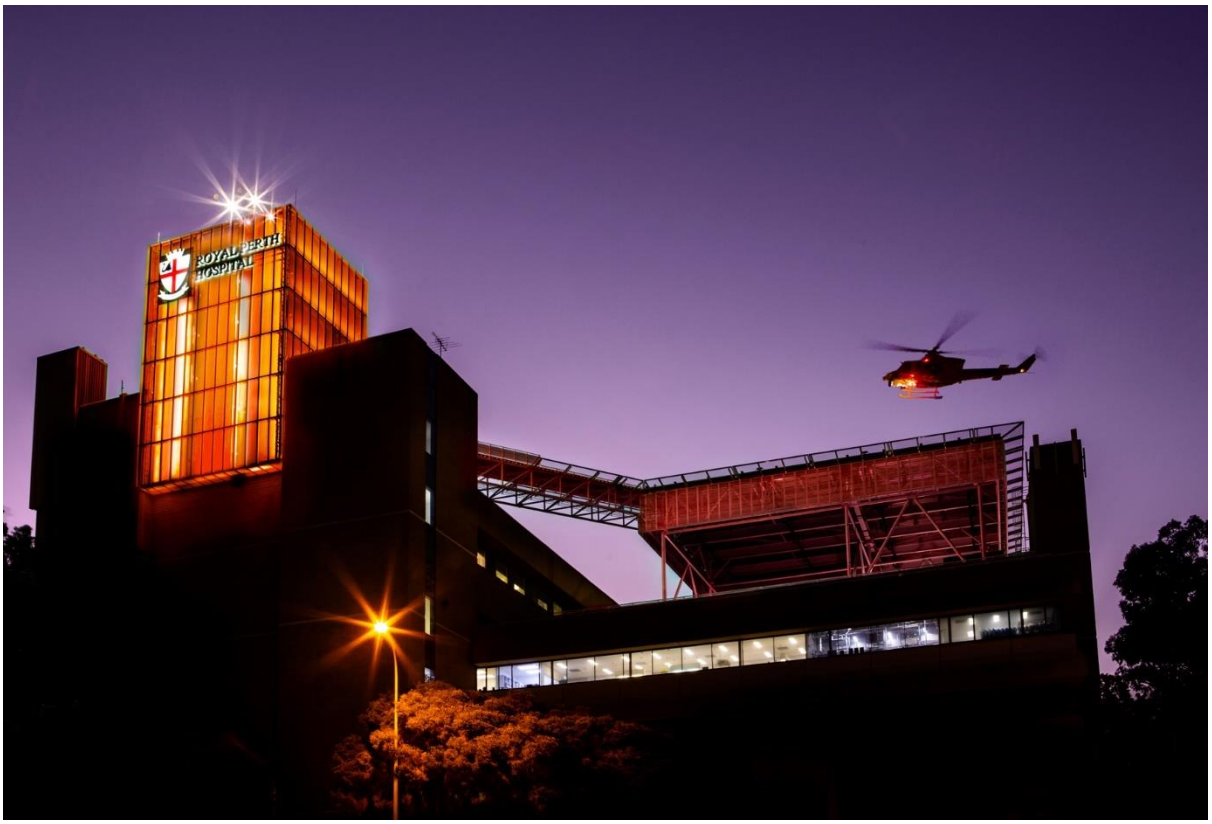
Government of Western Australia
East Metropolitan Health Service

Royal Perth Hospital Heliport Procedures



Final September 2023
V2.2

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Document control information

Title:	**Royal Perth Hospital Heliport Procedures**
Version:	2.1
Date of issue:	September 2023
Status:	Review V1.2
Description:	Procedures governing the operation of the new RPH Heliport
Applicable to:	All Helicopter Operators and RPH staff accessing the heliport area
National standard:	Governance for Safety and Quality in Health Organisations Service
Period of effect:	29th September 2023 to August 2026
Authorised by:	RPBG Director of Nursing, Midwifery and Patient Support Services

Version	Effective from	Effective to	Amendment(s)
2.2	September 2023	August 2026	Initial release version:.V1 May 2022 This release version V2 September 2023
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Recognition	Support and contribution gratefully provided by the Emergency Management Units at Perth Children's Hospital and Fiona Stanley Hospital.		

This document replaces the following documents:

Version	Effective from	Effective to	Changes
1.0	25 May 2022	25 May 2025	Updated contact phone numbers Added Action Card for Clinical Nurse Specialist (Appendix B) Updated Helipad Code Blue (Appendix C) Updated RFDS Inter Hospital Patient Transfer pathway (17.6 and Appendix D) Other minor administrative changes
1.1	30 May 2022	30 May 2025	Amalgamation of procedures and appendices into a single document
2.1	17 May 2023	25 May 2026	update Contact Details and Phone Numbers Updated Drone Procedures Update
2.2	July 2023	July 2026	Full Procedure Manual review 12 Months since full commission Review of Unplanned Landing Incident Actions Updated Drone Procedures

This version covers the operations of the new elevated heliport built on Level 8 (roof) of R Block.

The operations manual for the old helipad located on Level 5 R Block has now lapsed with approval for full decommissioning of the old helipad, withdrawn from service.

The definitive version of this document and amendments is held at the Emergency Operations Centre, Level 2 A Block, Royal Perth Hospital.

The latest version of this document can be found on the RPBG Emergency Management Hub page

Custodian: Manager, Emergency and Disaster Planning RPBG

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Abbreviations

Abbreviation	Description
CASA	Civil Air Safety Authority
CBD	Central Business District
CCP	Critical Care Paramedic, within this document also referred to as the “on-board clinician”
DFES	Department of Fire and Emergency Services
ED	Emergency Department
ED DO	Emergency Department Duty Officer
EDRT	Emergency Department Retrieval Team
EMHS	East Metropolitan Health Service
EMC	Emergency Management Committee
EMU	Emergency Management Unit
EMS	Emergency Medical Service
EPIC	Emergency Physician in Charge
ERHS	Emergency Rescue Helicopter Service
ERIC	Emergency Registrar in Charge
ERT	Emergency Response Team
ETA	Estimated time of arrival
FATO	Final Approach and Take Off
FOD	Foreign object debris
HEMS	Helicopter Emergency Medical Services
FSH	Fiona Stanley Hospital
HLO	Helicopter Landing Officer
HLS	Helicopter Landing Site
ICAO	International Civil Aviation Organisation
IPRA	In Patient Reception Area
MLW	Maximum Landing Weight
MTOW	Maximum Take-Off Weight
PCA	Patient Care Assistant
PCH	Perth Children’s Hospital
PIC	Pilot in Control
PPE	Personal Protective Equipment
PSS	Patient Support Services
RAAF	Royal Australian Air Force
RFDS	Royal Flying Doctor Service
RFDS MO	Royal Flying Doctor Service Medical Officer (Doctor), within this document also referred to as the “on-board clinician”
RFDS RN	Royal Flying Doctor Service Retrieval Nurse, within this document also referred to as the “on-board clinician”
RPBG	Royal Perth Bentley Group

RPH	Royal Perth Hospital
SCGH	Sir Charles Gardiner Hospital
SJA	St John Ambulance
SMTU	State Major Trauma Unit

1. Purpose

This procedure provides instructions for the management of the new Royal Perth Hospital (RPH) Heliport and is to be used as a guide for all operations including both internal and external users.

2. Initial safety

A rooftop heliport has risks associated with its use and all employees that require access to the heliport are to be aware of the inherent Work Health and Safety (WHS) issues. Employees are not to access the heliport during operations unless appropriately trained and authorised to do so.

Designed under (CASA Guidelines for the establishment and use of onshore HLS 92-2, 2014 and RPH Helipad Policy 2019). Replaced in December 200221 with Advisory Circular AC 91-29 v1 Guidelines for helicopter, suitable placed to take off and land.

3. Scope

These procedures are applicable any time an employee, contractor or service provider requires access to the heliport area or associated service area.

4. Associated documents

The following are documents associated with this procedure.

Internal Documents

Document Name	RPH Document Owner
Enter New Policy 2023	RPBG Executive Director
RPH SMTU Trauma Heliport Resuscitation "Heliport Code Blue" SOP 2022	RPH Trauma Program Manager
COVID-19 Helipad/Heliport SOP	RPH Trauma Program Manager
EMHS Security Stand Operating Procedures	EMHS Area Security Manager
RPH Emergency Department Critical Care Pod: Roles and Responsibilities	RPBG Emergency Department Nurse Unit Manager
East Metropolitan Health Service –Duties Register Security Officer 2020	EMHS Area Security Manager
RPH Emergency Response Procedures	RPBG Manager Emergency and Disaster Planning
Helicopter Landing Officer Flow Chart	EMHS Area Security Manager

Document Name	RPH Document Owner
EMHS Safety Management Plan/ Systems	EMHS Director Work Health and Safety
EMHS WHS Manual Tasks	EMHS Director Work Health and Safety
Policy Procedure Use of Two-Way Radio Communications Two Way Use Quick Guide	RPBG Manager Emergency and Disaster Planning

External Documents

Document Name	Document Owner
Guidelines for the establishment and operation of Helicopter Landing Sites	**CASA CAAP 92-2 (2)** *Replaced in December 200221 with Advisory Circular AC 91-29 v1 Guidelines for helicopter, suitable placed to take off and land.*
Application of aerodrome standards	**CASA AC 139.A03 v1.0**
International Standards and recommended practices, Annex 14 to the Convention on International Civil Aviation, Aerodromes Volume II – Heliports.	**ICAO Annex 14 Vol II**

5. Glossary

Term	Description
Abnormal landing	An abnormal landing that has caused significant damage to the aircraft and / or injuries to persons on board.
Approach	The area on level 8 outlined in Appendix A described as approach.
CCP	Critical Care Paramedic, within this document referred to as the "on-board clinician"
Cold Landing	The term refers to the status of engines during unloading as being off: the patient is unloaded from the helicopter once the engines have been shut down and the blades stop turning.
D Value	Is the largest overall dimension of a helicopter when rotors are turning. This dimension is normally measured from the most forward position of the main rotor tip path plane to the most rearward position of the tail rotor tip path plane and measured in metres.
Emergency landing	When a landing must occur because of impending or actual failure of a system or systems.
Evacuation route	The area on level 8 outlined in Appendix A
Final Approach and Take Off area (FATO)	The area which is delineated on the deck by a solid white line and green lights on its' perimeter.
Foreign Object Debris (FOD)	Foreign Object Debris or Foreign Object Damage. The term FOD is generically used to refer to any loose item that maybe a FOD hazard to an aircraft
Guard rails	Non-retractable guard rails spanning the link bridge from the IPRA halfway to the deck. The guard rails end at the FATO and are replaced by safety netting.
Green deck	The helicopter landing site and immediate area is clear of obstacles, equipment, FOD, personnel or any other items that would compromise the safety of the helicopter landing site for a normal landing. The door to the IPRA must be closed.
Heliport	The marked area on the Level 8 North Block as identified in Fig 3.
Hot Landings	The term refers to the status of engines during unloading as being off: the patient is unloaded from the helicopter with the engines still running and the blades still turning.
In Patient Reception Area (IPRA)	Includes the lift lobby
Helicopter Landing Officer (HLO)	In charge of activity on the heliport, including declaring the helicopter landing site operational prior to landings. The role is undertaken by a trained EMHS Security Officer.

Deck lights	Lights, which illuminate the helicopter landing site to enable safe helicopter movements at night.
Hot Landing	The term refers to the status of engines during unloading as being on and rotor blades still turning
Link bridge	The link bridge connects the deck and IPRA
Maximum Allowable Mass	The Maximum Allowable Mass denotes the maximum weight of an aircraft that can operate onto the helicopter landing site
Night	From 30 minutes prior to sunset until 15 minutes after sunrise.
Non-operational heliport	Any time when the heliport is deemed not operational or out of order
Open	When the HLO is present during helicopter operations the heliport is said to be open
Operational heliport	Any time when a helicopter is immediately (within 15 minutes) expected, on the deck, after helicopter departure until the aircraft is at least 500 metres away, or at any other time determined by the HLO.
Out of Order	Any time when the heliport has been declared out of order due to safety concerns.
Primary retrieval/transfers	A patient is retrieved from an incident site and brought directly to RPH by helicopter under the care of a Critical Care Paramedic
Secondary retrieval/transfers	A patient is under the care of another healthcare facility following an injury or illness, has received treatment, and is being transferred to RPH from that facility by helicopter.
T Value	The “t” value for a helicopter landing site is the Maximum Allowable Mass of the HLS expressed in tonnes (1000kg)
Unplanned Landing	An landing that has caused the aircraft to remain on deck, issues such as mechanical or instrument failures where departure safety and normal operations are compromised

6. Preparation for landings

The final decision to accept a patient via the heliport is subject to approval from the Emergency Department Duty Officer (ED DO). The emergency transfer of patients by helicopter must be discussed with the ED DO prior to the patient being accepted by RPH.

Refer to Section 15.3 for initial contact procedures.

The only other authorised landings will be to undertake pre-arranged training runs, or the collection of equipment or personnel being deployed for emergency purposes. The pilot in command of the helicopter makes the ultimate decision whether to land or not.

6.1 Deconfliction

Deconfliction is the reduction to the risk of collision between aircraft in an area by coordinating their movements.

It is essential that helicopter pilots be aware and look out for other traffic, and exchange traffic information when approaching or departing the RPH heliport. Use of the appropriate radio frequency and communications protocols is critical to the safety of Visual Flight Rules (VFR) traffic at RPH heliport.

In an event when two or more helicopters are on approach to the RPH heliport or when one helicopter is on the helicopter landing site and another is on final approach, there is a need to manage access to the heliport. Decisions concerning priority access will primarily be based on patient acuity.

When a helicopter is already in situ on the helicopter landing site and another helicopter is on approach, every effort will be made to clear the deck to allow the incoming helicopter to land.

7. Approved helicopter operators

Organisations must seek hospital approval prior to landing at RPH. Organisations currently approved to land are:

- CHC under contract with DFES and the Royal Australian Air Force (RAAF)
- Royal Flying Doctor Service
- Western Australian Police Air Wing
- Army Aviation

Other organisations seeking approval to utilise the heliport at RPH are directed to contact the Manager, Emergency and Disaster Planning at RPH, via telephone on (08) 9224 8590 or email RPBG.EmergencyMgtUnit@health.wa.gov.au

Final approval will be decided by the Executive Director, RPBG.

8. Approved helicopter types

Only the following types of helicopters are currently approved to land at RPH:

Operator	Make and model	Call sign	MTOW
ERHS	Bell 412EP	Rescue 651	5398kg (11900lbs)
ERHS	Bell 412EP	Rescue 652	5398kg (11900lbs)
RFDS	Eurocopter EC 145	FlyDoc 645	3585kg (7904lbs)
RFDS	Eurocopter EC 145	FlyDoc 646	3585kg (7904lbs)
RAAF Pearce	AgustaWestland AW139	CHOPPA61	6800kg
RAAF Pearce	Bell 412EP	CHOPPAA66	5398kg (11900lbs)
WAPOL	BK117	PolAir 61	3350kg (7385lbs)
WAPOL	AS365N3	PolAir 62	4300kg (9480 lbs)

Only multi-engine helicopters meeting the performance requirements for operations into a congested hostile environment are approved to land at RPH.

For aviation purposes a congested area is in relation to a city which is substantially used for residential, commercial or recreational purposes. A hostile environment includes an environment in which there is an unacceptable risk of endangering persons or property on the ground, and/or there are no safe forced landing surface areas.

9. Physical details of the heliport

9.1 Location

The RPH Heliport is located on the roof (Level 8) of R Block (North Block) at Royal Perth Hospital.

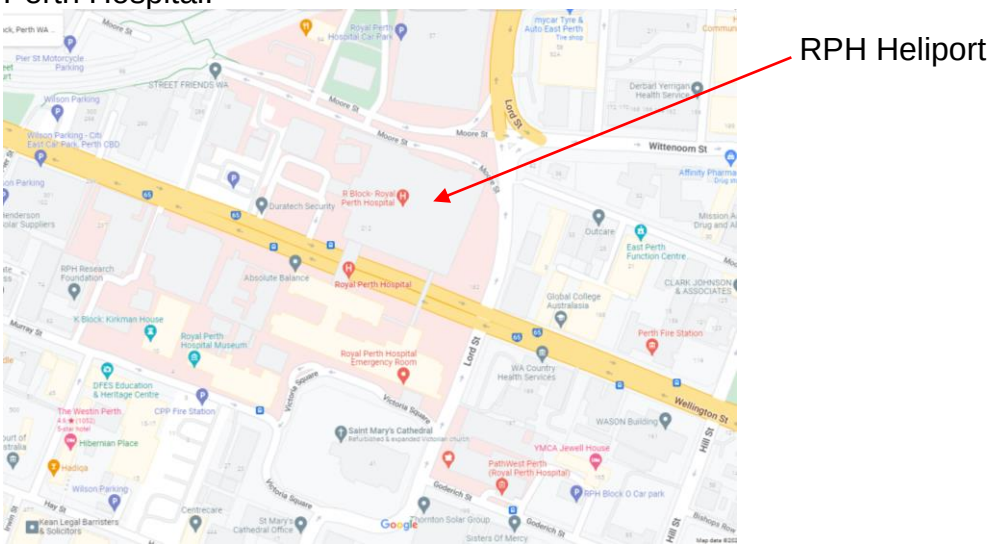


Figure 1. RPH Heliport location map

The RPH Heliport is the larger green area with the white cross depicted in the photo

below (Fig.2). The smaller green area is the old Helipad (decommissioned).

Figure 2. RPH Heliport aerial view

9.2 Heliport area and immediate surrounds

Figure 3. RPH Heliport area and immediate surrounds

The following terms are used in this document with areas marked in Fig 3.

Item	Symbol
Heliport	
Deck area (FATO)	
In Patient Reception Area (IPRA)	
Windsock	
Primary evacuation route	
Secondary evacuation route and point	

9.3 Heliport and surrounding buildings

The heliport is in the Perth Air Traffic Control zone.
Surveyed approach and departure paths 029^{O} / 209^{O} are aligned with the red deck marking **H**
Depending on prevailing conditions, it is the pilot's (PIC) decision to chose the appropriate approach and departure path.

