

Interim Operations Directive

COMPLIANCE REQUIREMENT

The instructions, procedures and information contained in an Interim Operations Directive are issued to cover short term operational requirements that will lapse after a defined period or amendments to operational procedures that will be included in the next amendment to the exposition.

All directives have been devised to improve safety and standardisation in the conduct of Rotorlift Aviation operations.

The directive will be in force for the length of time detailed in the directive and override all other company documents previously referencing the details mentioned in the directive.

They are to be observed by all operating personnel. Personnel are also required to comply with Civil Aviation Act, Regulations and Orders and such other directives, aeronautical information, and notices that CASA and Air services may publish.

Serial Number: IOD-01 2022

Issue Date: 23/06/2022

Subject: Temporary RHH approaches during daylight hours

Validity period: 27/06/2022 – 29/06/2023

Docs effected: Current Rotorlift pilot RHH PowerPoint

Distribution list: Rotorlift / Tas Police / Ambulance Tas

Authored by: Chris Crouch

Checked/Approved by: Dylan Vickerman

IOD Description:

1. Purpose:

The purpose of this document is to inform all crew members on HEMS/SAR flights of the temporary **HOURS OF DAYLIGHT** approach and departure flight profile to/from the Royal Hobart Hospital due to crane operations in the vicinity.

A mobile 220-ton crane will be operating at 87-91 Campbell Street, for up to twelve months. During the hours of daylight, this crane will pose a significant flight risk to arriving and departing helicopters as it infringes the approach and departure path gradients. Therefore, there has been a temporary modified approach and departure profile approved by the chief pilot in consultation with Hobart City Council and the crane operator.

During the hours of darkness, this crane will be lowered, and is therefore not considered a flight risk, thus normal arrival and departure flight profiles may cautiously resume. All crew are to remain vigilant during approaches/departures during the hours of darkness to ensure the crane has been lowered. Should the crane be still erect, the flight profile shall be modified in accordance with this document. This is a mobile crane, and it is not required to have illumination or red flashing lights attached to it.

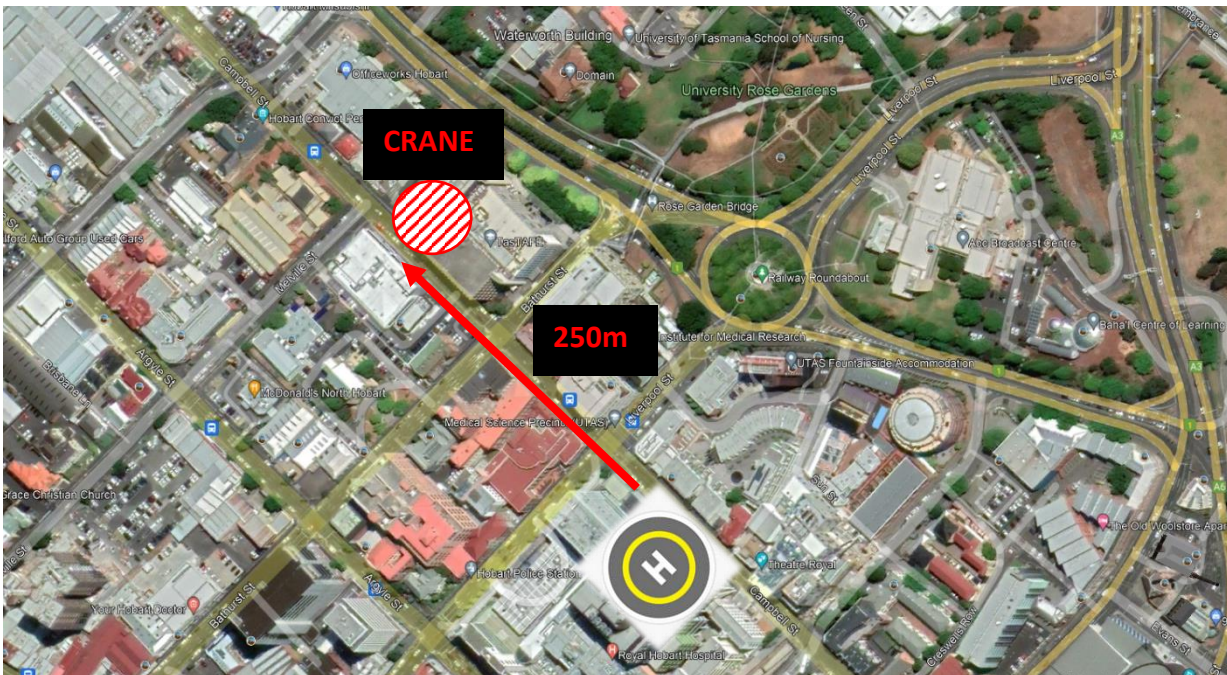


Figure 1: Crane location with reference to RHH

2. Scope:

This document applies to all crew members of HEMS/SAR flights operating to/from the Royal Hobart Hospital.

3. Reference:

This document should be read and operated in conjunction with the current Rotorlift pilot RHH PowerPoint presentation.

Modification to the PowerPoint presentation is:

300° arrivals/departures and 120° arrivals are to be flown in accordance with this temporary document during the hours of daylight.

4. Process:

Arrival 180°

During the hours of daylight with southerly winds, all arriving helicopters must fly the following profile. Figure 2.

During North - North Westerly winds, aircraft should continue to utilize the 300°M approach as mentioned later herein.

Aircraft arriving at the hospital are to fly a southerly arrival (approximately 180°M) from the eastern side of the Royal Tasmanian Botanical Gardens, overfly the Hobart Aquatic Center and onto the hospital. All aircraft are to be on a stabilized approach by 1nm and 700ft. The Tasman Highway should be utilized for situational awareness and tracking guidance.

An earlier than usual LDP will be required due to the lift well on top of the hospital, expect LDP to be about 400ft AMSL.

Any aircraft requiring a go around are to follow the standard 120°M go around, by turning left and flying overwater.



Figure 2: Arrival from north on an $\approx 180^\circ$ approach.

Departure 360°

Aircraft departing the hospital and requiring a departure to the north, must fly the following profile. Figure 3.

There is no change to the initial rearward climb from the hospital HLS, using the standard 300°M heading due to the lift well. Once through TDP, the aircraft will be turned right to make a track made good of $\approx 360^\circ$ M. This departure heading will position the helicopters flight path over the Hobart Aquatic Center. Once through a minimum of 500ft AMSL the helicopter can be turned to track for Hobart Base. Aircraft required to depart to another destination i.e., NETS, will not turn until past the Royal Tasmanian Botanical Gardens for noise abatement. The Tasman Highway should be utilized for situational awareness and tracking guidance.

Prior to TDP, helicopters can reject onto the RHH as per the RFM.

After TDP, aircraft **MUST** turn right and fly this profile.



Figure 3: Departures to the north on $\approx 360^\circ$

Arrival 300°

There is no change to the approach segment of a standard 300°M arrival. However, if a helicopter is required to conduct a go around from the 300° arrival, then the helicopter must be turned onto ≈ 360°M and overfly the Hobart Aquatic Centre. Figure 4.

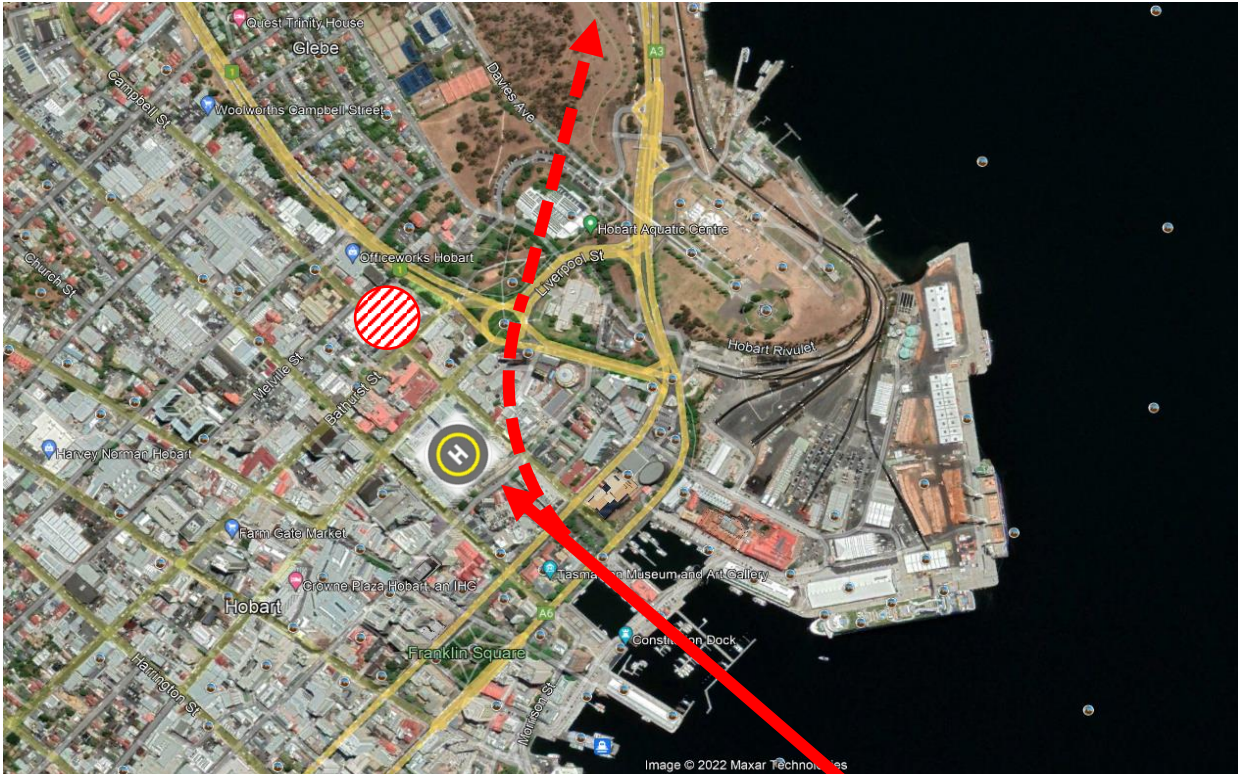


Figure 4: Go around profile from 300° arrival

Aircraft are not permitted to operate to the south – southwest of Campbell St.

The ultimate decision to conduct this arrival/departure rests with the pilot in command.

Should the pilot in command not be satisfied with the approach due to environmental conditions, then a landing can be made at the Cenotaph.

There is no change to helipad activation or the 5min approach landing clearance call. Should time permit, security could be politely asked to check that the crane is lowered during the hours of darkness.

Department of Health

GPO Box 125, HOBART TAS 7001, Australia
Web: www.health.tas.gov.au



Contact: Garry White
Phone: [Personal Information]
E-mail: [Personal Information]
WITS: 120660

Kerry Burns
President
Glebe Resident's Association
[Personal Information]
GLEBE TAS 7000

Dear Mr Burns

Subject: Royal Hobart Hospital Helipad

Thank you for your letter to the Minister for Health, the Hon Sarah Courtney MP, concerning the use of the helipad at the Royal Hobart Hospital (RHH).

Due to the State election on 1 May 2021 and the Government now being in caretaker mode, your letter has been referred to the Department of Health to respond directly to you on this matter.

The RHH helipad has been operating since May 2020 to ensure Tasmania's most critically unwell and injured patients reach the right hospital as efficiently as possible. Aeromedical transport times have also been reduced for helicopter transfers of unwell babies using the Neonatal Emergency Transport Service.

From November 2020 to February 2021 there were 103 landings on the helipad compared to 70 landings at the Cenotaph for the same period last year, an increase of one landing every three and a half days. AT has recently been finalising the development of its Helicopter Emergency Medical Service, delivering a Doctor/Flight Paramedic team to the most complex medical and trauma cases, this has also seen an increase in the use of the helipad.

In 2017, the Department of Health and Human Services commissioned an Acoustic Design Report to inform the development of the RHH and helipad. Noise from the rooftop helipad was assessed in relation to the EPA Victorian Publication 1254 'Noise Control Guidelines', in absence of Tasmanian noise guidelines related to helicopter noise. The assessment was conducted based on a Bell412 helicopter, the loudest of the helicopters currently in use.

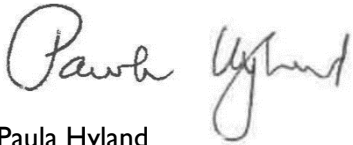
The report highlights that noise levels will generally be met by a separation between the landing site and the residential premises of 250m for helicopters of less than 15 tonnes all-up-weight, the Bell412 is included in this category. The southernmost tip of Glebe is over 400m from the helipad, with predicted noise levels slightly less than that of an emergency vehicle siren.

The flight path tracks follow Campbell Street and then turn toward the airport via the Queens Domain, or over the River Derwent. The contractor has been requested to ensure that the nominated flight paths are strictly adhered to, but the weather sometimes dictates that the helicopter takes a different path for safety reasons.

Given that the predicted noise level in the Campbell Street residences is less than that of an emergency vehicle siren, no further acoustic testing has been planned at this time. We will continue to monitor the use of the helipad in the coming months and revisit this as necessary.

As the information requested has been provided in this letter, I don't feel a meeting is required at this time.

Yours sincerely,

A handwritten signature in black ink that reads "Paula Hyland". The signature is written in a cursive style with a large initial 'P'.

Paula Hyland
Executive Director
Office of the Deputy Secretary
Community, Mental Health and Wellbeing

29 April 2021

**Deputy Premier
Minister for Health
Minister for Mental Health and Wellbeing
Minister for Community Services and Development
Minister for Advanced Manufacturing and Defence Industries**



Level 10 15 Murray Street HOBART TAS 7000 Australia
GPO Box 123 HOBART TAS 7001 Australia
Ph: +61 3 6165 7754
Email: Jeremy.Rockliff@dpac.tas.gov.au

18 August 2021

Mr Kerry Burns
President
Glebe Resident's Association
glebe_progress@netspace.net.au

Dear Mr Burns

Thank you for your letter of 21 June 2021 and your follow-up email regarding noise concerns relating to the Royal Hobart Hospital (RHH) helipad. My apologies for the delay in responding. I note that you have also raised your concerns directly with the Department of Health and that they have responded to the concerns raised.

I appreciate the matters raised by the Glebe Resident's Association Inc. As you have noted in your letter, the use of emergency air transport for patients is an essential part of our healthcare system and emergency transport requires the quickest route to the hospital. The RHH helipad is only used in emergency situations. Non-urgent patient transfers continue to occur via the aeromedical base at the Hobart Airport.

Prior to the establishment of the RHH helipad, previous landing sites were used at the cenotaph which required an emergency ambulance to provide transport from the cenotaph to the RHH. This presented some risks of delay in time critical emergency situations and required an ambulance to be available to meet the helicopter at the cenotaph.

The establishment of the RHH helipad now means that patients requiring emergency transport are taken by the quickest route to the RHH, providing the greatest chance of a positive outcome for these patients and their families. It also means that emergency ambulances are no longer required to wait for patients at the cenotaph, increasing availability of ambulances to provide emergency response to the rest of the Tasmanian community, including people living in the Glebe.

In relation to the RHH helipad flight pathways, I am advised these are set by the national body Air Services Australia and unfortunately cannot be changed. These flight paths are safety sensitive and are mandated to ensure maximum aircraft safety margins.

I also note your concerns in relation to a pronounced increase in the number of flights and the level and intensity of noise. I am advised that RHH Helipad landings over the months of May and June are the lowest they have been for a period of nine months. This is also the case for landings in the hours of 2200-0700, with only four landings over the course of the month for both May and June. Over the last 12 months the average number of landings overnight has been one per week.

I appreciate that from time to time the noise from helicopter flights can cause a disturbance for residents of the Glebe and for this I am sorry; however, providing the quickest route to the RHH to provide the greatest chance of a positive outcome for patients and their families must be our priority.

If you have any questions or would like further information, my Senior Health Advisor, Narelle Butt is available to assist and can be contacted via **Personal Information** or by calling **Personal Information**

Thank you once again for raising this matter.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Jeremy Rockliff'.

Jeremy Rockliff MP
Deputy Premier
Minister for Health

GLEBE RESIDENTS' ASSOCIATION INC.

C/- 3 Scott Street, GLEBE, Tas 7000
e-mail: glebe_progress@netspace.net.au

The Hon Jeremy Rockliff MP
Minister for Health,
Parliament House,
HOBART TAS 7000

Dear Minister,

I am writing on behalf of the Glebe Residents association about the noise issues associated with the use of helicopters at the new Royal Hobart Hospital (RHH) building in Campbell Street. We would appreciate the opportunity to meet with you and relevant officers of your Department to discuss this problem and what steps can be taken to mitigate it.

In this regard I refer too to the 29 April 2021 reply from the Department of Health to a letter from the Glebe Residents' Association (GRA) sent to your predecessor, the Hon Sarah Courtney MP in March 2021.

Glebe residents have noticed a pronounced increase in the number of helicopter flights over our suburb, together with an overall increase in the level and intensity of noise from those aircraft that we consider exceeds reasonable levels. In our view the effect on residents – as well as TAFE/University students and others in close proximity to the flightpath – could be reduced by changes to the management of the helicopter service.

The 29 April 2021 Department of Health letter indicated that there are no Tasmanian noise guidelines relating specifically to helicopter use and that EPA Victoria *Noise Control Guidelines* (Publication 1254) were instead used to inform the 2017 Department of Health and Human Services Acoustic Design Report. It is noted that the EPA Victoria Guidelines appear to have been applied by using the assumption that a separation of 250m between the helipad and the nearest residential premises would result in an acceptable noise level – rather than verifying the actual levels through sound logging.

The EPA Victoria document indicates that acceptable helicopter noise levels should not exceed 55dB(A) during the day for a residence ($L_{aeq,T}$) and that the maximum permissible level (L_{Amax}) should not exceed 82 dB(A). It is generally recognised that any noise more than 10dB above the ambient day or night time level is sufficient to cause a nuisance.

Noise logging data compiled by professional noise engineers on a separate project at the southern end of Glebe reveal ambient noise levels of 55dB(A) during the day and 40 dB(A) at night. Peak helicopter noise levels (L_{Amax}) were recorded (see chart below) by them at the Glebe as high as 98 dB(A) – or up to 53 dB(A) over night background noise levels—enough to cause significant nuisance to residents, particularly given the increasing frequency of helicopter flights, at night as well as during the day.

Further, the noise pollution footprint adversely impacts residents from central Hobart through to North Hobart, and this therefore is a significant issue of amenity for many Hobartians.

Given this data we would request that a review of helicopter operations at the RHH be undertaken with a view to ensuring that flight paths and operational arrangements minimise the impact on people living in the vicinity and other residential areas along those flight paths. This should include consideration of exit flight paths being directed away from residential areas and alternative landing locations (eg Regatta Ground) for non-urgent patient transfers.

As stated in our earlier letter, Glebe residents support the use of emergency air transport of patients as an essential part of the health care system and that we appreciate that emergency transport requires the quickest route to the hospital. Our interest here is in ensuring that the most effective protocols are in place to minimise the adverse impacts of helicopter noise on the wider community.

We look forward to meeting with you.

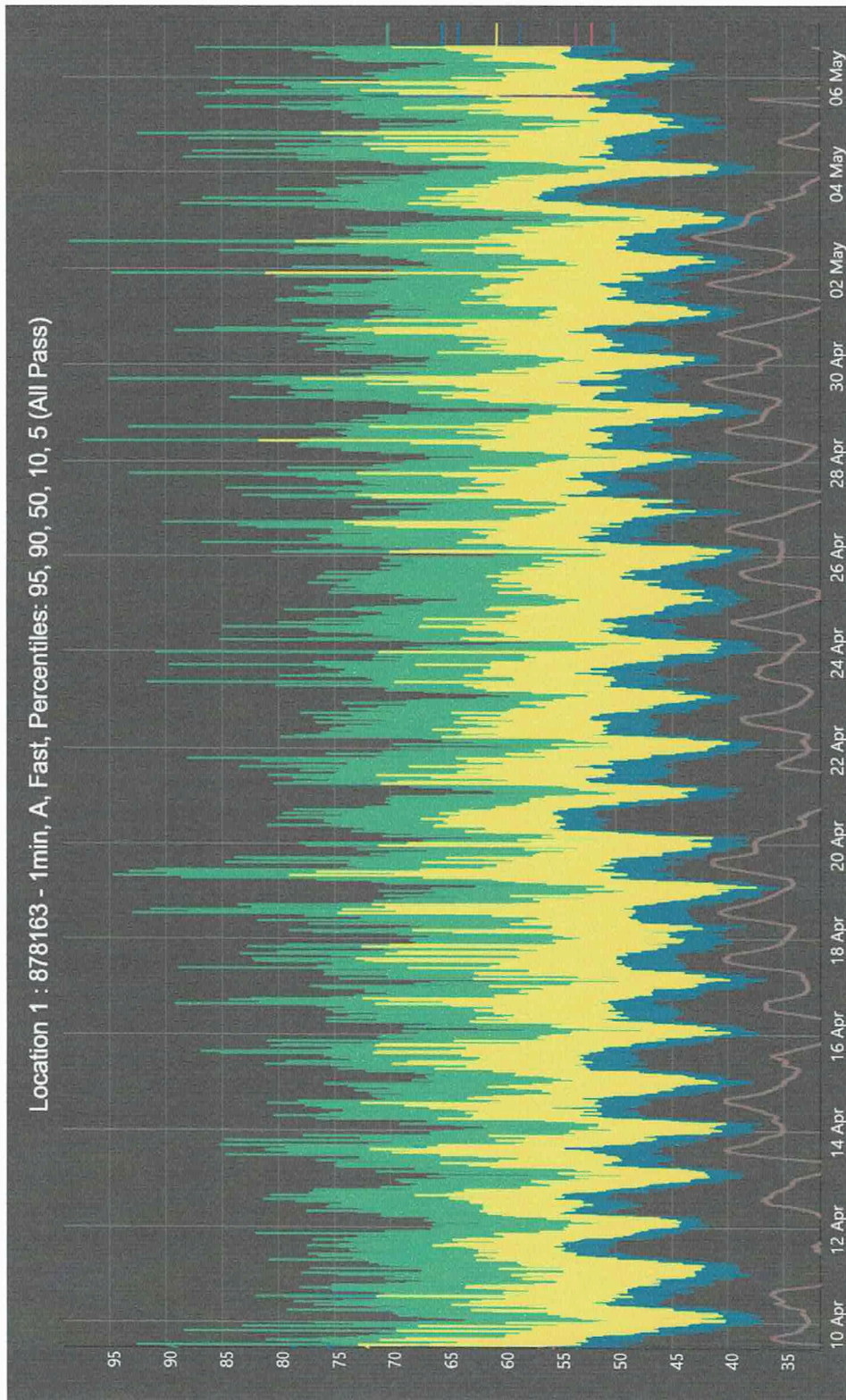
Yours faithfully,



Kerry Burns
President
Glebe Residents' Association Inc

21 June 2021

Sound Logging- southern end of Glebe, April/May 2021



From: Peter McKenzie **Personal Information**
Sent: Thursday, 12 May 2022 5:01 PM
To: White, Garry P; Hughson, Jon
Subject: RE: Crane in Campbell Street - request for test flight

Hello Jon/Garry,

My plan is to use the a hybrid approach which would come down the line of the highway and over the Aquatic Centre, thus avoiding flying over any houses. The departure would go the same route. Hopefully, given the new information, we should only need this in daylight hours.

I would like to fly it and see how it goes from a pilot management point of view. I don't envisage we would cause too much inconvenience and, with any luck, no one will notice the change – at least not initially.

I'm happy to defer if necessary, but I'm thinking if we can try it and prove that it is minimal impact, it might help sell it to the residents? Also, it needs to be done before the crane goes up.

Happy to discuss as needed.

Best Regards,

Peter McKenzie
Chief Pilot/Head of Operations

100 Holman Avenue, Cambridge, TAS 7170

Personal Information

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From: White, Garry P **Personal Information**
Sent: Thursday, 12 May 2022 4:41 PM
To: Hughson, Jon **Personal Information** Peter McKenzie **Personal Information**
Subject: RE: Crane in Campbell Street - request for test flight

Thanks Jon/Pete

I agree it would be advisable to communicate with the Glebe residents prior to actually flying the proposed route – I note below that this will be a 12 month project – do you have a proposed start date as yet?

Pete – the proposed flight paths I saw had a couple of options, the steeper turn had the chopper passing over the top of the aquatic centre, whereas the other option was closer to the houses – do you think the actual path would be closer to the aquatic centre rather than the houses??

Many thanks

Garry

From: Hughson, Jon **Personal Information**
Sent: Thursday, 12 May 2022 3:35 PM

To: Peter McKenzie <[redacted] White, Garry P [redacted]
Subject: RE: Crane in Campbell Street - request for test flight

Hi Peter and Garry,

Peter this is potentially a great outcome. Is there a need to consult with Council on the matter or would you like me to contact them to discuss?

Garry – I mentioned this to Shane and he asked if a test flight could be held off until communication has occurred with Glebe residents as no doubt this will have an impact on the noise levels they experience?

Regards

Jon

From: Peter McKenzie <[redacted]
Sent: Thursday, 12 May 2022 1:22 PM
To: White, Garry P [redacted] formation >; Hughson, Jon <[redacted] Personal Information >
Subject: FW: Crane in Campbell Street - request for test flight

Hi Garry,

We have received some more information from the construction manager which indicates the initial plan has changed somewhat. It will still mean the crane will be a hazard during daylight, but not at night.

I have also received feedback from Peter Simpson, the consultant involved in the original RHH survey work, which supports mt plan to change our flight path for the period the crane is in use. This will involve arriving and departing over the Aquatic Centre. We will use this flight path in daylight and revert to the standard Campbell St flight path at night.

To that end, I would like Approval to conduct a test flight tomorrow to RHH to prove the new flight path and be able to put out the instruction for our pilots. We would use HRT and can take the operational crew if applicable, or else just have the B412 as cover while we are in town.

Best Regards,

Peter McKenzie
Chief Pilot/Head of Operations

100 Holman Avenue, Cambridge, TAS 7170

[redacted]
[redacted]
[redacted]

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From: Adrian Easter [redacted] Personal Information >
Sent: Thursday, 5 May 2022 3:04 PM
To: Peter McKenzie [redacted] Personal Information >
Cc: Greg Smith <gsmith@vosconstruction.com.au>; com-inbound-hobart-youth-foyer@procoretech.com; Brendan Baynes [redacted] Personal Information >
Subject: RE: Crane in Campbell Street

Hi Peter,

Due to the issues that the proposed tower crane would have on your flight path and the potential effect on a crane underneath, I have been working on a solution and I offer the following proposal.

In lieu of the proposed tower crane, we would utilize mobile cranes set up from the area where the tower crane base was to be.

These cranes would have an overall max height of around 70m above the AHD but would only be used during work hours.

Any mobile crane left on site overnight would retract its boom as a minimum to the height of the TAFE building next door.

During the 12 month project, we will require some crane works to be undertaken from Campbell St which will occur on a weekend but in this location, the crane will not be left setup overnight. I will keep you informed of dates for this works.

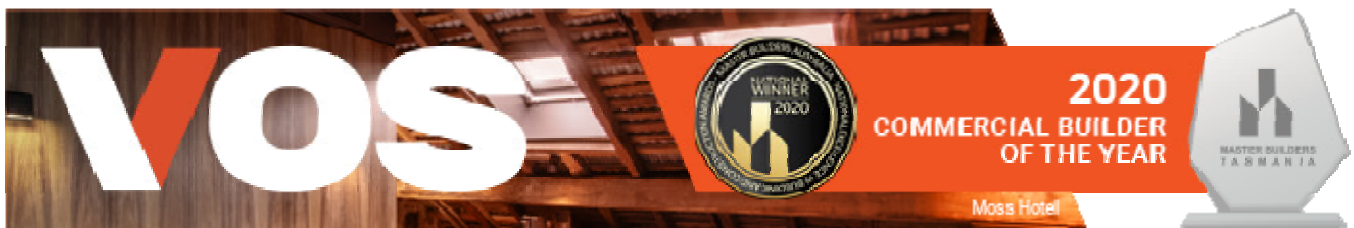
Can you confirm if the above meets with your approval and if there are any further requirements we would need to consider.

I have also attached an elevation that may assist.

Please contact me if you need anything further

Regards,

ADRIAN EASTHER
SITE MANAGER | CONSTRUCTION



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From: Peter McKenzie [mailto:Personal Information]
Sent: Saturday, 23 April 2022 4:39 PM
To: 'Adrian Easther' [mailto:Personal Information]
Cc: Greg Smith <gsmith@vosconstruction.com.au>; com-inbound-hobart-youth-foyer@procoretech.com
Subject: RE: Crane in Campbell Street

Hi Adrian,

Thanks for that – at least we know and I can factor that into looking for a solution.

Best Regards,



Peter McKenzie
Chief Pilot/Head of Operations

100 Holman Avenue, Cambridge, TAS 7170

Personal Information
[Redacted]

www.rotorlift.com.au

From: Adrian Easter **Personal Information**>
Sent: Friday, 22 April 2022 2:50 PM
To: Peter McKenzie **Personal Information**
Cc: Greg Smith <gsmith@vosconstruction.com.au>; com-inbound-hobart-youth-foyer@procoretech.com
Subject: RE: Crane in Campbell Street

Hi Peter,

I have been informed that the out of service height is set by the manufacturer of the crane.
Apologies

Regards,

ADRIAN EASTHER
SITE MANAGER | CONSTRUCTION



Personal Information
[Redacted]

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From: Peter McKenzie [mailto:**Personal Information**]
Sent: Thursday, 21 April 2022 1:38 PM
To: **Personal Information**
Cc: 'gsmith@vosconstruction.com.au' <gsmith@vosconstruction.com.au>; 'com-inbound-hobart-youth-foyer@procoretech.com' <com-inbound-hobart-youth-foyer@procoretech.com>
Subject: Crane in Campbell Street

Hello Adrian,

Thank you for the information. As discussed yesterday, this crane will have a significant impact on our helicopter operations into the RHH. The location is directly in our surveyed arrival and departure path and well inside our flight profile safety zone. It will be within 90 feet vertically of our Critical Decision Point for landing from the North and directly under our take-off path for departures to the north.

As a minimum risk mitigator, if you can find out if the crane can be lowered from the stated Out of Service height that may help, however the larger issues will remain.

I am going to do some brain storming with my helipad expert next Monday 25th April, I will advise on the outcomes. I will also notify the relevant AT and RHH parties that may be affected of the situation.

Best Regards,



Peter McKenzie
Chief Pilot/Head of Operations

100 Holman Avenue, Cambridge, TAS 7170

Personal Information
Personal Information
www.rotorlift.com.au

From: Adrian Easter aeaster@vosgroup.com
Sent: Wednesday, 20 April 2022 11:15 AM

To: Hobart Base <hobartbase@rotorlift.com.au>
Cc: Greg Smith <gsmith@vosconstruction.com.au>; com-inbound-hobart-youth-foyer@procoretech.com
Subject: Hobart Youth Foyer proposed tower crane 87 - 91 Campbell st

Hi,

As discussed, please see attached site plan and elevation of the Tower crane proposed for construction works at 87-91 Campbell st.
Can you please review and provide any feedback.

This is part of the project planning approval

This crane was previously in use at the Vibe hotel in Argyle st.
It is proposed to install the illuminated Vos logo on the boom and it would have a flashing red light at the top of the boom during the night.

Regards,

ADRIAN EASTHER
SITE MANAGER | CONSTRUCTION



Personal Information
[Redacted]

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From: White, Garry P
Sent: Wednesday, 22 February 2023 2:15 PM
To: Peter McKenzie; Susan Stanley
Subject: RE: Noise Pollution at the RHH

Many thanks for this info Pete

In regards to using the Aquatic Centre approach at night, I think this would be favourable for the Glebe residents, but only if your pilots feel this night time approach is safe.

Kindest regards

Garry

From: Peter McKenzie <Personal Information>
Sent: Tuesday, 21 February 2023 5:18 PM
To: White, Garry P <Personal Information> Susan Stanley <Personal Information>
Subject: RE: Noise Pollution at the RHH

Hi Garry,

Susan mentioned the afternoon of 7th Feb – that was me in the 412, but we came in over the Aquatic Centre. There was a strong southerly blowing, so noise will naturally still drift back over The Glebe even though we are not overhead. The weather conditions make a big difference to the perceived noise on the ground.

I also discovered that the pilots have been directed to sue the Campbell street approach at night when the crane is down, as it is safer. I can look at this and perhaps amend it if you think it is necessary, but there will always be an option for the pilots to do this if the wind is considered unfavourable for the alternate approach.

None of the flights on that day went over The Glebe residential area, but if you have specific information I can do some more research. Happy to work through it as needed.

