A494 River Dee

Red7Marine Proposal prepared for Mott Macdonald

A RED7MARINE PROPOSAL

A494 River Dee - Red7Marine Proposal

Dear Gethin,

ECI Stage 3 Proposal – Marine Works Mobilisation for A494 Bridge

Please find enclosed our ECI Stage 3 Proposal for the mobilisation of marine plant and equipment to support the piling and pier works associated with the proposed A494 Bridge crossing of the River Dee.

This proposal outlines our methodology and approach to delivering the marine elements of the project, with a focus on safety, efficiency, and environmental compliance. The submission includes:

- A detailed marine tow plan for navigation on the River Dee
- Marine mobilisation method statements and supporting sequence sketches
- Comprehensive method statement and sequence sketches for marine piling and concrete works
- Contract programme outlining key milestones and critical activities
- Pricing document, inclusive of detailed inclusions and deductions
- R7M standard documentation

We trust the enclosed documentation addresses all current requirements for this stage of the Early Contractor Involvement process. We remain committed to working collaboratively with Mott MacDonald and the wider project team to deliver a safe and effective marine works solution.

Should you have any queries or require further clarification, please do not hesitate to contact us.

Within this submission we have provided:

- Case study examples
- QHSE Measures and insurance details
- Programme
- Priced activity schedule

Within the appendix we have provided:

Scope of Works Brief

- Scope of works brief

Activity Schedule

- Priced activity schedule

Programme

- Programme

Mobilisation RAMS and Sequencing

- Barge mobilisation lift plan
- Vessel mobilisation methodology
- Vessel mobilisation methodology sequence sketches (R7M-5222027-SKH-015 A3 (1)
- Passage plan report

