



---

# Notice to Mariners

East Anglia TWO

C75466-NtM-001(02) | 29 June 2020

Final

**Scottish Power Renewables**



# Document Control

## Document Information

Project Title	East Anglia TWO
Document Title	Notice to Mariners
Fugro Project No.	C75466
Fugro Document No.	C75466-NtM-001(02)
Issue Number	001
Issue Status	Final

## Client Information

Client	Scottish Power Renewables
Client Address	1 Tudor Street, 3rd Floor, London, EC4Y 0AH
Client Contact	Beatriz Galán

## Revision History

Issue	Date	Status	Comments on Content	Prepared By	Checked By	Approved By
00	29 June 2020	For Review	First Issue	CRD	MML	LF
01	8 July 2020	Updated	Additional equipment information added, vessel details amended	MML	LF	LF
02	13 July 2020	Final	Deployment details confirmed	MML	LF	LF

## Project Team

Initials	Name	Role
LF	Lars Fogelin	Project Manager
MML	Matthew Linham	Senior Oceanographer
CRD	Chris Duffield	Oceanographic Engineer

---

## Contents

<b>1.</b>	<b>Introduction</b>	<b>1</b>
<b>2.</b>	<b>Area of Operations</b>	<b>2</b>
<b>3.</b>	<b>Offshore Metocean Measurements</b>	<b>3</b>
3.1	The Equipment	3
3.2	Safety	4
<b>4.</b>	<b>Immediate Contacts</b>	<b>5</b>
<b>5.</b>	<b>Distribution List</b>	<b>6</b>

## Tables in the Main Text

Table 1: SWLB Coordinates	2
Table 2: SWLB light flash sequence	3
Table 3: Contact persons	5
Table 4: Distribution list for this NtM	6

## Figures in the Main Text

Figure 1: SWLB planned deployment location	2
Figure 2: Equipment dimensions (left), example deployment (right)	3

---

## 1. Introduction

Mariners are advised that a SeaWatch LiDAR Buoy (SWLB) has now been deployed at the East Anglia TWO wind farm site. The SWLB is a sea state measurement instrument (referred to as 'the equipment'). The deployment location is within the UK Sector of the North Sea off the coast of East Suffolk and Essex.

The equipment is deployed within the East Anglia TWO wind farm array limits and will be deployed for approximately twelve months from July 2020.

The equipment was deployed by the vessel *Severn Supporter* on 11 July 2020. Scheduled maintenance is planned in the autumn/winter of 2020, from October onwards. Unforeseen maintenance may also be required.

The mooring design is specific to each SWLB deployment and location. The equipment is moored through a combination of steel chains, rope and rubber cord to approximately 2250 kg anchor weight at the seabed.

## 2. Area of Operations

The equipment is located within the East Anglia TWO offshore development site. Deployed coordinates for the equipment are provided in Table 1 and Figure 1.

