



# IPSWICH

# FLOOD CONTINGENCY

# PLAN 2016



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## DOCUMENT CONTROL AND REVIEW

<u>Version</u>	<u>Date</u>	<u>Description</u>	<u>Prepared by</u>	<u>Checked by</u>	<u>Approved by</u>
1.0	Jan 2014	First Issue	J.Coleman	N.Shaw	A.MacFarlane
2.0	Feb 2016	Second issue	J.Coleman	N.Shaw	A.MacFarlane

### Control & Distribution

This plan will be issued in controlled form on the server location

Copies will be sent to the following holders.

Port Director	1
Marine Adviser	1
Port Manager	1
Harbour Master	1
Operations Manager	1
Engineering Manager	1
ONS	1
Head of Operations	1
<b>TOTAL</b>	<b>8</b>

Copies may be sent to outside agencies at the discretion of the Port Manager or Harbour Master.

## **INTRODUCTION, AIMS & PRIORITIES**

In certain meteorological conditions a significant increase in predicted tide levels can threaten to cause flooding to the Port and the town of Ipswich.

This is caused by the passage of a severe depression close to the North Coast of Scotland and onwards to Denmark. The resultant surge in the sea water levels is funnelled into the shallow waters of the Southern North Sea and can cause an increase in tide levels of 2 metres or more in extreme examples, if the surge coincides with a spring high tide. Such conditions caused the fatal floods impacting the East coast of England on 31<sup>st</sup> January 1953 and also more recently flooding on 5/6<sup>th</sup> December, 2013.

This contingency plan is drawn up to help the Port's staff minimise the effects of tidal flooding and create a structured response to ensure any business disruption can be minimised.

### **Main Aim of the Flood Contingency Plan**

The aim of this contingency plan is to specify the sources of flooding information, means for raising the alarm and summoning assistance. It will also establish the roles of organisations/people involved in order to co-ordinate the activities necessary in safeguarding life, property and the environment. It will ensure that everyone is aware of the procedures to be adopted in the event of an incident.

### **Flood Contingency Plan Priorities**

The Priorities of this Major Incident Plan are:

**Safeguarding of life.**

**Safeguarding of property and the environment.**

**Rehabilitation of the area and rapid resumption of normal port activities.**

## INFORMATION SOURCES

### **Storm Tide Warning Service:–**

<http://www.ntslf.org/numerical-modelling/surge-forecast>

Variations in tide level predictions for the next 36 hours are produced by the STWS of the Meteorological Office twice daily. These are sent to ABP Ipswich by email at approximately 0400 and 1600 each day.

### **Flood Forecasting Centre:-**

This service is provided jointly by the Met. Office and the Environment Agency, to all category 1 & 2 Civil Contingency Act responders.

<http://www.ffc-environment-agency.metoffice.gov.uk/>

They issue warnings as described in the [Flood Guidance Statement](#) ABP Ipswich have registered to use this service for specific flood warnings for Suffolk. – this registration has been approved by FFC – we await the first live warning to ensure the system is working correctly.

### **Environment Agency**

The Environment Agency run the Floodline warning service and provide email, SMS text and fax flood warnings for the River Orwell and Suffolk Coast.

<http://www.environment-agency.gov.uk/homeandleisure/floods/34681.aspx?area=054WACDV3B&page=1&type=Region&term=Anglian>

All their flood warnings are also available through the EA website.

### **3 Day Flood Risk Forecast**

<http://www.environment-agency.gov.uk/homeandleisure/floods/3days/125305.aspx>

### **Regional list of flood alerts and warnings**

<http://www.environment-agency.gov.uk/homeandleisure/floods/34678.aspx?type=Region&term=Anglian&from=fl>

If the internet is not available local information flood risk information is obtainable by calling:-

**Call Floodline on 0845 988 1188**

**FLOOD WARNINGS**

The Environment agency issues flood alerts and flood warnings graded as shown in the table below for Ipswich.



**FLOOD ALERT**

**Moderate Flood Risk**

**Flooding is possible**



**FLOOD WARNING**

**Substantial Flood Risk**

**Flooding expected.**



**SEVERE FLOOD WARNING**

**Severe Flood Risk**

**Severe flooding.  
Danger to life**

The Harbour Master and Duty Engineer must be informed **IMMEDIATELY** if any **SEVERE FLOOD WARNING** messages are received, any time of the day, any day of the week.