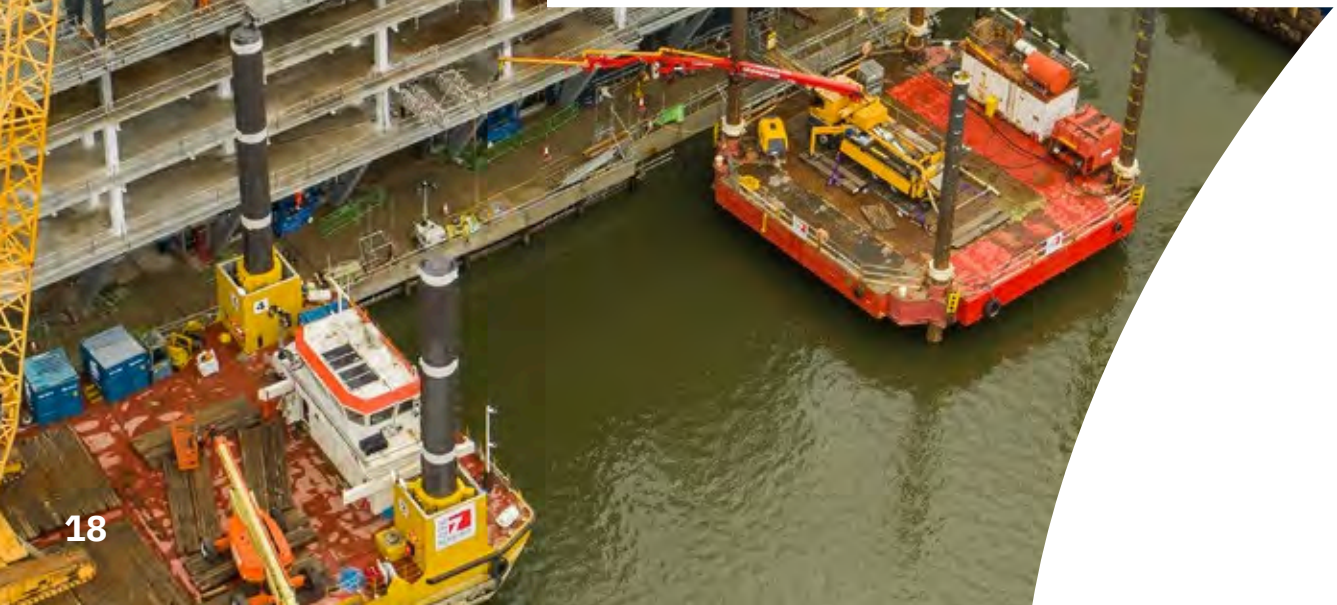
Piling Phase RAMS and Sequencing

- Piling phase methodology
- Piling phase sequence sketches

THE MARINE PARTNER OF CHOICE

CONTENTS

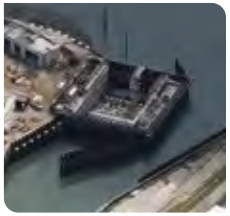
Case Studies / Experience



Case Studies

BRIDGWATER TIDAL BARRIER

Red7Marine carried out the installation of the test piles for the Bridgwater Tidal Barrier project. We are on-site delivering the foundation works in the form of a central cofferdam, east and west abutment and bypass channel.



IPSWICH TIDAL BARRIER

Red7Marine supported VolkerStevin on the construction of the £27M Ipswich Tidal Barrier Scheme.

PORTLAND PORT DEEP WATER BERTH

Red7Marine was responsible for delivering a £3.6M piling scope for Portland Port's new deep-water berth which allows larger ships to dock in the Port.

This involved installing 40m of new combi-wall structure (tube and sheet) from two jack-up barges, working on two piling fronts simultaneously. For this project we implemented a noise management plan for the piling operation. This required background noise surveys around sensitive receptors including residential and wildlife (known bird species nesting within areas of port). Noise monitoring was undertaken during piling works to ensure our obligations were fulfilled under the marine works license in place for the project.

SLADDENS PIER

Design and build contract involving the installation of 140m span of new sheet piled wall using aprox.

No 100 sheet pile pairs and walings. Proof dig and pile removal took place prior to contract start. All operations controlled within a busy port environment.

Having an awareness of the local Kittiwake population in the area, we incorporated fabricated nesting structures on top of the king piles at the start and end of the wave screen on Sladdens Pier, for the benefit of the kittiwake community.

Case Studies

ARUNDEL TIDAL DEFENCES SCHEME

Environment Agency job replacing a 40m stretch of sheet piled wall with drilled tie rods to protect residential properties in Arundel. Narrow and fast flowing river with noise constraints given proximity to properties, appreciation given to piling activities.

HULLBRIDGE EMBANKMENT STABILISATION

Two jack-up barges supporting the repair of 40m length of collapsed embankment along tidal estuary of the River Crouch. Giken Supercrush was used due to the noise constraints from close proximity of residential properties. River Crouch is subject to high tidal flows which led to the use of the elevated barges.