Yes, your list of preferred approaches is correct, with the above caveat.

Best Regards,

Peter McKenzie
Chief Pilot/Head of Operations

100 Holman Avenue, Cambridge, TAS 7170
Personal Information

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From: White, Garry P <Personal Information>
Sent: Monday, 20 February 2023 5:45 PM
To: Susan Stanley <Personal Information> Peter McKenzie <Personal Information>
Subject: Noise Pollution at the RHH

Hi Susan/Pete

I hope this finds you well

I have recently received a chain of emails relating to the noise pollution caused by the helicopters landing at the RHH. Can I please confirm with you that (in ideal conditions) the preferred routes for landing at the RHH are 1: from over the water, 2: from over the aquatic centre and 3: from down Campbell St – with direct flights over the Glebe residential area being voided??

Many thanks for your assistance

Cheers

Garry

Garry White

Acting Director Clinical Services
Ambulance Tasmania



1 Melville Street, HOBART TAS 7000
GPO Box 125, HOBART TAS 7001

W www.ambulance.tas.gov.au

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From: Kerry Burns <kburns@netspace.net.au>

Sent: Thursday, 31 March 2022 4:41 PM

To: Gregory, Shane T **Personal Information**

Subject: RHH Helicopters

Hello Shane

Thank you for making contact yesterday on the question of noise associated with helicopter operations and for offering to meet with Glebe residents.

On the basis of our phone discussion, would the evening of Thurs 7 April work for you? If so, could you please nominate a time/place – otherwise perhaps some alternative dates.

Regards

Kerry

Kerry Burns

Mob 0400 908 930

From: Bester, Marc A <Personal Information >
Sent: Tuesday, 31 May 2022 11:16 AM
To: Taylor, Chris <Personal Information >; Hughson, Jon <Personal Information >
Cc: Coad, Adam <Personal Information >
Subject: Test helipad activation

Hi all

As mentioned by Paul at the recent helipad meeting, the chief Pilot wishes to conduct a test approach and landing related to a recent crane going in up on the flightpath out. They are keen to do this on Friday 3rd morning. Any issues?

Marc

Marc Bester
B Nurs, B E-Health (Prof Hons)
Nurse Manager Clinical Application Specialist
Integrated Operations Centre - South

Personal Information
[Redacted]

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From: Peter McKenzie **Personal Information**
Sent: Friday, 31 March 2023 3:14 PM
To: Carlisle, Randal J
Cc: Susan Stanley
Subject: RHH Approach Paths
Attachments: 01 2022 Temp. RHH approaches during daylight hours.pdf; RHH Heliport Operations Manual - V1.0 24 April 2020.pdf

Hi Randal,

Please find attached the RHH Operations Manual and the revised procedures directive we produced in response to the crane issue.

Note on Page 104 the Approved approach and departure paths. We gained further Approval from the surveyor to modify these as per the RL directive.

Let me know if you need anything else.

Best Regards,

Peter McKenzie
Chief Pilot/Head of Operations

100 Holvman Avenue, Cambridge, TAS 7170

Personal Information

www.rotorlift.com.au



ROTORLIFT
Home Safely - Every Flight



From: White, Garry P <[Personal Information]>

Sent: Wednesday, 8 February 2023 10:13 PM

To: Emery, Jordan D <[Personal Information]>

Subject: FW: Hospital Helicopter Noise Pollution

Just FYI – did I mention, I hate helicopters!

From: Roland Browne <[Personal Information]>

Sent: Wednesday, 8 February 2023 9:50 PM

To: White, Garry P <[Personal Information]>

Cc: andrew.wilkie@aph.gov.au; Kerry Burns <kburns@netspace.net.au>; Richard Flanagan

<[Personal Information]>

Subject: RE: Hospital Helicopter Noise Pollution

You don't often get email from rolandbrowne@fablawyers.net.au. [Learn why this is important](#)

Good evening Garry.

I live on Glebe/Edward Streets. I agree with Richard's comments. And the changes in flight path to accommodate the crane – which were working well – have seemingly been abandoned. It is now apparent that the flight paths are not dependent on the weather or other factors (as we were told in the May meeting), but can be tailored as needs be. It's time for the government/department/Ambulance Tas to give some directions to the operator about avoiding the Glebe residential areas. I'd also like to meet to discuss this problem.

Regards

Roland Browne

FITZGERALD AND BROWNE Lawyers

Level 2, 115 Collins Street, Hobart TAS 7000

GPO Box 1951, Hobart TAS 7001

Tel: (03) 6224 6777 | Fax: (03) 6224 6755

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Where you have an appointment to meet with any lawyer or staff of FitzGerald and Browne and that lawyer or staff member develops symptoms, or is a close contact of people with symptoms, we will advise you in advance and make alternative arrangements for the meeting. These may include video conference, telephone or rescheduling the meeting.

[Your COVID commitment to us](#)

We require any person intending to visit our office to advise us by phone in advance if they develop symptoms, or are a close contact of people with symptoms, so that alternative arrangements can be made.

From: Richard Flanagan **Personal Information**

Sent: Wednesday, 8 February 2023 1:35 PM

To: **Personal Information**

Cc: Andrew.wilkie.mp@aph.gov.au; Kerry Burns <kburns@netspace.net.au>; Roland Browne

Personal Information

Subject: Hospital Helicopter Noise Pollution

Dear Garry,

I write about the ongoing and worsening problem of excessive noise pollution from the hospital helicopter.

I live in Edward St, in the southern end of the Glebe and directly look at the hospital's helipad. Last year the Macquarie Point Corporation used our home to measure noise pollution from their works on their site. What they discovered was unsurprising: the worst offender by far was the hospital helicopter which frequently recorded noise levels of between 85 and 92 dba—that is over 47 dba above background night time levels and 40 dba noise levels.

Anything over 5dba over background noise levels is considered a nuisance, and anything over 10dbs a severe nuisance that needs rectification. Given the decibel system is a logarithmic system, 40 to 47 dba over is many hundreds of times noisier than background noise levels of traffic and city noise. That noise is loud enough to wake you in the middle of the night—twice, once when the helicopter flies in, and again when it flies out.

At times—such as 1pm today when a helicopter came in close and low, the chair I am sitting on and the table I work on tremble from the vibration —as do the windows and other furniture inside the house.

The effect of this is considerable—from being unable to talk to being woken during the night repeatedly, and so on. It is not just audible noise pollution but something physically felt. No other industry would be allowed this level of noise impact on people's lives and homes at any time 24/7.

The situation, despite repeated complaints from residents, has worsened considerably. From a flight every day or two there are now often two, three or four flights a day. Not only that, but the helicopters now often fly directly over our home at very low altitudes, such as yesterday afternoon at 5.50pm, an intolerable situation.

And all this is unnecessary.

When last year, because of a crane at the TAFE building, flights were rerouted via the river and not over homes, the impact, while still significant, was greatly reduced.

That is clearly the compromise solution.

As it stands though it is clearly an unacceptable situation, and one that would not occur if helicopters came to the hospital to and from the river rather than passing across the Domain, over the Glebe, or going up Campbell Street.

These problems of noise in consequence are far from mine alone but affect people as far way as North Hobart.

I support the use of helicopters to save lives and to ferry people whose lives are at risk directly to the hospital helipad.

But I am at a loss to understand why less noisy routes are not routinely used, why exiting helicopters stay so low when going higher reduces noise, why one of Australia's noisiest helicopters is routinely used, and why what appear to be routine patient transfers are made via the helipad (ie every late Sunday afternoon—this is far too regular to be a matter of life or death) when they could be done at the Regatta Grounds as formerly.

Further, I am deeply concerned by the way the present system was set up without any of the normal planning and management systems being put in place to respect local amenity that you would expect.

I was shocked to discover that it was set up without due process, without noise trails, and without the necessary noise evaluation work to ensure noise to local residents would be minimised through the best available flight paths and a better managing of rules around helicopter use.

And finally, given when the crane was operating at the TAFE and helicopters used the river route for entering and exiting it was communicated to the Ambulance Board by the Glebe Residents Association that this was a much less audible route, I find it appalling that there seems to have been a partial return to the old routes once the crane came down and using new routes—such as directly over homes in the Glebe—when you are well aware there is growing problem that needs dealing with, not further worsening.

There are clearly alternatives and options and I would expect that you would explore them properly. The alternative is to risk a growing backlash for a failure to manage this important service properly.

I would be happy to meet to discuss these matters further.

I am also happy to start pressing the matter publicly, raising the completely inadequate and, it would seem, incompetent preparation in management systems for the introduction of this important service and the clear contempt for Hobartians it represents should changes not occur.

Warm wishes,
Richard Flanagan

From: Richard Flanagan **Personal Information**
Sent: Wednesday, 8 February 2023 1:35 PM
To: White, Garry P
Cc: Andrew.wilkie.mp@aph.gov.au.; Kerry Burns; Roland Browne
Subject: Hospital Helicopter Noise Pollution

You don't often get email from richard.flanagan@icloud.com. [Learn why this is important](#)

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I would be happy to meet to discuss these matters further.

I am also happy to start pressing the matter publicly, raising the completely inadequate and, it would seem, incompetent preparation in management systems for the introduction of this important service and the clear contempt for Hobartians it represents should changes not occur.

Warm wishes,
Richard Flanagan

From: Peter McKenzie <[REDACTED]>
Sent: Thursday, 21 April 2022 1:58 PM
To: Susan Stanley; White, Garry P; Wiss, David (DPEM)
Cc: Carlisle, Randal J
Subject: FW: Crane works in Campbell Street
Attachments: HYF Site plan rev 2.pdf; HYF_A202_NORTH_WEST_ELEVATION_04 Layout1 Tower crane.pdf

Hello All,

As per the email below and the attached documents, there is to be some construction work at the corner of Melville and Campbell Streets which will see a crane erected, which will impact our helicopter operations into RHH significantly.

I have had a conversation with Adrian from VOS and advised him of the following:

“Thank you for the information. As discussed yesterday, this crane will have a significant impact on our helicopter operations into the RHH. The location is directly in our surveyed arrival and departure path and well inside our flight profile safety zone. It will be within 90 feet vertically of our Critical Decision Point for landing from the North and directly under our take-off path for departures to the north.

As a minimum risk mitigator, if you can find out if the crane can be lowered from the stated Out of Service height that may help, however the larger issues will remain.

I am going to do some brain storming with my helipad expert next Monday 25th April, I will advise on the outcomes. I will also notify the relevant AT and RHH parties that may be affected of the situation.”

The best case is we may be able to modify our approach and departure paths, but this would be outside of the published guidelines for the helipad operations and would have an impact on the noise abatement procedures for The Glebe. There is still the potential for this to cease operations into the RHH until the crane is removed, which I believe is about a nine to twelve month building program, starting in May this year.

I will advise further once we have done our formal assessment of the situation.

Best Regards,

[REDACTED]
Chief Pilot/Head of Operations
100 Holyman Avenue, Cambridge, TAS 7170

Personal Information

www.rotorlift.com.au



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From: Adrian Easterher <aeasterher@vosgroup.com>
Sent: Wednesday, 20 April 2022 11:15 AM
To: Hobart Base <hobartbase@rotorlift.com.au>
Cc: Greg Smith <gsmith@vosconstruction.com.au>; com-inbound-hobart-youth-foyer@procoretech.com
Subject: Hobart Youth Foyer proposed tower crane 87 - 91 Campbell st

Hi,

As discussed, please see attached site plan and elevation of the Tower crane proposed for construction works at 87-91 Campbell st.

Can you please review and provide any feedback.

This is part of the project planning approval

This crane was previously in use at the Vibe hotel in Argyle st.

It is proposed to install the illuminated Vos logo on the boom and it would have a flashing red light at the top of the boom during the night.

Regards,

ADRIAN EASTHER
SITE MANAGER | CONSTRUCTION



Personal Information

VOSGROUP.COM

MAKING A POSITIVE DIFFERENCE

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From: Kerry Burns <kburns@netspace.net.au>
Sent: Thursday, 18 August 2022 2:53 PM
To: White, Garry P **Personal Information**
Cc: tony barrett <gleberasecretary@gmail.com>
Subject: Helicopter meeting - 2 May

Hello Garry

I just wanted follow up on the 2 May 2022 meeting Roland Browne and myself had with Shane Gregory, Joe Acker and yourself about helicopter noise.

Coming out of our discussions there were several things that were mentioned that could contribute to a better understanding of the noise issue and potential future mitigation, including:

- Undertaking noise measurement to compare current levels against the original assessment
- Looking to direct flight paths over the Derwent where operationally possible
- Consideration of noise levels as part of the new contract for helicopters services to operate from 2024

Any updates on these or related issues that you might be able to provide would be much appreciated.

Regards

Kerry

Kerry Burns
Glebe Residents' Association
Mob 0400 908 930

From: Kerry Burns <kburns@netspace.net.au>
Sent: Thursday, 18 August 2022 2:53 PM
To: White, Garry P
Cc: tony barrett
Subject: Helicopter meeting - 2 May

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- Looking to direct flight paths over the Derwent where operationally possible
- Consideration of noise levels as part of the new contract for helicopters services to operate from 2024

Any updates on these or related issues that you might be able to provide would be much appreciated.

Regards

Kerry

Kerry Burns
Glebe Residents' Association
Mob 0400 908 930

WITS/Min No.:

Mr Kerry Burns
President
Glebe Resident's Association
glebe_progress@netspace.net.au

Dear Mr Burns

Subject: Royal Hobart Hospital Helipad

Thank you for your letter of 21 June 2021 regarding noise concerns relating to the Royal Hobart Hospital (RHH) helipad. I note that several matters raised in your letter have already been addressed by Ms Paula Hyland, Executive Director, Office of the Deputy Secretary, Community, Mental Health and Wellbeing in her letter to you dated 29 April 2021 regarding the same subject matter.

Regarding the issue raised in your letter referring to a pronounced increase in number of flights and increase in the level and intensity of noise, I can confirm that RHH Helipad landings over the months of May and June are the lowest they have been for a period of nine months. This is also the case for landings outside of the hours of 2200-0700, with only four landings over the course of the month for both May and June. Over the last 12 months the average number of landings overnight has been 1 per week.

As was noted in Ms Hyland's letter, guidance contained within the EPA Victorian Publication 1254 regarding separation of greater than 250 metres between landing site and residents is met, and exceeded, in the case of the Glebe community. I understand from your letter that noise levels from a separate project have been logged, however I am unable to accept this data due to a lack of specificity and the risk that such data may have been contaminated by other noise sources.

I note your request for review of helicopter operations, including flight paths. Regrettably, flight paths for RHH Helipad landings are set by the national body Air Services Australia and are based on a multitude of factors, including prevailing weather. These flight paths cannot be changed as they are safety sensitive and are mandated to ensure maximum aircraft safety margins. The aeromedical contractor has demonstrated reliable compliance with these flight paths.

With regards to alternative landing sites, I can confirm that non-urgent transfers are not transported to the RHH helipad and instead these patients return to the aeromedical base at Hobart Airport. All patients flown to the RHH Helipad require definitive medical assessment and treatment.

Previous landing sites at the cenotaph require an emergency ambulance to provide transport to the RHH. This significantly impairs the availability of emergency ambulances to provide emergency care for the community, including those in Glebe.

I note that there are no mandatory requirements in Australia to control noise from emergency service helicopters and that typical standards and guidelines related to noise do not apply to these less frequent and transient events.

Considering the infrequent nature of helicopter noise events and that the noise associated with helicopter landings is less than that of an emergency services vehicle siren, as well as the significant benefit to the community associated with hospital helipads, I am satisfied that no further action is required regarding this matter.

As the information requested has been provided in this letter and the response from Ms Hyland, I do not feel a meeting is required.

Thank you once again for raising this matter.

Yours sincerely

Jeremy Rockliff MP
Deputy Premier
Minister for Health

Attachments:

Copy to:

Prepared by	Charles Wendell-Smith	A/Manager, Aeromedical & Retrieval	13/07/21	
Through	Prof Simon Brown	Director, Aeromedical & Retrieval	13/07/21	
Through	Joe Acker	A/Chief Executive, Ambulance Tasmania		
Cleared by				

GLEBE RESIDENTS' ASSOCIATION INC.

C/- 3 Scott Street, GLEBE, Tas 7000
e-mail: glebe_progress@netspace.net.au

The Hon Sarah Courtney MP
Minister for Health,
Parliament House,
HOBART TAS 7000

Dear Minister,

With the opening of the new Royal Hobart Hospital (RHH) building in Campbell Street, the Glebe community has noticed a pronounced increase in the number of helicopter flights over our suburb, together with an overall increase in the level and intensity of noise from those aircraft.

Of course, the Glebe community is entirely supportive and accepting of helicopters being used to transport critically ill patients. However, we are concerned that helicopter operations have not been configured in a way that minimises the impact on residential amenity. This is not just a matter for residents. It will be an issue for students on the Domain Campus once that facility is operating. The noise of helicopters is already causing problems for patrons of concerts at the Hedberg and, likely, residents in the area of Wapping and surrounding areas. There is evidence too that helicopter noise may affect the health of hospital inpatients.

There seem to be a number of factors at play. There is the increase in the number of helicopter flights. There is the choice of flight path. There is the level of noise produced by each particular helicopter and there is the question of whether the Regatta ground landing pad is used or not.

It seems to us that the general flight path to the hospital has been set so as to require a descent and pathway over the Glebe and towards the hospital. Exit flights too often involve a low altitude path over Glebe. These flights can be at any time and not infrequently occur at night.

We would like to better understand the situation and accordingly would be grateful to receive a copy of the noise assessment and environmental management plan prepared for the use of the new helipad on top of the hospital building. We also request information about the numbers of flights per month in the period 1 November 2020 – 28 February 2021, and for the corresponding periods in each of the previous three years.

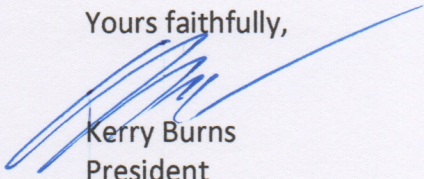
So that a clear pattern of noise disturbance can be established we would also like to see regular noise monitoring in areas surrounding the RHH (including Glebe) - to inform us all as to the frequency, intensity and duration of the noise and to enable an assessment in due course against the relevant Australian Standards.

We would also appreciate the opportunity to meet with you and relevant officers of your Department to discuss this problem and what steps can be taken to mitigate it.

I would again say that Glebe residents support the use of emergency air transport of patients as an essential part of the health care system and that we appreciate that emergency transport requires the quickest route to the hospital. Our interest here is in ensuring that the most effective protocols are in place to minimise the adverse impacts of helicopter noise on the wider community.

We look forward to meeting with you.

Yours faithfully,



Kerry Burns
President
Glebe Residents' Association Inc

2 March 2021

Royal Hobart Hospital

Heliport Operations Manual

Version: 1.0

24 April 2020

Contents

1	Acknowledgement	1
2	Document Development History	2
2.1	Record of Amendments	3
2.2	Distribution List	4
3	Executive Summary	6
4	Heliport Layout and Facilities	7
4.1	Introduction	7
4.2	Heliport Operator	7
4.3	Physical Characteristics	7
4.4	Navigation	9
4.5	Heliport Markings	9
4.6	Flightpath Obstacle Environment	10
4.7	Low Intensity Obstacle Lighting	10
4.8	Heliport Access / Egress Provisions	12
4.9	Heliport Lift Lobby Equipment	13
5	Normal Operating Procedures	26
5.1	Overview	26
5.2	Daily Serviceability Inspections	26
5.3	Notification of a Planned Helicopter Arrival	30
5.4	Procedures for Heliport Activation and Patient Reception	31
5.5	Communications with Ambulance Tasmania and Helicopter	31
5.6	Heliport Access Control	34
5.7	Use of the Heliport for Transport of Non-RHH Patients	34
5.8	Activities before Helicopter Arrival	34
5.9	Activity After Helicopter Touchdown	38
5.10	Helicopter Departure	39
5.11	Intervention by RHH Medical Staff	40
5.12	Picking-up of Clinical Staff	40
5.13	Hot Loading / Unloading is NOT a Normal Procedure	40
6	Emergency Response Procedures	41

6.1	Introduction	41
6.2	Actions in the Event of a Heliport Emergency	42
6.3	Heliport Evacuation and Emergency Access Procedures	45
6.4	Additional Guidance and Information Sources	51
7	Staff Training for Heliport Safe Operations	52
7.1	Introduction	52
7.2	Training Policy	52
7.3	Heliport Safe Operations Training Syllabus	52
7.4	Training of New Staff	53
7.5	Heliport Procedures and Emergency Response Practical Training	54
7.6	Safety Briefings by Helicopter Operators	54
7.7	Safety Around the Helicopter	54
7.8	Management Meeting	55
8	Heliport Inspection and Maintenance Provisions	56
8.1	Introduction	56
8.2	Responsibilities	56
8.3	Heliport Inspections	56
8.4	Heliport Approach and Departure Airspace Surveillance	57
8.5	Reporting Heliport Out-of-Service	58
8.6	Heliport Precinct Work Permit	59
9	Royal Hobart Hospital Staff Accountabilities	60
9.1	Heliport Manager	60
9.3	Manager Facilities and Building Services	60
9.4	Clinical Manager	61
9.5	Heliport Officer	62
9.6	Manager Environmental Services	63
9.7	RHH Switchboard Operator	63
9.8	Emergency Response Team	63
10	Glossary / Definitions	65
	Attachment A: Heliport Safety Guidelines	67
A1	Introduction	67
A2	Helicopter Danger Zones	67

A3	Rotor Blades	67
A4	Helicopter Shapes	68
A5	Helicopter Types Expected to Use the RHH Rooftop Heliport	68
A6	Guidelines to Ensure the Safest Operation	70
Attachment B: Airspace Survey and Analysis of Obstacle Environment		73
B1	Introduction	73
Attachment C: Radio Communications between Heliport and Helicopter		78
C1	Introduction	78
C2	Heliport-Helicopter Communications Equipment	79
C3	Phonetics and Phraseology for Transceiver Use	85
Attachment D: Maintenance		92
Attachment E: Heliport Permit to Work		93
Attachment F: Heliport Emergency Access Protocol		95
Attachment G: Heliport Planning and Design Background		97
4.1	Concept Design Philosophy	97
4.2	Selection of Design Helicopter	97
4.3	Analysis of Site Wind Conditions	98
4.4	Heliport Obstacle Environment	102
4.5	Operational Airspace Protection Measures	103

I Acknowledgement

This document has been derived from the Barwon Health University Hospital Geelong Heliport Operations Manual which was prepared by Barwon Health with the assistance of PSNK Aeronautical Services.

The RHH Heliport Operations Manual has also been developed using the PSNK Aeronautical Services Royal Hobart Hospital Redevelopment Helipad Feasibility Study dated October 2014.

2 Document Development History

The RHH Heliport Operations Manual is a managed document.

This Operations Manual reflects the operating procedures for the RHH rooftop heliport as at 29 March 2020. Revisions of the document are planned to be undertaken at intervals not exceeding 12 months.

Whilst every attempt has been made to ensure the quality, efficiency and effectiveness of the document, users of the manual are invited to provide feedback regarding the procedures and any errors or omissions detected. Such feedback should be provided in the first instance to the Heliport Manager.

For identification of amendments, each page contains a release number and a page number. Changes will only be issued as a complete replacement.

Recipients should remove superseded versions from circulation.

Version No	Date of Amendment	Amendments Made by:	Notes
0.a	4 February 2019	RHH Redevelopment Project	Initial Draft – Sent to Managing Contractor on 11 June 2019
0.b	12 June 2019	RHH Redevelopment Project	Staff Training Section
0.c	13 September 2019	RHH Redevelopment Project	Page Turn Updates and inclusion of Airport Survey Analysis and Data
0.d	20 September 2019	RHH Redevelopment Project	Page Turn Updates
0.e	17 November 2019	RHH Redevelopment Project	Updates from DPFEM / Ambulance Tasmania and Managing Contractor
0.f	29 January 2020	RHH Redevelopment Project	Updates from November 2019 Meeting and Added Photos
0.g	17 February 2020	Jon Hughson	Review and update
0.g	29 March 2020	Jon Hughson	Review and update with Scott Ellis and Stuart Jones
0.h	1 April 2020	Scott Ellis	Updated checklists and revised layout
0.i	23 April 2020	Scott Ellis	Updated maintenance, Marine Radio section, checklists, emergency evacuation routes.
1.0	24 April 2020	Scott Ellis	Final revisions after discussions 23/4/20

2.1 Record of Amendments

Amendments to this manual will be released as an update to the Checklist of Pages with a copy of all pages that have changed as part of the amendment.

Details of the receipt and insertion of amendments should be recorded in the following table by each copy holder.

Section Title	Page Number	Amendment Summary

2.2 Distribution List

This manual and amendments is distributed by the Tasmanian Health Service to the following people and organisations:

Copy No:	Position	ID Code	Contact Details
	Heliport Manager	RHH	Jon Hughson email: Personal Information phone: Personal Information
	Clinical Manager	RHH	email: Personal Information Personal Information
	Building Services Manager	RHH	Position due to be filled in May 2020
	Director Emergency Services	RHH	Position not yet filled
	Heliport Lift Lobby	RHH	phone: Personal Information
	Heliport Officer	RHH	phone: Personal Information
	Nursing Director Critical Care, Clinical Support and Investigations	RHH	Trish Allen Personal Information Personal Information
	Clinical Director of Surgical and Perioperative Services	RHH	Marcus Skinner Personal Information Personal Information
	Director State Trauma Service	RHH	Position currently being advertised for filling
	Director Corporate and Support Services South	THS	Jon Hughson Personal Information Personal Information
	Incident Management Centre	RHH	Position not yet filled
	Security Supervisor / Security Officer on Duty	RHH	phone: Personal Information

Copy No:	Position	ID Code	Contact Details
	Director Aero-Medical and Medical Retrieval	AT	Simon Brown Personal Information [REDACTED] [REDACTED]
	Manager Aero-Medical and Special Operations	AT	Scott Fyfe Personal Information [REDACTED] [REDACTED]
	Chief Executive Officer	Rotorlift	Susan Stanley Personal Information [REDACTED] [REDACTED]
	Marine and Rescue Services	DPFEM	[REDACTED]

Additional copies of this Heliport Operations Manual can be obtained by application to the Heliport Manager.

The Tasmanian Health Service reserves the right to restrict distribution of the document and amendments.

Applications for copies of the documentation and amendments need to provide details of their organisation and the reasons for their request.

3 Executive Summary

This manual has been prepared by the Tasmanian Health Service (THS) to provide details of the Operating Procedures and associated details for the use of the Helicopter Medical Transport (HMT) Heliport located on the rooftop of the Royal Hobart Hospital (RHH).

The Procedures and Instructions detailed in this manual have been prepared to ensure safety, standardisation and efficiency of activities undertaken by THS personnel in relation to the use of the RHH Rooftop Heliport.

The information presented in this manual includes technical details of the Heliport and associated flight paths. Whilst it is intended that this information will be used by helicopter operators in determining their procedures for operations to and from the RHH Heliport, the information presented in the manual does not imply or assume operational requirements for Helicopter Medical Transport flights using the RHH Heliport.

In accordance with the requirements of the Civil Aviation Regulation 92(1), operational decisions relating to the use of the RHH Heliport are the responsibility of the helicopter pilot in command, and in some circumstances, are shared with the aircraft operator.

4 Heliport Layout and Facilities

4.1 Introduction

The RHH Heliport is located above K-Block, adjacent Campbell Street between Liverpool and Collins Streets.

The RHH Heliport is a privately owned Helicopter Landing Site with access controlled by the THS and restricted in normal circumstances to Helicopter Medical Transport helicopters operated by Department of Police Fire and Emergency Management (current private operator Rotorlift). As such, the RHH Heliport facility provides an essential public function offering critical care and trauma services and efficient access to the Tasmania's tertiary hospital for patients carried by Medical Transport helicopters.

The following details of the physical characteristics and operational information is related to the RHH rooftop Heliport.

4.2 Heliport Operator

Heliport Owner

Contact:

Telephone:

Tasmanian Health Service

Heliport Manager; Director Corporate and Support Services

+ [REDACTED]

4.3 Physical Characteristics

Design Helicopter

D-Value (overall dimensions)	18.5 metres
Rotor Diameter	15 metres
Maximum Operating Mass	8 tonnes
FATO / TLOF Area (Category A Criteria)	23 metres x 27 metres

YXHH FATO/TLOF as built

Design Dimensions	23 metres x 27 metres
Safety Area – Outer Boundary	37 metres x 37 metres
Material for Deck and Structure	Aluminium (with Deck Integrated Fire Fighting system)

Lighting of FATO / TLOF

Perimeter	Green Perimeter Lights
Surface	Low Level Surface Floodlights Flightpath Track Alignment Lights (White)
Controls	Manual and Pilot Activated (through VHF Radio Link)

Illuminated Wind Direction Indicator

An Illuminated Wind Direction Indicator (IWDI) is located on the rooftop of the Heliport Lift Lobby, South of the heliport (Figure 7). The Illuminated Wind Direction Indicator consists of a wind indicator cone illuminated externally by four lights mounted on arms at the top of the pole in accordance with Part 139 of the CASA Manual of Standards.

Figure 1 – Location of Primary Illuminated Wind Direction Indicator Relative to Heliport



4.4 Navigation

Aeronautical Code	YXHH
Location	147 19 49.6625 E 42 52 47.0102 S
Elevation	64.5 metres AHD, 212 Feet
Primary Flight Track	314 True North
Secondary Flight Track	134 True North
Relative Location	8.4 Nm / 15.4 km 252 degrees True North from Hobart Airport ARP
ATIS	Hobart Airport VHF 128.45

4.5 Heliport Markings

The surface markings for the FATO and coincident TLOF (Figure 2) include:

Hospital Heliport Identification

Text Royal Hobart YXHH along the right-hand side of approach on main flightpath track.

Red H – 3 m x 1.8 m x 0.4 m aligned with primary flightpath direction.

White background – five 3 m x 3 m squares arranged to form a cross.

Touchdown Positioning Marking

Yellow circle stripe 500 mm wide, inner diameter $0.5 \times D = 9.25$ m

FATO/TLOF Perimeter

White line 300 mm wide around perimeter of FATO / TLOF.

Flightpath Track Alignment Guidance Markings

White arrowhead markings aligned with the two flightpath track centrelines.

Heliport Design D-Value

Text D18 (18 m x 18 m) on right hand side of approach aligned with primary flightpath track (313 TN) and reciprocal flightpath track (133TN) of the FATO.

Heliport Design Maximum Mass Rating

Text 8.0t (tonnes) on right hand side of approach aligned with primary flightpath track (313 TN) and reciprocal flightpath track (133TN) of the FATO.

Bell 412EP Category-A Pilot Reference Marks

White triangle and corner block markings on perimeter of FATO in accordance with Bell 412EP Category-A flight manual supplement.

Figure 2 – Surface Markings of Heliport



4.6 Flightpath Obstacle Environment

Details of the heliport obstacle environment around the RHH Heliport are presented in the section titled Heliport Obstacle Environment and in Attachment B – Airspace Survey and Analysis of Obstacle Environment.

4.7 Low Intensity Obstacle Lighting

Significant Objects in the obstacle environment around the heliport are identified with flashing low intensity obstacle lights. The elevation of the RHH Heliport to the surrounding terrain and structures results in three lights being required to notify the location of relative obstacles. During the day, the flashing lights are white. During the night, the flashing lights are red.

The location of the lights is illustrated in Figure 3 and Figure 4.

