

CONSTRUCTION RISK ASSESSMENT

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| Site: | Sefton Meadows Ext No 2 |
| Project: | Installation of replacement surface water pump system |
| Brief description of the works: | Turnkey project for the design, supply, and installation of a replacement pump system for the existing redundant pump system. |

# RISK MATRIX

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| --- | --- | --- | --- | --- | --- | --- |
|  |  | **Severity** | | | | |
|  |  | **1**  **Minor injury** | **2**  **Injury requiring first aid** | **3 Reportable injury** | **4**  **Major injury** | **5**  **Fatality** |
| **Likelihood** | **1 Remote** | **1** | **2** | **3** | **4** | **5** |
| **2 Unlikely** | **2** | **4** | **6** | **8** | **10** |
| **3 Likely** | **3** | **6** | **9** | **12** | **15** |
| **4 Probable** | **4** | **8** | **12** | **16** | **20** |
| **5 Certain** | **5** | **10** | **15** | **20** | **25** |

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| --- | --- | --- | --- | --- |
| **Risk Rating** | **Low** | **Medium** | **High** | **Very High** |

Based upon the following Risk Assessment these works have been classified as:

* Low risk 🞏
* Medium risk 🞏
* High risk 🗹 **Due to working at height**
* Very High risk 🞏

The Contractor is expected to put into place mitigation measures to protect against the risk identified.

