Onshore Converter Station

Code of Construction Practice

Requirement 22 (1) and (2)(c)

Appendix 2 - Flood Plan

(Applicable to Work Numbers 62 to 69)

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Revision Summary				
Rev	**Date**	**Prepared by**	**Checked by**	**Approved by**
1	01/11/2021	Dan Watson	Felicity Cole	Gareth Mills
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Description of Revisions			
Rev	**Page**	**Section**	**Description**
1	ALL	ALL	New Document
2	ALL	ALL	Amended in accordance with comments received from MSDC (24/11/21) and SCC (24/11/21).
3	4 5 8 14	1.2 1.2 5.3 7	Amended in acordance with comments received from MSDC (26/01/22), SCC (03/01/22) and the Environment Agecny (08/02/22)
4	7 8 11,12	5.1 5.3 5.9	Amended in acordance with comments received from SCC (20/05/22).

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1. INTRODUCTION AND SCOPE

1.1. Project Overview

1. East Anglia Three Limited (EATL) was awarded a Development Consent Order (DCO) by the Secretary of State, Department of Business, Energy and Industrial Strategy (DBEIS) on 7 August 2017 for the East Anglia THREE Offshore Windfarm (EA THREE). The DCO granted consent for the development of a 1200MW offshore windfarm and associated infrastructure and is live until 28 August 2022. The DCO has now been subject to three non-material variations:

- In March 2019 EATL submitted a non-material change application to DBEIS to amend the consent to increase the maximum generating capacity from 1,200MW to 1,400MW and to limit the maximum number of gravity base foundations to 100. In June 2019 DBEIS authorised the proposed change application and issued an Amendments Order.
- In July 2020 EATL submitted a second non-material change application to DBEIS to amend the parameters of its offshore substations (reducing the number of these to one) and wind turbines (a decrease in the number of turbines and an increase in their hub height and rotor radius). On 15 April 2021 DBEIS authorised this proposed change application and issued an Amendments Order.
- In August 2021 EATL submitted a third non-material change application to DBEIS to amend the consent to remove the maximum generating capacity of 1,400MW and to amend the parameters of its wind turbines (a decrease in the number of turbines and an increase in their hub height and rotor radius). The application is currently in the consultation phase.

2. The onshore construction works associated with EA THREE will have a capacity of 1,400MW and transmission connection of 1,320MW. The construction works will be spread across a 37km corridor between the Suffolk coast at Bawdsey and the Converter Station at Bramford, passing the northern side of Ipswich. As a result of the strategic approach taken, the cables will be pulled through pre-installed ducts laid during the onshore works for East Anglia ONE Offshore Windfarm (EA ONE), thereby substantially reducing the impacts of connecting to the National Grid (NG) at the same location. The infrastructure to be installed for EA THREE, therefore, comprises:

- The landfall site with one associated transition bay location with two transition bays containing the connection between the offshore and onshore cables;
- Two onshore electrical cables (single core);
- Up to 62 jointing bay locations each with up to two jointing bays;
- One onshore Converter Station, adjacent to the EA ONE Substation;
- Three cables to link the Converter Station to the National Grid Bramford Substation;
- Up to three onshore fibre optic cables; and
- Landscaping and tree planting around the onshore Converter Station location.

3. Since the granting of the DCO, the decision has been made that the electrical connection for EA THREE will comprise a high voltage direct current (HVDC) cable rather than a high voltage alternating current cable and, therefore, the type of substation that will be required is a HVDC Converter Station. The substation will, therefore, be referred to here as a 'converter station' and this amended terminology has been agreed with the relevant authorities on 15 October 2020. It has also been determined that only one converter station will be constructed rather than two and that the Converter Station will be installed in a single construction phase.

1.2. Scope and Purpose

4. This Flood Plan identifies the flood risk areas and sets outs the procedures to be followed in the unlikely event of a flood emergency during the construction of the EA THREE onshore Converter Station. This document forms an appendix to the Code of Construction Practice (CoCP) and fulfils DCO Requirement 20 (2) (c) which states:

> ***22***.—*(1) No stage of the connection works may commence until for that stage a code of construction practice (which must accord with the outline code of construction practice) has been submitted to and approved by the relevant local planning authority, in consultation with the relevant highway authority (...)*
>
> *(2) The code of construction practice must include—*
>
> *(c) a flood plan*

5. The scope of this document is the Flood Plan associated with the construction of the EA THREE onshore Converter Station (Converter Station). This comprises Work No.s 62 to 69 in the DCO, located to the north of the existing NG substation and adjacent to the EA

ONE Substation (Figure 1 Site Context Plan). Flood Plans have been produced for each stage of the onshore works and are provided under separate cover as part of the respective Codes of Construction Practice.

6. Construction works at the Converter Station will be some of the first onshore connection works to commence. The access track and temporary laydown will be constructed in Summer 2022 with the remaining works being undertaken from Q2 2023.

7. This Flood Plan contains information on flood emergency response actions for the construction works at the Converter Station. This Plan has been informed by a Flood Risk Assessment (FRA) (Royal HaskoningDHV, 2015), which demonstrates that EA THREE meets the requirements of the National Planning Policy Framework (NPPF). Ordnance Survey LiDAR data and Environment Agency (EA) flood maps have also been accessed online and used as evidence within this Flood Plan.

