contact shall act as a Liaison Officer with the Local Authority, Gardai, local residents and businesses.

The Construction Stage Traffic Management Plan is to be formulated with reference to the DTO publications "Traffic Management Guidelines Manual" and the Traffic Signs Manual". The document should contain information on the following issues: • Temporary signage (type and location);

- Temporary road markings (type and location);

- Temporary changes to existing signage and markings required to enable a road closure within the estate, if applicable;
- Location of proposed temporary traffic signals, if applicable; • Arrangements for local access and pedestrian access;
- Proposed lighting arrangements;
- Proposals for the use of flagmen;
- Proposals to erect barriers;
- Proposals for pedestrian movements including those of mobility impaired affected by the works;
- Arrangements that will apply during the road works

Site Set Up, Security and Hoarding Lines

Temporary hoarding lines and site security will be set up to site boundary lines, as required for the duration of the works. The Contractors traffic management plan will identify staging areas, delivery of materials, take account of pedestrians on the pavements north of the site adjacent to the N16 Ash Lane Road, strategy for any large concrete pours, removal of demolition waste material, traffic routes etc. Access gates will be operated by a flagman who will divert incoming / outgoing vehicles / pedestrians and general traffic as necessary.

- (h) the risks to human health (for example, due to water contamination or air pollution).

The nature of the Project and the engineering provisions will not lead to the likelihood of any risk to human health. The Project is of standard construction method and of appropriate scale and does not require the use of particular substances or use of technologies which of themselves are likely to give rise to significant environmental effects.

The Project is located within Sligo town. There are no operational impacts associated with this residential development that would be likely to cause significant effects in terms of human health. The Project will provide accommodation for 21 persons once complete and fully occupied. This population can be accommodated within this area and there is a sufficiency of physical and social infrastructure in the area to support this development such as transport links, schools, universities, churches, playing fields and local shops.

4.7.2 Location of the Proposed Development

The location of the Project is described in Section 2 above.

The environmental sensitivity of geographical areas likely to be affected by the Project, with particular regard to—

- (a) the existing and approved land use

The existing and approved land is a brownfield / greenfield site and considered of low ecological significance. There was no protected species or suitable habitat (devil's bit scabious – *Succisa pratensis*) for the marsh fritillary (*Euphydryas aurinia*) butterfly detected during the site walkover by the ecologist in May 2024 (Appendix II- AA screening report). However, boundary vegetation would provide habitats for many species of flora and fauna. The site is currently being used for the same purposes as the Project. Urban amenities and residential dwellings are common in the local area. There will be no significant impact on the local ecology or agricultural practices as a result of this development.

The use of the land for the same purposes as currently exist is in a manner compatible with the zoning designation and is entirely appropriate. The site is zoned 'existing residential areas' as per the CDP/SEDP and this zoning objective clearly allows for redevelopment/regeneration of such areas. This zoning objective is further supported by written objectives in the Pan which supports the redevelopment of existing residential areas. Having regard to the above, it is considered that the proposed Project is consistent with the zoning objectives for the area.

Once constructed, the operation phase will provide an important material asset and upgrade of housing for approximately 21 persons. The demand on water services, power, telecommunications and transport infrastructure could increase slightly as a result of the development; the impact on these material assets will not be significant and can be facilitated within planned demand loads for the area.

(b) the relative abundance, availability, quality and regenerative capacity of natural resources (including soil, land, water and biodiversity) in the area and its underground.

The proposal is not of such a scale that it would impact significantly upon the natural resources in this geographical area. The main body of the site (BL3: Artificial Surfaces, ED3: Recolonising bare ground, GA1: Improved Agricultural Grassland) is of low ecological significance. Enhanced native (sourced in Ireland only and not imported) tree planting is proposed around boundary lines.

(c) the absorption capacity of the natural environment, paying particular attention to the following areas:

(i) wetlands, riparian areas, river mouths;

The proposal is not of such a location or scale that it would impact upon the absorption capacity of this aspect.

(ii) coastal zones and the marine environment;

The proposal is not of such a location or scale that it would impact upon the absorption capacity of this aspect.

- (iii) mountain and forest areas;

The proposal is not of such a location or scale that it would impact upon the absorption capacity of this aspect.

- (iv) nature reserves and parks

The proposal is not of such a location or scale that it would impact upon the absorption capacity of this aspect.

- (v) areas classified or protected under legislation, including Natura 2000 areas designated pursuant to the Habitats Directive and the Birds Directive and;

The Appropriate Assessment Screening Report indicates no significant effect anticipated on any Natura 2000 sites or other designated sites.

- (vi) areas in which there has already been a failure to meet the environmental quality standards laid down in legislation of the European Union and relevant to the project, or in which it is considered that there is such a failure;

This does not apply.

- (vii) densely populated areas;

Given the quantum of units and proposed density, there will be no environmental impact as a result of increased population.

- (viii) landscapes and sites of historical, cultural or archaeological significance.

The site lies outside the Zone of Archaeological Potential as per the Record of Monuments and Places (RMP). There are no Protected Structures adjacent to the site.

There are no National Inventory of Architectural Heritage (NIAH) sites within the boundary of the Project.

The Project is not expected to have any significant impacts on archaeology, architectural or cultural heritage.

4.7.3 Characteristics of Potential Impacts

- (a) the magnitude and spatial extent of the impact (for example, geographical area and size of the population likely to be affected)

The magnitude of the proposal (0.998 ha) will upgrade existing housing and services for a small housing development. The area of the proposed works is not an expansion of the existing site. The Project is for 3 residential units, associated landscaping including parking/bays for each house. There are 3 no. dwellings in two 2 storey blocks: 1 block of 2 semi-detached dwellings and 1 detached house. The total number of bedrooms will be 9. Each house is a 3-bed unit, (same plan) but one of the bedrooms has facility for 3 beds, catering for 7 persons per house. Estimate facilities for 21 persons.

The scale of the Project will not extend the existing area. The development will provide serviced residential accommodation. The extent of the impact will be confined to that area in the immediate environs of the subject site and will be limited primarily to the residential population in the vicinity.

(b) the nature of the impact

The impact will be improved accommodation for the existing residential population with the provision of specific type of housing. The impact will provide improved housing conditions in a time of severe shortage and in accordance with the Sligo County Development Plan core strategy and as identified above in Section 4.

The proposed refurbishment of the existing units will improve the appearance of the units and will therefore have a positive impact in terms of visual amenity. Otherwise, the main additions to the site are the proposed new walls and the access road. In this regard, it should be noted that the subject site is very well screened by existing vegetation to the north and rising topography to the south.

Given that the proposed new structures are not significant in scale, and that the subject site is well screened from surrounding vantage points, it is considered that there will be minimal visual impact.

Having regard to the above, it is considered that the development is of an appropriate scale and design and can be accommodated on the subject site without adverse impacts on the visual amenity of the area.

There are no surrounding residential properties in close proximity to the site and therefore there will be no adverse impact on the residential amenity. In terms of the amenities of the prospective occupants, it is considered that the proposed refurbishment of facilities will generally result in significantly improved amenities.

There is no significant loss of open space as a result of the works. It should be noted that the central green area on the site (to the south and end of the access road) will

be retained at an area of 0.0521 hectares or 12.46% of the site area (i.e. the area to the east of the proposed new boundary wall which divides the site). When other peripheral green areas are included (i.e. to the north and west of new road), the overall green area on site increases to 0.1 hectares or 24% of the site area.

The open space areas on site are therefore well in excess of the 10% required for such sites as per the SEDP requirements.

Vehicular access to the site is currently provided to the site via the N16 Ash Lane.

Standards for entrances are set out in section 16.6.2 of the SEDP. Within the 50 kilometer per hour speed zone, sightlines of 70 metres are required. This has been satisfactorily demonstrated in the details and drawings included with the application. Furthermore, it is not considered that the development would impact on SCC/TII intentions to further develop the N16 National Primary Route.

Having regard to the above, it is considered that Project would be consistent with the policies and objectives of the Development Plan for the area and with the proper planning and sustainable development of the area.

- (c) the transboundary nature of the impact,

This does not apply.

- (d) the intensity and complexity of the impact,

The proposal in itself is not of a complex nature such that it warrants an EIAR.

- (e) the probability of the impact

Should approval be given, the development will proceed.

- (f) the expected onset, duration, frequency and reversibility of the impact,

The principal impacts associated with the proposal will most likely be concentrated during the construction phase. The Project will be permanent.

- (g) the cumulation of the impact with the impact of other existing and/or development, the subject of a consent for the Project for the purposes of section 172(1A) (b) of the Act and/or development the subject of any development consent for the purposes of the Environmental Impact Assessment Directive by or under any other enactment, and this is addressed in section 5.7.1.2 (Wider Area) above.

- (h) the possibility of effectively reducing the impact.

On the issue of the built structures, it is considered that the proposal will not visually change the existing landscape as this site is currently providing accommodation for residents. The design put forward is for three improved residential houses which have a high standard architectural design, infrastructure and associated lighting and landscaping.

In terms of wastewater treatment, it is considered that the impact upon the existing sewage system will be fully scoped having regard to the requirements of Irish Water. The floor levels of the Project will be constructed above the 100 year predicted flood events.

Foul Water and Storm Drainage

The development will involve connection to the existing Irish Water Foul Sewer network with Storm water discharged, via a petrol interceptor, attenuation tank, and flow control hydro brake, to an existing Local Authority Storm Water pipe network.

Watermain

The works will also involve diversion of the existing Irish Water, watermain.

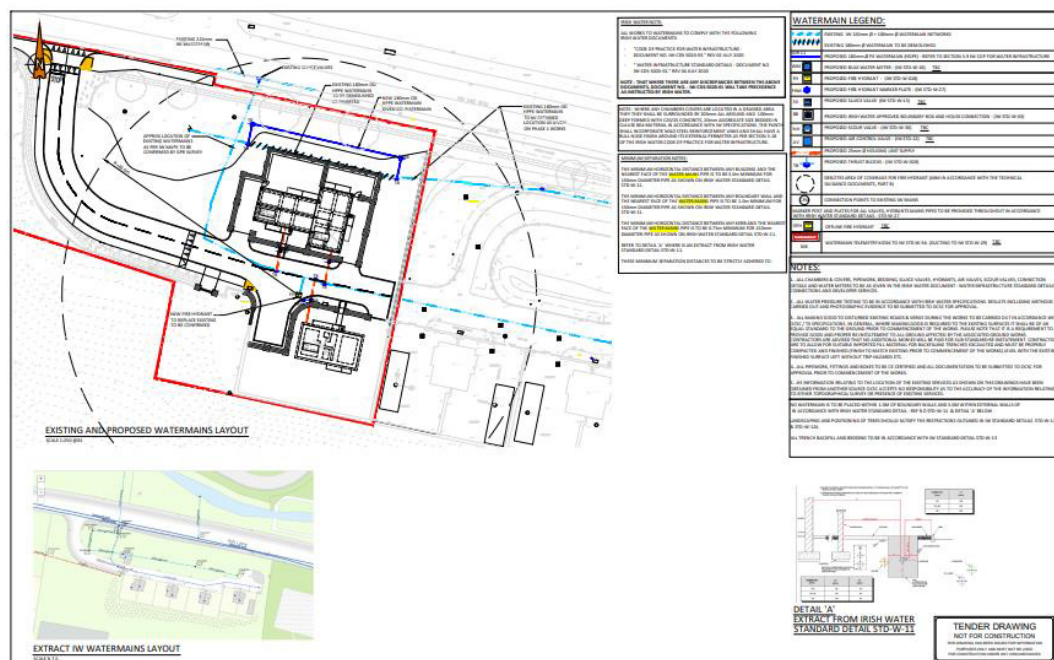


Figure 4.1 Existing and Proposed Watermains layout (extract (extract from Construction Methodology and EMP, 2023)

The Construction Methodology and EMP report (2023), Appendix I outlines in full detail the existing and proposed watermains for this Project. The water main has been designed in accordance with the Code of Practice for Water Infrastructure.

4.8 Inter relationship with above factors

All details have been outlined as required under the 'Environmental Impact Assessment (EIA) Guidance for Consent Authorities Regarding Sub-Threshold Development' groups criteria for deciding whether or not a Project would be likely to have significant effects on the environment under three main headings which corresponded to the updated Schedule 7. It is considered that any identified impact above is not considered adverse, nor would any impact cumulatively result in a likely significant adverse effect on the environment.

The supporting AA Screening Assessment for this Project has *shown there will be no likely significant effects to any European Site during the construction or operations phases of the Proposed Development. Works will be contained within the site; it is anticipated that there will be no in-combination impacts from any local planning applications.*

5 CONCLUSION

This EIA Screening Report has been prepared in relation to a Part 179A residential development on land situated at Ash Lane, Co. Sligo in accordance with Article 120 (1) (b) of the Planning & Development Regulations, 2001 as amended, having regard to the following:

- The location, size and nature of this serviced site located in an urban setting and distanced from protected and/or environmentally sensitive sites.
- The Project is below the threshold of a mandatory EIA which would require an Environmental Impact Assessment Report (EIAR)
- The modest scale and quantum of the residential development proposed and integration with the adjoining community and Sligo town.
- The description of possible effects on the environment are not considered significant and therefore further assessment pursuant to the Planning and Development Regulations 2001 as amended are not considered necessary.
- An Appropriate Assessment Screening has been carried out. It concluded that the Project will not cause direct or indirect impacts on any Natura 2000 sites, and that an Appropriate Assessment is not required.

It is considered that a sub-threshold EIAR is not required for the Project as the proposal is below the thresholds of Schedule 5 of the Planning and Development Regulations.

All standard practices will be employed throughout the construction and operation phase of the development to ensure that the Project will not create any significant impacts on the quality of the surrounding environment.

6 REFERENCES

Biodiversity Maps, <https://maps.biodiversityireland.ie/Map>

EPA (2017) Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (Draft). Environmental Protection Agency.

EPA Maps, <https://gis.epa.ie/EPAMaps/AAGeoTool>

EU (2017) Environmental Impact Assessment of Projects, Guidance on Screening (Directive 2011/92/EU as amended by 2014/52/EU).

Flood Maps, <https://www.floodinfo.ie/map/floodmaps/>

Geological Survey Ireland Spatial Resources (GSI),

<https://dcenr.maps.arcgis.com/apps/MapSeries/index.html?appid=a30af518e87a4c0ab2fbde2aac3c228>.

APPENDIX I

CONSTRUCTION METHODOLOGY AND EMP REPORT

GLENVIEW HOUSING PHASE 2

PROJECT NO. S603

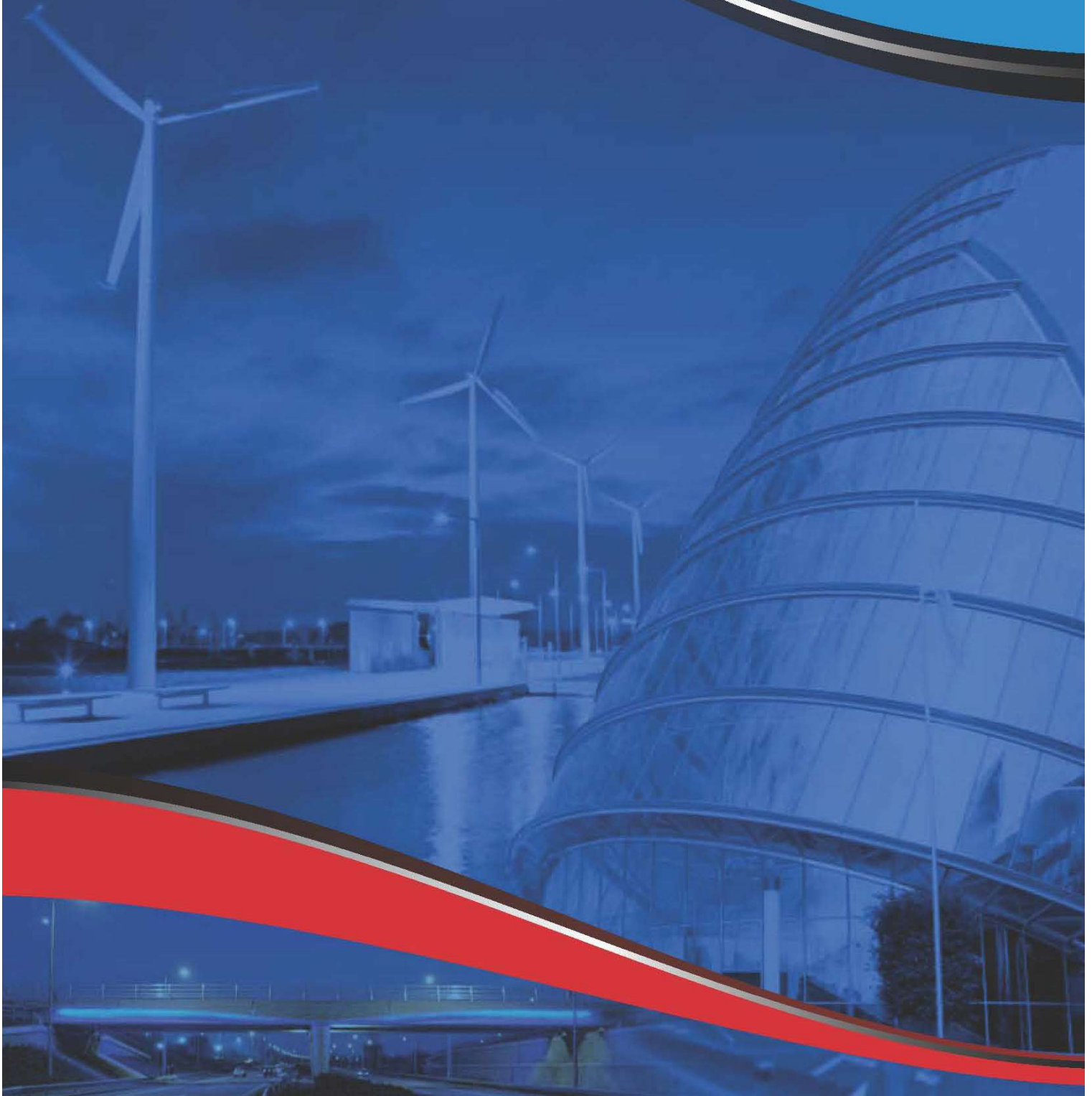
31st August 2023



OCSC

O'CONNOR | SUTTON | CRONIN

Multidisciplinary
Consulting Engineers



CONSTRUCTION METHODOLOGY AND EMP

GLENVIEW HOUSING PHASE 2
For Sligo County Council

PROJECT NO. S603
31st August 2023

CONSTRUCTION METHODOLOGY AND EMP

for

**Proposed Development at
Glenview Park Ash Lane Sligo**



OCSC

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Consulting Engineers

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DOCUMENT CONTROL & HISTORY

OCSC Job No.: S603	Project Code	Originator	Zone Volume	Level	File Type	Role Type	Number	Status / Suitability Code	Revision
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CONSTRUCTION METHODOLOGY AND EMP

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1 INTRODUCTION

1.1 Appointment

O'Connor Sutton Cronin & Associates (OCSC) have been appointed by *Sligo County Council (SCC)* as part of an integrated Design Team led by SCC Housing Capital Department to undertake the Civil & Structural design for the proposed Glenview Park Group Housing development at Ash Lane Sligo. This preliminary Construction Methodology and Environmental Management Plan statement has been prepared in support of the proposed works.

1.2 Administrative Jurisdiction

The proposed development is in the jurisdiction of Sligo Co Council.

1.3 Existing Site Overview

The site for the phase 2 development is located south of Ash lane in an existing halting site outlined in Red in Figure 1 below:



Figure 1 - Site Location ([Google](#) Maps)

The existing halting bay site includes 2 No halting bays and 1 No Caretakers unit with associated services with an existing entrance from the N16 Ash Lane Road. Refer to Figure 2 below.



Figure 2 – Topographical Site Survey

1.4 Proposed Development Context

The proposed works involve the demolition of the existing halting bay service units and the construction of 3 No residential housing units (1No detached and 2 No, semi-detached). It is also proposed to construct new boundary walls

within the site to facilitate subdivision of the housing units. The proposed works also include upgrade works to an existing vehicular entrance and access road to the development site at the northwest of the site, off the N16, Ash Lane Road and upgrade works to the existing access road into the development and all associated site development and drainage works. The development will involve connection to the existing Irish Water Foul Sewer network with Storm water discharged, via a petrol interceptor, Attenuation Tank, and flow control hydro brake, to an existing Local Authority Storm Water pipe network. Existing boundary block walls are to be retained within the proposed development. The redline boundary given on the drawings indicate the extents of site works for the proposed development. Figure 3 below indicates the extent of work involved.

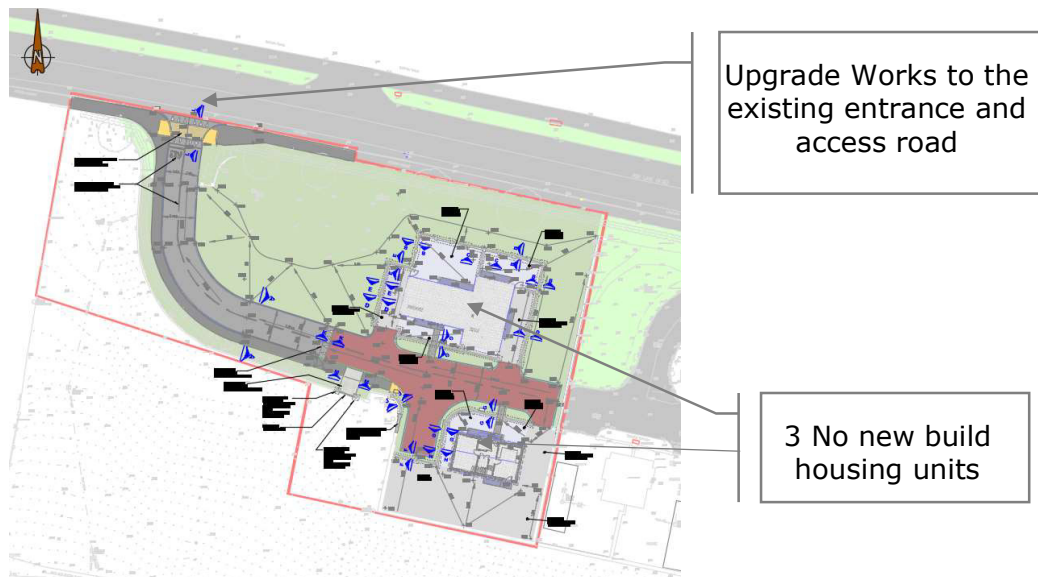


Figure 3 – Extent of Works Proposed

2 SCOPE OF CONSTRUCTION AND ENVIRONMENTAL MANAGEMENT PLAN

This report has been prepared as an outline construction strategy, setting out construction method and activities required for the demolition of the existing halting site units and construction of 3 no new residential units This outline plan

seeks to demonstrate how works can be achieved in a logical, sensible, and safe sequence with the incorporation of specific standard procedure measures to the potential impact on people and the environment. This methodology will be required to be interrogated and developed by the Main Contractor prior to commencing works on site. It is noted that this document should be viewed as an outline plan with the fully detailed Construction and Environmental Management Plan to be developed by the appointed main Contractor in consultation with Sligo Co Council Planning Authority prior to works commencing on site. The plan also demonstrates proposed construction traffic routes and areas for construction traffic set down and contractors compound areas.

Discussed in the following sections are:

- Construction Management issues
- Pre-Construction Activities
- Foundations & Substructure
- Services
- Superstructure
- Construction access routes
- Construction compounds

3 CONSTRUCTION MANAGEMENT

3.1 Overview

The works outlined in this methodology narrative outline the potential methods of construction available to the Main Contractor. The narrative indicates the prospective progress and explains the associated activities and their interdependencies and how the project will be delivered. There are a number of constraints and requirements which have been clearly considered by the Project Team throughout the design process-these will need to be further developed upon by the appointed Main Contractor prior to works commencing on site.

In broad terms, the project will be sequenced as follows:

- Pre-construction activities; access/ site set up/ hoarding;
- Site Clearance and demolition works;
- Concrete Strip Foundations;
- Piled Foundations
- Site services;
- Construction of Superstructure;
- Construction of Retaining walls;
- Mechanical & electrical works;
- Hard and soft landscaping;
- Completion;

3.2 Project Delivery

The project is proposed to be constructed in a single phase incorporating all new build units, new retaining walls, upgrade works to existing road junction / access road and storm water network including attenuation tank. The works will also involve diversion of the existing Irish Water, watermain. It is proposed to commence in late 2023 and take approximately 12 months to complete.

3.3 Site Management

The Main Contractor will be responsible for overall site management for the duration of the proposed works. Discussed below are a number of areas which the Main Contractor will be required to address within their Construction Environmental Management Plan and during the works.

3.3.1 Health & Safety

The Main Contractor will act as PSCS, must progress their works with reasonable skill, care, diligence and to, at all times, proactively manage the works in a manner most likely to ensure the safety and welfare of those carrying out construction works, interacting stakeholders, adjoining residents, and the public. Contractors are further required to ensure that, as a minimum, all aspects of their works and project facilities comply with good industry practice, statutory instruments, and all necessary consents. These will be further expanded and developed within the Main Contractor's Construction Management Plan in relation to Health & Safety requirements.

3.3.2 Hoarding & Site Security

The construction site will require a site compound located within the redline boundary and perimeter hoarding by the Main Contractor following possession of site to enclose the proposed works. The overarching consideration in all elements of the site set-up will be to ensure the works can be undertaken in a safe manner for members of the public, the Main Contractor and their staff as well as protecting the surrounding environment.

The Main Contractor will commence by erecting suitably robust hoarding around the site perimeter. The hoarding must ensure segregation of the general public from the proposed works areas. This will typically take the form of a standard Harris fence type hoarding. Appropriate access points will be provided to the site through the hoarding.

The proposed hoarding alignment for the main construction phase of the works is indicatively shown in dashed purple line in Figure 4 below. It is noted that this plan layout may be altered locally during the works to facilitate different works such as foundations, works to existing road junction, craneage operations, drainage and the like.

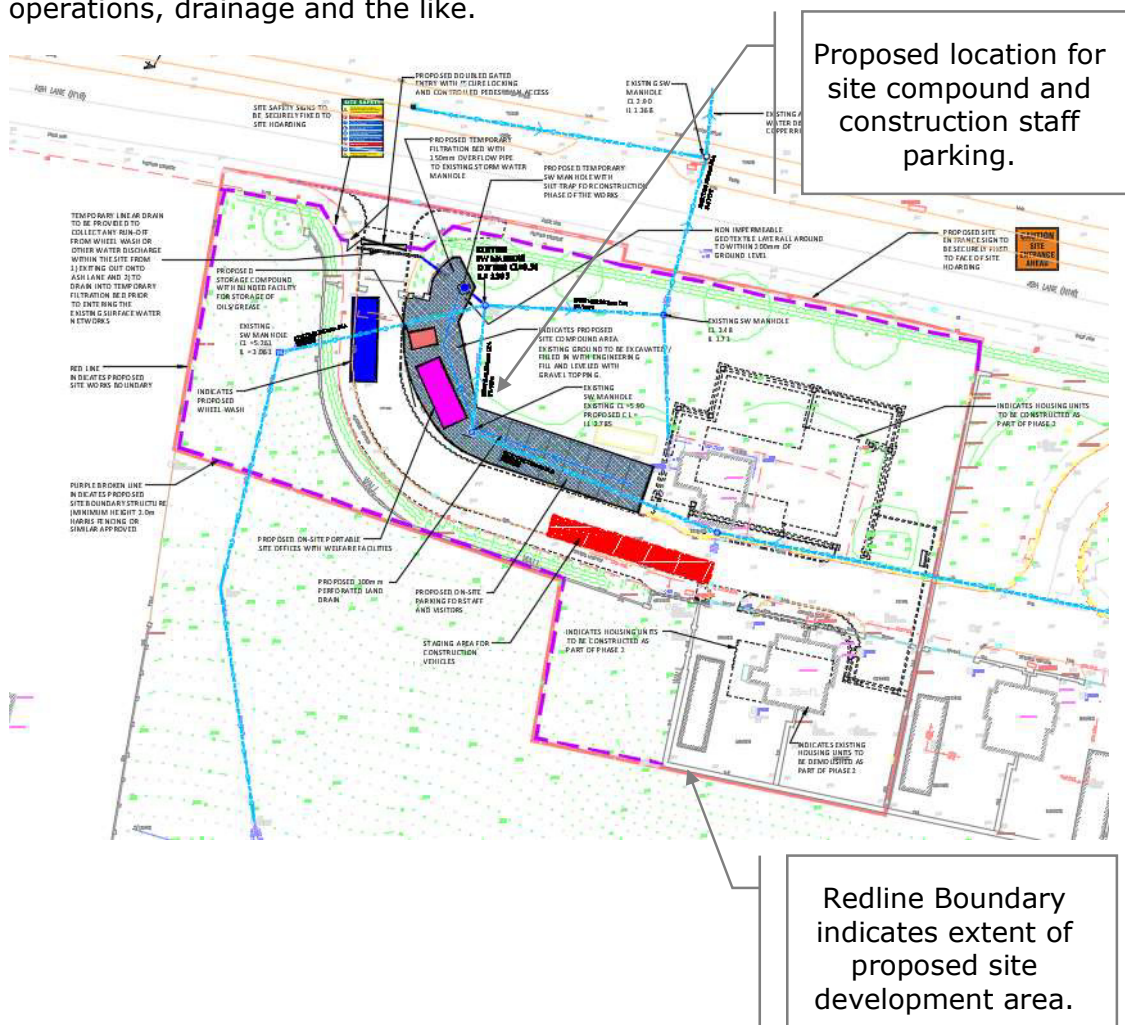


Figure 4 – Proposed Site Hoarding adjacent to the proposed works – Broken Purple Line.

The Main Contractor will be responsible for the security of the site for the duration of the works. The Main Contractor will be required to:

- Install and maintain adequate site hoarding to the site boundary with adequate controlled access and egress points;
- Maintain site security staff at all times;
- Install secure access in the form of turn-styles and gates for staff;
- Ensure restricted access control is maintained to the works;
- Operate a site induction process for all site staff and visitors;
- Ensure all staff have current 'Safe Pass' and Construction Skills Cards;
- Monitor and record all deliveries to site and all material/waste taken off site for disposal to appropriate licences facility.

All staff and operatives will be fully inducted into the security, health and safety and logistic requirements on site.

3.3.3 Site Compound

The extent of compound and facilities required by the Main Contractor will vary throughout the duration of the works. The initial phase of works involving site set-up, condition surveys, diversions of services (where and if required) and commencement of siteworks are likely to have limited requirements for Contractor's facilities. As the works advance, the Main Contractor's compound and facilities will be required to be enhanced. It is envisaged that such facilities will be provided within the hard and soft landscaped portions of the development, with locations to be selected by the Main Contractor to best suit their works methodologies and sequencing in agreement with Sligo County Council. As the works near completion, the requirements for facilities will be reduced and thus will allow the Main Contractor to remove sections of the compound to be able to complete the hard and soft landscaping works. Possible locations for the Contractors compounds are to be agreed.

3.3.4 Site Access & Egress

The key driver in the provision of site access and egress is to ensure that safety of the public and the Contractor's staff is maintained at all times. It is envisaged that access will be via the existing site entrance located at the northwest of the site off the N16 Ash Lane Road, shown as follows in Figure 5:



Figure 5 – Vehicular and Pedestrian Construction Routes

3.3.5 Deliveries to Site

Construction deliveries to site will make use of the access and egress point indicated in Figure 5 above. A "just in time" approach will generally be required for delivery of particular materials such as concrete and prefabricated structural elements. That is to say that deliveries of materials will be planned, sequenced, and programmed to ensure that materials as they are required on site. Works requiring multiple vehicle deliveries to site, such as concrete pours, should be planned well in advance. The Main Contractor will be responsible for ensuring that this will not impact upon the movement of the public, pedestrians or vehicles

using the existing N16 Ash Lane traffic route. The Main Contractor will be required to provide a flagman to direct construction vehicles entering/exiting the site and manage the interaction between public and construction vehicle movements in a safe manner as required.

3.3.6 Storage of Materials on Site

There is scope for some storage of materials around the site. Any materials stored on site will be done so in a safe manner. Any fuels or chemicals on site will be stored within double sealed tanks within bunds using standard practice procedures. A dedicated plant refuelling point will be set up on site. All fuels and chemicals required to be stored on site will be clearly marked.

3.3.7 Removal of Materials from Site

The removal of materials from site will primarily be undertaken during the initial stages of the works. This will involve the removal of excavated material to facilitate the construction of the foundations and attenuation tank envisaged to be required. This phase of works will need to be managed effectively to ensure that no queuing of trucks occurs on public access routes. All trucks will have a built-on tarpaulin that will cover excavated material as it is being hauled off site and wheel wash facilities will be provided at the site egress location. All vehicles will make use of the access and egress points noted in Section 3.3.4 above. The Main Contractor will be required to provide a flagman to direct construction vehicles entering/exiting the site and manage the interaction between public and construction vehicle movements in a safe manner around the proposed construction vehicular and staff routes.

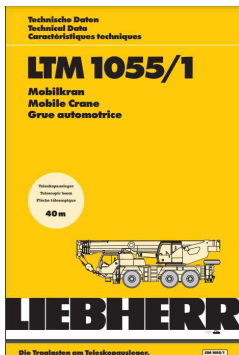
Earthworks will take place during periods of low rainfall to reduce run-off and potential suspended solids generation.

Wheel washers and dust suppression are to be employed on site with regular plant maintenance to ensure minimal sediment build of sediment on roads to minimise risk to surface water drainage.

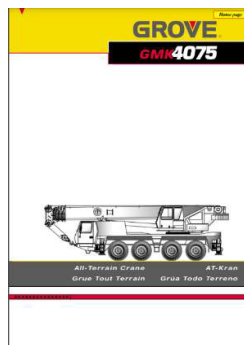
3.3.8 Craneage

The works may require the use of cranes on site. The final chosen structural form of the proposed building works will determine the likely type of cranes, the type and size of crane, mobile cranes or otherwise would be used for the installation of the superstructures and concrete pours. Crane bases may be required and size and location to be advised.

Crane booms vary in length from about 10m to 60m and the payload versus outreach depends on the crane deployed for the task.



5Tonnes @ 20m Outreach



7 Tonnes @20m; 5 Tonnes @24m.

3.3.9 Water Supply

The Contractor will require a water source for the duration of the works. Water will be required for:

- Contractor's welfare facilities;
- Vehicle washdown (use recycled water where feasible);
- Dust suppression (as applicable);

It is proposed that the Main Contractor will make use of existing water connections on the site for the purpose of water supply during the works.

3.3.10 Groundwater & Surface Water Control

The Contractor will be required to prepare and implement a site wide Surface Water collection and disposal plan that fully details all measures for groundwater and surface water control for agreement with the local authority prior to discharge of same from site. The extent of surface water will be minimal given the extent of the works. Details of the proposed collection, treatment, and discharge of surface water during the construction phase is given on drawing No S603-OCSC-XX-XX-DR-C-0606-S2-P01 – refer to Appendix A. The following Figure 6 is an extract from this drawing.

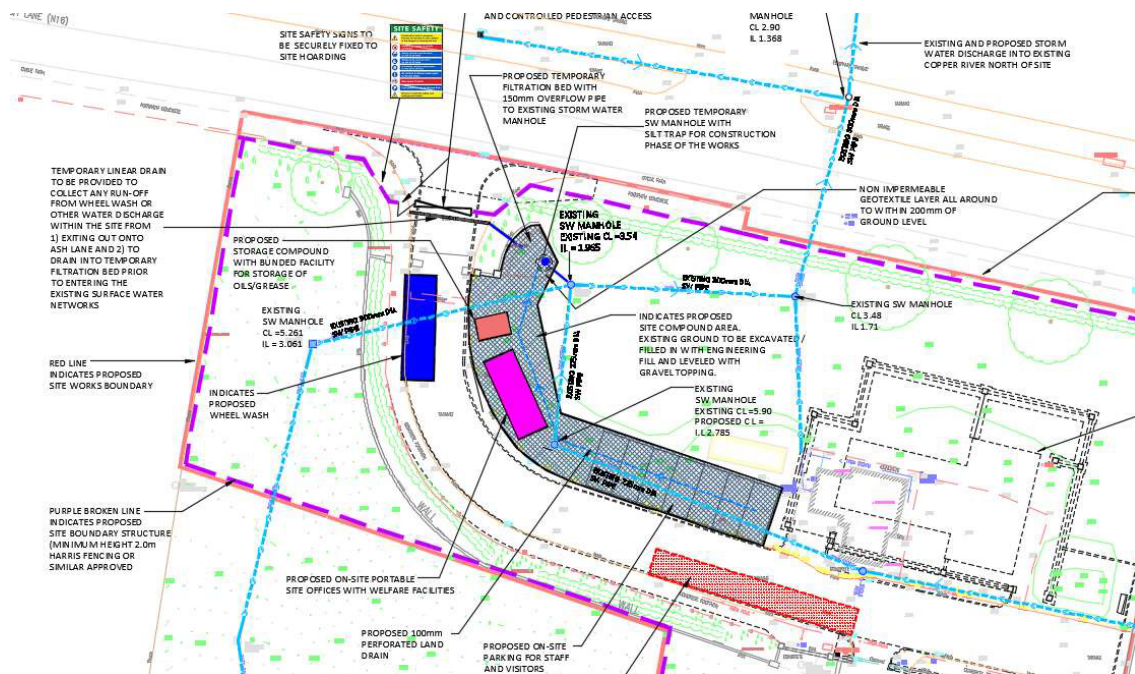


Figure 6 – Surface Water Disposal during Construction

Surface Water will be collected via a perforated drain constructed within the engineering fill (location of the site offices, oil compound and staff parking) and a temporary linear drain at the exit to the existing site which will flow by gravity into a filtration bed. Water is to discharge from the Filtration bed via a temporary

Silt Trap Manhole into an existing local authority storm water pipe network. Refer to Figure 7:

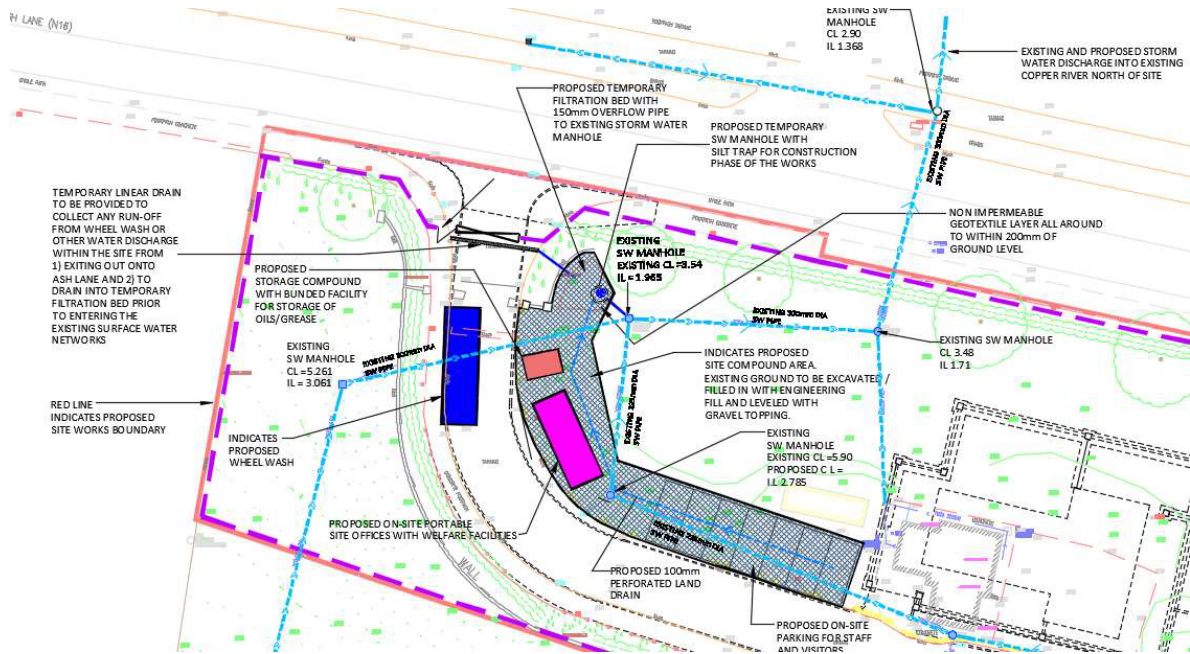


Figure 7 – Surface Water sedimentation and pollutant removal process.

The existing storm water pipe network discharges into the Copper River to the North of the site. The stone engineering fill, linear drain, lined stone filtration bed and silt trap manhole will provide the collection, reduction in flow velocities and filter out sedimentation / pollutant's removal during the construction phase of the works preventing any unclean water discharging into the Cooper River north of the site. Refer to drawing No S603-OCSC-XX-XX-DR-C-0606-S2-P01 which details the surface water collection, treatment, and discharge from site – refer to Appendix A.

If ground water is encountered during excavations, the water will be pumped from the excavation and discharged through a pumped main into the filtration bed.

The ground investigation carried out by Causeway Geotech indicates that groundwater strikes vary throughout the site. Refer to Figure 8 & Table 1 below:

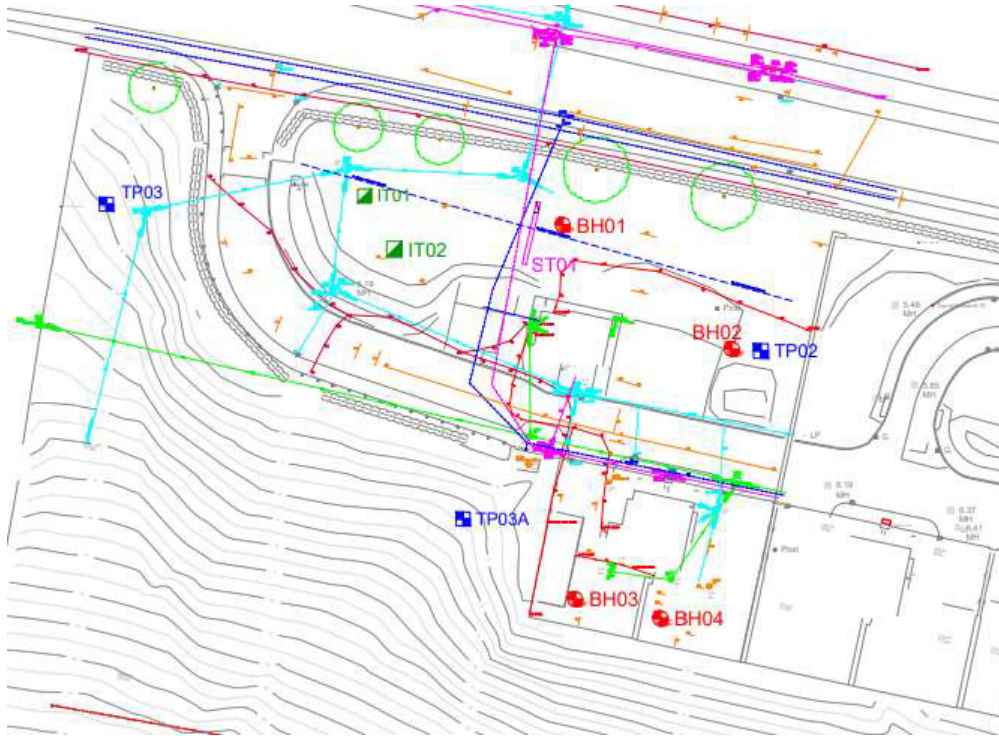


Figure 8 – Ground Investigation Layout

Details of the individual groundwater strikes, along with any relative changes in levels as works proceeded, are presented on the exploratory hole logs for each location.

Groundwater was encountered during the ground investigation as water strikes shown in Table 1.

Table 1. Groundwater strikes encountered during the ground investigation.

Location	Depth (mbgl)	Comments
BH01	3.00	Water rose from 3.00m to 2.85m over 20 minutes
IT02	0.65	Fast seepage

Groundwater was not noted during drilling of BH02. However, it should be noted that the casing used in supporting the borehole walls during drilling may have sealed out additional groundwater strikes and the possibility of encountering groundwater during excavation works should not be ruled out.

Groundwater was not noted during excavation of any of the other pits or trenches.

3.3.11 Hours of Work

It is envisaged that the hours of work for the project will be as follows, unless conditioned otherwise:

- Monday to Friday 7.00am to 7.00pm
- Saturday 8.00am to 2.00pm
- Sundays and Bank Holidays No activity on site

We note that certain activities may be required, subject to prior agreement with Sligo Co Council to be undertaken outside of these working hours.

3.3.12 Public Awareness of Ongoing Works

The site is located adjacent to the existing N16 road, west of Sligo Hospital & ATU Sligo. The Main Contractor will be required to ensure that all agents, sub-contractors, and suppliers act in a manner to minimise disruption to existing vehicular and pedestrian traffic. Construction staff will be encouraged to remove all Personal Protective Equipment (PPE) and use wash down facilities before leaving the site.

The contractor will be responsible for keeping people informed of site operations, through site signage.

3.3.13 Environmental Management

The appointed Contractor will be required to be accredited with ISO 14001 Environmental Management Systems.

3.3.14 Dust

A Dust Minimisation Plan will be formulated for the construction phase of the project. Dust prevention measures shall be included for control of any site airborne particulate pollution. The Contractor shall put in place a regime for

monitoring dust levels in the vicinity of the site during the works using the Bergerhoff Method. The minimum criteria to be maintained shall be the limit specified by the environmental Protection Agency (EPA) for licensed facilities in Ireland which is 350mg/m²/day as a 30-day average. The Contractor shall continuously monitor dust over the variation of weather and material disposal to ensure the limits are not breached throughout the project.

The level of monitoring and adoption of mitigation measures will vary throughout the construction works depending on the type of activities being undertaken and the prevailing weather conditions at the time. Additional monitoring and mitigation such as damping down of earth mounds on site would be undertaken if the prevailing weather conditions are dry and windy. It is noted that the stockpiling of excavated material on site is to be minimised with an immediate removal of excavated materials.

Where soil is to be stockpiled it is to be done within the site boundary confines.

3.3.15 Dirt

There will be small volumes of traffic generated by aspects of the construction works, particularly during the excavations and groundworks phase, it shall be a requirement that the Contractor shall ensure, where appropriate:

- A wheel wash facility shall be provided at each egress point from the site.
- All vehicles shall be required to pass through the wheel wash facility before exiting the site to the public & private road networks. The wheel wash must be kept in place and used throughout the critical dirt generating activities of the construction works.
- A temporary linear drain will be located downstream of the wheel wash facility to ensure no water use in the cleaning process exist the site and is instead diverted into the proposed filtration bed given on

drawing No S603-OCSC-XX-XX-DR-C-0606-S2-P01 – Refer to Appendix A.

- Road sweepers shall be retained for the duration of the construction works with an increase in cleaning during the critical dirt/dust generating works. Regular road drain clearing will be implemented.
- Water supplies shall be recycled for use in the wheel wash. All surface waters shall be drained through appropriate pipe networks and filter material prior to discharge from the site. Refer to drawing No S603-OCSC-XX-XX-DR-C-0606

3.3.16 Noise

We do not envisage any site operations that will cause excessive noise over and above normal construction activities. The Contractor shall be required to monitor baseline noise levels at the site prior to commencement of the project, with a noise monitoring regime being developed for the duration of the construction works on site. Variation of noise levels from those experienced as part of everyday life in the area can result in disruption. The Contractor shall implement measures to minimise and mitigate noise levels during construction. Specifically, noise levels shall be kept below levels identified in Table 2 over or if further limits as imposed by the Local Authority. Peak noise levels outside of the one-hour dBA measurement shall be in line with HAS guidelines.

Period over which criterion applies		Noise Impact Criterion ($L_{Aeq, 1hr}$)
Monday to Friday	Day 07:00 to 19:00	75dBA
	Evening: 19:00 to 22:00	60dBA*
	Night 22:00 to 07:00	The higher of 45dBA of the ambient level*
Saturday: Day 08:00 to 14:00 (work outside these hours no higher than 45dB of ambient noise level)		70dBA
Sundays and Bank Holidays	Day 08:00 to 14:00	60dBA*

Note-*Construction activity at these times, other than that required for emergency works, will require the explicit permission of the relevant local authority.

Table 2 – Noise Limit Criteria

Plant machinery will be chosen to avoid significant low-frequency noise emissions which increases nuisance potential to Bats in surrounding areas. Noisier plants will be positioned to optimise screening by other plant machinery. Plant machinery will be turned off when not in use.

3.3.17 Condition Surveys

Condition surveys of the existing halting site units and areas adjoining the works shall be undertaken by a specialist survey company engaged by the Main Contractor prior to any works commencing on site. The survey company will record, within a Condition Report using photographs and sketches, the current structural condition of the halting site units.

3.3.18 Vibrations

Vibration monitoring (as a minimum) of the following areas shall be carried out for the duration of the works:

Vibration monitoring stations should continually log vibration levels (including associated frequency) using the Peak Particle Velocity parameter (PPV, mm/s) in the X, Y and Z directions, in accordance with BS ISO 4866: 2010: Mechanical vibration and shock – Vibration of fixed structures – Guidelines for the measurement of vibrations and evaluation of their effects on structures. Vibration monitors, of both aural and visual type, with real time outputs to be located at agreed points.

The mounting of the recording equipment to the vibrating structure (or surface supporting sensitive equipment) shall comply with BS ISO 5348: 1998: Mechanical vibration and shock – Mechanical mounting of accelerometers. In summary, the following ideal mounting conditions apply:

- The recording equipment and its mountings should be as rigid as possible;
- The mounting surfaces should be as clean and flat as possible;
- Simple symmetric mountings are best, and;

- The mass of the mounting should be small in comparison to that of the structure under test.

The vibration limits for the duration of the construction works shall be set in line with the vibration criteria to be adopted at nearby sensitive on-site historical properties to avoid cosmetic damage, as taken from the German Standard DIN 4150-3 (1999-02) *Structural Vibration – Effects of vibration on structure*.

Traffic light system to be in place consisting of:

- **Green**-vibrations below all threshold limits-OK to proceed;
- **Amber**-vibrations exceed first threshold limit (2/3rds of limit)-Stop and check;
- **Red**-vibrations exceed second threshold-Stop and action.

3.3.19 Harmful Materials

Harmful materials will be stored remote from the site works for use in connection with the construction works only. The following on site measures will be included for the works to prevent any spillages of fuels.

- Designation of bunded refuelling areas on site;
- Provision of spill kit facilities across the site and personnel trained in its use;
- Where mobile fuel bowsers are used, the following measures will be taken:
 - Any flexible pipe, tap or valve will be fitted with a lock and will be secured when not in use;
 - The pump or valve will be fitted with a lock and secured when not in use;
 - All bowsers to carry a spill kit and operatives must have spill response training;

- Portable generators or similar fuel containing equipment will be placed on drip trays.

In the case of drummed fuel or other potentially polluting substances which may be used during construction, the following measures will be adopted:

- Secure storage of all containers that contain potential polluting substances in a dedicated internally bunded chemical storage cabinet unit or inside a concrete bunded area;
- Clear labelling of containers so that appropriate remedial measures can be taken in the event of a spillage;
- All drums to be quality approved and manufactured to a recognised standard;
- If drums are to be moved around site, they should be done so secured and on spill pallets;
- Drums to be loaded and unloaded by competent and trained personnel using appropriate equipment.

3.3.20 Invasive Species Prevention Measures

Good construction site hygiene will be employed to prevent the introduction and spread of problematic invasive alien plant species (e.g., Rhododendron, Japanese Knotweed, Giant Rhubarb etc.) by thoroughly washing vehicles prior to entering the site. Refer to Figure 9 below for location:

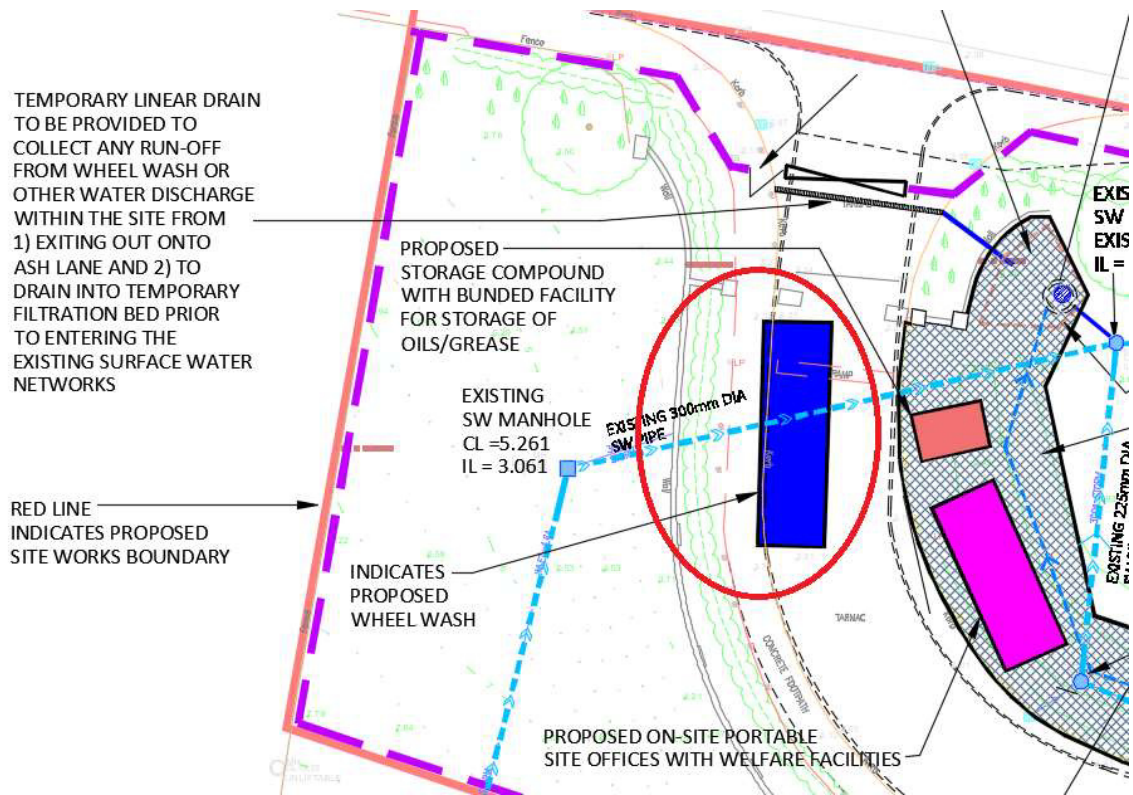


Figure 9 – Wheel wash Location

Materials used on site will be confirmed to be from a clean source that is free of invasive species.

3.3.21 Site Drainage

As construction advances there may be a small requirement to collect and treat surface water within the site. This will be completed using perimeter swales at low points around the construction areas, and if required water will be pumped from the swales into sediment bags prior to overland discharge allowing water to percolate naturally to ground. Daily monitoring and inspections of site drainage during construction will be carried out. A log will be maintained of daily inspections and status of drainage features. The log will be available on site for inspection.

3.4 Waste Management

3.4.1 Introduction

The appointed contractor will be responsible for the preparation of a detailed site-specific resource and waste management plan (RWMP) to be submitted to Sligo Co Council prior to commencement of works. Discussed below are key areas that will be developed upon by the Main Contractor in their detailed plan.

