

## THE BRIEF FOR THE MAINTENANCE AND/OR INSTALLATION AND/OR PROVISION OF HYDRODYNAMIC EQUIPMENT

Scheme Title	Southwest Regional Coastal Monitoring Programme
Employer's Address	Forde House, Newton Abbot, Devon TQ12 4XX
Nominated Employer's Representative	Mr Simon Humphry
Survey Title	Maintenance and/or installation and/or provision of hydrodynamic equipment
Purpose of Survey	The hydrodynamic network is used as a part of a long-term programme of coastal monitoring, to analyse coastal processes and provide data for operational and strategic shoreline management
Specification	Regional Coastal Monitoring Programmes Specification for maintenance and/or installation and/or provision of hydrodynamic equipment v1.0
Delivery Schedule	The delivery schedule for assumption of full responsibility for the network of existing instrumentation is 01 April 2016 or within 3 calendar months of award of contract, whichever is the later
Tender Submission Date	See the invitation to tender letter
Contract Completion Date	31 March 2021
Known Hazards	The Employer is unaware of any special hazards other than those normally associated with offshore and onshore instrumentation deployment and maintenance. The Consultant shall carry out a full Risk Assessment before each deployment/maintenance visit and shall prepare a Safe System of Working based on the Assessment. A copy shall be forwarded to the Employer's Representative. The Consultant's attention is drawn to the desirability, among other things, of monitoring weather conditions and of notifying the Coastguard of the deployment/maintenance activities.
Site Conditions/ Restrictions, Access and Public Relations	A letter of introduction will be provided which should be presented as a matter of course, and without it being demanded, at all meetings with landowners or the public

This Brief provides details specific to instrumentation which shall be maintained (including unscheduled maintenance) and/or deployed and/or provided according to the Specification.

## 1. Variations to Specification

There are no variations to the Specification.

## 2. Phased assumption of responsibility for continuity of data and of unscheduled maintenance

There will be a phased programme of transfer of responsibility from the Employer's representative to the Consultant during the 3 months prior to the Delivery Schedule. It is crucial that continuity of data is maintained during this period and that any data losses are kept to a minimum. If required, the Employer's representative will be available to accompany the Consultant to a half day's visit to each shore station, to aid the transfer of responsibility.

The Consultant will provide in the method statement a procedure for how the transfer of responsibility will be achieved and a programme for assuming responsibility for all sites by the Delivery Schedule.

## 3. Equipment spares

An extensive stock of spares for the deployed equipment is held by the Employer, as listed in the schedule (Appendix I). The Consultant will be expected to liaise with and co-operate with the Employer's representative in Hampshire to arrange a phased hand-over of the spares. This is to ensure that sufficient spares are available to both the Consultant and the Employer's representative during the 3 month period prior to the Consultant assuming responsibility for the network.

## 4. Existing deployments

The locations listed in [Table 1](#) and shown in [Figure 1](#) have instruments deployed, for which the Consultant will become fully responsible by the Delivery schedule date. Full details of the equipment at each site are given in the Schedule (Appendix 1). The wave buoys are Datawell Directional Waverider Mk III (DWR) moored using Datawell's shallow water mooring (deep water mooring at St Mary's Sound) and use HF radio transmission to shore station. The shore stations will continue to host equipment and all have a phone line and broadband installed. All existing equipment has been maintained according to the manufacturer's recommendations and in accordance with the Specification. It can be assumed that all deployed equipment will be operational when the Consultant assumes responsibility for it.

Where indicated in [Table 1](#), a display of real-time wave/tide/met/other parameters, customised to the shore station host's requirements, shall be provided and maintained at the shore station.

Where receiving/logging/data transfer systems for the DWR's are integrated with those for other wave/tide/met/ARGUS/other data, any changes to the shore station must maintain the service to the other equipment.

All Consultant's staff who work on the Severn Bridge (Second Severn Crossing) wave/tide gauge must undergo, at the Consultant's expense, a half day's training for access and evacuation procedures for the SSC. The training shall be arranged directly with the operations staff of the Second Severn Crossing. No photographs of the bridge or the installation must be published or made publicly available.

