

# Outer Dowsing Offshore Wind

## Environmental Statement

### Chapter 24 Hydrology and Flood Risk

#### Volume 3 Appendices

#### Appendix 24.3 Flood Risk Assessment: Onshore Substation

6 of 8

Date: July 2024

Document Reference: 6.3.24.3

Pursuant to APFP Regulation: 5(2)(a) and 5(2)(e)

Rev: 2.0 (Tracked)

Company:		<b>Outer Dowsing Offshore Wind</b>		Asset:	<b>Whole Asset</b>	
Project:		<b>Whole Wind Farm</b>		Sub Project/Package:	Whole Asset	
Document Title or Description:		Appendix 24.3 Flood Risk Assessment: Onshore Substation				
Internal Document Number:		PP1-ODOW-DEV-CS-REP-0196_02		3 <sup>rd</sup> Party Doc No (If applicable):	N/A	
Rev No.	Date	Status / Reason for Issue	Author	Checked by	Reviewed by	Approved by
1.0	March 2024	DCO Application	SLR	GoBe	Shepherd and Wedderburn	Outer Dowsing
2.0	July 2024	Response to Section 51 Advice	SLR	Outer Dowsing	Shepherd and Wedderburn	Outer Dowsing



**LEGEND**

- Substation Search Areas
- Onshore Substation Area
- Breach Location

**Difference in Hazard Class**

- 3
- 2
- 1
- 1
- 2
- 3

Google Satellite



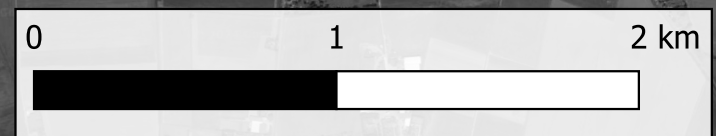
**Figure No. 56**

Project  
**Outer Dowsing Offshore Wind Farm - Flood Inundation Mapping**

Client  
**Outer Dowsing Offshore Wind**

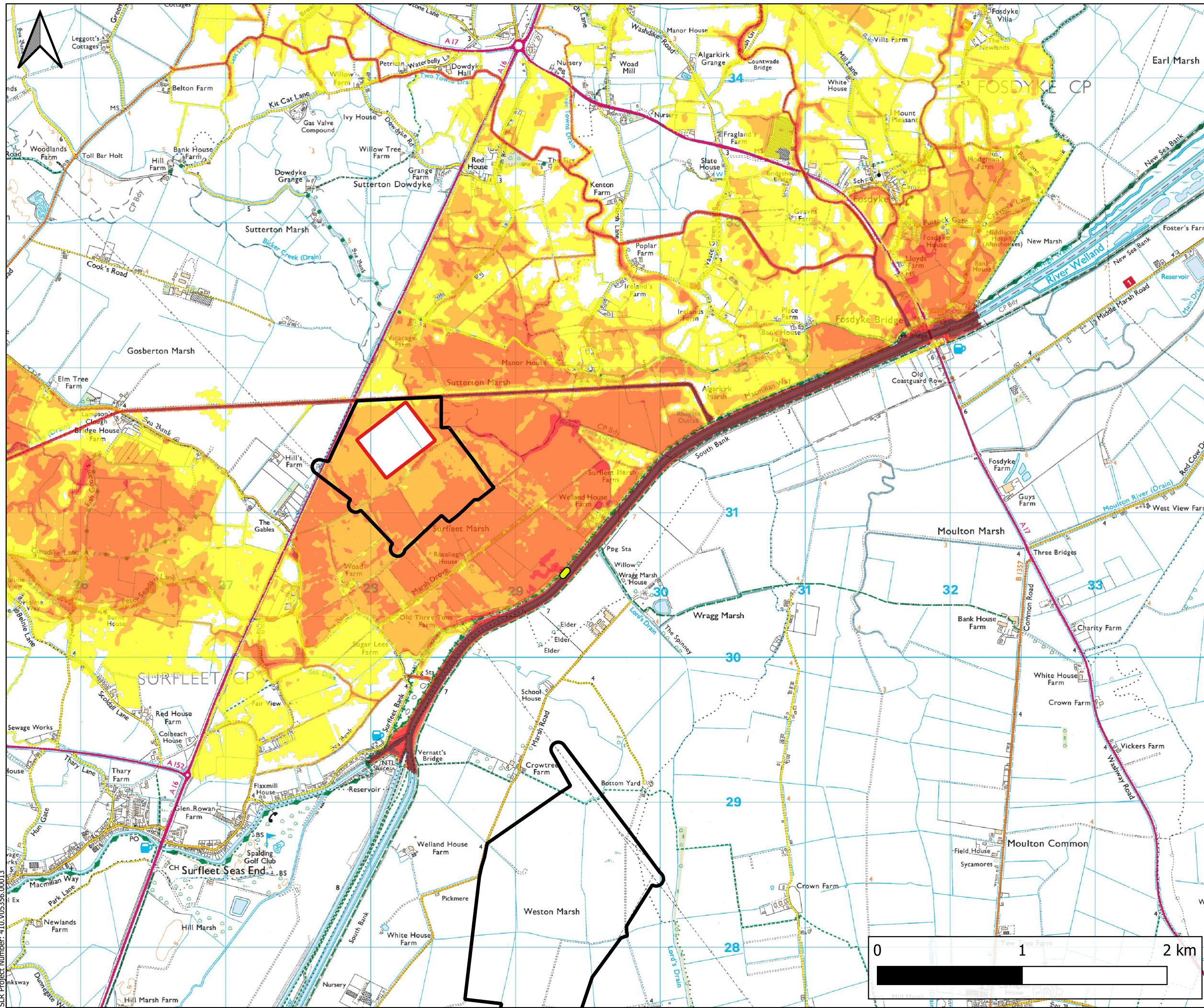


**Hazard Class Changes  
 1:200yr North Breach 1  
 Proposed Scenario**



Scale A3	Version 2.0	Date June 2024
-------------	----------------	-------------------

SLR Project Number: 410.V05356.00013



**LEGEND**

- Substation Search Areas
- Onshore Substation Area
- Breach Location

**Maximum Flood Depth (m)**

- 0.00 - 0.25
- 0.25 - 0.50
- 0.50 - 1.00
- 1.00 - 2.00
- > 2.00

Ordnance Survey(OS) 1:25000  
Raster Basemap



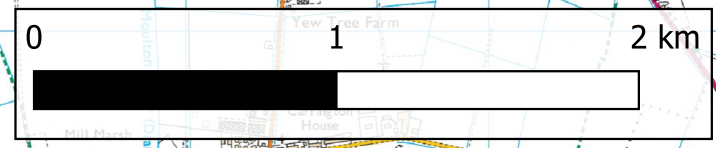
**Figure No. 57**

Project  
**Outer Dowsing Offshore Wind Farm - Flood Inundation Mapping**

Client  
**Outer Dowsing Offshore Wind**

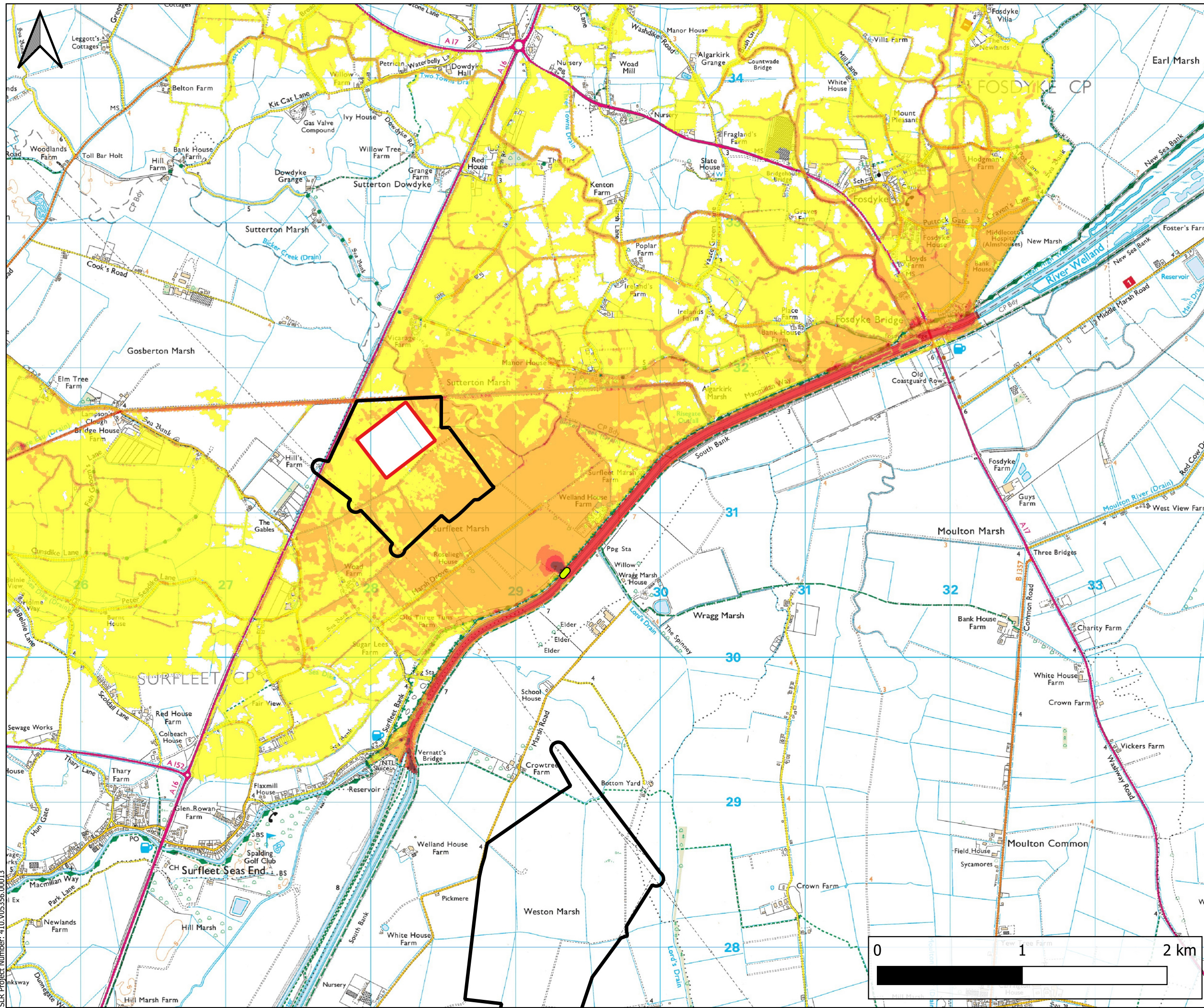


**Maximum Flood Depths  
1:1000yr+CC North Breach 2  
Proposed Scenario**



Scale A3	Version 2.0	Date June 2024
-------------	----------------	-------------------