Figure 3 – Location Map of Red Obstacle Lights

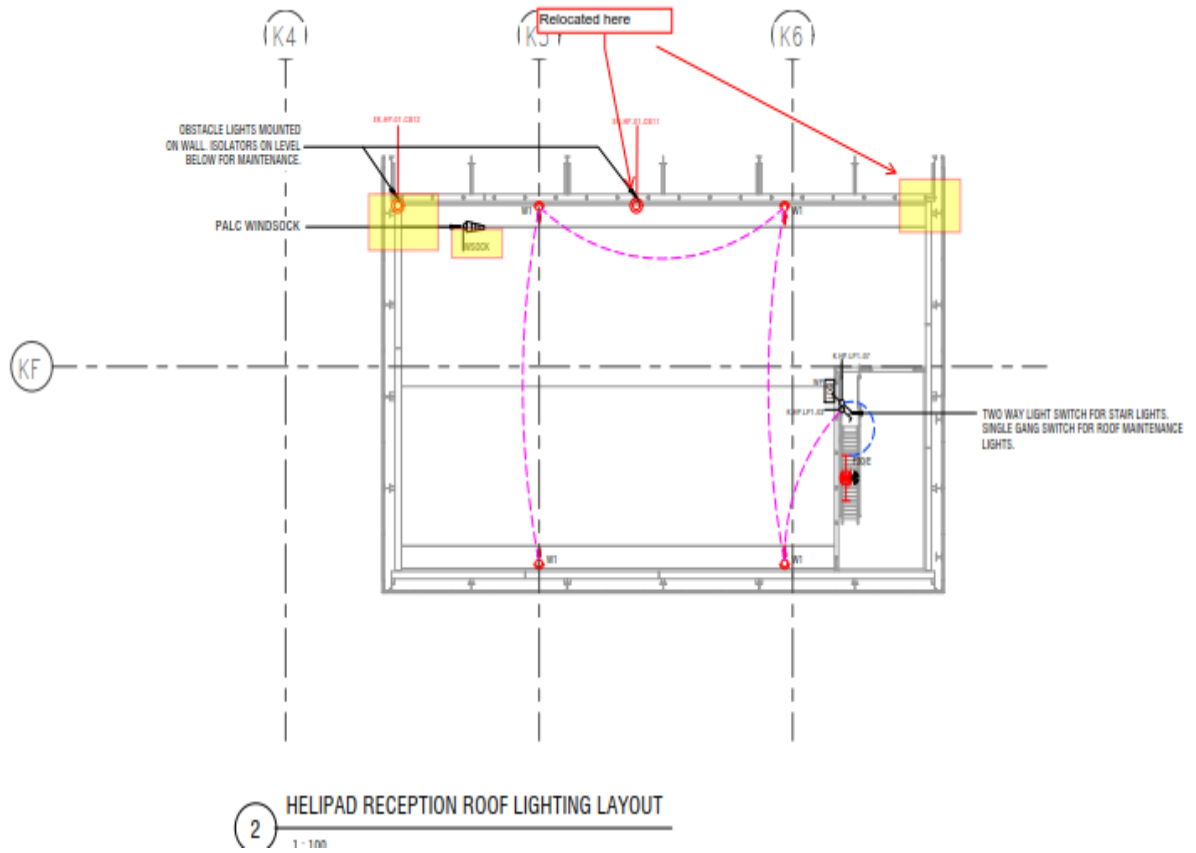


Figure 4 – Location of Red Obstacle Lights on Heliport Lift Lobby



4.8 Heliport Access / Egress Provisions

4.8.1 Access – Emergency Routes

Emergency access routes have been established in the event of both lifts failing or are out of service at the same time and a Helicopter / patient is on the Heliport or in the Heliport Lift Lobby, requiring urgent assistance.

See Section 6.3 Heliport Evacuation and Emergency Access Procedures and Attachment F - Heliport Emergency Access Protocol.

4.8.2 Egress

The primary method of access / egress is through the Heliport Lift Lobby using the K-Block lifts.

Other egress routes from the Heliport are for emergency or maintenance access only.

See Section 6.3 Heliport Evacuation and Emergency Access Procedures and Attachment F - Heliport Emergency Access Protocol.

4.9 Heliport Lift Lobby Equipment

The Heliport Lift Lobby provides a storage space for clinical and Personal Protective Equipment (PPE) required to support the personnel attending the heliport. The manual controls for the heliport lighting as well as radio and telephone communications equipment are also located in this area.

The following support equipment is stored in the Heliport Lift Lobby:

- Oxygen (2 x 'C' Size) – configured as 2 x oxygen and
- Oxygen (2 x 'CD' size) fitted with suction equipment (with 1 x fitted with paediatric suction PLUS 2 x portable rail hooks)
 - available for transport with each patient
 - are to be replaced if not full and
 - are to go to patient before unloading (only when requested).
- General PPE (for isolation) including:
 - rubber gloves
 - disposable gowns
 - eye protection and
 - face masks / visors.
- Personal Protective Equipment including:
 - high visibility vests
 - safety glasses
 - hearing protection and
 - high visibility wet weather gear.
- sharps container (on stand)
- dirty linen skip
- waste bin
- mop and bucket
- cleaning wipes
- additional lighting (torches)
- Neo-Natal Emergency Transport Cot Legs
- Aero-Medical Retrieval Cupboard (stocked by Ambulance Tasmania) – 2 x backpacks
- linen (ambulance sheet, blankets and towels)
- slide sheet and
- drinking water.

The Heliport Officer will be responsible for the daily checking of this equipment and replacement if required.

4.9.1 Fit-Out

- portable airband VHF marine radio (Icom IC-M37E)
- sub-fire indicator panel with Break Glass Alarm(BGA) for Fire Alarm and Deck Integrated Fire Fighting System (DIFFS) Activation
- Pilot Activated Lighting Control (PALC)
 - perimeter markers,
 - surface floodlights,
 - landing guide lights, and
 - Illuminated Wind Direction Indicator light.
- walkway floodlights
- manual DIFFS isolation buttons
- BGA
- fire extinguishers
- WIP telephone
- computer and printer
- hand wash facilities (sink, soaps and paper towels)
- desk phone (to cover emergency code calls)
- wall clock and
- essential power outlets and data points.

Aero-medical Retrieval staff may request additional specialised equipment from the receiving unit for specific patients.

Figure 5 – Heliport Lift Lobby Equipment – Northern Wall

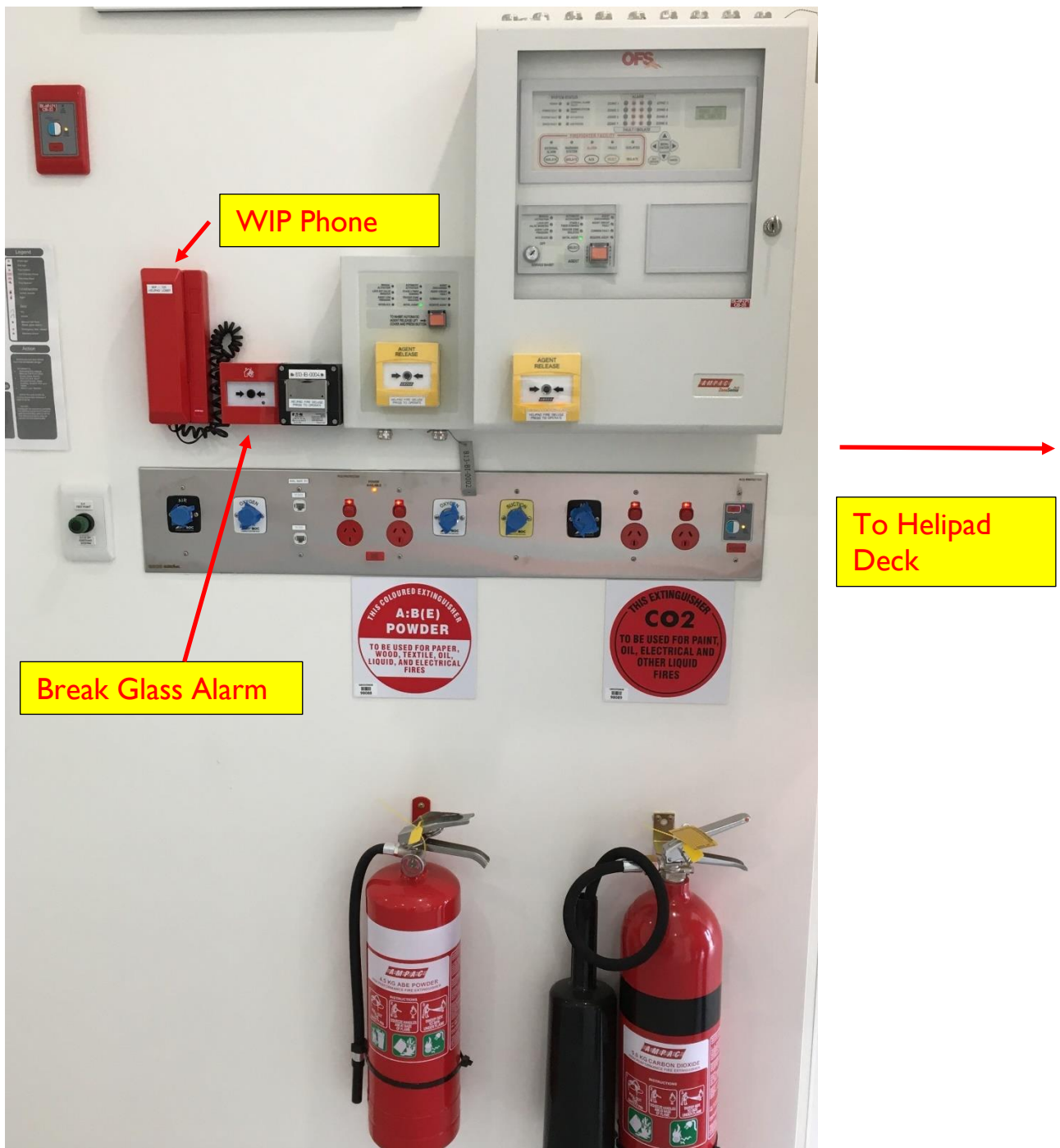


Figure 6 – Heliport Lift Lobby Equipment – Northern Wall – Deck Integrated Fire Fighting System

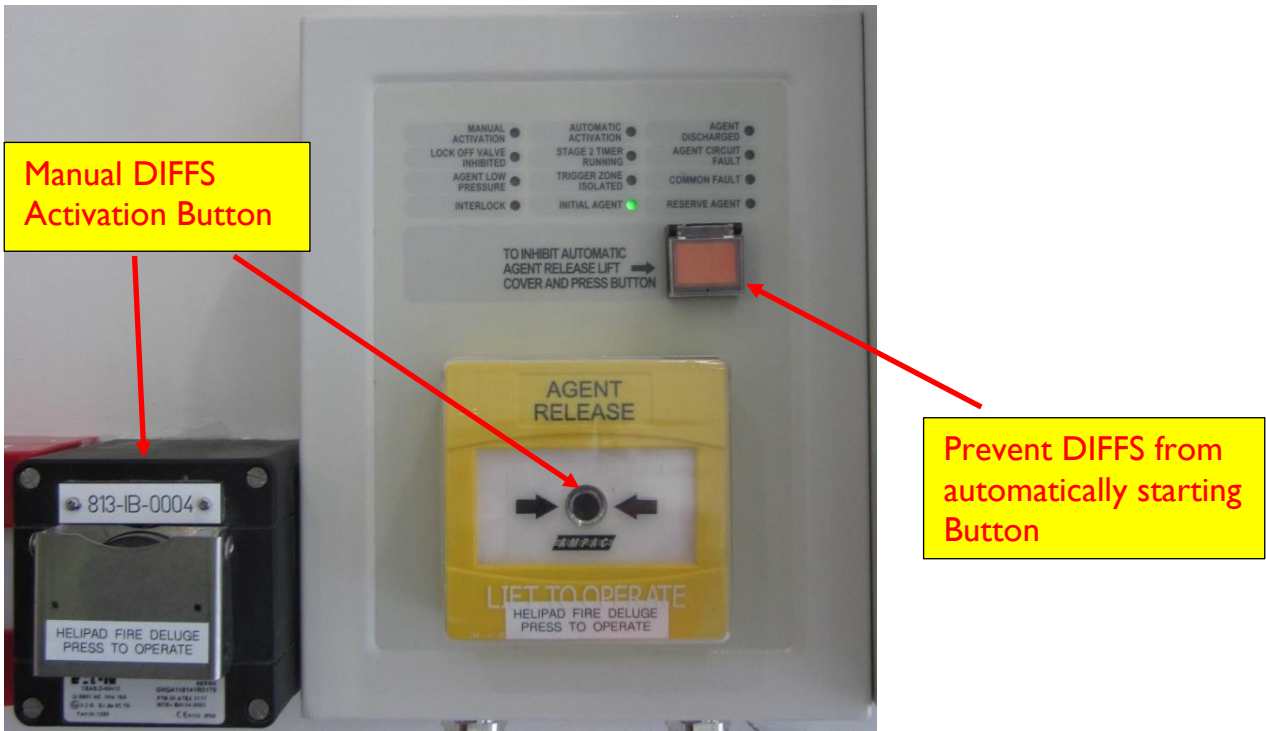
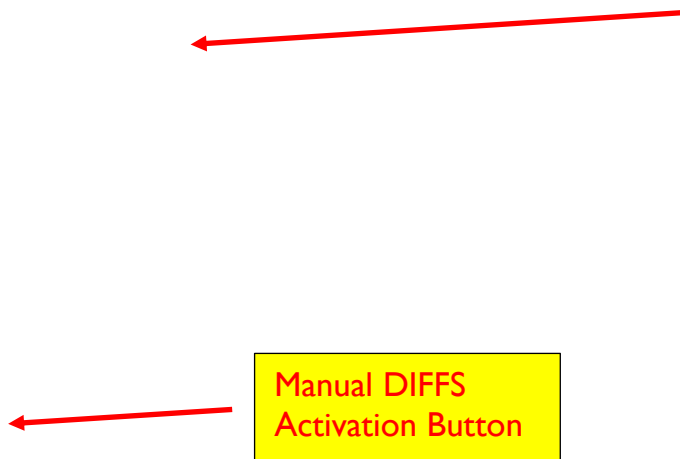
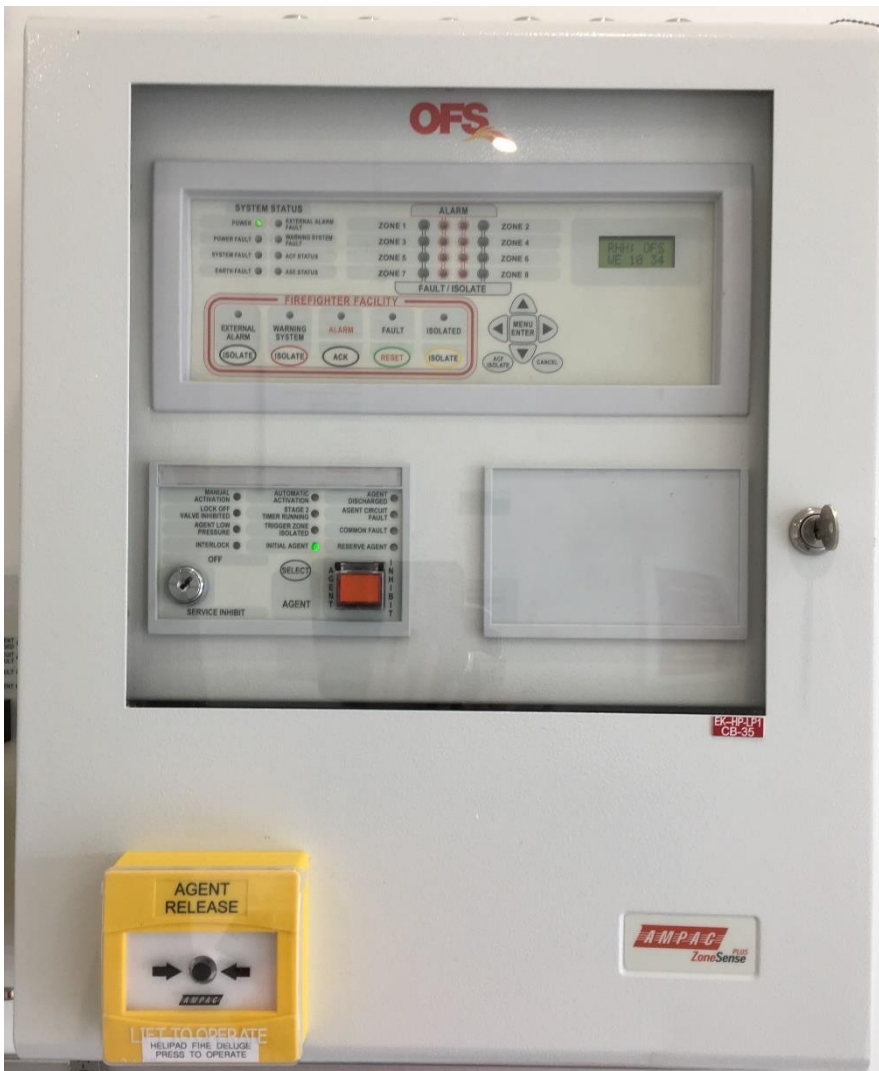


Figure 7 – Heliport Lift Lobby Equipment – Northern Wall – Fire Control Panel





Prevent DIFFS from automatically starting Button

Figure 8 – Heliport Lift Lobby Equipment – Northern Wall – Heliport Lighting Control Panel



To Helipad Deck

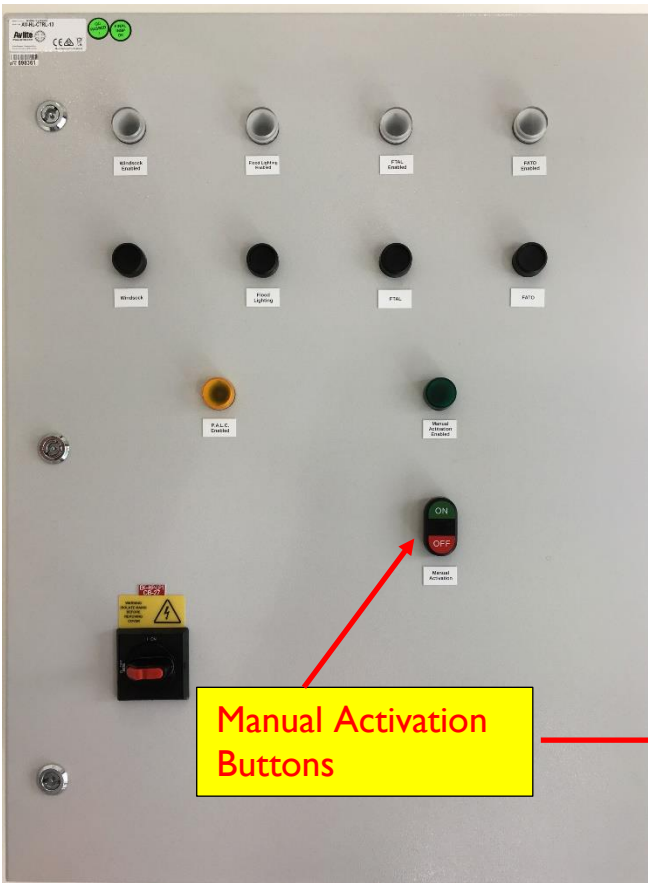


Figure 9 – Heliport Lift Lobby Equipment – Southern Wall

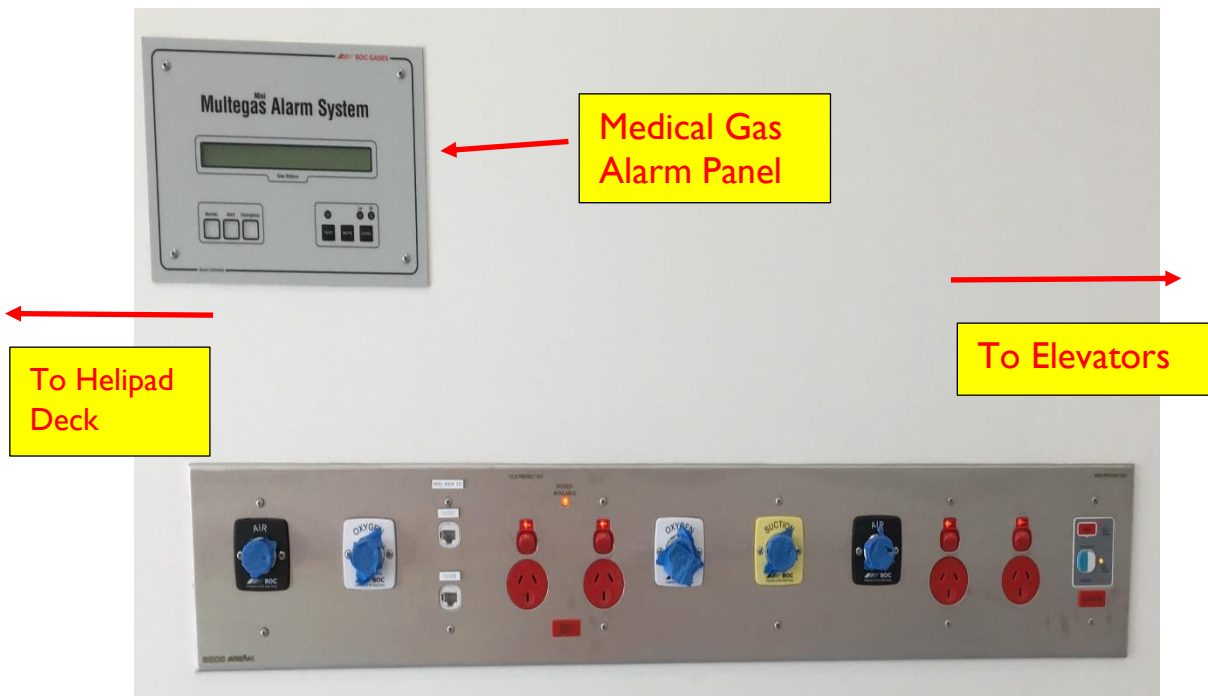


Figure 10 – Heliport Lift Lobby Equipment – Southern Wall – Medical Gas Valves / Indicators

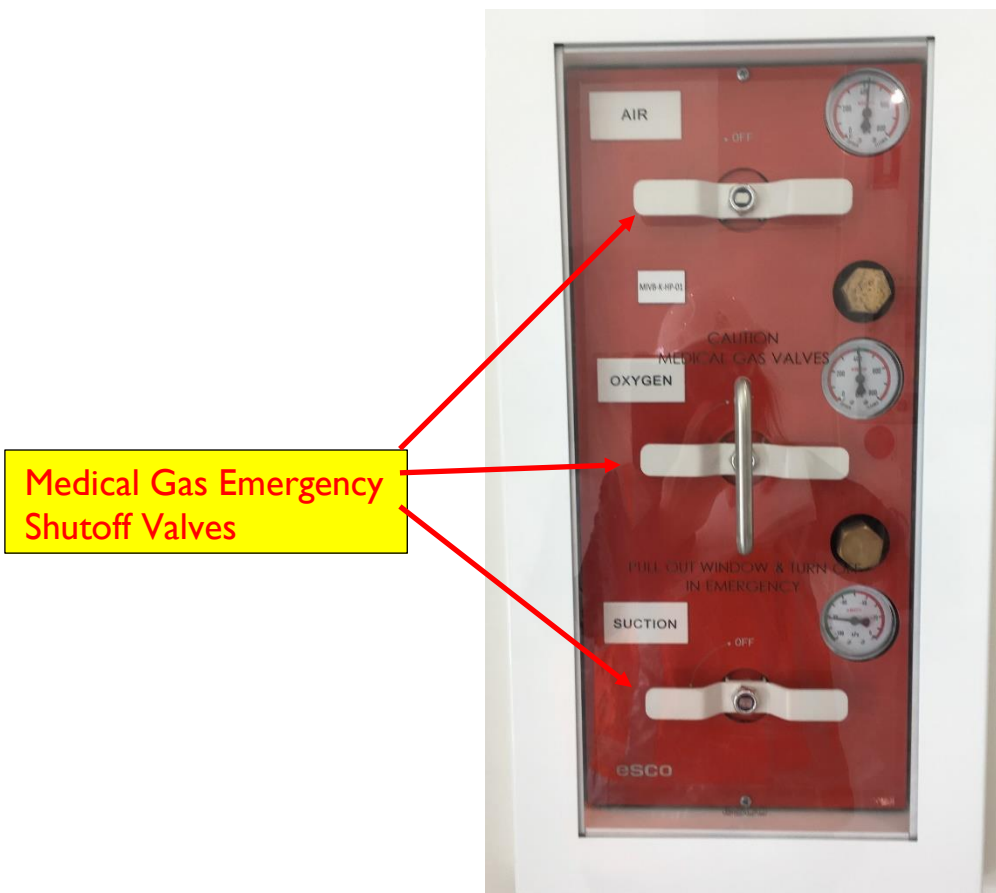


Figure 11 – Heliport Lift Lobby Equipment – Southern Wall – Fire Hose Reel



Figure 12 – Heliport Lift Lobby Equipment – Western Wall – Equipment Storage Cupboards



To Helipad
Deck

4.9.2 External

The following support equipment is located outside the Heliport Lift Lobby:

- Heliport Lift Lobby auto-doors push button entry
- manual DIFFS activation button (at Heliport Lift Lobby Entrance) and
- fire hydrant (in Stairwell 11 – open air stairwell – located diagonally opposite Heliport Lift Lobby).

Figure 13 – Heliport Lift Lobby Entrance (from Helipad Deck)

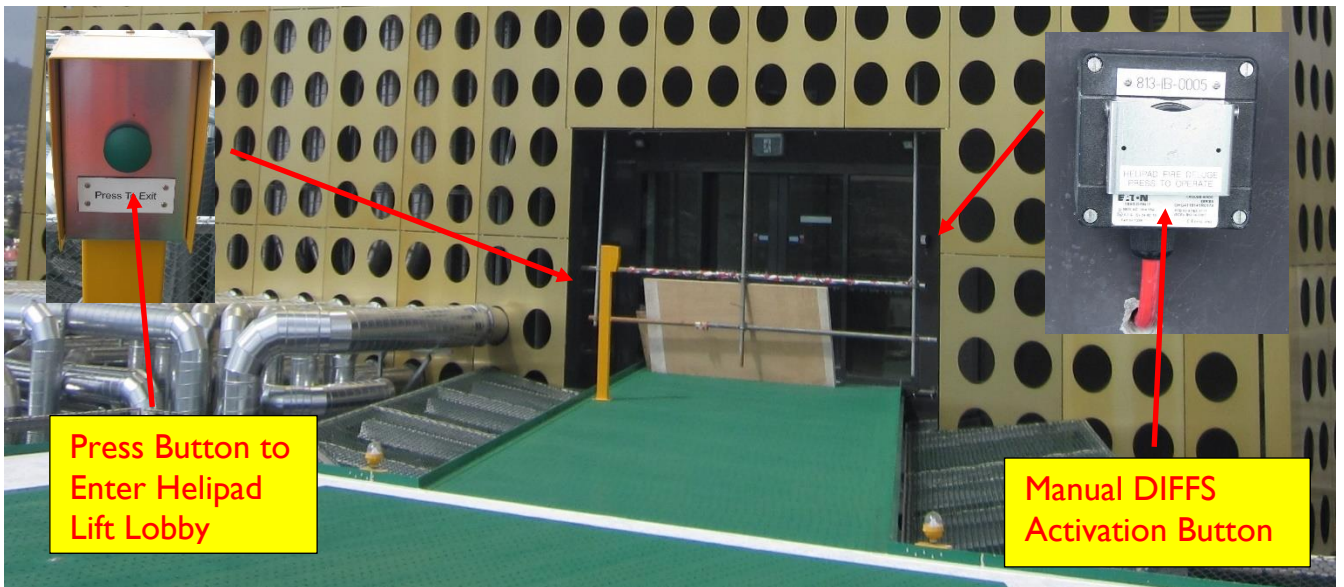


Figure 14 – Heliport Emergency Evacuation Stairs – diagonally opposite Heliport Lift Lobby

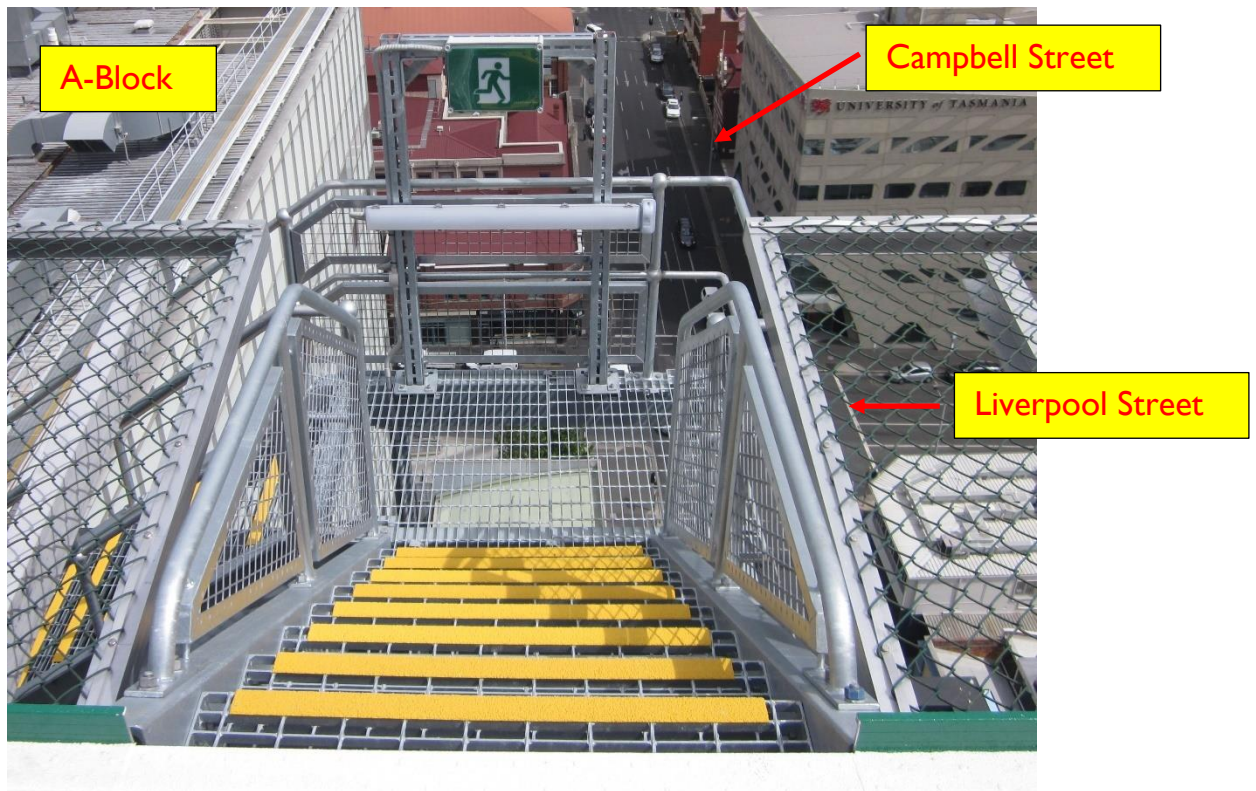
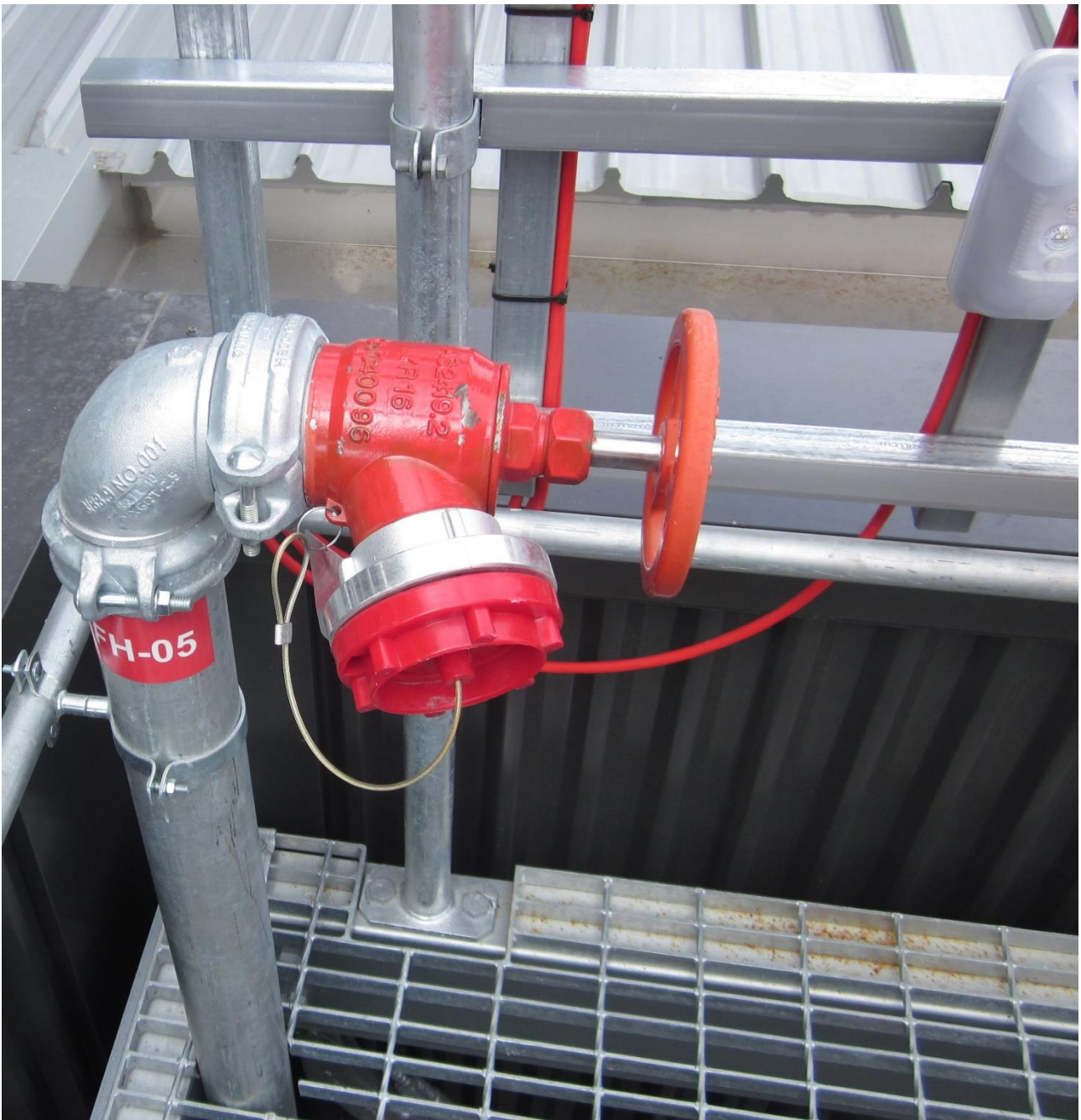


Figure 15 – Heliport Emergency Evacuation Stairs – Second Landing – Break Glass Alarm, WIP Phone and DIFFS Activation Button



**Manual DIFFS
Activation Button**

Figure 16 – Heliport Emergency Evacuation Stairs – Second Landing – Fire Hose Connector



5 Normal Operating Procedures

5.1 Overview

The use of medical transport helicopters for patient transport to and from the RHH ensures optimum health care can be provided for time critical patients. To that end, all patients should be moved from the helicopter to the intended destination within the hospital as swiftly as possible, with medical intervention en route only occurring if absolutely necessary and as requested by Ambulance Tasmania.