As soon as a Floodline or STWS message is received the details **must** be transferred on to a **STORM TIDE WARNING LOG SHEET**, current logs must be updated as the necessary actions are taken.

STORM TIDE WARNING LOGSHEET							
HIGH WATER @	Hrs	DATE	PREDICTED HIGH TIDE	Mm			
				FLOOD WATCH	FLOOD WARNING	RETURN TO NORMAL	ALL CLEAR
Range of levels in ACD warnings are:				3.2 - 3.7	3.7 - 4.2	4.2	
1	TIME OF ONSET OF FLOODING						
2	EXTENT OF FLOODING						
3	TO CONTACT BY CONTACT NO.			+1.3	+1.0	+1.0	
4	CONTACT LEVELS						
5	TIME OF ONSET OF FLOODING						
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## **COMMUNICATION PLAN**

### **FFC - Five Day Storm Surge Warning ( < 120 Hours)**

Warnings received from this service should be relayed by the ONS Operator to all concerned if the levels expected are at Flood Warning Level or Severe Flood Warning Level. For Severe level warnings these messages should be tagged High Priority

#### **Telephone Early Warning List**

Port Manager EA  
Head of Operations Ipswich  
Operations Manager Ipswich  
HM Ipswich  
Lock Master  
Port Manager Kings Lynn & Lowestoft  
Engineering Manager  
Engineering Resources Manager  
Maintenance Manager  
Safety Manager Ipswich

Tenant List as required (see appendix)

### **EA Flood Warning Service ( < 36 Hours)**

Warnings and Alerts from this service are dealt with in a structured manner as detailed in the Flood Warnings section of this document, using the [Storm Tide Warning Sheet](#). These actions will be undertaken by the duty ONS Operator.

This procedure will be supplemented by email warnings, phone calls and personal visits to all relevant parties for Severe Flood Warnings when it appears quays are likely to be overtopped.

## COMMAND AND CONTROL

The Harbour Master must be advised of any significant flood warning or severe flood warning event which would lead to the implementation of the Flood Contingency Plan. This must be done as soon as possible by quickest means available.

To activate an emergency response as precisely and quickly as possible remember these 5 W's in your initial request for assistance from the Harbour Master:

- W = Who is calling**
- W = What has happened**
- W = When did the incident occur**
- W = Where are you calling from**
- W = Weather at the location of incident**

Orwell Navigation Service (ONS) must record the start of any such event in an emergency log and continue to maintain a log of significant events and important messages and instructions.

Upon receipt of a Severe Flood Warning the HM should proceed to ONS and fully assess the risks of the forecast tide levels in relation to the port's assets.

Once the details of the incident have been understood it must be promptly established if the incident can continue to be managed via the ONS as a Minor incident or if it is to be declared a Major incident. This shall be determined by the HM as Incident Commander, in conjunction with the Port Manger or the Head of Operations.

The HM will assume the role of Incident Commander and will implement the communications plan. If necessary the Deputy HM will also be notified and can assist as Site Incident Officer.

For a Major Incident the Port Manger or the Head of Operations will assume the role of Incident Manager and liaise with Gold or Silver commands of the Main Emergency Services as necessary.

If the tide reaches **4.33 metres** over **chart datum** one hour or more before predicated high water, the ONS will advise the duty lock operator.

If the tide level reaches **4.60 metres** over **chart datum** one hour or more before predicted high water. The ONS will advise the Maintenance Manager or Engineering Resources Manager ,that an electrician is required to stand by. The flood gates are to be closed when the tide reaches **4.60 metres** over **chart datum**.



## **PRE-SURGE EVENT PREPARATIONS**

### **Action level 1: forecast surge height of 5.2 M–**

#### **A. Marine -**

- 1) The Electrician is to be called out and advised to commence isolating plug boxes when the tide level reaches **5.2 metres** over **chart datum**, starting with West Bank South then the Ro Ro berths and then boxes on Cliff Quay.
- 2) RED 7 MARINE flood gates are put in place ( Keys are kept at the ONS.)
- 3) West Knuckle floodgates are closed
- 4) Remove caps from waiting pontoon pilings.

