



PRELIMINARY SAFETY AND HEALTH PLAN

Water Tank Upgrade

The Coombe Women and Infants University Hospital
Cork Street,
Dublin 2

July 2026

GARLAND
Concepts Realised

CONSULTANTS

PSDP (Project Supervisor Design Process)

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Description of change	Originator	Rev	Approval	Date
Initial release	MJD	0	AA	27/07/2026

PRELIMINARY SAFETY & HEALTH PLAN

This Preliminary Safety and Health Plan has been prepared on a preliminary basis in accordance with Article 12 1A of SI 291 of 2013 of the Safety, Health and Welfare at Work (Construction) Regulations 2013, and is based on project information available at this time and gathered during site visit conducted by Garland on 10th June 2026.

1.0 GENERAL DESCRIPTION OF PROJECT

1.1 Client:

Name: Coombe Women's and Infant University Hospital
Address: Cork St, Saint James,
Dublin, D08 XW7X
Tel: 01 408 5200
Mob: 085 731 7019
Email: spanzu@coombe.ie
Contact: Serge Panzu

1.2 Project Supervisor Design Process:

Name: Garland
Address: Garland House,
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Email: dublin@garlandconsultancy.com

1.3 Project Description:

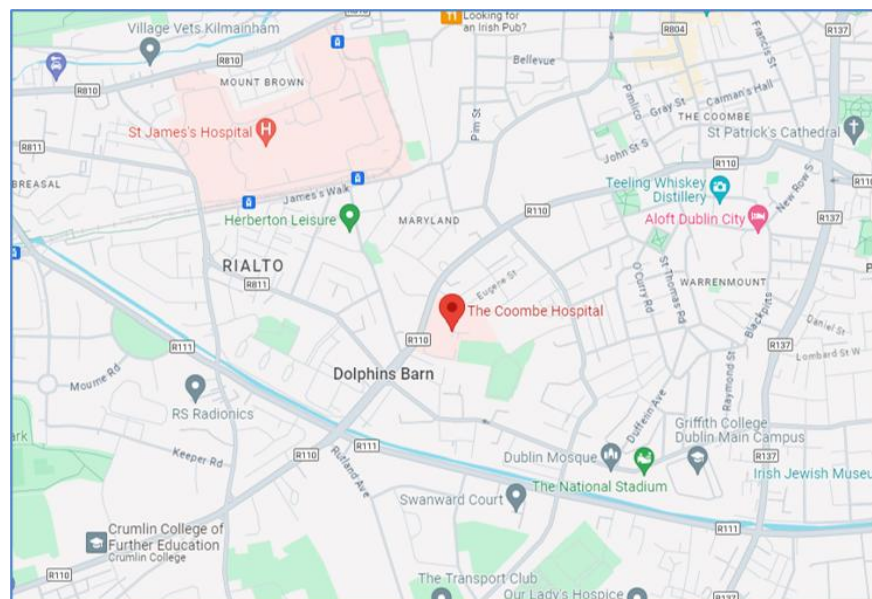
The project consists of the installation of a new plant room and a new water tank and associated electrical and plumbing works at the Coombe Hospital. The pipework will be routed from the basement boiler house underground across a carpark through the academic building and on to the new plant room and water tank.

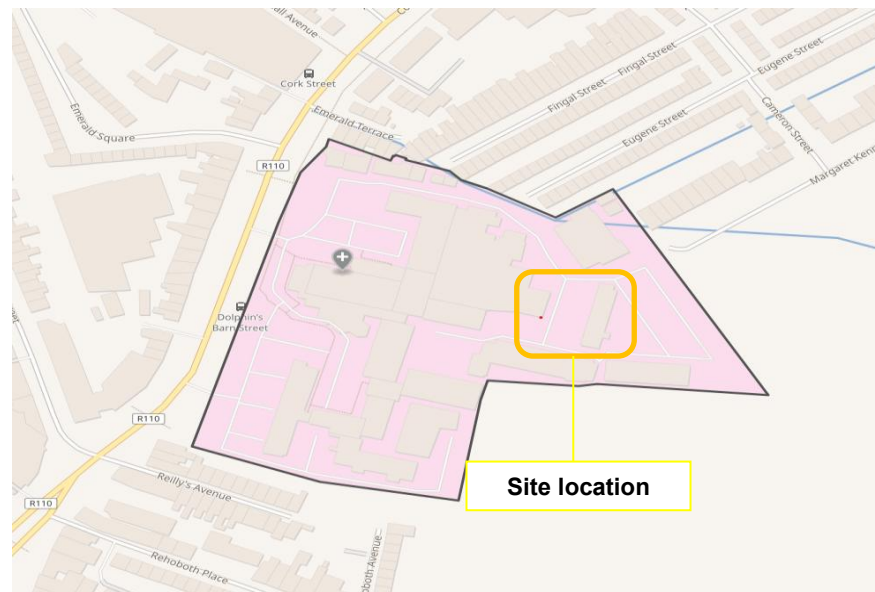


Coombe Hospital proposed location of new plant room & water tank

1.4 Site Location:

The site is located at Coombe Women & Infants University Hospital, Cork St, Dublin. D08 XW7X.





Combe Hospital – Location of new water tank works

1.5 Contaminated Land:

Although no Ground Investigation (GI) was undertaken for this project, there is a previous GI for a project close to the proposed works which noted there were 0.03-0.33 g/l sulphates in the soil and the soil has a 7.3 - 8.3pH. See attached Site GI Report carried out by IGSL Ltd in Appendix 7.

1.6 Drawings/Specifications/Location of Connections for Welfare Facilities:

In agreement with the client and considering the; scope, duration, and constraints of the site, it has been arranged that workers will have access to the existing staff toilet facilities located within the building. Access to the private clinics areas is strictly prohibited.

Existing parking spaces will be designated as the contractor's compound and storage area. The location will be in proximity to the work area while minimizing disruption to other site users. Materials and equipment are to be stored neatly and securely within the designated area. Access to this area is strictly conditional upon it being used in a respectful manner and maintained in a clean, orderly condition.

1.7 Existing Safety File for the project:

Existing documentation, surveys, and reports are available upon request from the Hospital Technical Services Manager. Some of this information is also appended to this Preliminary Safety & Health Plan.

The Facilities Department also hold a considerable amount of local knowledge on e.g. service routes, access points, switchboard locations, and other relevant information. The Client may have additional information and/or drawings

available on any specific location or service and will be made available on request from the Hospital Technical Services Manager. See also Section 4.

1.8 Relevant adjoining land uses:

Historic maps identify a mix of residential and industrial structures that were formerly located around the current hospital campus. A watercourse is also known to be present in the vicinity but is understood to have been diverted to a culvert in more recent times.

Residential areas immediately adjoin the site to the north and south. The western side of the hospital is bounded by Dolphins Barn Road. The eastern side of the hospital is land owned by the Local Authority, this land is currently under development.



Adjoining land uses: Existing residential identified in cyan.
Residential development currently under construction identified in brown.

Works will be confined to within the hospital campus, which will remain live and fully functional throughout the works. The hospital grounds contain several permanent and temporary hospital buildings, roads and car parks. Access must not be obstructed, and emergency access must be kept available at all times. Proposed works outside these areas must be coordinated with the Client in advance.

1.9 Existing Roads and Sight Lines

Access to the site is off Dolphin's Barn Street, which leads on to Cork Street, and is a bidirectional road with cycle lanes on either side. Sight lines are good and provide a clear view on the approach to the site entrance.



Site entrance



Sight Line towards Dolphins Barn



Sight Line towards Cork Street / City Centre

1.10 Traffic System and Access Restrictions:

Access is from Dolphin Barn Street / Cork Street. Vehicular, pedestrian and bicycle traffic volumes can be high, particularly during peak commuting hours. The roadway consists of inbound & outbound lanes, bus lanes, a cycle paths and pedestrian footpaths.



Access to basement plant room from where an excavation will be required to cross internal access footpath, road and parking area.

- Internal roads provide access to limited parking. Speed ramps and pedestrian crossings need to be considered.
- Never obstruct internal roads which are frequented by emergency vehicles.
- Closure or partial blocking of emergency routes requires permission from the Hospital Technical Services Manager. Submit RAMS two weeks in advance.
- PSCS deliveries to be notified in advance and in good time to the Hospital Technical Services Manager and Security Team.
- If work areas require clearance of hospital storage/parking; the PSCS must liaise with the Hospital Technical Services Manager and Security Team.
- Trained Banksman/men are required to safely control traffic and manage vehicle access/egress for the duration of the project.
- PSCS vehicles, materials & deliveries which may cause obstructions to hospital access routes must be notified to the Hospital Technical Services Manager and Security Team in advance.

1.11 Permit to Work (PTW) & Method Statement approval

Works which a Permit to Works require consultation with, and the agreement of, the Hospital Technical Services Manager and may also require notification to the Hospital Security Team.

The PSCS must initiate a Permit to Work for the works listed below:

- Hot Works including gas welding, metal cutting, gas torches, bitumen boilers, brazing or soldering
- Working at Height
- Roof Works

- Confined Space Works
- Works which could interfere with medical gas pipelines or electrical supplies
- Calorifiers
- Work where a significant hazard poses a risk to patients, staff, or contractors
- Use of hazardous substances which posing a risk to patients, staff, or contractors
- Deactivation or interference of the fire detector/fire alarm

For such works a Method Statement & Risk Assessment (RAMS) must be submitted to the Hospital Technical Services Manager and should include specific dust, noise and vibration control measures. A minimum of 3 working days' notice is required for the granting of a Hospital Permit to Work. This may be longer for any activities that affect a number of different or sensitive departments, such as Theatre or Continuity of Services. Refer to Coombe Hospitals [Contractor Safety Code](#) (attached) for further details.

1.12 Waste Management

The PSCS is responsible for their waste is disposed of in accordance with the most recent waste management legislation. Furthermore, waste must be transported from the construction site to an EPA-licensed location by drivers with appropriate permits.

The location of skips, delivery and collection times and days must be agreed in advance with the Hospital. Skips must be covered with a protective netting or tarpaulin sheet. Parking of skips and storage of materials will be restricted to a designated area, which must be secured and cordoned off from the public.

Road sweeping may be required. It may be necessary to dispose of waste, including but not limited to materials containing asbestos, in an appropriate manner. The protection, remediation, storage, transportation, and disposal of waste that may contain asbestos-containing material must only be undertaken in accordance with the HSA [Guidelines on ACM Management and Abatement](#).

2.0 INTENDED PROJECT COMPLETION TIME

2.1 Restrictions of Working Hours:

There are no set times in law limiting the working hours on building sites, as such. However, there are guideline standard times adopted by the Council that apply to construction activity, and if works take place outside these hours, it can then be regarded as a source of noise nuisance and investigated by the Council's Environmental Health Officers (EHOs). The standard time for construction works within Dublin City Council are:

07.00 - 18.00 Monday to Friday
08.00 - 14.00 Saturday
No work on Sunday and Bank Holidays

It may be necessary, under certain circumstances, for construction works to take place outside of these hours. Working hours outside of the above must be coordinated and agreed in advance with the Client.

The client retains the right to curtail the working hours when certain activities, particularly those that are liable to cause dust, noise, or vibration. In the event of the Contractor or any of his staff, agents, or sub-contractors creating unacceptable levels of dust, noise vibration, dirt, or any other disruptions to the operation of the hospital, the procedures will be as follows:

- a) The staff member who is being troubled by the construction works will report via their line manager to Serge Panzu.
- b) Serge Panzu will satisfy himself that the complaint is genuine.
- c) On instruction from Serge Panzu, work will cease immediately.
- d) The construction team will make an immediate recommendation for the amelioration of the cause of complaint to the Design Team for approval.
- e) The Design Team and Client will endeavour to have the recommendation approved immediately and to permit a return to work.

2.2 Other Contracts which may affect work:

This is a live hospital and may be subject to ongoing routine and emergency maintenance operations. Liaison between the PSCS and the Hospital Technical Services Manager and the Hospital Security Team is crucial to ensure adequate project coordination.

2.3 Contract Start Date:

The duration of the works is expected to be 8 to 10 weeks; a start date has not been determined yet.

2.4 Basis on which Time Frame was established.

Time phase was devised by the design team through identifying tasks, restrictions and sitework.

3.0 OTHER WORK ACTIVITIES

The following activities, not related to or included within the scope of the project, will be carried out on or adjacent to the site during the construction phase.

3.1 Existing Building Activities:

The project will be undertaken within the Hospital Campus. Since 1826, this hospital has provided care for women, mothers and infants in the greater Dublin area and at regional and national levels. The hospital is almost 200 years old and was the first named women's and infants' hospital in the country. The services for women's maternity, neonatal and gynaecology services are presented in the hospital

Hospital specialities:

- Obstetrics & Gynaecology
- Neonatology
- Maternal & Foetal Medicine
- Fertility Services
- Endometriosis & Menopause Clinics
- Perinatal Mental Health
- Community Midwifery
- Outpatient Services
- Support Services

Various maintenance and refurbishment works are ongoing throughout the hospital. The Maintenance Services Department will advise the PSCS if any minor works may be required within the PSCS red line boundary.

