

PRELIMINARY HEALTH & SAFETY PLAN

RAHEEN GWS WATERMAIN REPLACEMENT WORKS

Client	Raheen Group Water Scheme
Supervising Engineer	Fergal Coughlan Chartered Engineer Ltd
Project	Circa 2.3 km Watermain Replacement
Principal Main	PE100 DN 110 SDR17
Document Status	Tender Stage
Date	September 2026

Prepared for tender-stage health and safety coordination in accordance with the Safety, Health and Welfare at Work (Construction) Regulations 2013.

Document Control

Revision	Date	Status	Prepared By
P01	September 2026	Tender Issue	Fergal Coughlan Chartered Engineer Ltd
Project	Raheen GWS Watermain Replacement	Client	Raheen GWS
Supervising Engineer	Fergal Coughlan Chartered Engineer Ltd	Main	PE100 DN 110 SDR17

Purpose and Status of this Plan

This Preliminary Health & Safety Plan has been prepared for the tender and pre-construction stages of the Raheen GWS Watermain Replacement Works. It identifies project-specific information, foreseeable significant hazards and design-stage control measures that should be brought to the attention of tenderers and the appointed Project Supervisor Construction Stage (PSCS). It is not a substitute for the PSCS Construction Stage Safety and Health Plan, contractor risk assessments, method statements, temporary works designs, traffic management plans or statutory appointments.

Project Roles

Role	Current Project Information
Client	Raheen Group Water Scheme
Supervising Engineer	Fergal Coughlan Chartered Engineer Ltd
Project Supervisor Design Process (PSDP)	Fergal Coughlan Chartered Engineer Ltd
Project Supervisor Construction Stage (PSCS)	To be confirmed prior to commencement- Successful Tenderer will fulfil this role.

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1.0 General Description of Project

1.1 Project Particulars

Project Title	Raheen GWS Watermain Replacement Works
Client	Raheen GWS
Supervising Engineer	Fergal Coughlan Chartered Engineer Ltd
Location	Raheen Group Water Scheme area, Co. Clare - exact work limits as shown on Contract Drawings
Approximate Length	2.3 km
Principal Watermain	PE100 DN 110 SDR17
Nature of Works	Replacement of existing watermain distribution infrastructure
Road Environment	Predominantly public road carriageway, verge and footpath environments
Asset / Approval Interfaces	Raheen GWS, Clare County Council and Uisce Éireann requirements as applicable

1.2 Project Description and Scope

The project comprises approximately 2.3 km of replacement watermain works using PE100 DN 110 SDR17 pressure pipe, together with all associated excavation, pipe laying, jointing, fittings, valves, chambers, service connections, testing, disinfection, commissioning, reinstatement and handover requirements. The works are expected to progress principally along public roads, road verges and footpaths, with localised crossings, tie-ins and customer service transfers.

- site establishment, survey, setting out and pre-construction records;
- traffic management, temporary pedestrian arrangements and Road Opening Licence compliance;
- utility record review, scanning, marking, trial holes and hand excavation around services;
- saw cutting, pavement breaking and trench excavation;
- trench support, dewatering and temporary works where required;
- supply, handling and installation of PE100 DN 110 SDR17 watermain;
- butt-fusion and/or electrofusion jointing by competent trained personnel;
- valves, hydrants, air valves, washouts/scours, chambers and marker systems where scheduled;
- transfer of existing domestic connections and new connections, including boundary boxes, meters and domestic PRVs where specified/approved;
- live-main shutdowns, tie-ins and temporary continuity-of-supply arrangements where required;
- pressure testing, flushing, disinfection, sampling and commissioning;
- permanent carriageway, footpath, verge and agricultural reinstatement;
- booster pump, bypass, pressure-control or kiosk works where included in the final Contract scope;
- as-built survey, test certificates, safety records and handover documentation.

1.3 Site Location and Adjoining Land Uses

The work corridor is expected to comprise public roads, roadside verges, footpaths, entrances to dwellings and farms, and local interfaces with private property. The Contractor shall verify the exact extents from the Contract Drawings and Road Opening Licence. Public access, property access, agricultural access and emergency access shall be maintained so far as reasonably practicable.