THREE MILLS LONDON

Canal & River Trust scheme where Red7Marine supported Volker Steving to repair and replace sheet piled wall for new flood protection.

TWELVE QUAYS JETTY CONSTRUCTION

Red7Marine supported Farrans on the tubular piling elements for the new jetty infrastructure at Twelve Quays. Two of R7M's jack-up barges were utilised, working in close proximity to the jetty structure. The River Mersey has one of the strongest tidal flows in the UK, careful considerations was taken when moving the JUB 's. Bespoke piling gates were used to install piles to required tolerances.

Case Studies

PROJECT RISSA

£11M project for the installation of 3no. artificial nesting structures for Orsted. Included design interface management between client's design team and our in-house fabrication teams. As an off-shore project, this was subject to a high degree of third party engineering checks such as cat 3 checks. Our in-house design team carried out extensive temporary works to install piling gear onto our jack-up barge and sea-fastenings to accommodate the safe transit of offshore assets.

Close stakeholder liaison with MMO and local fisheries. Our project team worked alongside Marine Mammal Observers (MMO) to ensure our construction activities were undertaken in compliance with license conditions in the field.

We completed a 30 minute observation period for marine mammals prior to commencing piling operations. We followed a soft start procedure for every foundation that we installed, and we had the ability to monitor the energy output from the hammers real-time with full data logging functionality, to prove the equipment did not exceed 20% power during the soft start procedure. This proved to be valuable later on in the project.

DOVER OUTER WAVE WALL

Red7Marine installed 21no. workboat piles and a detached wave screen 59m in length at the entrance to the new marina within Dover Harbour. Operational constraints due to busy port location and coordination with other vessel users. Installation of the wave screen was carried out in close proxmity to a public beach. Acoustic surveys were completed during pre-construction to assess the impact of waterborne noise and vibration during piling operations.