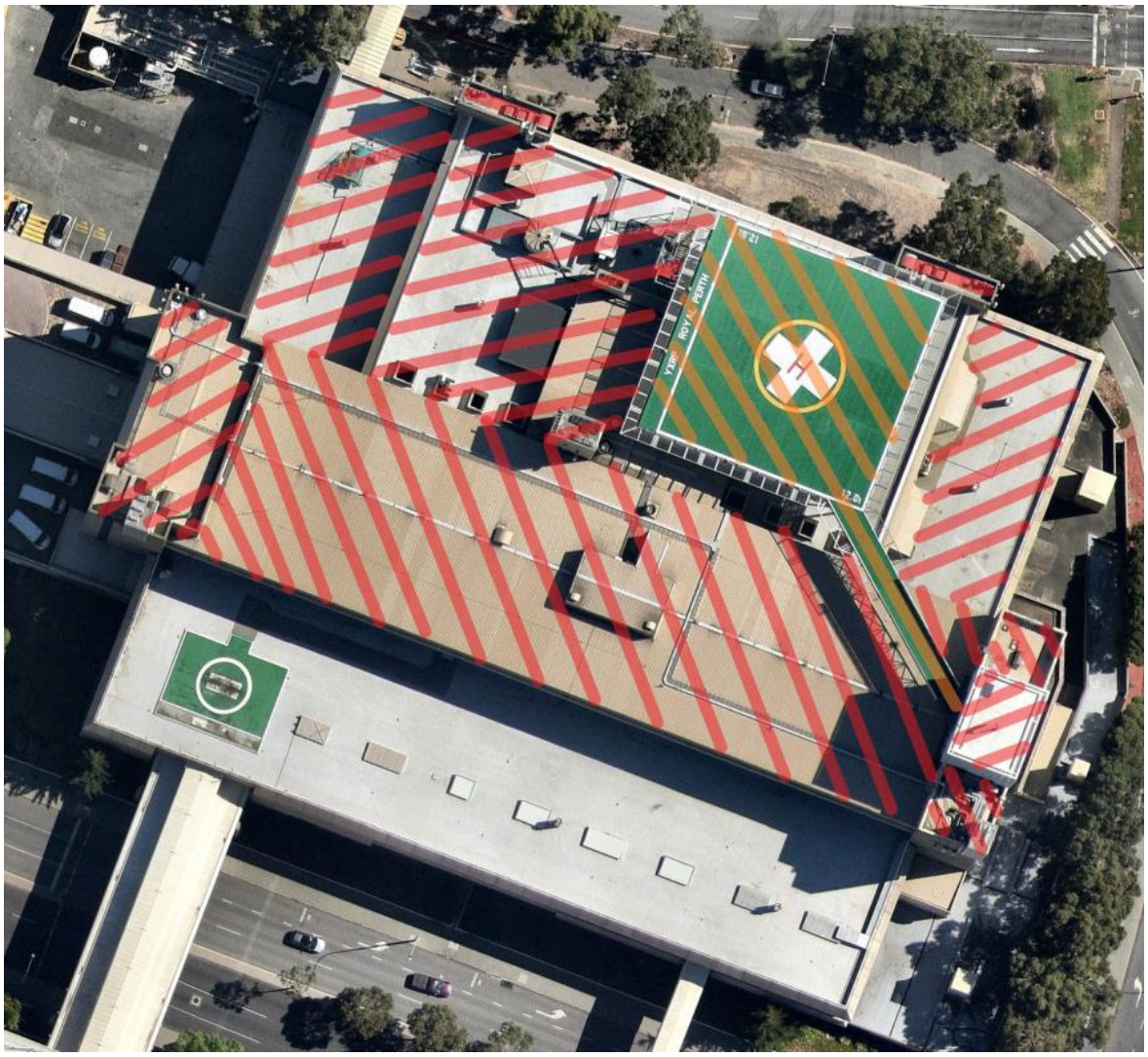
Figure 4. Approach and departure paths

9.4 RPH Restricted Helicopter Areas

For the purpose of this procedure, this covers anyone (RPH staff, contractors or other persons) that is required to access the RPH Restricted Helicopter Areas, detailed by the coloured areas in the image below for any purpose.

RPH Restricted Helicopter Areas, that are all within the impact zone from the helicopter's designated flight path, and as depicted in the diagram below, including:

- the Helideck, associated Helideck walkway
- R Block roof area, including both east and west end roof outdoor areas
- R Block north side of building (levels 5 and 6) roof spaces



When accessing and departing RPH Restricted Helicopter Areas, for the purpose of working in the area for a significant period, you must inform the **RPH Security Controller** who will keep a log of your access to the RPH Restricted Helicopter Areas.

The RPH Security Controller will require the following information:

- Name of contact person accessing, if more than one,
- Mobile contact number
- Purpose for accessing the RPH Restricted Helicopter Area
- Expected duration within the RPH Restricted Helicopter Area

All unsecured materials and tools bought into the RPH Restricted Helicopter Area must be removed as soon as you become aware of helicopter operations, or when advised of helicopter operations by Security, to an internal area. Alternatively, materials and tools are to be secured by a means that will tolerate the helicopter down-wash exceeding 95 km/h (this is equivalent to a Category 2 cyclone).

It is recommended that all tools be carried in a secure carry bag or toolbox that can be easily removed immediately to an internal area during helicopter operations or during work breaks. A person within the RPH Restricted Helicopter Area must remove themselves, together with any tools and materials, immediately they become aware of a helicopter movement or are requested by Security to do so.

No tools or materials can be left unattended at any time within the RPH Restricted Helicopter Area. If working alone, tools and materials must be removed to an internal area during any breaks or absences.

Should any tools or materials be blown over the edge of the building, immediately notify the RPH Security Controller and advise what may have gone over the edge and which direction it was lost in. Security will attempt to locate the item and determine the nature and extent of any damage

RPH Security Controller phone number: 9224 2811 or ext. 42811.

9.5 Dimensions

- The total deck area is 29.2 m x 27m
- The FATO is 27m x 27m
- From the centre of the deck to the IPRA building is 45 metres.

9.6 Weight capacity

- The helicopter landing site Maximum Allowable Operating Mass is 12,000 kg.
- The helicopter landing site “t” value is 12.

10. Hazards

10.1 Flight hazards

Utilisation of the surveyed approach and departure paths (029^{O} / 209^{O}) aligned with the red deck marking **H** provides protected pathways.

Flight crews should be aware that approaches from the south and departures to the south over A Block (South Block) required the use of a raised-50' "In Space" FATO. Refer to **Appendix A** for further details.

Flight crews should be aware of the MRI stack on the SW corner of the deck. This stack is approximately 7 meters from the edge of the FATO. The MRI stack is outside of ICAO 15% night lateral splays provided the flight crews follow the surveyed approach and departure paths.

Due to buildings to the south of RPH being higher than the helicopter landing site, flight crews should be aware that turbulence may be encountered, particularly with strong afternoon south-westerly winds.

The pilot in command of any helicopter landing at RPH should be aware that due to the proximity to the CBD, there are often numerous cranes in the vicinity, RPH will inform all approved operators of any impact to its location, flight path and possible local air space impacts. Some cranes may be unlit. Therefore, aircraft may require different approach procedures. Additionally, due to the population in the area there is a heightened chance of individuals pointing lasers at helicopters.

Flight crews should be aware that some nightclubs in the CBD area utilise large spotlights.

10.2 Proximity to wards

As indicated in Section 9.1, the heliport is located on Level 8 of R Block (North Block) at Royal Perth Hospital and is remote from wards.

The roof fabric of Ward 6H is directly below the heliport link bridge. In the event of an emergency on the heliport impacting on the wards below, the hospital response is to prioritise patient and staff safety. Depending on the situation, hospital resources may be prioritised for the evacuation of wards before help can be provided to personnel on the heliport requiring assistance refer to Section 24.1.

10.3 Foreign Object Debris

Foreign Objects Debris (FOD) on and around the heliport can be dislodged and carried large distances by rotor downwash. If an object passes through the rotor disk or into the engine intake, it can damage or destroy the rotors or engine and can be accelerated to extreme speed in any direction. This could result in destruction of the aircraft and injury or loss of life to personnel on the helicopter landing site or on the ground below.

All persons on the heliport have a responsibility to ensure that FOD damage does not occur.

A formal heliport FOD hazard check must be made by Security on a weekly schedule and by the Helicopter Landing Officer (HLO) immediately prior to any landing.

During the weekly inspection by Security and HLO any FOD item should be collected and disposed of appropriately.
If significant cleaning is required, then Facilities Maintenance should be contacted, and cleaning access arranged, this is due to working at heights. Any damage should be reported to the HLO as soon as possible. PSS are only responsible for cleaning the interior of the IPRA.

Any litter should be immediately picked up. Objects should not be left loose when an aircraft is approaching or leaving the heliport. Even large objects may be affected by the rotor downdraft. If any object is blown away, do not attempt to grab or chase it.

Routine heliport inspections and checks are in **Appendix H**

As required in the RPH Security Standard Operating Procedure the weekly inspection is recorded into an electronic log (Sentry) by the inspecting Security Officer

10.4 Light-weight equipment

Prior to entering the helicopter landing site area, consideration should be given to the effects of wind on any equipment to be taken out. Small light items and lids of transfusion containers must be secured to avoid them being blown away.

All bags should be sealed closed. Clothing should be secure and appropriate (e.g. scarves and hats must not be worn). If any item is blown away it should never be chased after. Any long object must always be carried horizontally on the deck, below shoulder height.

10.5 Rotor downdraft

Rotor downdraft is very strong. It is possible for dust to be blown up and to strike personnel on the deck in the face and eyes. During Hot Landings, eye protection must always be worn when on the deck.

Because of the downdraft force, no equipment or trollies should be on the deck area when the aircraft is hovering or under power.

10.6 Rotor droop

The helicopter blades may lower considerably depending on the model and prevailing conditions. Rotor droop is particularly a danger after the aircraft engines have been shut down, but the rotor blades have not come to a complete stop. No approach to the helicopter should occur unless escorted by the pilot or crew.

Typically, all approaches to the helicopter should be from the sides (i.e. 9 or 3 o'clock positions). Additionally, when moving from one side of the aircraft to the other side, remain outside of the rotor disk until positioned to come directly in from the side. Remain within eye contact with the pilot or crew.

10.7 Aircraft type specific issues / hazards

Some aircraft require different approach procedures. Never approach an aircraft unless escorted by its crew.

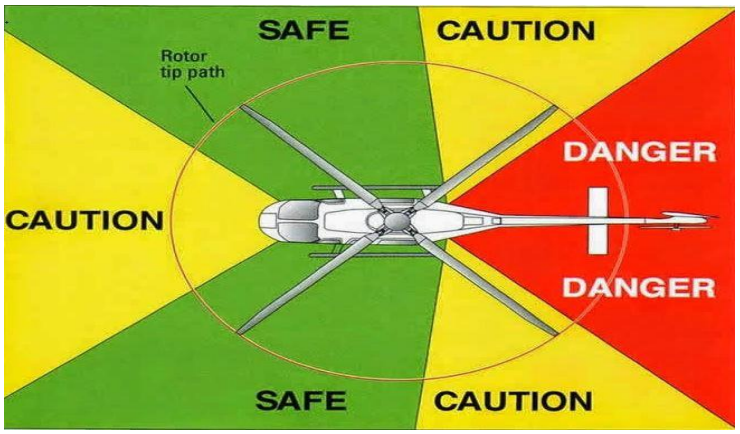
The CHC Australia helicopters (DFES and RAAF) unload from a side door – follow the direction of the flight crew.

The Royal Flying Doctor Service (RFDS) and WA Police helicopters normally unload via the rear clam shell doors, whilst PolAir62 is via the side door.

DO NOT CROSS IN FRONT OF A HELICOPTER
UNLESS ACCOMPANIED BY CREW.

For all Helicopter types:

- never walk around the back of the helicopter
- when crossing in front of the helicopter remain outside of the rotor disc
- do not run
- carry stretchers and objects horizontally below the waist, and keep a firm grip
- do not wear hats
- never reach up or chase items that blow away
- if you are blinded by dust or an object in your eye, sit down and wait



10.8 Dangerous goods

Dangerous goods other than oxygen and retrieval equipment shall not be taken onto the helicopter landing site. Matches and cigarette lighters must be left in the reception area.

Dangerous goods include:

- Compressed gases
- Corrosive liquids (including mercury)
- Flammable liquids
- Explosives
- Noxious or irritating substances
- Magnetic materials
- Oxidising materials
- Poisons
- Polymerizable materials
- Radioactive materials
- Gallium
- Articles possessing any inherent characteristics, which make them unsuitable for carriage by air unless properly packed.

Note that standard retrieval equipment which fits into the above categories is acceptable and is considered to have prior approval.

10.9 Flammable materials

Flammable materials must not be taken onto the helicopter landing site during helicopter operations. The heliport is a strict non-smoking area.

11. Safety systems

11.1 Heliport lighting

Night-time and landing lighting are installed on the helicopter landing site. This includes:

Heliport obstacle lighting
Heliport obstacle lighting is located on A Block (South Block), the MRI stack and the windsock, and comes on automatically at night 30 minutes prior to sunset and turns off 15 mins after sunrise.

Deck perimeter lighting
Green LED lighting surrounds the perimeter of the deck. The perimeter lighting will TURN-ON, on activation of the single lighting control switch for a green deck on the lighting panel by the HLO.

Touchdown zone lighting
Orange LED lighting surrounds the circumference of the touchdown zone. The touchdown zone lighting will TURN-ON, on activation of the single lighting control switch for a green deck on the lighting panel by the HLO.

Helicopter landing site flood lighting
Low angle flood lights are located around the perimeter of the HLS.
These flood lights should normally be TURNED-ON on for take-off and landings at night, however some pilots operating on NVIS (Night Vision Imaging Systems) may request the flood lighting be turned off for take-off and or landing.
To TURN-ON the flood lights the HLO manually activates the flood lights control switch on the lighting panel.

Link bridge lighting
White covered lighting is positioned along both edges of the link bridge. The lighting will come on automatically at night 30 minutes prior to sunset and turn off 15 mins after sunrise. These lights illuminate the deck of the link bridge and are positioned in a way as not to interfere with landings.

IPRA box lighting
The IPRA structure is surrounded on all sides by a light box. The light box will come on automatically at night 30 minutes prior to sunset and turn off 15 mins after sunrise. The light box will TURN-OFF on activation of the single lighting control switch for a green deck on the lighting panel by the HLO.

Figure 5. Heliport Lighting Control Panel

Should the heliport landing lights be unserviceable, the heliport should be declared non-operational, unless the inbound aircraft is equipped with Night Vision Imaging System (NVIS) and the Pilot In Command has been notified that heliport landing lights are unserviceable.

When heliport flood lights are unserviceable, approved aircraft utilising NVIS (Night Vision Imaging Systems) may elect to use the heliport dependant on the Pilot-In-Command acceptance. Additionally, the Pilot –In-Command may request the heliport flood lighting be turned off when utilising NVIS.

11.2 Windsock

The wind indicator (windsock) is located on top of In Patient Reception Area (IPRA). The windsock is orange in colour, illuminated by a flood lighting with a red flashing obstacle light on top of the mast.

11.3 Fire suppression and warning systems

The deck is protected by a Deck Installed Fire Fighting System (DiFFS) with the pop-up sprinkler nozzles flush mounted to the surface of the deck that will activate in the event of a fire on the deck. The system also enables rescue personnel to safely perform rescue operations, even when the system is fully activated.

The system employs open sprinklers attached to a piping system connected to a water supply through a deluge valve. This valve is opened by the operation of a fire detection system installed within the protected area. On the deck the DiFFS is automatically triggered by the activation of 3 of the 4 deck mounted flame detectors.

When the deluge valve opens, water flows into the piping system and discharges from all open sprinklers. The deluge valve is fed by twin diesel engine fire pumps and continues to discharge water to the deck until the system automatically resets back to closed position after five minutes of operation.

In the case of a fire emergency on the deck, the HLO can also activate a manual switch to trigger the DiFFS. There are two switches in the heliport, one located on the external south wall of the IPRA at the entrance to the link bridge, and a second switch located halfway down the first flight of external escape stairs at the northwest corner of the deck.

Figure 6. DIFFS Manual Activation point – link bridge

Figure 7. DIFFS Manual Activation point – northwest external escape stair

The deck also incorporates a passive fire-retarding system which works by allowing burning fuel to pass through holes in the decking at a rapid rate, immediately retarding and assisting in the extinguishing any fire.

The fire detection and occupant warning system in the IPRA are part of the building's fire detection and alarm system. A red Manual Call Point is located on the Fire Indicator Panel in the IPRA that can be activated in the event of a fire in the heliport area.

11.4 Minor equipment

Equipment (such as torches, safety vests, fire extinguishers) stored at the heliport are checked by Security and the HLO, ensuring there is adequate ear and eye protection available.

12. In Patient Reception Area

The In-Patient Reception Area (IPRA) is located on Level 8

Figure 8. IPRA – HLO control area

Figure 9. IPRA – Clinical area

Figure 10. IPRA – Fire Control Point (including Fire Indicator Panel)

12.1 Access and egress

Internal access to the heliport and IPRA is via the Heliport Lift No 32 (White Lift) by proximity card only and by the internal fire stair.

The heliport can also be accessed externally via the plant room on level 6.

The two fire isolated emergency stairs that open on to the open area at level 6 are secured from the inside to prevent free access to the roof directly under the elevated deck area. However, during an emergency evacuation of the heliport the stairs provide unhindered access inward from the open area.

Proximity card access is only provided to authorised personnel and can only be used when authorised staff have a valid reason for being at the heliport.

12.2 Heliport lift operation

For general access.

- As when calling any lift, use the Up button on the wall between lift No 32 and 33 (White Lifts) to call lift 32. (If lift 33 arrives simply send it away and recall lift 32).
- On entering lift 32 swipe the proximity card against the internal swipe pad and then,
- Select the **H** button on the floor call button panel.
- The lift may stop at other floors as called. Should anyone else enter the lift, ensure they do not exit at the level 8 heliport IPRA unless authorised to do so.

For urgent access in the event of a helicopter landing.

- Use the proximity card to swipe against the external swipe pad on the wall between lift No 32 and 33 (White Lifts) to call lift 32.
- This action will;
    - Stop the lift travel and a recorded announcement will be made inside the lift advising any occupants that the lift has been called for emergency use.
    - The lift will then travel non-stop to your floor and the doors will open.
- Upon the lift doors opening ask all occupants to exit the lift.
- On entering lift 32 swipe the proximity card against the internal swipe pad and then select the **H** button on floor call button panel.
- Note that you only have 20 seconds to swipe and select the **H** button once entering the lift.

12.3 Heliport authorised personnel

Heliport access proximity cards are issued as follows.

