



SEVERE WEATHER AND CYCLONE PLAN

Reference No: 9020MKY

Version 3

13 July 2016

MACKAY AIRPORT PTY LTD ACN 132 228 534

Any alterations to this Plan must be approved by the Manager Aviation Operations.

The current copy of this Plan is held on SharePoint.

It is your responsibility to ensure you hold the current copy of this Plan.

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Document Control

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9020MKY	3	Approved	General Manager	Manager Aviation Operations

Amendments	Date	By whom
Version 1 - NQA Full document control procedures applied	03 November 2014	MAO
Version 2 - Updated MAPL Logo, removed Tiger Airways, removed Aromas, inclusion of Cyclone information from Mackay Regional Council Local Disaster Management Group.	03 November 2015	MAO
Version 3 - NQA Full document control procedures applied	07 July 2016	AAO

Severe Weather and Cyclone Plan

INTRODUCTION

The Disaster Management Act 2003 S13(1) defines a disaster as a serious disruption in a community, caused by the impact of an event, that requires a significant coordinated response by the State and other entities to help the community recover from the disruption. Disasters that may affect Mackay Airport include:

- Tropical cyclones
- Gale-Force winds
- Storms
- Storm Surges
- Earthquake
- Tsunamis
- Volcanic Ash
- Tornados

The *Mackay Airport Severe Weather and Cyclone Plan* has been prepared to counter potential danger and damage that may occur as a result of a disaster.

Post disaster where airport infrastructure suffers significant damage impacting on airport operations, the Airport Emergency Committee (AEC) would be convened to manage disaster recovery program as per the Mackay Airport Airport Emergency Plan (AEP).

As a lesson learnt from Cyclone Marcia, the Mackay Regional Council Local Disaster Management Group have developed with the assistance of the Bureau of Meteorology reference documents, contained in Annexures A & B of this Plan. These documents titled the Cyclone/Tropical Low Timing Calculator, Cyclone/Tropical Low Distance Map & Cyclone/Tropical Low Error Margins are to assist with planning

