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**LAUNCESTON GENERAL  
HOSPITAL**

**ELEVATED HELICOPTER LANDING  
SITE**

**SUBMISSION TO THE  
PARLIAMENTARY STANDING  
COMMITTEE ON PUBLIC WORKS**

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VOLUME ONE OF TWO

*June 2023*

## Table of Contents

|                                                    |           |
|----------------------------------------------------|-----------|
| <b>1. EXECUTIVE SUMMARY .....</b>                  | <b>1</b>  |
| 1.1 DOCUMENT PURPOSE.....                          | 1         |
| 1.2 OBJECTIVES .....                               | 1         |
| 1.3 PROJECT BUDGET .....                           | 1         |
| 1.4 PROJECT PROGRAM .....                          | 1         |
| 1.5 GENERAL PROJECT SCOPE.....                     | 2         |
| 1.6 DESIGN APPROACH .....                          | 2         |
| <b>2. PROJECT DEFINITION.....</b>                  | <b>3</b>  |
| 2.1 PRIMARY OBJECTIVES .....                       | 3         |
| <b>3. NEED FOR THE PROJECT .....</b>               | <b>4</b>  |
| 3.1 ORIGINAL LGH HELIPAD & INTERIM PROVISIONS..... | 4         |
| 3.2 THE SOLUTION.....                              | 5         |
| <b>4. CONSULTATION AND GOVERNANCE .....</b>        | <b>10</b> |
| 4.1 CONSULTATION.....                              | 10        |
| 4.2 GOVERNANCE.....                                | 11        |
| 4.3 PROJECT WORKING GROUP .....                    | 11        |
| 4.4 DESIGN APPROVAL .....                          | 12        |
| <b>5. ADDRESSING THE NEED .....</b>                | <b>13</b> |
| 5.1 DESIGN PHILOSOPHY .....                        | 13        |
| 5.2 ARCHITECTURE AND INTERIORS .....               | 14        |
| 5.3 ENVIRONMENTALLY SUSTAINABLE DESIGN .....       | 15        |
| 5.4 BUILDING SERVICES DESIGN .....                 | 15        |
| <i>Mechanical Services</i> .....                   | 15        |
| <i>Medical Gases</i> .....                         | 15        |
| <i>Electrical</i> .....                            | 16        |
| <i>Lighting</i> .....                              | 16        |
| <i>Power</i> .....                                 | 16        |
| <i>Data and Communication</i> .....                | 16        |
| <i>Security</i> .....                              | 16        |
| <i>Fire/Smoke Detection Systems</i> .....          | 16        |
| <i>Fire Sprinklers and Drenchers</i> .....         | 17        |
| <i>Fire Hydrants</i> .....                         | 17        |
| <i>Hydraulics</i> .....                            | 17        |
| 5.5 IMPACT ON EXISTING SERVICES .....              | 18        |
| <b>6. PROJECT SCHEDULE AND BUDGET .....</b>        | <b>19</b> |
| 6.1 PROJECT SCHEDULE .....                         | 19        |
| 6.2 PROJECT COST .....                             | 19        |
| <b>7. RECOMMENDATION .....</b>                     | <b>20</b> |
| <b>8. APPENDIX A – PROPOSED DESIGN .....</b>       | <b>21</b> |

## **I. Executive Summary**

### **I.1 Document Purpose**

The purpose of this document is to inform the Parliamentary Standing Committee on Public Works (PSCPW) of the need for the proposed Elevated Helicopter Landing Site (HLS) project [the Project] at Launceston General Hospital (LGH) and how the design of the works will address this need.

The document includes the following:

- confirmation that the proposed investment in infrastructure is the most appropriate means to support improved aeromedical services delivery;
- confirmation that the Project is consistent with the Department of Health (DoH) Strategic Plan;
- confirmation that the Project is consistent with the DoH Launceston General Hospital (LGH) Masterplan;
- evaluation of the suitability of the proposed design of the Project; and
- discussion of 'value for money issues' relating to the design and construction of the Project.

### **I.2 Objectives**

The proposal for the Project at the LGH will result in increased capability for the safe delivery of aeromedical health services available to greater Launceston and the North-East, along with any referrals from North-West and West Coast regions. The facility will provide more immediate and better coordinated access to services. It will ensure the highest standard of treatment during access transition. This will support the LGH in meeting ever-increasing and changing demands into the future.

In summary, the proposed work for the Project involves:

- Delivery of a fully compliant, safe and efficient elevated helicopter landing site.
- Direct access from the Helideck to an Operations Room that is equipped for patient care.
- Modern bariatric lift access to Level 2 of LGH.
- Direct access via semi-enclosed walkway to all areas avoiding public areas.
- Minimal interruption to future building projects as identified by the LGH Precinct Masterplan – October 2021.

### **I.3 Project Budget**

Funding of \$15 million has been provided to develop the Launceston General Hospital Elevated Helicopter Landing Site and associated works. Current cost planning confirms the Project can be delivered within this budget.

### **I.4 Project Program**

Design and tender documents are scheduled for completion in mid-July 2023. Subject to the required approval processes, construction would commence in late August 2023. The construction

program is scheduled to take approximately 9 months, with Practical Completion estimated by May 2024. The defects liability period will run to 12 months after Practical Completion when final completion is expected.