3.4.2 Waste Management in Ireland

Overarching Legislation

The overarching legislative instruments governing waste management in Ireland are as follows:

- Waste Management Act 1996 (S.I. No. 10 of 1996) as amended 2001 (No. 36 of 2001), 2003 (No. 27 of 2003) and 2011 (No. 20 of 2011)
- Sub-ordinate legislation includes:
 - European Communities (Waste Directive) Regulations 2011 (S.I. 126 of 2011) as amended 2011 (S.I. No. 323 of 2011) and 2016 (S.I. 315 of 2016);
 - Waste Management (Collection Permit) Regulations 2007 (S.I. No. 820 of 2007) as amended 2008 (S.I. No. 87 of 2008), 2015 (S.I. No. 197 of 2015) and 2016 (S.I. No. 24 and 346 of 2016);
 - Waste Management (Facility Permit and Registration) Regulations 2007 (S.I. No. 821 of 2007) as amended 2008 (S.I. No. 86 of 2008), 2014 (S.I. No, 320 and No. 546 of 2014) and 2015 (S.I. No. 198 of 2015);
 - Waste Management (Licensing) Regulations 2000 (S.I. No. 185 of 2000) as amended 2004 (S.I. No. 395 of 2004), 2010 and (S.I. No. 350 of 2010);
 - Waste Management (Packaging) Regulations 2014 (S.I. 282 of 2014) as amended 2003 (S.I. No. 61 of 2003) as amended

- 2004 (S.I. No. 871 of 2004), 2006 (S.I. No. 308 of 2006) and 2007 (S.I. No. 798 of 2007);
- Waste Management (Planning) Regulations 1997 (S.I. No. 137 of 1997);
- Waste Management (Landfill Levy) Regulations 2015 (S.I. No. 189 of 2015) as amended 2011 (S.I. No. 434 of 2011) as amended 2012 (S.I. No. 221 of 2012);
- European Union (Waste Electrical and Electronic Equipment) Regulations 2014 (S.I. No. 149 of 2014);
- European Union (Batteries and Accumulators) Regulations 2014 (S.I. No. 283 of 2014) as amended 2014 (S.I. No. 349 of 2014) and 2015 (S.I. No. 347 of 2015);
- Waste Management (Food Waste) Regulations 2009 (S.I. 508 of 2009);
- European Union (Household Food Waste and Bio-waste) Regulation 2015 (S.I. No. 191 of 2015);
- Waste Management (Hazardous Waste) Regulations 1998 (S.I. No. 163 of 1998) as amended 2000 (S.I. No. 73 of 2000);
- Waste Management (Shipments of Waste) Regulations 2007 (S.I. No. 419 of 2007) as amended;
- Waste Management (Movement of Hazardous Waste) Regulations 1998 (S.I. No. 147 of 1998);
- European Communities (Transfrontier Shipment of Waste) Regulations 1998 (S.I. No. 147 of 1998) as amended 1994 (SI 121 of 1994);
- European Union (Properties of Waste which Render it Hazardous) Regulations 2015 (S.I. No. 233 of 2015).
- Litter Pollution Act 1997 (S.I. No. 12 of 1997) as amended by Protection of the Environment (amendment) Act 2003 as amended;
- Planning and Development Act 2000 as amended (S.I. No. 30 of 2010) and 2015 (S.I. No. 310 of 2015);

- Protection of the Environment Act 1992 as amended 2003 (S.I. No. 413 of 2003) and by Planning and Development Act 2000 as amended (S.I. No. 30 of 2010).

The above Acts and Regulations transpose European Union policy and Directives into Irish law. The over-riding 'Duty of Care' principle implies that the producer is responsible for waste from the time it is generated through until its legal disposal (including its method of disposal.). As it is not practical in most cases for the waste producer to physically transfer all waste from where it is produced to the final disposal area, waste contractors will be employed to transport waste to the final waste disposal site.

A waste collection permit, issued by the National Waste Collection Permit Office (NWCPO), must be held by every waste contractor engaged on the project. Waste receiving facilities must also be appropriately permitted or licensed to accept waste. Operators of such facilities cannot receive any waste, unless in possession of a waste permit granted by the relevant Local Authority under the Waste Management (Facility Permit & Registration) Regulations 2007 and Amendments or a waste licence granted by the Environmental Protection Agency (EPA). The permit/licence held will specify the type and quantity of waste able to be received, stored, sorted, recycled and/or disposed of at the specified site.

National Waste Management Policy

The 1998 '*Changing Our Ways*' policy document by the Irish Government identified objectives for the prevention, minimisation, reuse, recycling, recovery, and disposal of waste in Ireland. The target for C&D waste in this report was to recycle at least 50% of C&D waste within an initial five-year period with incremental increases to at least 85% by 2013. A waste industry task force of the *Forum for the Construction Industry* released '*Recycling of Construction and Demolition Waste*' recommending the development of a

voluntary construction industry programme to meet Government objectives for the recovery of C&D waste. 'A Resource Opportunity - Waste Management Policy in Ireland' published in 2012 stresses the environmental and economic benefits of better waste management, particularly in relation to waste prevention. In respect of C&D waste, the report commits to undertaking a review of specific producer responsibility requirements for C&D projects above a certain threshold. The National Construction and Demolition Waste Council (NCDWC) published 'Best Practice Guidelines for the Preparation of Waste Management Plans for Construction and Demolition Projects' in 2006 in conjunction with the Department of the Environment, Heritage, and Local Government (DoEHLG). The Guidelines outline the issues that need to be addressed at the pre-planning stage of a development all the way through to its completion. These Guidelines have been followed in the preparation of this document and include the following elements:

- Predicted C&D wastes and procedures to prevent, minimise, recycle, and reuse wastes;
- Waste disposal/recycling of C&D wastes at the site;
- Provision of training for waste manager and site crew;
- Details of proposed record keeping system;
- Details of waste audit procedures and plan; and
- Details of consultation with relevant bodies i.e., waste recycling companies, Sligo County Council etc.

In accordance with Section 3 of the Guidelines Construction and Demolition Waste Management plans should be submitted as part of development proposals for projects in excess of any of the following thresholds:

- New residential development of 10 units or more;
- New developments other than above, including institutional, educational, health and other public facilities, with an aggregate floor area in excess of 1,000m²;
- Demolition/renovation/refurbishment projects generating in excess of 100 cubic metres in volume of construction and demolition waste, and;

- Civil engineering projects in excess of 500 cubic metres of waste materials used for development works on the site.

3.4.3 Waste Categorisation

Typical non-hazardous and hazardous waste streams generated by construction and demolition activities at typical sites are shown in Table 3 along with their accompanying European Waste Code (EWC) Classification.

It is anticipated that the non-hazardous materials listed above will be encountered during the proposed works with the potential for some of the hazardous materials as discussed over.

Waste Materials Categorisation		
Category	Description	Code
Non-Hazardous	Metals	17 04
	Wood, glass, plastic	17 02
	Soil, stones, dredged soils	17 05
	Gypsum based materials	17 08
	Cardboard	15 01 01
	Glass	17 02 02
	Bituminous mixtures, coal tar, tar products	17 03
	Concrete, bricks, tiles, ceramics	17 01
Hazardous	Electrical and Electronic Components	16 02
	Liquid Fuels	13 07
	Wood Preservatives	03 02
	Batteries	16 06
	Soil and stones containing dangerous substances	17 05 03
	Waste construction material containing asbestos	17 06 05
	Other construction and demolition wastes containing dangerous substances	17 09 03

Table 3 – Waste Material Categorisation

Non-Hazardous Materials

The classification of materials as non-hazardous and/or hazardous will be based on the www.hazwasteonline.com web based system as well as classification using Waste Acceptance Criteria in accordance with the European Communities (EC) Council Decision 2003/33/EC, which establishes criteria for the acceptance of waste at landfills.

In addition, non-hazardous waste materials are likely to be generated during all phases of the construction works from casting of concrete, through to completion of structures and mechanical and electrical services etc.

Hazardous Materials

There is the potential for hazardous materials to be uncovered, particularly during the demolitions and excavations phases of the project as discussed below:

- ***Contaminated Soil***

The building works will require excavations to facilitate foundation construction, together with installation of below ground services. Given the greenfield / brownfield nature of the site, there is little potential for the soil to have elements of contaminant contained within it. An initial assessment of the site will be undertaken by OCSC to classify the materials to be encountered on site from a waste soils perspective. The Main Contractor will be responsible for the classification of all material to be removed from site and compliant disposal in accordance with the Waste Management Act 1996 as amended and all relevant Regulations.

- ***Fuels/Oils***

There will be no site storage of fuels or oils during the demolition, excavation, or construction phases of the project. Provided that these requirements are adhered to, and site crew are trained in the

appropriate refuelling techniques, it is not expected that there will be any fuel/oil wastage at the site.

3.4.4 Waste Arisings

The Environmental Protection Agency (EPA) produce figures on the amounts of waste generated by various developments. These figures are contained in EPA databases. The split between individual C&D waste categories is shown in Table 4.

Waste Types	%
Metals	2.2
Concrete, Brick, Tile, Gypsum	7.2
Bituminous mixtures	1.3
Mixed C&D waste	4.5
Soils & Stones	84.8
Total	100

Table 4 – Waste Generation

Further figures are available for typical overall waste generation figures for construction sites based on the type and scale of development.

It should be noted that until final materials and methods of construction have been determined it is not possible to predict with a high level of accuracy the construction waste that will be generated. These details will be required to be included by the Main Contractor in their RWMP to be prepared and agreed with MCC in advance of works commencing on site.

Site Waste Management Operations

Waste materials generated will be segregated on site where it is practical. Where the on-site segregation of certain waste types is not practical, off-site

segregation will be carried out. There will be skips and receptacles provided to facilitate segregation at source. All waste receptacles leaving site will be covered or enclosed. The appointed waste contractor will collect and transfer the wastes as receptacles are filled.

Any soil removed off-site will be carried by contractors licensed under the Waste Management Acts 1996 - 2008, the Waste Management (Collection Permit) Regulations 2007 and Amendments and the Waste Management (Facility Permit & Registration) Regulations 2007 and Amendments. Waste arising shall be handled by an approved waste contractor holding a current waste collection permit. All waste arising requiring disposal off-site will be disposed of at a facility holding the appropriate licence or permit, as required.

Written records will be maintained by the contractor(s) detailing the waste arising throughout the construction and demolition phases, the classification of each waste type, the contact details and waste collection permit number of all waste contractors who collect waste from the site and the end destination and waste facility permit or licence number for all waste removed and disposed off-site. Dedicated bunded storage containers will be provided for hazardous wastes such as batteries, paints, oils, chemicals etc., if required.

3.4.5 Record Keeping, Auditing & Consultation

Record Keeping

Records will be kept for each waste material, which leaves the site, either for reuse on another site, recycling, or disposal. A system will be put in place to record the construction waste arisings on site.

The Waste Manager or a member of his team will record the following:

- Waste taken for Reuse off-site (i.e., for capping of landfill cells or at another site);
- Waste taken for Recycling;
- Waste taken for Disposal;
- Reclaimed waste materials brought on-site for reuse.

For each movement of waste on- or off-site, the Waste Manager will obtain a signed docket from the contractor, detailing the weight and type of the material and the source and destination of the material. This will be carried out for each material type. This system will also be linked with the delivery records. In this way, the percentage of construction waste generated for each material can be determined.

The system will allow the comparison of these figures with the targets established for the recovery, reuse, and recycling of construction waste and to highlight the successes or failures against these targets.

Outline Waste Audit Procedure

The appointed Waste Manager on site will be responsible for conducting a waste audit at the site. A review of all the records for the waste generated and transported on- or off-site will be undertaken. If waste movements are not accounted for, the reasons for this should be established in order to see if and why the record keeping system has not been maintained.

A Summary Report will be prepared and compared with the established recovery/reuse/recycling targets for the site. Each material type will be examined, in order to see where the largest percentage waste generation is occurring. The waste management methods for each material type will be reviewed in order to highlight how the targets can be achieved. Waste management costs will also be reviewed.

Consultation

Consultation with waste contractors and Sligo County Council through the construction phase will be pursued to ensure best practices for waste management are being followed on site.

3.5 Construction Traffic

The proposed development will have a certain amount of construction traffic to facilitate the works. The construction access strategy to serve the site will still need to be developed by the Main Contractor in a manner taking cognisance of the existing road junction and access road of both pedestrian and vehicular traffic on the N16 road adjacent to the site.

It is envisaged that construction will be via the existing site entrance at the northwest of the site.

3.5.1 Traffic Generation

It is envisaged that traffic will be generated for the duration of the works by the proposed development. This will be from a number of sources:

- Hauling of excavated material off site;
- Hardcore and Small Volumes of Concrete deliveries;
- Deliveries of reinforcement & formwork to site;
- Deliveries of prefabricated structural steel elements if required;
- Deliveries of Timber Products
- Deliveries of building services equipment to site;
- Construction Workers.

Designated parking for construction workers will be provided within the site adjacent to the main site compound(s).

The levels of construction traffic will vary during the weeks with peak volumes predicted to be during the following activities:

- **Foundations**

The foundation excavation work will require hauling of spoil off site. This will occur in tandem with deliveries for concrete and reinforcement for the foundations.

- **Concrete pours**

Concrete pours will be required throughout the works, with the size/volume of same dependant on the final structural form selected. The concrete works will be required to be carefully planned,

sequenced, and managed by the Main Contractor to ensure that works can be undertaken without undue disruption to the neighbourhood.

- **Deliveries of Prefabricated structural elements**

The selection of the chosen structural form for the roof may necessitate the delivery of prefabricated steel / timber elements. These deliveries will need to be carefully planned, sequenced, and managed by the Main Contractor to ensure that they are undertaken at the appropriate time in the works sequence so as not to cause undue disruption to the neighbourhood.

- **Vehicle Maintenance and Refuelling**

All site plant is to be inspected at the beginning of each day prior to use. Defective plant shall not be used until the defect is satisfactorily fixed. All major repair and maintenance operations will take place off site. Vehicles will never be left unattended during refuelling. Plant refuelling methodology will be overseen, and methodology agreed with by an ecological Clerk of Works.

Only dedicated trained and competent personnel will carry out refuelling operations and plant refuelling procedures shall be detailed in the contractor's method statements.

3.5.2 Contents of Traffic Management Plan

The Construction Phase Traffic Management Plan will be prepared by the appointed Contractor and shall identify:

- Primary Contact Name;
- Primary Contact Mobile Phone Number;
- Secondary Contact Name;
- Secondary Contact Mobile Phone Number.

The primary contact shall act as a Liaison Officer with the Local Authority, Gardai, local residents and businesses.

The Construction Stage Traffic Management Plan is to be formulated with reference to the DTO publications "*Traffic Management Guidelines Manual*" and the Traffic Signs Manual". The document should contain information on the following issues:

- Temporary signage (type and location);
- Temporary road markings (type and location);
- Temporary changes to existing signage and markings required to enable a road closure within the estate, if applicable;
- Location of proposed temporary traffic signals, if applicable;
- Arrangements for local access and pedestrian access;
- Proposed lighting arrangements;
- Proposals for the use of flagmen;
- Proposals to erect barriers;
- Proposals for pedestrian movements including those of mobility impaired affected by the works;
- Arrangements that will apply during the road works.

4 PRE-CONSTRUCTION ACTIVITIES

4.1 Prior to Commencement of Development

Prior to any site works commencing, the Main Contractor will carry out the following:

- 1) Prior to the mobilisation of any works onsite, an Ecological Clerk of Works (ECoW) will give a toolbox talk on the sensitivity of the work site to all workers. The ECoW will provide site-specific practical and proportionate assistance to the contractor to achieve compliance with environmental legislation and oversee the works.
- 2) Investigate / identify the exact location of and tag all existing services and utilities around and through the site with the assistance of the relevant Sligo County Council technical divisions and utility companies, where applicable.

4.2 Site Set Up, Security and Hoarding Lines

Temporary hoarding lines and site security will be set up to site boundary lines, as required for the duration of the works.

The Contractors traffic management plan will identify staging areas, delivery of materials, take account of pedestrians on the pavements north of the site adjacent to the N16 Ash Lane Road, strategy for any large concrete pours, removal of demolition waste material, traffic routes etc.

Access gates will be operated by a flagman who will divert incoming / outgoing vehicles / pedestrians and general traffic as necessary.

A number of surveys will be required prior to works commencing on site. This includes:

- Baseline readings for noise, vibration, dust etc in advance of the establishment of monitoring regime and action of same;
- Surveys to identify toxic/hazardous materials which may be present on site.

5 Demolition

The existing residential units, paved areas adjacent, front boundary walls as indicated on drawing No S603-OCSC-XX-XX-DR-C-0605 are to be demolished and removed off-site. Refer to Figure 10 showing and extract from the demolition drawing:



Figure 10 – Demolition Works Plan.

6 FOUNDATION & SUB-STRUCTURE WORKS

6.3 Overview

A detailed site investigation of the entire site has been undertaken to inform the proposed foundation solution – refer to Figures 11 & 12:

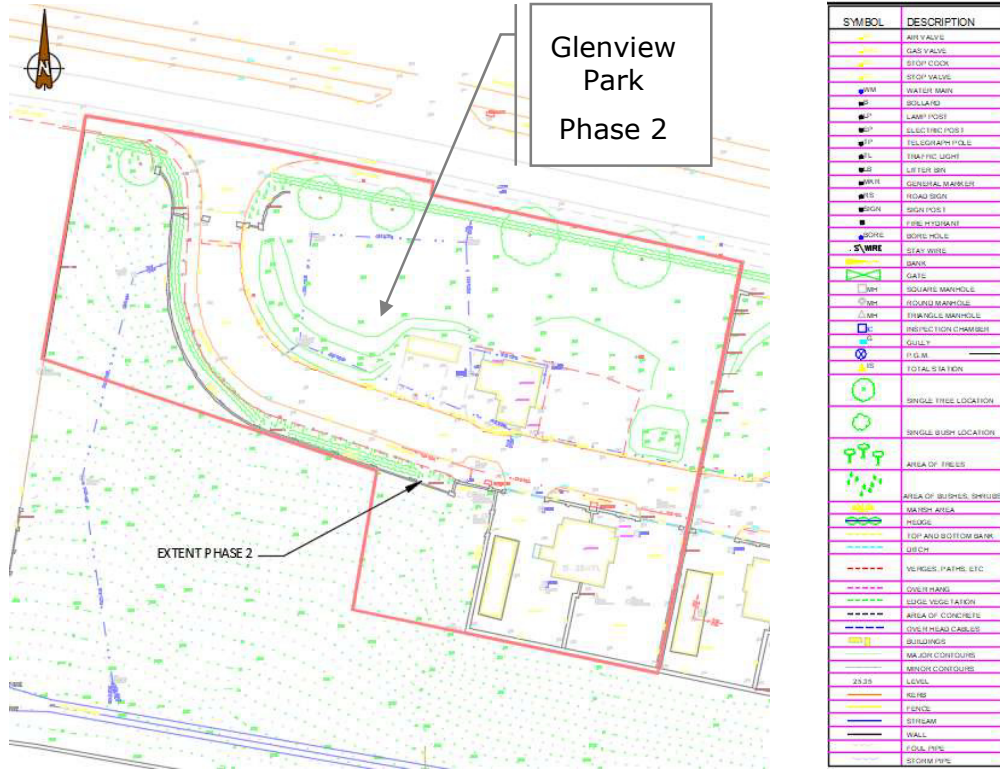


Figure 11 – Topographical Site Survey

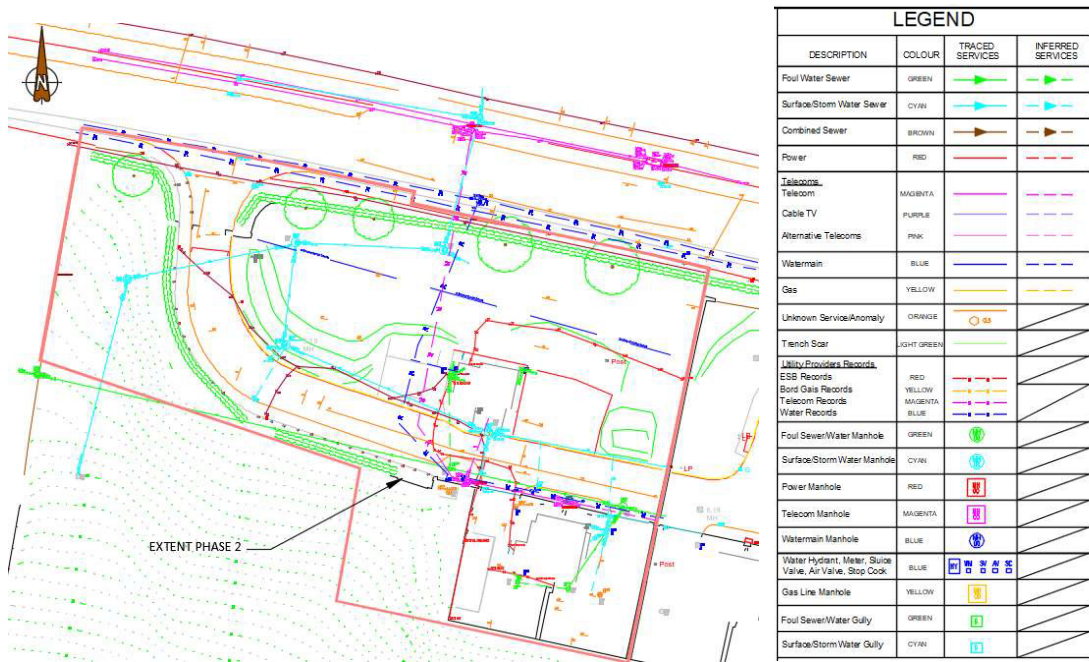


Figure 12 – GPR Site Survey

6.4 Foundations

The proposed foundations will be constructed using, strip foundations, piled foundations, and retaining walls on compacted fill onto approved bearing stratum. Refer to Figure 13 showing proposed works layout.

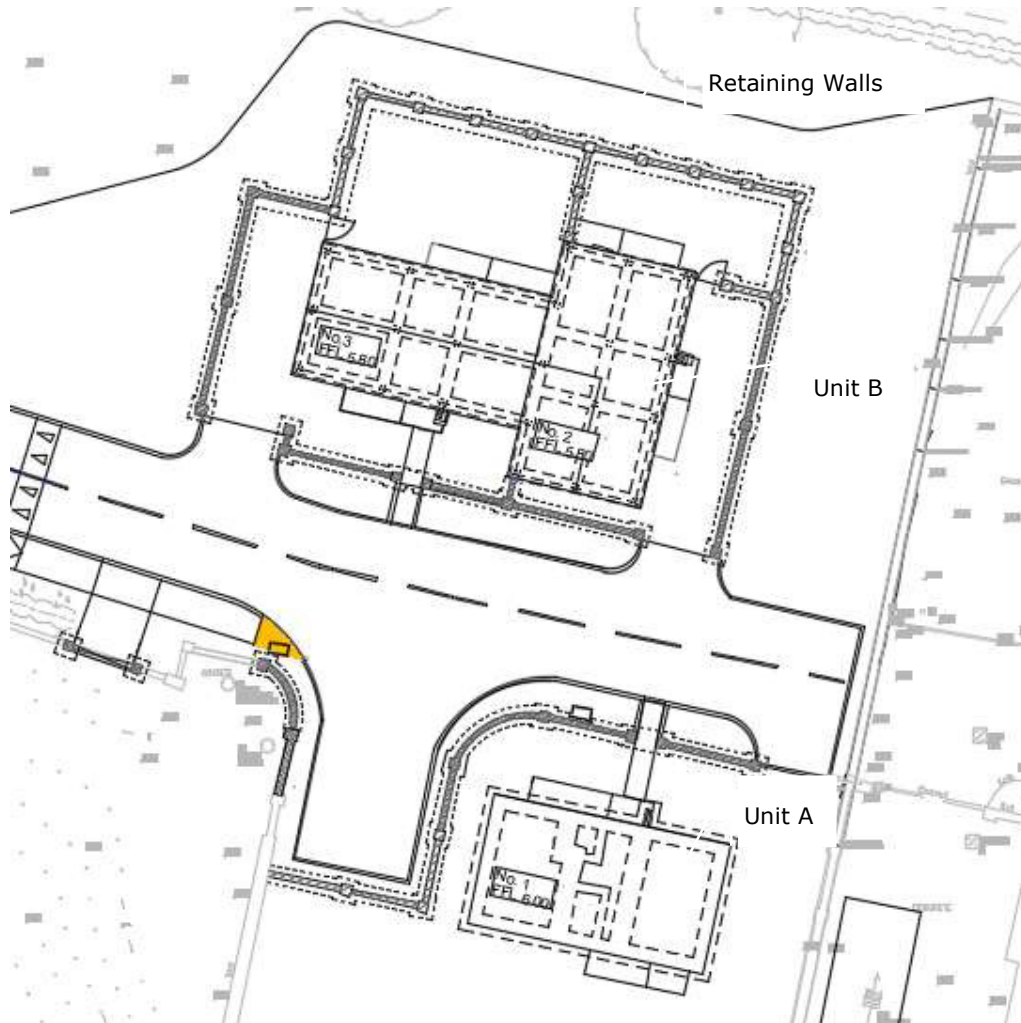


Figure 13 – Proposed Foundation Layout

6.5 Concrete Foundations (Strip Footings)

The actions required to form the concrete raft foundations and Strip Footing will consist of:

- Excavation of materials to approved formation.
- Installation of formwork.
- Placement of reinforcement.
- Pouring off concrete.
- Removing formwork when concrete is cured.

The following Figures 14 & 15 show typical foundation details and build-up of sub-base and capping materials.

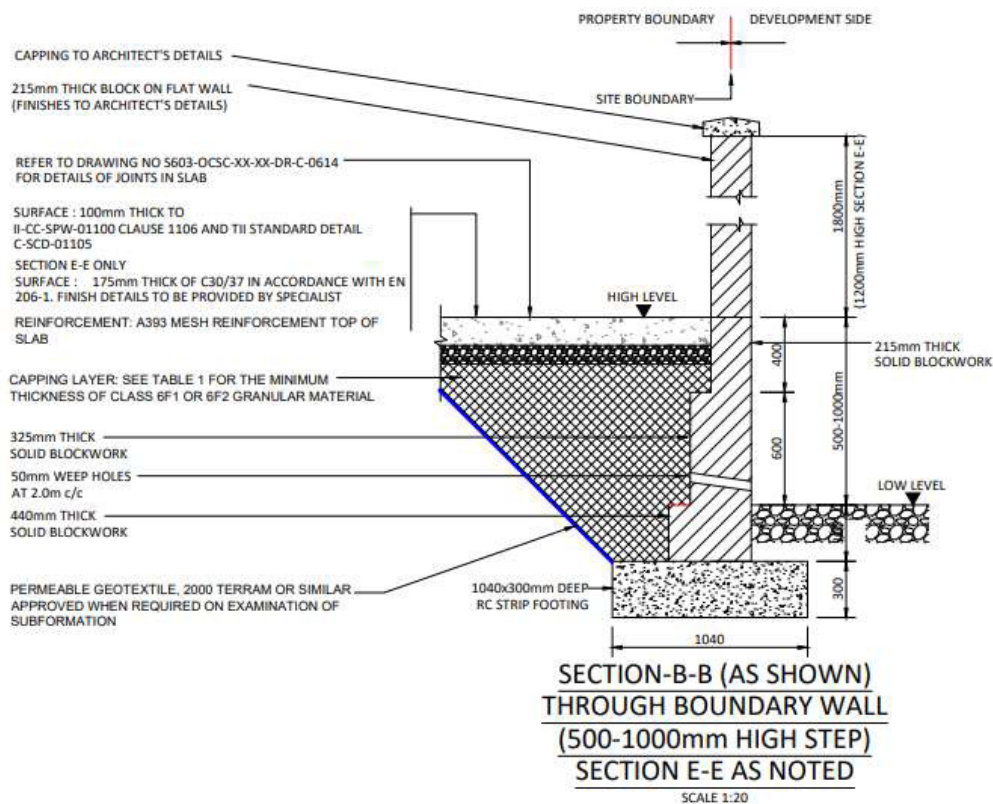


Figure 14 – Typical Section through Strip Footing for Block Retaining Walls

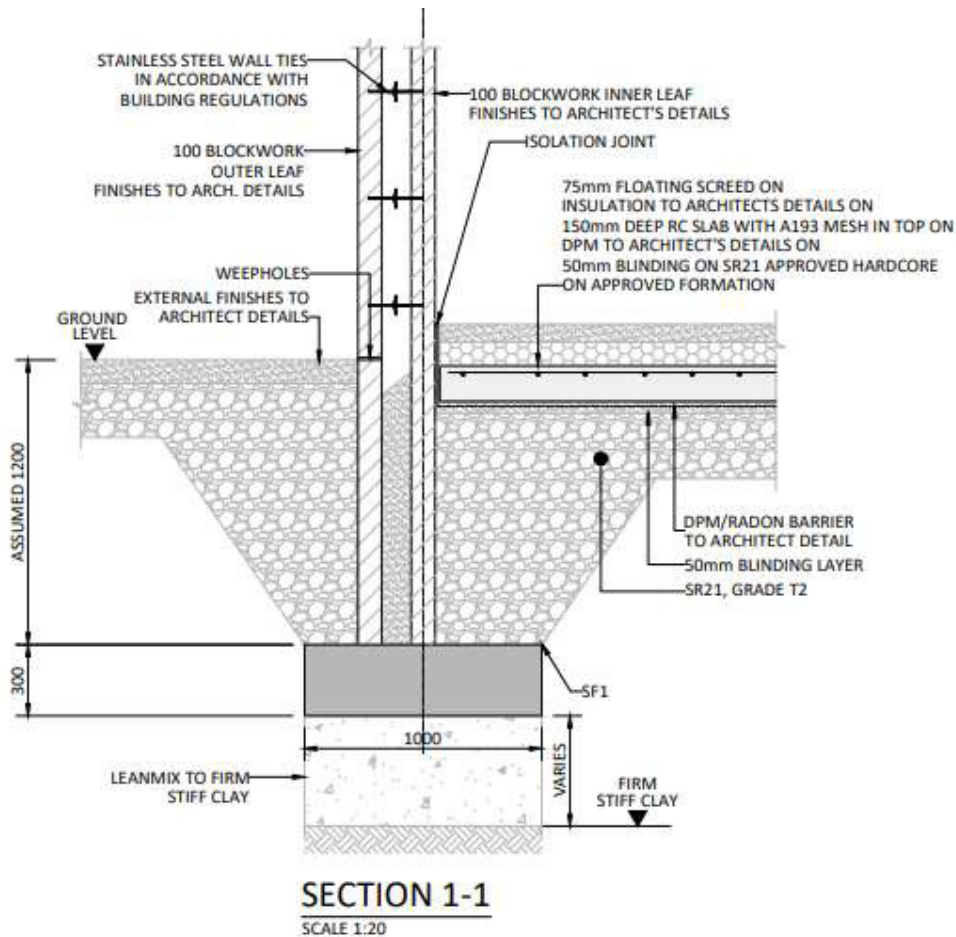


Figure 15 – Typical Section through Strip Foundation for new Housing Unit A

Where concrete is delivered to site only chute cleaning will be permitted with the minimal volume of water possible. No washing of any plant used in concrete transport will be allowed on site. All foundation bases are to be free of any standing water prior to concrete pours with provision of plastic (or similar) covering material to be on standby in the event of sudden rainfall. Planned concrete pours are to be coordinated with weather forecasting. Refer to section 3.3.10 for ground water and surface water control.

6.6 Piled Foundation

Precast concrete piles are designed by specialist designer and are reinforced to withstand driving stresses. The piles are driven into the soil, pushing an equal volume of soil sideways and compacting a zone around the pile, increasing its bearing capacity. Most piling rigs are track mounted and are specialist plant items, built to install one type of pile. Driven piles are hammered, jacked, or vibrated into the ground using a percussion hammer, hydraulic driver or rams or diesel-powered vibratory drivers used to reduce surrounding ground resistance and allow the pile to slide into the ground.

Following figure shows a pile foundation detail and suspended hollow core slab.

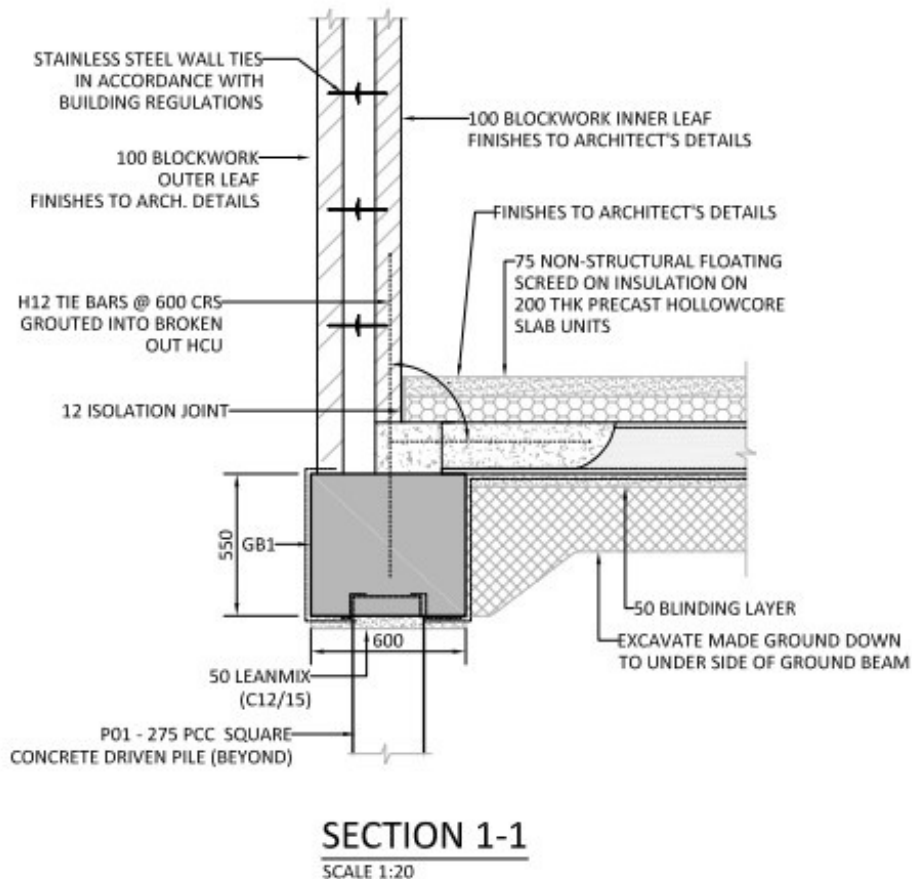


Figure 16 – Typical Section through Pile Foundation for new Housing Unit B

6.7 Storm Water Attenuation Tank

All proposed developments must ensure that a comprehensive sustainable urban drainage system, SuDS, is incorporated into the development. SuDS requires that post development run-off rates be maintained at equivalent, or lower, levels than pre-development levels. Thus, the development must be able to retain, within its boundaries, storm water volumes from extreme storm events up to a 1 in 100-year storm event, more commonly expressed as a 1.0% AEP with additional 20% for climate change included (Annual Exceedance Probability). Any new development must have the physical capacity to retain storm water volumes as directed under the GSDS and, if necessary, release these attenuated surface water volumes to an outfall at a controlled flow rate. A further component of the SuDS protocols is to increase the overall water quality of surface water runoff before it enters a natural watercourse or into a public sewer, which ultimately discharges to a water body. This is to ensure the highest possible standard of storm water quality.

The proposed surface water drainage network incorporates a variety of SuDS features to reduce flood risks and improve water quality. Details of the proposed Storm Water network and attenuation tank are given on drawing No S603-OCSC-XX-XX-DR-C-0620. Refer to Figure 16 for proposed layout of the Storm Water Network and Attenuation Tank System.

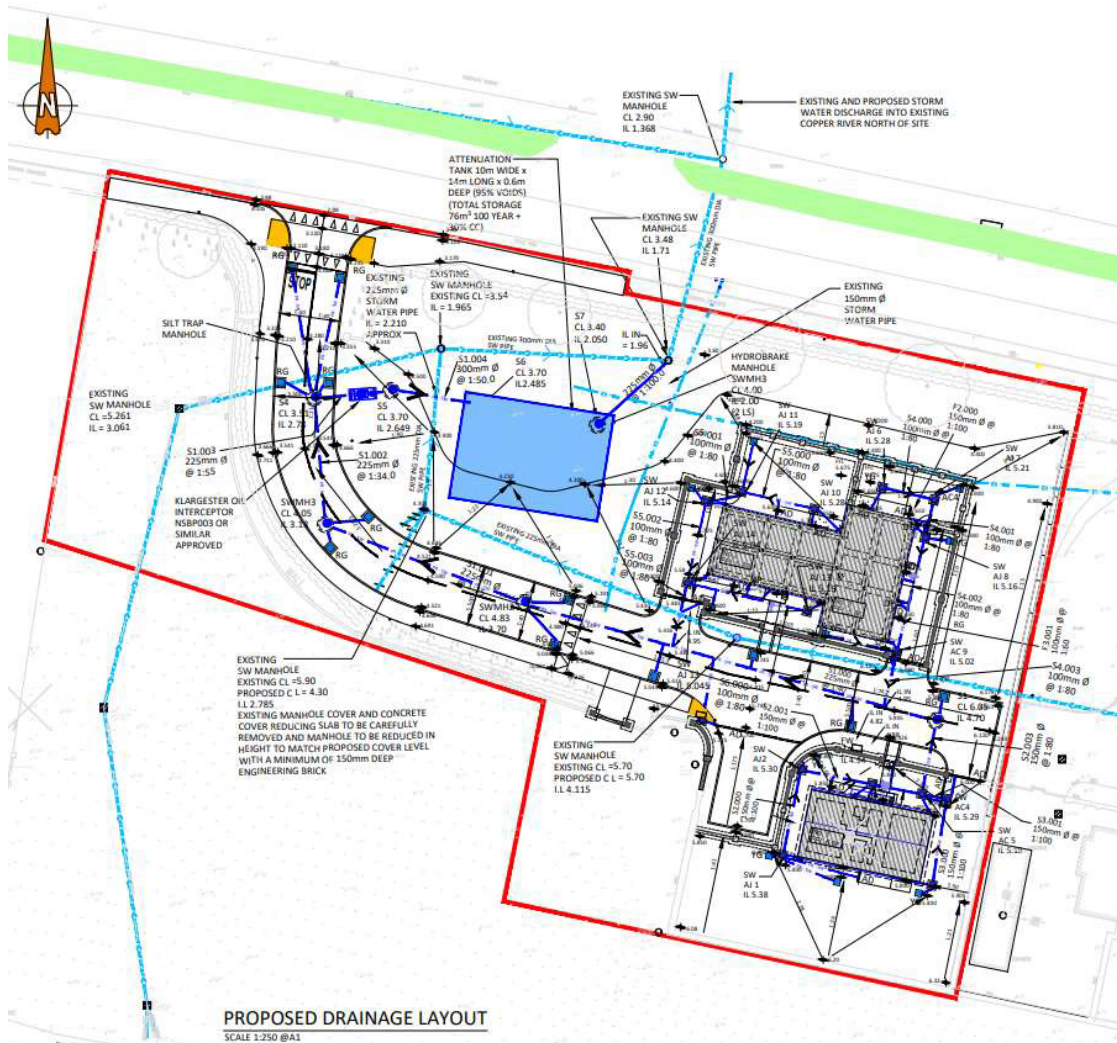


Figure 16 – Proposed Storm Water Network and Attenuation Tank.

Storm water is to be attenuated on site and discharged into the existing local authority stormwater pipe network on site via a Hydrobrake limiting flow to 2l/s. Refer to Figure 17 for proposed Attenuation Tank System.

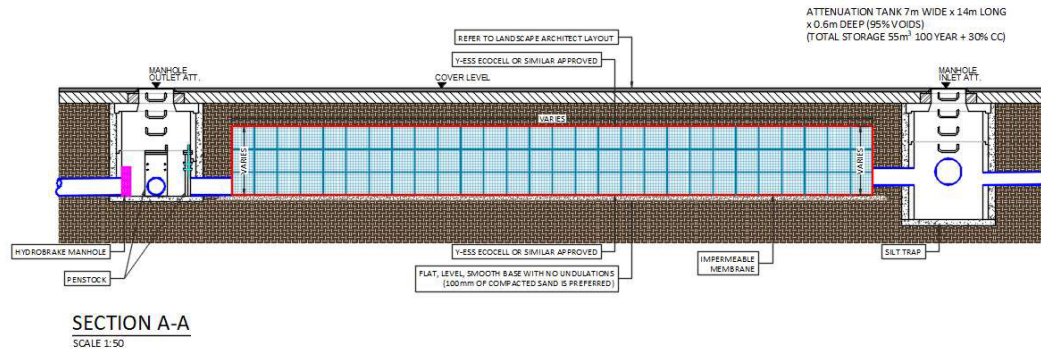


Figure 17 – Typical Section Attenuation Tank System

The actions required to install the Storm Water Attenuation tank will consist of:

- Excavation of materials to approved formation.
- Placement of sand blinding bedding layer
- Installation of Modular Attenuation Units wrapped in non-impermeable membrane and including granular bedding, clause 505 and distribution pipe(s).
- Backfill sides with granular backfill material Class 6N.
- Backfill over top of tank using suitable granular fill and clat material.
- Refer to Figure 18 for typical installation and construction details.

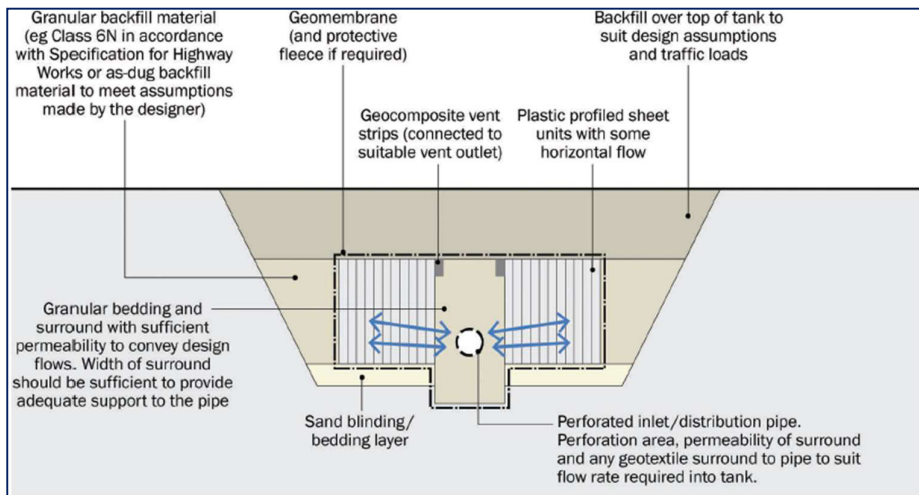


Figure 18: Typical Section of Geocellular System (CIRIA C753)

7 SITEWORKS

7.1 Overview

The siteworks for the proposed development will entail the installation of all required below ground services adjacent to the proposed housing units and road improvement works as well as the proposed landscaping works.

7.2 Site Services

A variety of services will be required to be constructed to provide functionality to the proposed development. These services will include items such drainage, water supply & power supply. Exact requirements to be confirmed.

The site services works are likely to proceed following completion of the foundations and will continue throughout the superstructure works.

The site services work will generally involve where required:

- Excavation of services trench;
- Placing of bedding as required for each service;
- Placing of service pipe/conduit within the trench;
- Placing of warning tape as required by each utility;
- Backfilling of trench.

7.3 Hard & Soft Landscaping

The externals to the proposed housing units and road works are made up of a number of differing soft and hard landscaping finishes. Refer to Landscape Architect layout.

The soft finishes may include:

- Grassed areas;

The hard landscaping may include:

- Pathways;
- Communal areas;

The hard landscaping works for the site are there to enhance the overall design, compliment the soft finishes and allow for pedestrian to and around the proposed works. The hard and soft landscaping works will be undertaken following the completion of the main elements of construction in accordance with Landscape Architect details.

The soft landscaping works will involve:

- Scrapping of existing topsoil to allow natural recolonisation and concurrently applying native Irish seed. This habitat will require low maintenance into the future: two moving session a year spring and autumn.
- Native trees and shrubs sourced in Ireland to enhance biodiversity. Planting to follow the IW Document No I1-AMT-GL-021 Biodiversity Guidance for Irish Water which will help deliver maximum benefit for biodiversity through the project delivery.
- Seeding of grass;
- Placing of furniture and fittings.

The hard landscaping works will involve:

- Placing and compacting of hardcore sub-base;
- Placing of furniture and fittings.

8 OUTLINE CONSTRUCTION PROGRAMME

8.1 Overview

At this stage of carrying out this assessment, a contractor has not yet been appointed to undertake the construction works. However, the information and parameters within this document will form part of any construction documentation issued and the appointed contractor will be required to comply with the outline methodology described.

This statement describes the anticipated programme of construction works and the key activities that will be undertaken on the site in relation to the development.

As part of the construction process the main contractors will be required to submit a statement demonstrating how they will comply with the Management Plan and, after appointment, provide detailed documentation to demonstrate this compliance.

It is envisaged that construction works would commence in late 2023 with a completion date of late 2024. Below ground Works to be planned to coincide with low to no rainfall periods.

A full set of drawings (A3 not scale) for the existing and proposed works to Glenview Park Works is provided in Appendix A for ease of reference.

Tom Duggan

AENG MIEI MICS

FOR OCSC MULTIDISCIPLINARY CONSULTING ENGINEERS

Appendix A

Glenview Park Phase 2

A3 Drawings (N.T.S)

PROPOSED DEVELOPMENT AT ASH LANE SLIGO

PHASE 2 GLENVIEW PARK

TENDER DRAWINGS

CIVIL ENGINEERING DRAWINGS

AUGUST 2023

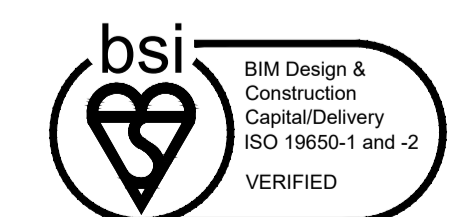


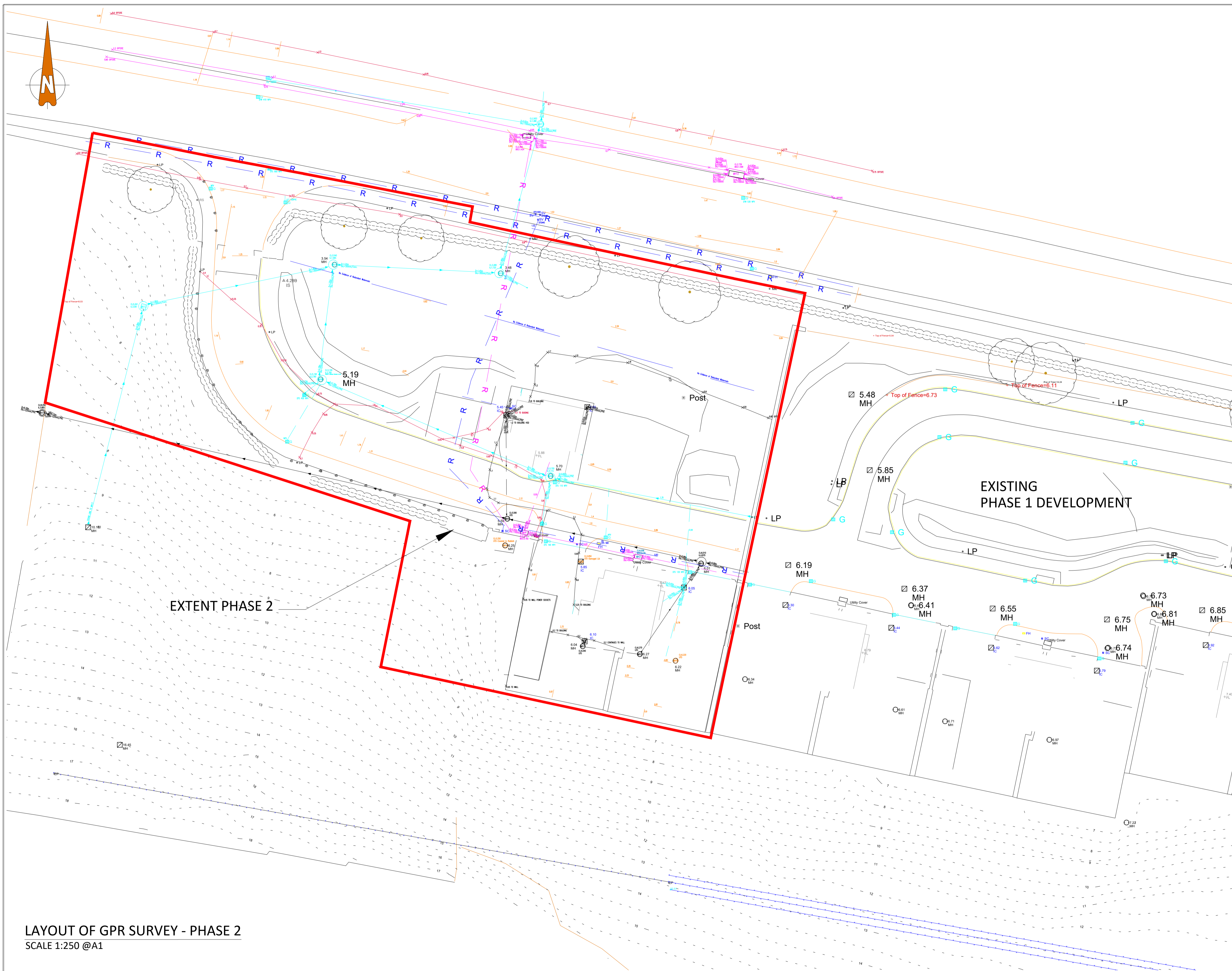
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S603-OCSC-XX-XX-DR-C-0600-D2-P01





LEGEND

DESCRIPTION	COLOUR	TRACED SERVICES	INFERRED SERVICES
Foul Water Sewer	GREEN	—▶—	—▶—
Surface/Storm Water Sewer	CYAN	—▶—	—▶—
Combined Sewer	BROWN	—▶—	—▶—
Power	RED	—	---
Telecoms	MAGENTA	—	---
Telecom	MAGENTA	—	---
Cable TV	PURPLE	—	---
Alternative Telecoms	PINK	—	---
Watermain	BLUE	—	---
Gas	YELLOW	—	---
Unknown Service/Anomaly	ORANGE	○ 0.5	
Trench Scar	LIGHT GREEN	—	
Utility Providers Records			
ESB Records	RED	---	
Bord Gais Records	YELLOW	---	
Telecom Records	MAGENTA	---	
Water Records	BLUE	---	
Foul Sewer/Water Manhole	GREEN	⊗	
Surface/Storm Water Manhole	CYAN	⊗	
Power Manhole	RED	⊗	
Telecom Manhole	MAGENTA	⊗	
Watermain Manhole	BLUE	⊗	
Water Hydrant, Meter, Sluice Valve, Air Valve, Stop Cock	BLUE	⊗	
Gas Line Manhole	YELLOW	⊗	
Foul Sewer/Water Gully	GREEN	⊗	
Surface/Storm Water Gully	CYAN	⊗	

NOTES:

- Utility survey carried out with RF & GPR equipment.
- RF = RD8000 Transmitter & Receiver.
- UTT denotes unable to Trace, UTO denotes unable to Open
- GPR = Ground Penetrating Radar - Mala 100 Mhz, 250 Mhz & 500 Mhz.
- Unknown voltage on electric cables.
- Dia. 300mm denotes the diameter of the pipe.
- 0.5 denotes depth in metres below ground level to top of pipe.
- Survey carried out in February 2023.
- R denotes sections of services taken from records.
- D = Depth to Pipe, DTF = Depth to Floor, DTS = Depth to Silt, BOC = Bottom Of Chamber.
- Where Invert Levels are shown adjacent to MHs, IC's etc. are to the invert of the lowest pipe/duct within the manhole. There may be further pipes/ducts within the MH which are located closer to ground level as per the depths marked on individual pipes/ducts. Care should be taken as higher level ducts may contain live electrical cables.

Disclaimer:
The information on this drawing is a general guide only and the accuracy thereof cannot be guaranteed. No liability is accepted for any discrepancy, omission or deviation from the actual subsurface location or depth to underground utilities.

GPR - Utility Survey

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Clonmore Business Park,
Mullingar, Co Westmeath.

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www.scantech.ie

Client: Causeway Geotech Ltd

Project Title: GPR Survey at Glenview, Sligo.

