# OFFICE OF PUBLIC WORKS
# & CORK COUNTY COUNCIL

# FERMOY SOUTH EAST AND SOUTH WEST DRAINAGE SCHEMES

# PUMPING STATIONS EICA UPGRADE AND O&M CONTRACT

## PRELIMINARY SAFETY AND HEALTH PLAN

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**PRELIMINARY SAFETY & HEALTH PLAN**

This Preliminary Safety and Health Plan has been prepared in accordance with Article 12(1)(a) of SI 291 of 2013 of the Safety, Health and Welfare at Work (Construction) Regulations 2013.

## 1 GENERAL DESCRIPTION OF PROJECT

*1.1 Project Name :*

Fermoy South East and South West Drainage Schemes – Pumping Stations EICA Upgrade and O&M Contract

*1.2 Project Reference:*

2961

*1.3 Client:*

Commissioners of Public Works in Ireland

*1.4 Project Supervisor Appointed for Design Process:*

*T.J.O'Connor & Associates*

*1.5 Project Description:*

This contract provides for the operation and maintenance of the four pumping stations and associated control equipment and generators along the South banks of the Munster Blackwater River in Fermoy.

It also includes for some EICA upgrade works to take place to improve the operation functionality of the pumping stations.

*1.6 Site Location*

Fermoy Town (South of the Blackwater River)

*1.7 Drawings/Specifications*

Drawings / Specifications prepared by Haskoning / T.J.O'Connor & Associates.

*1.8 Intended Contract Commencement Date*

Q3 2026

*1.9 Intended Contract Completion Date*

Q2 2029/2030/2031, depending on which timeline option is chosen by the Employer.

*1.10 Basis for Timeframe*

Fixed duration O&M period

*1.11 Site for Contractors and Engineers Representatives Accommodation*

Space at existing Pumping Station sites.

## 2 KNOWN EXISTING ENVIRONMENT AND ANY RELATED RESTRICTIONS

*2.1 Known Existing Underground Services*

The works do not involve any underground excavations but as-built drawings of the services effecting this contract have been provided in Appendix A3 and A4.

When any cranes are brought in to lift pumps the Contractor shall assess the proposed crane support and loading to confirm it will not damage the existing underground services.

*2.2 Known Existing Overground Services (Visible or Hidden)*

There are no overhead lines present at the pumping stations.

*2.3 Known Available Drawings or Safety File Prepared for Any Existing Structures*

The current O&M Manual including the As-Built Drawings have been provided within Volumes A2 and A3 all of which are extracts from the Safety File.

*2.4 Restrictions of Working Hours*

*Lane and* Road closures shall be minimised.

*2.5 Relevant Adjoining Land Uses*

Amenity, commercial, residential, industrial and agricultural.

*2.6 Restrictions and difficulties Concerning Site Access, Layout, etc.*

The Storage, Transport and Installation will be completed within public roads where only certain lane closures/traffic restrictions will be permitted.

*2.7 Restrictions relating to surrounding Land Uses*

Existing usage of the Blackwater River for angling, rowing and other activities shall be maintained at all times.

*2.8 Restrictions Relating to Phasing of Works*

Restrictions relating to maintenance works during Flood Events.

*2.9 Any Other Known Restrictions*

Flood barriers may be installed at the same time as works on the Pumping Stations which may affect access and must be coordinated.

There are a number of particular risks at the pumping stations which must be borne in mind by the Contractor including:

1. The pumping stations have high voltage power lines entering them and also have generators present at some of the pumping stations. The power lines are located within both over ground and underground routes. The Contractor shall put in place a controlled lock out/tag out / isolation procedures while completing any O&M works both for mains power but also to prevent unexpected start up of the power generators.
2. The upgrade works include many modifications to the existing control panels, HMI's and controls causing a risk of electrocution during these works. The Contractor shall put in place a controlled lock out/tag out / isolation procedures while completing any such works both for mains power but also to prevent unexpected start up of the power generators.
3. The Mill Road generator supplies power not only to the Mill Road Pumping Station but also to 2 remote pumping stations, i.e. O'Neill Crowley Quay and also Ashe Quay Pumping stations
4. Ashe Quay control panel supplies power to both the OPW Pumping station and control system but also to the Cork County Council (CCC) toilet block and tourist office. Careful co-ordination is required between the Contractor and CCC to minimise the risk of electrocution.
5. There are a number of health hazards associated with the Foul and storm sumps included in this contract, including but not limited to:
   • Possibility of contracting hepatitis, Weils disease, etc.
   • Possibility of needles or other sharp objects in sewage.
   • Possibility of hydrogen sulphide, methane and other harmful gases.
   All personnel involved in the works should have adequate training and any necessary inoculations.

   The Contractor will need to consider the possibility that his cleaning methods may result in faecal and/or biological matter, which may have adhered to surfaces as a result of contact with sewage over the years, becoming airborne and implement appropriate mitigation measures.

   Potable water sources available at all pumping stations to assist in any cleaning required.

