City of Perth

Minutes

Ordinary Council Meeting

29 August 2023

Michelle Reynolds
Chief Executive Officer
1 September 2023

Minutes to be confirmed at the next Ordinary Council Meeting

These minutes are hereby certified as confirmed.

Presiding member's signature _____ Date _____

5:21pm Councillor Catherine Lezer disclosed a Proximity Interest in Item 11.2 (detailed in Item 5) and departed the meeting accordingly.

5:21pm Councillor Viktor Ko disclosed a Proximity Interest in Item 11.2 (detailed in Item 5) and departed the meeting accordingly.

Councillor Sandy Anghie disclosed an Impartiality Interest in Item 11.2 (detailed in Item 5).

11.2 Final adoption of Amendment No. 47 to City Planning Scheme No. 2 and Amendment No. 5 to Local Planning Scheme No. 26 (Normalised Redevelopment Areas) - Royal Perth Hospital Flight Path Protection Special Control Area

Responsible Officer	Dale Page – General Manager Planning and Economic Development
Voting Requirements	Simple Majority
Attachments	Attachment 11.2A – Scheme Amendment No. 47 Report Attachment 11.2B – Scheme Amendment No. 5 Report Attachment 11.2C – Local Planning Policy and Precinct Plan Modifications Attachment 11.2D – Schedule of Submissions and modelling

Purpose

- For Council to consider the submissions received on Amendment No. 47 to City Planning Scheme No. 2 (CPS2) and Amendment No. 5 to Local Planning Scheme No. 26 (LPS26) and support the scheme amendments for submission to the Western Australian Planning Commission (WAPC) for a final decision by the Minister for Planning.
- For Council to adopt the amendments to the local planning policies and precinct plan maps.

Recommendation

That Council:

1. SUPPORTS Amendment No. 47 to City Planning Scheme No. 2 with modification, as per Attachment 11.2A, pursuant to Regulations 41(3)(b) of *the Planning and Development (Local Planning Schemes) Regulations 2015.*
2. SUPPORTS Amendment No. 5 to Local Planning Scheme No. 26 without modifications, as per Attachment 11.2B, pursuant to Regulations 41(3)(a) of *the Planning and Development (Local Planning Schemes) Regulations 2015.*
3. RECEIVES the submissions (including late submissions) received during the formal consultation period for Amendment No. 47 to City Planning Scheme No. 2 and Amendment No. 5 to Local Planning Scheme No. 26.
4. ADOPTS the amended Local Planning Policies and Precinct Plan Maps as per Attachment 11.2C, in accordance with the Deemed Provisions Clause 4 and Clause 5 of the *Planning and Development (Local Planning Schemes) Regulations 2015*, and subject to the gazettal of Amendment No. 47 and Amendment No. 5.

Background

1. At its Ordinary Meeting held on 27 September 2022, Council resolved to initiate Amendment No. 47 to CPS2 and Amendment No. 5 to LPS26 (the amendments) and advertise the associated local planning policy and precinct plan map modifications.

2. The Environmental Protection Authority did not require any environmental assessment on the proposed amendments.

3. The Western Australian Planning Commission (WAPC) approved the amendments for advertising subject to minor administrative changes to Amendment No. 47 to CPS2 that have been reflected in Attachment 11.2A.

4. The amendments will establish a Special Control Area (SCA) to protect two emergency helicopter flight paths to Royal Perth Hospital. Currently, there are no set emergency flight paths for helicopter operations at the hospital. This creates a risk that future development could obstruct helicopter access to Royal Perth Hospital in emergency situations. The introduction of the SCA will not result in any intensification of existing operations and is formalising existing arrangements.

5. The SCA comprises of the following key elements:

    - Core Area – development within the core flight path area will be controlled by limiting the height of permanent structures. Temporary works and use of equipment, such as cranes, will be managed to ensure they do not present a hazard to helicopters
    - Frame Area – temporary works and the use of equipment will be managed to ensure no hazard is presented to helicopters
    - Consultation process – establishing a referral process with the East Metropolitan Health Service (EMHS) to allow EMHS to provide advice on development applications or temporary structures located within the emergency flight path protection area.

6. Whilst the SCA applies to both CPS2 and LPS26, the details of the SCA provisions are contained in Amendment No. 47 (Attachment 11.2A). Only minor amendments to LPS26 are required to update the scheme text to align the planning provisions in the SCA created under CPS2 (refer to Attachment 11.2B).

7. Minor changes to several local planning policies and precinct plan maps are required to integrate the provisions of the SCA into the local planning framework (see Attachment 11.2C).

Discussion

8. The location of the SCA and the alignment of the emergency flight paths has been carefully considered to minimise the impact on privately owned land. The SCA is predominantly located over existing road and rail infrastructure, the Swan River and publicly owned land parcels. Privately owned landholdings represent approximately 5.7% of the SCA.

9. Under CPS2, the scale of development for the land located below the SCA is generally controlled through maximum building heights and maximum plot ratio (plot ratio determining the maximum total floor area of a building). The area between Hay Street and Murray Street has no building height limit, with density of development solely controlled by plot ratio.

10. The SCA does not propose any changes to the existing permitted plot ratio. However, the maximum building height will be reduced for a portion of the private land parcels located in the Core Area of the southern flight path, which is discussed in further detail in later sections of this report.

11. The potential development impact of the SCA was modelled and presented to Council at the Ordinary Council Meeting held on 27 September 2022.

12. During the advertising period, two submissions were received objecting to the amendments. These submissions relate to 447 and 467 Hay Street, Perth - the primary concern being the perceived loss in development potential.

13. The City has not received any development applications for 447 or 467 Hay Street and is not aware of any upcoming development proposals.

14. Additional modelling has been undertaken to further examine the impact on development for 447 and 467 Hay Street, Perth. The built form modelling was used to assess whether it was possible for these lots to be redeveloped to the permitted maximum base plot ratios for residential, hotel and office developments.

15. The additional modelling prepared for 447 and 467 Hay Street is provided in Attachment 11.2D, along with the schedule of submissions and City's response.

16. Building heights can vary depending on how a developer chooses to configure a development. Buildings with larger floorplates will result in lower building heights. Buildings with smaller floorplates will result in higher buildings.

17. The modelling shows that 447 Hay Street can develop to the permitted maximum base plot ratio for residential, hotel and office development scenarios, notwithstanding the height limitations of the SCA.

18. Two subdivision scenarios were modelled for 467 Hay Street, as this is a large lot with dual frontages to Hay Street and St Georges Terrace. The first scenario looked at the site being developed as one building and the other looked at the site being developed with two buildings (one addressing Hay Street and the other addressing St Georges Terrace).

19. The modelling confirmed that 467 Hay Street can develop to the permitted maximum base plot ratios for residential, hotel and office development scenarios, notwithstanding the height limitations of the SCA.

20. The modelling undertaken is indicative only and cannot include all possible development scenarios, circumstances, or development ambitions of a private landholder wanting to develop or redevelop their land. Different tower configurations may result in different impacts in terms of plot ratio.

Consultation

21. The amendments and modifications to the local planning policies and precinct plan maps were advertised for a period of 60 days in accordance with Clause 38 (3) of the *Planning and Development (Local Planning Schemes) Regulations 2015.*

22. The method of advertising included letters to landowners located below the SCA, a notice being placed in the newspaper, a notice being placed in the Council House foyer and information being displayed on the Engage Perth website.

23. A total of 10 submissions was received, including one late submission. Most submissions supported the amendments, however two submissions objected to the amendments.

24. The following issues were raised in the objections:

- Concerns about reduced development potential

- Concerns the amendments would adversely affect project feasibility, due to cost increases because of construction complexities
- Concerns about impacts on aesthetics of buildings
- Noise concern and safety risk associated with flight path
- Compensation for potential loss.

25. Minor text modifications were made to Attachment 11.2A and Attachment 11.2B to respond to a submission from the Civil Aviation Safety Authority (CASA).

26. Individual submissions and the City's response is provided in Attachment 11.2D.

Decision Implications

27. Council has the option to support the amendments with or without modifications, or not support the amendments.

28. If Council supports the recommendations:

    a. the amendments will be forwarded to the WAPC for its consideration and recommendation to the Minister for Planning for a final decision.

    b. the amended local planning policies and precinct plan maps will be updated following the Minister's approval of the amendments.

29. If Council does not support the recommendations:

    a. the amendments will be forwarded to the WAPC for its consideration and recommendation to the Minister for Planning for a final decision.

    b. The local planning policies and precinct plan maps will not be amended.

Strategic, Legislative and Policy Implications

Strategic Community Plan	
Strategic Pillar (Objective)	Liveable
Related Documents (Issue Specific Strategies and Plans):	**Local Planning Strategy** The Local Planning Strategy sets out the City's strategic objectives for future land use and development within the city. The Strategy acknowledges the City will continue to collaborate with Royal Perth Hospital and State Government agencies on the future planning and development of the area.

Legislation, Delegation of Authority and Policy	
Legislation:	*Planning and Development Act 2005* • Section 75 provides legislative power to the Council to prepare changes to its local planning scheme. • Section 81 requires referral of scheme amendments to the Environmental Protection Authority prior to advertising.

	• Section 84 sets out advertising requirements. • Section 87 outlines the Minister's approval process for a local planning scheme amendment. *City of Perth Act 2016* • 8(1)(i) - to develop and maintain collaborative inter-governmental relationships at regional, State, national and international levels with a view to developing and implementing strategies for the continued improvement of the City of Perth. *Planning and Development (Local Planning Schemes) Regulations 2015* • Regulations 41 and 44 outline the next steps for a complex amendment to a local planning scheme. *City Planning Scheme No. 2* • Clauses 3A of Schedule A (Supplemental Provisions) refers to amending Precinct Plans. • Clause 39 refers to Special Control Areas. *Local Planning Scheme No. 26 (Normalised Redevelopment Areas)* • Sets out the planning provisions for all normalised redevelopment areas within the City's local government boundary (except Crawley-Nedlands).
Authority of Council/CEO:	The *Planning and Development Act 2005* gives local governments powers in relation to Local Planning Schemes and Local Planning Policies. The above provisions of the *Planning and Development Act 2005* requires that a decision to amend be by Council resolution.
Policy:	Planning Policy Manual - Part 1 2.1 Applications 4.4 Building Heights and Setbacks Policy 6.3 Goderich Design Policy 6.3 Goderich Design Policy 6.4 Terrace Road Design Policy Planning Policy Manual – Part 2 2.3 Area 3 – Belvidere 2.4 Area 4 – Victory Terrace 2.5 Area 5 – Jewell Lane 2.14 Area 14 - Lord and Norbert Streets 2.15 Area 15 – Norbert and Clotilde Streets These local planning policies outline design requirements within areas that fall within the proposed SCA.

Financial Implications

Account Number	1079-100-10-10568-7243	Operating
Account Description	Gazettal Costs for CPS2 and LPS26 Amendment	
Total Budget	$12,500	
Budget – This report	$400 (estimated cost of Government Gazette)	
Remaining Budget	$12,100	
Budget Impact	$400	

Further Information

Nil.

Council Resolution (OCM-23/08-005)

Mover: Deputy Lord Mayor Liam Gobbert

Seconder: Councillor Rebecca Gordon

That Council:

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CARRIED UNOPPOSED (5/0)

For: Lord Mayor Basil Zempilas; Deputy Lord Mayor Liam Gobbert; Councillors Sandy Anghie, Clyde Bevan and Rebecca Gordon

Against: Nil



Amendment No. 47

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FORM 2A

RESOLUTION TO PREPARE AMENDMENT TO LOCAL PLANNING SCHEME

CITY OF PERTH

CITY PLANNING SCHEME NO. 2

AMENDMENT NO. 47

RESOLVED that the Local Government pursuant to section 75 of the *Planning and Development Act 2005,* amend the above Local Planning Scheme by:

1. Amending clause 36(1)(b) as follows:

   a non-complying application does not include an application involving:

   i. a prohibited use;
   ii. an application to increase the maximum plot ratio which exceeds the limits set out in clause 28 and/or 30; or
   iii. an application to permit permanent development within the Core Flight Path Area, outlined in Special Control Area 33, which exceeds the maximum AHD heights specified in Figures 33.2 – 33.7.

2. Inserting a new Special Control Area under clause 39(1) as follows:

   (gg) Royal Perth Hospital Flight Path Protection Special Control Area

3. Inserting the following as Special Control Area 33 in Schedule 8:

   33. Royal Perth Hospital Flight Path Protection Special Control Area

   33.1 Special Control Area

   The following provisions apply to the land shown in Figures 33, 33.1 to 33.7 as the Royal Perth Hospital Helicopter Flight Path Protection Special Control Area which comprises Core and Frame Flight Path Areas.

   Note: The provisions of this Special Control Area do not apply to the parts of the Special Control Area which are legislated under the *Metropolitan Redevelopment Act 2011 or to telecommunication facilities legislated by the Telecommunications (Low Impact Facilities) Determination Act 1997.*

   33.2 Objectives

   The objectives of the Royal Perth Hospital Helicopter Flight Path Protection Special Control Area are –

Am1

(a) To ensure the continued safe operation of Royal Perth Hospital's Strategic Helicopter Landing Site in support of the hospital's function as the State's Major Trauma Unit.

(b) To ensure that permanent development does not encroach into the Core Flight Path Area.

(c) To ensure that temporary works and equipment within the Special Control Area do not present a hazard to helicopters using the Core Flight Path Area.

33.3 General Provisions

33.3.1 Where a provision of another Special Control Area is inconsistent with a provision of this Special Control Area, the provisions of the latter are to prevail.

33.3.2 Notwithstanding clause 39(3) of the Scheme, where the heights specified in sub-clause 33.5.1 of this Special Control Area are inconsistent with the heights specified on the Maximum Building Heights Plan, whichever is the lower height shall apply.

33.4 Requirement for Development Approval for Works

In accordance with sub-clause 61(6)(a) of the Deemed Provisions, an application for development approval for works that are typically excluded under clause 61(1) of the Deemed Provisions and schedule 7 of the Scheme shall be required for works that are situated above or within 30 metres of the maximum AHD heights specified in figures 33.2 to 33.7 for the Core and Frame Flight Path Areas.

33.5 Development Requirements

33.5.1 Within the Core Flight Path Area, permanent development, including the parts of a building which are ordinarily excluded from building height calculations, shall not exceed the maximum AHD heights specified in Figures 33.2 to 33.7, as well as intermediate maximum AHD height values determined by a 4.5% gradient as shown in Figure 33.8.

33.5.2 Within the Core and Frame Flight Path Areas, temporary works and equipment shall not present a hazard to helicopters using the Core Flight Path Area.

33.6 Consultation with Other Authorities

Where development and any associated works are situated above or within 30 metres of the maximum AHD heights specified in Figures 33.2 to 33.7, and/or the intermediate maximum AHD heights specified in Figure 33.8 for the Core and Frame Flight Path Areas, the local government shall provide a copy of the application for development approval to the owner of the Royal Perth Hospital Helicopter Landing Site for objections and recommendations in accordance with clause 66 of the Deemed Provisions.

Note: The Department of Health's East Metropolitan Health Service is the owner of the Royal Perth Hospital helicopter landing site.

33.7 Consideration of Application by Local Government

Am2

33.7.1 Development approval shall not be granted for permanent development in the Core Flight Path Area which exceeds the maximum AHD heights specified in Figures 33.2 to 33.7 or the intermediate maximum AHD heights specified in Figure 33.8.

33.7.2 In considering an application for development approval (other than an application for which approval cannot be granted under subclause 33.7.1), the local government is to have due regard to the following matters:

(a) the objectives of this Special Control Area; and

(b) the views of the owner of the Royal Perth Hospital Helicopter Landing Site in relation to how the application addresses the National Airports Safeguarding Framework - Guideline H, or any other relevant technical guidelines.

33.7.3 Where development and associated works are situated above or within 30 metres of the maximum AHD heights specified in Figures 33.2 to 33.7, or the intermediate maximum AHD heights in Figure 33.8, for the Core and Frame Flight Path Areas, the local government shall include as a condition of development approval, the submission of a Construction and Demolition Management Plan in a form and manner to the satisfaction of the local government.

33.7.4 The local government shall provide a copy of the Construction and Demolition Management Plan, including any subsequent amendments to the plan, to the owner of the Royal Perth Hospital Helicopter Landing Site for recommendations for the local government to consider in determining the acceptability of the plan.

33.7.5 The owner of the Royal Perth Hospital Helicopter Landing Site shall, within 21 days of receiving the Construction and Demolition Management Plan, or within such longer period as the local government allows, provide to the local government a memorandum in writing containing any recommendations with respect to the plan and any subsequent amendments to the plan.

33.7.6 The Construction and Demolition Plan shall provide details of the temporary works and equipment, including cranes, to be used on site for construction and demolition purposes including but not limited to:

(a) The duration of the construction period (start date and end date) and the time period in which any crane or other equipment will remain on site;

(b) Maximum operating height, maximum operating radius and operating time/s of any crane or other equipment; and

(c) The measures to be taken to minimise any potential impact on and/or encroachment into the Core Flight Path Area.

33.8 Definitions

The following definitions apply within the Special Control Area:

Core Flight Path Area - is the protected operational flight paths used by helicopters arriving and departing the Royal Perth Hospital Helicopter Landing Site as defined by the relevant civil aviation guidelines and/or standards as shown in Figures 33.2 to 33.7.

Am3

Frame Flight Path Area - is the area adjoining the Core Flight Path Area as shown in Figures 33.2 to 33.7 within which temporary works and equipment need to be considered in relation to their impact on the Core Flight Path Area.

Royal Perth Hospital Helicopter Landing Site – the rooftop landing surface used for the arrival or departure of helicopters associated with the operations of the Royal Perth Hospital State Major Trauma Unit as shown in Figure 33.1.

Permanent Development – development which is not temporary works or equipment.

Temporary works and equipment – works and equipment such as cranes, machinery and structures used temporarily to undertake development and/or maintenance.

4. Amending the Maximum Building Height Plan (1 of 2) as follows:
   i. Inserting the Special Control Area on the map and in the map legend.

5. Inserting Figures 33, 33.1 to 33.8 into Schedule 8 – Special Control Areas of the Scheme.

Am4

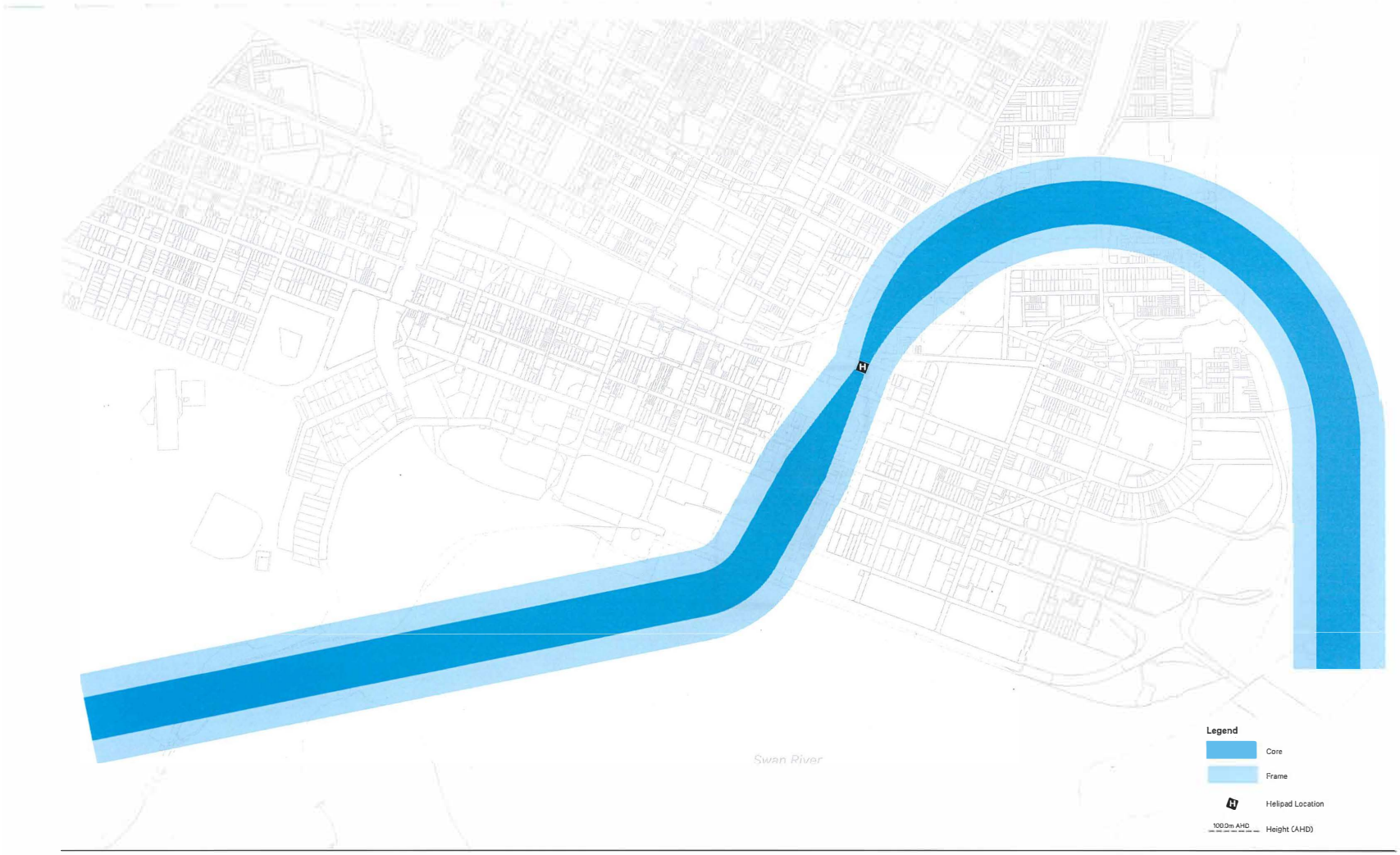


Figure 33. Overall Plan
Royal Perth Hospital Helipad

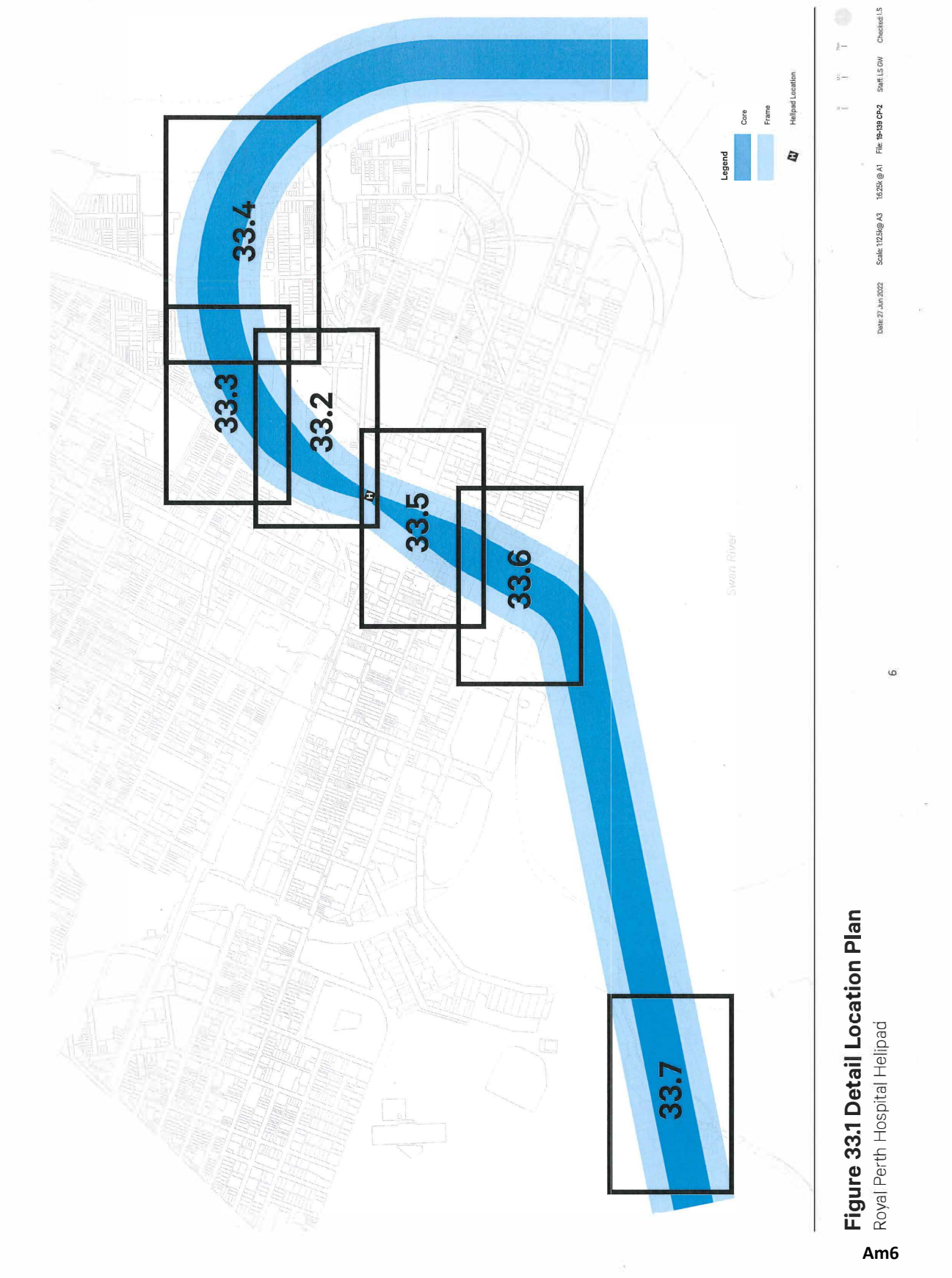


Figure 33.1 Detail Location Plan
Royal Perth Hospital Helipad

Am6

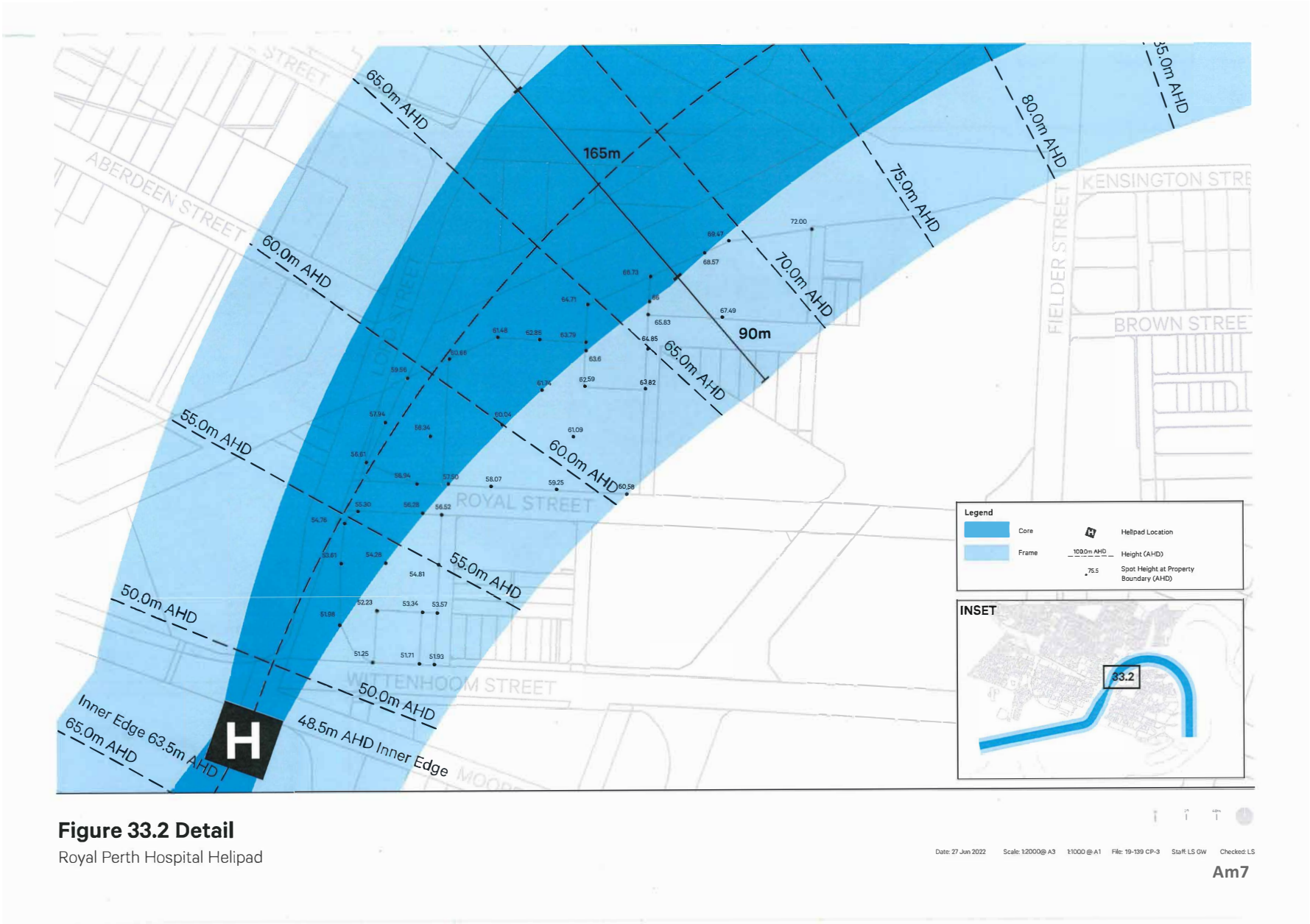


Figure 33.2 Detail
Royal Perth Hospital Helipad

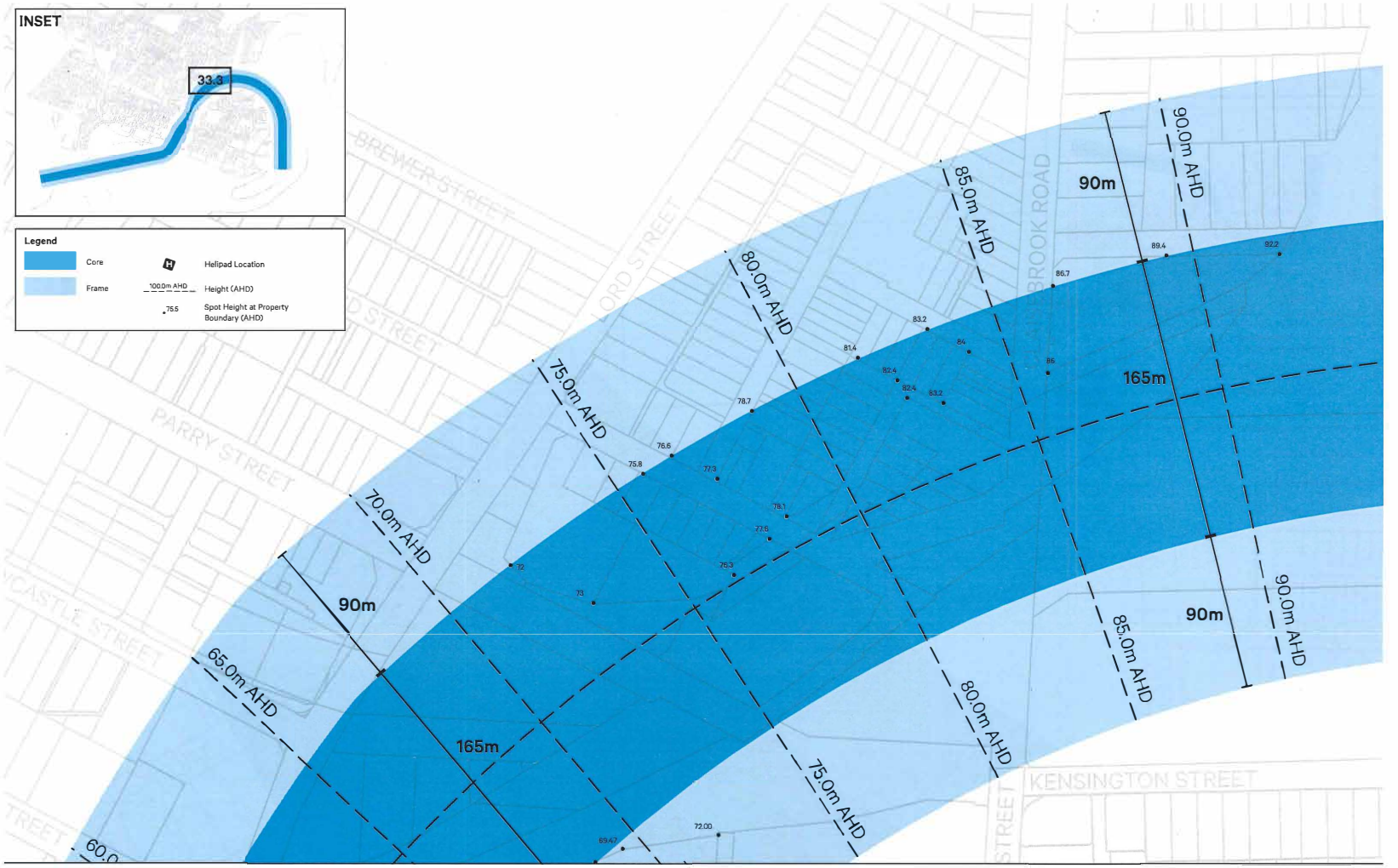


Figure 33.3 Detail
Royal Perth Hospital Helipad

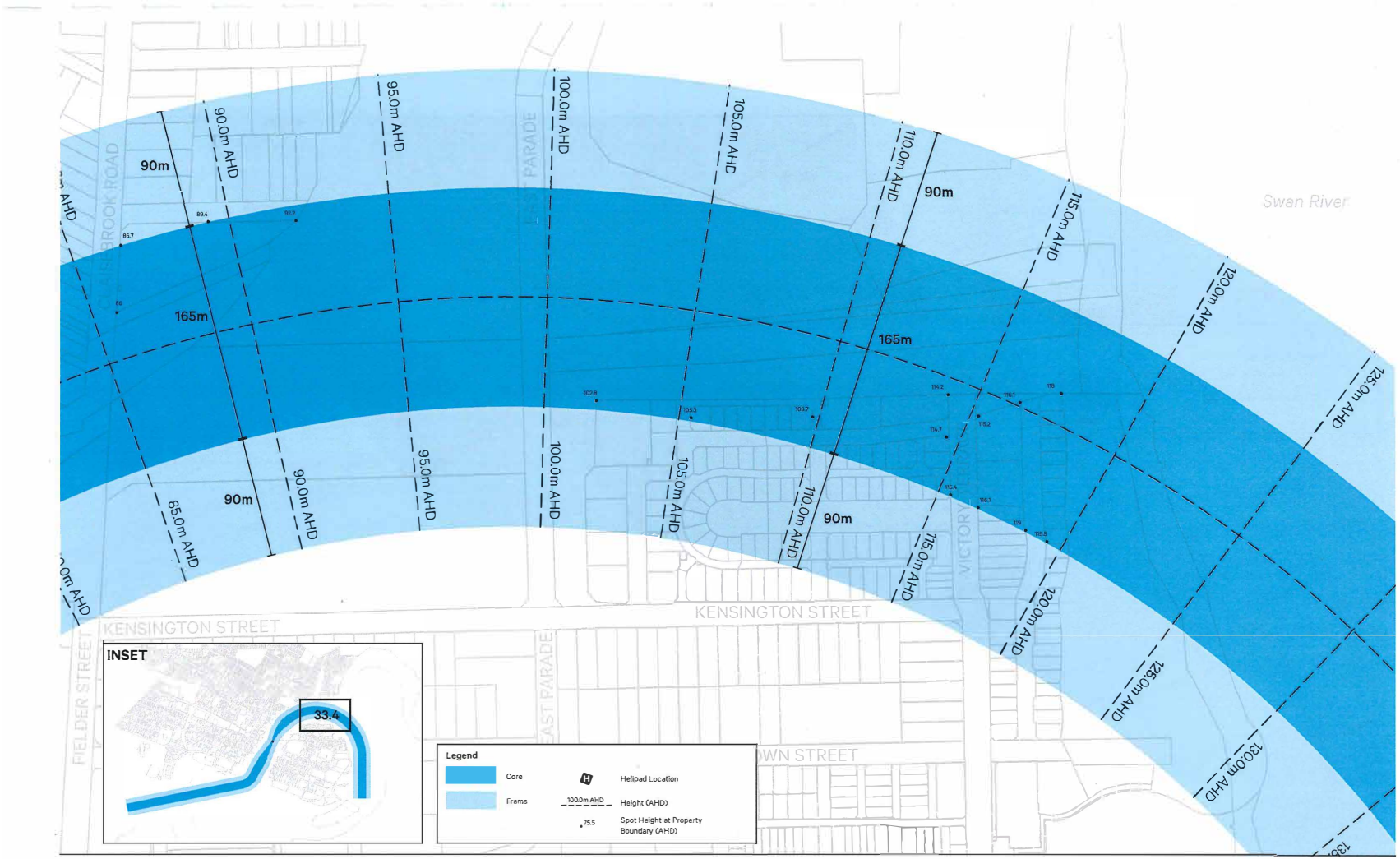


Figure 33.4 Detail
Royal Perth Hospital Helipad

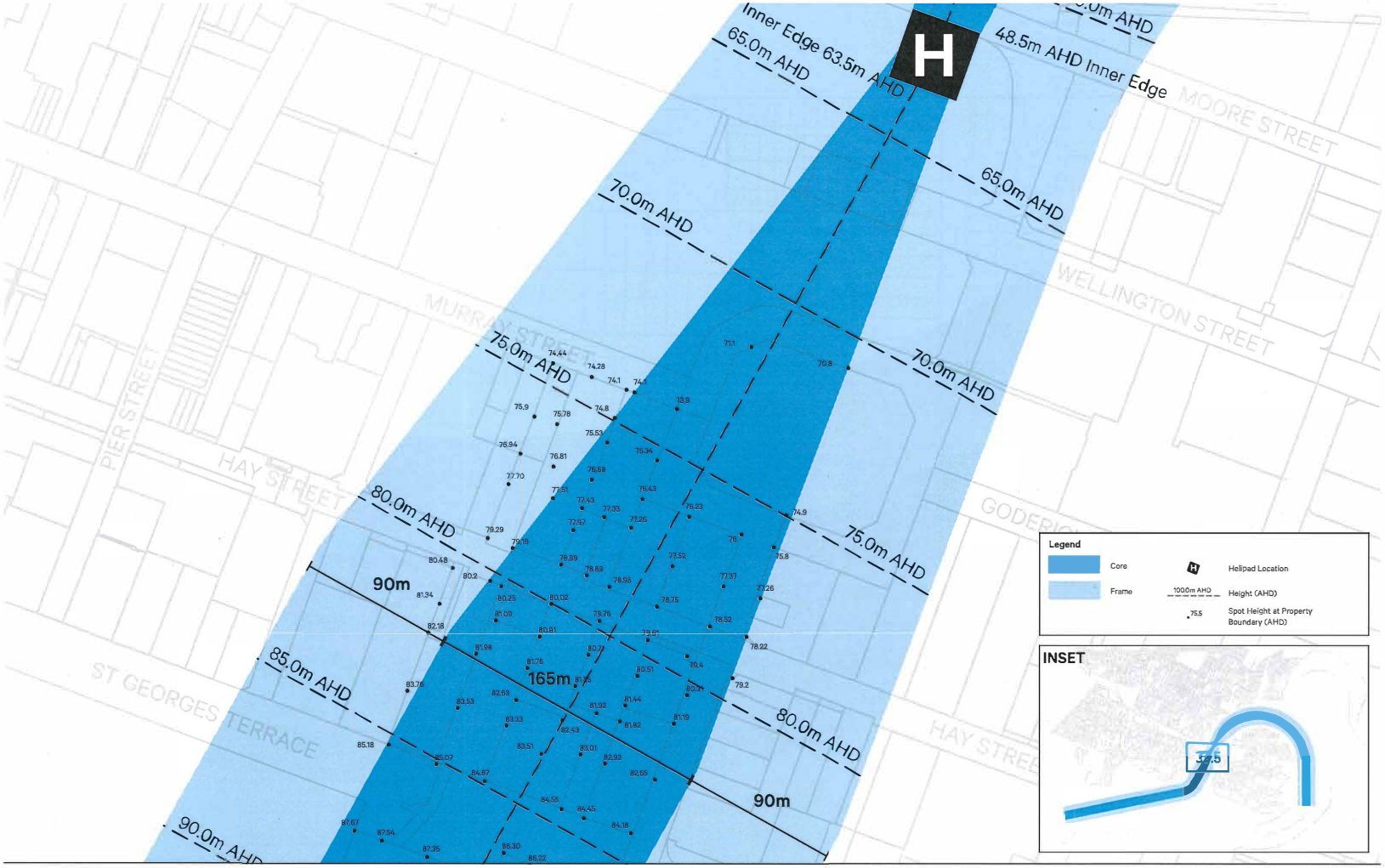


Figure 33.5 Detail
Royal Perth Hospital Helipad

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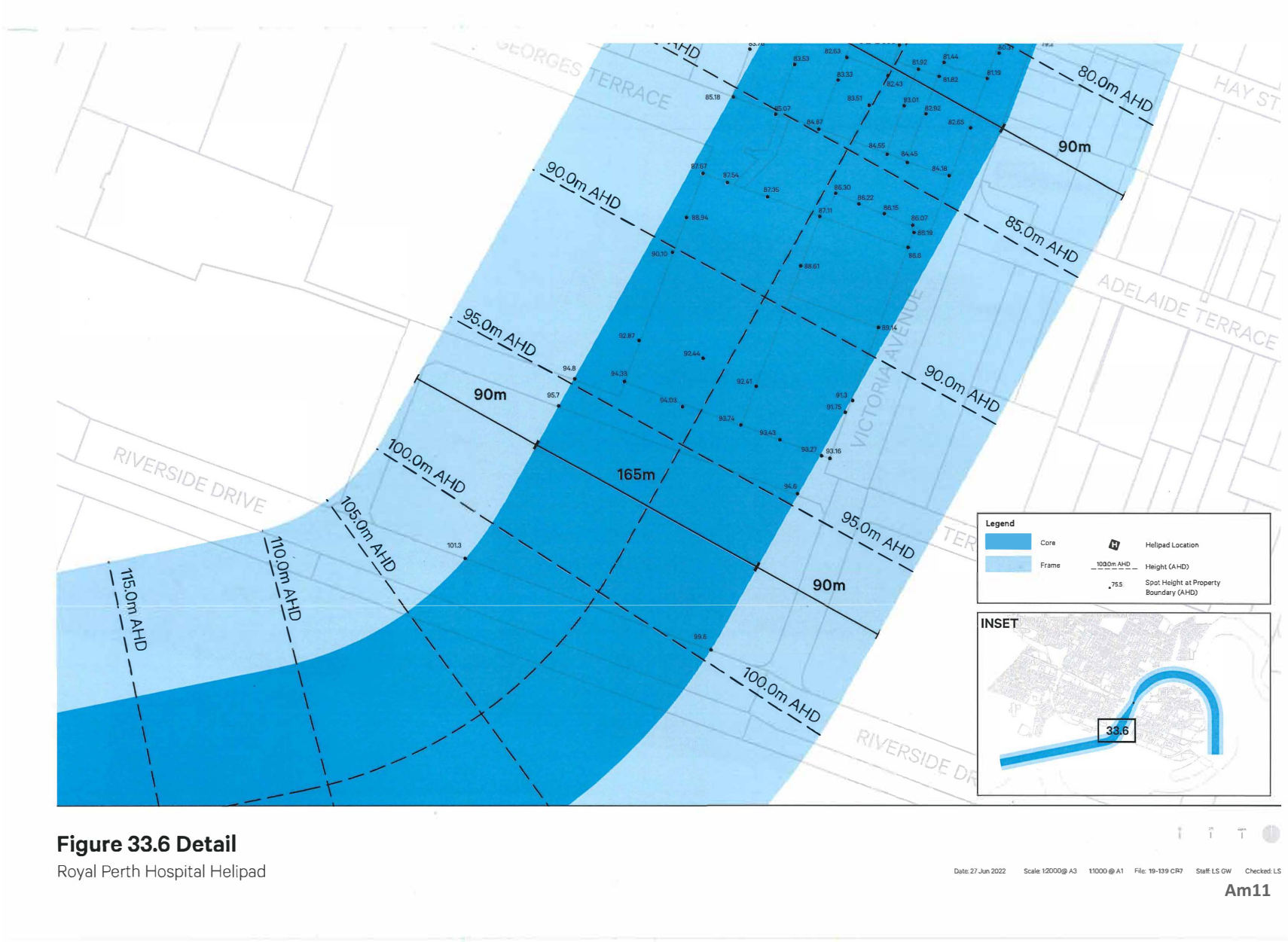


Figure 33.6 Detail
Royal Perth Hospital Helipad

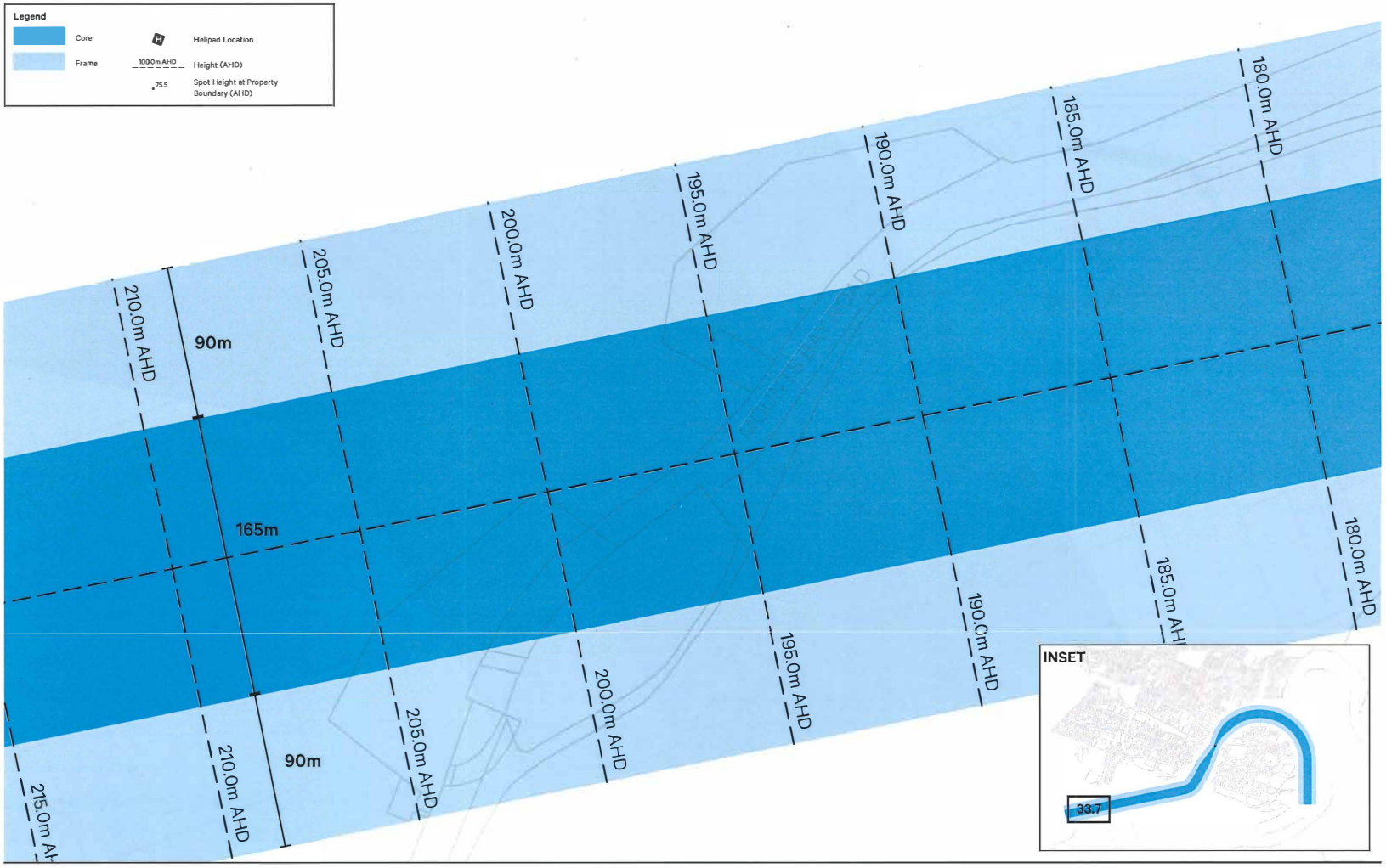
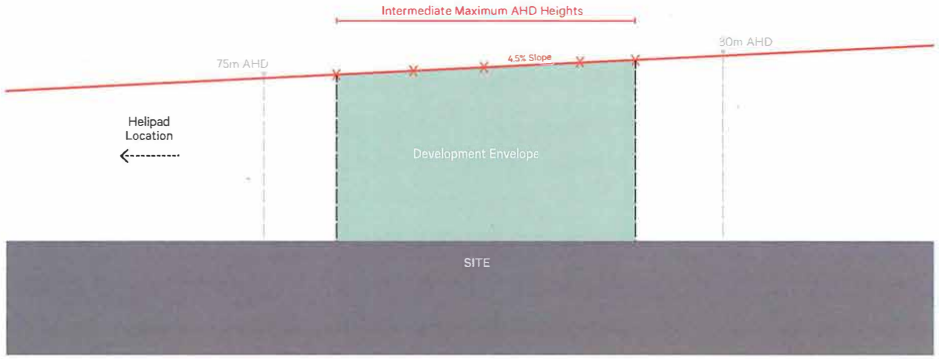


Figure 33.7 Detail
Royal Perth Hospital Helipad

Date: 27 Jun 2022 Scale: 1:2000@ A3 1:1000 @ A1 File: 19-139 CP-8 Staff: LS GW Checked: LS

Am12

element.



Typical section showing application of intermediate maximum AHD heights.

Note: Proponents will need to consider location, orientation and context of the development site in relation to the Helipad and associated flight paths in calculating intermediate maximum AHD heights.

Figure 33.8 Intermediate Maximum AHD Heights

Royal Perth Hospital Flight Path

Date: 22 Jun 2022 Scale: NTS @ A3 NTS @ A1 File: 19-139 CP-7 A Staff: LS GW Checked: LS

Am13

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Am14

The amendment is complex under the provisions of the Planning and Development (Local Planning Schemes) Regulations 2015 for the following reason:

- **The amendment will have an impact that is significant relative to development in the locality.**

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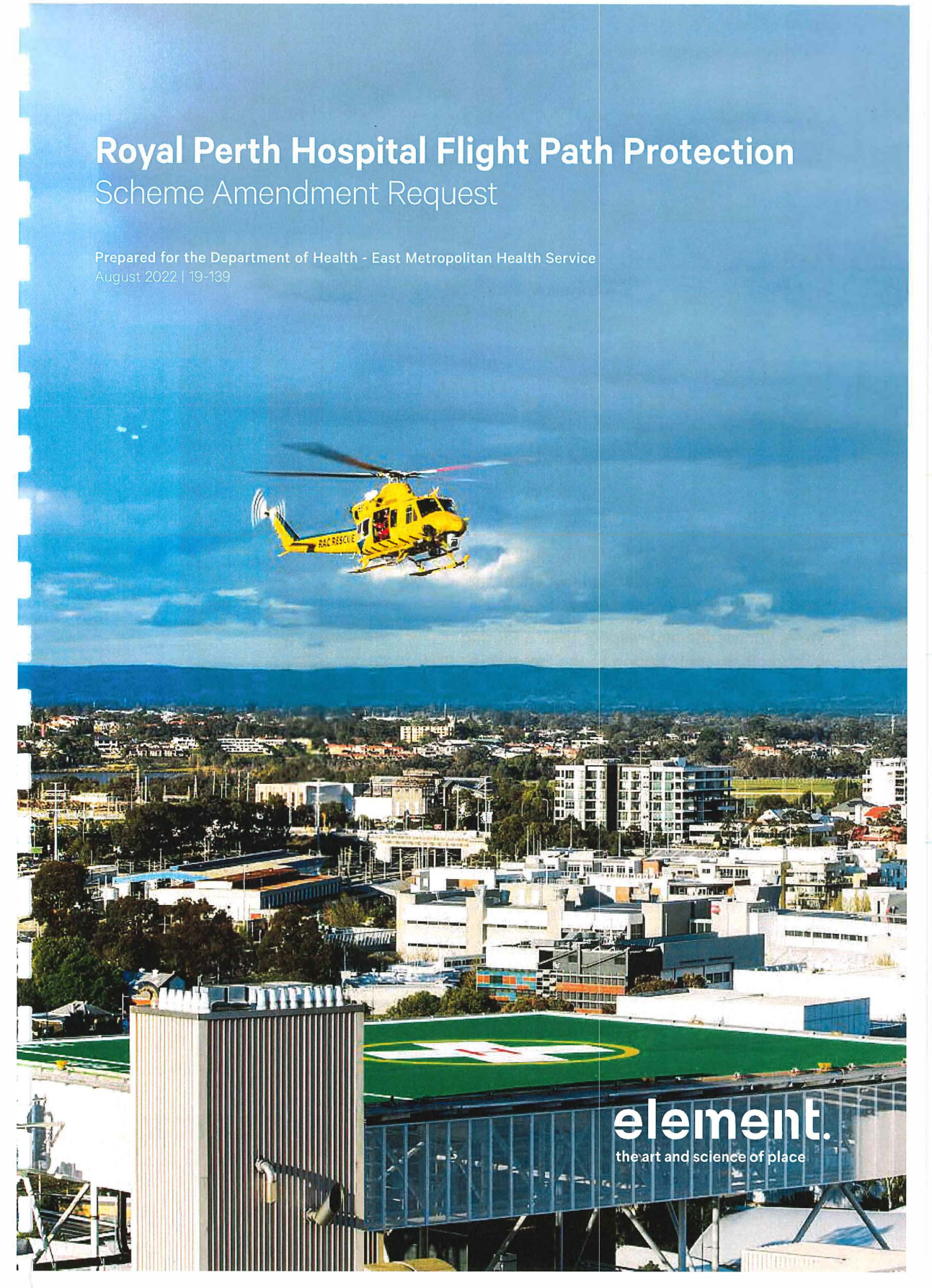
Am16

Dated this 24 day of October 2022

CHIEF EXECUTIVE OFFICER

Am17

Am18


Royal Perth Hospital Flight Path Protection
Scheme Amendment Request
Prepared for the Department of Health - East Metropolitan Health Service
August 2022 | 19-139
RAC RESCUE
element.
the art and science of place

Royal Perth Hospital Flight Path Protection Scheme Amendment Request

Cover image source: East Metropolitan Health Services

We acknowledge the Whadjuk people of the Noongar nation as traditional owners of the land on which we live and work.