Drawing Title: Underground Services Layout

Date: 21st February 2023 Drawn By: R.G
Scale: 1/200 on A1 Checked: D.T
Drawing No: SGL-23031-01_01 Revision:

LAYOUT OF GPR SURVEY - PHASE 2
SCALE 1:250 @A1

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Rev No.	Date	Revision Note	Drn by	Chkd by
P01	23.02.23	FOR INFORMATION	TD	TOD
P02	24.06.23	REDLINE BOUNDARY UPDATED	AD	TD
P03	16.08.23	ISSUED FOR TENDER INFORMATION ONLY	AD	TD

Rev No.	Date	Revision Note	Drn by	Chkd by

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COMMUNITY DEVELOPMENT DIVISION

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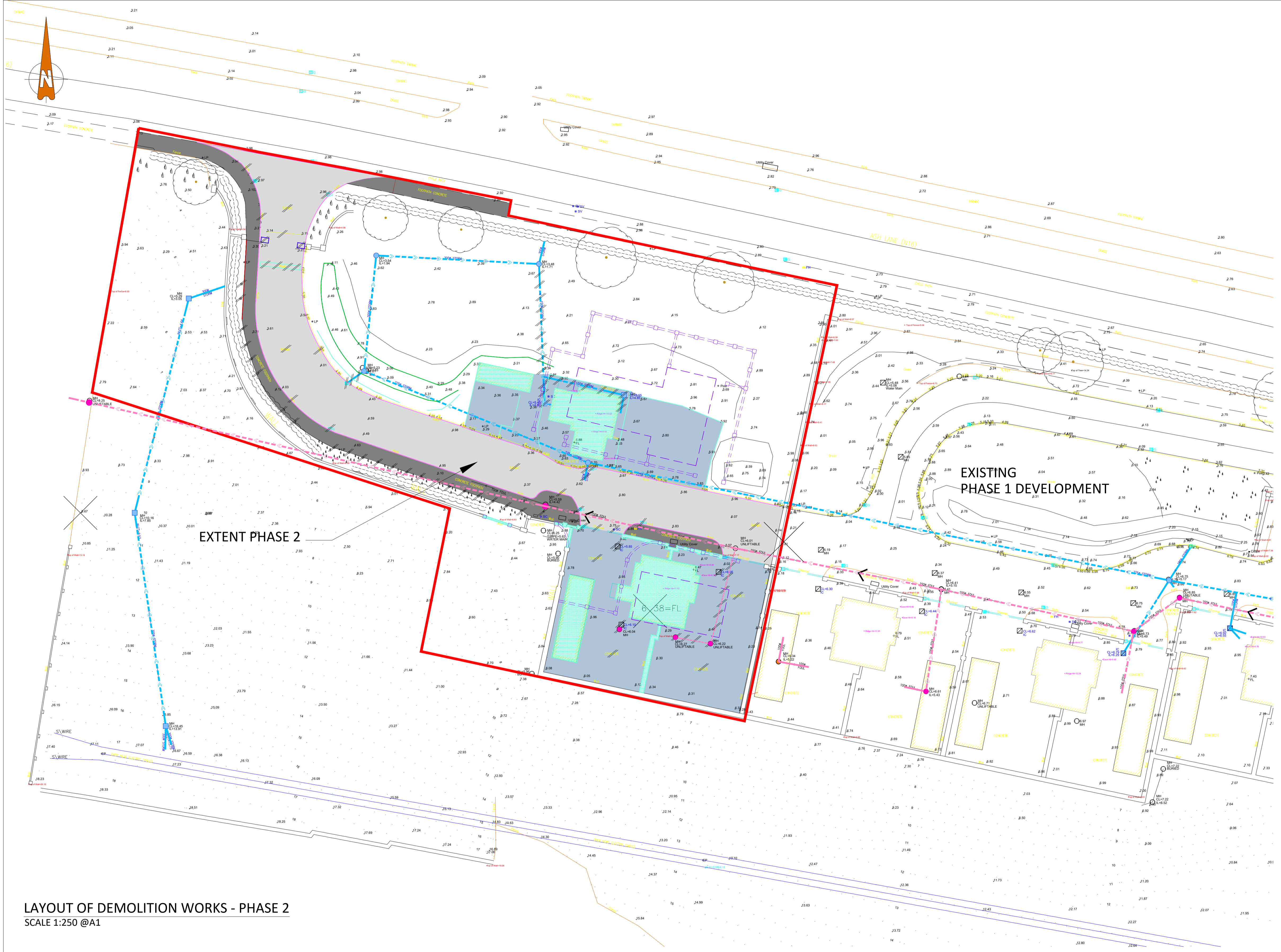
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Client: SLIGO COUNTY COUNCIL
Project: ASH LANE GROUP HOUSING

Title: GPR SURVEY PHASE 2

Code | Originator | Zone | Level | Type | Role | Number | Status | Revision
S603 · OCSC · XX · XX · DR · C · 0602 · D2 · P03

Date: FEB '23 Scale: 1:250 @ A1 Drn by: AD Chkd by: TD Aprvd by:



LEGEND	
EXISTING FOUL DRAINAGE NETWORK	
	EXISTING FOUL DRAINAGE PIPES TO BE RETAINED
	EXISTING FOUL DRAINAGE MANHOLES TO BE RETAINED
	EXISTING FOUL DRAINAGE PIPES TO BE DEMOLISHED
	EXISTING FOUL DRAINAGE MANHOLES TO BE DEMOLISHED
EXISTING STORM DRAINAGE NETWORK	
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	EXISTING STORM DRAINAGE MANHOLES TO BE RETAINED
	EXISTING STORM DRAINAGE AJ/IC TO BE DEMOLISHED
	EXISTING STORM DRAINAGE PIPES TO BE DEMOLISHED
	EXISTING STORM DRAINAGE MANHOLES TO BE DEMOLISHED
	EXISTING STORM DRAINAGE AJ/IC TO BE DEMOLISHED
	PROPOSED BUILDING DEMOLITION WORKS - WALLS AND HOUSES
	EXTENT OF EXISTING KERBING TO BE DEMOLISHED
	EXTENT OF EXISTING BERM TO BE DEMOLISHED
	EXTENT OF EXISTING ROAD TO DEMOLISHED TO A DEPTH OF 100mm MINIMUM
	EXTENT OF EXISTING FOOTPATH TO DEMOLISHED TO A DEPTH OF 100mm MINIMUM
	EXTENT OF EXISTING HARD SURFACE TO EXISTING UNITS TO DEMOLISHED TO A DEPTH OF 100mm MINIMUM
	PROPOSED NEW HOUSING UNITS AND ADDITIONAL BOUNDARY WALLS
	EXISTING GATE PILLARS TO BE DEMOLISHED
	EXISTING GULLIES TO BE DEMOLISHED INCLUDING ALL ASSOCIATED PIPEWORK TO EXISTING STORM WATER NETWORK
	EXISTING BOLLARDS TO BE REMOVED INCLUDING FOUNDATIONS
	EXISTING ROAD RAMP TO BE REMOVED

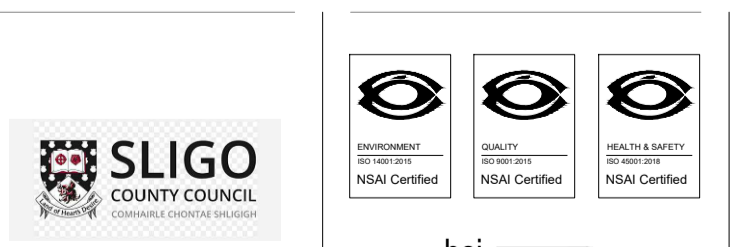
LAYOUT OF DEMOLITION WORKS - PHASE 2
SCALE 1:250 @A1

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P01	02.02.23	TD	TOD	
P02	23.02.23	ADDITIONAL DEMOLITION AS BUBBLED	TD	TOD
P03	24.06.23	REDLINE BOUNDARY UPDATED	AD	TD
P04	16.08.23	ISSUED FOR TENDER	AD	TD

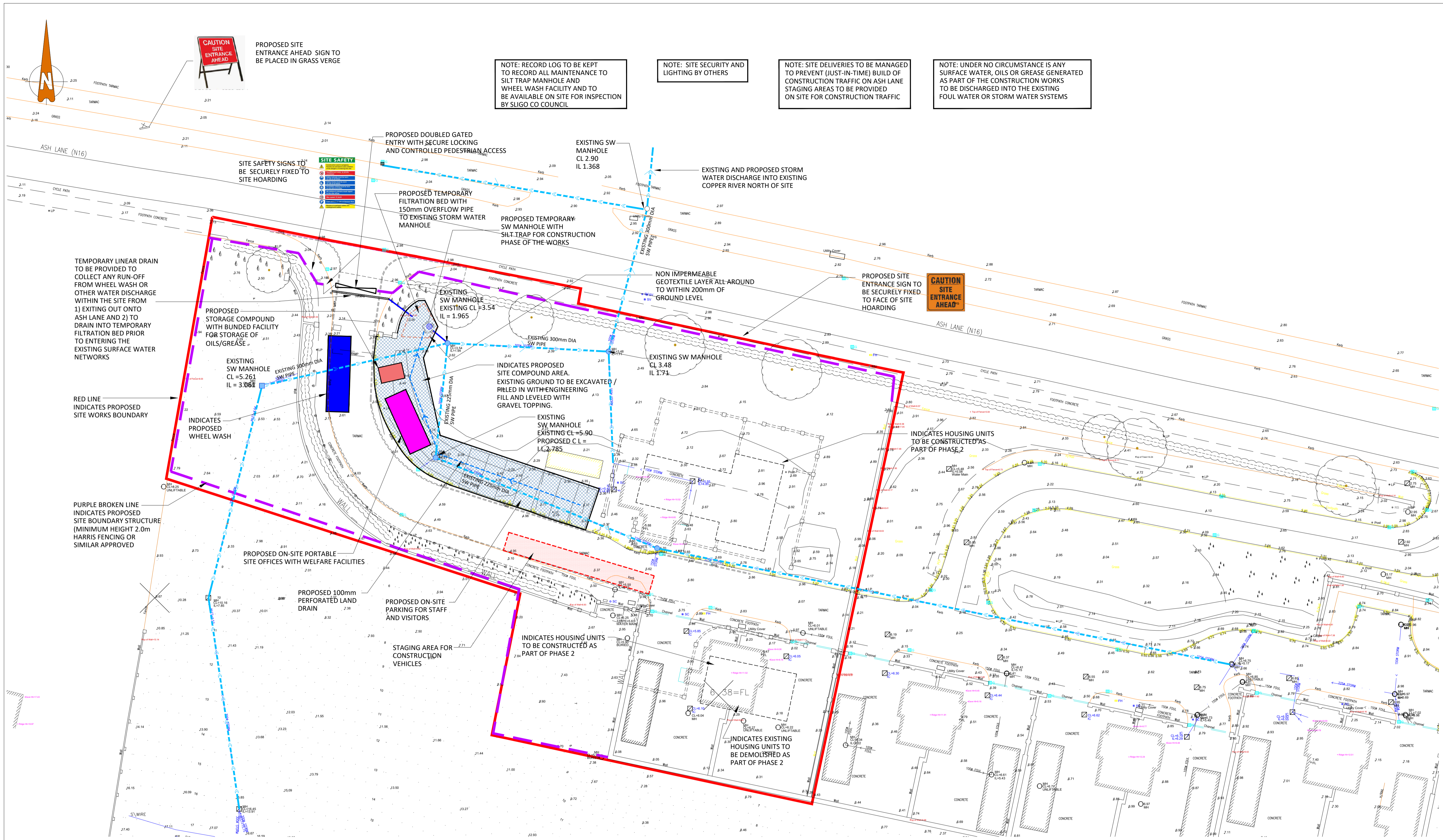
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Client: SLIGO COUNTY COUNCIL
Project: ASH LANE GROUP HOUSING
Title: PROPOSED DEMOLITION WORKS
Code | Originator | Zone | Level | Type | Role | Number | Status | Revision
S603 - OCSC - XX - XX - DR - C - 0605 | D2 | P04
Date: JAN '23 Scale: 1:250 @ A1 Drn by: AD Chkd by: TD Aprvd by:



NOTE: RECORD LOG TO BE KEPT TO RECORD ALL MAINTENANCE TO SILT TRAP MANHOLE AND WHEEL WASH FACILITY AND TO BE AVAILABLE ON SITE FOR INSPECTION BY SLIGO CO COUNCIL

NOTE: SITE SECURITY AND LIGHTING BY OTHERS

NOTE: SITE DELIVERIES TO BE MANAGED TO PREVENT (JUST-IN-TIME) BUILD OF CONSTRUCTION TRAFFIC ON ASH LANE STAGING AREAS TO BE PROVIDED ON SITE FOR CONSTRUCTION TRAFFIC

NOTE: UNDER NO CIRCUMSTANCE IS ANY SURFACE WATER, OILS OR GREASE GENERATED AS PART OF THE CONSTRUCTION WORKS TO BE DISCHARGED INTO THE EXISTING FOUL WATER OR STORM WATER SYSTEMS

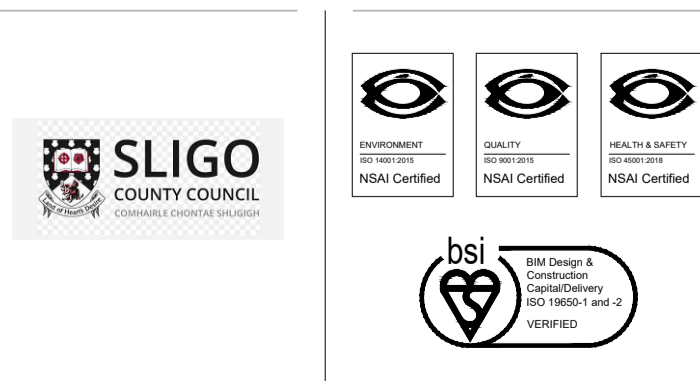
SITE COMPOUND LAYOUT
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P02	16.08.23	ISSUED FOR TENDER	AD	TD

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Client: **SLIGO COUNTY COUNCIL**
Project: **ASH LANE GROUP HOUSING**

Title: **SITE COMPOUND AND CONSTRUCTION TRAFFIC**

Code | Originator | Zone | Level | Type | Role | Number | Status | Revision
S603 - OCSC - XX - XX - DR - C - 0606 | D2 | P02

Date: JUNE '23 Scale: 1:250 @ A1 Drn by: AD Chkd by: TD Aprvd by:



LEGEND

	PROPOSED ROAD RESURFACING REFER TO DRAWING NO'S S603-OCSC-XX-XX-DR-C-0611 & 0612
	PROPOSED NEW 100mm THICK CONCRETE FOOTWAY TO REFER TO DRAWING NO'S S603-OCSC-XX-XX-DR-C-0611 & 0612 & S603-OCSC-XX-XX-DR-S-0160
	PROPOSED NEW 175mm THICK CONCRETE DRIVEWAY / VEHICULAR ACCESS REFER TO DRAWING NO'S S603-OCSC-XX-XX-DR-C-0611 & 0612
	PROPOSED NEW 100mm THICK CONCRETE RAMP - GRADIENTS TO ARCHITECT DETAIL - REFER TO DRAWING NO'S S603-OCSC-XX-XX-DR-C-0611 & 0612
	PROPOSED NEW 100mm THICK CONCRETE FOOTWAY TO PLACE EXISTING REFER TO DRAWING NO'S S603-OCSC-XX-XX-DR-C-0611 & 0612
	PROPOSED NEW BRICK PAVING REFER TO DRAWING NO'S S603-OCSC-XX-XX-DR-C-0612
	PROPOSED NEW PEDESTRIAN CROSSING REFER TO DRAWING NO S603-OCSC-XX-XX-DR-C-0611
	PROPOSED LANDSCAPING BY ARCHITECT
	EXISTING ROAD CARRIAGEWAY
	EXISTING LANDSCAPING
	PROPOSED 125mm HIGH PRECAST CONCRETE KERBING
	PROPOSED DROPPED / DROPPER KERBING 0-6mm AT PEDESTRIAN CROSSING 25mm AT VEHICULAR ACCESS / SHARED SURFACE
	PROPOSED 150mm HIGH PRECAST CONCRETE KERBING
	PROPOSED BUFF COLOURED BLISTER TACTILE PAVING - REFER TO PLAN FOR EXTENT AND LAYOUTS. 400mm x 400mm x 50mm DEEP ON 25mm DEEP 3:1 CEMENT MORTAR BEDDING. REFER TO DRAWING NO S603-OCSC-XX-XX-DR-C-0611 FOR DETAILS

NOTES:

REFER TO DRAWING NO: S603-OCSC-XX-XX-DR-C-0611 ROAD DETAILS SHEET 1 OF 2 (INCLUDING CROSS SECTIONS A-A, K-K, L-L & M-M)

REFER TO DRAWING NO: S603-OCSC-XX-XX-DR-C-0612 ROAD DETAILS SHEET 2 OF 2

REFER TO DRAWING NO: S603-OCSC-XX-XX-DR-S-0160 FOR DETAILS OF SECTIONS B-B, C-C & D-D

FOR DETAILS OF JOINTS IN CONCRETE SLABS REFER TO DRAWINGS NO S603-OCSC-XX-XX-DR-C-0614.

FOR DETAILS OF BOUNDARY WALLS DETAILS REFER TO DRAWINGS NO S603-OCSC-XX-XX-DR-S-0160 INCLUDING SECTIONS B-B, C-C, D-D, E-E, F-F, G-G, H-H, J-J

ROADS AND PAVEMENT LAYOUT

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P01	02.02.23	FOR INFORMATION	TD	TOD
P02	23.02.23	PROPOSED WORKS UPDATED AS BUBBLED	TD	TOD
P03	02.03.23	GENERAL REVISIONS	TD	TOD
P04	03.03.23	SECTION MARK, D-D ADDED, WALL FOUNDATIONS ADDED	TD	TOD
P05	24.06.23	REDLINE BOUNDARY UPDATED	AD	TD
P06	02.08.23	LAYOUT UPDATED AS PER REVISED ARCHITECT LAYOUT	AD	TD
P07	16.08.23	ISSUED FOR TENDER	AD	TD

Rev No.	Date	Revision Note	Drn by	Chkd by



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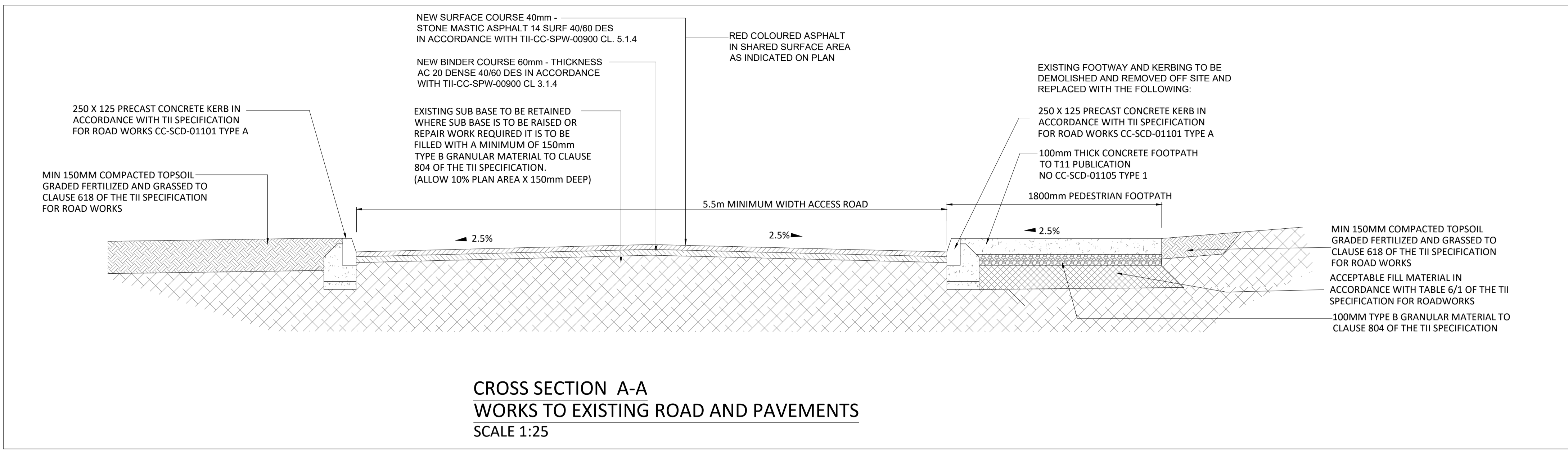
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w: www.ocsc.ie

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Client: SLIGO COUNTY COUNCIL
Project: ASH LANE GROUP HOUSING
Title: PROPOSED ROAD AND PAVEMENTS

Code | Originator | Zone | Level | Type | Role | Number | Status | Revision
S603-OCSC-XX-XX-DR-C-0610 | D2 | P07
Date: JAN '23 Scale: 1:250 @ A1 Drn by: AD Chkd by: TD Aprvd by:

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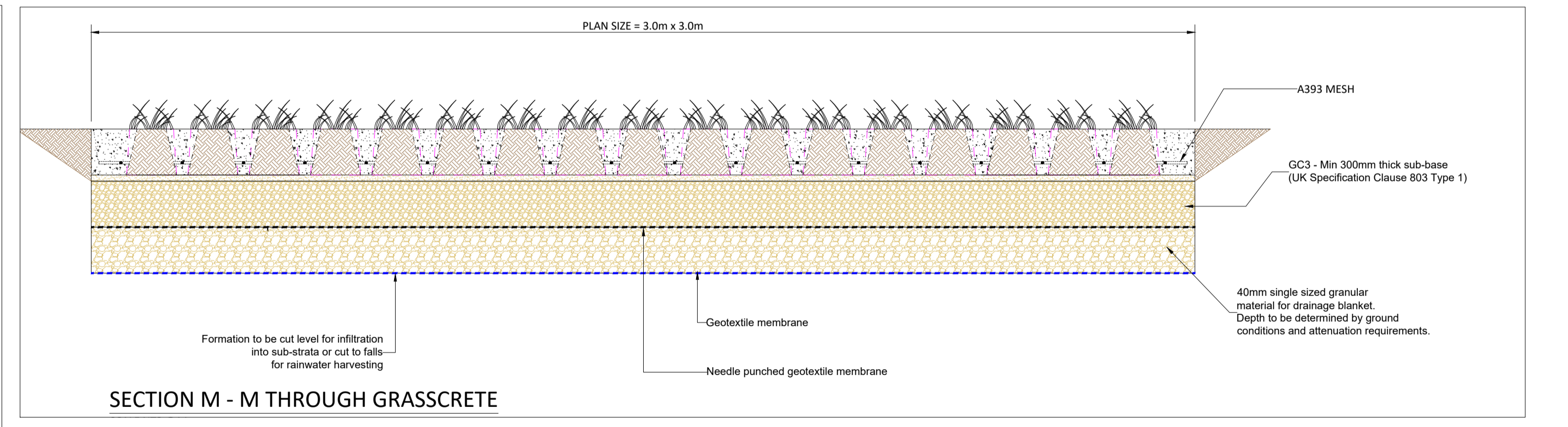
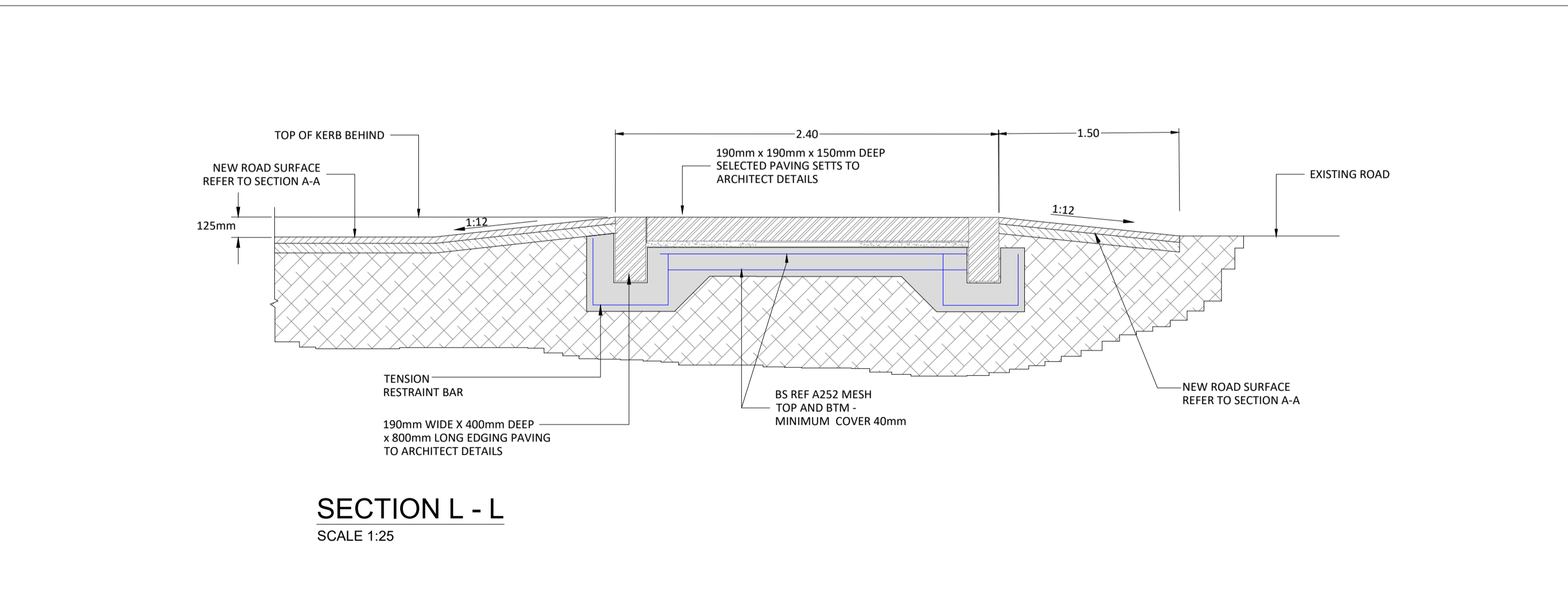
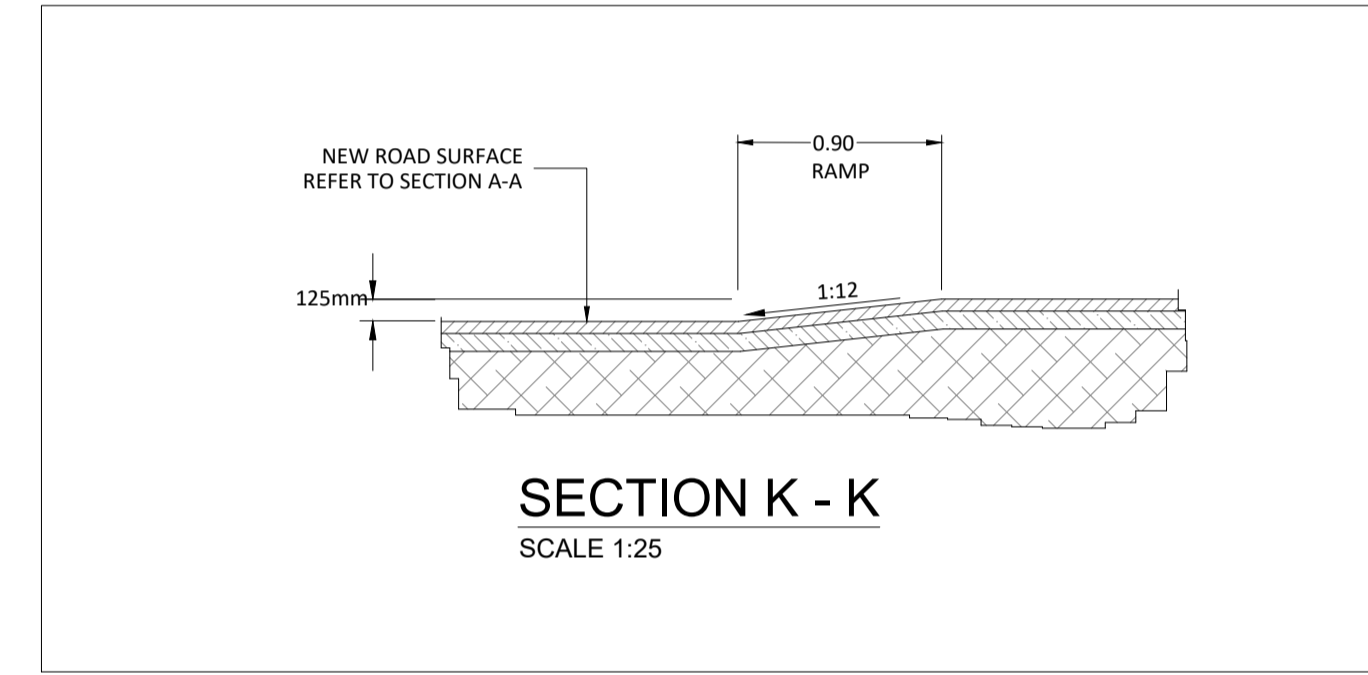
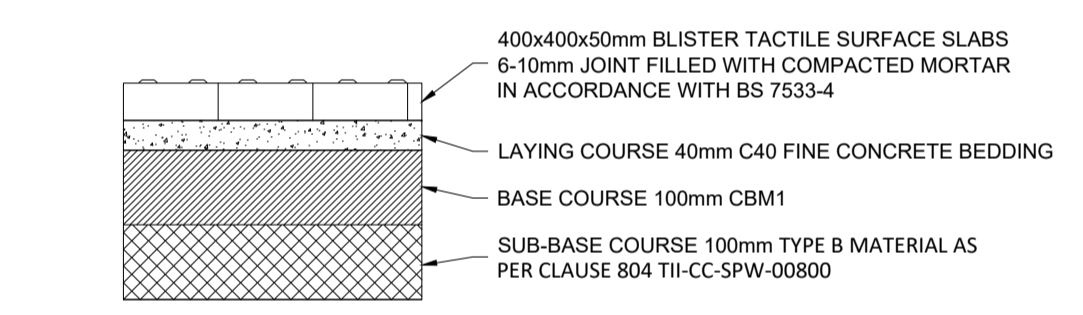
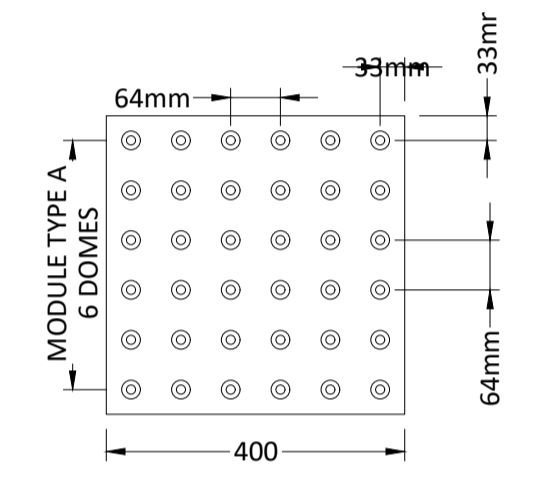
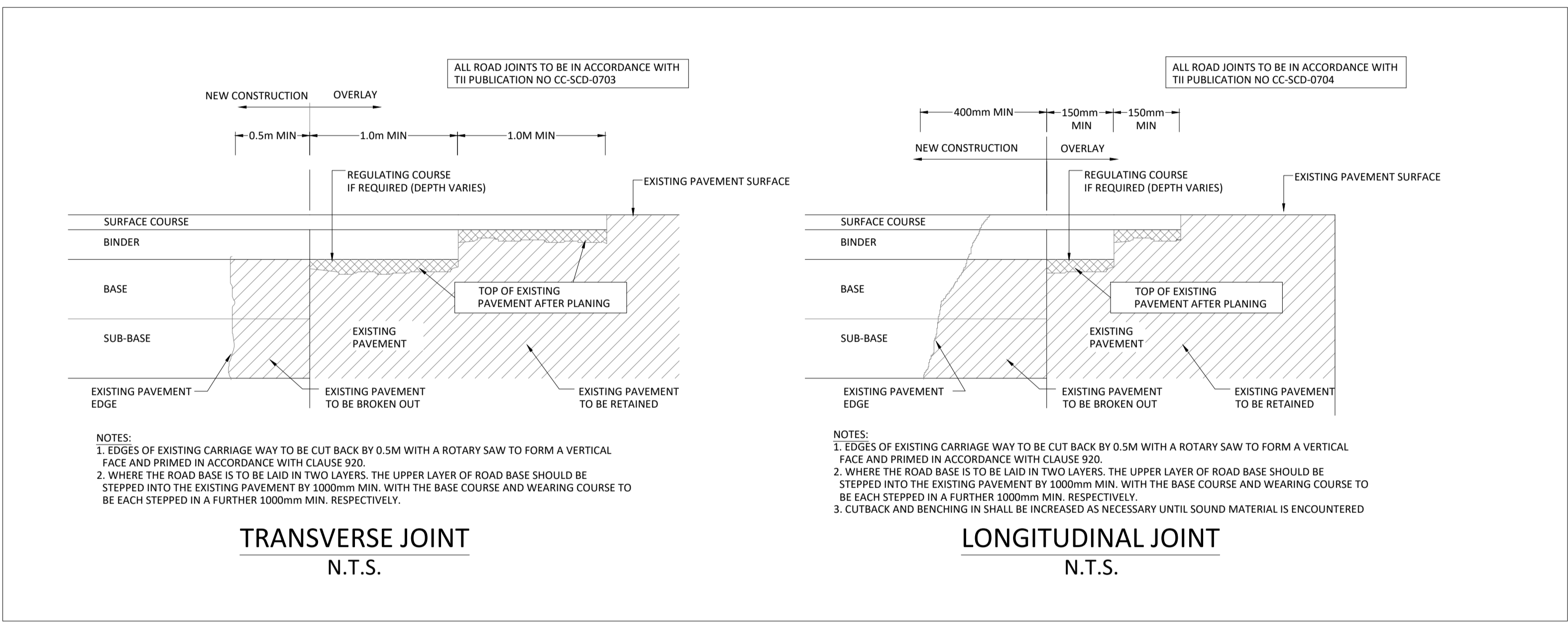
- NOTES:**
1. DO NOT SCALE FROM THIS DRAWING USE STATED DIMENSIONS ONLY. IF IN DOUBT CONSULT THE ENGINEER.
 2. ALL ROAD WORKS SHALL COMPLY WITH THE ENGINEERS SPECIFICATION AND THE TRANSPORT INFRASTRUCTURE IRELAND SPECIFICATION FOR ROAD WORKS.
 3. TRAFFIC MANAGEMENT SHALL AT A MINIMUM COMPLY WITH TRAFFIC SIGNS MANUAL AND THE REQUIREMENTS OF THE RELEVANT LOCAL AUTHORITY, AND BE IN ACCORDANCE WITH THE CONTRACT.
 4. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATION.
 5. ALL EXCAVATIONS BELOW THE ROAD SHOULD BE BACK FILLED WITH CLASS 6F MATERIAL COMPACTED IN ACCORDANCE WITH TABLE 6.4 OF 600 SERIES OF THE SPECIFICATION FOR ROAD WORKS (TII).
 6. GEOTEXTILE TO BE ADDED IF REQUIRED UPON INSPECTION BY ENGINEER.

NOTES:

REFER TO DRAWING NO: S603-OCSC-XX-XX-DR-C-0610 FOR ROAD AND PAVEMENT LAYOUT

REFER TO DRAWING NO: S603-OCSC-XX-XX-DR-C-0612 FOR ROAD AND PAVEMENT BUILD UP DETAILS

- NOTE (UNCONTROLLED CROSSING):**
1. BLISTER TACTILE PAVING SLABS 400x400mm BUFF IN COLOUR;
 2. THE TACTILE DOMES MUST BE LINED UP TO GIVE THE DIRECTION OF TRAVEL TO CROSS THE ROAD;
 3. UTILITY/SERVICE BOXES SHOULD NOT BE LOCATED IN TACTILE PAVED AREAS WHERE POSSIBLE;
 4. TACTILE SLABS SHALL BE CUT SO AS TO MINIMIZE THE CREATION OF SLIVERS ALONG THE KERB LINE;
 5. ANY GULLIES IN THE CROSSING TO BE RELOCATED;
 6. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STANDARD.



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P02	16.08.23	ISSUED FOR TENDER	AD	TD

Rev No.	Date	Revision Note	Drn by	Chkd by



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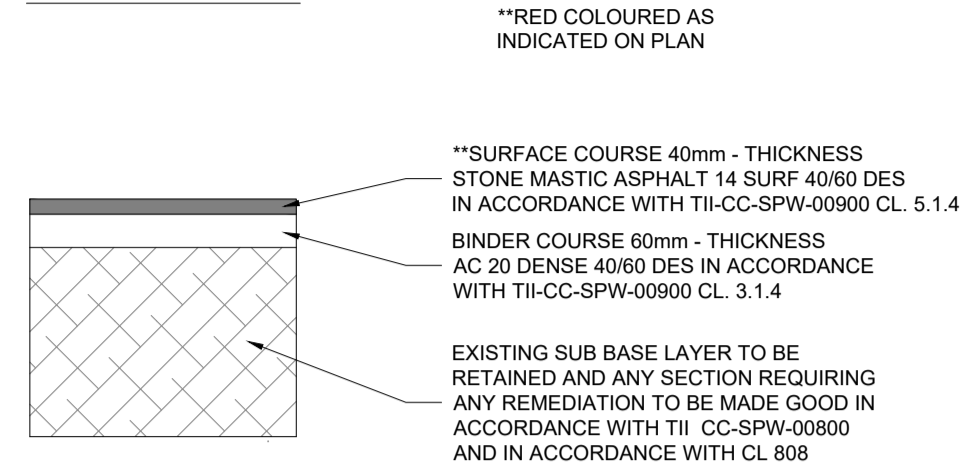
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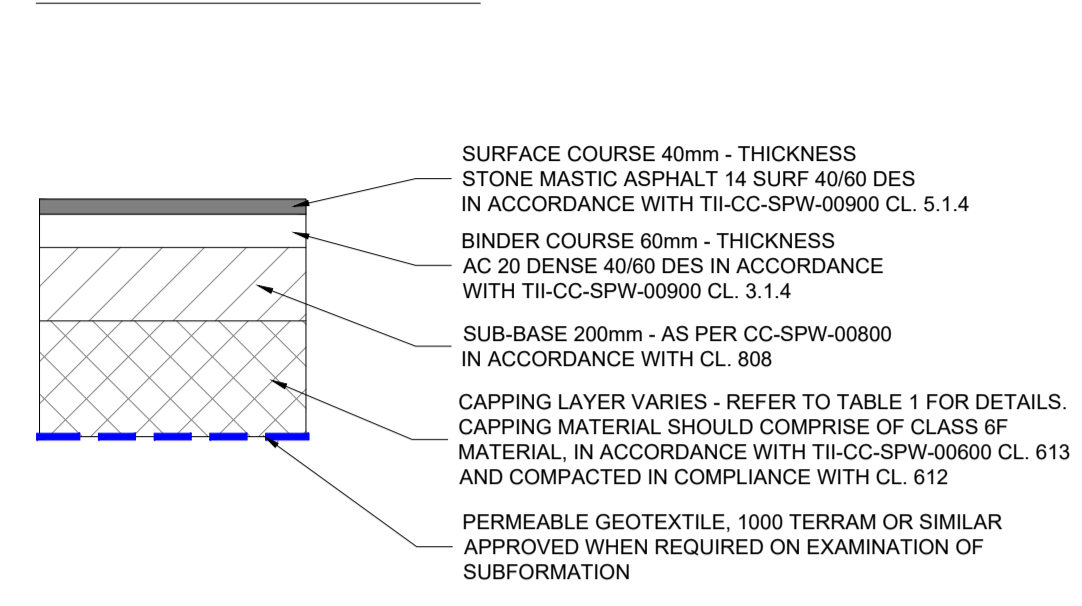
Client: SLIGO COUNTY COUNCIL
Project: ASH LANE GROUP HOUSING
Title: ROAD DETAILS SHEET 1 OF 2

Code | Originator | Zone | Level | Type | Role | Number | Status | Revision
S603 - OCSC - XX - XX - DR - C - 0611 | D2 | P02
Date: FEB '23 Scale: A.N. @ A1 Drn by: TD Chkd by: TOD Aprvd by:

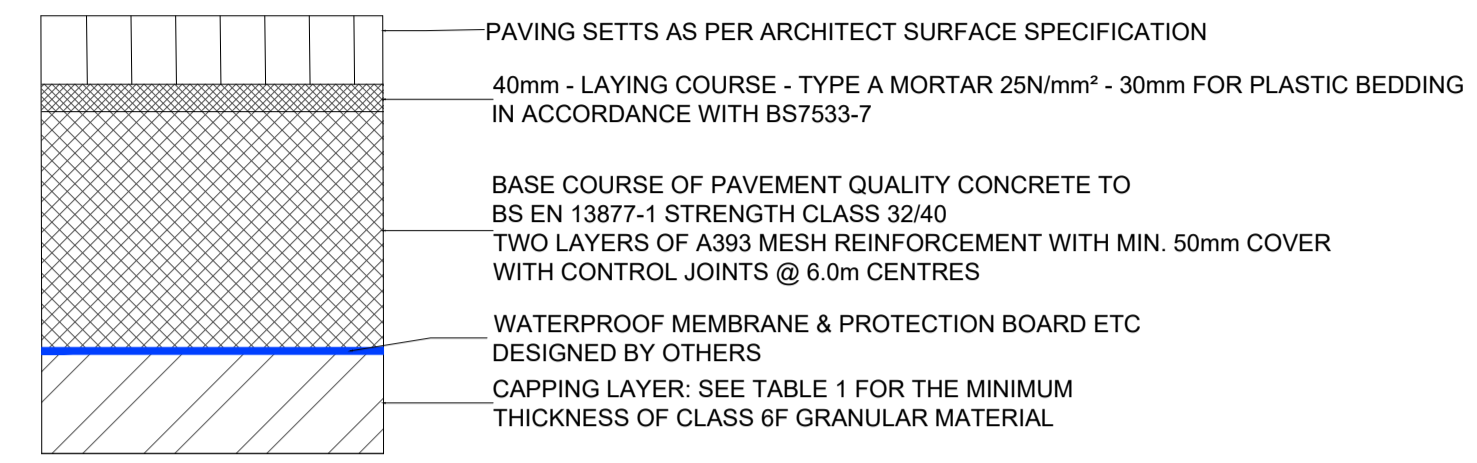
**RESURFACING EXISTING
INTERNAL ROAD**



**PROPOSED NEW
INTERNAL ROAD BUILD-UP**



**PAVING SETTS TO ARCHITECT DETAIL
TRAFFICABLE - INTERNAL ROAD**



NOTES:

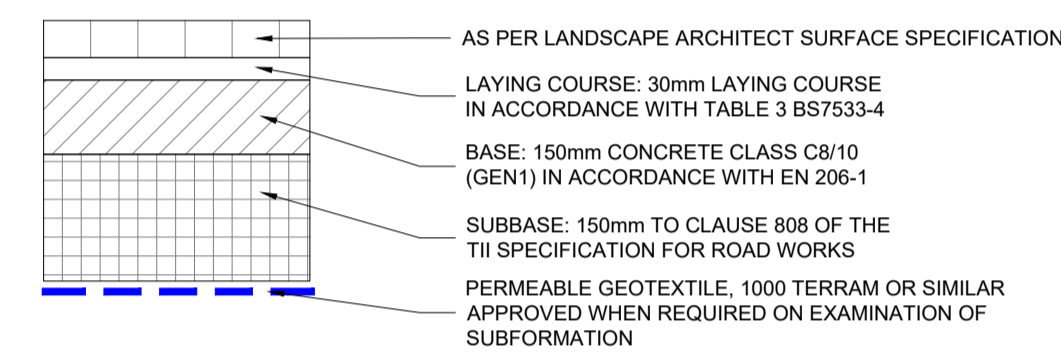
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NOTES:

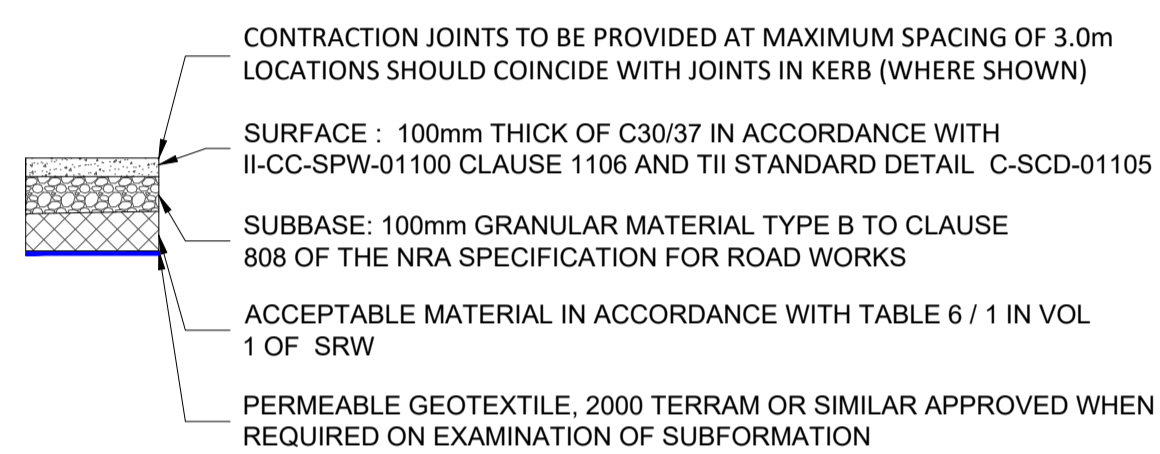
REFER TO DRAWING NO: S603-OCSC-XX-XX-DR-C-0610 FOR ROAD AND PAVEMENT LAYOUT

REFER TO DRAWING NO: S603-OCSC-XX-XX-DR-C-0611 FOR ROAD CROSS SECTIONS

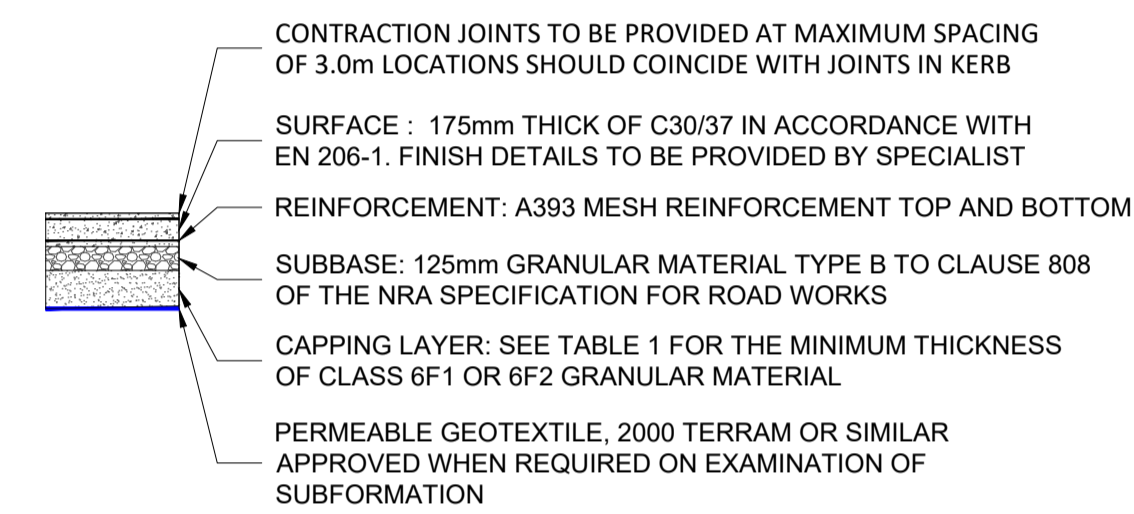
**PAVIOURS - VARIOUS SIZES - ON
SUBGRADE - NON TRAFFICABLE**



**DETAIL F
IN-SITU CONCRETE FOOTWAY + NON VEHICULAR CONCRETE PAVEMENTS
PEDESTRIAN USE ONLY**



**DETAIL E
IN-SITU CONCRETE IN DRIVEWAYS
VEHICULAR USE**



**RAISED TABLE
BUILD-UP**

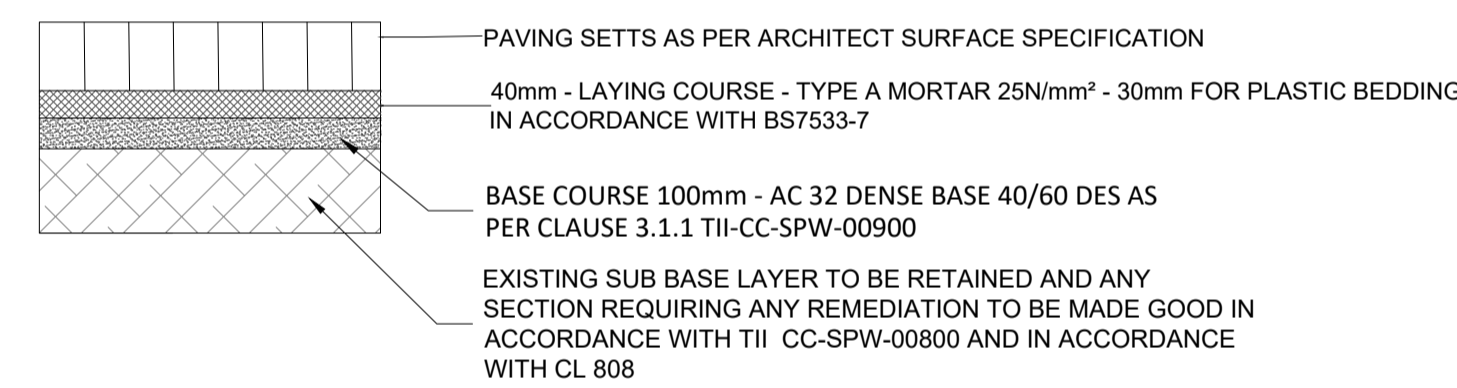


TABLE 1: CAPPING LAYER DEPTH

THE MINIMUM REQUIRED THICKNESS OF NON-FROST SUSCEPTIBLE CAPPING MATERIAL IS SHOWN HEREUNDER:

CBR SUBGRADE (%)	<2.5	2.5	3	4	5-15	>15
THICKNESS OF CAPPING LAYER (mm)	SPECIALIST GEOTECHNICAL ADVISE REQUIRED	600	350	300	250	150

CBR TESTS SHALL BE CARRIED OUT AT A RATE OF ONE TEST PER 100 METERS OF ROAD OR WHERE THE SOIL TYPE CHANGES

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Client: SLIGO COUNTY COUNCIL
Project: ASH LANE GROUP HOUSING

Title: ROAD DETAILS SHEET 2 OF 2

Code | Originator | Zone | Level | Type | Role | Number | Status | Revision
S603 - OCSC - XX - XX - DR - C - 0612 | D2 | P02
Date: FEB '23 Scale: A.N. @ A1 Drn by: AD Chkd by: TD Aprvd by:



LEGEND	
	BROKEN CENTRE LINE RRM 002B
	CONTINUOUS LINE RRM 001
	ROAD STOP SIGN
	STOP ROAD STOP MARKING M 114
	ROAD STOP LINE RRM 017

ROAD MARKINGS AND SIGNAGE LAYOUT
SCALE 1:250 @A1

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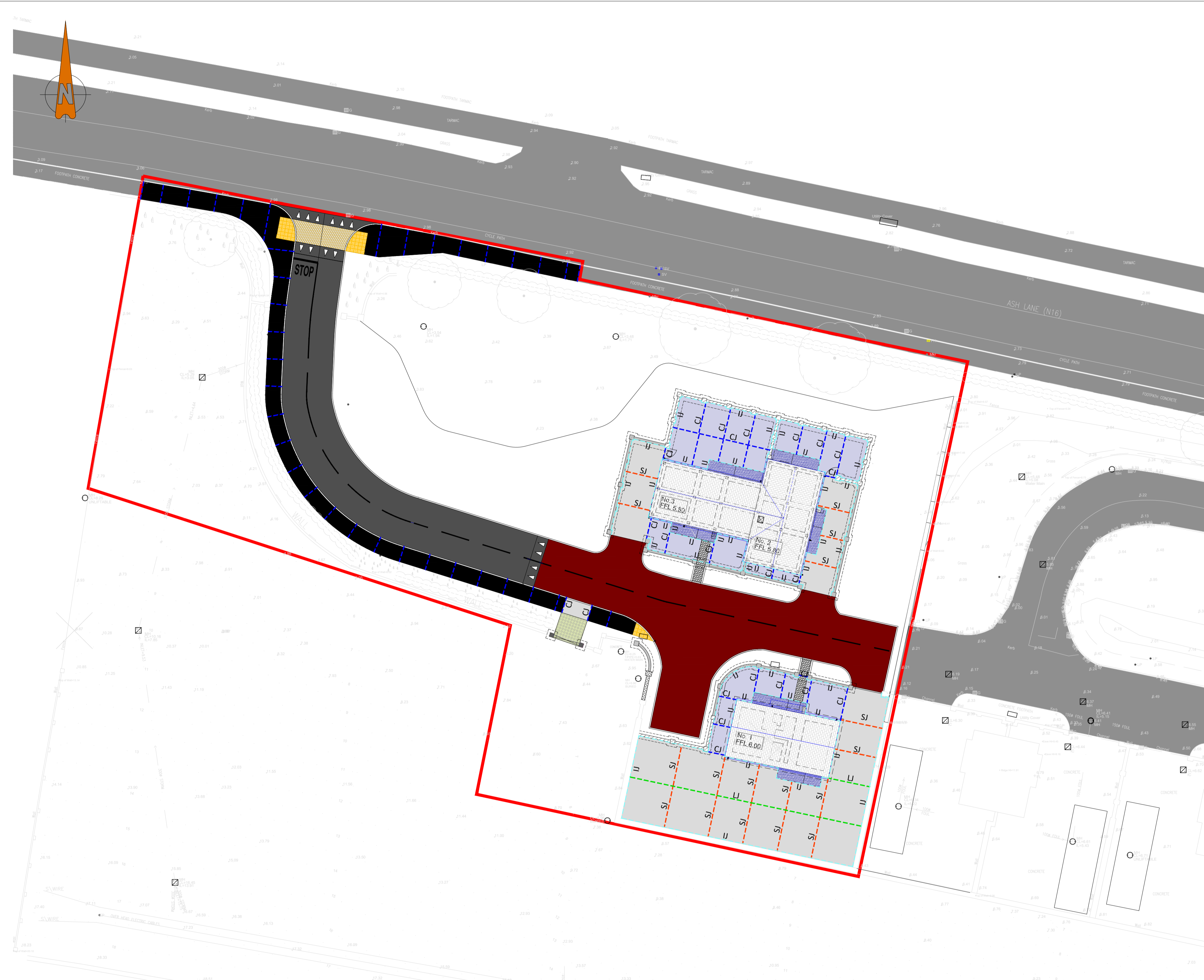
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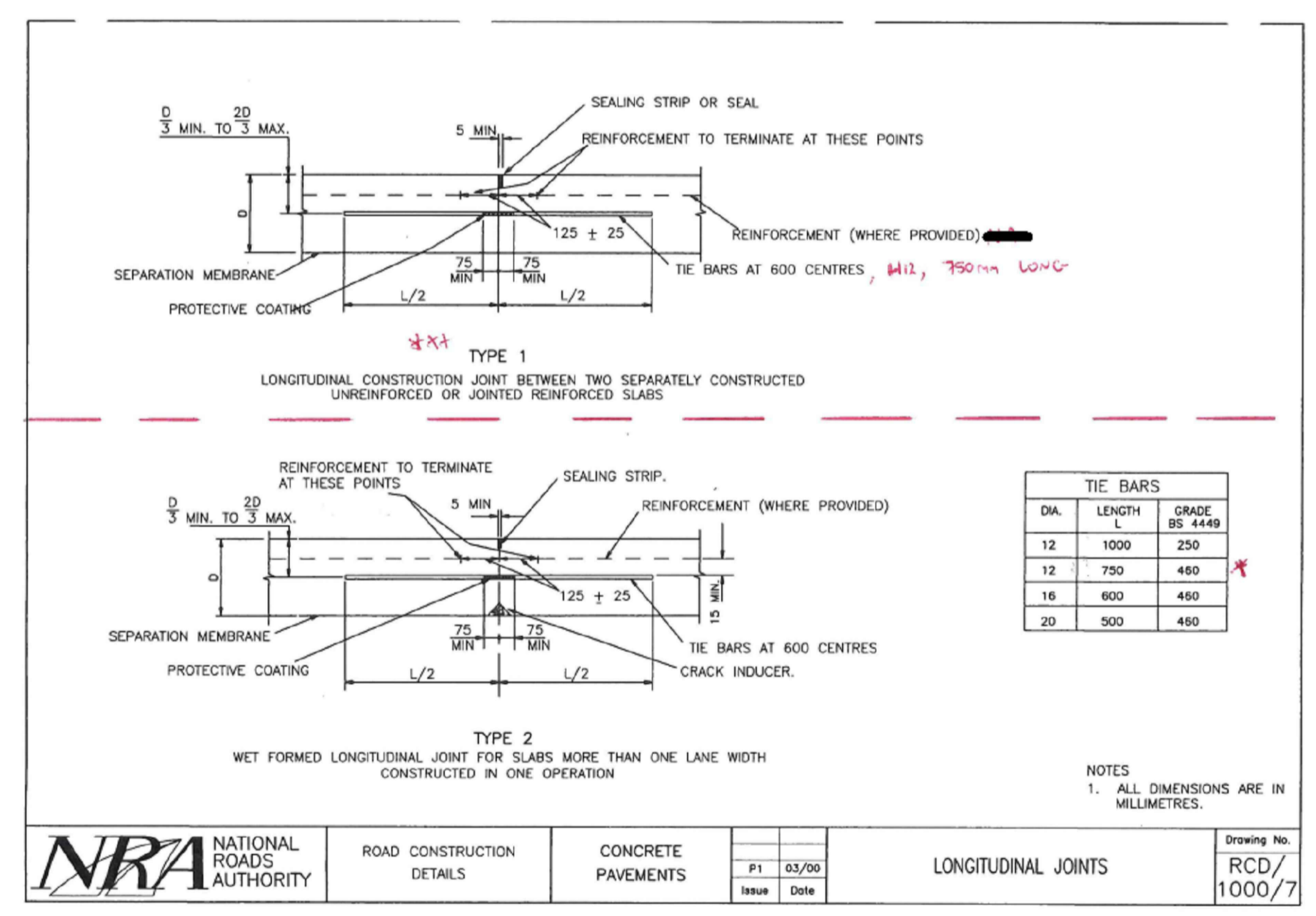
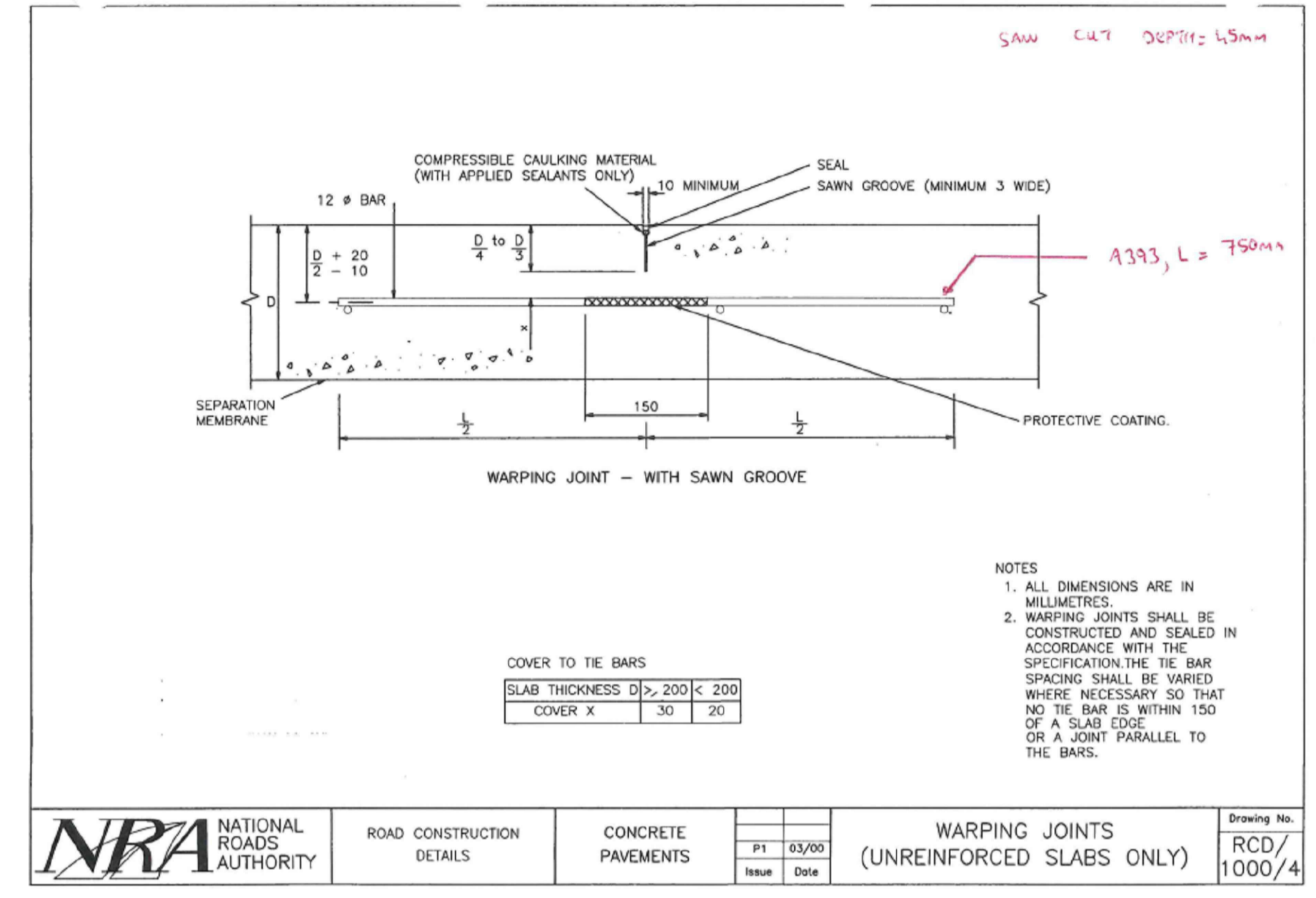
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Client:	SLIGO COUNTY COUNCIL										
Project:	ASH LANE GROUP HOUSING										
Title:	ROAD MARKINGS AND SIGNAGE										
Code	Originator	Zone	Level	Type	Role	Number	Status	Revision			
S603	OCSC	XX	XX	DR	C	0613	D2	P01			
Date:	AUG '23	Scale:	1:250	@	A1	Drn by:	AD	Chkd by:	TD	Aprvd by:	



LEGEND	
	LONGITUDINAL CONSTRUCTION JOINT. REFER TO TYPE 1 RCD/100/7
	SAW JOINT @ 4.5m CRS MAXIMUM. REFER TO RCD/1000/4
	JOINT FORMER & SAW CUT @ 3.0m CRS MAXIMUM IN 100mm FOOTPATH / CONCRETE PAVEMENTS
	10mm ISOLATION JOINT.