Note: All areas include – Heliport lift, access door to the link bridge, and L6 Plant Room (all doors)

Department/Area	Staff	Proximity Card	Access permitted
RPH Emergency Management Unit	3 x EM staff	Programmed to personal proximity cards	All areas
RPH Security staff	All security staff trained in HLO role	Programmed to personal proximity access cards	All areas

Department/Area	Staff	Proximity Card	Access permitted
RPH ED Retrieval Team	3 x proximity cards	Proximity cards held in ED	Heliport Internal
RPH ED Equipment and Procurement	1 x proximity card	Programmed to personal proximity access card	Heliport Internal
RPH SAFE Team	All SAFE team members as nominated	Programmed to SAFE Team Lead access card	Heliport Internal
ERT Emergency Scene Coordinator (ESC)	1 x proximity card	Programmed to ESC access card	All areas
ERT PCA Runner	1 x proximity card	Proximity card held in the EOC and issued by EMU staff on a code emergency	All areas
RPH PSS staff	2 x proximity cards	Proximity cards held by the CARPS Operator and issued as required	Heliport Internal
RPH PSS staff	All Central PCA staff trained in Retrieval Team role	Programmed to personal proximity access cards	Heliport Internal
RPH PSS staff	Cleaning Supervisors	Programmed to personal proximity access cards	Heliport Internal
RPH Facility Management	1 x proximity card for lift contractor 2 x proximity cards for general contractors	Lift contractor card held by Shindler Lifts Aust. Proximity cards for general contractors, held by the Facilities Operations Manager issued as required	Heliport Internal All areas
RPH Shift Engineers	All FM staff in Shift Engineer role	Programmed to personal proximity access card	All areas
Aircrew	2 x proximity cards	Proximity cards stored in IPRA and issued as required by the HLO	All areas
Supplementary Stand-by	3 x proximity cards	Proximity cards held in EOC and issued as required	All areas

13. Emergency Department Retrieval Team access and training

As a prerequisite, the Emergency Department (ED) Retrieval Team will have received training in heliport procedures prior to access to the heliport

Training is aimed at employees taking part in the retrieval of patients from the helicopter, mainly being ED doctors, ED nurses, Central PCAs and some other clinical staff. Retrieval team training must be refreshed every 12 months, unless the staff member has participated in an actual landing or drill in the meantime. (**Appendix G**).

Access to the HLS will be obtained via the HLO who has completed formal HLO training. In the event of any individual member of the ED Retrieval Team being only partially trained, then the most senior member of the team who is trained shall take responsibility for the individual. During heliport operations, medical team seniority devolves in the following order (excepting that trained staff member takes seniority over partially trained staff):

- RPH ED Consultant / Registrar,
- Other trained staff (RPH Medical / Nursing),
- PCA's

The HLO has control over all staff regarding heliport access. The pilot in command remains responsible for the aircraft and has command over all activities on the helicopter and HLS.

13.1 Non-team access during operations

The HLO will be responsible for the heliport area security and staff behaviour during helicopter operations. All staff will follow the HLO's instructions. Normally only staff who have completed appropriate training (**Appendix G**) and who have a valid reason for being present will be allowed in the heliport during helicopter operations. Untrained staff may only access the deck area with the HLO's approval.

No staff will be permitted on the deck when a helicopter is operational (rotors moving) unless escorted by a helicopter crew member.

No staff from the ED Retrieval Team will be permitted to access the deck (except the PCA) unless requested to do so by the on-board clinician in a medical emergency.

13.2 Access at other times

It is understood that other staff and contractors may require access at other times principally for maintenance work. Access can be gained by contacting the Security Control Room on ext:42811 or the Shift Engineer on 0404894003. These staff must vacate the heliport area immediately (with any equipment) on direction from the HLO in the event of an imminent landing.

14. Communications

The contact person for St John Ambulance and RFDS (or pilot) to **Activate the Heliport** is the ED DO / EPIC (Emergency Physician in Charge) / ERIC (Emergency Registrar in Charge). This person can be contacted on (08) 9224 1676.

The contact person for the Critical Care Paramedic (CCP) or on-board clinician is the ED DO / EPIC (Emergency Physician in Charge) / ERIC (Emergency Registrar in Charge). This person can be contacted on (08) 9224 1676

Updates by the CCP or on-board clinician will be conducted through the ED Bat-Phone on 9224 1798

After the Heliport has been activated, and once on route, the flight crew will make contact with RPH Security Control Room Operator to confirm the heliport has been activated and will update on their ETA.

The contact person for the flight crew is the RPH Security Control Room Operator, via the Security Control Room, via telephone on:
Mobile. 0404 894 066, or
Direct. (08) 9224 2811.

Air to ground communication for the pilot is via the HLO available via two- way radio, once in range.

Where possible helicopter operators should ensure they have the hospital's radio frequency available on board the aircraft refer to Section 14.1 for frequency 467.5375 MHz, NAK code 100 for RPH.

Not all helicopter operators have the P25 DFES frequency with NAK code. This has been reserved for the dedicated EMS (Emergency Medical Service) Helicopters. Other infrequent operators are to use mobile phone to contact the RPH Security Control Room Operator.

Flight crew will obtain a green deck from the HLO prior to landing by phone or radio communication.

The ED Retrieval Team will utilise two-way radios for communication with the Emergency Department. The Emergency Department is responsible for managing these communications.

The land line phone number for the IPRA is (08) 9224 3397.
This phone line is not routinely manned and is diverted to the Security Control Room if unanswered.

Prior to landing there should be two-way communication between the flight crew and the HLO confirming a green deck – that is effectively a clearance to land and confirms that the heliport is operational.

14.1 Radio frequencies

The IPRA has a deck mounted P25 base radio installed, which is to supplement the current DMR- P25 gateway, details of the new P25 radio frequencies are

Frequency 467.5375
MHz, NAK code 100 for RPH.

Royal Perth Hospital has dedicated radio communications between the HLO and:

- Rescue 651 and 652 helicopters, -
- RFDS Helicopters.

This is achieved via a digital DMR-P25 gateway to enable the HLO to be able to talk directly to the EMS helicopters on the normal RPH Security channel

The RPH repeater is operationally programmed at:

Transmit:	413.025 MHz
Receive:	403.575 MHz
Encode/decode:	114.8 Hz

15. ED / ED Retrieval Team

The ED Retrieval Team have handheld radios for communications with the ED. The two-way radios may have poor reception when used in the lifts.

15.1 General communications

Contacts at RPH to discuss issues related to the heliport are:

- Manager, Emergency and Disaster Planning on (08) 9224 8590, or mobile 0404 894 000 who will then disseminate as required to:
- Clinical: ED HOD on 9224 2662 and Nursing Director, Quality and Safety on 9224 8023
- Infrastructure: Facilities Operations Manager on (08) 9224 2700 or mobile: 0404 894 030

15.2 Initial contact

Notification of planned patient arrival is to be communicated as per the Initial Contact Flowchart in 15.3. Initial contact **Activate the Heliport** will occur to the ED DO on (08) 9224 1676.

Once the ED DO has been notified, communications of a non-medical nature are to be directed to the HLO via the Security Control Room on 9224 2811 or mobile 0404 894 066.

All medical communications are to be directed to the ED DO on (08) 9224 1676. Information handed over to the ED DO must include:

- Instances where alternative helicopters are being used
- The number of patients
- Whenever additional hospital stretchers are required

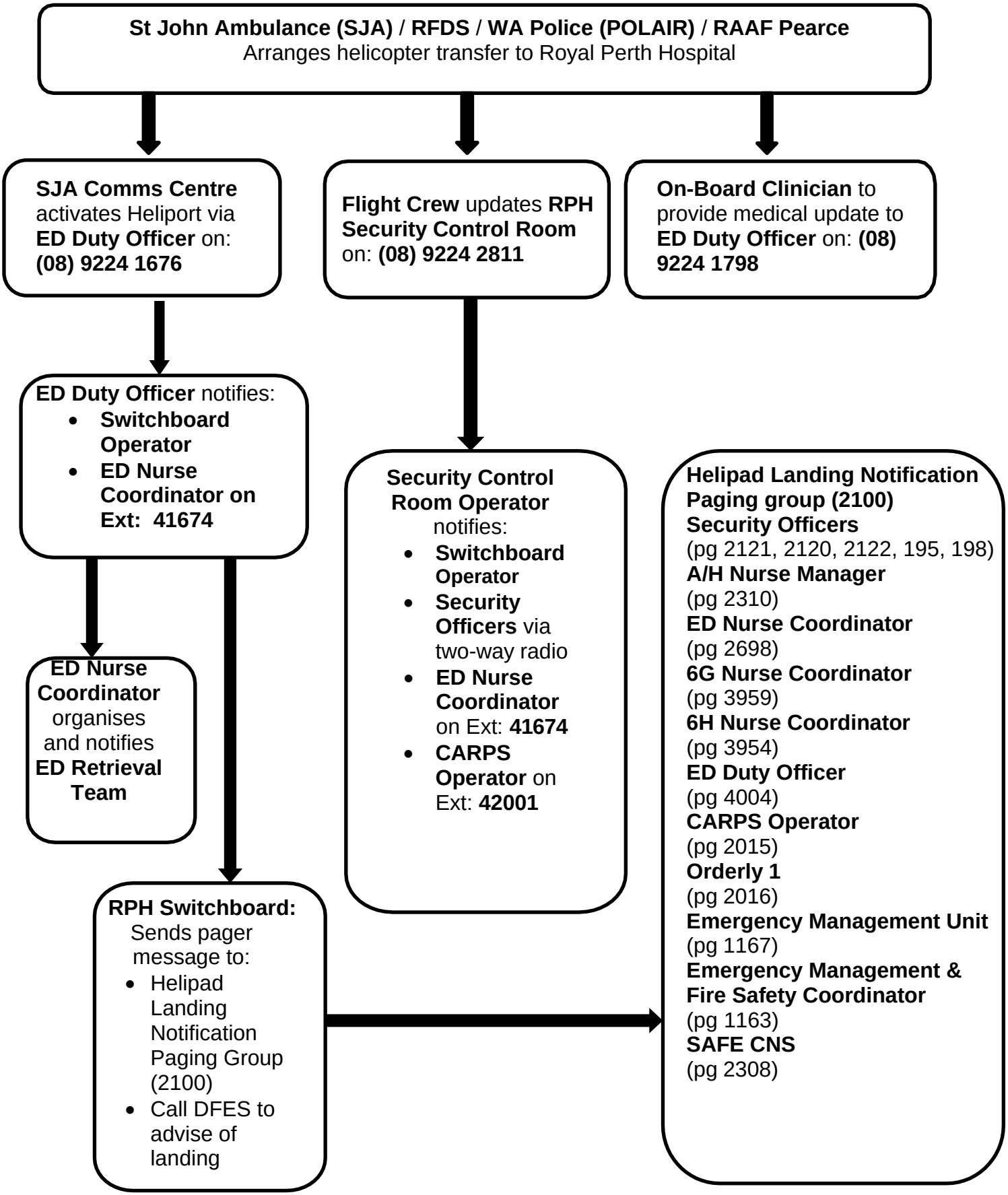
ED staff will become aware of the need for heliport activation via the ED DO. As soon as possible the ED DO will notify switchboard and request that a message be sent to the Helicopter Landing Notification group. RPH switchboard will contact EMHS Security via the paging system, notify the Helicopter Landing notification group 2100.

At a minimum, one EMHS Security Officer will proceed to the heliport to assume the role of HLO and commence preparation for helicopter arrival. The ED staff will arrange for the ED Retrieval Team if required for transfer to ED. If the patient is for a direct ward transfer and stable to do so, the SAFE CNS will attend the IPRA.

The flight crew of the helicopter will contact the Security Control Room to ensure that the heliport has been activated and to provide an accurate ETA. The Security Control Room will then notify switchboard and request that a message be sent to the Helicopter Landing Notification group if one has not already been sent, or if the original ETA has significantly changed.

See **Appendix B** for Staff Role Action Cards.

15.3 Initial contact flowchart



16. Hospital actions on initial contact

16.1 Helicopter Landing Officer

There will be a designated HLO at the heliport for all helicopter movements. The HLO will be an EMHS Security Officer trained in the role. The HLO shall be available within the hospital on a maximum of five (5) minutes response to the heliport. After receiving initial contact regarding an impending helicopter landing, the HLO will:

Proceed to the In Patient Reception Area (IPRA) via lift 32
Don orange HLO hi-vis vest.
Ensure desktop two-way radio is operational for pilot communications. (radio is switched on, on Security channel and volume turned up)
Complete Pre-landing section of heliport safety checklist if it is safe to enter heliport area (check wind speed and weather conditions).
Complete Safety Briefings for all personnel participating in the landing as appropriate for the aircraft.
Complete Briefing section of the heliport safety checklist.
Upon being contacted by the pilot, confirm Green Deck by stating **[Helicopter call sign] this is Royal Perth Heliport, you have a green deck, I say again you have a green deck.** On request from the pilot, provide **wind speed in xxx knots, from an xxx direction**. Request total number of persons on board. Complete Communication section of heliport safety checklist.
In the case of an RFDS Inter Hospital Patient Transfer, call the destination ward or department to advise of arrival.
Observe landing standing next to the door to the link bridge. Activate emergency procedures if required. Complete the Landing section of the heliport safety checklist.
Once given the all clear from the pilot, turn on deck flood lights and open door to the link bridge to allow retrieval operations. Remain next to the link bridge door to activate emergency procedures if required
Observe departure standing next to the link bridge door. Activate emergency procedures if required. Complete the Departure section of the heliport safety checklist.
Complete Post Departure and Closing the heliport section of heliport safety checklist. Return completed heliport safety checklist to the RPH EOC, A Block L2
If any hydrocarbon leaks are present on the deck, contact Security Control Room to raise a work order for Facilities to attend and clean.

See **Appendix B** for HLO action card

16.2 ED Retrieval Team

On notification of an impending helicopter landing, whether it is a primary transfer or a secondary transfer to go to another area within the hospital, the ED Nurse Shift Coordinator will organise the ED Retrieval Team with two-way radio.
A dedicated Rapid Intervention Trolley is located in the IPRA, along with portable O^2 and suction.

The dedicated electronic or manual heliport stretcher to be used for Rescue 651 and 652 is located in the IPRA, unless multiple patients are expected, then an ED stretcher is required.

An ED stretcher will need to be taken to the heliport where an alternative helicopter is being utilised, such as when the patient has been winched into Rescue 651 or 652 in a basket stretcher or where there are multiple patients are on board.

The RFDS stretcher is used to transfer the patient from the helicopter to the appropriate ward. Portable O^2 may be required.

The ED Retrieval Team will then proceed to the heliport In Patient Reception Area and await instruction from the HLO.

See **Appendix B** for ED Retrieval Team action cards

17. Airborne and transit

17.1 Default status

The default status of the RPH Heliport is Operational. Procedures for declaring the heliport Non-operational, and the notification process to be followed can be found in **Appendix E**.

Prior to landing, the pilot in command must ensure a green deck has been established, according to the following procedures.

17.2 Establishing a Green Deck

Upon arrival of the HLO to the heliport, the HLO will activate the lighting system and conduct a check using the Heliport Safety Checklist (**Appendix I**). A formal heliport FOD check must be undertaken. This will include a walk around the deck area. Any item(s) should be collected and disposed of within the hospital.

Conditions for a green deck exist when the heliport is confirmed clear of obstacles, equipment, FOD, personnel or any other items that would compromise the safety of the heliport for a normal landing and that lights are confirmed to be in working order.

Where a Western Power electrical failure has occurred and the hospital's generators are operational, a green deck may still be declared, providing the building fire systems are not affected. Shift Engineer can confirm where required.

The HLS will in most cases, close for landings when wind speed at the heliport exceeds 32 knots.

In extreme weather conditions where the safety of a person on the heliport deck may be affected, the HLO will consult with the helicopter PIC. A decision will then be made whether to proceed with the landing or not. Wind speeds, wet weather and visibility are to be considered when making this decision. The table below is to be referred to when deciding if it is safe to proceed with the patient retrieval.

Wind Speed	Guideline
Less than 28 knots (approx. 52 km/hour)	Usually safe to proceed
Between 28 and 32 knots	The HLO and Retrieval Team lead should proceed on to the deck to assess the risk of proceeding with the retrieval.
Over 32 knots (approx. 60 km/hour)	Usually not safe to proceed

While helicopters may have the capability to land in over 32 knot winds, there is a greater risk to retrieval team members and the likelihood of equipment being blown over.

The pilot in command of the helicopter is to radio or telephone the HLO within 10 minutes of landing to confirm a green deck. The HLO will confirm a green deck. If the green deck is not currently available, the HLO will advise the Flight Crew any delay time and further information to allow Flight Crew to make a decision for a delayed landing or diversion. Alternate landing sites may be considered, see **Appendix E** Heliport downtime procedure (Non-operational heliport).

No staff will access the deck area prior to landing, once a green deck has been declared.

If a green deck cannot be established, the helicopter pilot may elect to land at either another hospital, Jandakot Airport or at the Langley Park and arrange road transfer of the patient to RPH.

17.3 Issues arising

If the duty HLO becomes aware of any problem which may jeopardise safe landing, the HLO should immediately turn-off the landing lights off and notify the flight crew of the inbound helicopter via two-way radio.
If radio communication is not available, use mobile phone or landline. A flight crew contact list is held in the IPRA.

For PolAir and RAAF helicopters the HLO is to notify the pilot of the concern via mobile phone or telephone communication via the Security Control Room.

17.4 Drones

The RPH Heliport is considered a Helicopter Landing Site (HLS) or smaller aerodrome without a control tower. However the proximity to Perth CBD to Royal Perth Hospital must be considered and RPH is therefore deemed;

- In a Populous Area with a High- Density Population
- Likely to have “Manned/ Occupied Aircraft” in vicinity particularly with aircraft approach and departure paths RPH Heliport.

For this reason, only Licenced and Authorised Drone Operators who are contracted or employed to undertake drone operations at Royal Perth Hospital are permitted to fly its related air space.

Drone Operators used or contracted to provide drone services are to provide appropriate evidence of required Drone Licencing, related insurance and a Safety Work Method Statement that indicates the operator is familiar with the CASA regulations for drone operations near the RPH Helicopter Landing Site.

For the purpose of this procedure all drones used at RPH are considered as a remotely piloted aircraft (RPA) a drone flown for business or as part of employment – commercially authorised.

All Drone Operators must obtain the correct Flight Authorisations and Permissions from CASA. Drone Operators are responsible for and to apply for additional permissions such as

- Permission to fly over a movement area of a non-controlled aerodrome
- Permission to fly above 120 m (400 ft) AGL within 5.5 km (3 nm) of a non-controlled aerodrome.