SLR Project Number: 410.V05356.00013



**LEGEND**

- Substation Search Areas
- Onshore Substation Area
- Breach Location

Maximum Flood Velocity (m/s)

- 0.00 - 0.30
- 0.30 - 1.00
- 1.00 - 1.50
- 1.50 - 2.50
- > 2.50

Ordnance Survey(OS) 1:25000  
Raster Basemap



Figure No. 58

Project  
Outer Dowsing Offshore Wind Farm - Flood Inundation Mapping

Client  
Outer Dowsing Offshore Wind

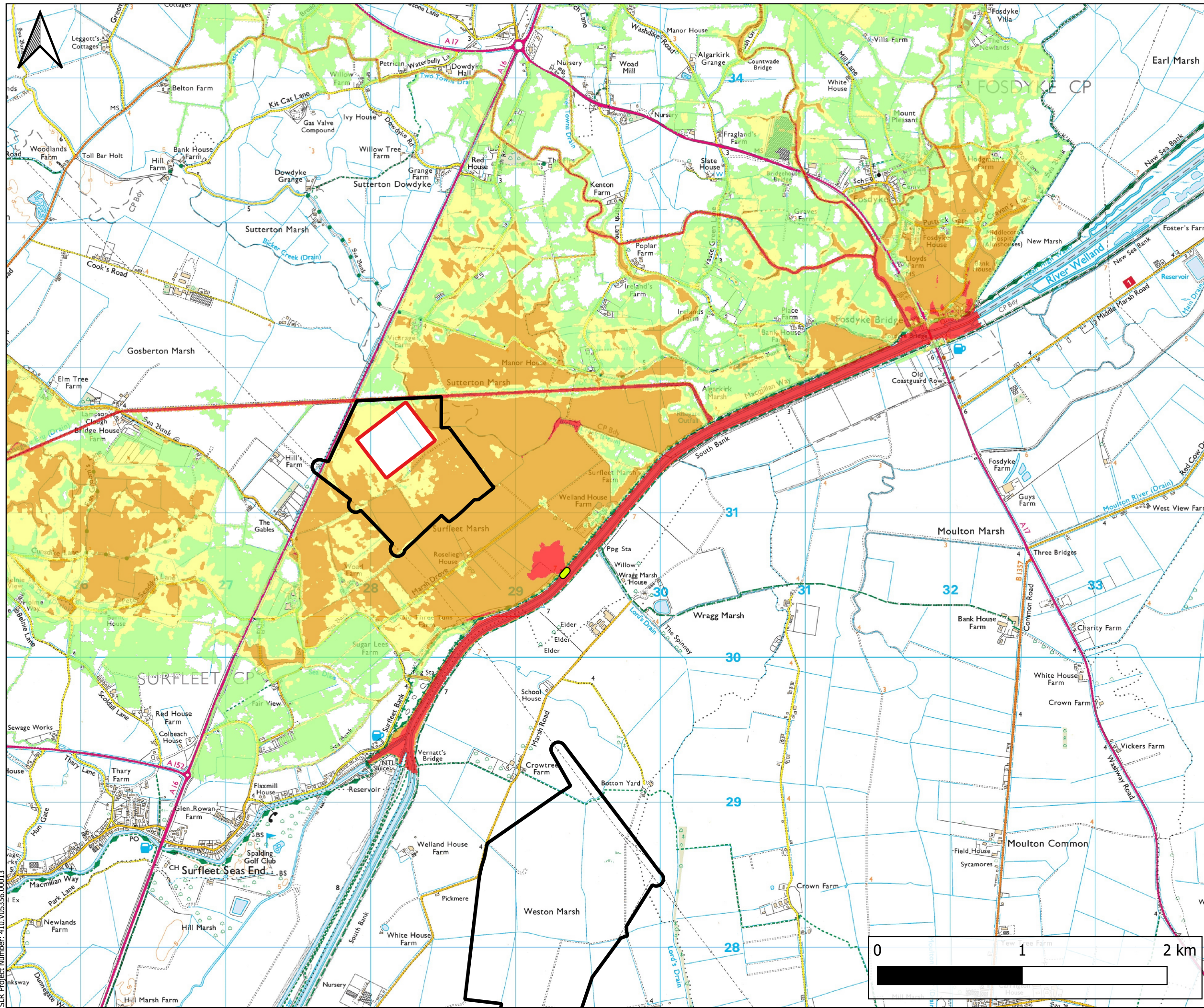


**Maximum Flood Velocity  
1:1000yr+CC North Breach 2  
Proposed Scenario**



Scale A3	Version 2.0	Date June 2024
-------------	----------------	-------------------

SLR Project Number: 410.V05356.00013



**LEGEND**

- Substation Search Areas
- Onshore Substation Area
- Breach Location

**Flood Hazard Rating**

- <= 0.75
- 0.75 - 1.25
- 1.25 - 2.00
- > 2.00

Ordnance Survey(OS) 1:25000  
Raster Basemap



**Figure No. 59**

Project  
**Outer Dowsing Offshore Wind Farm - Flood Inundation Mapping**

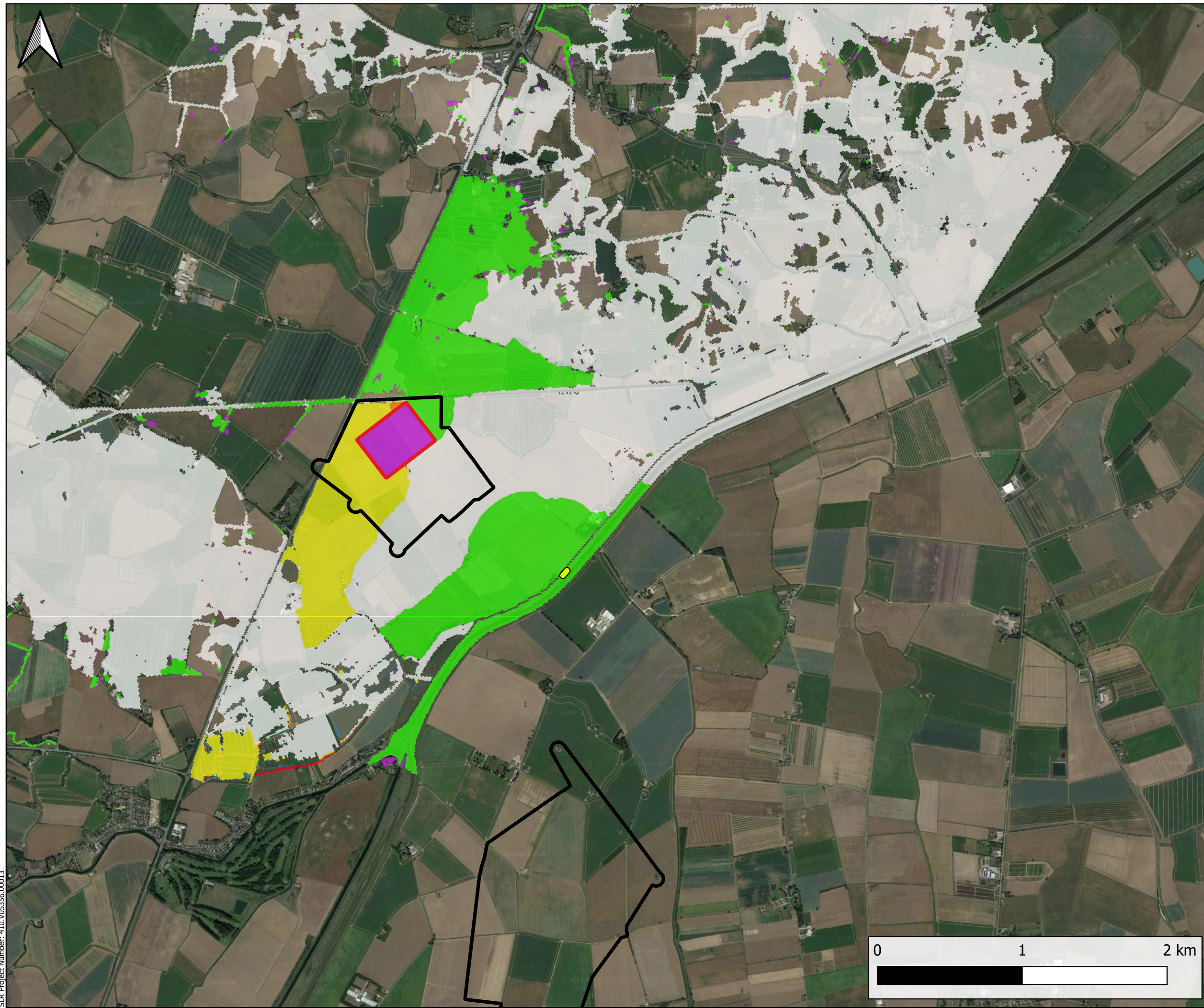
Client  
**Outer Dowsing Offshore Wind**



**Maximum Flood Hazard  
1:1000yr+CC North Breach 2  
Proposed Scenario**

Scale A3	Version 2.0	Date June 2024
-------------	----------------	-------------------

SLR Project Number: 410.V05356.00013



**LEGEND**

- Substation Search Areas
- Onshore Substation Area
- Breach Location

Difference in Depth (m)