We acknowledge and respect their enduring culture, their contribution to the life of this city, and Elders, past and present.

Document ID: /Volumes/Graphics/2019/19-139 Perth, 197 Wellington Street/Report/Draft/City of Perth/RPH Scheme Amendment Request Folder/AUGUST 2022 - REVISED LAYOUT/00 InDesign/19-139 RPH Scheme Amendment Request F1 220822 Folder

Issue	Date	Status	Prepared by	Approved by	Graphics	File
1	22.08.22	Final	Lewis Shugar	David Read	SA	F1

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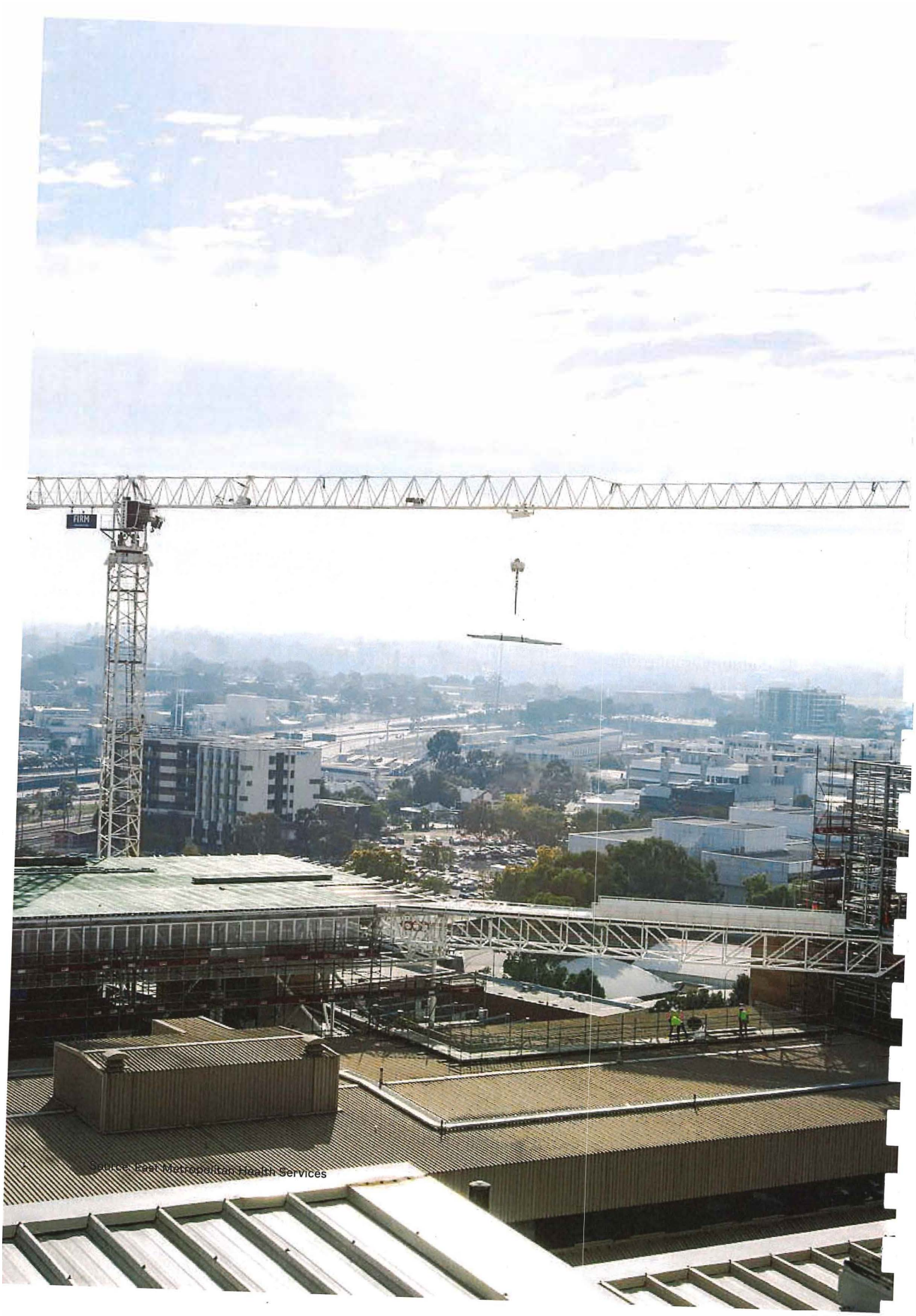
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FIRM
Source: East Metropolitan Health Services

element.

1. Introduction

element has prepared this report, on behalf of the East Metropolitan Health Service (EMHS), in support of a request to amend the City of Perth City Planning Scheme No. 2 (CPS2) as it relates to a number of landholdings identified as being within essential helicopter flight paths associated with the operation of emergency helicopter operations at the Royal Perth Hospital (RPH) located at Lot 916 and Lot 920 (No. 212) Wellington Street, Perth.

The Western Australian Planning Commission (WAPC) have recently approved the proposed development of an upgraded Helicopter Landing Site (HLS) at RPH. The upgraded HLS will enable a fleet of upgraded helicopters to utilise the facility and continue to support the State Major Trauma Unit (SMTU) at RPH into the future. As part of securing the long term use of the facility, it has been identified that the existing development potential of a number of landholdings immediately surrounding RPH may result in future development impacting on the safety of helicopter operations.

The existing and future development potential of land within the vicinity of RPH is therefore required to be considered as part of this proposed amendment to ensure essential emergency helicopter flight paths are not obstructed by development that may impact the safety of an emergency medical flight and ultimately result in the upgraded HLS being decommissioned, bringing with it significant impacts upon the efficiency of services provided by the SMTU.

The proposed amendment is being undertaken to align with a number of relevant elements that influence the ongoing successful operation of the Emergency Rescue Helicopter Service (ERHS) at RPH. This includes the interrelationship between the existing planning framework and development opportunities, the National Airports Safeguarding Framework, relevant aviation standards, State government investment and futureproofing the successful operation of the SMTU at RPH to support the States medical emergency needs.

The overarching objective of this request is to ensure that the SMTU located at RPH is able to continue to be serviced by the ERHS that is managed by the Department of Fire and Emergency Services (DFES) by introducing a Special Control Area (SCA) to create a Royal Perth Hospital Emergency Flight Path Protection area.

1.1 At a Glance - The Importance of Protecting Emergency Flight Paths

- Safety, viability and ongoing operations of HLS can be compromised by permanent and temporary development (such as cranes), gaseous plumes, telecommunications towers, powerlines and landscape features (such as trees).
- Recently, helipads have been decommissioned due to nearby operation of construction cranes. In the United Kingdom (UK), a fatal accident occurred where a helicopter collided with a construction crane. This has led to the UK Government formalising safeguarding arrangements to ensure a more robust notification system is in place. Around the world, building induced windshear has played a role in many helicopter crashes.
- Population growth and increased high-rise development continue to place pressures on HLS's located within built up areas.
- Despite the importance of maintaining unimpeded access to strategically important HLS, protective legislation varies across the country.
- In Australia, HLS are not licensed, certified or regulated in the way that aerodromes are under the *Civil Aviation Safety Regulations 1998* (CASR). Outside airports and commonwealth owned land, there are varying levels of regulation and guidance around safeguarding HLS across the country.
- Whilst the new HLS at RPH was formally considered and approved, ongoing development within the City may impact the safety of operations into the future, especially where a helicopter is required to fly with one engine inoperable. At present, there is no formal notification process in place for pilots to be aware of any proposed development (and construction cranes) within areas flown.
- Without protection, strategically important HLS may be required to be decommissioned as a result of ongoing development jeopardising the safety and efficiency of operations.

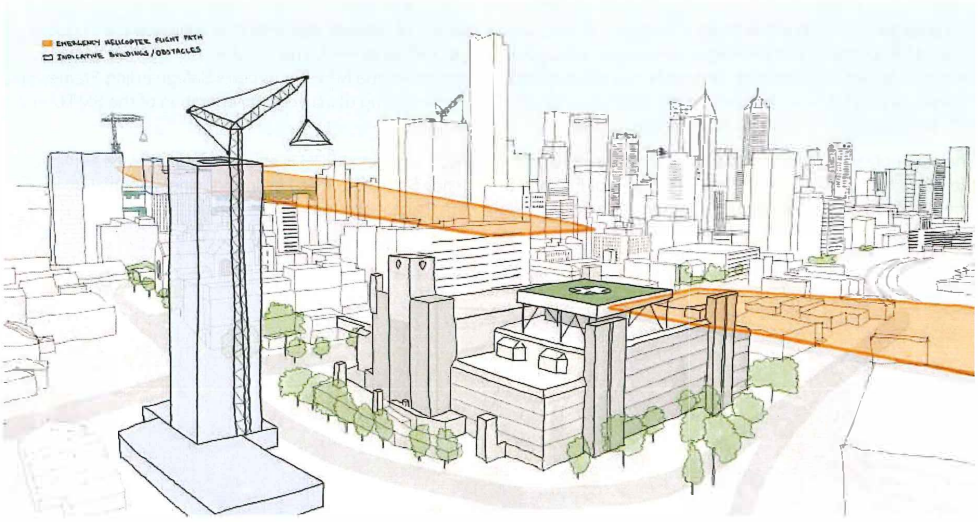


Figure 1. The importance of protecting helicopter flight paths at Royal Perth Hospital

2. Background

2.1 Royal Perth Hospital

RPH is Western Australia's longest serving hospital. Its origins date back to the old Colonial Hospital that was originally established on Garden Island in 1829 until it was subsequently relocated to Perth. The hospital continued to change location and then in 1855, the hospital commenced operations on the corner of Victoria Square and Murray Street. Since then, a number of additional buildings have contributed to the expansion of the hospital's operations toward Wellington Street where an existing helipad is situated on top of the 'North block'. The existing helipad provides an essential service to patients who are in need of urgent specialist trauma treatment at RPH's SMTU. The SMTU is used by the ERHS operated by the DFES. Other operators are also able to utilise the existing helipad when specifically required.

RPH is now the designated provider of major trauma services for adults in Western Australia. More than 75,000 patients are admitted to RPH annually, with over 700 of these patients being classed as major trauma. Approximately 80% of the State's major trauma cases are treated at RPH's SMTU, which provides state-of-the-art multidisciplinary emergency trauma and critical care for patients suffering complex injuries requiring care from multiple medical specialities.

2.1.1 State Major Trauma Unit and Emergency Rescue Helicopter Service

In respect to the existing helicopter operations at RPH, 70.4% of patients transported via the ERHS are taken to RPH for treatment, with an average of 354 patients being received per year. The following statistics from RPH Trauma Data in 2020 emphasise the importance of the service provided:

- 222 patients received were **trauma** patients, meaning that they required urgent medical care as a result of a sudden physical injury from impact, violence or accident;
- 101 patients received were considered **major trauma** patients;
- 43% of **major trauma** patients were considered to have sustained severe or critical trauma; and
- More than 50% of **major trauma** admissions to RPH required critical surgical intervention in response to their injuries.

'Trauma' *– means a body wound produced by sudden physical injury from impact, violence or accident.*

'Major Trauma' *– means a person who has many (multi-trauma) and/or severe injuries. Major and multi-trauma patients can experience serious complications including:*

haemorrhage – losing large amounts of blood can result in shock and other complications

infection or sepsis – the presence of open wounds increases risk of infection

multi-organ failure – when one or more organs, such as kidneys or liver, begin to stop working.

The statistics provided above have been extracted from a letter provided by the Western Australian State Director of Trauma, Dr Sudhakar Rao. The following statements are taken from Dr Sudhakar's letter, which provide a response to various matters raised by the City and ultimately highlight the importance of the ERHS, the associated helipad at RPH and the overall operations of the SMTU at RPH:

> *The need for helicopter emergency medical services to pick up a patient from their location, followed by immediate access to specialist treatment teams on arrival at a hospital is imperative.*
>
> *Helicopter transport provides the quickest means of transferring critically injured patients to a major trauma service. Off-site landings have been found to result in longer transport to the emergency room, however, the construction of helipads in trauma centres can reduce transport time, in addition to reducing the costs and sequelae of trauma.*
>
> *Acknowledging the increased chances of survival and recovery from on-site HLS, alternative locations such as Wellington Square or Langley Park were determined to be unacceptable for Standard Operating Procedures as both locations would cause delays to patient transfer with an additional ambulance transfer, and risk to life (including increased infection risk). These locations would further pose security and accident risks for the Rescue Helicopter as well as the general public on the ground, thus requiring WA Police intervention for each helicopter landing.*
>
> *The time critical nature of the relationship between event, definitive tertiary clinical intervention and the patient's survival is the reason why the construction of a new on-site helipad that will allow immediate access for the State Emergency Rescue Helicopter Service's (ERHS's) upgraded helicopter fleet at RPH is critical for the ongoing provision of emergency healthcare in WA.*

Refer to Appendix 1 – Letter from WA State Director of Trauma 4 November 2021 (Dr Sudhakar Rao)

DFES have provided its support for the proposed flight paths, being the agency responsible for the ongoing operation of the ERHS at RPH. DFES support can also be referred to at Appendix 2.

Refer to Appendix 2 - DFES Letter of Support

2.2 Futureproofing Royal Perth Hospital

The gazettal of the *Royal Perth Hospital Protection Act 2016* secured and reiterated the importance of the hospital for the State with clause 6 of the Act stating, *Royal Perth Hospital is to continue to operate as a public hospital unless a resolution approving the closure of the hospital has been passed by each House of Parliament.*

The Commonwealth and State Government has recently announced significant funding to upgrade clinical services and infrastructure including the Intensive Care Unit and a new authorised Mental Health Unit at RPH. Additional investments have been made in innovation as well as general building and maintenance upgrades to support the ongoing operation of the hospital.

2.2.1 Requirement for Upgraded Helicopter Facilities (Helipad)

The Australian Civil Aviation Safety Authority (CASA) has released a Notice of Proposed Rule Making NPRM 1304OS entitled *Regulation of aeroplane and helicopter 'ambulance function' flights as Air Transport Operations*. The significance of the updated regulatory framework on emergency air ambulance helicopter flights is that they will need to operate in accordance with a prescribed performance criteria of Performance Class 1, which requires the use of multi-engine helicopters certified in Category A.

The Category-A certification verifies that a helicopter with one engine inoperative is capable of meeting specified performance capabilities and prescribed limits set out in *Category-A Supplement to the Rotorcraft Flight Manual* compliance. With these operational parameters it ensures the helicopter is able to continue an approach on one engine (or reject a take-off) and set down on a HLS or fly away on one engine and clear all obstacles within the flight path boundary by approximately 10 metres.

Put simply, air ambulance helicopters are required to operate at the Performance Class 1 criteria. This requires a HLS and supporting structure that is capable of withstanding the dynamic loads generated by a helicopter making a heavy landing as well as the static loads generated by stationary helicopters.

The old HLS at RPH being used by air ambulance helicopters did not meet the physical dimensions of a Category A helipad. As such, the provision of a Category-A sized helipad in support of emergency medical transport flights has been approved and is now being utilised.

2.2.2 Upgraded Helipad Development Approval

At its meeting on 28 October 2019, the Statutory Planning Committee (SPC) of the WAPC resolved to approve the new HLS for RPH subject to a number of conditions.

Please refer to Appendix 3 – Development Approval - Helicopter Landing Site

A large body of work was undertaken by RPH and technical consultants to determine the most suitable location for an upgraded HLS, which was provided in support of the development application considered by the WAPC. A combination of factors were considered to determine the most suitable location, including the following:

- Patient care outcomes associated with location characteristics (as referred to above and within Appendix 1) - Prioritising speed from injury to specialist trauma treatment, eliminating additional transfer requirements and increased patient handling risks, and reducing costs to the State/patient;
- Existing location of the SMTU;
- Existing obstacle environment in the vicinity of a proposed helipad;
- Relationship between dominant period of helicopter activity and weather patterns, in particular prevailing wind characteristics; and
- High level review in consultation with the City of Perth (the City) to determine potential building heights and reduce impacts.

'The need for helicopter emergency medical services to pick up a patient from their location, followed by immediate access to specialist treatment teams on arrival at a hospital is imperative. The location of the new helipad was carefully thought through in order to ensure alignment with the WA State Trauma System objective of optimum speed from injury to specialist trauma treatment at WA's only Level 1 Major Trauma Centre. This eliminates an additional ambulance transfer and increased patient handling risks, as well as additional cost to the State/patient...'

Source: Dr Sudhakar Rao – WA State Director of Trauma (Letter from Dr Sudhakar Rao, WA State Director of Trauma 4 November 2021)

2.2.3 Aviation Standards

The physical characteristics of a HLS as well as the associated flight paths are controlled through the following documents:

- The Civil Aviation Safety Authority (CASA) Civil Aviation Advisory Publication CAAP 92-2(2) Guidelines for the establishment of on-shore helicopter landing sites (February 2014);
- International Civil Aviation Organisation (ICAO) Annex 14 Aerodromes – Volume II: Heliports (4th edition July 2013); and
- Civil Aviation Safety Authority NPRM 1304OS Regulation of aeroplane and helicopter 'ambulance function' flights as Air Transport Operations.

The pilots currently operating the ERHS and DFES have advised that in order to continue to conduct flights to and from the RPH HLS, the flight paths need to be protected in accordance with ICAO Annex 14.

This amendment has been prepared in direct response to the above documents, with elements of these being discussed within the following report. Further technical information can also be referred to at Appendix 4.

Refer to Appendix 4 – HLS Flight path Requirements (Rehbein Airport Consulting)

Please also refer to an explanation of the interpretation of relevant aviation regulations at Appendix 5.

Refer to Appendix 5 - Interpretation of Aviation Regulations (Rehbein Airport Consulting)

element has prepared this report on behalf of EMHS in consultation with key agencies. DFES have provided its support for the proposed flight paths, being the agency responsible for the ongoing operation of the ERHS at RPH. DFES support can also be referred to at Appendix 2.

Refer to Appendix 2 - DFES Letter of Support

2.2.4 Requirement to Protect Emergency Flight Paths

The need to protect the airspace in accordance with the above mentioned CASA regulation has been acknowledged at the federal level through the Department of Infrastructure, Transport, Regional Development and Communications publication titled *National Airports Safeguarding Framework* and in particular Guideline H. Guideline H presents information relevant to protecting strategically important HLS and includes discussion on the protection measures required to ensure buildings and structures (such as construction cranes) do not intrude into the Obstacle Limitation Surface (OLS) that outlines the lower limit of the operational airspace of a helicopter flying on one engine.

Being located in the Perth central city area, RPH is located within close proximity to a number of landholdings that currently contain and/or are able to contain buildings of a significant scale. This creates a significant and very real risk to the continued successful and safe operation of the hospital and the SMTU, which is reliant upon emergency air ambulance transporting critically ill patients for urgent treatment.

It is anticipated that over time and without intervention, the safety of emergency helicopter pilots, hospital staff, patients and the general public will be compromised through the cumulative impact of additional buildings constructed within the approach and departure routes to the HLS at RPH.

The parameters guiding the methodology used to determine the most appropriate flight paths are addressed later in this report.

> *"If intrusions into the flight paths for a HLS, and risks associated with the use of those SHLS are not regulated the ongoing helicopter operations at strategically important sites may be compromised. Without protection, development in the vicinity of a SHLS could jeopardise safety and efficiency and potentially result in the decommissioning of the HLS."*
>
> *Extract from the National Airports Safeguarding Framework*

2.3 Consultation and Engagement

Throughout the preparation of this amendment request, **element** and EMHS have worked closely with a number of key stakeholders. This has included a number of project meetings and ongoing correspondence with the City as well as the following stakeholders:

- Department of Planning, Lands and Heritage;
- City of Vincent;
- Development WA;
- Department of Fire and Emergency Services; and
- Relevant technical professionals; and
- Civil Aviation Safety Authority.

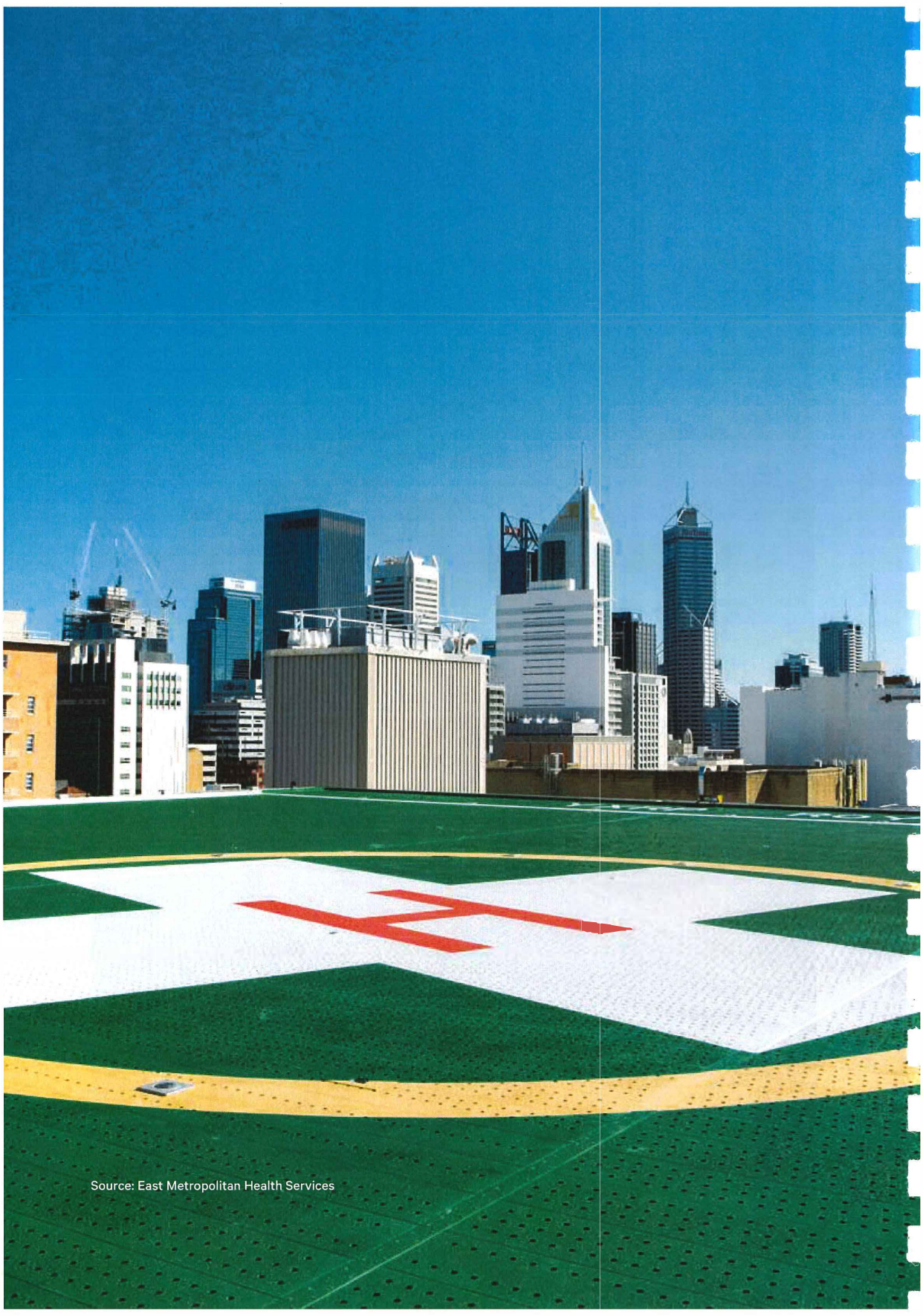
The culmination of technical advice and assistance from these stakeholders has allowed for a coordinated approach to be taken. This has allowed a number of relevant matters to be considered as part of the ongoing refinement of the proposed emergency flight paths to determine the most appropriate alignment with respect to flight requirements, strategic land use planning and minimising the impact to existing development potential as discussed throughout this report.

element.



Figure 2. Constructed helipad (Source: East Metropolitan Health Services)

7



Source: East Metropolitan Health Services

element.

3. Subject Site

3.1 Site Details

RPH is located within the Perth CBD and is generally situated toward the northern extent of the City's local government authority boundary, adjacent to the Graham Farmer Freeway and the Midland and Armadale Railway Line. RPH's facilities span multiple lots with a total land area of approximately 5.575ha. RPH maintains frontages to Murray Street, Victoria Square, Lord Street, Wellington Street and Moore Street.

Two bridges provide pedestrian connections over the road reserve of Moore Street and Wellington Street to individual buildings. The previous HLS is situated on top of the existing building located at Lot 916 (No. 212) Wellington Street, Perth. This HLS will remain operational for a temporary period of time as a backup facility to the recently completed upgraded HLS.

Refer to Figure 3 – Location Plan

Refer to Figure 4 – Aerial Plan

To protect the flightpath this amendment will apply to a series of landholdings that are located within two identified emergency helicopter flight paths and is referred to as the core flight corridor area. The core flight corridor area spans a total width of 165m and extends a total distance of 3.386km as required by relevant aviation standards and requirements for emergency helicopter flights.

This amendment also applies to a number of landholdings that are located either side of the core area. This will be referred to as the frame area and will extend 90m beyond the outer edges of each flight path for the total distance of the core area, being 3.386km. The intent of the frame area is to ensure that DFES is aware of, and approve any temporary encroachments into the core area such as swinging tower cranes associated with the construction of nearby buildings.

Differentiating between the core and frame areas will allow separate development provisions to be applied to each area to prevent obstructions within each flight path. The frame area is shown in Figures 3 and 4.

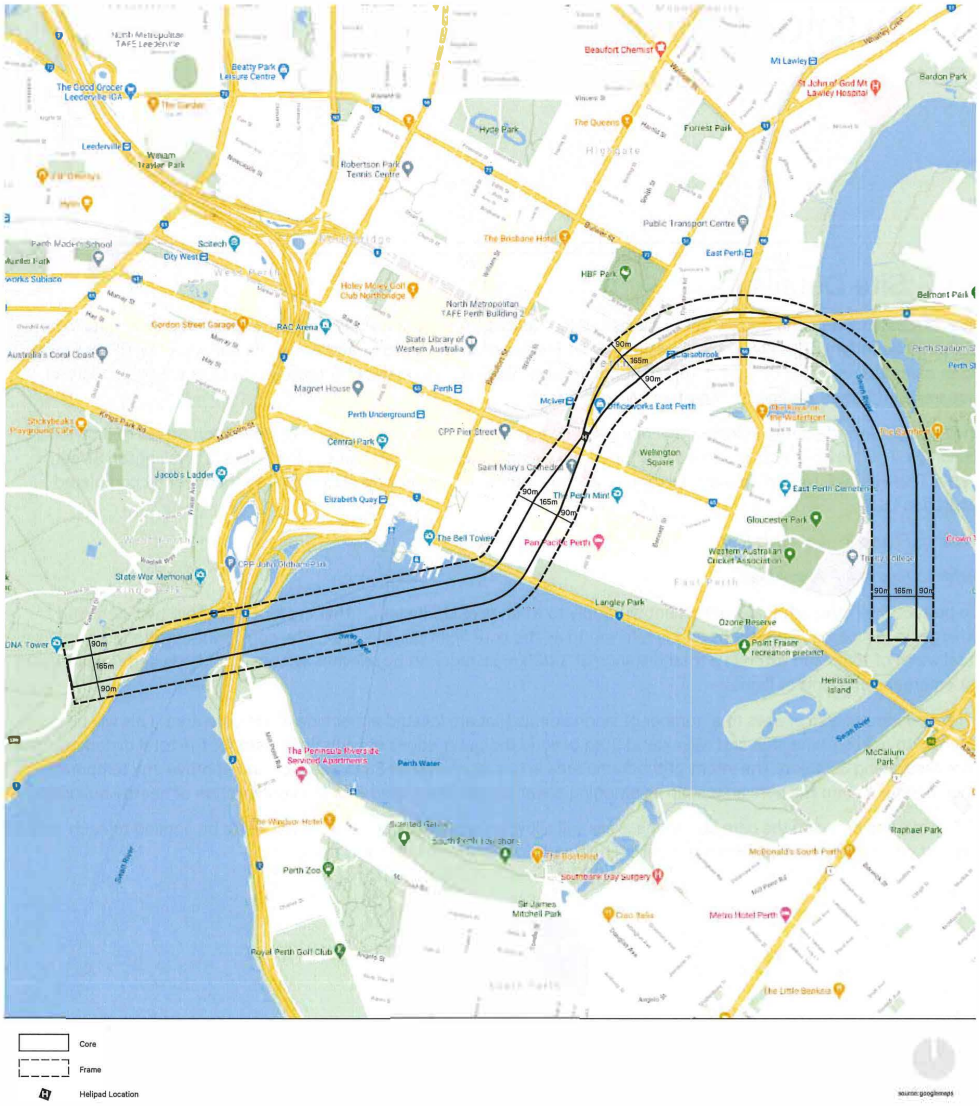


Figure 3. Location Plan

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Figure 4. Aerial Plan

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3.2 Site Context

The area immediately surrounding RPH is characterised by an eclectic mixture of buildings and land uses. The land to the immediate south of the RPH is characterised by a number of medium sized skyscrapers, whereas existing development to the immediate north and east are of a much lower scale and generally taper down toward the Swan River in the eastern most portion of the City's local government area.

There have been a number of developments recently completed in the immediate vicinity of RPH. Notably, the Westin Hotel located immediately south west of RPH along with numerous development in Northbridge and the Perth City Link. Many of these developments are of a significant scale and their overall height has resulted in ERHS pilots seeking alternative routes in and out of RPH in recent years.

Figure 5 identifies RPH within the context of the applicable planning framework and indicatively explores the potential development height above natural ground level of certain landholdings within the vicinity of RPH and the flight paths. This emphasises the purpose of the proposed amendment being sought and the importance in limiting development height where appropriate to ensure the upgraded HLS facility at RPH is protected and remains operational.



Figure 5. Indicative Development Potential Surrounding RPH

Date: 28 Jun 2022 Scale: 1:10k@ A3 15k @ A1 File: 19-139 CP-1 A Staff: LS GW Checked: LS



Source: East Metropolitan Health Services

4. Planning Framework

4.1 State and Regional Planning Context

4.1.1 Metropolitan Region Scheme

The Metropolitan Region Scheme (MRS) provides the legal basis for controlling development and land use at the regional level. The RPH site is reserved for 'Public Purposes – hospital'. The purpose and function of the 'Public Purpose' reservation is to protect land for public facilities, such as hospitals, high schools, universities, etc.

The northern flight path traverses land that is primarily zoned 'Urban'. It will also traverse land that is reserved for 'Primary Regional Roads', 'Railways', 'Parks and Recreation' and 'Waterways'.

The southern flight path traverses land that is primarily zoned 'Central city area'. It will also traverse land that is reserved for 'Public purposes – car park', 'Civic and Cultural', 'Other Regional Roads, 'Parks and Recreation', 'Waterways' and 'Primary Regional Roads'.

Refer to Figure 6 – MRS Extract

4.1.2 State Planning Strategy 2050

The State Planning Strategy 2050 was prepared by the Department of Planning, Lands and Heritage (DPLH) on behalf of the WAPC and aims to build strategic planning capacity and capability around a State planning vision.

Planning principles, strategic goals and State strategic directions are set out to respond to the challenges and opportunities that exist for the future land-use planning and development of Western Australia. The document is intended to guide and inform local community plans, growth plans and local planning schemes and strategies with structure planning and development assessments as well as planning for the coordination of physical and community infrastructure, such as hospitals.

The following extracts are of relevance to this amendment:

> *"Demand for Western Australia's goods and services will continue to rise in the foreseeable future, which will increase the pressure on the State's infrastructure."*
>
> *"Planning for the integration and coordination of both physical and social infrastructure is critical in achieving the strategic vision and goals of this document."*
>
> *"Of particular importance will be the continued collaborative approach to define the roles within all tiers of Government; and between the Government and the private sector."*
>
> *"Social infrastructure is by nature highly complex and multidimensional. All levels of government have a role to play in the coordinated delivery of the 'hard' elements of community infrastructure, including...hospitals..."*

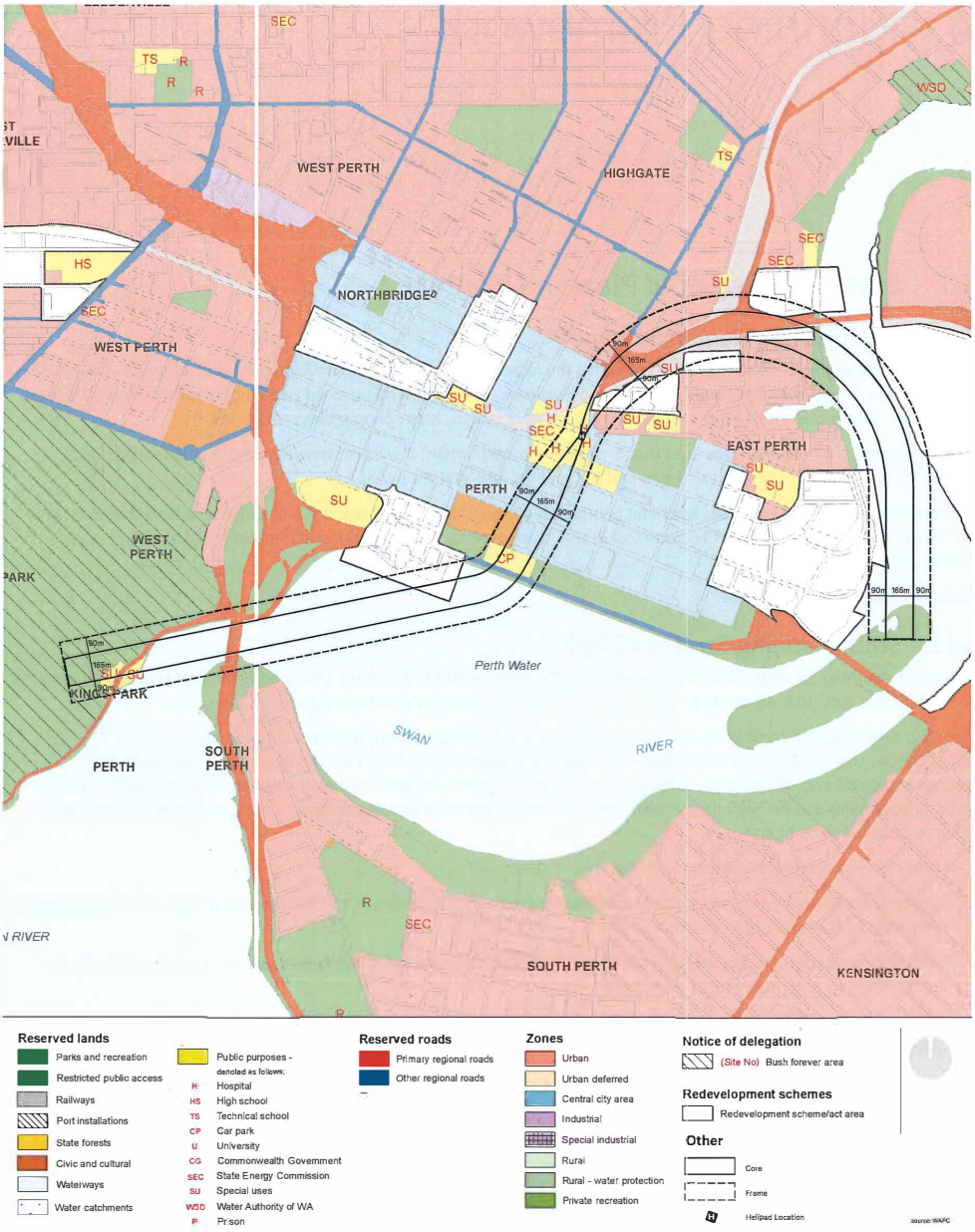


Figure 6. MRS Extract

4.1.3 Perth and Peel @ 3.5 Million

The *Perth and Peel @ 3.5million* strategic suite of documents has been developed to provide a long-term growth strategy for land use and infrastructure for the Perth and Peel regions. The framework outlines a number of overarching objectives in relation to urban form; economy and employment; community and social infrastructure; movement and access; service infrastructure; environment and landscape; and natural resources.

Relevant to the proposed amendment, the document outlines the following objective in relation to community and social infrastructure:

> *To provide a wide range of community and social infrastructure to enhance the health and wellbeing of the community and meet the community's needs including health, education and recreation, while promoting co-location and optimising the use of existing facilities and infrastructure.*

The document states that *"while population growth over time will result in increased demand for regional health facilities, the future focus will be to optimise the use of existing sites in preference to developing facilities on new sites".*

This amendment seeks to protect the ERHS at RPH and its role in supporting the SMTU.

4.1.3.1 Central Sub-Regional Planning Framework

The *Central Sub-Regional Planning Framework* (Framework) forms an integral part of the *Perth and Peel @ 3.5million* strategic suite of draft planning documents. The Framework has been developed to guide further detailed planning and decision-making by State Government agencies and local governments.

Relevant to the proposed amendment, a key principle of the framework is to *"ensure more efficient use of existing and planned service and social infrastructure to achieve a more sustainable urban environment".*

Of relevance to the proposed amendment, the following key strategic directions/priorities in relation to social infrastructure and employment are to:

> *"optimise use of existing infrastructure, with urban infill and employment opportunities utilising the principles of urban consolidation" through review and amendments to the planning framework.*
>
> *'Protect strategic industries and land classified for this purpose, together with their buffers, from the encroachment of non-strategic and/or incompatible land uses'*

The proposed amendment aligns with the broad principles and objectives of the *Perth and Peel @ 3.5million* documents, in that it will allow the existing hospital facility to remain operational and continue to meet the future needs of both the local and regional community. The proposed amendment will ensure a significant employment generator within the sub region is supported and consistent with the last strategic direction/priority outlined above, it seeks to protect the strategic industry and overall successful operation of RPH, which relies on supporting services from helicopters to meet the needs of the State.

4.1.4 Capital City Planning Framework

The Capital City Planning Framework (CCPF) establishes a spatial strategy for Central Perth and indicates how the objectives of *Directions 2031 and Beyond* and the *Central Metropolitan Perth Sub-Regional Strategy* can be delivered in this focus area.

Relevant to RPH, the document identifies the urban form for the site and southern flight path as being 'City', stating the following built form characteristics:

> ***Towers on podium:*** *High-rise elements are balanced with a podium base that reinforces scale and setbacks of the adjacent streetscape, typically four to six storeys in the city centre. Height, proportion and spacing of high-rise elements above podiums adapt to the urban context and contribute to the overall cityscape. This type has evolved to accommodate human-scaled active frontages and mitigate some of the microclimate effects created by 'skyscrapers'.*
>
> ***Modulated urban frontage:*** *Buildings are set back from the front boundary to allow for landscaped forecourts that contribute to streetscapes and the green infrastructure of the city. Buildings generally rise to their full height at their front elevation, creating a strong but less- continuous street frontage.*

The area of land to the east of RPH and in particular the northern flight path corridor is identified as being 'Urban', stating the following built form characteristics:

> ***Urban perimeter block:*** *For areas with consistently high development intensity, strongly defined urban blocks create legible built form and streetscape. Primary frontages are built to the boundary at heights appropriate to pedestrian-scaled streetscapes, typically three to six storeys. Additional levels above may be acceptable according to urban context, with further setbacks to differentiate from the primary frontage. Restrained overall heights maintain contrast with the high-rise development of the city centre and reinforce a hierarchy of building form.*
>
> ***Modulated urban frontage:*** *Buildings are set back from the front boundary to allow for landscaped forecourts that contribute to green streetscapes. Buildings generally rise to their full height at their front elevation, creating a strong but less continuous street frontage.*

Refer to Figure 7 – Capital City Planning Framework Proposed Urban Form

The proposed amendment considers the built form characteristics set out under the CCPF and aims to limit the impact to areas identified as 'City' under the CCPF as far as practically possible. The south western flight path will impact landholdings identified as having a 'City' built form, however, as outlined within the methodology section of this report and having considered all relevant parameters, there are no reasonable alternative flight path options available to the south. Notwithstanding this, the southwestern flight path impacts only a small number of landholdings before continuing over the Swan River.

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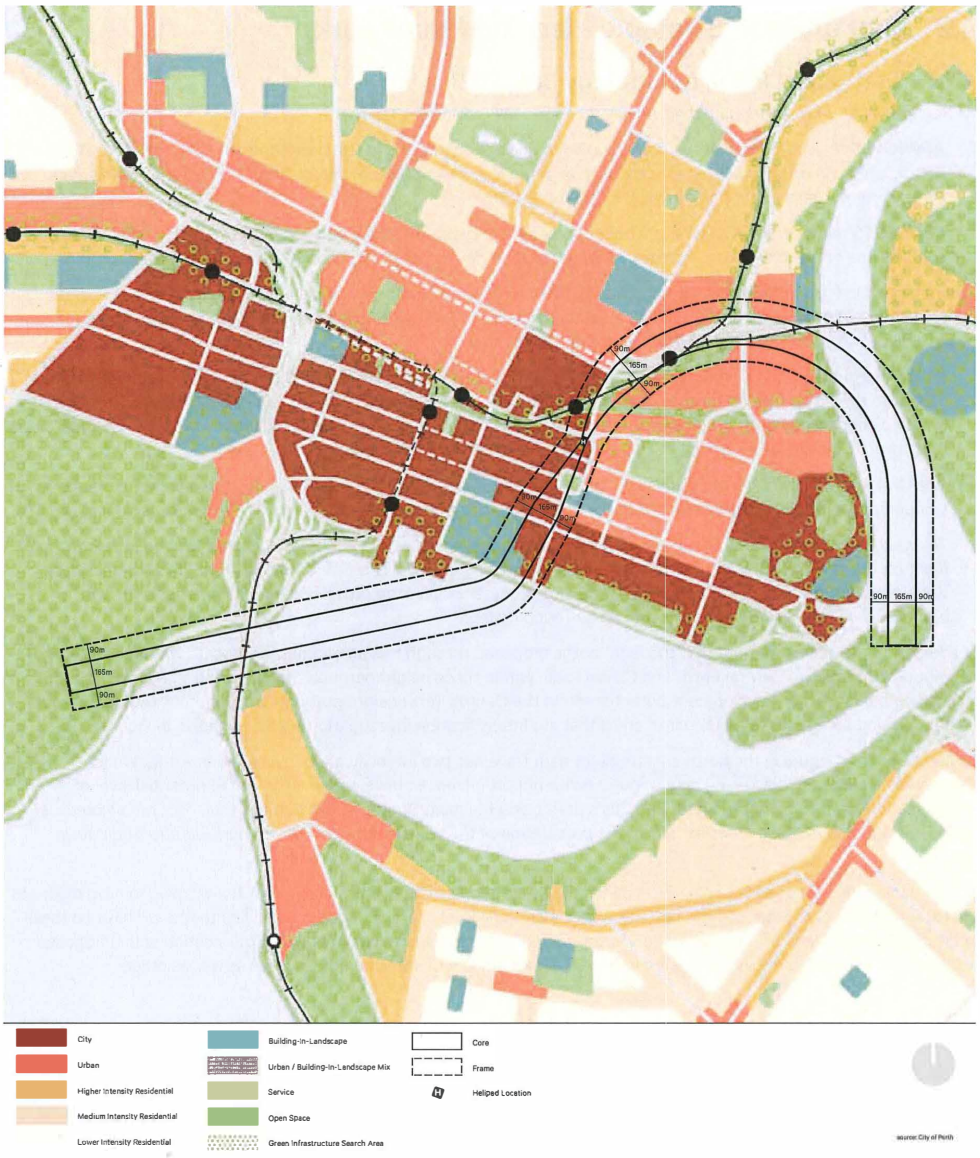


Figure 7. Capital City Planning Framework Proposed Urban Form

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4.2 City of Perth Strategic Planning Framework

4.2.1 Draft Local Planning Strategy July 2021

At the Special Council Meeting held on 13 July 2021, Council resolved as follows:

1. ***APPROVES** the submission of the draft Local Planning Strategy, as included in Attachment 6.2A, to the Western Australian Planning Commission for certification for advertising, pursuant to Regulation 12 (1) of the Planning and Development (Local Planning Schemes) Regulations 2015.*
2. ***REQUESTS** the Western Australian Planning Commission to approve the extension of the period for making submissions on the draft Local Planning Strategy from 21 days to 42 days pursuant to Regulation 13(2).*

The updated Draft Local Planning Strategy was formally advertised by the City in the first quarter of 2022. The draft Local Planning Strategy advertised outlines a number of relevant matters to consider with the following outlined on page 54 in respect to the Royal Perth Hospital Helicopter Flight Corridor:

> *As the designated State Trauma Centre for WA Health, Royal Perth Hospital (RPH) is required to maintain efficient access to a hospital helipad for the State Emergency Rescue Helicopter Service. Helicopter operations to and from RPH are conducted in accordance with the Civil Aviation Regulations and associated National Airports Safeguarding Framework Guidelines - Protecting Strategically Important Helicopter Landing Sites.*
>
> *The Civil Aviation Safety Authority has proposed modifications to this regulatory framework which will reclassify air ambulance functions and require flight paths to be established by the relevant planning authorities including the City.*
>
> *To ensure compliance with the above regulations and guidelines, it will be necessary to establish and protect formal flight corridors for RPH within the new Scheme and planning policies. The City is working with RPH and the State Government to determine the optimal location and necessary built form provisions to accommodate the flight corridor while minimising undue impacts on surrounding land.*

In addition to the above, we note that the flight paths proposed through this amendment will locate within the strategy neighbourhood areas of Central Perth and Claisebrook. Within these neighbourhoods, there are no significant changes to building height and/or development potential within the Central Perth neighbourhood area, whereas the Claisebrook neighbourhood area outlines a number of areas that are Intensification Investigation Areas, as shown in Figure 8.

As can be seen in Figure 8, the north eastern flight path traverses two Intensification Investigation Areas. Whilst these areas are identified as being able to potentially support increased development, the actual potential level of intensification is yet to be determined. The City's draft Local Planning Strategy 2021 outlines that, *'Plot ratio increases will be investigated in these areas as part of the preparation of the new Scheme taking into consideration-built form outcomes'.*

In determining the proposed level of intensification that is appropriate within these areas, the City will need to have regard to the flight paths that are proposed through this amendment. The level of impact the proposed flightpaths will have on these Intensification Investigation Areas as a whole is considered to be relatively minor, noting that the location of the proposed flight paths have been carefully considered to have the least amount of impact on these areas as well as others.

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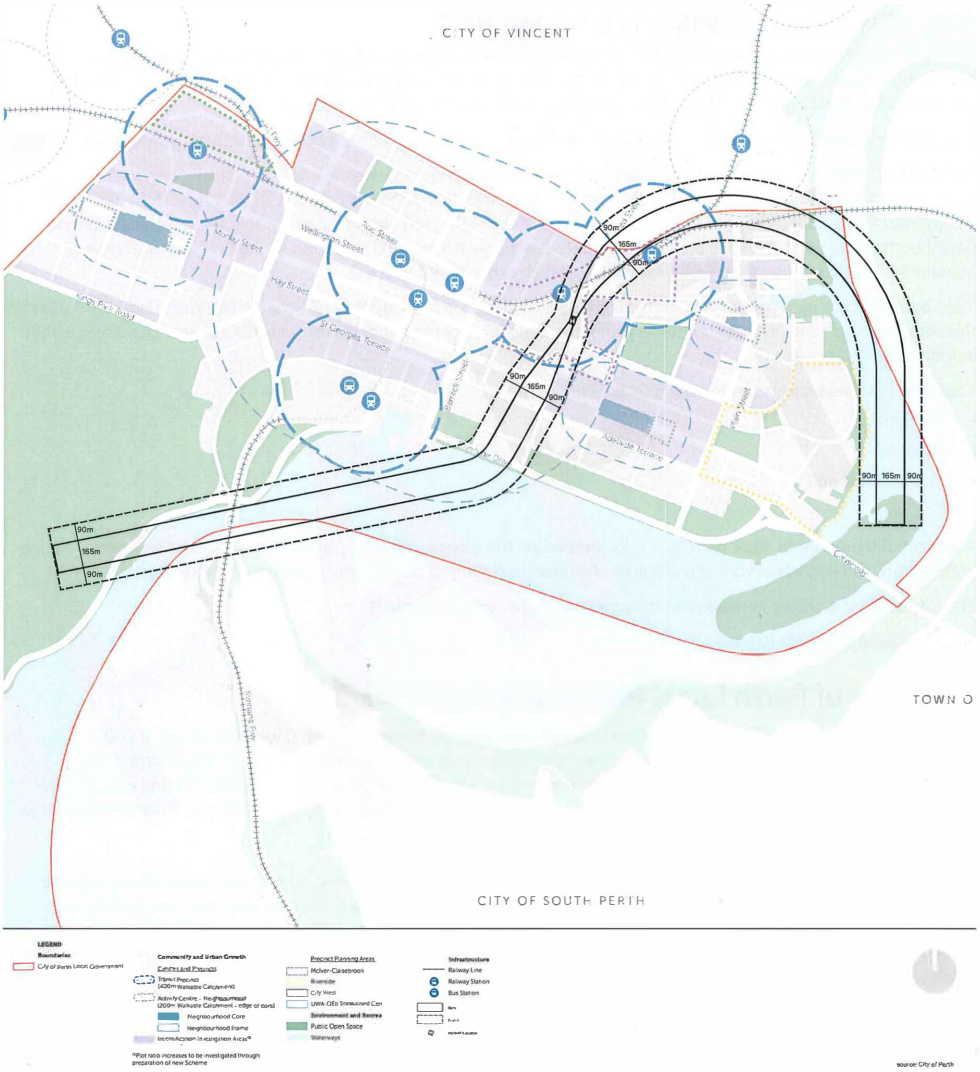


Figure 8. Local Planning Strategy 2021 Urban Growth Map – Intensification Investigation Areas

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4.2.2 City of Perth City Planning Scheme No. 2

The City's City Planning Scheme No. 2 (CPS2) is a statutory document setting out the way land is to be used and developed. The City's CPS 2 consists of the Scheme Text, Deemed Provisions, Supplemental Provisions, Scheme Map, Plot Ratio Plan, Building Heights Plan, and a number of plans relating to bonus plot ratio.

CPS 2 provides for the creation of Precinct Plans and Planning Policies, which support and further guide decision making.

The northern flight path areas are largely reserved under the MRS as explained previously. A small portion of the flight path area is included in the 'City Centre' Scheme Use Area, though this is primarily in the frame flight path area as opposed to the core flight path area. The remainder of the flight path area is located within the City's Claisebrook neighbourhood and is included in the Normalised Redevelopment Area, and is subject to the City's Local Planning Scheme No. 26 (Normalised Redevelopment Area), which is discussed below.

The southern flight path traverses land that is primarily included in the 'City Centre' Scheme Use Area under CPS 2 within the core flight path area. A small portion is within the 'Office/Residential' and 'Residential-160' Scheme Use Areas within in frame flight path area.

The flight path area covers the following CPS 2 Precincts:

- P4 Victoria;
- P7 Civic;
- P13 Adelaide; and
- P7 Civic.

A portion of the northern flight path area is located within the City of Vincent's planning control and discussions relating to their own planning framework and required changes are occurring concurrent to discussions with the City.

The City's CPS 2 is shown in relation to the proposed flight paths in Figure 9.

Refer to Figure 9 – CPS2 Extract

4.3 City of Perth Local Planning Scheme No. 26

The City's Local Planning Scheme No. 26 (Normalised Redevelopment Areas) (LPS 26) was introduced in 2007. LPS 26 provides planning provisions for the 'normalised' redevelopment areas (transferred planning control from DevelopmentWA to the City) with the administrative power to determine development applications being provided by CPS 2. LPS 26 is complementary to CPS 2 and details development requirements in the Claisebrook Village Project Area.

The Vision for the Claisebrook Village Project Area is outlined as follows:

> *Claisebrook Village will be a sustainable urban village based on the Claisebrook Cove. It will exemplify the Scheme Principles, through its environmental integrity, a high quality public realm, and diverse land uses and housing in an easily accessible and connected environment. The area will be enriched by its Indigenous and architectural heritage and public art. The area will exhibit contemporary transport planning and design principles which capitalise on its proximity to good public transport and further develop the pedestrian-friendly public realm.*

The flight path area covers the following LPS 26 redevelopment precincts which provide development standards and design guidance:

- Precinct EP4: Silver City
- Precinct EP7: East Parade
- Precinct EP8: Belvidere
- Precinct EP10: Riverbank

Concurrent to this amendment, LPS 26 will need to be amended to indicate that the provisions of the proposed Special Control Area No. 33 provisions will prevail over the LPS 26 scheme provisions.

The City's LPS26 is shown in relation to the proposed flight paths in Figure 10.

Refer to Figure 10 – LPS26 Extract

element.