8. The Flood Warning and Evacuation Procedure detailed in this plan will continue to be updated and reviewed during the onshore Converter Station construction works. As such, it has been necessary to include areas within the document where additional information will continue to be added as the document remains live throughout the works.

2. ABBREVIATIONS

CoCP	Code of Construction Practice
DBEIS	Department of Business, Energy and Industrial Strategy
DC	Direct Current
DCO	Development Consent Order
EA	Environment Agency
EA ONE	East Anglia ONE
EA THREE	East Anglia THREE Offshore Windfarm
FRA	Flood Risk Assessment
FWEP	Flood Warning Evacuation Plan
HVDC	High Voltage Direct Current
M aOD	Metres above Ordinance Datum
MW	Megawatt
NPPF	National Planning Policy Framework
NG	National Grid Plc
SFRA	Strategic Flood Risk Assessment

3. FLOOD PLAN GOVERNANCE

9. Prior to the commencement of construction, a Flood Coordinator will be appointed by the Principal Contractor to manage the implementation of the Flood Plan. Contact details for the Flood Coordinator will be submitted to stakeholders (MSDC, SCC, the Environment Agency and East Suffolk Internal Drainage Board) for their records prior to commencement of construction.

4. FLOOD RISK IDENTIFICATION

4.1. Aim and Objectives

10. The key aim of this Plan is to provide the Principal Contractors clear indicators confirming when the Converter Station construction works area should be evacuated in the unlikely event of a flood emergency. The Plan also provides key information for planning and responding to an evacuation.

4.2. Background

11. The Converter Station location is illustrated in Figure 1 Site Context Plan. The land initially comprised agricultural, greenfield land but was used as the temporary laydown area for the construction of the EA ONE substation and was consequently covered in hardstanding (crushed rock, Type 1). These features will be removed prior to the start of the construction works for the Converter Station. The temporary laydown area for EA THREE is to be located on an area of open arable fields. The Converter Station site is adjacent to the EA ONE Substation to the west and agricultural land to the north and east, with the National Grid Substation to the south. The site is located in Flood Zone 1.

12. The Converter Station site is located on the end of a topographic ridge that from the northwest to the southeast. The site is at an elevation of around 57m above Ordnance Datum and levels then fall away from the site to the north, east and south. Minor channels/springs rise on these downslopes.

13. The hydrology of the site and surrounding area is detailed in, Appendix 1. There are two ordinary watercourses (open channels) in the central-east portion of the site, with one feeding to the west of the site following the southwest site boundary. These are field drains that are typically dry but during wet periods convey storm flows. One of these contributes to an extensive surface water flow pathway extending east away from the site.

14. There is a SuDS detention basin located on the eastern edge of the site and a modified 'wet woodland' basin located to the southwest of the site which will permanently retain a pool of water (Scottish Power Renewables, 2016). These are part of the EA ONE storm water drainage systems.

15. There are several ordinary watercourses located within proximity to the site. Based on Ordnance Survey mapping the closest of these to the Converter Station site are (Appendix 1);

    a. A field drain that rises at NGR 609710, 245310 around 500m to the south of the site flowing southwards into Belstead Brook.

    b. Field drain that rises at NGR 610973, 246200 around 400m to the east of the site, flowing eastwards towards the River Gipping.

    c. Field drain that rises at NGR 611044, 245742 around 510m to the southeast of the site along Bullen Lane, flowing eastwards towards the River Gipping.

    d. A field drain that rises at NGR 608637, 247159 and is located 650m from the north of the site at its closest point flowing towards Somersham.

16. The closest Main River is a channel located 750m southeast of the site running in a southeasterly direction and draining an upstream catchment estimated to be 20.1km^2. Further downstream this channel becomes Belstead Brook.

17. Access into the Converter Station site is obtained along Bullen Lane to the east towards the B1113.

4.3. Flood Risk at the Site

18. A site-specific Flood Risk Assessment has been undertaken (Royal HaskoningDHV, 2015) in November 2015 and concluded that the Onshore Converter Station Construction Site is not at risk of flooding from any source. The FRA did not however consider the risk of flooding along access routes into the site.

19. Based on the EA Flood Map for Planning (Appendix 2) the Converter Station and its access route are located in Flood Zone 1 (land defined as having less than 1 in 1000 annual probability of flooding EA Surface water flood map (Appendix 3) indicates from rivers or the sea). Based on the local topography and the proximity of tidal water bodies and larger fluvial watercourses this assessment appears reasonable.

20. The EA surface water flood map (Appendix 3) indicates that the site is almost entirely at very low risk of flooding. This accords with the position of the site on the crest of a topographic ridge of land. Small areas of higher surface water risk on the site are shown; however, these relate to local topographic hollows and the very upstream reaches of flow pathways. Significant surface water flooding on the site is therefore not envisaged. The EA ONE project team have noted there has been no significant flood event on the site throughout the duration of EA ONE construction and operation.

21. The EA surface water flood map (Appendix 3) suggests that the risk of flooding along Bullen Lane to the east of the site is high. This equates to an annual probability of flooding of greater than 1 in 30. In addition to over land flow there is also a potential during wet periods for the capacity of the channel along Bullen Lane to be exceeded, likely associated with blockages. Flooding of this nature could potentially make Bullen Lane impassable and even if flooding is shallow, large numbers of traffic movements through flood water could generate significant quantities of turbid flood water resulting in environmental harm downstream. As Bullen Lane is the main and only access route onto the site, measures are required to avoid use of this road during periods when flooding is occurring or likely to occur.