## **1.5 General Project Scope**

Scope of the Project includes provision of the following:

- a lightweight aluminium helicopter landing deck (helideck) with a patented Deck Integrated Fire Fighting System (DIFF), located an average of 10m above the existing Cleveland St multi-storey carpark at the South-Western corner of the site;
- aero bridge for safe transfer of patients to and from the elevated helideck;
- safety stair alternative path of egress from the new helideck;
- elevated HLS Operations Room, incorporating provision of emergency patient care, at a height equivalent to the nominal LGH Level 7;
- provision of a new lift supporting bariatric use;
- new precast concrete lift tower to support the Operations Room and new lift;
- new foyer at the base of the lift tower at LGH level 2;
- connection from the new foyer to the LGH main access spine via a semi-enclosed walkway into an existing Level 2 entrance into the LGH;
- substantial helideck supporting equipment and services are provided on the existing carpark top open air level;
- upgrades to existing building structure and services will be completed in addition to the installation of new building services required to facilitate the proposed works.

## **1.6 Design Approach**

All work at Launceston General Hospital must comply with the requirements of Statutory Authorities, standards and regulations having jurisdiction over the work as well as any impending statutory changes that are known to each Statutory Authority at that time.

The location and height of the HLS formed by the lightweight aluminium helideck has been informed by the LGH Heliport (Helicopter Landing Site) Design Report from AviPro, Aviation Safety Consultants, based upon the current CASA Advisory Circular AC 139.R-01 v1.0 – Guidelines for Heliports, with additional reference to International Civil Aviation Organisation (ICAO) documents.

The Operations Room will be based on the guidelines contained in the Australasian Health Facility Guidelines, unless otherwise agreed by the Project Working Group and endorsed by the Infrastructure Oversight Committee. These requirements have formed part of the Architect's design brief in conjunction with substantial consultation with the Project Working Group.

All design and construction work must conform to the current National Code of Practice for the Construction Industry including the Tasmanian State Annexure. The Department of Health considers the Launceston General Hospital site including this proposed Helicopter Landing Site to fit into Importance Level 4 classification, referring to NCC Table B1.2a Importance Levels of buildings and structures. The lift tower and helideck design must comply with requirements of this classification.

All design and construction works must be inspected by the relevant statutory authority or relevant private practitioner and a certificate of approval that permits occupancy shall be obtained.

## **2. PROJECT DEFINITION**

### **2.1 Primary Objectives**

The Launceston General Hospital (LGH) commenced on its current site from 1863. It received a major upgrade in the early 1980's and is currently completing the first stage of a three-stage upgrade and redevelopment plan which will extend into the early 2040's. The LGH is the major hospital in Northern Tasmania and is also a teaching hospital associated with the University of Tasmania. It is set on a large site (3.87 Ha) and encompasses 6 levels. It provides acute and general hospital services to Northern Tasmania and the Bass Strait Islands and is the principal referral hospital for the North-West and West Coast Regions. LGH is fully accredited by the Australian Council on Healthcare Standards.

In late 2022 the Tasmanian Government released the final version of Advancing Tasmania's Health as part of its Our Healthcare Future Stage Two reforms; and with the LGH remaining a key component of service provision, particularly in the North. A strategic ambition of these reforms is "Delivering the Health Infrastructure of the Future".

The Project ensures the LGH can be accessed directly by aeromedical services, maximising the opportunity for medical professionals to deliver lifesaving treatment.

The proposed works anticipate achieving the following outcomes:

- Comply with CASA regulations so that risk assessments conducted by current and future aeromedical operators will enable continued service provision to the LGH Elevated HLS.
- Increase the immediacy of emergency treatment available and extend this support to broader areas.
- Create an environment that exceeds quality and safety requirements for patients and staff.
- Provide more appropriate and additional health services to the local community.
- Meet evolving health needs and service demand.

### **3. NEED FOR THE PROJECT**

#### **3.1 Original LGH Helipad & Interim Provisions**

The original LGH helipad was the first helipad at a Tasmanian hospital, opening in 2002 within the grounds of the neighbouring Ockerby Gardens. This helipad was built to a lesser standard than the contemporary Helicopter Landing Sites at the other major hospitals Royal Hobart, Mersey Community and North-West Regional. These HLS's are used to transport patients from remote areas and rural Tasmanian communities and transport critically ill or injured patients as efficiently as possible. They also enable transport of patients to and from Victoria, if required.

The Civil Aviation Safety Authority (CASA) is the Australian government body responsible for regulating aviation safety in Australia. On 2nd December 2021, new Australian Regulations governing helicopter emergency medical services in line with international best practice came into effect. Some elements of the Regulations can be deferred up to 2 December 2023. CASA does not directly regulate HLS outside of a certified aerodrome (airport) site, however CASA provide guidance, though Advisory Circulars for the planning, design, and operation of HLS.

Air Operators are required under the Regulations to undertake risk management to determine the suitability of HLS outside of airports, in line with the CASA guidance. It was understood that the LGH original helipad could continue to operate until 2 December 2023. In May 2022, the Department of Health's Aeromedical operator, Rotor-Lift Aviation, provided advice reinforcing the view that the critical date for decommissioning the LGH helipad was 2 December 2023. On 2 September 2022, following a site inspection by Ambulance Tasmania's (AT) aviation consultant, advice was provided to AT that the LGH helipad was not suitable for continued operation. In the period September – November 2022, Ambulance Tasmania and Rotor-Lift Aviation discussed the issues associated with operation of the helipad and sought an alternative nearby location for temporary operations. Rotor-Lift Aviation provided formal advice on 13 December 2022 that it could no longer operate the LGH HLS due to safety concerns after 31 December 2022.