To minimise disruption to hospital services, access to each designated works area will be discussed and agreed in advance with the Hospital representative, Serge Panzu.

3.2 Installation of Services, e.g. Telephones, Data, Computer, Process Services:

None known.

3.3 Installation of Furniture, Equipment, Fixtures & Fittings or Machinery:

None known.

3.4 External Works such as Land Drainage, Landscaping, Public Utility Services, Works by Local Authority:

None known.

4.0 KNOWN EXISTING SERVICES

A suite of underground services drawings is copied in Appendix 3. Prior to undertaking any ground disturbing activities, PSCS must ensure the latest drawings are requested from utility providers and are made available onsite with the necessary controls to ensure to maintain the integrity of services and the associated safety of all those potentially affected by the works.

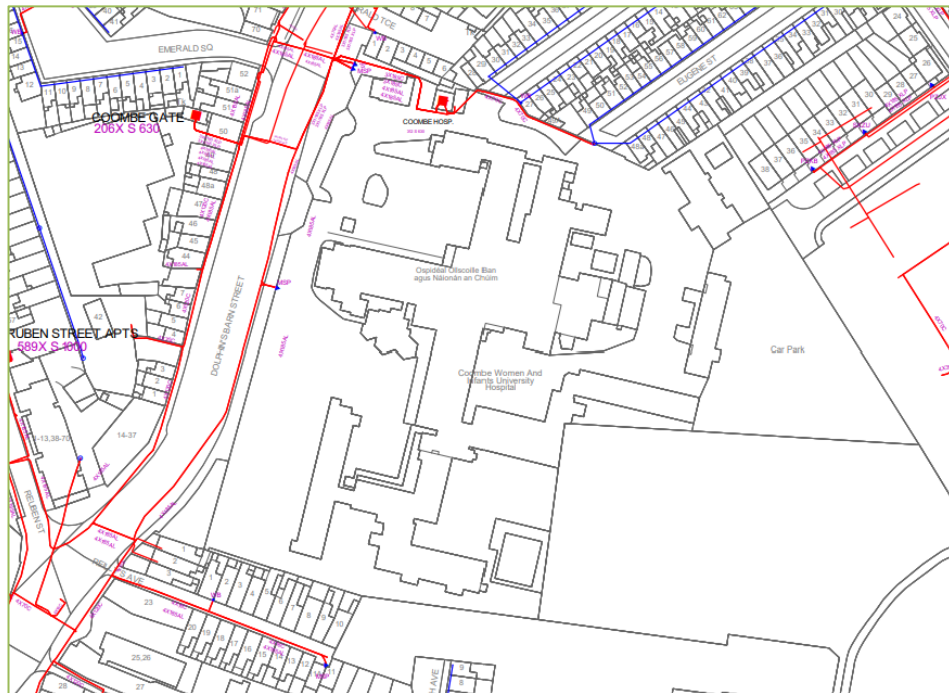
Safety File information has been provided to the PSCS and additional is available from the Facilities Department. Prior to starting work the PSCS must undertake a detailed site survey and satisfy themselves all service information provided is accurate and adequately detailed. The survey should seek to identify fragile or inadequate robust utilities prior to undertaking intrusive or ground disturbing activities.

In advance of implementing works with the potential to disrupt buried services, the PSCS must ensure a robust Ground Disturbance procedure, together with all required provisions, is implemented to ensure the protection of any live services (identified and unidentified services, advertent or inadvertent contact) in accordance with the following HSA [Code of Practice for Avoiding Danger from Underground Services](#), and HSA [Excavations Frequently Asked Questions](#). Any works in the vicinity of overhead powerlines must only be conducted in accordance with the HSA/ESB [Code of Practice for Avoiding Danger from Overhead Electricity Lines](#).

For any activity with the potential to disrupt live services, the physical location of the services must be verified prior to undertaking the activity. Existing live services must be protected in place for the duration of the works. A plan must be implemented to maintain the integrity of live services to ensure worker safety and to prevent interruptions to the day-to-day activities of the Hospital and neighbouring properties.

4.1 Electricity

ESB drawings indicate electrical connections and substation located to the northern side of the site. It is noted the drawing indicates the substation also serves residential properties north of the campus. Buried electrical cables also follow the line of the boundary with Dolphins Barn Road. Service routes and unidentified former service cables may also be present but not identified. The municipal service drawing will not identify electrical connections within the site.



Extract from ESB Networks Drawing – refer to Appendix 3 for the full drawing

Thank you for your recent enquiry regarding the location of ESB electrical network. Please find notice below of documentation which must be reviewed carefully in advance of site works at the requested location.

- Attached PDF map(s) of requested location.
- ESB Networks 'Avoiding Danger From Overhead Electricity Lines'.

<https://esbnetworks.ie/docs/default-source/publications/avoid-electrical-hazards-when-working-near-overhead-electric-lines.pdf?sfvrsn=4>

<http://esbnetworks.ie/docs/default-source/publications/code-of-practice-for-avoiding-danger-from-overhead-electricity-lines.pdf?sfvrsn=4>

- ESB Networks 'Safe System of Work for Digging'.

<http://esbnetworks.ie/docs/default-source/publications/avoid-electrical-hazards-when-digging.pdf>

- ESB Networks Code of Practice 'Safe Construction with Electricity'.

o -See Attached Document.

Please fully read the contents of this e-mail and all attached or referenced Documentation carefully before you proceed.

The attached PDF map(s) indicate the approximate location of ESB underground (UG) cables and overhead (OH) lines. ESB makes no representation that the maps accurately show the location of ESB cables.

ESB Networks has issued this map as a PDF document. If printing a paper version of this map and to maintain a clear and correct representation of the electrical network information, it must be ensured that

(1) It has been printed in colour to fit the page size that has been indicated within each PDF document (The PDF document indicates if the map should be printed on either of A4, A3, A2, A1, A0).

(2) Each of the colours indicated on the colour code legend (incorporated in the PDF document) are clear and distinct from each other.

Please note that there are High Voltage Overhead Lines and Underground Cables in the area concerned. If you intend working or undertaking development within an 80 meter corridor of the overhead lines or in the direct vicinity of the underground cables you must immediately contact: Overhead: Alan Brown, Ph: 087-9273970 or Underground: Philip Arthur, 087-9290875, ESB Transmission, Jamestown Road, Inchicore, Dublin 8 to agree safe working procedures and necessary clearances between the lines and the development in advance of any excavation.

If works don't commence before or continue beyond 6 weeks following the date of issue, then you must obtain an updated map. Each new job requires a new map. It is imperative that before any works commence you first locate and trace the routes of all electric cables by using appropriate locator equipment (in both power and radio modes). Before using a mechanical excavator, ONLY MANUAL means should be employed to prove the location of ESB cables. Even where manual excavation is used, extreme caution must always be exercised, as failure to do so could result in serious injury or electrocution. Under no circumstances should iron bars be used during manual excavation. Careful Hand Digging of Trial Holes using 'HSA Code of Practice for Avoiding Danger from Buried Services' should be used for accurate cable location and prior to using a mechanical excavator in the vicinity of electrical cables. See H.S.A. Code of Practice publication "Avoiding Danger From Underground Services" for further guidelines

Please note that, if during excavation, damage or interference occurs to our cables, causing damage to any property, injury or death to any person or loss of supply to any customers, ESB may at its discretion serve a STOP WORK Notice, and notify the relevant Health and Safety Authority immediately. The user will also be liable to reimburse the ESB on a full indemnity basis, The full costs, expenses and damages arising (directly or indirectly) as a result. It is essential before excavating in the vicinity of ESB cables that the ESB Network Controller in the area you are working in is contacted.

ESB will extend every assistance in indicating the route of the cables and arrangements can be made by contacting the relevant ESB office. ESB cannot, however, accept responsibility for the absence or incorrect position of any particular cable on ESB's records and drawings supplied. Please note that a charge may be made where a movement of networks is required, and/or where ESB provide staff outside of normal working hours.

Please ensure that all contractors and their personnel involved in excavations have been furnished with this map.

In the event that you have any issues of concern please do not hesitate to contact Central Site, ESB Network by the means

E-Mail: dig@esb.ie

Telephone: 1850 928 960

Extract from ESB drawing information notice

4.2 Water & Foul

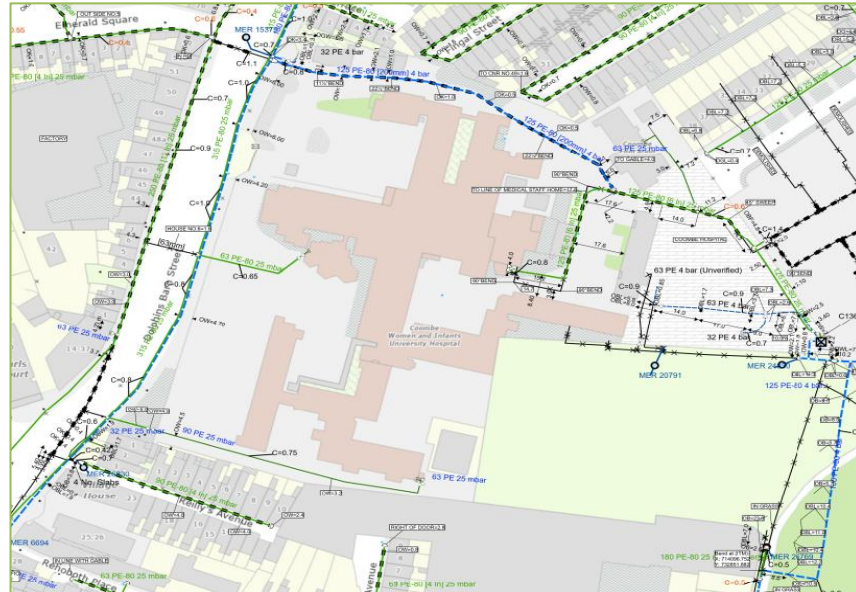
A water main follows the line of Dolphins Barn Street, and a number of public water connections enter the site. A foul sewer also follows parallel to the watermain, with other connections running across the northern and western sides of the Coombe Campus. Further water and foul services will be present



Extract from Irish Water Drawing - refer to Appendix 3 for the full drawing

4.3 Gas

The Gas Networks Ireland drawing identifies a number of gas connections to the campus and a 4-bar 200mm gas main is identified in the vicinity of the northern boundary.



Extract from Gas Networks Ireland Drawing - refer to Appendix 3 for the full drawing



Gas supply located in the proposed works area

Thank you for your enquiry to the Gas Networks Ireland [Dial Before You Dig](#) service, please find the attached network map for your area of interest.

Gas Networks Ireland has **Distribution Gas Network** within your area of interest.

Before you start work, you must have a current gas network map (or maps) for the work location. A current gas network map (or maps) must always be kept on site while work is under way.

Reading your Map

- High pressure transmission gas pipe is shown **Red**.
- Medium pressure distribution gas pipe is shown **Blue**.
- Low Pressure distribution gas pipe is shown **Green**.

The gas network map is indicative only. You must conform to the safety and legal notices printed on the map. For further information on reading this map refer to the **Safety Information**.

Breaking Ground

- Supervision by Gas Networks Ireland is **not** required when working in the vicinity of Distribution gas pipes (unless noted otherwise). Safe digging practices **must** be followed. All work in the vicinity of a gas transmission pipeline **must** be carried out in compliance with:
 - Health and Safety Authority, **Code of Practice for Avoiding Danger from Underground Services**.

Critical Activity

Quarrying or blasting must not be carried out within 400 m of the gas network until Gas Networks Ireland has been consulted on **1800 42 77 47**

Aurora Telecom

- Part of the Aurora Telecom Network may be present on your network map. For further information, Aurora can be contacted on **01 892 6166** (Office Hours) or auroralink@gasnetworks.ie.

Service Pipes

- Service pipes feeding individual properties are not generally shown but their presence should always be anticipated. For further information on domestic gas services refer to the **Safety Information**.

Safety Information

- Before starting work any work in the vicinity of the gas network, please refer to the Gas Networks Ireland safety booklet, **Safety advice for working in the vicinity of natural gas pipelines**, available at <https://www.gasnetworks.ie/home/safety/dial-before-you-dig/>

This booklet contains important safety information, including advice on how to read the gas network maps you have requested.

If you did not request this map, please contact Customer Service on 1800 42 77 47.

Thank you for your enquiry to Gas Networks Ireland.