These permissions can take a minimum 28 days to process from the date of lodgement and payment and must be taken into consideration by those requesting and authorising the drone operations including use for safety inspections and maintenance testing.

RPH Facilities Management are responsible for ensuring that planned maintenance and safety inspections, including the use of drones is conducted during non-peak operational times and under strict communication authority arrangements.

For more information see
CASA Drone Safety Rules

Enforcing Drone Rules
Enforcement and penalties | Civil Aviation Safety Authority (casa.gov.au)

Final Authorisation /Permissions for drone work and activity are to be authorised by the RPH Emergency Management Unit.

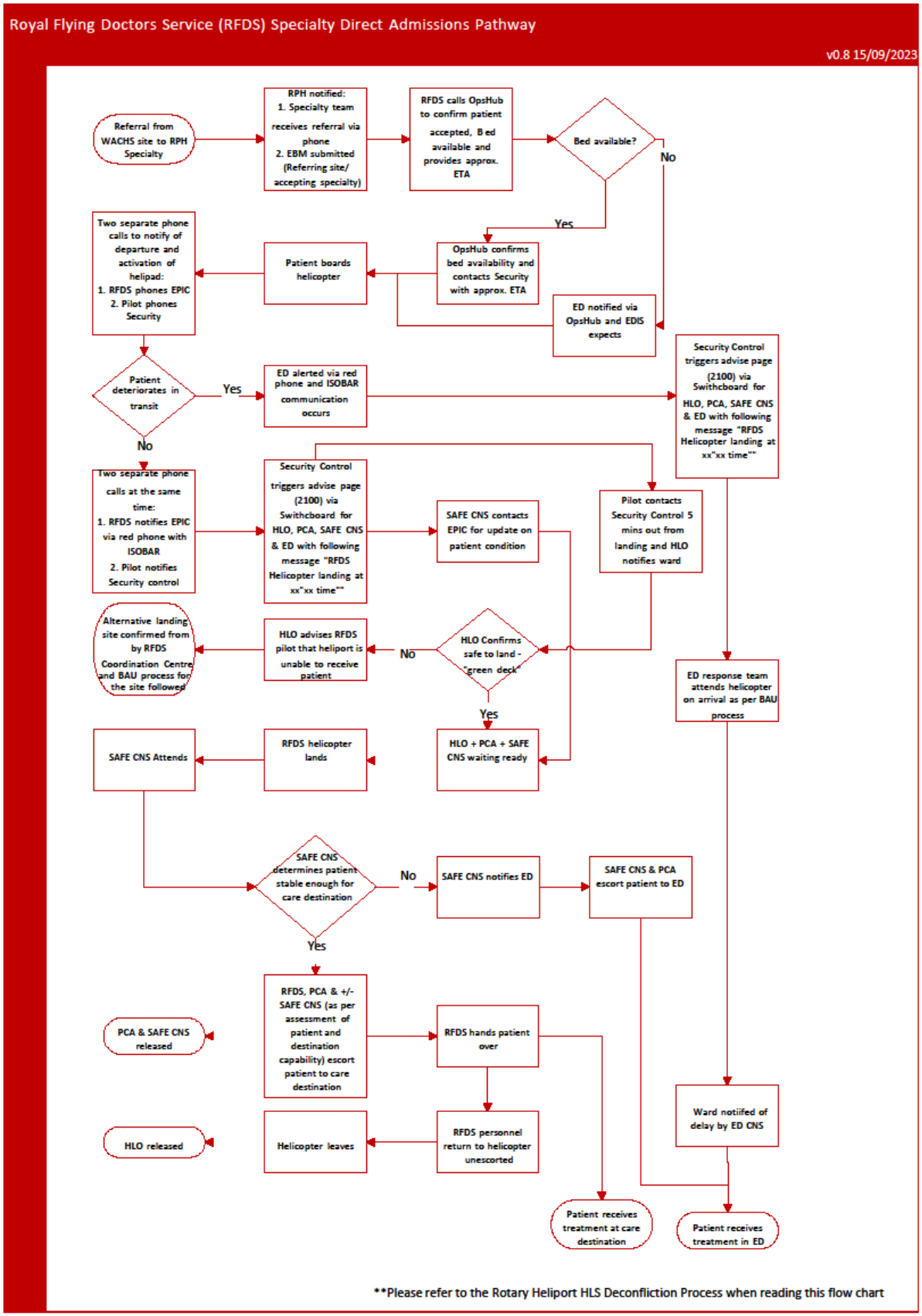
All drone work activity approvals are to be communicated to; • Hospital Logistics, • RPH Security Management, • Emergency Management Unit, and • Facilities Management Department 5 days prior to the scheduled operations, and include all the required authorisations, safe method statements etc.
The Emergency Management Unit are responsible for communicating all planned drone activities to the Authorised Helicopter Operators for RPH Heliport.
All Drone Operations are to be fully supervised at all times
RPH Security are to be contacted a half hour before any drones become airborne
RPH Security are to advise Drone Operators or those supervising of on any inbound helicopters or helicopters currently on deck and likely to depart during activity timelines
RPH Security must obtain a Point of Contact (POC) mobile phone number for the drone operator, to call in the event of helicopter operations at the HLS and all drone work activity is to cease and drones returned to ground.

No drones are to become airborne whilst there is a helicopter inbound, departing or on the deck of the RPH Heliport
Drone operations being conducted from the deck of the RPH Heliport are to vacate the deck immediately and remove all related equipment.
Drone Operators and or supervisors are to contact RPH Security when they have completed the drone operations or have vacated the RPH Heliport

17.5 IPRA Pilot contact list

Operator	Make and model	Call sign	Phone Contact
ERHS	Bell 412EP	Rescue 651	0428 400 410
ERHS	Bell 412EP	Rescue 652	0428 400 422
RFDS	Eurocopter EC 145	FlyDoc 645	0498 849 046 Sat. 0147 164 460
RFDS	Eurocopter EC 145	FlyDoc 646	0498 957 146 Sat. 0147 169 419
RAAF Pearce	AgustaWestland AW139	CHOPPA61	0447 447 165
RAAF Pearce	Bell 412EP	CHOPPA66	0447 722 834
WAPOL	BK117	PolAir 61	0428 324 370
WAPOL	AS365N3	PolAir 62	0419 462 173

17.6 RFDS Inter Hospital Patient Transit communications



17.7 Operational

The default landing will be a cold landing (normal landing) as this minimises risk to attending staff. The decision as to whether the landing will be a hot landing, or a cold landing will be at the discretion of the pilot in command of the helicopter.

If a hot landing is to occur, this must be communicated by the pilot in command of the helicopter to the HLO via radio, in advance of the helicopter landing, to allow the HLO to brief attending staff and ensure adequate preparations are undertaken.

It should be noted that for any hot landing, only the minimum number of staff should assist with the unloading of the patient; this will typically be one person to assist with the stretcher trolley. During hot landings, the helicopter crew will escort staff members with the stretcher trolley, if required, from the IPRA to the helicopter.

If there is a significant change in the estimated time of arrival (ETA), this information is to be communicated to the HLO via radio, or via the Security Control Room on 0404 894 066 or (08) 9224 2811.

Once the Security Control Room Operator has been advised of a change in ETA the Control Room Operator will notify the HLO via two-way radio and ED Nurse Co-ordinator on ext. 41674.

17.8 Medical

Medical updates from the on-board clinician (CCP) are to be directed to the ED Bat-Phone on (08) 9224 1798.

The ED DO can communicate information directly to the retrieval team via two- way radio. Medical communications must include any significant change or deterioration in the patient's condition.

Where a patient's condition has significantly deteriorated, or a medical emergency occurs, the Medical Emergency process is to be followed as per the Helipad Code Blue for trauma patients.

17.9 Approach and landing

The operator and ultimately the pilot in command (PIC) will identify the most appropriate approach, landing and departure direction, based on the ambient conditions.

The RPH heliport has designed surveyed approach and departure paths aligned with the helipad red **H** marking and correspond to 029^{O} / 209^{O}.

Departures and arrivals from 209^{O} (over A Block (South Block)) require the use of an "in-space" raised FATO of 50' above the HLS.

Helicopter operators should operate into the RPH Heliport preferably PC1, and PC2 as a minimum.

Performance Classes

- Performance Class 1, (PC1) for a rotorcraft, means the class of rotorcraft operations where, in the event of failure of the critical power unit, performance is available to enable the rotorcraft to land within the rejected take-off distance available or safely continue the flight to an appropriate landing area, depending on when the failure occurs.
- Performance Class 2, (PC2) for a rotorcraft, means the class of rotorcraft operations where, in the event of failure of the critical power unit, performance is available to enable the rotorcraft to safely continue the flight, except when the failure occurs early during the take-off manoeuvre or late in the landing manoeuvre, in which case a forced landing may be required.
- Performance Class 2 with exposure, (PC2WE) is very similar to PC2 as mentioned above. The primary difference is that there need not be any provision for a suitable forced landing area during the take-off and landing phases of flight, within the designated exposure period for the rotorcraft.

18. Heliport briefing

All staff must report to and be briefed by the HLO prior to HLS access. Safety briefing video packages will be played on one of the IPRA computer screens, however if the video package is not available the HLO will give a verbal briefing as detailed in **Appendix J** - Helicopter verbal safety briefing.

The HLO must ensure that:

- All dangerous personal items are removed (such as matches, lighters)
- All loose items (clothing, stethoscopes, name badges etc.) are secured
- All personnel have appropriate footwear (closed in and secured)
- Any untrained staff/observers are identified and are being suitably supervised by a trained staff member
- All personnel going on to the deck area are wearing a high visibility vest with the appropriate designation
- Where required for a hot landing eye and ear protection is being worn

All staff are to ensure that they follow the directions of the HLO and abide by the above. All other staff will remain in the IPRA, behind the access door during helicopter landings.

19. Helicopter landing

After the aircraft has touched down a crew member may leave the helicopter to escort the HLO, or signal the HLO, and other staff from the reception area to the helicopter as required.

The helicopter crew would only come over if it was a hot landing and then it would only be the PCA and one other assistant with helicopter stretcher that was escorted out, the HLO should stay on fire guard.

For most landings - which are cold - the flight crew will signal with a thumbs up after shut-down when staff hospital may start moving out to the aircraft

In the case of a hot landing, all persons in the heliport In Patient Reception Area must wear ear and eye protection prior to opening the HLS access door. Only staff selected and escorted by the helicopter crew are to leave the reception area and go onto the deck.

Permission must be obtained from the pilot / crew member before staff approach the helicopter, and patients must be unloaded in accordance with procedures described in Section 22.4. At all times the Helicopter crew and on board clinician remain in charge.

20. Aircraft type specific issues and hazards

Due to the various agencies that land at RPH there are different approach procedures for some of the helicopters. Never approach a helicopter unless escorted or directed by its crew. It is imperative that all staff aiding in heliport operations make themselves familiar with the type of aircraft they are about to approach and unload.

Safe approach and heliport safety information is available from the video safety briefing in the IPRA and with advice from the HLO. RAC Rescue 651 and 652 unload from the right hand (pilot) side of the aircraft. RFDS unload from the rear.
The RAAF aircraft have multiple configurations and instruction should be taken from the pilot and crew. WA Police operate different types of aircraft which unload from the rear or via the side. The safe approach pathway will depend on the orientation of the aircraft on landing. Do not cross behind any helicopter at any time unless accompanied by crew. See Figure 11 for safe approach angle.

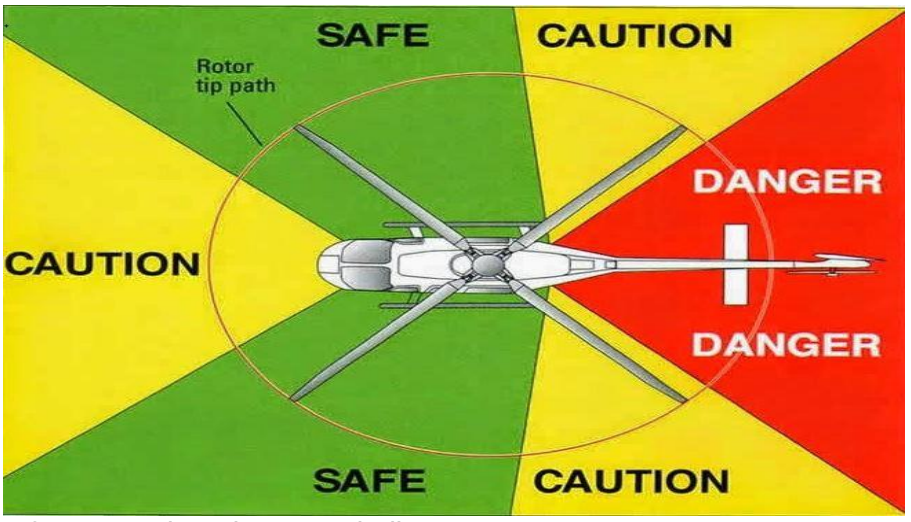


Figure 11. Safe approach pathways to helicopter

21. Helicopter standing on the HLS

Under normal circumstances the heliport is not left unattended at any time while a helicopter is on the HLS. No person shall enter a helicopter without the pilot or crew member's express permission. A Security/HLO presence shall be maintained whilst a helicopter is present.

Should Security need to leave the heliport to attend to another emergency while there is a helicopter on the HLS, the heliport will be locked off and take-off delayed until such time as the HLO is back in position.

On helicopter arrival, the Flight Crew are given two (2) proximity access cards by the HLO that are held in the IPRA to allow access to and from ED and the heliport.

The access cards are to be returned to the HLO before the helicopter departs.

21.1 Contingencies for multiple landings within a short time

Where two helicopters are in bound within a short time frame, the following options are available. Ultimately the decision on which option to take will be made by the helicopter crews. This decision must be conveyed to the hospital via the designated communication process.

1. The first helicopter lands and handover of the patient is conducted on the deck (this is only to occur if clinically appropriate). The helicopter and crew then take off and the second helicopter lands.

or,

2. If the first helicopter patient is required to be escorted to ED for a full trauma team handover and for retrieval of SJA equipment, the on-board clinician is to escort the patient. The helicopter crew can take off and vacate the heliport. The on-board clinician can then make alternative travel arrangements.

or;

3. If the patient in either helicopter is suitable for a road transfer from Jandakot Airport to RPH, then that helicopter can be redirected to Jandakot and road transfer to a hospital organised.

21.2 Practice landings

RPH recognise that pilots require regular training and practice landings on a variety of helicopter landing sites. Approved helicopter operators (refer to Section 7) can use the RPH heliport for training purposes provided the following procedure is used.

For training landings, helicopter operators will contact the RPH Manager Emergency and Disaster Planning on 0404 894 000 (during normal business hours) or via email at RPBG.EmergencyMgtUnit@health.wa.gov.au and arrange a suitable time for the practice landing.
Refer to **Appendix G** – Training prior to accessing the heliport, for details.

22. Patient transfer

22.1 General safety

Safety instructions from the pilot and / or crew member must always be obeyed/ observed. All staff must wear appropriate Personal Protective Clothing including closed-in shoes, and in the case of a hot unloading, ear protection and eye protection, when on the deck. No other headwear must be worn. At no time is any staff member to run on the deck area.

22.2 Safe manual handling

It is important that safe manual handling procedures are always followed for all helicopter patient transfers.

All employees are responsible for:

- Applying the risk assessment approach to all manual task activities prior to undertaking the patient transfer
- Following safe work procedures at all times
- Using the correct equipment appropriately where provided
- Taking reasonable care to ensure their safety and the safety of others
- Encouraging and supporting minimal lift
- Ensuring that the EMHS WHS Manual Tasks policy is followed

22.3 Handover and transfer of patients

The transfer of the patient from the aircraft, whether remaining on the stretcher or onto the heliport trolley, remains the responsibility of the on board clinician and the crew member. The on board clinician and the crew member will lead all patient movements and the removal of all equipment.

22.4 Unloading

The terms hot and cold unloading refer to the status of engines during unloading. All approaches to the helicopter are under the control of the Pilot and Crew. The decision as to whether the landing will be a hot landing, or a cold landing will be at the discretion of the Pilot in Command of the Helicopter.

Hot unloading (engine on) of patients will require care and co-ordination and should only be done under the direction of the pilot and crew. The CHC Australia, WA Police and RAAF helicopters will generally unload with engines **off** as this maintains a high rotor disc.

Unloading of patients from ERHS will require at least two Patient Care Assistants per patient in addition to the helicopter crewman and the team members. Team members should only approach the aircraft with the trolley under the direction of the flight crew. As RPH staff (PCAs) approach the aircraft, the flight crew will direct the patient trolley vertically and horizontally to align with the aircraft stretcher.

If an oxygen bottle is required to be brought out to the helicopter, the bottle should be at least ¾ full.

Additional medical equipment may be necessary as arranged via the ED officer. They should approach the nearest door and then follow the unloading process. If RFDS escorts the patient, prior medical arrangements to proceed directly to the ED, Operating Suite or Intensive Care Unit or CCU may have been made.

In these instances, the HLO and trained employees, and an ED nurse assists with the pre-arranged transfer. The transfer remains the responsibility of the RFDS medical staff until the patient is handed over to the appropriate department.

If RFDS escorts the patient, prior medical arrangements to proceed directly to the ED, Operating Suite, CCU or ICU may have been made. In these instances, trained PCA staff, and a SAFE CNS will assist with the pre-arranged transfer.

The transfer will remain the responsibility of the on-board clinician or RFDS personnel until medical handover has been conducted.

When a helicopter lands at the hospital with a patient for transfer to Emergency Department (ED), Theatres or any other location within the hospital, on direction of the Helicopter Landing Officer (HLO):

- For Rescue helicopters; a Central PCA and one ED PCA will take a stretcher trolley on to the deck and assist the helicopter crew with the unloading of the patient onto the trolley, under the direction of the on-board clinician.
- For RFDS helicopters; a Central PCA will take an oxygen cylinder on to the deck and assist the helicopter crew with unloading the patient trolley, under the direction of the on-board clinician.
- The ED team, usually consisting of one doctor and one nurse, is to remain within the IPRA. They will accompany the patient, PCAs and on-board clinician to the appropriate destination. The lift is not to contain any other staff.
- Formal patient handover will occur at the place of destination, unless an assessment is required to determine if an immediate transfer direct to Theatres is required.
- No other hospital staff or students are to go on to the deck during the unloading process. The HLO has the authority to stop any unauthorised person from entering the deck area.
- At the specific request of the on-board clinician (usually in advance by radio), due to the patient's critical condition, one doctor and one nurse as determined by the ED Team Leader, may provide assistance on the deck. They are to stop at the end of the link bridge at the edge of the deck until called forward by the on-board clinician or flight crew. Appropriate personal protective equipment is to be worn.
- Once the patient has left the deck area, at the approval of the helicopter crew and HLO, hospital staff / students may go on to the deck area to view the helicopter, under the direction of the helicopter crew. Appropriate personal protective equipment is to be worn.