This led to establishing an exclusion zone during certain stages of the project to protect swimmers and local wildlife. Collaboration between various stakeholders including the public, and other port users by advanced and regular communication, was key to ensuring the project was completed within our contract programme.

Case Studies

EAST COWES LAYBY BERTH CONSTRUCTION

Red7Marine acted as Principal Contractor for the construction of the new layby berth for the Red Kestrel RoRo vessel on East Cowes. Environmentally sensitive area, site located in close proximity to several conservation areas and Sites of Significant interest.

JUPITER POINT

Red7Marine installed two 610mm x 20m long rock-socketed restraining guide piles to support a new 35m landing walkway at the HMS Raleigh Naval Sea Training School. The site is located within a Naval base in close proximity to a Site of Significant Scientific Interest (SSSI). R7M worked closely with the client, Falmouth Divers Ltd, utilising a small site-team to find solutions to several key issues to ensure the necessary passes and consents were in place before the construction works commenced.

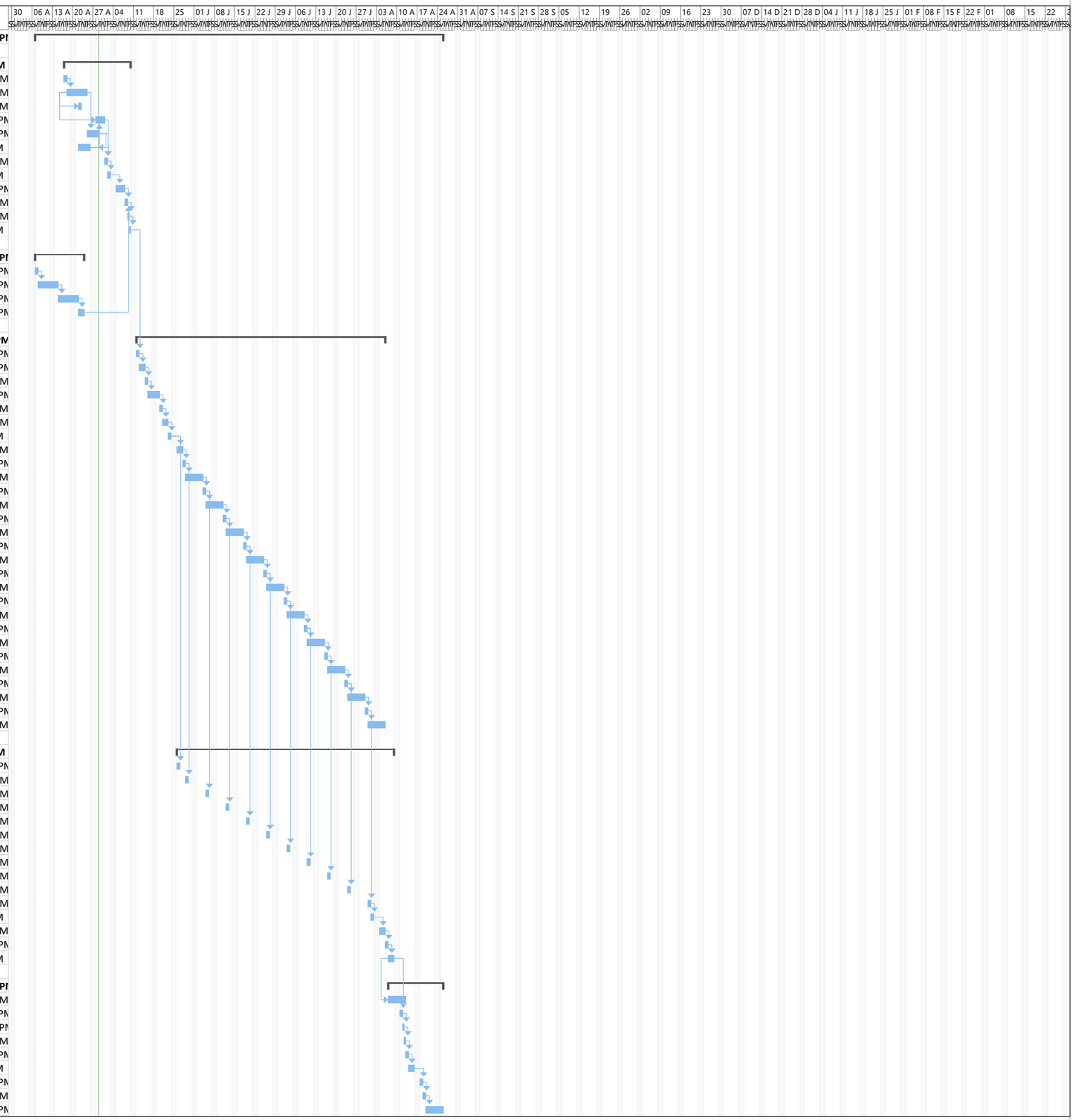
RIVER HULL FLOOD DEFENCES

Flood defence project on behalf of the Environment Agency involving the installation of 2.5km of sheet piled walls 2m in front of existing flood defences.

Operational constraints - Red7Marine worked closely with BAM Nuttall due to the sensitive nature of the site. All barge moves were planned safely and precisely taking into consideration the narrow stretches of river, 90-degree bends and low bridges. Value engineering – we reconfigured one of our jack-up barges to the bespoke requirements of the project to suit the site characteristics with river traffic and tidal restrictions in mind. Kate Sellers, BAM Nuttall Site Agent comments: “Our relationship with Red7Marine and its personnel through all stages of this challenging project has been based on partnership and co-operation. A huge consideration was given at the initial phase to identify potential difficulties. This has been followed by development of various scenarios and methods of addressing such difficulties which provided a great benefit during actual works.” BAM reported a 99.09% satisfaction rate with Red7Marine’s services within its feedback form.