T 1800 20 50 50 (Emergency)

T 1800 42 77 47 (Dial Before You Dig enquiries)

E dig@gasnetworks.ie

Gas Networks Ireland Networks Services Centre, St. Margaret's Road, Finglas, D11 Y895 [gasnetworks.ie](https://www.gasnetworks.ie) | Find us on [Twitter](#)

Useful Publications

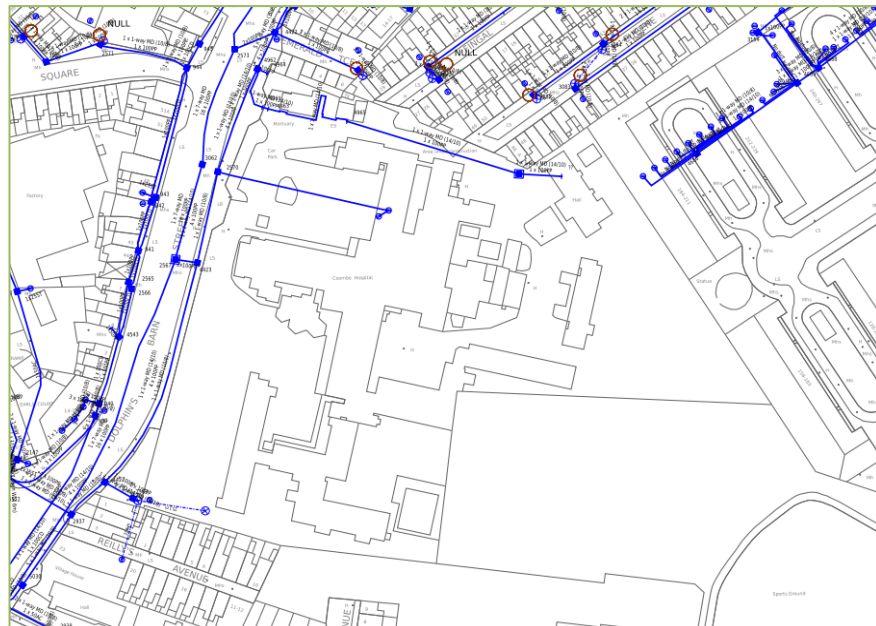
- Health and Safety Authority, *Code of Practice for Avoiding Danger from Underground Services*
- Health and Safety Authority, *Guide to Safety in Excavations*

Both are available free of charge from: Health and Safety Authority on
0818 289 389 www.hsa.ie

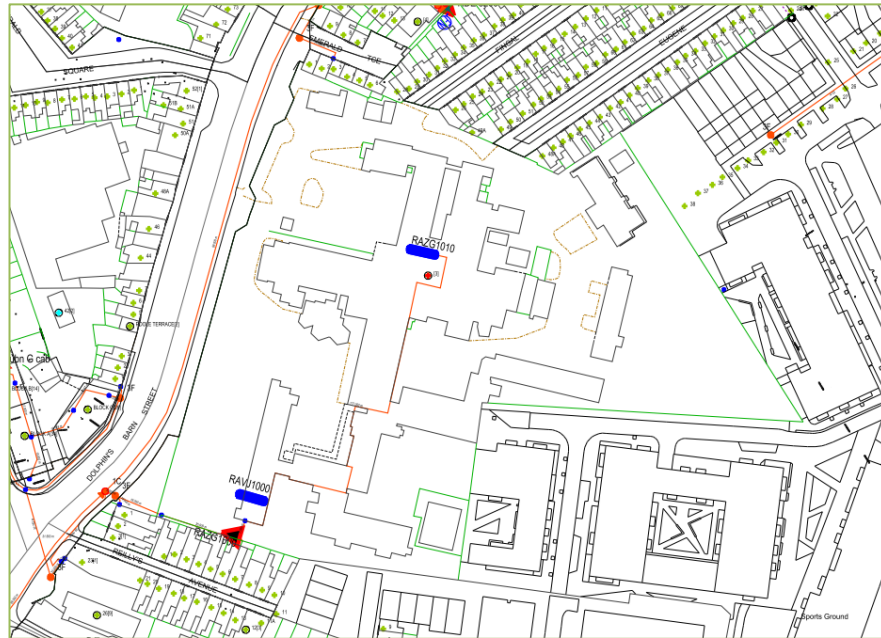
Extract from as Networks Ireland drawing information notice

4.3 Telecommunications

The campus is serviced by various telephone, data and telecommunications connections, including the following:



Extract from Eir Drawing- refer to Appendix 3 for the full drawing



Extract from Virgin Media Drawing - refer to Appendix 3 for the full drawing

4.4 Internal Services:

Buildings contain existing live services including:

- General Electrical Services
- Lighting
- Emergency Lighting
- Fire Alarm
- Hot & Cold-Water Services
- Ventilation
- Gas
- Medical Gases
- Heating
- Drainage
- Telephone / Data
- Nurse Call

Site drawings are available upon request from the Hospital Technical Services Department.

5.0 PARTICULAR RISKS

The following is the non-exhaustive list of particular risks to the safety and health of persons (as set out in the Schedule, No. SI 291 of 2013), together with the opinion of the Project Supervisor for Design Process on what elements, if any, of the works may fall within each particular risk category. It should be noted that many of the risks on the project might arise out of working methods, which are at the discretion of the Contractor and, as such, cannot be determined by the PSDP Process.

5.1 Works which puts persons at work at risk of:

5.1.1 **Falling from a height where the risk is particularly aggravated by the nature of the work, processes used or by the environment at the place of work or site.**

Working at height will require negating exposure to fall hazards. To carry out these activities safely and efficiently, the use of appropriate working at height equipment—such as podium ladders, scaffold towers, and mobile access towers—may be necessary. All equipment must be properly inspected and used in compliance with relevant safety regulations and site procedures. Only trained and competent personnel are permitted to undertake work at height.

Fall hazards associated with work at height may be aggravated by several contributing factors. These include the risk of falling into existing floor openings, the presence of water, sloughing materials, exposed debris, stored materials below, inappropriate or unstable scaffolding systems, limited rescue access, and other environmental or operational conditions. Any such hazards present in the vicinity of work at height must be identified in advance, with thorough planning undertaken to implement appropriate protection measures before any worker is potentially exposed to risk.

Prior to planning any work at height an assessment must be performed to determine the most appropriate fall protection provisions. The hierarchy of fall protection requires collective protection to be prioritised (e.g. fixed or scaffolding-supported guardrail).

The PSCS must assess the suitability of work at height equipment, considering the following aspects:

- The maximum height a worker needs to reach to carry out tasks.
- Type of task to be carried out at height (e.g. passing or lifting equipment).
- Available work area - there are often restrictions in terms of the area available for works.

Work at height must be conducted in accordance with the provisions detailed in the relevant HSA publications, namely:

- [HSA Code of Practice for Safety in Roofwork](#)
- [HSA Code of Practice for Access and Working Scaffolds](#)
- [HSA Mobile Elevated Work Platforms Guidance on Safe Systems of Works](#)

Installation and use of scaffolding

Scaffolding may be required for inaccessible areas or to avoid disruption to Hospital services.

Where scaffolding is required, a site-specific RAMS must be developed to include how the scaffolding will be planned, installed, checked, managed and removed. The use, purpose and maximum loading shall be clearly communicated to the Designers, installers and the users of scaffolding.

The Safety and Health Plan must be updated to reflect the status of scaffolding. Scaffolds must not obstruct escape routes at any time. Particular care must be taken during the assembly, disassembly, and modification of the scaffolding to ensure all emergency exits and access routes remain fully accessible.

Scaffolding below 2.2m which may be in contact with the public are to be highlighted, no projecting parts or sharp edges are permitted below 2.2m.

Scaffolding decks over pedestrians are to be designed as a crash deck for falling debris, tools, etc. During work at height existing fire escape routes must remain accessible or be suitably diverted. Fire escape routes and emergency escape doors may have to be incorporated into scaffolding.

Where the nature of the work or other restrictions make it impracticable to provide standard scaffolding or a particular risk is encountered PSCS must assess all existing risks, use the most suitable working at height equipment (MEWP/Cherry picker) and ensure control measures and rescue procedures are in place before works commencement.

The access route from the scaffolding to the building must be properly secured, ensuring sufficient space and the installation of appropriate measures to safely overcome any changes in level or uneven surfaces.

Scaffolding erection, use and dismantling must be planned and controlled in accordance with the HSA [Code of Practice for Access and Working Scaffolds](#).

5.1.2 Burial Under Earth falls where the risk is particularly aggravated by the nature of the work, processes used or by the environment at the place of work or site.

Excavations are necessary as part of the works for installation and/or connection of underground services.

There may be situations whereby burial under earth falls could become a hazard, particularly if workers are exposed to excavations, together with one or more of the following aggravating factors (non-exhaustive list):

- Workers exposed to excavation depths greater than waste level
- Inadequate excavation stability controls
- Saturated excavation, or potential for excavation to become saturated (precipitation, ground water, drainage, leaking / burst water utility, etc.)
- Excavation in poor, in-cohesive material, or heterogeneous made ground
- The presence of buried utilities or other structures
- Vibration within the vicinity (e.g. plant or vehicles, passing traffic)
- Adjacent loading of surrounding surface (e.g. adjacent structure, spoil piles, or vehicles in the vicinity)
- The presence of the early signs of excavation failure (cracking, sloughing, slipping, etc.)

The Ground Investigation has confirmed extensive *made ground* is present and the geotechnical qualities of the soil is likely to be poor therefore the construction sequence applied, should assist to negate many of the burial risk.

Excavations must be maintained secured and temporary shoring must be provided as necessary. A Safe System of Work (SSW) must be developed in advance as part of the Construction Safety & Health Plan, to clearly assess the type of material onsite, angle of repose, minimum distance required for spoil piles, minimum distance required for plant/mobile equipment, inspection routines, water ingress controls, sloping, shoring and excavation engineering requirements. The maximum permissible depth of an excavation that a worker can enter / be exposed to without excavation controls (sloping, shoring, engineering) must be communicated in the SSW and implemented robustly onsite.

For any excavations where industry standard techniques cannot be implemented (i.e. sloping or benching at 1:1) engineered excavations must be designed and constructed as per the specification of a competent Temporary Works (Geotechnical) Designer.

All excavating operations must be assessed, documented and communicated with a RAMS. For any excavation requiring worker entry, the risk assessment must take into account soil saturation level, adjacent structures, weather

conditions, worker exposure (e.g. requirement to crouch or lie in excavation?), falling materials and fall protection (e.g. into the excavation), safe access / egress provisions, buried utilities, required frequency of Statutory inspections (AF3's), sloping / shoring / engineering specifications, and any other requirements relevant to the specific excavation. Workers must not enter any excavation without a RAMS being conducted by a competent person, reviewed and approved by the PSCS. All excavations must be planned and controlled in accordance with the HSA publication: [Working in Excavations](#).

All neighbouring buildings must be monitored in accordance with the BRE guidance document [Assessment of Damage in Low Rise Buildings](#).

Stockpiles of excavated spoil will be required to be stored onsite, at least on a temporary basis. The constrained nature of the site implies the space available for stockpiles is limited. Excavation spoil and stockpiles of material can surcharge any adjacent excavation crest, increasing the risk of excavation failure. All stockpiles must be located a sufficient distance from any excavation to ensure not to compromise excavation integrity.

5.1.3 Engulfment in swampland

A historic buried watercourse is present in the vicinity (see section 1.8). It is assessed high levels of groundwater may be encountered, especially during periods of heavy precipitation. Contingencies must be readily available to ensure adequate pumping provisions can be implemented in advance of any excavation becoming excessively flooded, and especially, in advance of any worker being exposed to a flooded excavation. All excavations must be protected in accordance with the provisions of section 5.1.2.

5.2 Health monitoring

There may be specific legal requirements for health monitoring where a work activity puts a person at risk from hazardous substances or preparations. Where such a requirement exists, the activity must be regarded as involving particular risk.

Examples of activities requiring health monitoring and therefore involving particular risks include:

- The stripping of lagging which contains or is likely to contain asbestos or the breaking or mechanical drilling or screwing and removal of insulating boards tiles and other products likely to contain asbestos to which the Safety, Health, and Welfare at Work (Protection of Employees) (Exposure to Asbestos) Regulations 2006 and 2010 apply.
- Where Friable Asbestos is identified and remains in place the Project Supervisor for Construction Stage is required to develop a method

statement to remove asbestos at the earliest possible time. Where the risk exists, that asbestos will be disrupted during the course of the project.

- Demolition involving flame cutting or shotblasting of painted steel where the paint is likely to contain lead and where an assessment reveals any conditions as referred to by the Safety, Health and Welfare at Work (Chemical Agents) Regulations. Specific attention is required if lead must be physically abraded or saw-cut (or similar) to ensure no production of dust and/or worker exposure during removal of the material.
- Work involving the use of substances which must be labelled with the risk phrases R45 “may cause cancer” or R29 “may cause cancer by inhalation” and where a risk assessment in accordance with Safety, Health and Welfare at Work (Carcinogens) Regulation 2001 reveals a risk to safety or health.
- Any other work activities involving the use of any chemical or biological agents where a risk assessment in accordance with Regulations 4 and 5 of the above-mentioned Chemical Regulations 2001 or the Safety, Health, and Welfare at Work (Biological Agents) Regulations 2013.

