

NORDISPLAN

RP-09

2013



TERRITORY OF NORFOLK ISLAND

# NORDISPLAN TSUNAMI RESPONSE PLAN (RP-09)



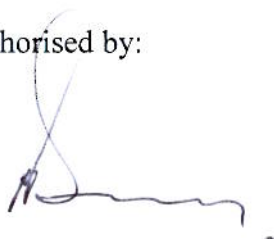
## DOCUMENT CONTROL

### AUTHORISATION

This Response Plan provides for the mobilisation and coordination of the Territory's resources to respond to the threat of an impending Tsunami impact and was prepared by the Emergency Management Norfolk Island Committee with input from Emergency Management Australia pursuant to Section 8 of the Disaster and Emergency Management Act 2001.

This Response Plan was authorised by:

Signed:



Mr Milton Bradley  
Territory Controller

Date of approval:

*30 April 2013*

### VERSION CONTROL

A review of the Tsunami Response Plan shall be conducted annually and after any activation of the RP-09 by EMNIC.

Amendment No.	Amendment Summary	Author	Effective Date
01 / 2013	Final Draft	2IC Police / CFCO	<i>30 APR 2013</i>

## DISTRIBUTION LIST

Copy number	Recipient	No. of Copies
1	Master Copy held in Records	1
2	Administrator	1
3	Minister, Norfolk Island Government	1
4	Chairperson EMNI	1
5	Chief Executive Officer Norfolk Island Administration	1
6	Controller EMNI	1
7	Deputy Controller EMNI	1
8	Emergency Operations Centre	1
9	Norfolk Island Government EMNIC Liaison Officer	1
10	Australian Government EMNIC Liaison Officer	1
11	Functional Service Coordinator (Airport & Ports)	1
12	Functional Service Coordinator (Border Protection)	1
13	Functional Service Coordinator (Fire Services)	1
14	Functional Service Coordinator (Health)	1
15	Functional Service Coordinator (Media & Public Information)	1
16	Functional Service Coordinator (Police)	1
17	Functional Service Coordinator (Telecommunications)	1
18	Functional Service Coordinator (Transport & Resources)	1
19	Functional Service Coordinator (Welfare)	1
20	Headquarters, Joint Operations Centre (HQ-JOC) Australian Defence Force (ADF)	1 – ecopy only
21	Crisis Coordination Centre, Attorney-General's Department, Canberra	1 – ecopy only
22	Emergency Management Australia, Attorney-General's Department, Canberra	1 – ecopy only
23	Australian Federal Police Operations Coordination Centre (AOCC)	1 – ecopy only
24	External Territories Policing Desk, International Deployment Group (IDG), Australian Federal Police	1 – ecopy only
25	Territories Division, Department of Regional Australia, Regional Development and Local Government	1 – ecopy only
26	Australian Maritime Safety Authority (Australian Rescue Coordination Centre)	1 – ecopy only
27	New Zealand Rescue Coordination Centre	1 – ecopy only

## CONTENTS

DOCUMENT CONTROL.....	4
Authorisation.....	4
Distribution List.....	5
List of Abbreviations .....	7
NORFOLK ISLAND TSUNAMI RESPONSE PLAN.....	8
1. INTRODUCTION.....	8
2. AIM .....	8
3. OBJECTIVE.....	9
4 RESPONSIBLE OFFICER.....	9
5. ACTIVATION OF TSUNAMI RESPONSE PLAN AND DECLARATIONS .....	9
6. NORFOLK ISLAND TSUNAMI WARNING STAGES .....	10
7. SUB PLANS.....	11
8. BACKGROUND.....	11
8.1 TSUNAMI MONITORING / WARNING CENTRES.....	11
ANNEXURE A: DECLARATION OF DISASTERS AND EMERGENCIES .....	13
ANNEXURE B – AREAS OF RISK.....	14
AREAS OF RISK.....	14
CONSIDERATION OF EVACUATION LEVELS .....	14
MAP OF CONTOUR LEVELS.....	15
CONTACT DETAILS AT 10M, 20M, 30 AND 40M CONTOURS - NORFOLK ISLAND .....	15



