
MWT Civil Engineering Ltd



METHOD STATEMENT

Operations: Replace flap valves

Scheme Name: Conwy and Deganwy flap valve replacement

MWT Ref: C002





Method Statement –

Issue and Revision Record

Document Title	Conwy and Deganwy flap valve replacement – Method Statement
Version	V1
Status	ECI DRAFT
Filename	Conwy and Deganwy flap valve replacement – Method Statement

Revision	Notes	Date
V1	ECI DRAFT	
V2		
V3		

	Signature	Name	Date
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Approved by			

Distribution	Client
Notes	

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1. Project Overview & Location

This project includes the removal and replacement of two existing flap valves located along the estuary banks at Conwy Morfa and Deganwy. Both existing valves will be replaced with a Duck Bill valve system supplied by Athlon or similar approved.

Conwy Morfa Valve

The existing valve is located below a cantilever concrete slab below an existing footway next to Ysgol Aberconwy on Morfa Drive. The valve is situated within a site of special scientific interest (SSSI) that is also affected by the tide.

Nearest postcode: LL328EP

Deganwy

This existing valve is located on the beach adjacent to the escape steps opposite the Deganwy Quay housing estate. The valve is submerged daily by the tide and is partially buried by sand and silt

Nearest Postcode: LL319EJ

2. Sequence of Operations

Order	Description	Contractor
1	All persons involved in the works to inducted to site, read and confirming their understanding and acceptance of the contents of the RAMS. The works manager will inform the local harbour authorities of the works programme before commencing any works within the tidal estuary.	
2	Any plant and equipment used within the tidal area must be jet-washed clean and thoroughly checked for any leaks prior to use. Motorised plant must also run using Bio-oil and must be equipped with a suitable emergency spill response kit. All plant, equipment and materials will be removed from the tidal area at least 1 hour before the tide comes in. Works will continue following the next falling tide. The crane will remain on site for the duration of the works to provide emergency breakdown assistance if required.	
	Conwy Morfa valve replacement	
3	This site is located within a site of special scientific interest. Every effort must be made to minimise disruption caused to the local area. In addition, the working area is also affected by the tide. Works must be carried out on low neap tides only. The works manager will monitor the tide heights and forecast before choosing the most suitable start dates. Works manager will also liaise with the client and harbour master regarding programme and access.	



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4	Temporary traffic and pedestrian management will be erected around the site to prevent unauthorised access and provide a safe working area for the crane to be positioned within the South bound lane on Morfa Drive. Exact location of the crane to be agreed on site. An area of approximately 20m x 10m directly opposite the existing valve will be segregated from the public using pig tail pins and orange bunting tape.	
5	Welfare facilities will be positioned within the footway area at a safe distance away from the lifting operations.	
6	A *100t mobile crane will arrive on site and be positioned within the south bound lane adjacent to the flap valve outfall. The crane will be used to lift an 8t excavator down into the channel while causing minimal disruption to the existing costal surroundings.	
7	The 8t excavator will be delivered to site on a low loader via junction 17 on the A55. The crane will be used to lift the 8t excavator and position it onto the beach in a safe and level area close to the existing valve using the designated lifting points and suitable lifting equipment.	
8	The lift will be controlled by a trained and competent lift supervisor. A separate lift plan will be produced to provide exact details for the lift including the lifting equipment, crane position and persons responsible.	
9	Once the machine has been safely positioned on the beach, the silt blocking the existing valve will be cleared to expose the bottom of the valve. Material will be discharged and graded onto the riverbank next to the working area. *Only the minimum amount of material will be excavated as to allow for the instillation of the new valve assembly.	
10	Once all flange studs have been exposed sufficiently, a 1t lifting strap attached to the boom of the excavator will be used to choke the valve and prevent it from falling before cutting the flange bolts off with a battery grinder. The bolts will be cut from the bottom side first to eliminate the risk of people getting trapped below the valve in the event of any movement. *Impact resistant goggles, ear defenders and safety foot ware must be worn in addition to standard PPE when operating the grinder.	
11	The existing valve is expected to weigh approximately 700kg based on the weight of the new valve to be fitted. The excavator will track back and position the valve on the beach where the crane can then be used to lift the valve onto a work pick up for recycling off site. Lift details to be covered within the lift plan.	
12	Depending on the duration of the works and the tide heights, the excavator may need to be removed from the channel until the next low tide.	
13	The remaining studs will be cut off flush with the existing concrete face using a grinder as described above. All debris will be removed to tip off site. The new valve (approximately 700kg) will be lowered onto the beach using the crane. The valve will then be moved into place using the 8t excavator and 1t strap. Pilot holes will then be drilled at the new locations to suit the new flange assembly using a battery powered SDS drill and masonry bit.	
14	The valve will then be removed and positioned in a safe area while the holes are drilled to the correct depth and diameter to suit the fixing studs supplied. Fixing studs will be installed as per the manufacturer's instructions.	
15	The new valve will then be positioned back over the new studs using the 8t excavator as described above. The bolts will be tightened and torqued using hand wrenches as per the manufacturer's recommendations.	
16	All areas disturbed by the works will be reinstated to match existing before removing the excavator from the beach using the crane as described above. The site compound will be demobilised following the approval of the client.	