Asbestos:

Previous Refurbishment and Demolition Asbestos Surveys (RDAS) have confirmed the presence of asbestos-containing materials (ACMs) in various areas of the building, and it is very likely that ACMs are present in additional areas.

Before the commencement of any construction activities, a Refurbishment and Demolition Asbestos Survey (RDAS) must be carried out by a competent and accredited asbestos surveyor.

No works shall proceed in any area where there is a potential to disturb ACMs until confirmation is received that:

- The materials have been safely removed by licensed contractors; or
- Risk assessments and controls are in place to ensure they will remain undisturbed, with appropriate exclusion zones and communication to all relevant personnel.

To ensure ACM's are appropriately protected in place for the duration of the project, the works must be undertaken in accordance with the HSA Safety Alert: [Management of Asbestos Containing Materials on Demolition & Refurbishment Sites](#) All requirements set out in the Safety Alert must be adhered to, including the requirement to identify and communicate ACM's to all contractors via the Construction Safety & Health Plan.

Where the site works are planned so as to avoid disturbance of any ACMs that are to remain in situ, the location of those ACMs must be communicated by the PSCS via the Safety and Health Plan to all contractors on site. This is to ensure that inadvertent disturbance of ACMs during the works is avoided.

Extract from HSA Safety Alert: *Management of Asbestos Containing Materials on Demolition & Refurbishment Sites*

Workers must also be trained to identify possible sources of ACM. In the event any potential ACM is discovered during the works, work in the area must be immediately halted, worker exposure prevented, and the Client and PSDP informed. An Asbestos Consultant must be appointed to sample the suspected material and determine the nature, extent and risk posed.

In the event asbestos remediation may be required, or work within areas potentially contaminated with ACM and/or with the potential for airborne friable asbestos (e.g. adjacent to a contaminated area without physical airtight barrier), it must only be undertaken in accordance with the HSA publication: [Asbestos-containing Materials \(ACM's\) in workplaces - Practical Guidelines on ACM Management and Abatement.](#)

If it is later determined that any ACM's discovered should be protected in place for the duration of the work, it must only be in accordance with the HSA Safety Alert: [Management of Asbestos Containing Materials on Demolition & Refurbishment Sites](#)

5.2.1 Materials with toxicological or physio-chemical properties:

The circumstances of the use of certain materials or substances may give rise to particular risks based on their toxicological or physicochemical properties. All materials and construction products must be used and stored in accordance with the manufacturer's SDS. It is possible that these products, if handled and used incorrectly, are irritating to the eyes and skin, may cause sensitisation by skin contact, cause burns, are harmful by inhalation and if swallowed.

Construction Products

All materials and construction products must be used and stored in accordance with manufactured SDS. It is possible that these products, if handled and used incorrectly, are irritating to the eyes and skin, may cause sensitisation by skin contact, cause burns, are harmful by inhalation and are harmful if swallowed. Diesel must be stored in specifically designed bowzers or, where refuelling is conducted by fuel tanker, bunds and spill protection must be deployed. Smaller quantities

of construction chemicals and hydrocarbons must only be stored in their original containers (or specifically manufactured and labelled containers for decanting) and maintained securely in a chemical storage cabinet with a copy of the SDS.

Secure designated hazard materials storage facilities must be provided with two levels of containment (e.g. bund to min 110% capacity and covered from elements). Firefighting equipment and appropriate spill kits must be available at the facilities, and Safety Data Sheets (SDS) for every chemical and hydrocarbon used onsite must be readily available and easily accessible at the designated storage location. All requirements of each SDS must be readily available, together with appropriate First Aid provisions and Emergency Procedures.

Hospital Waste

The works are being carried out in a live hospital environment where chemical and biological waste may be present. Although not anticipated, a potential exists for residual hospital waste to be discovered. The PSCS must induct workers on the procedures required to ensure they are not exposed to such waste.

Airborne Dust

The PSCS must allow for a necessary control measures required to eliminate any risk due to contaminated material for operatives and other personnel within and surrounding the works area. Regulatory exposure limits must be adhered to including airborne silica containing dust, and appropriate respiratory protection provided if exposure levels may be exceeded in localised area (e.g. drilling concrete). Inhalation of silica dust and contact with eyes, skin and clothing must be avoided.

5.2.2 Hazardous substances:

Hazardous substances and preparations must be labelled with appropriate hazards symbols, and the suppliers must provide a safety data sheet when requested by a person. The labels and safety data sheets must include "risk phrases", which indicate the specific risks associated with the substance. The requirements are set out in the European community (Classification, Packaging, Labelling and Notification of Dangerous Substances) (Amended) European Communities (Classification, Packaging and Labelling of Dangerous Preparations Regulations 2004) S.I. No. 62 of 2004).

5.2.3 Work with ionizing radiation requiring the designation of controlled or supervised areas as defined in Article 20 of Directive 80/836/Euratom:

None Envisaged - however the works are within a hospital campus where x-rays are available. Site workers & visitors must be made aware of this and advised not to interfere with or enter any x-ray departments. The instructions of hospital staff must be followed at all times.

5.3 Work near high voltage power lines

It is not anticipated work will be required in the immediate vicinity of overhead high voltage power lines. The PSCS must satisfy themselves all requirements of section 4 have been duly disposed of, in advance of undertaking the works. Should overhead high voltage powerlines be identified that may be affected by the works, the hazard must be protected in accordance with the provisions of the HSA/ESB [Code of Practice for Avoiding Danger from Overhead Electricity Lines](#).

It should be noted; in the event of works being required in the vicinity of live electrical systems, installations and services, these must be undertaken by competent electricians with adequate training and experience.

Prior to starting work on any live electrical utilities, a robust Lock Out / Tag Out procedure must be developed and detailed within the Construction Safety & Health Plan (CSP). Prior to energising, new or deactivated circuits panels must be isolated at the opposite end with a uniquely keyed lock, tagged with a label of what the circuit serves, and who locked the service. Locks and tags must remain in place until the service is live, commissioned and tested, and/or until the service has been physically disconnected with isolation guaranteed.

Temporary electrics must be specified by a competent electrical specialist and tracked with the temporary works certificate process. Temporary or live services with the potential to later become exposed (e.g. during excavating or ground disturbing operations) must be signed/labelled at appropriately spaced intervals.

5.4 Work exposing persons at work to the risk of drowning.

None Envisaged.

5.5 Work on wells, underground earth work and tunnels

None Envisaged.

5.6 Work carried out by divers at work having a system of air supply.

None Envisaged or Permitted.

5.7 Work carried out in a caisson with a compressed air atmosphere

None Envisaged or Permitted.

5.8 Work involving the use of explosives

None Envisaged or Permitted.

5.9 Work involving the assembly / dismantling of heavy prefabricated components

None Envisaged.

It can be anticipated that some heavy manual handling may be necessary throughout the project. In advance of all manual lifting or transporting operations, manual lifts must be assessed to ensure the risk of musculoskeletal injuries are appropriately negated. For heavier items, team lifts should be planned insofar as reasonably practicable and mechanical aids provided. All workers must be appropriately trained in manual handling. When possible, heavy elements should be assembled on the ground and their size and weight considered during design stage. Insofar as reasonably practicable, cranes, teleports, hoists, trolleys, dollies, and other mechanical equipment should be made available on-site to reduce manual handling risks.

5.10 Other Particular risks not included in schedules 1 of SI 291 of 2013

5.10.1 Working in the vicinity of live existing services

Burns, Scalds & Electrocution caused by accidental or intentional rupturing of existing cables/pipes can lead to serious injury or death, and also interruption of vital services to the hospital or neighbouring businesses and local residential housing. Adequate care must be exercised at all times to ensure the safety of personnel and continuity of services. See also sections 4, 5.1.2 and 5.3.

Where works involving interconnection with or disturbance to existing cables / pipes, Written Permission must be sought and received from the Hospital Technical Services Manager. Adequate care must be exercised to ensure the safety of hospital personnel and patients, and the continuity of services.

Method Statements are required to be submitted from the Contractor to the Client Representative, describing in detail the measures to be adopted to provide adequate protection measures to ensure integrity and continuity of services for the duration of the works. All electrical work must be undertaken in accordance with [ETCI Rules and the ETCI Wiring Regulations 2008](#). Any electrical connections to live services to be strictly controlled with a robust Lock Out / Tag Out procedure as developed in advance and detailed in the Construction Safety & Health Plan. Work in the vicinity of live environments to be restricted with a Permit to Work procedure.

The Contractor must also adhere to Safety, Health, and Welfare at Work Regulations, HSA guidelines, ETCI guidelines, and CIBSE Guide K “Electricity in Buildings”.

5.10.2 Emergency Escape Routes

For the duration of these works Emergency Escape Routes must be maintained at all times. Where a diversion of an existing emergency route is required this needs to be agreed with Hospital Technical Services Manager in advance.

Any diverted routes must be formed on suitable ground or event matting, and be appropriately lit and signed.

Particular attention must be given to maintaining clear and unobstructed escape routes during the following work activities:

- Deliveries and removal of waste
- Placement of skips and associated fencing
- Works carried out in hospital corridors
- Assembly of exterior scaffolding

The works will be performed within a live hospital campus. The emergency procedures, outlined in the document provided in Appendix 7 for reference, must be followed by all personnel on site. The PSCS must incorporate these procedures into the Construction Stage Health and Safety Plan (CSHSP) and ensure that the entire site team is fully informed and familiar with them.

5.10.3 Adverse Interaction / Interference with Public

The site is situated within live hospital grounds that will be frequented by patients, visitors, staff, etc. It should be assumed that neighbouring residents and members of the Public (including children and teenagers) may attempt to enter the site, even just out of curiosity.

Adverse antisocial behaviour, trespassing, opportunist, and organised crime may be encountered therefore the site must be secured from trespass and in this instance double clipped Herais fencing would be recommended with appropriate safety and warning signage. The site entrance gate/s should be maintained closed and secure. The integrity of site fencing must be maintained during the course of the works. Deliveries and site traffic must be coordinated with the hospital staff and security team to prevent adverse impacts on staff, visitors, patients and local residents.

Appropriate noise, vibration and dust reduction control measures must be implemented. Dust reduction measures, to limit dust infiltration into live areas of the hospital, and vibration control measures to be adopted on site during

construction works, in particular, but not limited to, neighbouring buildings, and in accordance with planning conditions. See also sections 1.6 & 1.8.

Care must be taken when working outside of the secure site such as in connection with, e.g.:

- Delivery of materials and machinery to the site.
- Removal of materials, waste, and machinery from site.

Other units within the vicinity will remain occupied and communication must be maintained with the Hospital Technical Services Manager to ensure safe movement of construction materials.

5.10.4 Noise and Dust in an operational hospital

The works are to take place within live hospital campus where patients with diminished immunity may be present. Noise & dust reduction control measures are necessary for all noisy or dusty works. Dust reduction techniques and control measures to limit dust infiltration into patient areas to be adopted on site during construction works.

PSCS is required to carry out construction works in accordance with [National Guidelines for the Prevention of Nosocomial Invasive Aspergillosis During Construction/Renovation Activities](#).

The Contractor and all staff must be compliant with the Health Information Quality Authority National standards for the Prevention and Control of Healthcare Associated Infections. (www.hiqa.ie)

The contractor and all staff must be compliant with the National Guidelines for Hand Hygiene in the Irish Healthcare setting 2005. (www.hpsc.ie)

The contractor and all staff must be prepared to undertake infection control education as requested by the Infection Prevention & Control Team.

The contractor and all staff must be compliant with the Department of Health Note 00 09 [Infection Control in the built environment](#).

The following is a list of Construction / Renovation Activities classifications with regard to Aspergillus production:

Construction / Renovation Activities
Type A1 – Minor internal containable activities with no/minimal dust generation This includes, but is not limited to, inspection and non-invasive activities and small-scale activities that create minimal dust. These include, but are not limited to, activities that require removal of ceiling tiles for preliminary visual inspection

(limited to 1 tile per 5m²), painting (no sanding), wall covering, electrical trim work, minor plumbing and other maintenance activities that do not generate dust or require cutting of walls or access to ceilings other than for visual inspection.

Type A1 – Minor internal small-scale works with some dust generation that can be contained

This includes, but is not limited to, minor works on a small scale where dust containment is achieved by using dust barriers and a HEPA-filtered vacuum.

Activities that require access to conduit spaces, cutting of walls, woodwork or ceilings where dust migration can be controlled, for example installation or repair of minor electrical work, ventilation components, telephone wires or computer cables. It also includes minor plumbing as well as minor drilling to allow for the erection of brackets and shelving.

Type B – Major internal containable activities

Any work that generates a moderate level of dust or requires demolition or removal of any fixed building components or assemblies (e.g. counter tops, cupboards, sinks). These include, but are not limited to, activities

that require sanding of walls for painting or wall covering, removal of floor-covering, ceiling tiles and stud work, new wall construction, minor duct work or electrical work above ceilings, major cabling activities, and any activity that cannot be completed within a single work shift. This type of activity includes extensive plumbing work. It also includes demolition or removal of a complete cabling system or plumbing and new construction that requires consecutive work shifts to complete.