## LIST OF ABBREVIATIONS

<b>ADF</b>	Australian Defence Force
<b>AGD</b>	Attorney-General's Department (Australian Government)
<b>AFP</b>	Australian Federal Police
<b>AMSA</b>	Australian Marine Safety Authority
<b>AO</b>	Authorised Officer
<b>AOCC</b>	Australian Federal Police Coordination Centre
<b>BOM</b>	Bureau of Meteorology (Australian Government)
<b>COMDISPLAN</b>	Australian Government Disaster Response Plan
<b>CCC</b>	Crisis Coordination Centre (Attorney-General's Department)
<b>CEO</b>	Chief Executive Officer, Norfolk Island Administration
<b>CFCO</b>	Chief Fire Control Officer
<b>CTLR</b>	Controller
<b>DEC</b>	Deputy Emergency Controller
<b>DERF</b>	Disaster and Emergency Relief Fund
<b>DRA</b>	Department of Regional Australia, Regional Development & Local Government
<b>DVI</b>	Disaster Victim Identification
<b>EMA</b>	Emergency Management Australia
<b>EMA-LO</b>	Emergency Management Australia Liaison Officer
<b>EMG</b>	Emergency Management Group (Norfolk Island)
<b>EMNI</b>	Emergency Management Norfolk Island
<b>EMNIC</b>	Emergency Management Norfolk Island Committee
<b>EOC</b>	Emergency Operations Centre
<b>ESC</b>	Emergency Services Centre
<b>FSA</b>	Functional Service Area
<b>FSC</b>	Functional Service Coordinator
<b>FSCC</b>	Functional Service Coordination Centre
<b>FSLO</b>	Functional Service Liaison Officer
<b>JATWC</b>	Joint Australian Tsunami Warning Centre
<b>MOA</b>	Memorandum of Agreement
<b>MOU</b>	Memorandum of Understanding
<b>NIA</b>	Norfolk Island Administration
<b>NIG</b>	Norfolk Island Government
<b>NIPF</b>	Norfolk Island Police Force
<b>NORDISPLAN</b>	Norfolk Island Territory Disaster and Emergency Plan
<b>NRIS</b>	National Registration and Inquiry System
<b>OIC-NIPF</b>	Officer-in-Charge, Norfolk Island Police Force
<b>SOP</b>	Standard Operating Procedure
<b>SP</b>	Sub Plan
<b>RP</b>	Response Plan
<b>TPA</b>	Tsunami Public Advice
<b>TPW</b>	Tsunami Public Warning
<b>TRP</b>	Tsunami Response Plan
<b>WAC</b>	Welfare Assembly Areas

# NORFOLK ISLAND TSUNAMI RESPONSE PLAN

## 1. INTRODUCTION

This Tsunami Response Plan (TRP) provides for the mobilisation and coordination of the Territory's resources to deal with an impending Tsunami impact and was prepared by the Emergency Management Norfolk Island Committee pursuant to Section 8 of the *Disaster and Emergency Management Act 2001* with input from Emergency Management Australia.

Norfolk Island (NI) is a self-governing Australian External Territory, located in the Pacific Ocean approximately 1,500km east of Brisbane approximately 1,100km north west of Auckland, New Zealand, and approximately 800km south south east of Noumea, New Caledonia, within the area bounded by the parallels 28 degrees 59 minutes and 29 degrees 9 minutes south latitude and the meridians 167 degrees 54 minutes and 168 degrees east longitude.



Norfolk Island is a volcanic outcrop approximately 5 x 8 kilometres with an area of 34.5 sq km. The Islands lies in the South Pacific along the Norfolk Ridge, which extends from New Zealand to New Caledonia. It has no large-scale internal bodies of water and 32km of coastline. The Island's highest point is Mount Bates, 319m above sea level, located in the northwest quadrant of the island. The majority of the terrain is rolling hills suitable for farming and other agricultural uses. The coastline consists of varying degrees of cliffs faces.

The Territory also includes the uninhabited islands of Phillip and Nepean (respectively 7km and 1km south of the main island). The climate is subtropical and with mild temperatures of little seasonal variation. Norfolk Island has a population of approximately 1,800 residents with up to an additional 400 tourists at any one time.