Table 1: SWLB deployed coordinates

Name	Latitude	Longitude	Depth [m]
SWLB	52° 07.088' N	002° 12.270' E	42

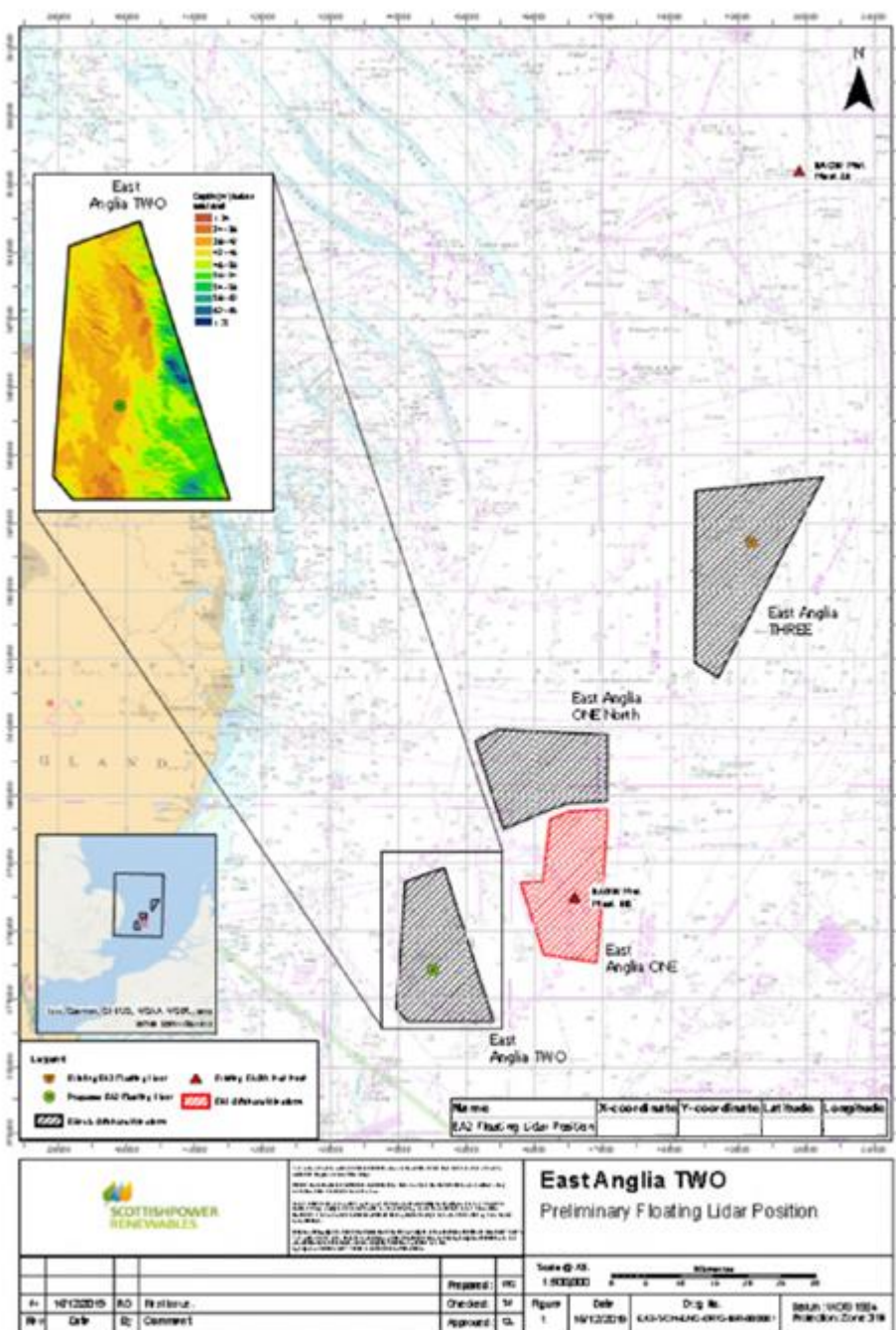


Figure 1: SWLB deployment location

### 3. Offshore Metocean Measurements

#### 3.1 The Equipment

The equipment is an integrated Seawatch Wavescan buoy and ZX 300M LiDAR; the purpose of the equipment is to collect oceanographic and meteorological data using a single platform. The equipment is supplied and charged by an onboard power system which uses methanol fuel cells and solar panels to recharge onboard lead acid batteries.

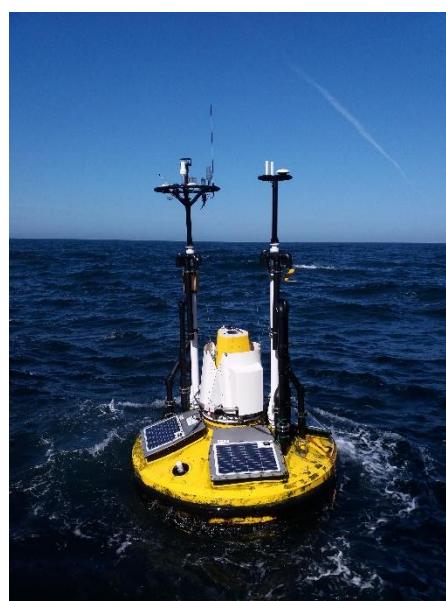
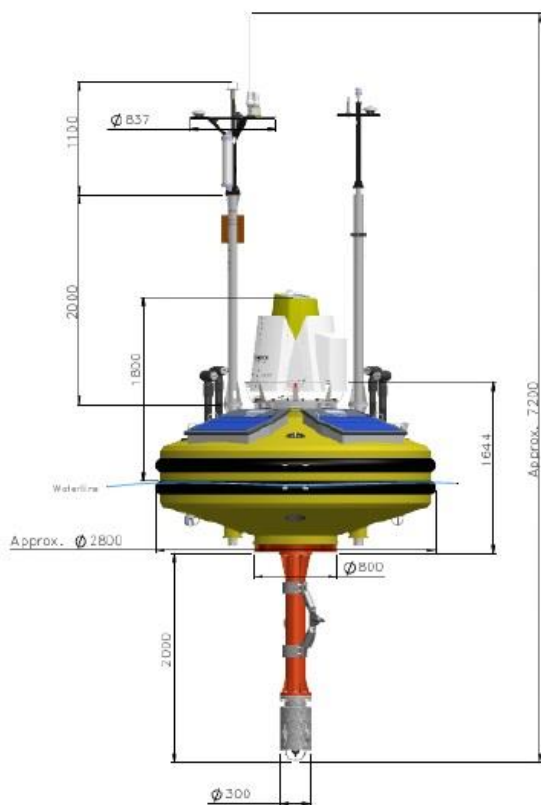


Figure 2: Equipment dimensions (left), example deployment (right)

In order to minimise the risk to other sea users, the measures listed below have been adopted for this deployment:

The equipment is equipped with a F1 (5) Y 20 s light with 4-5 nautical mile range; the light is mounted at the top of one of the masts, approximately 4 m above sea level. The flash sequence for this light is detailed in Table 2.