- <= -0.01
- 0.01 - 0.01
- 0.01 - 0.03
- 0.03 - 0.05
- 0.05 - 0.15

Change in Conditions

- Was wet now dry
- Was dry now wet

Google Satellite



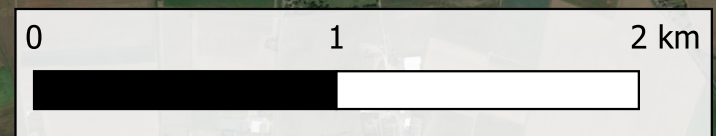
**Figure No. 60**

Project  
**Outer Dowsing Offshore Wind Farm - Flood Inundation Mapping**

Client  
**Outer Dowsing Offshore Wind**



**Flood Depth Difference  
 1:1000yr+CC North Breach 2  
 Proposed Scenario**






Scale A3	Version 2.0	Date June 2024
-------------	----------------	-------------------







SLR Project Number: 410.V05356.00013



**LEGEND**

-  Substation Search Areas
-  Onshore Substation Area
-  Breach Location

Difference in Hazard Class

-  -3
-  -2
-  -1
-  1
-  2
-  3

Google Satellite



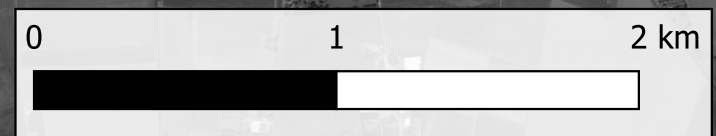
**Figure No. 61**

Project  
**Outer Dowsing Offshore Wind Farm - Flood Inundation Mapping**

Client  
**Outer Dowsing Offshore Wind**



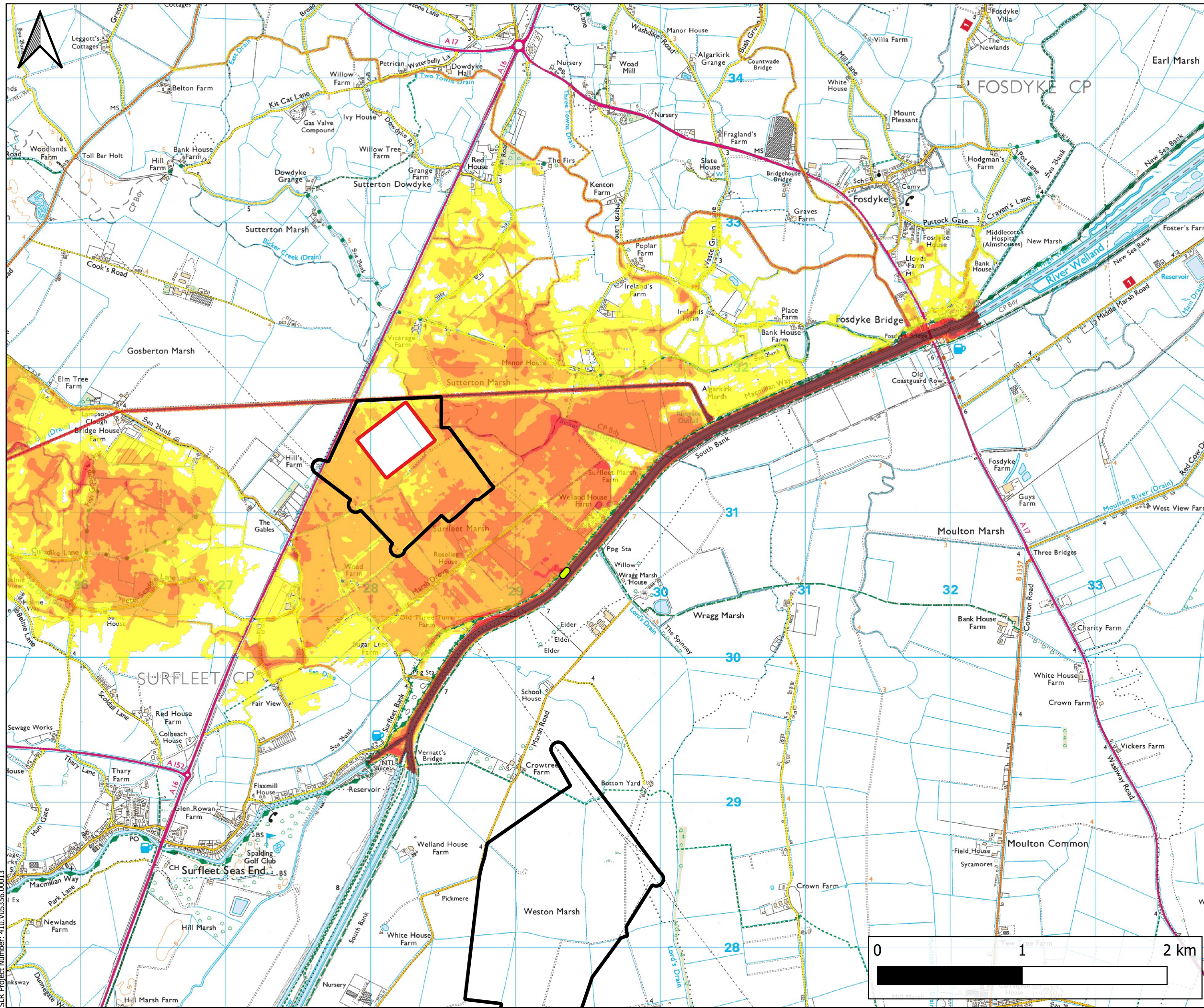
**Hazard Class Changes  
 1:1000yr+CC North Breach 2  
 Proposed Scenario**



Scale A3	Version 2.0	Date June 2024
-------------	----------------	-------------------

SLR Project Number: 410.V05356.00013





**LEGEND**

- Substation Search Areas
- Onshore Substation Area
- Breach Location

**Maximum Flood Depth (m)**

- 0.00 - 0.25
- 0.25 - 0.50
- 0.50 - 1.00
- 1.00 - 2.00
- > 2.00

Ordnance Survey(OS) 1:25000  
Raster Basemap



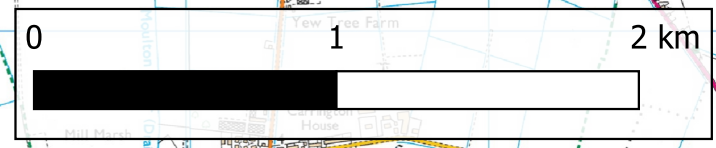
**Figure No. 62**

Project  
**Outer Dowsing Offshore Wind Farm - Flood Inundation Mapping**

Client  
**Outer Dowsing Offshore Wind**

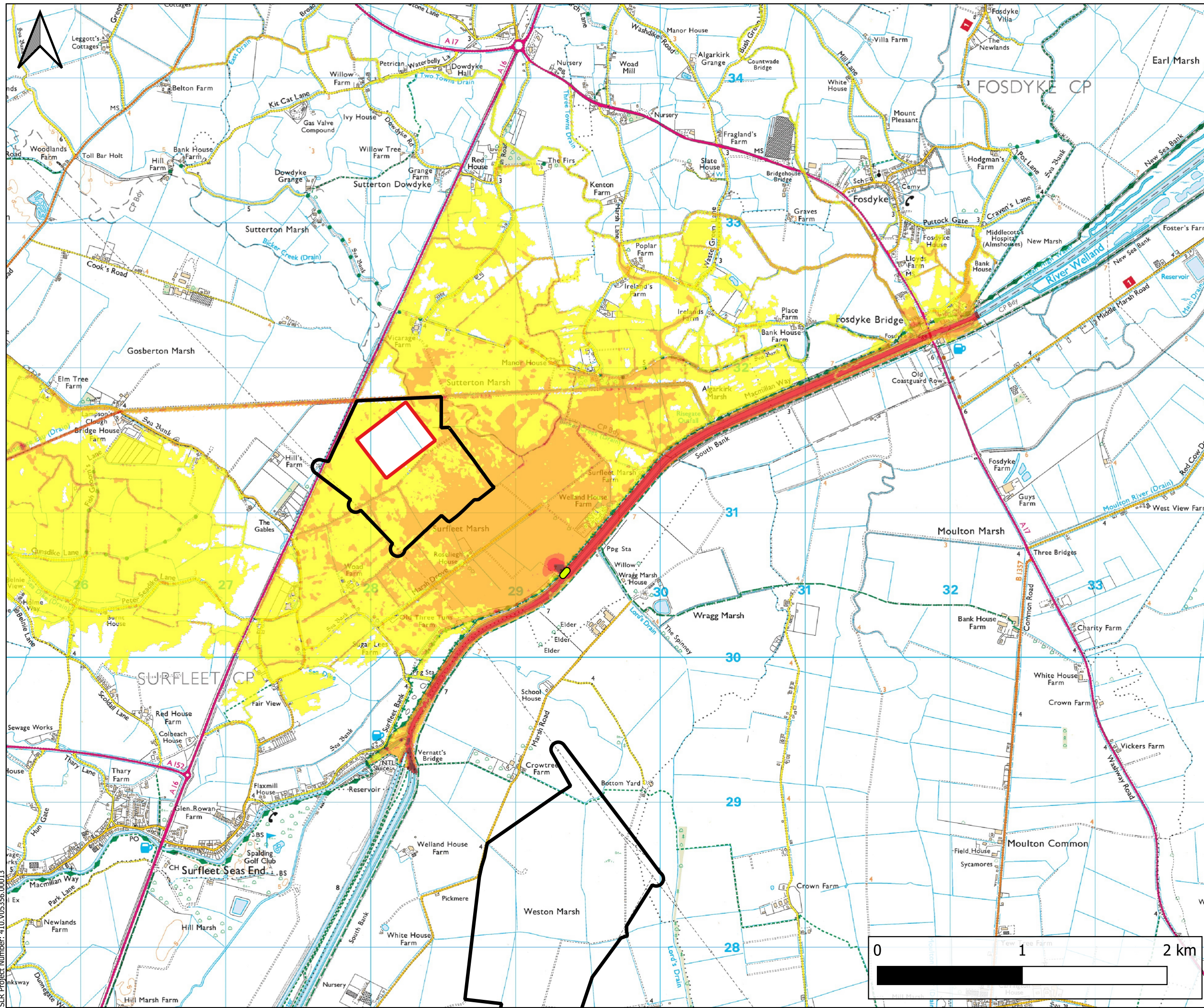


**Maximum Flood Depths  
1:1000yr North Breach 2  
Proposed Scenario**



Scale A3	Version 2.0	Date June 2024
-------------	----------------	-------------------