## 2. AIM

The aim of the Norfolk Island TRP is to detail the prevention, preparedness, response and recovery arrangements in the event of a Tsunami impacting on the Territory of Norfolk Island, in line with the requirements of the Norfolk Island Disaster Plan (NORDISPLAN).



The TRP provides for the mobilisation and co-ordination of the Territory's resources, both public and private, to deal with an impending Tsunami emergency.

### **3. OBJECTIVE**

The risk of Tsunami upon Norfolk Island exists, which requires Emergency Management Norfolk Island (EMNI) to have a Response Plan (RP) in place to cover such an identified threat.

Modern technology allows accurate monitoring of the track and intensity of Tsunamis, however they remain, because by their nature, largely unpredictable in terms of path, speed and wave height/force etc. As a result, it is important that EMNI has a TRP which can be implemented immediately after the threat of a Tsunami is identified.

The TRP details the phases of preparedness necessary for the Emergency Management Norfolk Island Committee (EMNIC) to prepare Norfolk Island for the impact of a Tsunami. In addition, the plan considers all aspects of Tsunamis, including inundation and impact.

This TRP also details the stages for alerting the community of Norfolk Island as well as the information that should be sent to the Australian Government Crisis Coordination Centre (CCC) in Canberra and other Australian Government agencies as required.

Although a tsunami cannot be prevented, the impact of a tsunami can be mitigated through community preparedness, timely warnings, and effective response.

### **4 RESPONSIBLE OFFICER**

The responsible Officer for this Response Plan is the Territory Controller.

### **5. ACTIVATION OF TSUNAMI RESPONSE PLAN AND DECLARATIONS**

Activation of this plan remains the responsibility of the Controller.

Declarations of a State of Disaster or a State of Emergency under Section 9 of the *Disaster & Emergency Management Act 2001* (NI) are made by the responsible Norfolk Island Government Minister, on the advice of the Controller, or, in the absence of the Controller the Deputy Controller or another member of the committee.

A declaration under subsection 9(1) must be made in writing in a manner and form determined by the Minister and must be published or announced in accordance with the NORDISPLAN.

A declaration under subsection 9(1) remains in force for 72 hours and may not be extended or renewed without a resolution of the Legislative Assembly.

Section 9(4)(a) of the *Disaster & Emergency Management Act 2001* (NI), allows for a declaration of disaster or emergency to be extended for the purpose of response operations under this Act and the Plan, and on the advice of the Controller for recovery operations under this Act and the Plan.

A schematic of the Declaration and decision making process can be found at Annexure 'A' - Declaration of Disasters and Emergencies'

## **6. NORFOLK ISLAND TSUNAMI WARNING STAGES**

The following is a detailed list of the stages of a Tsunami and actions that will be implemented by EMNIC.

In order to allow for quick and decisive notification to those potential areas and locations of risk, Annexure B outlines maps, addresses and contact details for notifications to be made depending on the height of the Tsunami.

### **6.1 Stage One: The Joint Australian Tsunami Warning Centre (JATWC) advise of a Tsunami triggered in the South Pacific Ocean (West) region**

- BoM/CCC alerts the Territory Controller and the Norfolk Island Police Force (NIPF).
- Territory Controller notifies the EMNIC of the imminent Tsunami (also notify Minister for Emergency Services, Administrator and the CEO).

### **6.2 Stage Two: The JATWC advise of potential Tsunami impact on NI**

- BoM informs the Territory Controller of the predicted track.
- EMNIC meet with EMG, discuss the situation and confirm actions.
- Norfolk Island Emergency Operations Centre (EOC) placed on standby for immediate activation.
- EMNIC to issue public warning to the Norfolk Island community in conjunction with the BoM.
- Customs and Border Protection Functional Service Coordinator (FSC) shall provide information and confirmation of known cargo ships, visiting marine vessels and or local fishing boats in Norfolk Island waters and contacted and establish communications where possible via Marine VHF channels 16 or 28 and/or mobile telephones.