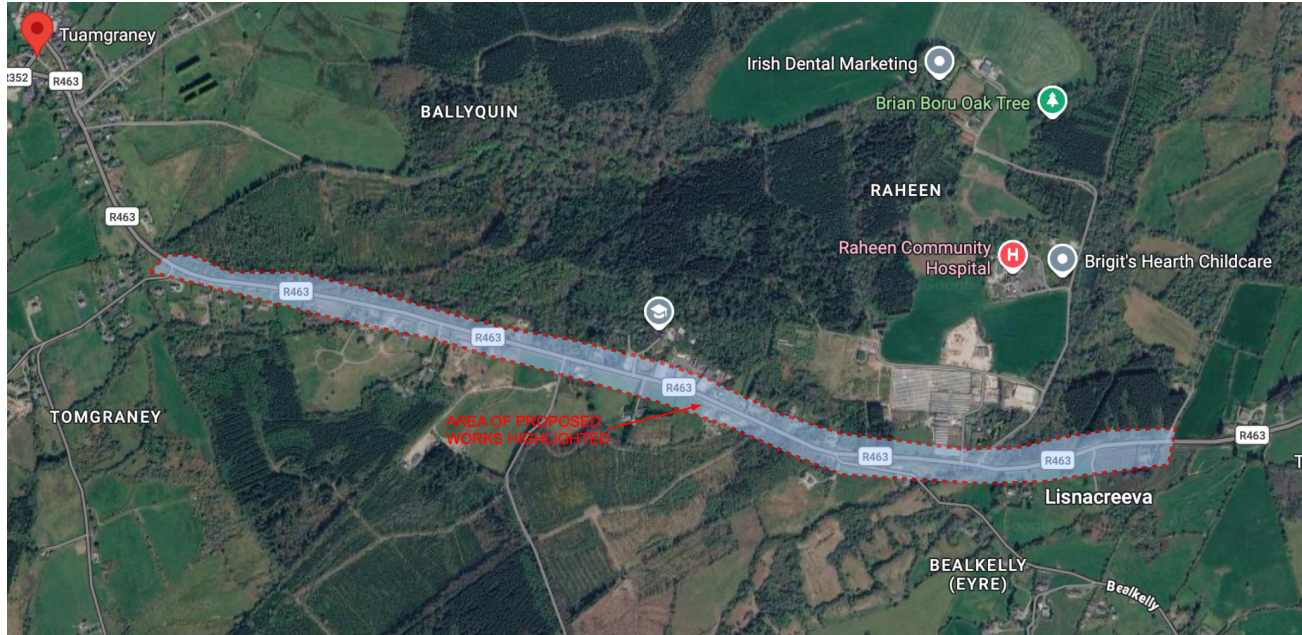


Figure 1 - Site Location / Area of Proposed Works (R463, Raheen GWS)

1.4 Site Restrictions and General Constraints

- Works are linear and mobile, requiring frequent relocation of traffic management and work zones.
- Storage of pipe, spoil and plant shall not obstruct sightlines, private entrances, pedestrian routes or emergency access.
- Parking of personnel vehicles within live traffic-management zones shall be prohibited unless specifically incorporated into the approved layout.
- Open excavations shall be minimised in length and duration and shall be securely guarded outside working hours.
- No interruption of water supply, electricity, telecommunications, drainage or other services shall occur without prior agreement with the relevant owner/operator.

2.0 Intended Project Completion Time and Programme

2.1 Programme Information

Tender / Pre-construction Stage	September 2026 onwards
Anticipated Start	To be confirmed by Client / appointed Contractor
Anticipated Completion	To be confirmed
Contract Duration	To be confirmed from accepted Works Programme
Normal Working Hours	Subject to Contract, Road Opening Licence and local authority restrictions
Out-of-hours Working	Only by prior approval where required

2.2 Sequencing Requirements

The Contractor shall develop a detailed programme that limits simultaneous open excavations, coordinates service transfers and shutdowns, and allows pressure testing/disinfection to be completed without compromising existing supply. Activities affecting traffic, private access, schools/businesses or sensitive receptors shall be programmed to reduce disruption.

2.3 Temporary Works and Hold Points

- approval of traffic management layout before road occupation;
- utility detection and trial-hole verification before mechanical excavation;
- inspection of trench formation, bedding and pipework before covering;
- approval of live-main shutdown/tie-in plan before isolation;
- approved pressure-test procedure before testing;
- water-quality clearance before placing new main into permanent service.

3.0 Known Existing Services

Existing service information shall be treated as indicative only. The Contractor shall obtain current records from relevant utility owners and carry out site detection and verification before excavation. Likely services include electricity, telecommunications, existing watermains and services, road drainage, culverts, private supplies and agricultural drains.