22. Other sources of potential flooding, including flooding from groundwater, flooding from sewers, flooding from infrastructure failure and flooding from artificial sources have been considered and are not considered to be significant at the for the Converter Station construction site.

5. FLOOD WARNING AND EVACUATION PROCEDURE

5.1. Evacuation Triggers

23. EA flood warnings provide advance notice of flooding from tidal or major fluvial systems. As discussed above these do not pose a risk of flooding at this site and flooding from such systems locally will not prevent safe and dry access and egress onto the site. Nevertheless, it is considered to be beneficial for the Flood Coordinator to sign up to the EA Flood Warning Service to receive warning of flood risk in the local area (e.g. for a nearby address that is at risk of flooding), although any warning should not affect works at the site itself.

24. Met Office severe weather warnings and observations on local conditions will all be used to initiate the flood procedures set out in this Flood Plan and have, therefore, been used to set evacuation triggers. Across three trigger levels, two stages have been identified: either to place staff on a green alert (state of readiness) and implement a review of the Emergency Plan procedures; or to issue a red alert (triggering site evacuation). Further detail on these stages is given in Section 5.8.

25. During construction all construction workers, as part of their Site Induction, will be made aware that the access route into the Converter Station is located in an area of elevated flood risk (Appendix 3) and of the evacuation process from the site in the event that an evacuation is triggered as set out in Table 5-7.

26. The Principal Contractor's Site Manager (along with their deputy/responsible person) will be required to sign up to the Met Office severe weather warning service so that automated warning messages are received by the Flood Coordinator.

5.2. Pre-Occupation Actions

27. Prior to the commencement of the construction works at the Converter Station site, it will be the responsibility of the Principal Contractor's Site Manager, monitored by EATL and working with the Flood Coordinator, to ensure that all actions outlined in Table 5-1 are completed.

Table 5-1 Pre-Occupation Actions

No	Action	Further Information	Completion Date and Signature
1	Undertake a review of the Flood Warning and Evacuation Procedure and make updates to take into account new or additional information.	Flood Warning and Evacuation Procedure to be incorporated into contractor Emergency Response Plan.	
2	Register with the Met Office Severe Weather Warning service. Register with the EA Floodline Warnings Direct service	Details on how to access weather warnings can be obtained at the following website: https://www.metoffice.gov.uk/weather/guides/warnings Floodline Warnings Direct can be signed up to using the following link https://www.gov.uk/sign-up-for-flood-warnings or by calling either the Floodline on 0345 988 1188 or the National Customer Contact Centre (03708 506 506) to receive flood warnings for more than one site.	

No	Action	Further Information	Completion Date and Signature
3	Ensure all construction personnel are aware of the Flood Warning and Evacuation Procedure and are trained sufficiently to implement the procedures set out in the Plan.	Include as part of the Site Induction training.	
4	Principal Contractor to verify and confirm the flood rendezvous point and evacuation route.	The rendezvous point (NGR 612150, 246090) and emergency evacuation route are included in Appendix 4.	

5.3. Key Contacts and Information

28. Table 5-2 lists contact numbers for personnel and Agencies that have key roles during a flooding emergency. This table will be completed by the Principal Contractor. This table will be periodically reviewed, and if necessary updated, with this review process monitored by EATL.

Table 5-2 Contact numbers

Position	Name	Role	Contact Number
Flood Coordinator	TBC	Once flood or weather warning alerts have been received, it is the Flood Co-ordinator's responsibility to disseminate the alerts to all members of staff. The Flood Co-ordinator should lead in directing the evacuation of the site and help other members of staff to move to the designated evacuation point(s) located in Flood Zone 1. The Flood Coordinator should also take a register to ensure all staff are accounted for and provide an update to any on-site emergency services confirming that the site has been evacuated.	
Project Manager	TBC	Ensure that the Flood Warning and Evacuation Procedure has been put in place and monitor to ensure that periodic updates are made to the procedure as necessary. Ensure sufficient resources (people, time and money) are provided to implement the procedure.	TBC
Construction Manager	TBC	The Construction Manager's role is to ensure all the Pre-Occupation Actions (Table 5-1) have been completed as well as to ensure that the Flood Warning Evacuation Plan is reviewed and updated when deemed appropriate.	TBC
Site Manager	TBC	It is the Site Manager's responsibility to operate emergency electrical shut off switches that terminate electricity supply to the works. The Site Manager should aid in assist the Flood Coordinator in directing the evacuation of the site and help other members of staff to move to the designated evacuation point(s) located in Flood Zone 1. The Site Manager should also take a register to ensure all staff are accounted for and provide an update to any on-site emergency services confirming that the site has been evacuated. When severe flood or weather warnings have been issued it is the Site Manager's responsibility to contact the Emergency Services and EA to confirm that the site is being closed due to potential flooding.	TBC

Position	Name	Role	Contact Number
EA Floodline Contact	TBC	The EA will issue a flood warning to nominated construction management personnel.	0345 9881188

Note: TBC fields to be completed prior to start of construction

5.4. Emergency Contacts

29. Table 5-3 provides contact numbers for the relevant Emergency Services.

30. **In an emergency where there is a real and immediate threat to life or property always dial 999.**

Table 5-3 Contact numbers for relevant Emergency services

Body	Contact Number
Suffolk Fire & Rescue Service	01473 260588
Suffolk Police (Ipswich Police Station)	01473 613500
Environment Agency National Contact	03708 506 506
Suffolk County Council (reporting a flood, even in an emergency)	0345 606 6171
Environment Agency Incident Hotline	0800 80 70 60

31. If medical attention is required within the workplace, First Aiders should be in attendance and a record of the individual affected and the circumstances relating to the incident should be kept.