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17	Deganwy beach valve replacement	
18	This site is located on the beach within a tidal area. As per above, the works manager will monitor the tide heights and weather prior to commencing the works. Access to the site will be via the Harbour masters works barge on a falling tide. Welfare facilities will be provided on the barge. The barge will position itself adjacent to the flap valve and wait for the tide to drop allowing the vessel to beach. A suitably prepared 1.7t excavator will be lifted onto the beach using the barge bogie and machine lifting points. The lift details will be covered in more detail within a site-specific list plan.	
19	The excavator will be tracked to the flap valve location. Pig tail pins and orange bunting tape will be erected around the working area to delineate the working area.	
20,	The excavator will be used to remove the and silt build up in front of the existing valve assembly exposing the existing flange bolts.	
21	The excavated material will be deposited and graded on the beach adjacent to the working area. The 1.7t excavator will be used to suspend the existing flap valve using a 1t strap before cutting the flange bolts.	
22	The flange bolts will be cut off using a battery powered grinder. *Caution, operatives must wear impact resistant goggles, ear defenders and safety boots when using the grinder. All debris to be removed from site for recycling.	
23	The bolts will be cut from the bottom up. The excavator will then remove the valve and load it onto the barge for recycling. The remaining studs will then be cut off flush using the battery grinder as described above.	
24	If required and depending on progress, the works will be stopped, and the excavator removed from the beach until the next low tide. This will be monitored and agreed on site with the client.	
25	The new valve will be transported to site using the Harbour master's barge. The valve will be lifted into place using the 1.7t excavator and pilot holes will be drilled using a battery powered SDS drill and masonry bit as described above. The valve will then be removed from the working area using the excavator and the holes will be drilled to the correct diameter and depth as per the manufacturer's instructions.	
26	Studs will then be installed as per the manufacturer's instructions to take the new valve flange. Bolts will be installed and torqued using hand spanners as per the manufacturer's recommendations.	
27	The working area will be reinstated to match the existing before removing all plant and materials.	
28	The client will be invited to inspect and approve the works before demobilising site.	

3. Welfare

A site welfare van will be provided at Conwy Morfa site.

A working barge platform will provide the welfare facilities for the Deganwy site.

4. Resources



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Resource	Description
Labour	TBC
Vehicles	TBC
Plant/Equipment	TBC
Sub Contractors	TBC

5. First Aid and Accident Reporting

Accidents will be reported as per MWT Civil Engineering's policies and procedures.

6. Risk Assessment

A task specific risk assessment will be present for all works, we have produced a contract risk register for our submission:

7. Environmental Issues

The sites are located within a coastal tidal area inside a site of special scientific interest.

8. COSHH

NA

9. Responsibilities – Supervision and management

Staff to be confirmed

This method statement will be extended or amended as site conditions vary and works progress,

Name	Position	Signature	Date



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