22.5 Patient trollies

The unloading of patients from Rescue helicopters will require PCAs to approach the aircraft with;

- one of the two dedicated heliport trolleys, located in the In Patient Reception Area (IPRA),
- if required an oxygen cylinder on stand-by (the oxygen cylinder must be at least ¾ full),
- any previously identified and requested additional ED retrieval team,
- additional medical equipment as necessary and as arranged via the ED DO.

Figure 12. Dedicated electric heliport trolley

Figure 13. Dedicated manual heliport trolley

When alternate helicopters or patients are on a scoop stretcher or vacuum matt a standard ED trolley will be required. This requirement must form part of the initial notification process (refer to Section 15.3).

RFDS stretchers are able to be used to take the patient to their destination without transfer on the helipad.

22.6 Multiple patients unloading

On occasion there may be more than one patient in an arriving helicopter.

The retrieval team (or crew in a military aircraft) is responsible for deciding the order in which patients are unloaded. Only one trolley is to be on the deck and one stretcher patient is to be unloaded at one time.

This requirement must be included in the initial notification process (refer to Section 15.5).

All required trolleys must be at the IPRA prior to the helicopter's arrival. Helicopter transfers require height adjustable/ hydraulic type trolleys on the deck.

Transfers between rescue litter/scoop stretcher patient trolleys may be required. This should take place in the IPRA, or at the receiving department, however it may be done on the deck if required.

22.7 Securing heliport area

The HLO is responsible for securing the heliport once the helicopter crew and ED Retrieval Team have vacated the area. This should be done by maintaining a static position in the IPRA. Where the HLO is required to urgently attend other tasks, they are to ensure the access door to deck via the link bridge is in the closed/locked position, and that all equipment is secured, and cupboards locked.

22.8 Patient transfer journey

During the transit from the heliport to ED or other department, medical responsibility for the patient remains with the on-board clinician until clinical handover has been completed.

22.9 Lift

Responding Central PCA 2 is responsible for isolating White Lift 32 at the IPRA on level 8 once all the ED Retrieval Team have arrived or on advice from the HLO.

The ED Retrieval Team and on-board clinician shall use the isolated lift to make their way with the patient to the ED or required department.

In the event of a lift entrapment, contact Switchboard via the emergency button in the lift. This will initiate a Code Yellow emergency and predetermined procedures will follow. An assessment will need to be made by the Emergency Scene Coordinator, with assistance from clinicians present, to determine if the patient's current status will require a DFES response or to wait until the lift technician arrives if the Shift Engineer is unable to get the lift restarted.

22.10 Handover

The transfer of the patient from the aircraft onto the stretcher and from the stretcher onto the trauma table remains the responsibility of the on-board clinician and the flight crew. The on-board clinician and the flight crew will lead all patient movements and the removal of all equipment. On arrival in ED resuscitation area, the on-board clinician identifies the trauma team leader, and a handover is to be directed to them. The trauma team leader can be identified by way of a badge over the pocket. The trauma team leader is not usually on the deck, another doctor will be but the handover in the ED will be to the trauma team leader.

Safety and cooperation are paramount to affect a safe transfer of patients as directed by the on-board clinician and flight crew. Should there be 2 patients, the on-board clinician will be responsible for movement and transfer of the most critical and the flight crew will be responsible for the transfer of the other.

The decision when to provide a clinical hand over will be made by the on-board clinician and the trauma team leader. This will be a defined time and take place clearly with all eyes and ears on the on-board clinician where additional info can be requested.

When the patient is transferred from the helipad to another department, without the need to transit ED, medical responsibility for the patient remains with the on-board clinician until clinical handover has been completed.

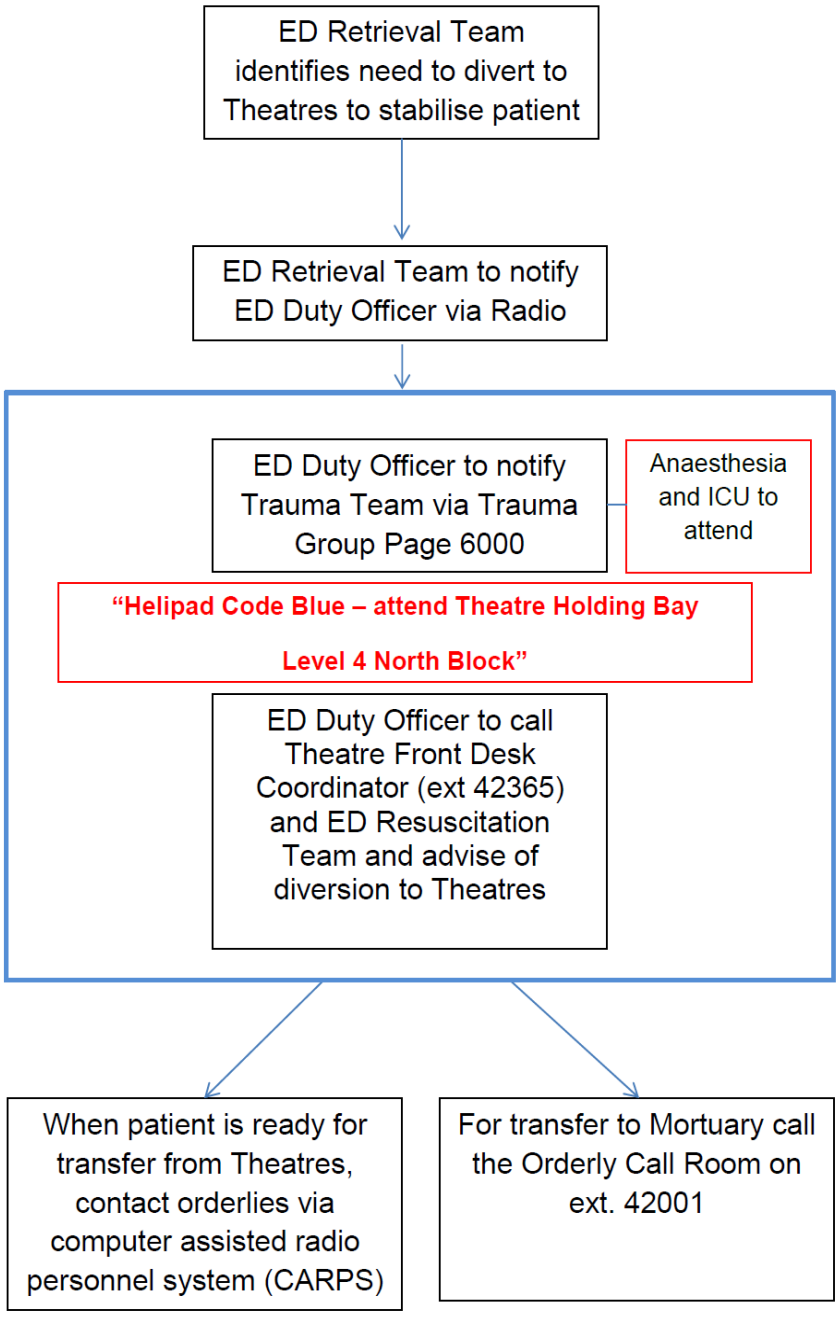
22.11 Medical emergencies

Patients that require emergency medical procedures on arrival, or soon after, will be transferred to the Holding Bay (Front Desk) of the Operating Theatres (Level 4 R Block) by the helicopter retrieval team for these procedures. In the event of a medical emergency, a member of the ED Retrieval Team will notify resus via radio and state "**Helipad Code Blue – diverting to Theatre Holding Bay**".

The ED DO will notify the Trauma Team via the Trauma Group Page (6000) and Theatre Front Desk Coordinator (ext. 42365). The ED Retrieval Team will continue to Theatre Holding Bay.

Individual staff roles and responsibilities in the ongoing care of the patient are documented in the Trauma Services Operational Guideline – Trauma Helipad Resuscitation – Helipad Code Blue.

22.12 Medical emergency - Helipad Code Blue notification flowchart



Reference: Trauma Helipad Resuscitation – "Helipad Code Blue" SOP (RPH) Revised April 2022

22.13 Soiled equipment

Where equipment used to transfer patients has become soiled, wash down facilities are available in the ambulance bay outside ED.

If required a tap is also available on the heliport link bridge, with a hose located in the IPRA to facilitate washdown.

St John Ambulance have also placed a spare scoop stretcher within the heliport In Patient Reception Area to assist with a rapid changeover if the soiled one cannot be cleaned to an acceptable standard or cannot be dried enough to be stowed.

It is the responsibility of St John Ambulance CCP to arrange for this stretcher to be cleaned or replaced as required.

Figure 14. St John Ambulance scoop stretcher

23. Departure

23.1 Helicopter departure

The HLO must be present prior to, and during the helicopter departure. Prior to departure, the helicopter crew and HLO will ensure that the HLS is clear of all personnel and equipment.

The helicopter pilot will be issued a proximity card to access the door to the link bridge leading to the deck. However, if the HLO is unable to attend the IPRA, pilots are to contact the Security Control Room via phone on 9224 2811 and await the HLO to attend for departure. The HLO is responsible for final securing the heliport following aircraft departure.

The pilot in command will follow their standard operating procedures for departure.

For and during start up, pilots require a few minutes to complete necessary safety checks. Multi- engine helicopters use a back-up profile upon departure from the RPH Heliport. During the departure process, the helicopter may need to immediately land back onto the HLS at any time.
The heliport lights must not be switched off until;

- the helicopter is seen climbing away from the hospital,
- the helicopter is no longer in a position to land back at the heliport, and
- no other helicopters are in the vicinity waiting to land.

23.2 Securing the heliport

The HLO is responsible for securing the heliport following aircraft departure. The HLO will ensure;

- all lights have switched off,
- all PPE and equipment is returned and stored correctly

A visual check of the heliport is to be conducted by the HLO to ensure that there is no sign of FOD, equipment left behind, fuel spills, or damage.

When the helicopter has departed, and the heliport is secure the HLO will advise Switchboard to send out a page that the helicopter has now left.

Full details are listed in **Appendix I** – Heliport Safety Checklist

23.3 Heliport log

All arrivals and departures will be entered into the log entry in the EMHS Security computerised database (Sentry) and must be completed for every occasion where a helicopter landing occurs. This can be done via the computer installed in the IPRA. Details must include:

- Time and date of operation
- Name of HLO
- Pilot Name.

Templated Sentry entries are as follows:

Location*:* *Heliport*
Start Time*:* This is the time the HLO arrived at heliport*, xx:xx*
End Time*:* This is the time the HLO completed tasks and left the heliport*, xx:xx*
Details: Choose from;

- *Heliport weekly inspection,* or
- *HLO duties*

Notes*:* *HLO Name.* Then choose from;

- *Conducted heliport inspection - no issues <or> issues identified <list issues>*
- *Conducted heliport inspection and cleared for green deck. Landed <time> xx:xx, Departed <time> xx:xx, Pilot's name.* List any issues.

24. Emergency procedures

24.1 Evacuation

The primary evacuation route from the heliport is via the heliport IPRA and down the internal fire rated stairs.

Two ResQpods are available in the IPRA to assist with emergency patient evacuation.

The secondary evacuation point from the heliport is via the external emergency stair located at the northwest corner of the deck to the open roof below and on to the north west internal fire rated stairs. A ResQpod is also located on the level 6 landing of this stair.

Once inside the hospital, the evacuation routes are as per local emergency evacuation plans/ diagrams.

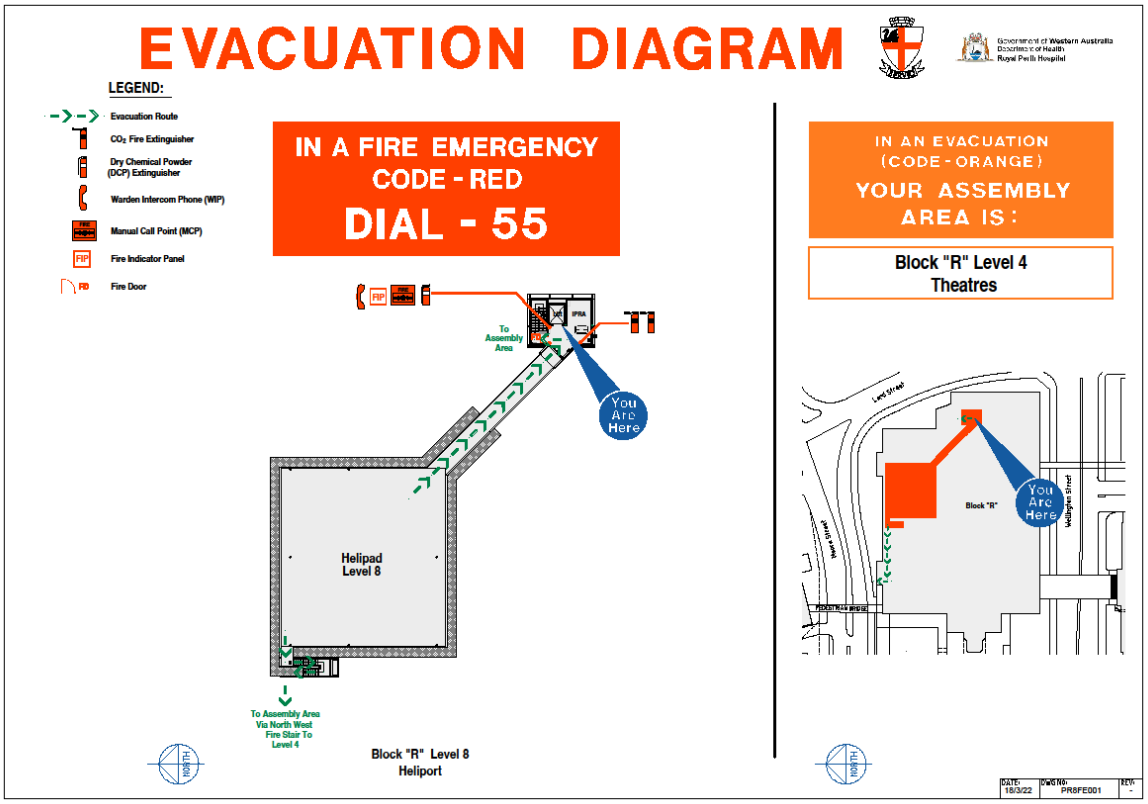


Figure 15. Heliport evacuation diagram

24.2 Emergency landing

On notification of an impending emergency landing by the helicopter, the HLO must ensure that any personnel in the heliport area leave immediately.

In the event of an impending declared emergency landing

- Under the direction of the HLO all personnel must move beyond the heliport IPRA into the fire isolated stairs to level 6, as a safe emergency landing Evacuation Muster Point.
- If safe to do so, the HLO is to activate the break glass alarm, and phone ‘55’ on an internal hospital telephone to declare an emergency landing of the helicopter and request a Code Red activation.
- All personnel must remain at the emergency landing Evacuation Muster Point until the aircraft has landed and shut down.
- If safe to do so, the HLO will enter the heliport IPRA, and assess the situation from behind the glass doors.

24.3 Additional actions for an abnormal landing

Only under the direction of the helicopter crew, and if safe to do so, hospital staff may assist as required.

If the situation is unsafe or there is no direction from the helicopter crew, staff are to remain in the IPRA and await the Emergency Response Team (ERT) and the Fire and Rescue Service.

24.4 Fire in heliport area

In the event of a fire on the heliport, any personnel in the heliport area must leave immediately via the safest evacuation point (refer to section 24.1).

Phone ‘55’ and declare a Code Red emergency at the heliport and activate the Manual Call Point in the IPRA.

The HLO will be responsible for accounting for staff at the heliport and to assist the Emergency Scene Coordinator/ERT on their arrival to the area.

If the fire is on the deck the HLO is to manually activate the DiFFS.

24.5 Loss of vision / foreign bodies in the eye

Helicopter rotor downwash can cause dust to rise which may get into the eyes even when eye protection is worn. If this occurs the affected person should immediately stop and sit down where they are and await assistance, such a person should be assisted away from the aircraft into the IPRA where management of their problem can occur.

24.6 Staff injury

If you are injured move to a safe area if possible and await assistance if required. If you see someone else who is injured, do not put yourself in danger by approaching them. If their injury is in any way disabling and the injured person is on the deck and a helicopter is operating on the deck, the HLO should ask the pilot to shut down so that appropriate medical aid can be provided.

Any injuries are reported according to EMHS WHS guidelines
Work Health and Safety (WHS)

Where significant injuries have occurred, a medical emergency may be activated by dialling ‘55’ from the heliport IPRA phone and declaring a Code Blue.

24.7 Equipment over the edge of the building

Immediately notify the HLO of any item that may have gone over the edge and which direction it was lost in. Security will attempt to locate the item and determine the nature and extent of any damage.

Appendices

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Appendix A – Key information for Helicopter Operators

Location

The RPH Heliport is elevated and located on the Level 8 of R Block (North Block) at Royal Perth Hospital.

Coordinates:	S31^{O} 57.2" E115^{O} 52.0"
Designation:	YXRP
Air Traffic Control Zone:	Perth
FATO Dimensions:	27m x 27m
Total Deck Dimensions:	29.2m x 27m
Elevation:	160 ft (48.8m)
Day/Night facility:	Yes
Night lighting:	Obstacle lighting to South Block (Block A) Obstacle lighting to MRI Stack (Block R) Illuminated windsock on top IPRA TLOF Perimeter low angle floodlighting TLOF Perimeter Green recessed lighting Touchdown Zone Yellow recessed lighting

Hazards

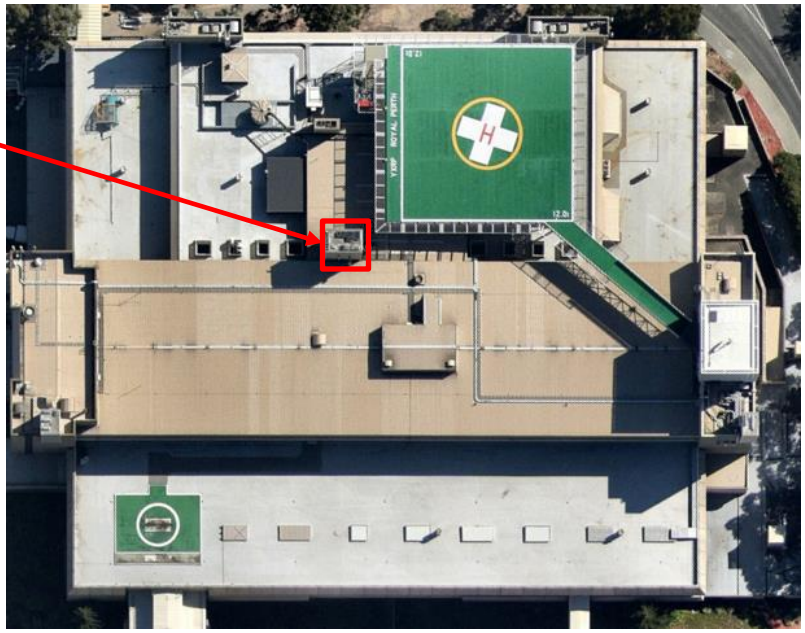
Utilisation of the surveyed approach and departure paths (029^{O} / 209^{O}) aligned with the red deck marking H provides protected pathways.