Programme

		Task Name	Duration	Start	Finish
1		**A494 Mob and Piling Prog.**	**101 days**	**Mon 07/04/25 8:00 AM**	**Mon 25/08/25 5:00 PM**
2					
3		**Mobilisation**	**17 days**	**Thu 17/04/25 8:00 AM**	**Fri 09/05/25 5:00 PM**
4		Jackup arrives at Birkenhead	1 day	Thu 17/04/25 8:00 AM	Thu 17/04/25 5:00 PM
5		Modify barge and prepare for river tow	5 days	Fri 18/04/25 8:00 AM	Thu 24/04/25 5:00 PM
6		Transfer by road, spudwell, quadra floats etc. to bridge site	1 day	Tue 22/04/25 8:00 AM	Tue 22/04/25 5:00 PM
7		Prepare spudwells, legs etc. for lift	3 days	Mon 28/04/25 8:00 AM	Wed 30/04/25 5:00 PM
8		Tow barge to A494 roadbridge	2 days	Fri 25/04/25 8:00 AM	Mon 28/04/25 5:00 PM
9		Mobilise 600T crane at site	4 days	Tue 22/04/25 8:00 AM	Fri 25/04/25 5:00 PM
10		At suitable high tide attached spudwells	1 day	Thu 01/05/25 8:00 AM	Thu 01/05/25 5:00 PM
11		Jack barge	1 day	Fri 02/05/25 8:00 AM	Fri 02/05/25 5:00 PM
12		Attach leg extensions and fit out deck	3 days	Mon 05/05/25 8:00 AM	Wed 07/05/25 5:00 PM
13		Relocate barge to temporary jetty structure	1 day	Thu 08/05/25 8:00 AM	Thu 08/05/25 5:00 PM
14		Load 165T Crane to jackup	0.5 days	Fri 09/05/25 8:00 AM	Fri 09/05/25 12:00 PM
15		Load 120T Piling rig to jack up	0.5 days	Fri 09/05/25 1:00 PM	Fri 09/05/25 5:00 PM
16					
17		**Temporary Jetty at site location**	**13 days**	**Mon 07/04/25 8:00 AM**	**Wed 23/04/25 5:00 PM**
18		Mobilise 165T crane	1 day	Mon 07/04/25 8:00 AM	Mon 07/04/25 5:00 PM
19		Drive piles	5 days	Tue 08/04/25 8:00 AM	Mon 14/04/25 5:00 PM
20		Fit deck steelwork	5 days	Tue 15/04/25 8:00 AM	Mon 21/04/25 5:00 PM
21		Complete deck	2 days	Tue 22/04/25 8:00 AM	Wed 23/04/25 5:00 PM
22					
23		**Piling Works at East and West piers (EP, WP)**	**62 days**	**Mon 12/05/25 8:00 AM**	**Tue 05/08/25 5:00 PM**
24		Move barge from temporary jetty to EP01 location	1 day	Mon 12/05/25 8:00 AM	Mon 12/05/25 5:00 PM
25		Pile and concrete EP01	2 days	Tue 13/05/25 8:00 AM	Wed 14/05/25 5:00 PM
26		Move barge onto WP01 location	1 day	Thu 15/05/25 8:00 AM	Thu 15/05/25 5:00 PM
27		Pile and concrete WP01	2 days	Fri 16/05/25 8:00 AM	Mon 19/05/25 5:00 PM
28		Move barge onto EP02 location	1 day	Tue 20/05/25 8:00 AM	Tue 20/05/25 5:00 PM
29		Pile and concrete EP02	2 days	Wed 21/05/25 8:00 AM	Thu 22/05/25 5:00 PM
30		Move barge onto WP02 location	1 day	Fri 23/05/25 8:00 AM	Fri 23/05/25 5:00 PM
31		Pile and concrete WP02	2 days	Mon 26/05/25 8:00 AM	Tue 27/05/25 5:00 PM
32		Move barge onto EP03 location	1 day	Wed 28/05/25 8:00 AM	Wed 28/05/25 5:00 PM
33		Pile and concrete EP03 and EP06	4 days	Thu 29/05/25 8:00 AM	Tue 03/06/25 5:00 PM
34		Move barge onto WP03 location	1 day	Wed 04/06/25 8:00 AM	Wed 04/06/25 5:00 PM
35		Pile and concrete WP03 and WP06	4 days	Thu 05/06/25 8:00 AM	Tue 10/06/25 5:00 PM
36		Move barge onto EP04 location	1 day	Wed 11/06/25 8:00 AM	Wed 11/06/25 5:00 PM
37		Pile and concrete EP04 and EP07	4 days	Thu 12/06/25 8:00 AM	Tue 17/06/25 5:00 PM
38		Move barge onto WP04 location	1 day	Wed 18/06/25 8:00 AM	Wed 18/06/25 5:00 PM
39		Pile and concrete WP04 and WP07	4 days	Thu 19/06/25 8:00 AM	Tue 24/06/25 5:00 PM
40		Move barge onto EP05 location	1 day	Wed 25/06/25 8:00 AM	Wed 25/06/25 5:00 PM