The heliport is intended to be used primarily for the transfer of patients and equipment to and from the RHH. It is acknowledged however, that the RHH Heliport may be used on occasions for the transfer of patients from road ambulances through the RHH Heliport. In the event that access to the RHH Heliport for non-RHH patients is requested and approved, the procedures detailed in the Use of Heliport for Transport of Non-RHH Patients are to be followed.

It is also acknowledged that there will be times when Ambulance Tasmania will require access to the Heliport for training purposes and Ambulance Tasmania will provide the RHH with notification of this training. In this instance the Heliport officer is to inspect the Helipad prior to and after use.

At times, there may be a request made for Ambulance Tasmania to conduct non-patient flights to pick up medical personnel and equipment from the RHH Heliport. The sole responsibility rests with Ambulance Tasmania and their pilots as to whether or not this request can be undertaken. Safety, weather and operational requirements are part of the factors when considering such requests and the final decision rests with the Pilot in Command.

In the event that such flights are not possible, Ambulance Tasmania will offer an alternative which may include travelling to Hobart Airport or rendezvousing at an alternative landing site (the Cenotaph) if one is available and it is safe to do so.

5.2 Daily Serviceability Inspections

A daily serviceability inspection is carried out by the duty Heliport Officer to confirm the facility and equipment is ready to change over from STANDBY to ACTIVE mode at any time. The inspection is to occur at the start of everyday at a time when the Helipad lights can be appropriately tested e.g. around sun up. In the event the sun up test does not occur at the appropriate time it will be at 08.00 daily.

Figure 17 – Daily Serviceability Inspection Checklist

Heliport DAILY Serviceability Inspections

Inspection & Checks Completed (✓✗)

Critical:		General:		Notifications:	
------------------	--	-----------------	--	-----------------------	--

Performed By:

Full Name:		Date:	
Signature:		Time:	

CRITICAL CHECKS – HELIPORT SERVICEABILITY		✓✗	Comments
1	Ensure Lifts K7 & K12 are working		
2	Check lift override key is in on heliport key set		
3	Ensure Radio Transceiver is charged / charging and seated correctly in station. VHF channel '6'		
4	Ensure desk phone is ON and working		
5	Check fire panel key is in fire panel door		
6	Turn ON aeronautical lighting: helipad perimeter lights (green), helipad surface floodlights (white), windsock lights (white)		
7	Check heliport auto doors are working		
8	Check walkway lights are ON (outside over auto door)		
9	Complete a check of all external lighting: helipad, walkway, windsock, obstacle (3 second flash interval red or white) Do Not go out on walkway if weather is wet or windy		
10	Check windsock is free from obstructions Do Not go out on walkway if weather is wet or windy. Check windsock from street level		
11	Check operational airspace for obstructions – up and down Campbell St (cranes, drones, etc.)		
12	Check helipad deck for and damage or physical obstructions (damage / debris) Check from lift lobby or walkway only. Do Not go onto Helipad		

13	Check emergency exit route (stair 10) is clear		
14	Turn OFF aeronautical lighting		

GENERAL CHECKS – CINICALLY READY		✓✗	Comments
15	Check Computer is ON and has network access		
16	Clinical equipment is present:		
	A. Rubber gloves (S, M, L, XL) (2 boxes each)		
	B. Disposable Gowns (min. 2 bags)		
	C. Disposable clinical eye protection (min. 20)		
	D. N95 masks (min. 2 boxes)		
	E. Cleaning wipes are present (min. 2 buckets)		
	F. Ambulance Tas. aero-medical retrieval backpacks are present (2)		
	G. Patient slide is present		
	H. Drinking water bottles are present (min. 25 600mL)		
	I. Ambulance Tas. patient trolley & mattress present		
	J. Ambulance sheets present (5)		
	K. Towels present (5)		
	L. Slide sheet (1)		
	M. Sharps container (on stand) present & not full		
	N. Clinical waste bin present & not full		
	O. General waste bin present & not full		
P. Dirty linen skip is present & not full			
17	A. Oxygen Cylinders ('C' size) present & full (2)		
	B. Portable suction units are present and charged/charging (2)		
18	Check lift lobby and cloak room lights are working		
19	Fire extinguishers are present (1xA:B(E) 1xCO2)		
20	Fire hose reel is wound up, no visible damage present and door is closed		
21	Hand basin taps operate and basin drains freely		
22	Check dispensers:		
	A. Soap present (all 3 containers)		

	B. Paper towel present (plus 1 spare)		
	C. Gloves present (S, M, L, XL)		
	D. Sanitiser present (plus 1 spare)		
23	Heliport equipment is present:		
	A. Hi-Vis wet weather jackets (4)		
	B. Hi-Vis vests (4)		
	C. Ear Protection (4)		
	D. Torch (1)		
	E. Safety Glasses (4)		
	F. Prohibited Landing Marker is present (1)		
	G. Tie down straps are present (4)		

NOTIFICATIONS		✓ x	Comments
24	Notify Clinical Manager (0439 405 881) of:		
	A. Heliport Daily checklists (2) completed		
	B. Heliport is in STANDBY mode		
	C. Any consumables or stock which needs replacing		
25	Report any maintenance items to RHH Facilities		
26	Report any security risks to RHH Security Coordinator		
27	File previous day's checklists		
28	Sign off DAILY Serviceability Inspections (all 3 sections)		

5.3 Notification of a Planned Helicopter Arrival

The normal and expected method of notification of a patient transport arriving by Helicopter is through the Ambulance Tasmania State Operations Centre Duty Manager to the Clinical Manager via the RHH Switchboard (Priority Number 6166 6744) as the first point of notification of an incoming Helicopter Medical Transport Flight. If mobile phone reception is not available at Clinical Managers location, there is an RHH issued radio at the State Operations Centre which can be utilised. If the Clinical Manager is unavailable, then contact the Patient Flow Manager through the same process.

The Clinical Manager is to be the first point of contact within the RHH in relation to an incoming Helicopter Medical Transport Flight and must immediately contact the Heliport Officer to prepare the helipad for ACTIVE mode. **If any other staff member of the RHH is advised (by an external body) of an incoming Aero-Medical Retrieval helicopter, they are to call the Clinical Manager immediately.**

The following details are expected to be provided by the Ambulance Tasmanian State Operations Centre:

- estimated time of arrival of the helicopter
- the Helicopter call sign – expressed as a POLAIR number
- number of patients to be transferred to the RHH
- any special needs associated with the transfer of the patient(s) for example:
 - bariatric patient
 - trauma patient
 - operating theatre patient and
 - neo-natal or paediatric patient.
- the accepting team (if known) for example:
 - Emergency Department
 - Intensive Care Unit
 - Special Care Nursery and
 - Cardiology.

The Helicopter Medical Crew will call the receiving Clinical Consultant to provide relevant clinical details. If required, the receiving unit can contact the Aero-Medical Retrieval Consultant on the helicopter via the Ambulance Tasmania State Operations Centre.

Ideally, at least 30 minutes notice should be provided to the RHH to ensure that all key stakeholders are aware of an incoming patient(s) and can prepare for the arrival. This includes allocation of bed space within the receiving unit at the RHH and whether there are any particular requirements (eg oxygen required).

Notes: If a destination within the RHH is not provided then it may be that a bed has not been arranged.

On receiving notification of an in-bound Helicopter Medical Transport Flight, the Clinical Manager is to contact the Heliport Officer, to inform them of the estimated time of arrival, the number of patients to be transferred and any special requirements in order to prepare the Heliport.

Approximately 5 minutes prior to landing, the Helicopter Medical Crew is to contact the Heliport Officer via radio communications to confirm the estimated time of arrival, whether there are any change in particular requirements (eg oxygen required). This information must be communicated to the Clinical Manager immediately.

The Heliport Officer is to contact the Helicopter crew, at the appropriate stage in the ACTIVE mode checklist, and note the Heliport is in ACTIVE mode for landing.

On approach, the Helicopter crew will confirm with the Heliport Officer via VHF marine radio “READY to land”. The Heliport Officer is to confirm with the Helicopter crew whether the Heliport aeronautical lighting has been activated.

5.4 Procedures for Heliport Activation and Patient Reception

The Standard Operating Procedures and activities ahead of a helicopter arrival and patient reception are illustrated in the flowchart at Figure 18. Activities associated with inspections of the heliport, communication with the helicopter, activity whilst the helicopter is on and when it has left the Heliport are detailed in Section 5.8 Activities Before Helicopter Arrival. Related actions, such as construction work within flightpaths, are noted as sub-processes of the flowchart.

5.5 Communications with Ambulance Tasmania and Helicopter

For all radio communications, a radio link is established between the RHH Heliport Officer and the helicopter via a VHF marine radio operating on the Ambulance Tasmania operational VHF Marine Channel 6 using call sign “POLAIR 71, 72 or 73”.

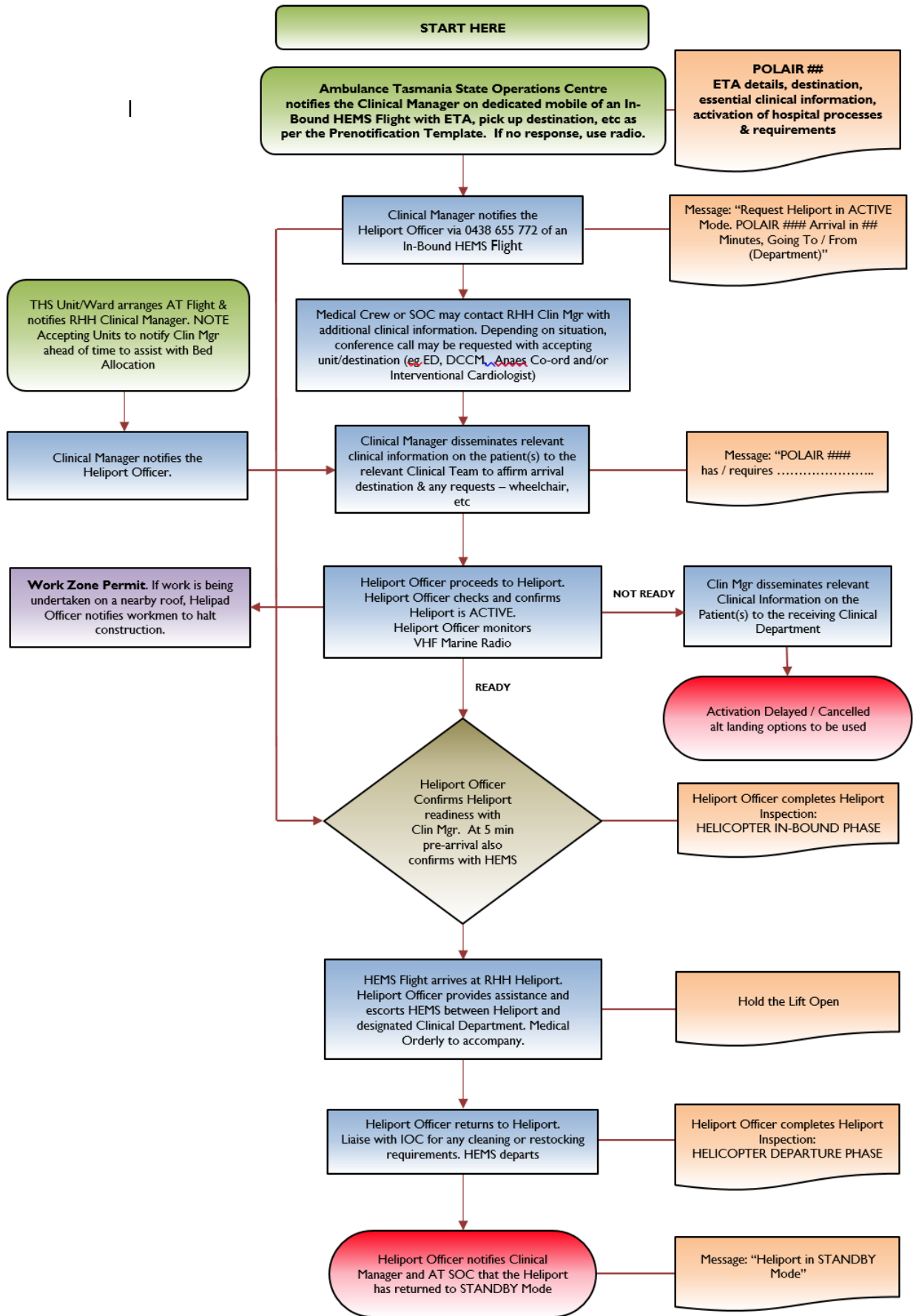
NOTE: the frequency is not allocated / private – the channel to be used is an open marine VHF Channel.

Further details of radio operating protocols and phraseology is presented in Attachment C to the manual – Radio Communications between Heliport and Helicopter.

The link is established primarily to relay information in regard to the status of the Heliport for an arriving helicopter. The Helicopter Medical Crew of an inbound helicopter at the earliest opportunity should contact the Clinical Manager and advise the estimated arrival time and whether there are any special requirements including equipment necessary for the patient(s) transfer. This will ensure that the Heliport Officer and, if required, support personnel appropriate to the patient’s condition are assembled in the Heliport Lift Lobby ready for the arrival.

If there is no contact established in response to an inbound call from the helicopter, the Pilot can activate the heliport through the use of the Pilot Activated Lighting Control (PALC) using the VHF airband radio link. The Building Management System controls, with alter air intake filters to prevent the helicopter fuel fume ingress into the adjacent buildings, are manually operated inside the lift lobby.

Figure 18 – Helicopter Activation / Patient Transport Flowchart



5.6 Heliport Access Control

Access to the Heliport is controlled at all times. Before the arrival or departure of a helicopter the Heliport and adjacent rooftop areas of K and A block will be checked to ensure maintenance or other personnel are clear of the helicopter operational area including associated flightpath regions. **Note:** a work permit is required for roof access and the permit will require the Heliport Officer is notified of all access, times and contact details.

There will be no personnel permitted on the Heliport other than helicopter crew while the helicopter rotors are turning during the landing or take-off phase of flight.

- the primary method of access / egress is from within the hospital through the Heliport lift lobby by lift
- the secondary method of access / egress is via the internal stairwells 6, 7 and 10. Signage is in place to guide relevant staff to the heliport lift lobby.
- the tertiary method of access / egress is via the stairway at the corner of the Heliport diagonally opposite the Heliport Lift Lobby area and walkway linking to the K11 Plant Room.

Egress options are illustrated in Section 6.3, Figures 21 to 26.

Access options are documented in Attachment F – Heliport Emergency Access Protocol.

5.7 Use of the Heliport for Transport of Non-RHH Patients

The following procedure will be used in response to requests made to the RHH requesting permission to use the RHH Heliport for operations other than RHH patient transfers or approved training flights.

- The RHH Heliport Manager / Clinical Manager will notify Ambulance Tasmania State Operations Centre of the approval for the proposed operation and that the heliport is available in STANDBY mode. It is anticipated that the Ambulance Tasmania State Operations Centre will provide details of the intended purpose (ie pick-up / drop-off and associated vehicles and personnel).
- Patients transported to the RHH by road ambulance will have access to the rooftop heliport via the road ambulance reception area of the Emergency Department (off Liverpool Street) where RHH staff will liaise with the arriving vehicle / team.
- The handover of patient to or from the Helicopter Medical Crew will occur in the relevant department of the hospital as the Heliport Lift Lobby is not clinically equipped.

The number of non-RHH patients will be monitored by the Heliport Manager and the use / approval process reviewed dependent on frequency and resources utilised.

5.8 Activities before Helicopter Arrival

Prior to the arrival of the helicopter, the Clinical Manager will contact the Heliport Officer and request that the Heliport Officer conduct a visual inspection of the Heliport and relevant roof tops to confirm that it is clear of any objects likely to pose a danger to a landing helicopter and to check the lighting and ancillary equipment. This inspection and checking activities are undertaken 10-15 minutes before the nominated estimated arrival time, or as soon as possible if less time provided.

The inspection and reporting checklist used by the Heliport Officer ahead of the helicopter arrival take the heliport from STANDBY mode to ACTIVE mode is shown in Figure 19 – Heliport Inspections during ACTIVE Mode.

The Heliport Officer is to activate the heliport aeronautical lighting as part of the pre-landing inspection and the heliport aeronautical lighting is to remain on ahead of the helicopter arrival. Alternatively, the lighting can be activated by the Pilot using the Pilot Activated Lighting Control VHF radio link or the Helicopter Crew can use night vision goggles.

On completion of the inspection, the Heliport Officer will maintain a record of completed ACTIVE Mode Inspection Checklist (see Figure 19) for quality assurance.

The Heliport Officer will make a radio call on the Heliport operational frequency VHF Marine Channel 6 to confirm with the Helicopter crew that the Heliport is ready. The Heliport Officer is to advise:

- that the RHH Heliport has been inspected
- whether the Heliport aeronautical lighting has been turned on and
- whether the Heliport is in ACTIVE mode.

Further details of the radio calls to be made are presented in Attachment C – Radio Communications between Heliport and Helicopter.

When the Heliport Officer is notified of an incoming aeromedical transport flight, the Heliport Officer is to activate the air intake shutdown by pressing the manual push button in the Heliport Lift Lobby. This will activate the charcoal filters.

NOTE: It will take less than a minute to close but will need more time to stabilise the air flow.

If the Heliport Officer declares that the Heliport is unsafe to land on as a result of a Daily Serviceability Inspection or an ACTIVE Mode Inspection, the Heliport Officer is to notify the Clinical Manager and the Heliport Manager or Safety and Emergency Coordinator, and place the prohibited landing marker over the Final Approach and Take-off Area / Touchdown and Lift-off Area.

Note: This task requires 2 people to complete and may not be possible in adverse weather conditions.

The Clinical Manager / Safety and Emergency Coordinator will notify Ambulance Tasmania State Operations Centre, activate a Code **YELLOW – Heliport Landing Site Outage** and consider activating the backup alternate Landing Site (the Cenotaph). If the alternate Landing Site (the Cenotaph) is activated, the Clinical Manager / Safety and Emergency Coordinator will notify the Ambulance Tasmania State Operations Centre and indicate that patient transfers can re-commence from the Cenotaph Landing Site.

Figure 19 – Heliport Inspections During ACTIVE Mode

Heliport ACTIVE Mode Inspection Checklist

Inspection & Checks Completed (✓✗)

Helicopter In-Bound Phase		Helicopter Out-Bound Phase	
----------------------------------	--	-----------------------------------	--

Performed By:

Full Name:		Date:	
Signature:		Time:	

Flight Details:

Helicopter ID:	POLAIR	Notified Time (24hr Format):	
Touchdown Time (24hr Format):		Lift-Off Time (24hr Format):	

Helicopter In-Bound Phase		✓✗	Comments
1	Go to Heliport lift lobby and hold lift K12 (K7 is back-up)		Use lift override key in ATS key switch & turn to "I". See instructions
2	Confirm the DAILY Serviceability checklists have been completed within last 24 hours		If inspections have not been done, complete them
3	Ensure Radio Transceiver is ON & volume is up (VHF channel '6')		Keep radio with you
4	Turn ON BMS Helicopter arrival system		See instructions
5	Turn ON aeronautical lighting: helipad perimeter lights (green), helipad surface floodlights (white), IWDI windsock lights (white)		See instructions
6	If Workers are on helipad or on rooftop, ensure they evacuate the area		
7	Advise Clinical Manager (0439 405 881) the heliport is in ACTIVE mode		
8	Await POLAIR# to call on Radio Transceiver and notify them the heliport has been checked and is in ACTIVE mode		See instructions for correct words
9	Await the Helicopter's safe landing		Push fire system START button if fire

	Pilot may contact via Radio Transceiver to advise:		<i>Consumables may be requested by POLAIR# via radio prior to landing</i>
	A. Any required consumables		
	B. Helicopter shutdown complete & OK to approach helicopter (only if requested)		
10	Escort helicopter medical crew to receiving clinical department		<i>Use lift override key in ATS key switch to control & hold lift</i>

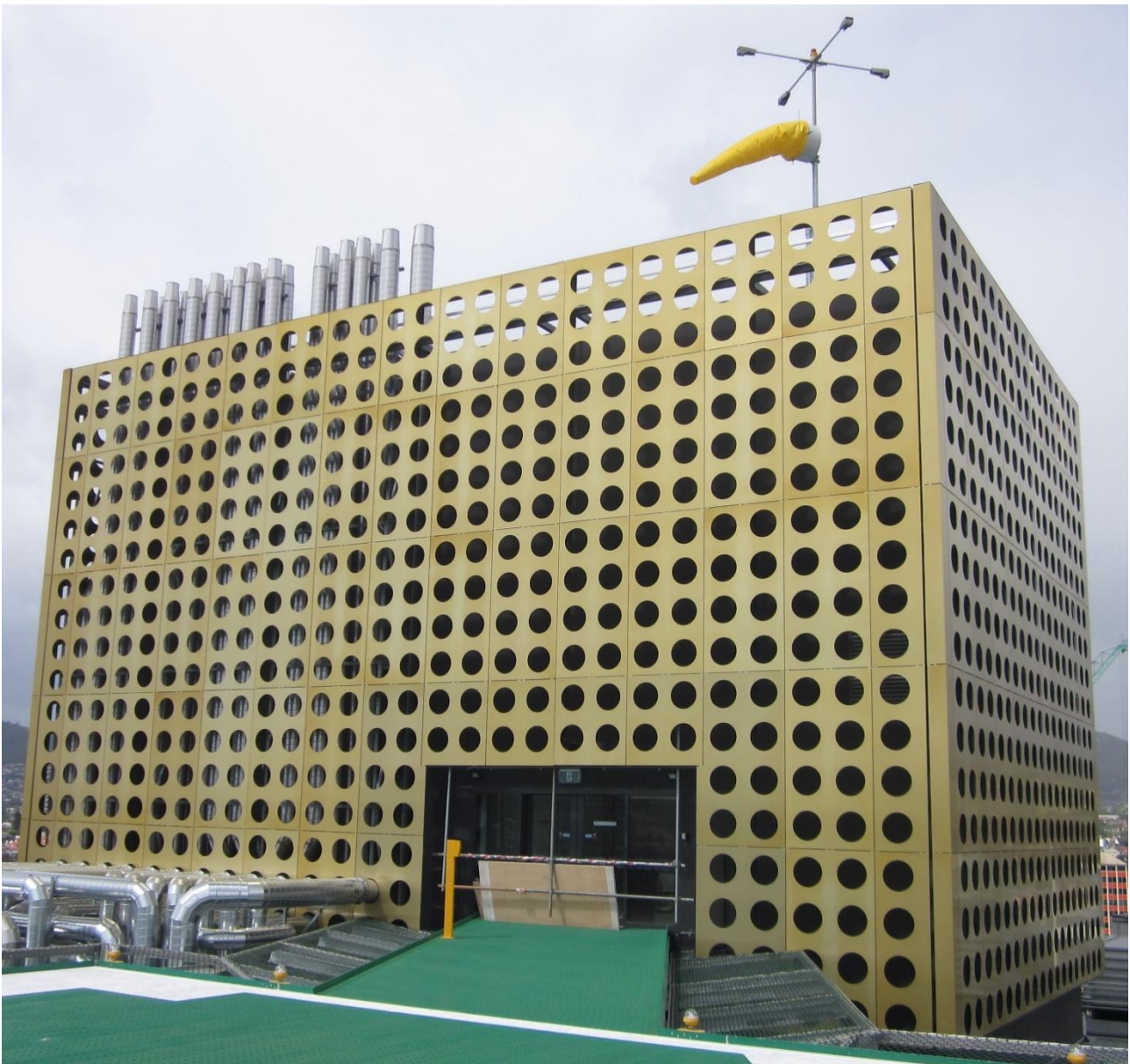
Helicopter Out-Bound Phase		✓✗	Comments
11	Escort helicopter medical crew to heliport lift lobby		<i>Use lift override key in ATS key switch to control & hold lift</i>
12	Check aeronautical lighting is ON		<i>Perimeter, surface floodlights and IWDI lights</i>
13	Release lift K12 (or K7) & replace lift override key		<i>Use lift override key in ATS key and switch to "0"</i>
14	Wait in heliport lift lobby while crew inspects helicopter		
15	Remain at heliport lift lobby until helicopter departs		
16	Complete a surface inspection from the heliport lift lobby		
17	Turn OFF aeronautical lighting: helipad perimeter lights (green), helipad surface floodlights (white), IWDI windsock lights (white)		
18	Turn OFF BMS helicopter arrival system		<i>Twists off</i>
19	Advise Clinical Manager Personal Information the heliport is in STANDBY mode and notify of any consumables needing replacing.		
20	Ensure Radio Transceiver is placed back in base & charging		
21	Complete & sign ACTIVE mode inspection checklist		

5.9 Activity After Helicopter Touchdown

Following the helicopter touchdown on the landing area, the Heliport Officer and any accompanying RHH personnel are to remain inside the Heliport Lift Lobby unless advised by radio from the Helicopter crew indicating that the aircraft shutdown is complete, and it is ok to open the doors and approach the helicopter.

On receiving this instruction, the Heliport Officer will activate the area lights and floodlights and release the Heliport Lift Lobby doors to allow access to the Helicopter. Alternatively, the Flight Crew can open the doors by activating the green external door release (Figure 13) positioned adjacent to the Heliport Lift Lobby doors as outlined in the section 4.8 Heliport Access / Egress Provisions.

Figure 20 – Heliport Lift Lobby Entry (External)



The Clinical Manager will arrange via Patient Flow Assistant or Medical Orderly to collect any requested equipment or consumables and meet the Heliport Officer who will escort them to the heliport lift lobby and provide assistance in the patient transfer if requested to do so.

The Heliport Officer will accompany the Helicopter Medical Crew to the relevant area of the hospital. The helicopter flight crew can remain on the heliport level or once the aircraft is secure, leave the Heliport. Proximity swipe cards are provided to the helicopter crew so that they have access to and from the Heliport.

RHH Clinical Staff other than the Heliport Officer will not normally be involved in heliport reception and patient unloading. All patients intended for the RHH will be transported to / from the relevant / appropriate department by the Helicopter Medical Crew and be escorted by the Heliport Officer. If urgent or clinically required, RHH clinical staff may attend the heliport for patient transport when escorted by the Heliport Officer.

5.10 Helicopter Departure

The Heliport Officer will accompany the helicopter crew to the Heliport and undertake the pre-take off checks ahead of a helicopter departure.

Note: The Heliport Officer will carry the internal mobile phone (0438 655 772) and will be contacted by the helicopter medical crew for the return trip (post clinical handover) from the RHH department to the Heliport.

5.10.1 Prior to Departure

Prior to the departure of the helicopter, the Heliport Officer will:

- conduct a visual inspection, from the lift lobby, in conjunction with the helicopter crew of the Heliport to confirm that it is clear of any objects likely to present a possible danger to the helicopter and
- activate the Heliport lights for both daytime and night time departures. Activation of the lights also activates controls in the Building Management System for air intake control.

If the windsock and heliport lights have timed-out or the TMTOL indicator on the Pilot Activated Lighting Control System panel is flashing, they can be re-activated in the Heliport Lift Lobby by the Heliport Officer using the Pilot Activated Lighting System control panel or by the pilot using the helicopter VHF radio link.

5.10.2 Following Departure

Following the departure of the helicopter, the Heliport lights are to stay on for 30 minutes.

The Heliport Officer will undertake an inspection of the heliport surface to check for the presence of any objects or fluid spills on the heliport. The Heliport Officer is to immediately notify the Helicopter crew, via the VHF radio, if any fluids or objects originating from the helicopter are found on the heliport or observed falling from the helicopter. The Clinical Manager should be notified as soon as practical and will liaise with Ambulance Tasmania State Operations Centre of the inspection findings.

5.11 Intervention by RHH Medical Staff

The priority of the Helicopter Medical Crew is to deliver the patient to the area of the hospital best equipped to manage the patient. However, if the condition of the patient determines it necessary then the Helicopter Medical Crew may call for support from an RHH medical team.

A Medical Emergency Team (MET) may be called to any location in the hospital but if a MET has been requested to meet the incoming helicopter then the MET will meet the Helicopter Medical Crew in the Heliport Lift Lobby. Normal clinical procedures apply thereafter. The duty heliport officer will meet the MET at ground floor K Block back of house lift lobby and escort them to the heliport lift lobby awaiting further instruction from the Helicopter crew.

5.12 Picking-up of Clinical Staff

On occasion the helicopter may land only to pick up a clinical team or equipment from the RHH and then immediately depart. All the procedures described above still apply, including the non-use of hot loading techniques. The clinical department initiating the pickup is responsible for gaining approval from the Heliport Manager or Clinical Manager, who in turn will notify the Heliport Officer to arrange an escort to the Heliport Lift Lobby. The Heliport Officer in attendance has the authority to ensure that no-one exits the Heliport Lift Lobby until given the all clear by the pilot.

5.13 Hot Loading / Unloading is NOT a Normal Procedure

Normal operation procedures exclude the use of hot loading or unloading where the helicopter rotors continue to turn. In the event that situations such as a mechanical fault preventing engine starting exists, hot loading may occur but will be considered an abnormal situation.

Safety Note:

The Helicopter Medical Crew will brief any RHH personnel involved in a hot load situation ahead of leaving the Heliport Lift Lobby. Safety practices in the vicinity of helicopters is detailed further in Attachment A.

6 Emergency Response Procedures

6.1 Introduction

A Heliport Emergency is any event that jeopardises the staff, the patients or the physical structure of the Hospital as a result of an incident on or in close proximity to the Heliport.

This definition covers a broad spectrum of possible occurrences, both natural and human-based in nature.

In broad terms there are five aspects of Heliport operations that may create an emergency situation:

- helicopter
- heliport
- patient
- personnel and
- special situations.

Emergencies involving the helicopter would be considered as a helicopter crash event which may include a hard landing with or without an associated fire, and require an immediate response. The likelihood of significant fuel or other liquid being released from the helicopter without a crash event is extremely unlikely and would involve the crash event response if it did occur. Other events such as the helicopter becoming assessed as unserviceable while on the Heliport is unlikely to be an emergency requiring immediate action, other than possible considerations of patient welfare if a patient is involved.

Emergencies involving the heliport would be extremely rare as events which may result in the heliport being unserviceable would be detected in advance and be advised to the Heliport Manager for rectification action and to the Ambulance Tasmania State Operations Centre for consideration in medical transport tasks assignments.

Emergencies involving patients are likely to relate to changes in their clinical condition when the helicopter medical crew may require assistance from RHH personnel.

Emergencies involving personnel other than patients may occur following slips or falls or injuries related to work being undertaken by tradespersons / contractors, noting that hot loading of the helicopter is not a normal procedure.

Other events may occur which are difficult to identify in advance and whilst not emergencies requiring an immediate response, they may require special attention or a rapid response. In the rare situation where a hot loading is required (that is when the engines are not shut down and rotors may be turning) special attention to activities are required.

Unique DIFFS (deck integrated firefighting system) activation buttons and Manual Call Points (Break Glass Alarms) also exist in the Heliport Lift Lobby, on the door frame (outside) and on the first landing of the stairwell II Evacuation Stairs. Activation of these activates the Deck Integrated Fire Fighting System and standard fire alarm response, including a direct notification to the Tasmanian Fire Service.