CONCRETE PAVEMENT JOINTS - LAYOUT PLAN
SCALE 1:250 @A1

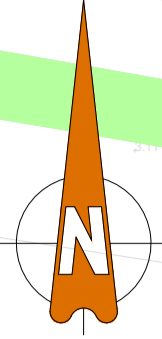
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Rev No.	Date	Revision Note	Drn by	Chkd by

		Client: SLIGO COUNTY COUNCIL
		Project: ASH LANE GROUP HOUSING
		Title: CONCRETE PAVEMENTS JOINTS LAYOUT PLAN
		Code Originator Zone Level Type Role Number Status Revision S603 · OCSC · XX · XX · DR · C · 0614 D2 P01
Dublin London Belfast Galway Cork Birmingham		Date: JAN '23 Scale: 1:250 @ A1 Drn by: AD Chkd by: TD Aprvd by:



ALL MANHOLE AND ACCESS CHAMBER / AJ's COVERS TO BE CLASS D400 IN TRAFFICKED AREAS. B125 ELSEWHERE. ALL TO BE DOUBLE SEALED AN EXISTING AND PROPOSED MANHOLES IN ACCESS ROAD AND ADJACENT TO THE ATTENUATION TANK TO BE LOCKABLE TYPE TO SCC SPECIFICATION

ALL PIPE WORK WITH LESS THAN 1200mm COVER TO BE ENCASED IN 100mm CONCRETE SURROUND

STORM WATER PIPES ADJACENT TO THE PROPOSED BUILDINGS TO BE GRADE SN8

STORM WATER PIPES IN THE ACCESS ROAD TO BE CORRUGATED TWINWALL

LEGEND

STORM DRAINAGE NETWORK	
	EXISTING STORM DRAINAGE PIPES TO BE RETAINED
	EXISTING STORM DRAINAGE PIPES TO BE DEMOLISHED
	EXISTING STORM DRAINAGE MANHOLES TO BE RETAINED
	PROPOSED STORM WATER MANHOLES
	PROPOSED STORM DRAINAGE AJ's AC's
	PROPOSED TWINWALL STORM DRAINAGE PIPES GRADE SN8
	PROPOSED ACO DRAINS
	YARD GULLY TO SPECIALIST DETAIL

STORM WATER NETWORK - PIPELINE DETAILS

USMH	USCL (m)	USIL (m)	USMH Dia (mm)	PN	Dia (mm)	Length (m)	Slope (1:X)	DSMH	DSIL (m)
S1	6.050	4.700	1200	1.000	225	40.000	40.0	S2	3.700
S2	4.830	3.700	1200	1.001	225	19.950	35.0	S3	3.130
S3	4.050	3.130	1200	1.002	225	11.890	34.0	S4	2.780
S4	3.510	2.780	1200	1.003	225	7.240	55.0	S5	2.649
S5	3.700	2.649	1200	1.004	225	8.200	50.0	S6	2.485

- ### NOTES
- ALL NOTED LEVELS ARE TO ORDINANCE DATUM, MALIN HEAD.
 - REFER TO ARCHITECT'S LAYOUT FOR ALL SET-OUT INFORMATION.
 - REFER TO ARCHITECT / LANDSCAPE ARCHITECT'S DESIGN DRAWINGS FOR DETAILS OF PROPOSED SURFACE FINISHES AND LANDSCAPING.
 - ALL SURFACE WATER DRAINAGE IS TO BE INSTALLED IN ACCORDANCE WITH THE GREATER DUBLIN REGION CODE OF PRACTICE FOR DRAINAGE WORKS, THE BUILDING REGULATIONS PART H AND THE SITE DEVELOPMENT SPECIFICATION.
 - ALL WASTEWATER DRAINAGE IS TO BE INSTALLED IN ACCORDANCE WITH THE IRISH WATER CODE OF PRACTICE FOR WASTEWATER INFRASTRUCTURE, THE BUILDING REGULATIONS PART H AND THE SITE DEVELOPMENT SPECIFICATION.
 - ALL DRAINAGE COVER LEVELS ARE TO BE COORDINATED WITH THE PROPOSED ROAD DESIGN LEVELS AND ARCHITECT DESIGN FINISH DETAILS.
 - ALL CONNECTIONS TO NEW DRAINAGE NETWORKS ARE TO BE MADE AT AN ANGLE OF 90° OR IN THE DIRECTION OF FLOW.
 - THE CONTRACTOR IS TO VERIFY INVERT LEVEL AT PROPOSED CONNECTION TO EXISTING SEWERS, PRIOR TO ANY OTHER WORKS BEING CARRIED OUT, AND MAKE ANY DISCREPANCIES KNOWN TO THE ENGINEER.
 - THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMATION OF PRESENCE ALL EXISTING UTILITIES, IF ANY, ALONG ROUTE OF PROPOSED DRAINAGE NETWORKS - BY INTRUSIVE INVESTIGATION OR EQUAL.
 - EXISTING PUBLIC SEWER TO BE JET CLEANED AND CCTV SURVEYED PRIOR TO, AND AFTER PROPOSED CONNECTIONS FROM NEW NETWORK.
 - ALL NEW DRAINAGE INFRASTRUCTURE TO BE JET CLEANED AND CCTV SURVEYED, WITH ANY NOTED DEFECTS REMEDIATED, ON COMPLETION OF WORKS, TO THE SATISFACTION OF THE LOCAL AUTHORITY.
 - REFER TO ARCHITECTS DRAWINGS FOR DETAILS OF PRIVATE DRAINAGE
 - ALL COVER LEVELS ARE TO BE COORDINATED WITH ROAD DESIGN LEVELS AND LANDSCAPE ARCHITECT'S PROPOSED FINISH LEVELS.
 - THE INTERNAL BUILDING DRAINAGE TO BE COORDINATED WITH ARCHITECT'S LAYOUT.
 - ALL MANHOLE COVERS TO ROADWAYS SUBJECT TO TRAFFIC LOADINGS TO BE CLASS D400 OTHERWISE B125 GRADE

PROPOSED DRAINAGE LAYOUT

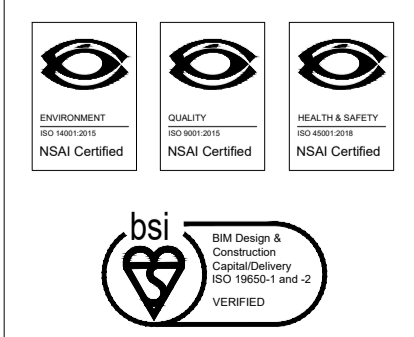
SCALE 1:250 @A1

- ### NOTES:
- CONTRACTOR TO ALLOW FOR JET WASHING ALL EXISTING FW AND SW DRAINS ON SITE FOLLOWED BY CCTV SURVEY OF ALL DRAINS ON SITE. CONTRACTOR TO PROVIDE 'AS BUILT' DRAWING OF ALL EXISTING AND PROPOSED DRAINS. REFER TO ARCHITECT'S DRAWINGS FOR FURTHER ADDITIONAL INSTRUCTIONS.
 - CONTRACTOR TO CARRY OUT A CCTV SURVEY OF NEW STORM WATER NETWORKS WITHIN THE PHASE 2 SITE BOUNDARY

Rev No.	Date	Revision Note	Drn by	Chkd by
P01	03.02.23	FOR INFORMATION	TD	TOD
P02	15.02.23	DRAINAGE DETAILS ADDED FW & SW	TD	TOD
P03	02.03.2023	DRAINAGE REVISED AS BUBBLED	TD	TOD
P04	26.06.23	REDLINE BOUNDARY & SW LAYOUT UPDATED	AD	TD
P05	07.08.23	DRAINAGE LAYOUT REVISED AS PER REVISED ARCHITECT LAYOUT	AD	TD
P06	16.08.23	ISSUED FOR TENDER	AD	TD

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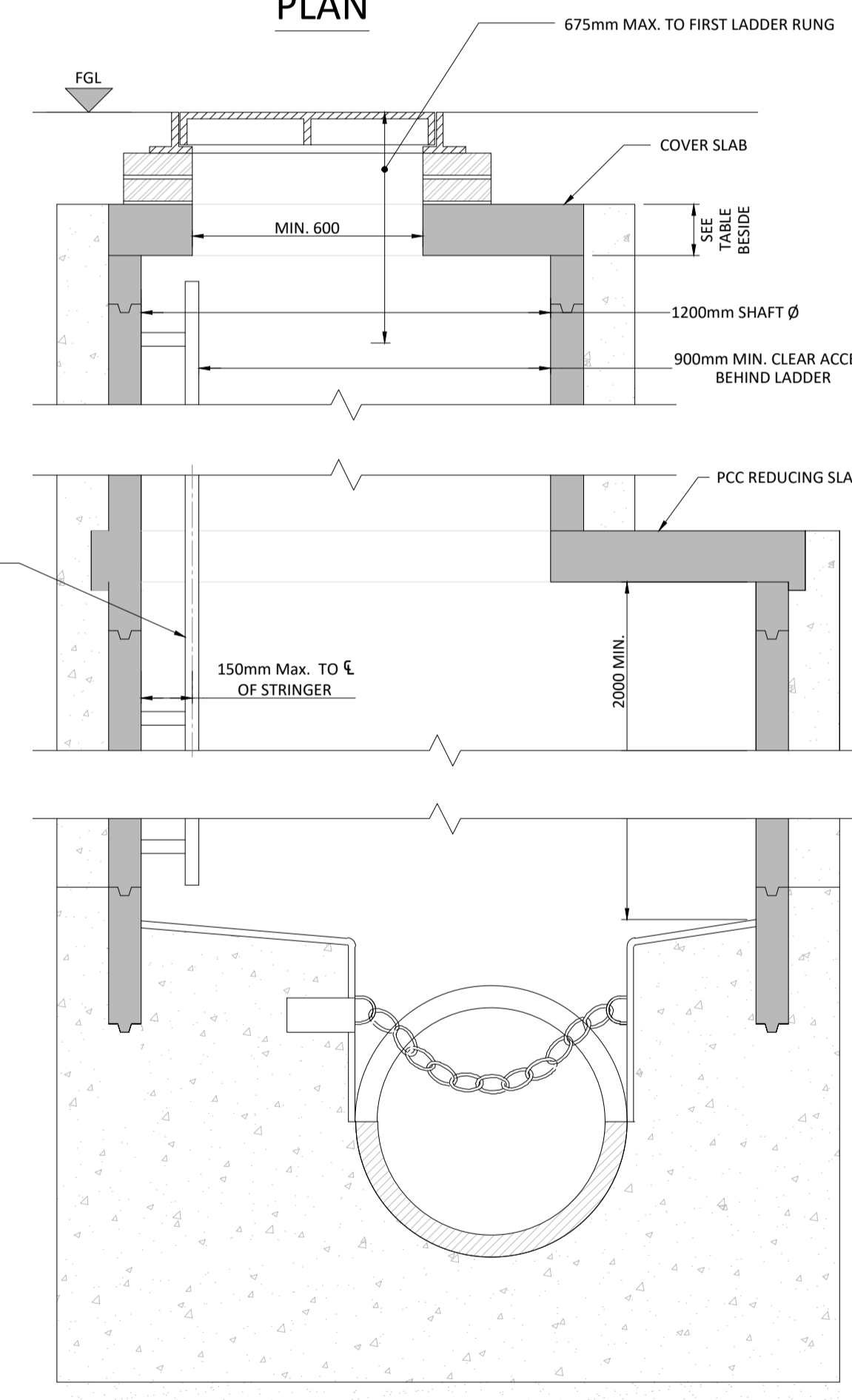
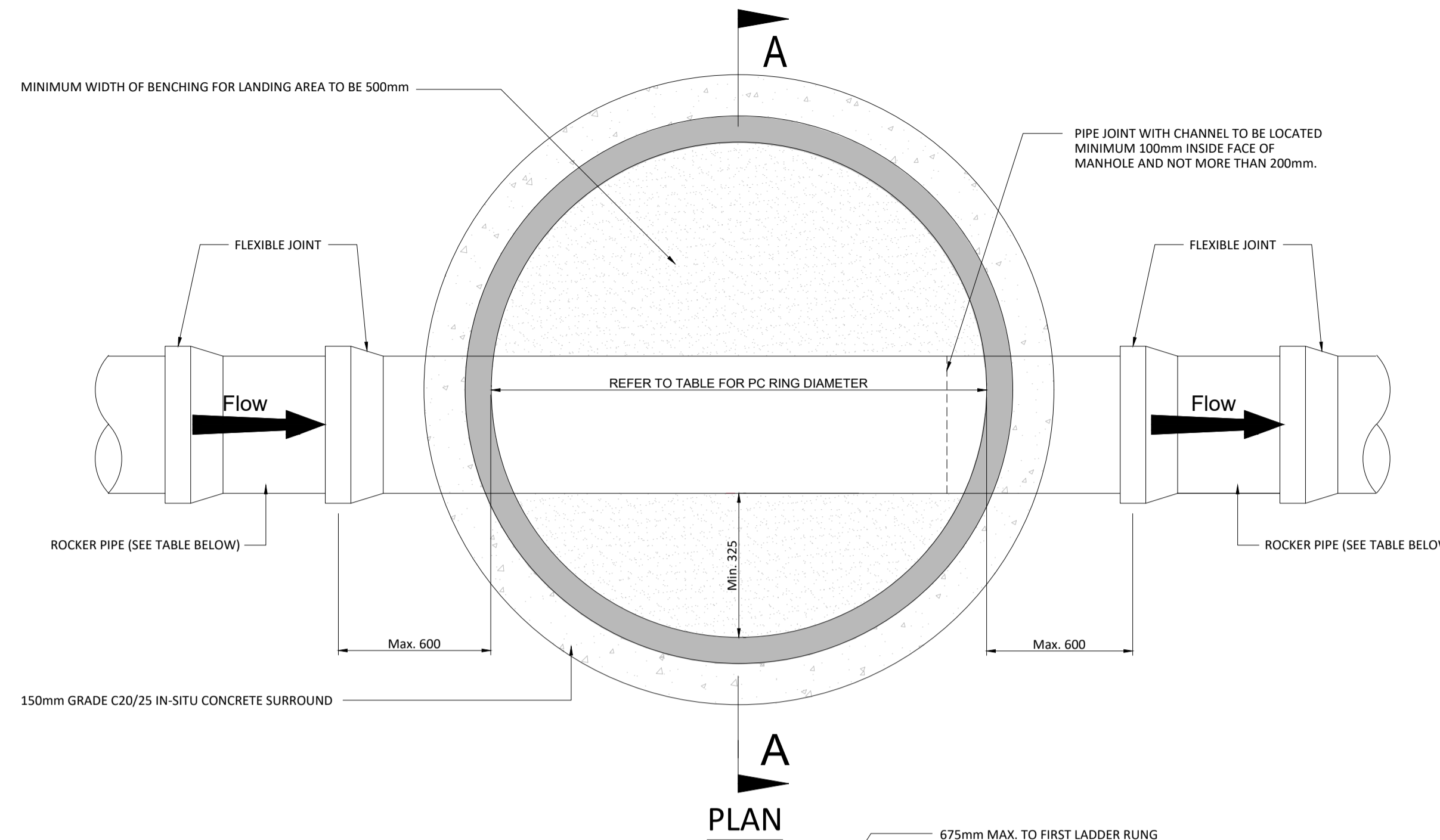
Client: SLIGO COUNTY COUNCIL
Project: ASH LANE GROUP HOUSING
Title: PROPOSED DRAINAGE LAYOUT

Code | Originator | Zone | Level | Type | Role | Number | Status | Revision
S603 - OCSC - XX - XX - DR - C - 0620 | D2 | P06
Date: JAN '23 Scale: 1:250 @ A1 Drn by: AD Chkd by: TD Aprvd by:

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PRE-CAST CONCRETE MANHOLE WITH CAST IN-SITU BASE NOTES:

- ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
- PRE-CAST MANHOLES UNITS: COMPLYING WITH REQUIREMENTS OF IS EN 1917 AND IS 420.
- THICKER MANHOLE BASES REQUIRED FOR SEWERS IN EXCESS OF 3m DEEP WHERE THE SIZE IS GREATER THAN THE STANDARD MINIMUM SIZE.
- APPROVED PRE-CAST CONCRETE BASES MAY BE USED INCORPORATING CHANNELS, BENCHING ETC. SUBJECT TO IRISH WATER REVIEW AND COMPLYING WITH IS EN 1719 AND IS 420.
- STRUCTURAL DESIGN AND REINFORCEMENT DETAILS TO BE PROVIDED BY THE DEVELOPER AND SUBMITTED TO IRISH WATER FOR REVIEW.
- MANHOLES GREATER THAN 3m IN DEPTH WILL REQUIRE A DETAILED STRUCTURAL DESIGN AND BE SUBJECT TO IRISH WATER REVIEW.
- MANHOLE ROOFS SHALL CONSIST OF A RE-INFORCED CONCRETE SLAB OF IN-SITU CONCRETE, C30/37, WITH A MINIMUM THICKNESS OF 225mm DESIGNED TO CARRY ALL LIVE AND DEAD LOADS. ALTERNATIVELY, APPROVED PRE-CAST CONCRETE ROOF SLABS MAY BE USED SUBJECT TO IRISH WATER REVIEW AND COMPLIANCE WITH IS EN 1917.
- COVERS AND FRAMES SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS SUBJECT TO REVIEW BY IRISH WATER.
- 200mm ALL AROUND x 100mm DEEP, C20/25 CONCRETE PLINTH COMPLETE WITH BULL NOSE FINISH AND TO BE PROVIDED COMPLETE WITH MILD STEEL REINFORCEMENT LINK AROUND COVERS IN GREEN AREAS.
- ALL CHAMBERS TO BE CHECKED FOR UPLIFT BY THE DEVELOPER BASED ON GROUND CONDITIONS WITHIN THE SITE. SHOULD ANTI FLOATION MEASURES BE REQUIRED THEY SHALL BE SUBJECT TO REVIEW BY IRISH WATER.
- ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206 : 2013.
- ANY SPECIAL ROAD REINSTATEMENT AROUND COVER & FRAME SHALL BE TO ROAD AUTHORITY'S REQUIREMENTS.
- NEW ROAD CONSTRUCTION & SURFACE FINISH TO BE TO ROAD AUTHORITY REQUIREMENTS.
- 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.
- IF DEPTH FROM GROUND TO PIPE SOFFIT IS GREATER THAN 6m DEEP, A SITE SPECIFIC ENGINEERED SOLUTION FOR ACCESS SHALL BE PROVIDED. PROPRIETARY WATERTIGHT PCC MANHOLE RING SYSTEMS WITH A WALL THICKNESS > 125mm, & A WATER TIGHT JOINT SEALING SYSTEM, MAY BE USED WITHOUT CONCRETE SURROUND, SUBJECT TO THE GROUND WATER LEVEL AT THE MANHOLE BEING LOW, & SUBJECT TO REVIEW BY IRISH WATER.
- THE INTERNAL MANHOLE DIAMETERS SHOWN IN THE TABLE BELOW ARE MINIMUM DIMENSIONS AND WILL INCREASE DEPENDING ON THE NUMBER AND DIAMETER OF ADDITIONAL INLETS AND FINISHED WITH A 1:3 SAND/CEMENT FINISH TO SUIT FLOW OF INLETS AND OUTLET.



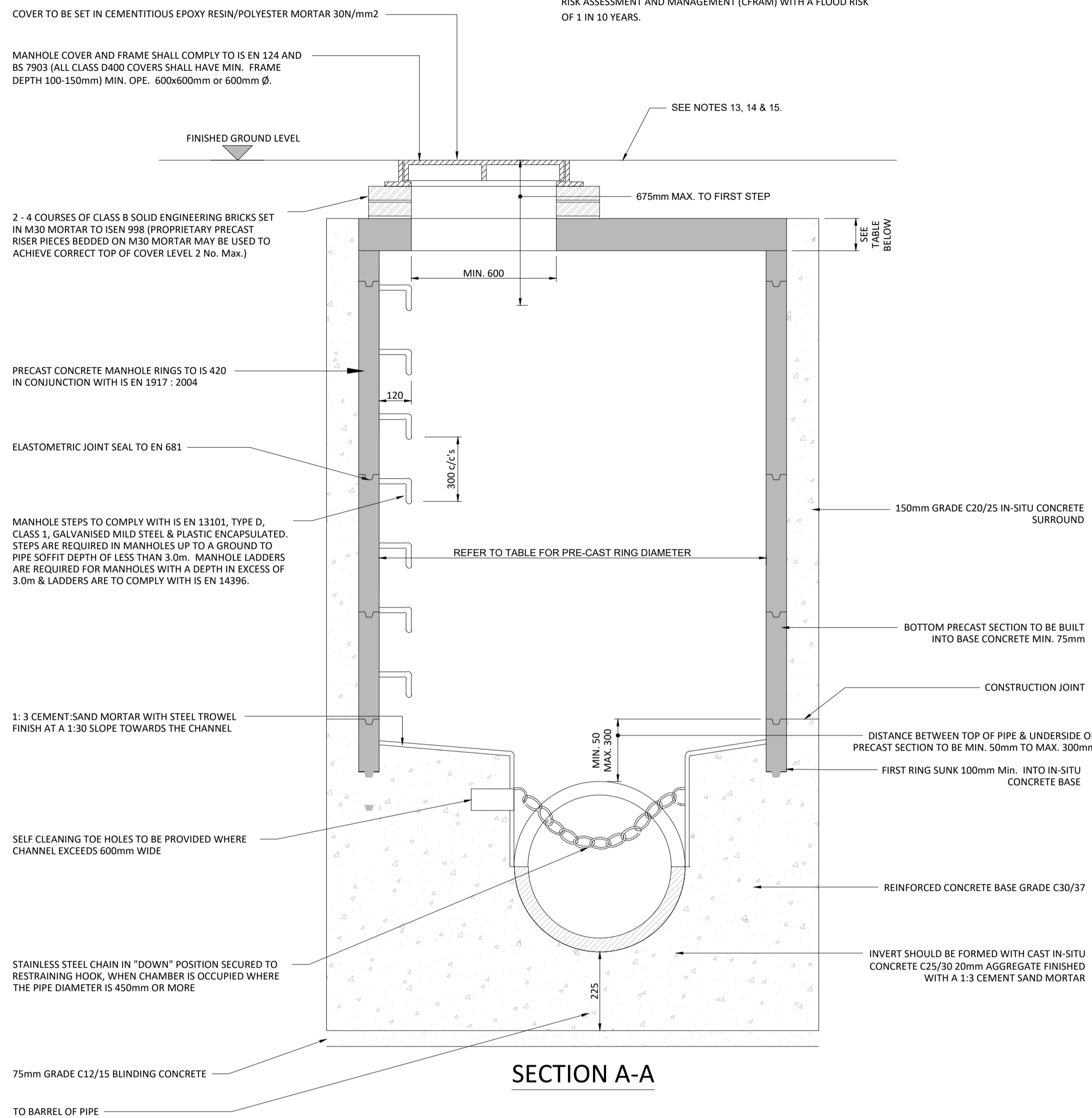
MANHOLE DETAIL > 3m & < 6m GROUND TO SOFFIT DEPTH

(NOTE: ON MANHOLES < 1.5m Ø, REDUCING SLAB NOT TO BE USED & PCC RINGS TO CONTINUE UP TO COVER SLAB)

ROCKER PIPE LENGTH	
PIPE DIAMETER (mm)	ROCKER PIPE LENGTH (mm)
150 TO 600	600
GREATER THAN 600 TO 750 *	1000
GREATER THAN 750 *	1250

* SEWERS GREATER THAN 450mm Ø ARE OUTSIDE THE SCOPE OF THE STANDARD DETAILS. MANHOLE SIZE OF THESE CHAMBERS MAY BE REQUIRED DUE TO MULTIPLE PIPES WITHIN MANHOLE.

NOTE:
PRE-CAST CONCRETE MANHOLES SHALL ONLY BE USED WHERE THE WATER TABLE IS LOW. THEY SHALL NOT BE USED WHERE THERE IS A PERCHED WATER TABLE, WHERE THE SEWER IS LOCATED NEXT TO A RIVER, LAKE OR OTHER WATER BODY AND WITHIN AREAS THAT ARE IDENTIFIED BY THE OFFICE OF PUBLIC WORKS CATCHMENT FLOOD RISK ASSESSMENT AND MANAGEMENT (CFRAM) WITH A FLOOD RISK OF 1 IN 10 YEARS.



MINIMUM MANHOLE DIAMETERS			
DIAMETER OF LARGEST PIPE IN MANHOLE (mm)	INTERNAL DIAMETER OF MANHOLE (mm)	MIN. PRECAST ROOF SLAB EFFECTIVE THICKNESS (mm)	MIN. IN-SITU ROOF SLAB THICKNESS (mm)
LESS THAN 375	1200	160	225
375 TO 450	1350	160	225
500 TO 750 *	1500	170	225

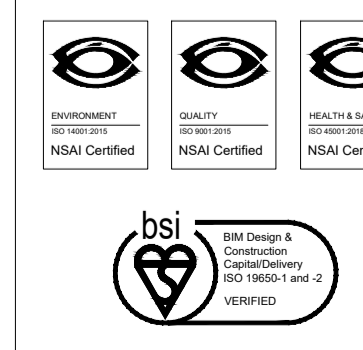
SURFACE WATER AND WASTEWATER STANDARD DETAILS

SCALE 1:10

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Rev No.	Date	Revision Note	Drn by	Chkd by
P01	16.02.23	FOR INFORMATION	TD	TOD
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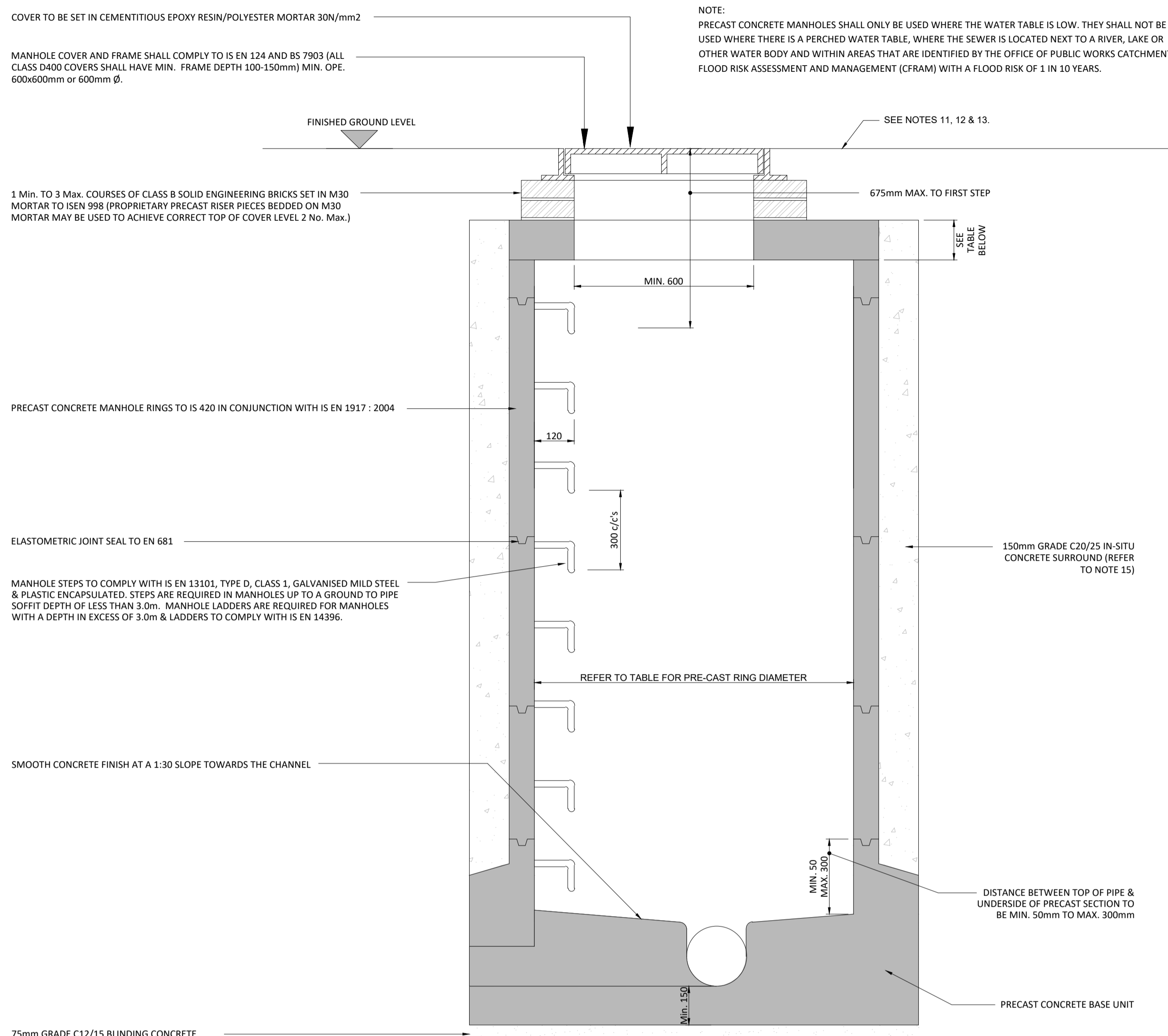
Client: SLIGO COUNTY COUNCIL
Project: ASH LANE GROUP HOUSING

Title: SURFACE AND WASTEWATER STANDARD DETAILS SHEET 1 OF 5

Code | Originator | Zone | Level | Type | Role | Number | Status | Revision
S603 - OCSC - XX - XX - DR - C - 0620 | D2 | P02

Date: FEB '23 Scale: A:N. @ A1 Drn by: AD Chkd by: TD Aprvd by:

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SECTION A-A

MINIMUM MANHOLE DIAMETERS			
DIAMETER OF LARGEST PIPE IN MANHOLE (mm)	INTERNAL DIAMETER OF MANHOLE (mm)	MIN. PRECAST ROOF SLAB EFFECTIVE THICKNESS (mm)	MIN. IN-SITU ROOF SLAB THICKNESS (mm)
LESS THAN 375	1200	160	225
375 TO 450	1350	160	225
500 TO 750	1500	170	225

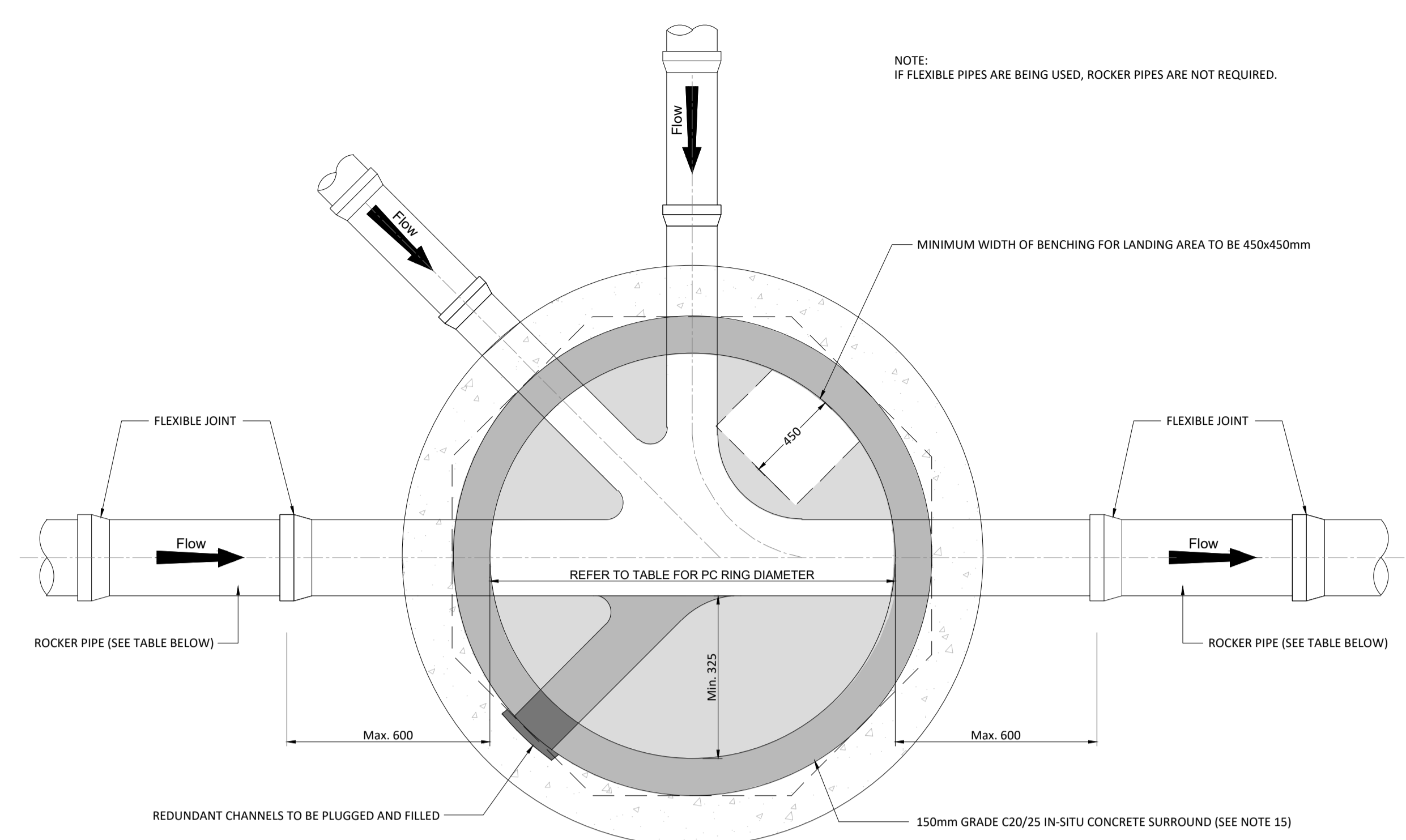
SURFACE WATER AND WASTEWATER STANDARD DETAILS

SCALE 1:10

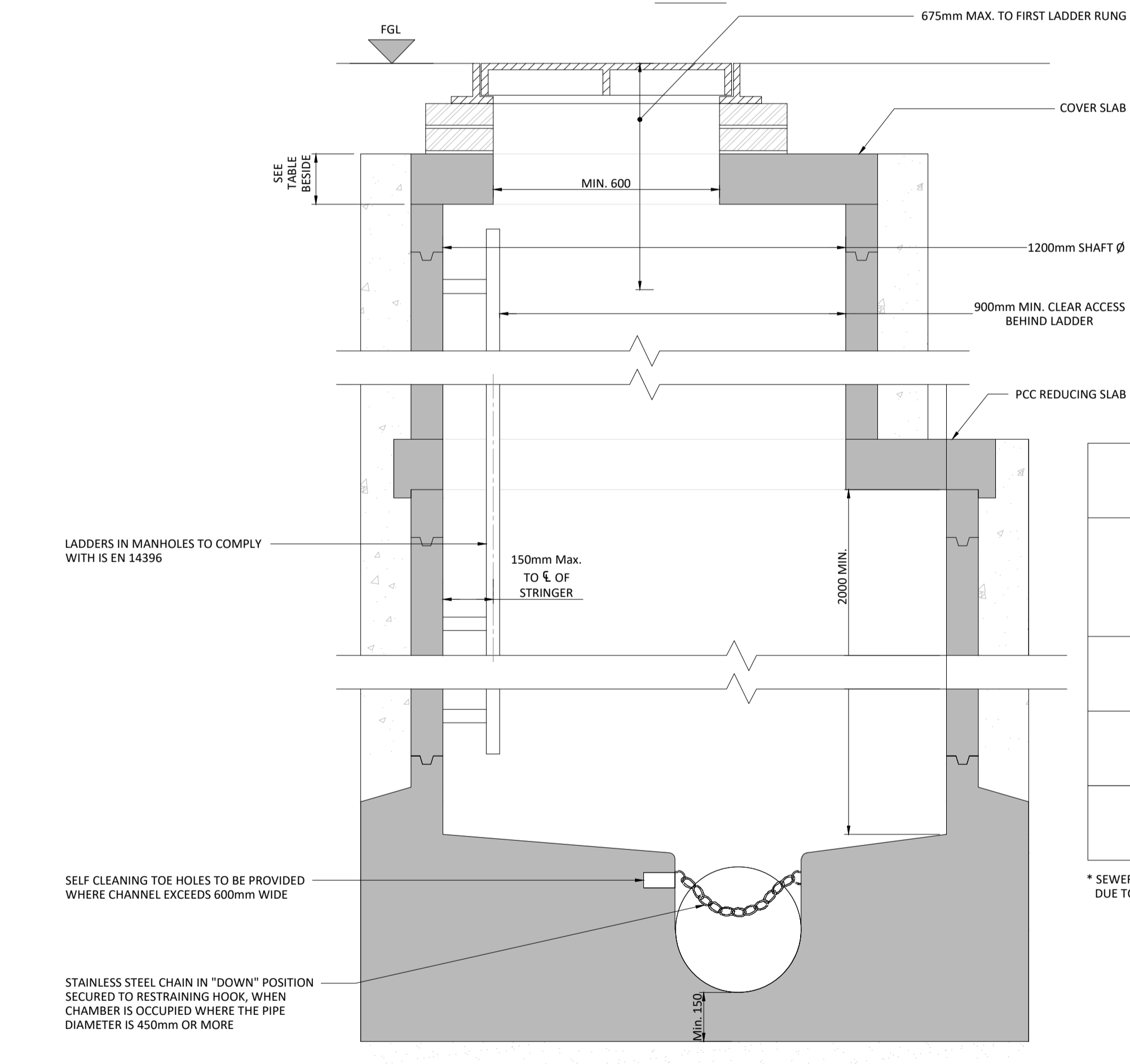
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PLAN



MANHOLE DETAIL > 3m & < 6m GROUND TO SOFFIT DEPTH

(NOTE: ON MANHOLES <1.5mØ, REDUCING SLAB NOT TO BE USED & PCC RINGS TO CONTINUE UP TO COVER SLAB)

ROCKER PIPE LENGTH	
PIPE DIAMETER (mm)	ROCKER PIPE LENGTH (mm)
150 TO 600	600
GREATER THAN 600 TO 750	1000
GREATER THAN 750	1250

* SEWERS GREATER THAN 450mm Ø ARE OUTSIDE THE SCOPE OF THE STANDARD DETAILS. MANHOLE SIZE OF THESE CHAMBERS MAY BE REQUIRED DUE TO MULTIPLE PIPES WITHIN MANHOLE.

PRE-CAST CONCRETE MANHOLE WITH PRECAST BASE NOTES:

- ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
- PRE-CAST MANHOLES UNITS: COMPLYING WITH REQUIREMENTS OF IS EN 1917 AND IS 420.
- PRE-CAST CONCRETE BASE INCORPORATING CHANNELS, BENCHING ETC. SUBJECT TO IRISH WATER REVIEW AND COMPLYING WITH IS EN 1917 & IS 420.
- IN SITUATIONS WHERE P.C.C. MANHOLE BASES HAVE REDUNDANT CHANNELS, THESE SHALL BE PLUGGED AND FILLED BY SCABBLING, AND INFILLED WITH GRADE C20/25 CONCRETE TO MATCH EXISTING BASE AND BENCHED TO SUIT FLOW WITHIN THE MANHOLE BASE.
- MANHOLES GREATER THAN 3m IN DEPTH WILL REQUIRE A DETAILED STRUCTURAL DESIGN AND BE SUBJECT TO IRISH WATER REVIEW.
- PRE-CAST CONCRETE ROOF SLABS TO BE USED SUBJECT TO IRISH WATER REVIEW AND COMPLIANCE WITH IS 420.
- COVERS AND FRAMES SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS SUBJECT TO REVIEW BY IRISH WATER.
- 200mm ALL AROUND x 100mm DEEP, C20/25 CONCRETE PLINTH COMPLETE WITH BULL NOSE FINISH AND TO BE PROVIDED COMPLETE WITH MILD STEEL REINFORCEMENT LINK AROUND COVERS IN GREEN AREAS.
- ALL CHAMBERS TO BE CHECKED FOR UPLIFT BY THE DEVELOPER BASED ON GROUND CONDITIONS WITHIN THE SITE. SHOULD ANTI FLOTATION MEASURES BE REQUIRED THEY SHALL BE SUBJECT TO REVIEW BY IRISH WATER.
- ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206 : 2013.
- ANY SPECIAL ROAD REINSTATEMENT AROUND COVER & FRAME SHALL BE TO ROAD AUTHORITY'S REQUIREMENTS.
- NEW ROAD CONSTRUCTION & SURFACE FINISH TO BE TO ROAD AUTHORITY REQUIREMENTS.
- 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.
- IF DEPTH FROM GROUND TO PIPE SOFFIT IS GREATER THAN 6m DEEP, A SITE SPECIFIC ENGINEERED SOLUTION FOR ACCESS SHALL BE PROVIDED.
- PROPRIETARY WATERTIGHT PCC MANHOLE RING SYSTEMS WITH A WALL THICKNESS > 125mm, & A WATER TIGHT JOINT SEALING SYSTEM, MAY BE USED WITHOUT CONCRETE SURROUND, SUBJECT TO THE GROUND WATER LEVEL AT THE MANHOLE BEING LOW, & SUBJECT TO REVIEW BY IRISH WATER.
- THE INTERNAL MANHOLE DIAMETERS SHOWN IN THE TABLE BELOW ARE MINIMUM DIMENSIONS AND WILL INCREASE DEPENDING ON THE NUMBER AND DIAMETER OF ADDITIONAL INLETS AND FINISHED WITH A 1:3 SAND/CEMENT FINISH TO SUIT FLOW OF INLETS AND OUTLET.

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Galway Technology House, Parkmore, Galway.

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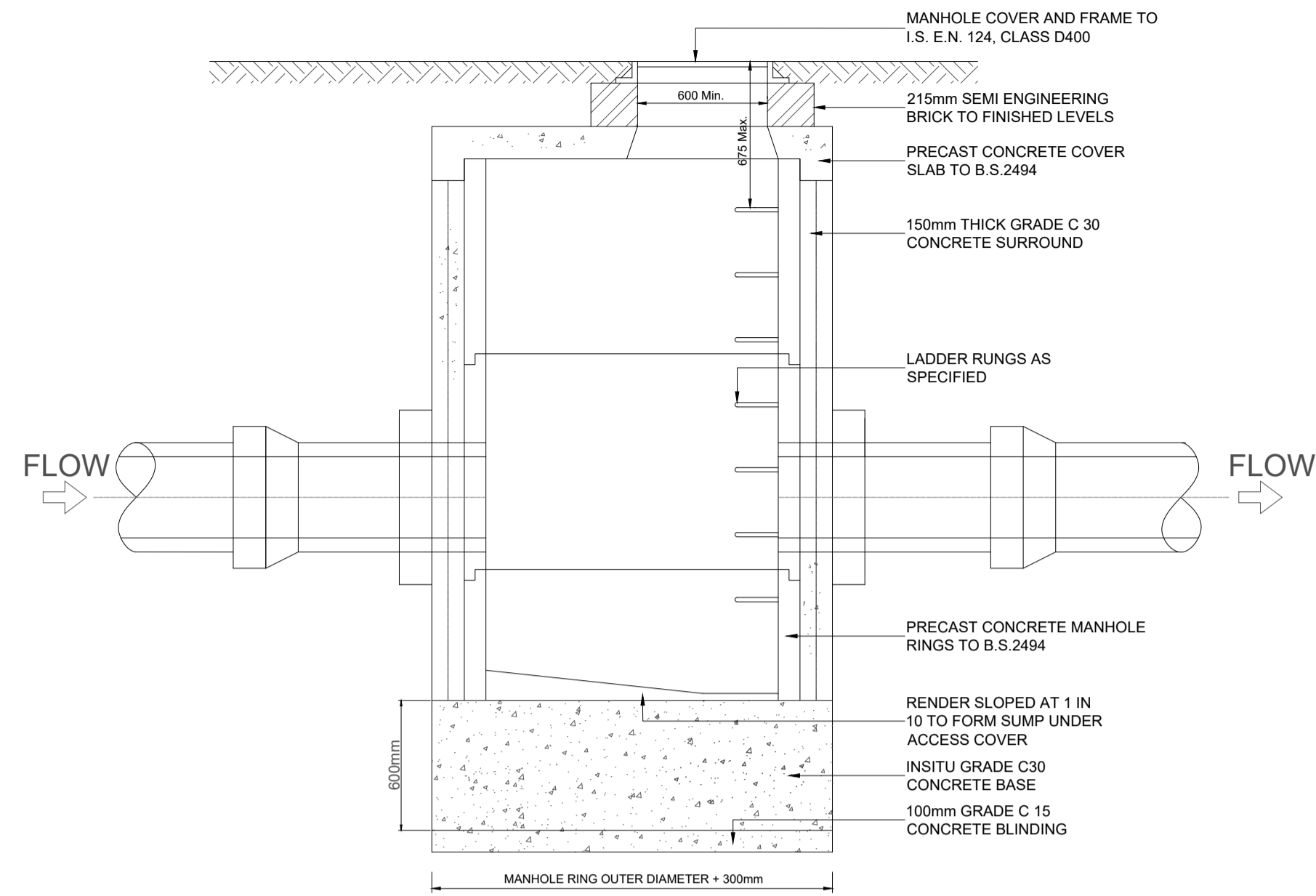
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Client: SLIGO COUNTY COUNCIL
Project: ASH LANE GROUP HOUSING

Title: SURFACE AND WASTEWATER STANDARD DETAILS SHEET 2 OF 5

Code	Originator	Zone	Level	Type	Role	Number	Status	Revision
S603	OCSC	XX	XX	DR	C	0622	D2	P02

Date: FEB '23 Scale: A.N. @ A1 Drn by: AD Chkd by: TD Aprvd by:

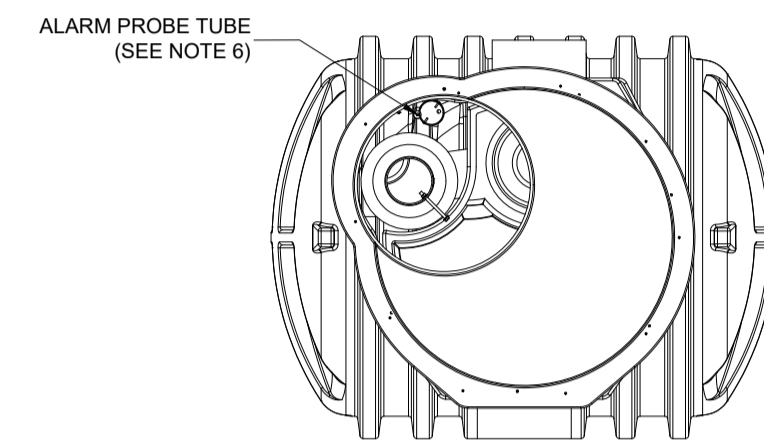


TYPICAL SILT TRAP
MAX. DEPTH G.L. TO I.L. - 3.0m
SCALE 1:25

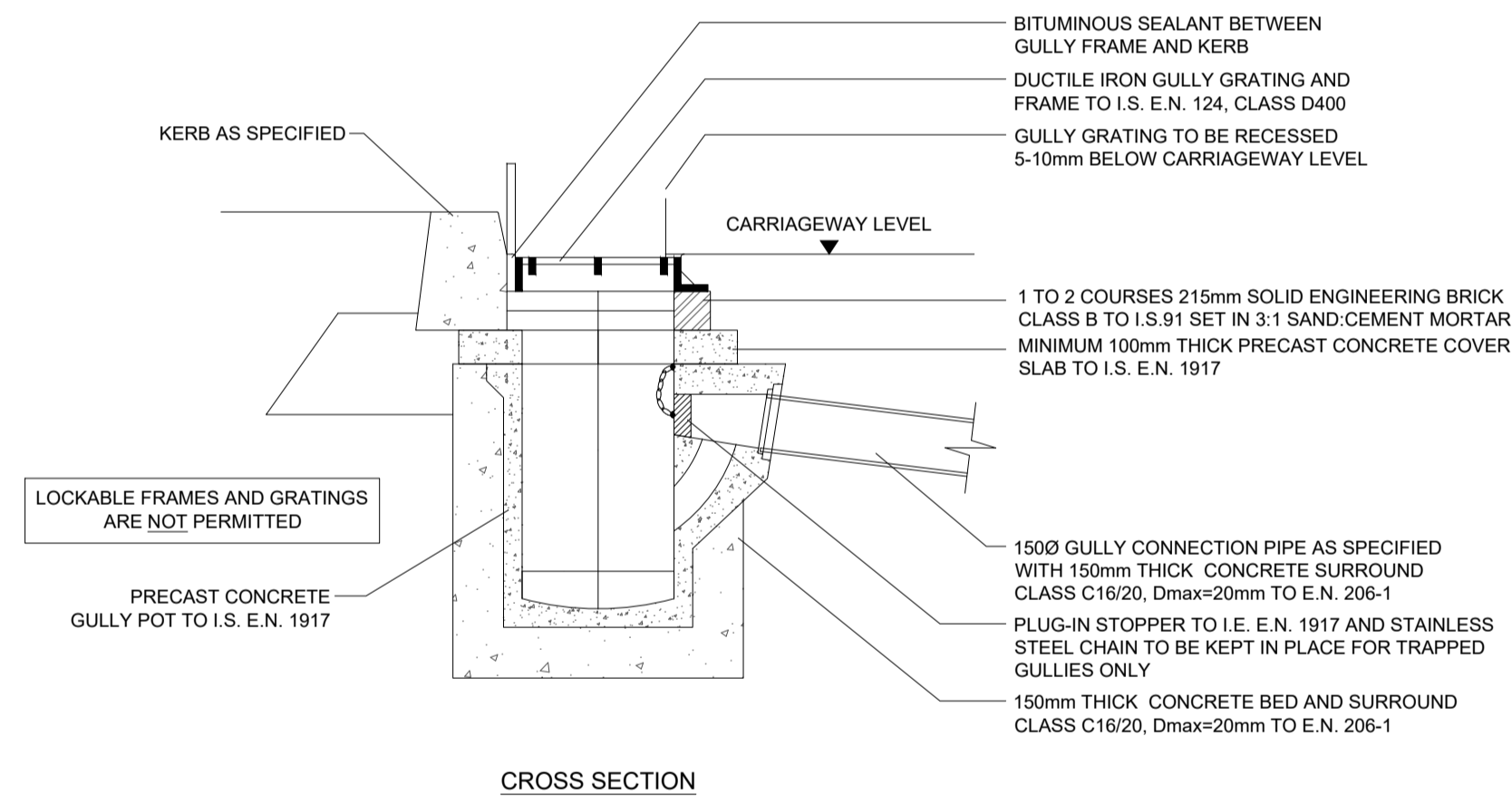
REF. NO.	FLOW (l/s)	DRAINAGE AREA	SILT STORAGE CAPACITY LITRES	OIL STORAGE CAPACITY LITRES	LENGTH (L) (mm)	UNIT DIA (D) (mm)	MANHOLE COVER (D1) (mm)	BASE TO INVERT (A) (mm)	BASE TO OUTLET (B) (mm)	MIN. INLET INVERT. (E) (mm)	STANDARD PIPEWORK DIA. (C) (mm)	STANDARD FALL ACROSS (mm)
NSBP003	3	1670	300	45	1700	1350	600	1760	1660	500	315	100

TYPICAL SIZE OF KLARGESTER CLASS 1 INTERCEPTOR

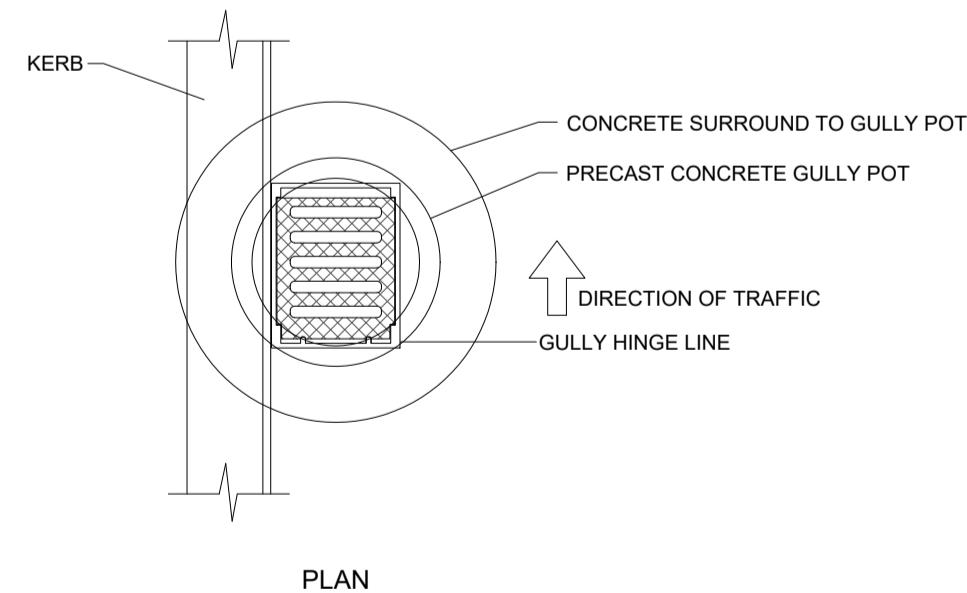
(Subject to planning, unit dimensions & surround provided at detailed design stage).