Aeromedical services for the LGH are currently being carried out from the Launceston Airport with an ambulance transfer, an approximate 10-minute drive (12.6km) from the LGH. DoH has identified that a facility located on the roof of the Cleveland Street multi-storey car park will meet or exceed all the necessary requirements for an elevated HLS. The Department continued working closely with AT, LGH clinical staff and Rotorlift on the design and delivery of the upgraded HLS, with an aim to commence operations by the end of 2023, the original target date. The provision of a new HLS forms part of Stage 2 of the LGH Masterplan. In the interim, Ambulance Tasmania will continue to use Launceston Airport as the helicopter landing site for aeromedical transport until the new helipad is delivered.

The design and investigation process undertaken in early 2023 has identified the originally intended delivery date of December 2023 is not achievable. Factors contributing to the original timeline extension include:

- Time required to complete consultant investigations, in particular complications of heritage oak trees, complex fire engineering solutions and acoustic testing;

- Complexities associated with the international procurement of the lightweight aluminium helideck and subsequent long lead time;
- Requirements to advance design development to solve building code requirements including fire engineering and complex dimensional placement issues, prior to the lightweight aluminium helideck being able to be ordered.

The Project will reduce time and risk associated with the current alternate use of Launceston Airport. It will also remove the need of ambulance transfer of helicopter patients from Launceston Airport.

Ambulance Tasmania is currently working several initiatives that will provide enhanced prehospital care to the population of both the North and Northwest regions of Tasmania.

The DoH is in the early stages of formalising a tender process for the provision of new Rotary Wing aircraft to service the growing needs for the state.

It is envisaged that the increased capability and range of a modern fleet of rescue helicopters will see a higher utilisation of the new HLS to either bring suitable patients to LGH for further care or to facilitate the timely transfer of critically unwell patients requiring ongoing care to the RHH. The HLS will allow direct access to all parts of the LGH and facilitate pad to pad transfers which are the preferred operational method for moving a critically unwell patient.

It is also notable that the new HLS will also be able to accommodate contemporary interstate rescue and policing helicopters.

### **3.2 The Solution**

The Project will deliver a fully compliant HLS enabling 24/7 delivery of aeromedical services to the LGH. The size of the HLS will be 27m x 27m to enable the operation of a design helicopter larger than that currently in use in Tasmania providing future-proofing and ability for Victorian based and other larger helicopters to use the HLS.

Scope of the Project includes provision of the following:

- A modular lightweight aluminium helicopter landing deck (helideck) with a patented Deck Integrated Fire Fighting System (DIFF), located an average of 10m above the existing Cleveland St multi-storey carpark at the South-Western corner of the LGH site. The Helideck is sourced from Singapore company Aluminium Offshore who provided the helideck for the Royal Hobart Hospital and 20 other locations around Australia and New Zealand such as at Royal Adelaide Hospital. This specific helideck was strongly recommended by the aviation safety consultant. The modular nature of the helideck provides for safe construction methods and the ability, if desired, to cost effectively relocate the helideck in the future. The Helideck has been ordered and is scheduled to arrive in Tasmania on 27 December 2023 in time for the forecast construction time frame for

assembly. It will be built in nine modules at ground level and lifted into place by a tower crane.

- Safety net around the perimeter of the helideck will be provided because no element of the helideck can be higher than 250mm above the landing surface. Hence the safety net provides the equivalent of a safety balustrade for anyone transiting or working on the helideck.
- Steel substructure to support and elevated the helideck above the carpark. Including maintenance walkways for safe access in the future.
- Aluminium aerobridge for safe transfer of patients to and from the elevated helideck. The aerobridge will also provide a support for building services to be supplied to the helideck and supporting equipment for the DIFF system. The aerobridge will be over a live internal roadway and will have a fixed balustrade for the majority of its length and then safety net and retractable balustrade for the length that impacts the approach and departure obstacle limitation surface to ensure helicopter safety.
- Aluminium safety stair alternative path of egress from the new helideck to the top level of the multi-storey carpark to easily access the existing fire safety stairs.
- Elevated HLS Operations Room, incorporating provision of emergency patient care, at a height equivalent to LGH Level 7. The top of the Operations Room will be used to locate the required windsock and navigation beacon. It will also provide a flood light to illuminate the helideck for safety at night or in low light conditions. Fully compliant working at height safety systems will be provided to allow safe maintenance of this critical equipment. The Operations Room holds all the required HLS safety systems to manually activate anything that is required for safe operation. Most of these systems are remotely controlled by the helicopter pilot but have the manual back up in the unlikely event of failure of the remote control.
- Provision of a new lift supporting bariatric use. This carefully selected lift will be ordered before appointment of the Head Contractor to address the long lead time of this item.
- New precast concrete lift tower to support the Operations Room and new lift, including provisioning of the lift to stop at LGH Levels 3-6 to allow integration of the lift tower into future Masterplan projects.
- New foyer at the base of the lift tower at LGH level 2, including an additional storeroom to provide a cost-effective cleaners store and bulky items storage required for HLS operations.
- Connection from the new foyer to the LGH main access spine via a semi-enclosed walkway into an existing Level 2 entrance into the LGH. This creates easy access to the Emergency Department (Level 3), Intensive Care Unit (ICU) (Level 4) and Operating Theatres (Level 5) and to all other areas of the hospital.
- Substantial helideck supporting equipment and services are provided on the existing carpark top open-air level. This includes all water supply tank, pumps and back-up generator to provide the required water pressure and flow rate to service the DIFF system. Provision of an oil/water separator by installation of a “pureceptor” to capture the runoff of any firefighting required. Careful planning has been undertaken to ensure all these systems are able to be safely maintained, replaced, or relocated as future needs require.
- Upgrades to existing building structure and services will be completed in addition to the installation of new building services required to facilitate the proposed works. This is fully explained in Section 5.4.