41		Pile and concrete EP05 and EP08	4 days	Thu 26/06/25 8:00 AM	Tue 01/07/25 5:00 PM
42		Move barge onto WP05 location	1 day	Wed 02/07/25 8:00 AM	Wed 02/07/25 5:00 PM
43		Pile and concrete WP05 and WP08	4 days	Thu 03/07/25 8:00 AM	Tue 08/07/25 5:00 PM
44		Move barge onto EP09 location	1 day	Wed 09/07/25 8:00 AM	Wed 09/07/25 5:00 PM
45		Pile and concrete EP09 and EP011	4 days	Thu 10/07/25 8:00 AM	Tue 15/07/25 5:00 PM
46		Move barge onto WP09 location	1 day	Wed 16/07/25 8:00 AM	Wed 16/07/25 5:00 PM
47		Pile and concrete WP09 and WP011	4 days	Thu 17/07/25 8:00 AM	Tue 22/07/25 5:00 PM
48		Move barge onto EP10 location	1 day	Wed 23/07/25 8:00 AM	Wed 23/07/25 5:00 PM
49		Pile and concrete EP10 and EP012	4 days	Thu 24/07/25 8:00 AM	Tue 29/07/25 5:00 PM
50		Move barge onto WP10 location	1 day	Wed 30/07/25 8:00 AM	Wed 30/07/25 5:00 PM
51		Pile and concrete WP10 and WP012	4 days	Thu 31/07/25 8:00 AM	Tue 05/08/25 5:00 PM
52					
53		**Concrete Pilecaps**	**55 days**	**Mon 26/05/25 8:00 AM**	**Fri 08/08/25 5:00 PM**
54		Install and concrete pilecap WP01	1 day	Mon 26/05/25 8:00 AM	Mon 26/05/25 5:00 PM
55		Install and concrete pilecap EP01 and EP02	1 day	Thu 29/05/25 8:00 AM	Thu 29/05/25 5:00 PM
56		Install and concrete pilecap WP02	1 day	Thu 05/06/25 8:00 AM	Thu 05/06/25 5:00 PM
57		Install and concrete pilecap EP03 and EP06	1 day	Thu 12/06/25 8:00 AM	Thu 12/06/25 5:00 PM
58		Install and concrete pilecap WP03 and WP06	1 day	Thu 19/06/25 8:00 AM	Thu 19/06/25 5:00 PM
59		Install and concrete pilecap EP04 and EP07	1 day	Thu 26/06/25 8:00 AM	Thu 26/06/25 5:00 PM
60		Install and concrete pilecap WP04 and WP07	1 day	Thu 03/07/25 8:00 AM	Thu 03/07/25 5:00 PM
61		Install and concrete pilecap EP08 and EP010	1 day	Thu 10/07/25 8:00 AM	Thu 10/07/25 5:00 PM
62		Install and concrete pilecap WP08 and WP010	1 day	Thu 17/07/25 8:00 AM	Thu 17/07/25 5:00 PM
63		Install and concrete pilecap EP09 and EP011	1 day	Thu 24/07/25 8:00 AM	Thu 24/07/25 5:00 PM
64		Install and concrete pilecap WP09 and WP011	1 day	Thu 31/07/25 8:00 AM	Thu 31/07/25 5:00 PM
65		Move barge onto EP12 location	1 day	Fri 01/08/25 8:00 AM	Fri 01/08/25 5:00 PM
66		Install and concrete pilecap EP10 and EP012	2 days	Mon 04/08/25 8:00 AM	Tue 05/08/25 5:00 PM
67		Move barge onto WP12 location	1 day	Wed 06/08/25 8:00 AM	Wed 06/08/25 5:00 PM
68		Install and concrete pilecap WP10 and WP012	2 days	Thu 07/08/25 8:00 AM	Fri 08/08/25 5:00 PM
69					
70		**Demobilisation**	**13 days**	**Thu 07/08/25 8:00 AM**	**Mon 25/08/25 5:00 PM**
71		Mobilise 600T crane at site	4 days	Thu 07/08/25 8:00 AM	Tue 12/08/25 5:00 PM
72		Move barge to temporary jetty	1 day	Mon 11/08/25 8:00 AM	Mon 11/08/25 5:00 PM
73		Unload 165T Crane from jackup	0.5 days	Tue 12/08/25 8:00 AM	Tue 12/08/25 12:00 PM
74		Unload 120T Piling rig from jack up	0.5 days	Tue 12/08/25 1:00 PM	Tue 12/08/25 5:00 PM
75		Relocate barge adjacent to mobile crane	1 day	Wed 13/08/25 8:00 AM	Wed 13/08/25 5:00 PM
76		Detach leg extensions and demob deck	2 days	Thu 14/08/25 8:00 AM	Fri 15/08/25 5:00 PM
77		Derig spudwells etc	1 day	Mon 18/08/25 8:00 AM	Mon 18/08/25 5:00 PM
78		Tow to Birkenhead	1 day	Tue 19/08/25 8:00 AM	Tue 19/08/25 5:00 PM
79		Prepare at Birkenhead for sea tow	4 days	Wed 20/08/25 8:00 AM	Mon 25/08/25 5:00 PM