KLARGESTER CLASS 1 INTERCEPTOR
PLAN VIEW
OR SIMILAR APPROVED
SCALE 1:25



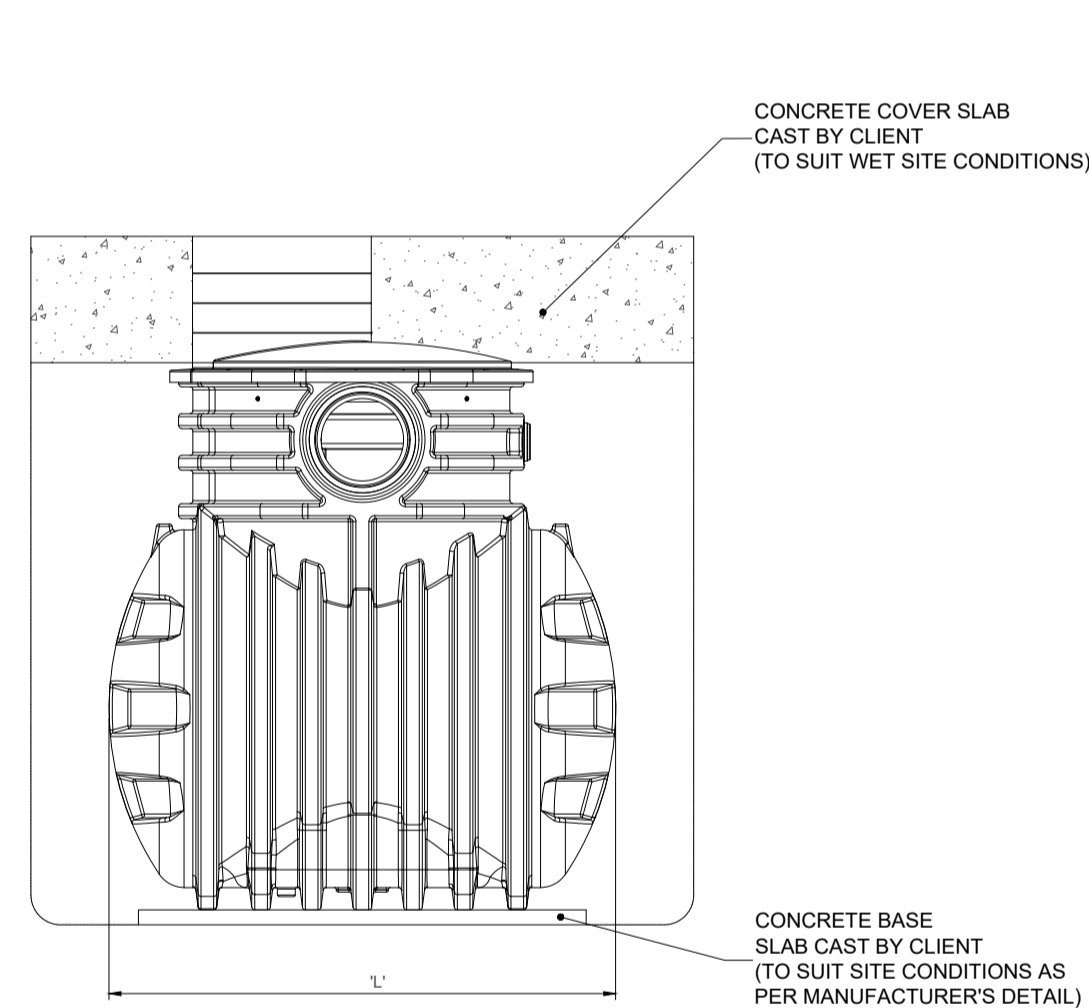
CROSS SECTION



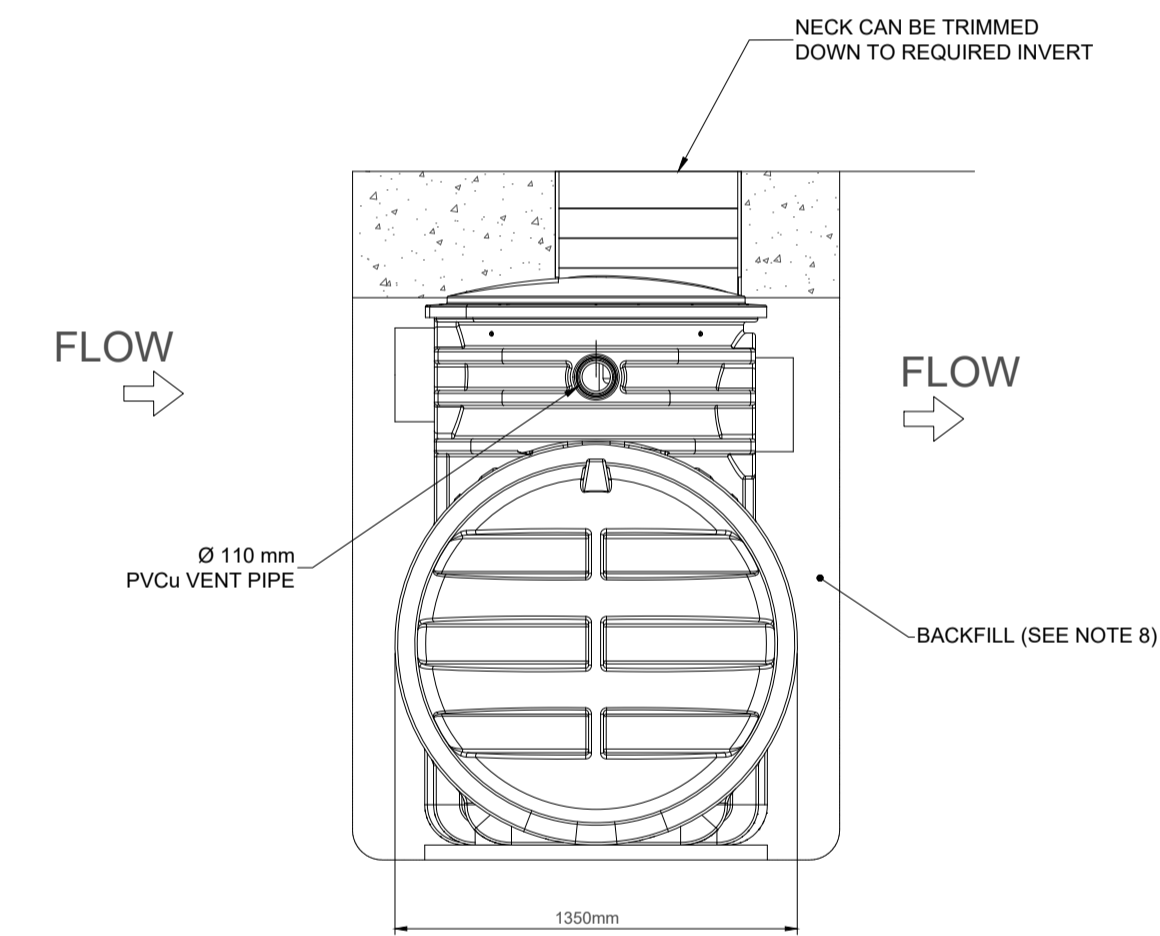
PLAN

PRECAST CONCRETE ROAD GULLY

SCALE: 1:20



KLARGESTER CLASS 1 INTERCEPTOR
SECTION B - B
OR SIMILAR APPROVED
SCALE 1:25



KLARGESTER CLASS 1 INTERCEPTOR
SECTION A-A
OR SIMILAR APPROVED
SCALE 1:25

NOTES:

- INLET / OUTLET PIPES ARE PLAIN PIPE Ø315mm PVCu. THE STANDARD EN 858 STATES MINIMUM CONNECTION SIZES. UNITS ORDERED WITH DIFFERENT SIZED CONNECTIONS ARE NOT FULLY COMPLIANT WITH THE STANDARD.
- EXTENSION NECKS FOR DEEPER INVERTS CAN BE PROVIDED. THESE CAN BE CUT IN 200mm SECTIONS. MAX. 2.0m INVERT RECOMMENDED. PLEASE ASK OUR SALES DEPARTMENT FOR FURTHER DETAILS.
- ALL UNITS REQUIRE APPROPRIATE COVER AND FRAME TO SUIT APPLIED LOADINGS.
- THIS DRAWING SHOULD BE USED FOR DIMENSIONAL INFORMATION ONLY. IT IS ESSENTIAL THAT THIS DRAWING IS READ IN CONJUNCTION WITH THE INSTALLATION GUIDELINES SUPPLIED WITH THE UNIT. (COPIES ARE AVAILABLE FROM OUR SALES DEPT.).
- THIS DRAWING IS ALSO AVAILABLE ON OUR WEBSITE www.kingspanenv.com.
- A Ø76 mm TUBE (INTERNAL) IS SUPPLIED TO HOUSE AN OIL ALARM PROBE.
- WET SITE CONDITIONS - CONCRETE BACKFILL DRY SITE CONDITIONS - PE4 SHINGLE BACKFILL. PLEASE REFER TO INSTALLATION MANUAL FOR DETAILS OF CORRECT BACKFILLING.

SURFACE WATER AND WASTEWATER STANDARD DETAILS

SCALE AS SHOWN

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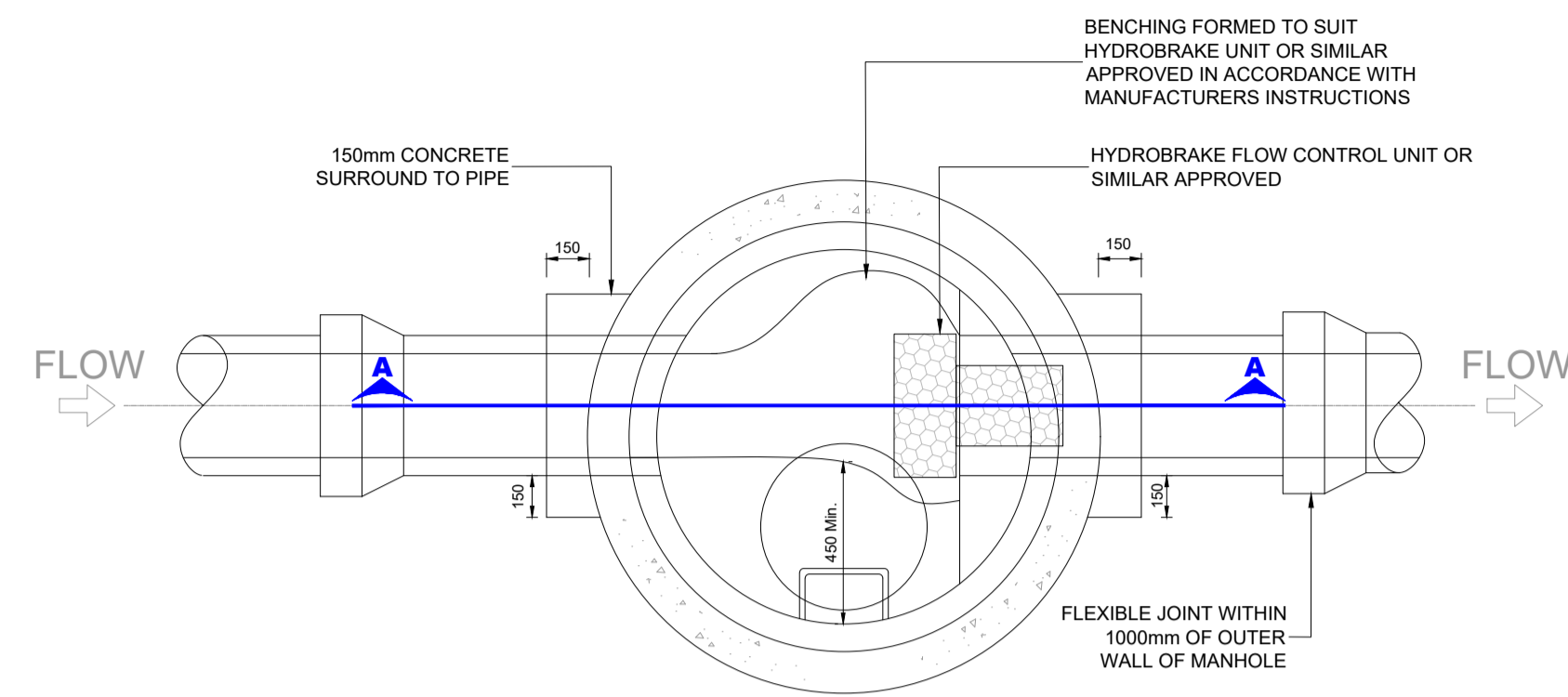
Client: SLIGO COUNTY COUNCIL
Project: ASH LANE GROUP HOUSING

Title: SURFACE AND WASTEWATER STANDARD DETAILS
SHEET 3 OF 5

Code | Originator | Zone | Level | Type | Role | Number | Status | Revision
S603 - OCSC - XX - XX - DR - C - 0623 | D2 | P02
Date: FEB '23 Scale: A.N. @ A1 Drn by: AD Chkd by: TD Aprvd by:

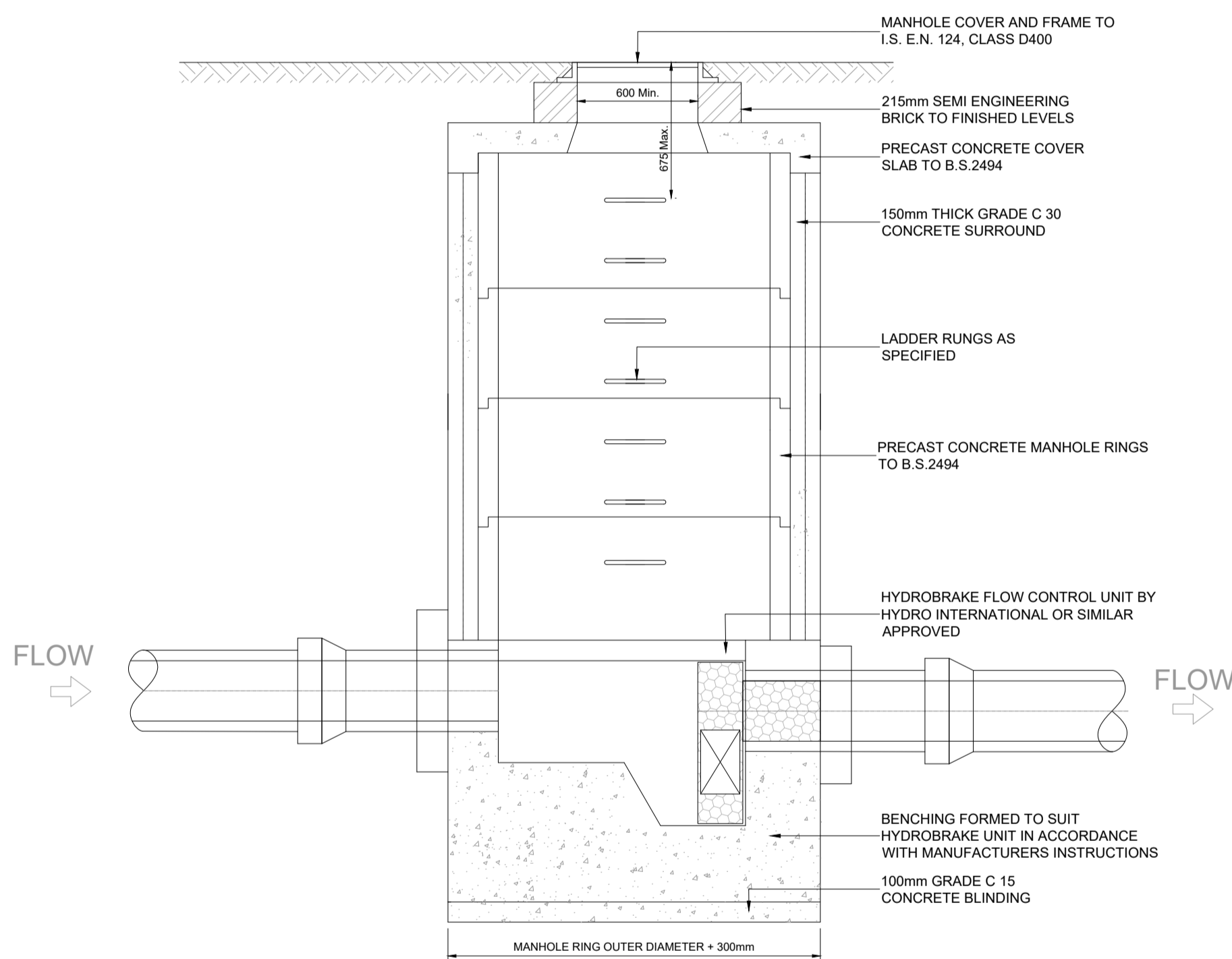
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FLOW CONTROL CHAMBER

MAX. DEPTH G.L. TO I.L. - 3.0m
SCALE 1:25



FLOW CONTROL CHAMBER - SECTION A-A

MAX. DEPTH G.L. TO I.L. - 3.0m
SCALE 1:25

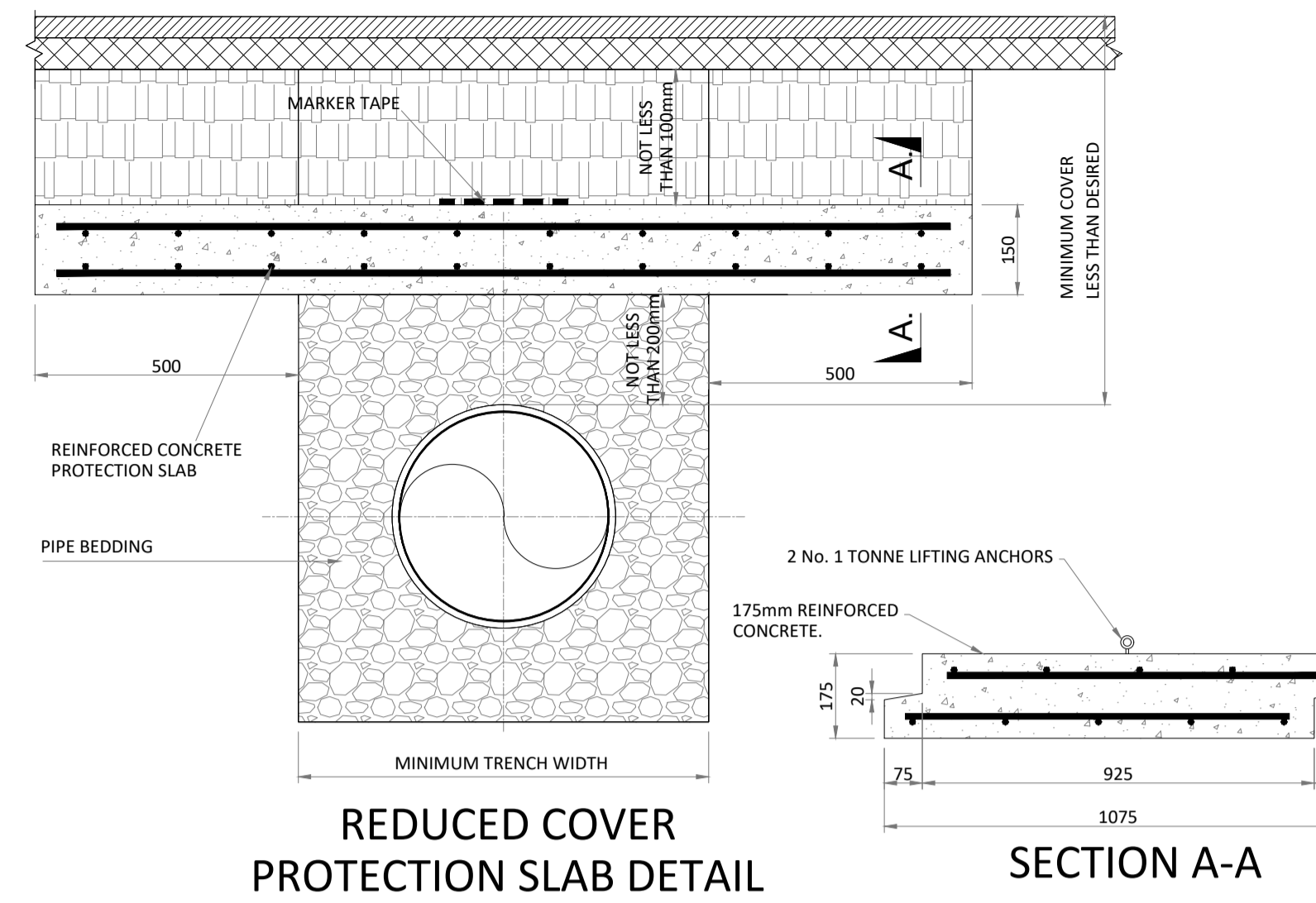
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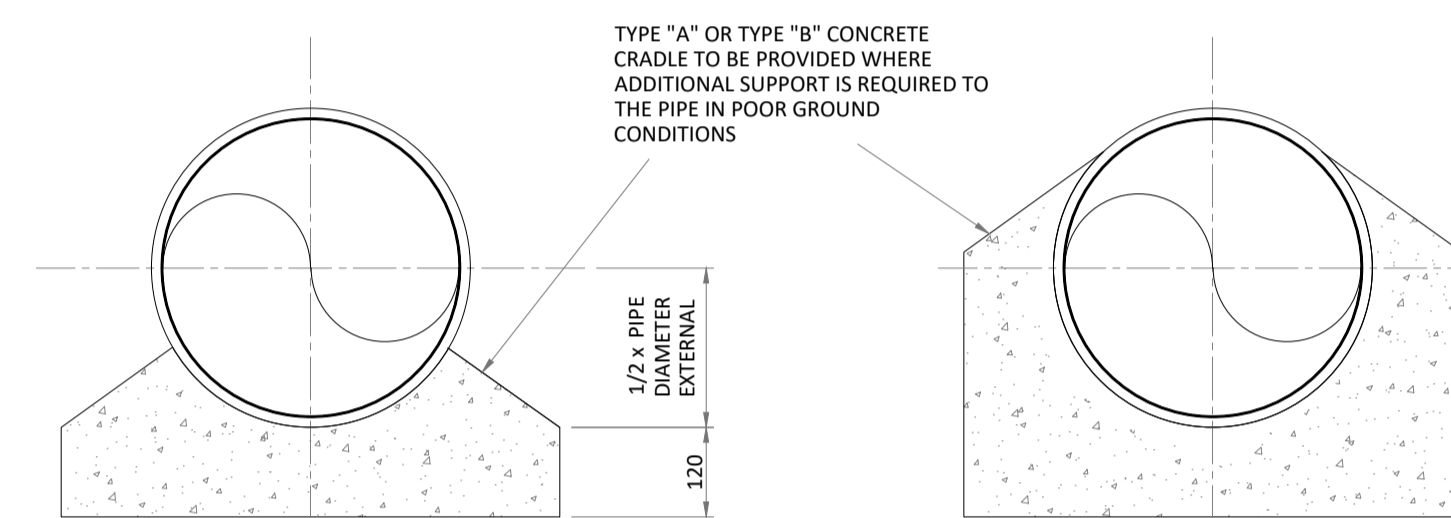
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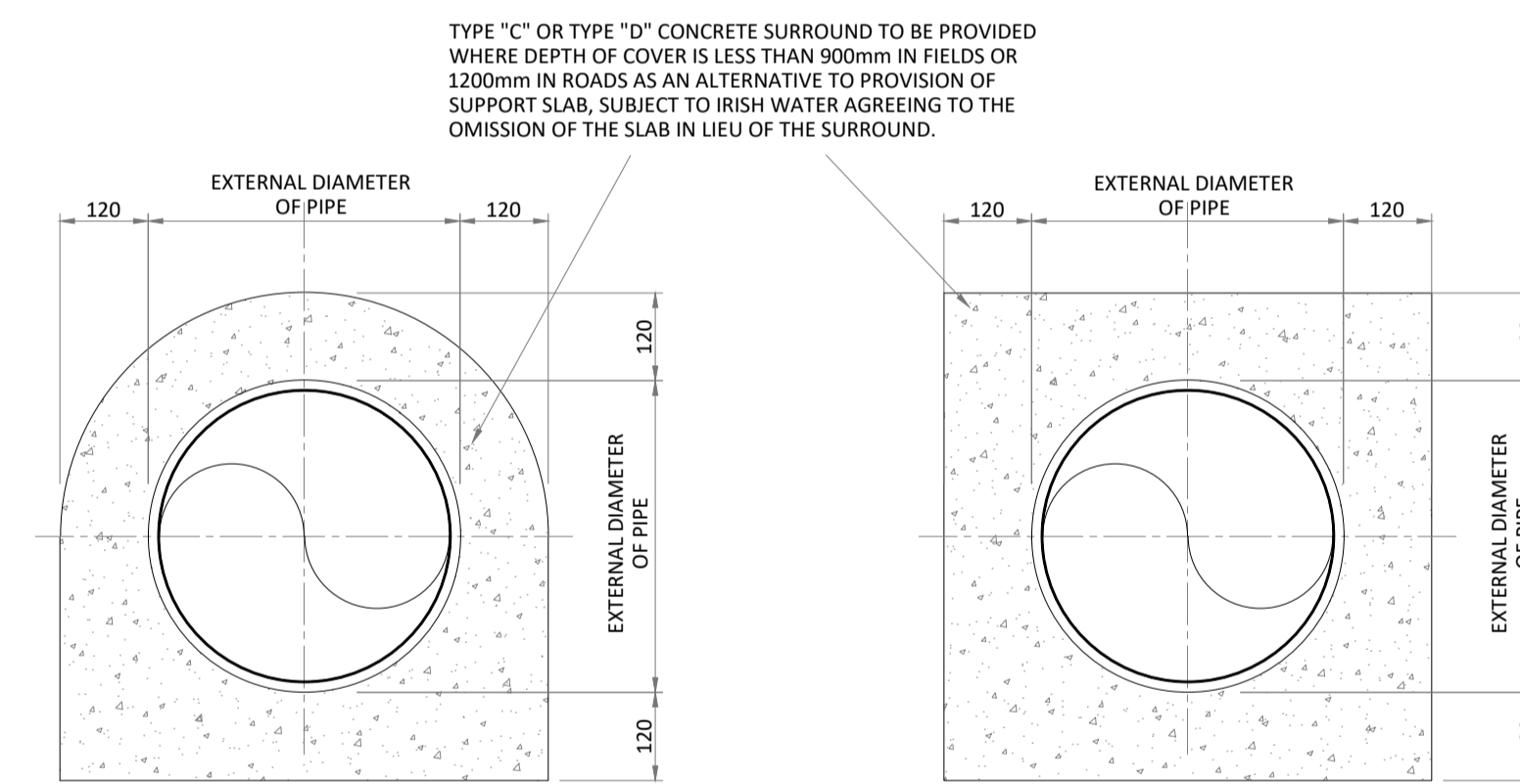
REDUCED COVER PROTECTION SLAB DETAIL

SECTION A-A



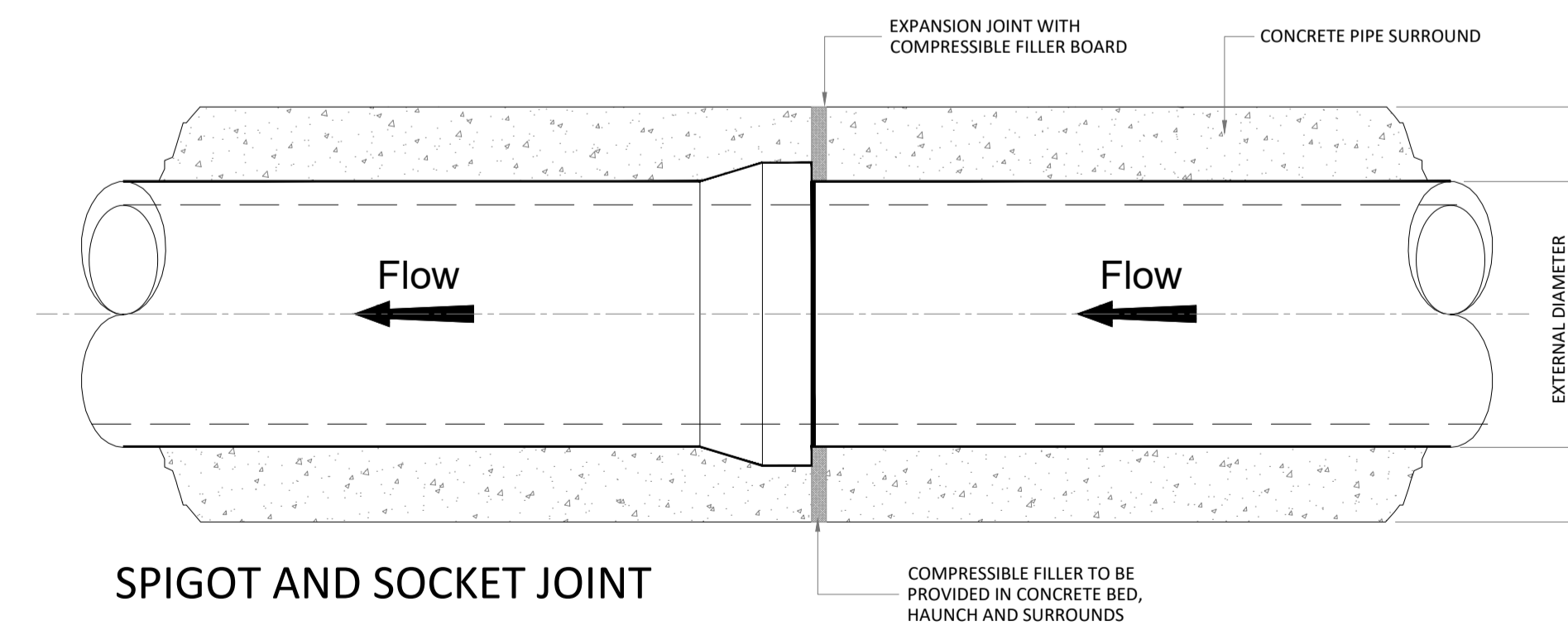
TYPE 'A' (BED)

TYPE 'B' (HAUNCH)



TYPE 'C' (SURROUND)

TYPE 'D' (SURROUND)



SPIGOT AND SOCKET JOINT

CONCRETE PROTECTION SLAB, BED, HAUNCH, AND SURROUND, TO WASTEWATER PIPES NOTES:

- FOR ANY SLABBING WORKS TO BE CARRIED OUT WITHIN THE VICINITY OF THE PIPELINE, A METHOD STATEMENT IS TO BE SUBMITTED FOR REVIEW BY IRISH WATER.
 - MARKER TAPE TO BE PLACED ABOVE THE SLAB AND ALONG THE DIRECTION OF THE PIPELINE.
 - CONCRETE TO BE GRADE C30/35.
 - 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 IRISH WATER FOR ASSESSMENT PRIOR TO INSTALLATION.
 - 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 IRISH WATER.
 - 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 IRISH WATER.
 - ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
 - CONCRETE BED AND HAUNCHES MAY BE REQUIRED TO PROVIDE ADDITIONAL SUPPORT IN POOR GROUND CONDITIONS. PROPOSALS TO BE PROVIDED TO IRISH WATER 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.
 - 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.

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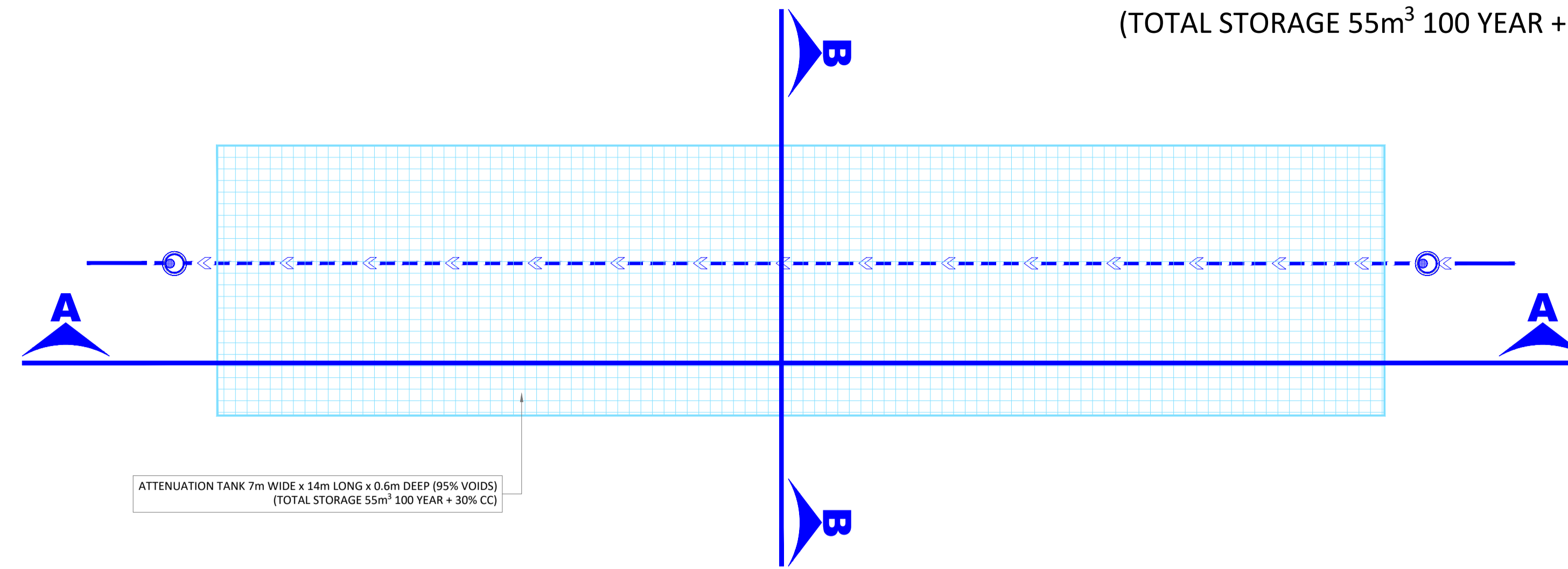


Client: SLIGO COUNTY COUNCIL
Project: ASH LANE GROUP HOUSING

Title: SURFACE AND WASTEWATER STANDARD DETAILS
SHEET 4 OF 5

Code | Originator | Zone | Level | Type | Role | Number | Status | Revision
S603 - OCSC - XX - XX - DR - C - 0624 D2 P02
Date: FEB '23 Scale: A:N. @ A1 Drn by: AD Chkd by: TD Aprvd by:

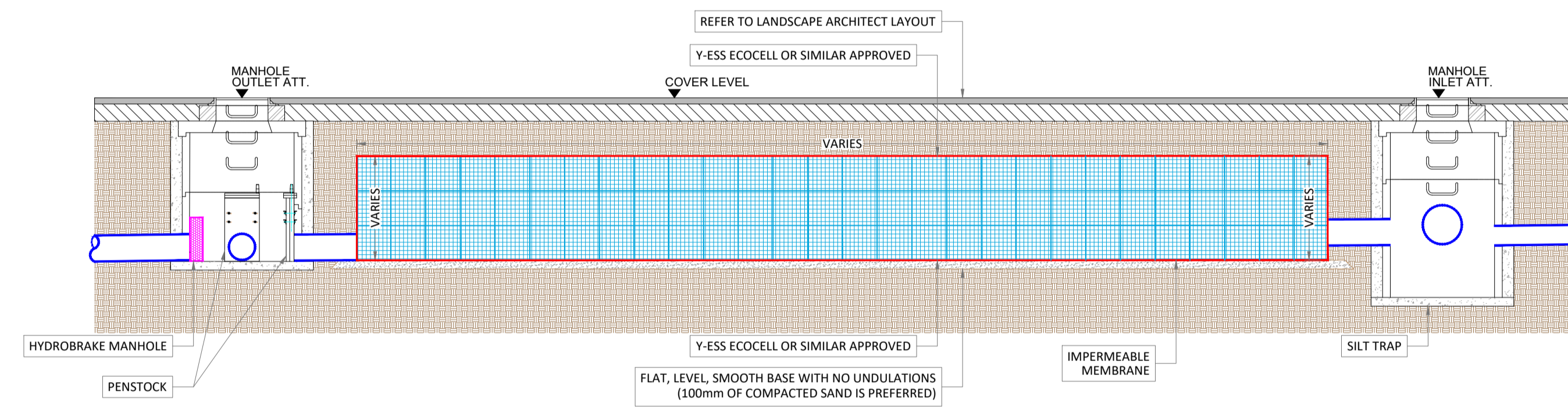
ATTENUATION TANK 7m WIDE x 14m LONG x 0.6m DEEP (95% VOIDS)
(TOTAL STORAGE 55m³ 100 YEAR + 30% CC)



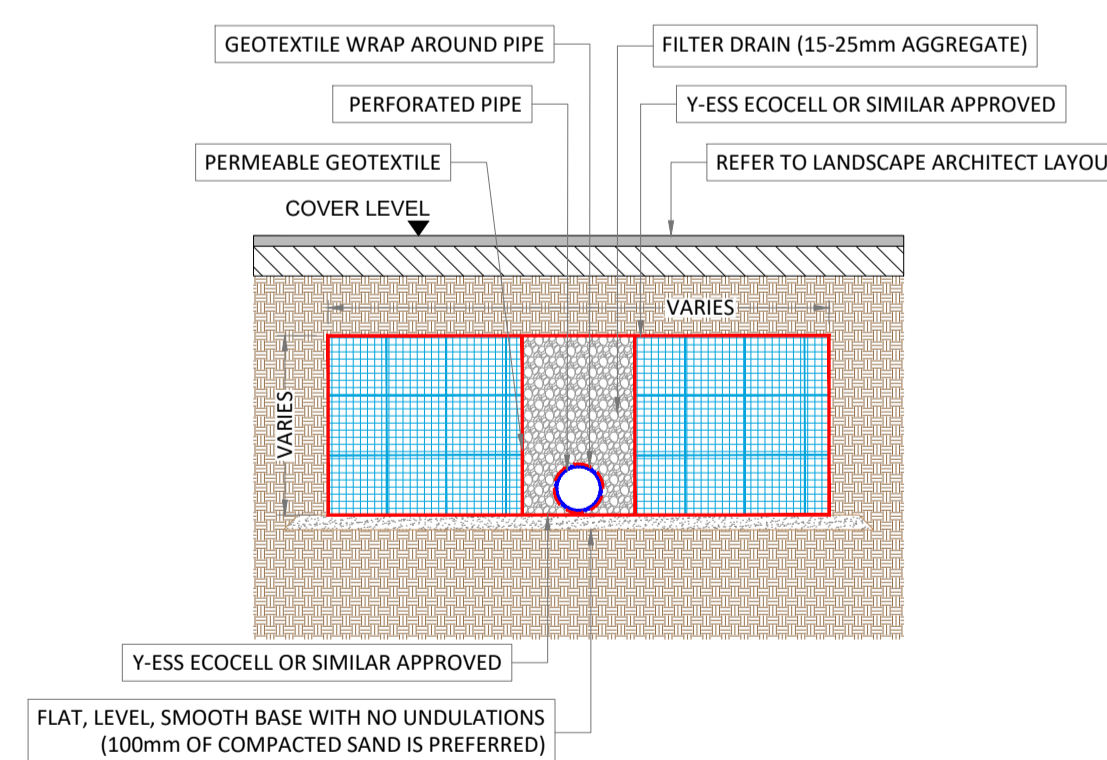
ATTENUATION TANK 7m WIDE x 14m LONG x 0.6m DEEP (95% VOIDS)
(TOTAL STORAGE 55m³ 100 YEAR + 30% CC)

ATTENUATION TANK ONLINE - TYPICAL CROSS-SECTION
SCALE 1:50

ATTENUATION TANK 7m WIDE x 14m LONG
x 0.6m DEEP (95% VOIDS)
(TOTAL STORAGE 55m³ 100 YEAR + 30% CC)



SECTION A-A
SCALE 1:50



SECTION B-B
SCALE 1:50

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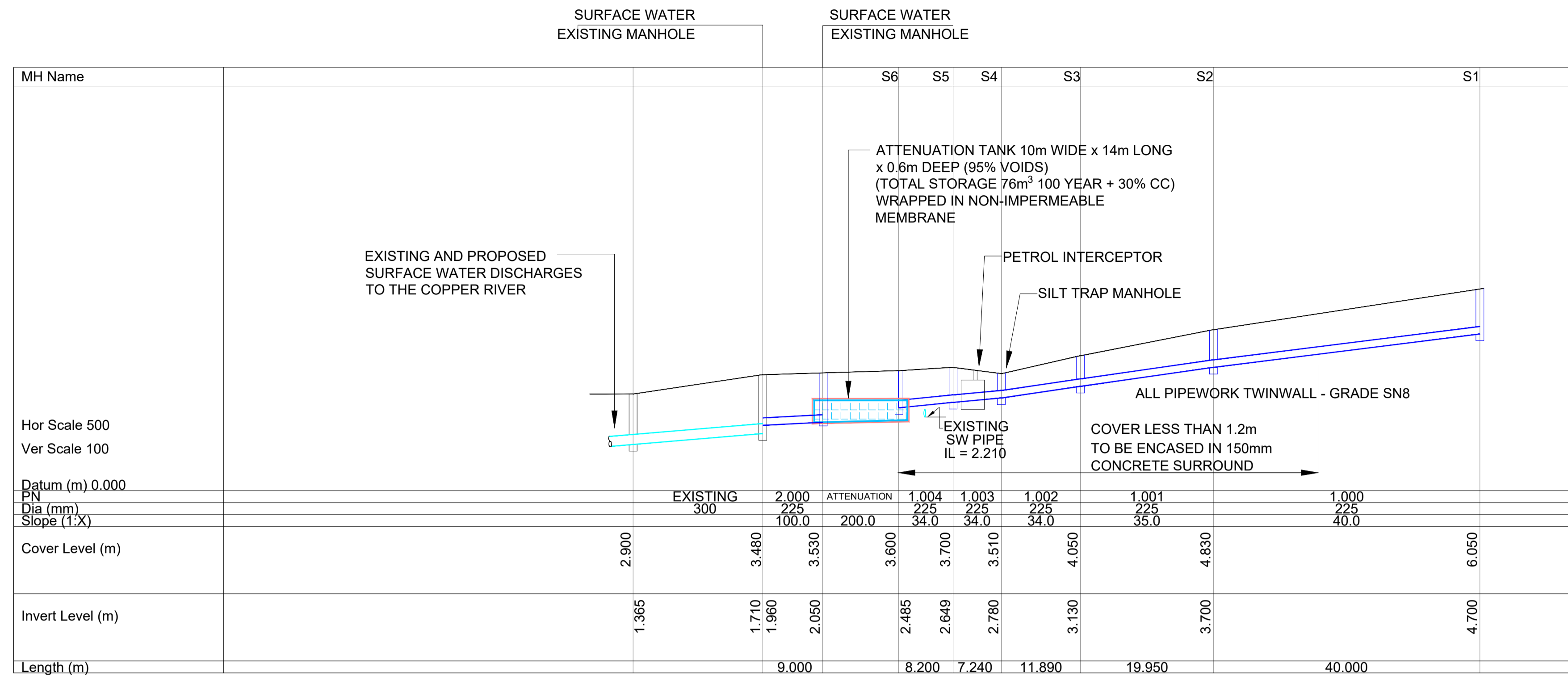
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Client: SLIGO COUNTY COUNCIL
Project: ASH LANE GROUP HOUSING

Title: SURFACE AND WASTEWATER STANDARD DETAILS
SHEET 5 OF 5

Code	Originator	Zone	Level	Type	Role	Number	Status	Revision
S603	OCSC	XX	XX	DR	C	0625	D2	P02

Date: FEB '23 Scale: A.N. @ A1 Drn by: TD Chkd by: TOD Aprvd by:



STORM WATER NETWORK 1
LONGITUDINAL ELEVATION S1 TO EXISTING
 SCALE 1:500 HOR , 1:100 VER

NOTES
 ALL DRAINAGE INFRASTRUCTURE TO BE INSTALLED IN ACCORDANCE WITH GDS5 AND GREATER DUBLIN REGION CODE OF PRACTICE

REFERENCE NOTE
 REFER TO DWG. NO. S603-OCSC-XX-DR-C-0620 FOR PROPOSED DRAINAGE LAYOUT

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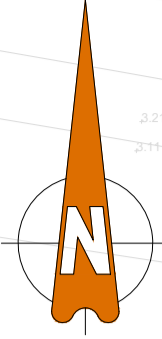


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Client: SLIGO COUNTY COUNCIL
 Project: ASH LANE GROUP HOUSING
 GLENVIEW PARK ASH LANE SLIGO
 Title: SURFACE WATER
 LONGITUDINAL ELEVATIONS

Code	Originator	Zone	Level	Type	Role	Number	Status	Revision
S603	OCSC	XX	XX	DR	C	0626	D2	P02

Date: JUNE '23 Scale @ A1: A.N. Drn by: AD Chkd by: TD Aprvd by:



ALL MANHOLE AND ACCESS CHAMBER / AJ's COVERS TO BE CLASS D400 IN TRAFFICKED AREAS, B125 ELSEWHERE.

ALL PIPE WORK WITH LESS THAN 1200mm COVER TO BE ENCASED IN 100mm CONCRETE SURROUND

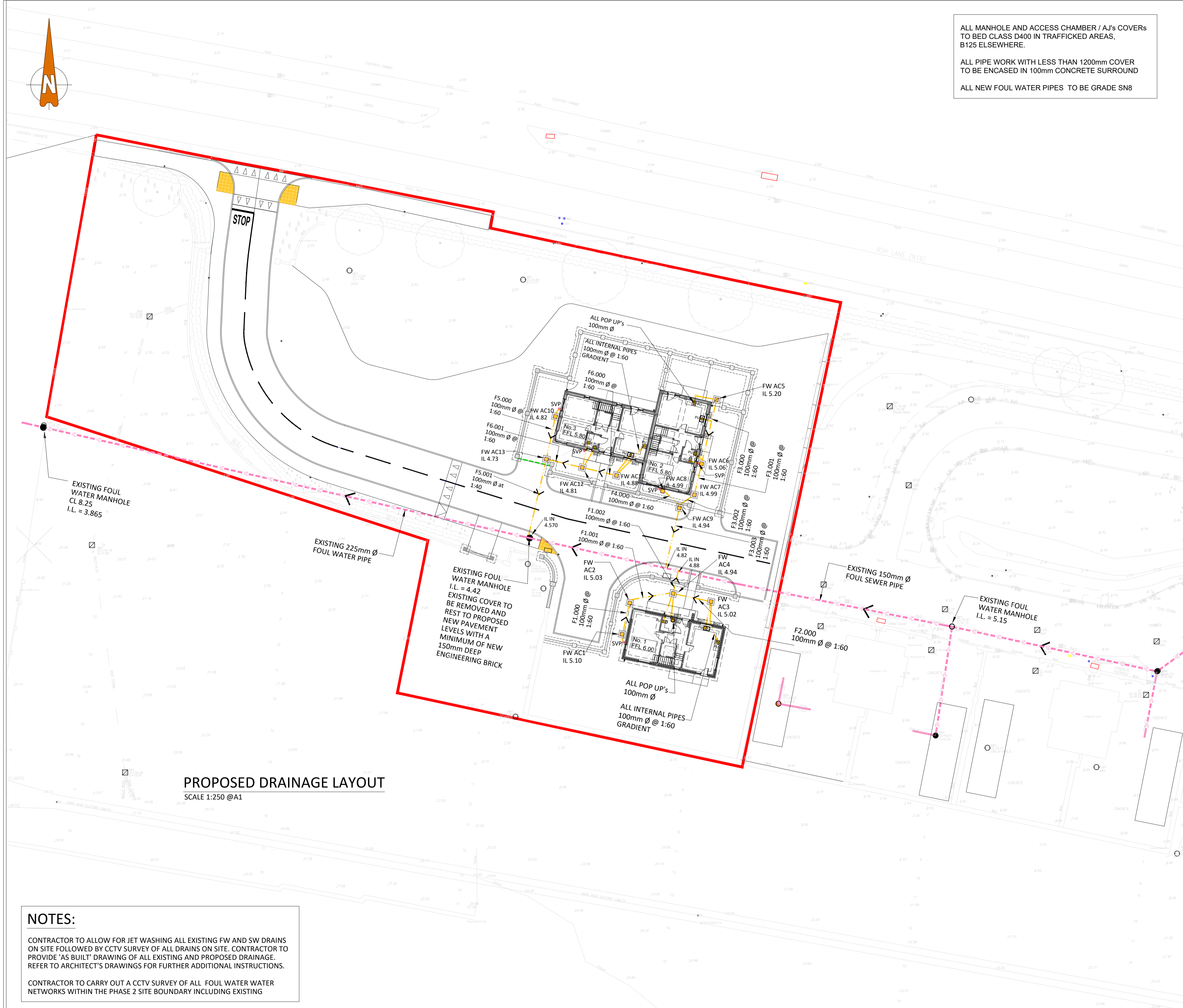
ALL NEW FOUL WATER PIPES TO BE GRADE SN8

LEGEND

FOUL DRAINAGE NETWORK	
	EXISTING FOUL DRAINAGE PIPES TO BE RETAINED
	EXISTING FOUL DRAINAGE MANHOLES TO BE RETAINED
	PROPOSED FOUL DRAINAGE ACCESS CHAMBERS AND ENCASED IN 100m CONCRETE SURROUND
	PROPOSED 100mm DIA uPVC FOUL DRAINAGE PIPES GRADE SN8 WHERE COVER IS LESS THAN 1.2m IN TRAFFICKED AREAS PIPES ARE TO BE ENCASED IN 100mm CONCRETE SURROUND
	100mm SOIL VENT PIPE
	BACK INLET GULLY TRAP TO SPECIALIST DETAIL ENCASED IN 100mm CONCRETE SURROUND
	100mm Ø FOUL WATER POP UP PIPES ENCASED IN 100mm CONCRETE SURROUND

NOTES

- ALL NOTED LEVELS ARE TO ORDNANCE DATUM, MALIN HEAD.
- REFER TO ARCHITECT'S LAYOUT FOR ALL SET-OUT INFORMATION.
- REFER TO ARCHITECT / LANDSCAPE ARCHITECT'S DESIGN DRAWINGS FOR DETAILS OF PROPOSED SURFACE FINISHES AND LANDSCAPING.
- ALL SURFACE WATER DRAINAGE IS TO BE INSTALLED IN ACCORDANCE WITH THE GREATER DUBLIN REGION CODE OF PRACTICE FOR DRAINAGE WORKS, THE BUILDING REGULATIONS PART H AND THE SITE DEVELOPMENT SPECIFICATION.
- ALL WASTEWATER DRAINAGE IS TO BE INSTALLED IN ACCORDANCE WITH THE IRISH WATER CODE OF PRACTICE FOR WASTEWATER INFRASTRUCTURE, THE BUILDING REGULATIONS PART H AND THE SITE DEVELOPMENT SPECIFICATION.
- ALL DRAINAGE COVER LEVELS ARE TO BE COORDINATED WITH THE PROPOSED ROAD DESIGN LEVELS AND ARCHITECT DESIGN FINISH DETAILS.
- ALL CONNECTIONS TO NEW DRAINAGE NETWORKS ARE TO BE MADE AT AN ANGLE OF 90° OR IN THE DIRECTION OF FLOW.
- THE CONTRACTOR IS TO VERIFY INVERT LEVEL AT PROPOSED CONNECTION TO EXISTING SEWERS, PRIOR TO ANY OTHER WORKS BEING CARRIED OUT, AND MAKE ANY DISCREPANCIES KNOWN TO THE ENGINEER.
- THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMATION OF PRESENCE ALL EXISTING UTILITIES, IF ANY, ALONG ROUTE OF PROPOSED DRAINAGE NETWORKS - BY INTRUSIVE INVESTIGATION OR EQUAL.
- EXISTING PUBLIC SEWER TO BE JET CLEANED AND CCTV SURVEYED PRIOR TO, AND AFTER PROPOSED CONNECTIONS FROM NEW NETWORK.
- ALL NEW DRAINAGE INFRASTRUCTURE TO BE JET CLEANED AND CCTV SURVEYED, WITH ANY NOTED DEFECTS REMEDIATED, ON COMPLETION OF WORKS, TO THE SATISFACTION OF THE LOCAL AUTHORITY.
- REFER TO ARCHITECTS DRAWINGS FOR DETAILS OF PRIVATE DRAINAGE AND LANDSCAPE ARCHITECT'S PROPOSED FINISH LEVELS.
- ALL COVER LEVELS ARE TO BE COORDINATED WITH ROAD DESIGN LEVELS AND LANDSCAPE ARCHITECT'S PROPOSED FINISH LEVELS.
- THE INTERNAL BUILDING DRAINAGE TO BE COORDINATED WITH ARCHITECT'S LAYOUT.
- ALL MANHOLES / ACCESS CHAMBER COVERS SUBJECT TO TRAFFIC LOADINGS TO BE CLASS D400 OTHERWISE B125 GRADE



PROPOSED DRAINAGE LAYOUT
SCALE 1:250 @A1

NOTES:

CONTRACTOR TO ALLOW FOR JET WASHING ALL EXISTING FW AND SW DRAINS ON SITE FOLLOWED BY CCTV SURVEY OF ALL DRAINS ON SITE. CONTRACTOR TO PROVIDE 'AS BUILT' DRAWING OF ALL EXISTING AND PROPOSED DRAINAGE. REFER TO ARCHITECT'S DRAWINGS FOR FURTHER ADDITIONAL INSTRUCTIONS.