Service / Hazard	Foreseeable Issue	Minimum Pre-start Action	Residual Requirement
Existing watermains	Pressurised main strike; flooding; loss of supply	Confirm route/depth, trial hole at tie-ins, shutdown plan	Hand dig around exposed live main; isolate only with approval
Electricity - overhead	Plant contact / arcing	Survey route; identify exclusion zones	Use trained banksman and safe plant clearances
Electricity - underground	Electrocution / arc flash	Current records, CAT/Genny or equivalent, trial holes	Hand excavation within tolerance zone
Telecommunications	Service interruption	Records, detection and trial holes	Protect/support exposed ducts/cables
Drainage / culverts	Flooding, undermining, confined-space risk	Survey crossings and outfalls	Specific method statement for crossings/chambers
Private services / land drains	Unrecorded strikes	Consult landowners and inspect site	Record and reinstate affected services

4.0 Other Work Activities and Interfaces

Other activities may occur adjacent to the works, including local authority road maintenance, utility works, agricultural operations, deliveries, residential access and routine GWS operational activities. The PSCS shall coordinate interfaces so that one contractor's traffic management, excavation or isolation does not create a hazard for another.

4.1 Public and Third-Party Interfaces

- moving public traffic adjacent to work zones;
- pedestrians, cyclists and vulnerable road users;
- residents entering/exiting properties through or beside the work zone;
- farm machinery and livestock movements;
- school buses, refuse collection, deliveries and emergency vehicles;
- utility-owner attendance for isolations, diversions or service repairs.

5.0 Particular Risks and Design Risk Controls

The following schedule is a non-exhaustive design-stage risk register. The PSCS and contractors remain responsible for construction methods, detailed risk assessments, temporary works, competence, supervision and safe systems of work.

Hazard / Activity	Principal Risk	Design / Pre-construction Control	Residual / Construction Requirement
Live traffic and mobile road works	Impact by vehicles; collision with plant; unsafe pedestrian diversion	Use site-specific Traffic Management Plan; maintain appropriate lane/pedestrian provision; barriers, cones, advance warning, temporary signals/Stop-Go as approved; competent traffic-management personnel.	PSCS to inspect and adapt layouts as work progresses; Road Opening Licence conditions take precedence.
Excavation / trench collapse	Burial, crush injury, falls into excavation	Limit open trench; assess ground; use trench boxes/shoring/battering as required; keep spoil/plant back; safe access/egress; barriers and edge protection.	Temporary works design/inspection by competent person where support systems are required.
Underground services	Electrocution, explosion, flooding, service loss	Obtain records, scan, mark and prove by hand-dug trial holes. No mechanical excavation until services are verified.	Treat records as indicative; stop work on unidentified service.
Overhead electricity	Contact/arcing from excavator, lifting operations or pipe handling	Identify crossings; goalposts/exclusion zones where needed; banksman; select plant and lifting method to maintain safe clearances.	Coordinate with ESB Networks where risk cannot be controlled by separation.
Handling PE pipe and fittings	Struck-by, stored energy, manual handling, unstable pipe stacks	Use mechanical aids, certified lifting accessories, chocks/restraints and manufacturer handling guidance.	Control coiled pipe release and lifting zones.
PE butt/electrofusion	Burns, electrical hazards, hot surfaces, poor-quality joints	Competent trained jointers; guarded/calibrated equipment; dry clean work area; fusion procedures; PPE.	Maintain joint records and inspection regime.
Live watermain tie-ins / shutdowns	High pressure release; flooding; contamination; interruption to consumers	Approved connection plan; verify valves and pressure; isolate/depressurise; clean/disinfect fittings; contingency fittings and communications.	No tie-in until asset owner/Engineer authorises shutdown.
Pressure testing	Stored energy, failure of caps/fittings, uncontrolled movement	Engineered temporary restraints; calibrated equipment; exclusion zone; fill/vent correctly; no adjustment under pressure.	Approved test procedure and competent test supervisor.
Disinfection / chlorination	Chemical exposure; environmental harm from discharge	COSHH-style chemical assessment; SDS; dosing controls; PPE; controlled dechlorination/disposal where required.	Water-quality clearance required before commissioning.
Valve/hydrant/chamber construction	Lifting injuries, unstable precast units, confined access	Mechanical lifting plan; certified lifting points; avoid entry where possible; safe excavation support.	Any confined-space entry subject to specific assessment and permit system.
Road and footpath reinstatement	Hot bitumen, compaction plant, traffic interface, silica/dust	Segregate public; safe plant reversing; PPE; dust suppression/cutting controls; coordinate machine-laying operations.	Reinstatement to Road Authority requirements.
Booster pump / kiosk / electrical works (if included)	Electrical shock, lifting, pressure-system hazards, restricted access	Competent electrical contractor; isolation/LOTO; designed lifting; adequate maintenance space; pressure relief/control provisions.	Final pump-station risk assessment to follow approved mechanical/electrical design.
Domestic meters / boundary boxes / PRVs	Small excavations in public footways, manual handling, water hygiene	Secure pedestrian route; clean potable-water components; correct chamber/cover installation; avoid open unattended excavations.	Install only at approved locations/details.
Working near watercourses / drainage	Drowning, slips, pollution, sudden water ingress	Edge protection where required; rescue provisions; pollution-control measures; weather monitoring.	Specific method statement for bridge/culvert/watercourse interfaces.
Noise, vibration and dust	Hearing damage; nuisance; respiratory exposure	Maintain plant; hearing/dust controls; wet cutting; limit idling; schedule noisy work appropriately.	Monitor complaints and sensitive receptors.
Biological hazards / contaminated water	Weil's disease and water-borne illness	Hygiene facilities; cover cuts; gloves; washing; information/training.	Seek medical attention following suspected exposure.