#### **B. Operations**

- 1) Engage with staff both Operations & Engineering.
- 2) Assess and shift sensitive cargo at WBT/CQ.
- 3) Ensure engineers isolate power supply to Dutch Barns.
- 4) All mobile plant, where possible to be moved to high ground for both WBT/CQ.
- 5) All cranes to be unplugged by engineering where operations allow.
- 6) Advise port COMAH sites (origin).
- 7) Ensure RoRo 1 and 2 are in parked position.
- 8) Inform shipping lines/Agents.

#### **C. Engineering**

- 1) Engage with staff both Engineering & Operations.
- 2) Switch off plug boxes where possible for WBT North and South ,but all to be isolated at the end of the working day.
- 3) Isolate Dutch Barn power supply.

## **Action level 2: forecast surge height of 5.2~5.8 M**

### **A. Marine**

- 1) Complete all Level 1 actions.

### **B. Operations**

- 1) All actions in level 1 plus
  - a) Ops & engineering to assess levels of staffing allocations as required
  - b) Assess cargo nearest the river road on the Timber Terminal.

### **C. Engineering**

- 1) All actions in Level 1 plus
  - a) Isolate WB South substation
  - b) Check and isolate all sensitive areas from the Live and Let Live gate towards the south substation.

## **Action level 3: forecast surge height of over 5.8 M**

### **A. Marine**

- 1) Complete all Level 1 actions.

### **B. Operations**

- 1) Complete all actions in Level 1& 2 plus
- 2) Construct Orwell Bulk Terminal Flood Defence Barriers (Ref Appendice 5.)
  - a) Evacuation of CQ/WBT plus island site

### **C. Engineering**

- 1) Complete all actions in Level 1 & 2 plus
  - a) Isolation of substations not already covered in level 2, with the aim to leave supply to ONS.

## **ACTIONS DURING SURGE EVENT**

- **Monitor all radio and phone communications and maintain log of all events.**
- **Record tide heights and weather conditions at regular intervals.**
- **Take photographs at regular intervals to help with post-flood analysis of impacts.**
- **Liaise with Police Site Incident Officer to ensure bridge closed to road traffic when necessary.**
- **Update Incident Manager and Silver/Gold command of significant incidents and events.**
- **Assist where possible with any lifesaving/rescue operations.**
- **Remain on upper floor of LPC (ONS) until safe to return to ground level.**
- **Assume all flood water is contaminated with sewage and unsafe.**
- **Remain at LPC and only walk on clear pathways which are not covered with flood water.**
- **Do not drive or walk through flood waters – you cannot see if manholes or other objects have been moved.**
- **Only move around to assess damage and pollution impacts once flood waters have receded.**

## **RECOVERY PLAN**

- Ensure any staff injuries are assessed and treated by First Aider and sent for Medical assessment if required.
- Only resume movement around the port estate when it is certain manhole covers haven't been dislodged.
- Notify Emergency Services of any known hazards to public safety or shipping.
- Check to ensure other flood events aren't expected before undertaking recovery work.
- Ensure staff have adequate welfare and rest before assigning further tasks.
- Treat any flooded buildings as potentially contaminated with sewage and ensure rigorous hygiene measures in place.
- Assess any damages to ABP property and equipment and formulate plans to restore normal activities.
- Inform Port Manager and SSP Director of any serious impacts and support needed in recovery phase.
- Respond to any information requests from Suffolk Resilience Forum and Dept. for Transport
- Assess any support or information needed to support the Port's customers and the wider community.
- Record all hours worked, actions taken, with reasons and photograph everything possible – all to support any insurance claims.
- Prepare brief report of what happened for Corporate Communications Department in London.