32. The closest hospital to the onshore construction works with an Accident and Emergency Department is the Ipswich Hospital. **The Hospital can be contacted on 01473 712233 The address is: Heath Road, Ipswich, Suffolk, IP4 5PD.**

5.5. Other Useful Numbers

33. Table 5-4 provides a list of other useful numbers. This table will be completed by the Principal Contractor. This table will be periodically reviewed, and if necessary updated, during the onshore construction works.

Table 5-4 Other useful numbers

Body	Name	Contact Number
Electricity Provider	UK Power Networks	TBC
Gas Provider	Cadent	TBC
Water Company	Anglian Water	0345 791 9155 Emergency number - 0800771881
Telephone Provider	TBC	TBC
Local Authority	Mid Suffolk District Council	0300 1234000
Local Radio Station	BBC Radio Suffolk	01473 250000
Local TV Stations	BBC – Suffolk	01473 250000

Note: TBC fields to be completed prior to start of construction

5.6. Insurance Details

34. Table 5-5 provides Insurance details for the onshore construction works. This table will be completed by the Principal Contractor.

Table 5-5 Insurance details

Insurance Company	Policy Number	Contact Number
TBC		
TBC		
TBC		
TBC		

Note: TBC fields to be completed prior to start of construction

5.7. Location of Services

35. Table 5-6 provides details of the locations of cut offs and valves for key services. This table will be completed by the Principal Contractor. This table should be periodically reviewed, and if necessary updated, during the onshore construction works.

Table 5-6 Location of Services

Service	Location of Cut Off and Values
Electricity	TBC
Gas	TBC
Water	TBC

Note: TBC fields to be completed prior to start of construction

5.8. Met Office Severe Weather Warnings

36. The Met Office is responsible for issuing weather warnings, which warn of impacts caused by severe weather. The warnings are designed to let people, businesses, emergency responders and governments know what weather is in store and what the impacts of that weather may be. Warnings are provided up to seven days ahead for rain, thunderstorms, wind, snow, lightning, ice and fog, although in relation to this plan the warnings for rain and thunderstorms are the ones of direct relevance.

37. Severe weather warnings are provided at four different levels that relate to the potential level of impact that the forecast weather is expected to bring and the likelihood of those impacts occurring. The levels used are detailed below, alongside the definitions stated on the Met Office website:

- Very low (green)

  "On many days of the year, the weather has the potential to impact our lives. Most of the time these impacts are quite small so we do not notice them. These are the days we often describe as 'typical weather' in the UK. These types of weather days are often assessed as having a 'very low' impact. The Met Office does not send out warnings for these days but there could still be some impacts caused by the weather. However, these impacts would be expected to be short-lived or fairly localised."

- Low (yellow)

  "Issued when it is likely that the weather will cause some low level impacts, including some disruption to travel in a few places. Many people may be able to continue with their daily routine, but there will be some that will be directly impacted and so it is important to assess if you could be affected. Other yellow warnings are issued when the weather could bring much more severe impacts to the majority of people but the certainty of those impacts occurring is much lower. It is

important to read the content of yellow warnings to determine which weather situation is being covered by the yellow warning."

- Medium (amber)

  "There is an increased likelihood of impacts from severe weather, which could potentially disrupt your plans. This means there is the possibility of travel delays, road and rail closures, power cuts and the potential risk to life and property. You should think about changing your plans and taking action to protect yourself and your property. You may want to consider the impact of the weather on your family and your community and whether there is anything you need to do ahead of the severe weather to minimise the impact."

- High (red)

  "Dangerous weather is expected and, if you haven't already done so, you should take action now to keep yourself and others safe from the impact of the severe weather. It is very likely that there will be a risk to life, with substantial disruption to travel, energy supplies and possibly widespread damage to property and infrastructure. You should avoid travelling, where possible, and follow the advice of the emergency services and local authorities."

38. The precise impacts of a warning issued will depend on the nature of the predicted weather systems and, as the rating are derived based on both probability and level of impact, may be notably different in nature on different occasion (i.e. an amber warning for rainfall may be issued in response to very different types of events). As a result, care should be taken to read the details of the warnings issued.

5.9. Flood Warning and Evacuation Procedures

39. An overview of the Flood Warning and Evacuation Procedures is illustrated in Diagram 1. This figure shows the three trigger levels and the corresponding actions that will need to be implemented.