TABLE 1 – CYCLONE STAGE ADVICE, NOTIFICATIONS AND ACTIONS

STAGE	ACTIVITY	WIND SPEEDS	NOTIFICATION	COMMENTS / ACTIONS
Stage 1	CYCLONE WATCH - Initiated by Bureau of Meteorology (BOM) by announcement of a Cyclone affecting the region.	Gale Force Winds (above 75km/h) (41 kt) 24 - 48 hrs away	Advice via SMS by MAPL	Cyclone watch: <ul style="list-style-type: none"> NQA team members to ensure company procedures are followed as per SOPs and review company procedures. Tenants review Severe Weather and Cyclone Plan and company procedures. Secure or remove non-essential equipment from open areas. Check emergency stores equipment (fuel, generators, radio's etc).
Stage 2	CYCLONE WARNING - Initiated by BOM by announcement of a Cyclone affecting the region.	Gale Force Winds (above 75km/h) (41 kt) 24 hrs away	Advice via SMS by MAPL	Cyclone Warning: <ul style="list-style-type: none"> Severe Weather and Cyclone Committee is convened. Complete initial preparation. Implement company procedures. Complete removing / securing non essential equipment. Remove / secure light aircraft. Continue to monitor cyclone activity via BOM website / media etc.
Stage 3	CYCLONE WARNING CURRENT – BOM Monitoring System	Gale Force Winds (above 100 km/h) (54kt) 6-12 hrs away	Advice Via SMS by MAPL	Cyclone Warning Current: <ul style="list-style-type: none"> Commence partial shutdown of facilities, documents computers etc. Consider sending non-essential staff home. Light aircraft relocated / stored /securely tied down. Consider flood precautions / sandbagging etc. Continue to monitor cyclone activity via BOM website / media etc.
Stage 4	CYCLONE WARNING CURRENT – BOM Monitoring System	Gale Force Winds (above 100 km/h) (54kt) at airport are 3-6 hrs away	Advice Via SMS by MAPL	Cyclone Warning Current: <ul style="list-style-type: none"> Stage shut down of airport facilities, including terminal, airport ground lighting etc. ATC, ARFF, Airlines will cease operations as soon as possible after declaration of Stage 4. Airport tenants expected to complete their own shut down of their own operations in a similar time frame. After consultation with ATC, and upon departure of last aircraft, MAPL Manager Aviation Operations will issue a NOTAM advising of non-availability of airport facilities (from time/date). All staff should have departed from airport. Severe Weather and Cyclone Committee is stood down.
Stage 5	CYCLONE WARNING CURRENT	Gale Force Winds (above 100 km/h) (54kt) have commenced	Nil Advice by MAPL	Cyclone Warning Current: ALL AIRPORT OPERATIONS HAVE CEASED
Stage 6	CYCLONE WARNING CURRENT	Gale Force Winds (above 100 km/h) (54kt) have passed	Nil Advice by MAPL	Cyclone Warning Current: ALL AIRPORT OPERATIONS REMAIN CEASED ALL CLEAR NOT YET ANNOUNCED – STAGE 5 MAY BE RE-DECLARED
Stage 7	CYCLONE WARNING MAY STILL EXIST	Gale Force Winds have passed Mackay, though a Cyclone warning may still exist	Nil Advice by MAPL	CYCLONE WARNING MAY STILL EXIST <ul style="list-style-type: none"> Cyclone Committee to reconvene Commence call in of essential staff to return airport to normal operational status NOTAM to be lifted by MAPL Manager Aviation Operations Timing to be determined by Airport Cyclone Committee and through the Chair
Stage 8	Cyclone Warning cancelled	Declaration of All Clear by District Disaster Manager	Advice via SMS by MAPL	Cyclone Warning Cancelled <ul style="list-style-type: none"> Staff returning to airport to re-commence operations

			Declaration of all clear	<ul style="list-style-type: none"> • Tenants clean up operations commence • Tenants to liaise with MAPL Assets Department regarding loss of services and damage to facilities <p>NOTE: Following a severe cyclone Stage 8 may extend to several days as clean up continues</p>
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TROPICAL CYCLONE WARNING SYSTEM

Tropical Cyclone Advises are issued by the Bureau of Meteorology's Tropical Cyclone Warning Centre and broadcast by radio and television stations.

Information is also available directly from the Bureau by:

Method	Details	Number/Website
Fax Poll	Forecast Track Map	1902 935 277
Telephone	Cyclone Advice	1300 659 212
Internet	All weather and warnings	www.bom.gov.au

TROPICAL CYCLONE FORECAST THREAT AND TRACK MAPS

The Bureau of Meteorology provides a **Tropical Cyclone Forecast Threat and Track Maps** displaying the forecast positions of each tropical cyclone up to 24 hours and is available on the Bureau's web page at <http://www.bom.gov.au/cyclone/>

TABLE 2 – TROPICAL CYCLONE CATEGORY SYSTEM

CATEGORY	MAX WIND GUST	TYPICAL EFFECTS
1	90 - 125 km/h (48 - 67 kt)	Tropical Cyclone - Negligible house damage, damage to some crops, trees, caravans and craft may drag moorings
2	125 – 164 km/h (67 – 89 kt)	Tropical Cyclone - Minor house damage, significant damage to signs, trees and caravans - heavy damage to some crops - risk of power failure - small craft may break moorings
3	165 – 224 km/h (90 – 120 kt)	Severe Tropical Cyclone - Some roof and structural damage - power failure likely
4	225 – 279 km/h (121 – 150 kt)	Severe Tropical Cyclone - Significant roofing loss and structural damage, blown away, dangerous airborne debris - widespread power failures
5	>280 km/h (> 151 kt)	Severe Tropical Cyclone - Extremely dangerous with widespread destruction

SEVERE WEATHER AND CYCLONE COMMITTEE

The Severe Weather and Cyclone Committee is convened at:

- Stage 2 Cyclone Warning and/or
- As determined by BOM weather warnings for severe weather and disasters including storms, storm surges, earthquake, tsunamis and volcanic ash and tornados.