# APPENDICES

## LIST OF TENANTS

### WEST BANK TERMINAL TENANTS AS 1/2/2016

TENANT	TELEPHONE NO.
Allens Transport Ltd	07860 206739
Brett Aggregates Ltd	01473 811900
Claydon Haulage	01473 830308
Dyer Welding Services Ltd	01473 602101
Edwards Distribution Services	07843 619357
Express Freight Services (UK) Ltd	01375 488730
H M Customs & Excise	01473 235700
Holland UK Logistics Ltd	07951 265692
Ipswich Audi	01473 556300
L&M (Hauliers) Ltd	07921 366900
MacIntyre Transport Ltd	07912 390198
Maze Logistic Solutions Ltd	01473 653010
Merchant Transport Ltd	07542 250310 / 717512
NJ Transport	c/o 07860 206739
NWT Distribution Ltd	01473 687686
Orwell Yacht Club	01473 602288
SE Transport Ltd	07731 455714
SEA Transport Ltd	01473 276400
Shotley Haulage Services	07767 453609 / 788728
Sims Group UK Ltd	01789 722059
TDJ Transport Ltd	07919 404928
Trans European Port Services Ltd t/a Felixstowe Warehousing	01394 675700

**CLIFF QUAY AND LOCK HEAD TENANTS AS AT 1/2/2016**

<b>TENANT</b>	<b>TELEPHONE NO.</b>
Anglo-Norden Forest Products Ltd	01473 233244
Clarkson Port Services Ltd	01473 297302
Cliff Quay Developments Ltd	01284 766200
Eastern Structures Ltd	01473 215888
Felixstowe Seafarers' Centre	01394 673599
G & T Commercials	07774 614815
The Grain Terminal (Ipswich) Ltd	01473 250461
R R Hearn & Sons	07768 645999
Hydrodec (UK) Ltd t/a Eco-Oil	01473 256031
I & C t/a Red7 Marine	07803 044002 / 214018
Ipswich Sea Cadet Corps	07788 436404
Lafarge Tarmac Trading Ltd	01206 332238
Nidera UK Ltd	01473 275020
Omex Nitrogen Ltd	01753 625931
Origin Fertilizers (UK) Ltd	01473 212444
Southern Cement Ltd	01473 284320



**ISLAND SITE/WET DOCK/NEW CUT WEST TENANTS AS AT**  
**1/2/2016**

<b>TENANT</b>	<b>TELEPHONE NO.</b>
A & A Transport	01473 681877
A C Freight	07850 741774
Anchor Bakery Ltd	c/o 01473 214763
T Bailey Esq	07989 427049
Burton Waters Marina Ltd	01473 225710
CG Bulk Haulage Ltd	07539384091
Terry Clarke GRP	07929 217180
Coe Haulage	07968 816222
DYM Holdings Ltd (The Last Anchor)	01473 214763
D W Addison Carter & Partners	07836 595477
DanceEast	01473 295230
Hydrodec (UK) Ltd t/a Eco-Oil	01473 256192
Fairline Boats Ltd ?	01473 233401
N G Fellingham	01449 673281
G K International	01473 414886
MJB Contractors	07885 497490
Neptune Marina Ltd	01473 215204
C Nixon Esq (Debbage Yachting), New Cut West	01473 601169
PC Restaurants Ltd (Mariners)	01787 247431
PDS Service Ltd	07731 171904
Spirit Yachts Ltd	01473 214715
Towner Traction Services	07886 830858 / 411693
Traffic Management Solutions Ltd	07977 984350



**Quay Heights in Metres above Chart Datum (CD)****CLIFF QUAY**

Power Station	6.34 M
2 Shed	6.27 M
1 Shed	6.27 M
500 ft.	6.27 M
1GT	6.27 M
BLT	6.27 M

**WEST BANK**

West Bank South	5.68 M
No. 2 RoRo	5.72 M
No 1 RoRo	5.72 M
West Bank North	5.72 M

**NEW CUT**

Flood Wall	6.5 M
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**IF IN DOUBT, CONTACT HARBOUR MASTER**

## **PROCEDURE FOR FLOODGATES OPERATION**

1. When the tide gets to a height of 4.6M, a warning screen will show on the console emitting a low-pitched buzz.
2. Go to main menu and press Flood Barriers of left of screen.
3. Go to top and bottom left-hand grey boxes and press both, motors will say 'West on' and 'East on'.
4. Then press Close button, and the Floodgates will close.
5. When the Floodgates have closed completely, go to main menu screen and close the Inner Lockgates as soon as possible.
6. When the tide ends wait for Lock and River to equalise and then go to Flood Barrier screen and then open Floodgates. Be aware that the Floodgates open very slowly.
7. When complete, put both Floodgate motors in the off position.
8. In the unlikely event the Floodgates are needed separately use the manual close and open buttons on the Flood-Barriers screen.