6.0 Safety Legislation, Standards and Guidance

The Works shall be carried out in accordance with applicable Irish safety legislation and the conditions of the relevant road and utility authorities. The following list is intended as a project baseline and is not exhaustive.

- Safety, Health and Welfare at Work Act 2005.
- Safety, Health and Welfare at Work (Construction) Regulations 2013, S.I. No. 291 of 2013, as amended.
- Safety, Health and Welfare at Work (General Application) Regulations 2007, as amended.
- Health and Safety Authority guidance applicable to construction, excavation, underground services, work equipment, lifting and traffic management.
- Department of Transport / road authority requirements for temporary traffic management and Chapter 8 roadworks arrangements, together with the Road Opening Licence.
- Applicable Uisce Éireann water-infrastructure requirements for potable watermain construction, pressure testing, disinfection, connections and commissioning.
- Manufacturer instructions for PE pipe, fusion equipment, valves, pumps, pressure equipment and chemical products.

6.1 Welfare

The PSCS shall ensure suitable and sufficient welfare facilities are provided from commencement and maintained for the duration of the works, including sanitary facilities, hand washing, drinking water, facilities for meals/rest, drying/change arrangements and first aid appropriate to a linear roadworks project.

7.0 Continuing Liaison and Design Change

The Supervising Engineer, Client, PSCS and Contractor shall maintain ongoing liaison where unforeseen conditions or proposed changes may alter the risk profile. No significant design or construction-method change should proceed without review of its health and safety implications.

- unrecorded services or materially different service depths;
- rock, unstable ground, groundwater or contaminated material;
- need for deeper excavation or different trench support;
- change in pipe alignment, crossing method or traffic-management arrangement;
- unexpected high pressure or inability to isolate an existing main;
- need for out-of-hours work or extended road closure;
- change to booster-pump, PRV or pressure-control design;
- new interface with third-party works or landowners.

8.0 Project-Specific Safety Requirements

8.1 Traffic Management

A site-specific Traffic Management Plan shall be prepared by the Contractor/PSCS before occupation of the public road. The plan shall address approach speeds, available road width, visibility, work-zone length, pedestrian routes, property access, temporary signals or Stop-Go control, working vehicle access and safe relocation of the mobile work zone.

8.2 Excavation Control

Excavation support shall be selected for actual ground conditions. No person shall enter an unsupported excavation where collapse is foreseeable. Daily and event-driven inspections shall be recorded, including after heavy rain, ground movement or alteration of support.

8.3 Water Hygiene

Potable-water components shall be stored capped and clean. Tools and fittings used for final connections shall be clean and disinfected as required. Open pipe ends shall be sealed whenever work stops. Muddy or flood-contaminated trenches shall not be allowed to contaminate the new main.

8.4 Live Main Connection and Consumer Continuity

Tie-ins shall be subject to an agreed isolation plan. The Contractor shall verify valves, prepare all fittings in advance, notify affected parties and provide contingency arrangements for failed isolation or unforeseen pipe materials. Supply interruptions shall be kept as short as practicable.