### **6.3 Stage Three: Tsunami path tracks towards NI**

- EMNIC liaise with the CCC regarding the approaching Tsunami and consider request for the deployment of an Emergency Management Liaison Officer (EMLO).
- EMNIC to consider the activation of the NORDISPLAN (this is ongoing throughout the stages).
- Evacuation of low-lying areas as required to premises outlined in Annexure B.
- Activation of Evacuation Centre located at Rawson Hall, Taylors Road.
- Activation of Red Cross for registration of those evacuated from affected areas.

### **6.4 Stage Four: Post-impact**

- Initial damage assessment undertaken by NIPF.
- NIPF advise the EMNIC if all clear.
- EMNIC meet to be briefed on impact and damage.
- EMNIC issue all clear.
- EMNIC develop a cleanup/initial recovery action plan.
- EMNIC to provide situation report to CCC.



## 7. SUB PLANS

Sub Plans are established to assist the EMNIC to coordinate an effective response to a Tsunami. All Functional Service Areas (FSAs), within their respective Sub-Plans, develop response and contingency plans for Tsunamis (along with specific response requirements for all identified hazards). EMNI FSCs are responsible for providing advice and information to the Controller and EMNIC pertaining to their FSAs. The FSAs include:

- Airport & Ports
- Border Protection
- EOC
- Fire
- Health
- Media & Public Information
- Police
- Telecommunications Infrastructure
- Transport & Resources, and
- Welfare

## 8. BACKGROUND

Tsunami is the Japanese word for 'Harbour Wave'. Tsunamis are described<sup>1</sup> as:

*a series of ocean waves generated by sudden displacements in the sea floor, landslides, or volcanic activity. In the deep ocean, the tsunami wave may only be a few inches high. The tsunami wave may come gently ashore or may increase in height to become a fast moving wall of turbulent water several meters high.*

A tsunami is different from a wind generated surface wave on the ocean. The passage of a tsunami involves the movement of water from the surface to the seafloor which means its speed is controlled by water depth. Consequently, as the wave approaches land and reaches increasingly shallow water it slows. However, the water column still in deeper water is moving slightly faster and catches up, resulting in the wave bunching up and becoming much higher. A tsunami is often a series of waves and the first may not necessarily be the largest<sup>2</sup>.

### 8.1 TSUNAMI MONITORING / WARNING CENTRES

The JATWC is operated by the Bureau of Meteorology (BoM) and Geoscience Australia (GA). The JATWC jointly operated 24 hours a day by BoM and GA detects, monitors, verifies and warns of any tsunami threat to the coastline of Australia and its offshore territories.

The Australian Government Bureau of Meteorology is responsible for issuing Tsunami advice and warning information to Norfolk Island community in conjunction with EMNI, and briefing and updating the EMNIC of current situation .

*Tsunami Watch*

---

<sup>1</sup> [http://www.ema.gov.au/www/ema/schools.nsf/Page/Get\\_The\\_FactsTsunami](http://www.ema.gov.au/www/ema/schools.nsf/Page/Get_The_FactsTsunami)

<sup>2</sup> <http://www.ga.gov.au/hazards/tsunami/tsunami-basics/what.html> - Geoscience Australia