Figure 9. CPS2 Extract

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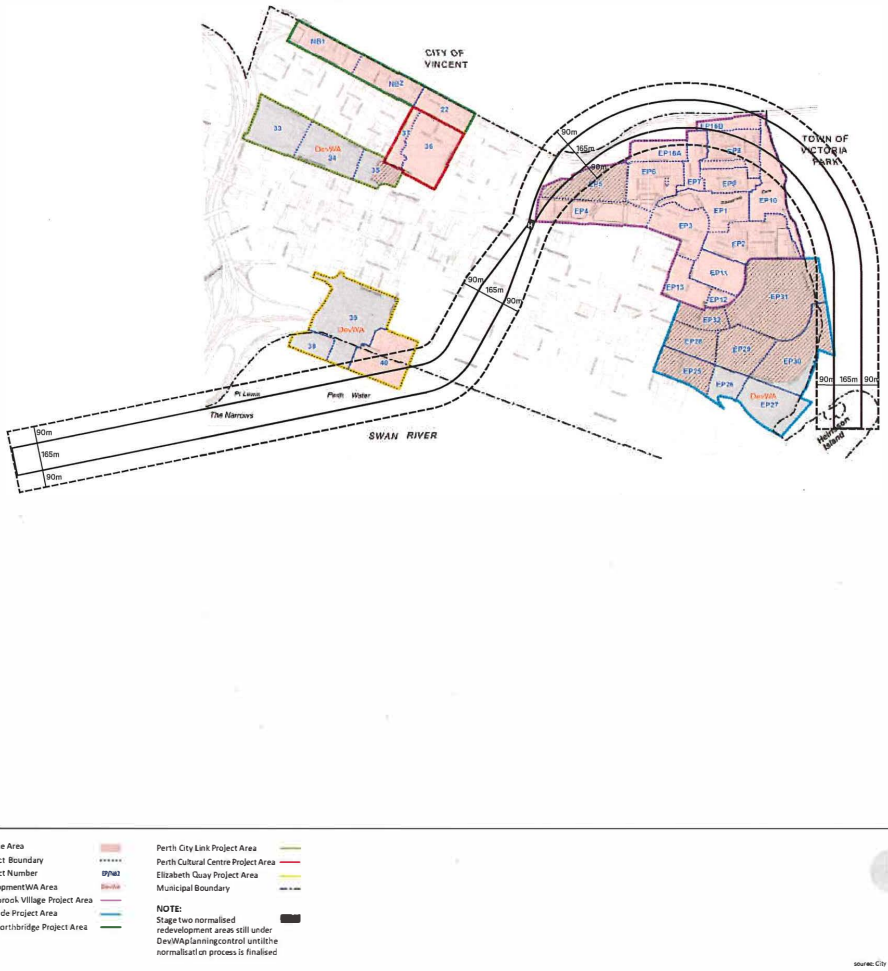


Figure 10. LPS26 Extract

4.4 Royal Perth Hospital Development Context

The area immediately surrounding RPH is characterised by an eclectic mixture of buildings and land uses. The land to the immediate south of the RPH is characterised by a number of medium sized skyscrapers, whereas existing development to the immediate north and east are of a much lower scale and generally taper down toward the Swan River in the eastern most portion of the City's local government area.

There have been a number of developments recently completed in the immediate vicinity of RPH. Notably, the Westin Hotel located immediately south-west of RPH and numerous developments in Northbridge and the Perth City Link. Many of these developments are of a significant scale and their overall height has resulted in ERHS pilots seeking alternative routes in and out of RPH in recent years.

Figure 5 identifies RPH within the context of the applicable planning framework and explores the potential development height of certain landholdings within the vicinity of RPH and the flight paths. It shows the location and height of recent planning approvals in close proximity to RPH and the proposed flight paths. This emphasises the purpose of the proposed amendment being sought and the importance in limiting development height where appropriate to ensure the upgraded HLS facility at RPH is protected and remains operational.

It should be noted that heights under the City's CPS 2 planning framework are taken from the natural ground level and figure 5 is indicative only and has not been used to inform planning controls. The proposed flight path heights are shown in Australian Height Datum (AHD).

Refer to Figure 5 - Indicative Development Potential Surrounding RPH


DFES

5. Proposal

5.1 Overview of Proposed Scheme Amendment

The purpose of the proposed scheme amendment and Special Control Area is to protect emergency air ambulance flight paths to ensure the continued successful operation of RPH and the SMTU.

In brief, the proposed scheme amendment to the City's CPS 2 will implement the following changes:

- Introduce the Royal Perth Hospital Flight Path Protection Special Control Area over land as shown in Figure 3, comprised of a Core Flight Path Area and a Frame Flight Path Area;
- Introduce maximum building heights in AHD metres within the Core Flight Path Area;
- Introduce provisions to control permanent development within the Core Flight Path Area;
- Introduce provisions to manage permanent and temporary structures (such as cranes) within the Core Flight Path Area and Frame Flight Path Areas so they are not a flight risk to flight path users; and
- Create a referral process to the owner of Royal Perth Hospital Helicopter Landing Site so they can provide advice on proposed development within the Core Flight Path Area and Frame Flight Path Area.

In addition, a scheme amendment to the City's LPS 26 will be required to amend the scheme text to indicate that the proposed Special Control Area provisions will prevail over the City's LPS 26 scheme provisions.

5.2 Proposed Scheme Amendment Provisions

This amendment seeks to insert provisions into the City's CPS 2 to protect emergency air ambulance flight paths to ensure the continued successful operation of RPH and particularly the SMTU.

To achieve this, it is proposed to amend the City's CPS 2 as follows:

Scheme Amendment Form 2A

1. Inserting a new Special Control Area under clause 39(1) as follows:

   (gg) Royal Perth Hospital Flight Path Protection Special Control Area

Amendments to Schedule 8

2. Inserting the following as Special Control Area 33 in Schedule 8:

33. Royal Perth Hospital Helicopter Flight Path Protection Special Control Area

33.1 Special Control Area

The following provisions apply to the land shown in Figures 33, 33.1 to 33.7 as the Royal Perth Hospital Helicopter Flight Path Protection Special Control Area which comprises Core and Frame Flight Path Areas.

Note: *The provisions of this Special Control Area do not apply to the parts of the Special Control Area which are legislated under the Metropolitan Redevelopment Act 2011 or to telecommunication facilities legislated by the Telecommunications (Low Impact Facilities) Determination Act 1997.*

33.2 Objectives

The objectives of the Royal Perth Hospital Helicopter Flight Path Protection Special Control Area are –

a. To ensure the continued safe operation of Royal Perth Hospital's Strategic Helicopter Landing Site in support of the hospital's function as the State's Major Trauma Unit.

b. To ensure that permanent development does not encroach into the Core Flight Path Area.

c. To ensure that temporary works and equipment within the Special Control Area do not present a hazard to helicopters using the Core Flight Path Area.

33.3 General Provisions

33.3.1 Where a provision of another Special Control Area is inconsistent with a provision of this Special Control Area, the provisions of the latter are to prevail.

33.3.2 Notwithstanding clause 39(3) of the Scheme, where the heights specified in sub-clause 33.5.1 of this Special Control Area are inconsistent with the heights specified on the Maximum Building Heights Plan, whichever is the lower height shall apply.

33.4 Requirement for Development Approval for Works

In accordance with sub clause 61(6)(a) of the Deemed Provisions, an application for development approval for works that are typically excluded under clause 61(1) of the Deemed Provisions and schedule 7 of the Scheme shall be required for works that are situated above or within 30 metres of the maximum AHD heights specified in Figures 33.2 to 33.7 for the Core and Frame Flight Path Areas.

33.5 Development Requirements

33.5.1 Within the Core Flight Path Area, permanent development, including the parts of a building which are ordinarily excluded from building height calculations, shall not exceed the maximum AHD heights specified in Figures 33.2 to 33.7, as well as intermediate maximum AHD heights determined by a 4.5% gradient as shown in Figure 33.8.

33.5.2 Within the Core and Frame Flight Path Areas, temporary works and equipment shall not present a hazard to helicopters using the Core Flight Path Area.

33.6 Consultation with Other Authorities

Where development and any associated works and equipment are situated above or within 30 metres of the maximum AHD heights specified in Figures 33.2 to 33.7 and/or the intermediate maximum AHD heights specified in Figure 33.8 for the Core and Frame Flight Path Areas, the local government shall provide a copy of the application for development approval to the owner of the Royal Perth Hospital Helicopter Landing Site for objections and recommendations in accordance with clause 66 of the Deemed Provisions.

Note: *The Department of Health's East Metropolitan Health Service is the owner of the Royal Perth Hospital Helicopter Landing Site.*

33.7 Consideration of Application by Local Government

33.7.1 Development approval shall not be granted for permanent development in the Core Flight Path Area which exceeds the maximum AHD heights specified in Figures 33.2 to 33.7 or the intermediate maximum AHD heights specified in Figure 33.8.

33.7.2 In considering an application for development approval (other than an application for which approval cannot be granted under subclause 33.7.1), the local government is to have due regard to the following matters:

a. the objectives of this Special Control Area; and

b. the views of the owner of the Royal Perth Hospital Helicopter Landing Site in relation to how the application addresses the National Airports Safeguarding Framework - Guideline H, or any other relevant technical guidelines.

33.7.3 Where development and associated works are situated above or within 30 metres of the maximum AHD heights specified in Figures 33.2 to 33.7, or the intermediate maximum AHD heights in Figure 33.8, for the Core and Frame Flight Path Areas, the local government shall include as a condition of development approval, the submission of a Construction and Demolition Management Plan in a form and manner to the satisfaction of the local government.

33.7.4 The local government shall provide a copy of the Construction and Demolition Management Plan, including any subsequent amendments to the plan, to the owner of the Royal Perth Hospital Helicopter Landing Site for recommendations for the local government to consider in determining the acceptability of the plan.

33.7.5 The owner of the Royal Perth Hospital Helicopter Landing Site shall, within 21 days of receiving the Construction and Demolition Management Plan, or within such longer period as the local government allows, provide to the local government a memorandum in writing containing any recommendations with respect to the plan and any subsequent amendments to the plan.

33.7.6 The Construction and Demolition Plan shall provide details of the temporary works and equipment, including cranes, to be used on site for construction and demolition purposes including but not limited to:

a. The duration of the construction period (start date and end date) and the time period in which any crane or other equipment will remain on site;

b. Maximum operating height, maximum operating radius and operating time/s of any crane or other equipment; and

c. The measures to be taken to minimise any potential impact on and/or encroachment into the Core Flight Path Area.

33.8 Definitions

The following definitions apply within the Special Control Area:

Core Flight Path Area - is the protected operational flight paths used by helicopters arriving and departing the Royal Perth Hospital Helicopter Landing Site as defined by the relevant civil aviation guidelines and/or standards as shown in Figures 33.2 to 33.7.

Frame Flight Path Area - is the area adjoining the Core Flight Path Area as shown in Figures 33.2 to 33.7 within which temporary works and equipment need to be considered in relation to their impact on the Core Flight Path Area.

Royal Perth Hospital Helicopter Landing Site – the rooftop landing surface used for the arrival or departure of helicopters associated with the operations of the Royal Perth Hospital State Major Trauma Unit as shown in Figure 33.1.

Permanent development – development which is not temporary works or equipment.

Temporary works and equipment – works and equipment such as cranes, machinery and structures used temporarily to undertake development and/or maintenance.

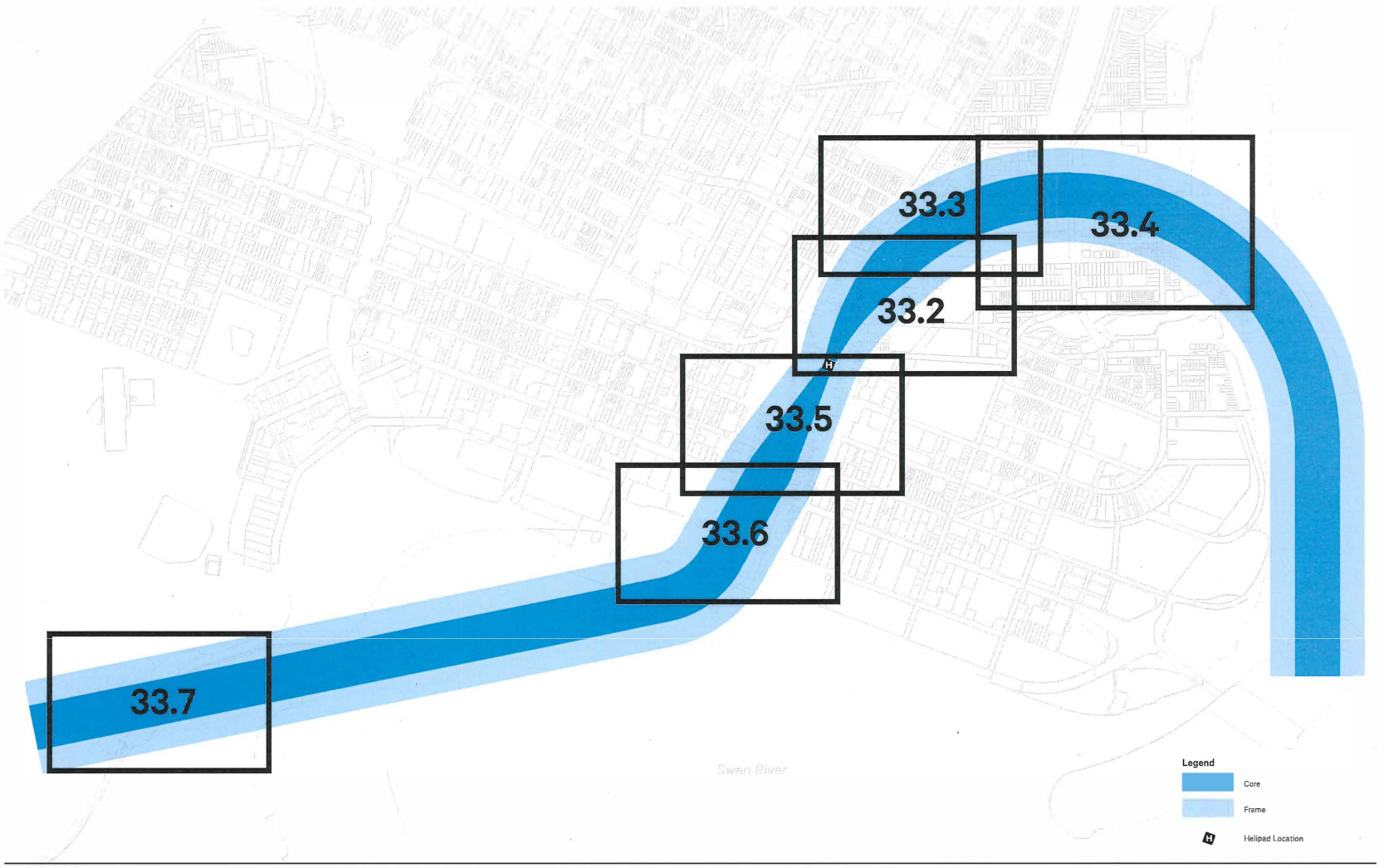


Figure 33.1 Detail Location Plan

Royal Perth Hospital Flight Path

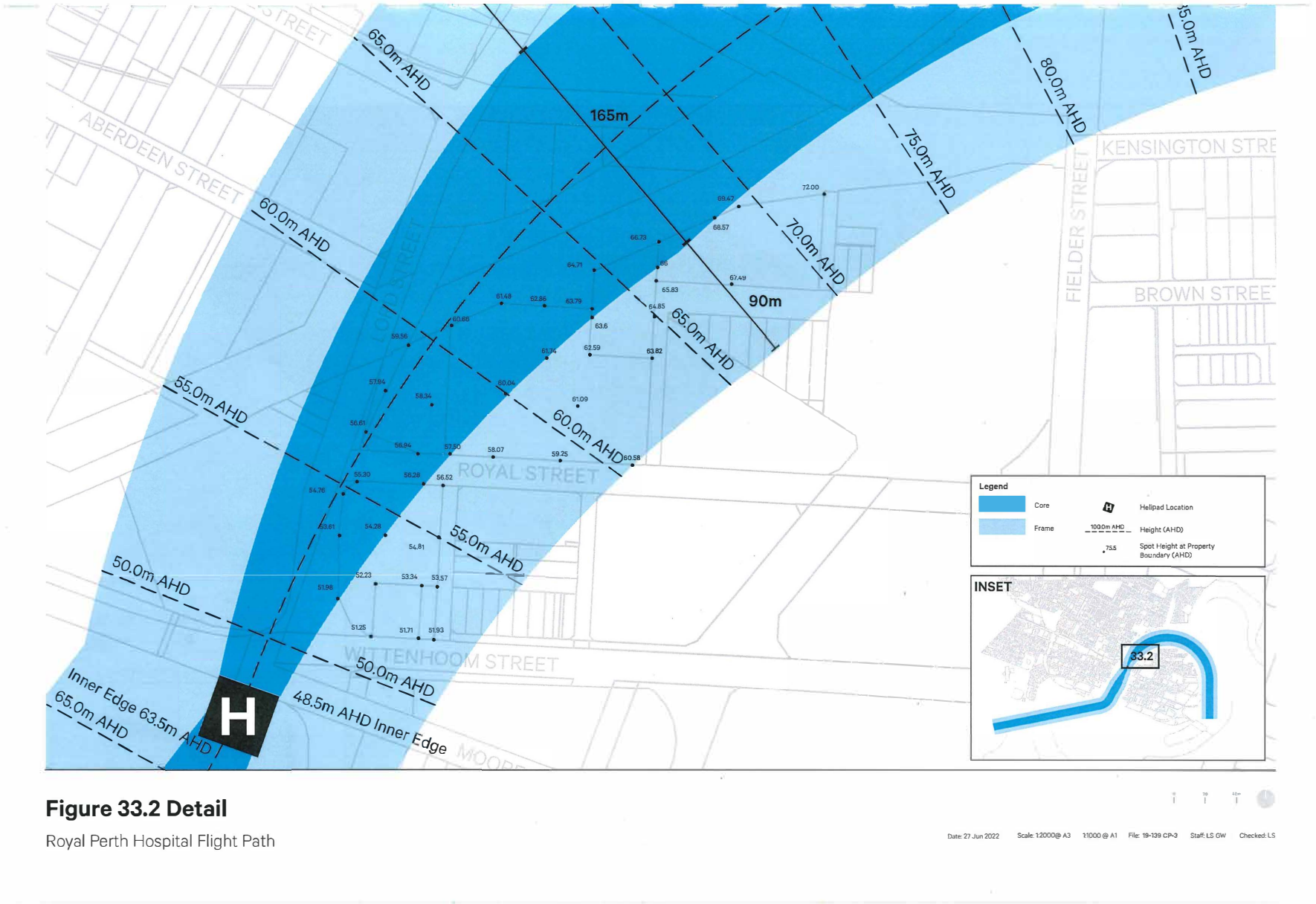


Figure 33.2 Detail

Royal Perth Hospital Flight Path

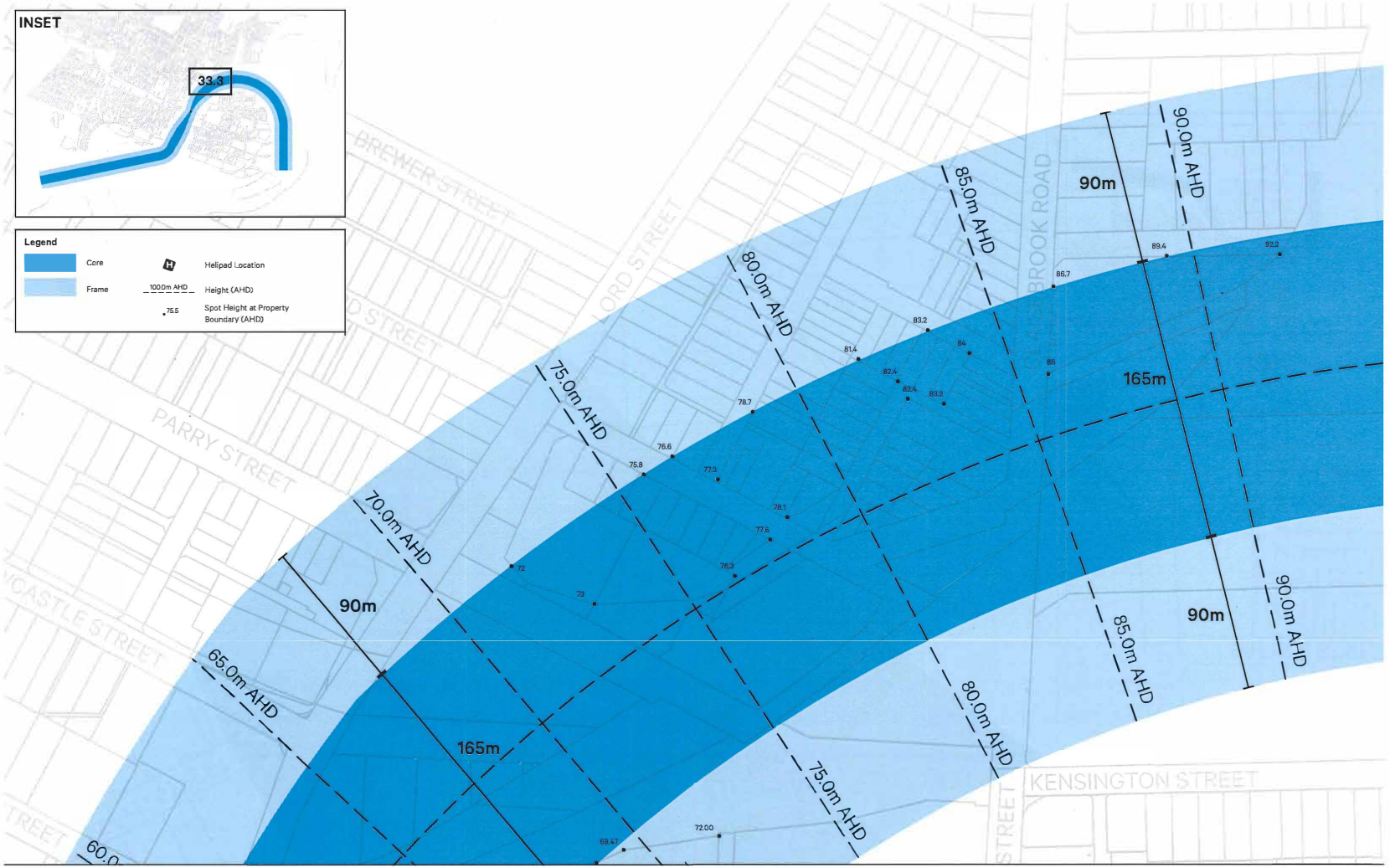


Figure 33.3 Detail

Royal Perth Hospital Flight Path

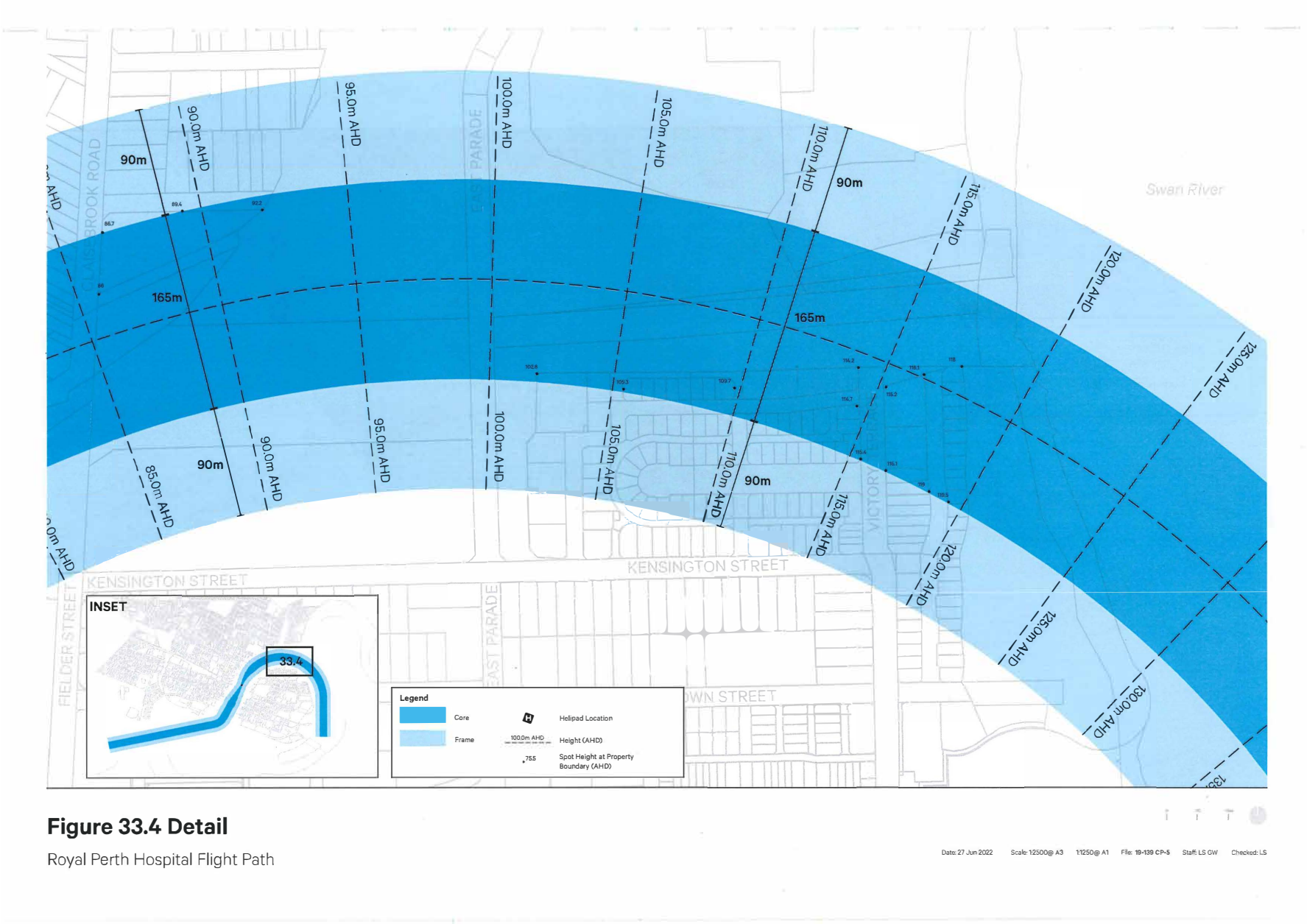


Figure 33.4 Detail

Royal Perth Hospital Flight Path

Date: 27 Jun 2022 Scale: 1:2500@ A3 1:1250@ A1 File: 19-139 CP-5 Staff: LS GW Checked: LS

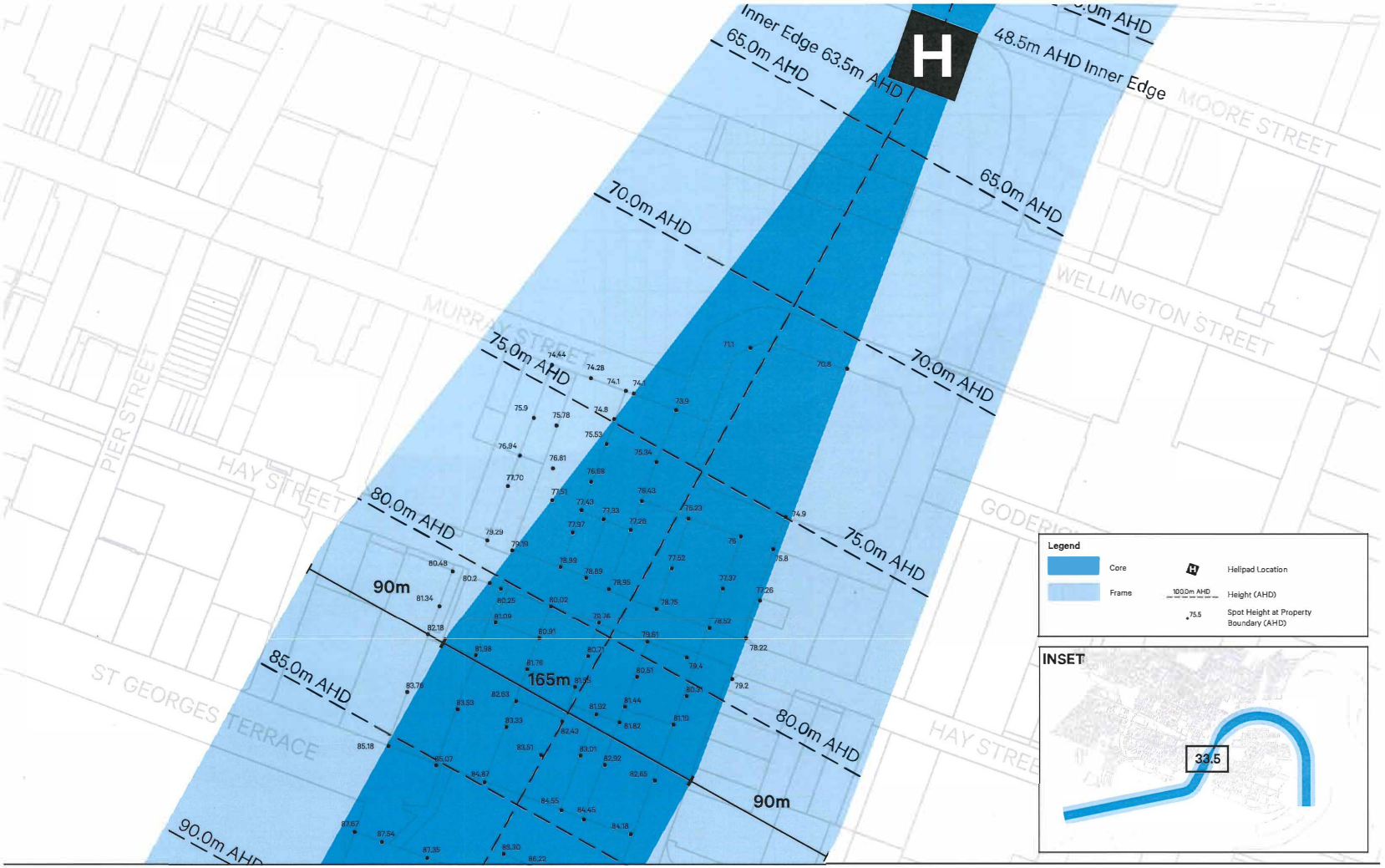


Figure 33.5 Detail

Royal Perth Hospital Flight Path

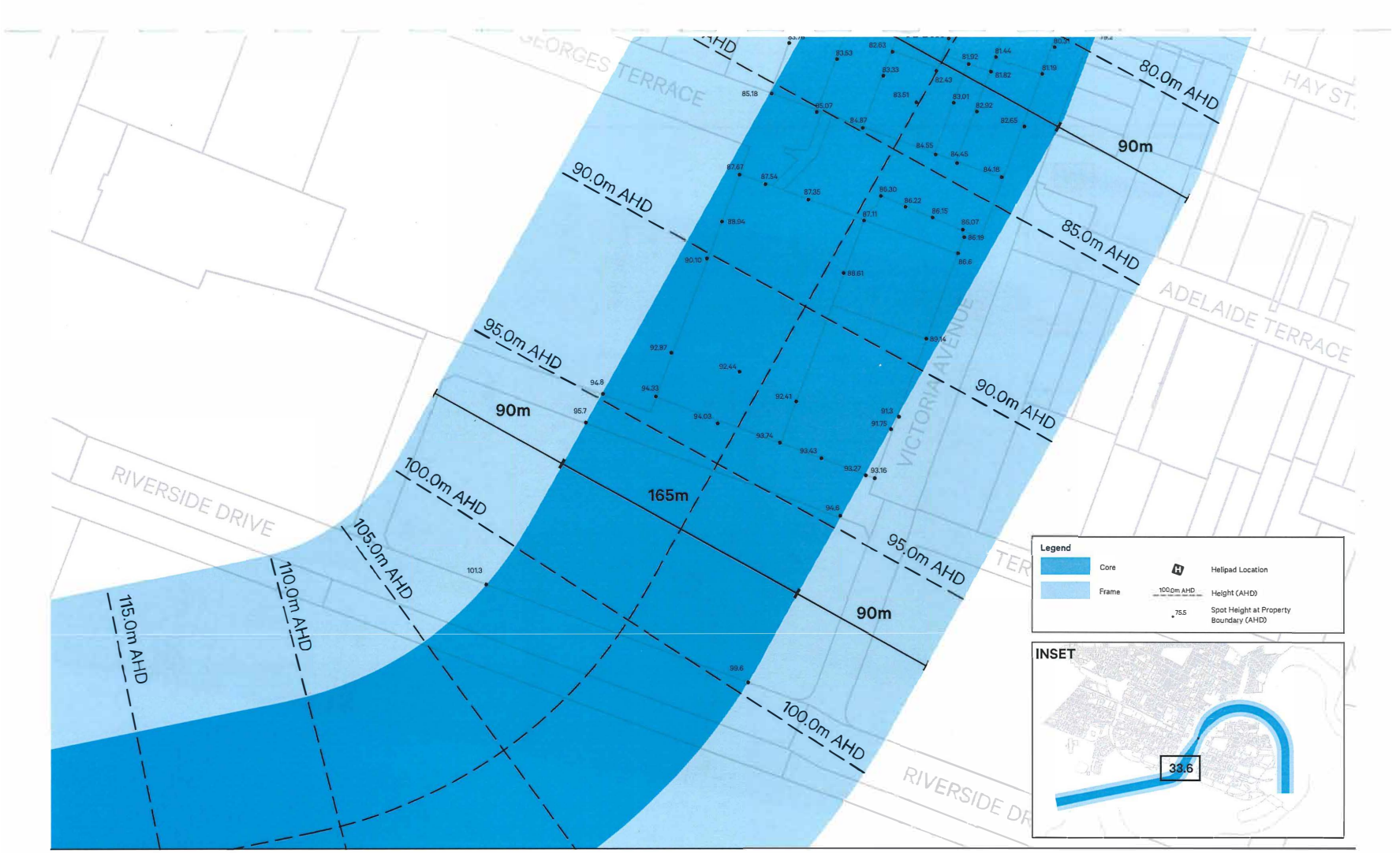


Figure 33.6 Detail
Royal Perth Hospital Flight Path

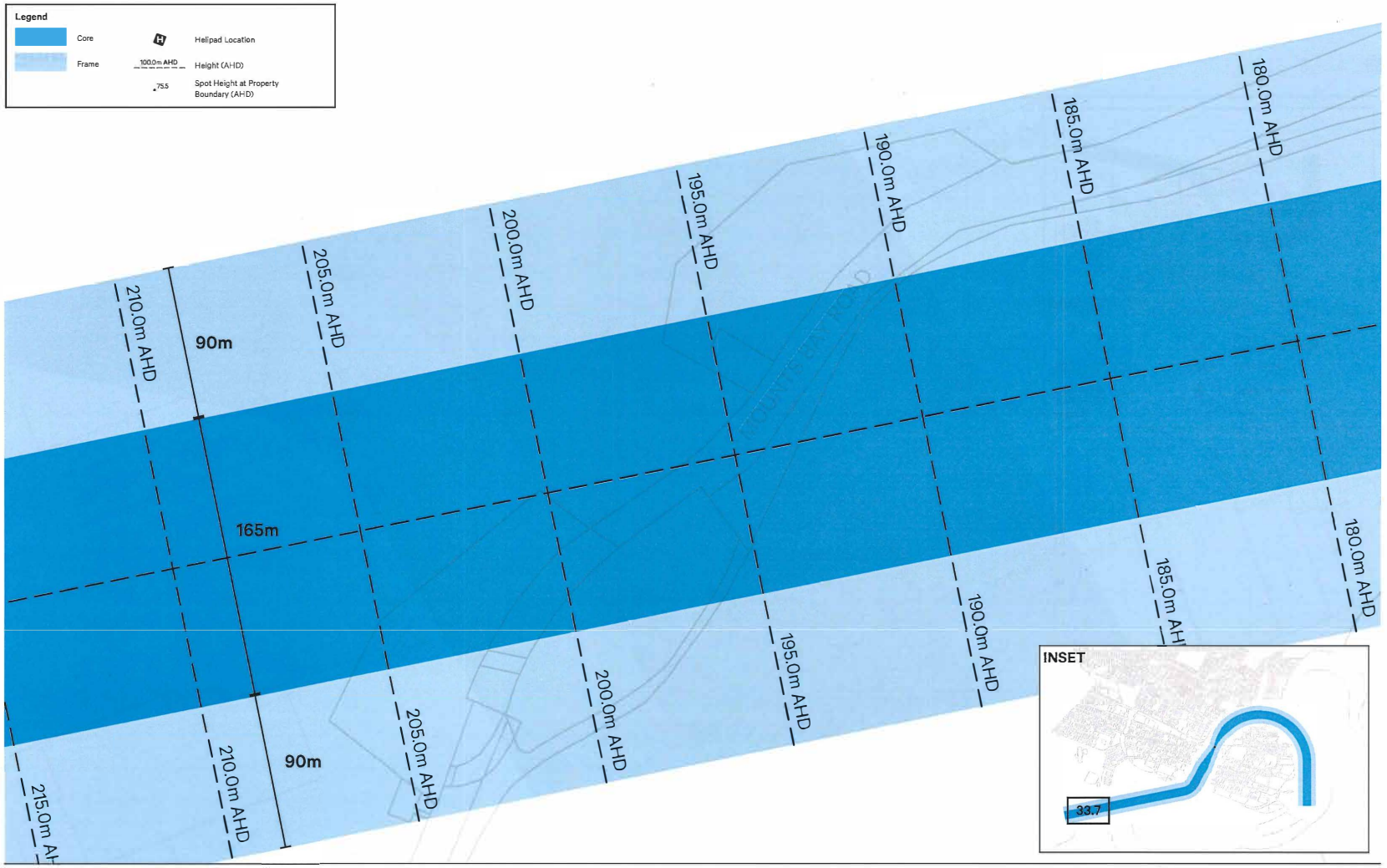
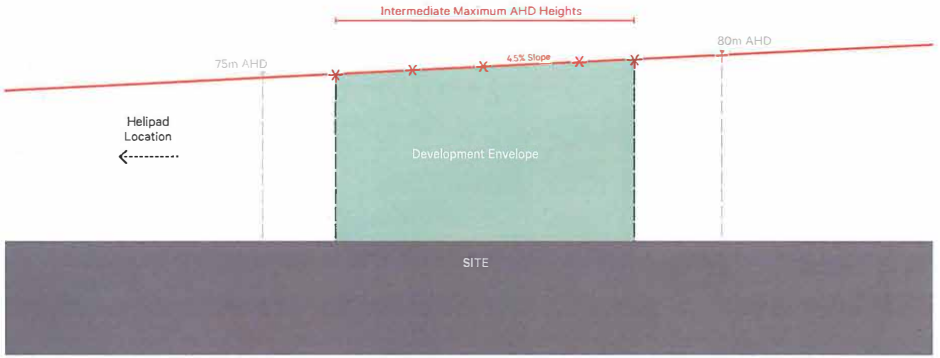


Figure 33.7 Detail

Royal Perth Hospital Flight Path

element.



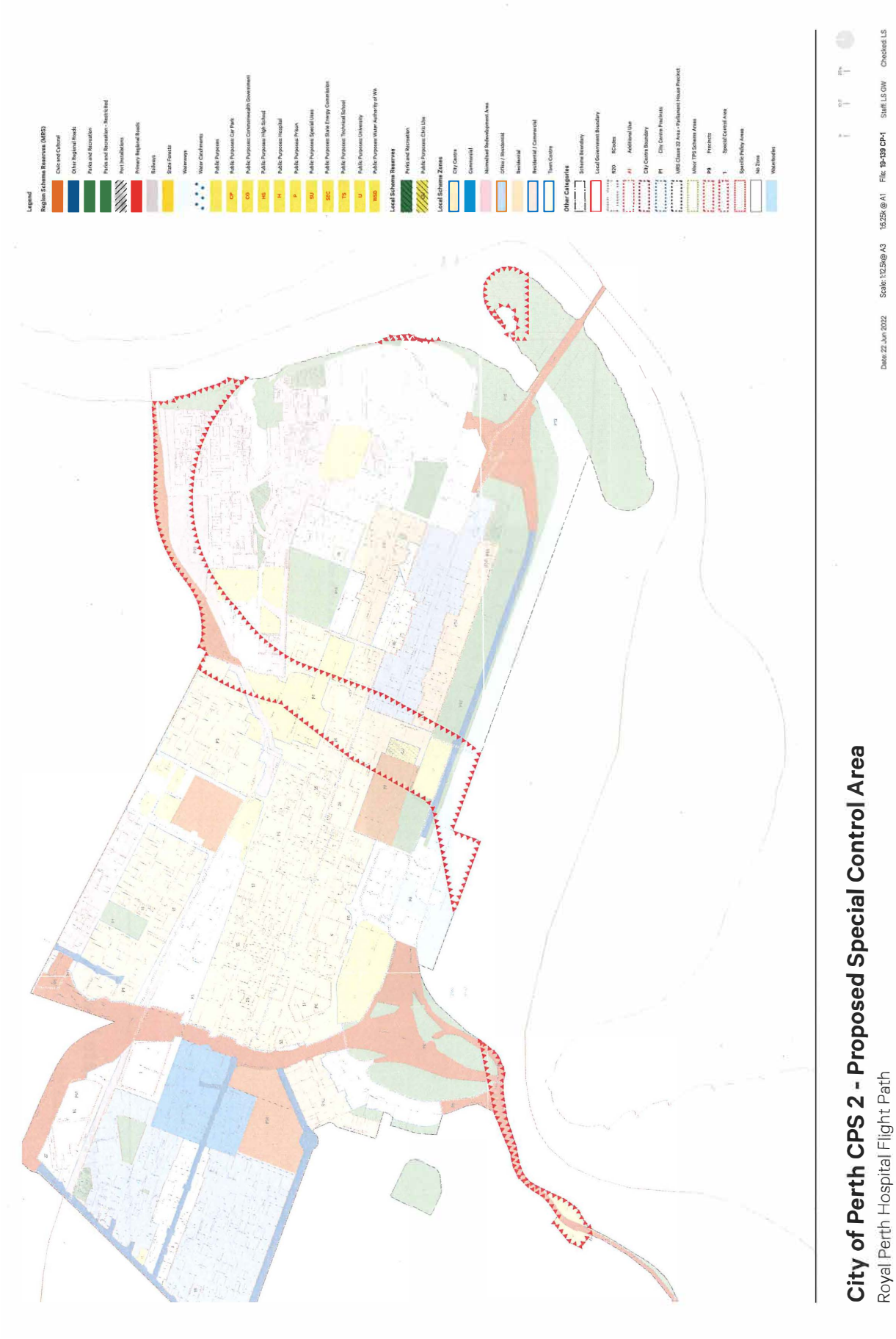
Typical section showing application of intermediate maximum AHD heights.

Note: Proponents will need to consider location, orientation and context of the development site in relation to the Helipad and associated flight paths in calculating intermediate maximum AHD heights.

Figure 33.8 Intermediate Maximum AHD Heights

Royal Perth Hospital Flight Path

Date: 22 Jun 2022 Scale: NTS @ A3 NTS @ A1 File: 19-139 CP-7 A Staff: LS GW Checked: LS


Legend
Region Scheme Reserves (MRS)
Civic and Cultural
Other Regional Roads
Parks and Recreation
Parks and Recreation – Restricted
Port Installations
Primary Regional Roads
Railways
State Forests
Waterways
Water Catchments
Public Purposes
Public Purpose: Car Park
Public Purposes: Commonwealth Government
Public Purpose: High School
Public Purpose: Hospital
Public Purpose: Prison
Public Purposes: Special Uses
Public Purposes: State Energy Commission
Public Purposes: Technical School
Public Purposes: University
Public Purposes: Water Authority of WA
Local Scheme Reserves
Parks and Recreation
Public Purposes: Civic Use
Local Scheme Zones
City Centre
Commercial
Normalised Redevelopment Area
Office / Residential
Residential
Residential / Commercial
Town Centre
Other Categories
Scheme Boundary
Local Government Boundary
R20
RCodes
Additional Use
City Centre Boundary
City Centre Precincts
MRS Clause 32 Area – Parliament House Precinct
Minor TPS Scheme Areas
Precincts
Special Control Area
Specific Policy Areas
No Zone
Warehouses
City of Perth CPS 2 - Proposed Special Control Area
Royal Perth Hospital Flight Path
Date: 22 Jun 2022
Scale: 1:12.5k@ A3
1:6.25k @ A1
File: 19-139 CP-1
Staff: LS GW
Checked: LS

5.3 Proposed Scheme Amendment Classification

The *Planning and Development (Local Planning Schemes) Regulations 2015* include three categories for amending Local Planning Schemes, each with their own processes and timeframes to be followed. In this instance, the proposed amendment is considered to align most closely with the definition of a 'complex amendment', which is set out as follows:

> ***complex amendment*** *means any of the following amendments to a local planning scheme —*
>
> *a. an amendment that is not consistent with a local planning strategy for the scheme that has been endorsed by the Commission;*
>
> *b. an amendment that is not addressed by any local planning strategy;*
>
> *c. an amendment relating to development that is of a scale, or will have an impact, that is significant relative to development in the locality;*
>
> *d. an amendment made to comply with an order made by the Minister under section 76 or 77A of the Act;*
>
> *e. an amendment to identify or amend a development contribution area or to prepare or amend a development contribution plan;*

Whilst the City's draft Local Planning Strategy identifies the requirement to protect emergency helicopter flight paths associated with RPH, the WAPC have not endorsed it. The proposed scheme amendment will have an impact on development within the locality and on this basis, the scheme amendment is considered to be 'complex'.

5.4 Planning Justification

5.4.1 Background to Flight Path Evaluation Methodology

To support the development application associated with the new upgraded HLS at RPH, EMHS previously engaged a project team with relevant professional to design and document the optimal helicopter approach and departure flight paths to the upgraded HLS. Two separate flight paths were developed having regard to the relevant guidelines and documentation controlling helicopter operations.

At its meeting of 3 September 2018, the Central Perth Central Planning Committee considered and resolved to:

1. provide support for the amended flight paths as detailed in Attachment 2;
2. provide support for the lodgement of a Development Application relating to the proposed helipad and helicopter flight paths; and
3. provide support for the preparation of a scheme amendment to protect the proposed flight paths from future development.

Refer to Appendix 6 – Central Perth Planning Committee Meeting (3 September 2018)

The flight paths outlined in Attachment 1 of Appendix 6 informed the location of the upgraded HLS and facilitated discussions between key stakeholders in the vicinity of RPH. Development WA (formerly Metropolitan Redevelopment Authority) and the Roman Catholic Archbishop of Perth also provided in principle support for the project and the proposed flight paths.

Refer to Appendix 7 – Letters of Support (previous indicative flight paths)

In respect to Central Perth Planning Committee's resolution outlined above, it is acknowledged that the proposed flight paths forming part of this amendment differ from the previous flight paths given in principle support. Since this time, ongoing detailed analysis and consideration has been given to the proposed flight paths to meet all relevant guidelines and documents controlling aviation operations. Notwithstanding this, the updated flight paths incorporated within this amendment are largely consistent with the existing flight paths that were previously supported. Further detail in this respect can be found within Appendix 4.

Refer to Appendix 4 – HLS Flight path Requirements (Rehbein Airport Consulting)

5.4.2 Requirement to Protect Emergency Flight Paths

The proposed amendment is being undertaken to align with a number of relevant elements that influence the ongoing successful operation of the ERHS at RPH. This includes the interrelationship between the existing planning framework and development opportunities, the National Airports Safeguarding Framework, relevant aviation standards, State government investment and futureproofing the successful operation of the SMTU at RPH to support the States medical emergency needs.

There are currently no set flight paths in place for the existing helicopter operations at RPH. Current flight paths in and out of RPH are determined by the operator of the ERHS, with specific decisions being made by the pilot in charge at the time of operation. Pilots are required to operate the ERHS in accordance with the *Civil Aviation Act 1988, the Civil Aviation Safety Regulations 1998* and associated guidance material. The existing regulatory framework allows pilots to fly in and out of RPH in the most appropriate direction, taking existing obstacles and weather conditions into consideration. As a greater number of buildings with significant scale are developed in the vicinity of RPH, pilots are having to continuously adjust the approach and take off directions, with the overall number of options being reduced as a result.

The proposed amendment seeks to protect flight paths associated with the ERHS at RPH in accordance with the National Airports Safeguarding Framework. Importantly, this amendment seeks to protect ERHS flight paths in an emergency, one-engine inoperative (OEI) scenario that may occur in the event of an engine failure. Protecting emergency flight paths at RPH in accordance with the National Airports Safeguarding Framework and applicable regulations will ensure that a helicopter can safely continue its flight to an appropriate landing area to protect its crew and the general public from a catastrophic event.

For the majority of the time and in normal operating conditions, the ERHS and pilot in command will continue to determine the most appropriate flight path by considering existing obstacles and weather conditions. Notwithstanding, ongoing development of significant scale in proximity to RPH will continue to limit flight path directions and options available to pilots. Over time, this will see the proposed flight paths become the preferred path of travel as limits ongoing operational risk to the ERHS.

5.4.2.1 National Airports Safeguarding Framework

At the national level, the Department of Infrastructure, Transport, Regional Development and Communities have developed the National Airports Safeguarding Framework (the Framework), which aims to provide guidance on planning and development that may impact upon aviation operations. This includes development around airports and strategically important HLS.

The Framework was developed by an advisory group made up of representatives from Commonwealth Infrastructure and Defence departments, aviation agencies, State and Territory planning and transport departments as well as the Australian Local Government Association.

The Framework comprises a series of Guidelines that each refer to a specific area of aviation. This includes, but is not limited to, matters such as wildlife risk, lighting distraction, communication and navigation. Of importance to this proposed amendment is Guideline H: Protecting Strategically Important Helicopter Landing Sites.

The National Airports Safeguarding Framework Factsheet summarises the importance of HLS and the purpose of Guideline H as follows:

> *'The protection of strategically important helicopter landing sites (HLS) (such as those associated with hospitals) from the adverse impacts of development has become a critical issue in recent years. There have been times where hospital emergency helipads have been closed due to safety concerns arising from the nearby operation of construction cranes. Guideline H seeks to provide a consistent national approach for land use planning in the vicinity of these facilities. State and Territory governments are responsible for identifying HLS that are considered to be of strategic importance, or those that are to be protected in the interest of public safety'.*

Guideline H addresses a number of matters to ensure that:

1. HLS are not compromised by development encroaching into flight paths;
2. new development (and activities) do not present a hazard to helicopters arriving or departing from HLS;
3. lighting does not distract or cause interference with night time operations;
4. noise impacts from helicopter operations are mitigated; and
5. building induced windshear or air turbulence is considered, where this could affect the normal flight of helicopters operating from HLS.

In assessing a proposed development within the vicinity of RPH and the associated flightpaths, the decision maker should have regard to the abovementioned matters and other guidance provided within Guideline H. Consistent with the purpose of Guideline H, the ongoing consideration of these matters by a decision maker as part of a development assessment process will ensure:

a. *the ongoing operation of those SHLS;*

b. *the use of those SHLS are not compromised by any proposed development encroaching into flight paths;*

c. *new development (and associated activities) do not present a hazard to helicopters arriving or departing from those SHLS;*

Of the matters addressed in Guideline H, most of these are matters to be considered by the decision maker, although the following matters are of relevance to the operator of the ERHS in respect to determining the suitability of a HLS location:

- Obstacle Limitation Surfaces;
- Lighting;
- Noise; and
- Windshear and Turbulence.

5.4.3 Helicopter Design Characteristics and Flight Path Design Requirements

The following summarises the key helicopter design characteristics and requirements that have informed the flight paths propose to be protected. These represent a culmination of matters that are addressed within the following documents:

- The Civil Aviation Safety Authority (CASA) Civil Aviation Advisory Publication CAAP 92-2(2) Guidelines for the establishment of on-shore helicopter landing sites (February 2014);
- International Civil Aviation Organisation (ICAO) Annex 14 Aerodromes – Volume II: Heliports (4th edition July 2013); and
- Civil Aviation Safety Authority NPRM 1304OS Regulation of aeroplane and helicopter 'ambulance function' flights as Air Transport Operations.

5.4.3.1 Helicopter Design Characteristics

DFES and the operator of the ERHS have confirmed the following key design characteristics are consistent with the current and future emergency helicopter fleet utilising the upgraded HLS at RPH, which have informed the design requirements for the upgraded helipad and associated flight paths.

D-Value

The D-Value is the largest overall dimension of the helicopter when its rotors are turning. The helicopter fleet utilising the RPH HLS will have a maximum D-value of 21m as shown in Figure 11 below.



Figure 11. Helicopter D-value

Rotor Diameter

The helicopter fleet utilising the RPH HLS will have a maximum rotor diameter of 16.5 m as shown in Figure 12 below.

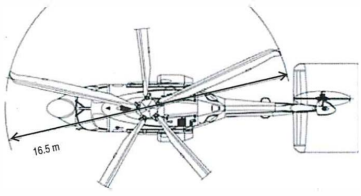


Figure 12. Helicopter rotor diameter

Core Flight Path Width

The proposed flight paths will have an overall width of 165m, being ten times the helicopter's rotor diameter as required by CAAP 92-2(2) for night time operations. The minimum width of a flight path ensures that the area of flight is protected from obstacles. The total width takes crosswinds into consideration.

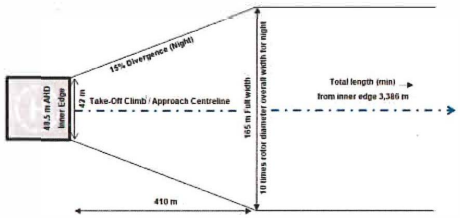


Figure 13. Helicopter flight path width

Performance Class

The helicopter fleet utilising the RPH HLS will be of a Performance Class 1, which effectively means that in the event of an engine failure, sufficient performance is available to enable the helicopter to land safely or continue to fly toward an appropriate landing area, depending on where the failure occurs.

Obstacle Limitation Surface (OLS) Slope

To ensure that the Performance Class 1 helicopter fleet can operate safely on one engine, a maximum take-off climb surface of 4.5% is required as illustrated below. This ensures that there is a minimum level of performance available to clear obstacles and remain within the OLS that is proposed to be protected through this amendment.

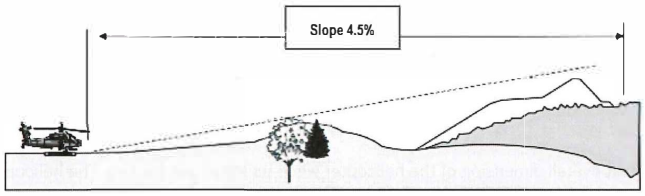


Figure 14. Helicopter take-off climb surface | Source: ICAO Annex 14-II Figure 4-6

Approach and Take-off Climb Surfaces

ICAO Annex 14 and CASA CAAP 92-2(2) requires that a HLS must comprise at least two (2) approach and take-off climb surfaces. These surfaces are required to be separated by a minimum angle of 150°.

ICAO Annex 14 allows for the flight paths to be curved to avoid obstacles or take advantage of a more suitable flight path course, however, only one (1) curve is allowed and it must have a constant rate radius of turn.

