Purpose of the project:
Remediation and industrial redevelopment of the former Carless Oil Terminal at Old Kilpatrick on the River Clyde. The project seeks to establish the Scottish Marine Technology Park (SMTP), which will facilitate the expansion of the marine engineering sector, including manufacturing and repair of specialist vessels, within the strategically important River Clyde corridor. In doing so, the project seeks to address a legacy of hydrocarbon contamination from historic oil refining and storage activities within the site.

Description of the project:
The former Carless Oil Terminal (17.7ha) was decommissioned in 1992 although jetties protruding into the River Clyde, partial structures, areas of reinforced concrete hardstanding and extensive made ground remain. The first phase of the SMTP comprises remediation works and the development of a 4,000m² marine fabrication complex and heavy lift quay. PBA provided a full suite of planning, environmental, transport, economic development and engineering services. This included implementing an EIA focused consenting strategy, with the EIA process used to design the proposed development and associated environmental mitigation (including construction phase) to minimise environmental effects. Environmental sensitivities which needed to be addressed through redevelopment include:

- Contamination - The site is designated as contaminated land under Part IIA of the Environmental Protection Act 1990, with an area at the east of the site also designated as a Special Site. The primary reason for these designations is the presence of hydrocarbon contaminants and migration pathways for contaminated groundwater;
- Unexploded Ordnance – Due to the site’s previous use as a Ministry of Defence fuel depot it is known to have been a bombing target during the Second World War and risk assessments indicate a residual risk of unexploded ordnance;
- Ecological Designations - The site abuts the Inner Clyde SPA, Ramsar Site and SSSI, which are designated for non-breeding birds (in particular wintering redshank) and for associated habitats. Additionally, the site is bounded to the north by a disused railway corridor which is designated locally as a Local Nature Conservation Site;
- Flood Risk - Parts of the site along the River Clyde foreshore have a high likelihood of flooding, as do the banks of the Auchentoshan Burn to the east;
Neighbouring Land - The site is bounded by a vibration sensitive precision manufacturing plant, bonded warehouses (COMAH Top Tier Site) and the Forth and Clyde Canal Scheduled Monument and towpath.

**Key Issues:**
A multi-stage EIA led consenting strategy was adopted:
- Remediation works – EIA screening in October 2017, with a planning application submitted in November 2018 and granted planning permission in April 2019; and,

A suite of key mitigation parameters were devised and committed to at EIA screening stage to avoid likely significant adverse effects from remediation works. These parameters were developed through an Ecological Impact Assessment and Pollution Prevention Plan, with the mitigation embedded within a Remediation Strategy underpinning the remediation works. Therefore, whilst the application was processed as a non-EIA development, this was only achieved through a rigorous and integrated approach to EIA screening and the design of mitigation.

The EIA Report for the marine fabrication complex addressed three major challenges:
1. Consideration of a wide range of likely environmental effects on terrestrial and marine environments. Whilst EIA screening confirmed that the Marine Works EIA Regulations were not engaged, specialist marine ecological and engineering support was obtained;
2. Assessment of likely development impacts on top of an expected future baseline scenario, to account for the prior approval and implementation of remediation works to make the site suitable for the intended industrial use; and,
3. As with the remediation works, key mitigation parameters and detailed mitigation measures were developed through the EIA. This included underwater and surface noise modelling, with mitigation specified and construction activities phased to avoid likely significant adverse effects (including on redshank and Atlantic Salmon species). The EIA also identified a need for flood compensatory storage as ‘further mitigation’ related to the proposed development.

**Lessons Learnt:**
Owing to changes in the design of the heavy lift quay it was only possible to undertake underwater noise modelling late in the EIA process. This resulted in changes to the construction programme, with consequential changes required to multiple chapters of the EIA Report. This emphasises the need to manage inter-relationships between technical assessments, resulting environmental mitigation and construction programmes.

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