

Outline Method Statement for Arran Berth Construction Stages 1 – 6 to be read in conjunction with the drawing 1620005121-RAM-ARN-00-DR-CW-10010

An anticipated construction methodology is described below however a contractor may develop alternative proposals.

Stage 1:

- The existing linkspan deck will either be removed by a mobile crane operating from the quayside or, alternatively, the existing linkspan may be lowered onto a floating barge and then towed away.
- The concrete pile caps to the existing dolphins will be saw cut and removed by crane.
- Supporting dolphin piles will be cut at sea bed level and then removed by crane or pulled out completely.

Stage 2:

- Existing buried structures along the line of the new quay (on land) will be excavated and removed to make room for the construction of the new quay wall. This may involve saw cutting and or hydraulic breakout of concrete elements by land-based plant.
- The existing quay wall may have to be temporarily supported where existing tie backs are affected. This may involve supplementary tie backs on the inside of the wall.

Stage 3:

- Working from the existing quayside, install piles for new quay wall and linkspan recess with land-based piling plant. This may be undertaken on a single linear work front or two work fronts and piling rigs operating simultaneously.
- At northern end of the new quay wall where the wall alignment will sever existing tie rods, maintain the stability of the existing quay wall until demolition by connecting it temporarily to the new quay wall or a suitable alternative.
- There may be a small element of overwater pile installation within the existing linkspan recess however the contractor may choose to temporarily construct a bund here to work from to allow the same piling approach to be implemented for all piles.

Stage 4:

- Working from the quayside, install the rock anchors to support the new quay wall and linkspan recess from land-based plant.
- Working from the quayside, install the new reinforced concrete bankseats and link span hanger bases
- Working from the quayside, install the new reinforced concrete capping beam

Stage 5:

- Begin demolition of the existing berth, working using long reach excavators operating from the quayside surface. The excavator will work backwards from the outer perimeter towards the new quay wall line while excavating the quayside in benches to form the new berth. The contractor may choose to leave the perimeter sheet piles in place for as long as he can to protect the works before breaking these down. The excavation may be on a single work front (likely to be progressing south to north) or multiple work fronts.
- On completion the existing perimeter piles will either be cut off at bed level or removed completely by the excavation of the shallow trench that the toe of the piles are concreted into.
- Finally, the excavators will trim the excavation to the face of the new quay wall and within the linkspan recess.

Stage 6:

- Install the new linkspan. This is likely to be floated into place on a barge. Alternatively, it could be lifted into place by a mobile crane located on the quayside.
- Working from the new quayside, construct new quayside perimeter surfacing
- Finalise and complete installation of new quay wall furniture