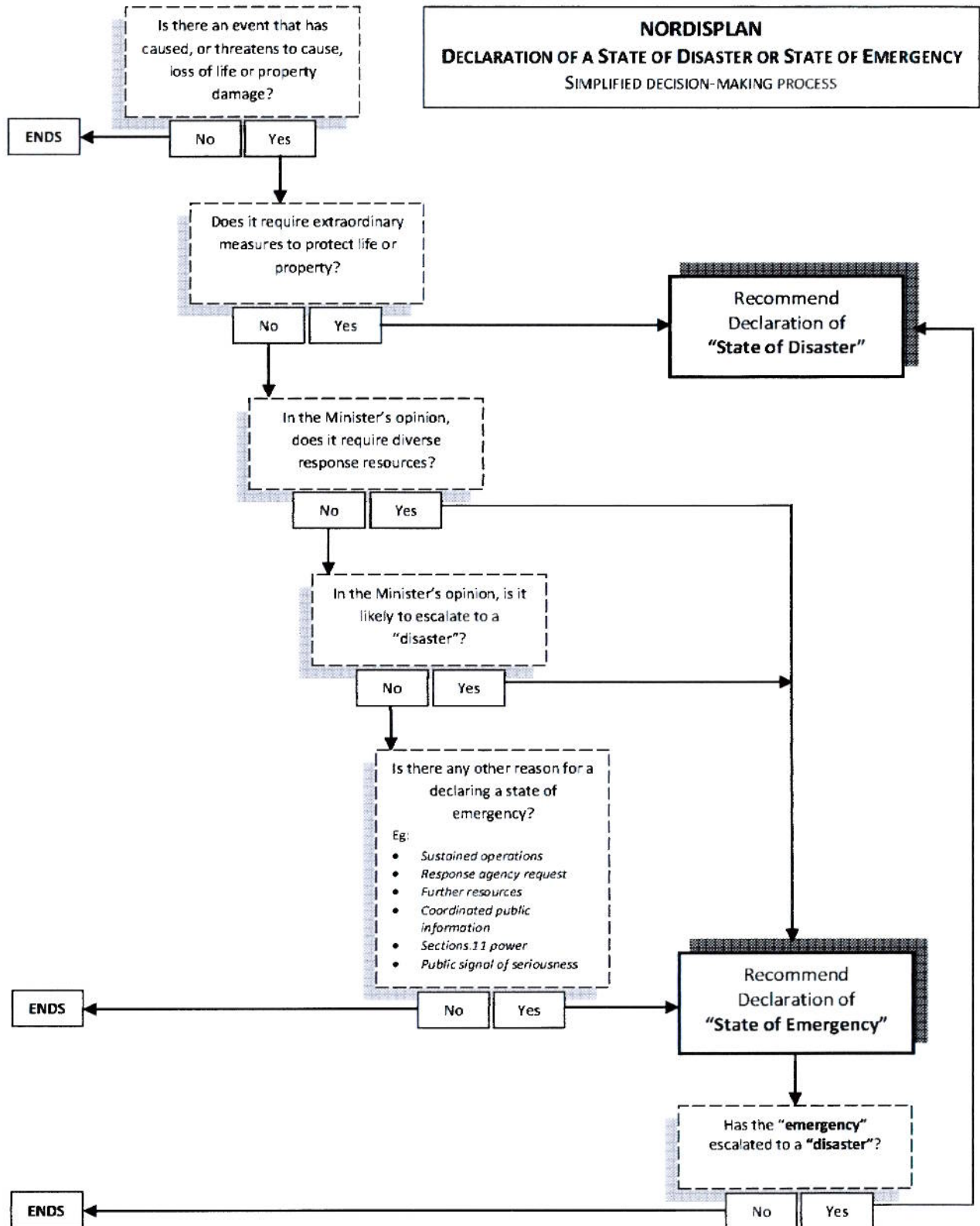
The first stage of the tsunami warning process is a 'tsunami watch' phase, where seismologists have determined that there is the potential for an identified undersea earthquake to cause a tsunami threat to Australia. If there is a threat, the Bureau will issue a National Tsunami Watch. If there is no threat, a National Tsunami No Threat Bulletin will be issued.

The National Tsunami Watch may be reissued if a tsunami remains unconfirmed by sea level observations and any potential first point of impact on Australia is more than 90 minutes away (the minimum time criteria for warning).

#### *Tsunami Public Warning*

If sea level observations and further data confirm the tsunami threat, or if any potential first point of impact is less than 90 minutes away, the Bureau, on behalf of the JATWC, will use its severe weather communication infrastructure to issue Tsunami Warnings for the States and Territories under threat. The Bureau's Regional Forecasting Centres (RFCs) in capital cities are the main liaison point for emergency services during tsunami events.

## ANNEXURE A: DECLARATION OF DISASTERS AND EMERGENCIES





## **ANNEXURE B – AREAS OF RISK**

### **AREAS OF RISK**

There are several areas where the risk is identified as requiring priority attention, but are not considered as being complete, factors such as time of day and seasons provide an increase in utilisation of some areas. The identified areas of risk include:

- Kingston and Arthurs Vale Historic Area (KAVHA) residents from Watermill Valley to Music Valley, including Flagstaff residence, Administration, KAVHA offices and staff and other recreational users such as golfers, swimmers, tourists (cemetery), and fishermen.
- Kingston or Cascade Piers where there may be Lighterage workers, transport operators, shipping company/cargo vessel when ship unloading/loading. A check should be conducted on trailers present at the pier so fishermen/boaters can be notified of an impending event. Vessels already at sea should be advised to stay offshore in water at least 25 metres deep until further advised, unless they are able to safely make it to shore in the time available.
- Picnic and campers Point Hunter reserve and Cemetery Bay grounds.
- Consideration will now be required to also include cruise ships and associated works involved.
- Ball Bay petroleum and gas terminal unloading operations from tankers, as well as Gas terminal daily refilling operations by local distributor.
- Isolated beaches including Anson Bay, Bumboras and Crystal Pool areas.
- Local rock fishing areas such as Puppies Point, Black Bank, Bucks Point and Headstone.
- Fishing Association hut at Philip Island

### **CONSIDERATION OF EVACUATION LEVELS**

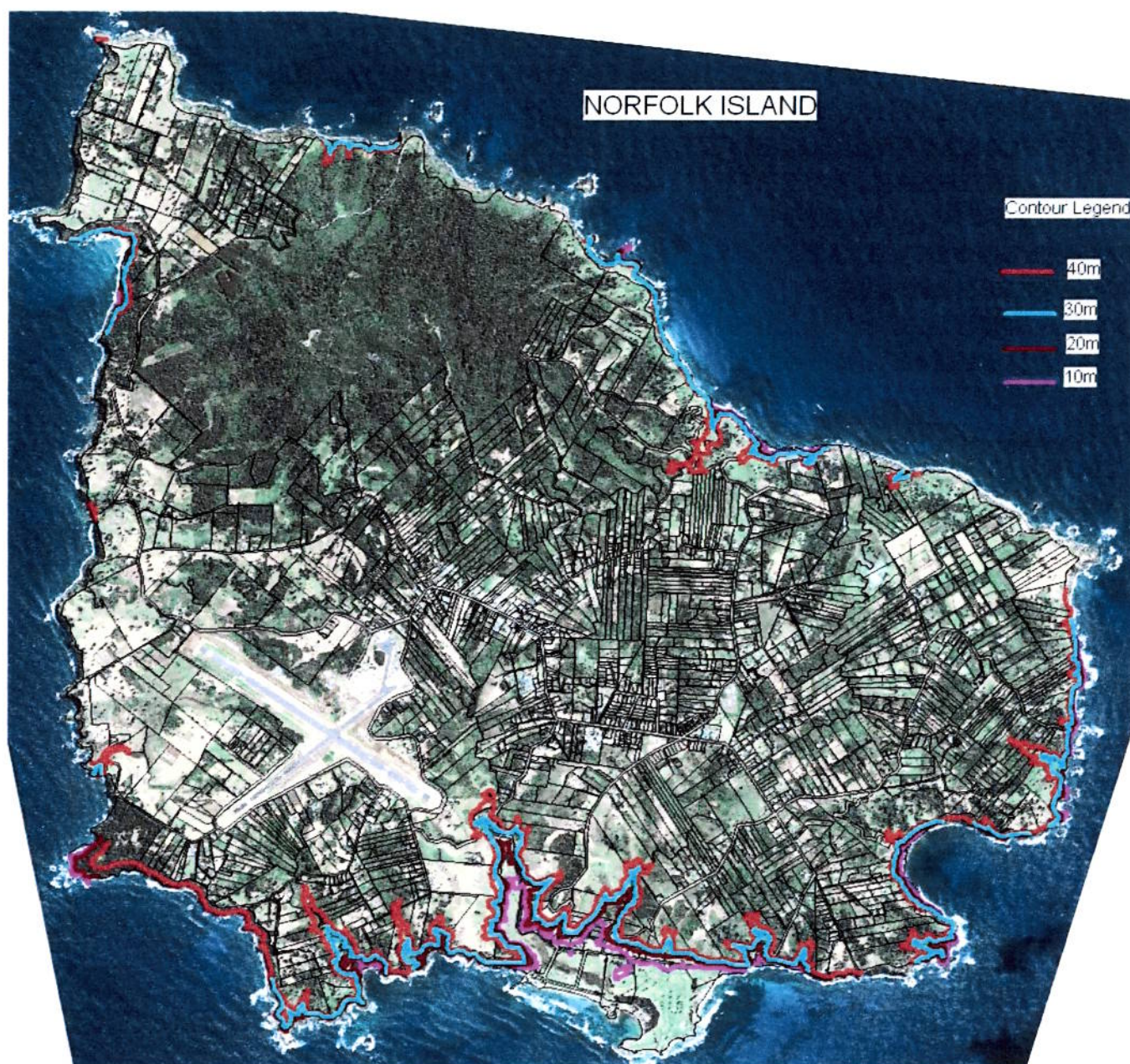
Tsunamis can vary depending on the size of the earthquake, where it is located in relation to the shoreline, and the shape of the local seafloor and terrain. There is no simple calculation with which to determine the elevation on land that a Tsunami will reach. The wave height does not easily equate to the elevation which water will reach on land.