CONTRACTOR TO CARRY OUT A CCTV SURVEY OF ALL FOUL WATER WATER NETWORKS WITHIN THE PHASE 2 SITE BOUNDARY INCLUDING EXISTING

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Rev No.	Date	Revision Note	Drn by	Chkd by
P01	05.08.23	FOR INFORMATION	AD	TD
P02	16.08.23	ISSUED FOR TENDER	AD	TD

Rev No.	Date	Revision Note	Drn by	Chkd by



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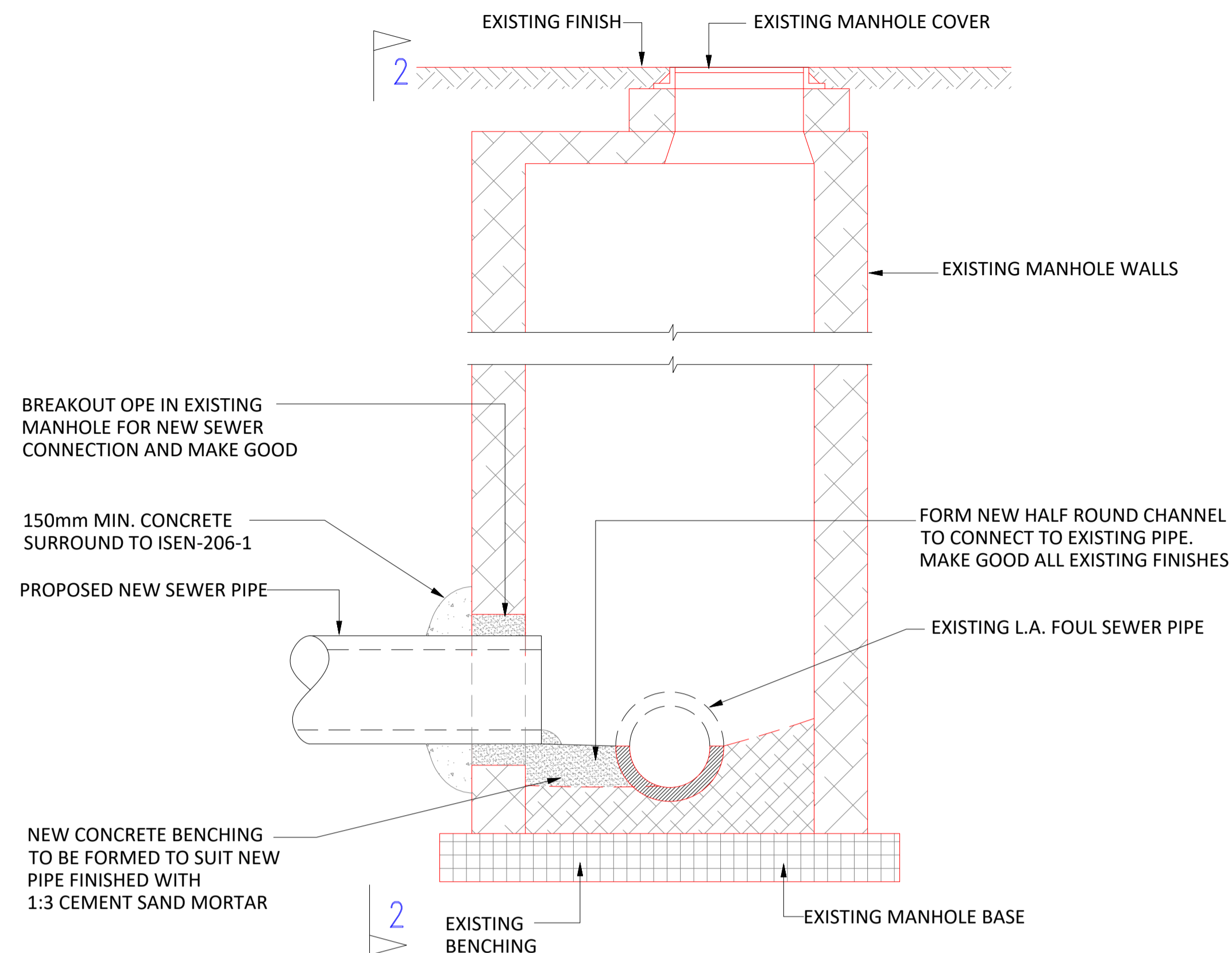
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Client: SLIGO COUNTY COUNCIL
Project: ASH LANE GROUP HOUSING

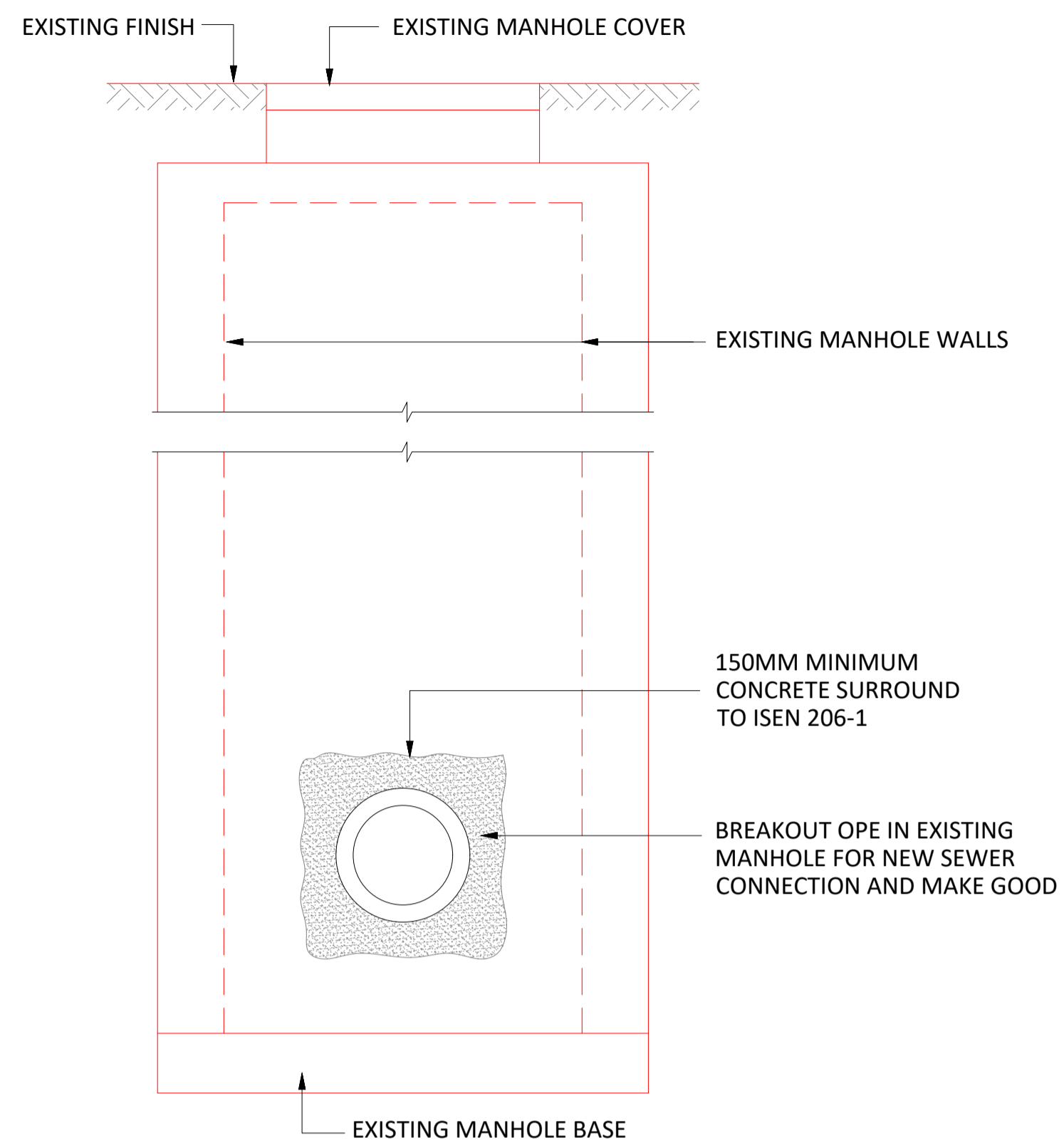
Title: PROPOSED FOUL DRAINAGE LAYOUT

Code | Originator | Zone | Level | Type | Role | Number | Status | Revision
S603 - OCSC - XX - XX - DR - C - 0627 | D2 | P02

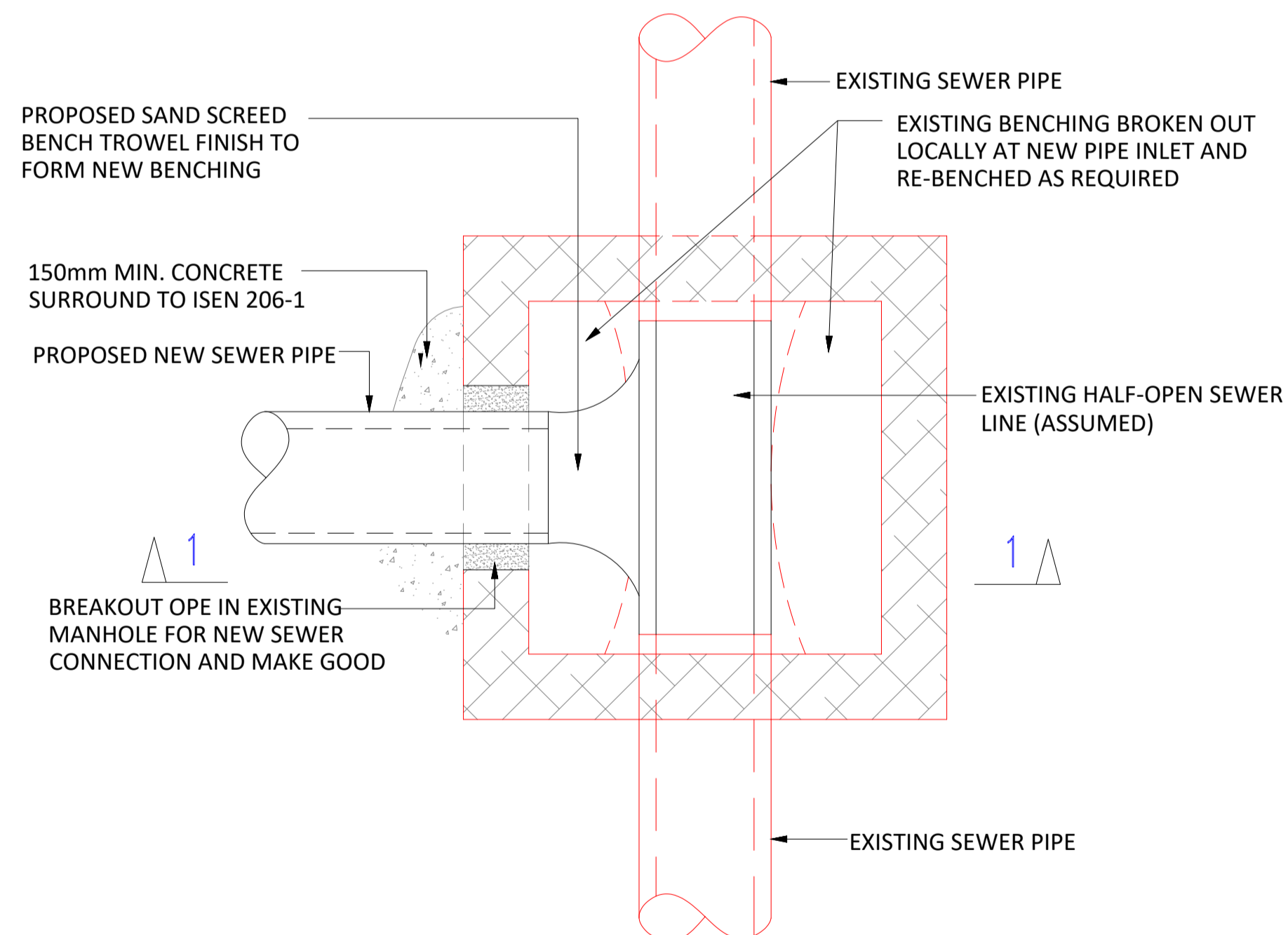
Date: AUG '23 Scale: 1:250 @ A1 Drn by: AD Chkd by: TD Aprvd by:



SECTION 1 - 1
SCALE 1:20



SECTION 2 - 2
SCALE 1:20



PLAN
SCALE 1:20

TYPICAL CONNECTION TO EXISTING MANHOLE
SCALE 1:20

NOTE:
CONTRACTORS TO ALLOW FOR FULL REINSTATEMENT TO AREAS OF GROUND EFFECTED BY THE WORKS. IN GENERAL, WHERE MAKING GOOD IS REQUIRED, IT SHOULD BE OF AN EQUAL STANDARD TO THE GROUND PRIOR TO THE COMMENCEMENT OF THE WORKS. REFER TO OCSC SITE DEVELOPMENT SPECIFICATION FOR FURTHER DETAILS.

NOTE:
ALL PIPE WORK TO BE LAID IN STRICT ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTION

- NOTES:**
- DO NOT SCALE FROM THIS DRAWING USE STATED DIMENSIONS ONLY. IF IN DOUBT CONSULT THE ENGINEER.
 - LEVELS REFER TO O.S. DATUM MALIN HEAD.
 - PRECAST MANHOLE RINGS, COVER SLABS AND REDUCING SLABS SHALL COMPLY WITH I.S. 420:1989.
 - PRECAST MANHOLE RINGS, COVER SLABS AND REDUCING SLABS SHALL BE INSTALLED COMPLETE WITH TYPE 2 RUBBER GASKETS AND JOINTING RINGS WHICH COMPLY WITH B.S. 2494.
 - CONCRETE TO MANHOLE BASES AND SURROUNDS SHALL BE A MINIMUM OF 150MM THICK (TO ISEN 206-1 AND CONTAIN ONE LAYER OF BS REF A142 REINFORCEMENT MESH).
 - BLINDING SHALL BE A MINIMUM THICKNESS OF 100mm.
 - SAND CEMENT RENDER 25MM THICK SHALL BE APPLIED TO THE BENCHING AND CHANNEL WITH A STEEL TROWEL FINISH.
 - LADDER RUNGS SHALL BE P.V.C. COATED STEEL. FOR MANHOLES WITH A DEPTH TO INVERT GREATER THEN 4.0M USE GRADE 316 STAINLESS STEEL LADDERS.
 - DROP PIPE WORK SHALL BE SIZED IN ACCORDANCE WITH TABLE NO. 1. WHERE THE CONNECTION < 1.0M ABOVE INVERT USE RAMP CONNECTION. WHERE CONNECTION IS > 1.0M ABOVE INVERT USE DROP CONNECTION.
 - LOCKABLE MANHOLE COVERS AND FRAMES SHALL COMPLY WITH I.S. E.N. 124, AND SHALL BE CLASS D400 WITH A CIRCULAR OPENING OF 600MM MINIMUM AND A SQUARE FRAME.
 - SUITABLE SHORT LENGTHS OF PIPE OR ROCKER PIPES SHALL BE INSTALLED TO PROVIDE A FLEXIBLE JOINT WITHIN 1000MM OF THE OUTER FACE OF THE MANHOLE ON ALL SEWERS AND BRANCHES.
 - SEMI ENGINEERING BRICK SHALL BE GRADE 47N/MM2.
 - FOR ALL INLETS, OUTLETS AND BRANCHES MATCH CROWN LEVELS UNLESS INDICATED OTHERWISE ELSEWHERE.
 - THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE OCSC SPECIFICATION.

- NOTES:**
- WHERE ROCK IS MET IN TRENCHES IT SHALL BE EXCAVATED AND TRIMMED TO PRESCRIBED LEVEL OF UNDERSIDE OF GRANULAR BED TO PIPELINE.
 - GRANULAR MATERIAL 14-5mm NOMINAL SIZE GRADED AGGREGATE (TO COMPLY WITH TABLE 1 OF BS) TO BE USED FOR BEDDING, HAUNCHING AND SURROUND.
 - CONCRETE FOR BEDDING, HAUNCHING AND SURROUND WHERE SPECIFIED TO ISEN 206-1
 - WHERE RIGID PIPES WITH FLEXIBLE JOINTS ARE USED WITH CONCRETE BEDS FOR SEWERS AND WATERMANS, VERTICAL MOVEMENT JOINTS WILL BE PROVIDED IN THE BED AT MAX INTERVALS OF 5.0m AND ALIGNED WITH FACE OF PIPE SOCKET. JOINTS TO BE 12mm WIDE AND FILLED WITH COMPRESSIBLE FILLER BOARD OR SIMILAR IN THE CONCRETE BED AND SURROUND.
 - SURFACE WATER PIPES SHALL BE SURROUNDED BY 150mm THICKNESS OF CONCRETE IF COVER TO THE PIPES IS LESS THAN 1.2m IN ROAD AND DRIVEWAYS AND 0.9m IN OPEN SPACES AND PATHS NOT NEAR CARRIAGEWAYS.
 - ALL CONCRETE TO BE AS PER ISEN 206-1
 - WHERE FLEXIBLE PIPES ARE ENCASED IN CONCRETE, THEY SHALL BE WRAPPED IN VISQUEEN 1000 GAUGE.
 - WHERE COVER FOR FLEXIBLE PIPES IS LESS THAN 1200mm IN ROADS AND 900mm IN GARDENS A PROTECTIVE CONCRETE RAFT MAY BE USED PROVIDED A CUSHION OF PROTECTIVE FILL IS LAID BETWEEN THE CROWN OF THE PIPE AND THE UNDERSIDE OF THE RAFT SLAB - REFER TO SUPPLIER DETAILS.
 - WHERE DRAINS ARE WITHIN 2.4m OF ROAD RESERVATION & PAVED THEY SHALL BE BACKFILLED IN IMPORTED GRANULAR FILL (ALL GRANULAR FILL MATERIAL TO COMPLY SR 21, LAID AND COMPACTED IN 225mm LAYERS).
 - ALL DRAINAGE PIPE RUNS TO BE LAID IN STRAIGHT LINE, NO DEVIATION OR BENDS ARE PERMITTED. ROUTES TO BE AGREED ON SITE IN ADVANCE OF EXCAVATION ENSURING ALL OBSTRUCTIONS IN THE FORM OF EXTENDED MANHOLE CHAMBERS OR OTHER SERVICES TO BE AGREED

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P01	16.08.23	ISSUED FOR TENDER	AD	TD

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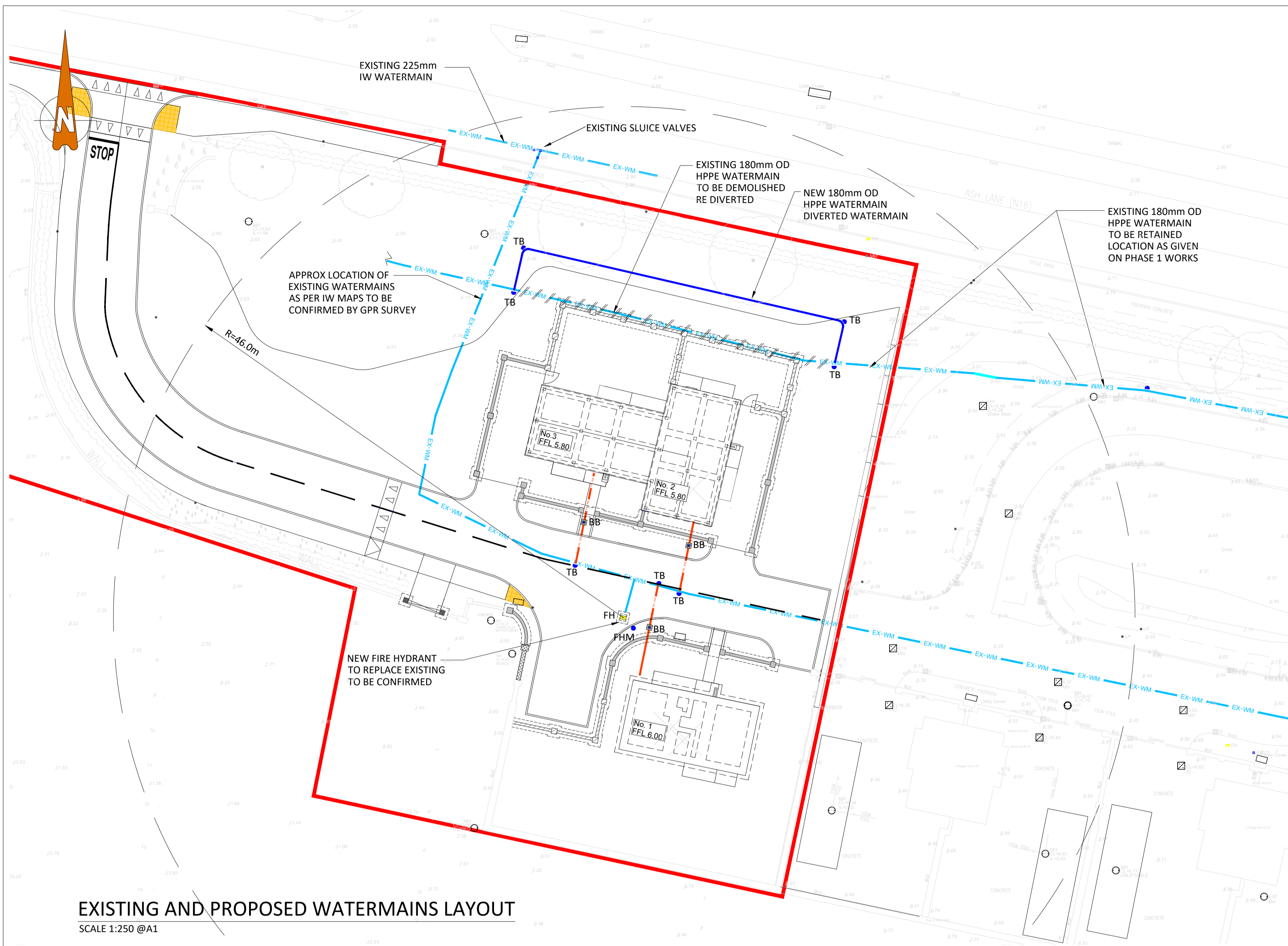


Client: SLIGO COUNTY COUNCIL
Project: ASH LANE GROUP HOUSING

Title: CONNECTION OF NEW SEWERS TO EXISTING L.A. / IW MANHOLES

Code	Originator	Zone	Level	Type	Role	Number	Status	Revision
S603	OCSC	XX	XX	DR	C	0628	D2	P01

Date: AUG '23 Scale: 1:20 @ A1 Drn by: AD Chkd by: TD Aprvd by:



IRISH WATER NOTE:

ALL WORKS TO WATERMAINS TO COMPLY WITH THE FOLLOWING IRISH WATER DOCUMENTS:

- "CODE OF PRACTICE FOR WATER INFRASTRUCTURE - DOCUMENT NO. IW-CDS-5020-03." REV 02 JULY 2020
- "WATER INFRASTRUCTURE STANDARD DETAILS - DOCUMENT NO IW-CDS-5020-01." REV 04 JULY 2020

NOTE - THAT WHERE THERE ARE ANY DISCREPANCIES BETWEEN THE ABOVE DOCUMENTS, DOCUMENT NO. - IW-CDS-5020-01 WILL TAKE PRECEDENCE AS INSTRUCTED BY IRISH WATER.

NOTE: WHERE ANY CHAMBERS COVERS ARE LOCATED IN A GRASSED AREA THEY SHALL BE SURROUNDED BY 200mm ALL AROUND AND 100mm DEEP FORMED WITH C20/25 CONCRETE, 20mm AGGREGATE SIZE BEDDED IN CLAUSE 804 MATERIAL IN ACCORDANCE WITH IW SPECIFICATIONS. THE PLINTH SHALL INCORPORATE MILD STEEL REINFORCEMENT LINKS AND SHALL HAVE A BULL-NOSE FINISH AROUND ITS EXTERNAL PERIMETER AS PER SECTION 3.18 OF THE IRISH WATER CODE OF PRACTICE FOR WATER INFRASTRUCTURE.

MINIMUM SEPARATION NOTES:

THE MINIMUM HORIZONTAL DISTANCE BETWEEN ANY BUILDING AND THE NEAREST FACE OF THE WATER MAINS PIPE IS TO BE 3.0m MINIMUM FOR 150mm DIAMETER PIPE AS SHOWN ON IRISH WATER STANDARD DETAIL STD-W-11.

THE MINIMUM HORIZONTAL DISTANCE BETWEEN ANY BOUNDARY WALL AND THE NEAREST FACE OF THE WATER MAINS PIPE IS TO BE 1.0m MINIMUM FOR 150mm DIAMETER PIPE AS SHOWN ON IRISH WATER STANDARD DETAIL STD-W-11.

THE MINIMUM HORIZONTAL DISTANCE BETWEEN ANY KERB AND THE NEAREST FACE OF THE WATER MAINS PIPE IS TO BE 0.75m MINIMUM FOR 150mm DIAMETER PIPE AS SHOWN ON IRISH WATER STANDARD DETAIL STD-W-11.

REFER TO DETAIL 'A' WHERE IS AN EXTRACT FROM IRISH WATER STANDARD DETAIL STD-W-11.

THESE MINIMUM SEPARATION DISTANCES TO BE STRICTLY ADHERED TO.

WATERMAIN LEGEND:

	EXISTING IW 150mm Ø + 180mm Ø WATERMAIN NETWORKS
	EXISTING 180mm Ø WATERMAIN TO BE DEMOLISHED
	PROPOSED 180mm Ø PE WATERMAIN (HDPE) - REFER TO SECTION 3.9 IW COP FOR WATER INFRASTRUCTURE
	PROPOSED BULK WATER METER - (IW STD-W-26) TBC
	PROPOSED FIRE HYDRANT - (IW STD-W-018)
	PROPOSED FIRE HYDRANT MARKER PLATE - (IW STD-W-27)
	PROPOSED SLUICE VALVE (IW STD-W-15) TBC
	PROPOSED IRISH WATER APPROVED BOUNDARY BOX AND HOUSE CONNECTION - (IW STD-W-03)
	PROPOSED SCOUR VALVE - (IW STD-W-30) TBC
	PROPOSED AIR CONTROL VALVE - (IW STD-W-22) TBC
	PROPOSED 25mm Ø HOUSING UNIT SUPPLY
	PROPOSED THRUST BLOCKS - (IW STD-W-028)
	DENOTES AREA OF COVERAGE FOR FIRE HYDRANT (46M IN ACCORDANCE WITH THE TECHNICAL GUIDANCE DOCUMENTS, PART B)
	CONNECTION POINTS TO EXISTING IW MAINS
MARKER POST AND PLATES FOR ALL VALVES, HYDRANTS MAINS PIPES TO BE PROVIDED THROUGHOUT IN ACCORDANCE WITH IRISH WATER STANDARD DETAILS - STD-W-27	
	OFFLINE FIRE HYDRANT TBC
	WATERMAIN TELEMETRY KIOSK TO IW STD-W-36. (DUCTING TO IW STD-W-29) TBC

NOTES:

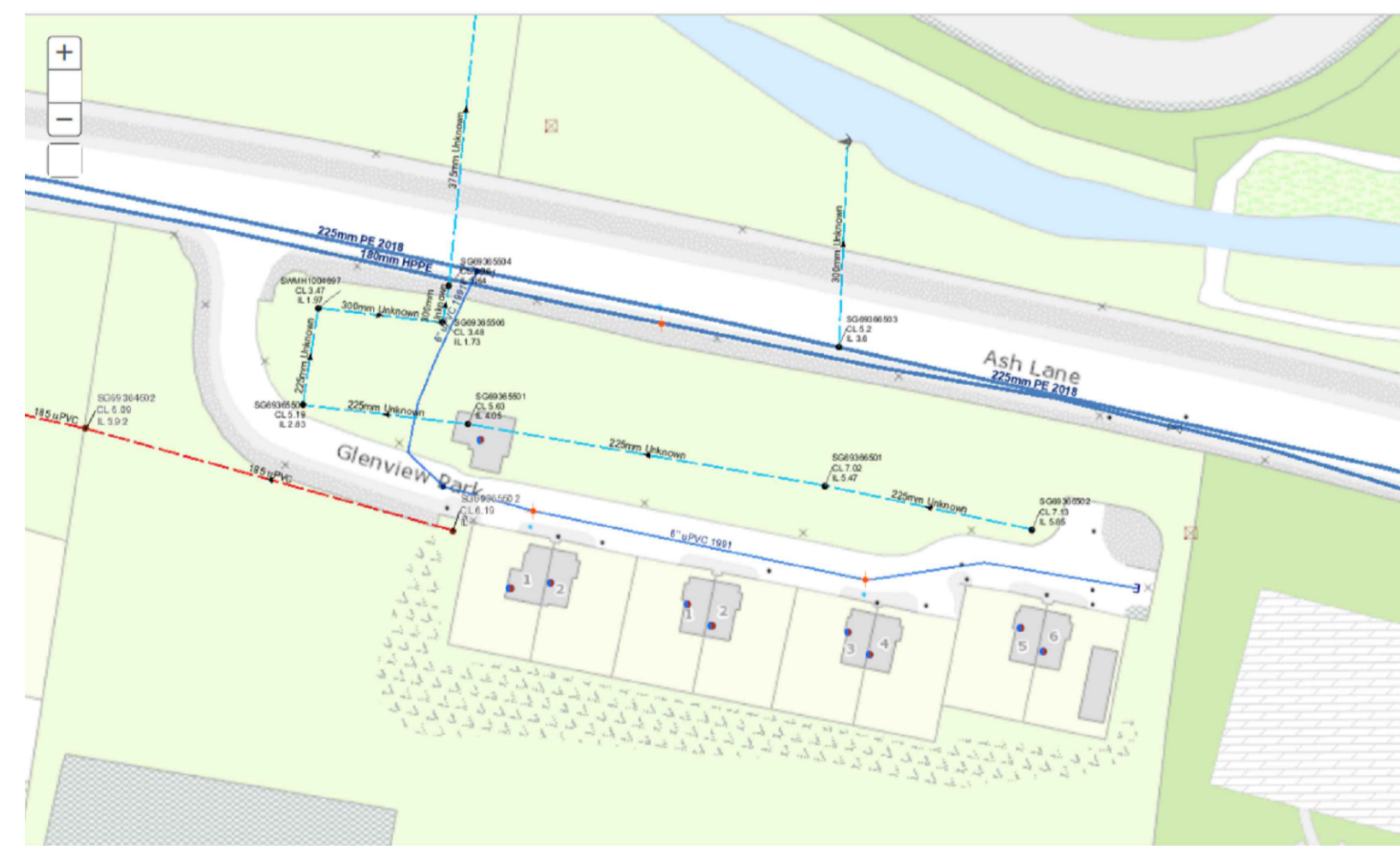
- 1...ALL CHAMBERS & COVERS, PIPEWORK, BEDDING, SLUICE VALVES, HYDRANTS, AIR VALVES, SCOUR VALVES, CONNECTION DETAILS AND WATER METERS TO BE AS GIVEN IN THE IRISH WATER DOCUMENT - WATER INFRASTRUCTURE STANDARD DETAILS, CONNECTIONS AND DEVELOPER SERVICES.
- 2...ALL WATER PRESSURE TESTING TO BE IN ACCORDANCE WITH IRISH WATER SPECIFICATIONS. RESULTS INCLUDING METHODS CARRIED OUT AND PHOTOGRAPHIC EVIDENCE TO BE SUBMITTED TO OCSC FOR APPROVAL.
- 3...ALL MAKING GOOD TO DISTURBED EXISTING ROADS & VERGE DURING THE WORKS TO BE CARRIED OUT IN ACCORDANCE WITH OCSC / TII SPECIFICATIONS. IN GENERAL, WHERE MAKING GOOD IS REQUIRED TO THE EXISTING SURFACES IT SHALL BE OF AN EQUAL STANDARD TO THE GROUND PRIOR TO COMMENCEMENT OF THE WORKS. PLEASE NOTE THAT IT IS A REQUIREMENT TO PROVIDE GOOD AND PROPER RE-INSTATEMENT TO ALL GROUND AFFECTED BY THE ASSOCIATED GROUND WORKS. CONTRACTORS ARE ADVISED THAT NO ADDITIONAL MONIES WILL BE PAID FOR SUB-STANDARD RE-INSTATEMENT. CONTRACTORS ARE TO ALLOW FOR SUITABLE IMPORTED FILL MATERIAL FOR BACKFILLING TRENCHES EXCAVATED AND MUST BE PROPERLY COMPACTED AND FINISHED (FINISH TO MATCH EXISTING PRIOR TO COMMENCEMENT OF THE WORKS) LEVEL WITH THE EXISTING FINISHED SURFACE LEFT WITHOUT TRIP HAZARDS ETC.
- 4...ALL PIPEWORK, FITTINGS AND BOXES TO BE CE CERTIFIED AND ALL DOCUMENTATION TO BE SUBMITTED TO OCSC FOR APPROVAL PRIOR TO COMMENCEMENT OF THE WORKS.
- 5...THE INFORMATION RELATING TO THE LOCATION OF THE EXISTING SERVICES AS SHOWN ON THIS DRAWINGS HAVE BEEN OBTAINED FROM ANOTHER SOURCE OCSC ACCEPTS NO RESPONSIBILITY AS TO THE ACCURACY OF THE INFORMATION RELATING TO EITHER TOPOGRAPHICAL SURVEY OR PRESENCE OF EXISTING SERVICES.

NO WATERMAIN IS TO BE PLACED WITHIN 1.0M OF BOUNDARY WALLS AND 3.0M WITHIN EXTERNAL WALLS OF IN ACCORDANCE WITH IRISH WATER STANDARD DETAIL - REF NO STD-W-11 & DETAIL 'A' BELOW

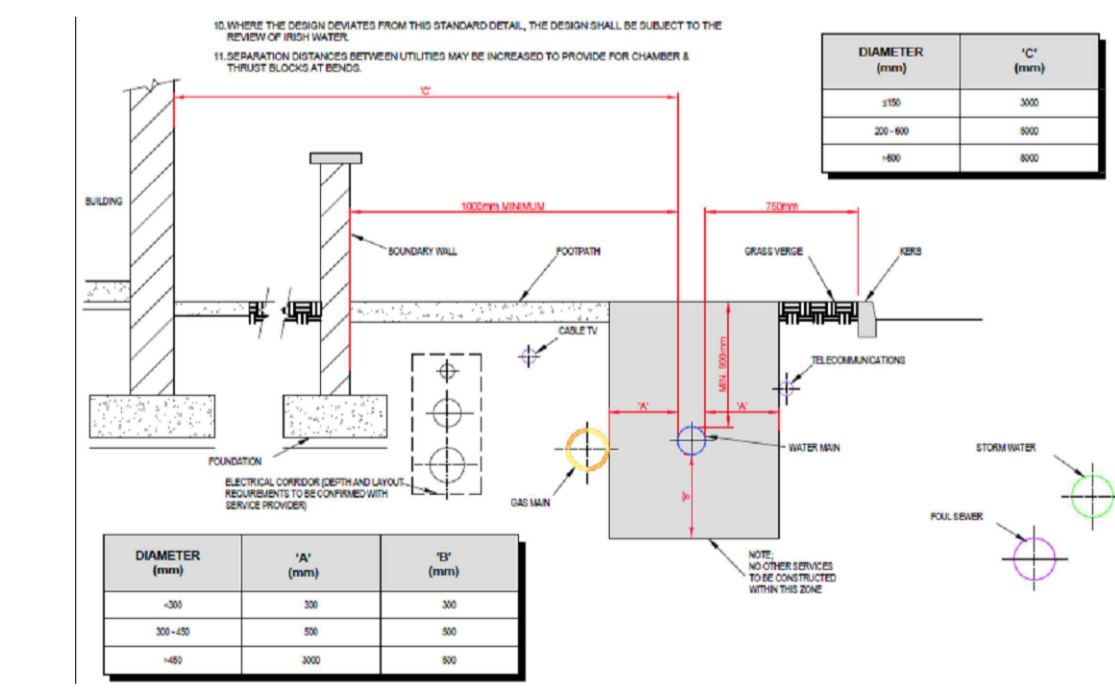
LANDSCAPING AND POSITIONING OF TREES SHOULD SATISFY THE RESTRICTIONS OUTLINED IN IW STANDARD DETAILS STD-W-12 & STD-W-12A

ALL TRENCH BACKFILL AND BEDDING TO BE IN ACCORDANCE WITH IW STANDARD DETAIL STD-W-13

EXISTING AND PROPOSED WATERMAINS LAYOUT
SCALE 1:250 @A1



EXTRACT IW WATERMAINS LAYOUT
SCALE N.T.S.



DETAIL 'A'
EXTRACT FROM IRISH WATER STANDARD DETAIL STD-W-11

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P01	16.02.23	FOR INFORMATION	TD	TOD
P02	02.03.23	EXISTING WATERMAIN REVISED AS BUBBLED	TD	TOD
P03	24.06.23	REDLINE BOUNDARY UPDATED	AD	TD
P04	02.08.23	LAYOUT UPDATED AS PER REVISED ARCHITECT LAYOUT	AD	TD
P05	16.08.23	ISSUED FOR TENDER	AD	TD

Rev No.	Date	Revision Note	Drn by	Chkd by

SLIGO COUNTY COUNCIL

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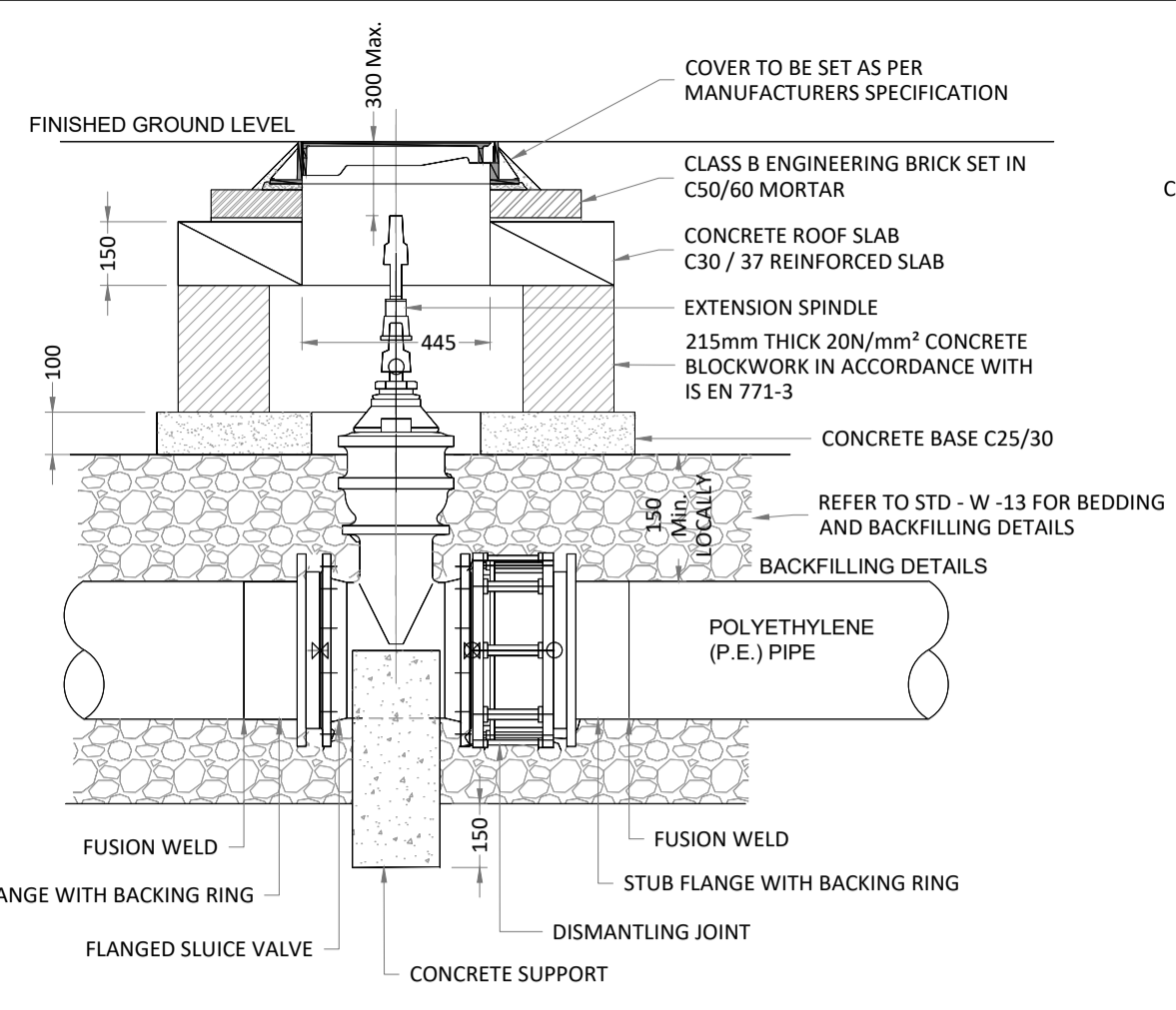
Client: **SLIGO COUNTY COUNCIL**

Project: **ASH LANE GROUP HOUSING**

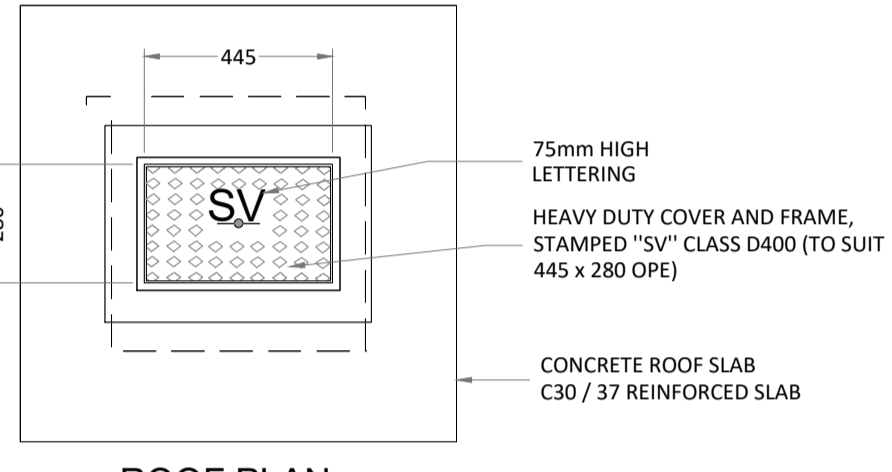
Title: **EXISTING AND PROPOSED WATERMAINS**

Code	Originator	Zone	Level	Type	Role	Number	Status	Revision
S603	OCSC	XX	XX	DR	C	0630	D2	P05

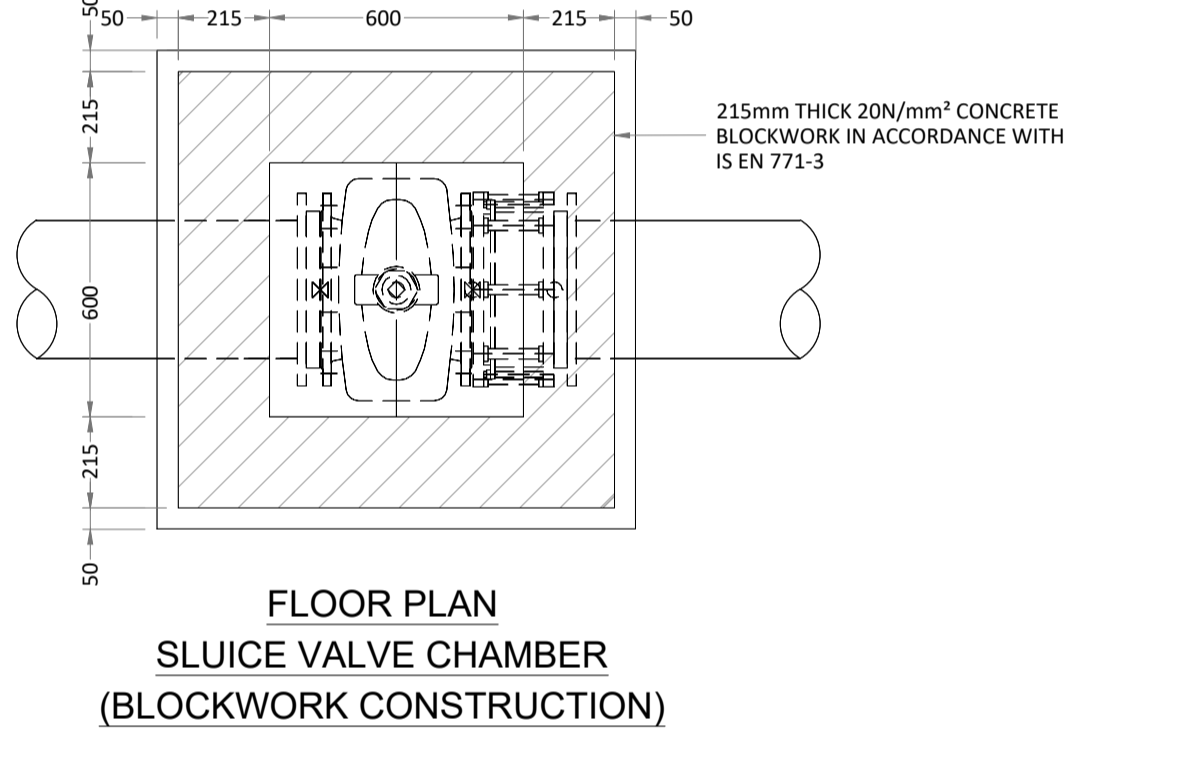
Date: FEB '23 Scale: 1:250 @ A1 Drn by: AD Chkd by: TD Aprvd by:



SECTION

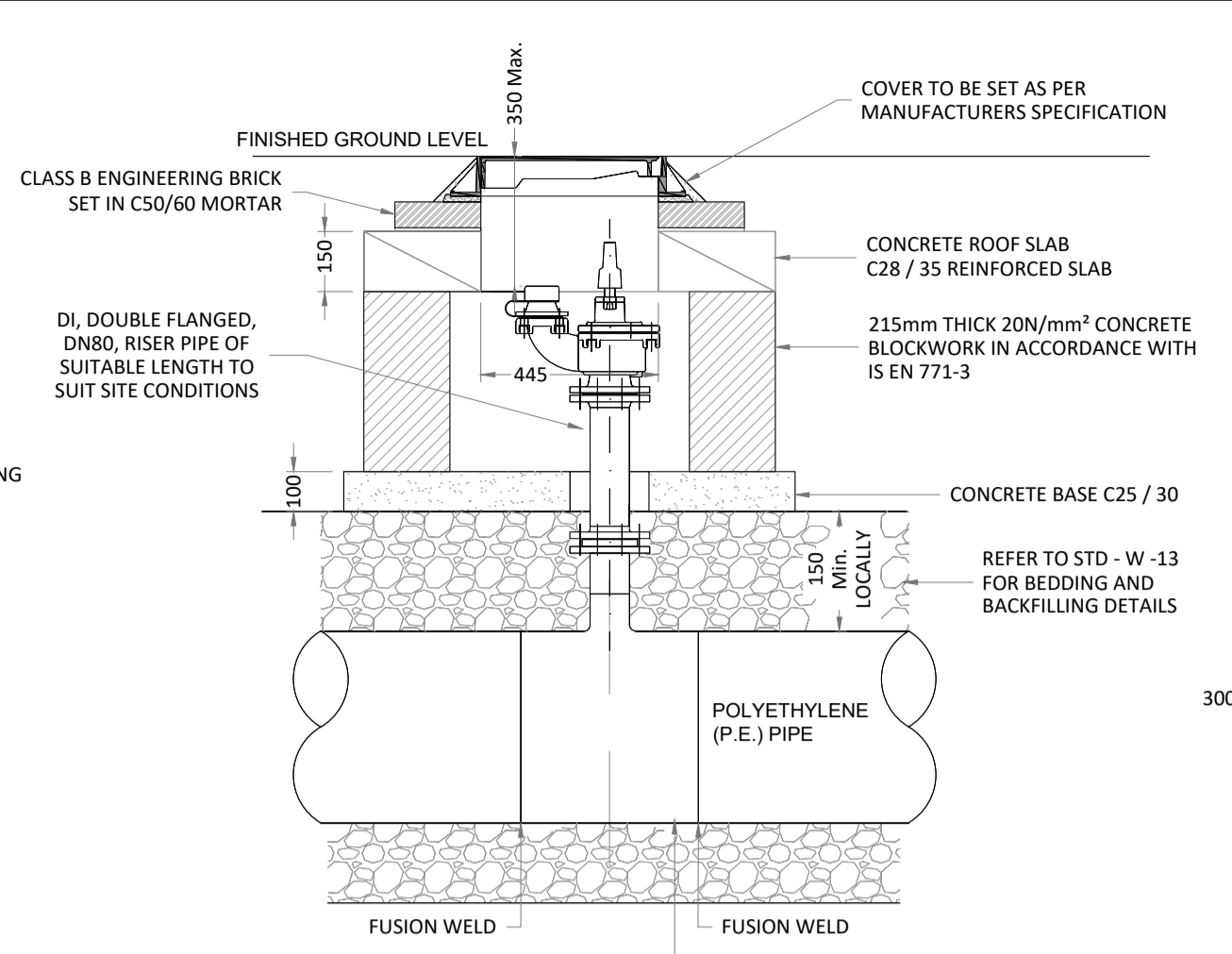


ROOF PLAN

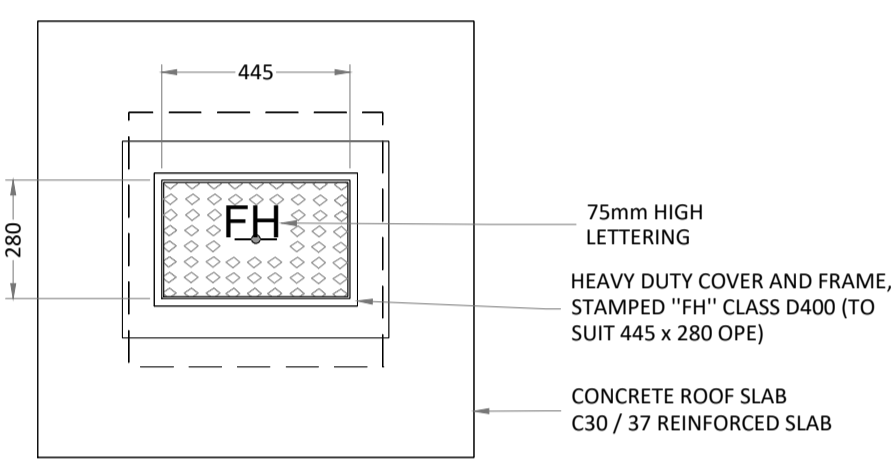


FLOOR PLAN

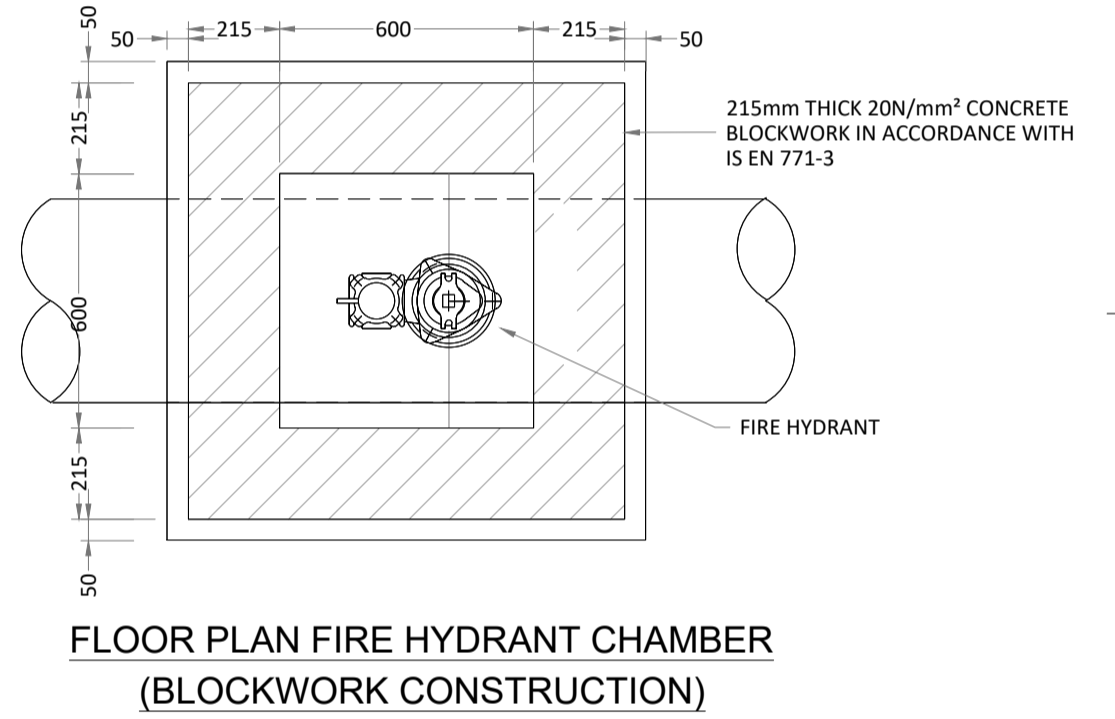
SLUISE VALVE CHAMBER (BLOCKWORK CONSTRUCTION)



SECTION

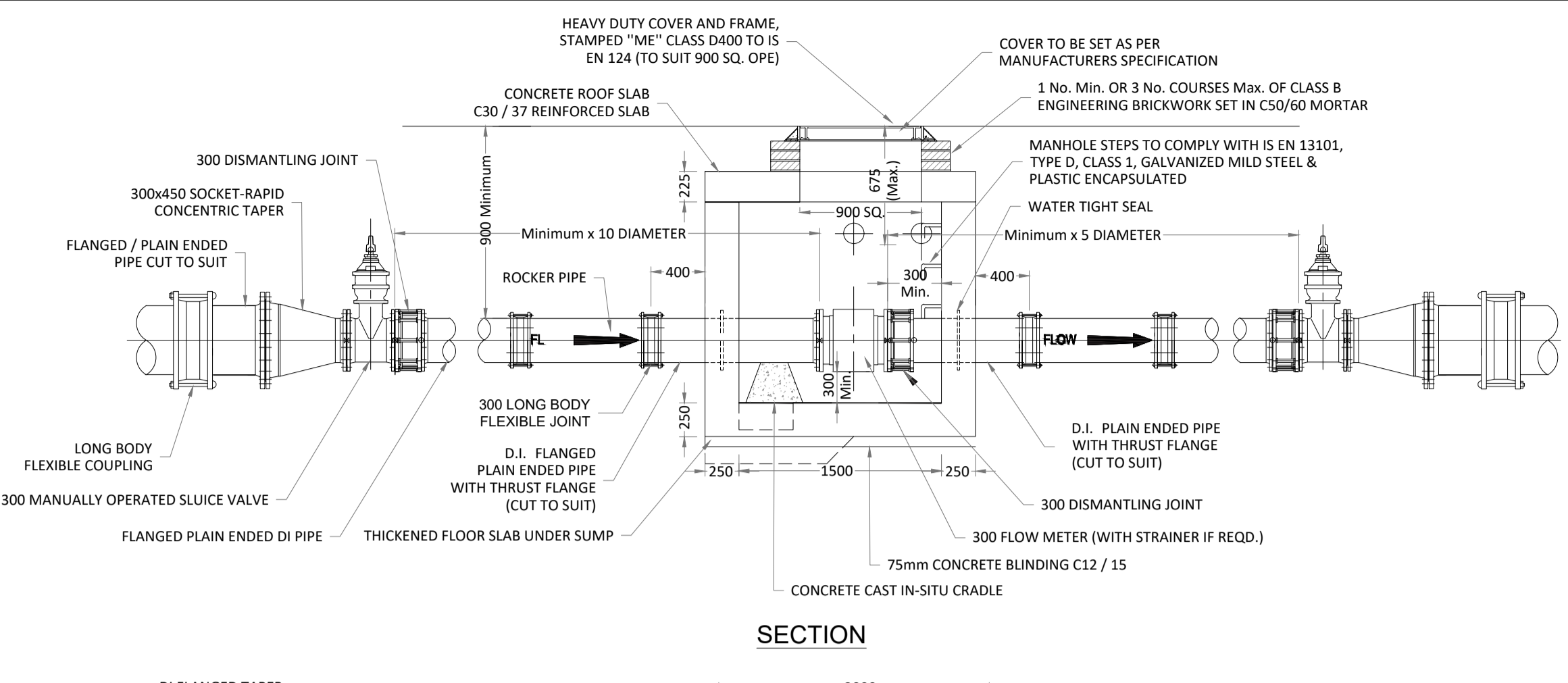


ROOF PLAN

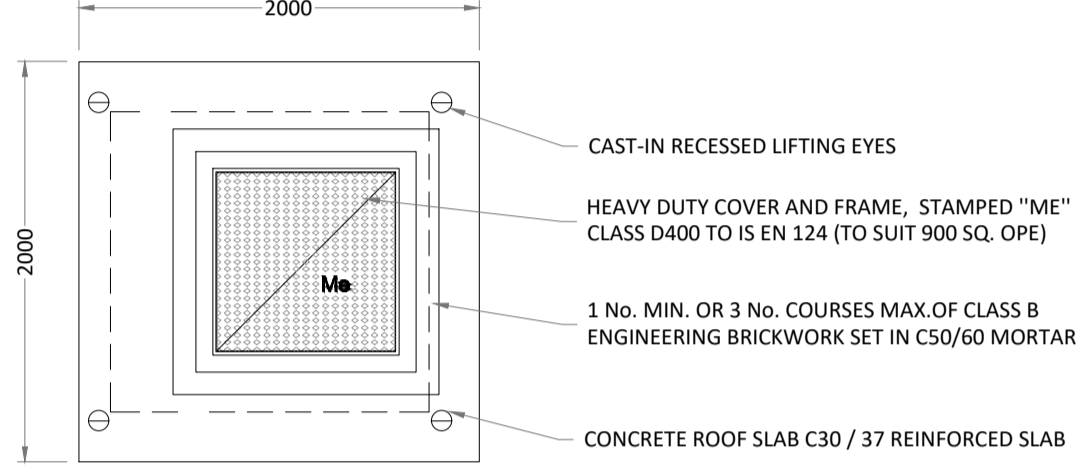


FLOOR PLAN FIRE HYDRANT CHAMBER (BLOCKWORK CONSTRUCTION)

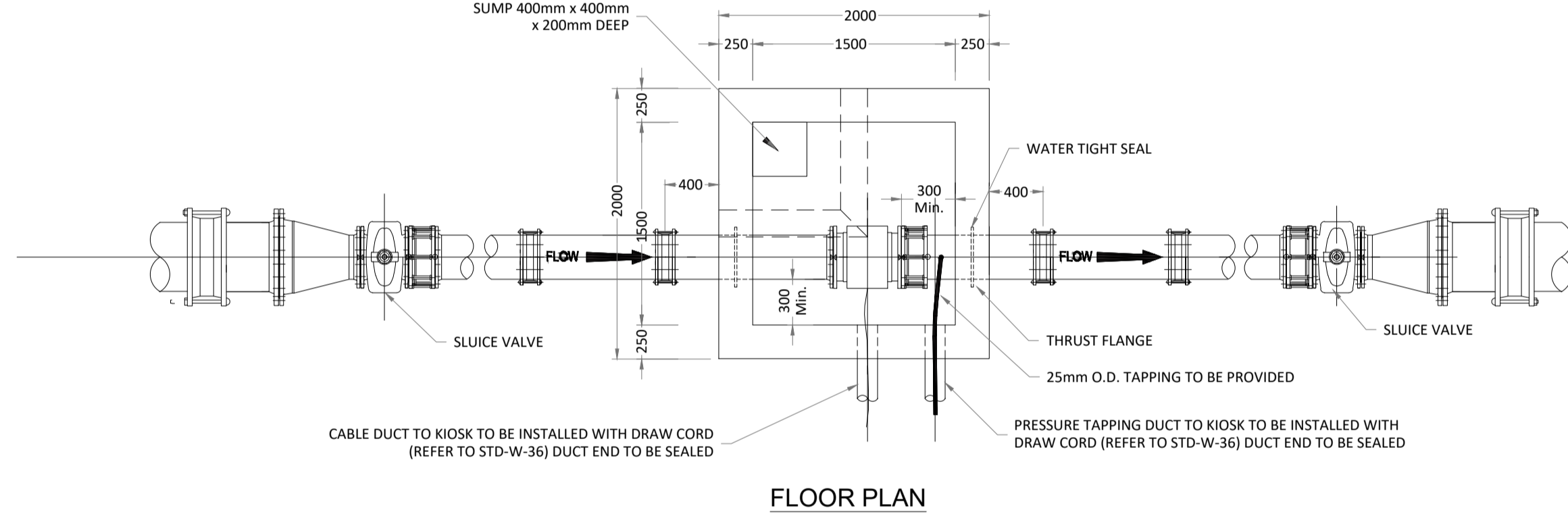
ON - LINE HYDRANT FOR POLYETHYLENE (P.E.) PIPE



SECTION



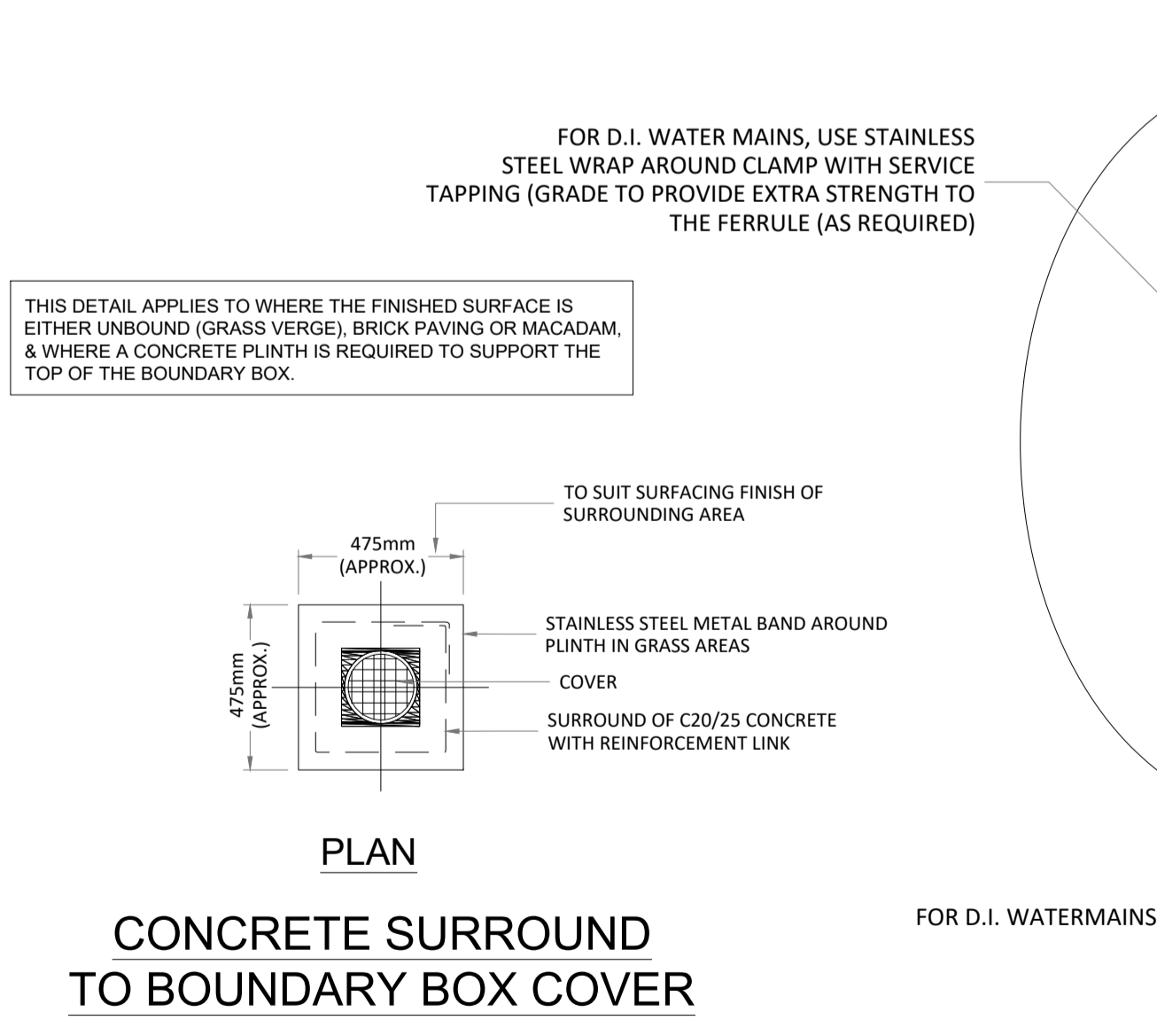
ROOF PLAN



FLOOR PLAN

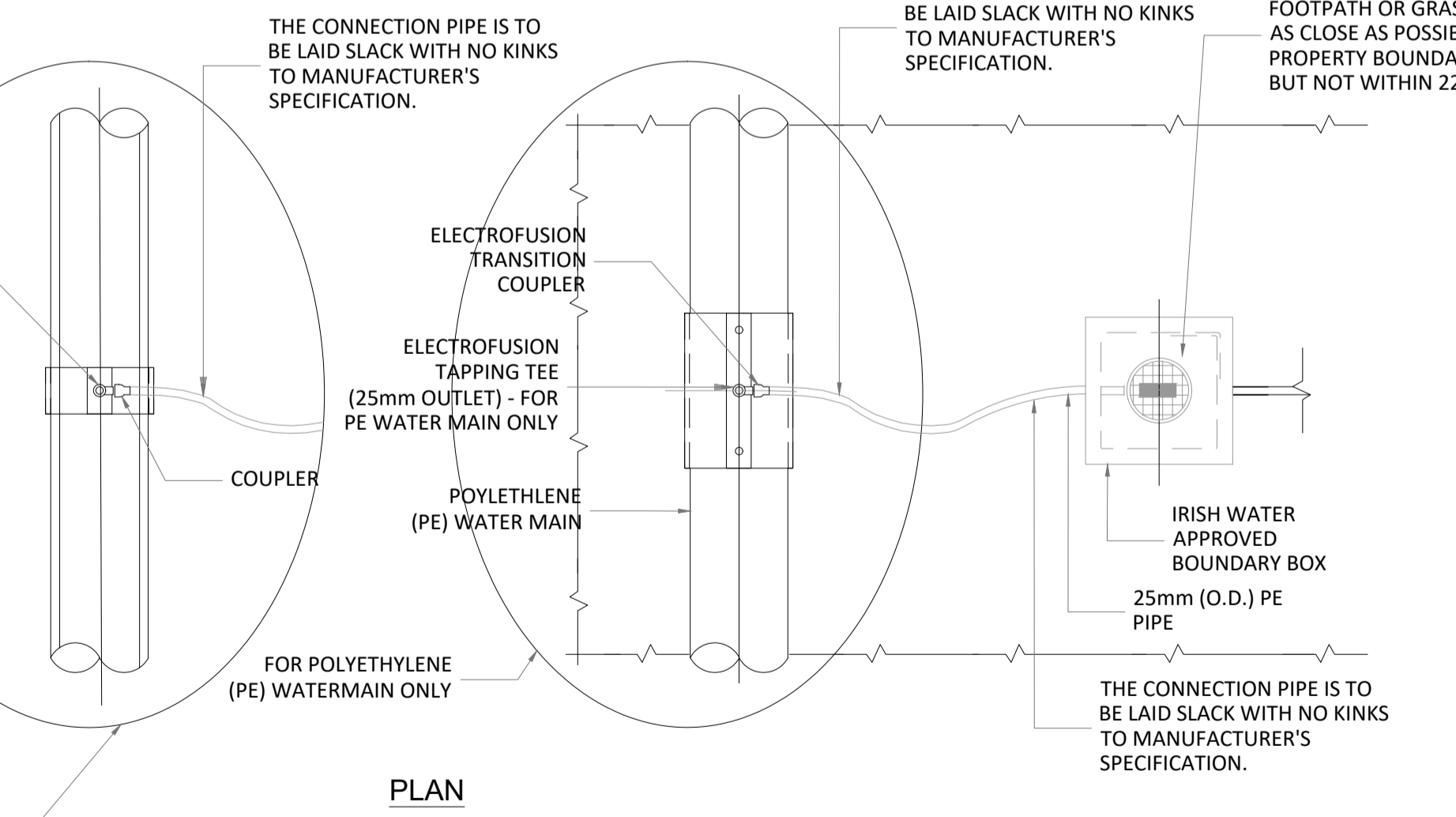
METER CHAMBER (<= 300mm DIA.)