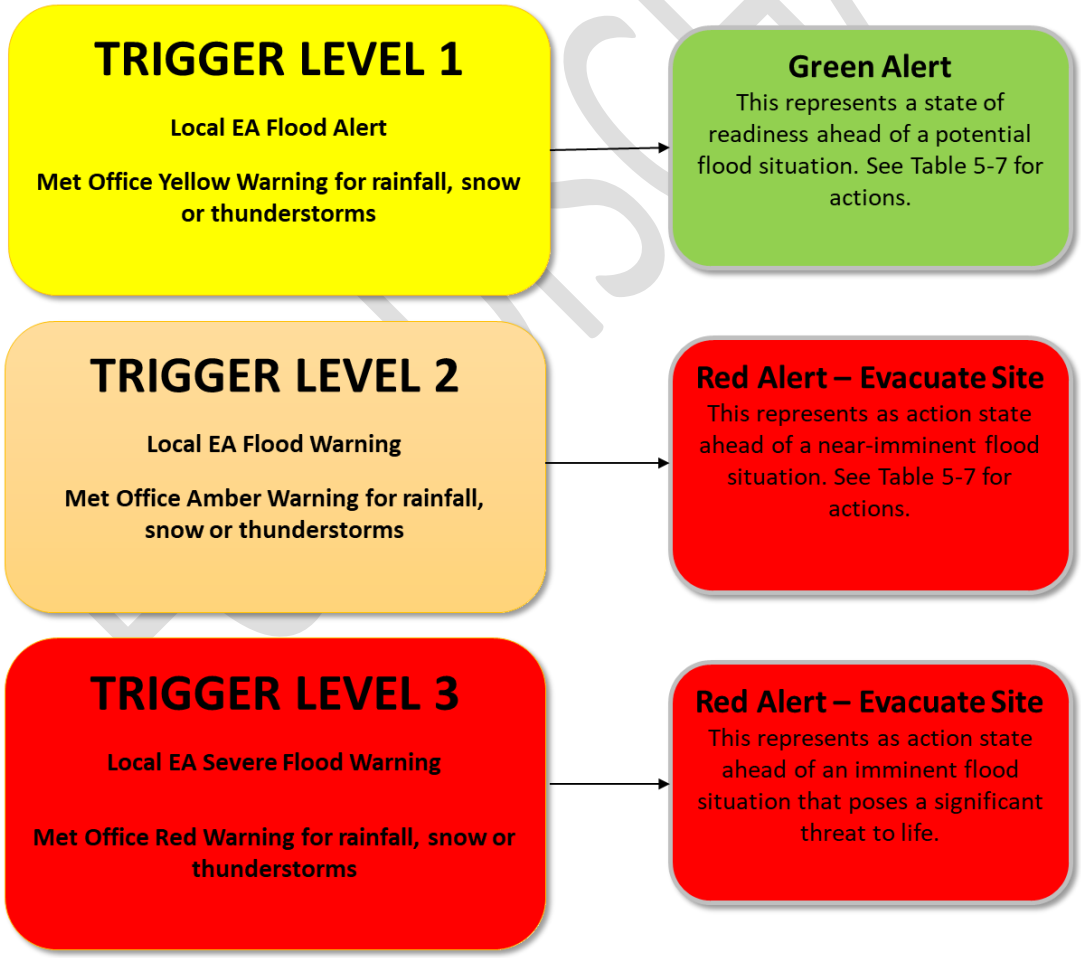

Diagram 1 Trigger Levels and Actions

40. Flood evacuation procedures are outlined in Table 5-7.

Table 5-7 Flood Evacuation Procedures

Warning Triggers	General Procedures	Specific Actions
Trigger Level 1	General actions include: • Communicate risk to all staff • Make sure you know who is on site • Take basic measures to prepare for flooding • Stay in a safe place with a means of escape. • Be ready should you need to evacuate.	• Place Staff on Green Alert • Check access and availability to, and condition of equipment: closed road signs, torches (check battery life/spares), high visibility jackets for all staff • Allow for handover should shift change occur before the warning is lowered • Check staff registers are complete and available to ensure all staff are accounted for post- evacuation • Speak to construction teams and request implementation of active measures to reduce the mobilisation fo sediment and other pollutants in storm water runoff. This is likley to take the form of bringing forward basic house keeping measures such a road sweeping and clearance of intercept ditches. • Reschedule (if reasonably possible and will not make situation worse) all engineering works which are liable to generate turbid runoff. This should include all earthworks. • Review active work programme and associated temporary drainage arrangements and confirm that these are all in place and functional. • Undertake survey of all active storm water drainage arranagments to check for damage, blockages or other problems which could impair their correct function and, in the event that definciencies are identfied, action urgent remedial works.
Trigger Level 2	• Stay away from high risk areas • Turn off gas, electricity and water supplies if safe to do so. • Put flood protection equipment in place if safe to do so. • Cooperate with the emergency services. • Call 999 if you are in immediate danger. • Evacuate site in an orderly and controlled way.	• Stop active work on the site and communicate change in flood status to all staff. • If reasonably possible within a short timeframe (1hr) remove plant and equipment and relocate to elevated area that is away from potential flooding. • Place staff on Red Alert and begin evacuation of jointing bay compound/CCS (Trigger Fire Alarm) • Operate the emergency electrical shut off switches terminating the electricity supply and all power supplies to construction works sites/compounds, but only if safe to do so. • Direct staff toward the flood rendezvous location avoiding any areas that are flooded. • Take register to ensure all staff are accounted for. • Direct all staff to depart the area using the agreed flood evacuation route. • Contact the Emergency Services and EA to confirm that the work sites are being closed due to the risk of flooding