Instrument	Site name	Approximate Location	Shore station	Approx. service intervals/ due	Comments
DWR	Chesil	50° 36.16'N 02° 31.38'W	Weymouth & Portland National Sailing Academy	6 months* Apr 2016	Shore station is integrated with Weymouth DWR and Portland met station, both of which are the responsibility of the Southeast Regional Coastal Monitoring Programme
DWR	West Bay	50° 41.60'N 02° 45.00'W	West Bay Harbour Master's office	6 months* Apr 2016	Data display
Etrometa	West Bay Harbour	50° 42.53'N 02° 45.85'W		9 months Oct 2016	
Met station		50° 42.64'N 02° 45.83'W			
REX	Exmouth		Exmouth Harbour Master's office	9 months Nov 2016	Data display
DWR	Dawlish	50° 34.78'N 03° 25.05'W	Beach office	6 months Jul 2016	Data display
DWR	Tor Bay	50° 26.00'N 03° 31.10'W	Torbay Harbour Master's office	6 months Apr 2016	Data display
DWR	Start Bay	50° 17.54'N 03° 37.00'W	The shore station is in an outbuilding of a private dwelling. Details will be provided to the Consultant on award of contract	6 months Jun 2016	Data display. An ARGUS system is owned by the University of Plymouth but maintained by the Consultant. The system is integrated into the DWR shore station and shares the broadband line
DWR	Looe Bay	50° 20.32'N 04° 24.65'W	Looe Coastguard station	6 months* June 2016	Data display
Met station		50° 20.70'N 04° 27.17'W		9 months Sep 2016	
DWR	Porthleven	50° 03.76'N 05° 18.48'W	Penzance Harbour Master's office	6 months Sep 2016	Data display
DWR	Penzance	50° 06.86'N 05° 30.18'W		6 months Sep 2016	

Instrument	Site name	Approximate Location	Shore station	Approx. service intervals/ due	Comments
Etrometa	Port Isaac	50° 35.65'N 04° 50.06'W	Port Isaac aquarium	9 months	Additional task is cleaning and maintenance of navigation adjacent to step gauge. Data display.
DWR	St Mary's Sound	49° 53.52'N 06° 18.73'W	Coastguard Tower	6 months Jul 2016	DWR also has Orbcomm satellite as back-up. Data display at the Beach office in St Mary's
DWR	Perranporth	50° 21.20'N 05° 10.53'W	Youth Hostel, Droskyn Point	6 months May 2016	Data display. An ARGUS system and met station are owned by the University of Plymouth but maintained by the Consultant. Both systems are integrated into the DWR shore station computer and share the broadband line. The met data will be forwarded to the project's website. The shore station is also a receiving station for Wave Hub DWR.
DWR	Bideford Bay	51° 03.49'N 04° 16.61'W	Appledore RNLI	6 months Aug 2016	Data display
DWR	Minehead	51° 13.63'N 03° 28.15'W	Harbour Master's office	6 months* Aug 2016	Data display
DWR	Weston Bay	51° 21.22'N 03° 01.10'W	Beach office	6 months Sep 2016	Data display
REX	Severn Bridge	51° 34.46'N 02° 42.00'W	Engineer's office	9 months Dec 2016	Additional task is maintenance of fog horn override system, linked to tide data. Data display in SSC office. Further data display in Gloucester Harbour Board office, with display integrated with GHB's Ohmex tide gauge.

**Table 1:** Location of existing deployments \*may need additional cleaning visit every 3-4 months due to heavy bio-fouling. REX = Rosemount WaveRadar REX; met stations comprise any of air temperature, wind speed, gust speed, wind direction, barometric pressure, rainfall, RH, UV, sunshine



Figure 1: Location of existing deployments

## 5. New deployments

There are no planned new deployments at present.

## 6. Instrument/buoy lettering

The wording to be used on a wave buoy is:

02380 598467  
NO MOORING  
Channel Coastal Observatory

On award of contract, however, the telephone number shall be amended to that of the Consultant's 24-hour contact number. The revised telephone number need only be applied to new deployments or following a service visit.