The total length of the approach and take-off climb surfaces must be 3,386m. The proposed flight paths for the HLS at RPH are each constructed to 3,400m in total length, bringing each flight path to a total of 201.5m AHD or 153m above the elevation of the HLS.

element.

5.4.3.2 Flight Path Design Characteristics

The project team have continued to work closely with key stakeholders in determining the most appropriate flight paths to be incorporated within this proposed amendment. Importantly, the flight paths have been designed to meet all relevant aviation standards and requirements whilst minimising the impact to landholdings as far as practically possible by limiting flight time over land.

The following matters were considered in determining the most appropriate flight paths:

- Limit impact to landholdings as far as practical by:
  - taking advantage of major road and rail reservations; and
  - utilising the Swan River for a large proportion of the flight path length;
- Consider the existing and future planning framework to:
  - limit the impact on existing development potential as far as practical; and
  - recognise and limit the impact to areas of land that are of strategic importance to the State, the City of Perth, the City of Vincent and DevelopmentWA for future infill development;
- Ensure all relevant aviation safety standards and requirements are met.

For further information related to the flight path design requirements and helicopter design requirements, please refer to Appendix 4.

Appendix 4 - HLS Flight path Requirements (Rehbein Airport Consulting)

North East Emergency Flight Path

A north-eastern flight path is shown in Figure 15 below. This flight path consists of a curved take-off and climb surface and begins to straighten out once over the Swan River before finishing at the northern most portion of Herrison Island, 3.386km away from the RPH HLS.

The north eastern flight path is primarily located within the City of Perth's local government area. The northern most portion also crosses into the City of Vincent's local government area as shown in Figure 15.

Detailed investigation has been undertaken to determine the most suitable flight path course. The analysis considered the various matters outlined above under the flight path design characteristics. Consideration of various options involved ongoing consultation with Rehbein Airport Consulting, EMHS, DFES, the operator of the ERHS, the City of Perth, the City of Vincent and Development WA.

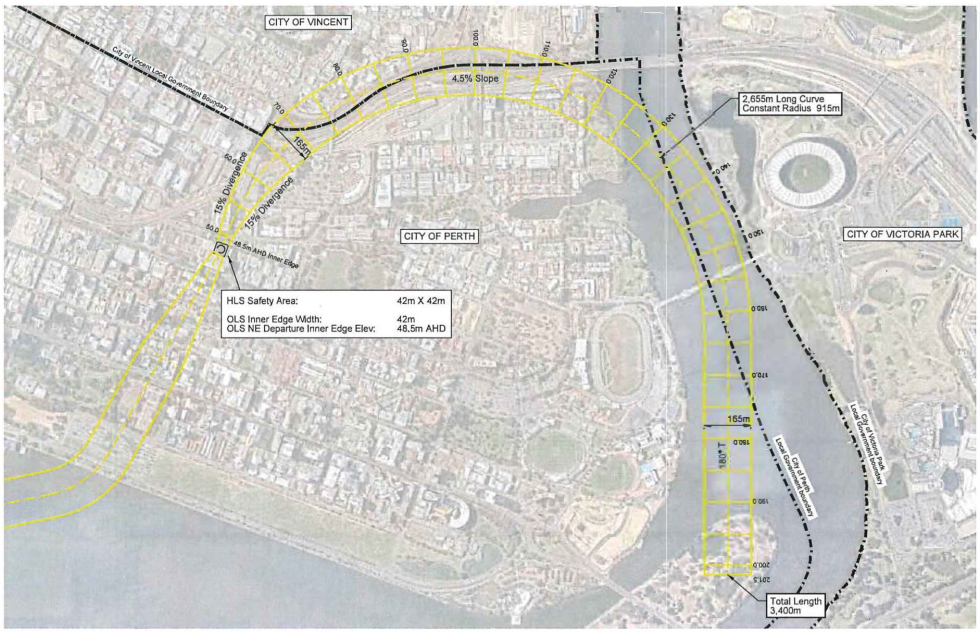


Figure 15. North east flight path

South West Emergency Flight Path

The south western flight path commences with a straight section for a distance of 790m in south westerly direction. The flight path then transitions to a curve at the edge of the Swan River where it continues in a west south westerly direction before finishing over Kings Park, 3.386km away from the RPH HLS as shown in Figure 16.

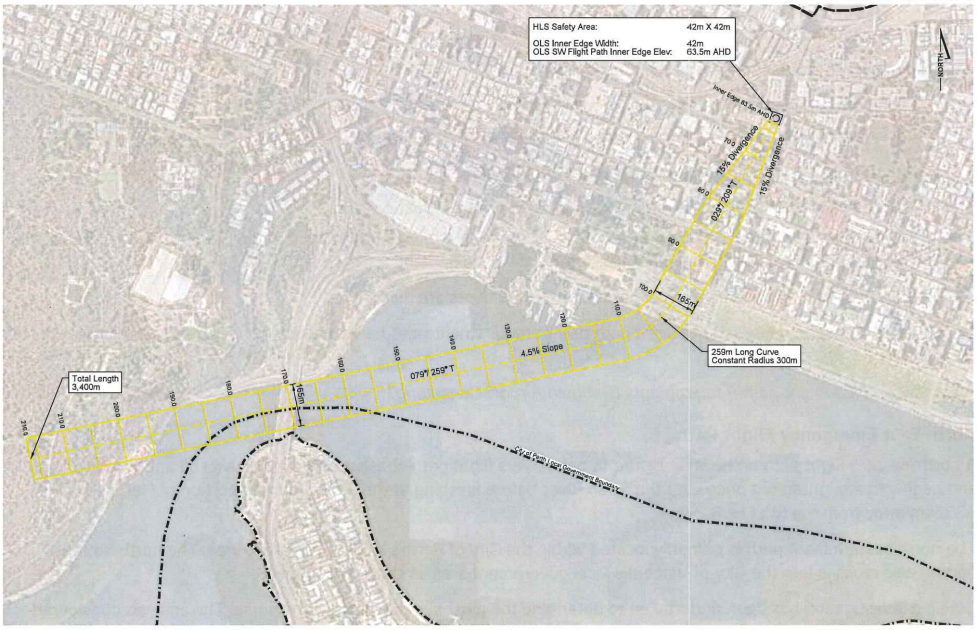


Figure 16. South west flight path

The OLS of the flight path has been designed to begin 15m above the height of the HLS. This is required to ensure helicopters clear an existing RPH building that is located immediately south of the HLS known as 'South block'.

To clear the existing building to the south, during take-off, pilots will to elevate to an appropriate distance during the back-up procedure before continuing its flight in a forward direction. This is a common procedure undertaken by pilots of Performance Class 1 helicopters and is explained below in Figure 17. The take-off procedure has been approved by DFES and the operator of the ERHS during ongoing consultation as part of this process.

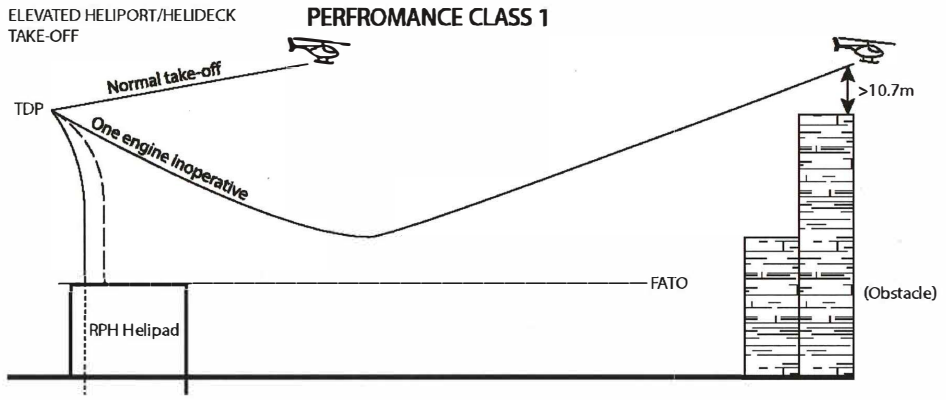


Figure 17. Take-off backup procedure

As undertaken with the north eastern flight path, detailed investigation has been undertaken to determine the most suitable course for the flight path and has considered various matters outlined previously within this report and addressed in more detail within Appendix 4.

Refer to Appendix 4 – HLS Flight path Requirements (Rehbein Airport Consulting)

In addition to this and most importantly, the flight path is positioned to avoid the following existing buildings as also illustrated in Figure 18:

- The Westin Hotel at 480 Hay Street, Perth (approximately 120m AHD);
- Condor Tower at 22 St Georges Terrace, Perth (approximately 103m AHD); and
- 256 Adelaide Terrace, Perth (approximately 83m AHD).

The location and height of these buildings constrain the flight path to the extent that there is no other option that exists without there being a far greater impact to a larger number of landholdings. In addition, the South-Western flight path proposed impacts a number of Government landholdings and therefore reduces the impact to private landholdings.

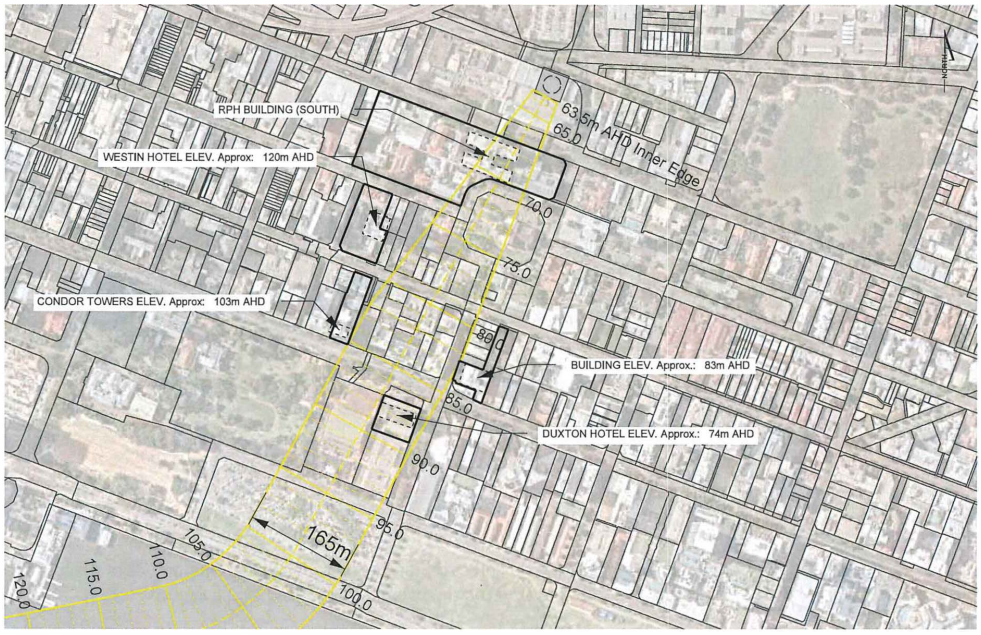


Figure 18. South west flight path and existing buildings

5.4.4 Consideration of Impact on Development Potential

5.4.4.1 Land Ownership

As outlined above, careful consideration has been given to limiting the overall impact on landholdings by the designated flight paths, whilst acknowledging that it is not possible for there to be no impacts. Where landholdings are impacted, these are considered to be only minor or relatively minor with substantial development still being able to occur directly beneath and/or adjoining the flightpath. By utilising existing major road and rail alignments, as well as the Swan River, the vast majority of the flight path area will occur over publicly owned land parcels. Only a small portion of the overall area will impact privately owned land parcels as shown in Figure 19 below.

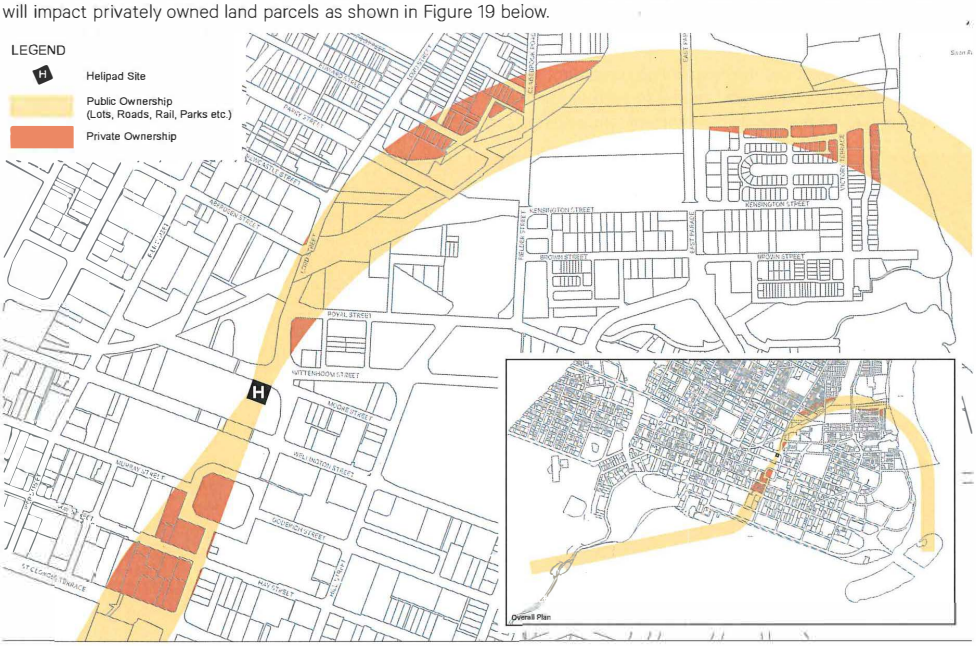


Figure 19. Public/private ownership

The privately owned land parcels identified in the following figures represents approximately 6.13ha, or 5.7% of the total flight path area. 101.03ha, or 94.3% of the total flight path area occurs over publicly owned land parcels.

5.4.4.2 Impact on Building Height

In respect to the potential scale of future development within these privately owned land parcels identified above, the majority of these land parcels will be able to deliver a development of a scale that is as envisaged by the applicable planning framework in terms of prescribed building height.

The height of future development on private landholdings within the north eastern flightpath will not be impacted as shown in figures 20 and 21.

The height of future development on private landholdings within the south western flightpath will be impacted as shown in Figure 22.

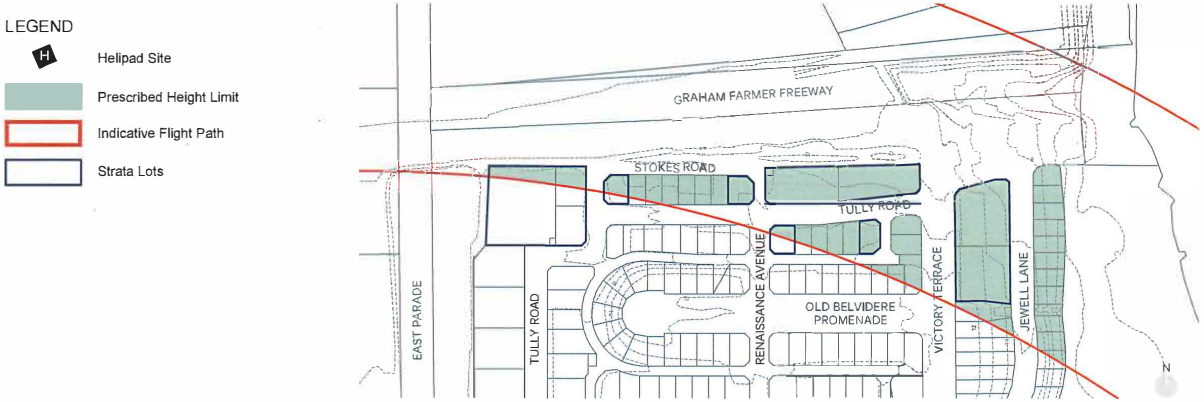
Notwithstanding the indicative impact shown in Figure 22, the actual height of a building in this location would need to consider a number of factors including, but not limited to, plot ratio calculations, heritage considerations and a range of other matters to determine the full extent of a buildings potential scale or its ability to support a development or redevelopment at all. In this respect, there are a number of opportunities for landowners to utilise plot ratio available whilst ensuring the overall building does not protrude within the flight path area. For these reasons the indicated impact shown does not analyse properties identified as having heritage significance.

element.



Figure 20. Height Impact Study - Northern

47



Indicative plan showing sites impacted by the flight path.

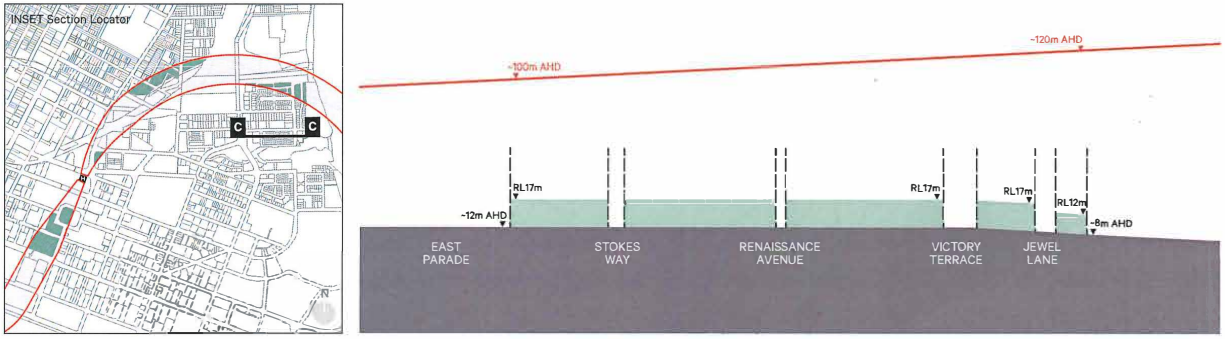
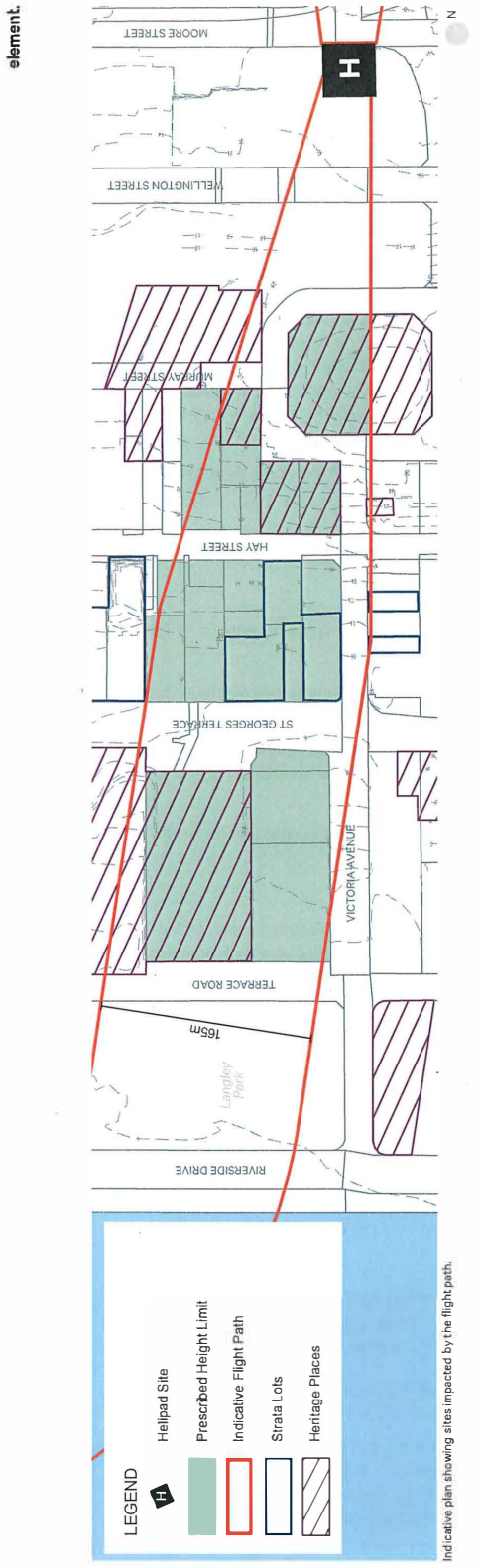


Figure 21. Height Impact Study - Northern (continued)



Indicative plan showing sites impacted by the flight path.

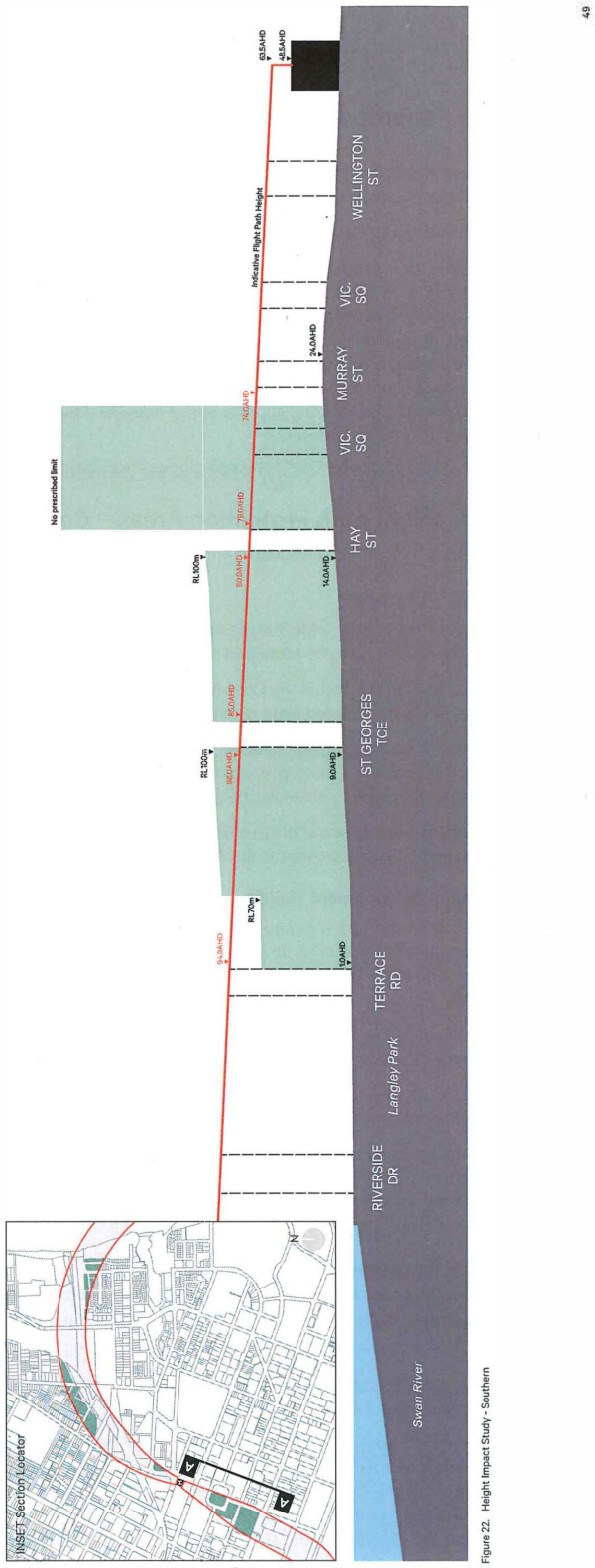


Figure 22. Height Impact Study - Southern

5.4.5 Appropriateness of Special Control Area

A Special Control Area (SCA) is the most appropriate mechanism to control development spanning various zones and reserves. A SCA will be visible on the City's Scheme Maps, making it very clear to landowners and prospective purchasers of the special circumstances that apply to specific landholdings.

The *Planning and Development (Local Planning Scheme) Regulations 2015*, states the following in respect to SCA's:

> *(This Part is included in the Scheme to identify areas which are significant for a particular reason and where special provisions in the Scheme may need to apply. These provisions would typically target a single issue or related set of issues often overlapping zone and reserve boundaries. The special control areas should be shown on the Scheme Map as additional to the zones and reserves. If a special control area is shown on the Scheme Map, special provisions related to the particular issue would apply in addition to the provisions of the zones and reserves. These provisions would set out the purpose and objectives of the special control area, any specific development requirements, the process for referring applications to relevant agencies and matters to be taken into account in determining development proposals.)*

Based on the above, it is considered that a SCA is the most appropriate way to control development within the flight path area.

5.4.6 Flight Path Protection Areas – Core and Frame

The SCA is split into a 'Core' and 'Frame' area. The purpose of the Core Area and Frame Area is explained below.

5.4.6.1 Core Area

The Core Area is 165m wide, being ten times the helicopter's rotor diameter. This reflects the minimum width of a flight path that is required to be protected from obstacles.

Development that is within the Core Area will locate directly beneath a helicopter flying in an emergency scenario (one engine only) with reduced flight capabilities.

Specific provisions apply to development located within the Core Area to limit the overall development height achievable. This will ensure that a helicopter operating in an emergency scenario (one engine only) will have an appropriate underside clearance to obstacles below.

Two separate provisions apply to a development within the Core Area – Maximum Development Height and Referral Requirements. These provisions are discussed below.

Maximum Development Height

In an emergency flight with one engine only operating, the ERHS fleet of helicopters will have a reduced ability to fly away and clear all obstacles. In considering a helicopter flying away with one engine operating only, very high ambient temperature exists (resulting in low air density) and the helicopter is fully loaded, a minimum elevation gain of 4.5% is possible.

Given the above, a development located within the Core Area cannot extend within the minimum elevation gain of a helicopter flying away from the HLS at RPH as it would form an unavoidable obstacle.

A series of Figures forming part of the SCA (Figures 33.1 -33.8) show the applicable Maximum Development Height achievable within landholdings located in the Core Area.

Pilots will be required to determine their ability to fly away with one engine only if required. In undertaking a backup procedure as discussed in this report previously, pilots will reach a specific altitude before deciding to proceed. This altitude will consider minor projections above buildings that are exempt from the requirement to obtain approval (telecommunications infrastructure) and cannot be overridden by local planning scheme provisions.

Referral Requirement

Where a proposed development and any associated works a situated above or within 30 metres of the maximum AHD heights specified in Figures 33.2 to 33.7, and/or the intermediate maximum AHD heights in Figure 33.8, the application is required to be referred to the EMHS, being the managing authority of the RPH HLS.

This will allow the EMHS to consider a potential development that locates within close proximity to the flight path and to liaise with the operator of the ERHS to identify any matters that may potentially impact on emergency flights.

The provision allows for the EMHS to provide objections and recommendations in relation to a development application and the location and operation of temporary works and equipment, such as construction cranes, directly below the Core Area of the flight path. This will ensure that temporary works and equipment do not encroach within the flight path at all or where considered appropriate, arrange for certain encroachments to occur for a period of time that the EMHS consider suitable.

element.

5.4.6.2 Frame Area

The Frame Area immediately adjoins each side of the Core Area and is 90m wide.

The Frame Area is intended to not limit development, but to ensure the construction of a development does not impact the Core Area by way of inappropriate intrusions into it from temporary structures such as construction tower cranes.

The Frame Area acknowledges that development potential is not impacted in this location, but careful consideration must be given to the type of crane that is used to construct a development.

Referral Requirement

Where development and associated works are situated above or within 30 metres of the maximum AHD heights specified in Figures 33.2 to 33.7, or the intermediate maximum AHD heights in Figure 33.8, the local government will require a Construction and Demolition Management Plan to be submitted as a condition of development approval. A Construction and Demolition Management Plan, and any subsequent amendment to the plan, will be provided to the EMHS for recommendations on temporary works and equipment, such as cranes, to prevent or limit encroachments into the Core Area.

Where a proposed development is located within the Frame Area, does not exceed the heights shown on Figures 33.2 – 33.8 and does not have the potential for construction cranes to extend above these heights, there is no requirement for a proposed development to be referred to EMHS for recommendations.

The provisions are intended to allow lower scale development to occur without the need for a referral to EMHS, where these are considered to have no risk, being below 30m of the applicable height limits as set out in Figure 33.2 – 33.8.

Taller development within the Frame Area may result in a construction crane swinging into the Core Area. The provisions are worded to capture such development and require additional supporting detail for the development, particularly around the ongoing use of a crane, equipment, machinery or structures required during construction activity.

6. Conclusion

element has prepared this report on behalf of the EMHS, in support of a request to amend the City's CPS2 as it relates to a number of landholdings identified as being within essential helicopter flight paths associated with the operation of emergency helicopter operations at RPH.

The proposed amendment is being undertaken to align with a number of relevant elements that influence the ongoing successful operation of the ERHS at RPH, which includes the interrelationship between the existing planning framework and development opportunities, the National Airports Safeguarding Framework, relevant aviation standards, State government investment at RPH and futureproofing the successful operation of the SMTU to support the States medical emergency needs.

This report has considered the existing planning framework in detail and addressed a number of relevant matters that have been used to determine the most suitable flight paths that are required to be protected. The proposed amendment has considered a series of provisions that will seek to control development outcomes directly beneath the emergency flight paths and directly adjoining them. A rationale is provided for each of the provisions and addresses limitations to development height and the requirement for applications to be referred to DFES in certain circumstances that may trigger the need for Crane Management Plan to be required.

The proposed amendment seeks to ensure that the new HLS at RPH continues to operate and support the needs of the State, transferring critically ill patients to the SMTU. Ongoing development within the City may impact the safety of operations into the future, especially where a helicopter is required to fly with one engine inoperable. At present, there is no formal controls in place to limit development potential immediately surrounding the HLS at RPH. Without protection, the HLS may be required to be decommissioned as a result of ongoing development jeopardising the safety and efficiency of operations, in turn having significant impacts on the ability to treat patients that are in need of critical care.

element.

Appendix 1

Letter from WA State Director of Trauma 4 November 2021 (Dr Sudhakar Rao)

Government of Western Australia
East Metropolitan Health Service



Dear Mrs Circosta,

Response: request for further information – Royal Perth Hospital Emergency Flight Path Scheme Amendment

Thank you for the opportunity to provide further information in relation to the RPH Emergency Flight Path Scheme Amendment (email correspondence dated 29 October 2021).

You will be aware, RPH State Major Trauma Centre (SMTC) has been the designated provider of major trauma services for adults in WA since 2008 and continues to provide services to 95% of the State's population, including receiving major trauma patients from regional WA.

The protection of emergency flight paths for RPH is integral to ensuring West Australians (WA) continue to have access to world-class emergency trauma and critical care services, and plays an integral role in the State's Clinical Services Framework (2014-2024) – a framework that lays the foundation for health system planning. Aligned to this framework, the SMTC is a key provider in WA Emergency Response planning which is evidenced in the State Trauma Sub-plan (2014).

As per your request please refer to the below responses to your questions;

3. Scheme Amendment request should include background information as to why the Helicopter Landing Site (HLS) is located where it is and why it cannot be located elsewhere, that is, why other options were ruled out, for example Langley Park.

The need for helicopter emergency medical services to pick up a patient from their location, followed by immediate access to specialist treatment teams on arrival at a hospital is imperative. The location of the new helipad was carefully thought through in order to ensure alignment with the WA State Trauma System objective of optimum speed from injury to specialist trauma treatment at WA's only Level 1 Major Trauma Centre. This eliminates an additional ambulance transfer and increased patient handling risks, as well as additional cost to the State/patient for Langley Park transfers.

In 2018, the RPH Helipad Strategic Overview document was developed and investigated several options for the location of the new helipad. Construction of a new helipad on the north eastern rooftop of RPH R Block (North Block) was selected as the preferred location for various reasons including;

- clinical needs;
- physical building structural limitations, and;
- operational requirements of the helicopters.

Helicopter transport provides the quickest means of transferring critically injured patients to a major trauma service. Off-site landings have been found to result in longer transport to the emergency room, however, the construction of helipads in trauma centres can reduce transport time, in addition to reducing the costs and sequelae of trauma .

The "Golden Hour" concept is one deeply entrenched in trauma systems and the emergency management of trauma victims, indicating that the first 60 minutes following a trauma is a critical period for getting patients to a trauma centre.

It is widely accepted that on-site helipads result in more positive patient outcomes, with no medical disadvantages. The clear need to move toward helicopter landing-areas that are physically on-site at referring and receiving institutions is undeniable. Consideration of on-site HLS were found to be particularly important for medical transport systems to contemplate when building a new helipad.

Acknowledging the increased chances of survival and recovery from on-site HLS, alternative locations such as Wellington Square or Langley Park were determined to be unacceptable for Standard Operating Procedures as both locations would cause delays to patient transfer with an additional ambulance transfer, and risk to life (including increased infection risk). These locations would further pose security and accident risks for the Rescue Helicopter as well as the general public on the ground, thus requiring WA Police intervention for each helicopter landing.

4. Scheme Amendment request should include detail of how frequently the HLS and the emergency flight path are expected to be used. Explain what the current situation is including:

4.2. How many helicopter landings does RPH receive delivering critically ill patients to the State Major Trauma Centre per year.

4.3. What percentage of these are considered major (that is would die without emergency treatment).

Of the three Tertiary Hospitals in Perth, the State's Emergency Rescue Helicopter transports 70.4% of patients to RPH (avg of 354 per year). In 2020, a significant number of helicopter arrivals to RPH were trauma presentations (222) and, of these, 101 were major trauma patients, with 43 (43%) considered severe or critical trauma. These patients generally spend longer in hospital and often require Intensive Care treatment (critical lifesaving interventions) as well as extensive rehabilitation.

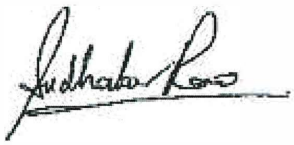
RPH Trauma Data (2020) shows that more than 50% of major trauma admissions to RPH required critical surgical intervention in response to their injuries, further emphasising the importance of time from injury to specialist treatment.

The time critical nature of the relationship between event, definitive tertiary clinical intervention and the patient's survival is the reason why the construction of a new on-site helipad that will allow immediate access for the State Emergency Rescue Helicopter Service's (ERHS's) upgraded helicopter fleet at RPH is critical for the ongoing provision of emergency healthcare in WA.

I trust this information is sufficient to allow the City of Perth to progress the Scheme Amendment Request.

Please do not hesitate to contact Emma Morony at emma.morony@health.wa.gov.au for further information should you require it.

Kind regards,



Dr Sudhakar Rao
State Director of Trauma
Royal Perth Hospital

4 November 2021

Wellington Street Campus 〉 Box X2213 GPO 〉 Perth 6847 〉 Western Australia
Tel: (08) 9224 2244 〉 Fax: (08) 9224 3511

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element.

Appendix 2

DFES Letter of Support

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Government of **Western Australia**
Department of **Fire & Emergency Services**

DFES

Our Ref: 20210129
Your Ref:

Mr. Graeme Jones
Executive Director, Finance and Infrastructure
East Metropolitan Health Service
197 Wellington Street
EAST PERTH WA 6004

Dear Mr. Graeme Jones,

ROYAL PERTH HOSPITAL HELIPORT'S APPROACH AND DEPARTURE PATHS

Following the approval of the East Metropolitan Health Services (EMHS) development application by the State Planning Commission for the construction of a new hospital heliport at Royal Perth Hospital (RPH) in October 2019, consultation commenced with the Department Fire and Emergency Services (DFES) Aviation Services for design input and aviation expertise. As the managing agency for the State's Emergency Rescue Helicopter Service (ERHS) and the primary user of the RPH heliport, DFES Aviation Services have been in consultation with EMHS to address the new heliport operational requirements and provided consultation with aviation regulatory requirements.

These discussions included the securing of approach and departure flight paths from the edge of the RPH heliport Safety Area as mandated under current Civil Aviation Safety Authority (CASA) and International Civil Aviation Organisation (ICAO) legislation and Commonwealth Department of Infrastructure, Transport, Regional Development and Communications (DITRDC) guidelines. Establishment and protection of these flight paths must be ensured by the responsible local government for continued helicopter operations into the new RPH heliport. Failure to comply may result in non-compliance and permanent cease of operations into the RPH heliport.

The flight paths presented to the Central Perth Planning Committee in September 2018 did not meet the regulatory requirements for RPH heliport's approach and departure flight paths. The most prominent issues and non-compliances identified by DFES and their contracted helicopter service provider with the September 2018 flight paths are:

- Length of the approach and departure flight paths were not developed out to the regulatory distance requirement of 3,386 metres;
- Only a one, constant radius of turn is permitted by regulation with the flight paths. The north-eastern flight path was designed with two;
- Width of the flight paths did not incorporate the future ERHS aircraft fleet, or other emergency services helicopters that could operate into the new RPH heliport; and
- Elevations depicted were not compliant with the mandatory 4.5% incline slope commencing from the edge of the heliport's Safety Area. This requirement limit building heights and construction activities underneath and to the side of the flight paths, ensuring compliance and safe operation with the heliport.

Emergency Services Complex I 20 Stockton Bend Cockburn Central WA 6164 I PO Box P1174 Perth WA 6844
Tel (08) 9395 9300 I Fax (08) 9395 9384 I dfes@dfes.wa.gov.au I www.dfes.wa.gov.au
ABN 39 563 851 304

Due to these regulatory non-compliances with the September 2018 approach and departure flight paths, DFES recommended EMHS to consult with an alternative aeronautical consultant to provide revised flight paths to ensure regulatory and legislative compliance. EMHS completed this consultation for design of new approach and departure flight paths in early 2020.

DFES was asked to participate by Rehbein Airport Consulting during this consultation process for the development of the new flight paths, as presented in their report: *'Royal Perth Hospital Helicopter Landings Site Flight Path Requirements'* (revision 2). These north-east and south-west flight paths for RPH's heliport were developed to meet regulatory compliance, whilst minimising impact on Perth International Airport's approach and departure paths and the city building schemes for the City of Perth and City of Vincent.

In 2015, the Royal Melbourne Hospital the heliport / helipad was shut down due to construction of high-rise building impeding into the hospital's heliport flight path. The approach and departure paths were not secured for the hospital's heliport. The Victorian State planning tribunal over-ruled the Melbourne City Council building approval, which resulted in the new construction building height being reduced by three floors. Subsequently, the Commonwealth's DITRDC published the *Protecting Strategically Important Helicopter Landing Sites* document, which was endorsed by all States and Territories. This document directly addressed protecting Strategically Important Helicopter Landing Sites (i.e. hospital heliports) and their respective approach and departure flight paths.

It is critical that the RPH heliport approach and departure flight paths are secured and protected to ensure ERHS helicopter operations into the future. As demonstrated with the Royal Melbourne Hospital, if these flight paths are not secured and protected from future development, there is significant risk that ERHS operations will cease with into the Western Australia's only Level 1 Trauma Centre.

If you have any further queries on the above, please do not hesitate to contact Steven Sartain, Manager Emergency Rescue Helicopter Service, DFES on 6499 1888.

Yours sincerely

TERRY SHEHAN
SUPERINTENDENT AVIATION SERVICES

28 January 2021

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element.

Appendix 3

Development Approval - Helicopter Landing Site

Western Australian Planning Commission

Our Ref : 10-50286-1
Your Ref :
Enquiries : Suzanne Roach (Ph 6551 9181)

Department Of Finance - Building Management & Works
Optima Centre
16 Parkland Road
OSBORNE PARK WA 6017

Application for Approval to Commence Development dated 21 June 2019 received 2 July 2019.

Lot Number	:	916
Location	:	
Plan / Diagram	:	Deposited Plan 183230
Volume/Folio	:	2820/191
Locality	:	No. 212 Wellington Street, Perth
Owner	:	Metropolitan Health Service Board C/- Department Of Health - East Metropolitan Health Service G P O Box X2213 PERTH WA 6847

Under the provisions of the Metropolitan Region Scheme this application has been referred for determination by the Western Australian Planning Commission.

The application has now been considered by the Commission and the formal notice setting out the terms of the decision is attached.

A copy of this decision has been forwarded to the Local Government for information.

Should the applicant be aggrieved by this decision there is a right to apply for a review pursuant to the provisions of Section 252 of the *Planning and Development Act 2005*. Such an application for review must be submitted to the State Administrative Tribunal, Level 6, State Administrative Tribunal Building, 565 Hay Street, PERTH WA 6000 in accordance with Part 14 of the *Planning and Development Act 2005*. It is recommended that you contact the State Administrative Tribunal for further details (telephone 9219 3111) or go to its website: http://www.sat.justice.wa.gov.au.

Ms Sam Fagan
Secretary
Western Australian Planning Commission
6 November 2019

140 William Street, Perth, Western Australia 6000, Locked Bag 2506 Perth, 6001
Tel: (08) 6551 8002; Fax: (08) 6551 9001; Infoline: 1800 626 477
e-mail: info@dplh.wa.gov.au; web address http://www. dplh.wa.gov.au
ABN 35 482 341 493

Western Australian Planning Commission

Our Ref : 10-50286-1
Your Ref :
Enquiries : Suzanne Roach (Ph 6551 9181)

METROPOLITAN REGION SCHEME

City of Perth

APPROVAL TO COMMENCE DEVELOPMENT

Name and Address of Owner and Land on which Development Proposed:

Owner	:	Metropolitan Health Service Board C/- Department Of Health - East Metropolitan Health Service G P O Box X2213 PERTH WA 6847
Lot Number	:	916
Location	:	
Plan / Diagram	:	Deposited Plan 183230
Volume/Folio	:	2820/191
Locality	:	No. 212 Wellington Street, Perth
Application Date	:	21 June 2019
Application Receipt	:	2 July 2019
Development Description	:	Construction Of Roof Mounted Helipad And Associated Structures On North East Corner Of R-Block Building

The application for approval to commence development in accordance with the plans submitted thereto is granted subject to the following condition(s):

1. The development is to be carried out in accordance with the plans date stamped 4 July 2019, subject to any modifications as required by the conditions of approval.

2. The development approval is valid for two years from the date of this letter. If the subject development is not substantially commenced within a two-year period, the approval shall lapse and be of no further effect.

3. Prior to commencement of works, final details of the design and a sample board of the materials, colours and finishes and details of the signage illumination shall be submitted and approved to the specification of the City of Perth and to the satisfaction of the Western Australian Planning Commission.

If the development the subject of this approval is not substantially commenced within a period of two years from the date of this letter, the approval shall lapse and be of no further effect.

140 William Street, Perth, Western Australia 6000, Locked Bag 2506 Perth, 6001
Tel: (08) 6551 8002; Fax: (08) 6551 9001; Infoline: 1800 626 477
e-mail: info@dplh.wa.gov.au; web address http://www. dplh.wa.gov.au
ABN 35 482 341 493

Western Australian Planning Commission

Where an approval has so lapsed, no development shall be carried out without the further approval of the responsible authority having first been sought and obtained.

Ms Sam Fagan
Secretary
Western Australian Planning Commission
6 November 2019

140 William Street, Perth, Western Australia 6000, Locked Bag 2506 Perth, 6001
Tel: (08) 6551 8002; Fax: (08) 6551 9001; Infoline: 1800 626 477
e-mail: info@dplh.wa.gov.au; web address http://www. dplh.wa.gov.au
ABN 35 482 341 493

element.

Appendix 4

HLS Flight path Requirements (Rehbein Airport Consulting)



ROYAL PERTH HOSPITAL
HELICOPTER LANDING SITE
FLIGHT PATH REQUIREMENTS

EAST METROPOLITAN HEALTH SERVICE

REHBEIN Airport Consulting



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Revision	Date	Description	Author	Verifier	Approver
0	12/06/2020	DRAFT	BMW		
1	07/07/2020	FINAL DRAFT for approval	BMW	BJH	BJH
2	10/08/2020	FINAL	BMW	BJH	BJH

Reviewed by:

Steven Sartain
Manager, Emergency Rescue Helicopter Service
Department of Fire and Emergency Services



1. INTRODUCTION

REHBEIN Airport Consulting was engaged by East Metropolitan Health Service (EMHS) to prepare a report on the technical requirements for helicopter flight paths associated with the proposed helicopter landing site at the Royal Perth Hospital (RPH).

The purpose of establishing and protecting helicopter flight paths for the Royal Perth Hospital (RPH) is to ensure new developments (and associated activities) do not prevent helicopters from arriving or departing from the new RPH Helicopter Landing Site (HLS). An effective and safe helicopter service to support emergency services relies entirely on a clear flight path which is free from obstructions.

The responsibility for determining the suitability of a place as a HLS is held, under Civil Aviation Regulation 92, by the pilot-in-command and the organisation that holds the helicopter operating certificate. This means that the pilot in control of the aircraft will decide during each and every mission as to whether it is safe to arrive or depart the RPH HLS. This decision will be based on a number of factors including whether the flight path required is clear of obstructions.

The Australian Government Department of Infrastructure, Transport, Regional Development and Communications in May 2018 published the National Airports Safeguarding Framework Guideline H: *Protecting Strategically Important Helicopter Landing Sites*. Guideline H is intended to assist planners in making decisions around important HLSs that should be safeguarded through land use planning controls and in making decisions about applications, proposals, planning permits or planning scheme amendments that relates to a facility's essential flight paths.

Guideline H provides guidance to State/Territory and local government decision makers to safeguard ongoing operations at strategically important HLSs, as well as to ensure any new HLS is appropriately located. Importantly, this Guideline assists in making decisions around developments encroaching into flights that would render the approach or departure path unsafe and result in the pilot-in-command aborting a mission.

The Guideline identifies a HLS which is associated with a hospital, or one which is elevated within a populated area, as being strategically important.

In Australia, helipads are not currently licensed, certified or regulated in the same way that aerodromes are under Part 139 of the Civil Aviation Safety Regulations 1998 (CASR).

Relevant regulations and references pertaining to the physical characteristics of a HLS as well as the associated flight paths are:

- The Civil Aviation Safety Authority (CASA) Civil Aviation Advisory Publication CAAP 92-2(2) *Guidelines for the establishment of on-shore helicopter landing sites* (February 2014);
- International Civil Aviation Organisation ICAO Annex 14 *Aerodromes – Volume II: Heliports* (4th edition July 2013); and
- Civil Aviation Safety Authority NPRM 1304OS *Regulation of aeroplane and helicopter 'ambulance function' flights as Air Transport Operations*.

The pilots of the helicopter service currently operating the ambulance services have stated that the flight paths must be protected in accordance with ICAO Annex 14 for them to safely conduct flights to and from the RPH HLS.



2. RELATED GUIDELINES AND APPLICABLE STANDARDS

The Civil Aviation Safety Authority (CASA) does not currently have a legal instrument to certify or register HLSs that are not part of a certified or registered aerodrome under Part 139 of the Civil Aviation Safety Regulations 1998.

The responsibility for determining the suitability of a place as a helicopter landing site is held under Civil Aviation Regulation 92 by the pilot-in-command and/or by the helicopter operator.

The primary guidance pilots will use to decide whether to operate to an HLS is the Civil Aviation Advisory Publication (CAAP) 92-2(2) *Guidelines for the establishment and operation of onshore Helicopter Landing Sites.* CAAP 92-2(2) sets out factors that may be used to determine the suitability of a place for the landing and taking-off of helicopters.

In relation to flight paths and their protection from obstacles CAAP 92-2(2) refers to the Standards and Recommended Practices (SARPs) for Heliports, as set out in Volume II of Annex 14 to the Convention of International Civil Aviation (the Chicago Convention).

The International Civil Aviation Organisation (ICAO) sets out international standards and recommended practices for the safe conduct of civil aviation activities in various Annexes to the *Convention on International Civil Aviation (Chicago, 1944),* to which Australia is a signatory.

In 2013 CASA released a Notice of Proposed Rule Making (NPRM) 1304OS *Regulation of aeroplane and helicopter 'ambulance function' flights as Air Transport Operations*. The NPRM provides directional guidance to the future regulatory environment for helicopter medical transport flights in Australia.

2.1 GUIDELINES FOR ESTABLISHMENT AND OPERATION OF ONSHORE HELICOPTER LANDING SITES – CIVIL AVIATION ADVISORY PUBLICATION (CAAP 92-2(2))

CASA CAAP 92-2(2) recommends that approach and departure paths for emergency medical service operations at metropolitan hospital sites should be in accordance with the standards and recommended practices set out in ICAO Annex 14 Volume II Heliports.

The factors that determine the characteristics of the helicopter flight path obstacle limitation surfaces (OLS) are:

- The specifications of the largest helicopter that is intended to use the HLS;
- Certain physical characteristics of the HLS itself; and
- The Performance Class applicable to the helicopter operation.

The Department of Fire and Emergency Services (DFES) and the current aeromedical service provider identified and confirmed the design helicopter characteristics as listed in **Section 3**.

2.2 CASA NOTICE OF PROPOSED RULE MAKING

The Australian Civil Aviation Safety Authority has released in July 2013 a Notice of Proposed Rule Making (NPRM) 1304OS entitled *Regulation of aeroplane and helicopter 'ambulance function' flights as Air Transport Operations*.

The purpose of the NPRM is to advise the public and aviation community of CASA's intent to regulate, to the greatest extent practicable, ambulance function flights to the same safety standards that are currently applicable to air transport operations. This will extend to certification requirements, operating standards and maintenance standards.

Annex A to the NPRM clarifies that helicopters conducting operations to/from a final approach and take-off area (FATO), at a hospital that is located in a populous area and that is used as a Helicopter Medical Transport (HMT) heliport or HMT operating base, will be operated in accordance with the requirements of Performance Class 1 or Performance Class 2 with exposure. The exception to this is when the heliport approach and departure pathways provide sufficient safe forced landing areas for Performance Class 2 operations, in which case Performance Class 2 operations may be used.

Given that safe forced landing areas do not exist in proximity to RPH, what NPRM effectively means is that the flight paths for the RPH helipad need to meet the obstacle clearance requirements associated with Performance Class 1 helicopter operations.

2.3 ICAO ANNEX 14 AERODROMES VOLUME II HELIPORTS JULY 2013

The minimum standards and recommended practices for helipad approach and departure paths are set out in Chapter 4 *Obstacle Environment* of ICAO Annex 14 Volume II.

The objective of these specifications is to describe the clear airspace required around heliports so as to permit intended helicopter operations to be conducted safely and to prevent, where appropriate State controls exist, heliports from becoming unusable by the growth of obstacles around them. This is achieved by establishing a series of obstacle limitation surfaces that define the limits which objects may project into the airspace in the vicinity of heliports.

3. HELICOPTER DESIGN CHARACTERISTICS

The *Royal Perth Hospital Rooftop Helipad Concept Design Report* (Revised 190527) prepared by PSNK Aeronautical Services (hereafter referred to as the 'PSNK Report 190527'), submitted as Appendix A of the Planning Report, and identifies key characteristics of the design helicopter to be:

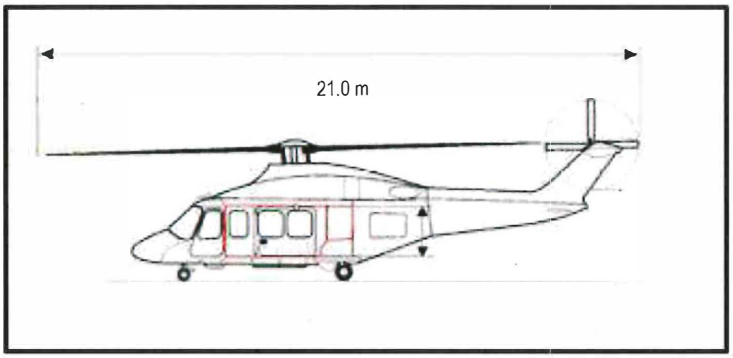
- D-value, the largest overall dimension with rotors turning 21.0 metres
- Rotor diameter 16.5 metres
- Maximum mass 12 tonnes
- Performance Class 1
- Night operations

These specifications have been confirmed by DFES and the current aeromedical services provider as meeting the current and likely future helicopter specifications.

D-Value

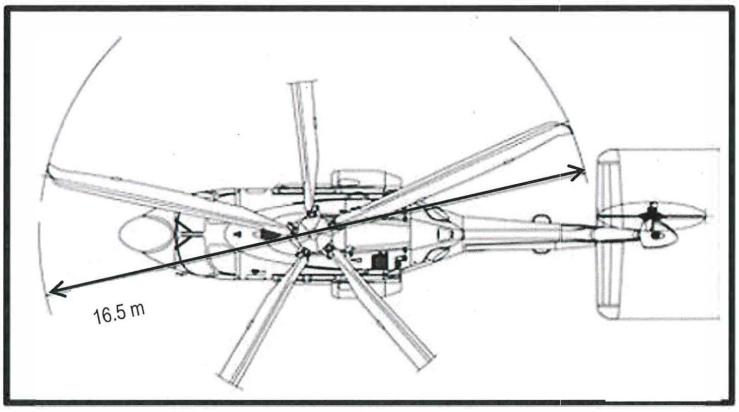
The D-Value is the largest overall dimension of the helicopter when rotor(s) are turning, normally measured from the most forward position of the main rotor tip path plane to the most rearward position of the tail rotor tip path plane. The physical size of the new RPH HLS is 27 x 27m which provides for a civil medical transport helicopters operating in Performance Class 1 to $1.5*D_{18}$, the utilisation of a 21m D-Value for the 'Operational Airspace' accommodates current and potential future medical transport helicopters.

A D-value of 21 m was established as the largest helicopter that may use the facility.



Rotor Diameter

Rotor diameter is the diameter of the main rotor with the engine(s) running. A rotor diameter of 16.5 m was established as the largest helicopter that may use the facility.



Performance Class

Performance Class 1 means the operations where, in the event of failure of an engine, performance is available to enable the helicopter to land within the rejected take-off distance available or safely continue the flight to an appropriate landing area, depending on when failure occurs.

Performance Class 1 is the operation which must be protected for at RPH HLS.

4. ROYAL PERTH HOSPITAL HELICOPTER LANDING SITE

CASA CAAP 92-2(2) defines the basic areas of a helicopter landing site (HLS). Specific to the construction of flight paths the relevant HLS characteristic is the size of the Final Approach and Take-off Area (FATO) and the associated Safety Area. The FATO is the area over which the final approach is completed and the take-off conducted. The Safety Area surrounds the FATO and is free of obstacles, other than those required for air navigation purposes and intended to reduce the risk of damage to helicopters accidentally diverging from the load-bearing area primarily intended for landing or take-off.

Both the FATO and the safety area are determined by the D-value of the largest helicopter intended to use the HLS facility.

The DFES and the East Metropolitan Health Services (EMHS) identified and confirmed the below RPH HLS characteristics. These characteristics were confirmed and reviewed to ensure that all current and potential operations are protected.