Type C- Minor External Non-Containable Activities.

External construction activities that generate moderate levels of dust or minor excavations. Such activities include, but are not limited to, digging trial pits and minor foundations, trenching, landscaping, minor construction and demolition work.

Type D-Major External non-Containable Activities

External construction activities that generate large levels of dust. Such activities would include, but are not limited to, major soil excavation, demolition of buildings and any other construction activity not covered under Type C.

The following is a list of Population Risk Group classifications with regard to Aspergillus production:

Population Risk Groups
Group 1- No evidence of risk. • Staff members / Service providers / Contractors • All patients not listed in Group 2-4 below
Group 2- Increased Risk • Patients on prolonged courses of high dose steroids or tumour necrosis factor α (TNF-α) antagonists, particularly those hospitalised for prolonged periods

- Severely immunosuppressed AIDS patients
- Patients undergoing mechanical ventilation
- Non-neutropenic patients on chemotherapy
- Dialysis patients

Group 3- High Risk

- Patients with neutropenia for less than 14 days following chemotherapy
- Adult acute lymphoblastic leukaemia patients on high dose steroid therapy
- Solid organ transplantation
- Patients with Chronic Granulomatous Disorder (CGD)
- Neonates in intensive care units
- COPD patients meeting GOLD stage III and IV criteria⁵ and in intensive care or high dependency units
- Patients with extensive burns

Group 4 –Very high Risk

- Allogeneic haematopoietic stem cell transplantation⁶
 - a. during the neutropenic period
 - b. with graft-versus-host disease requiring steroid $\pm$ other immunosuppressive therapy
- Autologous haematopoietic stem cell transplantation⁶, i.e. during the neutropenic period
- Non-myeloablative transplantation
- Children with severe combined immunodeficiency syndrome (SCID)
- Prolonged neutropenia for greater than 14 days following chemotherapy or immunosuppressive therapy (including acute myeloid leukaemia)
- Aplastic anaemia patients

The following is a list of Preventive Measures to be undertaken during the course of the works broken down into activity types:

Class 0 Preventive Measures
Dust Control

- Immediately replace ceiling tiles displaced for preliminary visual inspection

Cleaning

- Wet mop and vacuum area as needed and when work is completed
- Wipe horizontal and vertical work surfaces with hot soapy water

Infection Prevention and Control Personnel

- Approval must be sought from IPCT for the construction activity

Patient Risk Reduction

- Minimise exposure of patients in at-risk Group 2 to the construction / renovation area
- Minimise dust and increase cleaning in patient area

Note: Class 0 preventive measures do not apply to Groups 3-4 at-risk patients. For further details, please see matrix presented in Table 5.

Class I Preventive Measures
Dust Control

- Immediately replace ceiling tiles displaced for visual inspection
- Execute work by methods to minimise dust generation from construction or renovation activities
- Provide active means to minimise dust generation and migration into the atmosphere

Cleaning

- Wet mop and vacuum area as needed and when work is completed
- Wipe horizontal and vertical work surfaces with hot soapy water

Infection Prevention and Control Personnel

- Approval must be sought from IPCT for the construction activity and the permit to be issued
- In collaboration with cleaners and technical services, ensure that the construction zone remains sealed and that the cleaning is adequate at all times

Patient Risk Reduction

- Move at-risk patients (Groups 2-4) away from construction zone. If it is not possible to move, for example ICU patients, an impermeable dust barrier should be erected around the construction zone
- Minimise patients' exposure to the construction/renovation area
- Minimise dust and increase cleaning in patient area

Class II Preventive Measures
Dust Control

- Execute work by methods to minimise dust generation from construction or renovation activities
- Erect an impermeable dust barrier from floor to slab/floor
- Ensure windows and doors are sealed
- A separate entrance away from patient traffic should be created for use by construction workers

- Protective clothing should be worn by construction workers and removed when leaving the construction site
- Dust barrier should not be removed until the project is complete

Ventilation of Construction Zone

- Seal windows
- Maintain negative pressure within construction zone by using a portable extract fan
- Ensure air is exhausted directly to the outside where feasible and away from intake vents or filtered through a minimum of an F9 filter
- Ensure the ventilation system is functioning properly and is cleaned if contaminated by soil or dust after construction or renovation project is complete

Debris Removal and Cleaning

- Contain debris in covered containers or cover with either an impermeable or moistened sheet before transporting for disposal.
- Remove debris at end of the work shift.

Infection Prevention and Control Personnel

- Approval must be sought from IPCT for the construction activity and the permit to be issued.
- In collaboration with cleaners and technical services, ensure that the construction zone remains sealed and that the cleaning is adequate.

Patient Risk Reduction

- Move all patients from within the construction zone
- If possible move at-risk patients (Groups 2-4) who are adjacent or near to the construction zone
- Ensure that patients do not go near construction zone
- All windows, doors, air intake and exhaust vents should be sealed in areas of the hospital containing patients who are classified as at increased risk (Groups 2-4), if the construction or demolition work is considered likely to result in Aspergillus contaminated air entering these areas
- High and very high-risk patients (Groups 3-4) should preferably be treated in HEPA-filtered, positive pressure isolation rooms or facilities. Where such facilities are not available, the local IPCT should perform a risk assessment to identify alternative options. This may include neutral pressure isolation rooms (also referred to as a room with positive pressure ventilated lobby (PPVL)) (79, 80). Although these facilities have been validated from an engineering perspective they have not yet been clinically validated for the prevention of

nosocomial aspergillosis among at-risk patients, see section 3.5.1 and 3.5.2 for more details.

Traffic Control

- In collaboration with the Technical Services Manager, designate a traffic pattern for construction workers that avoids patient care areas and a traffic pattern for clean or sterile supplies, equipment, patients, staff and visitors that avoids the construction zone
- A traffic path should be designated for the removal of rubble from the construction site which preferably is separate to and away from all hospital-related traffic.

Class III Preventive Measures**Dust Control**

- Execute work by methods to minimise dust generation from construction or renovation activities
- Provide active means to minimise dust generation and migration into the atmosphere. During dry weather soil must be regularly dampened for the period involving any ground works

Debris Removal and Cleaning

- Contain debris in covered containers or cover with an impermeable or moistened sheet before transporting for disposal
- Ensure no increased dust within hospital, increased cleaning may be necessary

Infection Prevention and Control Personnel

- Approval must be sought from IPCT for the construction activity and the permit to be issued
- In collaboration with technical services ensure that dust is minimised from the construction site and that the construction site measures are being adhered to
- Ensure that cleaning is adequate to minimise dust within the hospital

Patient Risk Reduction

- No specific requirement for Risk Group 1
- If possible, move at-risk patients (Groups 2-4) who are adjacent or near to the construction zone
- Ensure that patients do not go near construction zone
- All windows, doors, air intake and exhaust vents should be sealed in areas of the hospital containing at-risk patients (Groups 2-4), if the construction or

demolition work is considered likely to result in Aspergillus-contaminated air entering these areas

- High and very high-risk patients (Groups 3-4) should be preferably treated in HEPA-filtered, positive pressure isolation rooms or facilities. Where such facilities are not available the local IPCT should perform a risk assessment to identify alternative options. This may include neutral pressure isolation rooms (also referred to as a room with positive pressure ventilated lobby (PPVL)) (79, 80), although these facilities have been validated from an engineering perspective they have not yet been clinically validated for the prevention of nosocomial aspergillosis among at-risk patients, see section 3.5.1 and 3.5.2 for more details.

Traffic Control

- In collaboration with the Technical Services Manager, designate a traffic pattern for construction workers, that avoids patient care areas and a traffic pattern for clean or sterile supplies, equipment, patients, staff and visitors that avoids the construction zone
- A traffic path should be designated for the removal of rubble from the construction site which preferably is separate to and away from all hospital-related traffic.

The following infection control measures for this project are required as a minimum:

- Dust reduction and elimination techniques should be used for cutting, hole boring and demolition works.
- Debris must be removed from the construction area at the end of each working day. Debris should be removed in covered containers. In addition, normal good housekeeping procedures to be maintained during the works in particular, holding skips and other containers should be kept moistened and covered.
- If required by Infection Control HEPA filtered air extraction unit, exhaust to the outside should be used during drilling / coring work. Filters must be in working order.
- Construction workers should wear protective clothing, which should be removed before leaving the construction area. Contractors are required to change outer clothing or wear suitable suits when moving internally through all sections of the hospital.
- Ensuring windows and doors of possible affected hospital areas are closed and properly sealed during dust-producing works. Notify Infection Control of any open windows that may be affected by the works.

- The use of dust extraction systems placed directly onto tools to collect dust at source.
- As per Client requirements, method statements may need to be reviewed by the Infection Control Department.

A HEPA filtered vacuum cleaner must be used for any and all dust producing activities carried out in or outside of the infection control barriers.

5.10.5 Fire Arising from Construction Activities

The outcome of a fire onsite could potentially be catastrophic. The PSCS must therefore ensure every precaution is taken to protect locations with a higher fire load (e.g. welfare cabins, fuel stores, waste, etc.) and sources of ignition (sparking activities, poor or overloaded electrical circuits and equipment, etc.). Adequate provisions must always be readily available, in appropriate locations, to tackle any potential fire that may occur. Waste must never be allowed to build up onsite and newly created waste should be removed at the end of the working day. Flammable materials and liquids must only be brought to site on an as-required basis and, together with empty flammable liquid containers, be removed from work areas overnight.

In advance of any Hot Works, a Hot Works Permit must be acquired from the Hospital Maintenance Services Department. Hot Work activities can only be undertaken in accordance with a Hot Works Permit conditions and upon completion, a Fire Watch must be maintained for a minimum of 1-hour.

A specific area may be designated were, in so far as reasonably practicable, Hot Work activities can be undertaken. Appropriate and adequate fire preparedness provisions must be maintained at the designated Hot Work area. Fire blankets and fire extinguishers must be provided in areas adjacent to Hot Work activities.

The Hospital Maintenance Services Department manage a campuswide Hot Work permitting system, works undertaken outside the red line boundary, which have the potential to cause a fire will require a Hot Work Permit. Permits must be coordinated with the Hospital Maintenance Services Department prior to work commencing. Live fire heads must be maintained throughout the works. These must be deactivated / protected appropriately to avoid inadvertent activation during the works, and in accordance with the Hospital Maintenance Service Department Hot Work Permit requirements.

Storage of materials in fire escape routes or stairs is not permitted. Contractor plant & equipment to be checked prior the end of each shift to ensure it is secured and isolated and does not pose a fire hazard.

Keys to permit access to secured areas must be made available to Hospital security so that in the event of an emergency or a fire alarm the first responders and fire crews can easily gain access.

It is paramount that contractor extends and maintain the hospital L1 Fire Alarm System everywhere as per IS3218.

5.10.6 Struck-by plant / mobile equipment

Excavators, trucks and other construction vehicles will be servicing the site, particularly during bulk excavation. Depending on the construction schedule, high concentrations of plant and mobile equipment may be working simultaneously within a specific area. In such circumstances, clear access routes and haul roads to be detailed as part of the bulk excavation plan and site logistics management plan. Where vehicles are required to reverse and/or turn, adequate dedicated turning areas must be provided, an appointed Banksman must be available to assist.

Worker access routes must be segregated from plant and equipment with appropriate routing signage posted. A trained Traffic Marshall must be on duty at all times to manage deliveries, etc. Trucks and vehicles servicing the site must never be staged on the public roadway.

Particular provisions are required to manage the interface between the public road and the site. Both a pedestrian footpath and a cycle path traverse this interface and can be busy, particularly during peak commuting hours. Specific controls will be required to appropriately manage this interface. See also provisions outlines in sections 1.9 & 1.10.

6.0 CONCLUSIONS

This Preliminary Health and Safety has been prepared (in compliance with Regulation 12) so that it may be provided (in accordance with Regulation 9) to every person being considered or tendering for the role of project supervisor for the construction stage.

The potential hazards that have been identified during construction include the following:

- Falls from height
- Work which puts persons at risk from chemical or biological substances
- Fire within a live operational hospital.
- Working in a live hospital campus.
- Accidental disruption of existing vital Hospital services
- Adverse interactions with hospital patients, visitors, and staff

A detailed Construction Management Plan must be created and implemented on site by the contractor. This plan must cover all the hazards outlines above and any others that come to light during the project.

Appendix 5 contains a form which should be used in the case of temporary works design. It is critical that temporary works designers and contractors base their temporary works design with the due regard to the assumptions made in relation to loadings and construction sequence.

Temporary Works Designers will be required to complete a RIAI Temporary Works Design Certificate or to evidence the provision of adequate information to all parties to allow the structure to be built in safety.

Appendix 5 also includes a Permanent Works Certificate which Designers will be required to sign including specialist Sub-Contractors with design responsibility for elements of permanent works.