## 7. Additional tasks

Additional tasks are required at Port Isaac and Severn Bridge, as listed in [Table 1](#).

## 8. Vessel costs for unscheduled maintenance

Vessel costs for unscheduled maintenance visits are expected to be kept to a minimum, and not to exceed £1,000 per (12 hour) day. Only in exceptional circumstances will the Employer agree to vessel costs exceeding this sum, which must be authorised in advance by the Employer.

## 9. Technical Requirement

Required data shall be delivered within 4 weeks of the activity. Deployment/service reports shall be delivered quarterly.

## APPENDIX I - SCHEDULE OF HYDRODYNAMIC EQUIPMENT

The schedule of deployed and spare equipment is correct at the time of issue of the tender documents. There may be some minor changes to the quantities of spares by the time of contract award.

Key:

- DWR = Datawell Directional Waverider Mk III  
 Mooring = Datawell shallow water mooring, consisting of 2 x 15 m bungee, polypropylene terminations, 2 float pellets, 2 aluminium anodes, chain separators, ~850 kg clump weight, bespoke length polyprop line  
 REX = Rosemount WaveRadar REX  
 Met = OMC/Campbell/Gill integrated met station with instruments measuring any/all of wind speed (mean and gust), wind direction, barometric pressure, rainfall, air temperature, humidity, UV  
 UoP = University of Plymouth

Equipment	No.	Comments
<b>Chesil</b>		
DWR	1	Deployed at 50° 36.16'N 02° 31.38'W
Mooring	1	
RX-C	1	Located at shore station (Weymouth & Portland National Sailing Academy)
<b>West Bay</b>		
DWR	1	Deployed at 50° 41.60'N 02° 45.00'W
Mooring	1	
Datawell HF antenna + cable	1	Located at shore station, West Bay Harbour Master's Office Windows XP, rfbouy software
Datawell RX-C	1	
Computer	1	
VDU	1	
UPS	1	
Cabinet	1	
BT broadband	1	
BT phone line	1	
<b>West Bay Harbour</b>		
2-section Etrometa step gauge	1	Deployed at seaward end of western harbour arm
Marine-grade s/s frame for gauge	1	
Met station, including rain gauge	1	Located at shore station, West Bay Harbour master's office. Integrated with West Bay DWR
<b>Exmouth</b>		

REX	1	Due for deployment Oct 2015
S/S frame for REX	1	
Computer	1	Located at shore station, Exmouth Marina Harbour office
VDU	1	
UPS	1	
Cabinet	1	
BT broadband	1	
BT phone line	1	
<b>Dawlish</b>		
DWR	1	Deployed at 50° 34.78'N 03° 25.05'W
Mooring	1	
Datawell HF antenna + cable	1	Located at shore station, Dawlish beach office Windows XP, rfbuoy
Datawell RX-C	1	
Computer	1	
VDU	1	
UPS	1	
Cabinet	1	
BT broadband	1	
BT phone line	1	
<b>Tor Bay</b>		
DWR	1	Deployed at 50° 26.00'N 03° 31.10'W
Mooring	1	
Datawell HF antenna + cable	1	Located at shore station, Tor Bay Harbour Master's office Windows XP, rfbuoy
Datawell RX-C	1	
Computer	1	
VDU	1	
UPS	1	
Cabinet	1	
BT broadband	1	
BT phone line	1	
<b>Start Bay</b>		
DWR	1	Deployed at 50° 17.54'N 03° 37.00'W
Mooring	1	
Datawell HF antenna + cable	1	Located at shore station



Datawell RX-C	1	Windows XP, rfbuoy
Computer	1	
VDU	1	
UPS	1	
Cabinet	1	
BT broadband	1	
BT phone line	1	
UoP ARGUS camera system	1	
<b>Looe Bay</b>		
DWR	1	Deployed at 50° 20.32'N 04° 24.65'W
Mooring	1	
Datawell HF antenna + cable	1	Located at shore station, Looe Coastguard Windows XP, rfbuoy
Datawell RX-C	1	
Computer	1	
VDU	1	
UPS	1	
Cabinet	1	
BT broadband	1	
BT phone line	1	
Met station	1	
<b>Porthleven</b>		
DWR	1	Deployed at 50° 03.76'N 05° 18.48'W (shore station at Penzance)
Mooring	1	
<b>Penzance</b>		
DWR	1	Deployed at 50° 06.86'N 05° 30.18'W
Mooring	1	
Datawell HF antenna, cable + cable splitter	1	Located at shore station, Penzance Harbour Master's office Windows XP, rfbuoy
Datawell RX-C	2	
Computer	1	
VDU	1	
UPS	1	
Cabinet	1	
BT broadband	1	