The RPH HLS is confirmed through the PSNK Report 190527 to have the following characteristics

- Safety Area (2 x 'D-Value') 42 m x 42 m
- HLS elevation 48.5 m AHD

5. FLIGHT PATH CONSTRUCTION

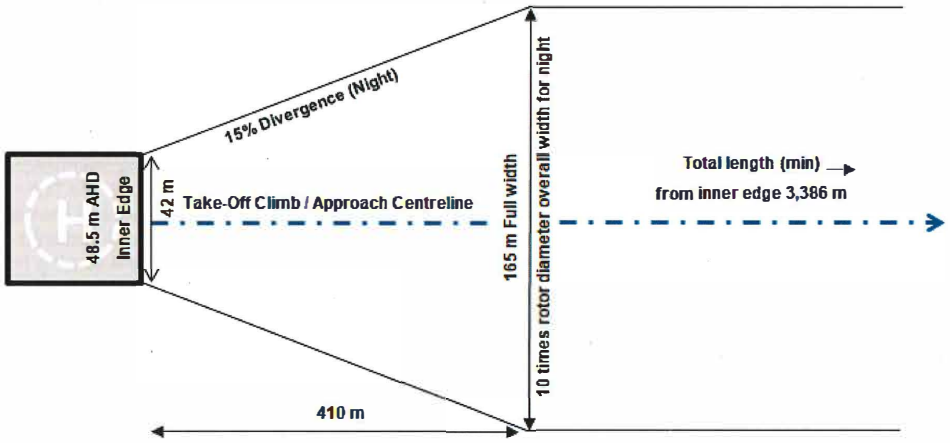
Land-use planning authorities should be aware that all intrusions into the flight paths have the potential to create aviation safety risks and to limit the scope of operations possible from the HLS. This is a determination and responsibility of the pilot on every approach and departure.

The ICAO and CAAP 92-2(2) compliant flight path construction is summarised in **Table 1** and **Figure 1** below with a detailed explanation following.

Table 1: Flight Path Construction

Approach and Take Off Climb Surface and Dimensions	
Length of inner edge	42 m
Elevation of inner edge	48.5 m AHD
Night Use	15%
Total Length	3,386 m (min.)
Slope	4.5%
Outer Width	165 m

Figure 1: Flight Path Construction



Approach and take-off climb surfaces

Both ICAO Annex 14 and CASA CAAP 92-2(2) require a HLS to have at least two (2) approach and take-off climb surfaces. These surfaces must be separated by a minimum angle of 150°.

The flight paths may be curved to avoid obstacles or take advantage of more advantageous flight paths, however only one curve is allowed which must have a constant rate radius of turn.

The approach and take-off climb surfaces slope upwards from the edge of the HLS safety area starting at the height of the Final Approach and Take-Off Area (FATO).

Both surfaces are comprised of an inner edge, two side edges and an outer edge specified as follows.

Inner Edge

The inner edge is equal in length to the minimum specified width of the HLS FATO plus safety area and located at the outer edge of the safety area.

The HLS Safety Area for the RPH HLS is 42 m wide and the elevation of the FATO is 48.5 m AHD as illustrated in **Figure 1** above.

The OLS inner edge is therefore also 42 m wide, 21 m either side of the flight path centreline.

In the absence of restricting obstacles, the elevation of the OLS inner edge shall be the elevation of the FATO. However, for heliports intended to be used by helicopters operated in Performance Class 1 the origin of the inclined plane may be raised directly above the FATO. The intention in raising the origin of the inclined plane may be to avoid already existing obstacles within the flight path.

The south-west flight path at RPH appears to be obstructed by the RPH building to the south. The PSNK Report 190527 identifies the hospital south block as an obstacle. The south-west flight path must pass over the existing hospital building which is approximately 15 m higher than the proposed FATO elevation. Accordingly, the inner edge for the south-west approach and take-off climb surfaces was set at 15 m above the HLS which is at 48.5 m AHD, therefore the inner edge elevation is 63.5 m AHD (Refer GHD Drg No 61-12512706/Figure 01/RevC). Refer **Section 6.2** for further discussion.



Source: Google Earth

Side Edges

The two side edges originate at the ends of the inner edge and diverge uniformly from the centreline at a specified rate. The divergence rate for night operations is 15% each side. The overall width of the approach and take-off climb surfaces increases by 30 m (15 m each side of the centreline) for every 100 m along the centreline.

The final width of the surface for night operations is 10 times the design helicopter rotor diameter. For RPH HLS flight paths this means 165 m (10 x 16.5m). This makes the length of the splayed section 410 m.

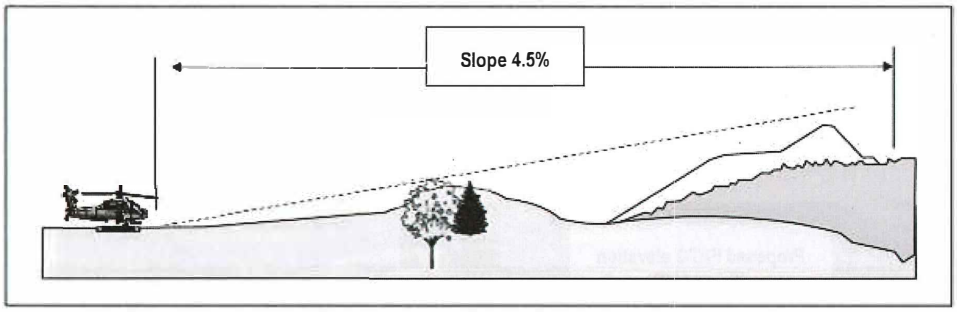
Outer Edge

The outer edge is horizontal and perpendicular to the flight path centreline and located at a specified height of 152 m (500 feet) above the FATO.

Slope of the surface

The slope of the approach and take-off climb surfaces is measured in the vertical plane containing the centreline of the surface. The slope of the surface is determined by the performance class of operations at the HLS.

The operations at RPH HLS are required to be Performance Class 1. As such the maximum slope of the approach and take-off climb surface permitted is 4.5% as illustrated below.



Source: ICAO Annex 14-II Figure 4-6

Curved approach and take-off climb surface

In the case of an approach or take-off climb surface involving a turn, ICAO Annex 14 stipulates that the surface must not contain more than one curved portion.

In addition, the minimum radius of turn permitted is 270 m. The sum of the radius of arc defining the centreline of the approach and take-off climb surfaces and the length of the straight portion originating at the inner edge shall not be less than 575 m.

Total length of the surface

The total length of the approach and take-off climb surface from the inner edge for slope design category A is 3,386 m. This length brings the helicopter to 152 m (500 ft) above the FATO elevation of 48.5 m AHD. Flight paths for the RPH HLS are each constructed to 3,400 m in total length bringing each flight path to a total of 201.5 m AHD or 153 m above the FATO elevation.

6. RPH HLS FLIGHT PATHS

6.1 NORTH-EAST FLIGHT PATH

The North-east flight path is illustrated on **Figure NE-1** included at **Appendix A**. This flight path consists of a curved take-off climb surface initiated from a bearing of 020°True. The radius of turn is 915 metres until it reaches a bearing of 180° True and then continues straight on bearing 180° to its full length of 3,400 metres.

Emergency Rescue Helicopter Service

Consultation with helicopter pilots through DFES ERHS indicated that a bearing of 020° True avoids an obstacle, the hospital stack, in the event of a back–up procedure for departure as per the Flight Manual.

Deviation from this bearing means the hospital stack is an obstacle in their back-up procedure and must be taken into account. This limits the number of pilots that can service RPH safely as special training is required and not all pilots will be suitably qualified to accommodate such a procedure. An initial departure bearing other than 020° True risks the ERHS being unable to access the RPH HLS.

Planning Environment



The North-east flight path is within the City of Perth local government area and crosses partially into the City of Vincent as illustrated on **Figure NE-1**.

Impact on building areas

The impact on building areas as identified allocated by Element Advisory drawing number 19-139 CP-1/A (10 February 2020) *RPH Flight path – Height Limitations* has been assessed. This assessment should be treated as an indicative order of magnitude only. These heights and areas should not be used directly to inform planning controls. Any planning controls should be based on the technical flight path geometry as shown on Figures NE-1 and NE-2.

The orange areas on **Figure NE-2** illustrate the area of land where current/proposed development on land does not exceed the elevation of the HLS and therefore would not be considered as part of the obstacle environment to the OLS. The blue areas represent land where development either currently exists, is planned and could exceed the elevation of the HLS at 48.5 m AHD and therefore may require further consideration.

The total area (blue areas only) affected by the North-east flight path is 34,212 square metres.

The North-east flight path partially covers development areas identified as 4, 6, and 9.

Area 6 is identified as having no prescribed height limit. The flight path OLS covers a small area of 122 metres square of the south-eastern corner of Area 6. The flight path OLS ranges from a lower limit at 61 m AHD to 63 m AHD. The ground elevation is estimated at 12 m AHD therefore the available building height would be in the order of 49 m to 51 m high, depending on the exact location on the block. A newly constructed development / under construction at 40 m (10 storey) is identified as 'H' in Area 6 as per the Element Advisory drawing number 19-139 CP-1/A (10 February 2020) *RPH Flight path – Height Limitations*. Element Advisory has confirmed that this development is outside the flight path OLS.

Areas 4 and 9 are identified as having a limited planning framework in place and therefore no height restrictions have been applied at this stage. Area 4 is the Claisebrook Village precinct numbered 16B in Figure 3 of the City of Perth letter dated 7 October 2019. Area 9 is the Claisebrook Village precinct numbered as 5.

Area 4 is 23,326 square metres in total area. The North-east flight path effectively covers this whole area (23,202 square metres). The flight path OLS ranges from a lower limit of 100 m AHD to an upper limit of 118 m AHD. The ground elevation is estimated at 12 m AHD therefore available building height would be in the order of 88 m to 106 m high depending on the exact location within this precinct.

Area 9 is a total area of 76,670 square metres. The North-east flight path covers 10,797 square metres of the western portion of the block. The flight path OLS ranges from a lower limit of 55 m AHD to 68 m AHD. The ground elevation is estimated at 11 m AHD therefore available building height would be in the order of 44 m to 57 m high depending on the exact location on the block.

6.2 SOUTH-WEST FLIGHT PATH

The south-west flight path is based on the previous GHD Figure 01 Rev C. The current ambulance helicopter service provider for Western Australia, identifies that the dominant period of activity for RPH flights is in the afternoon when there are prevailing winds from the south west, there is a requirement for a south-west flight path so as to provide Performance Class 1 departure capability during this high activity period.

The south-west flight path commences with a straight section bearing 029°/209° True for a distance of 790 m at which point it transitions to a curve radius 300 m then onto a straight section bearing of 079°/259°True for a total length of 3,400 m as illustrated on **Figure SW-1**.

The inner edge width is 42 m at an elevation of 63.5 m AHD. In accordance with ICAO Annex 14 Vol II paragraph 4.1.3 and 4.1.15 the elevation of the inner edge may be raised directly above the FATO, for use by helicopter in performance class 1 and must be approved by an appropriate authority. In the absence of specific CASA rules on this matter, it would be reasonable for the current helicopter operator to be considered the appropriate authority.

The south-west flight path is within the City of Perth local government area as illustrated on **Figure SW-1**.

Surrounding Building Environment



The OLS for the south-west flight path, based on GHD Figure 01 Rev C, commences 15m above the FATO elevation at 63.5 m. It appears the OLS has been raised in this manner in order to clear the building to the south, by applying the provisions of ICAO Annex 14 Vol. II Chapter 4 - *Obstacle Environment*. Given the presence of the building, the OLS as defined in GHD Figure 01 is considered appropriate for the purposes of protecting the OLS from any future intrusions. The flight path direction is positioned so that the OLS avoids the following buildings as illustrated in **Figure SW-2**:

- The Westin Hotel (120 m AHD approx.)
- Condor Tower building at 22 St Georges Terrace (approx. 103m AHD). This building would remain just outside the western edge of the south-west flight path.
- A building at approximately 83 m AHD on the north-east corner of Victoria Ave and St Georges Terrace. This building would remain just outside of the eastern edge of the south-west flight path.

These latter two buildings constrain the location of the south-west flight path to the extent that no other location option exists.

The Duxton Hotel on the south-west corner of Victoria Ave and St Georges Terrace is within the lateral extents of the south-west flight path. The building at approximately 74m AHD would remain below the south-west flight path OLS which will be approximately 87 m AHD over the site.

7. CONCLUSION

The purpose of establishing and protecting helicopter flight paths for the Royal Perth Hospital (RPH) is to ensure new developments (and associated activities) do not prevent helicopters from arriving or departing from the new RPH Helicopter Landing Site (HLS).

The responsibility for determining the suitability of a place as a HLS is held by the pilot-in-command and the organisation that holds the helicopter operating certificate. The pilot in control of the aircraft will make the decision as to whether it is safe to arrive or depart the RPH HLS during each mission.

The North-east flight was developed taking into account the following considerations in the construction of the approach and take-off climb surfaces for helicopters arriving north-easterly direction for RPH HLS:

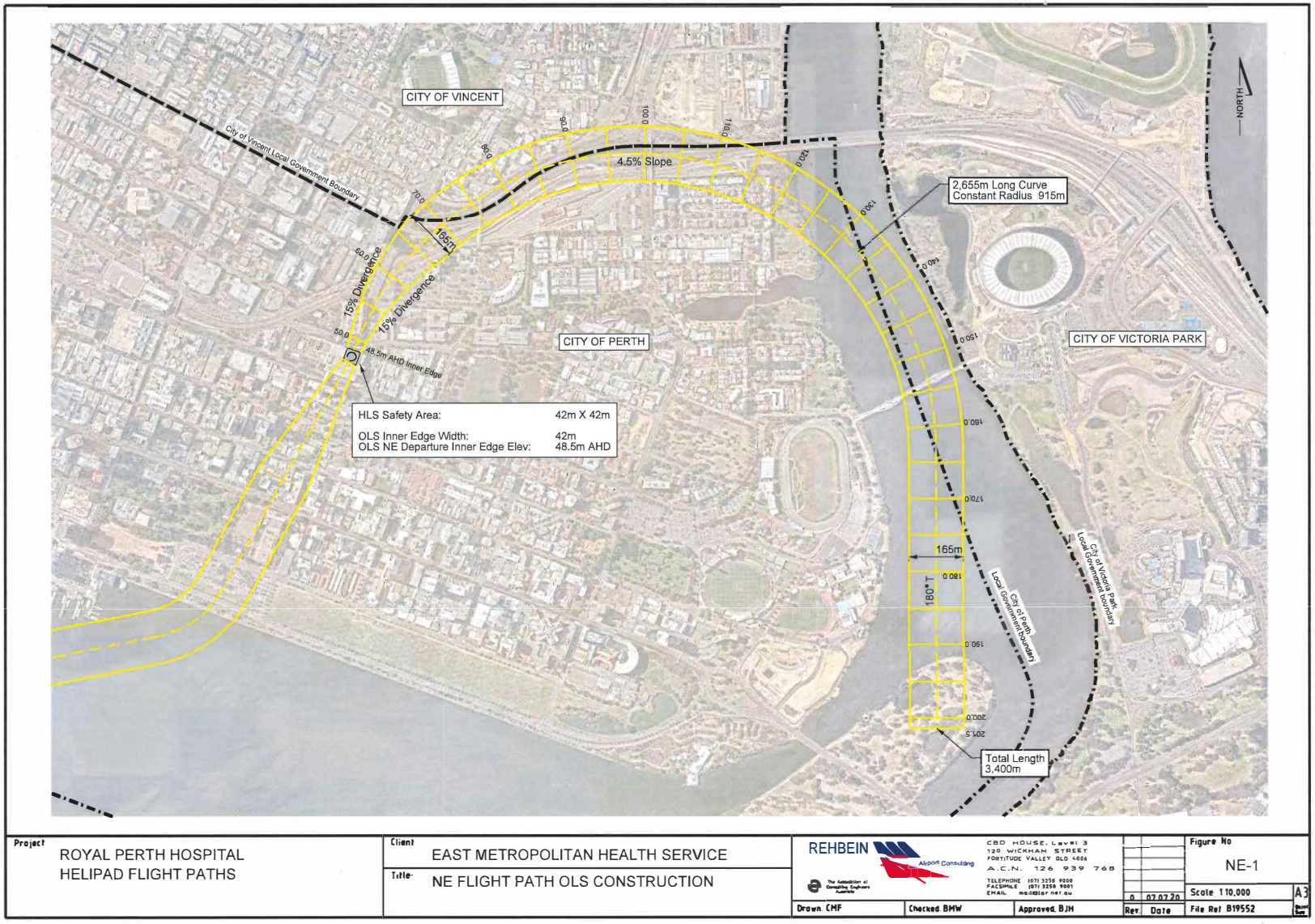
- The physical characteristics and immediate surrounds of the HLS;
- Flight paths must comply with ICAO Annex 14 Volume II criteria;
- Helicopter pilot feedback; and
- The obstacle and planning environment.

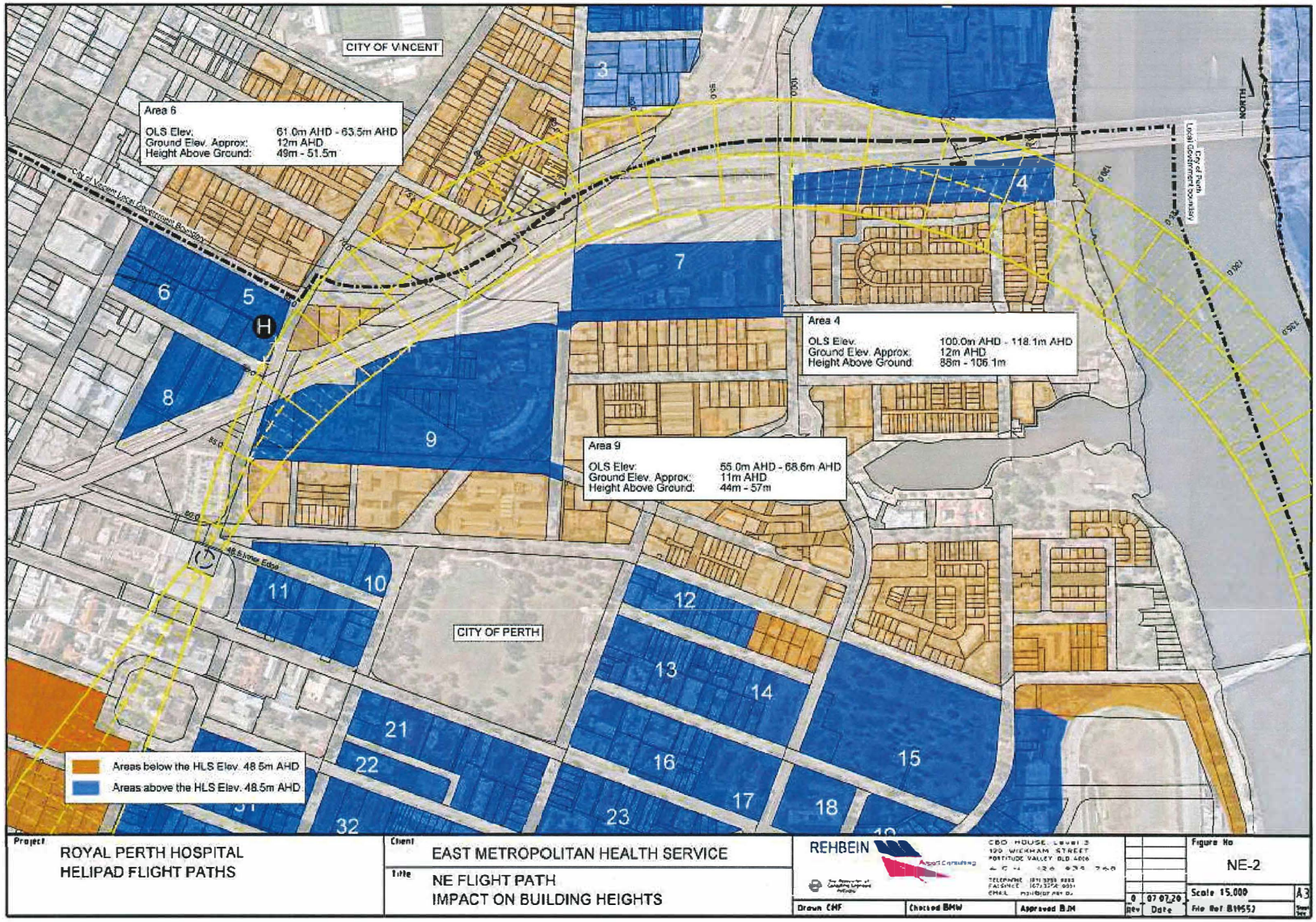
The south-west flight path commences 15m above the FATO elevation. It appears the OLS has been raised in this manner in order to clear the building to the south. EMHS should confirm the current aeromedical service provider and DFES that the presence of the RPH South building is accounted for adequately in helicopter operations to the new helipad.

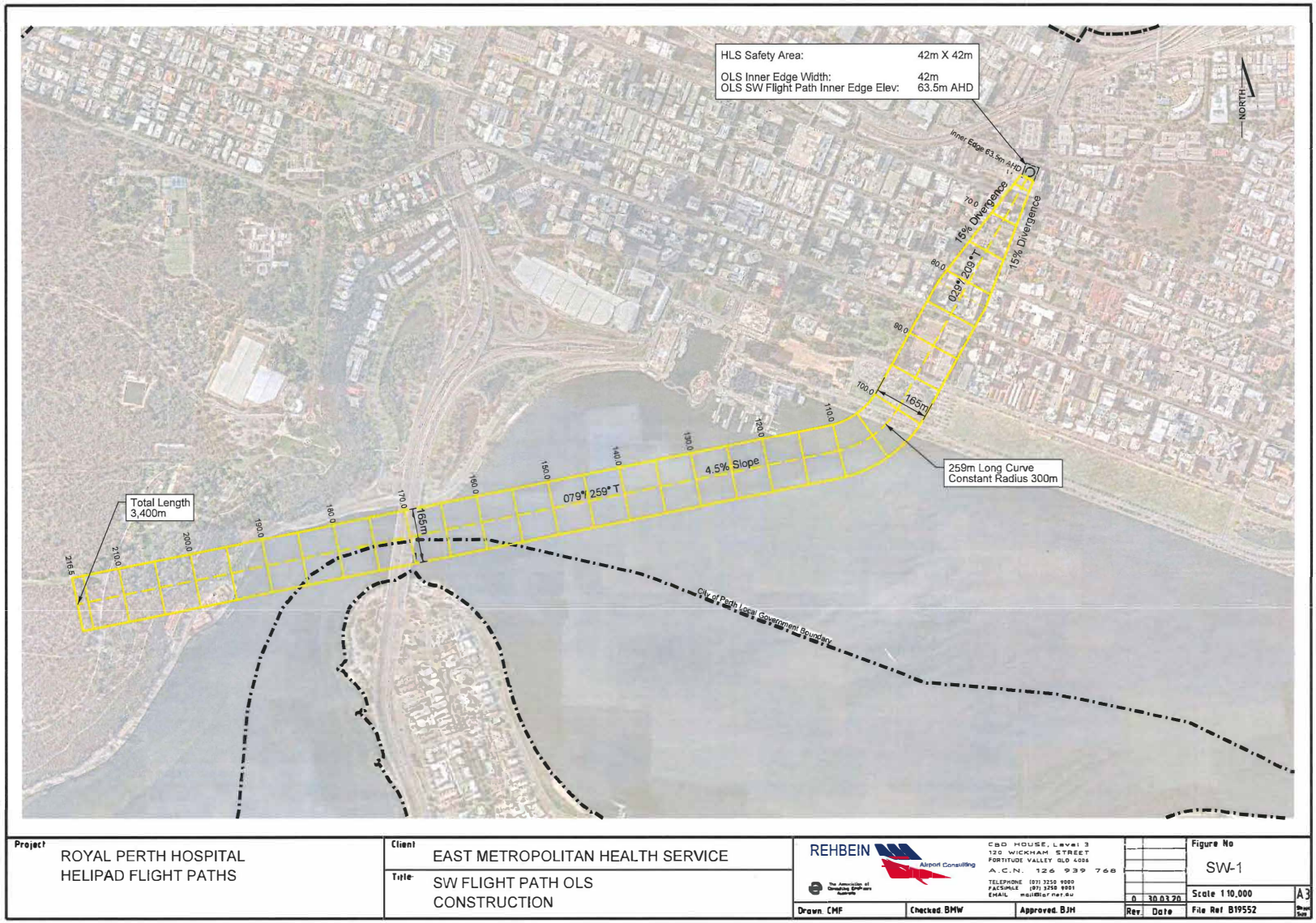


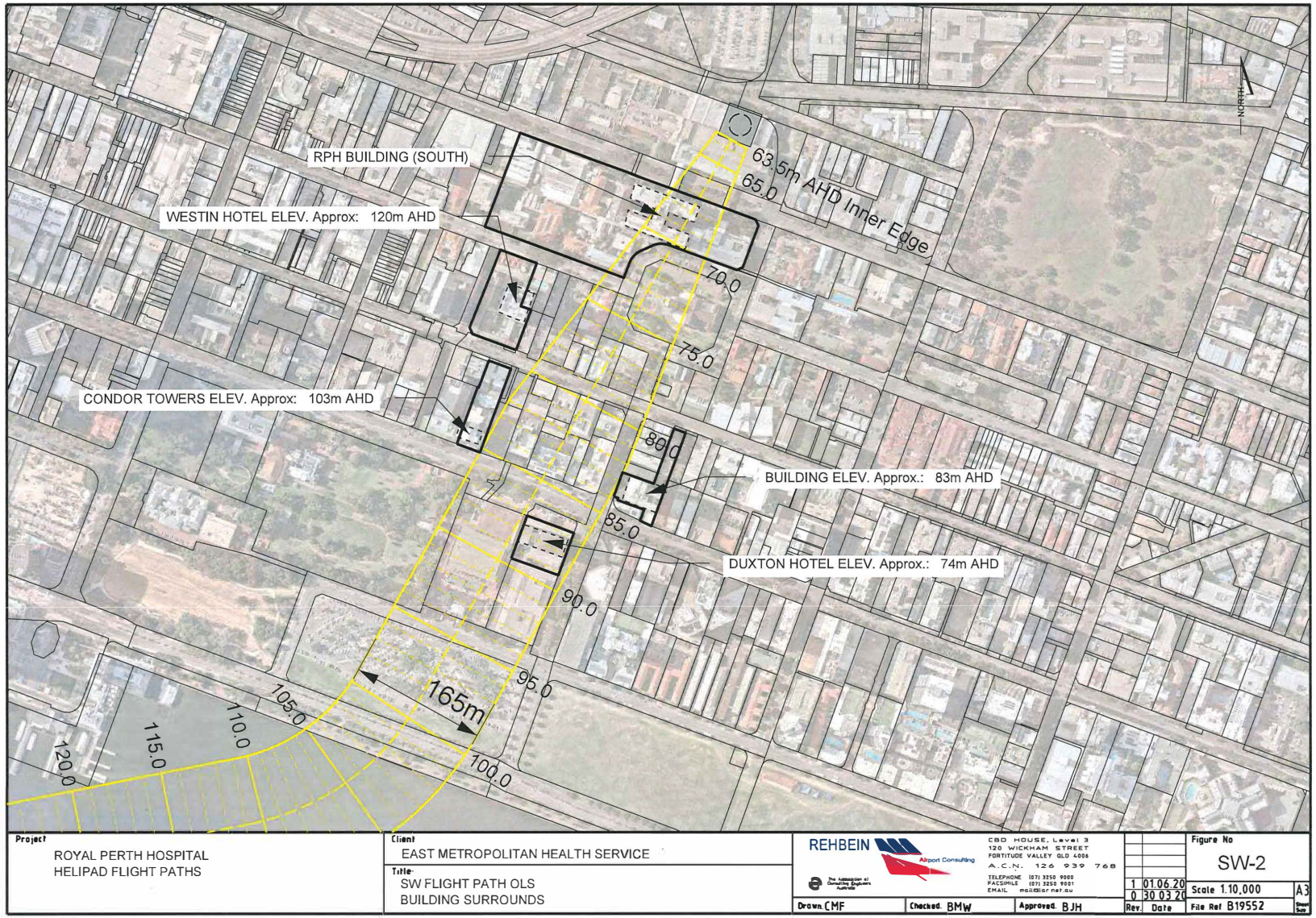
APPENDIX A

RPH HLS Flight Paths


CITY OF VINCENT
City of Vincent Local Government Boundary
4.5% Slope
2,655m Long Curve
Constant Radius 915m
165m
15% Divergence
15% Divergence
48.5m AHD Inner Edge
CITY OF PERTH
CITY OF VICTORIA PARK
HLS Safety Area: 42m X 42m
OLS Inner Edge Width: 42m
OLS NE Departure Inner Edge Elev: 48.5m AHD
165m
180°T
City of Perth Local Government boundary
City of Victoria Park Local Government boundary
Total Length
3,400m
NORTH
Project
ROYAL PERTH HOSPITAL
HELIPAD FLIGHT PATHS
Client
EAST METROPOLITAN HEALTH SERVICE
Title
NE FLIGHT PATH OLS CONSTRUCTION
REHBEIN
Airport Consulting
CBD HOUSE, Level 3
129 WICKHAM STREET
FORTITUDE VALLEY QLD 4006
A.C.N. 126 939 768
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Checked BMW
Approved BJH
Rev 0
Date 07.07.20
Figure No
NE-1
Scale 1:10,000
A3
File Ref B19552


CITY OF VINCENT
CITY OF PERTH
Area 6
OLS Elev: 61.0m AHD - 63.5m AHD
Ground Elev. Approx: 12m AHD
Height Above Ground: 49m - 51.5m
Area 4
OLS Elev: 100.0m AHD - 118.1m AHD
Ground Elev. Approx: 12m AHD
Height Above Ground: 88m - 106.1m
Area 9
OLS Elev: 55.0m AHD - 68.6m AHD
Ground Elev. Approx: 11m AHD
Height Above Ground: 44m - 57m
Areas below the HLS Elev. 48.5m AHD
Areas above the HLS Elev. 48.5m AHD
NORTH
Project
ROYAL PERTH HOSPITAL
HELIPAD FLIGHT PATHS
Client
EAST METROPOLITAN HEALTH SERVICE
Title
NE FLIGHT PATH
IMPACT ON BUILDING HEIGHTS
REHBEIN
Figure No
NE-2
Scale 1:5,000
A3
Drawn CMF
Checked BMW
Approved BJM
07.07.20
Date


HLS Safety Area: 42m X 42m
OLS Inner Edge Width: 42m
OLS SW Flight Path Inner Edge Elev: 63.5m AHD
Inner Edge 63.5m AHD
15% Divergence
15% Divergence
70.0
80.0
90.0
100.0
110.0
120.0
130.0
140.0
150.0
160.0
170.0
180.0
190.0
200.0
210.0
216.5
165m
165m
029° 209° T
079° 259° T
4.5% Slope
259m Long Curve
Constant Radius 300m
Total Length
3,400m
City of Perth Local Government Boundary
NORTH
Project
ROYAL PERTH HOSPITAL
HELIPAD FLIGHT PATHS
Client
EAST METROPOLITAN HEALTH SERVICE
Title
SW FLIGHT PATH OLS
CONSTRUCTION
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Rev. 0
Date 30.03.20
Figure No
SW-1
Scale 1:10,000
A3
File Ref B19552


RPH BUILDING (SOUTH)
WESTIN HOTEL ELEV. Approx: 120m AHD
CONDOR TOWERS ELEV. Approx: 103m AHD
BUILDING ELEV. Approx.: 83m AHD
DUXTON HOTEL ELEV. Approx.: 74m AHD
63.5m AHD Inner Edge
65.0
70.0
75.0
80.0
85.0
90.0
95.0
100.0
105.0
110.0
115.0
120.0
165m
NORTH
Project
ROYAL PERTH HOSPITAL
HELIPAD FLIGHT PATHS
Client
EAST METROPOLITAN HEALTH SERVICE
Title
SW FLIGHT PATH OLS
BUILDING SURROUNDS
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30.03.20
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File Ref B19552

element.

Appendix 5

Interpretation of Aviation Regulations (Rehbein Airport Consulting)

REHBEIN Airport Consulting

10 February, 2021
Our File Ref: B19552AL001
Contact: Ben Hargreaves

Senior Project Manager
East Metropolitan Health Service
Level 4, Room 4202, O Block (Goderich St)
Royal Perth Hospital
Perth, WA 6000

Attention: Emma Morony

RE: PROPOSED RPH HELIPAD
HELICOPTER FLIGHT PATH PROTECTION

1. INTRODUCTION

REHBEIN Airport Consulting was engaged by East Metropolitan Health Service (EMHS) to review aspects of helicopter flight path protection associated with the proposed Royal Perth Hospital (RPH) helipad, which was recently approved for construction.

Previously, PSNK Aeronautical Services was engaged by EMHS, to provide advice on suitable flight paths for the proposed helipad at Royal Perth Hospital based on the operational needs of helicopters with performance capabilities equivalent to that of the AW139.

The result was report titled *RPH Rooftop Helipad Assessment of Operational Airspace* Version 180424. Following consultation between EMHS and DFES, two points were raised:

- Flight path geometry must be compliant with International Civil Aviation Organisation (ICAO) specifications for obstacle limitation applicable to Performance Class 1 / Category A operations; and
- Obstacle-free airspace must accommodate a wider range of potential future helicopter types.

The purpose of this letter is to confirm the flight path protection requirements, based on the nominated helicopter characteristics and ICAO specifications.

2. RELEVANT REGULATIONS

There are currently no legislative regulations specifically addressing the requirements for physical characteristics of helicopter flight paths and an HLS. Rather, the *Civil Aviation Regulations 1998* Regulation 92 places the responsibility on the pilot-in-command/helicopter operator for determining whether an HLS is safe or not to use.

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There is, however, strong and accepted guidance material from the Civil Aviation Safety Authority (CASA) and International Civil Aviation Organisation (ICAO) that is broadly accepted by helicopter operators in Australia and internationally as indicating whether facilities offer acceptable levels of safety.

This is reinforced by the National Airports Safeguarding Advisory Group comprising high-level Commonwealth, State and Territory transport and planning offices who prepared the National Airports Safeguarding Framework which includes Guideline H *Protecting Strategically Important Helicopter Landing Sites*. The purpose of Guideline H is to provide guidance to State/Territory and local government decision makers of identified strategically important HLS particularly in recognition that HLS in Australia are not licensed, certified or regulated in the way that aerodromes are. Strategically important HLS includes an HLS associated with a hospital and an elevated HLS within a populated area.

Relevant regulations and guidance pertaining to the use of a HLS as well as the associated flight paths are:

- *Civil Aviation Regulations 1988* – Regulation 92;
- The Civil Aviation Safety Authority (CASA) Civil Aviation Advisory Publication CAAP 92-2(2) *Guidelines for the establishment of on-shore helicopter landing sites (February 2014)*;
- International Civil Aviation Organisation ICAO Annex 14 Aerodromes – Volume II: Heliports (4th edition July 2013) – herein referred to as ICAO Annex 14-II; and
- Civil Aviation Safety Authority NPRM 1304OS Regulation of aeroplane and helicopter 'ambulance function' flights as Air Transport Operations.

Paragraph 4.6 of CAAP 92-2(2) states:

> '*In keeping with its submissions to ICAO on this topic, CASA recommends owners and operators of an HLS who intend to develop and operate a heliport for the purposes of RPT or Charter operations refer to, and comply with, the SARPs* [standards and recommended practices] *as set out in Annex 14.*'

Per NPRM1304OS, CASA has signalled its intention to create legislation treating emergency medical transport operations in a similar category to RPT and Charter.

Until there exists legislation to the contrary, it is for the relevant service provider, or any operator into and out of RPH, to determine the appropriateness of the RPH HLS facilities and flight path protection. The pilots of the helicopter service currently operating the ambulance services (CHC Helicopter Services) and DFES have stated to EMHS and REHBEIN Airport Consulting that the flight paths must be protected in accordance with ICAO Annex 14 for them to safely conduct flights to and from the RPH HLS. It will, therefore, be for the current helicopter operators and DFES to approve any deviation from the ICAO Annex 14 specifications.

3. HELICOPTER CHARACTERISTICS

The critical characteristics of the design helicopter dictate the physical characteristics of the airspace required to be protected in order to ensure safe operations in a non-normal operating situation (i.e. with one engine inoperative), by reference to the relevant standards and guidance. These characteristics include the helicopter D-value (largest overall length/width) and the main rotor diameter.

The PSNK report v180424 determines flight path characteristics based on a design helicopter with a D-value of 21.0 metres and main rotor diameter of 15.0 metres.

DFES has subsequently advised that the emergency flight path airspace needs to accommodate a design helicopter with a main rotor diameter of 16.5 metres. This is larger than the design helicopter rotor diameter used for the PSNK report and requires a wider overall width of OLS (165 m vs. 150 m).

4. OLS EXTENTS

The PSNK report is predicated on obstacle limitation surfaces (OLS) dimensions for the flight paths as follows. These extents are not compliant with ICAO Annex 14-II requirements, as noted below.

4.1 North-east Flight Path OLS

The north-east flight path OLS (Figure 6 in the PSNK Report – reproduced below) extends a distance of approximately 1,600 metres. The minimum distance for Performance Class 1 OLS is 3,386 metres, per attached extract of ICAO Annex 14-II, Table 4-1.

The PSNK flight path also includes two (2) curved segments. ICAO Annex 14-II only permits one (1) curved portion:

> 4.1.6 In the case of an approach surface involving a turn, the surface shall not contain more than one curved portion.
>
> 4.1.19 In the case of a take-off climb surface involving a turn, the surface shall not contain more than one curved portion.

This requirement is described in the PSNK report and has been applied to the south-west flight path OLS but does not seem to have been adopted for the north-east flight path OLS.[1]

4.2 South-west Flight Path OLS

The south-west flight path OLS is shown in the PSNK Report (Figure 7 – reproduced below) extending a distance of approximately 850 metres, to the Swan River. The remainder of the south-west flight path length (if it was defined by PSNK) is not shown in the PSNK Report. However, by definition above, having already adopted a curved segment on departure from the helipad, the remaining length of 2.5 kilometres approximately would need to be straight in order to comply with ICAO Annex 14-II specifications. Alternatively the curved portion on departure would need to be removed in order to accommodate a curve further out.

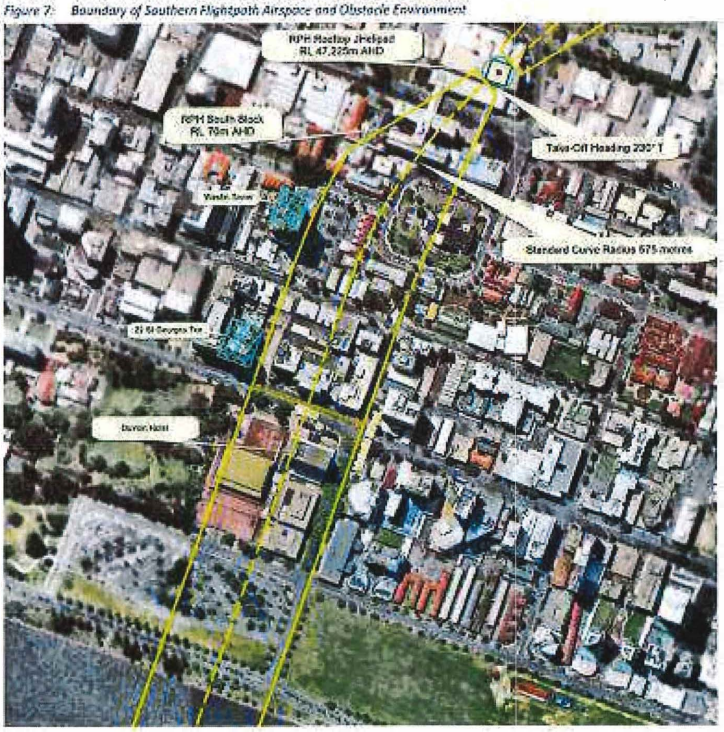
[1] A subsequent version of the PSNK Report (190527) appears to address the limitation to a single curved section, but does not extend the flight path protection to the required length

Figure 6: Airspace extent for northern and southern flightpath tracks



Source: PSNK Report V180424

Figure 7: Boundary of Southern Flightpath Airspace and Obstacle Environment



Source: PSNK Report V180424

5. OLS SLOPES

Annex 14-II specifies the slope design categories which apply to different helicopter performance class operations. For performance class 1 operations, the slope design category is A, and the required slope is 4.5%, per Annex 14-II Table 4-1 and Figure 4-6 (attached).

ICAO Annex 14-II also describes how the inner edge of the 4.5% slope may be raised in order to clear close in obstacles (see Figure 4-4, attached). Raising the inner edge is permitted under Annex 14-II with approval from the appropriate authority.

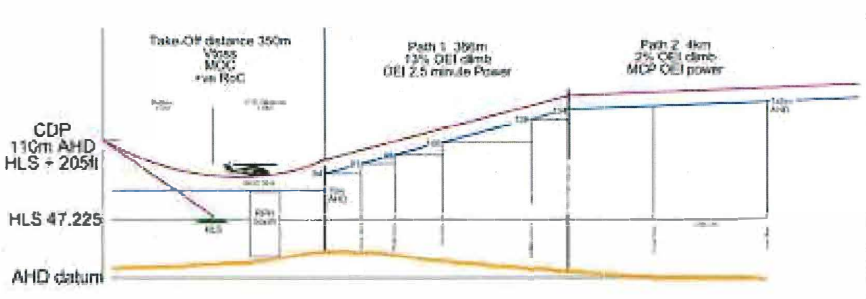
> 4.1.15 The elevation of the inner edge shall be the elevation of the FATO at the point on the inner edge that is intersected by the centre line of the take-off climb surface. For heliports intended to be used by helicopters operated in performance class 1 and when approved by an appropriate authority, the origin of the inclined plane may be raised directly above the FATO.

In Australia currently, the appropriate authority would be the pilot-in-command/Chief Pilot of the helicopter operator, as the responsibility under the available regulations (*Civil Aviation Regulations 1998*) for the safety of operations lies with the operator.

The 4.5% OLS slope specified in ICAO Annex 14-II is a generic slope intended to protect for a wide range of helicopter operating capabilities and conditions. It forms an internationally accepted 'standard' which provides a quantifiable degree of certainty around the obstacle environment.

In our experience, helicopter operators providing emergency medical transport generally expect a 4.5% slope to be protected, as a minimum. For reference the Ministry of Health policy in NSW and Queensland Health guidelines both require a 4.5% slope commencing at the helipad elevation. The Department of Health and Human Services guidelines in Victoria require protection of (RPH-equivalent) helipads with a horizontal segment at the helipad elevation for the first 240 metres, followed by a 4.5% slope for 3,386 metres.

The PSNK report includes a technical analysis demonstrating that the AW139 helicopter, on a representative operating day of 40°C can exceed the 4.5% slope during the early part of the one engine inoperative climb (part of Figure 15 – reproduced below. This is a specific analysis for a particular helicopter type (which we have not verified but assume to be accurate).



Source: PSNK Report V180424 Figure 15 (part)

Although in common use for emergency medical transport operations, The AW139 is not the only type that might operate to the RPH helipad. DFES has noted in consultation that use of the helipad by a range of potential helicopter types must be protected into the future. DFES is not able to specify or guarantee the helicopter type or capability in soliciting future service providers.

While it may be sufficient for current operations to protect the slopes identified in the PSNK report, instead of the 4.5% required by ICAO, this may not be sufficient to ensure future operations.

6. FLIGHT PATH APPROVAL

Under Civil Aviation Regulation 92-2 and Civil Aviation Advisory Publication 92-2(2) a person must not land an aircraft on, or engage in conduct that causes an aircraft to take-off from, a place unless that place is suitable for use for the purposes of the landing and taking-off of aircraft. The assessment of suitability lies with the pilot, including in particular the flight paths available for use in a one engine inoperative or other emergency situation.

Day-to-day approval of the RPH flight path obstacle clearances therefore comes from the Chief Pilot/s of the respective organisations which are required to operate there in providing emergency medical transport services (refer **Section 2**).

However, as custodian of the aeromedical services contract, we suggest DFES would be the appropriate overarching approval authority, in consultation with current and potential future helicopter operators and, at its discretion, CASA. We would expect that consultation to result in adoption of the current CASA guidance and ICAO Annex 14 Volume II specifications for obstacle limitation surface dimensions, geometry and slope.

Yours faithfully
For and on behalf of
LAMBERT & REHBEIN (SEQ) PTY LTD

B.J. HARGREAVES M.Eng, M.Sc, C.Eng MICE, MIEAust, CPEng, RPEQ
SENIOR ASSOCIATE

Enc: ICAO Annex 14 Volume II Table 4-1
ICAO Annex 14 Volume II Figure 4-6
ICAO Annex 14 Volume II Figure 4-4

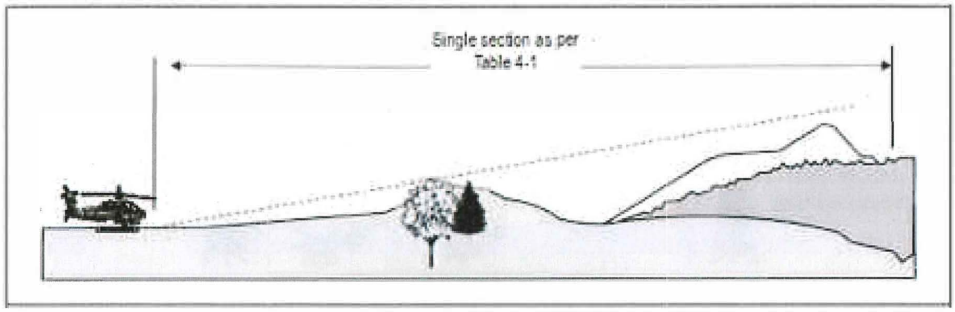
Table 4-1. Dimensions and slopes of obstacle limitation surfaces for all visual FATOs

SURFACE and DIMENSIONS	SLOPE DESIGN CATEGORIES		
	A	B	C
APPROACH and TAKE-OFF CLIMB SURFACE:			
Length of inner edge	Width of safety area	Width of safety area	Width of safety area
Location of inner edge	Safety area boundary (Clearway boundary if provided)	Safety area boundary	Safety area boundary
Divergence: (1st and 2nd section)			
Day use only	10%	10%	10%
Night use	15%	15%	15%
First Section:			
Length	3 386 m	245 m	1 220 m
Slope	4.5% (1:22.2)	8% (1:12.5)	12.5% (1:8)
Outer Width	(b)	N/A	(b)
Second Section:			
Length	N/A	830 m	N/A
Slope	N/A	16% (1:6.25)	N/A
Outer Width	N/A	(b)	N/A
Total Length from inner edge (a)	3 386 m	1 075 m	1 220 m
Transitional Surface: (FATOs with a PinS approach procedure with a VSS)			
Slope	50% (1:2)	50% (1:2)	50% (1:2)
Height	45 m	45 m	45 m

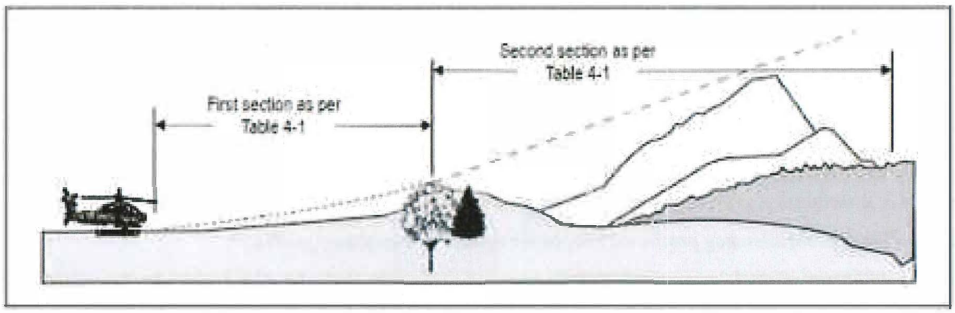
(a) The approach and take-off climb surface lengths of 3 386 m, 1 075 m and 1 220 m associated with the respective slopes, brings the helicopter to 152 m (500 ft) above FATO elevation.

(b) Seven rotor diameters overall width for day operations or 10 rotor diameters overall width for night operations.

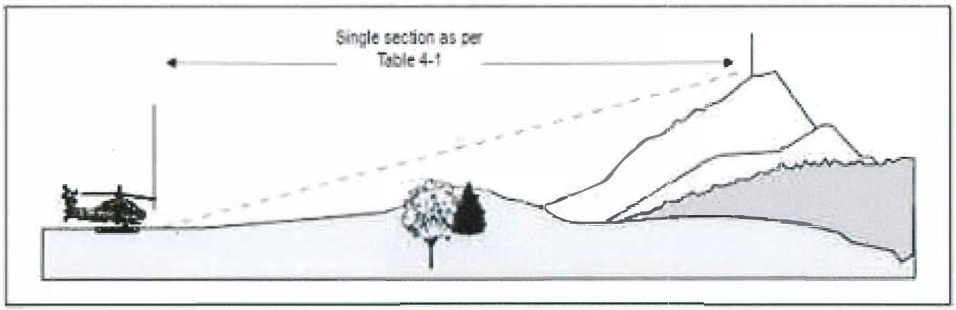
Note — The slope design categories in Table 4-1 may not be restricted to a specific performance class of operation and may be applicable to more than one performance class of operation. The slope design categories depicted in Table 4-1 represent minimum design slope angles and not operational slopes. Slope category "A" generally corresponds with helicopters operated in performance class 1; slope category "B" generally corresponds with helicopters operated in performance class 3; and slope category "C" generally corresponds with helicopters operated in performance class 2. Consultation with helicopter operators will help to determine the appropriate slope category to apply according to the heliport environment and the most critical helicopter type for which the heliport is intended.



a) Approach and take-off climb surfaces - "A" slope profile - 4.5% design



b) Approach and take-off climb surfaces - "B" slope profile - 8% and 16% design



c) Approach and take-off climb surfaces - "C" slope profile - 12.5% design

Figure 4-6. Approach and take-off climb surfaces with different slope design categories

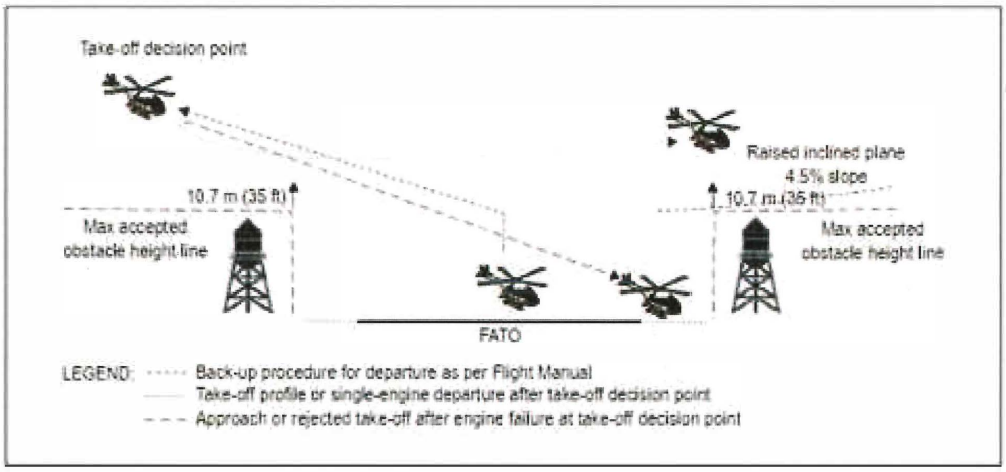


Figure 4-4. Example of raised inclined plane during operations in Performance Class 1

Note 1 — This example diagram does not represent any specific profile, technique or helicopter type and is intended to show a generic example. An approach profile and a back-up procedure for departure profile are depicted. Specific manufacturers operations in performance class 1 may be represented differently in the specific Helicopter Flight Manual. Annex 6, Part 3, Attachment A provides back-up procedures that may be useful for operations in performance class 1.

Note 2 — The approach/landing profile may not be the reverse of the take-off profile.

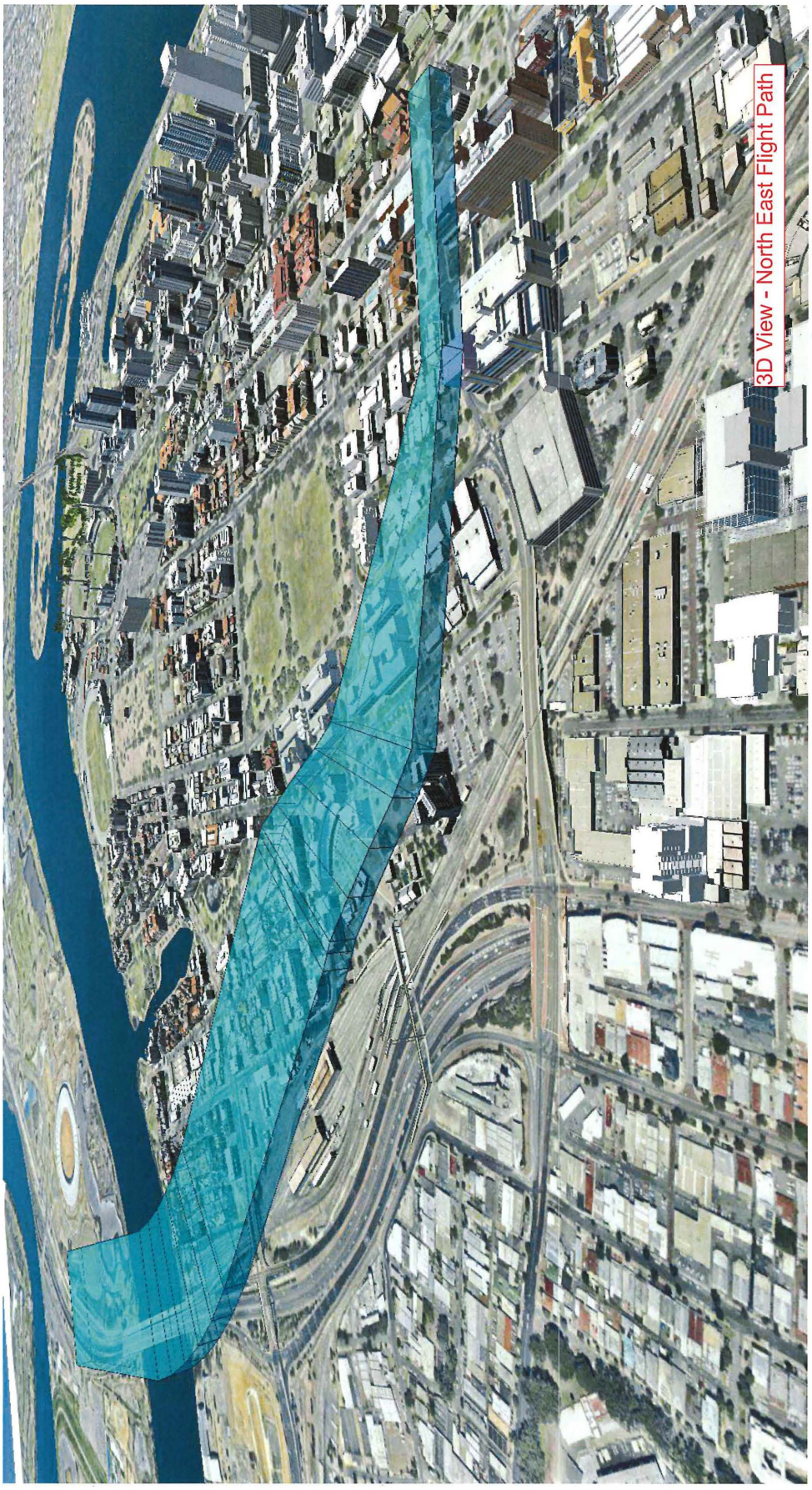
Note 3 — Additional obstacle assessment might be required in the area that a back-up procedure is intended. Helicopter performance and the Helicopter Flight Manual limitations will determine the extent of the assessment required.