Warning Triggers	General Procedures	Specific Actions
Trigger Level 3	• Evacuate site as quickly as can be safely achieved. • Account for all personnel • Leave the area	• Immediately start evacuation of jointing bay compound and CCS if not actioned on receipt of the Flood Warning or Met Office Weather Warning (Trigger Fire Alarm at compounds) • Direct staff toward the flood rendezvous location avoiding any areas that are flooded. • Take register to ensure all staff are accounted for. • Direct all staff to depart the area using the agreed flood evacuation route. • Contact the Emergency Services and EA to confirm that the work sites are being closed due to the risk of flooding
All Clear	• Be careful. Flood water may still be around for several days. • If you've been flooded, ring your insurance company as soon as possible.	Where the preceeding event related to rainfall or resulted in flood water entering or passing through the site storm water management systems, the Principal Contractor will: • Undertake a survey of all active storm water drainage arranagments to check for damage, blockages or other problems resulting from the storm / flood. • Remedial works should be urgently undertaken on deficient drainage equipment. • Signficiant pollution of any surface waterbody should be reported to the Environment Agency.

41. Flooding is very complex and is controlled by a number of highly variable physical factors such as the volume and intensity of rainfall and subsequent upstream flow. Ground level data has been analysed to estimate likely flood conditions along the access route into the Converter Station site and built into this FWEP. However, it is recommended that the Principal Contractor reviews advice provided by the Met Office and, if necessary, adapts the actions detailed to reflect the time available between receiving a severe weather warning and severe inclement weather affecting the construction works site.

5.10. Designated Rendezvous Point and Evacuation Route

42. The recommended flood rendezvous point for the Converter Station construction site is to the south along the B1113 at NGR 612150, 246090. In this location there is a wide layby where cars can pull up without impeding traffic along the road. This location is elevated and remotes from areas of significant elevated flood risk as indicated by Environment Agency flood mapping.

43. In the event of site evacuation being initiated all staff should be directed to the flood rendezvous point. A register should be completed to confirm that all staff have cleared the operational site and then staff should be directed to leave the area by vehicle heading south to the junction with the A1071 from where access is possible into Ipswich. It is noted that the route does pass across other significant surface water flow pathways; however, provided that the evacuation is initiated at a sufficient early stage there should be no risk of having to traverse areas of flooding.

44. The recommended flood rendezvous point and the emergency evacuation route for the Converter Station construction site are included in Appendix 4.

5.11. Water Level Falling

45. As detailed, the Met Office Severe Weather Warnings identify a 'potential' rather than 'actual' threat. It should be noted that not all events would result in an automatic progression from one warning to another with the end result being flooding and evacuation of the application site. It is possible for smaller events to trigger initial warnings with conditions easing before flooding occurs.

46. If flooding along the access route occurs it may potentially persist for some time following cessation of severe rainfall. As such before triggering an 'all clear' the Contractor's Site Manager should review the route onto the site and the condition of the work areas. If no

flooding remains and work areas are sufficient dry to resume works then the Contractor's Site Manager can downgrade the trigger level response as appropriate.

6. MONITORING AND REVIEW

47. During the construction a Flood Coordinator will be appointed by the Principal Contractors. The Flood Coordinator would ensure that all construction personnel are aware of the potential flood risk and of how to respond in the event of a flooding emergency. The training for construction personnel as a minimum, will cover:

- Requirements of the Flood Warning and Evacuation Procedure (detailed in Section 5).
- Confirmation of Key Roles, clearly identifying positions held, responsibilities, communication, and chain of command.
- Staff duties.
- Evacuation Routes.
- Staff safety during a flood event.
- Electrical systems emergency shut off procedures.
- Operation of communications systems, signage and traffic management systems.
- All construction staff will be trained as part of the site induction process.

48. All training completed will be documented and recorded. Staff will also be made aware of any updates to the Procedure through appropriate internal staff briefings or toolbox talks.

49. The Flood Warning and Evacuation Procedure will be subject to update / review:

- Whenever there are changes to any of the contact numbers, names or roles held within the Procedure.
- All updates / reviews shall be documented and recorded.
- The Contractor's Site Manager will ensure an up-to-date version of the Procedure is available at all times during the construction phase.

50. When the Procedure is updated a document control record, as presented in Table 5-8, will be completed for document control and to understand why changes were needed.

Table 5-8 Flood Plan Evacuation Procedures Document Control

Version	Date	Prepared by	Checked by	Approved by	Reasons for Revision

7. REFERENCES

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APPENDIX 1 LOCAL HYDROLOGY

608500 609000 609500 610000 610500 611000

247000 246500 246000 245500

TYE LANE
Guide Post
THE CHANNEL
Track
Track
Track
Track
Track
Track
Track
Track
Track
BULLEN LANE
BULLEN LANE
Path (um)
Path (um)
GP
GP
GP
GP

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter

EA THREE DCO Corridor
EA THREE Onshore Converter Station Layout Detail
EA THREE Onshore Converter Station SUDs Pond
EA THREE Onshore Converter Station Temporary Site Facilities Detail
EA THREE Onshore Converter Station SUDs Pond

EA THREE Converter Substation to National Grid Substation Cable Route
400kV AC Cable - Open Cut Section
400kV AC Cable - Ducted Section