The proposal is consistent with the State Government's White Paper 'Delivering Safe and Sustainable Clinical Services', that aims to:

- Create efficient assets that support effective services that are responsive to change.
- Develop adaptable buildings in key locations and create a management and service structure which responds to local and regional needs while maximising professional interaction and economies of scale.

The facility will also be fully consistent with all Department of Health (DOH) Strategic Objectives:

- Supporting individuals, families, and communities to have more control over what matters to them.
- Promoting health and wellbeing and intervening early when needed.
- Developing responsive, accessible, and sustainable services; and
- Creating collaborative partnerships to support the development of healthier communities.

The Launceston General Hospital Helicopter Landing Site and associated facility will provide:

- A contemporary building design in line with current Australasian Health Facility Guidelines whilst responding to operational requirements as determined by the Project Working Group.
- Adequate space for provision of interim emergency services.
- Upgrade to existing critical infrastructure and services.

Extensive consultation has been undertaken with relevant experts and future users to ensure the facility delivered by the Project meets current and foreseeable future needs.

PSCPW Submission – LAUNCESTON GENERAL HOSPITAL  
ELEVATED HELICOPTER LANDING SITE

Figure 1 - Location Plan – Hospital Environ





## 4. CONSULTATION AND GOVERNANCE

### 4.1 Consultation

Stakeholder consultation has flowed out of the LGH Master Plan process and commenced formally for the Project in January 2023. The primary means of key stakeholder consultation has been undertaken through the establishment of a Project Working Group (PWG). The PWG has been involved in multiple meetings with the Project Manager and lead design consultants, Artas Architects, spanning a detailed six-month consultation phase have been supportive of the scope of works to be delivered by the project.

Presentation sessions have been hosted by Artas Architects where the PWG has been able to review the overall proposal and provide feedback on the design. Traditional 2D plans and interior concepts were accompanied by a 3D virtual tour of the redevelopment, allowing current staff to provide valuable feedback and seek targeted clarification relating to future facility operation.

Consultation has continued to occur with a dedicated project working group, all key services groups, other internal stakeholders, and associated services.

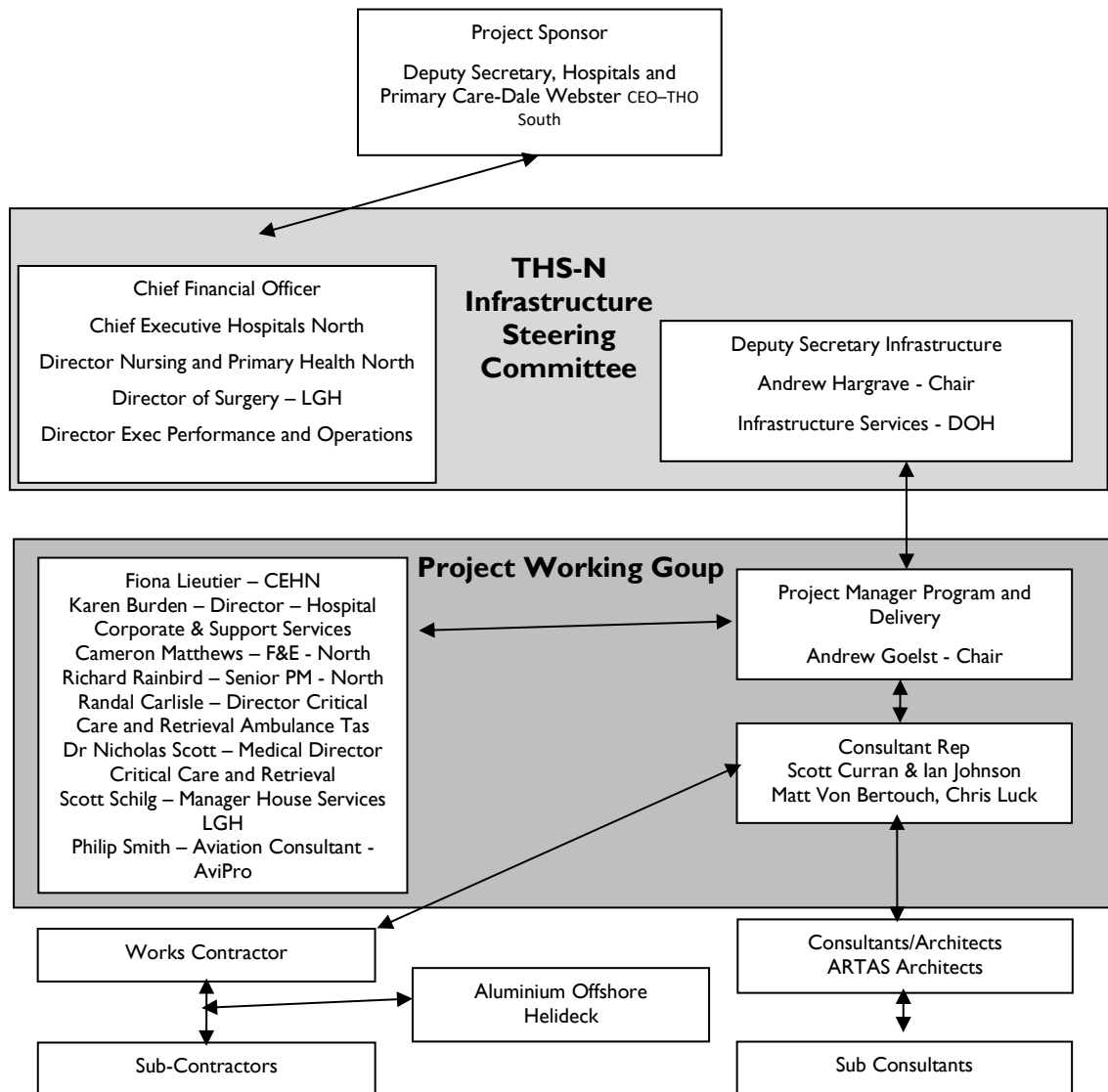
Consultation has occurred with the following key stakeholders:

- LGH Executive Staff, through participation in the PWG and briefings to Performance and Operations Meeting
- Unions – briefing by Chief Executive Hospitals North
- LGH Operational Staff, through participation in the PWG
- LGH Facilities and Engineering, through participation in the PWG and detailed site briefings and regular design review
- LGH Nurse Unit Manager – Northside, for potential impacts on the high dependency unit
- Ambulance Tasmania, through participation in the PWG
- DoH Asset Management Services
- DoH Programming and Delivery, including Project Managers delivering other projects at the LGH and the Master Scheduler for program coordination.
- AviPro, aviation safety consultants, through participation in the PWG and full design process
- Specialist subconsultants for Acoustics, Helicopter Down Draft and Traffic Management input into the Project
- Rotor-Lift Aviation, current contracted provider of Aeromedical Services to the THS
- Construction Industry Specialists for crane operations and assembly of the lightweight helideck at height
- City of Launceston, before and during the Development Application process.
- Heritage Tasmania – for care and management plans to protect heritage listed Ockerby Gardens oak trees
- Nearby businesses, particularly Launceston Health Hub owner's representative and managers, for current and future developments
- Discovery Early Learning Centre, for the impact to their playground from the HLS operation.

A formal Stakeholder and Community Engagement Plan is being finalised to be ready for when the project proceeds to public advertising under the City of Launceston Development Application process and will guide ongoing consultation for the project moving forward.

## 4.2 Governance

The following diagram illustrates the Tasmanian Health Services (THS) Infrastructure Steering Committee, Project Working Group and Consultant Team relationships.



The PWG has been meeting as required to enable the project to evolve in line with the project timeline, providing an adequate consultation phase and sufficient time for Contract Documentation and Project Procurement.

## 4.3 Project Working Group

The PWG was established following the closer of the original Ockerby Gardens Helipad and prior to the announcement of the capital investment project to bring together key stakeholders to provide advice in relation to the design of the Project.

The PWG is coordinated by the Department of Health Project Manager. Membership includes people with knowledge and skills needed to oversee the management and design process of the redevelopment; this included Artas Architects, engineers, Tasmanian Health Service representatives with clinical skills and experience, Ambulance Tasmania aeromedical specialists, LGH Chief Executive, LGH Director Hospital Corporate and Support Services, LGH Manager House Services, Regional Manager Facilities Management and Engineering Services and AviPro aviation safety consultants. The PWG roles and functions have extended into the detailed design phase.

#### **4.4 Design Approval**

The Hospitals North Capital Infrastructure Committee at its April 2023 meeting endorsed the project schematic design and approved detailed design to proceed.

All desired project outcomes and key project risks have been tabled, discussed and then reviewed for compliance with the endorsed project brief have been tabled before this Committee. This consultative approach has resulted in a design that allows all desired outcomes to be resolved.

Final sign-off of the documented plans will be undertaken through the PWG, review by Asset Management Services and endorsement by the Hospitals North Capital Infrastructure Committee.

## 5. ADDRESSING THE NEED

### 5.1 Design Philosophy

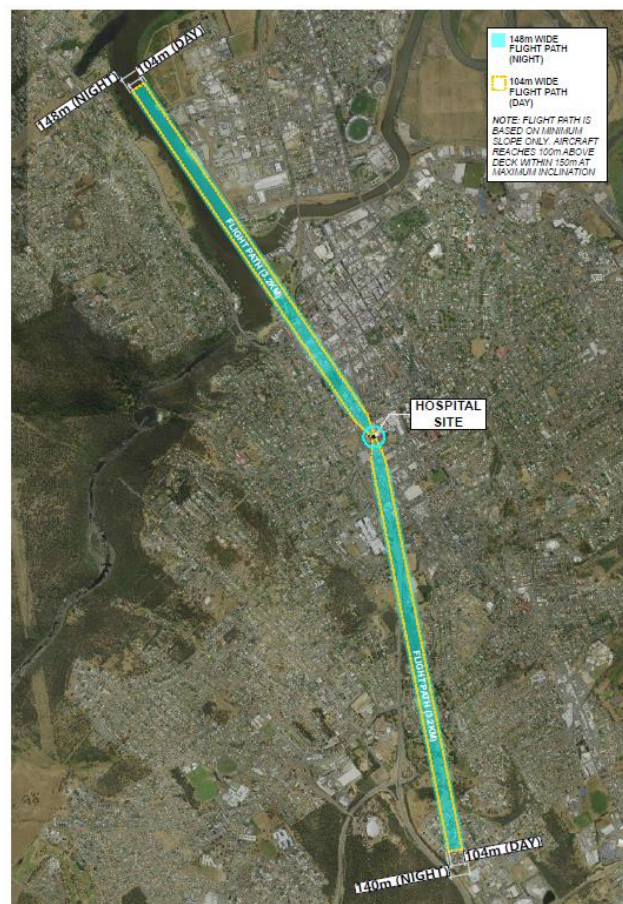
The Project is an opportunity to provide contemporary aeromedical services in line with the Our Healthcare Future Stage Two reform agenda that addresses current functional and deliverable shortfalls as well as compliance issues with the previous Ockerby Gardens Helipad.