This section of the Heliport Operations Manual provides details for responses to heliport related emergencies. The response to and management of such emergency events are defined within the RHH Emergency Response Procedures.

6.2 Actions in the Event of a Heliport Emergency

RHH staff who attend the heliport are not emergency response personnel and consequently the primary response of RHH personnel in a heliport emergency is to activate an Emergency Code (as per RHH Emergency Response Procedures) and to communicate with the RHH Emergency Management Team via the Warden Intercom Phone (WIP).

The principal differences in responding to an emergency on the Heliport compared to an emergency situation elsewhere in the hospital are:

- The Heliport features a passive fire detection capability linked to an active Deck Integrated Fire Fighting System which is activated automatically by fire source detectors located on the Heliport deck perimeter. Manual activation of the Deck Integrated Fire Fighting System is also available via the Break Glass Alarms or DIFFS activation buttons in the Heliport Lift Lobby, at the auto-doors (outside) and the emergency egress stairs (as a backup). The Heliport is also equipped with fire hydrants and hose reels which are intended to be used by trained Fire Department personnel rather than any RHH or Ambulance Tasmania personnel.
- The need to notify the Ambulance Tasmania State Operations Centre of the non-availability of the heliport.

Nonetheless, the local knowledge held by the Heliport Officer regarding the available systems and response procedures is paramount to safe operations and effective response to a Heliport emergency.

6.2.1 Helicopter Emergencies

The response to emergencies involving the helicopter will include immediate notification to the Chief Warden who will alert emergency services (ie Ambulance Tasmania, the Tasmanian Fire Service and Tasmanian Police) via the Switchboard. Communications with the Chief Warden will be made using either the WIP or the internal telephone system (222) which is located in the Heliport Lift Lobby. The role of the area Warden will be adopted by the Heliport Officer until emergency services arrive.

If the helicopter emergency results in a fire on the Heliport area, the automated Deck Integrated Fire Fighting System can be expected to operate, noting that it may take up to 30 seconds for the water to pressurise the in-deck nozzles. The Heliport Officer should anticipate this time delay but be prepared to press a Break Glass Alarm (in the Heliport Lift Lobby – see Figure 5) or use a manual DIFFS activation button (3 x located on the fire system panel – see Figures 6 and 7), at the entrance to the Heliport Lift Lobby from the Helipad Deck (see Figure 13) and on the Second Landing of the Heliport Emergency Evacuation Stairs diagonally opposite the Heliport Lift Lobby (see Figure 15).

In the event of a helicopter crash, the Heliport Officer as the area Warden, will assist the coordination of any approach to the site and assistance to survivors, if and when such approach is safe. Extrication of survivors or deceased is fundamentally the responsibility of professional ambulance and fire brigade responders.

6.2.2 Guidelines for RHH Personnel in the Event of a Helicopter Emergency

- Although there may be no evidence of fire, the possibility of fire is ever present and extreme caution must be exercised in approaching the accident site.
- As hospital personnel you are not trained Rescue Personnel / Fire Fighters:
 - do not place either yourself or your colleagues in a position of risk
 - do not take actions without considering the potential outcomes and
 - do not become a victim yourself.
- PRESERVE – the accident site as intact as possible for investigators.
- As in all emergency situations the principal response for all personnel in the vicinity of the heliport during an emergency situation is:

MOST IMPORTANT
Report the Emergency
Follow Procedures
Do not become a victim yourself

If survivors are in the wrecked aircraft and rescue appears feasible, remember:

- **This is not a duty of THS staff.**
- Only approach the aircraft if you are confident it is safe to do so and take a moment to think am I putting myself and others at risk.
- Do not approach the helicopter until the blades have stopped moving.
- The safest approach to the crash is generally from upwind, to the side of the aircraft fuselage.
- It will be easier to access the wreckage through hatches, rescue points or aircraft doors or emergency exits. Do not move any controls, handles or levers in the cockpit.
- Before trying to remove survivors, always unfasten or cut the seatbelt and shoulder harness and remember to disconnect the radio cord to the helmet or headset. If survivors are wearing helmets leave them on until you have them clear of the wreckage.

Each and every piece of the aircraft, its location, and its exact position is important to investigators in determining the sequence of events, causes of the accident, and injuries involved, nothing should be disturbed, other than that necessary to rescue survivors.

If there are obvious fatalities, the bodies should not be disturbed or moved until the Coroner makes a positive identification, since the location of bodies may help determine significant facts about the accident.

6.2.3 Heliport Emergencies

Whilst heliport unserviceability can be expected for events such as longer duration maintenance or adjacent works, it is unlikely that an emergency situation would arise that had not been detected during normal inspections. A failure of any heliport system would create an emergency situation only if a helicopter arrival is imminent.

In the event of a heliport emergency, the Heliport Officer will advise the inbound helicopter by a PAN call using the Marine radio transmitting on VHF Marine Channel 6. Details of communication protocols and appropriate phraseology is presented in Attachment C to this manual.

6.2.4 Patient Emergencies

Emergencies arising in relation to patient conditions will generally relate to a deterioration of the patient's clinical condition and additional attendants or equipment may be required.

If requested by the Helicopter Medical Crew and within the capabilities of the individual Heliport Officer in attendance, the Heliport Officer may provide the requested assistance.

The Helicopter Medical Crew will liaise with the Clinical Manager and/or receiving clinical team if there is a patient emergency.

The meeting point will be the Ground Floor back of house lift lobby in K-Block.

Discussion of the patient's clinical condition will not normally occur on the Marine radio operated by the Heliport Officer which is intended for airborne operational use.

6.2.5 Personnel Emergencies

Emergencies involving personnel in attendance at the Heliport need to be notified to the Clinical Manager via mobile phone without delay. An SRLS will need to be completed.

6.2.6 Special Situation

Special situations are events that may not create an emergency situation where an immediate response is required but which have the potential to affect the availability of the heliport until the situation is rectified. These events are difficult to define other than being outside the activity groups listed above.

Without creating an emergency situation where an immediate response is required, it is imperative that a timely response to the high level alarm is initiated to return the heliport to operational ready status.

6.3 Heliport Evacuation and Emergency Access Procedures

It is important that this section is read in conjunction with the RHH Emergency Response Procedures.

In the event that a heliport emergency situation occurs and it is necessary to evacuate the heliport, the following procedures and considerations are to be implemented:

For emergencies, the generic RACE principle or AARR principles may be applied as follows:

RACE stands for:	AARR stands for:
<ul style="list-style-type: none"> • REMOVE those in immediate danger ONLY if it is safe to do so. • ALERT other staff by calling *222 and if Fire and/or Smoke, by breaking the closest break glass alarm (manual call point). This will automatically occur when the Deck Integrated Fire Fighting System is activated. • In the event of a helicopter fire, CONTAIN, with automatic or manual activation of the DIFFS or if a small fire by use of the portable extinguishers – if confident / competent. • EVACUATE the area through the Heliport Lift Lobby or via the Heliport Emergency Evacuation Stairs located diagonally opposite the Heliport Lift Lobby. 	<ul style="list-style-type: none"> • ASSESS the situation by analysing the risk to yourself and others: <ul style="list-style-type: none"> ○ move all persons in immediate danger to a safe area (evacuation routes) and ○ remove or control known hazards. • ALERT others to the fire and get help as soon as possible. <ul style="list-style-type: none"> ○ should you discover smoke and/or fire, activate a break glass alarm. This will activate both the Alarm and DIFFS (inter-connected). ○ dial *222 and report a Code RED. • RESPOND by ensuring steps are taken to extinguish or contain the fire: <ul style="list-style-type: none"> ○ evacuate in relation to the physical threat. If in doubt, or if the fire is too large to be contained, evacuate the area immediately. ○ if safe to do so – use the appropriate fire extinguisher. • RECOVERY debrief, document and ensure services and/or equipment is reinstated and return to normal duties.

Note: Lifts are fire rated and **CAN** be used during a fire.

6.3.1 Primary Evacuation Route

Primary evacuation route is via the Heliport Lift Lobby either via a lift or stairwell 10, as shown in Figure 21.

The secondary emergency evacuation route is via the Heliport Emergency Evacuation Stairs diagonally opposite the Heliport Lift Lobby then through the Plant Room doors on Level 11 as shown in Figures 22 to 26

The Heliport Officer needs to know the number of people in attendance at the heliport, including the number of persons on the helicopter so that a check can be conducted in the event of a heliport evacuation.

- Stairwell “10” is a fire isolated stairwell accessed from the Heliport Lift Lobby area. This stairwell then connects to stairwell “6” on K11. Stairwell “6” connects to stairwell “7” on K6. Stairwell “7” continues to the Lower Ground Floor.

Figure 21 – Stairwell 10 Entry (inside Heliport Lift Lobby)



- Stairwell “11” is an open air stairwell located on the corner of the Heliport diagonally opposite the Heliport Lift Lobby area. Enter the K11 Plant Room and proceed to Stairwell “5”. Stairwell “5” then becomes Stairwell “3” between K11 and K10. Stairwell “3” continues to the Lower Ground Floor.

Figure 22 – Stairwell 11 (Open Air Stairwell on North West Corner of K-Block Roof)

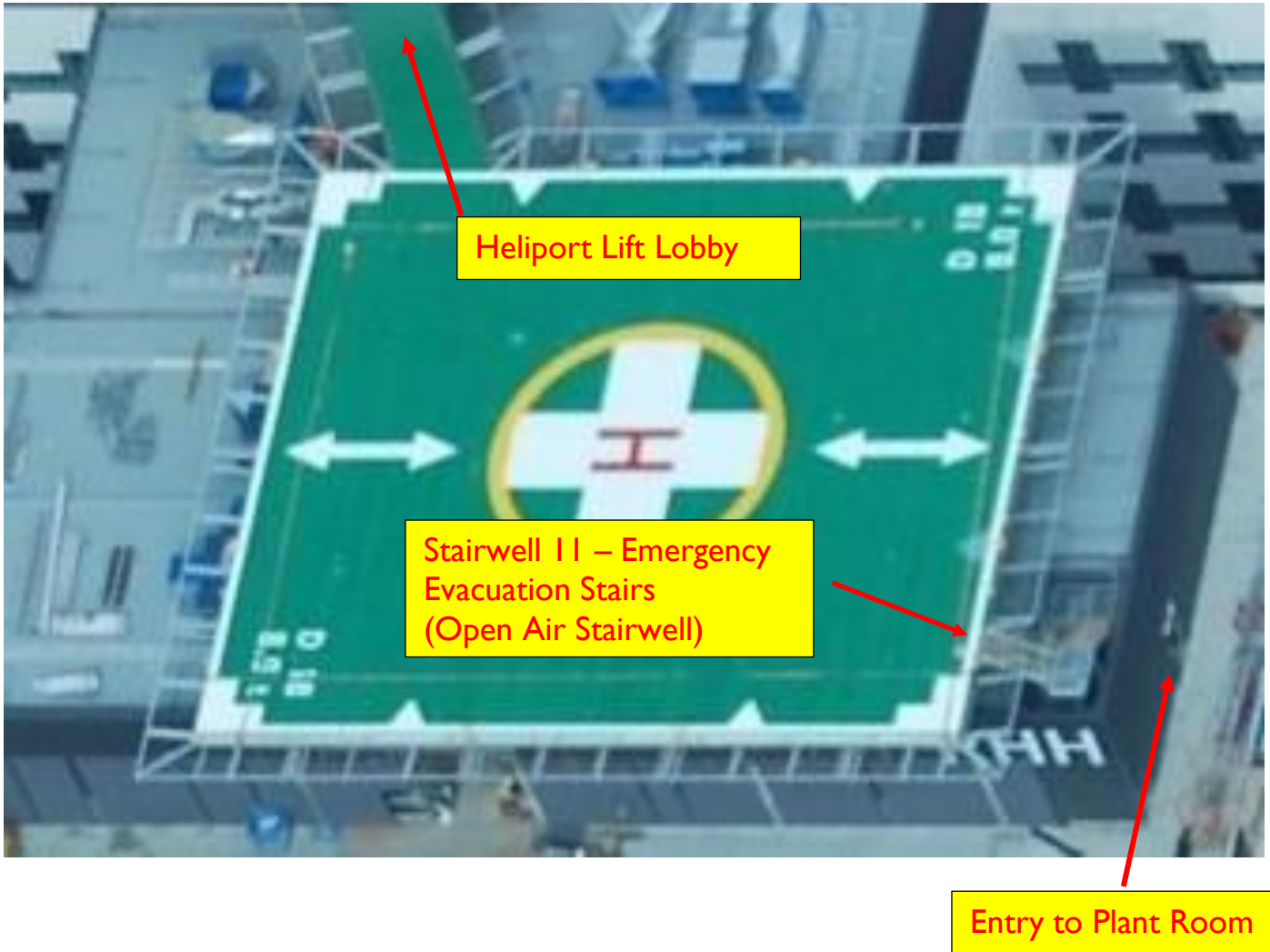


Figure 23 - Emergency Evacuation Routes from Heliport

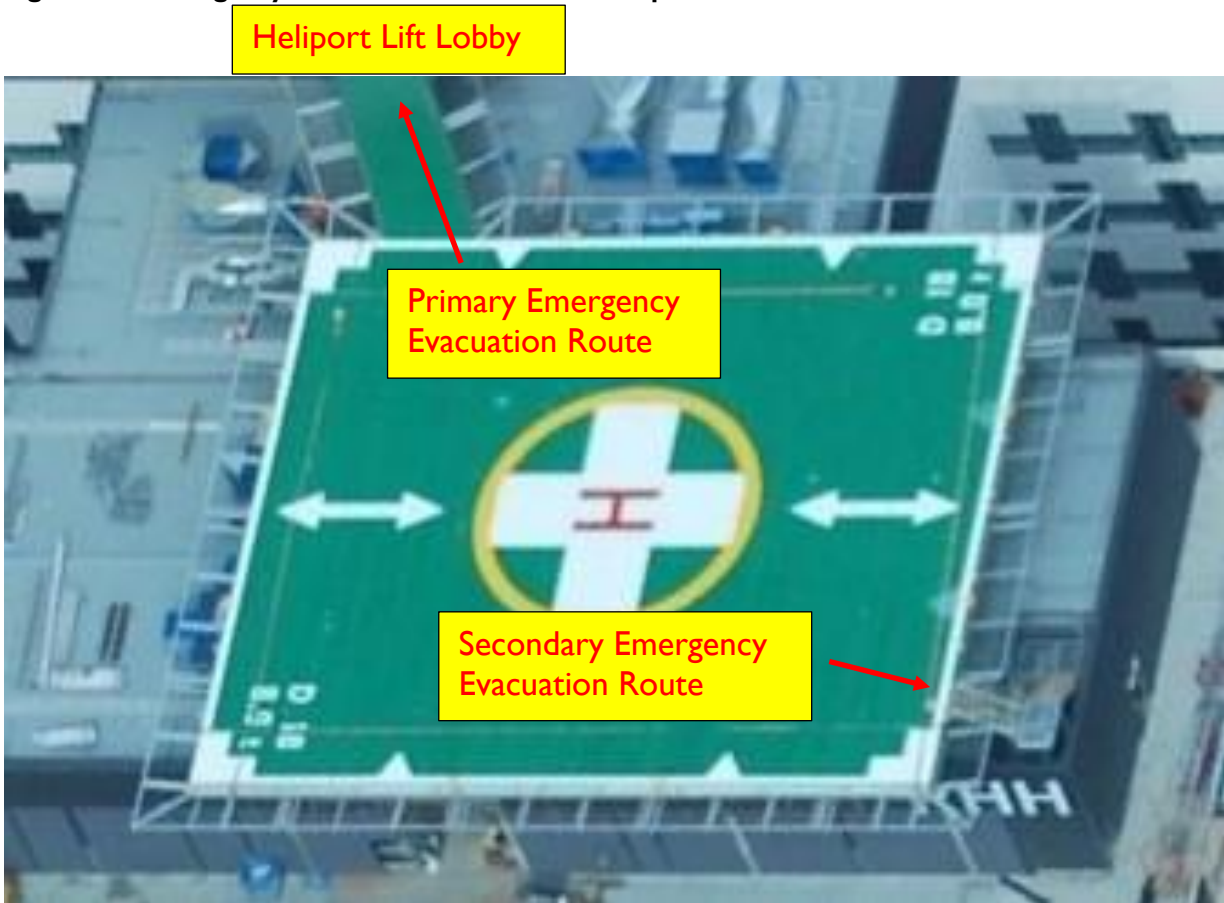


Figure 24 - Emergency Ingress / Egress Routes from Heliport

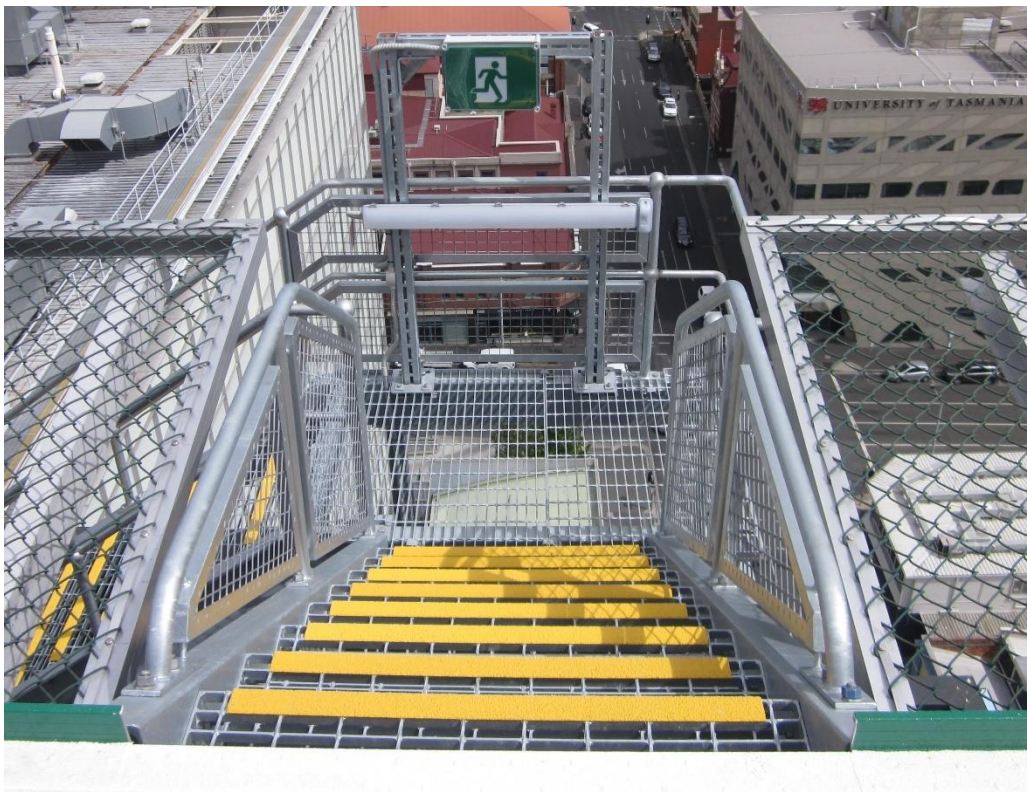


Figure 25 – Heliport Emergency Evacuation Stairs – Exit at Plant Room Level



Figure 26 – Heliport Emergency Evacuation Stairs – Entrance to Plant Room



6.3.2 Emergency Access Routes

Emergency access routes have been established in the unlikely event that both lifts fail / are out-of-service at the same time and a Helicopter / patient is on the Heliport / in the Heliport Lift Lobby, requiring urgent assistance. See Attachment F – Heliport Emergency Access Protocol.

Emergency Access Routes

Option 1:	<ul style="list-style-type: none"> • Go up Stairwell “7” to K6. • Stairwell “7” connects to Stairwell “6” on K6. • Continue up Stairwell “6” to level K11, the Helipad key is required to open the gate at K10 • go through the Room to Stairwell “10” which connects to the Heliport Lift Lobby.
Option 2:	<ul style="list-style-type: none"> • Go up Stairwell “3” which connects to Stairwell “5” between K10 and K11. • Proceed up Stairwell “5” • Exit Stairwell “5” to the external walkway • Follow walkway to Stairwell “11” on K11. Use Helipad Key to open the door at Stairwell “11” • Proceed up Stairwell 11 (open air stairwell located on the corner of the Heliport, diagonally opposite the Heliport Lift Lobby).
Notes:	<p>Blue and white signage is in place to assist with navigating stairs to the Heliport</p> <p>Either a Security Access Card and / or Keys can be used to enter the Plant Rooms and the Heliport Lift Lobby.</p>

6.3.3 Engineering Access (for Helicopters)

When access is required for Engineering staff to attend to the unlikely breakdown of a Helicopter on the heliport the following procedures applies:

- engineering staff should contact RHH Security or the Heliport Officer in the first instance to provide initial direction escort to the Heliport and advise of car parking availability
- the Helicopter Medical Crew are then able to provide ongoing access for the Engineering staff as they have been issued a proximity card for hospital access.

6.4 Additional Guidance and Information Sources

For contact regarding emergency management planning or response to specific incidents, additional information and expert knowledge may be sourced from these RHH positions:

- Executive Director of Operations - South
- Emergency Management Coordinator
- Security on-call 0408 454 744
- Facilities Maintenance and Engineering 6166 8832 (normal hours) 0437 687 597 (after hours)
- After Hours Nurse Unit Managers.

7 Staff Training for Heliport Safe Operations

7.1 Introduction

This information has been prepared to provide the basis for the initial and on-going training of personnel who may need to be involved in the support process of loading or unloading of patients, equipment or people to or from helicopters at the RHH Heliport.

The responsibility for coordinating the training of RHH personnel is held by the Heliport Manager and is covered in the RHH Training program.

7.2 Training Policy

Introduction to Helicopter Safety training will be given to all new staff members who have roles working on the heliport. Heliport Safety Refresher Training will be provided to all relevant staff on an annual basis.

The Heliport Manager will retain records of training sessions including dates, scope and attendees.

The *Heliport Safety Guidelines* presented at [Attachment A](#), forms the basis for the introduction and refresher training for movement in the vicinity of the helicopter.

7.3 Heliport Safe Operations Training Syllabus

Training in the appropriate responses to a Heliport Emergency situation will be provided to appropriate staff associated with the use of the heliport.

The training will include:

- Documentation –
 - RHH Heliport Operations Manual
 - communication protocols
 - use of VHF Marine radio (refer [Attachment C](#)) and
 - notification of inbound helicopter arrival.
- Emergencies -
 - Code **BLUE** - Clinical Issue with Patient on Helicopter or in Heliport Lift Lobby
 - Code **BLACK** - Behavioural Issue with Patient in Heliport Lift Lobby
 - Code **YELLOW** - Fuel Spill without Fire
 - Code **YELLOW** - Helicopter Crash without Fire
 - Code **RED** - Helicopter Crash with Fire
 - Fire Warden training
- Building Services and Systems Operation
- Heliport Safety Operations
 - security / access
 - heliport inspection
 - safety around helicopters

- use of Ambulance Tasmania equipment
- normal unloading procedures
- emergency response reporting
- fire fighting and rescue guidelines and
- heliport evacuation procedures.

Emergency response training will be coordinated by the Heliport Manager and may occur in conjunction with other training sessions. Familiarisation with the helicopter may be organised formally with Ambulance Tasmania or as the opportunity arises when a helicopter is at the heliport.

7.4 Training of New Staff

Where it is intended that a staff member will be assigned duties as a member of the Heliport Response Team, the staff member will be afforded training in order that he/she will have the knowledge and confidence to perform the assigned duties without causing hazard to either themselves or other members of the Response Team by their actions.

7.4.1 Personnel Accreditation

The Heliport Manager or delegate will retain training records for personnel assigned to Heliport duties.

7.4.2 Induction Training Syllabus

Staff newly assigned to heliport duties will undergo formal training coordinated by the Heliport Manager in order to satisfy the following syllabus.

Training levels to apply:

- A Introduction to: Safety around the Helicopter
- B Familiar with:
 - B1 Documentation – Heliport Operational Procedures
 - B2 Communications Protocols
 - B3 Rescue Guidelines
 - B4 Fire Fighting Guidelines
- C Fully aware of and competent to perform, complete or action:
 - C1 Notification of Inbound Helicopter Transfer
 - C2 Heliport Security / Access
 - C3 Heliport Inspection
 - C4 Briefing “Safety Around Helicopters”
 - C5 Normal Unload Procedures
 - C6 Emergency Response Reporting
 - C7 Immediate Response to Emergencies
 - C8 Heliport Evacuation Procedures

Additionally, this syllabus of training will form the basis for annual recurrent training. The Heliport Manager will maintain a register of staff credentialed for heliport operations.

Staff currency training is repeated annually and is facilitated by local (line) managers who will notify the Heliport Manager of compliance with basic training for new staff, and annual currency training thereafter for specific staff members.

7.5 Heliport Procedures and Emergency Response Practical Training

The Heliport Manager in conjunction with Emergency Management will, on an annual basis, coordinate Emergency Code Response and Evacuation exercises for Heliport Operational personnel.

The training will generally take the form of a workshop presenting emergency situations as a desktop exercise and a practical refresher of the workshop outcomes at the heliport and lobby area.

These exercises will ensure that Heliport personnel are familiar with the:

- operation and use of the automated and manual Deck Integrated Fire Fighting System equipment
- operation and use of the secondary fire-fighting equipment – the extinguishers and fire hose reel
- necessary fire-fighting techniques and the precautions
- necessary rescue techniques and the precautions
- heliport evacuation procedures and
- Tasmanian Health Service / RHH Emergency Management Plan.

The relevant line manager for staff groups will ensure that copies of training records are forwarded to the Heliport Manager for retention on the individuals' heliport training records.

7.6 Safety Briefings by Helicopter Operators

The Heliport Manager will, on an opportunity basis, organise through Ambulance Tasmania for the Helicopter Medical Transport operators to provide helicopter safety briefings to Heliport Response staff. These briefings will be requested on an informal basis and should be used for refresher training purposes. They may also provide an opportunity to conduct the annual "Safety around Helicopters" briefing for available staff.

7.7 Safety Around the Helicopter

The safety standards should be the same, whether the helicopter is running or has been shut down.

- **ALWAYS APPROACH THE HELICOPTER IN VIEW OF THE PILOT**
- **NEVER APPROACH FROM OR MOVE INTO THE PROHIBITED ZONE**

To ensure the safest operation, procedures that result in habitual performance should be rehearsed and adhered to.

- **DO NOT** approach the helicopter after it has landed until the helicopter crew indicates that it is safe to do so
- When approaching the aircraft, always approach and depart the area from the side of the aircraft and ensure that you are in the view of the pilot.
- **NEVER** approach or depart to the rear of the aircraft (DANGER ZONE).

- **NEVER** walk near the tail rotor (DANGER ZONE).
- Unauthorised personnel must be kept away from the Heliport area.
- **DO NOT** shine torches or other white lights directly towards the aircraft as this may momentarily blind the pilot.

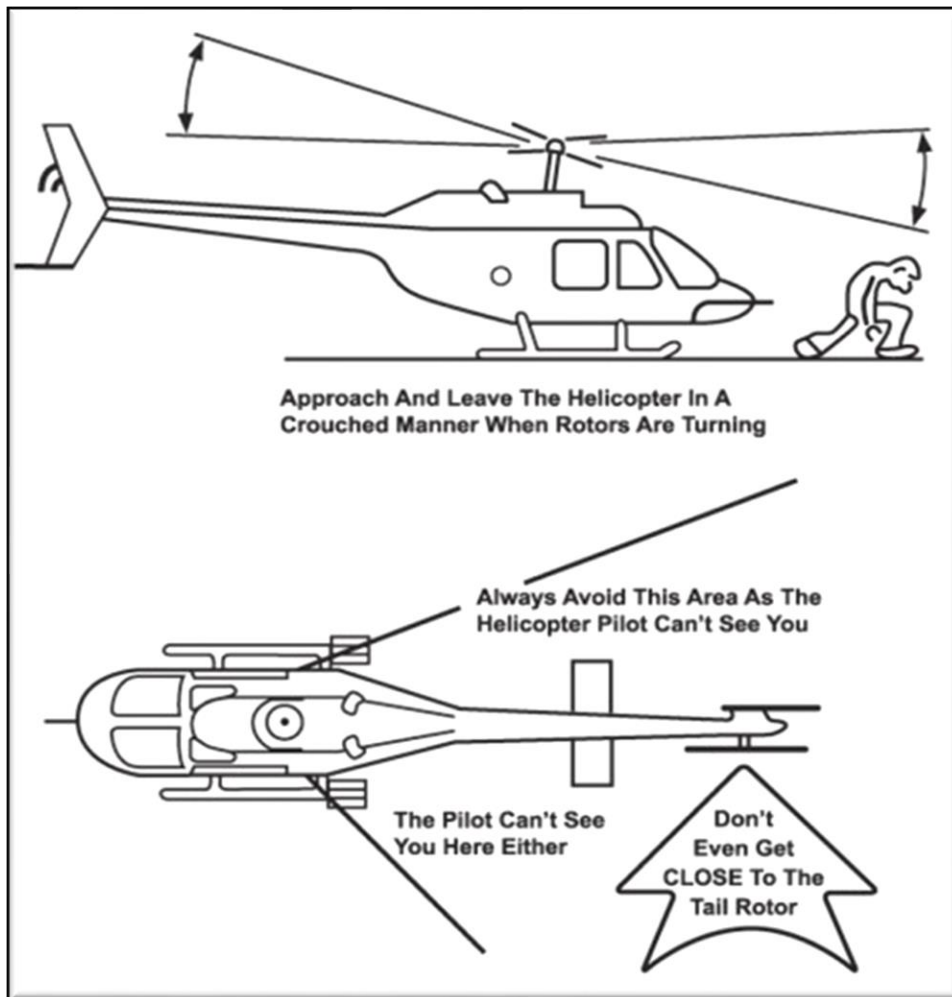


Image: National EMS Pilots Association: www.NEMSPA.org

7.8 Management Meeting

The Heliport Manager may, on an annual basis or as otherwise required, organise a Management Meeting between RHH and Ambulance Tasmania and the Helicopter Medical Transport operators for the purpose of ongoing liaison and providing a forum for the discussion of operational issues affecting both the Operators and the Hospital.

The meeting will provide:

- a forum for discussion of issues and opportunities from all perspectives
- a forum for the review and discussion of safety aspects involving helicopter operations
- a forum for the review of incidents or occurrences that resulted from operations conducted on the RHH Rooftop Heliport and
- an opportunity for the Helicopter Operators to present briefings on Helicopter Safety and Operations as reported from Operators conducting similar operations from within Australia and overseas.

8 Heliport Inspection and Maintenance Provisions

8.1 Introduction

The maintenance requirements for the heliport to be used for Helicopter Medical Transport (HMT) flights are not significant as there are few moving parts and the relatively low frequency of use creates little wear and tear. Nonetheless, an HMT Heliport features markings and lighting that need to be maintained in good condition to ensure the Heliport is safe and functional in poor operating conditions such as at night, in rain or in fog.

The Maintenance Schedule provided at Attachment D as per the Maintenance Manual is coordinated by Facilities and Engineering Section, RHH.

8.2 Responsibilities

It is the responsibility of RHH to maintain the Heliport in an airworthy condition for Helicopter Medical Transport use.

Daily inspections are carried out by Heliport Officers and any problems with the heliport must be reported to Facilities and Engineering for subsequent action. The general condition of the heliport is also monitored by pilots.

Any deficiencies in the serviceability of the heliport must be advised to the Heliport Manager and/or Facilities and Engineering Section, RHH.

Responsibility for determining the suitability of the heliport for the intended use is held by the helicopter pilot under the provisions of Civil Aviation Regulation 92. CAR 92(1) prohibits the use of a place as an aerodrome unless the aircraft can land at or take-off from the place in safety. CAAP 92-2 (1) advises that the assessment of circumstances relating to the suitability of the place is the responsibility of the pilot-in-command (PIC) and in some circumstances are shared with the aircraft operator.

If RHH personnel become aware of any situation that appears to affect the availability or suitability of the heliport, details of the situation should be relayed to the Heliport Manager during business hours or the Clinical Manager immediately. The Heliport Manager or Clinical Manager must notify the Helicopter Operators directly in the first instance and Tasmanian Ambulance secondly.

The intent of the regular and daily heliport and lobby inspections is to ensure that the designed suitability and availability is maintained, and advice of the heliport status is provided to the helicopter operators.

A serious problem may render the heliport and lobby unusable, therefore early notification may enable the problem to be rectified, without unnecessarily closing the facility.

