



- Notes**
- This drawing has been produced to support the Marine Licence application (ref: CML2563). The drawing illustrates the A494 River Dee Bridge Replacement Scheme layout, the application licensable activities, the Tidal Flood defences of the river Dee (based on NRW survey information) and Mean High Water Spring Tide level based on an approximate level of +4.65m AOD.
 - This drawing details the current Developed Design at Key Stage 4 of Welsh Government's Linear Stage Approval Process and is subject to further detail design development.
 - This drawing is to be read in conjunction with all other related Mott MacDonald and RML drawings and specifications.
 - Unless otherwise stated all dimensions are in metres and all levels in metres Above Ordnance Datum (AOD).
 - Information on this drawing is based on topographical data received from PM Surveys 2018, OS mapping data and the information sources as listed under 'Key to symbols' below.
 - All grid co-ordinates are presented in Latitude / Longitude format.

Key to symbols

- Z Line defined banktop, where Survey data is not available (Lidar 2012) (A494 River Dee Hydraulic Modelling Report)
- NRW 2016 North Wales Tidal Defence Survey (NWTDS) Levels: +6.0m to +6.5m AOD.
- NRW 2016 North Wales Tidal Defence Survey (NWTDS) Levels: +6.5m to +7.0m AOD.
- NRW 2016 North Wales Tidal Defence Survey (NWTDS) Levels: +7.0m to +7.5m AOD.
- NRW 2016 North Wales Tidal Defence Survey (NWTDS) Levels: Above +7.5m AOD.
- A494 River Dee Bridge Replacement Scheme Site Boundary
- Mean High Water Springs Tide (+4.65m AOD) (from LIDAR survey undertaken in March 2022)
- Area seaward of Mean High Water Springs Tide (+4.65m AOD) (from LIDAR survey undertaken in March 2022)
- Proposed Scheme Works
- Existing

Reference Information

395318-MMD-00-XX-DR-C-0002 General Arrangement P06

P04	18/05/26	EP	LA7 work omitted from Marine Licence application CML2563.	SH	GM
Rev	Date	Drawn	Description	Ch'k'd	App'd

Status Stamp

NOT FOR CONSTRUCTION

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RML

Licensable Activities (LA)

Permanent Works						Temporary Works		
LA1	LA2	LA3	LA4	LA5	LA6	LA7	LA8	LA9
Construction of two sets of River Piers and Pile Caps	Construction of new Bridge Deck	Construction of new Outfall Structures	Filling of inlet on Western Bank	Riverbanks (East and West)	Removal of existing Bridge Deck	Omitted from Marine Licence application CML2563	Construction and removal of Crane Pad and Temporary Jetty	Mobilisation and positioning of jack-up and service barges
a) Construction of two river piers each consisting of a maximum number of 12 No. piles for each river pier equalling a maximum worst case scenario of 24 No piles b) Installation of steel casings for each pile (24 No.) into the riverbed to a depth of approximately 13m into glacial till. Casings to be oscillated or driven in using vibration methods. c) With casings installed, a piling rig mounted on a jack up barge to drill within them to a depth of approximately 34m. Excavated spoil will be collected in skips and transferred to land for disposal via the support barge. d) During drilling, bentonite or polymer-based drilling fluid will be pumped from the landside batching plant into the borehole to support the excavation. e) Steel reinforcement cages will be spliced and lowered into the drilled hole using the 160t crane. Concrete to be placed via a tremie (watertight) pipe, displacing the drilling fluid, which will be pumped back to the landside batching plant for recycling. f) Concrete to be supplied from a mobile pump on the riverbank and conveyed via a pipe system supported by pontoons or with a large mobile pump. An overpour of approximately 1m above the cut-off level is expected to ensure structural integrity. g) The jack-up barge to then relocate and repeat the process for all 24 No. piles	a) Install new bridge deck	a) Installation of sheet piles to form cofferdam as temporary works. b) Excavate any soft material to firm ground with temporary works in place as appropriate to enable safe excavation of soft material. c) Construct two new outfall structures.	a) Installation of sheet piles to form cofferdam b) Excavate any soft material to firm ground with temporary works in place as appropriate to enable safe excavation. c) Backfill with suitable engineering material to form base for foundations of western bridge abutment.	a) Works to the riverbanks (existing and new bridges) - regrading / making good/remedial works to eastern bank revetment.	(following construction and opening of new replacement bridge) a) Installation of crash deck / access platform to bottom flanges of beams - this will progress at same time as parapet removal. b) Remove redundant sewer main. c) Remove vehicle barrier and steel parapet railings. d) Remove the central PC slabs and saw cut the cantilevers in a similar way to the parapet cantilevers.	N/A	a) Install sheet piles for construction of temporary jetty. b) Construction of a temporary jetty adjacent to the bridge site to enable the piling equipment to be transferred onto the barge.	a) Mobilise jack-up barge at dry dock on River Mersey b) Marine vessel to tow jack-up barge and service barge into position upstream of existing bridge to crane pad. c) Assemble jack-up barge for final barge assembly/disassembly and equipment transfer. d) Install temporary moorings to secure jack-up barge during operations e) Service barge to transport equipment, fuel and materials to and from jack up barge.

Client

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North & Mid Wales Trunk Road Agent

Yn gweithio ar ran Llywodraeth Cymru
Working on behalf of the Welsh Government

Title

A494 River Dee Bridge Replacement Scheme - Developed Design Marine Licence Application Licensable Activities

Designed	F.SALEH	FS	Eng check	S.HORSFALL	SH
Drawn	E.PROBERT	EP	Coordination	G.MORGAN	GM
Dwg check	S.HORSFALL	SH	Approved	G.MORGAN	GM

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Security: Rstd

Suitability Description: Suitable for Information
Suit. Code: S2

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