7.0 CONTINUING LIAISON

- 7.1 Site Health & Safety Meeting to be held as required throughout the project:
- to deal with the co-ordination of Designers
 - to organizing dealing with changes or late changes to design.
 - and all other matters to be dealt with by Fax / Email or Telephone.
- 7.2 PSCS shall advise the PSDP of the appointment of any specialist, sub-contractor with design responsibility or temporary works designers so that the PSDP can co-ordinate their design activities.
- 7.3 PSCS shall keep the PSDP advised of any design changes or design selections on site.

Please Note: The selection of products to comply with design criteria or performance specifications may constitute Design under the Health & Safety (Construction) Regulations 2013. The PSDP must be advised accordingly.

- 7.4 PSCS shall keep the PSDP advised of any Temporary Works planned on site and the designer of same. At least a week's notice is required of any temporary works to be undertaken on site.

The information contained in this preliminary Health & Safety Plan has been prepared prior to the commencement of the work on site. It does not take account of any matters or information, which may come to light after that time.

For and on behalf of: **Garland**

Signed:

..........

Dated:

.....27/07/2026.....

APPENDIX 1 – Generic Site Rules

These are generic rules for the general guidance of the Main Contractor and must be developed by the main contractor to become Site Specific Rules for the project in hand:

1. All site visitors, personnel and contractors should be required to comply with the Main Contractor's Health & Safety policy and the specific Construction Stage Safety and Health Plans.
2. All other Sub-Contractors should be required to provide evidence of their Health & Safety Policy and procedures to the Main Contractor prior to start of work. This information should be incorporated in the Health & Safety Plan by the Project Supervisor Construction Stage. A monthly report will be submitted as to the status of each sub-contractor's submissions and adherence to procedures.
3. All risks identified in the Preliminary Safety and Health Plan and in the Safety, Health and Welfare at Work (Construction) Regulations 2013 are to be individually identified and addressed by the Main Contractor.
4. Method statements and Safety statements are to be reviewed as necessary on an ongoing basis to take into account any new issues, which arise during the course of any revision. Revisions, which could affect SHW matters, are, to be raised at site meetings.
5. All site personnel and Safety and Health personnel should be advised on an ongoing basis of any revisions to the Safety Plan by the PSCS.
6. Standard and proof of adequate training of personnel on site is to be included in the Safety, and Health Plan prepared by the PSCS.
7. Smoking is not permitted within designated working areas.
8. Eating and drinking should not be allowed in the designated working area.
9. Main Contractor should ensure that a suitable person is appointed to attend all hot work operations and be supplied with a suitable fire-extinguishing appliance. Hot work must finish at least one hour before completion of work on site for that day to ensure that the workplace is left in a safe condition.
10. Collective protective measures such as nets and mobile elevated platforms must be considered by the Main Contractor during the erection of the roof work.
11. The Main Contractor will take sufficient adequate steps to control dust during the construction stage and this is to be noted in the Safety and Health Plan and to be reviewed at the site meetings.

12. The Main Contractor should ensure that all excavations are supported in accordance with the requirements of the Safety, Health and Welfare at Work (Construction) Regulations 2013.
13. The Main Contractor is to ensure that all relevant Safety, and Health Regulations are adhered to at all times.
14. Personnel or sub-contractors with an unsatisfactory safety record, procedures shall not be allowed on the site unless evidence of improvement and training to achieve same is obtained.
15. The Contractor shall observe all legislation regarding littering.
16. The Main Contractor shall ensure that all cables, loose wires etc. and other trip hazards are avoided and set up procedures to prevent same.
17. Work must not commence until the Safety and Health Plan (Construction) is in place for each of the Sub-Contractors.
18. The PSCS should issue a method statement for distribution of Health & Safety related information and revisions to Health& Safety plan to Sub-Contractors and any other parties whose health and safety may be affected.
19. The PSCS shall advise all parties, whose health and safety may be affected of the emergency arrangements for dealing with and minimising the effects of injuries, fire and other dangerous occurrences.
20. The Main Contractor shall minimize noise and vibration as far as is reasonably practicable.
21. For any statement, reference, report, legislation, the more onerous conditions will apply.

APPENDIX 2 – Preliminary Safety File

Safety Health and Welfare at Work (Construction) Regulations 2013

Duties of Contractor: Part 3 (24) (e): *“Promptly provide the Project Supervisor for the Construction Stage, in writing, with all relevant information necessary to prepare the Safety File”*

The Project Supervisor Construction Stage in co-operation with the Main Contractor shall ensure that the Safety File to be produced at the end of the project shall incorporate all issues identified in the Main Contractor’s Method and Safety Statement.

The Project Supervisor Construction Stage shall standardize the format for each Sub-contractor’s information for the Safety File with the client for ease of access of information and standard of information to be submitted by all Sub-contractors.

All drawings must be in AutoCAD format as well as PDF.

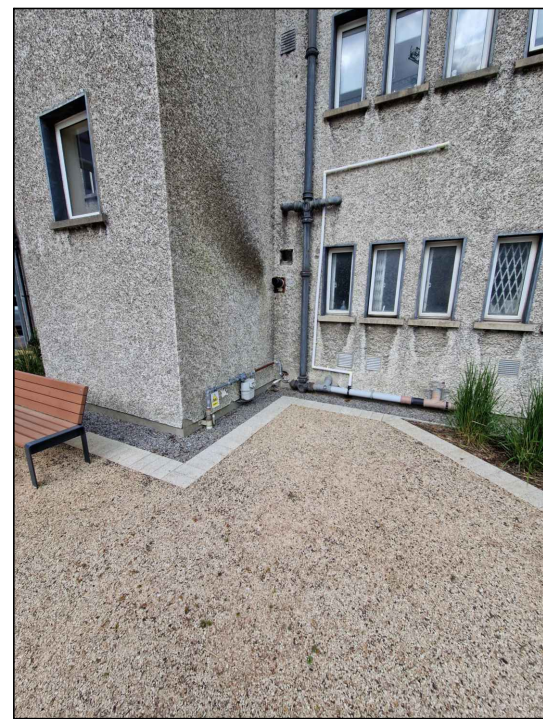
The Preliminary Safety File shall also include the following items:

1. Name and Contact details of all contractors, sub-contractors and suppliers.
2. Certification of Compliance from the main-contractor and all sub-contractors.
3. Copy of AF2 Form.
4. Known remaining hazards.
5. As built drawings, certification and data sheets/specification from all specialist contractors.
6. Detailed Operation & Maintenance Manuals for the full Mechanical & Electrical Installation. At a minimum these must include the following;
 - Introduction
 - List of suppliers and contractors
 - System Description
 - Operating Procedures
 - Schedules of Equipment
 - Maintenance Procedures
 - Handling, Installation & Storage
 - Test & Commissioning Records
 - Health & Safety Information – Residual Hazards, Hazards during decommissioning.
 - Manufactures Literature
 - As installed drawings

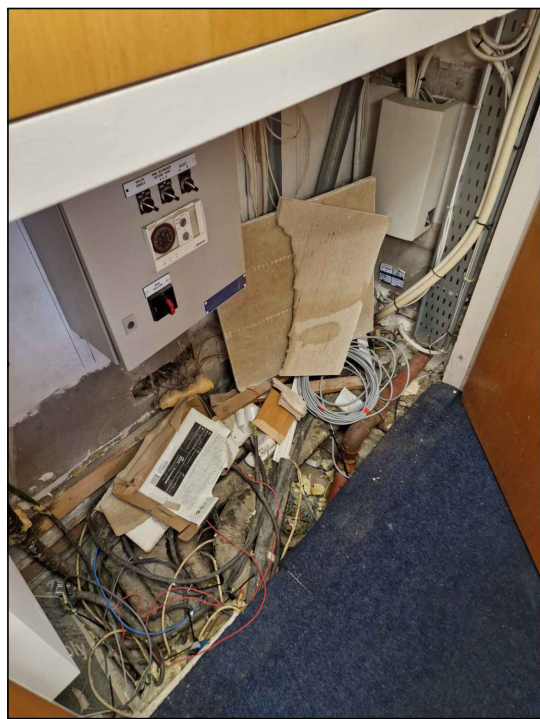
7. Certification of all Fire Safety / Emergency related work have been completed.
8. For all products and materials installed as part of these works the following documentation must be provided.
 - Manufacturer details and/or data sheets as appropriate
 - Maintenance Procedures
 - Maintenance Regime
 - Health & Safety Information – Remaining Hazards