Chair of the Severe Weather and Cyclone Committee in succession is:

- General Manager
- Manager Aviation Operations

Membership of the Severe Weather and Cyclone Committee is:

- Airport Incident Management Team
 - General Manager
 - Manager Aviation Operations
 - Manager Airport Assets
 - Supervisor Airside Safety
 - Terminal Services Team Leader
 - Team Leader Assets
 - Asset Maintenance Coordinator
 - Aviation Administration Officer
- CAPL remote support may include -
 - General Manager People Communications & Compliance
 - Manager Operations
 - Manager Compliance
 - Manager ICT
 - Security Operations Manager
 - Corporate Communications Manager
 - Technical Services Manager

The core members of the **Mackay Airport Severe Weather and Cyclone Committee** comprise of:

- MAPL staff
- Bureau of Meteorology (advice received via phone or email)
- Airservices Australia
 - Air Traffic Control
 - Infrastructure Support Services
 - Aviation Rescue and Fire Fighting
- Aerocare

- Qantas Freight
- Aviation Refuellers
- ISS Security
- General Aviation Representatives
 - CQ Rescue
- SecurePark
- Compass Group
- Relay
- O'Brien Electrical Services, Mackay
- Virgin Australia Technician

Note 1: The Chair of the Severe Weather and Cyclone Committee will advise any change to the operational status of the airport to the Chief Executive Officer and Corporate Communications Manager.

Note 2: The Manager Aviation Operations (or if unavailable the Chair of the Severe Weather and Cyclone Committee) will advise any change to the operational status of the airport to the:

- Mackay Local Disaster Management Group (Local Disaster Coordinator - Jason Devitt - 07 4965 9007 and 0418 782 870 or email disaster@Mackay.qld.gov.au)
- Mackay District Disaster Management Group – telephone 07 4840 0800 or 07 4840 0814

Note 3: Manager Aviation Operations (or if unavailable) the Chair of the Severe Weather and Cyclone Committee will log on to the Bureau of Meteorology website in preparation for the meeting.

Annexure A – Mackay Regional Council Local Disaster Management Group - Cyclones & Tropical Lows – Triggers and Actions documents

Cyclones & Tropical Lows – Triggers and Actions

In preparation for making decisions regarding triggers and actions of the Local Disaster Management Plan reference will be needed to the appendixes;

- A) Cyclone/Tropical Low Timing Calculator
- B) Cyclone/Tropical Low Distance Map
- C) Cyclone/Tropical Low Error Margins

It is important to understand that advice from the Bureau of Metrology and other sources are based on best knowledge however due to the nature of cyclones and tropical lows this information cannot be relied upon as providing definitive tracks, timings and intensities. Systems can slow down or speed up. Therefore the triggers and actions contained in this section rely primarily on distance.

Whilst distance is a primary driver, timing is important to consider. For some State support a minimum of 24 hours' notice is required (eg Cyclone Shelter Management Team deployments). The expected timing of the event may also coincide with weekends, public holidays or other events.

The timing of the event may necessitate the need to bring the timing of the activation level forward or some actions forward.

The following table may be used to determine the timing for actions.