EA THREE Onshore Converter Station Access Roads
Permanent
Temporary

EA THREE Cable Access Road
Haul Road
EA THREE Area to be Reprofiled
EA ONE Onshore Converter Station Access Road

Statutory Main River
Ordinary Watercourse
EA1 Onshore Converter Station As Built Layout and Access Detail
Surface Water Area

GoBe consultants

Rev	Date	By	Comment
B	13/04/2022	PW	Second Issue
A	10/01/2022	PW	First Issue

Original A3 Plot Scale 1:7,500

0 150 300 Metres

Onshore Converter Station Stage

Appendix 1: Local Hydrology

Drg No	05356.00006.12.00046.1 ONCS Flood Plans
Rev	2
Date	13/04/2022
Layout	N/A

Document Path: P:\05356 - GoBe Consultants Ltd\00006 East Anglia Three\Tech\GIS\Dwgs\Wking\EA3\Onshore Substation\Doc Ref EA3-OND-CNS-REP-IBR-000005\5356.00006.12.0046.1 ONCS Flood Plans.mxd

APPENDIX 2 EA FLOOD ZONE MAP

608500 609000 609500 610000 610500 611000

247000 246500 246000 245500

TYE LANE
Guide Post
THE CHANNEL
Track
BULLEN LANE
Path (um)
GP

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter

EA THREE DCO Corridor
EA THREE Onshore Converter Station Layout Detail
EA THREE Onshore Converter Station Temporary Site Facilities Detail

EA THREE Converter Substation to National Grid Substation Cable Route
400kV AC Cable - Open Cut Section
400kV AC Cable - Ducted Section

EA THREE Onshore Converter Station Access Roads
Permanent
Temporary

EA THREE Cable Access Road
Haul Road
EA THREE Onshore Converter Station SUDs Pond
EA THREE Area to be Reprofiled

EA ONE Onshore Converter Station Access Road
EA Flood Zone 3
EA Flood Zone 2

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Rev	Date	By	Comment
B	12/04/2022	PW	Second Issue
A	22/12/2021	PW	First Issue

Original A3 Plot Scale 1:7,500

0 150 300 Metres

Onshore Converter Station Stage

Appendix 2: EA Flood Zone Map

Drg No	05356.00006.12.00088.1 ONCS EA Flood Zones
Rev	2
Date	13/04/2022
Layout	N/A

Document Path: P:\05356 - GoBe Consultants Ltd\00006 East Anglia Three\Tech\GIS\Dwgs\Wking\EA3\Onshore Substation\Doc Ref EA3-OND-CNS-REP-IBR-000005\5356.00006.12.0088.1 ONCS EA Flood Zones.mxd

APPENDIX 3 SURFACE WATER FLOOD MAP

608500 609000 609500 610000 610500 611000

247000 246500 246000 245500

TYE LANE
Guide Post
THE CHANNEL
Track
BULLEN LANE
Path (um)
GP

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter

EA THREE DCO Corridor
EA THREE Onshore Converter Station Layout Detail
EA THREE Onshore Converter Station Temporary Site Facilities Detail

EA THREE Converter Substation to National Grid Substation Cable Route
400kV AC Cable - Open Cut Section
400kV AC Cable - Ducted Section

EA THREE Onshore Converter Station Access Roads
Permanent
Temporary

EA THREE Cable Access Road
Haul Road
EA THREE Onshore Converter Station SUDs Pond
EA THREE Area to be Reprofiled

EA ONE Onshore Converter Station Access Road

Surface Water Flood Extent
0.1% Annual Exceedance Probability
3.3% Annual Exceedance Probability
1% Annual Exceedance Probability

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Rev	Date	By	Comment
B	13/04/2022	PW	Second Issue
A	22/12/2021	PW	First Issue