## 3 SITE OCCUPATION OR WORK ACTIVITIES BY THE CLIENT OR OTHERS

*3.1 General Details of Site Occupation (if partly or fully occupied) by the Client or Others*

The Employer has a right of entry upon lands in the ownership of others for the purpose of the erection of the temporary defence structures or any other works associated with this scheme.

*3.2 Other contracts which may affect the Works*

- Routine maintenance of sewers and drains by Local Authority / landowners.
- Road maintenance works on roadways and footpaths by NRA / Local Authority - Diversion and other works on their services by the various service authorities.
- Installation of flood barriers.

## 4 INFORMATION ON THE PRESENCE OF PARTICULAR RISKS TO SAFETY & HEALTH

The following is the non exhaustive list of particular risks to the safety and health of persons as set out in Schedule 1 of 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 may arise out of working methods which are at the discretion of the Contractor and as such cannot be determined by the Project Supervisor for Design Process.

*4.1 Works which puts persons at work at risk of burial under earthfalls, engulfment in swampland or falling from a height, where the risk is particularly aggravated by the nature of the work or processes used or by the environment at the place of work or site:*

| | |
|---|---|
| 4.1.1 Falling from a height | As far as it is known, the project does not involve any particular risks beyond what would be regarded as normal risks. These risks include :<br>- Working over and within the deep Pumping Station sumps. |
| 4.1.2 Burial Under Earthfalls | None known |
| 4.1.3 Engulfment in Swampland | Particular care must be taken to provide the necessary supports to the works adjacent to / in :<br>- All works carried out within and adjacent to the Blackwater River and Mill race channel<br>Otherwise, as far as it is known, the works associated with the Project do not involve any particular risks beyond those which would be considered normal risks arising from such activities. |

*4.2 Work which puts persons at risk from chemical or biological substances constituting a particular danger to the safety and health of such persons or involving a statutory requirement for health monitoring:*

Work may be carried out in the proximity of gases arising from the presence of raw sewage from the pumping stations. These gases can have a detrimental health effect if the exposure time is sufficiently long and/or the concentration of gases is high enough. In addition, these gases can be explosive in certain conditions.

*4.3 Work with ionising radiation requiring the designation of controlled or supervised areas as defined in Directive 92/29/Euratiom*

None that would not be evident and reasonably deducible from drawings or other support documentation to a competent Project Supervisor (Construction Stage)

*4.4 Work near high voltage power lines*

Electricity supply cables - overground and underground high and low voltage cables are present throughout the site but not above the barriers to be installed. If the Contractor intends to have a working method that requires work in the vicinity of any cables they must comply with the Utility guidelines.

*4.5 Work exposing persons at work to the risk of drowning*

All works to be carried out in the floodplain and adjacent to the Blackwater River and also works are over and within deep pumping station sumps.

*4.6 Work on wells, underground earthwork and tunnels*

None Known.

*4.7 Work carried out by divers at work having a system of air supply*

None that would not be evident and reasonably deducible from drawings or other support documentation to a competent Project Supervisor (Construction Stage)

*4.8 Work carried out in a caisson with a compressed air atmosphere*

None that would not be evident and reasonably deducible from drawings or other support documentation to a competent Project Supervisor (Construction Stage)

*4.9 Work involving the use of explosives*

None that would not be evident and reasonably deducible from drawings or other support documentation to a competent Project Supervisor (Construction Stage).

*4.10 Work involving the assembly or dismantling of heavy prefabricated components.*

The pumping station operation will require lifting in/out of heavy components such as pumps, generators, etc. Risk of instability / collapse of mobile crane or similar equipment due to unstable supporting ground, incorrect assessment of lifting loads, or underground service causing ground weakness. Contractor to assess existing ground conditions and underground service information to reduce the risk of ground weaknesses. Contractor to also consult the Safety File and equipment suppliers for information on the equipment loading.

Otherwise, none that would not be evident and reasonably deducible from drawings or other support documentation to a competent Project Supervisor (Construction Stage).

## 5 CONTINUING LIAISON

*5.1 Procedures for Dealing with Unforeseen eventualities during the project execution resulting in substantial design change and which might affect particular risks, contract period, or have other safety and health liabilities*

Any unforeseen eventualities that become apparent to the Contractor/PSCS that may necessitate a change to the permanent design must be communicated to the PSDP and Employers Representative immediately. The Contractor/PSCS shall provide detailed information of the occurrence.

Project Supervisor Design Process to assess and advise of any change and any further risk considerations arising from the occurrence.

*5.2 Procedure for considering the safety and health implications of design elements and where appropriate communicating these to the Project Supervisor (Construction Stage)*

Discussion at site meetings of any issues arising, leading where necessary to further consideration as per 5.1 above.

## 6 THE DESIGN RESPONSIBILITIES

*6.1 The Client*

Commissioners of Public Works in Ireland.

*6.2 The Civil Engineering Consultant*

Haskoning / T.J.O'Connor & Associates Joint Venture

*6.3 The Main Contractor*

tbc

## 7 SIGNED ON BEHALF OF T.J.O'CONNOR & ASSOCIATES

The information contained in this Preliminary Safety and Health 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.