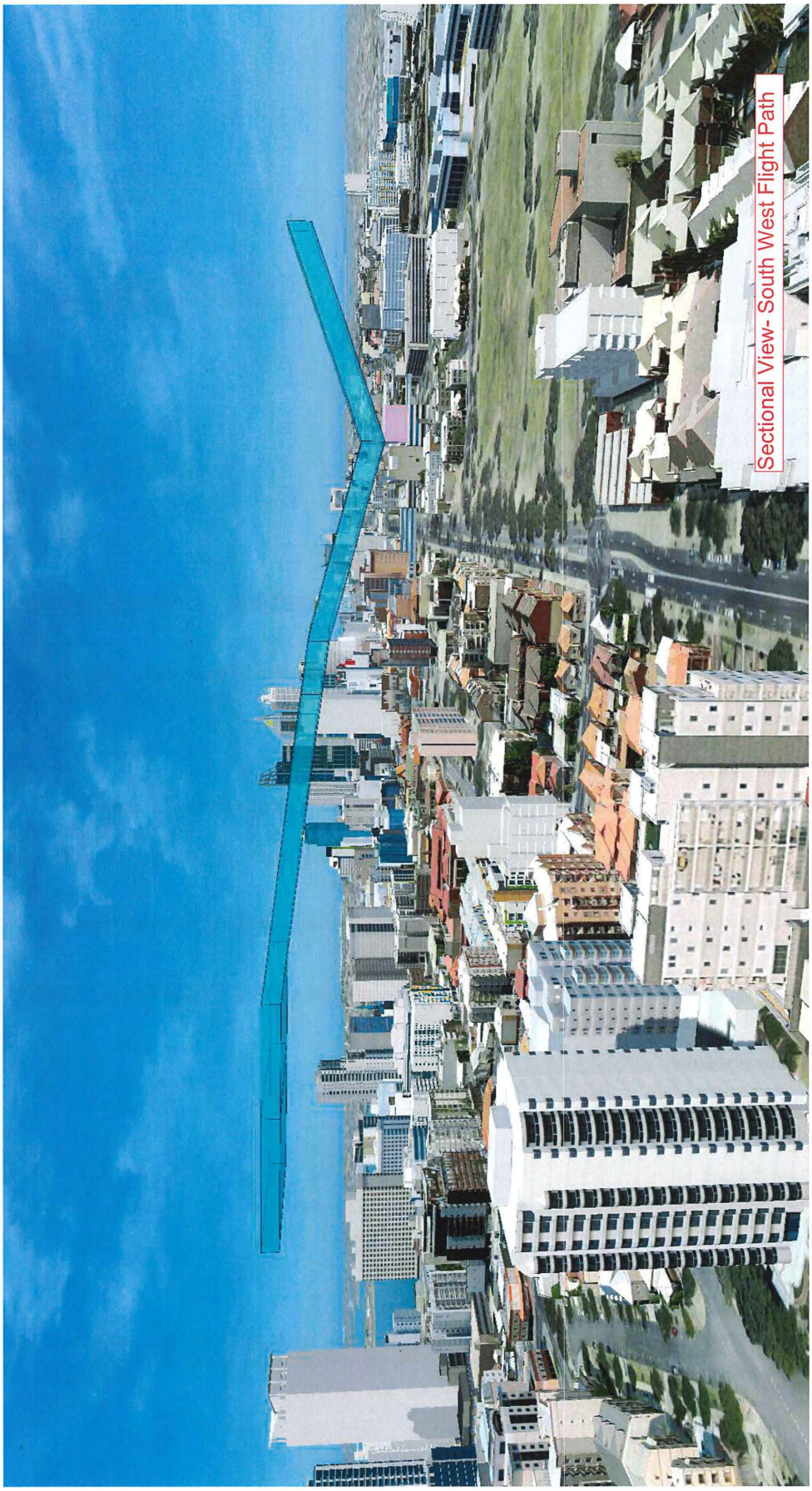
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Appendix 6

Central Perth Planning Committee Meeting (3 September 2018)


Plan View - North East and South West Flight Paths


3D View - North East Flight Path


Sectional View- South West Flight Path

GOVERNMENT OF WESTERN AUSTRALIA

Western Australian Planning Commission

Your ref: N/A
Our ref: DP/11/01552
Enquiries: Tyrone Desai (6551 9638)

Liz MacLeod
Chief Executive
East Metropolitan Health Service
PO BOX 8172
Perth Business Centre
PERTH WA 6849

Dear Ms MacLeod

CENTRAL PERTH PLANNING COMMITTEE MEETING – ROYAL PERTH HOSPITAL HELIPAD FLIGHT PATHS

The amended proposal for the Royal Perth Hospital Helipad flight paths was considered by the Central Perth Planning Committee on 3 September 2018 where the following resolution was passed:

That the Central Perth Planning Committee resolves to;

1. *provide support for the amended flight paths as detailed in Attachment 1;*
2. *provide support for the lodgement of a Development Application relating to the proposed helipad and helicopter flight paths; and*
3. *provide support for the preparation of a scheme amendment to protect the proposed flight paths from future development.*

If you have any queries regarding this advice, please contact Tyrone Desai on 6551 9638 or Tyrone.Desai@dplh.wa.gov.au

Yours sincerely

Sam Fagan
Secretary
Western Australian Planning Commission

7 September 2018

Postal address: Locked Bag 2506 Perth WA 6001 Street address: 140 William Street Perth WA 6000
Tel: (08) 6551 8002 Fax: (08) 6551 9001 info@dplh.wa.gov.au www.dplh.wa.gov.au
ABN 35 482 341 493
wa.gov.au


Attachment 1

element.

Appendix 7

Letters of Support (previous indicative flight paths)

Metropolitan Redevelopment Authority

RECEIVED 6/6/18 Adj # 1203

31 May 2018

Ms Elizabeth MacLeod
Chief Executive Officer
East Metropolitan Health Service
PO Box X2213
PERTH WA 6847

File No: MRA-09705
Doc Id: A563193

Dear Ms MacLeod

PROPOSED ROYAL PERTH HOSPITAL HELIPAD AND FLIGHT PATHS

I write in relation to your correspondence received on 7 May 2018 regarding the proposed Royal Perth Hospital (RPH) helipad upgrade and associated flight paths.

The Metropolitan Redevelopment Authority (MRA) understands two designated flight paths have been identified, in accordance with emerging Civil Aviation Safety Authority (CASA) regulations. The proposed northern flight path will pass through a portion of the MRA's Central Perth Redevelopment Area, including portions of Claisebrook Village (at a minimum flight height of 60m) and the East Perth Power Station (at a minimum flight height of 150m).

I can advise that the MRA supports in-principle the proposed northern flight path, as indicated in Attachment 1 to this letter. It is requested that the Department of Health continue to work to minimize impacts on potential development options for the identified sites in the context of ensuring safe flight paths. Please advise the MRA of the final designated flightpaths, so that the MRA can inform prospective purchasers of sites such as the East Perth Power Station that the lots are situated in the vicinity of a designated helicopter flight path route.

The MRA encourages Department of Health to continue to liaise with the City of Perth regarding the southern flightpath.

Thank you for the opportunity to comment on the proposal and should you have any further queries regarding this matter please contact Ms Conor Ward on 6557 0781 or via email conor.ward@mra.wa.gov.au.

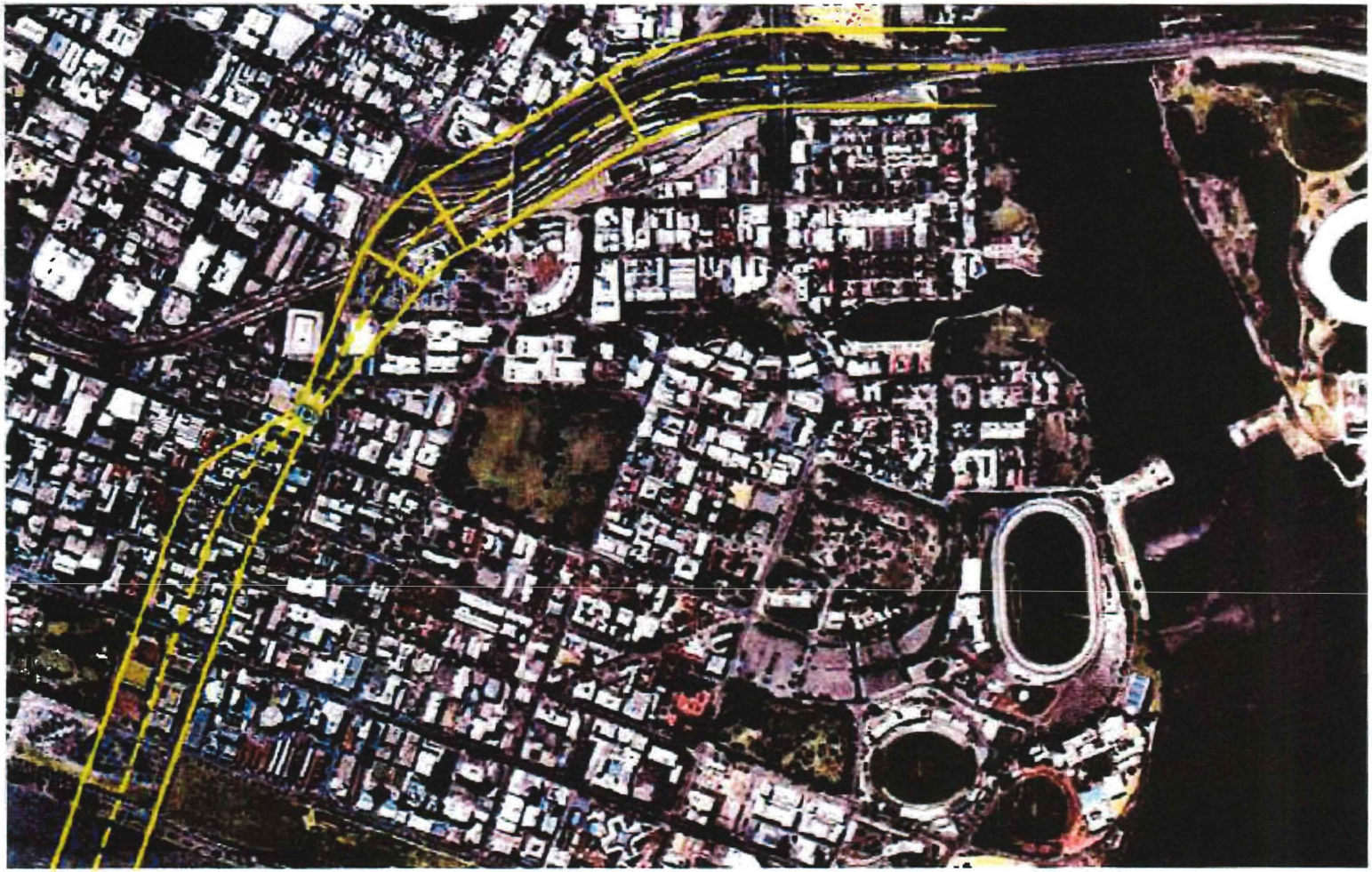
Yours sincerely

Ryan Keys
Executive Director Planning

Att Attachment 1 – Proposed Flight Paths

HEAD OFFICE GPO Building, Level 1, Forrest Place, Perth WA
PO Locked Bag 8, Perth Business Centre, WA 6849
T +61 (08) 6552 0700 E reception@mra.wa.gov.au
F +61 (08) 9281 6020 W www.mra.wa.gov.au
ABN 69 902 571 142

Attachment 1 – Proposed Flight Paths (from 'Royal Perth Hospital Helipad Strategic Overview' prepared by PWC April 2018)



CATHOLIC ARCHDIOCESE OF PERTH

Administration Centre

23 August 2018

Mr Brad Caldwell
Director
PricewaterhouseCoopers
GPO Box D198
PERTH WA 6840

Dear Mr Caldwell

Proposed Royal Perth Hospital Helipad and Flight Paths

Further to your recent correspondence I am writing to confirm the following:

The Roman Catholic Archbishop of Perth:

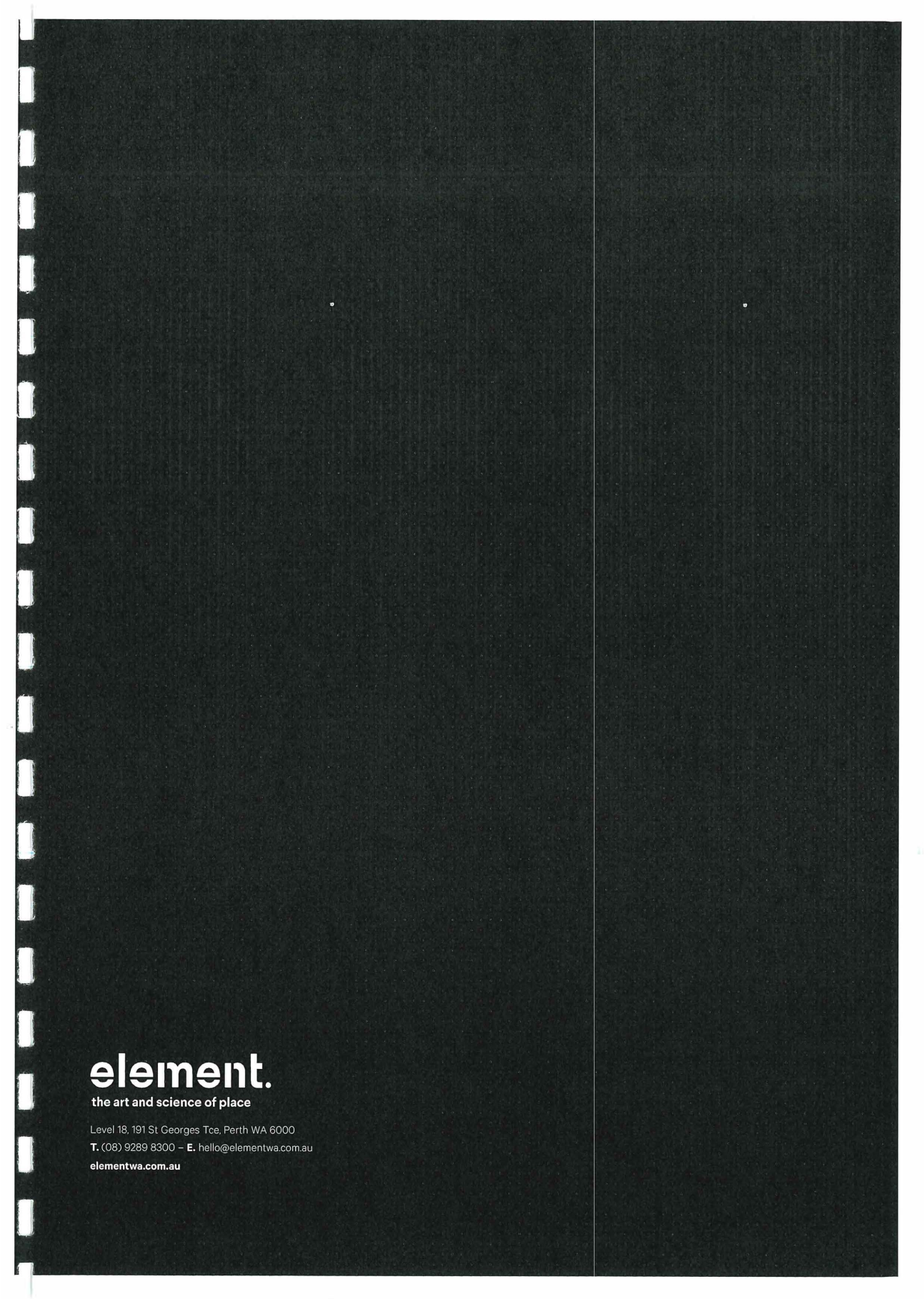
- is the owner of a number of significant properties located within the 'Victoria Square Precinct'.
- is a stakeholder and neighbour of the Royal Perth Hospital
- supports in-principle, the proposed relocation of the existing helipad
- understands the relocation of the helipad is necessary to accommodate the new heavier helicopters being purchased to replace the existing helicopters currently in operation
- acknowledges the proposed protected flight path associated with the helicopter service is required for the service to continue providing this critical service to the community during "emergency" conditions and at other times flight paths will be dictated, as they are now by climatic conditions.

If you have any further queries, please do not hesitate to contract the Catholic Administration Centre.

Yours sincerely

Theresa Carroll
Manager Property

Address: Giver House, Administration Centre, 249 Adelaide Terrace, Perth WA 6000, Australia
Mailing Address: GPO Box M962, Perth WA 6843
Telephone: +61 8 6104 3600
Facsimile: +61 8 6162 0345
Email: admin@perthcatholic.org.au
Website: www.perthcatholic.org.au


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PLANNING AND DEVELOPMENT ACT 2005

RESOLUTION TO AMEND LOCAL PLANNING SCHEME

CITY OF PERTH

CITY PLANNING SCHEME NO. 2

AMENDMENT NO. 47

RESOLVED that the Local Government pursuant to section 75 of the *Planning and Development Act 2005,* amend the above Local Planning Scheme by:

1. Amending clause 36(1)(b) as follows:

   a non-complying application does not include an application involving:

   i. a prohibited use;
   ii. an application to increase the maximum plot ratio which exceeds the limits set out in clause 28 and/or 30; or
   iii. an application to permit permanent development within the Core Flight Path Area, outlined in Special Control Area 33, which exceeds the maximum AHD heights specified in Figures 33.2 – 33.7.

2. Inserting a new Special Control Area under clause 39(1) as follows:

   (gg) Royal Perth Hospital Flight Path Protection Special Control Area

3. Inserting the following as Special Control Area 33 in Schedule 8:

   33. Royal Perth Hospital Flight Path Protection Special Control Area

   33.1 Special Control Area

   The following provisions apply to the land shown in Figures 33, 33.1 to 33.7 as the Royal Perth Hospital Helicopter Flight Path Protection Special Control Area which comprises Core and Frame Flight Path Areas.

   Note: The provisions of this Special Control Area do not apply to the parts of the Special Control Area which are legislated under the *Metropolitan Redevelopment Act 2011 or to telecommunication facilities legislated by the Telecommunications (Low Impact Facilities) Determination Act 1997.*

   33.2 Objectives

   The objectives of the Royal Perth Hospital Helicopter Flight Path Protection Special Control Area are –

Am19

(a) To ensure the continued safe operation of Royal Perth Hospital's Strategic Helicopter Landing Site in support of the hospital's function as the State's Major Trauma Unit.

(b) To ensure that permanent development does not encroach into the Core Flight Path Area.

(c) To ensure that temporary works and equipment within the Special Control Area do not present a hazard to helicopters using the Core Flight Path Area.

33.3 General Provisions

33.3.1 Where a provision of another Special Control Area is inconsistent with a provision of this Special Control Area, the provisions of the latter is to prevail.

33.3.2 Notwithstanding clause 39(3) of the Scheme, where the heights specified in sub-clause 33.5.1 of this Special Control Area are inconsistent with the heights specified on the Maximum Building Heights Plan, whichever is the lower height shall apply.

33.4 Requirement for Development Approval for Works

In accordance with sub-clause 61(6)(a) of the Deemed Provisions, an application for development approval for works that are typically excluded under clause 61(1) of the Deemed Provisions and schedule 7 of the Scheme shall be required for works that are situated above or within 30 metres of the maximum AHD heights specified in figures 33.2 to 33.7 for the Core and Frame Flight Path Areas.

33.5 Development Requirements

33.5.1 Within the Core Flight Path Area, permanent development, including the parts of a building which are ordinarily excluded from building height calculations, shall not exceed the maximum AHD heights specified in Figures 33.2 to 33.7, as well as intermediate maximum AHD height values determined by a 4.5% gradient as shown in Figure 33.8.

33.5.2 Within the Core and Frame Flight Path Areas, temporary works and equipment shall not present a hazard to helicopters using the Core Flight Path Area.

33.6 Consultation with Other Authorities

Where development and any associated works are situated above or within 30 metres of the maximum AHD heights specified in Figures 33.2 to 33.7, and/or the intermediate maximum AHD heights specified in Figure 33.8 for the Core and Frame Flight Path Areas, the local government shall provide a copy of the application for development approval to the owner of the Royal Perth Hospital Helicopter Landing Site for objections and recommendations in accordance with clause 66 of the Deemed Provisions.

Note: The Department of Health's East Metropolitan Health Service is the owner of the Royal Perth Hospital helicopter landing site.

33.7 Consideration of Application by Local Government

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33.7.1 Development approval shall not be granted for permanent development in the Core Flight Path Area which exceeds the maximum AHD heights specified in Figures 33.2 to 33.7 or the intermediate maximum AHD heights specified in Figure 33.8.

33.7.2 In considering an application for development approval (other than an application for which approval cannot be granted under subclause 33.7.1), the local government is to have due regard to the following matters:

(a) the objectives of this Special Control Area; and
(b) the views of the owner of the Royal Perth Hospital Helicopter Landing Site in relation to how the application addresses the National Airports Safeguarding Framework - Guideline H, or any other relevant technical guidelines.

33.7.3 Where development and associated works are situated above or within 30 metres of the maximum AHD heights specified in Figures 33.2 to 33.7, or the intermediate maximum AHD heights in Figure 33.8, for the Core and Frame Flight Path Areas, the local government shall include as a condition of development approval, the submission of a Construction and Demolition Management Plan in a form and manner to the satisfaction of the local government.

33.7.4 The local government shall provide a copy of the Construction and Demolition Management Plan, including any subsequent amendments to the plan, to the owner of the Royal Perth Hospital Helicopter Landing Site for recommendations for the local government to consider in determining the acceptability of the plan.

33.7.5 The owner of the Royal Perth Hospital Helicopter Landing Site shall, within 21 days of receiving the Construction and Demolition Management Plan, or within such longer period as the local government allows, provide to the local government a memorandum in writing containing any recommendations with respect to the plan and any subsequent amendments to the plan.

33.7.6 The Construction and Demolition Plan shall provide details of the temporary works and equipment, including cranes, to be used on site for construction and demolition purposes including but not limited to:

(a) The duration of the construction period (start date and end date) and the time period in which any crane or other equipment will remain on site;
(b) Maximum operating height, maximum operating radius and operating time/s of any crane or other equipment; and
(c) The measures to be taken to minimise any potential impact on and/or encroachment into the Core Flight Path Area.

33.8 Definitions

The following definitions apply within the Special Control Area:

Am21

Core Flight Path Area - is the protected operational flight paths used by helicopters arriving and departing the Royal Perth Hospital Helicopter Landing Site as defined by the relevant civil aviation guidelines and/or standards as shown in Figures 33.2 to 33.7.

Frame Flight Path Area - is the area adjoining the Core Flight Path Area as shown in Figures 33.2 to 33.7 within which temporary works and equipment need to be considered in relation to their impact on the Core Flight Path Area.

Royal Perth Hospital Helicopter Landing Site – the rooftop landing surface used for the arrival or departure of helicopters associated with the operations of the Royal Perth Hospital State Major Trauma Unit as shown in Figures 33.1.

Permanent Development – development which is not temporary works or equipment.

Temporary works and equipment – works and equipment such as cranes, machinery and structures used temporarily to undertake development and/or maintenance.

4. Amending the Maximum Building Height Plan (1 of 2) as follows:
   i. Inserting the Special Control Area on the map and in the map legend.

5. Inserting Figures 33, 33.1 to 33.8 into Schedule 8 – Special Control Areas of the Scheme.

Am22

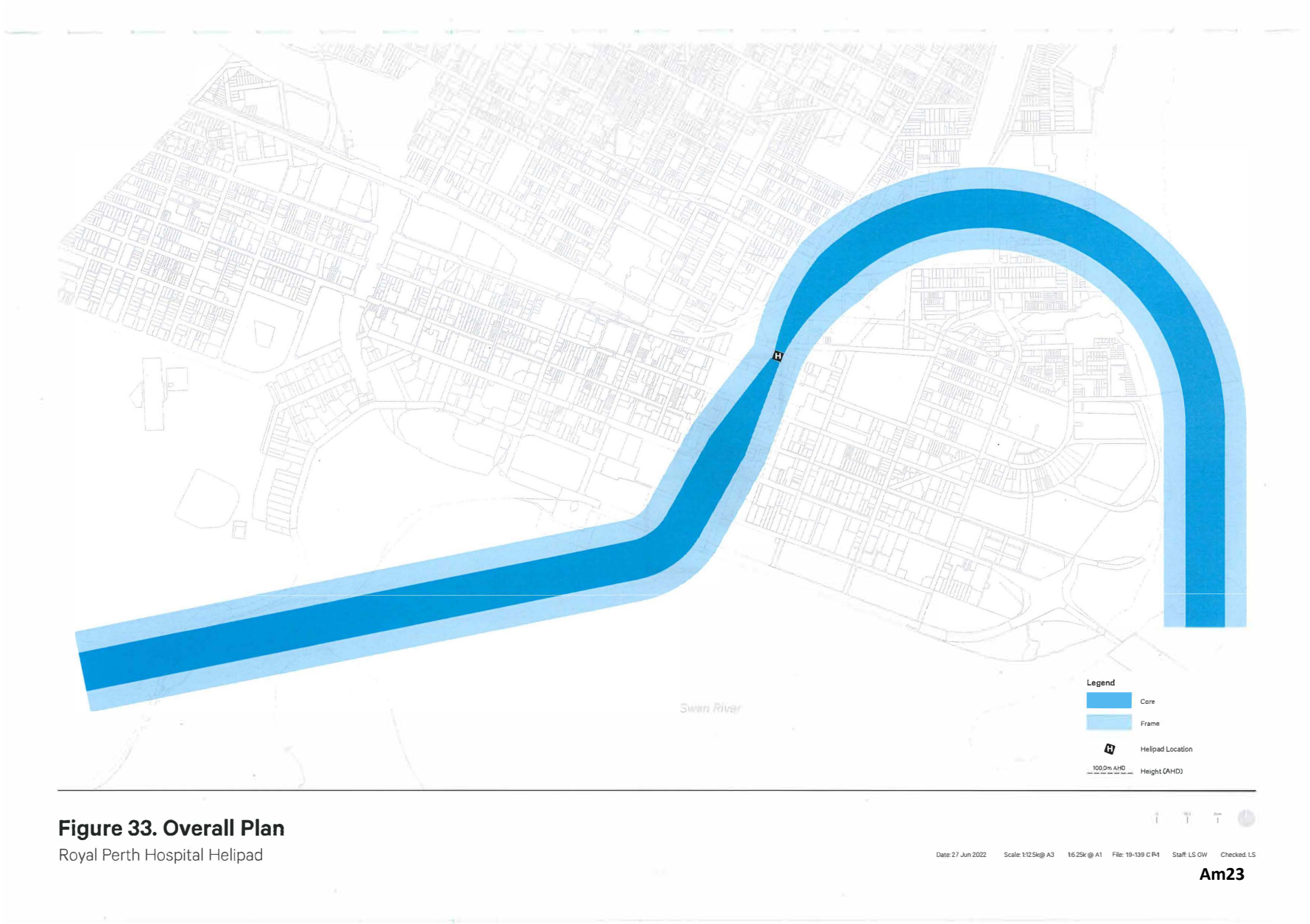


Figure 33. Overall Plan
Royal Perth Hospital Helipad



Figure 33.1 Detail Location Plan
Royal Perth Hospital Helipad

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Am24

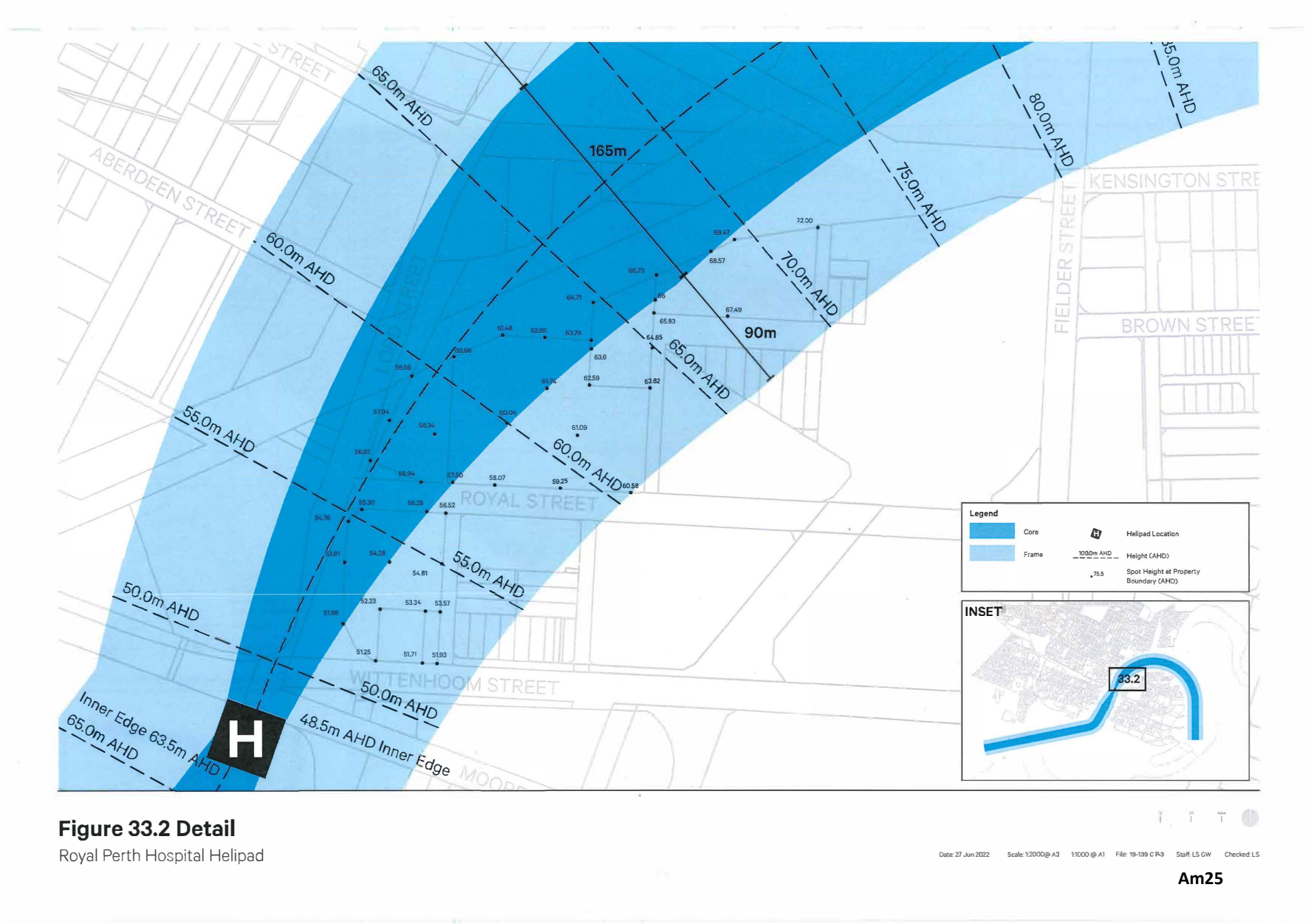


Figure 33.2 Detail
Royal Perth Hospital Helipad

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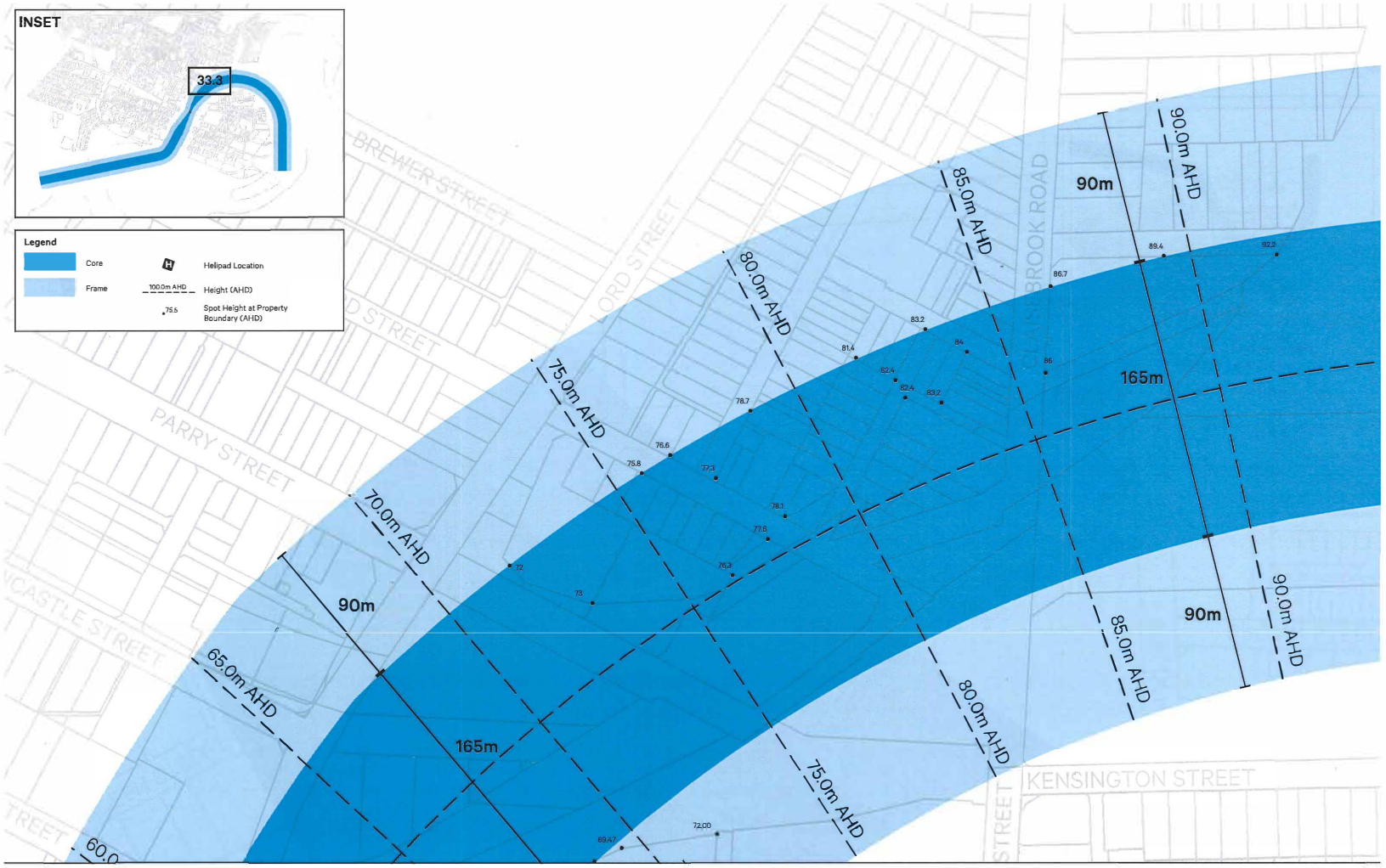


Figure 33.3 Detail
Royal Perth Hospital Helipad

Date: 27 Jun 2022 Scale:1:2000@ A3 1:1000 @ A1 File: 19-139 CP-4 Staff: LS GW Checked: LS

Am26

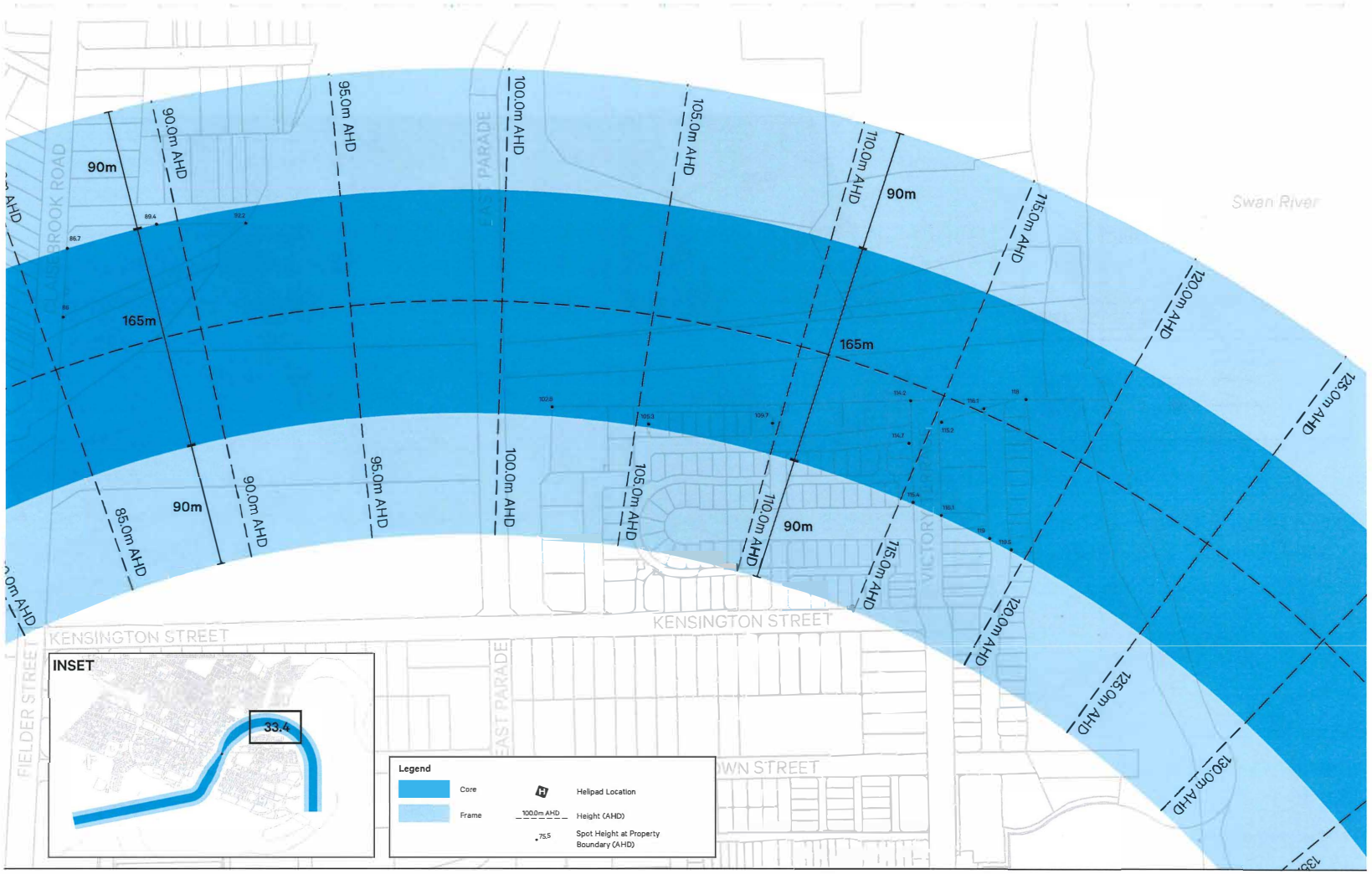


Figure 33.4 Detail
Royal Perth Hospital Helipad

Am27

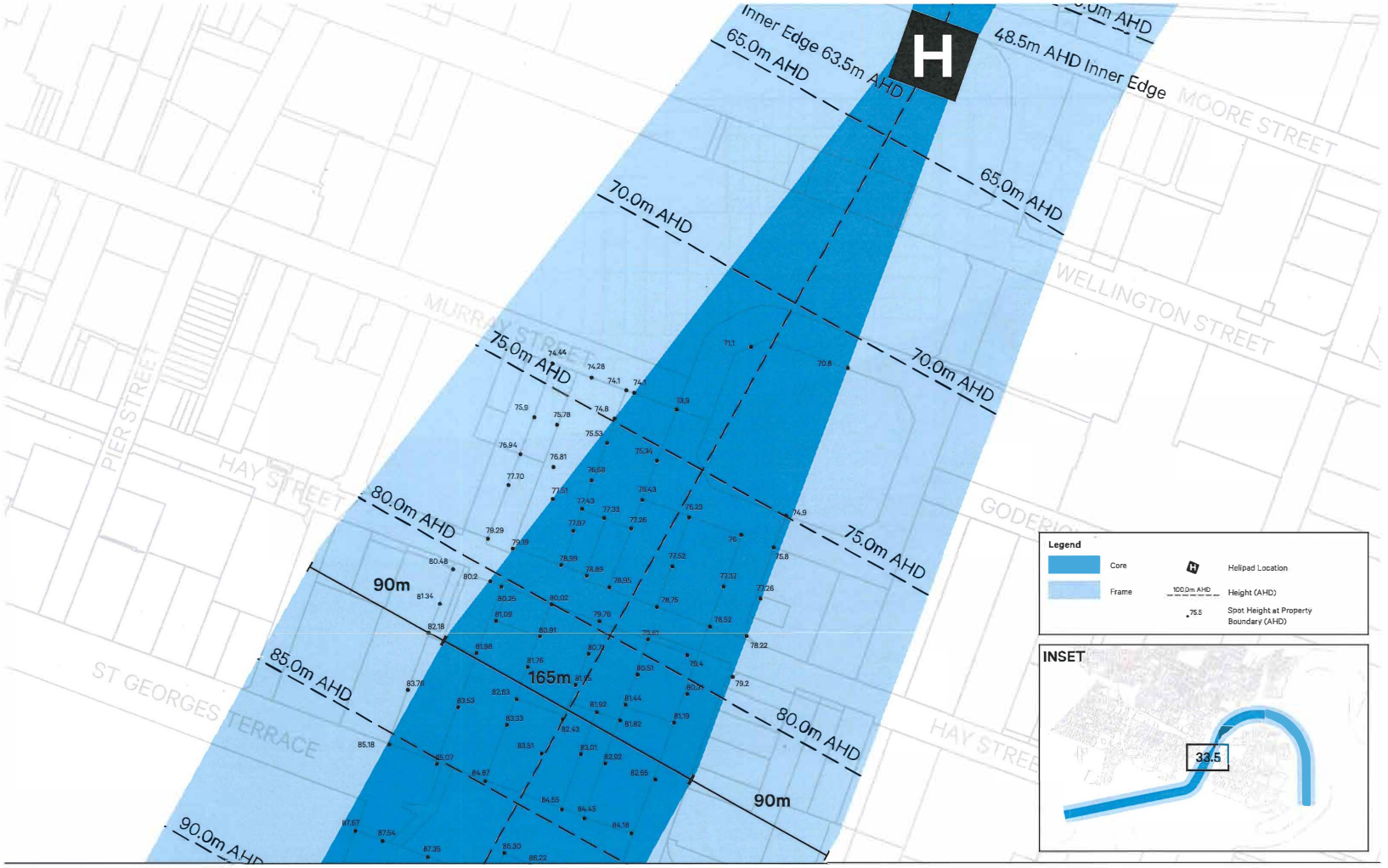


Figure 33.5 Detail
Royal Perth Hospital Helipad

Am28

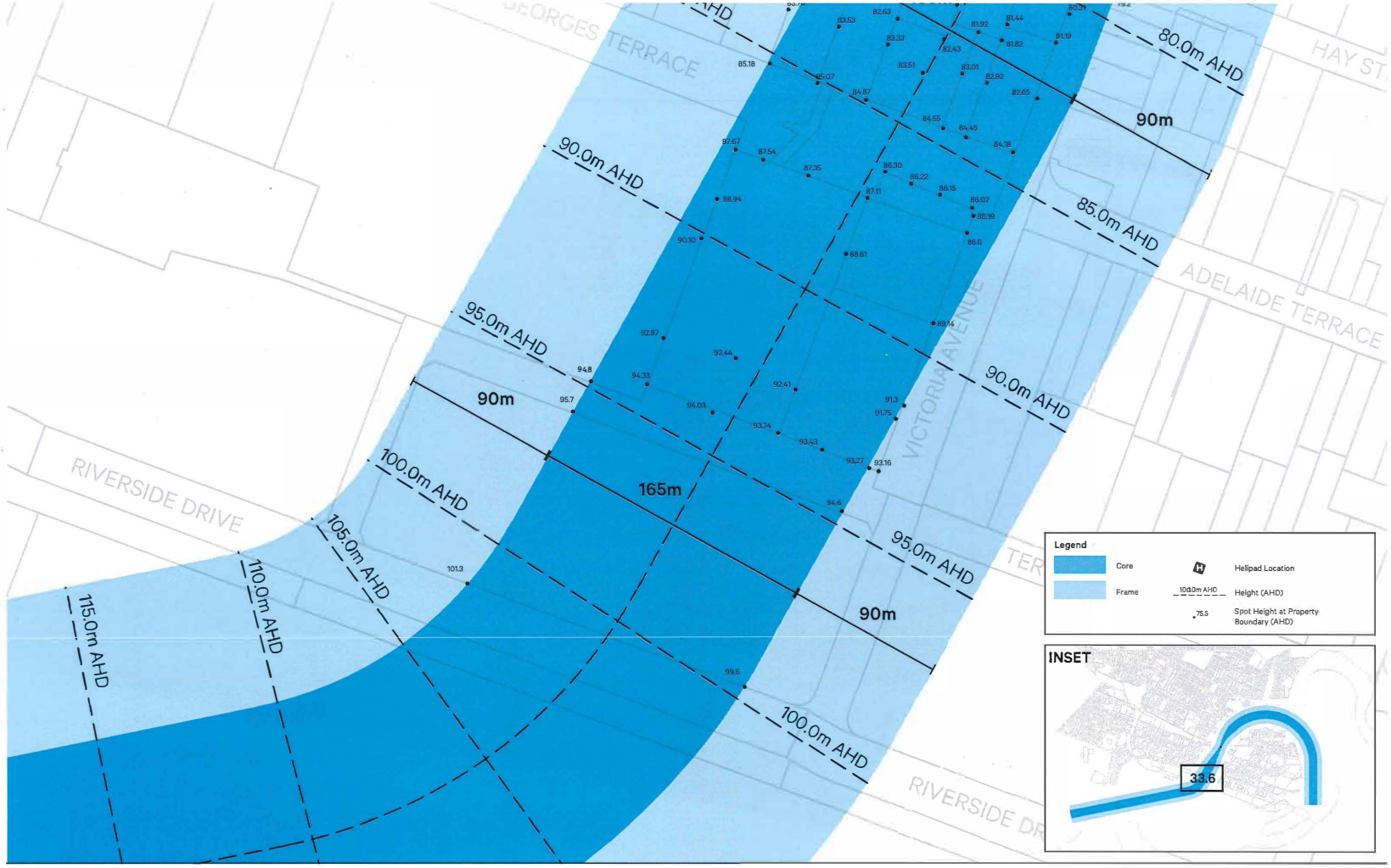


Figure 33.6 Detail
Royal Perth Hospital Helipad

Am29

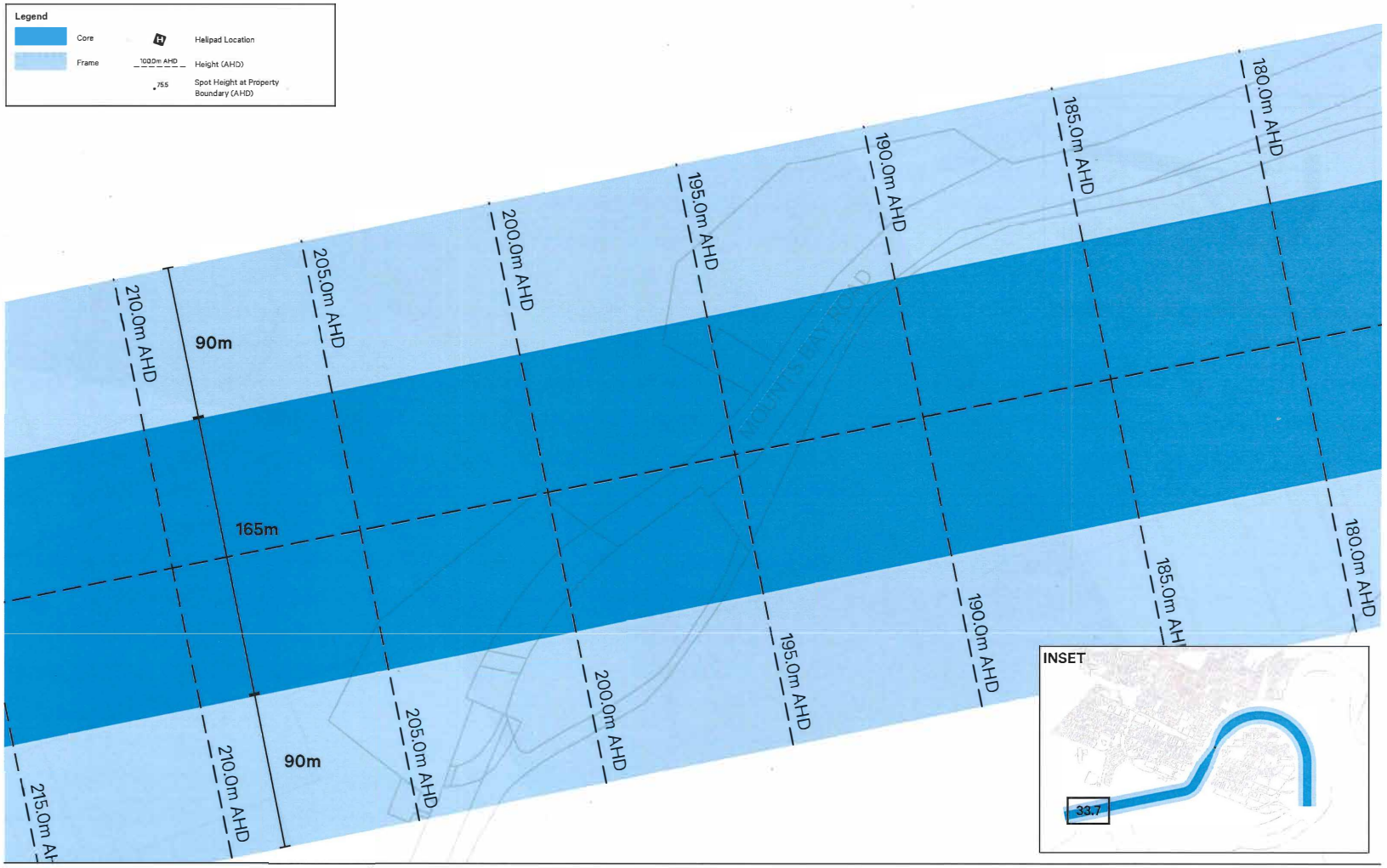
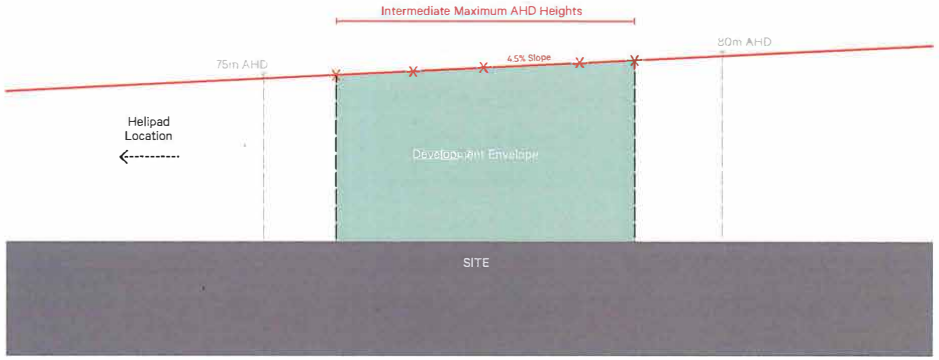


Figure 33.7 Detail
Royal Perth Hospital Helipad

Am30

element.



Typical section showing application of intermediate maximum AHD heights.

Note: Proponents will need to consider location, orientation and context of the development site in relation to the Helipad and associated flight paths in calculating intermediate maximum AHD heights.

Figure 33.8 Intermediate Maximum AHD Heights

Royal Perth Hospital Flight Path

Date: 22 Jun 2022 Scale: NTS @ A3 NTS @ A1 File: 19-139 CP-7 A Staff: LS GW Checked: LS

Am31

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Am32

The amendment is complex under the provisions of the Planning and Development (Local Planning Schemes) Regulations 2015 for the following reason:

- **The amendment will have an impact that is significant relative to development in the locality.**

Am34

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Am35

COUNCIL ADOPTION

This Complex Amendment was adopted by resolution of the Council of the City of Perth at the Ordinary Meeting of the Council held on the day of 27 September , 2022 .

.....

LORD MAYOR

.....

CHIEF EXECUTIVE OFFICER

COUNCIL RESOLUTION TO ADVERTISE

by resolution of the Council of the City of Perth at the Meeting of the Council held on the day of 29 September 2022 **proceed to advertise this Amendment.**

.....

LORD MAYOR

.....

CHIEF EXECUTIVE OFFICER

COUNCIL RECOMMENDATION

This Amendment is recommended by resolution of the City of Perth at the Ordinary Meeting of the Council held on the _____ **day of** _____, _____ **and the Common Seal of the City of Perth was hereunto affixed by the authority of a resolution of the Council in the presence of:**

.....