8.3 Heliport Inspections

8.3.1 Daily Serviceability Inspections

An inspection of the heliport and surrounds need to be made daily to ensure operational readiness for an event that can occur without significant advanced notice. The daily inspection is most efficient when conducted before last light in the evenings or shortly after daybreak so that the heliport lighting can be checked whilst there is enough light to undertake a visual inspection of the heliport surface and surrounding airspace.

Serviceability inspections should also be carried out after significant weather events such as severe wind or rain storms.

The inspection needs to be recorded on the Heliport 'Daily Serviceability Inspection' checklist by the Heliport Officer and each checklist is to be kept in the heliport lift lobby.

8.3.2 Heliport Inspection Ahead of Helicopter Arrival

An inspection of the Heliport and surrounds need to be made ahead of an imminent helicopter arrival to confirm the ready status of the Heliport. For further details see Section 5.8 Activities before Helicopter Arrival.

The inspection needs to be recorded on the Heliport 'Active Mode Inspection' checklist by the Heliport Officer. On completion of the inspection, the Heliport Officer is to file the completed ACTIVE Mode Inspection Checklist in the folder located in the Helipad Lift Lobby.

8.3.3 Heliport Technical Inspections

Heliport inspections with greater technical content than the serviceability inspection are required at regular intervals and where an existing regulatory standard does not provide an inspection time interval, a twelve month period has been adopted for the RHH heliport.

The most obvious facility is the heliport landing deck area. The principle issues needing regular inspection and potential maintenance are:

- windsock and windsock light
- low intensity obstacle lights
- heliport perimeter lights
- heliport perimeter low level floodlights
- line markings
- fall arrest netting around Heliport perimeter
- communications (telephone and handheld radio) and
- firefighting systems.
- Lighting control systems

These inspections will be initiated and recorded by the Facilities and Engineering and conducted in conjunction with the Helipad Officer.

8.4 Heliport Approach and Departure Airspace Surveillance

It is a requirement of Ambulance Tasmania that the airspace protecting the Heliport approach and take-off flight paths to the heliport is inspected to ensure it is clear of obstruction.

8.4.1 Daily Inspection

Inspection of the airspace around the heliport is part of the daily serviceability inspections undertaken by the Heliport Officer. This will be achieved by visually checking the approach paths to the heliport for any new or unknown obstacle that may present a danger to helicopter operations (ie birds, cranes, smoke, Unmanned Aerial Vehicles (UAVs) etc).

8.4.2 Annual Detailed Survey

A detailed aeronautical survey of the heliport and environs within the obstacle assessment area boundaries needs to be undertaken annually to ensure the Heliport operational areas remain clear of obstacles. The survey needs to be conducted by a licensed surveyor suitably qualified and experienced in the conduct of airspace surveys. The results of the survey need to be analysed and provided to Ambulance Tasmania for subsequent advice to the helicopter operators.

Details of the survey and findings conducted in August 2019 are presented as Attachment B to the manual.

8.5 Reporting Heliport Out-of-Service

In the event that RHH personnel become aware of any serviceability problem that could require closure of the heliport, the Heliport Officer should be immediately advised in the first instance.

The Heliport Manager will then investigate the matter and consult with appropriate others if the operation of the heliport may genuinely be affected. The Heliport Manager will then advise all the necessary agencies until rectification action is completed.

In addition to direct notification to Ambulance Tasmania, the Final Approach and Take-off Area / Touchdown and Lift-off Area may be marked as unserviceable by placing the prohibited landing marker (red background with yellow diagonal cross – 4x4m across and 50 cm wide cross, made of canvas or vinyl material that is designed to tie off at the edge of the safety net with sufficient strength to withstand the elements for the period of time in use). See Figure 27 – Prohibited Landing Marking.

The marker is stored in the Heliport Lift Lobby when not in use. The need to deploy the markings should be discussed with Ambulance Tasmania by the Heliport Manager and reflect consideration of the projected time that the heliport will be out-of-service.

Figure 27 –Prohibited Landing Marker



8.6 Heliport Precinct Work Permit

All access related to conducting work on or around the Heliport is subject to a Heliport Precinct Work Permit (Attachment E). The definition of Heliport Precinct for this purpose includes the Heliport Lift Lobby, all infrastructure related to the Heliport and A and K block roof tops.

The related procedure will be maintained on the THS – Southern Region works permit register by Facilities and Engineering.

The Work Permit for the Helipad is at Attachment E.

9 Royal Hobart Hospital Staff Accountabilities

Accountabilities for Tasmanian Health Service personnel in relation to the use of the RHH Heliport are presented in the following sections with reporting hierarchy indicated by paragraph indents in the following list.

9.1 Heliport Manager

- **Reports to:** Executive Director of Operations - South.
- **Responsibilities:** Operational control of the day-to-day activities in regard to the RHH Rooftop Heliport. The position of Director Corporate and Support Services, of which Heliport Manager is a key function, also has business ownership of the campus' buildings and infrastructure.
- **Activities include:**
 - Monitoring and ensuring operational effectiveness and efficiency of the RHH Rooftop Heliport.
 - Ensuring relevant personnel with heliport related responsibilities are trained to carry out their assigned duties including both contract and Tasmanian Health Service personnel.
 - Developing suitable training programs to ensure the operational efficiency of relevant personnel in receiving and transferring helicopter patients.
 - Developing suitable training programs to ensure the safety of relevant personnel when working in close proximity to helicopters.
 - Providing adequate supervision of work practices in regard to the RHH Rooftop Heliport.
 - Ensuring that the necessary responses are activated to deal with an emergency occurrence in regard to the RHH Rooftop Heliport.
 - Operational Control of the day-to-day activities in regard to the RHH Rooftop Heliport including:
 - Authorising requests for limited access to the RHH Rooftop Heliport.
 - Reviewing work and administrative processes and practices to ensure that all programs remain current with and appropriate to operational circumstances.
 - Investigating and reporting all accidents, incidents and dangerous occurrences resulting from the operation of a helicopter in regard to the RHH Rooftop Heliport.

9.3 Manager Facilities and Building Services

- **Reports to:** Director Corporate and Support Services South
- **Responsibilities:** Management of all maintenance issues in regard to RHH Rooftop Heliport.
- **Activities include:**
 - Developing preventative maintenance regimes.
 - Maintenance requests from the Heliport Manager, Ambulance Tasmania or their delegate.
 - Providing resources to manage maintenance related issues that may impact on the safe operations or lead to the closure of the heliport.
 - Ensuring access permits and systems are in place for safety of relevant personnel when working in and around the Heliport.

- Ensuring compliance to relevant Laws and Standards through maintenance regimes.

9.4 Clinical Manager

- **Reports to:** Assistant Director of Nursing – Access and Patient Flow Unit.
- **Responsibilities:**
 - Communication (via the RHH Switchboard) with Ambulance Tasmania State Operations Centre of all Helicopter Medical Transport Flight.
 - Notify the Heliport Officer to prepare for the arrival of the helicopter.
 - Ensure patient transfers and movements are managed safely and in accordance with Tasmanian Health Service procedures.
- **Activities include:**
 - Receive notification from Ambulance Tasmania State Operations Centre via the RHH Switchboard. The Clinical Manager is to obtain the following information in relation to the in-bound Helicopter Medical Transport Flight:
 - The estimated time of arrival (ETA) of the helicopter.
 - The helicopter POLAIR number (if known).
 - Number of patients to be transferred.
 - Any special needs associated with the transfer (eg bariatric case, trauma, E0 theatre, neonatal, paediatric).
 - Accepting team (if known).
 - The reason for the landing – if **NOT** related to an aero-medical retrieval:
 - Advise the Heliport Officer on 0438 655 772 of an in-bound Helicopter Medical Transport Flight, via the RHH Switchboard on priority number 61 66 6744, and advise of any additional requirements.
 - Ensure the Heliport Officer is aware of the alert and all the information provided.
 - Receive calls from the Heliport Officer reporting that the heliport has been checked and is ready for use. This includes:
 - Daily Serviceability Inspection.
 - Ahead of imminent helicopter arrival when established and ACTIVE at Heliport Lift Lobby.
 - Notify the Heliport Manager of issues or concerns related to the heliport, personnel or safe heliport operations.
 - Receive notification from the Heliport Officer of any consumables to be replaced at the Heliport Lift Lobby and organise relevant personnel to provide the items to the Heliport Officer.

9.5 Heliport Officer

- **Reports to:** Manager Medical Orderly and Security Services
- **Responsibilities:** Operational control of the day-to-day activities.
- **Activities include:**

Daily:

- Completes visual inspection of heliport and environs, including activation of lights, and of the Heliport Lift Lobby equipment. Record completed check in the heliport safety and security log, noting and reporting any deficiencies.
- Reports any maintenance issues to Facilities and Engineering Services and completes a Pulse request.
- Ensures all necessary equipment stored in the Heliport Lift Lobby (as per equipment list) is prepared for helicopter arrival.
- Notifies the Clinical Manager of heliport readiness and status.
- Remains contactable for the entire shift to be readily available for reception of helicopters.
- Re-stocks medical consumables

Ahead of Helicopter Arrival:

- On notification of in-bound Helicopter Medical Transport Flight by the Clinical Manager, attends the Heliport Lift Lobby and undertakes pre-landing checks and inspection.
- Ensure communication devices - portable VHF Marine Radio and Communications Handset are switched on and monitors pilot communications.
- Anticipate confirmation or update of ETA from helicopter using VHF Marine Radio Channel 6.
- If requested by helicopter crew, prepare equipment stored in Heliport Lift Lobby for transport to helicopter after landing.

Note: Wear Personal Protective Equipment as appropriate and if advised to do so.

On Helicopter Landing:

- If requested by Ambulance Tasmanian Helicopter Medical Crew (in consultation with Clinical Manager) escort any RHH medical team members to the Heliport Lift Lobby from ground floor K Block lift lobby.
- Waits for rotors to completely stop, and after instruction from pilot / crew by radio, open Heliport Lift Lobby doors and, if required, approach helicopter.
- Accompany Helicopter Medical Crew to accepting area in hospital, where handover takes place.
- Return to Heliport Lift Lobby with Helicopter Medical Crew ahead of helicopter departure.
- Assist Helicopter Medical Crew with inspections and preparation if required.
- Assists Ambulance Tasmania Helicopter Medical Crew with patient or equipment transfer if required.

After Helicopter Departs:

- Undertake inspection of heliport platform checking for objects or fluids on the surface.
- Ensure heliport area is secure, check the stored equipment and note any consumables to be replaced.
- Return with consumables from Heliport consumable locker and re-stock (if necessary)
- Report to Clinical Manager that heliport has returned to STANDBY status.
- Record details of helicopter movement on heliport checklist.
- In addition: Attend yearly safe heliport operations training.

9.6 Manager Environmental Services

- **Reports to:** Director of Corporate and Support Services - South.
- **Responsibilities:** Management of any cleaning issues in regard to RHH Rooftop Heliport.
- **Special conditions:**
 - Cleaning of the Heliport Lift Lobby is considered a “special clean” that only needs to be carried out at the request of the Heliport Officer.

Note: Environmental Services personnel are not authorised to proceed beyond the Heliport Lift Lobby at any time without escort.

9.7 RHH Switchboard Operator

- **Reports to:** Manager, Communications.
- **Responsibilities:**
 - First point of contact and notification of in-bound Helicopter Medical Transport Flight including relaying messages relating to the RHH Rooftop Heliport as a priority.
- **Activities include:**
 - Receiving notification from Ambulance Tasmania State Operations Centre.
 - The estimated time of arrival (ETA) of the helicopter.
 - The helicopter POLAIR number (if known).
 - Notification from the Clinical Manager.
 - Contact additional resources upon request of Heliport Officer or Clinical Manager (ie Facilities and Engineering On-Call to address repairs).

9.8 Emergency Response Team

- **Responsibilities:**
 - Manage or assist the management of any “Code Red”, “Code Orange” or “Code Yellow” incidents within the heliport vicinity, in accordance with existing THS emergency management procedures.

- It is intended that the Chief Warden, Chief Executive Hospitals – South, Heliport Manager, Manager Security and Medical Orderlies, Manager Facilities and Building Services, will attend the primary fire control room.
- The Heliport Officer shall remain in the heliport lobby to act as the floor Warden.
- **Activities include:**
 - Assisting Tasmanian Fire Service (TFS) and the Chief Warden in responding to the relevant activity under a “Code Red” or “Code Orange”, such as:
 - Providing infrastructure knowledge.
 - Escorting TFS to the heliport.
 - Manage any “Code Yellow” incidents as necessary.
 - Advising relevant stakeholders of activities.
 - Contact additional resources upon request.

I0 Glossary / Definitions

The following are the Definitions and Abbreviations used within this manual.

Abbreviation / Entity	Description
ACC	Ambulance Control Centre
AHD	Australian Height Datum
AROCP	Aircraft Radio Operator Certificate of Proficiency
AT	Ambulance Tasmania
AT SOC	Ambulance Tasmania State Operations Centre
BMS	Building Management System
CASA	Civil Aviation Safety Authority
CASR	Civil Aviation Safety Regulations
CBD	Central Business District
CDP	Critical Decision Point
CM	Clinical Manager
DDO	Design and Development Overlay
DIFFS	Deck Integrated Fire Fighting System
DoH	Department of Health
DPFEM	Department of Police, Fire and Emergency Management
D-Value	Largest overall dimension of the Helicopter when rotors are turning
ED	Emergency Department
ECR	Emergency Control Room
EMS	Emergency Medical Services
ETA	Expected Time of Arrival
FATO / TLOF	Final Approach and Take-off Area / Touchdown and Lift-off Area
HEC	Helicopter Emergency Call
Helimet	Helicopter Emergency Call
Hot Loading / Hot Unloading	Helicopter Loading / Unloading Whilst Engines are Running
HM	Helicopter Manager
HMC	Helicopter Medical Crew
HMT	Helicopter Medical Transport
HO	Helicopter Officer
ICU	Intensive Care Unit

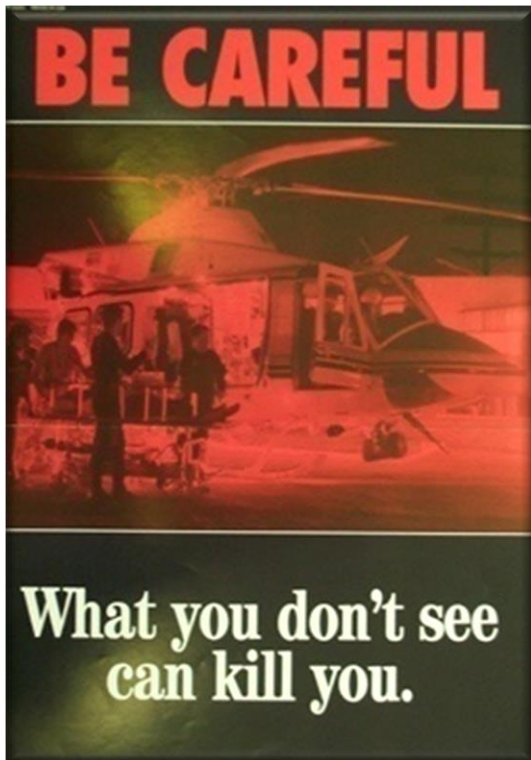
ICFP	Intensive Care Flight Paramedic
IWDI	Illuminated Wind Direction Indicator
JSA	Job Safety Analysis
MET	Medical Emergency Team
OAA	Obstacle Accountability Area
OEI	One Engine Inoperative
PALC	Pilot Activated Lighting System
PAN (PAN, PAN)	(from PANNE, meaning breakdown) for Out-of-Service Message
PFM	Patient Flow Manager
PIC	Pilot-in-Command
POB	Person on Board
RHH	Royal Hobart Hospital
SCR	Security Control Room
STEMI	ST Elevation Myocardial Infarction
SWMS	Safe Work Method Statement
TAPM	The Air Pollution Model
THS	Tasmanian Health Service
TLOF	Touchdown and Lift-Off Area
UAV	Unmanned Aerial Vehicle (eg Quad Copters / Drones)
VFR	Visual Flight Rules

Attachment A: Heliport Safety Guidelines

A1 Introduction

The purpose of the Heliport Safety Guidelines is to give a basic understanding of where the potential dangers exist, and how to work around helicopters safely and effectively.

The procedures and cautions applied in the vicinity of a helicopter should be the same whether the helicopter engines are running or have shut down.



The helicopter is not intrinsically dangerous.

The danger manifests itself in the form of people not understanding the potential hazards that exist on or near the helicopter.

Above all: **Stay Alert!**

A2 Helicopter Danger Zones

The shape size and behaviour of helicopters creates a potentially dangerous area, particularly at night when visibility is reduced and in situations where the clinical needs of a patient may distract the attention of personnel attending the helicopter.

A3 Rotor Blades

The greatest threat when operating around a helicopter is the turning rotor blades. The main rotor is the large one on top of the helicopter and the tail rotor is the smaller one at the rear of the helicopter. When stationary, the blades of the main rotor can droop down significantly with a minimum clearance similar to the height of an adult. When the rotors are turning, the high speed tail rotor is virtually invisible. Physical contact with either rotor when turning could result in serious or fatal injury.

If rotors are turning, additional hazards are generated by the volume and velocity of air in the rotor downwash, the noise generated by the rotors and the engines and the associated difficulties for spoken communication in such circumstances.

A4 Helicopter Shapes

A range of helicopter types may operate on the RHH Rooftop Heliport with each having different physical characteristics, noting however that the helicopter that is currently operating Helicopter Medical Transport flights for Ambulance Tasmania is a BK117-B2 model which will be the dominant type.

Differences relate to the use of skids or wheels, the location of protrusions such as horizontal stabilisers from the fuselage and different locations and orientations of doors. In general terms, helicopters can provide a number of things to trip over or bump into.

A5 Helicopter Types Expected to Use the RHH Rooftop Heliport

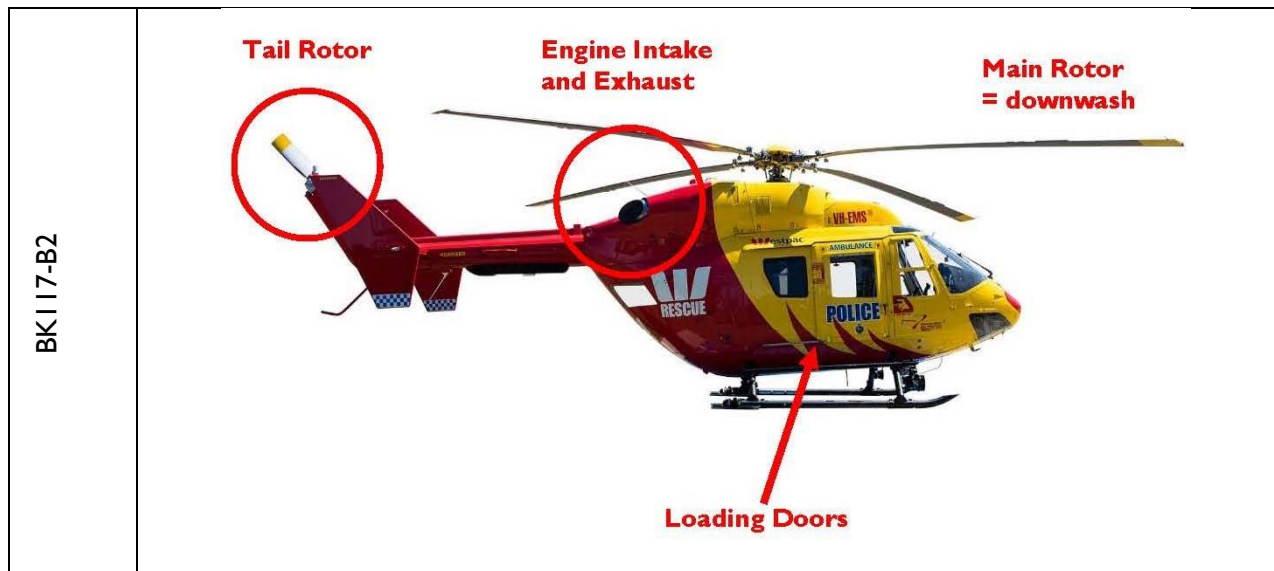
The following are the current and future types of Helicopter that Ambulance Tasmania are expected to operate at the RHH Rooftop Heliport:

- BK117-B2 (D-Value 13.03)
- Leonardo AW139 (D-Value 16.8)
- Bell 412EP (D-Value 17.1) and
- Eurocopter EC175 (18.06).

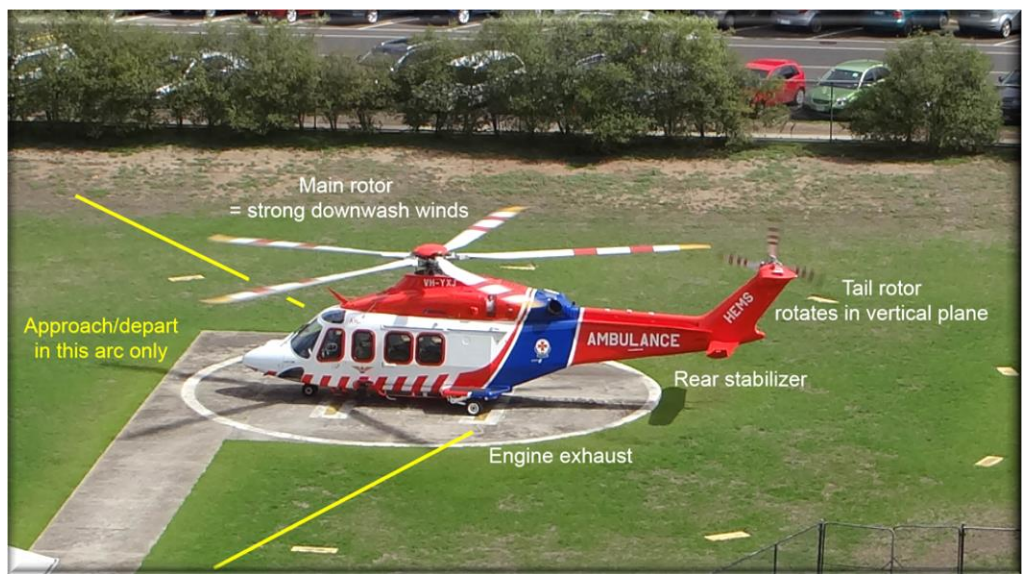
The BK117-B2 and the Bell 412EP have a conventional skid undercarriage while the Leonardo AW139 and the Eurocopter EC175 have a wheeled undercarriage.

All Helicopter types have areas of potential danger to be aware of.

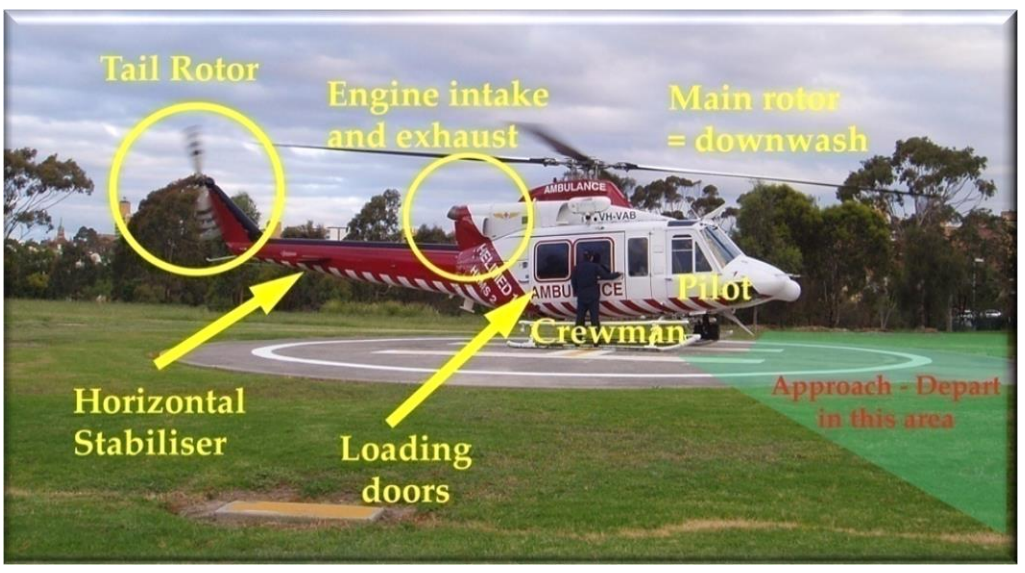
If in doubt, you should look to the helicopter Pilot for guidance on what should and shouldn't be done around the aircraft.



AW 139



Bell 412EP



Eurocopter EC175



A6 Guidelines to Ensure the Safest Operation

- Good habits should be established for working with the helicopter.
- Procedures that result in habitual performance should be rehearsed and adhered to.



- Always remember that repeated and practiced procedures do not reduce the need to exercise caution at all times.



- **DO NOT** approach the helicopter after landing; the air-medical crew will approach you when they are ready and free to do so.
- Remain clear of the helicopter unless an air-medical crew member is with you.



- The **DANGER ZONE** is at the rear of the helicopter.
- **NEVER** approach or depart to the rear of the aircraft.
- **DO NOT** carry equipment such as IV drips above the head.



- Working in a zone roughly between a ten o'clock and two o'clock position from the front of the bubble means the pilot can see you at all times.



- You should only approach the machine forward of the mid-section. Outside of this frontal zone means you are increasingly working toward a blind area and the ever threatening, nearly invisible, tail rotor.

- **NEVER** try to help crew members open or close doors.
- **ALWAYS** follow the crew's directions when loading patients.
- Unauthorised persons must be kept from the Heliport area. A distance of 30 meters is the minimum separation recommended by the Civil Aviation Safety Authority.
- **NO SMOKING** near the aircraft.
- No vehicular traffic near the aircraft.
- **NEVER** use flash bulbs when the aircraft is landing or taking-off.
- **NEVER** shine a white light directly towards the aircraft, as this can blind the pilot.
- Items such as bedding, clothing etc. need to be secured before approaching the helicopter. If anything blows away, LEAVE IT. **DO NOT** chase it into an area of possible **DANGER**.

Attachment B: Airspace Survey and Analysis of Obstacle Environment

BI Introduction

A survey of the airspace around the RHH Rooftop Heliport was undertaken by Airport Surveys Pty Ltd on 26 August 2019.

The information presented in this appendix to the RHH Heliport Operations Manual includes details of locations surveyed and analysis of data relative to the nominal North West – South East primary flightpath track alignment.

Survey of RHH Rooftop Heliport



Surveyor : Bryan Fitzgerald
Surveyed : 26.08.2019

LOCATION OF HLS				
MGA94 ZONE 55		AHD RL	GDA94	
EAST	NORTH		LATITUDE	LONGITUDE
526987.887	5252488.433	64.466	S. 42° 52' 47.0102"	E. 147° 19' 49.6625"
MAG DECLINATION: 15.034°			at 10th September 2019	

OLS SPECIFICATIONS USED FOR SURVEY

SLOPE DESIGN CATEGORY: C
 INNER EDGE LENGTH: 37m
 DIVERGENCE: 15%
 FIRST SECTION LENGTH: 240m
 FIRST SECTION SLOPE: 0.00%
 SECOND SECTION LENGTH: 890m
 SECOND SECTION SLOPE: 4.50%
 FINAL WIDTH: 150m
 TRANSITIONAL SLOPE: 1 in 2

Locations Surveyed and Analysis of Data Relative to the Primary Flightpath Track Alignment

SURVEYED POINT NUMBER	DESCRIPTION	DIST. FROM INNER EDGE	HEIGHT OF OBSTACLE ABOVE HELIPAD	OBST. RL	C/L OFFSET	RELATION TO	RELATION TO	RELATIONSHIP TO				GRADIENT	
						APPROACH SURFACE	TRANSITIONAL SURFACE	MGA94 ZONE 55 CO-ORDINATES EAST	NORTH	CENTRE OF HELIPAD GRID BEARING	DISTANCE	MAGNETIC BEARING	FROM INNER EDGE
1	Cypress Tree	2188.8	86.53	150.998	564.1 L	OUTSIDE	OUTSIDE	525064.083	5253570.64	299°21'33"	2207.305	284.1°	3.95%
2	Mobile Phone Tower	4772.1	115.06	179.524	508.5 L	OUTSIDE	OUTSIDE	523216.583	5255442.632	308°04'22"	4790.618	292.8°	2.41%
3	Euc. Tree	4667.3	107.59	172.051	382.4 L	OUTSIDE	OUTSIDE	523371.475	5255468.024	309°29'07"	4685.765	294.2°	2.31%
4	Euc. Tree	2041.3	26.11	90.572	107.1 R	OUTSIDE	OUTSIDE	525586.925	5253998.474	317°08'45"	2059.835	301.9°	1.28%
5	Cypress Tree	2256.3	27.46	91.929	481.5 R	OUTSIDE	OUTSIDE	525728.548	5254382.882	326°23'09"	2274.834	311.1°	1.22%
6	Euc. Tree	2109.3	28.33	92.795	479.8 R	OUTSIDE	OUTSIDE	525835.185	5254276.969	327°11'54"	2127.811	311.9°	1.34%
7	Euc. Tree	2130.6	62.35	126.811	608.1 R	OUTSIDE	OUTSIDE	525932.982	5254360.808	330°36'10"	2149.096	315.3°	2.93%
8	Euc. Tree	2153.7	87.87	152.334	808.3 R	OUTSIDE	OUTSIDE	526104.772	5254473.039	336°00'42"	2172.224	320.8°	4.08%
9	Aerial on Hill	2086.7	87.20	151.667	776.4 R	OUTSIDE	OUTSIDE	526125.183	5254408.742	335°48'28"	2105.195	320.5°	4.18%
10	Crane	393.9	36.89	101.359	299.5 L	OUTSIDE	OUTSIDE	526575.82	5252471.215	267°36'25"	412.426	252.3°	9.37%
11	Corner of Building	13.5	8.85	73.32	31.2 R	OUTSIDE	3.5m	526971.328	5252461.065	211°10'30"	31.987	195.9°	65.65%
12	Corner of Building	2.4	8.85	73.316	19.6 R	OUTSIDE	8.5m	526979.396	5252469.311	203°56'30"	20.922	188.7°	365.40%
13	Corner of Building	13.2	8.85	73.312	19.6 R	8.8m	OUTSIDE	526992.046	5252457.001	172°27'50"	31.706	157.2°	66.98%
14	Windsock	5.2	12.72	77.187	21.7 R	OUTSIDE	11.5m	526979.623	5252466.169	200°21'50"	23.748	185.1°	242.40%
15	Chimney	7.4	10.40	74.867	20.2 R	OUTSIDE	10.1m	526985.491	5252462.608	185°18'00"	25.936	170.0°	139.87%
16	Building	1086.5	-8.23	56.232	338.8 R	OUTSIDE	OUTSIDE	527506.306	5251512.626	152°01'10"	1104.969	136.8°	-0.76%
17	Approach Alignment Line	-6.0	-1.63	62.833		INSIDE HLS	OUTSIDE	526996.865	5252479.688	134°14'40"	12.533	119.0°	27.37%
18	Approach Alignment Line	-5.9	-1.64	62.828		INSIDE HLS	OUTSIDE	526978.872	5252497.175	314°07'10"	12.558	298.9°	27.57%
19	Top of Hill	2930.7	333.69	398.151	2321.8 L	OUTSIDE	OUTSIDE	524065.744	5252089.987	262°14'07"	2949.183	247.0°	11.39%
20	Flagpole on Hill	5043.0	293.32	357.788	2783.1 R	OUTSIDE	OUTSIDE	528081.4	5247546.461	167°31'23"	5061.508	152.3°	5.82%
21	Floodlight	856.1	27.33	91.794	494.3 R	OUTSIDE	OUTSIDE	526814.778	5253345.703	348°35'00"	874.573	333.3°	3.19%
22	Floodlight	912.1	27.19	91.657	602.7 R	OUTSIDE	OUTSIDE	526899.193	5253414.8	354°31'50"	930.603	339.3°	2.98%
23	Aerial on Building	245.5	-10.81	53.658	75.1 L	OUTSIDE	-20.9m	527221.786	5252365.919	117°38'40"	264.042	102.4°	-4.40%
24	Crane	82.5	-0.98	63.486	77.1 L	OUTSIDE	-24.1m	527088.395	5252498.346	84°22'00"	100.995	69.1°	-1.19%

Figure B2: Obstacle Identification – airspace North West of YXHH



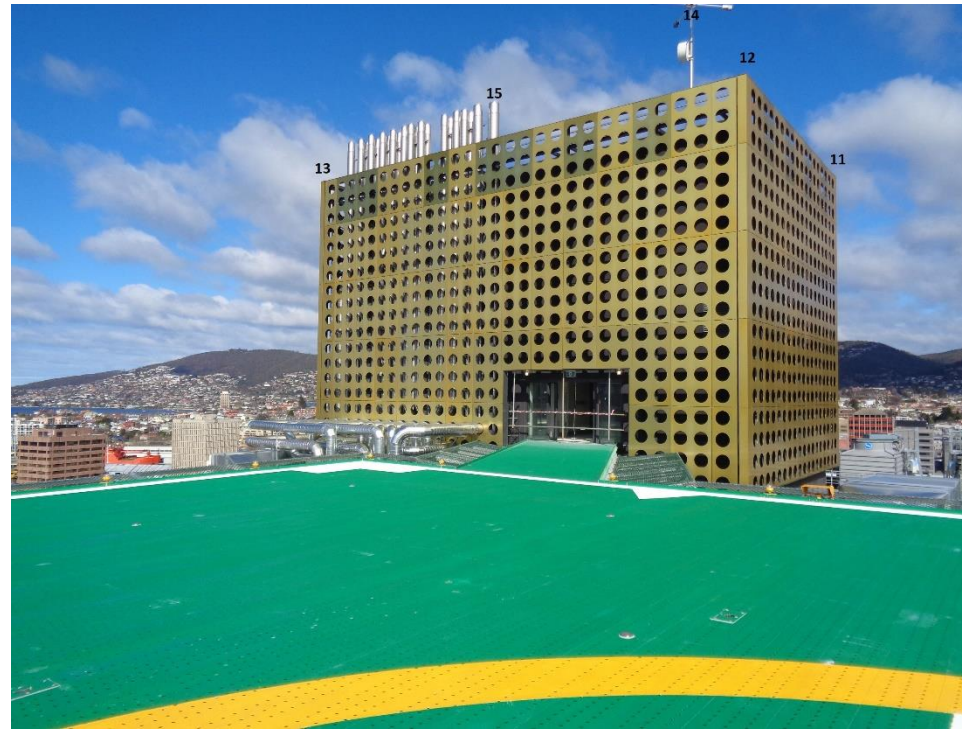
View to North West

Figure B3: Obstacle Identification – airspace South East of YXHH



View to South East

Figure B4: Obstacle Identification – airspace South of YXHH



View to South

Attachment C: Radio Communications between Heliport and Helicopter

CI Introduction

The transfer of patients and use of the RHH Rooftop Heliport by the Helicopter Medical Transport operator involves communication between the key elements in the Department of Health and Ambulance Tasmania organisations as indicated in Figure CI.