Flight crews should be aware that approaches from the south and departures to the south over A Block (South Block) required the use of a raised-50' "In Space" FATO.

Due to buildings to the south of RPH being higher than the helicopter landing site, flight crews should be aware that turbulence may be encountered, particularly with strong afternoon south-westerly winds.

Flight crews should be aware of the MRI stack on the SW corner of the helicopter landing site. This stack is approximately 7 meters from the edge of the FATO. The MRI stack is outside of ICAO 15% night lateral splays provided the flight crews follow the surveyed approach and departure paths.

Aerial photo showing location of MRI stack



Due to the proximity to the CBD, there are often numerous cranes in the vicinity, some unlit.

Due to the population in the area there is a heightened chance of individuals pointing lasers at helicopters. Some nightclubs in the CBD utilise large spotlights.

Airborne and transit

Activate heliport 30 minutes prior to landing (if possible) with ETA to Emergency Department Duty Officer on 08 9224 1676.

Confirm heliport activation with HLO on 08 9224 2811or 0404 894 066.

Approach and landing

The City of Perth will approve surveyed flightpaths 029^{O} / 209^{O} to / from the RPH Heliport. Use of these approach paths provide protected airspace IAW ICAO Annex 14 VOL II at 4.5 % gradient.

Obtain a 'green deck' clearance with HLO via phone or radio:

- This is now achieved via a digital DMR-P25 gateway to enable the HLO to be able to talk directly to the helicopter on the RPH Security channel.

Current P25 frequencies in use by EMS Helicopters for Tertiary Hospitals are:

- Frequency 467.5375 MHz, NAK code 100 - RPH Specific

In most cases, the HLS will close for landings when wind speed at the heliport exceeds 32 knots (approx. 60 km/hour). While helicopters may have the capability to land in over 32 knot winds, there is a greater risk to retrieval team members and the likelihood of equipment being blown over.

During the non-operational status of the HLS, alternate landing sites may be considered, see Appendix E – Heliport downtime procedure (Non-operational heliport).

A trained member of Security staff will undertake the role of Helicopter Landing Officer (HLO) for all landings. On landing the RPH staff will wait for a signal/escort before approaching helicopter.

Deconfliction

It is essential that helicopter pilots be aware and look out for other traffic, and exchange traffic information when approaching or departing the RPH heliport. Use of the appropriate radio frequency and communications protocols is critical to the safety of Visual Flight Rules (VFR) traffic at RPH heliport.

In an event when two or more helicopters are on approach to the RPH heliport or when one helicopter is on the helicopter landing site and another is on final approach, there is a need to manage access to the heliport.

Decisions concerning priority access will primarily be based on patient acuity.

When a helicopter is already in situ on the helicopter landing site and another helicopter is on approach, every effort will be made to clear the helicopter landing site to allow the incoming helicopter to land.

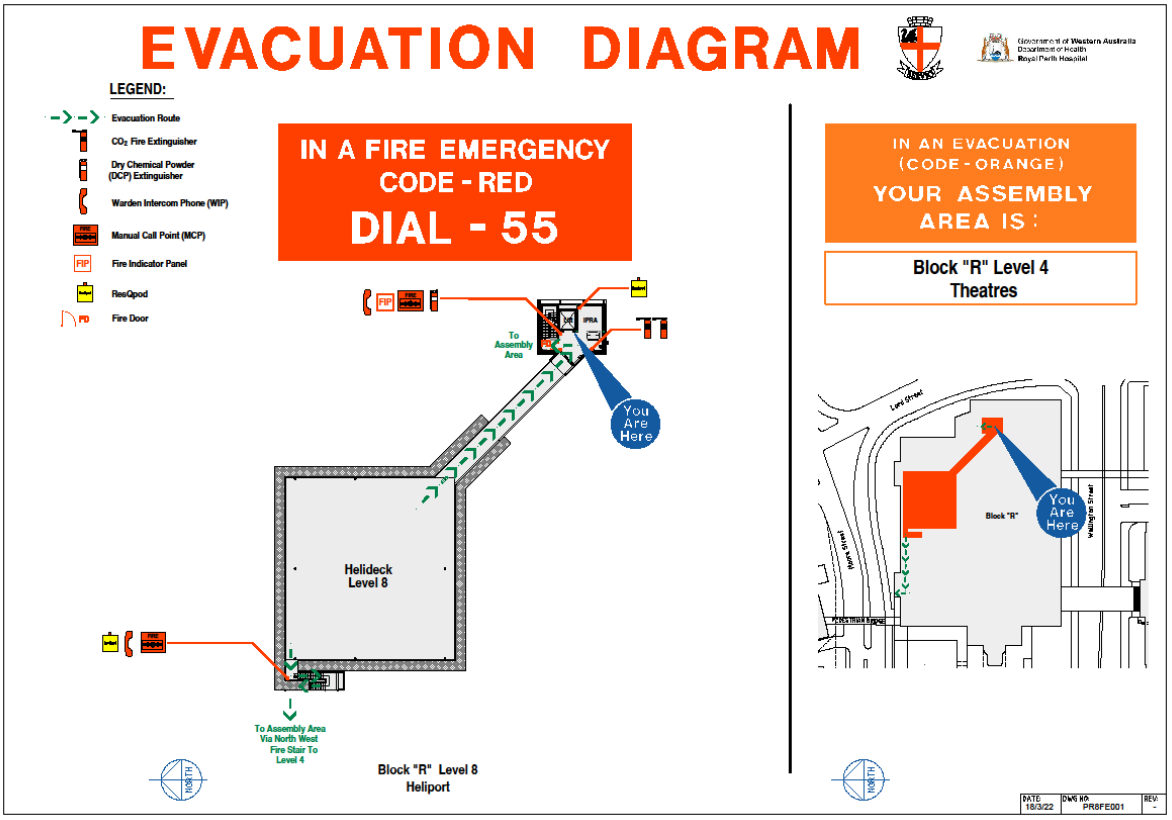
Departure

HLO must be present prior to and during departure

Emergency procedures

The Primary evacuation route from the heliport is via the link bridge, through the IPRA access door in to the IPRA and then down the internal fire rated escape stair.

The Secondary evacuation route is down the external open access stair located at the northwest corner of the deck and then across Level 6 and into the fire rated escape stair located at the northwest corner of the roof.



Appendix B – Action Cards

Heliport Action Card 1 Emergency Department Duty Officer (ED DO)		
	Phone: (08) 9224 1676	**Check**
1.	Receive notification of intended transfer of patient from SJA / RFDS. Accept transfer if meets acceptance criteria. Ascertain ETA and any special transfer requirements. Note: For Rescue Helicopter Primary Missions, this heliport activation notification may come without detailed clinical information.	
2.	Notify RPH Switchboard of impending ETA, and request a message is sent to the Helicopter Notification Paging Group (2100).	
3.	Notify ED Nursing Shift Coordinator pager 2698 or portable phone 41674.	
4.	Receive medical handover from the Critical Care Paramedic (CCP) or other on-board clinician.	
5.	Allocate ED Medical Officer, if appropriate, to meet incoming arrival.	
	Note: RFDS accompanied flight transfer may progress direct to ICU, CCU or Theatre. A retrieval team including a RN and PCAs will still be required to accompany patient.	
6.	If notified of a Heliport Code Blue	
7.	Notify the Trauma Team via the Trauma Group Page (pager 6000), with the following message – "**Helipad Code Blue – attend Theatre Holding Bay Level 4 R Block**"	
8.	Notify the Theatre Front Desk Coordinator on ext. 42365 of impending of arrival of patient from heliport.	
9.	Refer to Appendix C – Helipad Code Blue	

Heliport Action Card 2 Emergency Department Medical Officer		
	On advice from Emergency Department Duty Officer:	**Check**
1.	Liaise with ED Nurse/s and ED PCA who will be attending the heliport	
2.	Ensure appropriate amount of time for the team to attend the IPRA to conduct the ED Rapid Intervention Trolley check	
3.	At the heliport conduct the ED Rapid Intervention Trolley check	
4.	Collect and don appropriate PPE for COLD landing - "Doctor" high- vis vest. Change to HOT landing PPE only if instructed by HLO of a Hot Landing - PPE is "Doctor" high-vis vest, ear protection and eye protection	
5.	Remain in the IPRA to await arrival of helicopter Participate in the helicopter safety briefing	
6.	Once helicopter has landed remain in the IPRA with the attending nurse and follow instructions of HLO.	
7.	Await the return of the patient by the ED PCA and Central PCA, on-board clinican and helicopter crew	
8.	Return to ED with the patient, on-board clinican, helicopter crew and the ED Retrieval Team, or if condition warrants a Helipad Code Blue declaration, transfer to Theatres	
	Note: If the patient's condition deteriorates the on-board clinican (usually in advance by radio) may request one doctor and one nurse attend the helicopter to provide assistance, once the rotor blades have stopped moving and the HLO has given clearance to proceed. The doctor and nurse are to stop at the edge of the deck until called forward by the on-board clinican or helicopter crew (appropriate PPE is to be worn).	
	Note: If the incoming helicopter has multiple patients on board, an extra patient stretcher will need to be taken from ED.	
	Note: Any untrained staff/observers are to be identified to the HLO and must be suitably supervised by a staff member trained in heliport procedures (refer to Appendix G).	

Heliport Action Card 3 Emergency Department Nurse Shift Coordinator		
Phone: (08) 9224 1674 Page: 2698		
	On advice from Emergency Department Duty Officer:	**Check**
1.	Organise receiving team of ED Nurse/s and ED PCA	
2.	Collect heliport two-way radio and conduct a radio check with the Resus two-way radio.	
3.	Ensure appropriate amount of time for the team to attend the IPRA to conduct the ED Rapid Intervention Trolley check	
4.	Once at the heliport collect and don appropriate PPE for COLD landing - "Nurse" high- vis vest. Change to HOT landing PPE only if instructed by HLO of a Hot Landing - PPE is "nurse" high-vis vest, ear protection and eye protection	
5.	Remain in the IPRA to await arrival of helicopter Participate in the helicopter safety briefing	
6.	Once helicopter has landed remain in the IPRA with the attending doctor and follow instructions of HLO.	
7.	Await the return of the patient by the ED PCA and Central PCA, on-board clinican and helicopter crew	
8.	Return to ED with the patient, on-board clinican, helicopter crew and the ED Retrieval Team, or if condition warrants a Helicopter landing site Code Blue declaration, transfer to Theatres	
	Note: If the patient's condition deteriorates the on-board clinician (usually in advance by radio) may request one doctor and one nurse attend the helicopter to provide assistance, once the rotor blades have stopped moving and the HLO has given clearance to proceed. The doctor and nurse are to stop at the edge of the deck until called forward by the on-board clinician or helicopter crew (appropriate PPE is to be worn).	
	Note: If the incoming helicopter has multiple patients on board, an extra patient stretcher will need to be taken from ED.	
	Note: Any untrained staff/observers are to be identified to the HLO and must be suitably supervised by a staff member trained in heliport procedures (refer to Appendix G).	

Heliport Action Card 4 SAFE Clinical Nurse Specialist		
RFDS helicopter direct admission pathway		
		Check
1.	Receive pager notification of impending RFDS helicopter direct admission arrival	
2.	Contact ED EPIC for patient condition update and destination (refer to information on EDIS EXPECTS/ EBM)	
3.	Arrive in IPRA at least 10 minutes prior to helicopter arrival. PCA and HLO will also be present.	
4.	Once at the heliport IPRA collect and don appropriate PPE for COLD landing - "Nurse" high- vis vest. If required to change to HOT landing PPE only if instructed by HLO of a Hot Landing - PPE is "Nurse" high-vis vest, ear protection and eye protection	
5.	Remain in the IPRA to await arrival of helicopter Participate in the helicopter safety briefing	
6.	Once helicopter has landed remain in the IPRA with the PCA and follow instructions of HLO.	
7.	Await the return of the patient by the PCA, RFDS on board clinicians and helicopter crew	
8.	Receive handover and assess patient for destination ward suitability (including COVID status). Accompany patient to ward destination. If condition warrants further escalation due to deterioration, transfer to ED (liaise with EPIC)	
	Note: If the patient's condition deteriorates the RFDS personnel (usually in advance by radio to ED) may request one doctor and one nurse from ED to attend the helicopter to provide assistance, once the rotor blades have stopped moving and the HLO has given clearance to proceed. The ED doctor and ED nurse are to stop at the edge of the deck until called forward by RFDS or helicopter crew (appropriate PPE is to be worn).	
	Note: Any untrained staff/observers are to be identified to the HLO and must be suitably supervised by a staff member trained in heliport procedures (refer to Appendix E).	

Heliport Action Card 5 RPH Switchboard Operator		
	Phone: (08) 9224 2244 Page: 91	**Check**
1	**On notification of impending Rescue or RFDS helicopter landing or practice landing from Emergency Department Duty Officer or Security Control Room Operator:**	
2	Phone Security Control Room on 0404 894 066 (speed dial *4870) or ext. 42811 to notify of helicopter landing	
3	Confirm type of helicopter landing. e.g. Rescue helicopter or RFDS helicopter or other type.	
4	Send a message to the Helicopter Landing Paging Group (2100). Message to read either: "**Rescue Helicopter** Landing at xx:xx (time)", or "**RFDS Helicopter** Landing at xx:xx (time)"	
5	Call DFES Communications Centre to advise of helicopter landing at RPH Heliport (ETA and if available the departure time)	
	If contacted by Security with an updated ETA for helicopter landing:	
6	Send a message to the Helicopter Landing Paging Group (2100). Message to read either: "Updated ETA for **Rescue Helicopter** - now landing at xx:xx (time)", or "Updated ETA for **RFDS Helicopter** - now landing at xx:xx (time)"	
7	**On notification from Helicopter Landing Officer that the helicopter has left:**	
8	Send a message to the Helicopter Landing Paging Group (2100). Message to read either: "**Rescue Helicopter** has left RPH", or "**RFDS Helicopter** has left RPH",	
9	Note: for all practice landings: **On notification of impending practice landing from Security Control Room Operator:** Send a message to the Helicopter Landing Paging Group (2100). Message to read: "Practice Only Helicopter Landing at xx:xx (time)"	

Heliport Action Card 6 Security Control Room Operator		
	Phone: (08) 9224 2811 Mobile: 0404 894 066	**Check**
1.	On notification from the helicopter pilot of an impending landing (including practice landings), if no previous notification has been received internally, notify Switchboard of impending ETA, and request that a message is sent to the Helicopter Notification Paging Group (2100). Advise Switchboard of type of helicopter landing. E.g. Rescue helicopter or RFDS helicopter or other type.	
2.	On notification by pager or Switchboard of the in-bound helicopter the Security Control Room Operator will notify ETA to the following persons:	
	• Allocate Helicopter Landing Officer (HLO) duties to one of the Security Officers on shift.	
	• CARPS Coordinator via two-way radio or Ext. 42001	
3.	If the helicopter pilot or HLO makes contact with an updated ETA, contact Switchboard and ask them to send an updated message to the Helicopter Notification Paging Group (2100) and notify HLO via two-way radio.	
4.	Monitor arrival and departure of helicopter via CCTV on Camera 165	
5.	Relay any two-way radio messages from HLO to appropriate people	

Heliport Action Card 7 Helicopter Landing Office (HLO) Phone: (08) 9224 2811 Mobile: 0404 894 066 RPH Heliport In Patient Reception Area (08) 9224 3397		
	Actions from notification to departure	**Check**
1.	On advice from Security Control Room, proceed to the In Patient Reception Area (IPRA) via lift 32	
2.	Don orange HLO hi-vis vest.	
3.	Ensure desktop two-way radio is operational for pilot communications. (radio is switched on, on Security channel and volume turned up)	
4.	Complete 'Pre-landing' section of heliport safety checklist if it is safe to enter heliport area (check wind speed and weather conditions).	
5.	Complete Safety Briefings for all personnel participating in the landing as appropriate for the aircraft.	
6.	Complete 'Briefing' section of the heliport safety checklist.	
7.	Upon being contacted by the pilot, confirm Green Deck by stating **"[Helicopter call sign] this is Royal Perth Heliport, you have a green deck, I say again you have a green deck.** If requested by pilot provide **wind speed in xxx knots, from an xxx direction**. Request total number of persons on board. Complete 'Communication' section of heliport safety checklist.	
8.	Observe landing whilst remaining in the IPRA. Activate emergency procedures if required. Complete the 'Landing' section of the heliport safety checklist.	
9.	Once given the all clear from the pilot, open door to the link bridge to allow retrieval operations. Remain next to the link bridge door to activate emergency procedures if required	
10.	For an RFDS Inter Hospital Transfer; call the destination ward or department to advise the patient has landed and is on route within the hospital	
11.	Observe departure standing next to the link bridge door. Activate emergency procedures if required. Complete 'Departure' section of the heliport safety checklist.	
12.	Complete 'Post Departure' and 'Closing the heliport' section of heliport safety checklist. Return completed heliport safety checklist to the RPH EOC, A Block L2	
13.	If any hydrocarbon leaks are present on the deck, contact Security Control Room to raise a work order for Facilities to attend and clean.	