**** 1 soft copy of all information must be provided ****

APPENDIX 3 - Drawings



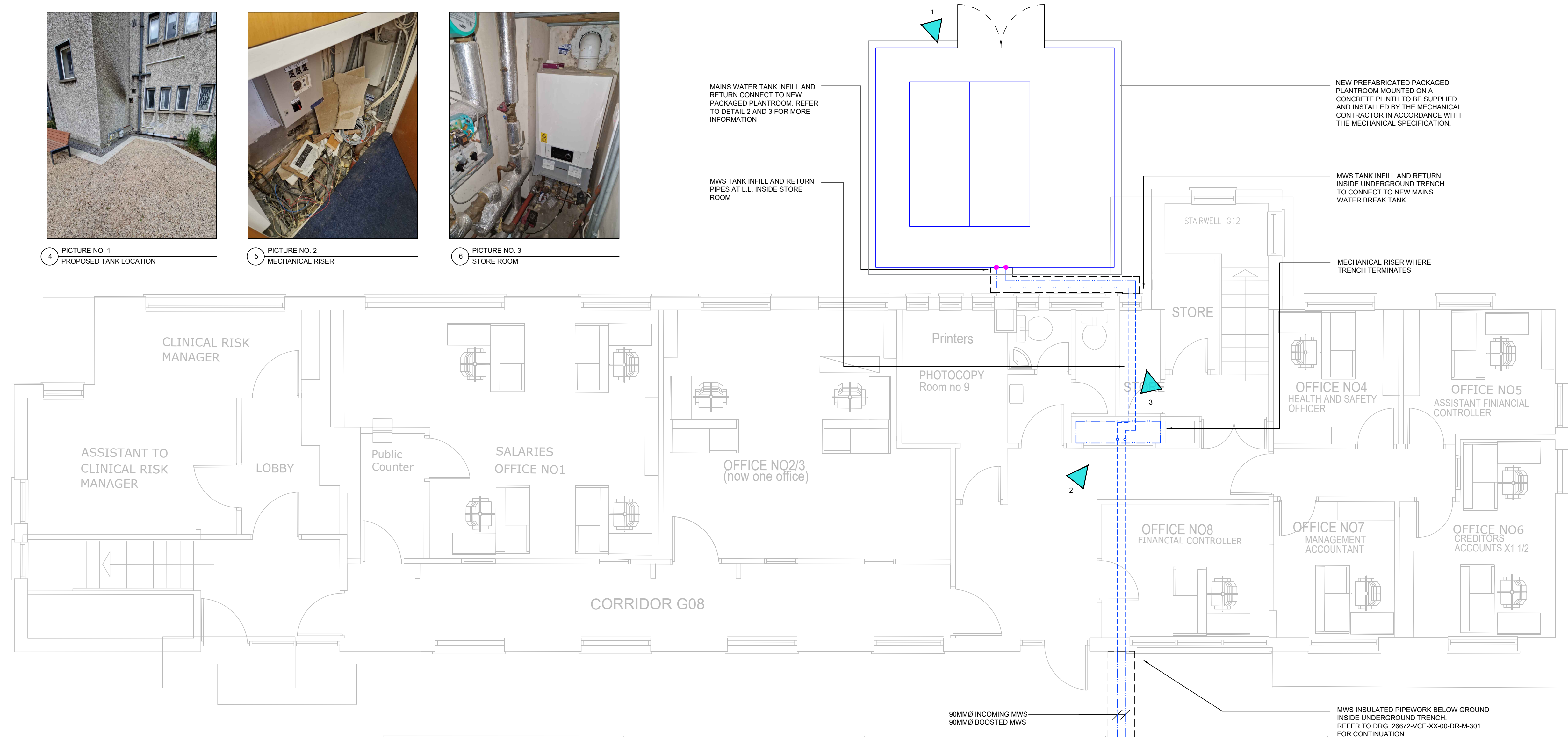
PICTURE NO. 1
PROPOSED TANK LOCATION



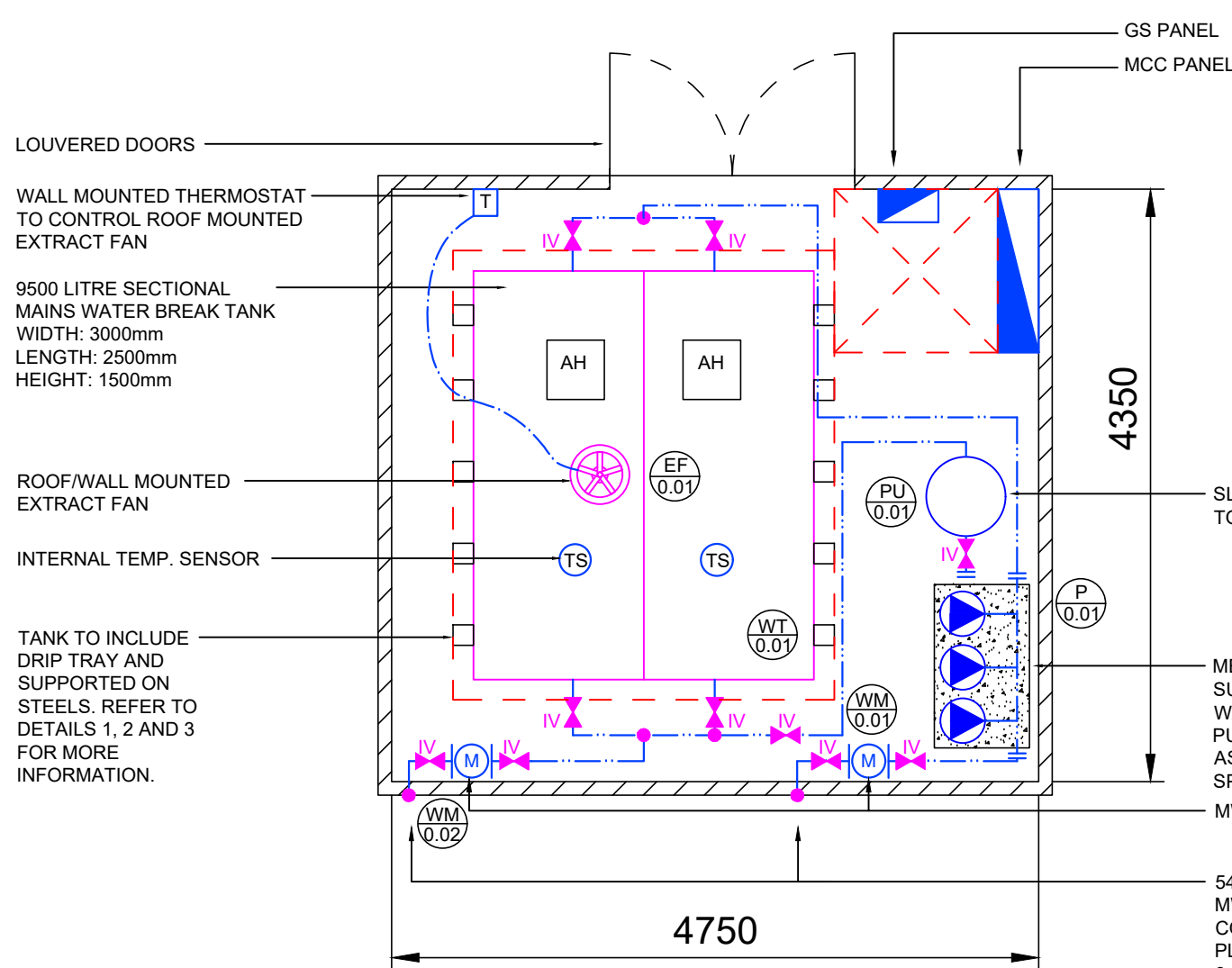
PICTURE NO. 2
MECHANICAL RISER



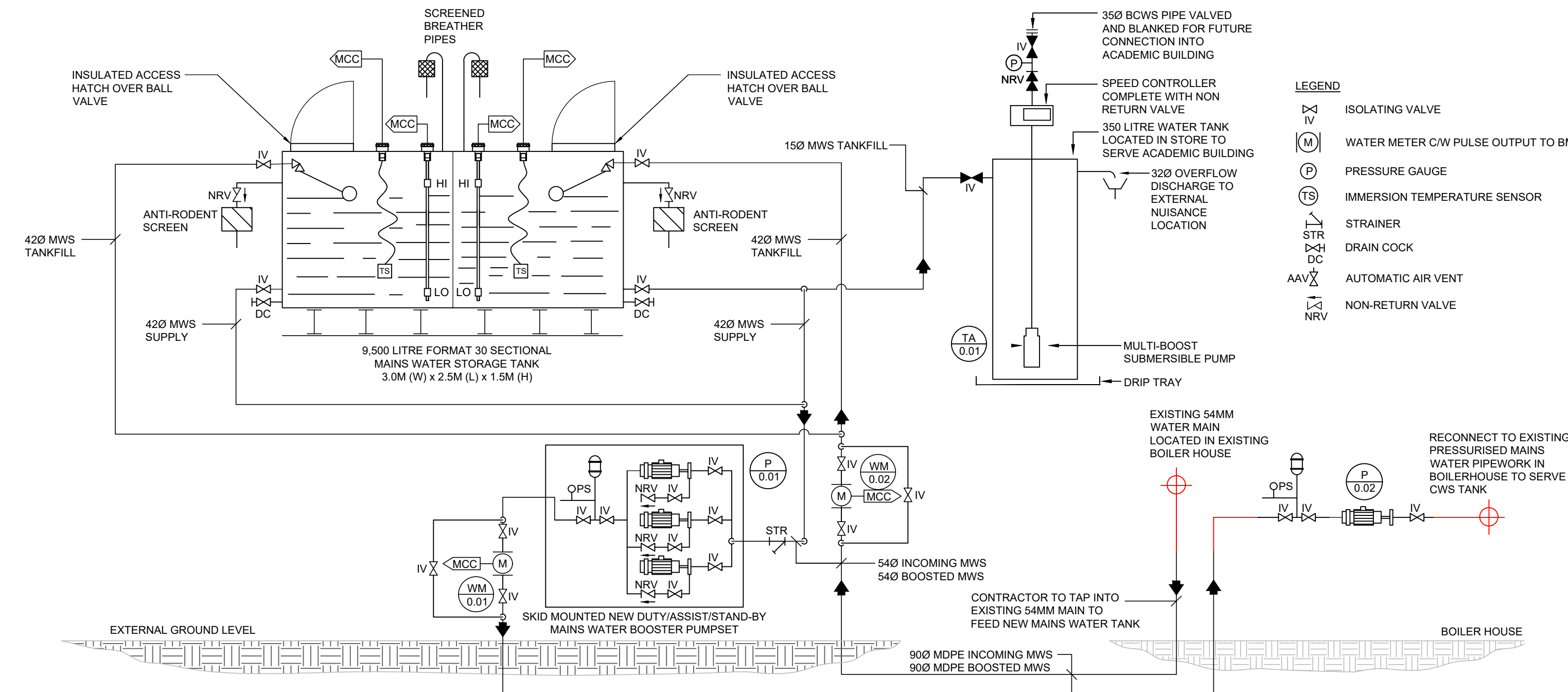
PICTURE NO. 3
STORE ROOM



1
ACADEMIC BUILDING GROUND FLOOR
1:50 (A1)



2
DETAIL NO. 1 - PACKAGED PLANTROOM
1:50 (A1)



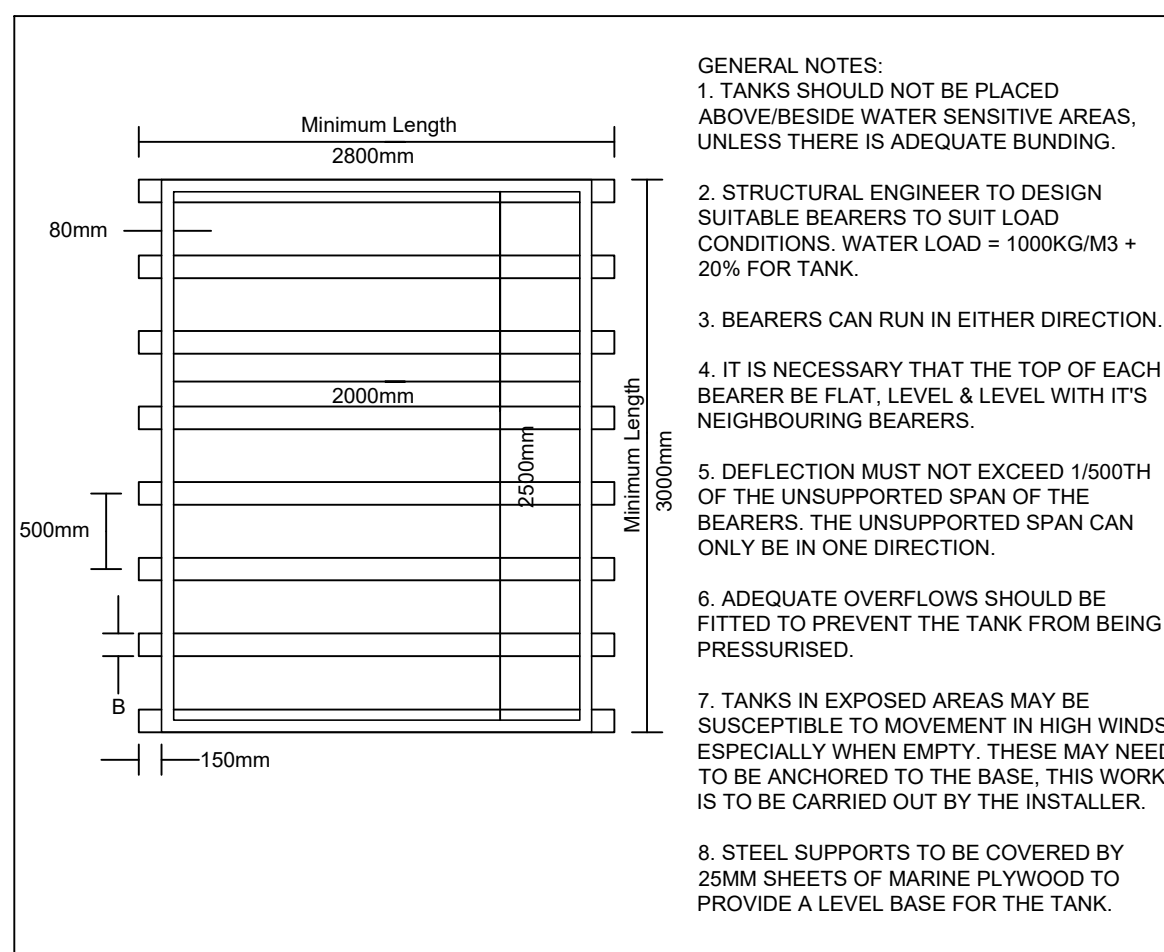
3
PROPOSED WATER SERVICES SCHEMATIC
N.T.S.

NOTES:

- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS & CONTRACT DOCUMENTS.
- THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR CO-ORDINATION OF THE MECHANICAL SERVICES FOR THE BUILDING IN CONJUNCTION WITH THE MAIN CONTRACTOR'S AND ELECTRICAL CONTRACTOR'S INSTALLATION.
- THE MECHANICAL CONTRACTOR SHALL ENSURE THAT THE INSTALLATION COMPLIES WITH LOCAL AUTHORITY CODES AND ALL OTHER RELEVANT STANDARDS.
- THE MECHANICAL CONTRACTOR SHALL ALLOW FOR ALL NECESSARY ACCESS HATCHES, ISOLATION VALVES, DRAIN COCKS, AAVs, CLEANING EYES ETC FOR MAINTENANCE OF THE MECHANICAL SERVICES INSTALLATION.
- THE CONTRACTOR SHALL ALLOW FOR THE CLEANING & FLUSHING OUT OF ALL EQUIPMENT, DUCTWORK & PIPEWORK ETC.
- ALL BUILDERS' WORK OPES TO BE COMMUNICATED TO THE MAIN BUILDING CONTRACTOR IN ADVANCE.
- THE CONTRACTOR SHALL ALLOW FOR SUPPLY & INSTALL OF FIRE COLLARS ON ALL PIPES PENETRATING FIRE RATED STRUCTURE IN COMPLIANCE WITH THE BUILDING REGULATIONS.
- THE MECHANICAL CONTRACTOR SHALL INFORM THE CLIENT & THE ENGINEER OF WORKS WHICH NEED TO TAKE PLACE OUTSIDE OF THESE AREAS.
- THE MECHANICAL CONTRACTOR WILL BE REQUIRED TO ENSURE SERVICES ARE KEPT LIVE AND OPERATIONAL WITHIN THE CLIENT OCCUPIED AREAS AT ALL TIMES.
- THE CONTRACTORS SHOULD VISIT THE SITE DURING THE TENDER PERIOD TO FAMILIARISE THEMSELVES WITH THE SERVICES AND THEREBY ALLOW IN THEIR TENDERS FOR ALL TEMPORARY WORKS NECESSARY TO KEEP THE BUILDING OPERATIONAL DURING THE CONSTRUCTION.
- THE CONTRACTOR SHALL ALLOW FOR THE ISOLATION, DRAIN DOWN AND STRIP OUT OF ANY REDUNDANT MECHANICAL SERVICES.
- ALL ISOLATION VALVES TO BE BALL LEVER TYPE.
- CARE SHALL BE TAKEN TO ENSURE THAT ALL VALVE LOCATIONS ARE READILY ACCESSIBLE.
- ALL ABOVE GROUND WATER SERVICES PIPEWORK TO BE INSULATED COPPER AS PER SPECIFICATION.
- THE MECHANICAL CONTRACTOR SHALL ALLOW FOR ALL EXPOSED WATER SERVICES PIPEWORK THROUGHOUT THE BUILDING TO BE CHROME PLATED.
- AUTOMATIC AIR VENTS TO BE FITTED AT HIGH POINTS OF THE PIPEWORK.
- ALL FINAL CONNECTIONS SHALL BE HARD PIPED. FLEXIBLE CONNECTIONS SHALL NOT BE USED UNDER ANY CIRCUMSTANCE.

