# Environmental Risk Assessment

PF10-PR10-01-F003

## Risk Assessment No: SBQ1-GCL-ENV-SBKXX-MS-WM-000001

| Project: | South Bank Quay | Contract No: | GX21 |
|---|---|---|---|

The following is an assessment of risk for the operations detailed below:

Details and area of work:

**Piling operations associated with the following construction activities**

- **Anchor wall & waling beams (Sheet piles)**
- **Main quay wall (Tubular piles & Sheet piles)**
- **Heavy Lift Platform (Bored concrete piles)**

**Classification of Risk = Severity x Likelihood**

(Before control measures taken)

| Likelihood of Incident | | 1 (Unlikely) | 2 (Likely) | 3 (Near certain) |
|---|---|---|---|---|
| Severity of environmental incident | **1** Minor | Low risk | Medium risk | Medium risk |
| | **2** Serious | Medium risk | High risk | High risk |
| | **3** Extreme | Medium risk | High risk | High risk |

**Corrective action to be detailed on sheet 2 for Medium to High risk activities.**

The following Hazards are to be evaluated for the above detailed operation

| | Hazard | Risk | | Hazard | Risk |
|---|---|---|---|---|---|
| 1 | Airborne dust / smoke | 1 | 8 | Large amounts of waste generated | 1 |
| 2 | Noise | 6 | 9 | Disposal of hazardous materials | 1 |
| 3 | Escape of hazardous fumes | 1 | 10 | Traffic disruption | 1 |
| 4 | Light nuisance | 1 | 11 | Vibration | 6 |
| 5 | Discharges in water sources | 1 | 12 | Disruption to wildlife | 4 |
| 6 | Leaking fuel / oil / hazardous substances from storage containers | 4 | 13 | Visual nuisance | 1 |
| 7 | Working on contaminated ground | 2 | 14 | Groundwater contamination | 4 |

Compiled by: _____Jayne Walker_____ Date: _____07/10/21___

Date of Risk Assessment review (if applicable) : _____

## Risk Assessment No:

This sheet is to be read in conjunction with Sheet 1 of the Environmental Risk Assessment.

| Hazard No. | Details of hazard<br>(More specific breakdown of environmental impacts and who / what could be affected by them) | Preventative Measures |
|---|---|---|
| 2 | **Noise**<br>Noise generated as a result of piling has the potential to impact on Human and ecological receptors. The closest human receptors are located at offices in South Tees Business Park. Other human receptor are located across the River Tees at Highfield Environmental, Tees REP power station, Hanson Cement, PD Ports and South Bank Coke Ovens. There are no residential receptors in close proximity.<br>Ecological receptors include waterbird and seabird located at North Tess Mudflat, Vopak foreshore and Dabholme Gut | • Implementation of Best Practicable Means (BPM) as detailed in Section 7 of the CEMP<br>• Use of noise reduction shrouding on piling rigs. It is estimated (based on research) that such noise shrouds may provide 14dB noise attenuation.<br>• Implementation of control measures specified in the Marine Licence |
| 6 | **Leaking fuel / oil / hazardous substances from storage containers**<br>There is the potential for ground and / or water contamination as a result of spillages of hazardous substances. | • All hazardous substances will be stored as per the methods outlined in section 5.4 of the CEMP (Control measures for hazardous substances) and Section 5.7 (Control measures for oil storage).<br>• Enviropads will be used under all small plant and when refuelling away from the designated refuelling area.<br>• Spill kits will be readily available at all work locations<br>• All operatives will be briefed on the incident response protocols for spillages |
| 7 | **Working on contaminated ground**<br>Given the historic uses of the site, there is a risk that any contamination present within the on-site soils could be mobilised resulting in risks to human health via a range of pathways including ingestion, inhalation and direct dermal contact. For on-site human health receptors(construction workers), all pathways would be relevant, but for off-site human | • The use appropriate Personal Protective Equipment (PPE), provision of welfare facilities and relevant good working practices applied to avoid potential risk to human health from any potential ground contamination<br>• Implementation of dust suppression techniques |

| | | |
|---|---|---|
| | **health receptors it is likely that the critical pathway would be inhalation of contaminated dusts, vapours or gases that may be generated during construction works** | |
| **11** | **<u>Vibration</u>**<br>**Vibration generated as a result of piling has the potential to impact on structures and on human receptors. The closest human receptors are located at offices in South Tees Business Park. Other human receptor are located across the River Tees at Highfield Environmental, Tees REP power station, Hanson Cement, PD Ports and South Bank Coke Ovens. There are no residential receptors in close proximity.** | • **Implementation of Best Practicable Means (BPM) as detailed in Section 7 of the CEMP** |
| **12** | **<u>Disruption to Wildlife</u>**<br>**Noise generated as a result of piling activities has the potential to impact on ecological receptors. Ecological receptors include waterbird and seabird located at North Tess Mudflat, Vopak foreshore and Dabholme Gut** | • **Use of noise reduction shrouding on piling rigs. It is estimated (based on research) that such noise shrouds may provide 14dB noise attenuation.** |
| **14** | **<u>Groundwater Contamination</u>**<br>Piling has the potential to create preferential pathways, allowing contaminant migration to the underlying aquifers. Piling also has the potential to physically drag down contaminants from the overlying Made Ground deposits as well as allowing for potentially contaminated perched groundwater to migrate to the underlying aquifers. | • Given that the aquifers located below the proposed scheme footprint are likely to be impacted by saline intrusion thus rendering the groundwater unsuitable for potable water abstraction, the likely magnitude of effect to the groundwater is considered to be low. Therefore the overall impact on groundwater quality during construction is considered to be of negligible significance and no additional mitigation is proposed. |
| | | |

Use another sheet if necessary.

**Classification of risk after control measures have been undertaken = …Low……**
**(Only "low" acceptable. If not "low" then further control measures must be applied.)**

**CIRCULATION OF RISK ASSESSMENT**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Contract Manager** | | **Site Engineer** | | **Employees** | | **Client** | |
| **Site Foreman** | | **Sub-Contractor** | | **Other occupiers of premises** | | **Site Copy** | |