Aviation Safety Consultants AviPro has been tasked with a scope of work that includes the provision of aviation specific advice for the design and operation of the LGH Elevated HLS. This includes advice on the landing area dimensions, suitable approach and departure paths and design advice with respect to the landing area and associated infrastructure.

The design of the heliport is based upon the current CASA Advisory Circular AC 139.R-01 v1.0 with additional reference to ICAO documents relating to heliports, US FAA AC 150/5390-2D and UK CAP 1264. The guidelines relate to the structural requirements for the static and dynamic loads to meet the Design Helicopter limitations and the dimensions, marking and lighting for the Touchdown and Lift-off Area (TLOF), Final Approach and Take-off Area (FATO) and the Safety Area for the Design Helicopter, plus the approach and departure and transitional surfaces.

The chosen position for the heliport structure is atop the LGH Cleveland St multistorey carpark with the landing area raised to RL45.000 Australian Height Datum (height above mean sea level) so that obstacle free approach and departure paths can be achieved allowing for operations in Performance Class I (PCI). Approaches and departures to and from the heliport conform to the predominant prevailing wind conditions for Launceston city but also consider limitations with terrain to the south and use of the alignment of the Tamar River to the northwest.

Figure 4 – Helicopter Flight Path



Multiple alternative sites for the Elevated HLS were considered around Launceston and the LGH site. The chosen site an average of 10m above the top level of the multistorey carpark, at RL45.000, was subsequently the only cost-effective solution available to place the Helideck within a suitable time frame. The Helideck has been designed so that it could be relocated in the future to the top of the new Charles and Howick St multistorey carpark (due for delivery in 2026) or the top of the future North Side Tower (due for delivery in 2031).

The design helicopter has been chosen to represent the limiting characteristics of helicopters using the airport at present and into the immediate future. Allowance has been made to accept both the AW139 and H175 helicopters as potential users of the heliport, which are the common helicopters used for Aeromedical transport in other States. These have formed the basis of the design helicopter for the Project. This provides a pathway to future proofing the heliport for reasonably foreseeable use by commonly available helicopters. Rotorlift currently operate a Bell 412EP which is smaller than design helicopters.

The heliport will consist of a load bearing rectangular Final Approach and Take-Off (FATO) Area of 27 m x 27 m capable of accepting helicopters up to 8 tonnes. Overlaying the FATO is a rectangular safety area of 36 m x 36 m. These dimensions are consistent with the design helicopter.

The solution for the provision of the 27m x 27m FATO is the purchasing of a prefabricated lightweight aluminium helideck from Aluminium Offshore out of Singapore. This is the same helideck used as part of the Royal Hobart Hospital K-Block Redevelopment. It will be the twenty-first time an Aluminium Offshore Helideck has been used for aeromedical elevated HLS provision across Australia and New Zealand. Of significant benefit is that Aluminium Offshore helideck has a patented deck integrated firefighting solution that uses only water as the fire retardant and rapidly removes any spilt fuel from a helicopter crash to improve survivability of helicopter occupants in the event of a crash on the helideck. This solution was recommended by AviPro. The lightweight nature of the helideck does not overload the existing multistorey carpark and simplifies potential future relocation.

## **5.2 Architecture and Interiors**

Effort was directed toward obtaining a premium operational facility once the requirement for an up-to-date compliant and safe HLS was recognised as necessary, Consideration of interoperability with the existing hospital and effective fit with the proposed redevelopment initiatives was vitally important.

Structural and fire safety interests have led to creation of an all-concrete lift tower. This is precast to enable fast assembly and minimal loadings. The helideck attached bridge and escape stair are aluminium framed and are produced and shipped in complete and demountable components. This contains all necessary deck lighting and finishing along with fire suppression outlets.

Mechanical, electrical and fire suppression support is to be housed upon the existing carpark top deck. The lift tower supports an aircraft obstacle warning light, tri-coloured safety lighting, helideck floodlighting for use during helicopter operations, general deck lighting and illuminated windsock. This is essential for night and poor weather use.

At its base, the lift tower opens to a foyer and semi-enclosed walkway linking to the main LGH Level 2 internal main access spine. The enclosed walkway is conceived as a simple steel supported structure with translucent walling and a barrel-vaulted roof. It will remain light and easily trafficked. It provides level access at one end to the lift and the hospital generally. The walkway has been informed by patient flow, reducing circulation crossovers, and increasing operational efficiencies while maintaining separation from main public areas.

The overall LGH facility will continue to provide existing essential health services to the North of Tasmania for all age groups and with various levels of ability for the entirety of the construction period.