SLR Project Number: 410.V05356.00013



**LEGEND**

- Substation Search Areas
- Onshore Substation Area
- Breach Location

Maximum Flood Velocity (m/s)

- 0.00 - 0.30
- 0.30 - 1.00
- 1.00 - 1.50
- 1.50 - 2.50
- > 2.50

Ordnance Survey(OS) 1:25000  
Raster Basemap



Figure No. 63

Project  
**Outer Dowsing Offshore Wind Farm - Flood Inundation Mapping**

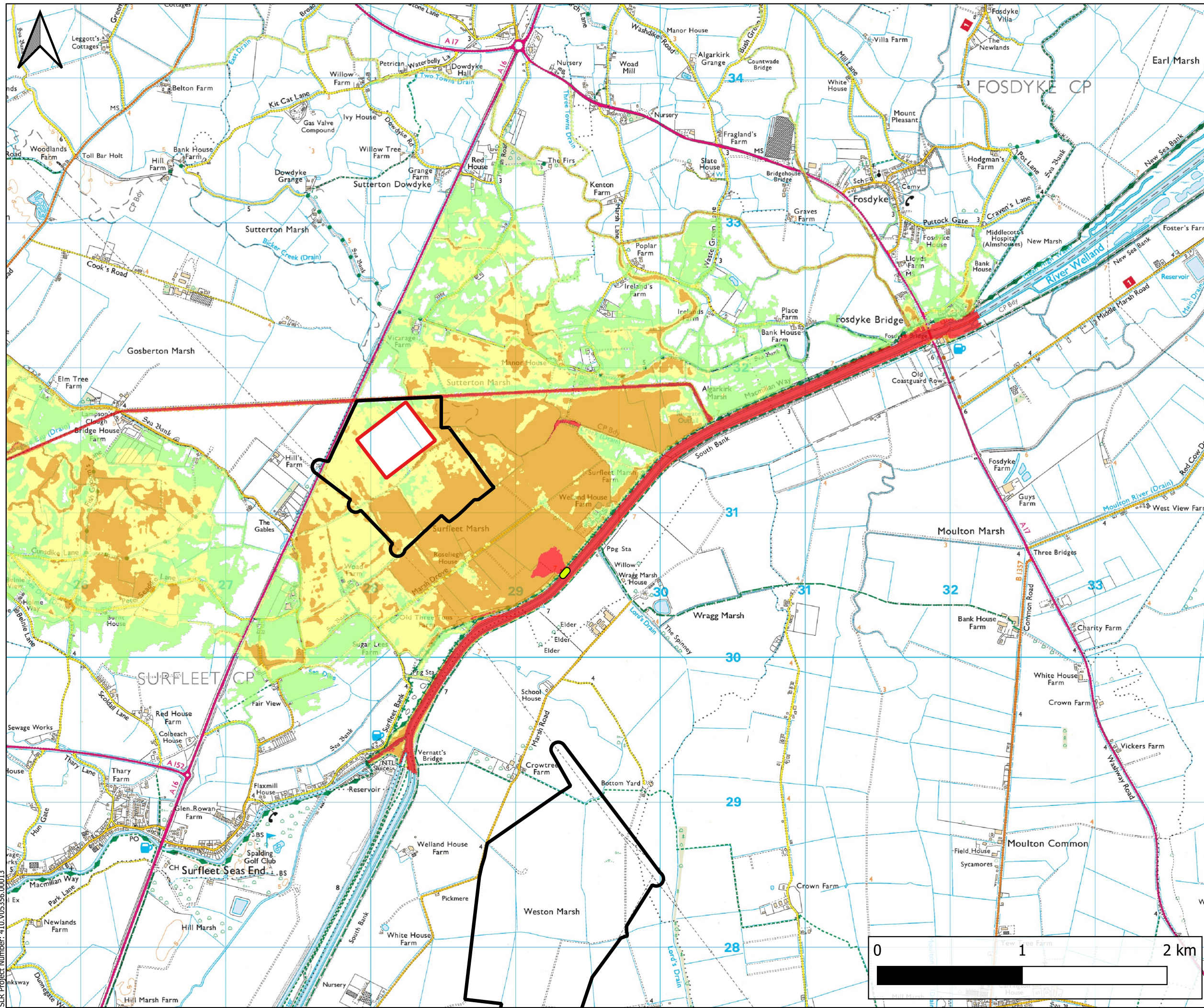
Client  
**Outer Dowsing Offshore Wind**



**Maximum Flood Velocity  
1:1000yr North Breach 2  
Proposed Scenario**

Scale A3	Version 2.0	Date June 2024
-------------	----------------	-------------------

SLR Project Number: 410.V05356.00013



**LEGEND**

- Substation Search Areas
- Onshore Substation Area
- Breach Location

**Flood Hazard Rating**

- ≤ 0.75
- 0.75 - 1.25
- 1.25 - 2.00
- > 2.00

Ordnance Survey(OS) 1:25000  
Raster Basemap



**Figure No. 64**

Project  
**Outer Dowsing Offshore Wind Farm - Flood Inundation Mapping**

Client  
**Outer Dowsing Offshore Wind**

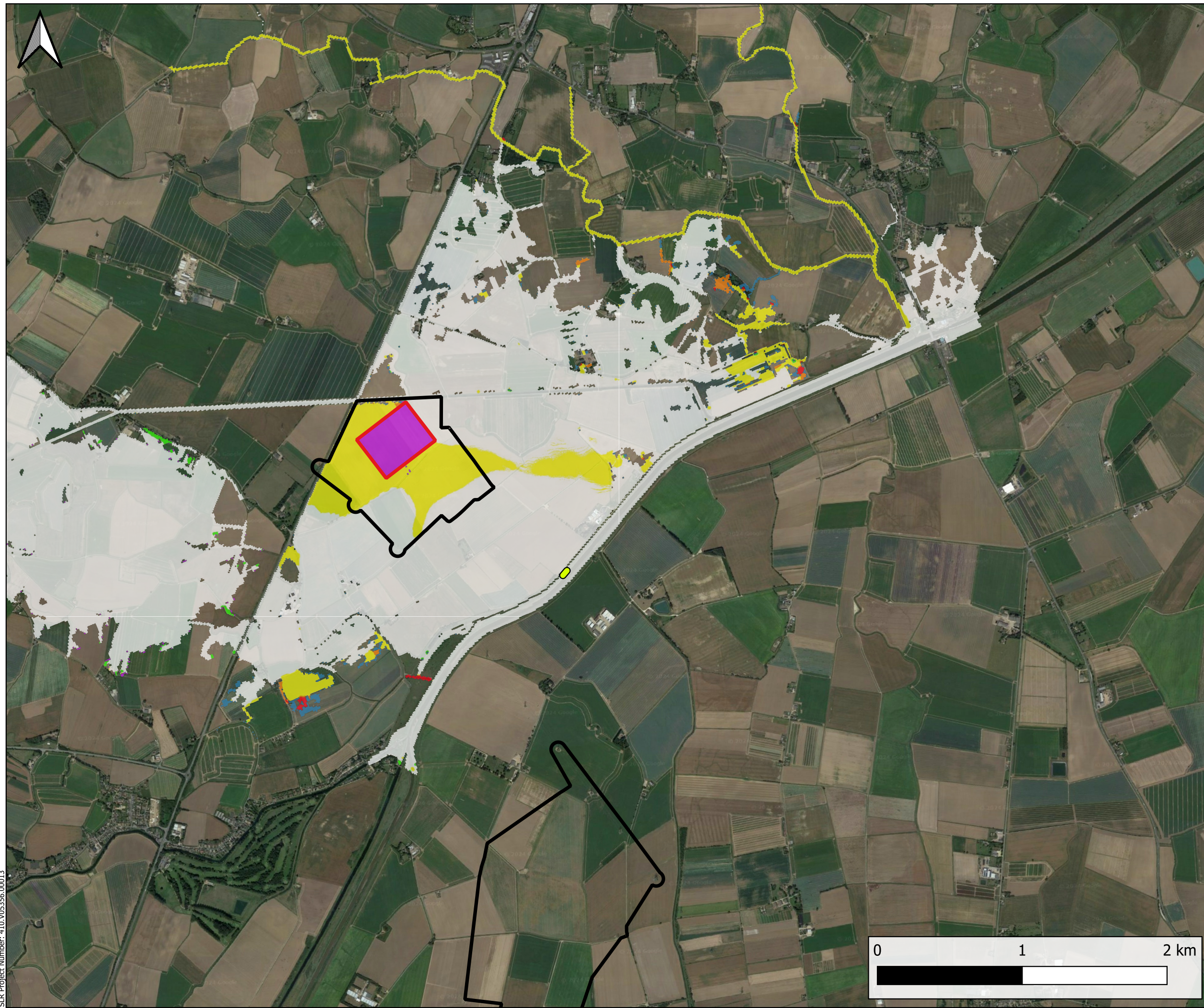


**Maximum Flood Hazard  
1:1000yr North Breach 2  
Proposed Scenario**



Scale A3	Version 2.0	Date June 2024
-------------	----------------	-------------------

SLR Project Number: 410.V05356.00013



**LEGEND**

- Substation Search Areas
- Onshore Substation Area
- Breach Location

Difference in Depth (m)