Heliport Action Card 8 CARPS Operator and Central PCAs 1 and 2		
	Phone: (08) 9224 2001	**Check**
1.	On notification from Switchboard by page and/or by Security that a helicopter is inbound, CARPS Operator is to allocate two Central PCAs to attend the heliport for patient retrieval.	
2.	CARPS Operator is to maintain communications with Central PCA if extra equipment or staff are required due to multiple patients.	
3.	Central PCAs to retrieve lift key and proceed to the In Patient Reception Area (IPRA) via lift 32	
4.	PCAs to don PCA hi-vis vests.	
5.	Participate in Safety Briefing from Helicopter Landing Office (HLO) as appropriate for the aircraft	
	For Rescue Helicopter Retrieval	
6.	Central PCA 1 – when advised by the HLO use lift key to secure and hold lift 32 at the IPRA for transfer of patient once the helicopter has landed.	
7.	Central PCA 1 and 2 – to assist on the deck as required once approval from HLO has been given to enter the deck area.	
8.	Central PCA 1 and 2 – to assist in transfer of patients from helicopter to patient stretcher trolley as required and transfer to ED.	
	For RFDS Helicopter Retrieval	
9.	Central PCA 1 – when advised by the HLO use lift key to secure and hold lift 32 at the IPRA for transfer of patient once the helicopter has landed. Remain in the IPRA	
10.	Central PCA 2 – to take O_2 cylinder to the RFDS flight crew on the deck once approval from HLO has been given to enter the deck area.	
11.	Central PCA 2 – to assist and guide the RFDS flight crew to the internal hospital destination.	
12	Central PCA 1 – to release lift 32 for normal operation.	

Appendix C – Helipad Code Blue Trauma Heliport Resuscitation

Helipad Code Blue

1

General Information

Helicopter retrieval trauma patients are often severely injured and/or critically ill. In addition, these patients may have travelled a significant distance from trauma location to definitive care.
The heliport at RPH is located in Level 8 R Block, some considerable distance from the Emergency Department (ED) resuscitation area on Level 3 Q Block. In the event of a patient's clinical status rapidly deteriorating on route to the ED, there needs to be a contingency for an alternative resuscitation location that is appropriately resourced in terms of equipment and trained personnel.

Criteria

- Impending or actual cardiac arrest
- Impending or actual airway compromise
- At the discretion of the receiving ED Specialist

"Heliport Code Blue" Scenarios

- Scenario 1: Arrest on heliport with no prior notification and requiring urgent diversion to Theatre Holding Bay. ED Heliport Retrieval Team present: one Nurse, one Doctor (optional), one Patient Care Assistant (PCA)
- Scenario 2: Notification from Helicopter on-board clinican of arrest in progress and will likely require urgent diversion to Theatre Holding Bay. ED helipad/Heliport Response Team will consist of two nurses, a number of medical staff (subject to availability and clinical requirement) and one PCA
- Scenario 3: Previously stable patient deteriorates on route to the ED from the heliport. ED Helipad/Heliport Response Team present, one Nurse, one Doctor and one PCA.

Note:
If the deterioration occurs past the "point of no return" (i.e. post R Block lifts on level 3), continue to proceed to the ED.

The entire ED resuscitation team (3x Doctors (Team Leader, Airway, Circulation); 3x nurses (CC1- drugs/defibrillator, CC2- airway, scribe/circulation); and 1 x PCA will be required to attend theatres to assist with any Helipad Code Blue scenario.

Helipad Code Blue

2

Activation of Helipad Code Blue

ED (Helipad/Heliport Retrieval Team)

- Activation of "Helipad Code Blue" is done by the ED Helipad/Heliport Response Team via radio notification to the ED Physician in Charge (EPIC). Stating "Activate Helipad Code Blue- diverting to Theatre Holding Bay". The EPIC will then notify the Trauma Team (via the Trauma Group page - 6000) and Theatre Front Desk Coordinator (via telephone on ext. 42365), Stating "Helipad Code Blue – attend Theatre Holding Bay, Level 4 R Block/ North Block"
- Due to radio transmission issues within the lifts, radio notification needs to be conveyed before entering the lift, with receipt of acknowledgement from the EPIC
  Automatic attendance of Intensive Care Unit (ICU) and Anaesthesia in response to this page.
- Initiate resuscitation and accompany patient to the Theatre Holding Bay (with the St John Ambulance (SJA) Critical Care Paramedic)

Roles and Responsibilities

ED Helipad/Heliport Retrieval Team

- Initiate "Helipad Code Blue" as above and request entire ED resuscitation team on standby to attend theatres immediately
- Liaise with multidisciplinary team members (ED/Trauma/Operating Theatre [OT]/SJA) and coordinate ongoing resuscitation in the Holding Bay.

  In the rare event that the Theatre Coordinator is not available on arrival in theatres (i.e. no one from Theatres in the Theatre Holding Bay and hence no Helipad Code Blue notification), hit the red resus button to announce arrival in the Holding Bay.

ED resuscitation team (on standby in ED)

- Attend Theatre Holding Bay (ED and Trauma staff)
- Activate Massive Transfusion Protocol if patient haemodynamically unstable
- Bring ultrasound and major haemorrhage pack (MHP), (if already in ED)
- If transfusion required immediately and MHP has not yet arrived, use the 2 units O Neg red blood cells (RBC) from the emergency shipper* located in the ED medication room
- If patient location changes post-dispatch of orderly to Transfusion Medicine to collect the MHP, contact orderly with new patient location for delivery of MHP
- ED Resuscitation Team to undertake allocated roles once in theatre holding bay
- Role stickers and trauma documentation available in the rapid intervention trolley in the Theatre Holding Bay, all team members are to identify themselves with these
- ED Resuscitation Team and Trauma Team to assist with preparation of the patient for OT, if required, and assume responsibility for the patient until handover to OT.

  It is important that someone from the ED resus team notifies the Transfusion Medicine staff if the shipper has been taken to the Theatre Holding Bay.

Trauma fellow/registrar

- Notify on-call Trauma Consultant
- Notify Radiology for portable chest x-ray and ultrasound
- Proceed to the Operating Theatres Holding Bay
- Liaise with ED Team Leader and assist with resuscitation
- Activate and coordinate additional specialties (e.g. Neurosurgery) as required

Helipad Code Blue

2

Roles and Responsibilities continued

Operating Theatres (OT) Front Desk Coordinator

- Activation of Theatre Team (Prep coordinator, Duty Anaesthetist (if available) and Anaesthetic Tech Coordinator)
- Call for theatre emergency thoracotomy trolley and defibrillator
- Additional equipment (e.g. Level 1 Transfuser (Anaesthetic Tech Coordinator – Page 2058); Personal Protective Equipment (PPE); action cards)
- In the event that the Anaesthetic Technician is unavailable, utilise the ED rapid intervention trolley (intubation equipment; lines; transducers; disposable scalpel etc.), which is located in the designated room off to the side of the Theatre Holding Bay.

Theatre Staff (if available)

- Theatre Nurses to assist ED Trauma Nurse

Duty Anaesthetist

- Assist with airway and ventilation management as appropriate

Intensivist

- Assist with patient management as appropriate, in consultation with the ED Team Leader.

Note: Each team member is responsible for identifying themselves with a role allocation sticker, which are kept on the rapid intervention trolley.

Helipad Code Blue

3

Patient Disposition

ED Response Team and Trauma Team maintain full responsibility for the patient until handover to the admitting team:

- A decision regarding patient disposition must be made within 20 minutes of arrival in the Theatre Holding Bay
- In the event of patient becoming stable enough for further review, patient will be transferred to the ED under the care of the ED Response Team.

All other areas:
Booking slip to be done via Enterprise Bed Management (EBM) with notification to ED Notification (page 6199) regarding patient's disposition.

Surgery

- Relevant surgical team and Duty Anaesthetist to assume responsibility for the patient once in theatre

ICU

- Liaise with ICU shift coordinator (page 1607) and ICU Senior Registrar (page 3605) and transfer to ICU as appropriate under the care of the relevant admitting team

State Major Trauma Unit (SMTU)

- Determine requirements for standard (STU) or High Acuity (STUA) trauma bed. Liaise with SMTU Shift Coordinator (ext.41383). Transfer to SMTU (STU or STUA) as appropriate under the care of the relevant admitting team

Radiology

- The Trauma Surgical Team to assume responsibility for the transfer of patient to Radiology. If the patient is intubated, liaise with ED/Anaesthetists and follow intra- hospital guidelines regarding transfer of intubated patient (to computed tomography [CT], magnetic resonance imaging [MRI] etc)

Deceased Care

- Care of bereaved relatives – Process for notification, informing relatives etc. is the responsibility of ED staff
- Bereavement information packs to be supplied by ED for family
- ED and Theatre staff (if available) to prepare patient for the Mortuary
- Relatives visiting – wherever possible, deceased patient to be transferred to the Mortuary for family viewing

Helipad Code Blue

4

Patient Documentation/Identification

Temporary Patient Records

- Disaster Packs are kept in the ED rapid intervention trolley located in the Theatre Holding Bay. These packs contain admission records, the blue Trauma Form (MR 1.1) and a temporary patient unit medical record number (UMRN), which can be merged with patient's existing records when available
- ED Nursing Team to ring ED Clerical Staff (ext. 42660) to notify that a temporary patient record has been used and will need replacement for the Helipad/Heliport Theatre Holding Bay Resuscitation Area
- ED Clerical Staff to enter patient onto WebPAS (web based patient administration system) – with patient details, including temporary UMRN
- ED Clerical Staff to perform merge of patient's temporary record with existing record, post resuscitation, if applicable
- Theatre Staff to add patient to Theatre Management System (TMS) once patient has been added to WebPAS, in order to capture clinical activity.

These procedures have been taken from the SMTU: Trauma Helipad/Heliport Resuscitation – "Helipad Code Blue" Standard Operational Procedure (RPH), endorsed by the RPH Trauma Committee and **last reviewed in April 2022**.
Latest version available on the RPH Hub

Appendix D – RFDS Inter Hospital Patient Transfer pathway

Appendix E – Heliport downtime procedure (Non-operational heliport)

Downtime applies to any planned non-operational activities. A Code Yellow should be considered for any instances of infrastructure damage or failure.

Purpose
To outline the downtime procedure for a non-operational heliport, including authorised parties, notification processes and procedures.

Authority to declare non-operational status
The heliport may be declared non-operational for the following reasons and authorised by the listed staff:

Reason	Authorisation
Unplanned outages impacting on the heliport, such as lift out of order.	Facilities Management (FM) staff (FM Manager and Shift Engineer), Manager Emergency and Disaster Planning
Scheduled or urgent unscheduled maintenance, involving or adjacent to the heliport or any identified unresolved safety concerns	Facilities Management (FM) staff (FM Manager and Shift Engineer)
Infrastructure issues affecting the heliport, RPH R Block, or other significant declared emergency situation	Hospital Incident Commander, authorised FM staff
Any safety concerns identified by the Helicopter Landing Officer (HLO) during a heliport inspection for an impending landing or take off, including unscheduled maintenance required	Helicopter Landing Officer

Any safety concerns by a pilot or helicopter operator/s raised need to be directed initially to the HLO. The HLO will advise the Security Control Room (SCR) for escalation to FM for resolution. If unable to be resolved, authorised FM staff can declare the heliport non-operational.

Procedure
- Follow notification steps as listed below for planned or unplanned events
- Provide updates as required to key stakeholders
- When the heliport is deemed operational (e.g. planned maintenance completed), repeat notification process to advise of operational status
- Ensure East Metropolitan Health Service Security Incident Management System database (Sentry) entry is completed for all instances of an unplanned non-operational heliport.

Notification procedure
Unplanned
When the heliport is unexpectedly declared non-operational, the Emergency Operations Centre (EOC) or the SCR must be notified immediately by the authorising person by phone (ext. 42811 or mob. 0404 894 066).
The notification cascade is to be activated as per **Appendix F**. including RPH Ops Hub Coordinator, HIC during work hours or SRN On Call if after hours.

Security Control Room
The Security Control Room will contact switchboard and arrange for a pager message to be sent to the following paging groups, stating the reason why the heliport is closed and the approximate duration:
- the Helicopter Landing group (page 2100)
- the Heliport Shutdown Notification Group (page 297)

Emergency Department Duty Officer

The ED Duty Officer will arrange for the following to be advised of the shutdown:

- Duty Consultant,
- SCGH ED Duty Officer (Ph: 6457 7255)
- FSH (Ph: 6152 7642)
- Medical Administrator On-call.

Emergency Operation Centre or Operations Hub

The EOC or the Operations Hub are to ensure notification includes the following stakeholders:

- Alternatively, the Operations Hub or EOC
- HIC during hours, or SRN On-call after-hours
- Clinical areas receiving patients including RPH Emergency Department (ED) and State Major Trauma Unit (SMTU) Co-Directors and Clinical Nurse Managers
- The following external stakeholders via telephone and email or as specified:
  SJA Operations Centre
  Duty Manager Ph: 08 9334 1226
  Emails: MMOGroup@stjohnambulance.com.au
  ManagerStateAmbulanceOfficer@stjohnambulance.com.au

  CHC Helicopters
  CHC Jandakot
  Emails: jandakot-bm@chcheli.com and jandakot-ops@chcheli.com
  Jandakot Base Manager Ph: 0417 822 801
  Jandakot Base Ph: 08 9414 8377
  Aircraft Mobile: 0428 400 410

  CHC Bunbury
  E-mails: bunbury-bm@chcheli.com and bunbury-ops@chcheli.com
  Bunbury Base Manager Ph: 0417 323 950
  Bunbury Base Ph: 08 9241 7253
  Aircraft Mobile:0428 400 422

  DFES Emergency Rescue Helicopter Service
  Email: erhs@dfes.wa.gov.au

  RFDS Coordination Centre
  Email: operations@rfdswa.com.au
  EC145@rfdswa.com.au
  Ph: 08 9417 6388

  Police Air Wing
  Police.air.wing@police.wa.gov.au
  Airwing.rotary@police.wa.gov.au
  Ph: 08 6595 9777

  RAAF Pearce
  Ph: 08 9570 8802
  Mob: 0447 112 093
  pearce-bm@chcheli.com and pearce-ops@chcheli.com

Planned
For scheduled maintenance, notification must be made 5 working days prior to the commencement of work by FM to the EOC advising of the shutdown and estimated duration.
Upon an alternative landing site being approved, the EOC will send an email advice to:

- Operations Hub
- Clinical areas receiving patients including RPH Emergency Department (ED) and State Major Trauma Unit (SMTU) Director and Clinical Nurse Managers
- Key external stakeholders list identified in the notification cascade

Prior to work commencing, the authorised party scheduled to conduct the works must seek approval and confirmation to commence via FM from the EOC.

Alternate landing sites
During the non-operational status of the HLS, alternate landing sites may be considered by the helicopter pilot and critical care paramedic, which would include:

- Langley Park (approval needs to be obtained from City of Perth)
- Perth Children's Hospital
- Fiona Stanley Hospital
- Jandakot Airport

Site specific notification processes are required to be followed in the event an alternate landing site is required. A retrieval team will not be provided by RPH. St John Ambulance road transport from the alternative landing site to RPH will need to be arranged via SJA Communications

The following arrangements have been established with the City of Perth to use Langley Park and an alternative landing site.

Alternative landing site required for an unplanned outage of heliport (on the day)
RPH Emergency Management to contact the City Watch team on 08 9461 6611 to confirm Langley Park is available for a landing.

Required closures/predicted unavailability of heliport with 1 to 4 days' notice
RPH Emergency Management to contact City of Perth Activity Approvals on 08 9461 3333 or obstruction.permits@cityofperth.wa.gov.au to confirm there are no other activities or events occurring on Langley Park in case of an emergency landing.

Planned and scheduled closures of the heliport (any number of days) + 5 days' notice
An obstruction permit will be required. RPH Emergency Management to make a submission online at: Obstruction Permit | City of Perth

Appendix F – Notification cascade for urgent after hours

Operations Hub Coordinator 0404 894 053 or Security Control Room Operator Ext 42811 or 0404 894 066 are notified of an immediate shutdown by Authorised Person
(Pilot, Approved Helicopter Operations Servicerovider etc)

Operations Hub or Security Control Room Operator contacts RPH switchboard on "55" and requests a pager message be sent out to:

- Helicopter Landing Notification Pager Group (2100)
- Helipad Shutdown Notification Pager Group (297)

Ops Hub Coordinator/ Security Control Room Operator Notifies:

- St John Ambulance Operations Centre
  Ph: 9414 8377
- CHC Helicopters (Jandakot)
  Ph: 9414 8377 or 0428 400 410
- CHC Helicopters (Bunbury)
  Ph: 9241 7252 or 0428 400 422
- Royal Flying Doctor Service
  Ph: 9417 6364 or
  RFDS Coordination Centre
  Ph: 08 9417 6388
- Police Air Wing
  Ph: 6595 9777
- CHC Helicopter (Pearce)
  Ph: 9571 2100
- RAAF Pearce
  Ph: 9571 7120

ED Duty Officer Notifies:

- Medical Administrator On Call
- Duty Consultant SCGH Emergency Department (Ph: 9346 4266)
- ED Duty Officer FSH (Ph: 6512 7634)
- City Watch team on 08 9461 6611 to confirm Langley Park is available for a landing.

Helipad/Heliport Shut Down Notification Pager Group (297):

- State Trauma Director (Pager 2033)
- Trauma Fellow/ Registrar (Pager 1055)
- Trauma Program Manager (Pager 6005)
- Nursing Director- Patient Flow (Pager 4001)
- Nursing Director Corporate Nursing (Pager 2287)
- Direct of Nursing (Pager 2285)
- Director of Clinical Services (Pager 1500)
- Executive Director (Pager 2240)
- Manager Emergency management Unit (Pager 2235)
- Public Relations Manager (Pager 6670)
- Deputy Executive Director (Pager 325)
- Emergency Management Officer (Pager 1167)

Appendix G – Training prior to accessing the heliport

Staff accessing the heliport

All staff accessing the heliport must undergo appropriate training in safe heliport usage during helicopter operations. They will need to be familiar with equipment, procedures and responsibility in relation to their roles. They will require regular refresher training.

During helicopter operations

It may be necessary for untrained staff to have access to the heliport during helicopter operations. All untrained staff must be under the direct supervision of a staff member who has completed training in safe heliport processes during helicopter operations (as outlined below). Untrained staff must not access the heliport during Hot Landings of a helicopter unless also under the supervision of an helicopter crew and approved by the pilot in command.

Training guidelines

As a guide, the Heliport Training Matrix should be used in training for staff in safe heliport usage during helicopter operations.

Practice Landings

For training landings, helicopter operators will contact the Management Emergency and Disaster Planning on 0404 894 000 (during normal business hours) or via email at RPBG.EmergencyMgtUnit@health.wa.gov.au and arrange a suitable time for the practice landing.

The EMU will advise EMHS Security of the landing. Practice landings will be restricted to between the times of 0700hrs and 2100hrs.

Helicopter operators must be aware that the negotiated landing time will need to be flexible due to the nature of the Security Officers' work and their availability as the HLO.

