

**From:** Cowing, Abi <Abi.Cowing@atkinsglobal.com>  
**Sent:** 07 August 2020 11:55  
**To:** Noble E (Ellie) (MARLAB)  
**Cc:** Timmons, Paul  
**Subject:** RE: Marine Licence - Screen Request Windmillcroft Quay

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Good Morning Ellie,

Please see below for the additional information requested (in red) in relation to Windmillcroft Quay.

### **Construction methodology**

More information is sought on both approaches to construction.

If construction involves the use of marine plant, what is the anticipated methodology?. What types of marine plant could be employed?

Jack-up barges to host craneage and equipment to permit installation of the pile sections. Barges and tugs to bring pile sections to site by river due to size of components. Backhoe dredger depending on proposed dredging works.

Engineering fill will either be brought to site by road vehicle or by marine barge.

What effect could that decision have on the potential impacts of the project?

Site is significantly constrained due to existing riverside flats developments and access to the locations. Marine based plant access to the site will form a significant part of the works in general.

Similarly, If a bund is used to provide a dry environment for the works, could you provide a more detailed description of what that would entail regarding the construction of the bund.

If a bund were to be formed, it would involve the placement of material on the existing bed (brought in via barge). It is likely that this would be in a controlled manner and deposited by excavator bucket.

I would also like more information on the potential demolition aspects. What would be the potential methodology for demolition? Would the demolition be behind a coffer dam?

Demolition refers essentially to the partial removal of existing masonry block frontage and the trimming of timber fenders / timber sheet piles to the front. This is required in part to permit formation of the new paving systems but mainly, to allow for the introduction of tie rod restraint systems which extend landward of the existing wall frontage.

Removal of these components, depending on Contractor preference may occur once installation of the new quay wall frontage progresses or, may take place in advance of any piling works.

Removal of the materials may take place by land - based plant or, again by marine based activities.

### **Dredging**

The screening request letter you submitted makes a single reference to potential impacts on water quality through suspended sediments associated with any dredging activity. Can you provide more information regarding what type and scale of dredging may be required? I am interested to know if there is any information available regarding the composition of the sediment where dredge may take place and any levels of contamination which may be there. I believe Atkins notified Marine Scotland of

an exemption to undertake sediment sampling in the area in 2018. What did the sediment sampling show regarding contamination in the area?

The anticipated construction methodology will be such that the new quay wall frontage would be constructed prior to the removal of the existing seabed materials within the footprint of the structure. Whilst that may take place before full closure of the wall structures at the periphery, mobilisation of sediments in the water column would be trapped within the bounding wall systems. There does however remain the potential for some dredging to take place in the open water column prior to the installation of the quay wall as the design construction sequence is not set.

Total volume of material to be removed estimated to be ~22000m<sup>3</sup>

The proposed dredged material has been described as “Extremely low strength very soft greyish black sandy SILT”. The material has been logged as ‘Made Ground’ due to the presence of anthropogenic materials (leather and timber), dark colour and very strong hydrocarbon type odour noted throughout; however, it is anticipated that the material has been deposited under natural sedimentation processes and has become contaminated (in places) as a result of the industrial nature of the River Clyde and is therefore considered to be an Alluvium deposit.

Results also showed that three sample locations within silt at Windmillcroft Quay contained material with hazardous properties (HP7, HP8 and HP11 – \*see below for definitions). Asbestos was also detected at one sample location although it is not considered a risk, due to it’s low % concentration and isolated occurrence/depth.

- HP7 relates to waste that is considered to have carcinogenic properties (waste which induces cancer or increases its incidence).
- HP8 relates to waste which is considered to have corrosive properties to human skin.
- HP11 relates to waste which is considered mutagenic (waste which may cause a mutation, that is a permanent change in the amount or structure of the genetic material in a cell).

Any actual material identified for disposal must be appropriately tested (WAC analysis), classified and disposed of in agreement with the chosen landfill operator.

### Resource use

Your screening letter references the use of granular material and engineering fill. Is there any information regarding the approximate quantities of material involved? Is there any other significant resource use involved with this project?

Once we have excavated / dredged down to the required depth to the rear of the new wall frontage, engineered granular fill will be placed. We estimate the total volume of material (from excavated depth to finished surface level) to be in the region of ~47000 m<sup>3</sup> of material.

Separately, the wall frontage has to be made from structural steel sections due to the loads being taken and as such, will be of a steel pile-combi wall formation. We estimate current steel tonnages to be in the region of 8500 tonnes.

### Risk of major accidents and/or disasters

Considering the location of the project is the centre of Glasgow, I believe some information should be provided regarding the potential risks of major accidents and/or disasters especially during the construction and demolition.

The works will be undertaken on an existing and historic quay wall that is to be partially demolished and buried within the new works. The Site is significantly constrained and is bounded by the Private Riverside Flats to the South, River Clyde to the North and the Kingston Bridge and Tradeston Pedestrian Bridge to the East and West respectively.

The Site and surroundings will be handed over to the appointed Contractor for the duration of the Works, with Site access controlled. Public and pedestrian access will be controlled and prevented throughout. In addition, where works interface with Site boundaries (east and west) adjacent to existing public realm, it would be envisaged controls will be put in place to ensure safe working practices as standard.

Navigation controls in form of Notice to Mariners would be in place for the duration of the works to maintain private vessel proximities from the works.

Construction works will be programmed and controlled through appropriate risk assessments and method statements and managed in accordance with the principles and requirements of CDM. These principles also apply to the design being undertaken.

The works will include vessel movements within the channel, navigation of materials and equipment to the site under various navigable bridges and the use of heavy plant (including craneage) at the Site. We do not believe the location of the Works attract any additional potential for incident due to their city centre location.

Kind regards,  
Abi

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