| Ref | | Hazard | Risk | | Persons at Risk | Rating (L x S = R) | | | Mitigation measures |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| L | S | R |
| 1.1 | Existing Environment – Works within the curtilage of a former landfil site | | | Landfill site emissions – Landfill gas (fire and explosion)  Landfill leachate (contaminated surface water)  Risk of Weil’s disease | Contractor | 1 | 3 | 3 | H&S advice for a contractor working on a former landfill site included in the Contractor Information Pack. |
| 1.2 | Existing Environment – Works within the curtilage of a former landfill site – Farming operations | | | Damage to arable crops and conflict with farmer. Active farm machinery. | Contractor | 1 | 5 | 5 | The former landfill site is an active arable farm and moving machinery is to be anticipated. The Contractor shall restrict all activities to within the confines of the pump station and shall not encroach onto the farmland without the Authorities consent. |
| 1.3 | Existing Environment – No shelter from weather conditions | | | Exposure to the elements | Contractor | 2 | 1 | 2 | The brick motor housing provides the only shelter from the elements, however there is no heating this is not considered appropriate use. The Contractor shall make provision for suitable shelter as required. Details are to be included in the Contractor’s Construction Phase Plan (CPP). |
| 1.4 | Existing Environment – No welfare facilities | | | Lack of potable water and WC facilities | Contractor | 2 | 2 | 4 | The Contractor is responsible for providing suitable welfare facilities. Details are to be included in the Contractor’s CPP. |
| 2.1 | Vehicular access through the HWRC – delivery of materials and manoeuvring through site | | | Road traffic accident. | Contractor  Member of public  Operational staff | 2 | 2 | 4 | Contractor is required to adhere to the predetermined access route through the HWRC and abide by the posted highway signs.  Traffic is restricted to a max speed of 5mph.  Contractor shall ensure that any abnormal loads are marshalled through the site.  The Contractor shall give advance notice of all their traffic movements through the HWRC to the site operative. |
| 2.2 | Vehicular access through the HWRC – striking overhead services | | | Electrocution  Damage to services | Contractor  Member of public | 1 | 5 | 5 | Contractor shall be aware of overhead services at the HWRC, and shall adhere to the predetermined traffic routes at all times. Abnormal loads shall be marshalled through the HWRC. |
| 2.3 | Vehicular access through the HWRC – Steep incline with 90o turn | | | Overturn high sided vehicle | Contractor | 1 | 4 | 4 | Traffic is restricted to a max speed of 5mph.  Contractor shall ensure that any abnormal loads are marshalled accordingly.  Contractor shall satisfy themselves as to the nature of the access before committing to delivery of any materials etc. |
| 2.4 | Vehicular access along the stone track | | | Road traffic accident | Contractor  Member of the public | 1 | 3 | 3 | Contractor traffic shall remain on the stone track at all times.  Traffic is restricted to a max speed of 5mph  The trackway is open to the public and the Contractor shall give all due courtesy and give way to any pedestrians along the access route. |
| 3.1 | Existing services - Accidental contact with electrical cables | | | Electrocution | Contractor | 1 | 5 | 5 | Details of the route of the underground electrical cable are included in the tender documents Appendix 1.  It is understood that no excavations will be required as part of these works. The electrical connection for the new pump control panels etc. shall be made via the existing incoming electrical supply into the pump motor housing. |
| 4.1 | Site Works Electrical works – Connection of pump control panels to the existing incoming electrical supply. | | | Electrocution | Contractor | 2 | 5 | 10 | Electrical works shall be undertaken by a suitably qualified electrician appointed by the Contractor. |
| 4.2 | Site Works - Works adjacent a water course – Installation of discharge pipes | | | Fall into River Alt | Contractor | 2 | 5 | 10 | Contractor shall implement a safe system of work for the installation of the discharge pipes onto the existing outfall head wall. Details shall be included in the Contractor’s CPP |
| 4.3 | Site works – works adjacent to surface water lagoon | | | Fall into lagoon | Contractor | 2 | 5 | 10 | The work area may require access to the elevated platform above the surface water lagoon which can contain a deep body of water. Details for working in this area shall be detailed in the Contractor’s CPP. |
| 4.4 | Site Works - Uneven ground, hidden pot holes etc. | | | Slips, trips and falls | Contractor | 2 | 4 | 8 | The Contractor shall be aware that the area outside of the pump station compound can be uneven underfoot. The Contractor shall apply all due care when walking around the works area. Suitable safety footwear is required. |
| 4.5 | Site Works - Poor lighting levels | | | Reduced hours of daylight inhibiting works | Contractor | 1 | 3 | 3 | There is no artificial lighting outside of the motor housing building, and no lighting from neighbouring property.  The Contractor shall make provision for task lighting where they intend to work outside of natural daylight hours. |
| 4.6 | Site Works - Manual handling -Placement of materials | | | Muscular skeletal injuries | Contractor | 2 | 3 | 6 | The Contractor shall develop safe system of work and manual handling plan as required. Details shall be included in the Contractors CPP. |
| 4.7 | Site Works - Site security | | | Theft and vandalism. | Contractor | 2 | 2 | 4 | While there is active CCTV monitoring at the compound, night-time incursions have occurred.  The Contractor is advised not to leave any apparatus unattended, and all tools and equipment shall be removed from site at the end of the working day. All works shall be secured at the end of each working day. |
| 4.8 | Site Works - Noise levels | | | Equipment to be maintained to ensure that levels of noise are suitable and complaint with relevant standards (i.e. <85dB) | Contractor | 1 | 2 | 2 | Contractor shall make provision for appropriate ear defender should noise generating equipment be required. Details shall be included in the Contractor’s CPP |
| 4.9 | Site Works - Plant and equipment | | | Injury caused by materials and appliances used as part of the works. | Contractor, Members of the public  Farmer  MWDA staff | 2 | 2 | 4 | Appropriate signage should be displayed to warn members of the public of the works being undertaken. Working areas outside of the ump station compound shall be clearly demarcated |
| 4.10 | Site Works - Use of tools as required | | | Muscular injury minor abrasions etc | Contractor | 2 | 3 | 6 | Only appropriately trained persons, using suitable PPE, are permitted to carry out such activities. Safe working method to be established by the Contractor |
| 4.11 | Site Works - Working at height- Installation of pumps | | | Fall into SW retention lagoon | Contractor | 2 | 5 | 10 | The bottom of the SW retention lagoon is nominally 4m deep. Contractor shall include a methodology for working at height in their CPP. |
| 5.1 | COSHH | | | Injury through hazardous substances | Contractor | 2 | 3 | 6 | The Contractor shall undertake a COSHH risk assessment for any COSHH products to be used in these works. Details shall be included in the Contractor’s CPP |
| 6.1 | DSEAR | | | Risk of explosion | Contractor | 1 | 3 | 3 | The basement to the existing motor housing bldg. is classified as DSEAR Zone 2, and all apparatus used in that zone shall be ATEX Category 3. See Tender documents Appendix 2. |
| 7.1 | Confined space | | | Noxious fumes, reduced oxygen levels, risk of fire. | Contractor | 1 | 3 | 3 | Entry into a confined space is forbidden without a Permit to Work.  It is understood that there is no requirement for access into this area as part of these works. See Tender documents Appendix 3 |