Figure CI: Heliport Officer and Helicopter Medical Transport VHF radio link



The communications link between the Helicopter Medical Transport in flight and the Heliport Officer attending the rooftop heliport is by VHF Marine Radio on channel 6.

The equipment in use by the Heliport Officer is an ICOM IC-M37E hand held transceiver (Note: the range of this device is very limited).

This Appendix describes the operation of the ICOM IC-M37E hand held transceiver as well as guidance on the structure and phraseology of messages between the helicopter and the Heliport Officer.

The marine band radio link will be used in normal situations only in relation to flight operational matters and communication of messages between the aircraft and the Heliport Officer. All discussions relating to the patient clinical condition will be made if necessary using alternate communication protocols.

C2 Heliport-Helicopter Communications Equipment

C2.1 Introduction

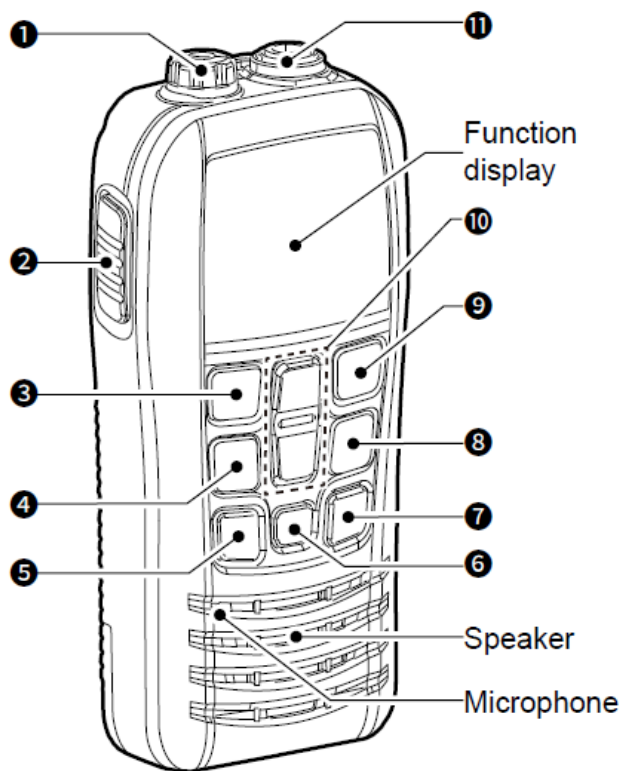
The Heliport Officer and the Helicopter Medical Transport helicopter can communicate directly using the VHF Marine Radio Channel 6.

The equipment used by the Heliport Officer at the heliport is an ICOM IC-M37E which is situated in the Heliport Lift Lobby.

The transceiver and primary features for operation by Heliport Officers is shown below.

Figure C2: ICOM IC-M37E key operational elements

■ Front, top and side panels



1 SPEAKER/MIC JACK [SP/MIC]

(p. 23)

Connect the optional HM-213 speaker microphone here.

2 PTT SWITCH [PTT]

Hold down to transmit, release to receive.

3 CHANNEL 16/CALL CHANNEL KEY [16/C] (p. 9)

- Push to select Channel 16.
- Hold down for 1 second to select the Call channel.

4 VOLUME/SQUELCH/MONITOR KEY [VOL/SQL]/[MONI]

- Push once to display the volume level setting screen.
- Push twice to display the squelch level setting screen. (p. 12)
- Hold down for 1 second to turn ON the monitor function.

5 SCAN/DUAL KEY [SCAN]/[DUAL]

- Push to start or stop a scan. (p. 15)
- Hold down for 1 second to start the Dual/Tri-watch mode. (p. 16)
 - ① While in Dualwatch, push to cancel Dualwatch.
 - ① Tri-watch may start, depending on the Set mode settings.
- Hold down both [SCAN] and [Hi/Lo] for 1 second to turn ON the AquaQuake function. (p. 12)

6 POWER KEY [ON]

Hold down for 1 second to turn the transceiver ON or OFF.

7 TRANSMIT POWER/LOCK KEY [Hi/Lo]/[P-O]

- Push to set the power level to High or Low.
 - ① Some channels are set to only Low power.
- Hold down for 1 second to lock or unlock the keypad.

8 CHANNEL/WEATHER CHANNEL*1 KEY [CH/WX]/[U/I/C] or [CH]

- Push to switch between a regular channel and weather channel.*1 (p. 10)
- Push to select a regular channel.*2
- Hold down for 1 second to change the channel group. (p. 9)

NOTE: [CH] is described as [CH/WX] or [U/I/C] in this instruction manual.

9 FAVORITE CHANNEL KEY [FAV] (p. 15)

- Push to select a Favorite channel.
- Hold down for 1 second to set or clear the selected channel as a Favorite channel.

10 UP/DOWN KEYS [▲]/[▼]

- Push to select the operating channel.
- Push to change the volume/squelch level while adjusting.
- In the Set mode, push to select an item option.

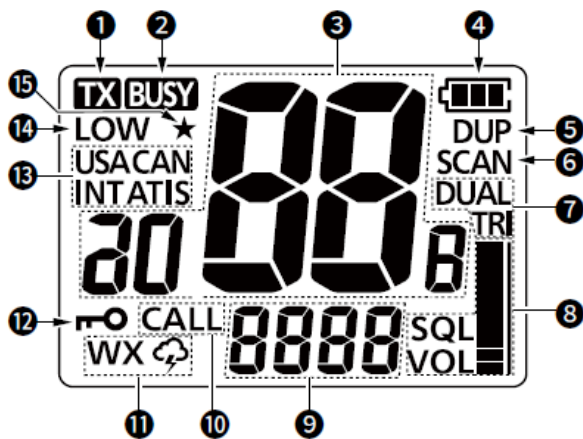
11 ANTENNA CONNECTOR (p. 2)

Connect the supplied antenna here.

*1 For the USA, EXP, and AUS versions

*2 For the EUR, FRG, HOL, and UK versions

Function Display



1 TRANSMIT INDICATOR

Displayed while transmitting.

2 BUSY ICON

Displayed while receiving, or the squelch is open.

3 CHANNEL NUMBER READOUT

Displays the selected operating channel number.

4 BATTERY INDICATOR

• Displays the battery status.

Indication	Battery status
	Full
	Mid
	Charging required
	Battery exhausted

5 DUPLEX INDICATOR

Displayed when a Duplex channel is selected.

6 SCAN INDICATOR*1

Blinks while scanning. (p. 15)

7 DUALWATCH/TRI-WATCH INDICATOR*1

Displayed during Dualwatch or Tri-watch operation. (p. 16)

8 VOLUME/SQUELCH LEVEL INDICATOR

- Number of bars shows the volume/squelch level.
- “SQL” blinks when adjusting the squelch level. (p. 12)
- “VOL” blinks when adjusting the volume level.

9 SUB CHANNEL READOUT

- Displays the volume/squelch level while adjusting the level. (p. 12)
- Displays Channel 16 during a priority scan, Dualwatch or Tri-watch. (p. 16)
- Displays the Set mode item while in the Set mode. (p. 17)

10 CALL CHANNEL INDICATOR

Displayed when the Call channel is selected. (p. 9)

11 WEATHER CHANNEL ICON*2

Displayed when the Weather channel is selected. (p. 10)

- ① “☁” is displayed when the Weather Alert function is ON.

12 LOCK ICON

Displayed when the Lock function is ON.

13 CHANNEL GROUP INDICATOR

(p. 9)

Displays the selected channel group, INT (International), USA, CAN (Canada), or ATIS.

- ① The selectable channels differ, depending on the transceiver version, or the presetting.

14 LOW POWER INDICATOR

- Displayed when low power is selected.
- Blinks when a high temperature error or low voltage is detected, and automatically switches to low power.

15 FAVORITE CHANNEL ICON

Displayed when a Favorite channel is selected. (p. 15)

*1 Except the HOL version

*2 For the USA, EXP, and AUS versions

C2.2 Warnings and Cautions

ICOM IC-A15

Caution: NEVER carry the transceiver by the antennae. A belt clip is attached to the radio.

Caution: DO NOT transmit without an antenna attached. Otherwise the transceiver may be damaged.

WARNING! NEVER hold the transceiver so that the antenna is very close to or touching exposed parts of the body, especially the face or eyes, while transmitting. The transceiver will perform best if the microphone is 5 to 10 cm away from the lips and the transceiver is vertical.

C2.3 Normal Transceiver Operations

Transmitting

Note: to prevent interference, listen on the frequency before transmitting. If the frequency is busy, wait until the channel is clear.

Two methods are available for talking over the radio transceiver.

- Lift the handset from the cradle and press the Press To Talk (PTT) button on the handset. Speak clearly at normal volume into the handset.
- Leaving the handset on the cradle, press the PTT button on the cradle and speak clearly at normal volume into the Conference Mic (see the back of the handset).
- The first method is preferred as speech is then transmitted with the lowest level of background noise. In each case the PTT LED will stay on.

Note: The level of audio from the handset earphone is pre-set and is not affected by adjustment of this volume control.

- Release the PTT button to return to receive.

ICOM IC-M37E

Receiving

- Push the 0/1 button to turn on the radio
- If the channel is not on '6', push the up/down buttons until channel '6' is displayed on the screen. h
- Press the VOL/SQL button until the volume bars are displayed in the bottom right corner, while still holding down the VOL/SQL button push the up/down buttons to adjust the volume to desired level.
- Press the VOL/SQL button until the squelch bars are displayed in the bottom right corner, while still holding down the VOL/SQL button push the up/down buttons to adjust the squelch to desired level. Squelch is a function that mutes undesirable background noise while receiving no signal. Squelch may be reduced to increase signal strength and may be required for RHH heliport operations. The lower the number the higher the strength but the more background noise, the higher the number the lower the strength but less background noise.
- Radio is ready to receive transmissions from the helicopter. When a message is received, the 'BUSY' indicator appears on the transceiver display screen.



Transmitting

Note: to prevent interference, listen on the frequency before transmitting. If the frequency is busy, wait until the channel is clear.

CAUTION: Transmitting without an antennae attached may damage the transceiver.

- Check that the desired frequency channel 6 is visible on the display screen. If not, enter the frequency from a stored memory or manually as advised in the advanced operations section below.
- Push and hold the Push to Talk (PTT) button to transmit. The “TX” indicator appears on the transceiver display screen.
- Speak into the microphone at a normal voice level. DO NOT hold the transceiver too close to your mouth or speak too loudly. This may distort the signal.
- Release the PTT button to return to receive.

C2.4 Action Before Leaving Heliport Lift Lobby Area

After the helicopter has landed and the medical and clinical crews have left the heliport, or after the helicopter has departed:

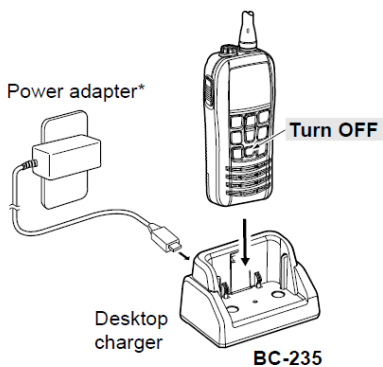
ICOM IC-M37E

- Place the radio in the battery charger, checking that the charging indicator light is on.

■ Battery charger

◇ Supplied battery charger

Charging time: Approximately 4 hours for the BP-296



C2.5 Advanced Transceiver Operations

ICOM IC-M37E

The transceiver has been setup and pre-programmed to access the assigned frequency when the unit is turned on.

It is acknowledged however that unexplained changes can occur and the following information is provided to give the operating essentials for the radio without the need to refer to the 40 page User Manual. The manual is available on line¹, embedded into the electronic copy of this manual and the printed version is kept in the heliport lift lobby.





¹ http://www.icom-australia.com/products/marine/ic-m37/Marine_IC-M37_InstructionManual.pdf

C2.8 Checking Low Battery Conditions

The storage of the transceiver in the supplied battery charger unit is intended to prevent the onset of a low battery condition. A low battery condition is indicated by an icon on the screen display and checking the display is part of the daily serviceability and pre landing checklists.

④ BATTERY INDICATOR

- Displays the battery status.

Indication	Battery status
	Full
	Mid
	Charging required
	Battery exhausted

C3 Phonetics and Phraseology for Transceiver Use

C3.1 Introduction

Civil Aviation Regulation 83 prohibits a person from transmitting on a radio frequency of a kind used for the purpose of ensuring the safety of air navigation unless that person is qualified to do so. Department of Health personnel performing the role of Heliport Officers are deemed to be qualified pursuant to CAR82 (2)(b) under an authority notified by Ambulance Victoria under CASR Part 64 for transmission on the assigned frequency of #####.### MHz.

Although the Heliport Officer is not required to hold a formal AROCP, the protocols and phraseology to be used needs to meet the standards applicable to the use of the airband. Accordingly, the following information relates to the relevant sections of the CASA Syllabus of Training for an Aircraft Radio Operator Certificate of Proficiency².

C3.2 Legislation

The applicable legislation is Civil Aviation Regulation 83 and Part 64 of the Civil Aviation Safety Regulations 1998 – *Authorisations for non-licenced personnel*

C3.3 Requirements for and privileges of the authority to transmit

The VHF Marine Radio channel 6 used by aircraft conducting medical transport flights for Ambulance Tasmania is an operational frequency within the Marine band to which CAR 83 refers. As such the conduct of persons transmitting on the frequency needs to meet the accepted and required standards of other persons using the frequency. These standards are established by the Civil Aviation Safety Authority and published as the Syllabus of Training for an Aircraft Radio Operator Certificate of Proficiency.

Accordingly the extracts from the syllabus that are relevant to operations at the RHH Rooftop Heliport have been adopted to ensure compliance with the requirements and privileges of transmitting on the VHF Marine Radio channel 6.

² https://www.casa.gov.au/sites/g/files/net351/f/_assets/main/fcl/download/arocp.pdf?trk=profile_certification_title

C3.4 Functions of Components of Radiotelephone System

The components of the radiotelephone system in use for the RHH Rooftop Heliport is the ICOM Model IC-A15 transceiver. Details of the functions and capabilities of the equipment are presented in the earlier sections of this appendix to the Heliport Operations Manual. In particular the material presented includes details of the battery and power supply, the microphone, the transmitter, the receiver and the speaker.

C3.5 Operation of Radiotelephone System

Procedures for setting up and using the ICOM IC-A15 transceiver are presented in the earlier parts of this Appendix.

C3.6 Responsibilities of a Radio Telephone Operator

Radio transmissions associated with the use of the RHH Rooftop Heliport are intended to support the safe and efficient transfer of patients by air ambulance helicopters. All transmissions have the same level of privacy as other aspects of patient care and wellbeing that applies to Department of Health personnel engaged in activities that are not directly related to heliport operations.

As an element of the aviation communications VHF Marine Radio transmissions on channel 6 are part of the operational radio network and need to reflect that significance. Accordingly the use of correct technique including phraseology is required and unauthorised transmissions are not permitted.

C3.7 Understanding of Correct Phraseology and Phonetics

Communications with Helicopters operating at the RHH Rooftop Heliport requires the use of standard protocols including words and phrases incorporating the phonetic alphabet and numbers.

The standard structure of each radio message consists of four elements: 1- To; 2-From; 3-Content and 4-Closing identification of broadcasting station.

TO:	FROM	MESSAGE	FROM
Royal Hobart Hospital	POLAIR I	Inbound ETA Time three five 4 POB, 3 crew 1 patient Request oxygen after shutdown	POLAIR I
POLAIR I	Royal Hobart Hospital	Heliport inspected and in ACTIVE Mode Acknowledge oxygen after shutdown	Royal Hobart Hospital

C3.8 Standard Procedural Words and Phrases

Phrases and messages transmitted on the aeronautical airband are generally assembled with reference to standard phonetic pronunciation of the alphabet and numbers as well as the standard words listed on the following pages.

Radiotelephony pronunciation of the phonetic alphabet is as follows:

A	Alpha “ al fah”	B	Bravo “ brah voh”	C	Charlie “ char lee”
D	Delta “ dell tah”	E	Echo “ eck ho”	F	Foxtrot “ foks trot”
G	Golf “ golf ”	H	Hotel “ hoh tel”	I	India “ in dee a”
J	Juliet “ jew lee ett”	K	Kilo “ key loh”	L	Lima “ lee mah”
M	Mike “ mike ”	N	November “ no vem bar”	O	Oscar “ oss cah”
P	Papa “ pah pah”	Q	Quebec “ keh beck”	R	Romeo “ row me oh”
S	Sierra “ see air rah”	T	Tango “ tang go”	U	Uniform “ you nee form”
V	Victor “ vik tah”	W	Whiskey “ wiss key”	X	X-ray “ ecks ray”
Y	Yankee “ yang key”	Z	Zulu “ zoo loo”		

Radiotelephony pronunciation of numbers shall be in the phonetic form as follows:

0	ze-ro	1	wun	2	too	3	tree	4	fow er
5	fife	6	six	7	sev en	8	ait	9	nin e

The following words and phrases are to be used in radiotelephony communications, as appropriate, and have the meaning given:

Acknowledge	Let me know that you have received and understood the message
Affirm	Yes
Approved	Permission for proposed action granted
Blind Transmission	Transmission sent without / unable to receive a response
Cancel	Annul the previously transmitted clearance
Check	Examine a system or procedure (no answer is normally expected)
Cleared	Authorised to proceed under the conditions specified
Confirm	Have you correctly received the following...? Did you correctly receive this message?
Correct	That is correct
Correction	An error has been made in this transmission (or message indicated). The correct version is...
Disregard	Consider that transmission as not sent
How do you read	What is the readability of my transmission? The readability scale is: 1 Unreadable 2 Readable now and then 3 Readable but with difficulty 4 Readable 5 Perfectly readable
I say again	Repeat for clarity or emphasis
Mayday	My aircraft and its occupants are threatened by grave and imminent danger and/or I require immediate assistance
Negative	No Permission is not granted That is not correct
Over	My transmission is ended and I expect a response from you (not normally used in VHF communication)

Out	My transmission is ended and I expect no response from you (not normally used in VHF communication)
Pan Pan Pan	I have an urgent message to transmit concerning the safety of my aircraft, or other vehicle or of some person on board, or within sight, but I do not require immediate assistance
POB	Persons on board includes crew as well as any patients or passengers. May be clarified by nominating patients on board as a separate number
Request	Should like to know or I wish to obtain
Roger	I have received and understood all of your last transmission Note: Under no circumstances to be used in reply to a question requiring read back or a direct answer in the affirmative or negative
Say again	Repeat all or the following part of your last transmission
Speak slower	Reduce your rate of speech
Standby	Wait and I will call you
Wilco	Understand your message and will comply with it

C3.9 Use of Helicopter and Heliport Call-signs

The helicopters operating medical transport flights for Ambulance Tasmania has call-signs reflecting their status as Helicopter Medical Transport aircraft – POLAIR – with a number between 71 and 73 to identify the individual aircraft. The call signs for the helicopters operating to the RHH Rooftop Heliport will therefore have call signs to be used in radio telephony of POLAIR-71; POLAIR-72; and POLAIR-73.

Conversations with helicopters operating to the RHH Rooftop Heliport will generally be initiated by an initial contact from the helicopter advising the ETA and other operational details. At that time the POLAIR number will be identified and used in subsequent conversations.

In the absence of a known POLAIR number, the aircraft can be addressed with the generic broadcast to “All stations Royal Hobart Hospital”, “Traffic Royal Hobart Hospital” or “POLAIR Traffic for Royal Hobart Hospital”.

C3.10 Transmission of Time

Time will be expressed with reference to local time - Australian Eastern Standard Time (AEST) or Australian Eastern Standard (Daylight Saving) Time (AEDT).

Say each figure separately, eg 55 minutes past the hour is ‘time five five’ not ‘fifty-five’, 1400 is said ‘time one four zero zero’. Say the minutes only, unless you are referring to a time more than an hour ahead; eg if the time is now 0830, you would refer to 0850 as ‘time five zero’ but 1050 as ‘time one zero five zero’.

C3.11 Radio Test Procedure / Readability Scale

The operational readability of the transceiver can be checked by the transmission of a message with the phrase: “All stations Royal Hobart Hospital, request radio check, Royal Hobart Hospital” with the anticipated response being , when there is a receiving station available, “ Royal Hobart Hospital, this is POLAIR reading you five” with reference to the readability scale listed in the standard phrases table above.

C3.12 Listening Before Transmitting

Good practice involves listening to the radio before transmitting to ascertain whether the frequency is already in use and a conversation is in progress or confirming that the airwaves are not active. It is not anticipated that there would be a lot of activity on VHF Marine Radio channel 6 but checking before transmitting is the proper practice.

C3.13 Establishing and Maintaining Communications

Conversations on air band radio frequencies are conducted in a semi-formal manner to ensure safety efficiency and brevity are associated with the conveyance of a message. The appropriate use of call signs for the transmitting and receiving stations and the message format ensures this outcome can be achieved even if it seems too formal on occasions.

C3.14 Standard Radio Procedures for Flights serving the RHH Rooftop Heliport

Communications between the Heliport Officer and the Helicopter Medical Transport helicopter is expected to be limited to a small range of phrases relating to the initial contact, revision of information such as ETA, requests for the provision of equipment and consumables stored in the Heliport Lift Lobby, and the helicopter departure call.

The following is a sample of anticipated and typical messages to be transmitted on VHF Marine Radio channel 6, each preceded by the station to and station from naming and concluded with the station from protocol.

- POLAIR ##, Inbound, ETA time [minute minute], [#] POB, Anticipate approach from [N/S/E/W]. Request oxygen bottles after shutdown. POLAIR ##
- Royal Hobart Hospital Heliport inspected and in ready mode. Request for Oxygen after shutdown acknowledged and ready. Royal Hobart Hospital.
- POLAIR ## Shut down Royal Hobart Hospital complete, approach to helicopter permitted. POLAIR ##

Note: This message may be used at night or in poor weather when a hand signal from the helicopter crew may be difficult to see from the heliport lobby. Normal practice will be to advise the Heliport Safety Officer by a hand signal rather than a radio call.

C3.15 Emergency Radio Procedures

In the unlikely but possible event that an emergency situation develops on the heliport or environs and a helicopter is inbound, advice of the situation and the possible cancellation of serviceability or availability of the heliport should be relayed to the helicopter by the Heliport Officer preceded by the PAN PAN PAN phrase.

For example

“All stations Royal Hobart Hospital. PAN PAN PAN. Heliport closed due to incident. Please divert to alternate location. Royal Hobart Hospital.”

C3.16 ICOM IC-M37E Operational Instructions



Marine_IC-M37_Instr
uctionManual.pdf

Attachment D: Maintenance

The maintenance schedule for the building and its elements is managed by the Facilities Management and Engineering Services business unit. They operate an asset management data base (Pulse) which automatically generates planned maintenance events for each type of element in given locations. These planned maintenance events cover all statutory and preventative maintenance tasks.

Pulse is able to allow remote requests from user groups for reactive maintenance requests, which is a standard icon on all THS computers. The login details are as follows:

- Login: Heliport
- Password: Heliport

Attachment E: Heliport Permit to Work



Tasmanian Health Service
ROYAL HOBART HOSPITAL

TASMANIAN
HEALTH
SERVICE

Heliport Permit to Work

For all work related to, or in the vicinity of the Heliport and that effects / may effect Heliport operations.

This permit is only valid for the location and period indicated and is to be returned to the point of issue on completion of the work.

Note: The expected notification period is 3 business days prior to the commencement of the works, unless otherwise approved by THS Facilities and Engineering.

Part A (to be completed by the person performing the work)

Note: A Heliport Permit to Work does not replace the need for appropriate Job Safety Analysis (JSA), Safe Work Method Statement and/or Hot Work Permit

Permit Applicant _____ **Date** _____ / /
(Name and Company Name)

Principal Contact _____ **Signature*** _____
(Name of Tasmanian Health Service Employee)

* In signing this permit the Contractor also acknowledges he / she has completed the appropriate Tasmanian Health Service contractor induction.

Location of Work _____ Department / Level

Period of Issue
from _____ hours on _____ day / /
to _____ hours on _____ day / /

Description of Work

Part B (to be completed by the person performing the work)

Pre-permit Checks for Contractors

	Yes	No
Have all workers completed the THS Contractor Induction?	<input type="checkbox"/>	<input type="checkbox"/>

General Precautions Before Work Commences:

Has THS Facilities and Engineering given approval for the works to proceed?	<input type="checkbox"/>	<input type="checkbox"/>
Has the "Worker on Heliport" sign been put in place?	<input type="checkbox"/>	<input type="checkbox"/>
Are all Heliport finishes, infrastructure and equipment protected?	<input type="checkbox"/>	<input type="checkbox"/>
Will the works being undertaken cause debris? If so, will waste be controlled / collected?	<input type="checkbox"/>	<input type="checkbox"/>
Has the Roof Access Permit been completed?	<input type="checkbox"/>	<input type="checkbox"/>
Is a JSA / SWMS or Hot Work Permit required? If so, is it completed and attached?	<input type="checkbox"/>	<input type="checkbox"/>

General Precautions During Works:

Is there an observer on hand where working out of sight (ie below the Heliport)?	<input type="checkbox"/>	<input type="checkbox"/>
--	--------------------------	--------------------------

In Case of Emergency Phone: 222

Location of Nearest Telephone: Heliport Lift Lobby

Part C Special Precautions

Ensure Hi-Vis clothing is worn as an outer garment at all times.

Obeys any and all instructions by Heliport Officer and Facilities and Engineering.

Signed _____ THS Authorised Person

Part D

On completion of work/s, the following conditions must be met:

- The work site is left clean and all tools, debris and waste is removed.
- Appropriate Heliport staff are notified that works have been completed and the area vacated.
- No person is to return to the Heliport for any reason.

Signed _____ THS Authorised Person



Signed _____ Worker / Contractor in charge of works performed

Attachment F: Heliport Emergency Access Protocol

When Lift Access is Unavailable:

Responding Team

Upon notification that urgent / emergency access is required to the Heliport to provide clinical care / support, the responding team are to immediately contact the Heliport Officer on 0438 655 772 and request to meet at the selected route option as detailed below:

Option 1:	<ul style="list-style-type: none"> • Go up Stairwell “7” to K6. • Stairwell “7” connects to Stairwell “6” on K6. • Continue up Stairwell “6” to level K11, the Helipad key is required to open the gate at K10 • go through the Room to Stairwell “10” which connects to the Heliport Lift Lobby.
Option 2:	<ul style="list-style-type: none"> • Go up Stairwell “3” which connects to Stairwell “5” between K10 and K11. • Proceed up Stairwell “5” • Exit Stairwell “5” to the external walkway • Follow walkway to Stairwell “11” on K11. Use Helipad Key to open the door at Stairwell “11” • Proceed up Stairwell 11 (open air stairwell located on the corner of the Heliport, diagonally opposite the Heliport Lift Lobby).
Notes:	<p>Blue and ██████ signage is in place to assist with navigating stairs to the Heliport.</p> <p>Either a Security Access Card and / or Keys can be used to enter the Plant Rooms and the Heliport Lift Lobby.</p> <div style="display: flex; justify-content: space-around; align-items: center;">   </div>

The responding team will meet the Heliport Officer at the applicable stairwell, follow the designated route to the Heliport Lift Lobby via the marked walkways and directional ‘Heliport Access’ signage.

See route options via the stairwells in Section 6.3.

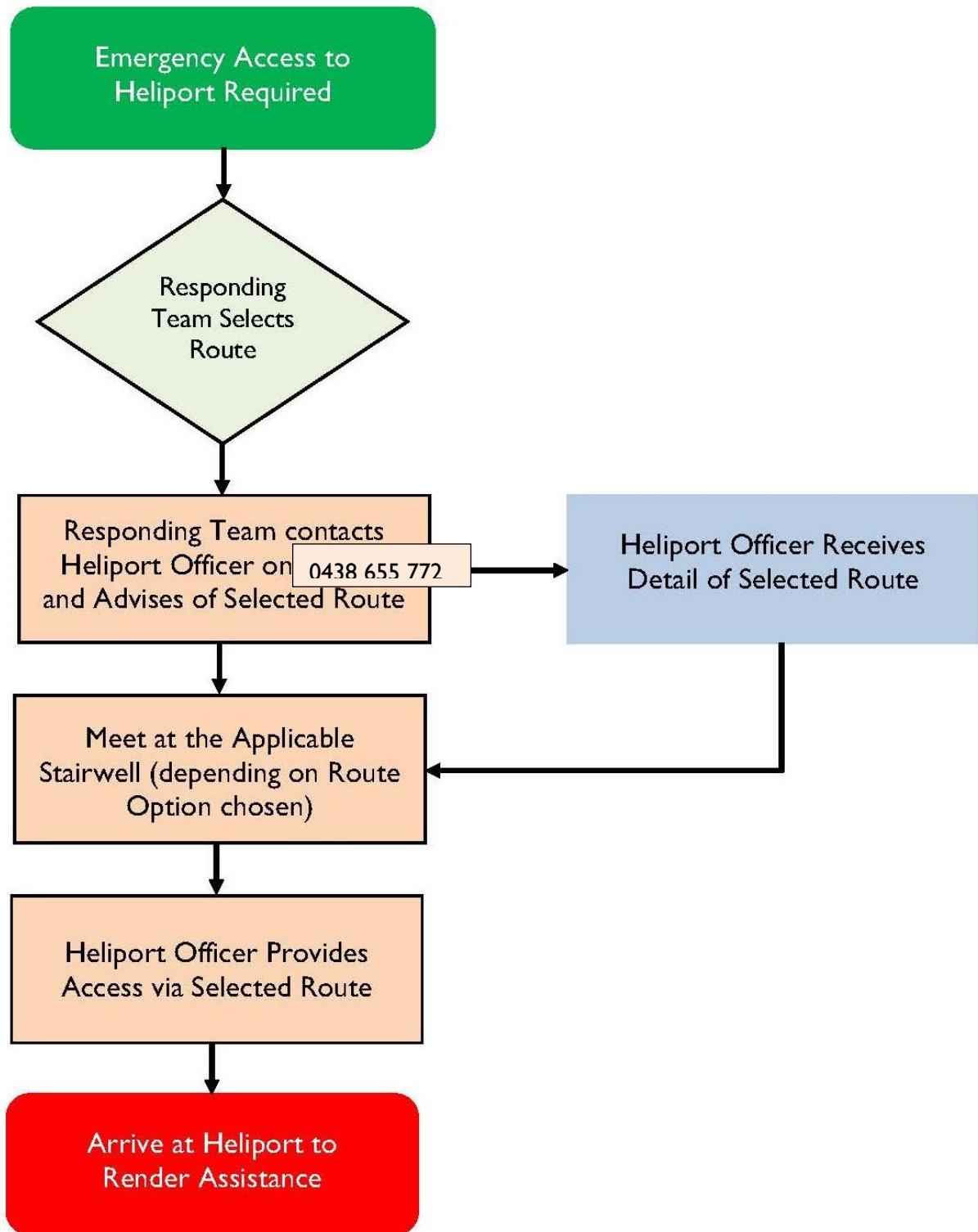
Note: Should there be more than a single group of respondents, the initial team must make arrangements to have additional staff provide access to later arrivals (ie be stationed at the doors or the Heliport Officer to be sent back to Level 11 after reaching the Heliport Lift Lobby).