Original A3 Plot Scale 1:7,500

0 150 300 Metres

Onshore Converter Station Stage

Appendix 3: Surface Water Flood Map

Drg No	05356.00006.12.00047.1 ONCS Flood Plans
Rev	2
Date	13/04/2022
Layout	N/A

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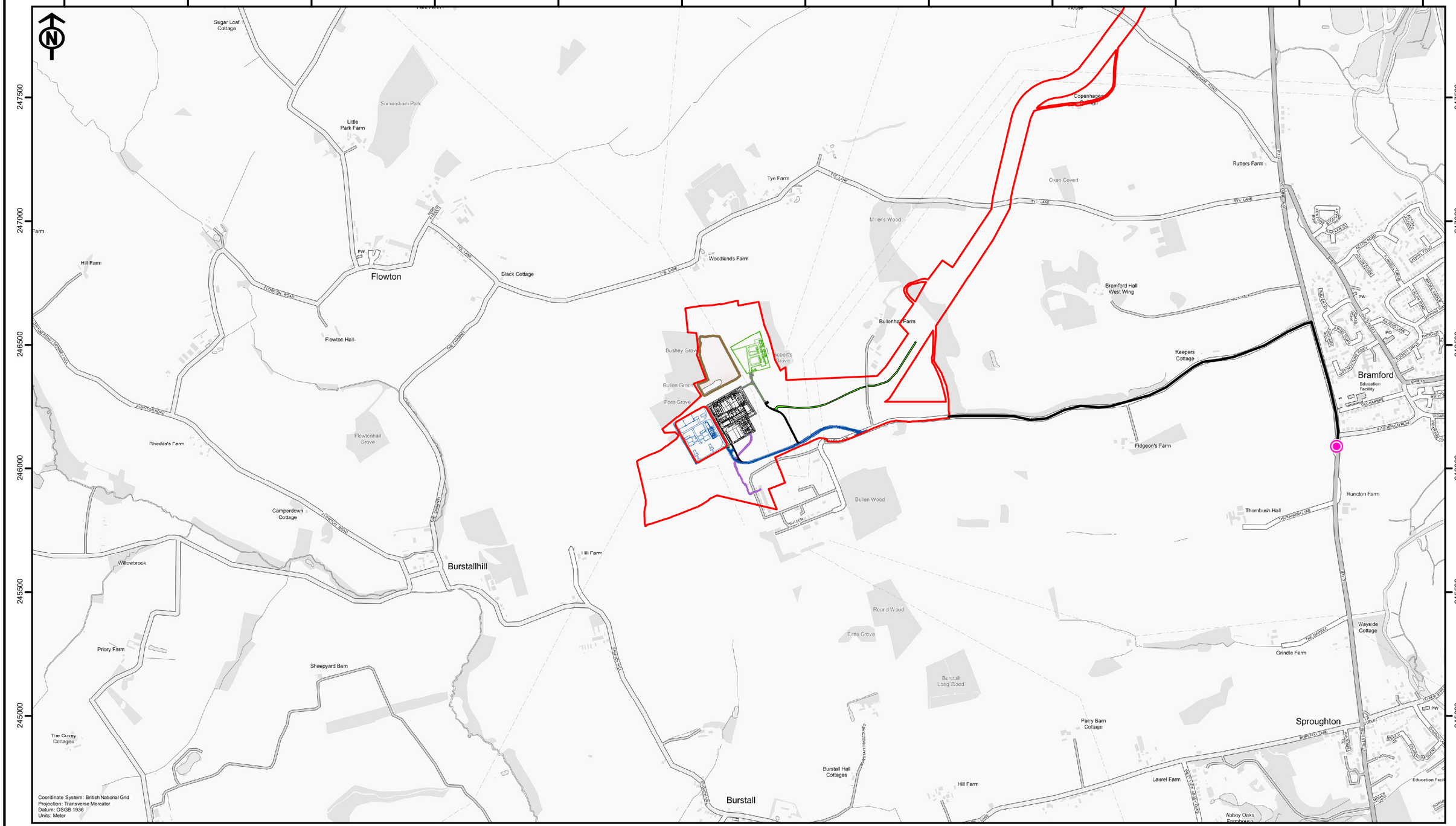
APPENDIX 4 RENDEZVOUS POINT AND EVACUATION ROUTE



EA THREE DCO Corridor

EA THREE Onshore Converter Station Layout Detail

EA THREE Onshore Converter Station Temporary Site Facilities Detail

EA THREE Converter Substation to National Grid Substation Cable Route

400kV AC Cable - Open Cut Section

400kV AC Cable - Ducted Section

EA THREE Onshore Converter Station Access Roads

Permanent

Temporary

EA THREE Cable Access Road

Haul Road

EA THREE Area to be Reprofiled

EA ONE Onshore Converter Station Access Road

Rendezvous Point

Evacuation Route

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Rev	Date	By	Comment
B	12/04/2022	PW	Second Issue
A	07/01/2022	PW	First Issue

Original A3 Plot Scale 1:15,000

0 300 600 Metres

Onshore Converter Station Stage

Appendix 4 : Rendezvous Point and Evacuation Route

Drg No	05356.00006.12.00048.1 ONCS Evacuation Route
Rev	2
Date	12/04/2022
Layout	N/A

Document Path: P:\05356 - GoBe Consultants Ltd\00006 East Anglia Three\Tech\GIS\Dwgs\Wking\EA3\Onshore Substation\Doc Ref EA3-OND-CNS-REP-IBR-000005\5356.00006.12.0048.1 ONCS Evacuation Route.mxd

609000 609500 610000 610500

246500 246000

Track Track Track Track

BULLEN LANE BULLEN LANE

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter

Works No.s Overview

Black Cottage Woodlands Farm Tye Lane Bullen Hall Farm Channel Hill Farm Burstallhill

69 65 64 67 62 63 66 68

EA THREE DCO Corridor
EA THREE Onshore Converter Station Layout Detail
EA THREE Onshore Converter Station Temporary Site Facilities Detail

EA THREE Converter Substation to National Grid Substation Cable Route
400kV AC Cable - Open Cut Section
400kV AC Cable - Ducted Section

EA THREE Onshore Converter Station Access Roads
Permanent
Temporary

EA THREE Cable Access Road
Haul Road
EA THREE Onshore Converter Station SUDs Pond
EA THREE Area to be Reprofiled

EA ONE Onshore Converter Station Access Road

Works No.s
65 62 66 63 67 64 68 69

GoBe consultants

Rev	Date	By	Comment
B	04/04/2022	PW	Second Issue
A	31/03/2022	JRS	First Issue

Original A3 Plot Scale 1:5,000

0 100 200 Metres

Onshore Converter Station Stage

Figure 1: Site Context Plan

Drg No	05356.00006.12.0001.1 ONCS Site Context Plan
Rev	2
Date	04/04/2022
Layout	N/A

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