Activation Level		Triggers	Action/s
ALERT	CYCLONE/TROPICAL LOW	<p>Cyclone/Tropical Low is 800Km from our coast line</p> <p>Other triggers can also be the expected category (intensity), the speed of travel, its expected track and consideration must be given to error margins.</p> <p>Eg. If the system is travelling at 30km/hr and an allowance of 5 hours is given for the initial impacts (prior to the core) then there is only 22 hours preparation time available. At 10km/hr there is 75 hours of preparation time. Be aware systems can speed up.</p>	<ol style="list-style-type: none"> 1. LDMG will primarily consist of the LDC and Chair 2. LDMG Emailed 3. Email to Council Staff, Managers, Directors, Emergency Management Teams (ELO's, PSC Teams, Recovery, Special Needs Groups), 4. Contact Department of Education, Training and Employment for potential handover of Public Cyclone Shelter. 5. Consider RFA for Public Cyclone Shelter Management Team(s). 6. Create Folder Naming for Event in Guardian. 7. Active monitoring of the system to commence 8. Checking of tides and potential storm surge scenario's 9. Media to commence preparation messaging to the community using Facebook, TV, radio. 10. No deployments of essential staff/SES out of area.
	STORM SURGE		
LEAN FORWARD	CYCLONE/TROPICAL LOW	<p>Cyclone/Tropical Low is 500Km from our coast line</p> <p>Other triggers can also be the expected category (intensity), the speed of travel, its expected track and consideration must be given to error margins.</p> <p>Eg. If the system is travelling at 30km/hr and an allowance of 5 hours is given for the initial impacts (prior to the core) then there is only 12 hours preparation time available. At 10km/hr there is 45 hours of preparation time. Be aware systems can speed up.</p>	<ol style="list-style-type: none"> 1. LDCC set up for operations (Rosters, inform staff of potential start time) 2. Handover of Public Cyclone Shelter to LDMG. 3. Basic set up of Public Cyclone Shelter (prepare team, set up registration areas, check inventory and operational capacity – do not set up chairs at this time) 4. Identify and make ready any Places of Refuge 5. LDMG Meeting to commence on advice of Chair. 6. LDMG Emailed 7. 24 Hour Monitoring of event by staff to commence. 8. Continued checking of tidal and storm surge scenarios 9. Media messaging in relation to preparedness and evacuations to increase. 10. Voluntary evacuations and self-evacuations to commence 11. Evacuation Plans to be activated 12. Ensure Emergency Alert Templates and Polygons are correct. 13. SITREP/Emails to all council staff and Emergency Management Teams 14. Assessment of localised flood risks and take necessary action.
	STORM SURGE		

STAND UP	CYCLONE/TROPICAL LOW	<p>Cyclone/Tropical Low is 250Km from our coast line</p> <p>Other triggers can also be the expected category (intensity), the speed of travel, its expected track and consideration must be given to error margins.</p> <p>Eg. If the system is travelling at 30km/hr and an allowance of 5 hours is given for the initial impacts (prior to the core) then there is only 3 hours preparation time available. At 10km/hr there is 20 hours of preparation time. Be aware systems can speed up.</p>	<ol style="list-style-type: none"> 1. Activation of all relevant sub plans 2. LDMG stood up with regular meetings 3. Regular Emails to Managers and LDMG 4. Public Cyclone Shelter opened for evacuees (if expected to be Category 2 or higher) 5. Places of Refuge prepared and opened for overflow from Public Cyclone Shelter. 6. Conduct evacuations 7. Media – providing all messaging and event information 8. Consider the use of Emergency Alerts 9. Event Action Plans written 10. Rapid Damage Assessments conducted, collated and distributed 11. Undertake response actions (RFA's/Guardian) 12. Stand up Recovery and Relief Groups (pre-empt requests from the community)
	STORM SURGE		
STAND DOWN	CYCLONE/ TROPICAL LOW	<p>Cyclone/Tropical Low has passed out of our area.</p> <p>No more response RFA's</p> <p>No further need for a multi-agency response.</p>	<ol style="list-style-type: none"> 1. LDMG Stood Down 2. LDCC Stood Down 3. Shelter handed back to DETE 4. Debrief conducted (Hot/Full) and After Action Review undertaken. 5. Handover to Relief & Recovery 6. Post Event Evaluation conducted.
	STORM SURGE	<p>Have transitioned back to core business.</p>	