- $\leq -0.01$
- 0.01 - 0.01
- 0.01 - 0.03
- 0.03 - 0.05
- 0.05 - 0.15

Change in Conditions

- Was wet now dry
- Was dry now wet

Google Satellite



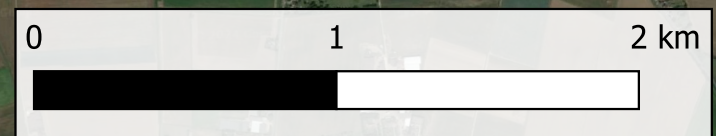
**Figure No. 65**

Project  
**Outer Dowsing Offshore Wind Farm - Flood Inundation Mapping**

Client  
**Outer Dowsing Offshore Wind**



**Flood Depth Difference  
 1:1000yr North Breach 2  
 Proposed Scenario**



Scale A3	Version 2.0	Date June 2024
-------------	----------------	-------------------

SLR Project Number: 410.V05356.00013



**LEGEND**

- Substation Search Areas
- Onshore Substation Area
- Breach Location

Difference in Hazard Class

- 3
- 2
- 1
- 1
- 2
- 3

Google Satellite



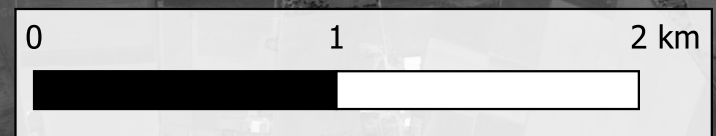
**Figure No. 66**

Project  
**Outer Dowsing Offshore Wind Farm - Flood Inundation Mapping**

Client  
**Outer Dowsing Offshore Wind**

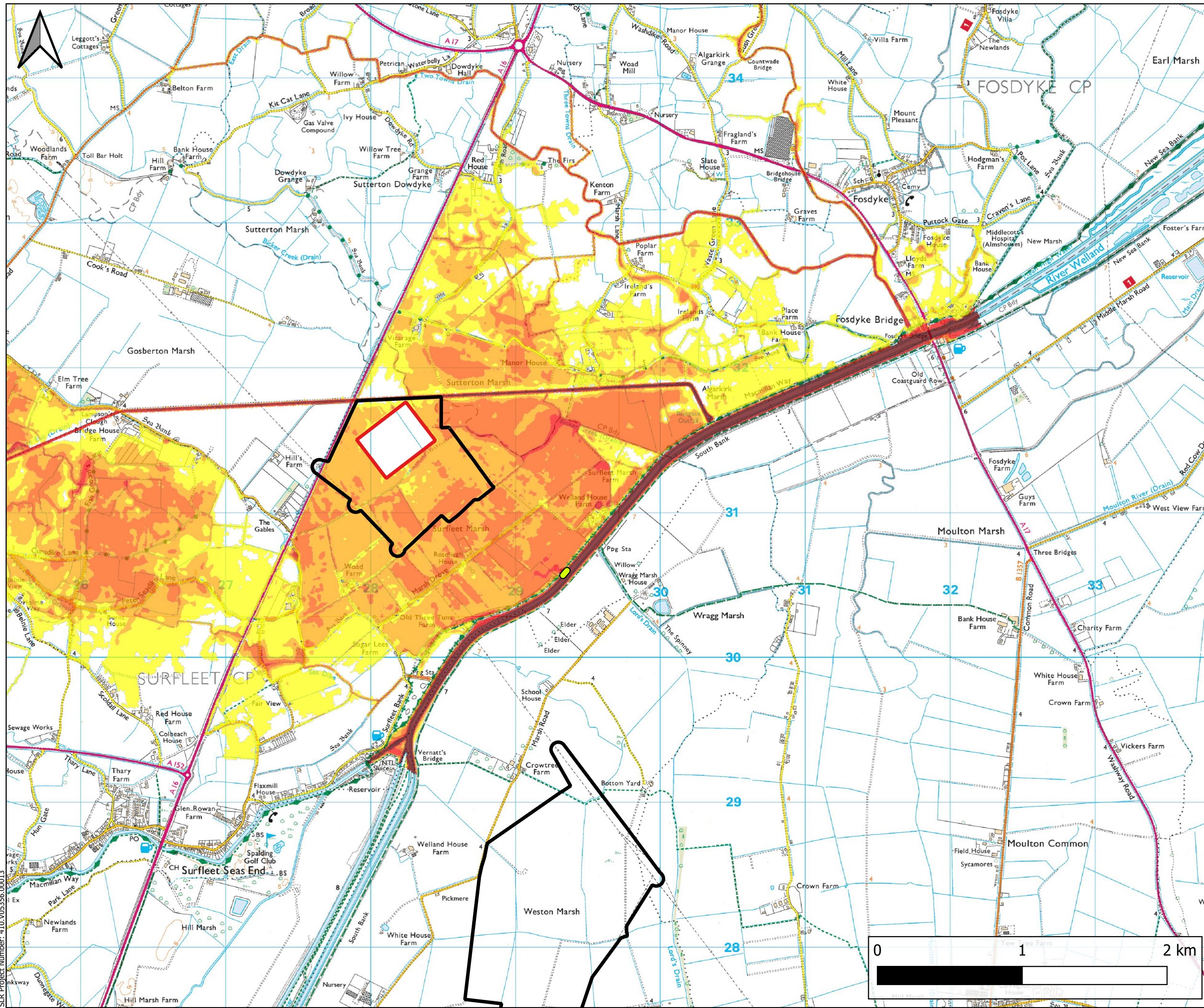


**Hazard Class Changes  
 1:1000yr North Breach 2  
 Proposed Scenario**



Scale A3	Version 2.0	Date June 2024
-------------	----------------	-------------------

SLR Project Number: 410.V05356.00013



**LEGEND**

- Substation Search Areas
- Onshore Substation Area
- Breach Location

**Maximum Flood Depth (m)**

- 0.00 - 0.25
- 0.25 - 0.50
- 0.50 - 1.00
- 1.00 - 2.00
- > 2.00

Ordnance Survey(OS) 1:25000  
Raster Basemap



**Figure No. 67**

Project  
**Outer Dowsing Offshore Wind Farm - Flood Inundation Mapping**

Client  
**Outer Dowsing Offshore Wind**

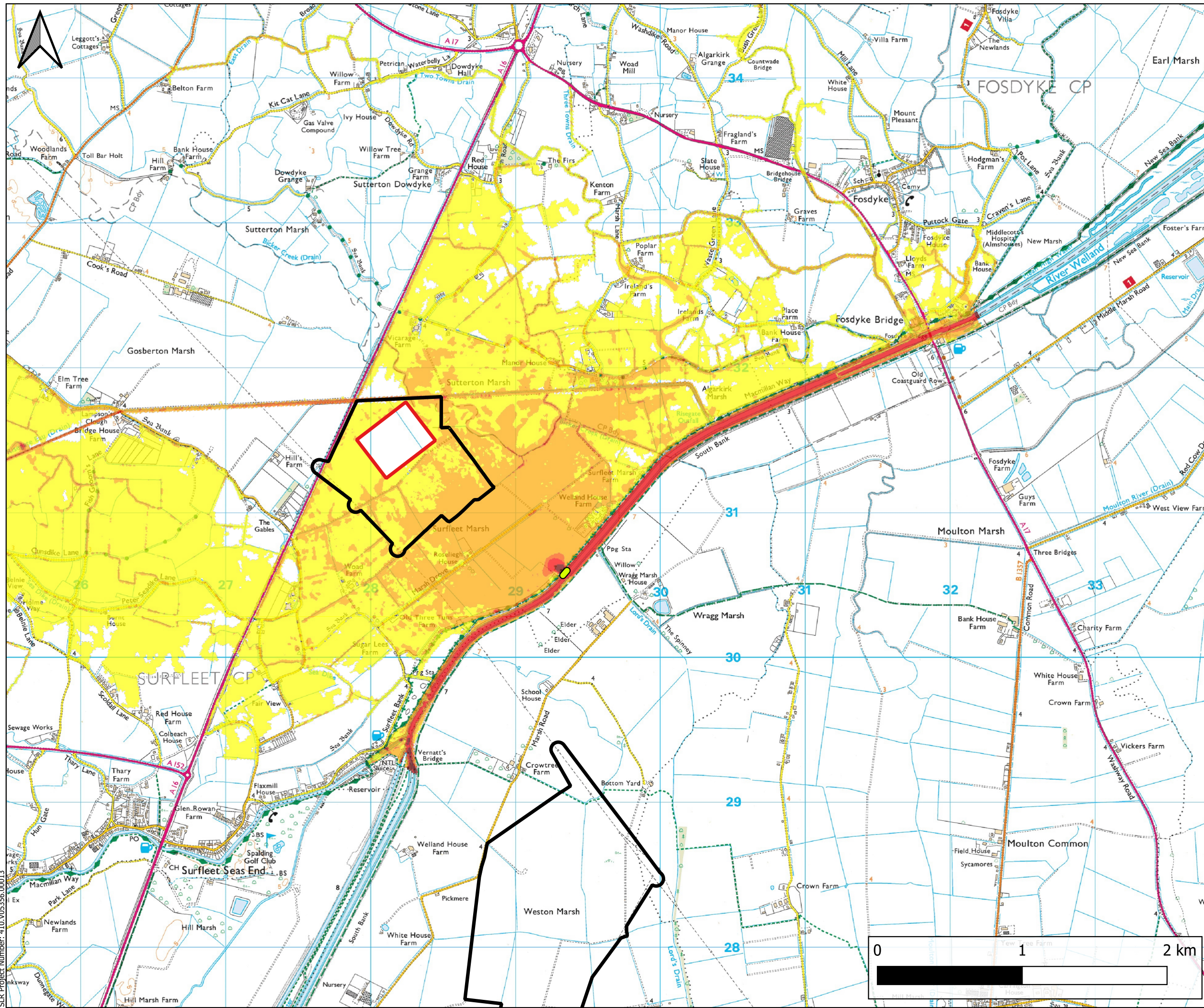


**Maximum Flood Depths  
1:200yr+CC North Breach 2  
Proposed Scenario**



Scale A3	Version 2.0	Date June 2024
-------------	----------------	-------------------

SLR Project Number: 410.V05356.00013



**LEGEND**

- Substation Search Areas
- Onshore Substation Area
- Breach Location

Maximum Flood Velocity (m/s)