Pilots are requested to call the RPH Security Control Room / HLO on 9224 2811 or 0404 894 066 at least five minutes before landing to confirm the practice landing is still available and to request a green deck. Failure of the HLO to answer their phone would indicate their inability to open the heliport.

The Security Control Room / HLO must inform RPH Switchboard of all practice landings and ETA. Switchboard will page the Helicopter Landing Paging Group (2100).

The practice landing will be conducted between the HLO and the helicopter crew. Once the HLO has an ETA they will contact the ED Duty Officer on Ext. 41674 to inform them of the practice landing time.

If opportunity allows and the pilot agrees, ED Nursing and Medical staff may view or interact with the landing. Security will contact the pilot requesting staff interaction.

Aircraft mobile phone numbers

- CHC Rescue 651 (Jandakot) - 0428 400 410
- CHC Rescue 652 (Bunbury) - 0428 400 422
- RAAF Pearce CHOPPA61 - 0447 447 165
- RAAF Pearce CHOPPA66 - 0447 722 834
- RFDS FlyDoc 645 - 0498 849 046
- RFDS FlyDoc 646 - 0498 957 146
- Pol Air 61 - 0428 324 370
- Pol Air 62 - 0419 462 173

RPH Heliport Training Matrix	HLO	Retrieval Team	Observers	Specialist Support
Physical Details				
Security and access	✔	✔		
Lighting	✔	✔		
Fire equipment	✔	✔		
Communications				
General communications	✔	✔		
Initial contact				
Notification	✔	✔		
Attendance	✔	✔		
FOD check	✔	✔		
Lighting	✔	✔		
Green deck	✔	✔		
Airborne and transit				
Updated ETA	✔	✔		
Issues arising	✔	✔		
Approach and landing				
Briefing	✔	✔	✔	✔
Clothing / footwear - acceptable and non-acceptable	✔	✔	✔	✔
Eye and ear protection	✔	✔	✔	✔
Heliport access limitations / 'no go' zones	✔	✔	✔	✔
Aircraft types and safety issues	✔	✔		
Hand signals	✔	✔		
Hot and cold landings	✔	✔	✔	✔
Patient transfer				
Access	✔	✔		
Approaching the helicopter	✔	✔	✔	✔
Manual tasks	✔	✔		
Lift usage	✔	✔		

RPH Heliport Training Matrix	HLO	Retrieval Team	Observers	Specialist Support
Departure				
Securing the heliport	✔	✔		
Visual checks	✔	✔		
Log requirements	✔	✔		
Notifying switchboard	✔	✔		
Equipment/PPE storage	✔	✔		
Reporting issues	✔	✔		
Emergency procedures				
Fuel spills	✔	✔		
Emergency evacuation	✔	✔		
Abnormal landing	✔	✔		
Fire	✔	✔		
Loss of equipment over the edge of the deck	✔	✔		

Appendix H – Routine heliport inspections and checks

Daily Checks

A daily check of Lift 32 to the heliport In Patient Reception Area (IPRA) on level 8 will be conducted by RPH Shift Engineer in the morning to cover the following items:

Lift 32 operation

- Is the lift in working order?
- Does the proximity card work to priority-call the lift?

If the lift is not in working order, immediately advise the lift contractor and the Manager Emergency and Disaster Planning on 0404 894 000.

Weekly Checks

Weekly checks of the heliport and surrounding area will be conducted by RPH Security (with the exception that medical equipment will be checked by the Emergency Department staff). These will cover the following items:

Emergency Lighting

- Are all emergency lights working in the IPRA?
- Are all the deck lights working including obstacle lighting?
- Is the windsock lighting working?

Windsock

- Is the windsock in satisfactory condition?

Foreign Object debris (FOD)

- Is the heliport free from foreign objects/debris?

Safety Equipment

- Is external equipment free from spiders/pests?
- Is there clear access to emergency equipment?
- Are the portable fire extinguishers accessible and serviceable?
- Are torches and other equipment present and working?

Clothing

- Are the hi-vis vests and wet weather gear accounted for, hung and stowed correctly?

Any damage, missing equipment, faults or other problems should be immediately reported to the Area Security Manager, Facilities Management (EMPAC Requisition), Shift Engineer, and/or the Emergency Department Duty Officer, as appropriate.

Monthly Checks
For the monthly checklist see Facility Management.

The below monthly checks of the heliport and surrounding area will be conducted by Facilities Management. These will cover the following items:

Electricians

- Check the lights on the heliport
- Check the lights in the surrounding area
- Check the lights at the windsock

Fitters

- Check for structural rust

Six-monthly Checks
For the six-monthly checklist see Facility Management.

Six monthly checks of the heliport and surrounding area will be conducted by Facilities Management.

Appendix I – RPH Heliport Safety Checklist

Date	DD/MM/YY	**Started Heliport Opening Process**	TIME hh:mm		**Heliport Closed**	TIME hh:mm			
HLO / Security Officer Name									
Aircraft call sign	Rescue 651		Rescue 652		FlyDoc 645		FlyDoc 646		WAPOL	
	Chopper 63		Chopper 64		Other aircraft. Call sign:		Company / Organisation:			
Pilot's Surname					**No. of Patients**					
Landing Type	Normal landing		**Response type**		Patient Transfer		Exercise		Practice / Training	
	Hot landing				HRT Pick-up		HRT Drop-off		Equipment Pick-up	
	Aborted				Equipment Drop-off		Personnel Pick-up		Personnel Drop-off	

Patient Destination Please Circle: ED Theatres ICU Ward Other:

Upon notification of landing	✓	✘	N/A
Proceed to heliport In Patient Reception Area (IPRA)			
Open all locked equipment storage areas			
Don HLO hi-vis vest			
Ensure door to link bridge remains closed until Pre-landing checks are complete			

Pre landing checks			✓	✘	N/A
Check wind speed on weather station	Wind Speed: **(knots)**	Wind direction:			
Check individual light switches for default position. Turn lighting controls ON					
RADIO SECURITY CONTROL PRIOR TO COMMENCING AND ON COMPLETING EXTERNAL CHECKS Enter external heliport area and conduct the following checks:					
• FOD					
• Damage					
• Safety netting integrity					
• Ensure the following lights are illuminated:					
○ Windsock and Obstructions Lights (night-time operations only)					
○ Low angle flood lights (night-time operations only)					
○ Perimeter lights (green LEDs))					
○ Touchdown Zone lights (orange LEDs)					

○ Link bridge lights			
Ensure secondary evacuation route is clear all the way to level 6 Fire Isolated Stairs (east and west) and that all lights are working.			
At night. If requested by pilot turn flood lighting lights OFF (if pilot is using Night Vision Imaging Systems)			
If necessary. Call Facilities via the Shift Engineer to ensure all persons have been removed from the level 5 and level 6 roof areas: • Shift Engineer – 0404 894 003			

Briefing	✓	✗	N/A
Note relevant information on white board (WB) including roll call			
Show helicopter safety video for ERHS or RFDS (If video is not available, use verbal safety brief located in **Appendix J** of the Heliport Procedures)			
Activate Sentry on IPRA iPad			
For Normal landings ensure: • PPE is issued ○ Hi-vis vests ○ Wet weather PPE if required • All personnel are wearing enclosed footwear with non-slip soles • All dangerous goods have been removed • All bags are sealed • Any small equipment and containers secured (stethoscopes etc.)			
For Hot landings ensure: • Additional PPE is issued ○ Safety googles ○ Hearing protection • No protruding equipment (IV poles collapsed) • No lose items of clothing (lanyards, hats, safety vest closed etc.)			

Communication	✓	✗	N/A
Upon the pilot establishing communications confirm: • Number of crew and patients on board (update white board) • Type of landing – normal or hot (update white board) • ETA. If required dial '55' and advise Helipad Landing Group of updated time • Green deck • If requested by pilot advise weather information i.e. wind / gust speed and direction			

Landing	✓	✖	N/A
Observe landing through glass door leading to the link bridge and CCTV on wall screen			
Activate relevant emergency procedures if required			
Wait for radio or hand signal from helicopter pilot/crew to proceed with retrieval			
Give go ahead to PCA's to enter the deck area, turn on flood lights (if required) and open door to link bridge			
If an RFDS Inter Hospital Patient Transfer (IHPT); advise receiving ward or department by phone that RFDS helicopter has landed			

Departure	✓	✖	N/A
Ensure all persons (except helicopter crew) have left the deck and link bridge			
Turn off flood lights			

Post departure checks	✓	✖	N/A
Return all PPE			
RADIO SECURITY CONTROL PRIOR TO COMMENCING AND ON COMPLETING EXTERNAL CHECKS Enter external heliport area and conduct the following checks:			
• Damage			
• Safety netting integrity			
• Hydrocarbon leaks			
• Ensure the following lights are still operational:			
○ Windsock and Obstructions Lights (night-time operations only)			
○ Low angle flood lights (night-time operations only)			
○ Perimeter lights (green LEDs))			
○ Touchdown Zone lights (orange LEDs)			
○ Link bridge lights			
Call Facilities via the Shift Engineer to advise of All Clear: • Shift Engineer – 0404 894 003			
Select individual light switches to default position			
Conduct full check of safety equipment:			
• HLO safety vests			
• HLO goggles, earmuffs (clean and sanitise after every use)			
• Retrieval team safety vests			
• Retrieval team goggles, earmuffs			
• Wet weather jackets			

• ResQpod (2)			

Closing the heliport	✓	✘	N/A
Secure all locked equipment storage areas			
Ensure that stairwell door is secure			
Close door to link bridge and ensure it is secure			
Ensure that lift 32 is released from priority recall			
Record details into Sentry (use template entry log)			
Record any issues reported (i.e. hydrocarbon leaks) or general comments in comments box below			
Comments:			
HLO Signature			
Return completed checklist to the HLO Completed Checklist tray in the IPRA overhead cabinet.			

Appendix J – Helicopter verbal safety briefing

For use by the HLO in the event of the appropriate safety briefing video being unavailable.

- For staff and patient safety, always remember to look to the flight crew and follow their instructions.
    - Rescue helicopters are normally crewed by a Pilot, a crewmember and a Critical Care Paramedic.
    - The Royal Flying Doctor Service helicopters are normally crewed by a Pilot and one or two on board clinicians.
- Failing to follow instructions from the crew could result not only in injury but could also damage the aircraft. There are many fragile components that can be easily damaged.
- Normally, the helicopter will shut down after landing and the flight crew will give a 'thumbs up' signal when clear for the Patient Care Assistants (PCA) to enter the deck area.
    - The HLO will advise when it is safe to proceed.
    - PCAs are to approach the helicopter together as a group.
- When approaching the helicopter, don't step under the rotor disk until a crewmember has exited the aircraft and is ready to escort you in.
- Never, under any circumstances approach the helicopter from the rear. If you need to move to the other side of the helicopter, do so around the front while outside of the rotor disk.

- When you are operating around the helicopter, there are many parts that are fragile. It’s important not to touch anything, particularly the pitot tubes on the front which can burn if touched.
- Don't touch any of the doors, the crew will manage these.
- The stretcher trolley poses a big risk to the aircraft if not controlled.
- Any trolleys that are brought onto the deck must always be controlled and either held or have brakes. Trolleys can easily blow into the aircraft.
- The helicopter crew will coordinate the patient unload so pay attention and follow their instructions.
- When moving the Rescue Stretcher Trolley, do not bring the trolley toward the aircraft until asked by the crew. Once it is positioned to receive the aircraft stretcher, apply the brakes.
    - As the helicopter stretcher moves onto the hospital trolley care needs to be taken to ensure any IV lines, monitoring equipment or oxygen lines are not snagged or removed.
    - Assist the crew by pulling the aircraft stretcher, there is no need to lift. Always follow the directions of the helicopter crew.
    - Once the stretcher is locked onto the trolley it is important not to lower the trolley until it has been moved at least 30cm clear of the aircraft to prevent damage to the aircraft.
    - Wait until the helicopter paramedic has checked monitors and access lines for security before wheeling the trolley to the IPRA.
    - Give the aircraft a wide berth moving out beyond the rotor disc area and around the front of the aircraft as required.
- When assisting with the Royal Flying Doctor Service their onboard Stretcher Trolley will be unloaded from the rear of the helicopter by the onboard clinicians and flight crew.
- Should there be a need to carry out a patient unload with the helicopter rotors still running, hospital staff will be held in the IPRA.
    - Upon landing a helicopter crew member will retrieve the Rescue Stretcher Trolley and return to the aircraft to conduct the patient unload.
    - At discretion of the flight crew a PCA or other staff member may be requested to accompany them.
- Injuries and damage around the helicopter typically occur when people start rushing unnecessarily. It may help to remember that this is just an air ambulance, and no more urgency is typically required than unloading a road ambulance. Take it slow, follow the crews lead, and help to make the patient transfer as safe and smooth as possible.

Appendix K – IPRA Workstation User Guide

General System Operation

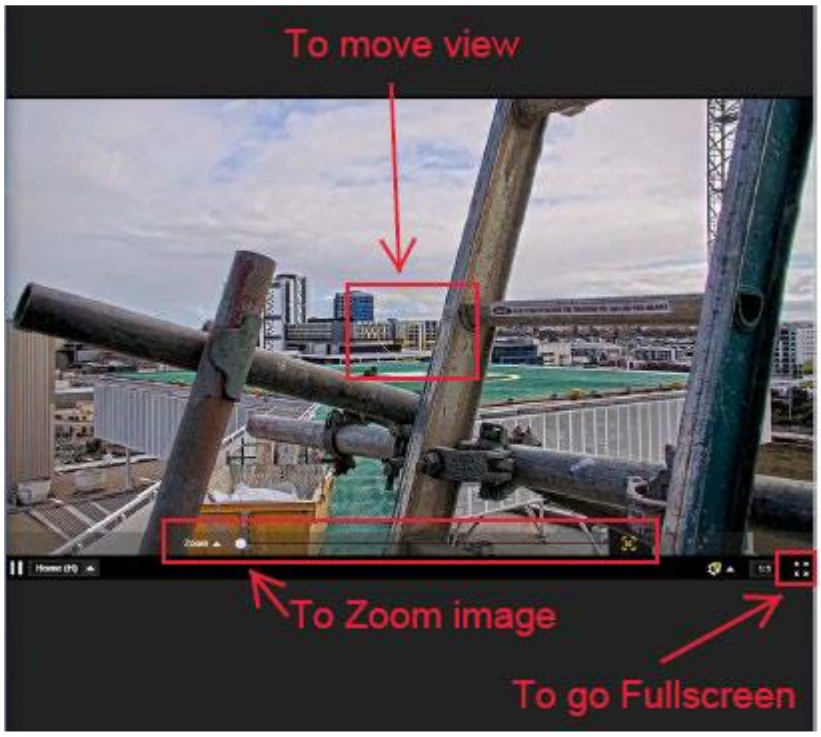
- Workstation will log into operator level user when powered automatically.
- Weather station and CCTV camera Microsoft Edge apps will load when workstation powers on.

Weather station Operation

- Use touch screen to scroll up and down screen to view all data.
- Weather station display will be displayed as soon as workstation logs in.
- Weather station runs on a Microsoft Edge App.

CCTV-PTZ Operation

- Use finger to control the CCTV camera outside the door leading to the link bridge. The camera has a pan-tilt-zoom (PTZ) movement
- To pan image - slide finger to the left on the PTZ view and camera will go left use the yellow circle on the centre of the screen as centre point
- To zoom on image – use finger to control zoom slide bar in the middle of the screen.
- To enlarge picture to full screen, click on the box on the bottom right of the Camera View.
- To return to normal size double click with finger on the yellow circle and a X box will appear in the middle of the screen click this and it will return to normal.



Appendix L – Heliport Lighting Control Panel Operation

Deck lights operation

- To turn on Helicopter landing site lighting push the green ‘ON’ button, Helicopter landing sites Lights will turn on along with the green indicator light.
- To Turn off, push red ‘OFF’ button, Helicopter landing sites Lights and green indicator light will turn off.
- When switched ‘ON’ the Helicopter landing site Control Panel will override Glow Box lights and Royal Perth Hospital Signage. This allows for only the Helicopter landing site lights to be operational during this time.
- Helicopter landing site landing lights are 240v

Deck lights intensity

- The Helicopter landing site Lighting intensity switch has 3 settings:
- Low
- Medium
- High
- These can be changed at any time.

Low angle flood lights operation

- To turn on Helicopter landing site Flood Lights, push black button, Helicopter landing site Flood Lights will turn on along with orange indicator light.
- To turn off Helicopter landing site Flood Lights, Push black button again Helicopter landing site Flood Lights will turn off along with orange indicator light.
- Helicopter landing site Floods Lights can only be turned on once Helicopter landing site Lighting is in operation.
- Helicopter landing site floodlights are 240v.

Windsock lighting

- Helicopter landing site Windsock only comes on while the Helicopter landing site lighting is in operation and is mounted on top of the IPRA roof.

Glow box lighting operation

- The Glow Box lighting around the Helicopter landing site tower is controlled by an LED Pharos Touch Screen in the level 6 East comms room and at the IPRA computer.
- The Level 6 East comms room workstation will log into operator level user when powered automatically.
- Weather station and CCTV camera Microsoft Edge apps will load when workstation powers on.
- To select a colour there are several options.
- Selecting from a pre-set selection e.g. Red, Green, Blue and White.
- Selecting from a list of programmed colours.
- Selecting from the colour wheel.
- Intensity can also be changed from here.
- The colour you select will remain constant until another colour has been chosen.
- When the Helicopter landing site is in operation it will turn off Glow Box lighting. Once the Helicopter landing site is turned off the Glow Box will resume.

Heliport Lighting Control Instructions for HLO

Preparation for helicopter landing

1- Turn on deck lighting, push the **green 'ON' button**.

The green deck perimeter lights and orange landing zone lights will turn on, as will the green indicator light on the panel.

At night the heliport glow box will automatically switch-off.

2- Once the helicopter has landed and the pilot has indicated it is safe to approach the aircraft:

Turn on deck low angle flood lights, push the **black button**.

The low angle flood lights on the deck perimeter will turn on, as will the orange indicator light on the panel.

Deck perimeter lights and orange landing zone lights must be on to activate the flood lights.

Preparation for helicopter take-off

3- Once the pilot has indicated they are ready for take-off:

Push the **black button** to turn off the low angle flood lights, the orange indicator light on the panel will also turn off.

4- After the helicopter has taken-off and cleared the HLS.

Return the system back to normal, push **red 'OFF' button.**

The green deck perimeter lights and orange landing zone lights will turn off, as will the green indicator light on the panel.

NOTE: The link bridge low angle lighting is controlled automatically by a day/night sensor and timer, and will remain on during heliport night operations.