LORD MAYOR

.....

CHIEF EXECUTIVE OFFICER

Am36

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Am37

FORM 6A CONTINUED

WAPC ENDORSEMENT (r.63)

.....

DELEGATED UNDER S.16 OF THE *P&D ACT 2005*

DATE.....

APPROVAL GRANTED

.....

MINISTER FOR PLANNING

DATE.....

Am39

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Am40

SCHEDULE 1: EXISTING MAXIMUM BUILDING HEIGHT PLAN (1 OF 2)

City Planning Scheme No.2

Maximum Building Height Plan (1 of 2)

Note: This plan should be read in conjunction with Clause 26 of the Scheme Text and the Street Building Height and Setback Plan.

LEGEND

Municipal Boundary

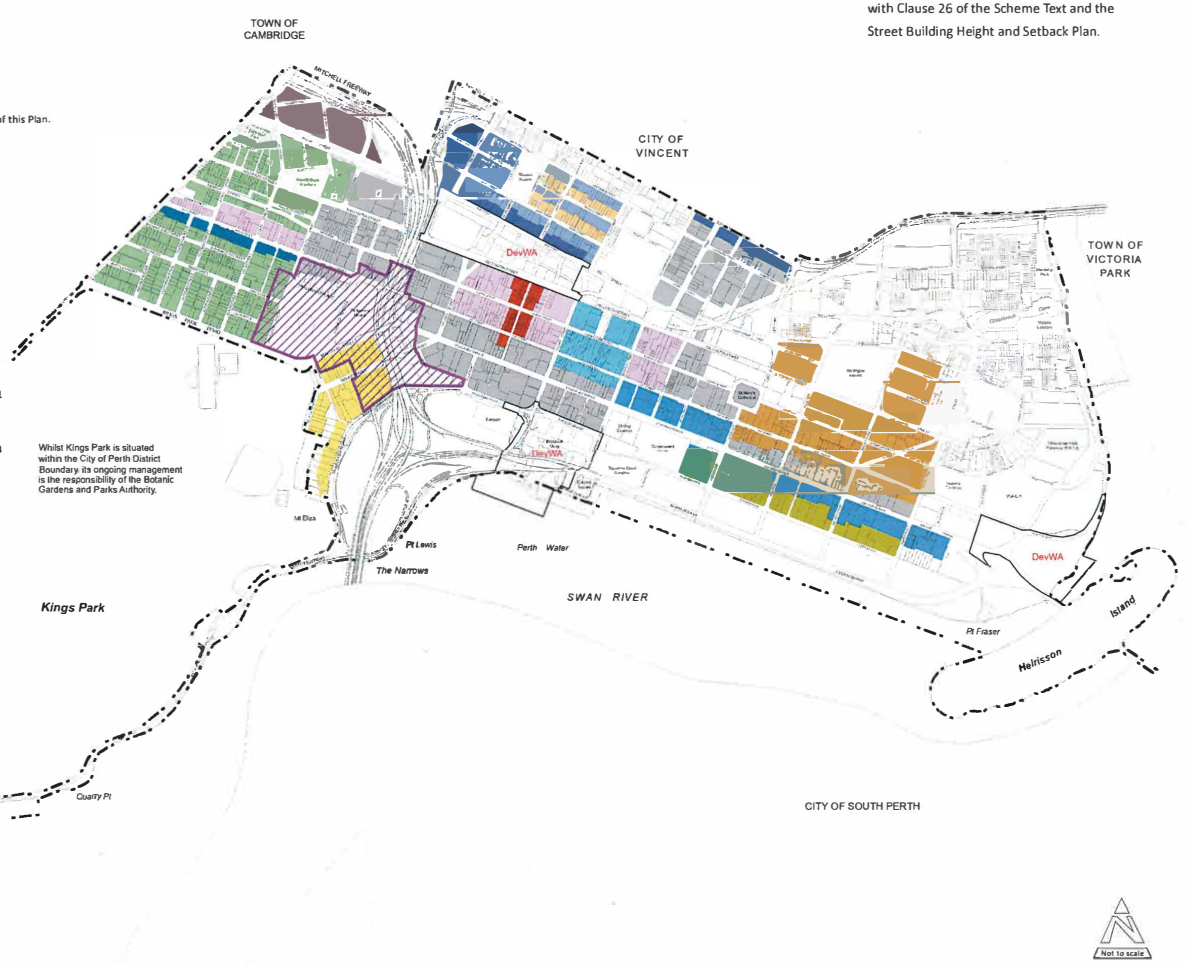
DevelopmentWA Area (DevWA)

MAXIMUM BUILDING HEIGHT

Street setbacks above the Street Building Height apply as indicated on Page 2 of this Plan.

- 29 metres — Figure 1
- 33 metres — Figure 2
- 39 metres — Figure 3
- 40 metres — Figure 4
- 45 metres — Figure 5
- 70 metres — Figure 6
- 100 metres — Figure 7
- 7 metres above the Street Building Height and then within a 45° height plane — Figure 8+9
- Additional height above the Street Building Height within a 45° height plane measured from both the streets to the north and south — Figure 10+11
- Additional height above the Street Building Height within a 45° height plane measured from the street to the south (excludes laneways) — Figure 12+13
- No prescribed height limit — Figure 14
- Refer to Parliament House Precinct Policy MRS Clause 32 Area
- Refer to Hamilton (P11) Precinct Plan
- Refer to Mount Street Design Policy
- Refer to Terrace Road Design Policy
- Refer to King Street Heritage Precinct Design Guidelines
- Refer to Goderich Design Policy

Note: All development must comply with the *Airports Act 1996 and the Airports (Protection of Airspace) Regulations*



Am41

SCHEDULE 2: PROPOSED MAXIMUM BUILDING HEIGHT PLAN (1 OF 2)

City Planning Scheme No.2

Maximum Building Height Plan (1 of 2)

Note 1: This plan should be read in conjunction with Clause 26 of the Scheme Text and the Street Building Height and Setback Plan.

Note 2: Where there are inconsistencies with the Max Building Height Plan, the most restrictive height will apply.

LEGEND

Municipal Boundary

DevelopmentWA Area (DevWA)

MAXIMUM BUILDING HEIGHT

Street setbacks above the Street Building Height apply as indicated on Page 2 of this Plan.

- 29 metres — Figure 1
- 33 metres — Figure 2
- 39 metres — Figure 3
- 40 metres — Figure 4
- 45 metres — Figure 5
- 70 metres — Figure 6
- 100 metres — Figure 7
- 7 metres above the Street Building Height and then within a 45° height plane — Figure 8+9
- Additional height above the Street Building Height within a 45° height plane measured from both the streets to the north and south — Figure 10+11
- Additional height above the Street Building Height within a 45° height plane measured from the street to the south (excludes laneways) — Figure 12+13
- No prescribed height limit — Figure 14
- Refer to Parliament House Precinct Policy MRS Clause 32 Area
- Refer to Hamilton (P11) Precinct Plan
- Refer to Mount Street Design Policy
- Refer to Terrace Road Design Policy
- Refer to King Street Heritage Precinct Design Guidelines
- Refer to Goderich Design Policy
- Refer to Schedule 8 – Special Control Area No. 33 Royal Perth Hospital Flight Path Protection

Note: All development must comply with the *Airports Act 1996 and the Airports (Protection of Airspace) Regulations*



City of Perth | City Planning Scheme No.2
Maximum Building Height Plan (1 of 2)

Amended - 6 May 2022

3

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Am42

SCHEDULE 3 - EXISTING CITY CENTRE PRECINCTS 1-8 PLAN (P1-8)

City Planning Scheme No.2

CITY CENTRE - Precincts 1-8

CITY CENTRE:

Will continue to develop as the focus of business, retail, civic, cultural and entertainment activities in Western Australia

PRECINCTS:

The City Centre contains the following Precincts

P1 - Northbridge
P2 - Cultural Centre
P3 - Stirling
P4 - Victoria
P5 - Citiplace
P6 - St Georges
P7 - Civic
P8 - Foreshore

PARLIAMENT HOUSE AND SURROUNDS:

A Clause 32 area which maintains the visual prominence of Parliament House and the aesthetic quality of development in the area.

MINOR TOWN / LOCAL PLANNING SCHEMES (TPS / LPS):

The additional Schemes which apply in the city centre are:

TPS 11 - Wesley Trust and WA Travel Centre
TPS 13 - State Government Insurance Office
TPS 16 - David Jones Site (now Central Park)
TPS 21 - FAI Site
TPS 23 - Paragon
LPS 26 - Normalised Redevelopment Areas

SPECIAL CONTROL AREAS:

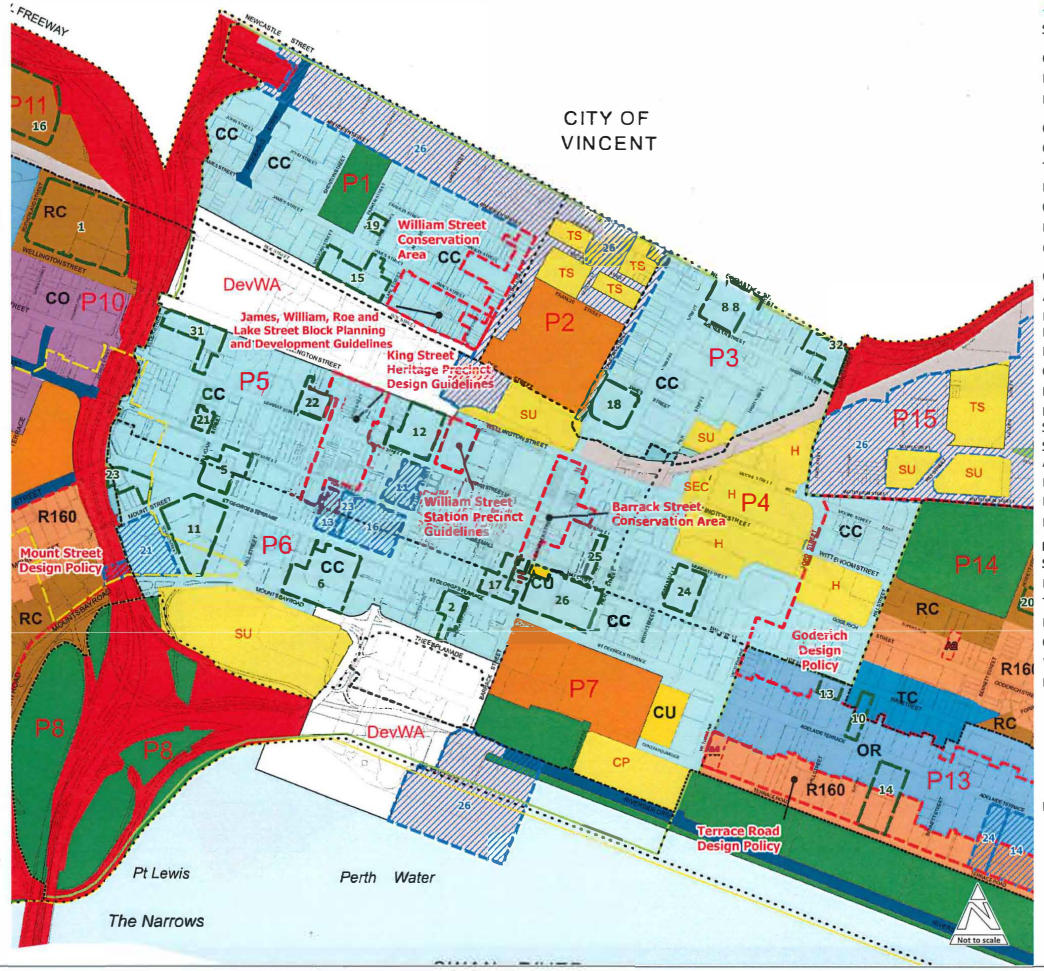
Special control areas apply in the city centre for these areas:

2 - CTA Building
5 - 240 St Georges Tce & 899-915 Hay St
6 - 141 & 125-137 St Georges Tce & 18 Mounts Bay Rd
8 - 126-144 Stirling St
11 - 225-239 St Georges Tce (Bishops See)
12 - 298-316 Murray St
15 - 92-120 Roe St
17 - St Martins
18 - 30 Beaufort St
19 - 2-6 (Lot 40) Parker St
21 - Melbourne Hotel
22 - 396, 370-372 & 378-392 Murray St
23 - 251 (Lot 11), 255 (Lot 412), 267 (Lot 10) St Georges Tce
24 - 480 (Lots 23 & 350) Hay St & 15-17 (Lot 500) Murray St
25 - 560 Hay St & 101 Murray St
26 - 553 and 565-579A Hay St, 38A St Georges Tce & 28 Barrack St
31 - 707-725 (Lots 14 & 101) Wellington St & 482-488 (Lots 1,2, & 66) Murray St
32 - 11 (Lot 100) & 27 (Lot 700) Newcastle St

PLANNING POLICIES:

Planning and design guidelines apply in the city centre for these areas:

- James, William, Roe & Lake Street
- King Street
- Goderich
- William Street Station Precinct



LEGEND

Scheme Area Boundary

CITY OF PERTH SCHEME RESERVES

Parks & Recreation — P&R
Public Purposes - Civic Use — CU

CITY OF PERTH SCHEME USE AREAS

City Centre — CC
Town Centre
Residential — R60
Office/Residential — OR
Residential/Commercial — RC
Commercial — CO

OTHER

Additional Uses — AU
Normalised Redevelopment Area
DevelopmentWA Area — DevWA
City Centre Boundary
MRS Clause 32 Area
Minor Town / Local Planning Schemes and Number — 10
Special Control Areas and Number — 2
Planning Policy Areas
Precinct Boundary
Precinct Number — P7

METROPOLITAN REGION SCHEME RESERVES

Parks & Recreation
Town Centre
Railways
Civic & Cultural
Waterways
Public Purposes
- Hospital — H
- Car Park — CP
- University — U
- SECWA — SEC
- Special Uses — SU

ROADS

- Primary Regional Roads
- Other Regional Roads

NOTE 1: The Department of Planning should be consulted for full information on the actual land requirements for all Metropolitan Region Scheme Reserves

NOTE 2: This map should be read in conjunction with City Planning Scheme No. 2 Scheme Map.

City of Perth | City Planning Scheme No.2
City Centre P1 to P8

Amended - 6 May 2022

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Am43

SCHEDULE 4 - PROPOSED CITY CENTRE PRECINCTS 1-8 PLAN (P1-8)

City Planning Scheme No.2

CITY CENTRE - Precincts 1-8

CITY CENTRE:

Will continue to develop as the focus of business, retail, civic, cultural and entertainment activities in Western Australia

PRECINCTS:

The City Centre contains the following Precincts

- P1 - Northbridge
- P2 - Cultural Centre
- P3 - Stirling
- P4 - Victoria
- P5 - Citiplace
- P6 - St Georges
- P7 - Civic
- P8 - Foreshore

PARLIAMENT HOUSE AND SURROUNDS:

A Clause 32 area which maintains the visual prominence of Parliament House and the aesthetic quality of development in the area.

MINOR TOWN / LOCAL PLANNING SCHEMES (TPS / LPS):

The additional Schemes which apply in the city centre are:

- TPS 11 - Wesley Trust and WA Travel Centre
- TPS 13 - State Government Insurance Office
- TPS 16 - David Jones Site (now Central Park)
- TPS 21 - FAI Site
- TPS 23 - Paragon
- LPS 26 - Normalised Redevelopment Areas

SPECIAL CONTROL AREAS:

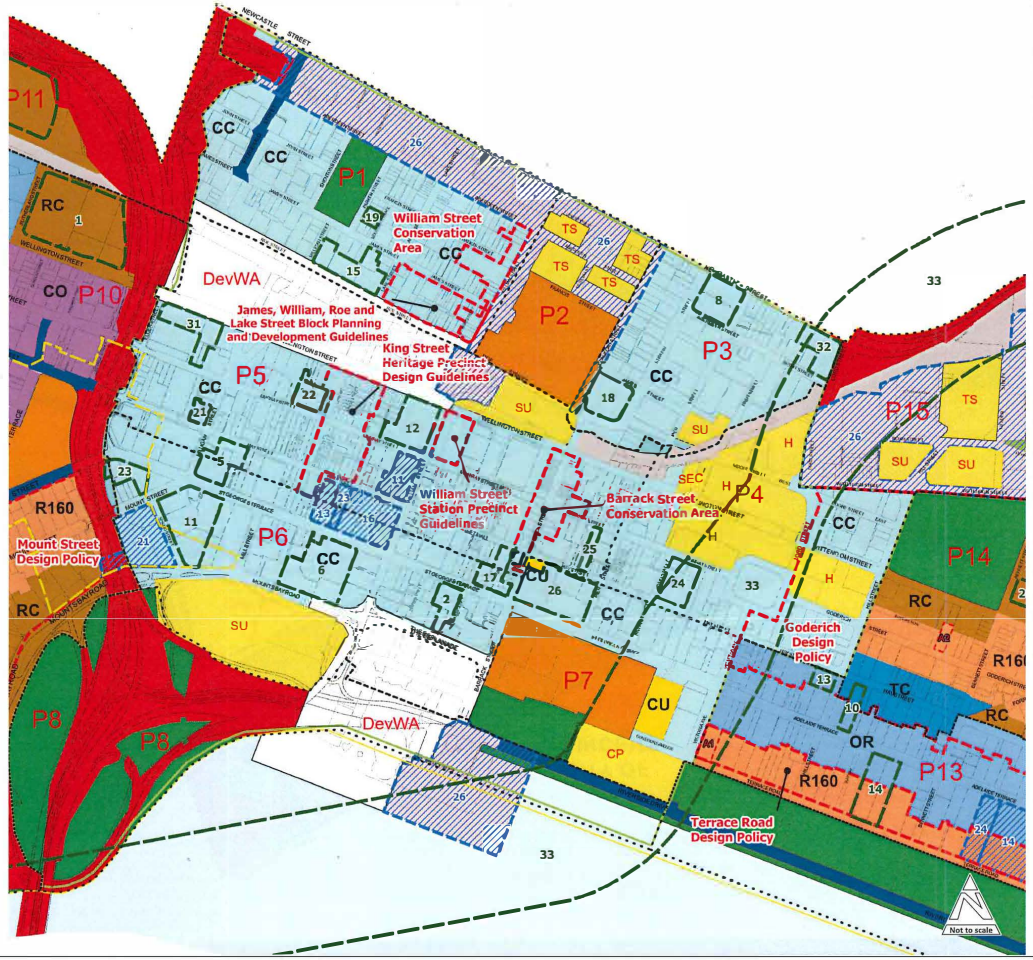
Special control areas apply in the city centre for these areas:

- 2 - CTA Building
- 5 - 240 St Georges Tce & 899-915 Hay St
- 6 - 141 & 125-137 St Georges Tce & 18 Mounts Bay Rd
- 8 - 126-144 Stirling St
- 11 - 225-239 St Georges Tce (Bishops See)
- 12 - 298-316 Murray St
- 15 - 92-120 Roe St
- 17 - St Martins
- 18 - 30 Beaufort St
- 19 - 2-6 (Lot 40) Parker St
- 21 - Melbourne Hotel
- 22 - 396, 370-372 & 378-392 Murray St
- 23 - 251 (Lot 11), 255 (Lot 412), 267 (Lot 10) St Georges Tce
- 24 - 480 (Lots 23 & 350) Hay St & 15-17 (Lot 500) Murray St
- 25 - 560 Hay St & 101 Murray St
- 26 - 553 and 565-579A Hay St, 38A St Georges Tce & 28 Barrack St
- 31 - 707-725 (Lots 14 & 101) Wellington St & 482-488 (Lots 1,2, & 66) Murray St
- 32 - 11(Lot 100) & 27 (Lot 700) Newcastle st
- 33 - Royal Perth Hospital Flight Path Protection

PLANNING POLICIES:

Planning and design guidelines apply in the city centre for these areas:

- James, William, Roe & Lake Street
- King Street
- Goderich
- William Street Station Precinct



LEGEND

Scheme Area Boundary

CITY OF PERTH SCHEME RESERVES

- Parks & Recreation — P&R
- Public Purposes - Civic Use — CU

CITY OF PERTH SCHEME USE AREAS

- City Centre — CC
- Town Centre
- Residential — R(#)
- Office/Residential — OR
- Residential/Commercial — RC
- Commercial — CO

OTHER

- Additional Uses — A
- Normalised Redevelopment Area
- DevelopmentWA Area — DevWA
- City Centre Boundary
- MRS Clause 32 Area
- Minor Town / Local Planning Schemes and Number — 12
- Special Control Areas and Number — 2
- Planning Policy Areas
- Precinct Boundary
- Precinct Number — P7

METROPOLITAN REGION SCHEME RESERVES

- Parks & Recreation
- Town Centre
- Railways
- Civic & Cultural
- Waterways
- Public Purposes
  - Hospital — H
  - Car Park — CP
  - University — U
  - SECWA — SEC
  - Special Uses — SU

ROADS

- Primary Regional Roads
- Other Regional Roads

NOTE 1: The Department of Planning should be consulted for full information on the actual land requirements for all Metropolitan Region Scheme Reserves

NOTE 2: This map should be read in conjunction with City Planning Scheme No. 2 Scheme Map.

City of Perth | City Planning Scheme No.2
City Centre P1 to P8

Amended - 6 May 2022

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Am44

SCHEDULE 5 - EXISTING MATILDA BAY PRECINCT 9 PLAN (P9)

City Planning Scheme No.2

MATILDA BAY - Precinct 9

MATILDA BAY:

The features of the University of Western Australia, the Swan River, Kings Park and the Crawley Residential Area make the Precinct one of the most attractive entry points to the City.

CRAWLEY RESIDENTIAL AREA:

Will develop as an area of spacious high quality dwellings. New development will:

- reflect and reinforce the distinct natural topography of the Residential Area and the Mt Eliza escarpment; and
- maintain the amenity of the river foreshore by minimising overshadowing and building bulk.

RESIDENTIAL COLLEGES:

Future development of this land is to be designed generally in accordance with the style and character of the adjacent land. Development is not to exceed 10 metres in height and is to reflect the historic character and scale of existing university college buildings.

KINGS PARK:

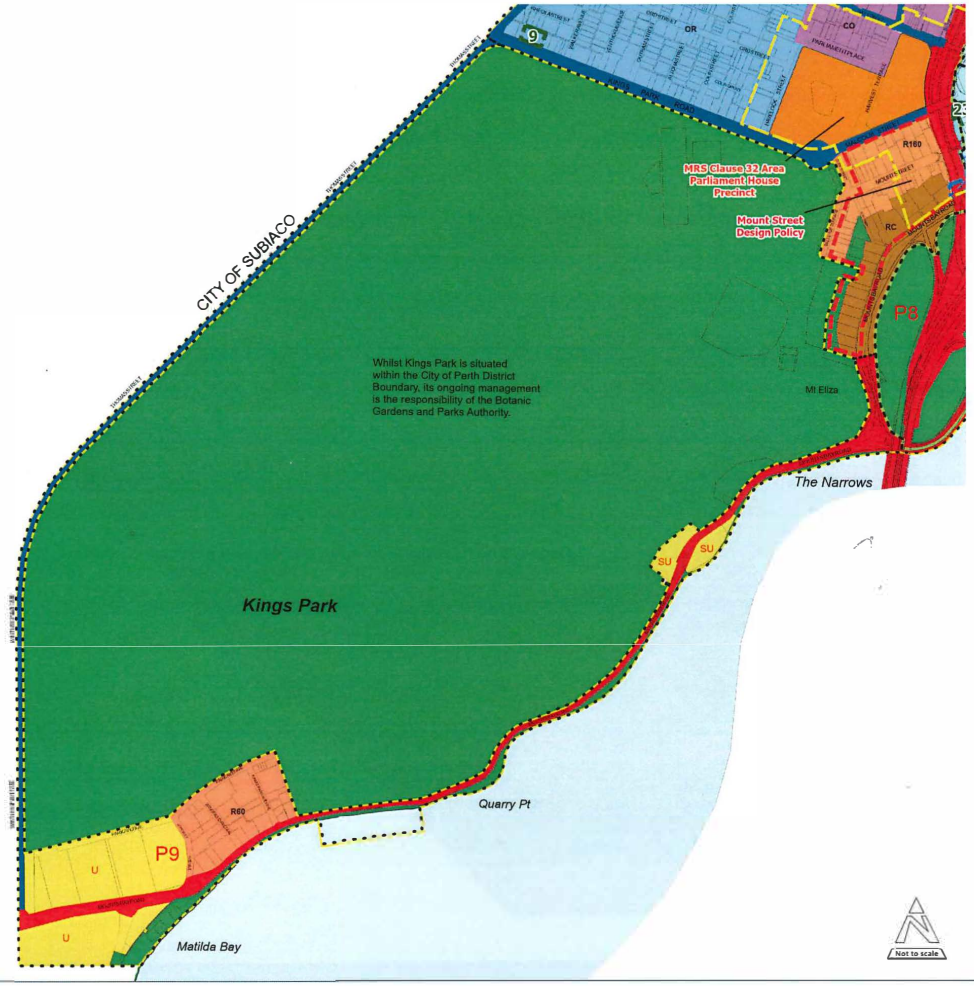
Whilst Kings Park is situated within the City of Perth District Boundary, its ongoing management is the responsibility of the Botanic Gardens and Parks Authority. In addition to its great beauty and physical prominence, Kings Park is one of the best known attractions in Perth. The impact that development would have on the park will be carefully accessed.

RIVER FORESHORE:

Public access is to be maintained at all times along the foreshore area. The limestone wall is an integral part of the foreshore character and is to be maintained.

OLD SWAN BREWERY SITE:

The former Swan Brewery remains a very prominent public site. Works should respect the heritage importance and environmental quality of the area.



LEGEND

Scheme Area Boundary

CITY OF PERTH SCHEME RESERVES
- Parks & Recreation (P&R)
- Public Purposes - Civic Use (CU)

CITY OF PERTH SCHEME USE AREAS
- City Centre (CC)
- Town Centre
- Residential (R60)
- Office/Residential (OR)
- Residential/Commercial (RC)
- Commercial (CO)

OTHER
- Additional Uses (A1)
- Normalised Redevelopment Area
- DevelopmentWA Area (DevWA)
- City Centre Boundary
- MRS Clause 32 Area
- Minor Town / Local Planning Schemes and Number (M)
- Special Control Areas and Number (2)
- Planning Policy Areas
- Precinct Boundary
- Precinct Number (P7)

METROPOLITAN REGION SCHEME RESERVES
- Parks & Recreation
- Town Centre
- Railways
- Civic & Cultural
- Waterways
- Public Purposes
  - Hospital (H)
  - Car Park (CP)
  - University (U)
  - SECWA (SEC)
  - Special Uses (SU)

ROADS
- Primary Regional Roads
- Other Regional Roads

NOTE 1: The Department of Planning should be consulted for full information on the actual land requirements for all Metropolitan Region Scheme Reserves

NOTE 2: This map should be read in conjunction with City Planning Scheme No. 2 Scheme Map.

SCHEDULE 6 - PROPOSED MATILDA BAY PRECINCT 9 PLAN (P9)

City Planning Scheme No.2

MATILDA BAY - Precinct 9

MATILDA BAY:

The features of the University of Western Australia, the Swan River, Kings Park and the Crawley Residential Area make the Precinct one of the most attractive entry points to the City.

CRAWLEY RESIDENTIAL AREA:

Will develop as an area of spacious high quality dwellings. New development will:

- reflect and reinforce the distinct natural topography of the Residential Area and the Mt Eliza escarpment; and
- maintain the amenity of the river foreshore by minimising overshadowing and building bulk.

RESIDENTIAL COLLEGES:

Future development of this land is to be designed generally in accordance with the style and character of the adjacent land. Development is not to exceed 10 metres in height and is to reflect the historic character and scale of existing university college buildings.

KINGS PARK:

Whilst Kings Park is situated within the City of Perth District Boundary, its ongoing management is the responsibility of the Botanic Gardens and Parks Authority. In addition to its great beauty and physical prominence, Kings Park is one of the best known attractions in Perth. The impact that development would have on the park will be carefully accessed.

RIVER FORESHORE:

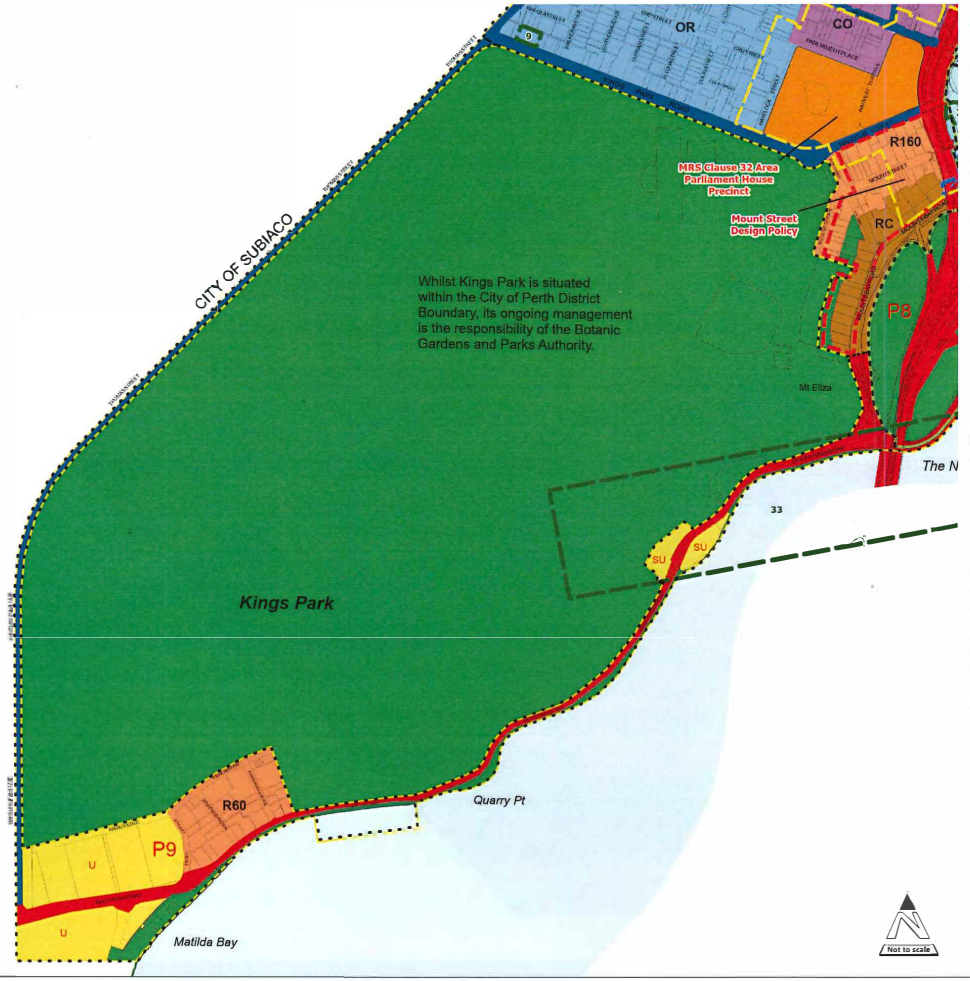
Public access is to be maintained at all times along the foreshore area. The limestone wall is an integral part of the foreshore character and is to be maintained.

OLD SWAN BREWERY SITE:

The former Swan Brewery remains a very prominent public site. Works should respect the heritage importance and environmental quality of the area.

SPECIAL CONTROL AREAS:

33 - Royal Perth Hospital Flight Path Protection



LEGEND

Scheme Area Boundary

CITY OF PERTH SCHEME RESERVES

Parks & Recreation P&R
Public Purposes - Civic Use CU

CITY OF PERTH SCHEME USE AREAS

City Centre CC
Town Centre
Residential R60
Office/Residential OR
Residential/Commercial RC
Commercial CO

OTHER

Additional Uses A1
Normalised Redevelopment Area
DevelopmentWA Area DevWA
City Centre Boundary
MRS Clause 32 Area
Minor Town / Local Planning Schemes and Number 12
Special Control Areas and Number 2
Planning Policy Areas
Precinct Boundary
Precinct Number P7

METROPOLITAN REGION SCHEME RESERVES

Parks & Recreation
Town Centre
Railways
Civic & Cultural
Waterways
Public Purposes
- Hospital H
- Car Park CP
- University U
- SECWA SEC
- Special Uses SU

ROADS

- Primary Regional Roads
- Other Regional Roads

NOTE 1: The Department of Planning should be consulted for full information on the actual land requirements for all Metropolitan Region Scheme Reserves

NOTE 2: This map should be read in conjunction with City Planning Scheme No. 2 Scheme Map.

City of Perth | City Planning Scheme No.2
Matilda Bay P9

Amended - 6 May 2022

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Am46

SCHEDULE 7 - EXISTING LANGLEY PRECINCT 12 PLAN (P12)

City Planning Scheme No.2

LANGLEY - Precinct 12

LANGLEY:

A focus for recreation and leisure pursuits which also provides a dramatic setting for the city centre.

FORESHORE ACTION PLAN:

The Action Plan aims to maintain and enhance public access and use of the Swan River foreshore. The use of Riverside Drive primary as a scenic route will improve linkages between the city centre and the foreshore and create an envrionment conducive to walking and cycling. Point Fraser is to be developed as a major visitor node on the foreshore, with secondary activity points at the end of Plain Street and Victoria Avenue. Elsewhere on the foreshore structures are to be minimal in scale and number to preserve the parkland character of the area.

LANGLEY PARK:

Will continue to be used for a wide range of leisure and recreational activities, particularly those which add to or draw from the experience of the river. Further alienation of the open space will not be permitted, although use of the space for large temporary events may be permitted.

HEIRISSON ISLAND:

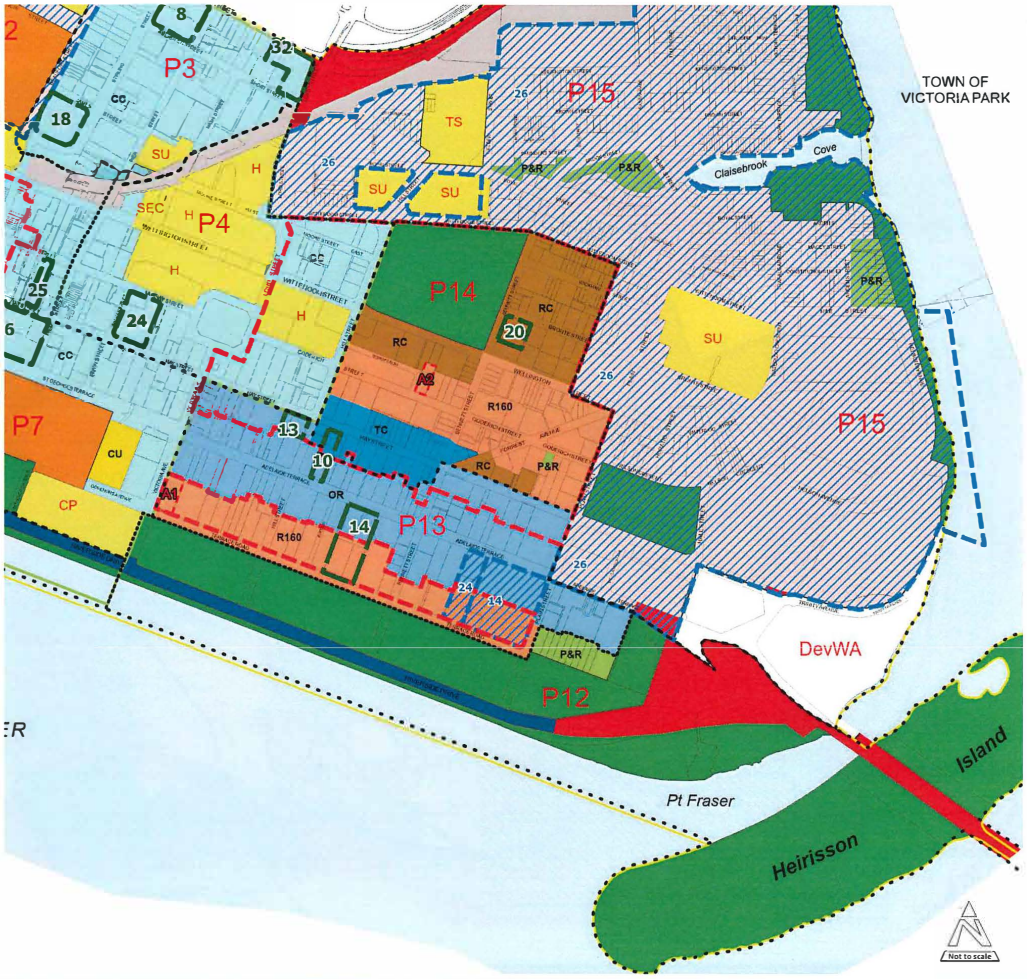
The Island will remain a passive recreation and wildlife refuge area. General vehicular access will be restricted. Improved pedestrian access from the foreshore is considered an important basis for increasing the enjoyment of visitors to this area.

CITY GATEWAY:

The Causeway and surrounding parkland will be enhanced to a standard reflecting the role of this road as a major entry route for visitors to the city centre.

PERTH WATER:

Perth Water, the waterfront and the foreshore will continue to be promoted as one of the city's major venues for public events. The use of the water for intensive motor powered leisure craft will be discouraged in favour of manual and wind propelled craft. Recreational boating facilities for short stay use may be appropriate where they do not conflict with other river transport.



LEGEND

- Scheme Area Boundary

CITY OF PERTH SCHEME RESERVES

- Parks & Recreation — P&R
- Public Purposes - Civic Use — CU

CITY OF PERTH SCHEME USE AREAS

- City Centre — CC
- Town Centre
- Residential — R60
- Office/Residential — OR
- Residential/Commercial — RC
- Commercial — CO

OTHER

- Additional Uses — A1
- Normalised Redevelopment Area
- DevelopmentWA Area — DevWA
- City Centre Boundary
- MRS Clause 32 Area
- Minor Town / Local Planning Schemes and Number — 12
- Special Control Areas and Number
- Planning Policy Areas
- Precinct Boundary
- Precinct Number — P7

METROPOLITAN REGION SCHEME RESERVES

- Parks & Recreation
- Town Centre
- Railways
- Civic & Cultural
- Waterways
- Public Purposes
  - Hospital — H
  - Car Park — CP
  - University — U
  - SECWA — SEC
  - Special Uses — SU

ROADS

- Primary Regional Roads
- Other Regional Roads

NOTE 1: The Department of Planning should be consulted for full information on the actual land requirements for all Metropolitan Region Scheme Reserves

NOTE 2: This map should be read in conjunction with City Planning Scheme No. 2 Scheme Map.

City of Perth | City Planning Scheme No.2
Langley P12

Amended - 6 May 2022

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Am47

SCHEDULE 8 - PROPOSED LANGLEY PRECINCT 12 PLAN (P12)

City Planning Scheme No.2

LANGLEY - Precinct 12

LANGLEY:

A focus for recreation and leisure pursuits which also provides a dramatic setting for the city centre.

FORESHORE ACTION PLAN:

The Action Plan aims to maintain and enhance public access and use of the Swan River foreshore. The use of Riverside Drive primary as a scenic route will improve linkages between the city centre and the foreshore and create an envrionment conducive to walking and cycling. Point Fraser is to be developed as a major visitor node on the foreshore, with secondary activity points at the end of Plain Street and Victoria Avenue. Elsewhere on the foreshore structures are to be minimal in scale and number to preserve the parkland character of the area.

LANGLEY PARK:

Will continue to be used for a wide range of leisure and recreational activities, particularly those which add to or draw from the experience of the river. Further alienation of the open space will not be permitted, although use of the space for large temporary events may be permitted.

HEIRISSON ISLAND:

The Island will remain a passive recreation and wildlife refuge area. General vehicular access will be restricted. Improved pedestrian access from the foreshore is considered an important basis for increasing the enjoyment of visitors to this area.

CITY GATEWAY:

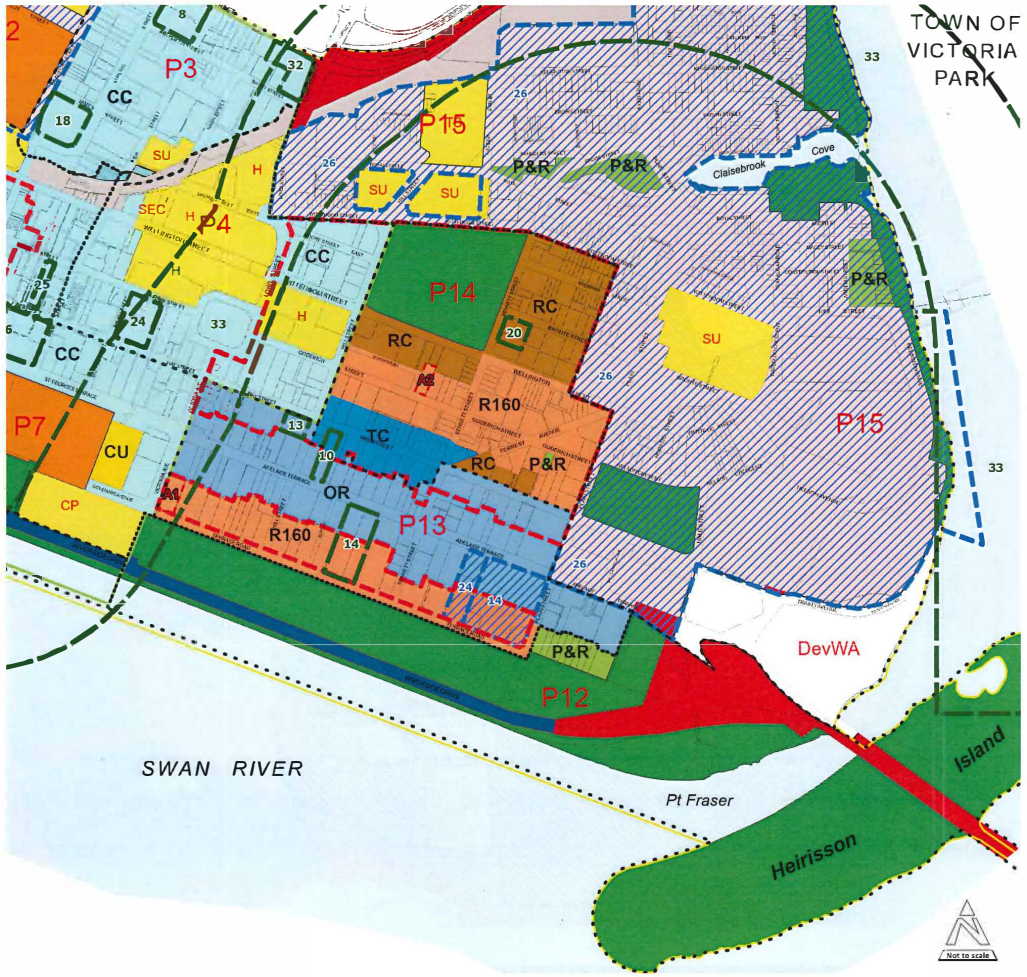
The Causeway and surrounding parkland will be enhanced to a standard reflecting the role of this road as a major entry route for visitors to the city centre.

PERTH WATER:

Perth Water, the waterfront and the foreshore will continue to be promoted as one of the city's major venues for public events. The use of the water for intensive motor powered leisure craft will be discouraged in favour of manual and wind propelled craft. Recreational boating facilities for short stay use may be appropriate where they do not conflict with other river transport.

SPECIAL CONTROL AREAS:

33 - Royal Perth Hospital Flight Path Protection



LEGEND

Scheme Area Boundary

CITY OF PERTH SCHEME RESERVES
- Parks & Recreation — P&R
- Public Purposes - Civic Use — CU

CITY OF PERTH SCHEME USE AREAS
- City Centre — CC
- Town Centre
- Residential — R60
- Office/Residential — OR
- Residential/Commercial — RC
- Commercial — CO

OTHER
- Additional Uses — A1
- Normalised Redevelopment Area
- DevelopmentWA Area — DevWA
- City Centre Boundary
- MRS Clause 32 Area
- Minor Town / Local Planning Schemes and Number — 12
- Special Control Areas and Number — 3
- Planning Policy Areas
- Precinct Boundary
- Precinct Number — P7

METROPOLITAN REGION SCHEME RESERVES
- Parks & Recreation
- Town Centre
- Railways
- Civic & Cultural
- Waterways
- Public Purposes
  - Hospital — H
  - Car Park — CP
  - University — U
  - SECWA — SEC
  - Special Uses — SU

ROADS
- Primary Regional Roads
- Other Regional Roads

NOTE 1: The Department of Planning should be consulted for full information on the actual land requirements for all Metropolitan Region Scheme Reserves

NOTE 2: This map should be read in conjunction with City Planning Scheme No. 2 Scheme Map.

Am48

SCHEDULE 9 - EXISTING ADELAIDE PRECINCT 13 PLAN (P13)

City Planning Scheme No.2

ADELAIDE - Precinct 13

ADELAIDE:

A residential and office area adjacent to both central city development and an extensive open space network.

ADELAIDE TERRACE:

Will be the formal approach to the centre of the city and an attractive, open, sunny and colourful boulevard. Building will be set back from the street with landscaped forecourts.

OFFICE / RESIDENTIAL AREA:

Will provide for an office area adjacent to the city centre where mixed uses and independent residential developments are strongly encouraged. This area will develop as an office district set in spacious landcaped surrounds. Tourist, leisure and recreation oriented activities will be encouraged.

RESIDENTIAL DEVELOPMENT:

Will continue to be strongly encouraged throughout the majority of the Precinct, both independently and in conjunction with office and commercial uses. The outlook to the foreshore and the river, as well as the proximity to Langley Park and the city centre, will be highlighted in the promotion of this Precinct as a residential locality.

TERRACE ROAD DESIGN POLICY AREA:

Will provide for a wide variety of high density residential accommodation, including tourist and short stay accommodation, such as hotels, serviced apartments and hostels. Non-residential uses which serve the residents, such as coffee shops and restaurants, will be supported where they are part of a residential use. Development will minimise wind and overshadowing effects.

SPECIAL CONTROL AREAS

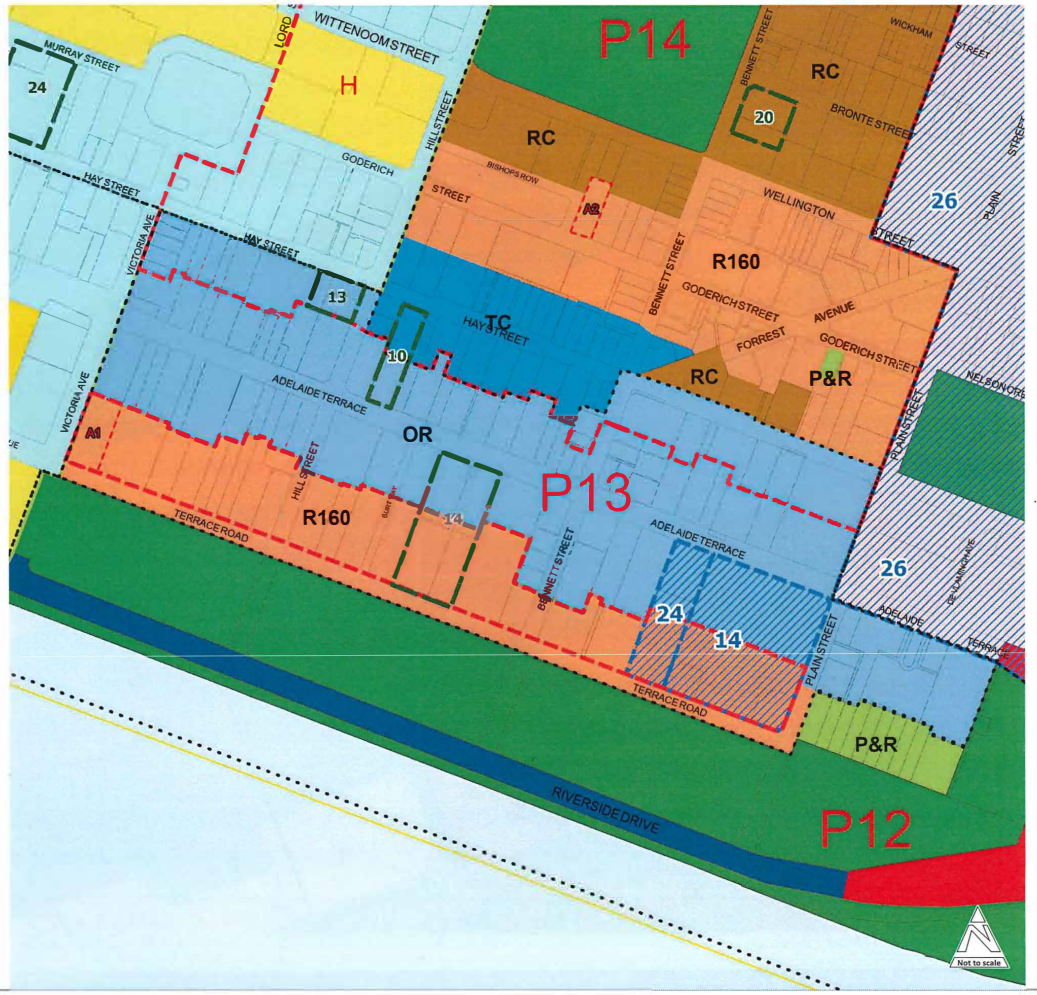
Special control areas apply in the city centre for these areas

10 - 208-210 Adelaide Terrace
13 - 339-341 and 347 Hay St
14 - 187-193 Adelaide Terrace and 82-94 Terrace Road

MINOR TOWN PLANNING SCHEMES

The additional scheme will apply for these areas:

TPS 14 - Withernsea
TPS 24 - 131-137 Adelaide Terrace
LPS 26 - Normalised Redevelopment Areas



LEGEND

Scheme Area Boundary

CITY OF PERTH SCHEME RESERVES
Parks & Recreation — P&R
Public Purposes - Civic Use — CU

CITY OF PERTH SCHEME USE AREAS
City Centre — CC
Town Centre
Residential — R60
Office/Residential — OR
Residential/Commercial — RC
Commercial — CO

OTHER
Additional Uses — A1
Normalised Redevelopment Area
DevelopmentWA Area — DevWA
City Centre Boundary
MRS Clause 32 Area
Minor Town / Local Planning Schemes and Number — 12
Special Control Areas and Number — 2
Planning Policy Areas
Precinct Boundary
Precinct Number — P7

METROPOLITAN REGION SCHEME RESERVES
Parks & Recreation
Town Centre
Railways
Civic & Cultural
Waterways
Public Purposes
- Hospital — H
- Car Park — CP
- University — U
- SECWA — SEC
- Special Uses — SU

ROADS
- Primary Regional Roads
- Other Regional Roads

NOTE 1: The Department of Planning should be consulted for full information on the actual land requirements for all Metropolitan Region Scheme Reserves

NOTE 2: This map should be read in conjunction with City Planning Scheme No. 2 Scheme Map.

City of Perth | City Planning Scheme No.2
Adelaide P13

Amended - 6 May 2022

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Am49

SCHEDULE 10 - PROPOSED ADELAIDE PRECINCT 13 PLAN (P13)

City Planning Scheme No.2

ADELAIDE - Precinct 13

ADELAIDE:
A residential and office area adjacent to both central city development and an extensive open space network.

ADELAIDE TERRACE:
Will be the formal approach to the centre of the city and an attractive, open, sunny and colourful boulevard. Building will be set back from the street with landscaped forecourts.

OFFICE / RESIDENTIAL AREA:
Will provide for an office area adjacent to the city centre where mixed uses and independent residential developments are strongly encouraged. This area will develop as an office district set in spacious landcaped surrounds. Tourist, leisure and recreation oriented activities will be encouraged.

RESIDENTIAL DEVELOPMENT:

Will continue to be strongly encouraged throughout the majority of the Precinct, both independently and in conjunction with office and commercial uses. The outlook to the foreshore and the river, as well as the proximity to Langley Park and the city centre, will be highlighted in the promotion of this Precinct as a residential locality.

TERRACE ROAD DESIGN POLICY AREA:
Will provide for a wide variety of high density residential accommodation, including tourist and short stay accommodation, such as hotels, serviced apartments and hostels. Non-residential uses which serve the residents, such as coffee shops and restaurants, will be supported where they are part of a residential use. Development will minimise wind and overshadowing effects.