- 0.00 - 0.30
- 0.30 - 1.00
- 1.00 - 1.50
- 1.50 - 2.50
- > 2.50

Ordnance Survey(OS) 1:25000  
Raster Basemap



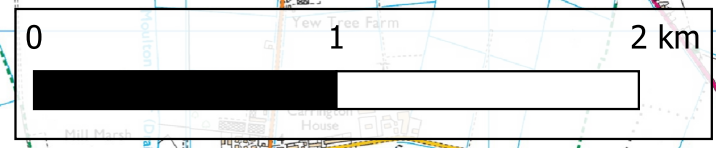
Figure No. 68

Project  
Outer Dowsing Offshore Wind Farm - Flood Inundation Mapping

Client  
Outer Dowsing Offshore Wind

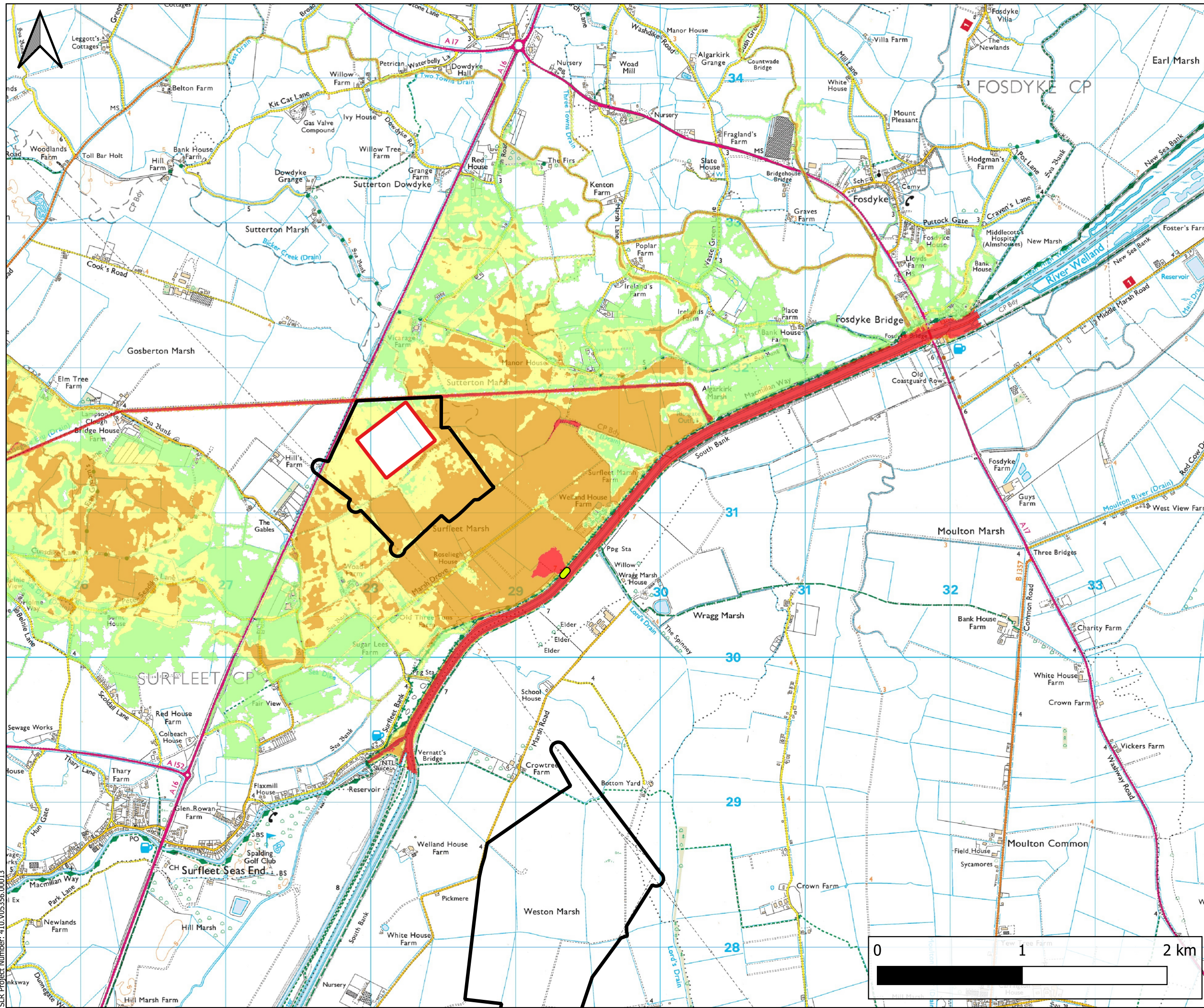


**Maximum Flood Velocity  
1:200yr+CC North Breach 2  
Proposed Scenario**



Scale A3	Version 2.0	Date June 2024
-------------	----------------	-------------------

SLR Project Number: 410.V05356.00013



**LEGEND**

- Substation Search Areas
- Onshore Substation Area
- Breach Location

**Flood Hazard Rating**

- <= 0.75
- 0.75 - 1.25
- 1.25 - 2.00
- > 2.00

Ordnance Survey(OS) 1:25000  
Raster Basemap



Figure No. 69

Project  
Outer Dowsing Offshore Wind Farm - Flood Inundation Mapping

Client  
Outer Dowsing Offshore Wind



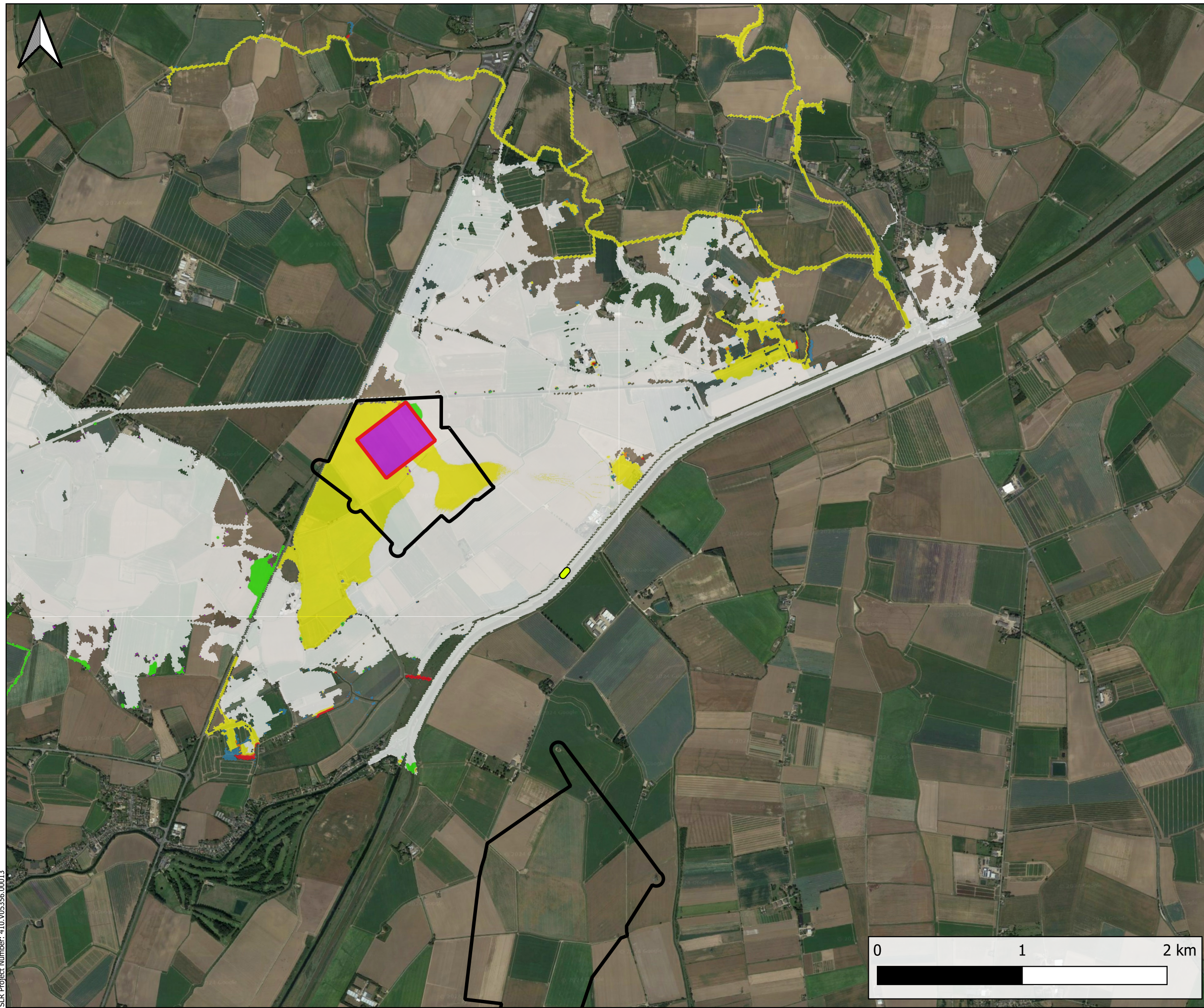
**Maximum Flood Hazard  
1:200yr+CC North Breach 2  
Proposed Scenario**






Scale A3	Version 2.0	Date June 2024
-------------	----------------	-------------------

SLR Project Number: 410.V05356.00013












**LEGEND**

-  Substation Search Areas
-  Onshore Substation Area
-  Breach Location

Difference in Depth (m)

-  ≤ -0.01
-  -0.01 - 0.01
-  0.01 - 0.03
-  0.03 - 0.05
-  0.05 - 0.15

Change in Conditions

-  Was wet now dry
-  Was dry now wet

Google Satellite



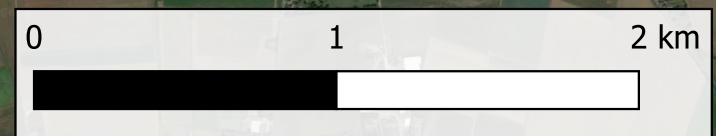
**Figure No. 70**

Project  
**Outer Dowsing Offshore Wind Farm - Flood Inundation Mapping**

Client  
**Outer Dowsing Offshore Wind**



**Flood Depth Difference  
 1:200yr+CC North Breach 2  
 Proposed Scenario**






Scale A3	Version 2.0	Date June 2024
-------------	----------------	-------------------