SLUISE VALVE FOR POLYETHYLENE (P.E.) PIPE (< 350mm DIA.)



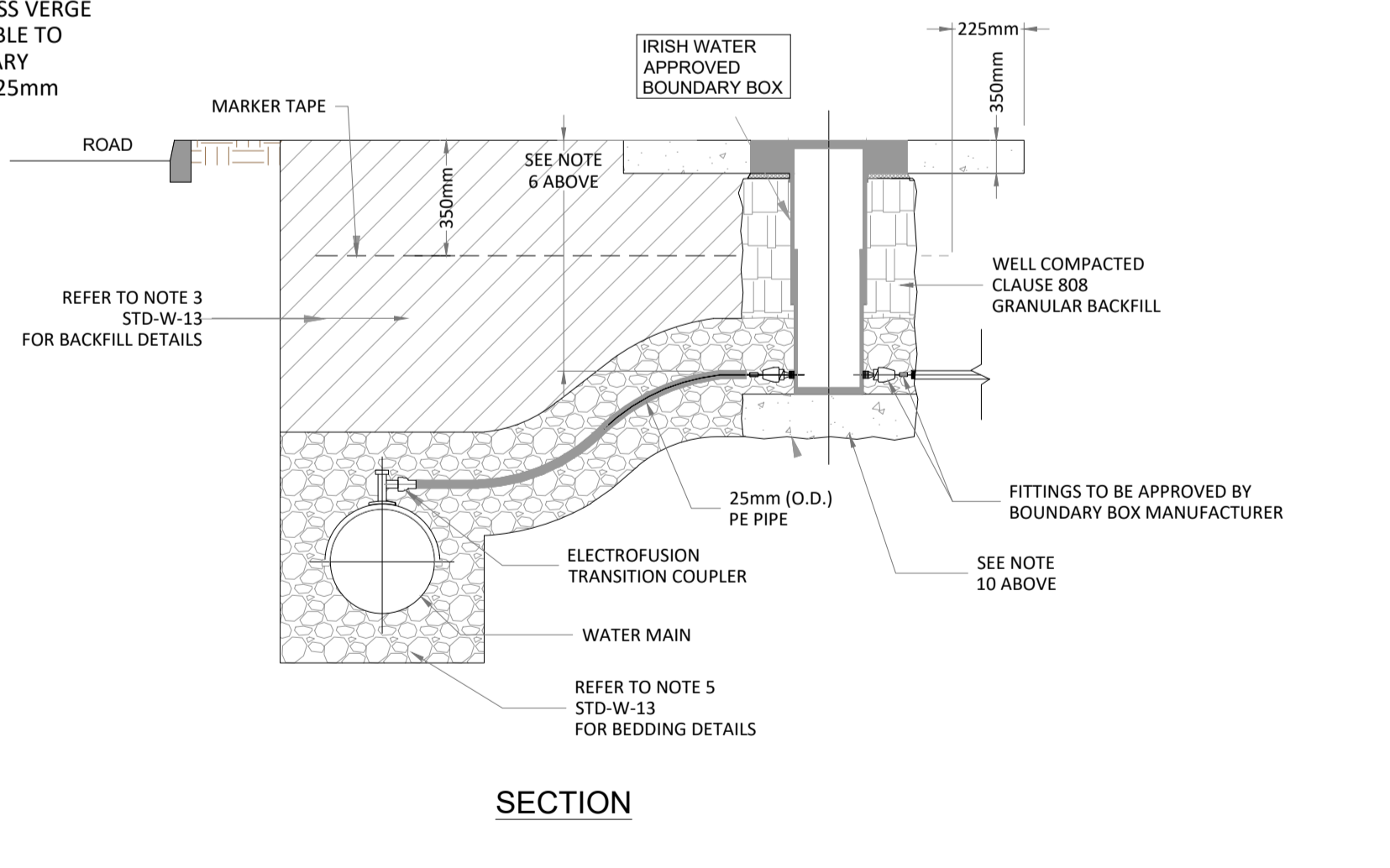
PLAN

CONCRETE SURROUND TO BOUNDARY BOX COVER



PLAN

CUSTOMER CONNECTION AND BOUNDARY BOX (25mm OD PIPE)



SECTION

GENERAL NOTES:

- ALL DIMENSIONS IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
- CONCRETE CHAMBERS SHALL BE SURROUNDED BY A MINIMUM OF 150mm COMPACTED CLAUSE 808 MATERIAL AS PER STD-W-13.
- DUCTILE IRON PIPES AND FITTINGS TO BE IN ACCORDANCE WITH IS EN 545. PE PIPES AND FITTINGS TO BE IN ACCORDANCE WITH IS EN 12201:2011.
- 200mm ALL AROUND, 100mm DEEP CONCRETE PLINTH WITH PROTECTIVE STAINLESS STEEL METAL BAND AROUND COVERS IN GREEN AREAS.
- THRUST BLOCKS (NOT SHOWN ON DRAWING), TO BE PROVIDED AS PER STANDARD DRAWING STD-W-28 AT ALL TEES, BENDS, TAPERS, DEAD ENDS AND PIPES AT STEEP SLOPES.
- ANTI CORROSION TAPE TO BE PROVIDED AROUND BURIED FLANGES.
- ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.

SLUISE VALVE NOTES:

- SLUISE VALVE CHAMBERS SHALL BE COVERED WITH APPROVED HEAVY DUTY METAL COVERS TO IS 261 OR BS 5834. COVER AND FRAME SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS AND IS SUBJECT TO THE APPROVAL OF IRISH WATER.
- SLUISE VALVES SHALL BE RESILIENT SEATED AND SHALL COMPLY WITH BS 5163-1, BS 5163-2, IS EN 1074-1, IS EN 1074-2, OR EQUIVALENT G.U. SPECIFICATIONS.
- ALL SLUISE VALVES SHALL BE ANTI-CLOCKWISE CLOSING.
- VALVE CHAMBER TO BE CONSTRUCTED OF PRECAST CONCRETE UNITS OR HIGH DENSITY BLOCKWORK. ALTERNATIVELY PROPRIETARY PREFABRICATED CHAMBER UNITS MAY ALSO BE USED, SUBJECT TO APPROVAL FROM IRISH WATER.

HYDRANT NOTES:

- HYDRANT CHAMBERS SHALL BE COVERED WITH APPROVED HEAVY DUTY METAL COVERS TO IS 261 OR BS 5834. COVER AND FRAME SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS AND IS SUBJECT TO THE APPROVAL OF IRISH WATER.
- ALL HYDRANTS, SURFACE BOX FRAMES & COVERS SHALL COMPLY WITH THE RELEVANT PROVISIONS OF IS EN 14399, IS EN 1074-6 & BS 750. FIRE HYDRANTS SHALL BE TYPE 2. THE HYDRANT INLET SHALL BE 80mm DIAMETER WITH PN16.
- ALL HYDRANTS SHALL BE CLOCKWISE CLOSING.
- HYDRANT CHAMBER TO BE CONSTRUCTED OF PRECAST CONCRETE UNITS OR HIGH DENSITY BLOCKWORK. ALTERNATIVELY PROPRIETARY PREFABRICATED CHAMBER UNITS MAY ALSO BE USED, SUBJECT TO APPROVAL FROM IRISH WATER.

METER CHAMBER NOTES:

- STRUCTURAL DESIGN AND REINFORCEMENT DETAIL TO BE PROVIDED BY THE DEVELOPER AND SUBMITTED TO IRISH WATER FOR REVIEW.
- CONCRETE FOR FLOW METER CHAMBER TO BE C30 / 37.
- PRECAST METER CHAMBER (WITH CONCRETE SURROUND) MAY BE USED SUBJECT TO APPROVAL FROM IRISH WATER.
- METER CHAMBER SHALL BE COVERED WITH APPROVED HEAVY DUTY METAL COVERS TO IS EN 124 RATING D400. COVER AND FRAME SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS AND IS SUBJECT TO THE APPROVAL OF IRISH WATER.
- ANTI CORROSION TAPE TO BE PROVIDED AROUND BURIED FLANGES.
- ALL CHAMBERS TO BE CHECKED FOR UPLIFT BY THE DEVELOPER BASED ON GROUND CONDITIONS WITHIN THE SITE. SHOULD ANTI FLOATION MEASURES BE REQUIRED THEY SHALL BE SUBJECT TO APPROVAL FROM IRISH WATER.
- PIPEWORK TO BE DOWNSIZED TO ACCOMMODATE THE REQUIRED RANGE OF THE FLOW METER. STRAIGHT PIPE LENGTHS UPSTREAM AND DOWNSTREAM OF THE METER TO BE PROVIDED. IF THE METER IS NOT CAPABLE OF ACCURATE NIGHT FLOW MEASUREMENTS, A BY-PASS FLOW METER SHALL BE PROVIDED WITH APPROPRIATE VALVES, FITTINGS AND PIPEWORK.

BOUNDARY BOX NOTES:

- 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.
- 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.
- 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.
- THE SURFACE BOX COVER ON THE BOUNDARY BOX SHOULD BE NOT LESS THAN GRADE C (BS 5834.2-2011); & THE BOUNDARY BOX SHOULD BE LOCATED SUCH THAT HEAVIER GRADES OF COVER WOULD NOT BE REQUIRED.
- THE SHAFT OF THE BOUNDARY BOX IS TO BE INSTALLED VERTICALLY, & THE SURFACE BOX/COVER INCLINED TO MATCH THE SURFACE GRADIENT.
- 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.
- 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.
- THE PIPE FITTINGS TO THE BOUNDARY BOX SHALL BE APPROVED BY THE BOUNDARY BOX MANUFACTURER.
- THE BOUNDARY BOX SHALL BE INSTALLED HYGIENICALLY & LEFT CLEAN & FREE OF CONSTRUCTION WASTE OR DIRT FOR LATER METER INSTALLATION BY IRISH WATER.
- BOX TO BE FOUNDED ON 100mm DEPTH OF C12/15 CONCRETE AND SURROUNDED WITH CLAUSE 808 GRANULAR MATERIAL.
- THE DESIRABLE MINIMUM DEPTH OF 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).

CUSTOMER CONNECTION AND BOUNDARY BOX NOTES:

- FOR CONNECTION TO AN EXISTING MAIN THE CONNECTION SHALL BE AS PER THE PIPE MANUFACTURER'S SPECIFICATION.
- ELECTRO FUSION COUPLING TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

WATERMAIN STANDARD DETAILS SCALE 1:25

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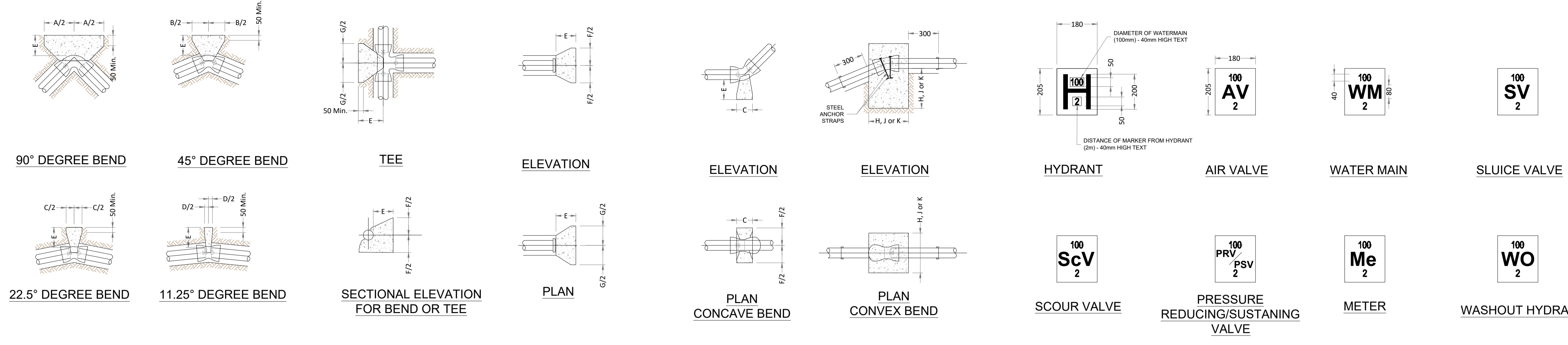
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Client: SLIGO COUNTY COUNCIL
Project: ASH LANE GROUP HOUSING
Title: WATERMAIN STANDARD DETAILS SHEET 1 OF 3

Code	Originator	Zone	Level	Type	Role	Number	Status	Revision
S603	OCSC	XX	XX	DR	C	0631	D2	P02

Date: FEB '23 Scale: A.N. @ A1 Drn by: TD Chkd by: TOD Aprvd by:

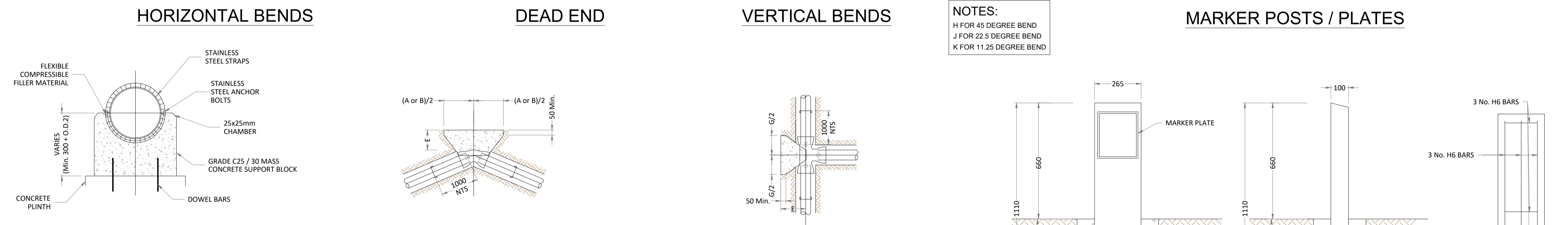


THRUST BLOCKS NOTES:

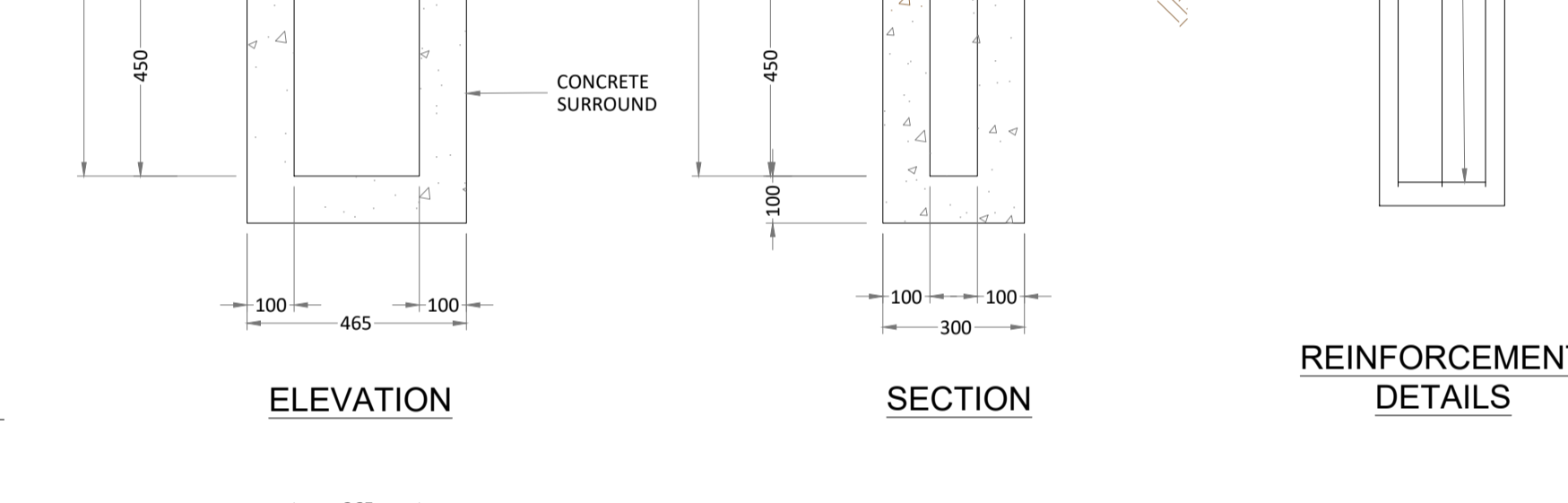
- CONCRETE THRUST BLOCKS (ANCHORAGE) SHALL BE POSITIONED SYMMETRICALLY WITH RESPECT TO THE CONNECTING PIPE & BENDS.
- TRENCH DIMENSIONS - REFER TO DRAWING No.'s STD-W-2.
- THRUST BLOCKS SHALL BEAR ON UNDISTURBED SOIL. IF FOR ANY REASON THEY CAN NOT THEN THE DEVELOPER SHALL NOTIFY IRISH WATER IMMEDIATELY WITH A PROPOSED SOLUTION.
- THRUST BLOCK REINFORCEMENT REQUIRES SPECIFIC DESIGN.
- FOR TEST PRESSURES GREATER THAN 18 BAR, THRUST BLOCK DESIGN IS TO BE SUBMITTED TO IRISH WATER FOR APPROVAL.
- THRUST BLOCKS ARE DESIGNED FOR AN AVERAGE BEARING PRESSURE OF 100 KN/m (TYPICAL FOR SOFT CLAY) FOR OTHER CONDITIONS, ACTUAL DIMENSIONS MAY BE ALTERED ON INSTRUCTIONS FROM IRISH WATER.
- CONCRETE IN THRUST BLOCKS SHALL BE GRADE C20/25.
- COMPRESSIBLE FILLER FOR CONCRETE PROTECTION TO BE IN ACCORDANCE WITH BS EN 622-1 AND BS EN 622-4. BITUMINOUS MATERIAL SHALL NOT BE PUT IN CONTACT WITH PLASTIC PIPES. THE THICKNESS OF COMPRESSIBLE FILLER FOR MAINS < 450mm IN DIAMETER IS TO BE 18mm.
- CONCRETE THRUST BLOCKS FOR POLYETHYLENE PIPE TO COMPLY WITH THE MANUFACTURERS REQUIREMENTS.
- POLYETHYLENE PIPES SHALL BE WRAPPED IN PLASTIC SHEETING HAVING A COMPOSITION IN ACCORDANCE WITH BS 6076 BEFORE BEING CAST INTO CONCRETE.

MARKER POSTS NOTES:

- WHERE PRACTICAL MARKER PLATES SHALL BE FIXED TO ADJACENT WALLS OR ALTERNATIVELY ATTACHED TO MARKER POSTS.
- PLATES TO BE FIXED IN POSITION USING WALL PLUGS AND STAINLESS STEEL SCREWS.
- MARKER PLATES TO BE MANUFACTURED IN ACCORDANCE WITH BS 3251.
- FOR HYDRANT PLATE ALL CHARACTERS SHOULD BE BLACK AND THE REMAINDER OF THE FRONT FACE SHOULD CONFORM TO COLOUR REFERENCE No. 309 (CANARY YELLOW) OF BS 381C.)
- PIPE DIAMETER ON HYDRANT PLATE TO REFER TO WATERMAIN NOT BRANCH.
- SLUICE VALVE, AIR VALVE, SCOUR VALVE, WASHOUT HYDRANT AND METER PLATES SHOULD BE CAST IRON. ALL CHARACTERS SHOULD BE BLACK ON WHITE PAINT BACKGROUND.
- CONCRETE SURROUND TO MARKER POST TO BE GRADE C25/30 AND IN ACCORDANCE WITH IS EN 206/2013.
- PLASTIC MARKER POSTS ARE NOT ACCEPTABLE.



NOTES:
 H FOR 45 DEGREE BEND
 J FOR 22.5 DEGREE BEND
 K FOR 11.25 DEGREE BEND



THRUST BLOCKS TABLES:

< 12 BAR TEST PRESSURE

NOM. DIA. (mm)	DIMENSIONS										
	A	B	C	D	E	F	G	H	J	K	
100	600	330	160	80	200	350	300	700	600	400	
150	950	510	260	130	275	450	400	660	900	750	
200	1300	690	350	160	300	600	500	780	1050	900	
250	1700	950	480	200	300	800	700	1000	1000	750	
300	2100	1200	650	250	350	950	1150	1300	1300	850	
350	2500	1500	850	300	400	1100	1450	1550	1550	950	
400	2900	1800	1100	350	500	1250	1800	1700	1700	1000	
450	3300	2100	1400	400	600	1400	2100	2000	2000	1100	
500	3700	2400	1700	450	700	1550	2400	2300	2300	1200	
600	4300	2800	2100	550	850	1800	2800	2700	2700	1300	

12 BAR TO 16 BAR TEST PRESSURE

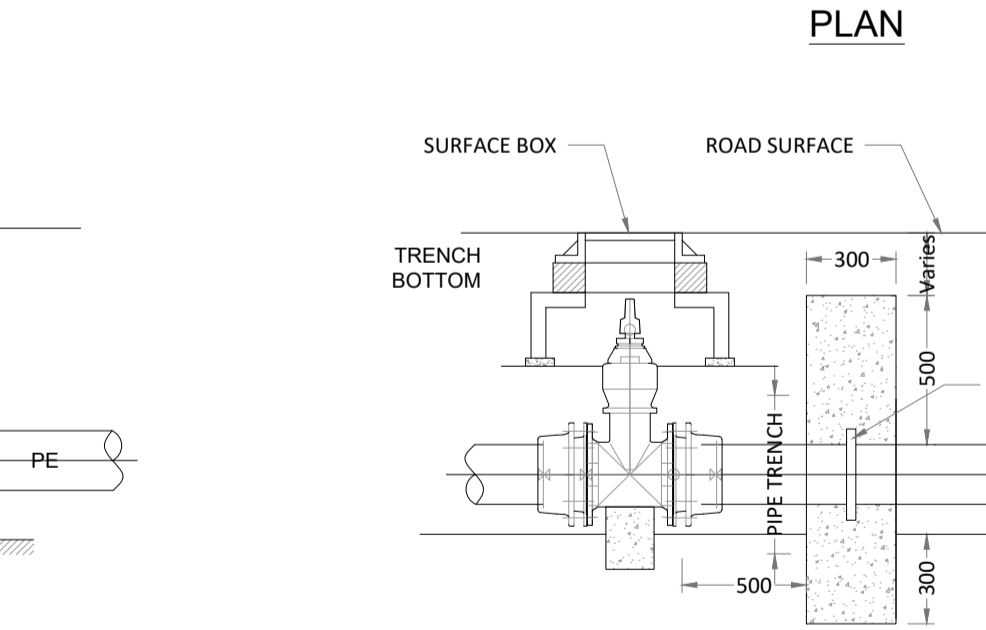
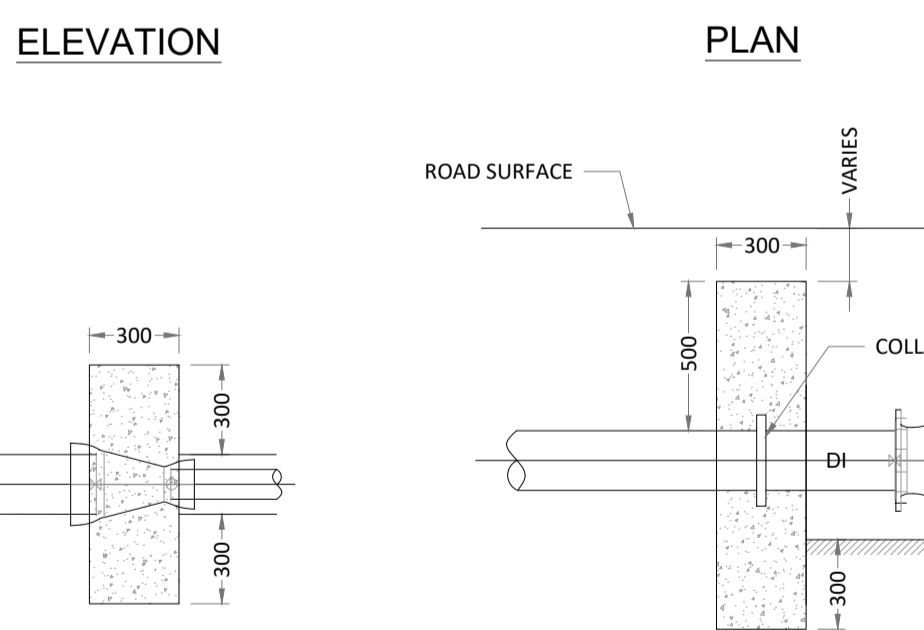
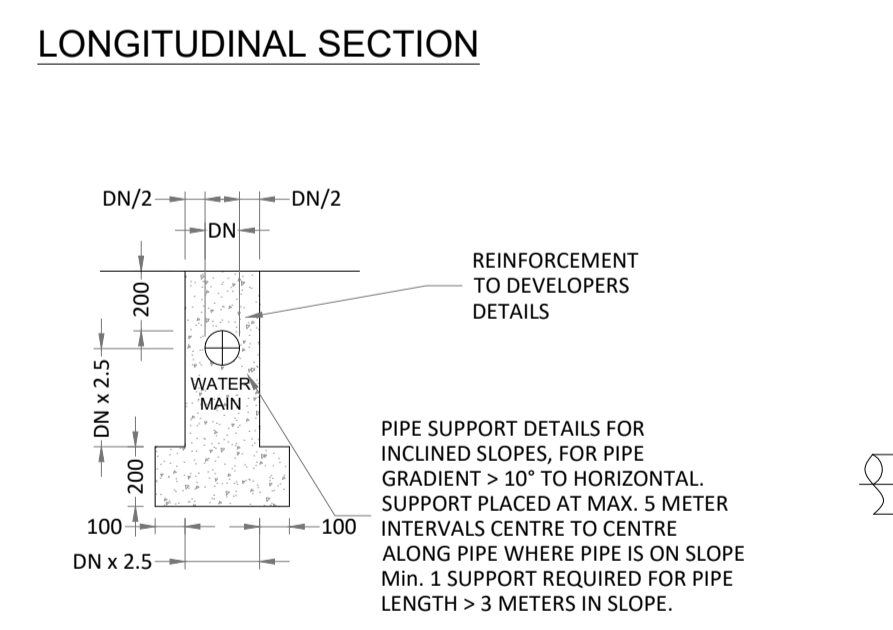
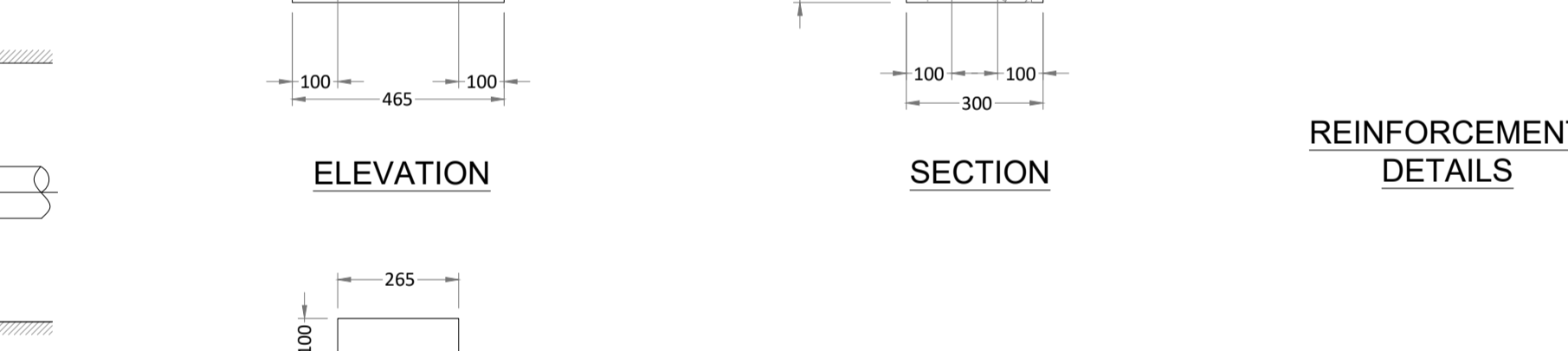
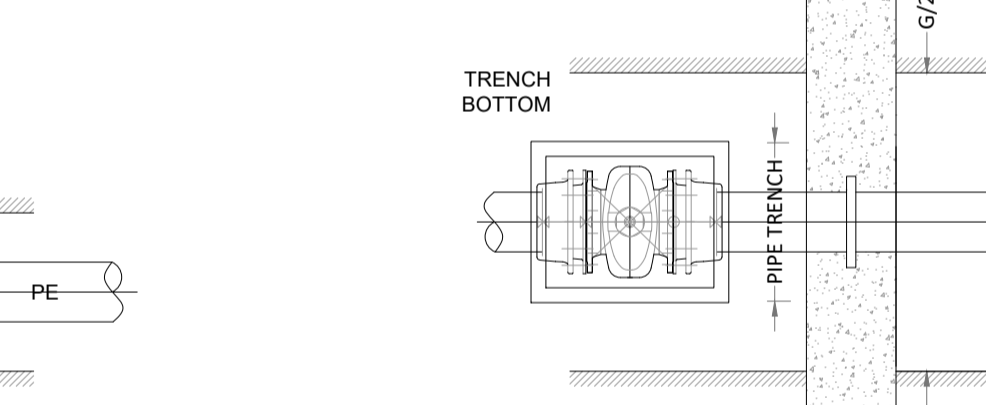
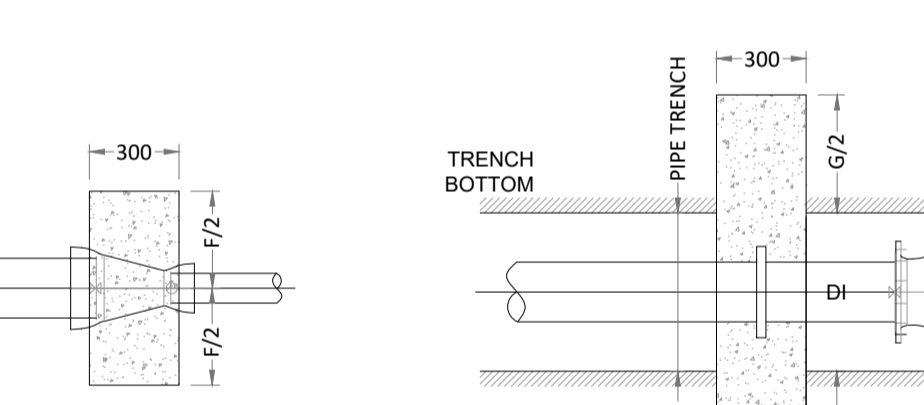
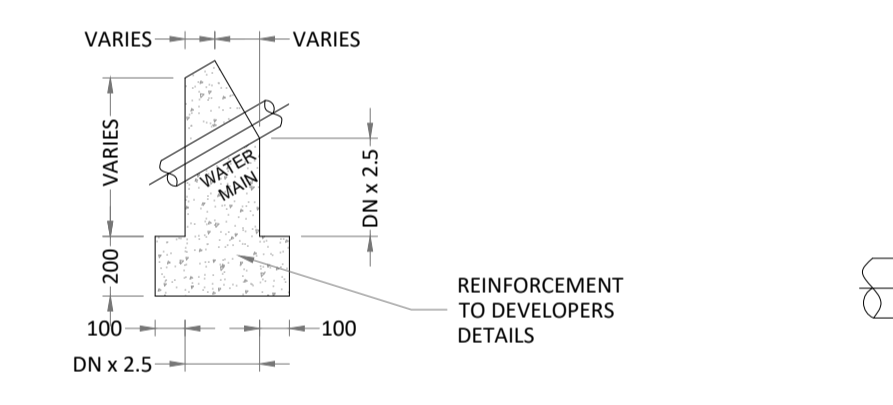
NOM. DIA. (mm)	DIMENSIONS										
	A	B	C	D	E	F	G	H	J	K	
100	700	380	190	100	200	350	350	750	600	400	
150	1150	620	320	160	275	450	400	950	750	600	
200	1400	750	380	190	300	600	500	1150	950	700	
250	1750	940	480	240	300	800	700	1350	1050	850	
300	2050	1130	600	300	350	950	850	1550	1200	950	
350	2400	1410	720	360	400	1100	1050	1800	1350	1050	
400	2800	1650	850	420	500	1250	1250	2050	1500	1150	
450	3200	1940	1050	480	600	1400	1500	2300	1700	1250	
500	3600	2230	1300	550	700	1550	1750	2550	1900	1350	
600	4200	2650	1650	650	850	1800	2100	2900	2300	1450	

16 BAR TO 18 BAR TEST PRESSURE

NOM. DIA. (mm)	DIMENSIONS										
	A	B	C	D	E	F	G	H	J	K	
100	750	400	200	100	220	400	350	800	650	450	
150	1200	700	350	180	250	500	450	1000	850	650	
200	1600	950	450	230	300	700	600	1250	1050	800	
250	1950	1200	580	270	350	850	750	1450	1150	900	
300	2300	1500	750	320	400	1000	900	1700	1300	1050	
350	2700	1800	950	380	450	1150	1050	1950	1450	1150	
400	3100	2100	1200	450	550	1300	1200	2200	1600	1250	
450	3500	2400	1500	520	650	1450	1350	2450	1750	1350	
500	3900	2700	1800	600	750	1600	1500	2700	1900	1450	
600	4500	3200	2200	700	900	1850	1750	3000	2200	1550	

TABLE OF DIMENSIONS FOR STEEPLY INCLINED PIPELINES

GRADIENT	SPACING
1 IN 2 & STEEPER	5.5m
BELOW 1 IN 2 TO 1 IN 4	11.0m
1 IN 4 TO 1 IN 5	16.6m
1 IN 5 TO 1 IN 6	22.0m



PIPE SUPPORT DETAILS FOR INCLINED SLOPES

THRUST BLOCK FOR DUCTILE IRON TO POLYETHYLENE CHANGE OVER

THRUST BLOCK FOR SLUICE VALVE / GATE VALVE FOR VALVE BOX ARRANGEMENT

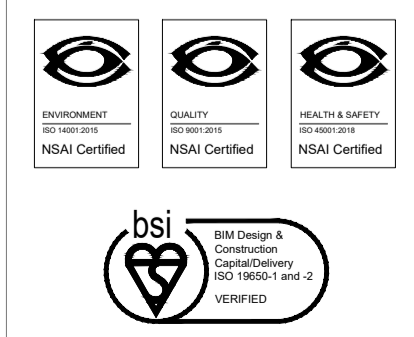
WATERMAIN STANDARD DETAILS
SCALE 1:25

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Project: ASH LANE GROUP HOUSING

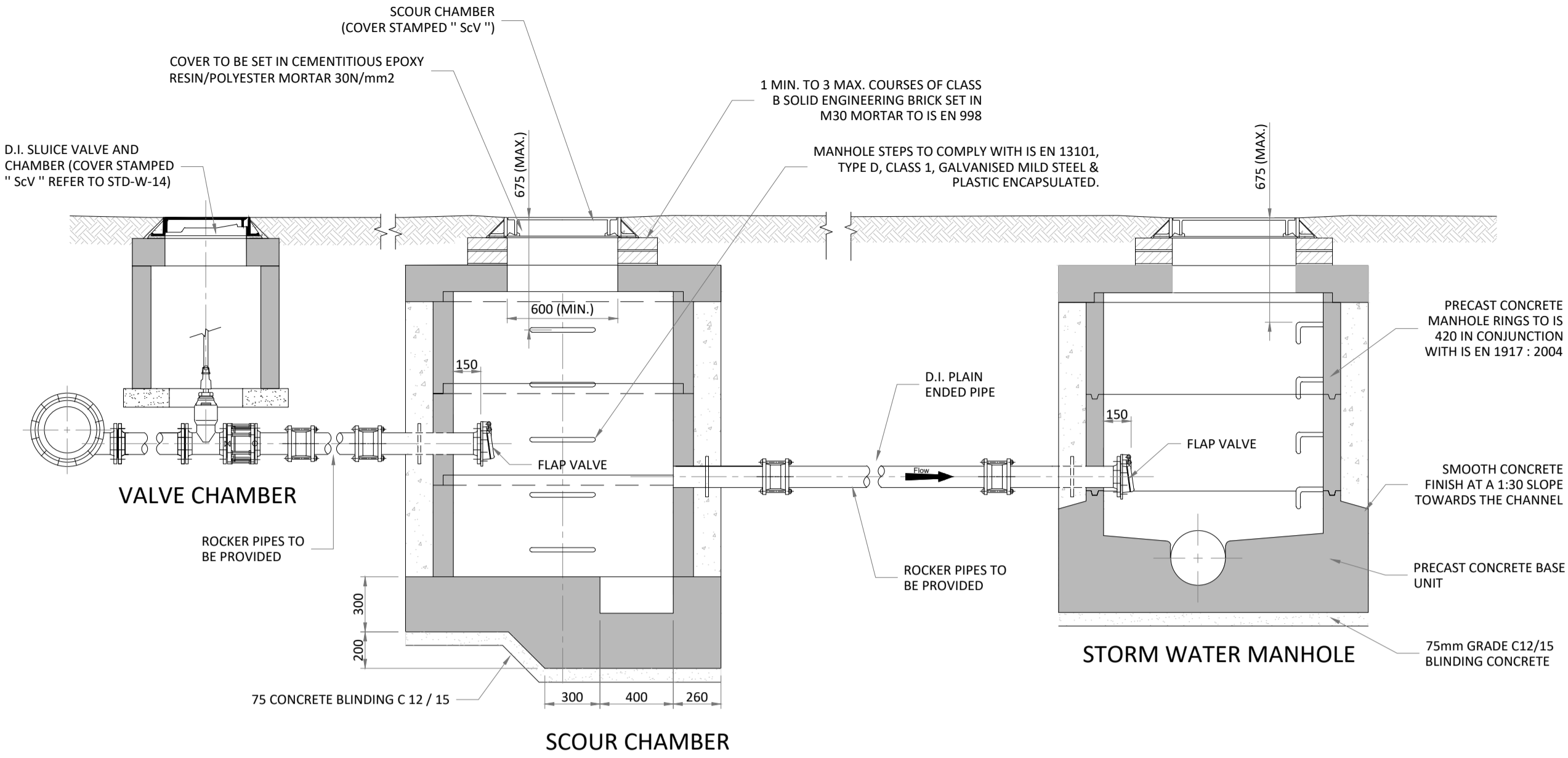
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SHEET 2 OF 3

Code	Originator	Zone	Level	Type	Role	Number	Status	Revision
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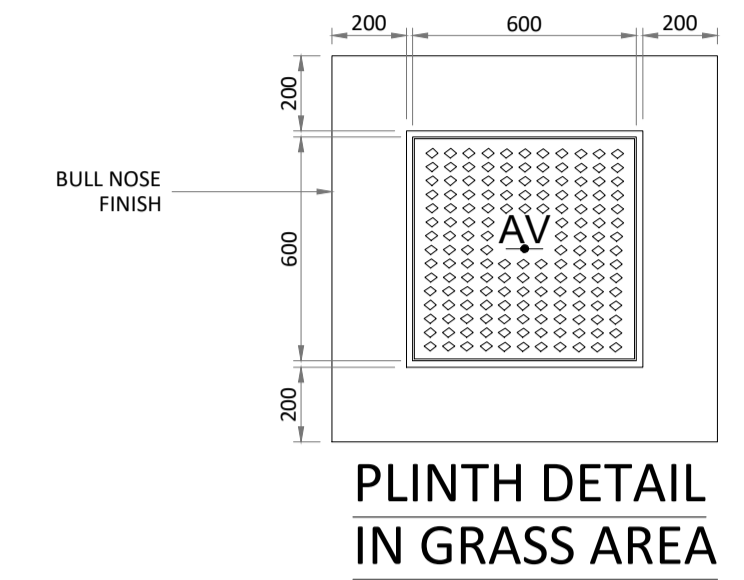
Date: FEB '23 Scale: A:N. @ A1 Drn by:TD Chkd by:TOD Aprvd by:

SCOUR CHAMBER TO STORM SEWER ARRANGEMENTS NOTES:

- ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
- STRUCTURAL REINFORCEMENT AND DESIGN DETAIL TO BE PROVIDED BY THE DEVELOPER AND SUBMITTED TO IRISH WATER FOR REVIEW. ROOF SLABS SHALL BE DESIGNED TO CARRY ALL LIVE LOADS & DEAD LOADS, & CONSIST OF A REINFORCED CONCRETE SLAB OF IN-SITU CONCRETE, GRADE C30/37, WITH A MINIMUM THICKNESS OF 225mm. ALTERNATIVELY, PRE-CAST CONCRETE ROOFS MAY BE USED, SUBJECT TO IRISH WATER REVIEW, & COMPLIANCE WITH IS EN 1719 & IS 420
- CONCRETE FOR SCOUR CHAMBER AND HEADWALL TO BE C30 / 37.
- APPROVAL TO BE OBTAINED FROM LOCAL AUTHORITY FOR CONNECTION TO THE EXISTING STORM SEWER.
- SCOUR CHAMBER SHALL BE COVERED WITH APPROVED HEAVY DUTY METAL COVERS TO IS EN 124 RATING D400. COVER AND FRAME SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS AND IS SUBJECT TO REVIEW BY IRISH WATER.
- 200mm ALL ROUND, 100mm DEEP CONCRETE PLINTH AROUND COVERS IN GRASS AREAS.
- FINAL DETAIL TO BE REVIEWED BY IRISH WATER AND RELEVANT REGULATORY AUTHORITIES.
- THRUST BLOCKS (NOT SHOWN ON DRAWING), TO BE PROVIDED AS PER STANDARD DRAWING STD-W-28 AT ALL TEES, BENDS, TAPERS, DEAD ENDS AND PIPES AT STEEP SLOPES.
- ANTI CORROSION TAPE TO BE PROVIDED AROUND BURIED FLANGES.
- ALL PIPEWORK AND FITTINGS TO BE IN ACCORDANCE WITH IS EN 545. PE PIPES AND FITTINGS TO BE IN ACCORDANCE WITH IS EN 12201:2011.
- ALL CHAMBERS TO BE CHECKED FOR UPLIFT BY THE DEVELOPER BASED ON GROUND CONDITIONS WITHIN THE SITE. SHOULD ANTI FLOTATION MEASURES BE REQUIRED THEY SHALL BE SUBJECT TO AGREEMENT WITH IRISH WATER.
- ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.
- BACKFILL AND REINSTATEMENT OF RIVER BED AND BANK TO BE SUBJECT TO AGREEMENT WITH IRISH WATER & RELEVANT AUTHORITIES.



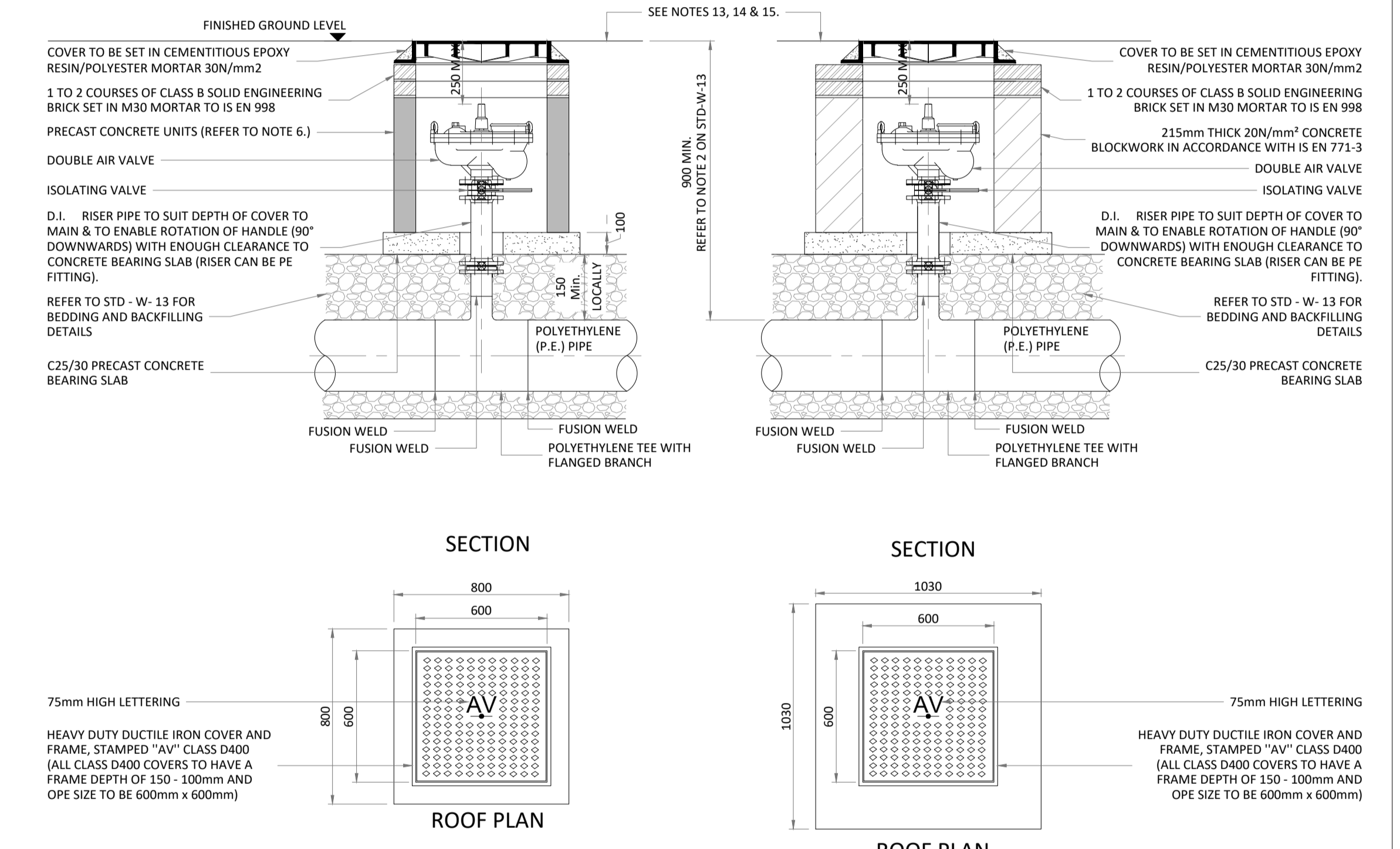
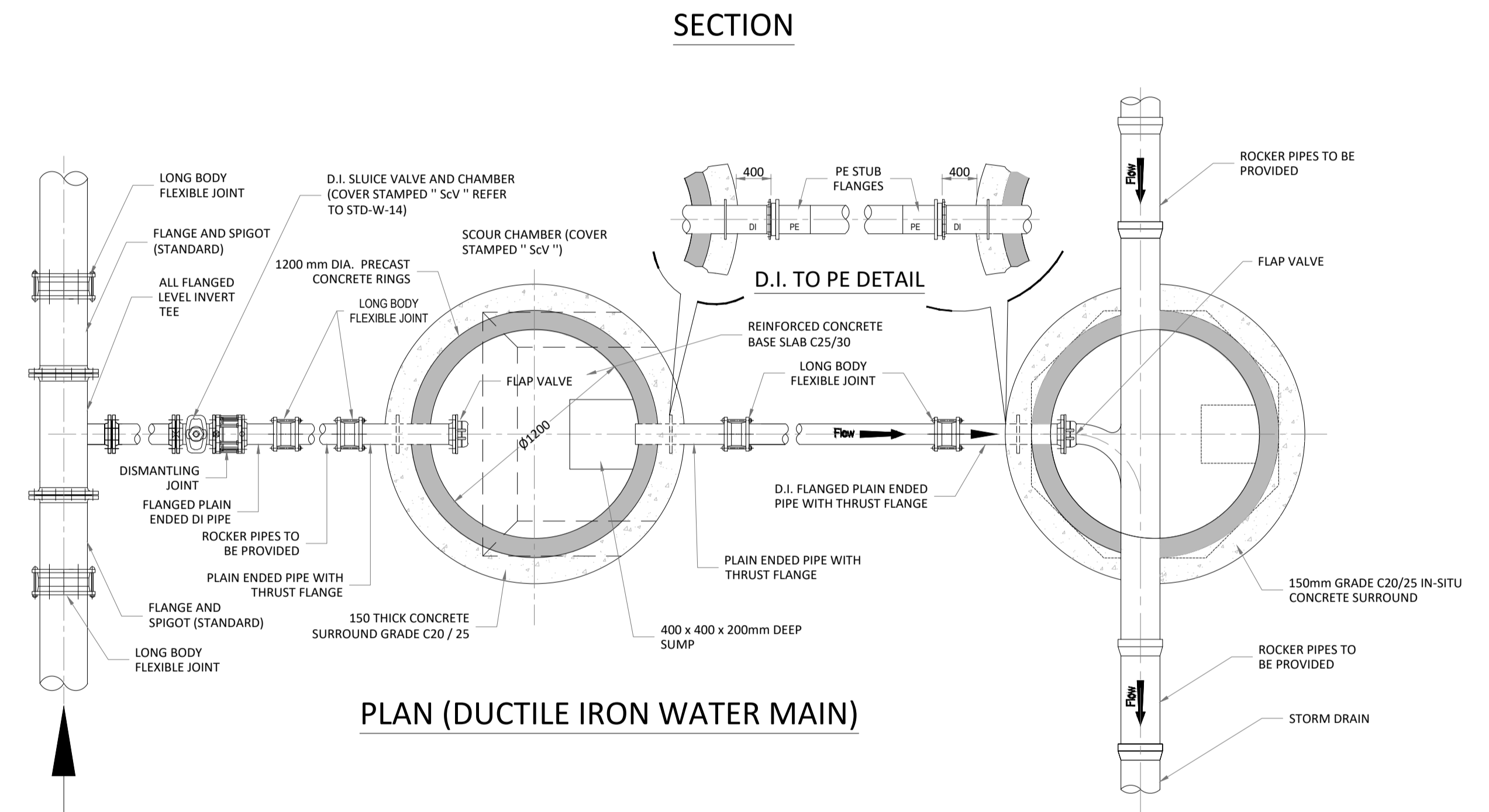
DIAMETER OF MAIN	UP TO 250 (mm)	250 TO 350 (mm)
DIAMETER OF BRANCH	80mm	100mm
BORE OF VALVE INLET	80mm	100mm



ON-LINE AIR VALVE NOTES:

- ALL DIMENSIONS IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
- AIR VALVE CHAMBERS SHALL BE COVERED WITH APPROVED VENTILATED HEAVY DUTY DUCTILE IRON COVERS TO IS EN 124 RATING D400. COVER AND FRAME SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS AND IS SUBJECT TO REVIEW BY IRISH WATER.
- AIR VALVES SHALL COMPLY WITH THE REQUIREMENTS OF IS EN 1074-4. AIR VALVES SHALL BE DOUBLE ORIFICE TYPE AND SHALL INCLUDE AN ISOLATING VALVE. THE ISOLATING VALVE SHALL BE EITHER A GATE VALVE CONFORMING TO IS EN 1074-2 & SHALL BE OF A BOLTLESS BONNET DESIGN, OR A BUTTERFLY VALVE TO IS EN 1074-2.
- SERVICE CONNECTIONS SHALL NOT BE PROVIDED WITHIN 2m OF THE AIR VALVE LOCATION.
- AIR VALVE CHAMBERS TO BE OF PRECAST CONCRETE UNITS OR HIGH DENSITY BLOCKWORK. ALTERNATIVE PROPRIETARY PREFABRICATED CHAMBER UNITS MAY ALSO BE USED, SUBJECT TO REVIEW BY IRISH WATER.
- PRECAST CONCRETE CHAMBERS SHALL BE SURROUNDED BY A MINIMUM OF 150mm COMPACTED CLAUSE 808 MATERIAL AS PER STD-W-13.
- DUCTILE IRON PIPES / FITTINGS AND PE PIPES / FITTINGS TO BE IN ACCORDANCE WITH IS EN 545 AND IS EN 12201:2011.
- 200mm ALL AROUND, 100mm DEEP CONCRETE PLINTH AROUND COVERS IN GRASS AREAS.
- THRUST BLOCKS (NOT SHOWN ON DRAWING), TO BE PROVIDED AS PER STANDARD DRAWING STD-W-28 AT ALL TEES, BENDS, TAPERS, DEAD ENDS AND PIPES AT STEEP SLOPES.
- ANTI CORROSION TAPE TO BE PROVIDED AROUND BURIED FLANGES.
- THE LOCATION OF THE AIR VALVE SHALL BE THE SUBJECT OF PARTICULAR AGREEMENT WITH IRISH WATER TO ENSURE THAT THE RISK OF CONTAMINATION THROUGH THE VALVE IS ELIMINATED.
- ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.
- ANY SPECIAL ROAD REINSTATEMENT AROUND COVER & FRAME SHALL BE TO ROAD AUTHORITY'S REQUIREMENTS.
- NEW ROAD CONSTRUCTION & SURFACE FINISH TO BE TO ROAD AUTHORITY REQUIREMENTS.
- 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.

