

1010A – Rhuddlan Marsh Steps – Marine License (Question Continuations)

6(a).

The step must contain two layers of A393 reinforcement mesh with a cover 55mm minimum from the bottom of the casting and to the front and rear faces. The step is to be 1900mm wide x 600 deep, to

give an overall width of 2400mm for the entire unit. One line of longitudinal bars is to be cast into the stringer at 200mm centres with a minimum cover of 150mm from the external face of the stringer. These bars must be 16mm diameter and have a length of 300mm, 150mm embedment into both the existing concrete plinth and the staircase units.

The first staircase is located adjacent to Millers Caravan Park (Staircase 1). Approx 390m northeast from Staircase 1 the central staircase (Staircase 2) is located adjacent Knightly's Fun Park, with the final staircase another 500m northeast which is adjacent to Golden Sands holiday park (Staircase 3)

The installation will involve working over-night to remove the old staircase lower staircase sections, with a Telehandler and Excavator. The new sections will be lifted in via crane working from the concrete access road on the other side of the walkway / rock armour.

We will look to close the cycle path / footpath over night during hours of work.

Please see the following provided drawings for full details of the works:

- 23047W-DRG-000 B02
- 23047W-DRG-003 B02
- 23047W-DRG-004 B02
- 23047W-DRG-005 B02
- 23047W-DRG-006 B02

6(c). (iii)

- 23047W-DRG-006 B02 - PROPOSED DETAILS

- 23047W-RAR-001 B02 – DRA – DESIGNERS RISK ASSESSMENT
- NND-JBA-XX-XX-RP-EN-0001-A1-C01-Rhuddlan_Steps_WFD – WFD Assessment including ecological assessment.
- 1010A_WAL_MPH - Location Plan
- Staircase 1 -297234-1250-1010A_WAL_MPH (OS Map)
- Staircase 2 -297236-1250-1010A_WAL_MPH (OS Map)
- Staircase 3 -297235-1250-1010A_WAL_MPH (OS Map)

- 1010A_WAL_MPH - Site Plan (Part 1)
- 1010A_WAL_MPH - Site Plan (Part 2)

7(a).

- Site compound will be set up behind the rock armour shoreline on Golden Sands waste ground/grass area, this will be segregated from the public using heras panel fencing and site signage – this will be used as a site storage / welfare area for the duration of the works.
- Any materials or fuels stored on site will be a minimum of 10mts above high tide levels, and stored to both manufacturer and COSHH guide lines including bunded drip trays and spill mats where applicable.
- Fire extinguishers will be stored on site and a full site fire risk assessment carried out due to the remote nature of the compound, should emergency services be required then a supervisor would wait on the entrance to the main road and direct emergency vehicles to the site.
- Track mats will be utilised for beach access where required and removed at the end of each shift; all vehicles will only be permitted to drive on the beach under banksman supervision on signposted approved access routes with a maximum 5mph speed limit enforced. All plant and machinery needing to access below the high tide level will run on bio diesel and fluids, be fitted with non-drip plant nappies and have additional spill kits in the cab with full instructions attached for the containment of any spills on site.
- Existing life expired concrete steps will be removed in sections utilising on site plant for enabling works on the shoreline side of the rock armour, these works will involve removing existing handrails and splaying the area of rock armour to allow new steps to be placed in position, any hot works will only take place under a signed onto hot works permit and overseen by a trained fire marshal on site.
- Plant equipment planned for beach works will be a telehandler, and a 13t excavator along with an ATV for operative transport and rescue response.
- The lifting and removal of the steps will be via a contract crane lift, with the crane parked on the cycle path behind the rock armour surrounded by chapter 8 barriers and site signage, this will be classed as a complex lift as the initial lift will be carried out blind for the operator but under the control of banksmen with direct two-way radio contact with the crane operator. the steps will be lifted clear and over the rock armour and then placed /set down in waiting wagons for disposal from site all lifts will only take place in a marshalled exclusion zone.
- New steps will be replaced on the existing bases using the same crane method as above, once in situ then the rock armour will be replaced to existing footprint and handrails and fixings all installed as per AFC drawings and manufactures guidelines.
- Should the base of the steps require any further improvement then c40 marine grade concrete will be used with a fast set additive to allow setting times within the return tide time frame.
- All metal and iron works renewed or introduced will be galvanized marine spec to ensure long life and marine approval
- The above method will be repeated for all 3 staircases along the shoreline on a mixture of night and day shifts, all waste materials and packaging will be removed at the end of each shift and disposed of at licenced skip sites.
- Noise abatement barriers such as [Echo Acoustic Barrier H10](#) or similar, will be installed to HERAs fencing surrounding large plant when operating at night.
- Nocturnal lighting is to be kept to access routes & work areas only

- Nocturnal lighting to be directed away from water to minimise any potential otter disturbance.
- A construction environmental management plan (CEMP) will be produced and issued to NRW prior to commencement of works. This will give further details on mitigation methods that will be implemented to prevent the adverse impact of noise and light on the surrounding environment.
- Only plant equipment essential to the works will be allowed access to the beach area, this will be monitored by the site manager and access road supervisor, All plant and equipment will be washed down clean and serviceable with proven test certification before access is granted to the access road and beach.
- Should any of the above works not take place as per the program or methodology works must STOP until approval has been gained from all stakeholders.