Table 2: SWLB light flash sequence

Flash Code	On [s]	Off [s]	On [s]	Off [s]	On [s]	Off [s]	On [s]	Off [s]	On [s]	Off [s]
FL (5) 20 S	0.8	1.2	0.8	1.2	0.8	1.2	0.8	1.2	0.8	11.2

Additional risk reduction measures include the use of passive radar reflectors to make the buoy more visible on vessel radars, Automatic Information Systems (AIS) to broadcast the buoy position to marine AIS platforms, Global Positioning Systems (GPS) position monitoring of the buoy at 30-minute intervals and an independent GPS tracker used for backup position monitoring of the equipment in the event of primary GPS failure.

The equipment is moored using a single point mooring. The mooring design allows for free movement of the buoy over a radius that is approximately equal to the water depth. The anchor weight used to moor the equipment is approximately 2000 kg weight in water and comprised of large diameter scrap chain.

It should be noted that some elements of the mooring float just below the sea surface. To avoid the risk of entanglement, vessels should allow a minimum 200 m clearance from the surface buoy

### **3.2 Safety**

It is requested that anybody having knowledge of any potential objects submerged or moored on the seabed close to the deployment zone, that could be damaged or form a hazard to the vessel and its equipment advises the Project's Fishing Industry Liaison Officer of their position and nature.

## 4. Immediate Contacts

The contents of this notice are based upon our current understanding of East Anglia TWO requirements.

Enquiries regarding the contents of this Notice to Mariners or any other matters should be directed to the persons outlined in Table 3.

Table 3: Contact persons

Role	Name	Contact Details
Scottish Power FliDar Package Manager	Beatriz Galán	+34 659 027 371 <a href="mailto:bgalan@iberdrola.es">bgalan@iberdrola.es</a>
Fugro Project Manager	Lars Fogelin	+47 9241 0056 <a href="mailto:l.fogelin@fugro.com">l.fogelin@fugro.com</a>
Fugro Project Director	Arve Berg	+47 9139 4172 <a href="mailto:a.berg@fugro.com">a.berg@fugro.com</a>
Senior Oceanographer	Matthew Linham	+44 2392 205 503 +44 7917 852 948 <a href="mailto:m.linham@fugro.com">m.linham@fugro.com</a>
Operations Manager	Ralph Bostock	+44 2392 205 514 +44 7787 430 832 <a href="mailto:r.bostock@fugro.com">r.bostock@fugro.com</a>



## 5. Distribution List

This NtM has been distributed to the following parties.

Table 4: Distribution list for this NtM

Distribution List
<a href="mailto:marine@scottishpower.com">marine@scottishpower.com</a>
<a href="mailto:jonathan@brownmay.com">jonathan@brownmay.com</a>
<a href="mailto:sarah@gobeconsultants.com">sarah@gobeconsultants.com</a>
<a href="mailto:jyoung@ScottishPower.com">jyoung@ScottishPower.com</a>
<a href="mailto:nberry@scottishpower.com">nberry@scottishpower.com</a>
<a href="mailto:nabad@scottishpower.com">nabad@scottishpower.com</a>
<a href="mailto:c.paterson@scottishpower.com">c.paterson@scottishpower.com</a>
<a href="mailto:wm.humber@mcga.gov.uk">wm.humber@mcga.gov.uk</a>
<a href="mailto:sdr@ukho.gov.uk">sdr@ukho.gov.uk</a>
<a href="mailto:offshore.energy@ukho.gov.uk">offshore.energy@ukho.gov.uk</a>
<a href="mailto:noticestomariners@ukho.gov.uk">noticestomariners@ukho.gov.uk</a>
<a href="mailto:navigationsafety@mcga.gov.uk">navigationsafety@mcga.gov.uk</a>
<a href="mailto:navigation.directorate@thls.org">navigation.directorate@thls.org</a>
<a href="mailto:lowestoft@marinemanagement.org.uk">lowestoft@marinemanagement.org.uk</a>
<a href="mailto:kingfisher@seafish.co.uk">kingfisher@seafish.co.uk</a>
<a href="mailto:zone10@hmcg.gov.uk">zone10@hmcg.gov.uk</a>
<a href="mailto:NavWarnings@UKHO.gov.uk">NavWarnings@UKHO.gov.uk</a>
<a href="mailto:nmoccontroller@hmcg.gov.uk">nmoccontroller@hmcg.gov.uk</a>
<a href="mailto:h.capon@fugro.com">h.capon@fugro.com</a>
<a href="mailto:m.crawshaw@fugro.com">m.crawshaw@fugro.com</a>