				Cyclone/Tropical Low Timing Calculator																																																					
				12 Hours or less to impacts												24 Hours or less to impacts												48 Hours or less to impacts												Over 48 hours to impacts																	
				Speed in Kilometres per Hour																																																					
				40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1														
				1000	20	21	22	23	24	24	25	26	27	28	29	31	32	33	35	37	38	40	43	45	48	51	54	58	62	66	72	78	86	95	106	120	138	162	195	245	328	495	995														
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				900	18	18	19	20	21	22	23	24	25	26	27	28	30	31	33	34	36	38	40	42	45	48	51	54	58	64	70	77	85	95	108	124	145	175	220	295	445	895															
				875	17	17	18	19	20	21	22	23	24	25	26	27	29	30	31	33	35	37	39	41	44	46	50	53	58	62	68	75	83	92	104	120	141	170	214	287	433	870															
				850	16	17	17	18	19	20	21	22	23	24	25	26	28	29	30	32	34	35	38	40	42	45	48	52	56	60	66	72	80	89	101	116	137	165	208	278	420	845															
				825	16	16	17	17	18	19	20	21	22	23	24	25	26	27	28	29	31	33	34	36	38	41	44	47	50	54	58	64	70	78	87	98	113	133	160	201	270	408	820														
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				780	15	15	16	16	17	17	18	19	20	21	22	23	24	25	26	28	29	30	32	34	36	38	41	44	47	51	55	60	66	73	82	93	106	125	151	190	255	385	775														
				760	14	14	15	16	16	17	17	18	19	20	21	22	23	24	25	27	28	30	31	33	35	37	40	43	46	49	53	58	64	71	79	90	104	122	147	185	248	375	755														
				740	14	14	14	15	15	16	16	17	18	19	20	21	22	23	24	25	27	28	30	32	34	36	39	41	44	48	52	57	62	69	77	88	101	118	143	180	242	365	735														
				720	13	13	14	14	15	16	16	17	18	19	20	21	22	23	24	25	26	28	29	31	33	35	37	40	43	46	50	55	60	67	75	85	98	115	139	175	235	355	715														
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				360	4	4	4	4	5	5	5	6	6	6	7	7	8	8	9	9	10	10	11	11	12	13	14	15	16	18	19	21	23	25	28	31	35	40	46	55	67	85	115	175	355												
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				280	2	2	2	2	3	3	3	4	4	4	5	5	5	6	6	7	7	8	8	9	10	11	12	13	14	15	17	18	20	23	26	30	35	42	51	65	88	135	275														
				260	2	2	2	2	2	3	3	3	4	4	4	5	5	5	6	6	7	7	8	9	10	11	12	14	15	17	19	21	24	28	32	38	47	60	82	125	255																
				240	1	1	1	1	2	2	2	3	3	3	4	4	4	5	5	6	7	7	8	9	10	11	12	14	15	17	19	21	24	28	32	39	48	60	82	125	255																
				220	1	1	1	1	1	1	2	2	2	2	3	3	3	4	4	5	5	6	7	7	8	9	10	11	12	13	15	17	19	23	26	32	39	50	68	105	215																
				200	0	0	0	0	1	1	1	1	1	2	2	2	3	3	4	4	5	5	6	7	7	8	9	10	11	12	13	15	17	21	23	26	32	39	50	68	105	215															
				180	-1	0	0	0	0	0	1	1	1	1	1	2	2	2	3	3	3	4	4	5	6	6	7	8	9	10	11	13	15	18	21	25	31	40	55	85	175																
				160	-1	-1	-1	-1	0	0	0	0	1	1	1	1	2	2	2	3	3	3	4	4	5	6	7	8	10	11	13	15	18	22	27	35	48	75	135																		
				140	-2	-1	-1	-1	-1	-1	-1	0	0	0	0	1	1	2	2	2	3	3	4	4	5	6	7	8	9	11	13	15	18	23	30	42	65	135																			
				120	-2	-2	-2	-2	-1	-1	-1	-1	-1	-1	0	0	0	0	1	1	1	2	2	3	3	4	5	6	7	8	10	12	15	19	25	35	55																				