QHSE Measures

A RED7MARINE PROPOSAL

Quality Assurance

It is the policy of Red7Marine to provide its clients with products and services which are at all times, fit for their intended purpose and fulfil contractual obligations. We are ISO 9001: 2015 accredited, and hold the Achilles Building Confidence accreditation (audited).

In order to meet these requirements, we have developed a documented Quality Management System which forms part of the Integrated Management System that has been implemented throughout our operation and is firmly adhered to where product quality may be affected.

As a marine Contractor on our Clients sites and Principal Contractor on our own sites of operations undertaking marine construction and marine support; all of our operations shall be conducted in full compliance with our Quality Management Systems to ensure compliance with ISO 9001: 2015 standards, and adherence to industrial legislation.

Quality Control Measures

Red7Marine shall always maintains high standards of quality control and assurance of all aspects of the work scope throughout the duration of the project up to the official handover.

During project lifecycles, our Head of QHSE carries out a number of proactive monitoring measures; such as desk top audits of project document folders, site QHSE audits and at the end of each site visit he engages the whole site team for QHSE consultations to cover all aspects of the project QHSE plan in an open forum.

Our Journey to Net Zero

We have recently started our Net Zero journey with a third-party consultancy, and we are expecting to report a considerable decrease in our carbon footprint in the next financial year.

We recognise the importance of assessing energy and carbon impacts throughout our supply chain. Wherever applicable, we source and utilise eco-friendly materials in our projects. This may include recycled materials, sustainable timber, and non-toxic coatings to reduce our environmental footprint. We supply our timber for deck mats, crane mats etc from an FSC accredited supplier.

We usually source materials from local suppliers (which reduces the carbon emissions associated with longer haulage journeys. Materials are selected in accordance with the project specifications. With lower carbon alternatives usually comes an uplifted price. We are always happy to price environmentally friendly alternatives if our clients request it.

With regards to steel, we always use approved suppliers (that have been vetted first) and that have some form of environmental accreditation, policy or procedure in place – and also by procuring from local suppliers this in itself reduces carbon emissions from haulage.

We rarely have packaging with our projects, but when we have pallets, this is either recycled through our third party waste management supplier or utilised as storage timber separation for steel plates. Our hazardous materials (oils and lubes) are responsibly recycled via our contaminated waste contractor that removes it.

We prioritise the use of construction methods that minimise environmental impact. This includes techniques such as soft-start procedures. Our fleet of marine vessels and equipment is regularly upgraded to incorporate energy-efficient technologies. We recently delivered a test pile for the Bridgwater Tidal Barrier scheme where we used A 60t fully electric (plug in and battery) crawler Liebherr crane to lift the vibro hammer and two types of piling hammers (CG300 for tubular and CX85 for UB and sheet piles).

Insurance Details

Employers Liability
Insurer: QBE UK Limited
Policy number: Y105838QBE0124A
Cover period: 1st August 2024 to 31st July 2025
Indemnity limit: £10,000,000

Public Liability
Insurer: QBE UK Limited
Policy number: Y105838QBE0124A
Cover period: 1st August 2024 to 31st July 2025
Indemnity limit: £10,000,000

Professional Indemnity
Limit of Liability: GBP 10,000,000 each claim.
Insurer: Markel Insurance SE and Chaucer Insurance Company
Policy Period: From 1 August 2024 to 31 July 2025 both days inclusive. Insured Services: Marine Project Management; Marine Design and Engineering
Consultancy; (including the design component of marine design and construct projects); Marine Inspection Reports; Marine Stability Calculations, Anchorage and Mooring Calculation and Labour Agency

Activity Schedule

Item	Bill description	Unit	Bill quantity	Rate	Amount
100	**Prelims**				
	Site Management Preliminaries	sum	1	**********	**********
200	**Mob / Demob**				**********
	Mobilisation	sum	1	**********	**********
	Demobilisation	sum	1	**********	**********
300	**Engineering & Temporary Works**				**********
	Engineering	sum	1	**********	**********
	Temporary Works	sum	1	**********	**********
400	**Enablimg Works**				**********
	Crane Platform & Temporary Jetty		1	**********	**********
400	**Support Fluid**				**********
	Delivery / Slab / Material / Disposal / Demobilisation	sum	1	**********	**********
500	**Materials**				**********
	Perm Casings / Concrete / Pile Cages	sum	1	**********	**********
600	**Piling Works**				**********
	East Pier Piles 12nr	nr	12	**********	**********
	West Piles Pier 12 nr	nr	12	**********	**********
700	**Pier Caps**				**********
	East Pier Caps	nr	12	*******	**********
	West Pier Caps	nr	12	*******	**********
	TOTAL				**********

www.red7marine.co.uk

Thank you for the opportunity to work across this scheme and we would be happy to talk through our proposal in further detail.