SLR Project Number: 410.V05356.00013



**LEGEND**

-  Substation Search Areas
-  Onshore Substation Area
-  Breach Location

Difference in Hazard Class

-  -3
-  -2
-  -1
-  1
-  2
-  3

Google Satellite



**Figure No. 71**

Project  
**Outer Dowsing Offshore Wind Farm - Flood Inundation Mapping**

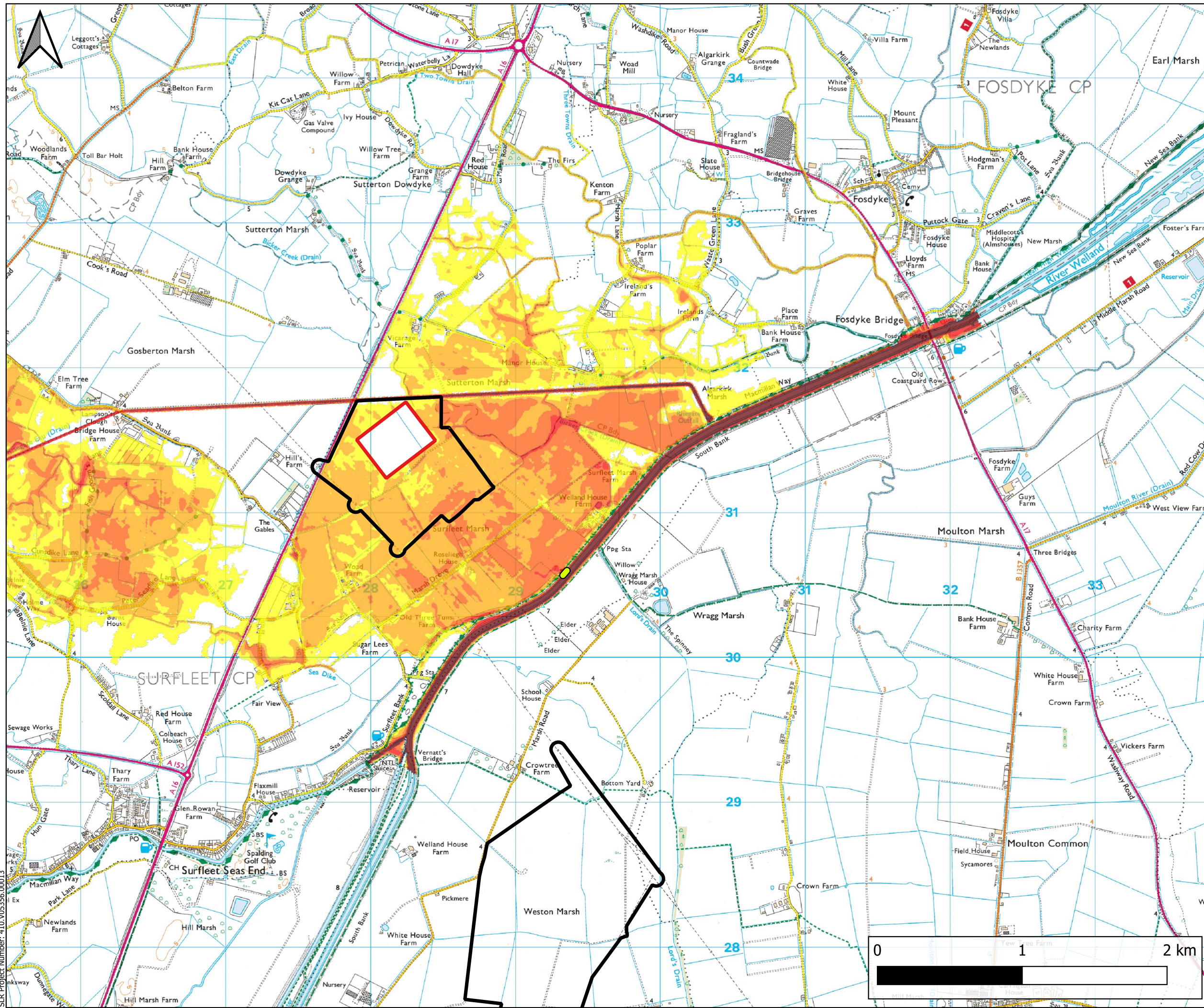
Client  
**Outer Dowsing Offshore Wind**



**Hazard Class Changes  
 1:200yr+CC North Breach 2  
 Proposed Scenario**

Scale A3	Version 2.0	Date June 2024
-------------	----------------	-------------------

SLR Project Number: 410.V05356.00013



**LEGEND**

- Substation Search Areas
- Onshore Substation Area
- Breach Location

**Maximum Flood Depth (m)**

- 0.00 - 0.25
- 0.25 - 0.50
- 0.50 - 1.00
- 1.00 - 2.00
- > 2.00

Ordnance Survey(OS) 1:25000  
Raster Basemap



**Figure No. 72**

Project  
**Outer Dowsing Offshore Wind Farm - Flood Inundation Mapping**

Client  
**Outer Dowsing Offshore Wind**

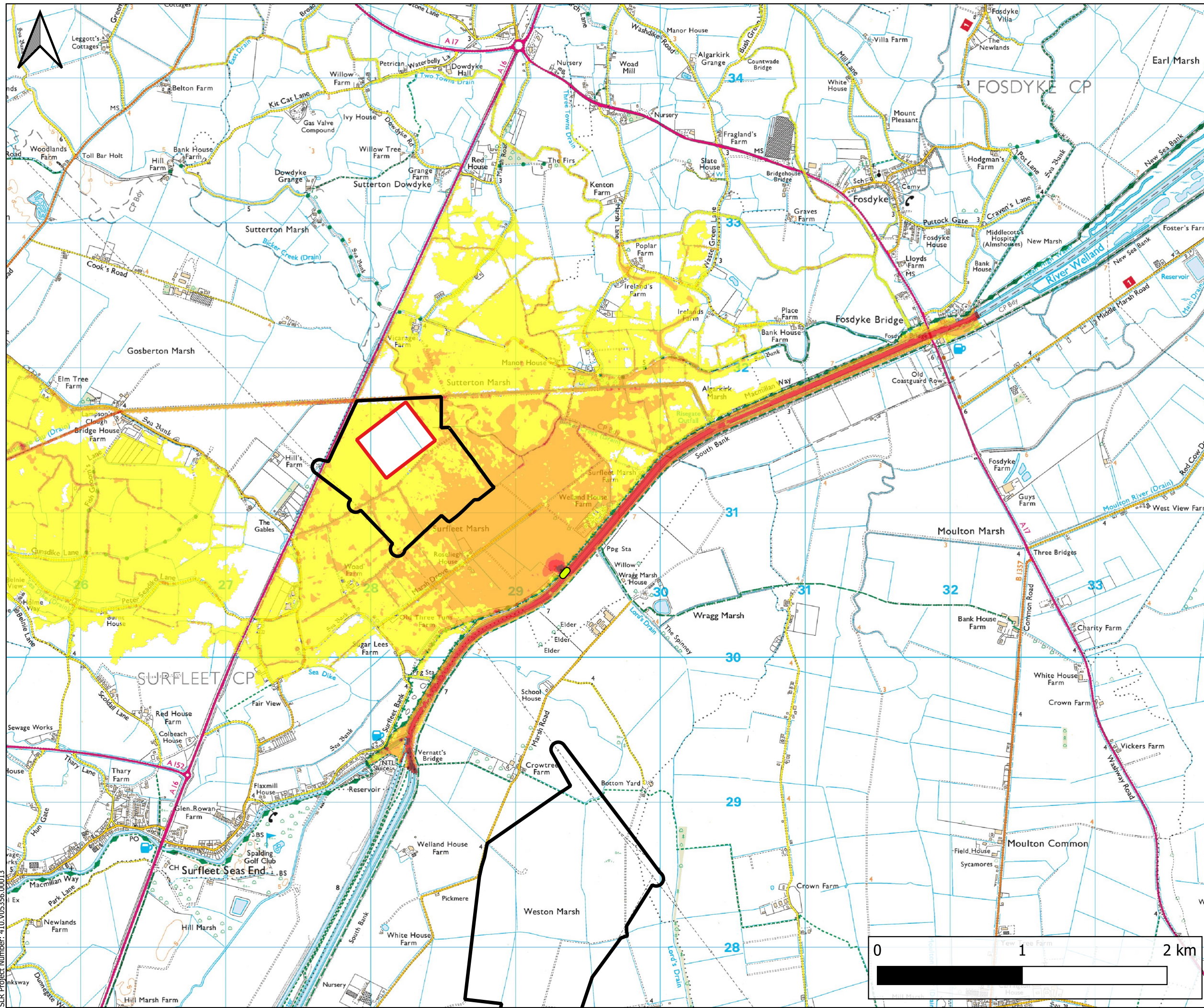


**Maximum Flood Depths  
1:200yr North Breach 2  
Proposed Scenario**



Scale A3	Version 2.0	Date June 2024
-------------	----------------	-------------------

SLR Project Number: 410.V05356.00013



**LEGEND**

- Substation Search Areas
- Onshore Substation Area
- Breach Location

Maximum Flood Velocity (m/s)