DIAMETER OF WATERMAIN (mm)	DIAMETER OF SCOUR (mm)
NOT EXCEEDING 75	50
100 TO 200	75
200 TO 350	100



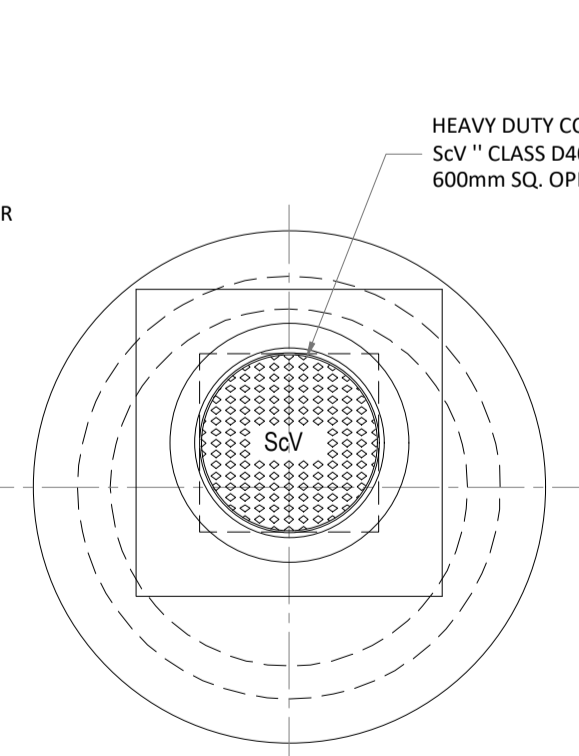
WATERMAIN STANDARD DETAILS SCALE 1:25

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PLAN (POLYETHYLENE WATER MAIN)

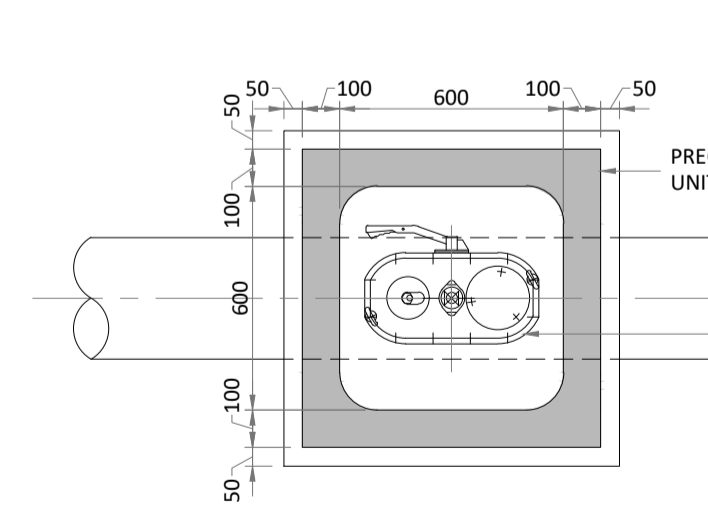
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PO2	16.08.23	ISSUED FOR TENDER	AD	TD

ROOF PLAN

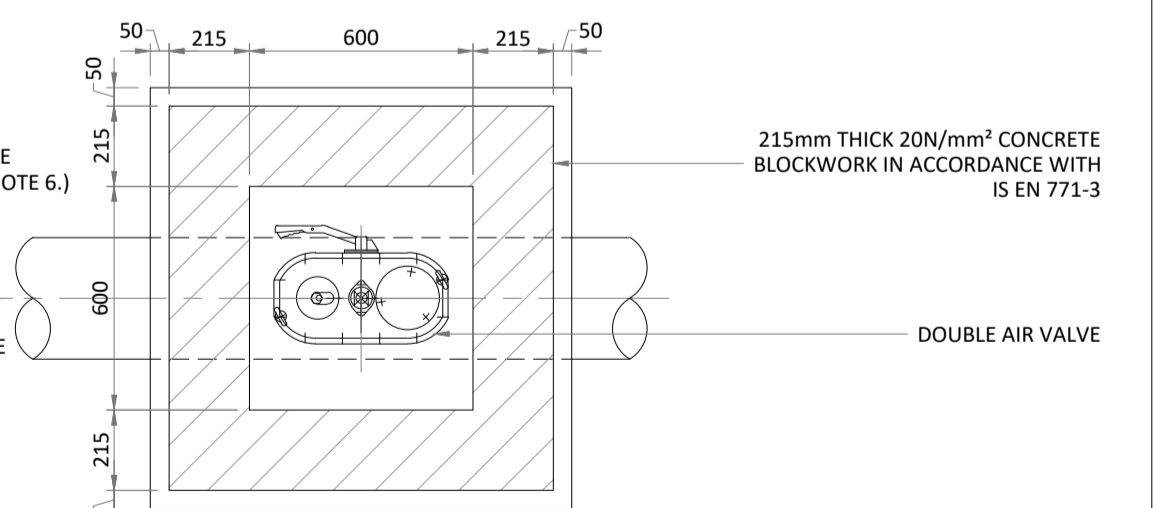


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FLOOR PLAN DOUBLE AIR VALVE (PRECAST CONCRETE CONSTRUCTION)



FLOOR PLAN DOUBLE AIR VALVE (BLOCKWORK CONSTRUCTION)



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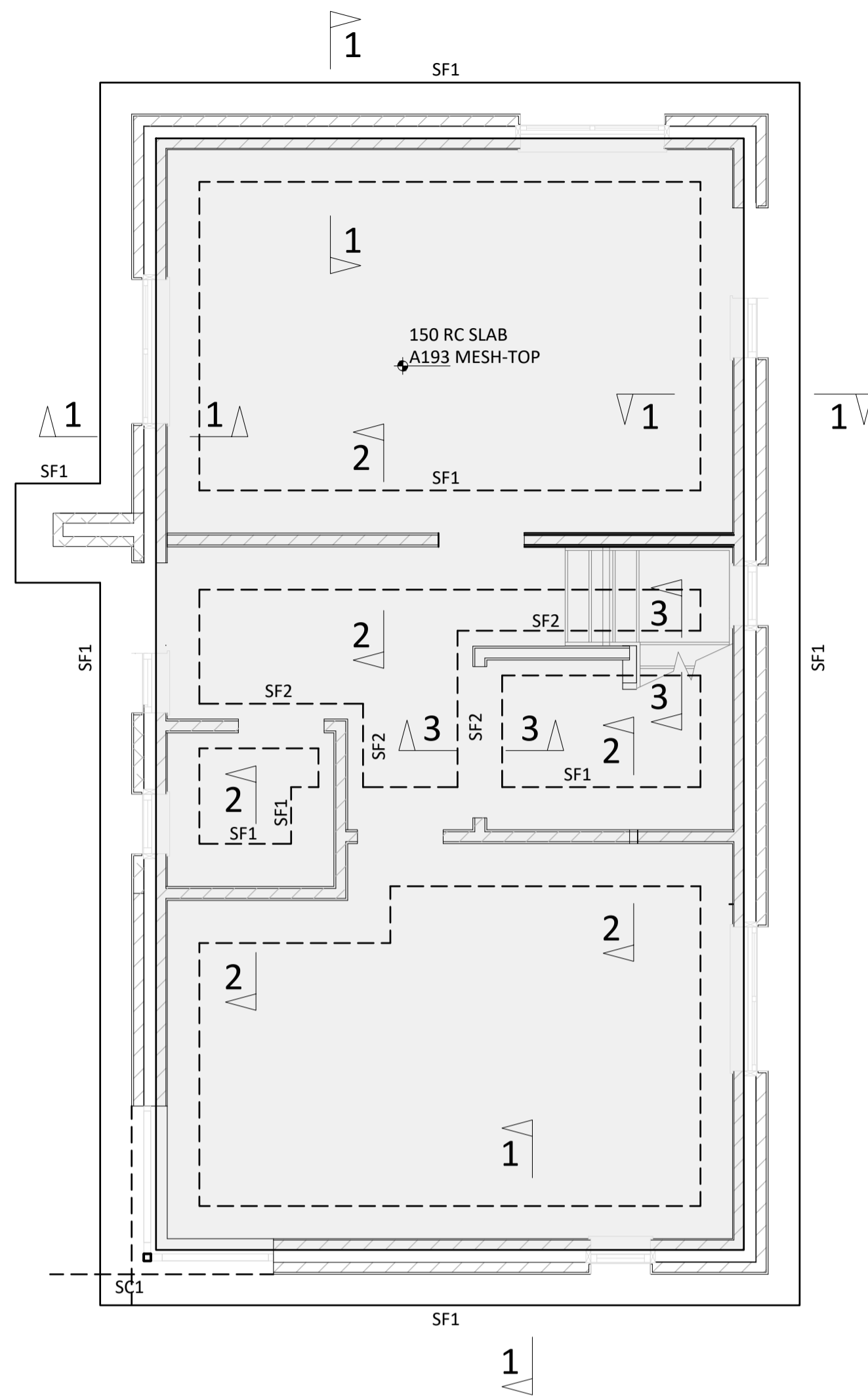
Client: SLIGO COUNTY COUNCIL
Project: ASH LANE GROUP HOUSING

Title: WATERMAIN STANDARD DETAILS
SHEET 3 OF 3

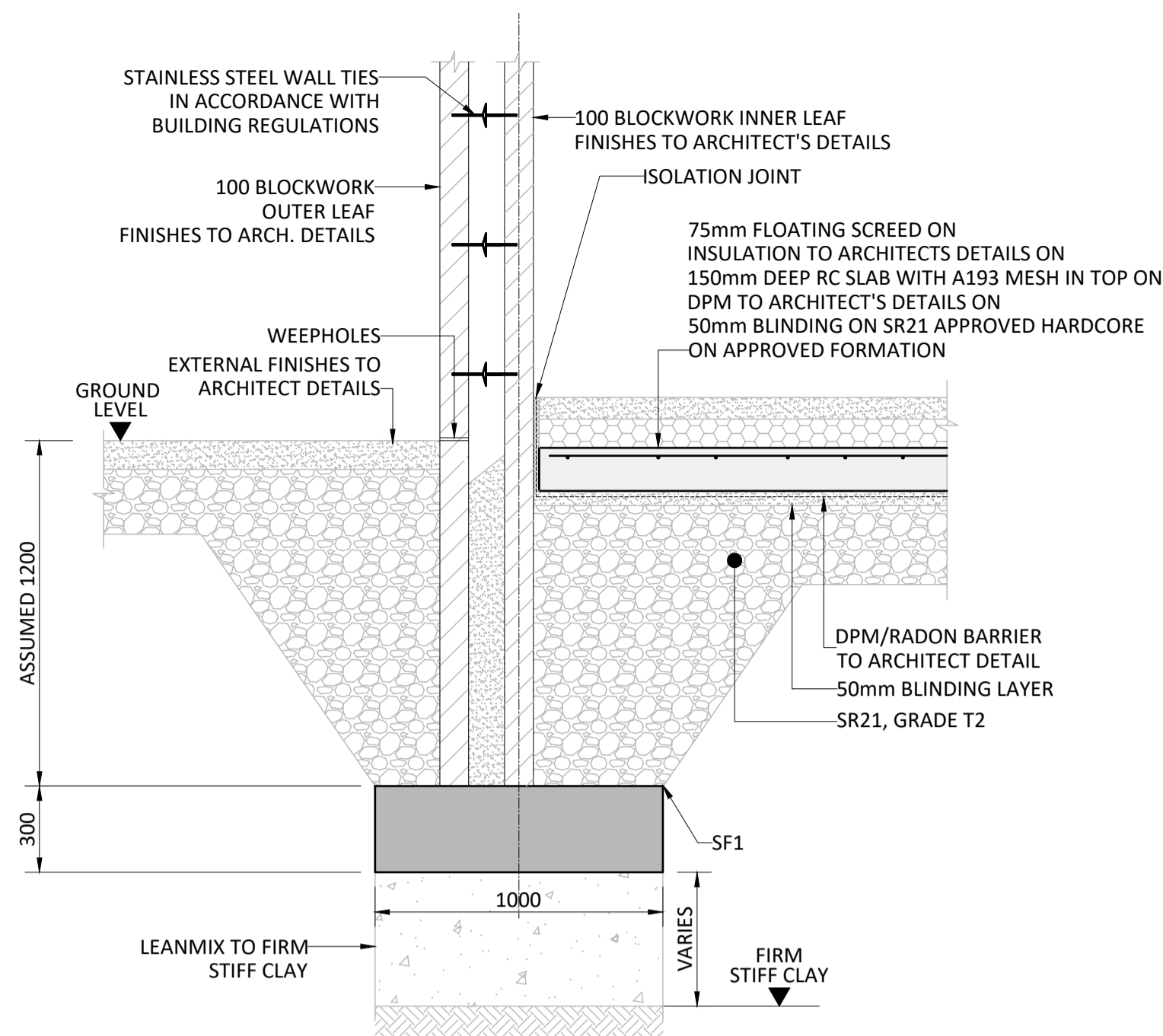
Code | Originator | Zone | Level | Type | Role | Number | Status | Revision

S603 - OCSC - XX - XX - DR - C - 0633 | D2 | PO2

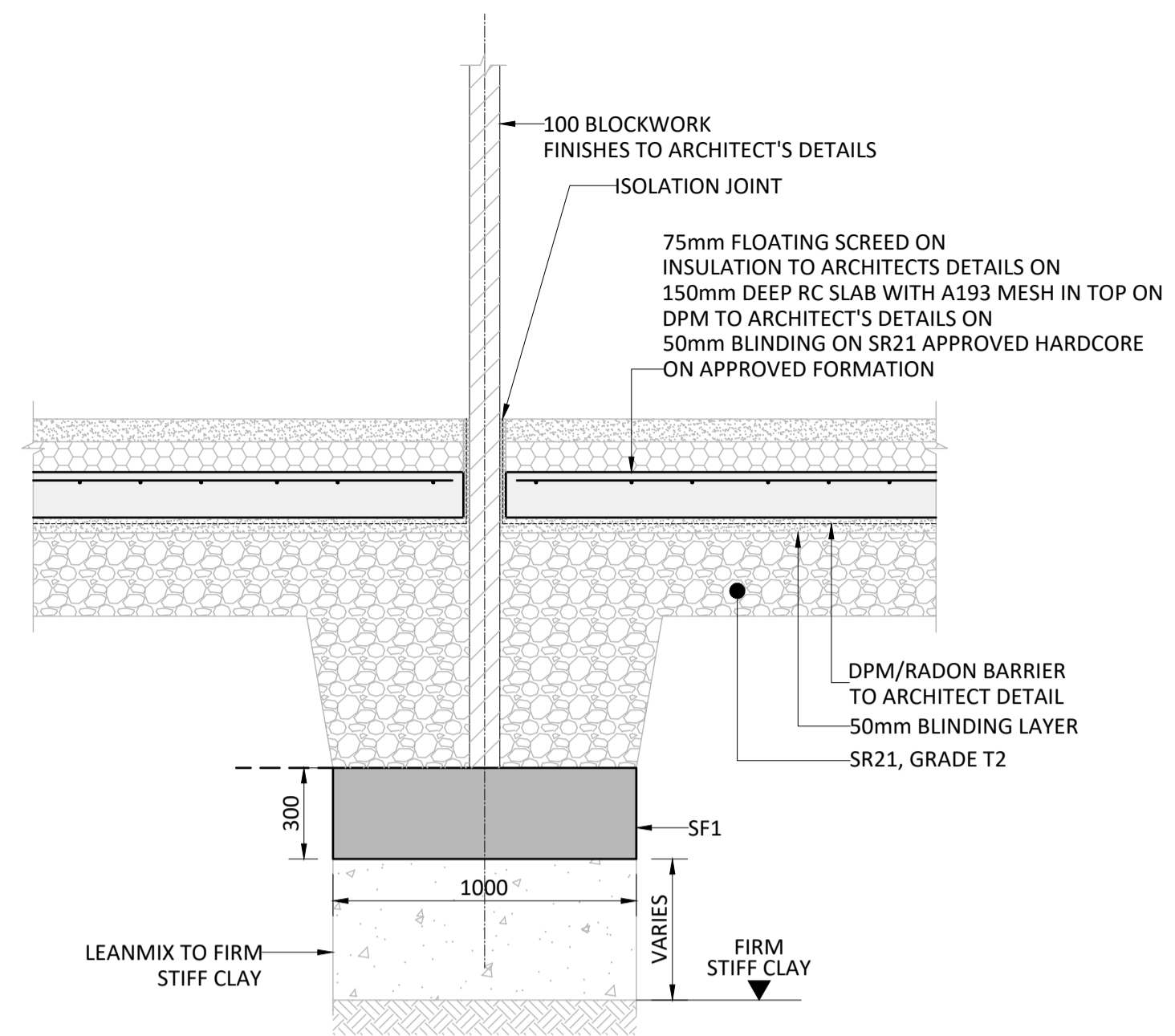
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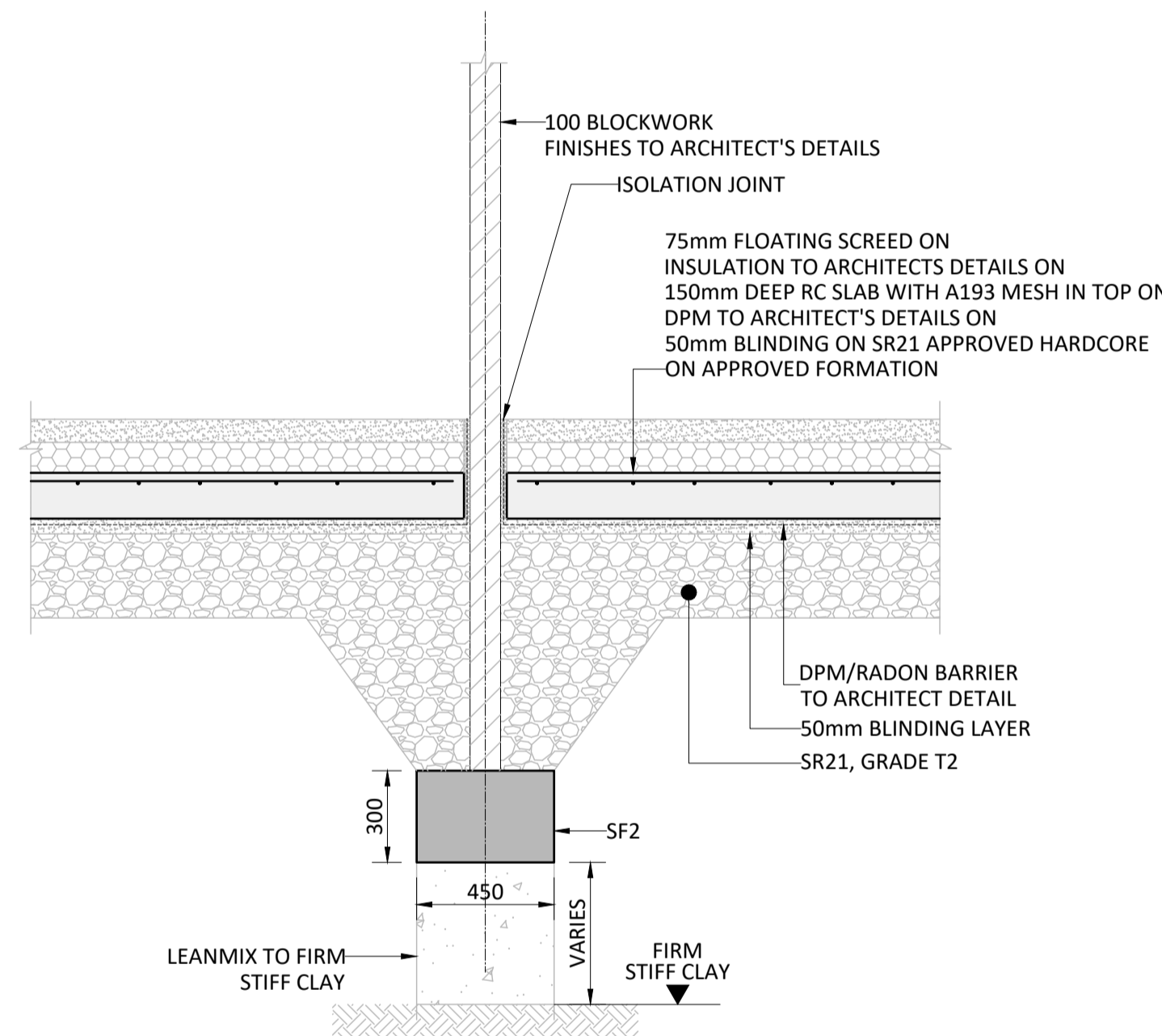
FOUNDATION / GROUND FLOOR PLAN - HOUSE TYPE A
SCALE 1:50



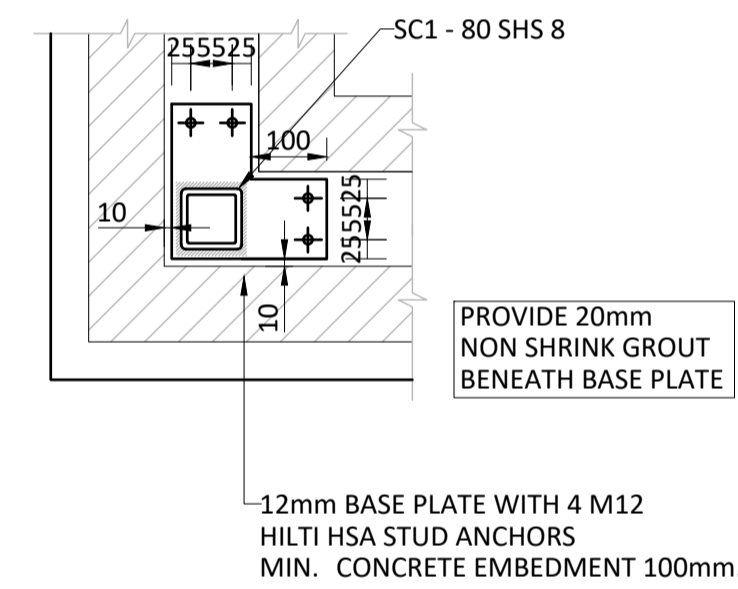
SECTION 1-1
SCALE 1:20



SECTION 2-2
SCALE 1:20



SECTION 3-3
SCALE 1:20



SC1 - HOLDING DOWN BOLT DETAIL
SCALE 1:10

LEGEND:

- CONCRETE BLOCKWORK
- STONE CLADDING BY ARCHITECT

FOUNDATION LEGEND:

- SF1 = 1000x300mm DEEP STRIP FOOTING WITH A393 MESH BOTTOM
- SF2 = 450x300mm DEEP STRIP FOOTING WITH A393 MESH BOTTOM

NOTE: BLOCKWORK

- 1...USE SOLID CONCRETE BLOCKS (THICKNESS SHOWN ON PLANS). REFER TO ARCHITECT'S SPECIFICATION FOR REQUIRED FINISH TO ALL BLOCKWORK.
- 2...PROVIDE A MIN. DECLARED MEAN COMPRESSIVE STRENGTH OF 7.5N/mm² BLOCKWORK IN ACCORDANCE WITH IS EN 771-3, LAID IN M4 MORTAR GRADE IN ACCORDANCE WITH SR. 325+A1-2014.
- 3...MASONRY WALLS TO BE BUILT NO HIGHER THAN 1.5M IN ANY ONE DAY.
- 4...REFER TO OCSC TECHNICAL SPECIFICATION FOR LOAD BEARING MASONRY FOR ADDITIONAL NOTES AND REQUIREMENTS.
- 5...LOCATION AND DETAILS OF CONTROL JOINTS IN ALL MASONRY SHALL BE AGREED WITH THE ENGINEER, ARCHITECT AND CONTRACTOR. FOR MEASUREMENT PURPOSES, PROVIDE JOINTS @12m CRS GENERALLY IN BRICKWORK EXTERNAL LEAVES AND @6m CRS GENERALLY IN BLOCKWORK EXTERNAL LEAVES.
- 6...EXPANSION JOINTS IN MASONRY SHALL BE FORMED USING 12mm THICK 'HYDROCELL' OR SIMILAR COMPRESSIBLE FILLER BOARD AND HIGH GRADE PROPRIETARY MASTIC SEALANT (TO ARCHITECTS SPECIFICATION) AND TAPE BOND BREAKER.

STEEL LEGEND:

- SC1 = 80 SHS 8 (GALVANISED POST)

- THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DESIGN TEAM DRAWINGS AND SPECIFICATIONS.
- FOR SETTING OUT REFER TO ARCHITECT'S DRAWINGS. DO NOT SCALE THIS DRAWING. USE FIGURED DIMENSIONS ONLY.
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Rev No.	Date	Revision Note	Drn by	Chkd by
P01	23.06.23	SUITABLE FOR INFORMATION	PT	TK
P02	06.07.23	SUITABLE FOR INFORMATION	PT	TK

Rev No.	Date	Revision Note	Drn by	Chkd by



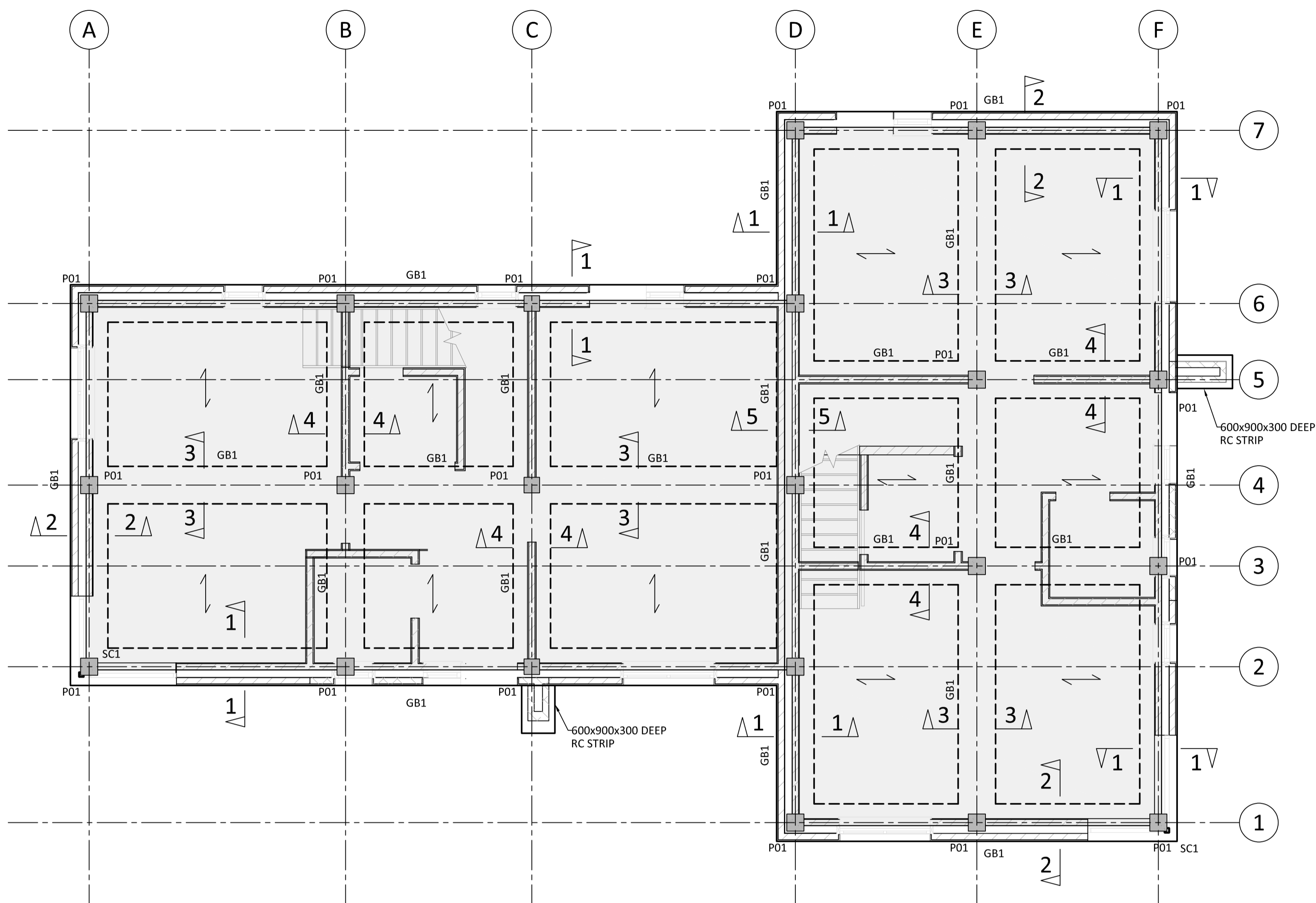
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Client: SLIGO CO. CO.
Project: ASH LANE GROUP HOUSING

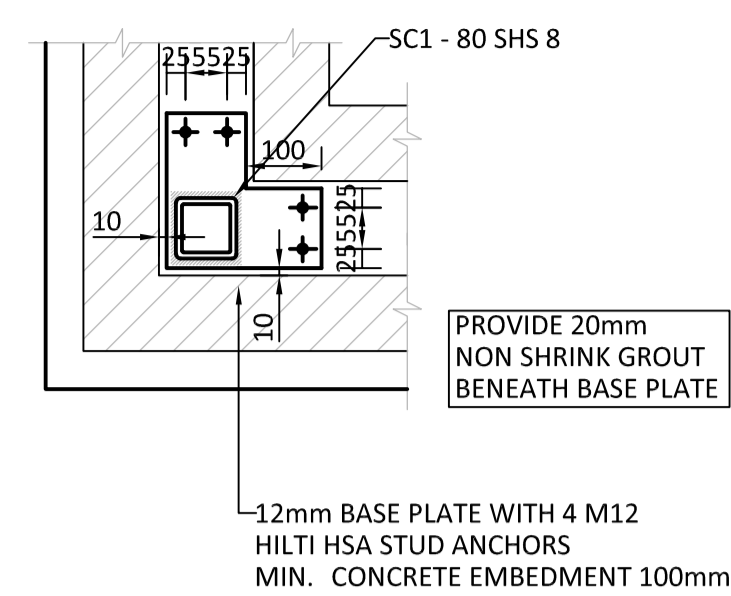
Title: GENERAL ARRANGEMENT
GROUND FLOOR PLAN
HOUSE TYPE A

Code	Originator	Zone	Level	Type	Role	Number	Status	Revision
S603	OCSC	XX	00	DR	S	1500	S2	P02

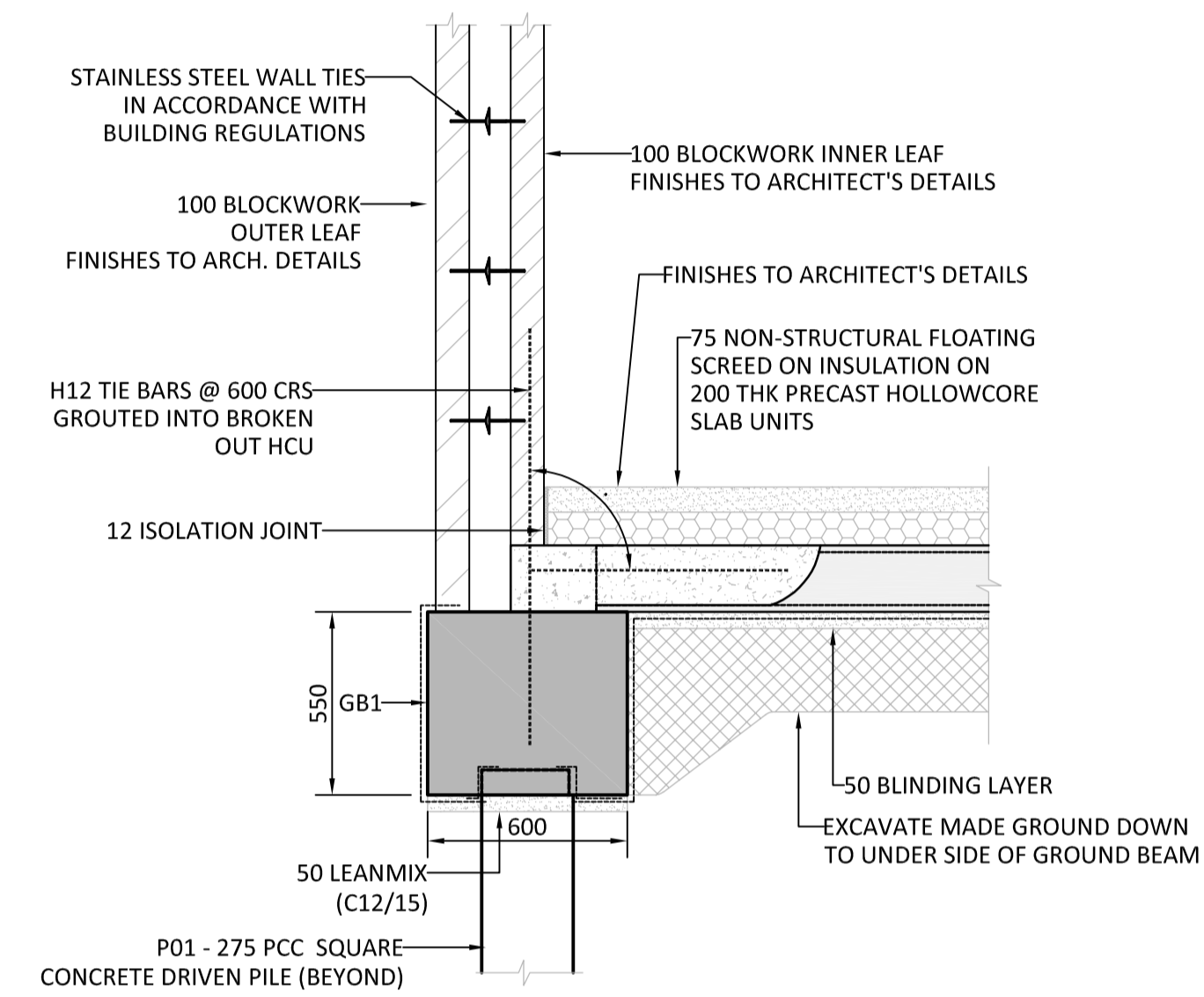
Date: 19.06.23 Scale @ A1: NOTED Drn by: PT Chkd by: TK Aprvd by: TK



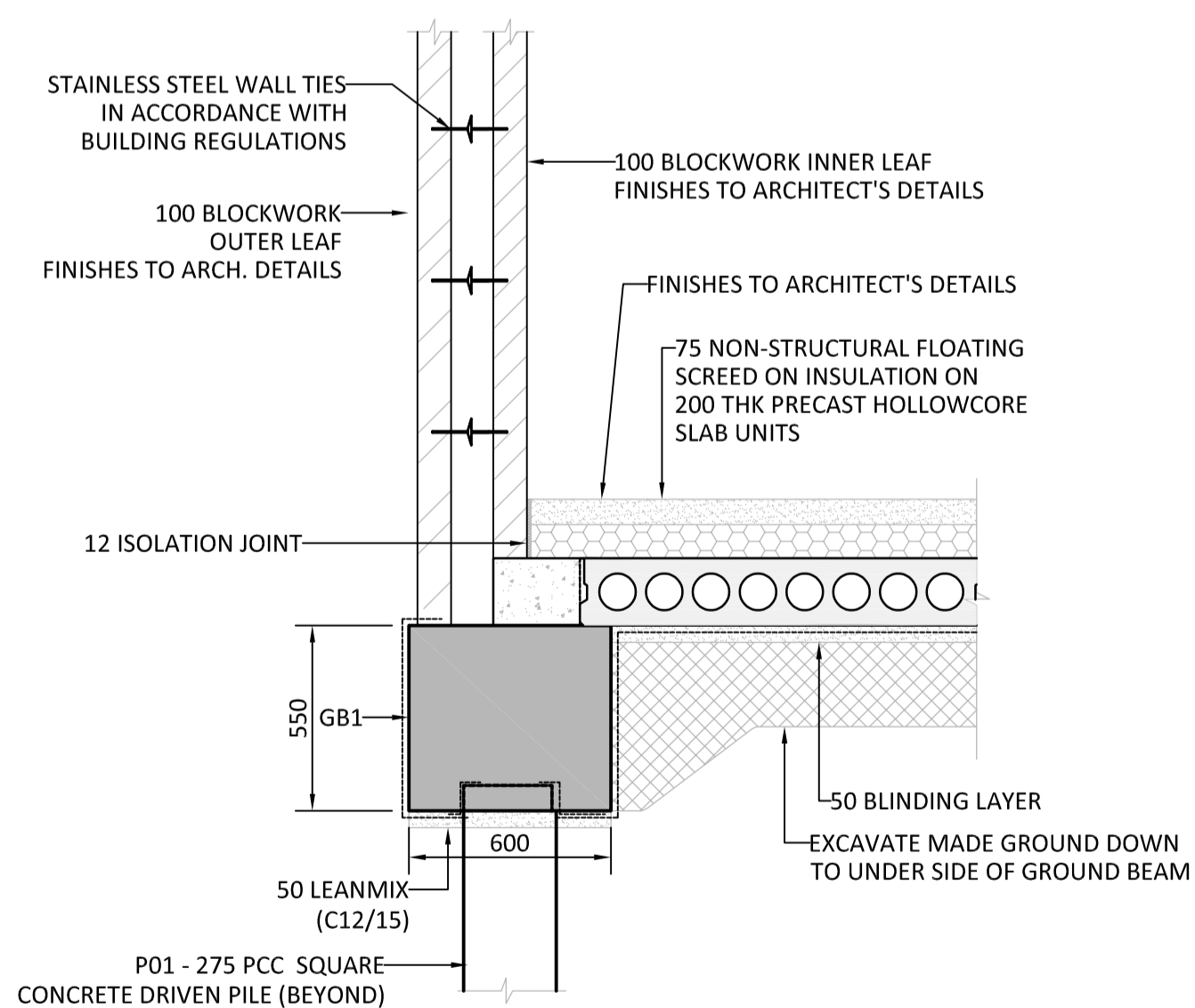
FOUNDATION / GROUND FLOOR PLAN - HOUSE TYPE B
SCALE 1:50



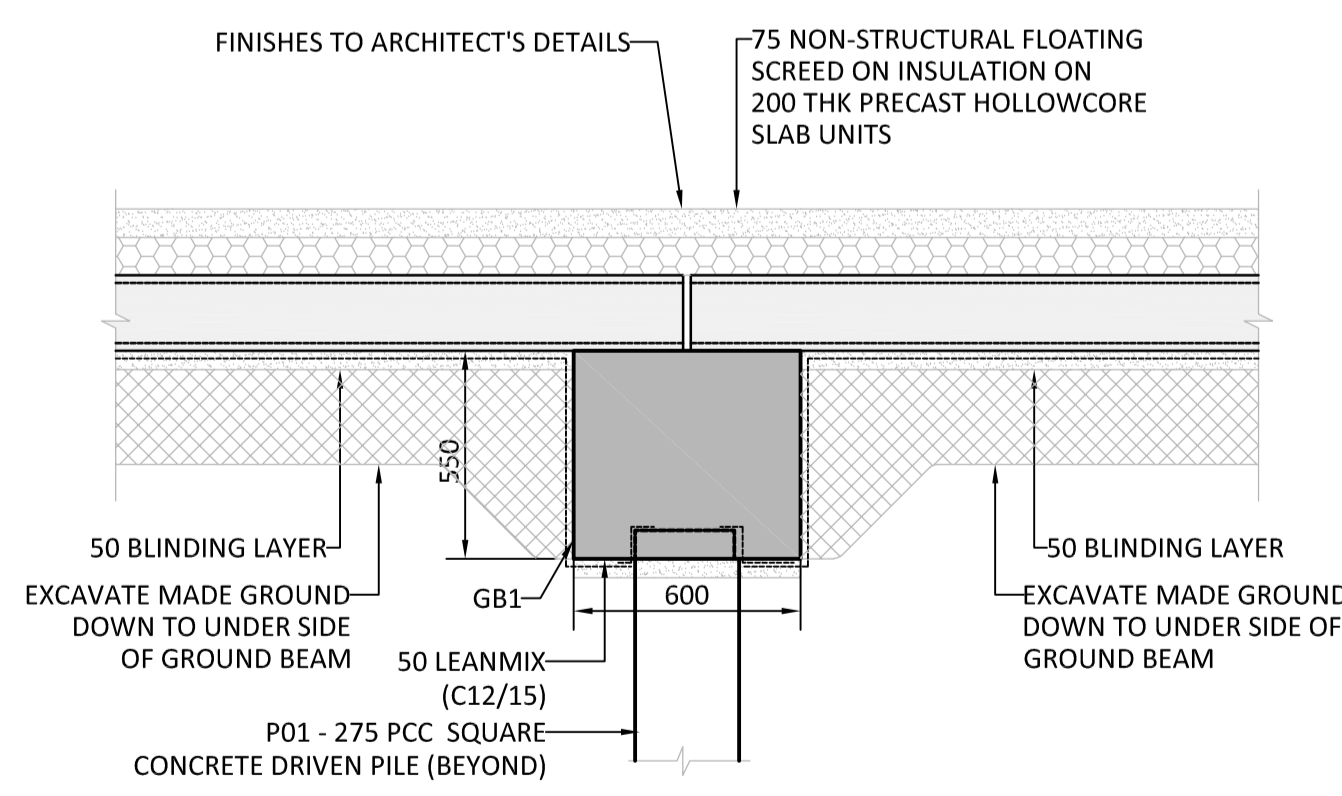
SC1 - HOLDING DOWN BOLT DETAIL
SCALE 1:10



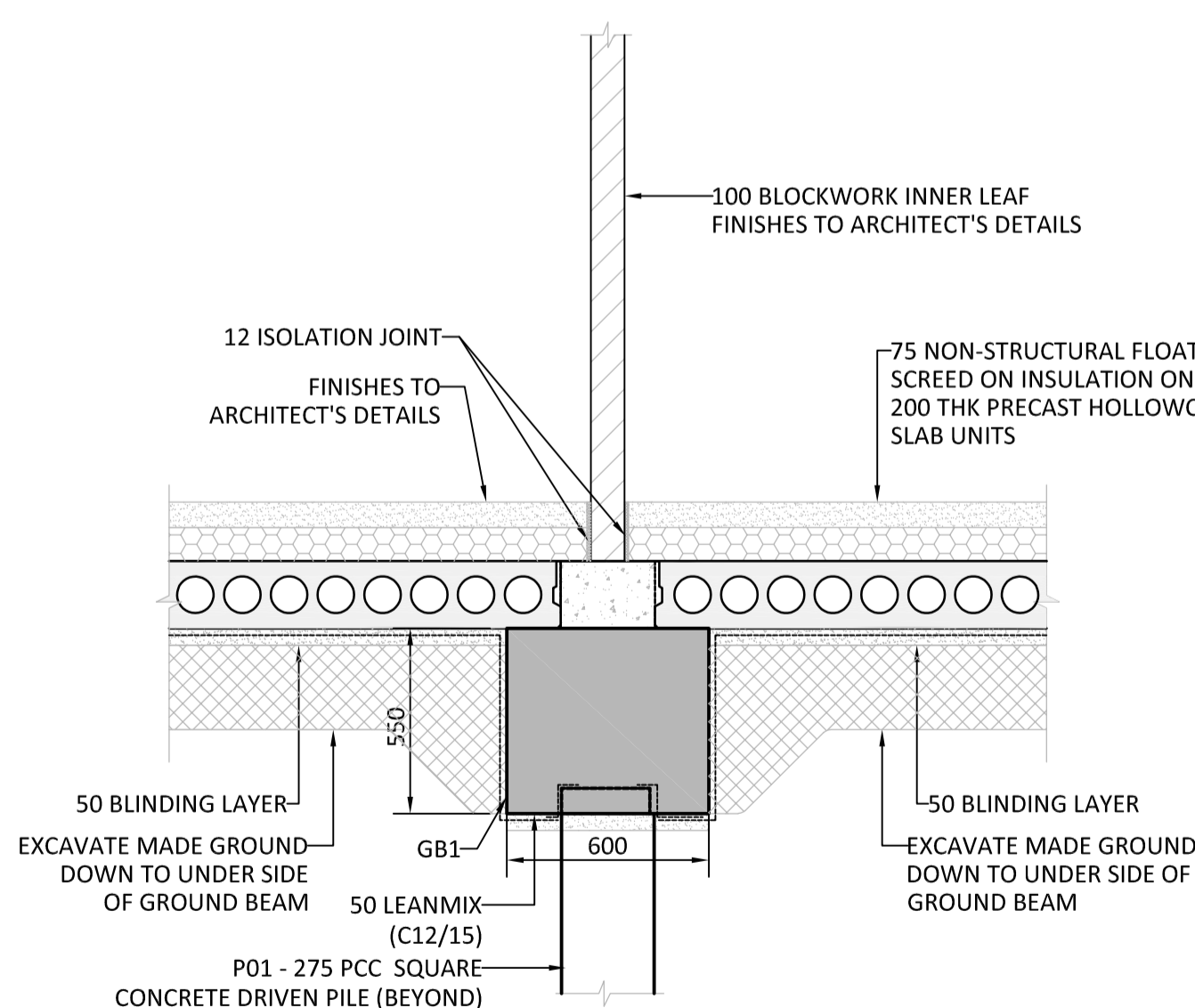
SECTION 1-1
SCALE 1:20



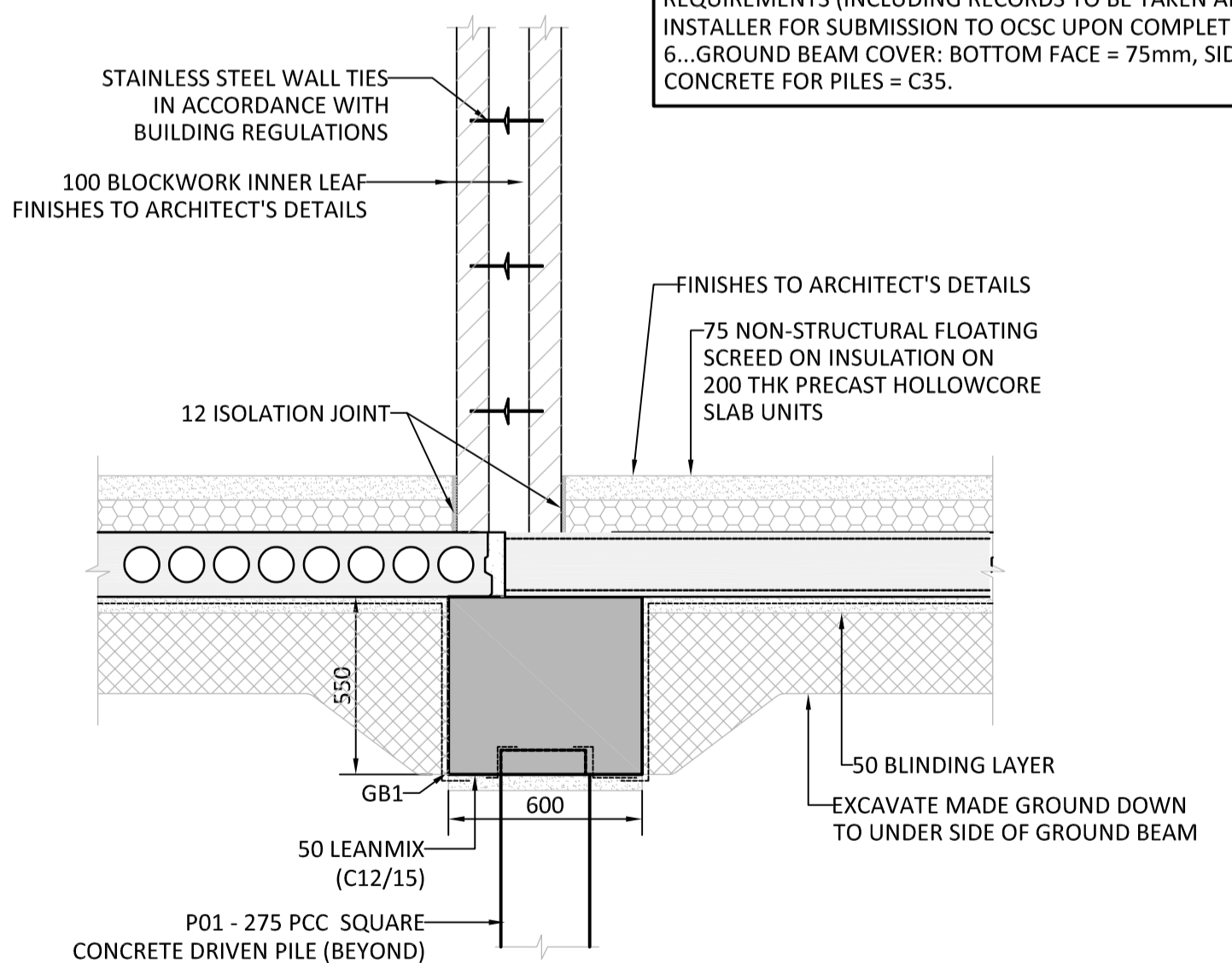
SECTION 2-2
SCALE 1:20



SECTION 3-3
SCALE 1:20



SECTION 4-4
SCALE 1:20



SECTION 5-5
SCALE 1:20

LEGEND:

- CONCRETE BLOCKWORK
- STONE CLADDING BY ARCHITECT
- 75 NON STRUCTURAL SCREED ON 200 PRECAST HOLLOWCORE UNITS

FOUNDATION LEGEND:

- P01 = 250 SQUARE PILE - REFER TO NOTE 'A'
- GB1 = 600x550 DEEP RC GROUND BEAM

NOTE: BLOCKWORK

- 1...USE SOLID CONCRETE BLOCKS (THICKNESS SHOWN ON PLANS). REFER TO ARCHITECT'S SPECIFICATION FOR REQUIRED FINISH TO ALL BLOCKWORK.
- 2...PROVIDE A MIN. DECLARED MEAN COMPRESSIVE STRENGTH OF 7.5N/mm² BLOCKWORK IN ACCORDANCE WITH IS EN 771-3, LAID IN M4 MORTAR GRADE IN ACCORDANCE WITH SR. 325+A1-2014.
- 3...MASONRY WALLS TO BE BUILT NO HIGHER THAN 1.5M IN ANY ONE DAY.
- 4...REFER TO OCSC TECHNICAL SPECIFICATION FOR LOAD BEARING MASONRY FOR ADDITIONAL NOTES AND REQUIREMENTS.
- 5...LOCATION AND DETAILS OF CONTROL JOINTS IN ALL MASONRY SHALL BE AGREED WITH THE ENGINEER, ARCHITECT AND CONTRACTOR. FOR MEASUREMENT PURPOSES, PROVIDE JOINTS @12m CRS GENERALLY IN BRICKWORK EXTERNAL LEAVES AND @6m CRS GENERALLY IN BLOCKWORK EXTERNAL LEAVES.
- 6...EXPANSION JOINTS IN MASONRY SHALL BE FORMED USING 12mm THICK 'HYDROCELL' OR SIMILAR COMPRESSIBLE FILLER BOARD AND HIGH GRADE PROPRIETARY MASTIC SEALANT (TO ARCHITECTS SPECIFICATION) AND TAPE BOND BREAKER.
- 7...AT THE LOCATION OF THE MOVEMENT JOINT, DOUBLE STRUCTURE TO BE PROVIDED.

STEEL LEGEND:

- SC1 = 80 SHS 8 (GALVAISED POST)

NOTE:

- PILE LENGTH = 9.0m IS BASED ON SITE INVESTIGATION REPORT

NOTE A - PILING: GENERAL REQUIREMENT:

- 1...ALL PILES TO BE DESIGNED BY SPECIALIST SUB-CONTRACTOR FOR THE FOLLOWING DESIGN CRITERIA:
 - MINIMUM SAFE WORKING LOAD PER PILE = 350KN
 - GROUT STRESS TO BE LIMITED TO 0.25fcu
 - REQUIRED FACTOR OF SAFETY = 2.5
 - PILE DEPTH OF APPROXIMATE 7.5M (SUBJECT TO FURTHER SITE INVESTIGATION STUDY) PLEASE REFER TO THE SITE INVESTIGATION REPORT CARRIED OUT BY CAUSEWAY GEOTECH FOR INFORMATION ON GROUND CONDITIONS, ASSOCIATED TESTS THAT ACCOMPANIES THIS TENDER OR RELEVANT INFORMATION RELATING TO THE GROUND CONDITIONS. CALCULATIONS WILL BE REQUIRED TO BE SUBMITTED IN ADVANCE OF THE WORKS BY THE MAIN CONTRACTORS SPECIALIST PILE DESIGNER FOR OCSC APPROVAL PRIOR TO INSTALLATION OF THE PILE SYSTEM.
- 2...ALL PILES TO BE REINFORCED CONCRETE ROTARY BORED PILES OF A MINIMUM 250 SQUARE PROVIDED WITH A MINIMUM ROCK SOCKET OF 4x PILE DIAMETER INTO SOUND COMPETENT ROCK.
- 3...PRELIMINARY DESIGN CALCULATIONS INDICATES THAT A 250 SQUARE PILE IS SUITABLE FOR USE. WHILE TENDERERS MAY PROPOSE ALTERNATIVE PILE SIZES, PLEASE BE ADVISED THAT ADDITIONAL FEES WILL BE CHARGED BY OCSC DIRECTLY TO THE SUCCESSFUL MAIN CONTRACTOR FOR ANY AMENDMENTS REQUIRED TO BE CARRIED OUT TO BOTH STRUCTURAL GENERAL ARRANGEMENTS AND REINFORCEMENT DRAWINGS AS RESULT OF AN ALTERNATIVE PROPOSED PILE DIAMETER BEING USED.
- 4...PILE TESTING TO BE CARRIED OUT IN ACCORDANCE WITH BS8004 AND TO CONSIST OF THE FOLLOWING:
 - ALL PILES TO BE INTEGRITY TESTED
 - 10% OF PILES TO BE DYNAMICALLY TESTED
 - KENTLEDGE TEST TO BE CARRIED OUT ON 2No. PILES.
- 5...REFER TO OCSC TECHNICAL SPECIFICATION ON PILING FOR ALL OTHER DESIGN AND WORKS REQUIREMENTS (INCLUDING RECORDS TO BE TAKEN AND SUBMITTED BY THE SPECIALIST PILE INSTALLER FOR SUBMISSION TO OCSC UPON COMPLETION).
- 6...GROUND BEAM COVER: BOTTOM FACE = 75mm, SIDE AND TOP = 40mm. GRADE OF CONCRETE FOR PILES = C35.

- THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DESIGN TEAM DRAWINGS AND SPECIFICATIONS.
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P03	19-07-23	SUITABLE FOR INFORMATION	PT	TK
P04	12.08.23	SUITABLE FOR INFORMATION	PT	TK

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Client: SLIGO CO. CO.
Project: ASH LANE GROUP HOUSING

Title: GENERAL ARRANGEMENT GROUND FLOOR PLAN HOUSE TYPE B

Code	Originator	Zone	Level	Type	Role	Number	Status	Revision
S603	OCSC	XX	00	DR	S	1550	S2	P04

Date: 19.06.23 Scale @ A1: NOTED Drn by: PT Chkd by: TK Aprvd by: AMcD



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