BT phone line	1	
<b>St Mary's Sound</b>		
DWR	1	Deployed at 49° 53.52'N 06° 18.73'W
Datawell 30 m mooring	1	
Datawell HF antenna + cable	1	Located at shore station, Coastguard tower Additional VDU at St Mary's beach office Windows XP, rfbuoy
Datawell RX-C	1	
Computer	1	
VDU	1	
UPS	1	
Cabinet	1	
BT broadband	1	
BT phone line	1	
<b>Perranporth</b>		
DWR	1	Deployed at 50° 21.20'N 05° 10.53'W
Mooring	1	
Datawell HF antenna + cable	1	Located at shore station, Youth Hostel, Droskyn Point Windows XP, rfbuoy
Datawell RX-C	1	
Computer	1	
VDU	1	
UPS	1	
Cabinet	1	
BT broadband	1	
BT phone line	1	
UoP met station	1	
UoP ARGUS camera system	1	
<b>Port Isaac</b>		
4-section Etrometa step gauge	1	Located on outer breakwater
Marine-grade galvanised frame for gauge	1	
Solar powered VHF transmitter	1	
Batteries	2	
Navigation light	1	
Weatherproof cabinet		
VDU	1	Located at shore station, Port Isaac aquarium

UPS	1	Windows XP	
Cabinet	1		
BT broadband	1		
BT phone line	1		
VHF receiver	1		
<b>Bideford Bay</b>			
DWR	1	Deployed at 51° 03.49'N 04° 16.61'W	
Mooring	1		
Datawell HF antenna + cable	1	Located at shore station, Appledore RNLI Windows XP, rfbuoy	
Datawell RX-C	1		
Computer	1		
VDU	1		
UPS	1		
Cabinet	1		
BT broadband	1		
BT phone line	1		
<b>Minehead</b>			
DWR	1		Deployed at 51° 13.63'N 03° 28.15'W
Mooring	1		
Datawell HF antenna + cable	1	Located at shore station, Minehead harbour Master's office Windows XP, rfbuoy	
Datawell RX-C	1		
Computer	1		
VDU	1		
UPS	1		
Cabinet	1		
BT broadband	1		
BT phone line	1		
<b>Weston Bay</b>			
DWR	1		Deployed at 51° 21.22'N 03° 01.10'W
Mooring	1		
Datawell HF antenna + cable	1	Located at shore station, Weston beach office Windows XP, rfbuoy	
Datawell RX-C	1		
Computer	1		
VDU	1		

UPS	1	
Cabinet	1	
BT broadband	1	
BT phone line	1	
<b>Severn Bridge</b>		
REX	1	Deployed mid-span of Second Severn Crossing
S/S frame for REX	1	
Computer	1	Located at shore station, SSC engineer's office Windows XP
VDU	1	
UPS	1	
Cabinet	1	
BT broadband	1	
BT phone line	1	
<b>Spare equipment</b>		
Rosemount WaveRadar REX	1	For REX
3 m step gauge section	1	For Etrometa step gauge
3 m step gauge frame	1	
Datawell DWR Mk III	1	For DWR
15 m bungee		
30 m bungee		
3 kg pellet float		
10 kg pellet float		
Galvanised seabed shackle		
S/S 12 mm shackle		
Chain anode separator set		
Chain anodes		
Triangle anodes		
Mooring chain		
Rope termination		
Radar reflector set		
Battery pack		
Safety triangle		
Hatch cover screw		

Hatch cover "O" ring		
Hatch cover handle		
BUFFIN antenna		
GPS wire		
HF antenna (32-36 MHz)		
RX-C		
Buoy finder	1	