- 0.00 - 0.30
- 0.30 - 1.00
- 1.00 - 1.50
- 1.50 - 2.50
- > 2.50

Ordnance Survey(OS) 1:25000  
Raster Basemap



**Figure No. 73**

Project  
**Outer Dowsing Offshore Wind Farm - Flood Inundation Mapping**

Client  
**Outer Dowsing Offshore Wind**

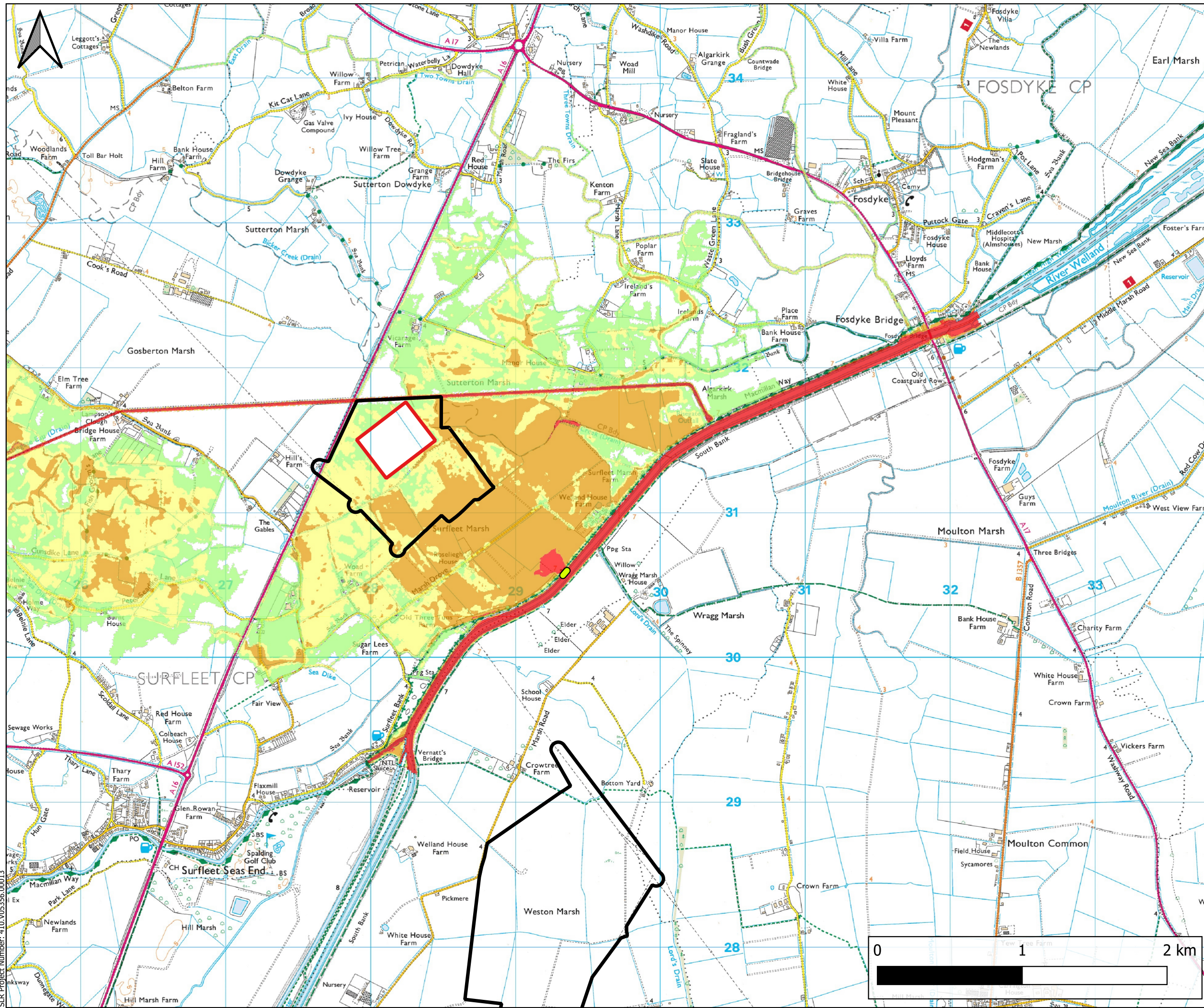


**Maximum Flood Velocity  
1:200yr North Breach 2  
Proposed Scenario**



Scale A3	Version 2.0	Date June 2024
-------------	----------------	-------------------

SLR Project Number: 410.V05356.00013



**LEGEND**

- Substation Search Areas
- Onshore Substation Area
- Breach Location

**Flood Hazard Rating**

- ≤ 0.75
- 0.75 - 1.25
- 1.25 - 2.00
- > 2.00

Ordnance Survey(OS) 1:25000  
Raster Basemap



**Figure No. 74**

Project  
**Outer Dowsing Offshore Wind Farm - Flood Inundation Mapping**

Client  
**Outer Dowsing Offshore Wind**

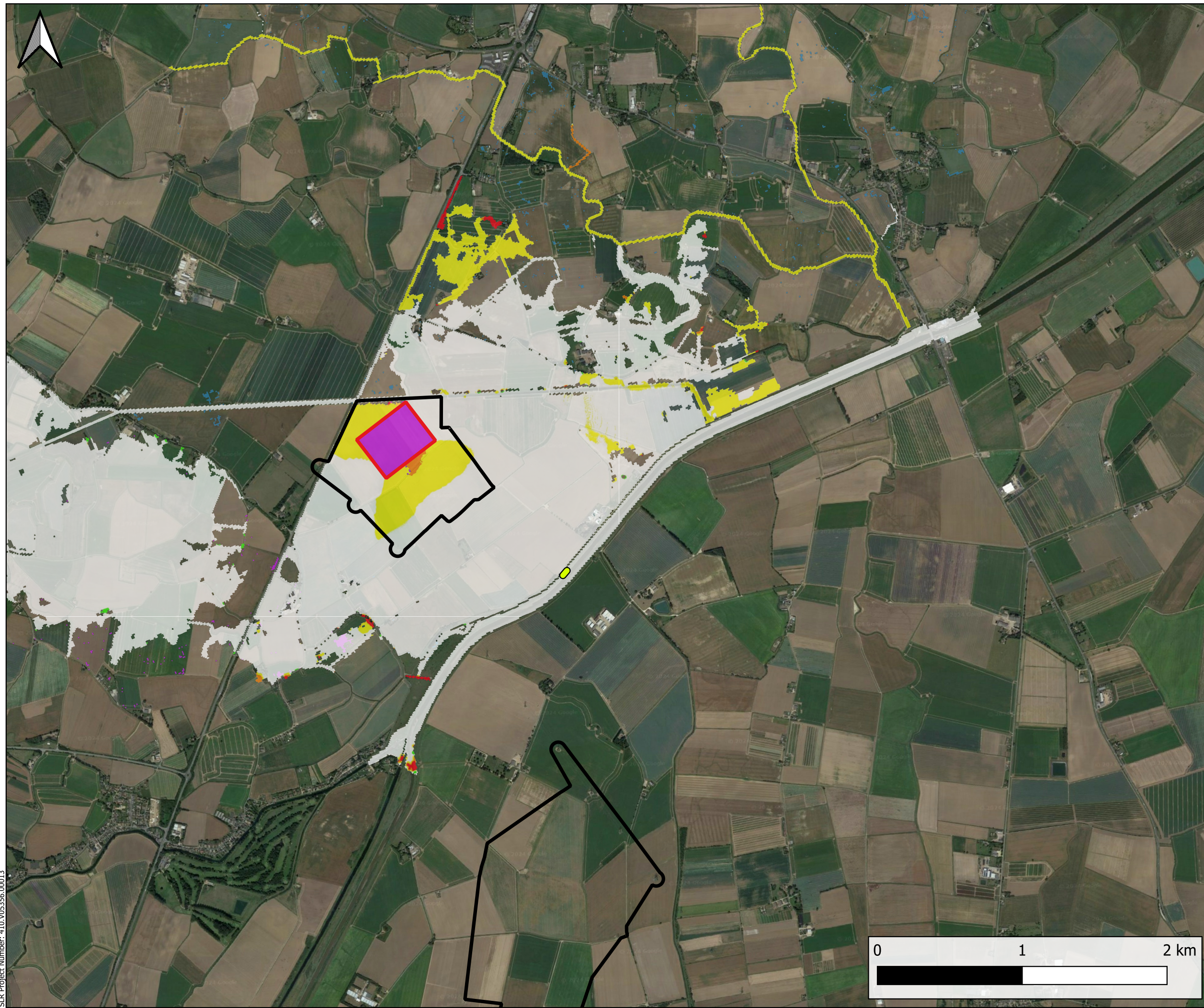


**Maximum Flood Hazard  
1:200yr North Breach 2  
Proposed Scenario**



Scale A3	Version 2.0	Date June 2024
-------------	----------------	-------------------

SLR Project Number: 410.V05356.00013



**LEGEND**

- Substation Search Areas
- Onshore Substation Area
- Breach Location

Difference in Depth (m)

- <= -0.01
- 0.01 - 0.01
- 0.01 - 0.03
- 0.03 - 0.05
- 0.05 - 0.15

Change in Conditions

- Was wet now dry
- Was dry now wet

Google Satellite



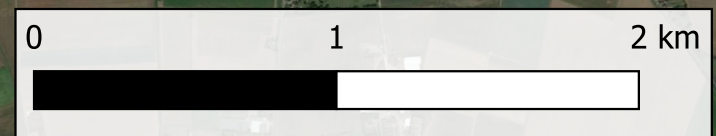
**Figure No. 75**

Project  
**Outer Dowsing Offshore Wind Farm - Flood Inundation Mapping**

Client  
**Outer Dowsing Offshore Wind**



**Flood Depth Difference  
 1:200yr North Breach 2  
 Proposed Scenario**



Scale A3	Version 2.0	Date June 2024
-------------	----------------	-------------------

SLR Project Number: 410.V05356.00013



**LEGEND**

- Substation Search Areas
- Onshore Substation Area
- Breach Location

Difference in Hazard Class

- 3
- 2
- 1
- 1
- 2
- 3

Google Satellite



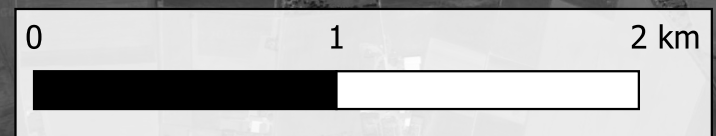
**Figure No. 76**

Project  
**Outer Dowsing Offshore Wind Farm - Flood Inundation Mapping**

Client  
**Outer Dowsing Offshore Wind**



**Hazard Class Changes  
 1:200yr North Breach 2  
 Proposed Scenario**



Scale A3	Version 2.0	Date June 2024
-------------	----------------	-------------------

SLR Project Number: 410.V05356.00013