### IPSWICH FLOOD GATE – CONTACT LIST

ORGANISATION/CONTACT	NAME	TELEPHONE/FAX	E-MAIL
The Environment Agency Kingfisher House Goldhay Way Orton Goldhay Peterborough PE2 5ZR		Tel: 01733 371811 Fax: 01733 464372	
The Environment Agency Cobham Road Ipswich I P3 9JE	Steve Reave	Tel: 01473 706036 Mob: 07771 553970 Fax: 01473 724205	steve.reave@ environment- agency.gov.uk.
Henderson UK	John Henderson	Mob : 07786 914838 Mob: 07809 565713	johnhenderson@ jhuk.co.uk
Associated British Ports Old Custom House Key Street Ipswich IP4 1BY	Brian Read	Tel: 01473 231010 Mob: 07885 082278 Fax: 01473 288488 <b>Emergency Contact</b> <b>01473 211066</b> <b>Fax 01473 230915</b>	bread@abports.co.uk

## **PROCEDURE FOR STARTING GENERATOR FOR EMERGENCY POWER TO OPERATE THE FLOOD GATES IN THE EVENT OF A POWER FAILURE**

### NUMBER TRAIL 1-4

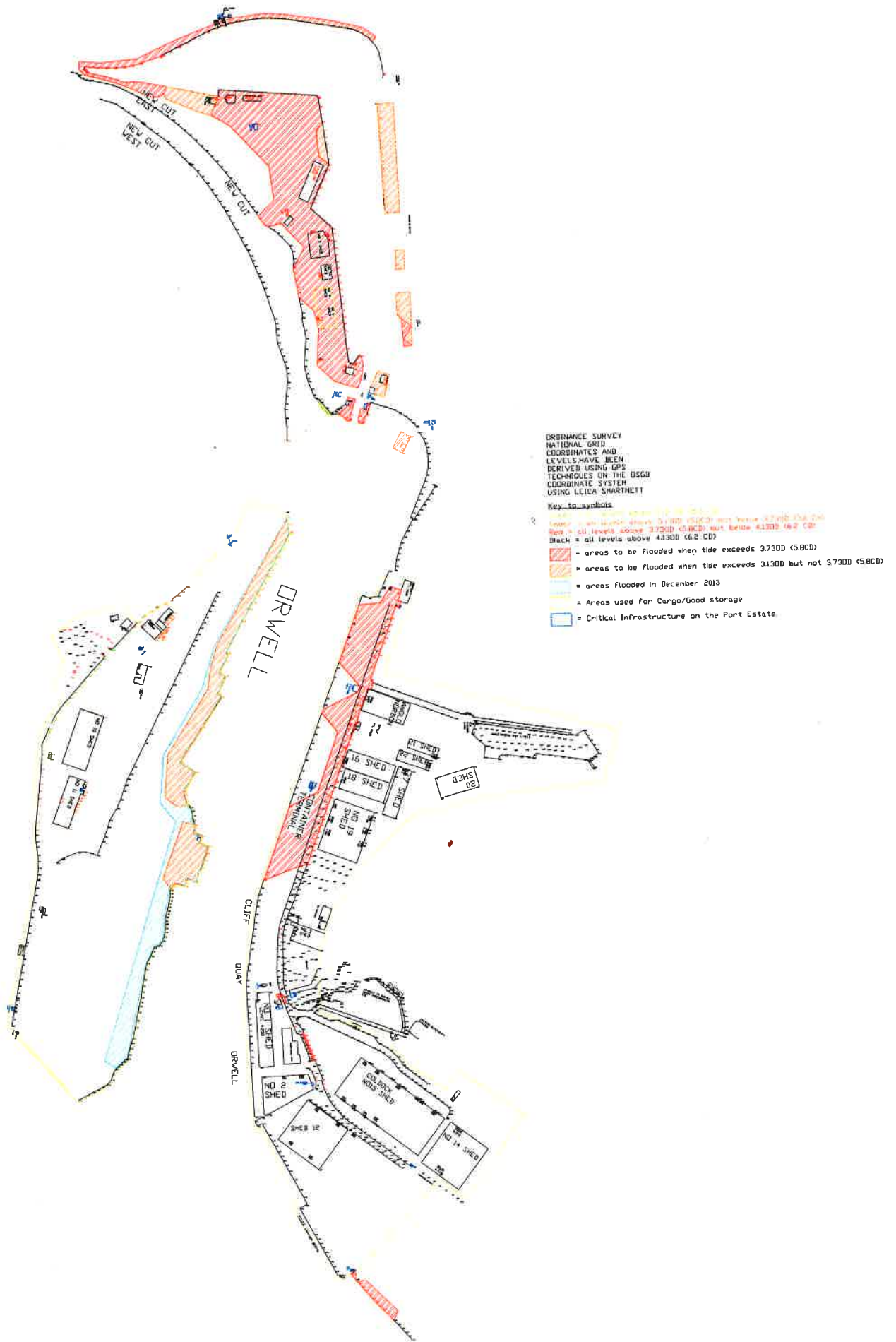
Take keys marked '4' and instructions card from ONS building (Gray Box next to Lock Consul).