LEGEND:

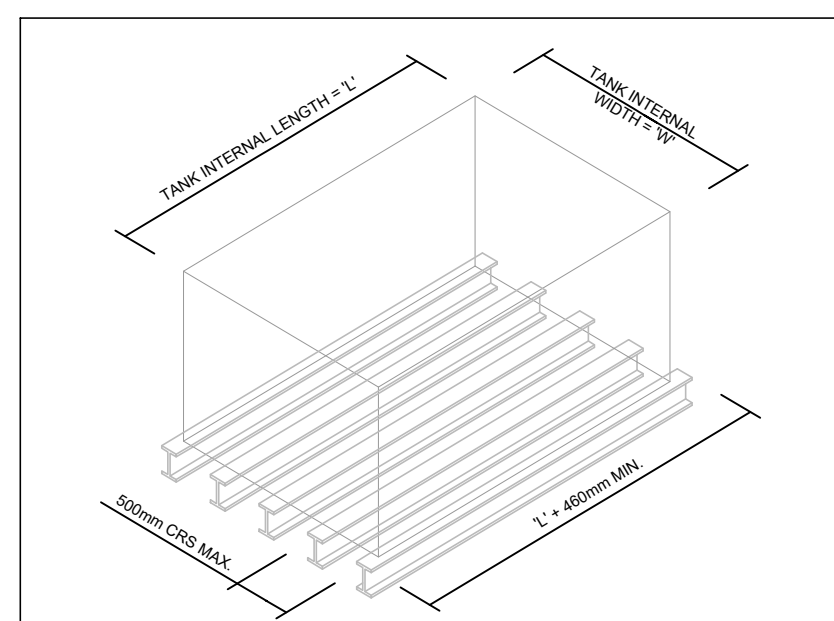
- LOW LEVEL WS PIPEWORK (EXISTING)
- LOW LEVEL WS PIPEWORK (NEW)
- MWS MAINS WATER SUPPLY
- T.A. TO ABOVE
- F.A. FROM ABOVE
- F.B. FROM BELOW
- T.B. TO BELOW
- H.L. HIGH LEVEL
- L.L. LOW LEVEL



4
DETAIL NO. 1
MAINS WATER BREAK TANK SUPPORT STEELS DETAILS

Working Space & Bearer Width			Bearer Width 'B'	
Tank Height	Dimension 'A'		mm	mm
500	450		75	
1000	450		100	
1500	500		100	
2000	600		150	
2500	650		150	
3000	700		150	

5
DETAIL NO. 2
MAINS WATER BREAK TANK SUPPORT STEELS DIMENSIONS



6
DETAIL NO. 3
MAINS WATER TANK SUPPORT STEELS MIN. DIMENSIONS

General Notes

A. DO NOT SCALE FROM THIS DRAWING - WORK ONLY FROM FIGURED DIMENSIONS.

B. ALL ERRORS & OMISSIONS TO BE REPORTED TO THE CONSULTING ENGINEER

C. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCHITECTS AND STRUCTURAL ENGINEER'S DRAWINGS.

D. REFER TO DOCUMENT REGISTER FOR DESCRIPTION OF STATUS CODES.

Rev	Status	Date	Description	D.E.
P01	A4	MAY'26	TENDER ISSUE	J.R.

Client
THE COOMBE WOMEN & INFANTS UNIVERSITY HOSPITAL

Project Title
COOMBE HOSPITAL WATER TANK UPGRADE

Drawing Title
PROPOSED WATER SERVICES LAYOUT (SHEET 1 OF 2)



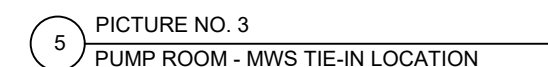
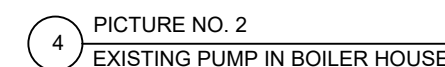
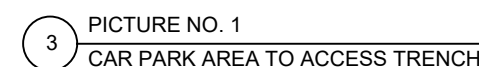
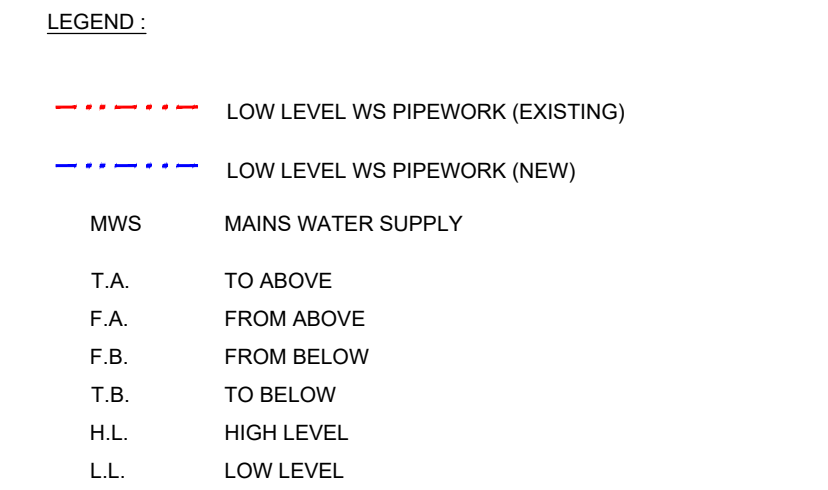
Dublin
Cork
Roscommon
Website
www.varming.ie

01 4872300
021 2375080
090 6602380

Engineering for the Future



Revision	Project Drawing Reference		
P01	26672-VCE-XX-00-DR-M-300		
Status	Date	Job Number	Scale
A4	MAY'26	26672	1:50@A1
Drawn By	Checked By	Approved by	
J.R.	A.N.	A.N.	



APPENDIX 4 –

APPENDIX 5 – Permanent and Temporary Work Certificates

Form: HSP1



Permanent Works Designer's Certificate

(For use in connection with the Safety Health and Welfare at Work (Construction) Regulations 2006 by a designer of any element(s) of the permanent works of a project, including specialist suppliers/contractors/others who design any element(s) of the permanent works. Nothing in this certificate shall be construed as imposing on the designer any liability whether in negligence, for breach of duty or otherwise that would not otherwise attach and the certificate is provided on this basis)

PSDP's Certificate Ref. No: _____

1.	Project:	
2.	Designer:	
3.	Designer's client:	
4.	Our appointment was/is in respect of: <i>(eg architectural; structural; M&E...design services)</i>	
5.	Elements/features of the permanent works which we were/are appointed to design (subject to 8 below).	
6.	Main design codes adopted: <i>(if applicable)</i>	
7.	Current project drawings and specifications <i>(schedule may be appended)</i>	
8.	Specialist suppliers/contractors/others who must design elements of the permanent works which we were/are to integrate within the overall permanent works design. <i>(if applicable; schedule may be appended)</i>	
9.	Were particular erection or construction sequencing, or particular risk control measures, which are unusual for the type of project and which would not be apparent to a competent contractor, assumed by us during design? If yes, where are these described?	☐ yes ☐ no

We hereby confirm that we have to date carried out, and will continue to carry out as necessary, the design of those parts of the works which we are appointed to design exercising reasonable professional skill, care and diligence and with due regard to our duties under the Safety Health and Welfare at Work Act 2005 and under the Safety Health and Welfare at Work (Construction) Regulations, 2006 (the 'Regulations') in that we:

1. have taken account of the General Principles of Prevention and any existing Safety File,
2. have provided the PSDP & PSCS as appropriate with relevant information as required by the Regulations, and
3. have cooperated with the PSDP & PSCS and with other designers as necessary.

Signed:

for and on behalf of (Designer)

Date:

We hereby confirm that we have coordinated the activities of the designer named above and the other designers on the project in respect of the taking account of the General Principles of Prevention during the design of the element(s) described above with due regard to our duties as PSDP under the Safety Health and Welfare at Work (Construction) Regulations, 2006.

Signed:

for and on behalf of (PSDP)

Date:

© 2010

Form: HST1



Temporary Works Designer's Certificate

(For use in connection with the Safety Health and Welfare at Work (Construction) Regulations 2006. Nothing in this certificate shall be construed as imposing on the designer any liability whether in negligence, for breach of duty or otherwise that would not otherwise attach and the certificate is provided on this basis)

PSDP's Certificate Ref. No: _____

1.	Project:	
2.	Designer:	
3.	Designer's client:	
4.	Elements/features of the temporary works for which we were/are appointed.	
5.	Main design codes adopted: (if applicable)	
6.	Drawings: (schedule may be appended)	
7.	The intended construction sequence is detailed in:	
8.	Requirements for temporary stability, propping, bearing, bracing, loading restrictions etc are detailed in:	
9.	Certificate(s) by permanent works designer(s) which we have taken particular account of in respect of its/their Item 9: (if applicable, quote the PSDP's Certificate Ref. No.)	

We hereby confirm that we have to date carried out, and will continue to carry out as necessary, the design of those parts of the works which we are appointed to design exercising reasonable professional skill, care and diligence and with due regard to our duties under the Safety Health and Welfare at Work Act 2005 and under the Safety Health and Welfare at Work (Construction) Regulations, 2006 (the 'Regulations') in that we:

1. have taken account of the General Principles of Prevention and any existing Safety File,
2. have provided the PSDP & PSCS as appropriate with relevant information as required by the Regulations, and
3. have cooperated with the PSDP & PSCS and with other designers as necessary.

We confirm we have received all information and cooperation which we required from the designer(s) noted in Item 9.

Signed:

for and on behalf of (temporary works designer)

Date:

We hereby confirm that we have coordinated the activities of the designer named above and the other designers on the project in respect of the taking account of the General Principles of Prevention during the design of the element(s) of the works described above with due regard to our duties as PSDP under the Safety Health and Welfare at Work (Construction) Regulations, 2006.

Erection of the Temporary Works may proceed, subject to the provision of a Temporary Works Method Statement agreed by the Contractor, Temporary Works Erector and PSCS as being adequate.

Signed:

for and on behalf of (PSDP)

Date:

APPENDIX 6 – AF1 FORM



An tÚdarás Sláinte agus Sábháilteachta
Health and Safety Authority

Safety, Health and Welfare at Work (Construction) Regulations 2013

Approved Form (AF 1)

Regulation 10

Particulars to be notified by the Client to the Health and Safety Authority before the design process begins

NOTE:

This form is to be used to notify of any project covered by the Safety, Health and Welfare (Construction) Regulations 2013, which will last longer than 30 days or 500 person days. It can also be used to provide changes in appointments since initial notification of projects.

Any day on which construction work is carried out (including holidays and weekends) should be counted, even if the work on that day is of short duration. A person day is one individual, including supervisors and specialists, carrying out construction work of one normal working shift.

- 1 Client:** Provide name, full address, telephone number and e-mail address for the Client. If more than one Client, please attach details of all Clients on a separate sheet.

Name: Coombe Womens and Infants University Hospital

Address: Cork Street

DUBLIN 8

Telephone: 014085200

E-Mail: info@coombe.ie

- 2 Project Supervisor Design Process and Health & Safety Coordinator:** Provide name, full address, telephone number and e-mail address for the PSDP and Health & Safety Coordinator for the Design Process.

PSDP Name: Garland

H&S C. Name:

Address: Garland House
28-30 Rathmines Park

Address:

Rathmines

DUBLIN 6

Telephone: 014964322

Telephone:

E-Mail: dublin@garlandconsultancy.com

E-Mail:

- 3 Project Supervisor Construction Stage and Health & Safety Coordinator, if know :** Provide name, full address, telephone number and e-mail address for the PSCS and Health & Safety Coordinator for the Construction Stage.

PSCS Name:

H&S C. Name:

Address:

Address:

Telephone:

Telephone:

E-Mail:

E-Mail:

- 4 Information on Construction Work:** Please provide your details of the following.

Description of Project: The project involves the installation of the new mains water break tank.

Exact Address

of Construction Site: Coombe Womens and Infants Hospital
Cork Street
DUBLIN 8

Signed: Aaron Daly

by or on behalf of the Client

Position: Graduate Safety Professional

Date: 02/06/2026

APPENDIX 7 – OTHER RELEVANT INFORMATION

Consulting Engineers

Project Management

Safety Management

International

www.garlandconsultancy.com

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