The design addresses access, Disability Discrimination Act (DDA) and workplace standards requirements.

Where finish is required, colour selections are neutral shades of white and grey along with natural material colours. These are chosen to complement the existing building and the surrounding infrastructure. Colour and robust materials are intended to enrich the environment internally and externally. Concrete pre-cast lift core panelling is intended to be finely corrugated vertically by form liner to each side while end panels remain plain off-form concrete.

The aluminium helideck, bridge and exit stair are 'industrial' in form and aesthetic as is the steel structure provided under it. The deck support enables reach to the necessary take-off and landing minimum height of RL 45.000.

Apart from the aluminium components which are developed in Singapore, most construction materials selected are commonly used in local construction and are readily available. They have been selected with consideration of current and ongoing global material and supply chain difficulties. Where feasible, options for alternate materials and construction methods have been explored to minimise risk and cost to the project.

### **5.3 Environmentally Sustainable Design**

The Tasmanian Government has set an energy consumption reduction target of 60 per cent across all Departments by 2050. The Project has been designed to incorporate integrated low energy consumption and sustainable features to support this aim. The environmentally sustainable development features of this building include the following:

- Inclusion of energy efficient light systems
- All unglazed walls, ceiling and roof cavity spaces are insulated and sealed to meet Building Code of Australia mandatory requirements to mitigate heat loss and gain fluctuations.
- Appropriate use of double-glazing to avoid excess heat gain and loss with the added benefit of providing internal acoustic comfort.

### **5.4 Building Services Design**

#### **Mechanical Services**

A new ducted split air conditioning system will service the Operations Room providing heating and cooling of the space. An air-to-air heat exchanger will provide minimum outdoor and exhaust air to and from the space. This can be arranged for either negative or positive pressure in the space required. All outdoor air conditioning plant will be located on the roof mounted plant area above the rooms being served. Safe access is provided for all plant maintenance.

#### **Medical Gases**

Medical gas terminal outlets are provided in the Operations Room at the bedhead panel. This includes oxygen, medical air and suction terminal outlets. All new medical gas cylinders for use in the Operations Room are provided in a compliant enclosure at the base of the lift shaft accessible to the outside carpark. This is adjacent the lobby area. This facility includes an automatic change

over mechanism to provide N+1 redundancy as required by AS2896. A new dedicated suction plant will be located on the roof above the Operations Room.

### **Electrical**

The existing Tas Networks power supply to the site will be maintained.

A back-up generator providing essential power supply is intended. This aims at ensuring the continuous operation of the HLS, operations area and comfort, health and security of patients, staff and lift passengers during a power outage.

### **Lighting**

LED Lighting will be provided throughout the facility. Lighting Levels will be provided to AS NZS 1680.2.5-2017.

An exit and emergency lighting system complying with AS 2293 is to be provided.

Lighting will be controlled by localised switching in general areas with motion sensors. The Operations Room will have additional lighting control from the wall mounted instrument panel.

New external lighting will be provided under the Helideck, on the Helideck emergency stairs, the Helideck bridge, Level 2 covered area entry and to the car park/crossing and driveway adjacent the tower and walkway.

### **Power**

New body protection power will be provided within the Operations area in accordance with AS/NZS 3003. Essential and general-purpose power outlets will be provided throughout to meet the needs of the users. The facility will be equipped with new and upgraded switchboards to suit the scope of works and future capacity.

### **Data and Communication**

All new data systems will be supplied and installed in accordance with Department of Health Information Management and Technology Services (IMTS) specifications.

Intercom systems will be provided at the helideck oversight station and at the wall mounted service panel within the Operations Room.

A fully integrated master clock system will be provided with NTP (Network Time Protocol) and Global Positioning System (GPS) synchronisation.

### **Security**

All security systems installed as part of the building are to be an extension of the Honeywell systems installed throughout the Tasmanian Health Service (THS). This is inclusive of Access Control to the new lift and Cleveland St multi-storey carpark lift and fire stairs. The CCTV system is to be configured as a fully standalone local camera and database server with backup database in a separate location offsite.

### **Fire/Smoke Detection Systems**

The LGH existing fire detection and intercom system will be extended via a new Fire Mimic panel in the Operations Room complying with AS 1670.1 and a warning system complying with AS 1670

.4. This will be monitored by the Tasmanian Fire Service. The system will include connections to the Helipad fire deluge system and to all fire doors, smoke doors and access control doors.

## **Fire Sprinklers and Drenchers**

### **Scope of Sprinkler Protection**

It is a DoH requirement that all hospital facilities be sprinkler protected. Internal sprinklers throughout the facility are to be of Light Hazard classification except for Plant Rooms which are classified as Ordinary Hazard and are to be installed in accordance with AS2118.6.

A drencher system to supply the pressure and water flow needs of the DIFF system will be provided in accordance with the helideck designers specifications. The customised helipad drainage system collects fluid from any firefighting activities from the DIFF into a purceptor prior to discharge. The purceptor allows the containment of any oil-based pollutants captured from the DIFF systems deployment and enable compliant discharge to City of Launceston storm water. The remaining areas will be sprinkled in accordance with the standard.

### **Fire Hydrants**

Existing fire hydrants will be augmented in accordance with the fire engineers specified requirements within the Fire Engineering Report.

## **Hydraulics**

### **Cold/Hot Water**

The domestic cold-water services on this site are classified high hazard as required of health care Facilities. Reduced Pressure Zone Device (RPZD) backflow protection of the TasWater main will be located at the meter assembly.