Heliport Officer

Upon notification that urgent / emergency access is required to the Heliport, the Heliport Officer will proceed immediately to the meeting point for the advised route. The Heliport Officer will provide access to the Heliport Lift Lobby (for the responding team) as the Heliport Officer carries a master key set.

The Heliport Officer has no additional role in regards to the emergency access protocol, as they will continue to support the Helicopter Medical Crew as required.

Figure F1 - Heliport Emergency Access Protocol



Attachment G: Heliport Planning and Design Background

4.1 Concept Design Philosophy

The rooftop heliport serving the RHH was planned, designed and constructed to ensure a heliport is available that meets the airworthiness Category A heliport criteria. The operation of Helicopter Medical Transport helicopters requires the use of Category A certificated helicopters as a pre-requisite for operations in Performance Class I which is the design intent for the RHH Rooftop Heliport.

The dimensions and configuration of the RHH Rooftop Heliport were identified following the evaluation of a design helicopter and the analysis of site specific wind data.

Category A Helicopters

A Category A certificated helicopter is a multi-engine rotorcraft with demonstrated performance capabilities with one engine inoperative (OEI) that enable the helicopter to land at a heliport of defined dimensions or to fly away with climb capabilities in excess of specified limits.

Performance Class I Helicopters

Helicopters operating in accordance with Performance Class I criteria are accountable through all phases of flight. Helicopters operating in Performance Class I have the capability, in the event of a critical engine failure, to safely land at the helipad or to fly away clearing all relevant obstacles vertically by at least 35 feet (10.7 metres) with an engine out and be able to achieve a rate of climb of 100 feet per minute at 200 feet above the heliport elevation.

4.2 Selection of Design Helicopter

The Aero-Medical Retrieval Service in Tasmania is currently being provided by Rotorlift who hold the helicopter contract with the Department of Police, Fire and Emergency Management.

The helicopter that is currently operating Helicopter Medical Transport flights for Ambulance Tasmania is a BK117-B2 model

Provision been made in the design of the heliport for the operation of much larger helicopter types than are currently being operated by Rotorlift.

Helicopter Emergency Medical Service flights conducted by the mainland states of Australia typically use the Bell 412EP and the Leonardo AW139 type of helicopter.

Future helicopters types that could operate at the RHH could include:

- updated models of the BK117 (either the BK117-C2 model or similar)
- Bell 412EP and
- Leonardo AW139.

The heliport has been designed with reference to a design helicopter with key characteristics expressed in terms of a D-value, the largest overall dimension with rotors turning, and a maximum operating mass.

The design helicopter for the RHH rooftop heliport has a D-value of 18.5 metres and a maximum operating mass of 8 tonnes. The design helicopter characteristics have been selected to provide a contingency against the potential introduction of larger medical transport helicopter types in the longer-term future within the design life of the facility. The significance of the D-Value is the dimension of the safety area round the helipad and the length of the inner edge of the airspace surrounding nominated flight path tracks. Whilst the D-Value has an influence on the helipad dimensions, the Category-A criteria for the Bell 412EP dominated the analysis and selection of the required helipad dimensions.

The helipad dimensions based on the Bell 412EP criteria reflect the ground level helipad criteria rather than the elevated helipad criteria. A rooftop helipad is elevated in a physical sense but is a ground level helipad rather than an elevated helipad in an operational sense. This is because the one engine inactive (OEI) fly-away profile does not descend below the elevation of the helipad deck as this is not an option for sites in congested environments such as the Hobart CBD.

The planning and design work for the RHH Heliport has been undertaken with recognition of Civil Aviation Regulation 92 whereby the responsibility remains with the pilot in command to decide if a safe take-off or landing can be achieving in the prevailing conditions. The RHH Heliport has been designed with the intention that the Category A helipad requirements of the Helicopter Medical Transport fleet will be met thereby ensuring that Ambulance Tasmania helicopter medical transport flights can be operated in Performance Class I whenever ambient weather conditions are suitable.

4.3 Analysis of Site Wind Conditions

The design of the RHH Heliport needed to consider the orientation of prevailing winds at the site to identify a flightpath alignment which provides optimum usability for the helipad, particularly with reference to operations conducted in Performance Class I.

An assessment of the wind conditions at the site has been undertaken using the meteorological module of TAPM (The Air Pollution Model). TAPM uses a range of databases including terrain and vegetation in conjunction with synoptic data sourced from the Bureau of Meteorology to model historic site specific weather conditions, including an hourly average wind speed and direction dataset. The TAPM analysis is generally taken over a five year period and provides over 43 000 data points for analysis at each of the selected elevations.

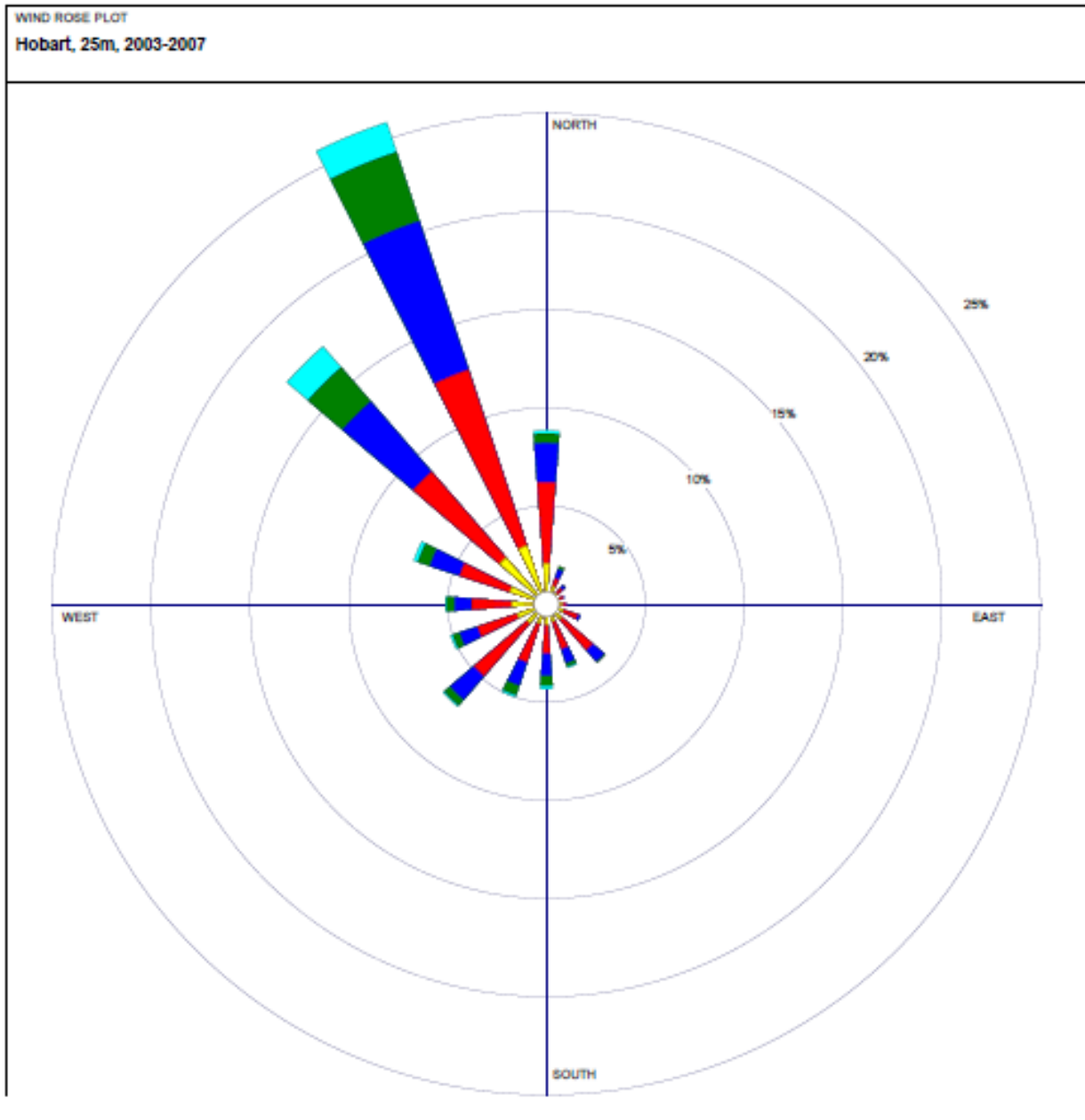
The TAPM analysis for the RHH site was undertaken for an elevation of 25 metres, 50 metres and 100 metres above ground level. Figure 1 presents the wind rose for the winds at 25 metres, Figure G2 presents the wind rose for the winds at 50 metres and Figure 3 presents the wind rose for the winds at 100 metres.

Analysis of the wind data generated by TAPM indicates that whilst there is a dominance of wind events from the North North West (NNW), the overall site wind distribution at 25 metres above ground level has an average speed of 4.60 metres per second (8.9 knots or 16.6 kilometres per hour). At 50 metres above ground level, the TAPM data indicates an average wind speed of 5.23 metres per second (10.2 knots or 18.8 kilometres per hour) and at 100 metres above ground level, an average wind speed of 5.94 metres per second (11.5 knots or 21.4 kilometres per hour).

The wind data identifies a strong dominance of winds from the NNW which indicates that a rooftop helipad with the orthogonal shape of the building will be capable of providing a high usability for helicopter flights operating in Performance Class I.

It is noted that the consideration of site conditions including the ambient wind direction and velocity in conjunction with other operational parameters remain the responsibility of the Pilot in Command.

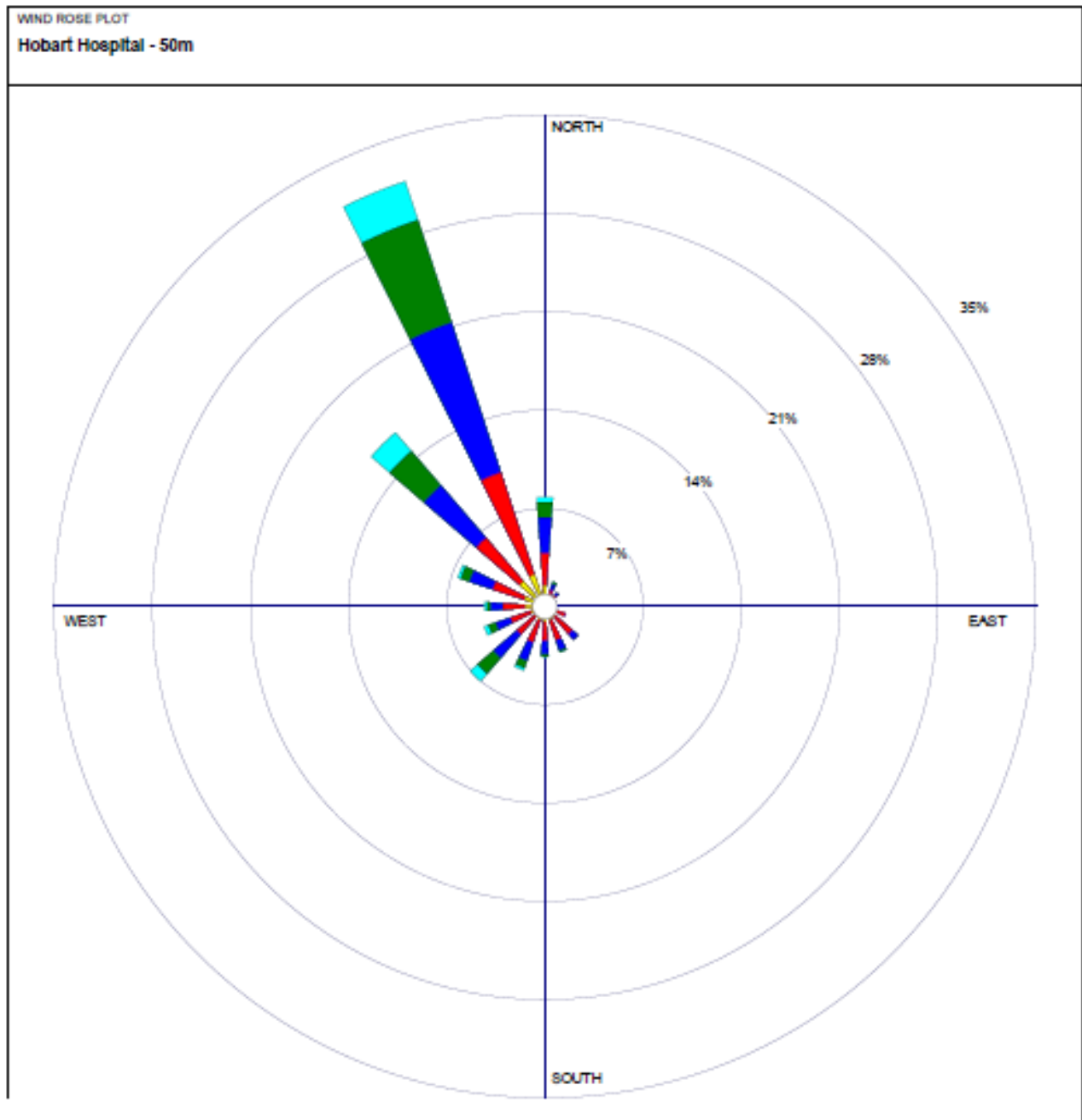
Figure G1 – Wind Rose Plot at 25 Metres Above Ground Level



Wind Speed (m/s) 	MODELER 	DATE 12/08/2008	COMPANY NAME
	DISPLAY Wind Speed	UNIT m/s	COMMENTS
	AVG. WIND SPEED 4.60 m/s	CALM WINDS 0.00%	
	ORIENTATION Direction (blowing from)	PLOT YEAR-DATE-TIME 2003 2004 2005 2006 2007 Jan 1 - Dec 31 Midnight - 11 PM	PROJECT/PLOT NO.

WRPLOT View 3.5 by Lakes Environmental Software - www.lakes-environmental.com

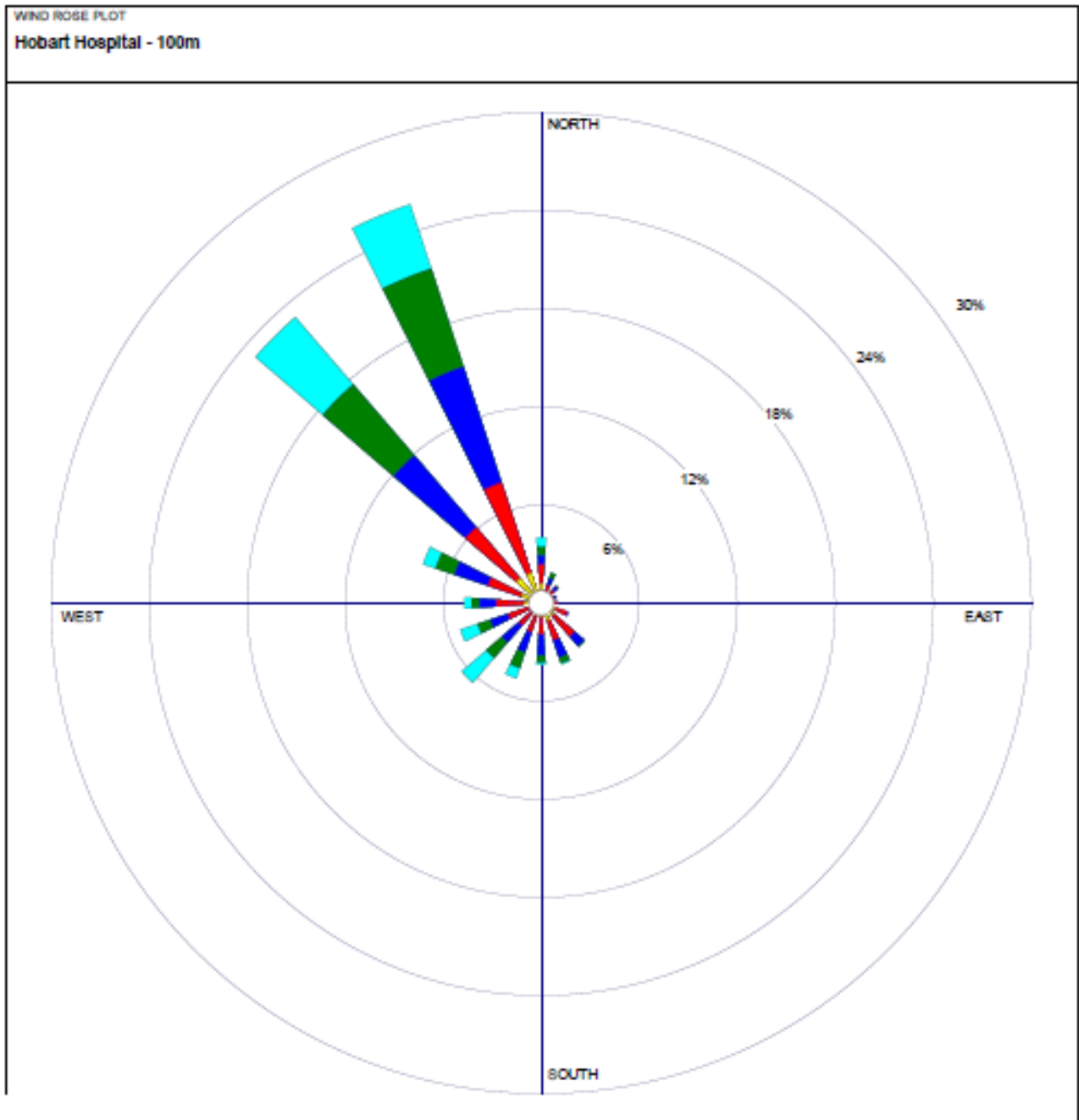
Figure G2 – Wind Rose Plot at 50 Metres Above Ground Level



<p>Wind Speed (m/s)</p> <ul style="list-style-type: none"> > 9.00 7.00 - 9.00 5.00 - 7.00 3.00 - 5.00 1.00 - 3.00 0.00 - 1.00 	<p>MOEDELER</p>	<p>DATE</p> <p>2/23/2012</p>	<p>COMPANY NAME</p>	
	<p>DISPLAY</p> <p>Wind Speed</p>	<p>UNIT</p> <p>m/s</p>	<p>COMMENTS</p>	
	<p>AVG. WIND SPEED</p> <p>5.23 m/s</p>	<p>CALM WINDS</p> <p>0.00%</p>		<p>PROJECT/PLOT NO.</p> <p>2005 - 2009 Inclusive</p>
	<p>ORIENTATION</p> <p>Direction (blowing from)</p>	<p>PLOT YEAR-DATE-TIME</p> <p>2005 Jan 1 - Dec 31 Midnight - 11 PM</p>		

MRPLOT View 2.5 by Lakes Environmental Software - www.lakes-environmental.com

Figure G3 – Wind Rose Plot at 100 Metres Above Ground Level



<p>Wind Speed (m/s)</p> <ul style="list-style-type: none"> > 9.00 7.00 - 9.00 5.00 - 7.00 3.00 - 5.00 1.00 - 3.00 0.00 - 1.00 	<p>MODELER</p>	<p>DATE</p> <p>2/23/2012</p>	<p>COMPANY NAME</p>	
	<p>DISPLAY</p> <p>Wind Speed</p>	<p>UNIT</p> <p>m/s</p>	<p>COMMENTS</p>	
	<p>AVG. WIND SPEED</p> <p>5.94 m/s</p>	<p>CALM WINDS</p> <p>0.00%</p>		<p>PROJECT/PLOT NO.</p>
	<p>ORIENTATION</p> <p>Direction (blowing from)</p>	<p>PLOT YEAR-DATE-TIME</p> <p>2005 Jan 1 - Dec 31 Midnight - 11 PM</p>		<p>2005 - 2009 Inclusive</p>

WRPLOT Menu 3.5 by Lakes Environmental Software - www.lakes-environmental.com

4.4 Heliport Obstacle Environment

Helicopters flown in Performance Class I are required to meet prescribed performance criteria in the event that one engine is in-operative (OEI). In the event that the fly-away option is selected following an engine failure in the approach and landing or take-off stages of flight, the helicopter is required to be capable of clearing relative obstacles in the flightpath by a margin, for a Visual Flight Rule (VFR) flight, of at least 35 feet (10.7 metres) from the end of the initial take-off segment.

A nominal provision of 240 metres has been adopted for the length of the initial take-off segment in the assessment of the obstacle environment for the RHH Heliport. This distance is nominated following an assessment of performance charts for the Bell 412EP, Leonardo AW169 and Kawasaki BK117 helicopters as indicative of the continued take-off distance for a range of ambient weather conditions.

The relevance of obstacles is defined by its location and elevation within the boundary of an Obstacle Accountability Area (OAA). The OAA is a trapezoidal shaped region centred on the flightpath track. The lateral boundaries of the OAA are defined by an inner edge of 37 metres in length coincident with the Heliport safety area boundary and an outer width for day and night operations of ten times the design helicopter rotor diameter. The sides of the Obstacle Accountability Area splay at 15 per cent from the inner edge to the overall width of 150 metres over a distance of 377 metres for a D18.5 helicopter.

The primary flightpath track alignment is dictated by the central axis of the helipad deck area which offers a rectangular FATO (final approach and take-off) area that meets the Category A criteria.

The Airspace Survey and Analysis of the Obstacle Environment is detailed in Attachment B.

4.5 Operational Airspace Protection Measures

The rooftop Heliport for the RHH is located above K-Block, adjacent to the corner of Campbell and Liverpool Streets.

An assessment of the flightpath tracks for arrival and departure flights has been made with reference to the terrain and existing developments in the Hobart CBD region, the relative location of water areas to provide Fly Neighbourly routes and a review of the overall usability of the identified tracks with reference to site specific wind data generated by the meteorological module of TAPM (see Analysis of Site Wind Conditions Section above).

The TAPM wind data strongly supports the use of a North West – South East primary flightpath track with a curve track to the North East enabling overflight of the Derwent River area.

Whilst the flightpaths followed by helicopters under normal conditions with all engines operating will be capable of utilising the North West – South East primary flightpath track, a helicopter in the OEI situation will have reduced performance capabilities and will need to utilise airspace with a lower climb gradient than that required to clear the terrain in the Queens Domain.

Consideration of the high terrain region in the Queens Domain region in the event of an OIE fly-away requires the inclusion of a tracking option at lower elevations around the perimeters of the Queens Domain.

Figure G4 provides a representation of the adopted flight path tracks for OEI flights with the north-eastern track following the perimeter of the Queens Domain region.

Figure G4 – RHH Heliport OEI Flightpath Tracks (Oblique View)



Alternate flight path tracks have been identified in addition to those mentioned above. A straight track to the North West, nominally parallel and east of Clare Street has been identified for flights responding to an OEI situation as a supplement to the curved track following the perimeter of the Queens Domain area. In addition, the ICAO SARP's nominate a minimum radius for a curved track of 575 metres and this has been identified as a track from the hospital to the Hobart Airport base which is likely to be used for the short return flight after a patient has been delivered to the hospital.

Figure G5 indicates the range and location of the identified tracking options for helicopters serving the RHH.

Figure G5 – Indicative Location of Helicopter Tracking Options

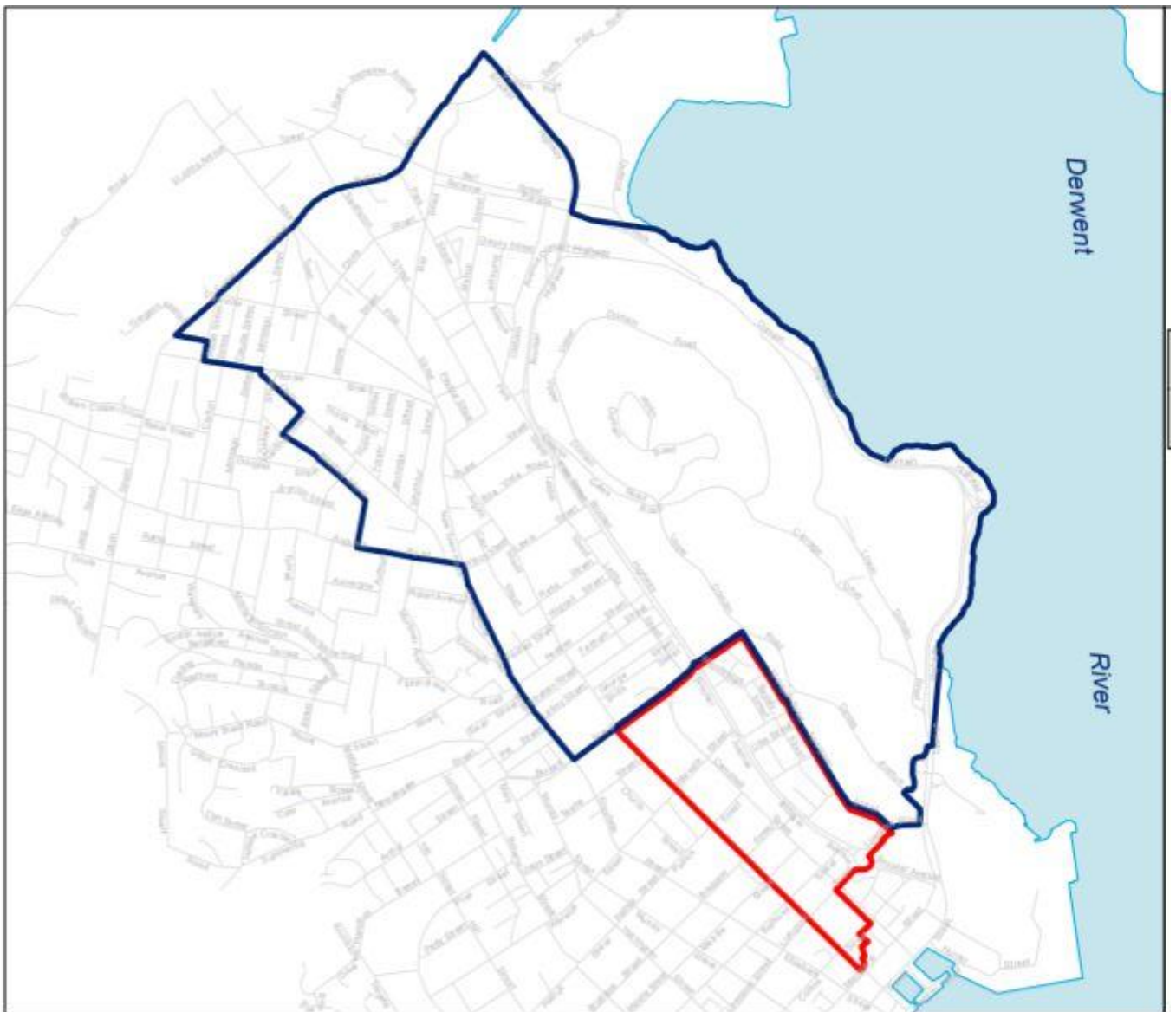


The areas defining the airspace for the RHH Heliport has been divided into two sections – one with a development referral trigger height of 64.5 metres Australian Height Datum (AHD) to match the design elevation of the helipad and an outer area with a development referral trigger height elevation of 100 metres AHD. The boundary of the inner section extends to approximately 1 000 metres in length to take account of the increase in elevation from the end of the first section of the OEI profile to the area where the nominal 4.5 per cent surface attains an elevation of 100 metres AHD. Note that AHD and AMSL are both referenced as 0.000m¹

¹ <http://www.ga.gov.au/scientific-topics/positioning-navigation/geodesy/datums-projections/australian-height-datum-ahd#heading-1>

Figure G6 presents the map from the Tasmanian Planning Commission approved planning scheme showing the extent of the RHH Helipad Airspace Specific Area Plan.

Figure G6 – Tasmanian Planning Commission Approved Planning Scheme – RHH Helipad Airspace Specific Area Plan



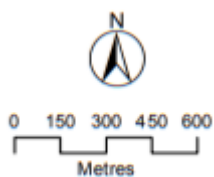
Legend



Development Referral Trigger Height - Inner Area 64.5 m AHD



Development Referral Trigger Height - Outer Area 100 m AHD



4.5.1 Purpose of Helipad Airspace Specific Area Plan

The purpose of the Helipad Airspace Specific Area Plan is to ensure that development of land does not obstruct safe air navigation of aircraft approaching and departing the RHH Helipad.

4.5.2 Application of Helipad Airspace Specific Area Plan

The Helipad Airspace Specific Area Plan applies to the area of land designed as the Royal Hobart Hospital Helipad Airspace Specific Area Plan in Figure 6.

4.5.3 Development Standards for Building Works

Building Height - Objective:

To ensure that buildings do not interfere with safe aircraft operations in the vicinity of the RHH Helipad.

Acceptable Solutions	Performance Criteria
AI	PI
Building height including minor protrusions, masts or aerials within the areas shown in Figure 6 must be no more than: (a) 64.5 m AHD if within the Inner Area or (b) 100 m AHD if within the Outer Area	Buildings that exceed the specified height must not create an obstruction or hazard for the operation of aircraft, having regard to any advice from the Civil Aviation Safety Authority, the Department of Health and the Helicopter operator.

Note: The building height restrictions does not conflict with development standards relating to height which apply to the area of land to which the Helipad Airspace Specific Area Plan Applies.

The building height restrictions are to operate concurrently with the zone development standards relating to height and not prevail over them.

4.5.4 Conditions and Restrictions on a Permit

The Hobart City Council may impose conditions on a permit to ensure that cranes or other temporary structures used in construction of a development that may exceed the specific height in the building height zones listed above (ie zone (a) – 64.5 m AHD for the Inner Area and (b) – 100 m AHD for the Outer Area) do not create an obstruction or hazard for the operation of aircraft having regarding to any advice from the Civil Aviation Safety Authority, the Department of Health and the Helicopter operator.

Dot Points for Minister

Jeremy Rockliff MP
Minister for Health

Subject: Royal Hobart Hospital Helipad

- **Kerry Burns, President of the Glebe Residents Association wrote to Minister Courtney in March 2021 regarding noise pollution associated with the use of the RHH Helipad.**
- **In April 2021, the Office of the Deputy Secretary (Department of Health) responded to Mr Burns highlighting that from November 2020 to February 2021 there had been an average increase of one helicopter landing every three and a half days compared to the same period in the previous year.**
- **Mr Burns wrote to Minister Rockliff in June 2021, reiterating his concerns noting a pronounced increase in the number of helicopter flights with an increase in the intensity of noise.**
- **Mr Burns included reference to noise logging data provided from a separate project being conducted in Glebe. Ministerial Briefing**
- **Minister Rockliff responded to Mr Burns in August 2021, noting his concerns and highlighting the improved service delivery and availability of resources the helipad offers. Minister Rockliff also identified that in May and June of this year the helipad landings were the lowest they had been for nine months, and there had been an average of one night-time landing per week for the previous 12 months.**
- **Rotorlift is contracted to provide helicopter services for the Department of Health and the Department of Police, Fire and Emergency Services.**
- **Ambulance Tasmania uses BK117 helicopters and a larger Bell412 to transfer critically injured and ill patients around the state.**
- **The flight paths used by the emergency services helicopters were dictated during the original design of the helipad, focusing on the safest approach and departure routes taking into consideration the surrounding infrastructure and prevailing winds.**
- **The approach and departure profiles (altitude and rate of descent of aircraft) were also designed to minimise noise pollution and maximise the**

safety of the aircraft, within the limitations of the flight manuals. The aircraft climb rapidly after leaving the helipad, minimising noise pollution prior to turning toward the airport over the upper end of Queens Domain or over the River Derwent.

- In the six months to July 2021, Emergency Services Helicopters landed on the RHH Helipad 183 times, 22 of these were overnight (10:00pm-7:00am). This is an average of one helicopter every 24 hours, with only one overnight landing a week.

Prepared by	Garry White	Manager Aeromedical and Retrieval	Personal Information	28 September 2021
Through	Joe Acker	Chief Executive		28 September 2021
Cleared by	Paula Hyland	Acting Deputy Secretary, Community, Mental Health and Wellbeing		29 September 2021