1. Push down switch. Turn key to left, remove key and take it with you to the Velocity Control Room. The Emergency Generator is next to VCR.
2. Insert key. Turn to right, raise switch.
3. Turn switch from mains to generator.
4. Generator Starting Position.  
Push and hold left button - the override.  
Turn key to start.  
Ten seconds after generator is running release override.

You now have power to the flood gates control panel at the lock and may proceed as per instructions on the inside of panel door.

To stop the generator loosen curled screw on control (under air filter on motor) lower to stop position. Do not use the emergency stop button unless it really is an emergency stop. Once the motor has stopped return control to former position put starting key to 'Battery Charging' then reverse the number trail 4-3-2-1 finally returning the keys back to ONS.

Should the mains and emergency generator power fail the gates can be closed with a fork lift or truck once the hydraulic valve on the panel has been closed and locking pins on the gates have been removed.



# Orwell Bulk Terminal

**ORWELL BULK TERMINAL  
FLOOD DEFENCE BARRIER ASSEMBLY**



## Introduction

The following guide explains how to assemble the Orwell Bulk Terminal Flood Defence Barriers.

The Terminal has 2x Bay Doors (Front) & 6x Personnel Doors (2x Front, 2x Left, 2x Right)  
Each access point has its own flood defence barrier.

## Tools Required

- Keys to open barrier unit padlocks – stored at Cliff Quay Maintenance.
- Allen Keys & Screwdriver – stored in the blue storage boxes outside the Terminal.

## ORWELL BULK TERMINAL FLOOD DEFENCE BARRIER ASSEMBLY



### PART 1: Personnel Doors

1. Use an Allen Key to remove the protective panels on the Door Ground Pillars (*figure 1*)
2. Remove defence panels from the blue storage boxes located near the doorways (*figure 2*). Each box contains 8 panels (enough to protect two personnel doors).
3. Slot the door panels into the personnel doorways. The panels with a rubber strip must be placed at the bottom (rubber makes contact with the ground).
4. Fasten two clamps to the top of each defence wall (*figure 3*).



*Figure 1*



*Figure 2*



*Figure 3*

**ORWELL BULK TERMINAL  
FLOOD DEFENCE BARRIER ASSEMBLY**



**PART 2: Bay Doors**

1. Use an Allen Key to remove the protective panels on the Door Ground Pillars (*figure 1*)
2. Remove the defence panels from the racks outside the bay doors (*figure 4*).
3. Collect the support pillars, screws, clamps & pad lock brackets from Store 85 (next to 3 Shed). Screw the support pillars into the ground as shown in *figure 5*.
4. Slot the door panels into the bay doorways. The panels with a rubber strip must be placed at the bottom (rubber makes contact with the ground).
5. Fasten clamps to the top of each bay door wall as shown in *figures 6 & 7*.