Domestic hot water is provided via electric boosted cylinder located in the services duct on the South-West wall.

### **Sewer**

Sewer drainage works are required to service the sewerage system and as per AS3500.2. These discharge into the existing drain at Cleveland St.

### **Trade Waste**

Trade waste works are limited to removal of trapped pollutants in the case of spill from the Helipad Deck. Any emergency use involving helicopter mishaps could trigger production of these wastes. The mechanism involves trapping pollutants and releasing the remainder after purification. The waste is transmitted by gravity to ground level collection by truck.

### **Stormwater**

The existing stormwater system will be modified where required to suit new roof lines, gutters and will comply with AS3500.3. The exception to this is the Helideck which will be filtered through the trade waste purification system of the purceptor mentioned above.

## 5.5 Impact on Existing Services

The selected location of the HLS will impact the following existing services at the LGH:

- Loss of 66 staff car parking spaces on the open-air top level of the Cleveland St Multi-Storey Carpark
- Temporary loss during construction of 5 public carparking spaces in the small Allied Health Carpark where the lift tower will be constructed

Advice from AviPro and specialist helicopter down draft consultants has strongly advised it is not safe to allow carparking on the open deck of the Cleveland St multi-storey carpark, necessitating the loss of 66 staff car parking spaces. A new wall will be built at the end of the last covered section of the carpark to protect parked cars from down draft effects. The new wall will contain a suitably strengthened roller door for ongoing maintenance access to the HLS.

Planning is underway to provide offset staff carparking at a nearby location with shuttle bus provision at shift change time to allow staff to get to work with minimised impact to current practices. Three potential options have now been discounted and increased collaboration with City of Launceston is underway to secure a suitable offset carparking solution.

The new multi-storey carpark on the corner of Howick and Charles Streets, that is, part of Stage 2 of the LGH Masterplan, has been fast-tracked to provide much needed additional 400 parking spaces at the LGH for staff and public.

The small existing Allied Health public car park will be lost during construction but will return 11 spaces at the completion of construction. However, the Masterplan will eventually bring about the complete loss of this small car park, hence the need to deliver the Howick and Charles Streets multi-storey carpark to also offset this car parking loss.

A small, improved amenity for staff is the semi-enclosed walkway. While partly open to moderate wind at the LGH end, this will otherwise provide weather protected access for staff entering the LGH from the Cleveland St multi-storey carpark. The carpark/semi-enclosed walkway will be easily accessed from the carpark across a freshly aligned internal driveway with bollard protected access to stair and landing at the lift foyer.

Where maintenance of Helideck, the lift, services or other necessary elements may intrude on the proper operation of the utility provided by the Helideck, in consultation with Rotorlift and air transport authorities retrievals will be from Launceston Airport in line with operational standards.

## 6. PROJECT SCHEDULE AND BUDGET

### 6.1 Project Schedule

A Summary of the project timeline is as follows:

|                                                           |                |
|-----------------------------------------------------------|----------------|
| Completion of Design Development                          | April 2023     |
| Submission of Development Application to Council          | 21 April 2023  |
| Completion of construction Tender Documentation           | 30 June 2023   |
| Construction Tender                                       | 26 July 2023   |
| Construction Start                                        | 28 August 2023 |
| Practical Completion of Construction                      | 14 May 2024    |
| Commissioning & Testing Phase Complete                    | 31 May 2024    |
| Final Completion (Completion of Defects Liability Period) | 14 May 2025    |

### 6.2 Project Cost

The approved funding for the Launceston General Hospital Helicopter Landing Site project is \$15.0 million comprising the following key elements:

| DESCRIPTION                                   | SUM                  |
|-----------------------------------------------|----------------------|
| Consultancy cost, management & statutory fees | \$ 1,790,690         |
| Construction Costs                            | \$ 8,891,078         |
| Aluminium Helideck (Supply and Delivery)      | \$ 1,788,922         |
| Construction Contingency                      | \$ 1,982,742         |
| Post Occupancy Allowance                      | \$ 189,941           |
| The Tasmanian Government Art Site Scheme      | \$ 80,000            |
| ICT Infrastructure                            | \$ 126,627           |
| Furniture and Equipment                       | \$ 150,000           |
| <b>PROJECT TOTAL</b>                          | <b>\$ 15 000 000</b> |

The current project costs are provided by the project Quantity Surveyor and based on reasonable allowances for the project's location and current market conditions.

## 7. RECOMMENDATION

The Tasmanian Health Service and Project Team have carefully assessed and explored the options and solutions available and have determined that the design submitted provides the required project outputs as established by the project brief. The design is consistent with the strategic long-term direction of the Department of Health and Launceston General Hospital.

It is recommended that this submission be viewed favourably for the health services, emergency patient care and economic benefits it will provide not only to the local Northern Tasmanian community, but to many Tasmanians across the State through expedited and safe aeromedical delivery. This critical infrastructure will deliver better health outcomes through improved aeromedical transportation of patients needing critical care.

*View from the South-Western corner of the helideck showing the Operations Room*



## **8. APPENDIX A – PROPOSED DESIGN**

ARCHITECTURAL IMAGES AND PRELIMINARY DRAWING SET  
IN SEPARATE VOLUME

PSCPW Submission – LAUNCESTON GENERAL HOSPITAL  
ELEVATED HELICOPTER LANDING SITE

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