8.5 Pressure Testing and Commissioning

Test sections, pressures, temporary restraints and exclusion zones shall be defined in the approved test procedure. Following successful pressure testing, flushing, disinfection and water-quality clearance shall be completed before the new main is placed into permanent service.

9.0 Information Required from the PSCS / Contractor

- Construction Stage Safety and Health Plan before commencement.
- Organisation chart, competent-person appointments and emergency contacts.
- Detailed works programme and sequence.
- Site-specific Traffic Management Plan and traffic-management drawings.
- Utility records, detection results and trial-hole records.
- Risk assessments and method statements for trench excavation, PE jointing, lifting, live connections, pressure testing, disinfection and reinstatement.
- Temporary works designs/checks for trench support, road plates, lifting points or other engineered temporary measures.
- Plant inspection records and statutory lifting-equipment certification.
- PE jointing competence records and equipment calibration.
- Chemical safety data and disinfection procedure.
- Environmental controls, spill response and waste-management arrangements.
- Pressure-test, disinfection, water-quality and commissioning records.
- As-built drawings and residual-risk information for the Safety File.

10.0 Emergency, Environmental and Public Protection

Scenario	Minimum Preparedness	Key Action
Utility strike	Utility emergency numbers, isolation knowledge, first aid, exclusion controls	Stop work, protect public, raise alarm, contact utility and Engineer.
Watermain burst / flooding	Pumps, barriers, isolation plan, drainage awareness	Stop excavation activity, isolate where authorised, prevent entry to flooded excavation. Repair when safe to do so.
Excavation collapse	Rescue plan; do not rely on unplanned entry	Raise emergency services; prevent secondary collapse; no uncontrolled rescue entry.
Traffic collision	Traffic-management emergency procedure	Protect scene, contact emergency services/Gardaí, preserve safe route.
Chemical spill / chlorinated discharge	Spill kit, SDS, controlled containment	Stop source, contain, protect drains/watercourses, notify as required.
Electrical incident	Isolation knowledge and emergency contacts	Do not approach live plant/lines; isolate by competent authority.

10.1 Public Protection

Barriers shall positively prevent access to open excavations and operating plant. Pedestrian diversions shall be stable, accessible and clearly signed. Temporary ramps, plates or covers shall be designed and secured for the loads imposed. Work areas shall be left safe at the end of each shift.

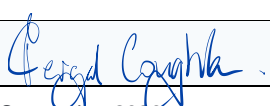
11.0 Residual Risk Register

Ref	Residual Risk	Location / Activity	Information to Pass Forward	Owner
RR01	Unrecorded underground services	Entire route	Utility records are indicative; verify before every excavation	PSCS / Contractor
RR02	Live pressurised water infrastructure	Tie-ins / existing connections	Approved isolation and connection plan required	PSCS / GWS / Contractor
RR03	Traffic exposure	Public road corridor	Site-specific TMP and mobile-zone inspections	PSCS
RR04	Variable ground / excavation stability	Trenches and chambers	Support based on observed conditions; inspect daily	PSCS / Contractor
RR05	Pressure-test stored energy	Test sections	Engineered restraints and exclusion zones	PSCS / Contractor
RR06	Water hygiene / contamination	New main and connections	Clean handling, disinfection and water-quality clearance	Contractor / GWS
RR07	Bridge / culvert / watercourse interface where present	Local crossings	Specific design and method statement required	Designer / PSCS
RR08	Booster/pressure-control equipment if included	Pump kiosk / pressure assets	Electrical/pressure-system residual hazards to Safety File	Designer / PSCS

12.0 Tender-Stage H&S Submission Checklist

Item	Tenderer / PSCS Response	Status
Named proposed PSCS and competent site management		☐
Outline Construction Stage Safety & Health Plan		☐
Traffic-management strategy		☐
Utility locating and safe-dig methodology		☐
Trench support / excavation strategy		☐
PE fusion competence and quality controls		☐
Live-main connection / shutdown strategy		☐
Pressure testing and commissioning methodology		☐
Water hygiene / disinfection methodology		☐
Emergency arrangements		☐
Environmental and waste controls		☐
Programme and proposed working hours		☐

Sign-Off / Issue Record

Prepared by	Fergal Coughlan Chartered Engineer Ltd
Role	Supervising Engineer
Signature	
Date	September 2026

Disclaimer: This document is preliminary and is based on information available at tender/pre-construction stage. The PSCS shall develop and maintain the Construction Stage Safety and Health Plan to reflect actual site conditions, contractor methods, temporary works and information arising during construction.