Any advice provided by JATWC and BoM should be heeded, however the following general principles may assist with determining evacuations:

- If a Tsunami is expected to be small, that is a wave height of up to a metre, evacuation to an elevation of 10m at a minimum is suggested.
- If a Tsunami is expected to be larger than a metre in height, then evacuation to an elevation of 40m is suggested.
- Any advice provided by JATWC and BoM is to be noted in determining evacuations.



## MAP OF CONTOUR LEVELS



## CONTACT DETAILS AT 10M, 20M, 30M AND 40M CONTOURS - NORFOLK ISLAND

Name	Address / Contact	Phone
<b>10m</b>		
Kingston Pier	Administrator / KAVHA Works Manager	22152 / 50001 / 22300
Duffy's Whale	CEO	22001
Cemetery	Sexton / Conservator	24198 / 23195 / 50380
No. 11 (Kavha Office)	KAVHA Site Manager	23101
Compound	Administrator / KAVHA Works Manager	22152 / 50001 / 22300
Munna's	KAVHA Works Manager / KAVHA Site Manager	22300 / 50633 / 23101



Lions Club	Administrator / KAVHA Works Manager	22152 / 50001
Pier Store Museum	Museum Curator / CEO	23788 / 22001
REO Café	Museum Curator / CEO	23088 / 22001
Cascade Pier	Administrator / Conservator	22152 / 50001 / 50380
Ball Bay shoreline	Administrator / Conservator	22152 / 50001 / 50380
Bumboras Reserve	Administrator / Conservator	22152 / 50001 / 50380
Golf Club / Pro Shop	Manager, Golf Club / Golf Professional	22354 / 23603
Government House	Administrator	22152 / 50001
Legislative Assembly	Chief Minister	22003
No. 10 House museum	KAVHA Site Manager	23101
Kingston Cottages	Allen & Debbie Bataille	50376 / 23691 / 22529
New Military Barracks	CEO	22001
All Saints Church	Church of England Rectory	22293 / 22487
	<b>20m</b>	
Crystal Pool	Administrator / Conservator	22152 / 50001 / 50380
100 Acres Reserve	Administrator / Conservator	22152 / 50001 / 50380
Anson Bay beach	Administrator / Conservator	22152 / 50001 / 50380
Quality Row houses	KAVHA Site Manager	23101
Helen Pedal ( S Trickey tenant)	New Farm Road	22085 / 23000
Ball Bay Gas storage tanks	Chris Gatehouse	22419 / 23023
	<b>30m</b>	
Headstone tip	Manager, Waste Management	24090 / 50403
Cockpit Reserve	Administrator / Conservator	22152 / 50001 / 50380
Cascade Quarry	John (Moochie) Christian	22421 / 22078
Garnets Point	Maria Christian	50854
Leon (Bubby) Evans	Driver Christian Rd (Music Valley)	22339
L. Woodward (R & C Lowry tenant)	Taylors Rd	22743 / 50691
John Walsh (& flat)	Taylors Rd	22543 / 50529
	<b>40m</b>	
Peter Barney	Rocky Point Rd	50680
Ball Bay fuel storage tanks	Arthur Keeping (Norfolk Energy)	22126 / 51237
H. Reddy (Les Quintal tenant)	Taylors Rd	23767 / 50414
D Nicolai & A French	Taylors Rd	23252 / 50695