SPECIAL CONTROL AREAS

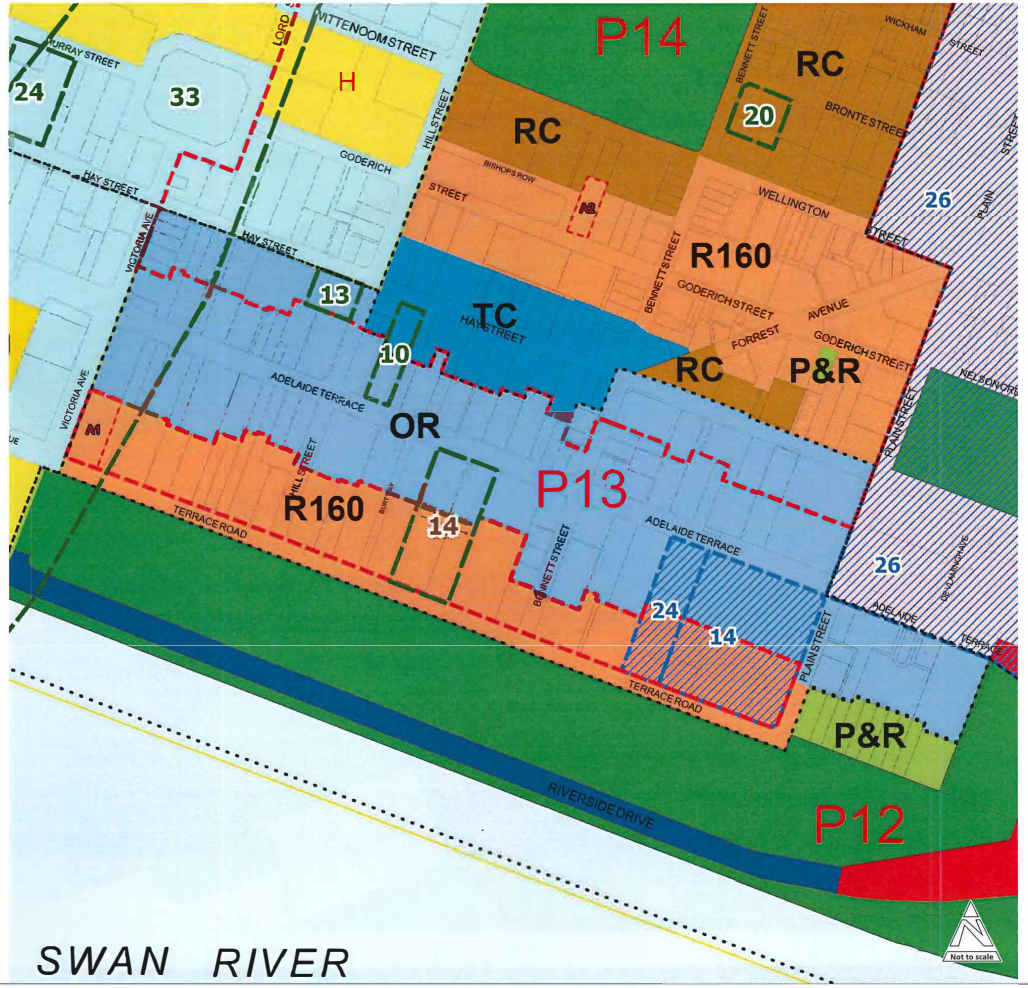
Special control areas apply in the city centre for these areas

10 - 208-210 Adelaide Terrace
13 - 339-341 and 347 Hay St
14 - 187-193 Adelaide Terrace and 82-94 Terrace Road
33 - Royal Perth Hospital Flight Path Protection

MINOR TOWN PLANNING SCHEMES

The additional scheme will apply for these areas:

TPS 14 - Withernsea
TPS 24 - 131-137 Adelaide Terrace
LPS 26 - Normalised Redevelopment Areas



LEGEND

Scheme Area Boundary

CITY OF PERTH SCHEME RESERVES
Parks & Recreation — P&R
Public Purposes - Civic Use — CU

CITY OF PERTH SCHEME USE AREAS
City Centre — CC
Town Centre
Residential — R60
Office/Residential — OR
Residential/Commercial — RC
Commercial — CO

OTHER
Additional Uses — A1
Normalised Redevelopment Area
DevelopmentWA Area — DevWA
City Centre Boundary
MRS Clause 32 Area
Minor Town / Local Planning Schemes and Number — 12
Special Control Areas and Number — 2
Planning Policy Areas
Precinct Boundary
Precinct Number — P7

METROPOLITAN REGION SCHEME RESERVES
Parks & Recreation
Town Centre
Railways
Civic & Cultural
Waterways
Public Purposes
- Hospital — H
- Car Park — CP
- University — U
- SECWA — SEC
- Special Uses — SU

ROADS
- Primary Regional Roads
- Other Regional Roads

NOTE 1: The Department of Planning should be consulted for full information on the actual land requirements for all Metropolitan Region Scheme Reserves

NOTE 2: This map should be read in conjunction with City Planning Scheme No. 2 Scheme Map.

City of Perth | City Planning Scheme No.2
Adelaide P13

Amended - 6 May 2022

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Am50

SCHEDULE 11 - EXISTING EAST PERTH PRECINCT 15 PLAN (P15)

City Planning Scheme No.2

EAST PERTH - Precinct 15

EAST PERTH:

A compact, mixed use, riverside neighbourhood centred on the Claisebrook Inlet.

PRECINCT BOUNDARY:

The area shown on the Precinct Plan Map as the East Perth Precinct reflects two areas as follows:-

- the area which was formally under the planning control of DevelopmentWA (DevWA) formerly MRA, but which is now under the planning control of the City of Perth, otherwise known as the "Normalised" area; and
- the area of land that remains is regulated by DevWA in accordance with the Metropolitan Redevelopment Authority Act 2011 that is not included in the normalised area of Precinct 15.

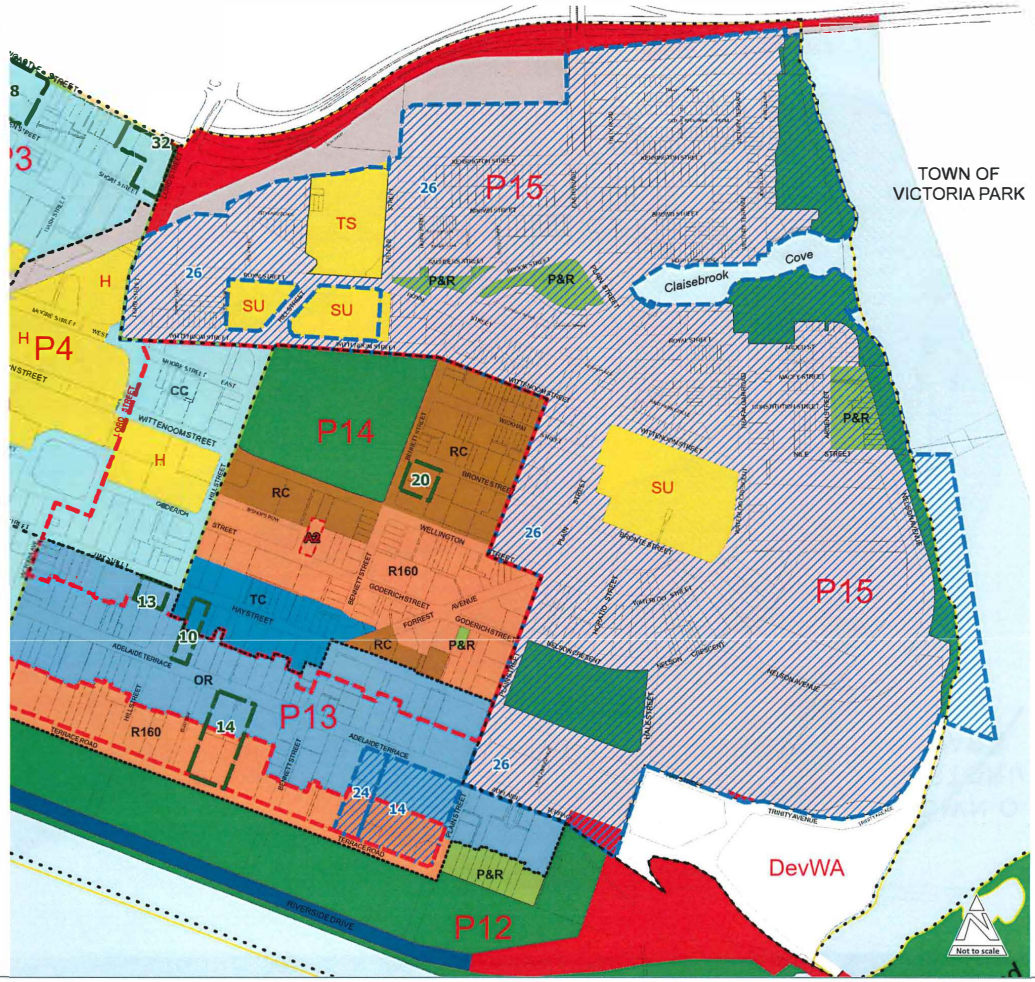
For the "Normalised" area of the East Perth Precinct the Council is the responsible authority for development approvals.

DEVELOPMENTWA (DEVWA):

For DevWA regulated areas, development approvals must be obtained from DevWA. This includes Stage 2 redevelopment precincts: Royal Street West, Queens, Queens Gardens, WACA, Trinity College, Gloucester Park and Hillside until the normalisation process is finalised.

The local government is asked to comment on development applications, administer building, health and related controls and at times is involved in other major works including transport related matters.

The broad objectives for Precinct 15 will assist with the future development of the area, and includes the areas managed by the two separate regulatory bodies. It is aimed to facilitate a highly integrated living environment, incorporating shopping, civic, health, commercial, educational, entertainment, recreational and cultural facilities and therefore provide the basis for a diversified employment base.



LEGEND

Scheme Area Boundary

CITY OF PERTH SCHEME RESERVES
- Parks & Recreation — P&R
- Public Purposes - Civic Use — CU

CITY OF PERTH SCHEME USE AREAS
- City Centre — CC
- Town Centre
- Residential — R60
- Office/Residential — OR
- Residential/Commercial — RC
- Commercial — CO

OTHER
- Additional Uses — A1
- Normalised Redevelopment Area
- DevelopmentWA Area — DevWA
- City Centre Boundary
- MRS Clause 32 Area
- Minor Town / Local Planning Schemes and Number — 12
- Special Control Areas and Number — 3
- Planning Policy Areas
- Precinct Boundary
- Precinct Number — P7

METROPOLITAN REGION SCHEME RESERVES
- Parks & Recreation
- Town Centre
- Railways
- Civic & Cultural
- Waterways
- Public Purposes
  - Hospital — H
  - Car Park — CP
  - University — U
  - SECWA — SEC
  - Special Uses — SU

ROADS
- Primary Regional Roads
- Other Regional Roads

NOTE 1: The Department of Planning should be consulted for full information on the actual land requirements for all Metropolitan Region Scheme Reserves

NOTE 2: This map should be read in conjunction with City Planning Scheme No. 2 Scheme Map.

City of Perth | City Planning Scheme No.2
East Perth P15

Amended - 6 May 2022

168

Am51

SCHEDULE 12 - PROPOSED EAST PERTH PRECINCT 15 PLAN (P15)

City Planning Scheme No.2

EAST PERTH - Precinct 15

EAST PERTH:

A compact, mixed use, riverside neighbourhood centred on the Claisebrook Inlet.

PRECINCT BOUNDARY:

The area shown on the Precinct Plan Map as the East Perth Precinct reflects two areas as follows:-

- the area which was formally under the planning control of DevelopmentWA (DevWA) formerly MRA, but which is now under the planning control of the City of Perth, otherwise known as the "Normalised" area; and
- the area of land that remains is regulated by DevWA in accordance with the Metropolitan Redevelopment Authority Act 2011 that is not included in the normalised area of Precinct 15.

For the "Normalised" area of the East Perth Precinct the Council is the responsible authority for development approvals.

DEVELOPMENTWA (DEVWA):

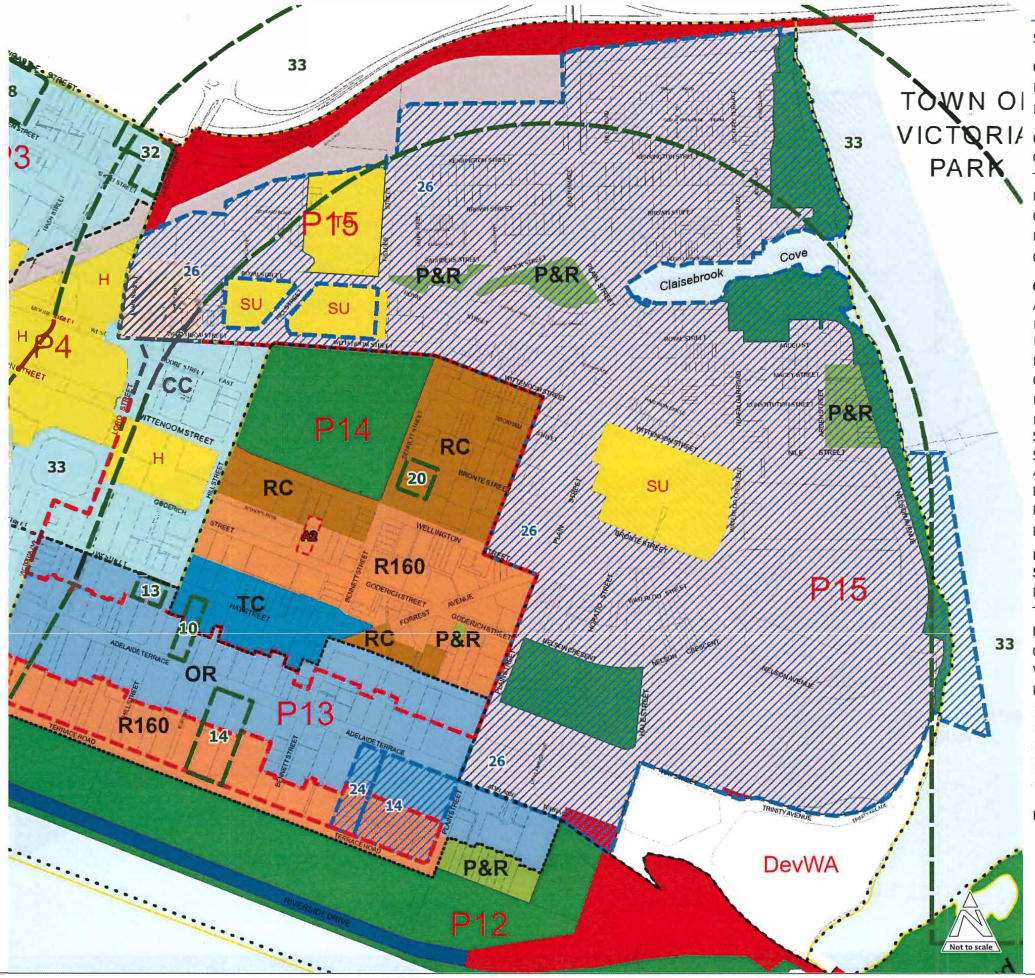
For DevWA regulated areas, development approvals must be obtained from DevWA. This includes Stage 2 redevelopment precincts: Royal Street West, Queens, Queens Gardens, WACA, Trinity College, Gloucester Park and Hillside until the normalisation process is finalised.

The local government is asked to comment on development applications, administer building, health and related controls and at times is involved in other major works including transport related matters.

The broad objectives for Precinct 15 will assist with the future development of the area, and includes the areas managed by the two separate regulatory bodies. It is aimed to facilitate a highly integrated living environment, incorporating shopping, civic, health, commercial, educational, entertainment, recreational and cultural facilities and therefore provide the basis for a diversified employment base.

SPECIAL CONTROL AREAS:

33 - Royal Perth Hospital Flight Path Protection



LEGEND

Scheme Area Boundary

CITY OF PERTH SCHEME RESERVES

- Parks & Recreation — P&R
- Public Purposes - Civic Use — CU

CITY OF PERTH SCHEME USE AREAS

- City Centre — CC
- Town Centre
- Residential — R60
- Office/Residential — OR
- Residential/Commercial — RC
- Commercial — CO

OTHER

- Additional Uses — A1
- Normalised Redevelopment Area
- DevelopmentWA Area — DevWA
- City Centre Boundary
- MRS Clause 32 Area
- Minor Town / Local Planning Schemes and Number — 12
- Special Control Areas and Number — 2
- Planning Policy Areas
- Precinct Boundary
- Precinct Number — P7

METROPOLITAN REGION SCHEME RESERVES

- Parks & Recreation
- Town Centre
- Railways
- Civic & Cultural
- Waterways
- Public Purposes
  - Hospital — H
  - Car Park — CP
  - University — U
  - SECWA — SEC
  - Special Uses — SU

ROADS

- Primary Regional Roads
- Other Regional Roads

NOTE 1: The Department of Planning should be consulted for full information on the actual land requirements for all Metropolitan Region Scheme Reserves

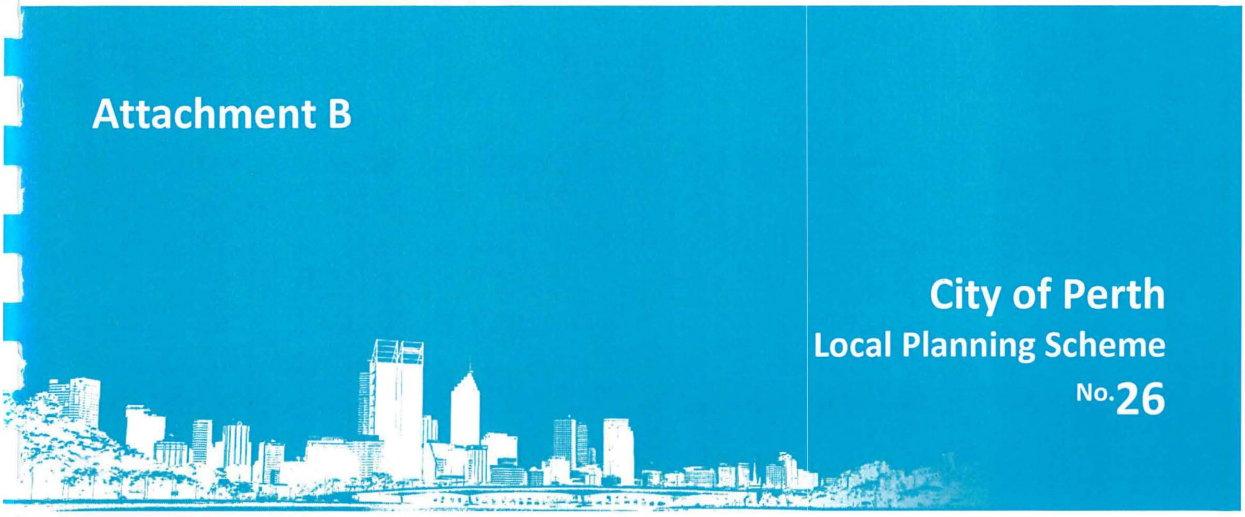
NOTE 2: This map should be read in conjunction with City Planning Scheme No. 2 Scheme Map.

City *of* Perth | City Planning Scheme No.2
East Perth P15

Amended - 6 May 2022

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Am52



Amendment No. 5

CITY of PERTH

FORM 2A

RESOLUTION TO PREPARE AMENDMENT TO LOCAL PLANNING SCHEME

CITY OF PERTH

LOCAL PLANNING SCHEME NO. 26

AMENDMENT NO. 5

RESOLVED that the local government, pursuant to section 75 of the *Planning and Development Act 2005,* amend the above Local Planning Scheme by:

1. Amending clause 1.6.2 so that it reads as follows:

   'Where a provision of this Scheme is inconsistent with a provision of the City Planning Scheme, the provision of this Scheme prevails except in the case of 'Special Control Area No. 33 Royal Perth Hospital Flight Path Protection' of City Planning Scheme.

The amendment is complex under the provisions of the *Planning and Development (Local Planning Schemes) Regulations 2015* for the following reason:

- **the amendment will have an impact that is significant relevant to development in the locality.**

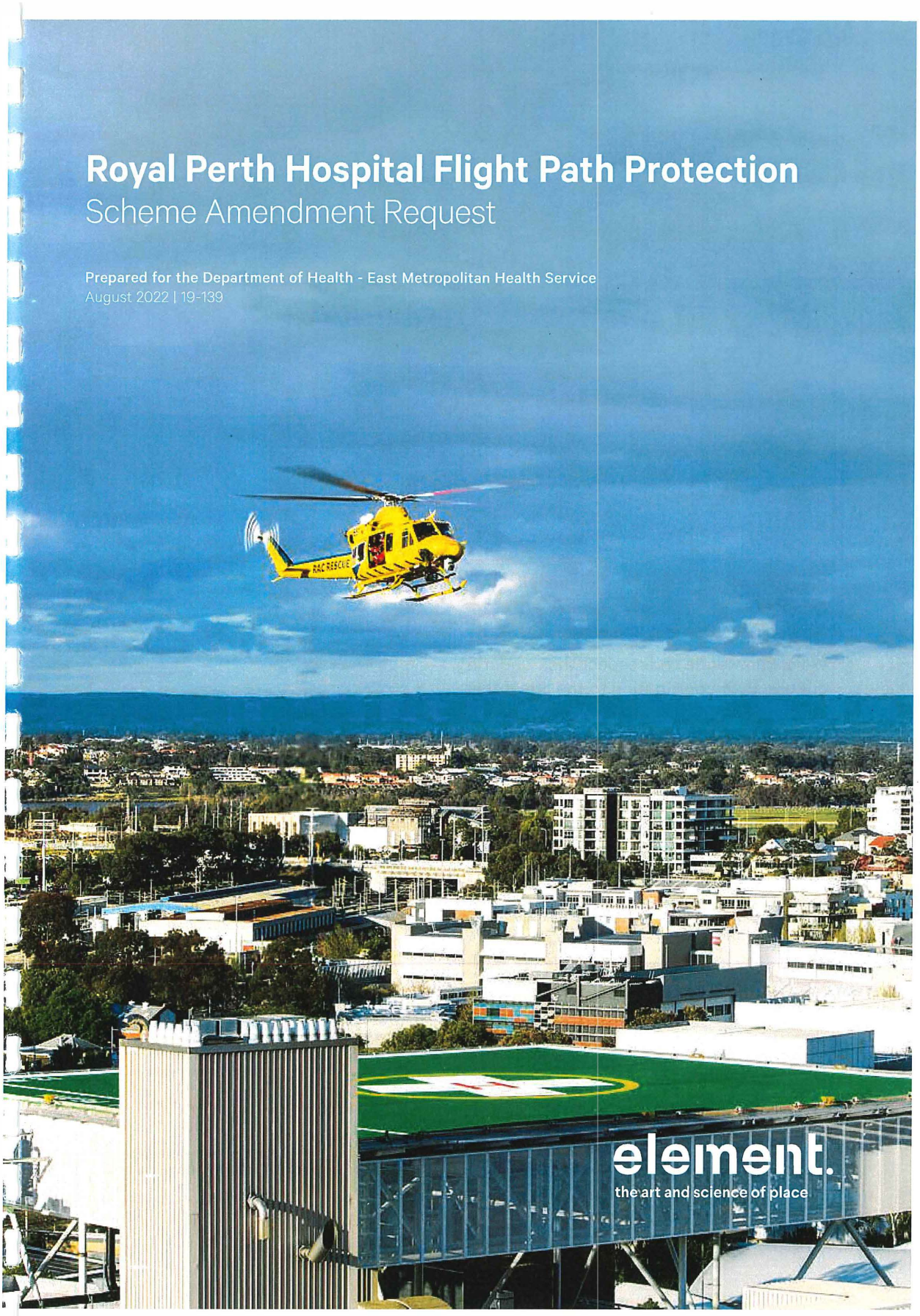
Dated this 24 day of October 2022

CHIEF EXECUTIVE OFFICER

Royal Perth Hospital Flight Path Protection

Scheme Amendment Request

Prepared for the Department of Health - East Metropolitan Health Service
August 2022 | 19-139



Royal Perth Hospital Flight Path Protection Scheme Amendment Request

Cover image source: East Metropolitan Health Services

We acknowledge the Whadjuk people of the Noongar nation as traditional owners of the land on which we live and work.

We acknowledge and respect their enduring culture, their contribution to the life of this city, and Elders, past and present.

Document ID: /Volumes/Graphics/2019/19-139 Perth, 197 Wellington Street/Report/Draft/City of Perth/RPH Scheme Amendment Request Folder/AUGUST 2022 - REVISED LAYOUT/00 InDesign/19-139 RPH Scheme Amendment Request F1 220822 Folder

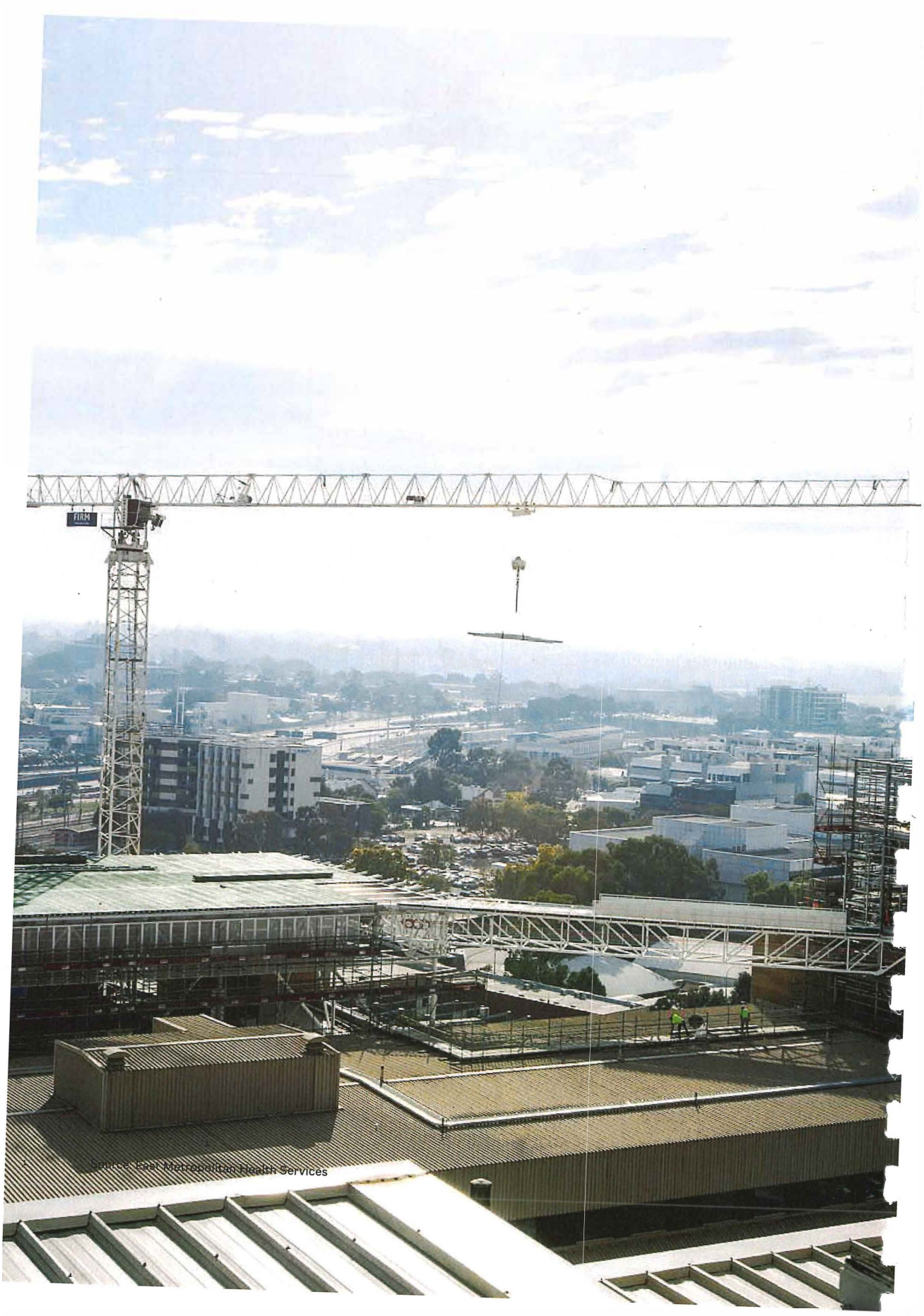
Issue	Date	Status	Prepared by	Approved by	Graphics	File
1	22.08.22	Final	Lewis Shugar	David Read	SA	F1

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FIRM
South East Metropolitan Health Service

element.

1. Introduction

element has prepared this report, on behalf of the East Metropolitan Health Service (EMHS), in support of a request to amend the City of Perth City Planning Scheme No. 2 (CPS2) as it relates to a number of landholdings identified as being within essential helicopter flight paths associated with the operation of emergency helicopter operations at the Royal Perth Hospital (RPH) located at Lot 916 and Lot 920 (No. 212) Wellington Street, Perth.

The Western Australian Planning Commission (WAPC) have recently approved the proposed development of an upgraded Helicopter Landing Site (HLS) at RPH. The upgraded HLS will enable a fleet of upgraded helicopters to utilise the facility and continue to support the State Major Trauma Unit (SMTU) at RPH into the future. As part of securing the long term use of the facility, it has been identified that the existing development potential of a number of landholdings immediately surrounding RPH may result in future development impacting on the safety of helicopter operations.

The existing and future development potential of land within the vicinity of RPH is therefore required to be considered as part of this proposed amendment to ensure essential emergency helicopter flight paths are not obstructed by development that may impact the safety of an emergency medical flight and ultimately result in the upgraded HLS being decommissioned, bringing with it significant impacts upon the efficiency of services provided by the SMTU.

The proposed amendment is being undertaken to align with a number of relevant elements that influence the ongoing successful operation of the Emergency Rescue Helicopter Service (ERHS) at RPH. This includes the interrelationship between the existing planning framework and development opportunities, the National Airports Safeguarding Framework, relevant aviation standards, State government investment and futureproofing the successful operation of the SMTU at RPH to support the States medical emergency needs.

The overarching objective of this request is to ensure that the SMTU located at RPH is able to continue to be serviced by the ERHS that is managed by the Department of Fire and Emergency Services (DFES) by introducing a Special Control Area (SCA) to create a Royal Perth Hospital Emergency Flight Path Protection area.

1.1 At a Glance - The Importance of Protecting Emergency Flight Paths

- Safety, viability and ongoing operations of HLS can be compromised by permanent and temporary development (such as cranes), gaseous plumes, telecommunications towers, powerlines and landscape features (such as trees).
- Recently, helipads have been decommissioned due to nearby operation of construction cranes. In the United Kingdom (UK), a fatal accident occurred where a helicopter collided with a construction crane. This has led to the UK Government formalising safeguarding arrangements to ensure a more robust notification system is in place. Around the world, building induced windshear has played a role in many helicopter crashes.
- Population growth and increased high-rise development continue to place pressures on HLS's located within built up areas.
- Despite the importance of maintaining unimpeded access to strategically important HLS, protective legislation varies across the country.
- In Australia, HLS are not licensed, certified or regulated in the way that aerodromes are under the *Civil Aviation Safety Regulations 1998* (CASR). Outside airports and commonwealth owned land, there are varying levels of regulation and guidance around safeguarding HLS across the country.
- Whilst the new HLS at RPH was formally considered and approved, ongoing development within the City may impact the safety of operations into the future, especially where a helicopter is required to fly with one engine inoperable. At present, there is no formal notification process in place for pilots to be aware of any proposed development (and construction cranes) within areas flown.
- Without protection, strategically important HLS may be required to be decommissioned as a result of ongoing development jeopardising the safety and efficiency of operations.

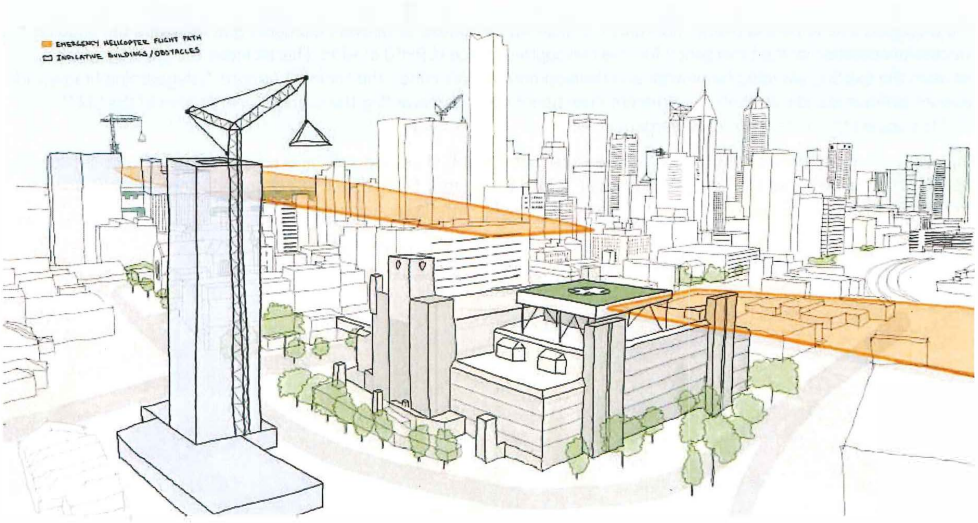


Figure 1. The importance of protecting helicopter flight paths at Royal Perth Hospital

2. Background

2.1 Royal Perth Hospital

RPH is Western Australia's longest serving hospital. Its origins date back to the old Colonial Hospital that was originally established on Garden Island in 1829 until it was subsequently relocated to Perth. The hospital continued to change location and then in 1855, the hospital commenced operations on the corner of Victoria Square and Murray Street. Since then, a number of additional buildings have contributed to the expansion of the hospital's operations toward Wellington Street where an existing helipad is situated on top of the 'North block'. The existing helipad provides an essential service to patients who are in need of urgent specialist trauma treatment at RPH's SMTU. The SMTU is used by the ERHS operated by the DFES. Other operators are also able to utilise the existing helipad when specifically required.

RPH is now the designated provider of major trauma services for adults in Western Australia. More than 75,000 patients are admitted to RPH annually, with over 700 of these patients being classed as major trauma. Approximately 80% of the State's major trauma cases are treated at RPH's SMTU, which provides state-of-the-art multidisciplinary emergency trauma and critical care for patients suffering complex injuries requiring care from multiple medical specialities.

2.1.1 State Major Trauma Unit and Emergency Rescue Helicopter Service

In respect to the existing helicopter operations at RPH, 70.4% of patients transported via the ERHS are taken to RPH for treatment, with an average of 354 patients being received per year. The following statistics from RPH Trauma Data in 2020 emphasise the importance of the service provided:

- 222 patients received were **trauma** patients, meaning that they required urgent medical care as a result of a sudden physical injury from impact, violence or accident;
- 101 patients received were considered **major trauma** patients;
- 43% of **major trauma** patients were considered to have sustained severe or critical trauma; and
- More than 50% of **major trauma** admissions to RPH required critical surgical intervention in response to their injuries.

'Trauma' *– means a body wound produced by sudden physical injury from impact, violence or accident.*

'Major Trauma' *– means a person who has many (multi-trauma) and/or severe injuries. Major and multi-trauma patients can experience serious complications including:*

haemorrhage – losing large amounts of blood can result in shock and other complications

infection or sepsis – the presence of open wounds increases risk of infection

multi-organ failure – when one or more organs, such as kidneys or liver, begin to stop working.

The statistics provided above have been extracted from a letter provided by the Western Australian State Director of Trauma, Dr Sudhakar Rao. The following statements are taken from Dr Sudhakar's letter, which provide a response to various matters raised by the City and ultimately highlight the importance of the ERHS, the associated helipad at RPH and the overall operations of the SMTU at RPH:

> *The need for helicopter emergency medical services to pick up a patient from their location, followed by immediate access to specialist treatment teams on arrival at a hospital is imperative.*
>
> *Helicopter transport provides the quickest means of transferring critically injured patients to a major trauma service. Off-site landings have been found to result in longer transport to the emergency room, however, the construction of helipads in trauma centres can reduce transport time, in addition to reducing the costs and sequelae of trauma.*
>
> *Acknowledging the increased chances of survival and recovery from on-site HLS, alternative locations such as Wellington Square or Langley Park were determined to be unacceptable for Standard Operating Procedures as both locations would cause delays to patient transfer with an additional ambulance transfer, and risk to life (including increased infection risk). These locations would further pose security and accident risks for the Rescue Helicopter as well as the general public on the ground, thus requiring WA Police intervention for each helicopter landing.*
>
> *The time critical nature of the relationship between event, definitive tertiary clinical intervention and the patient's survival is the reason why the construction of a new on-site helipad that will allow immediate access for the State Emergency Rescue Helicopter Service's (ERHS's) upgraded helicopter fleet at RPH is critical for the ongoing provision of emergency healthcare in WA.*

Refer to Appendix 1 – Letter from WA State Director of Trauma 4 November 2021 (Dr Sudhakar Rao)

DFES have provided its support for the proposed flight paths, being the agency responsible for the ongoing operation of the ERHS at RPH. DFES support can also be referred to at Appendix 2.

Refer to Appendix 2 - DFES Letter of Support

2.2 Futureproofing Royal Perth Hospital

The gazettal of the *Royal Perth Hospital Protection Act 2016* secured and reiterated the importance of the hospital for the State with clause 6 of the Act stating, *Royal Perth Hospital is to continue to operate as a public hospital unless a resolution approving the closure of the hospital has been passed by each House of Parliament.*

The Commonwealth and State Government has recently announced significant funding to upgrade clinical services and infrastructure including the Intensive Care Unit and a new authorised Mental Health Unit at RPH. Additional investments have been made in innovation as well as general building and maintenance upgrades to support the ongoing operation of the hospital.

2.2.1 Requirement for Upgraded Helicopter Facilities (Helipad)

The Australian Civil Aviation Safety Authority (CASA) has released a Notice of Proposed Rule Making NPRM 1304OS entitled *Regulation of aeroplane and helicopter 'ambulance function' flights as Air Transport Operations*. The significance of the updated regulatory framework on emergency air ambulance helicopter flights is that they will need to operate in accordance with a prescribed performance criteria of Performance Class 1, which requires the use of multi-engine helicopters certified in Category A.

The Category-A certification verifies that a helicopter with one engine inoperative is capable of meeting specified performance capabilities and prescribed limits set out in *Category-A Supplement to the Rotorcraft Flight Manual* compliance. With these operational parameters it ensures the helicopter is able to continue an approach on one engine (or reject a take-off) and set down on a HLS or fly away on one engine and clear all obstacles within the flight path boundary by approximately 10 metres.

Put simply, air ambulance helicopters are required to operate at the Performance Class 1 criteria. This requires a HLS and supporting structure that is capable of withstanding the dynamic loads generated by a helicopter making a heavy landing as well as the static loads generated by stationary helicopters.

The old HLS at RPH being used by air ambulance helicopters did not meet the physical dimensions of a Category A helipad. As such, the provision of a Category-A sized helipad in support of emergency medical transport flights has been approved and is now being utilised.

2.2.2 Upgraded Helipad Development Approval

At its meeting on 28 October 2019, the Statutory Planning Committee (SPC) of the WAPC resolved to approve the new HLS for RPH subject to a number of conditions.

Please refer to Appendix 3 – Development Approval - Helicopter Landing Site

A large body of work was undertaken by RPH and technical consultants to determine the most suitable location for an upgraded HLS, which was provided in support of the development application considered by the WAPC. A combination of factors were considered to determine the most suitable location, including the following:

- Patient care outcomes associated with location characteristics (as referred to above and within Appendix 1) - Prioritising speed from injury to specialist trauma treatment, eliminating additional transfer requirements and increased patient handling risks, and reducing costs to the State/patient;
- Existing location of the SMTU;
- Existing obstacle environment in the vicinity of a proposed helipad;
- Relationship between dominant period of helicopter activity and weather patterns, in particular prevailing wind characteristics; and
- High level review in consultation with the City of Perth (the City) to determine potential building heights and reduce impacts.

'The need for helicopter emergency medical services to pick up a patient from their location, followed by immediate access to specialist treatment teams on arrival at a hospital is imperative. The location of the new helipad was carefully thought through in order to ensure alignment with the WA State Trauma System objective of optimum speed from injury to specialist trauma treatment at WA's only Level 1 Major Trauma Centre. This eliminates an additional ambulance transfer and increased patient handling risks, as well as additional cost to the State/patient...'

Source: Dr Sudhakar Rao – WA State Director of Trauma (Letter from Dr Sudhakar Rao, WA State Director of Trauma 4 November 2021)

2.2.3 Aviation Standards

The physical characteristics of a HLS as well as the associated flight paths are controlled through the following documents:

- The Civil Aviation Safety Authority (CASA) Civil Aviation Advisory Publication CAAP 92-2(2) Guidelines for the establishment of on-shore helicopter landing sites (February 2014);
- International Civil Aviation Organisation (ICAO) Annex 14 Aerodromes – Volume II: Heliports (4th edition July 2013); and
- Civil Aviation Safety Authority NPRM 1304OS Regulation of aeroplane and helicopter 'ambulance function' flights as Air Transport Operations.

The pilots currently operating the ERHS and DFES have advised that in order to continue to conduct flights to and from the RPH HLS, the flight paths need to be protected in accordance with ICAO Annex 14.

This amendment has been prepared in direct response to the above documents, with elements of these being discussed within the following report. Further technical information can also be referred to at Appendix 4.

Refer to Appendix 4 – HLS Flight path Requirements (Rehbein Airport Consulting)

Please also refer to an explanation of the interpretation of relevant aviation regulations at Appendix 5.

Refer to Appendix 5 - Interpretation of Aviation Regulations (Rehbein Airport Consulting)

element has prepared this report on behalf of EMHS in consultation with key agencies. DFES have provided its support for the proposed flight paths, being the agency responsible for the ongoing operation of the ERHS at RPH. DFES support can also be referred to at Appendix 2.

Refer to Appendix 2 - DFES Letter of Support

2.2.4 Requirement to Protect Emergency Flight Paths

The need to protect the airspace in accordance with the above mentioned CASA regulation has been acknowledged at the federal level through the Department of Infrastructure, Transport, Regional Development and Communications publication titled *National Airports Safeguarding Framework* and in particular Guideline H. Guideline H presents information relevant to protecting strategically important HLS and includes discussion on the protection measures required to ensure buildings and structures (such as construction cranes) do not intrude into the Obstacle Limitation Surface (OLS) that outlines the lower limit of the operational airspace of a helicopter flying on one engine.

Being located in the Perth central city area, RPH is located within close proximity to a number of landholdings that currently contain and/or are able to contain buildings of a significant scale. This creates a significant and very real risk to the continued successful and safe operation of the hospital and the SMTU, which is reliant upon emergency air ambulance transporting critically ill patients for urgent treatment.

It is anticipated that over time and without intervention, the safety of emergency helicopter pilots, hospital staff, patients and the general public will be compromised through the cumulative impact of additional buildings constructed within the approach and departure routes to the HLS at RPH.

The parameters guiding the methodology used to determine the most appropriate flight paths are addressed later in this report.

> *"If intrusions into the flight paths for a HLS, and risks associated with the use of those SHLS are not regulated the ongoing helicopter operations at strategically important sites may be compromised. Without protection, development in the vicinity of a SHLS could jeopardise safety and efficiency and potentially result in the decommissioning of the HLS."*
>
> *Extract from the National Airports Safeguarding Framework*

2.3 Consultation and Engagement

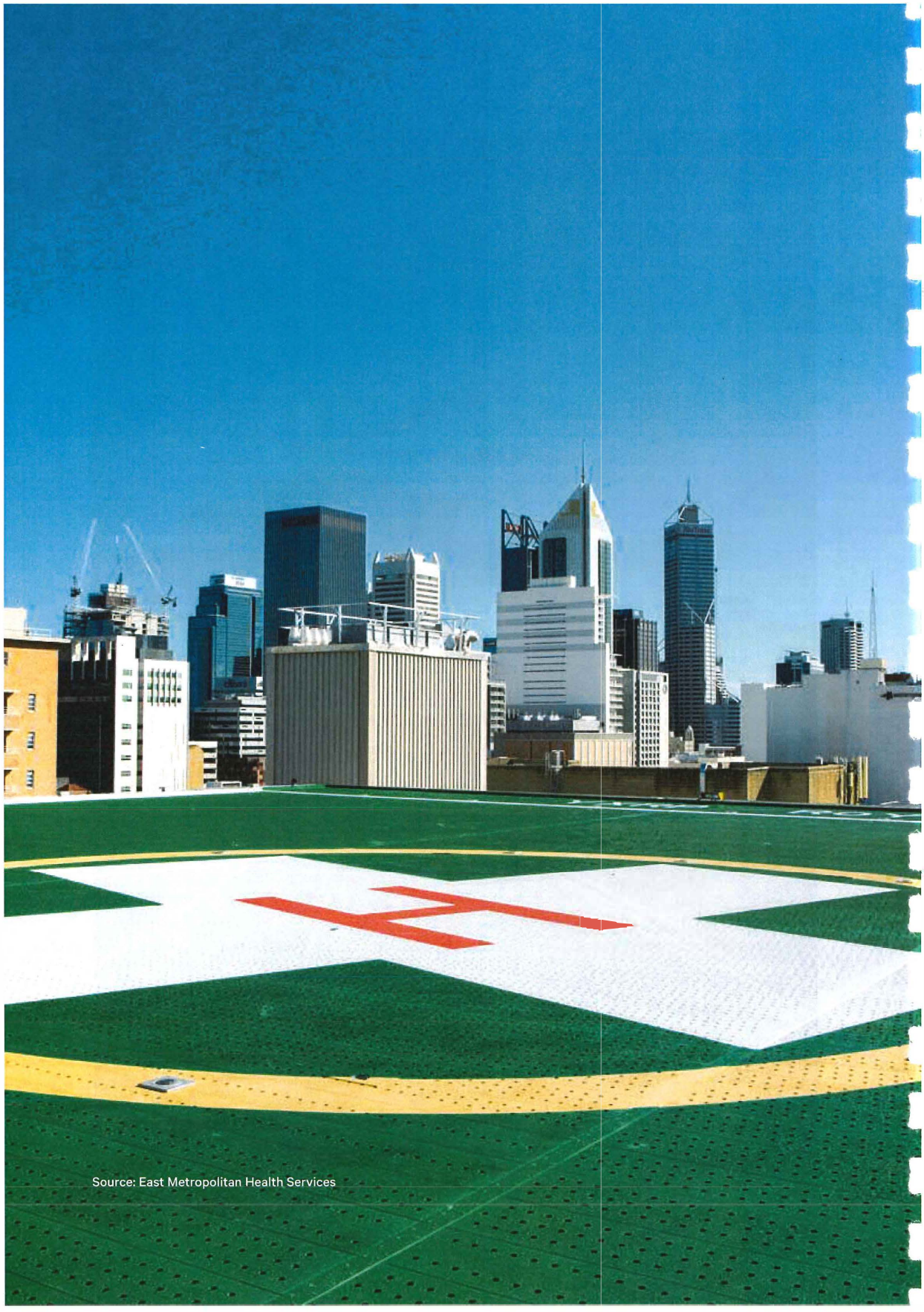
Throughout the preparation of this amendment request, **element** and EMHS have worked closely with a number of key stakeholders. This has included a number of project meetings and ongoing correspondence with the City as well as the following stakeholders:

- Department of Planning, Lands and Heritage;
- City of Vincent;
- Development WA;
- Department of Fire and Emergency Services; and
- Relevant technical professionals; and
- Civil Aviation Safety Authority.

The culmination of technical advice and assistance from these stakeholders has allowed for a coordinated approach to be taken. This has allowed a number of relevant matters to be considered as part of the ongoing refinement of the proposed emergency flight paths to determine the most appropriate alignment with respect to flight requirements, strategic land use planning and minimising the impact to existing development potential as discussed throughout this report.



Figure 2. Constructed helipad (Source: East Metropolitan Health Services)


Source: East Metropolitan Health Services

element.

3. Subject Site

3.1 Site Details

RPH is located within the Perth CBD and is generally situated toward the northern extent of the City's local government authority boundary, adjacent to the Graham Farmer Freeway and the Midland and Armadale Railway Line. RPH's facilities span multiple lots with a total land area of approximately 5.575ha. RPH maintains frontages to Murray Street, Victoria Square, Lord Street, Wellington Street and Moore Street.

Two bridges provide pedestrian connections over the road reserve of Moore Street and Wellington Street to individual buildings. The previous HLS is situated on top of the existing building located at Lot 916 (No. 212) Wellington Street, Perth. This HLS will remain operational for a temporary period of time as a backup facility to the recently completed upgraded HLS.

Refer to Figure 3 – Location Plan

Refer to Figure 4 – Aerial Plan

To protect the flightpath this amendment will apply to a series of landholdings that are located within two identified emergency helicopter flight paths and is referred to as the core flight corridor area. The core flight corridor area spans a total width of 165m and extends a total distance of 3.386km as required by relevant aviation standards and requirements for emergency helicopter flights.

This amendment also applies to a number of landholdings that are located either side of the core area. This will be referred to as the frame area and will extend 90m beyond the outer edges of each flight path for the total distance of the core area, being 3.386km. The intent of the frame area is to ensure that DFES is aware of, and approve any temporary encroachments into the core area such as swinging tower cranes associated with the construction of nearby buildings.

Differentiating between the core and frame areas will allow separate development provisions to be applied to each area to prevent obstructions within each flight path. The frame area is shown in Figures 3 and 4.

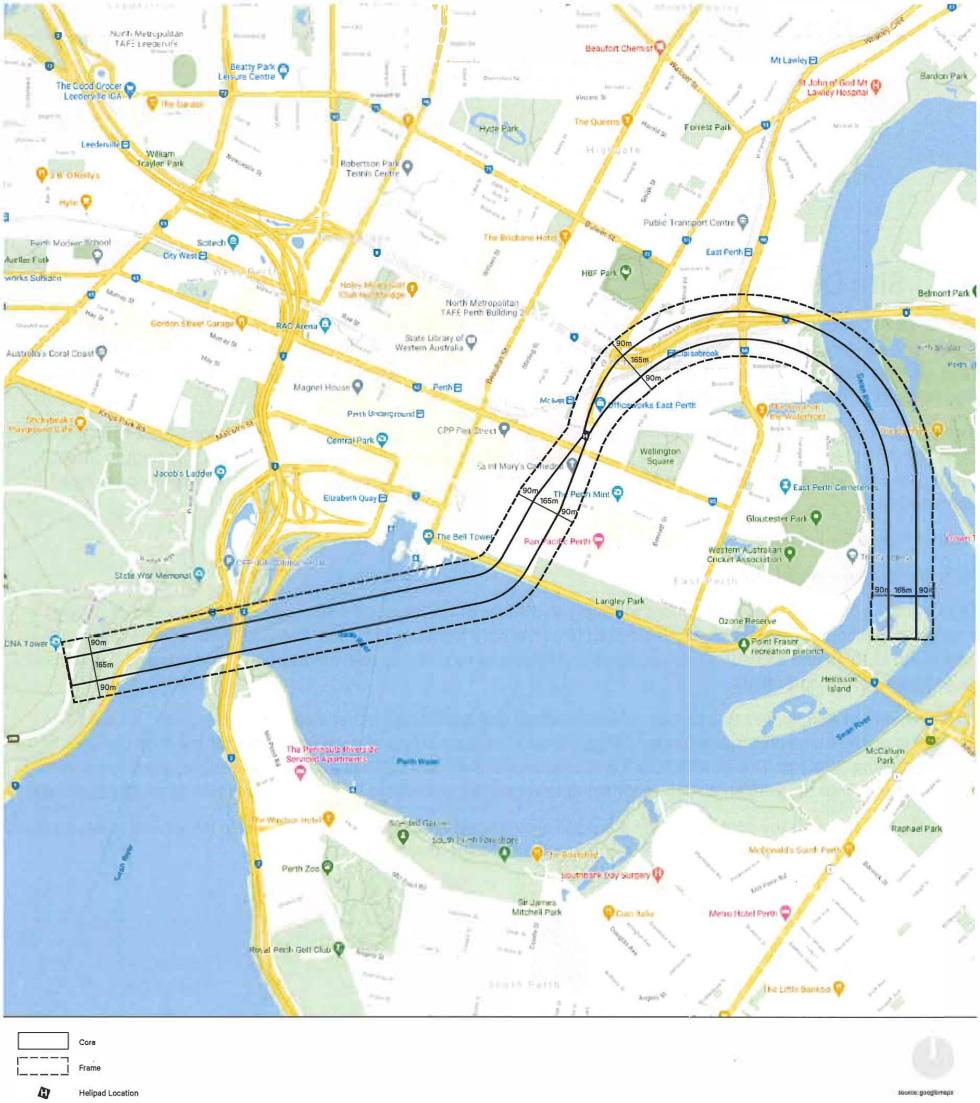


Figure 3. Location Plan

element.



Figure 4. Aerial Plan

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3.2 Site Context

The area immediately surrounding RPH is characterised by an eclectic mixture of buildings and land uses. The land to the immediate south of the RPH is characterised by a number of medium sized skyscrapers, whereas existing development to the immediate north and east are of a much lower scale and generally taper down toward the Swan River in the eastern most portion of the City's local government area.

There have been a number of developments recently completed in the immediate vicinity of RPH. Notably, the Westin Hotel located immediately south west of RPH along with numerous development in Northbridge and the Perth City Link. Many of these developments are of a significant scale and their overall height has resulted in ERHS pilots seeking alternative routes in and out of RPH in recent years.

Figure 5 identifies RPH within the context of the applicable planning framework and indicatively explores the potential development height above natural ground level of certain landholdings within the vicinity of RPH and the flight paths. This emphasises the purpose of the proposed amendment being sought and the importance in limiting development height where appropriate to ensure the upgraded HLS facility at RPH is protected and remains operational.



Figure 5. Indicative Development Potential Surrounding RPH

Date: 28 Jun 2022 Scale: 1:10k@ A3 1:5k @ A1 File: 19-139 CP-1 A Staff: LS GW Checked: LS


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RAC
Source: East Metropolitan Health Services

element.

4. Planning Framework

4.1 State and Regional Planning Context

4.1.1 Metropolitan Region Scheme

The Metropolitan Region Scheme (MRS) provides the legal basis for controlling development and land use at the regional level. The RPH site is reserved for 'Public Purposes – hospital'. The purpose and function of the 'Public Purpose' reservation is to protect land for public facilities, such as hospitals, high schools, universities, etc.

The northern flight path traverses land that is primarily zoned 'Urban'. It will also traverse land that is reserved for 'Primary Regional Roads', 'Railways', 'Parks and Recreation' and 'Waterways'.

The southern flight path traverses land that is primarily zoned 'Central city area'. It will also traverse land that is reserved for 'Public purposes – car park', 'Civic and Cultural', 'Other Regional Roads, 'Parks and Recreation', 'Waterways' and 'Primary Regional Roads'.

Refer to Figure 6 – MRS Extract

4.1.2 State Planning Strategy 2050

The State Planning Strategy 2050 was prepared by the Department of Planning, Lands and Heritage (DPLH) on behalf of the WAPC and aims to build strategic planning capacity and capability around a State planning vision.

Planning principles, strategic goals and State strategic directions are set out to respond to the challenges and opportunities that exist for the future land-use planning and development of Western Australia. The document is intended to guide and inform local community plans, growth plans and local planning schemes and strategies with structure planning and development assessments as well as planning for the coordination of physical and community infrastructure, such as hospitals.

The following extracts are of relevance to this amendment:

> *"Demand for Western Australia's goods and services will continue to rise in the foreseeable future, which will increase the pressure on the State's infrastructure."*
>
> *"Planning for the integration and coordination of both physical and social infrastructure is critical in achieving the strategic vision and goals of this document."*
>
> *"Of particular importance will be the continued collaborative approach to define the roles within all tiers of Government; and between the Government and the private sector."*
>
> *"Social infrastructure is by nature highly complex and multidimensional. All levels of government have a role to play in the coordinated delivery of the 'hard' elements of community infrastructure, including...hospitals..."*

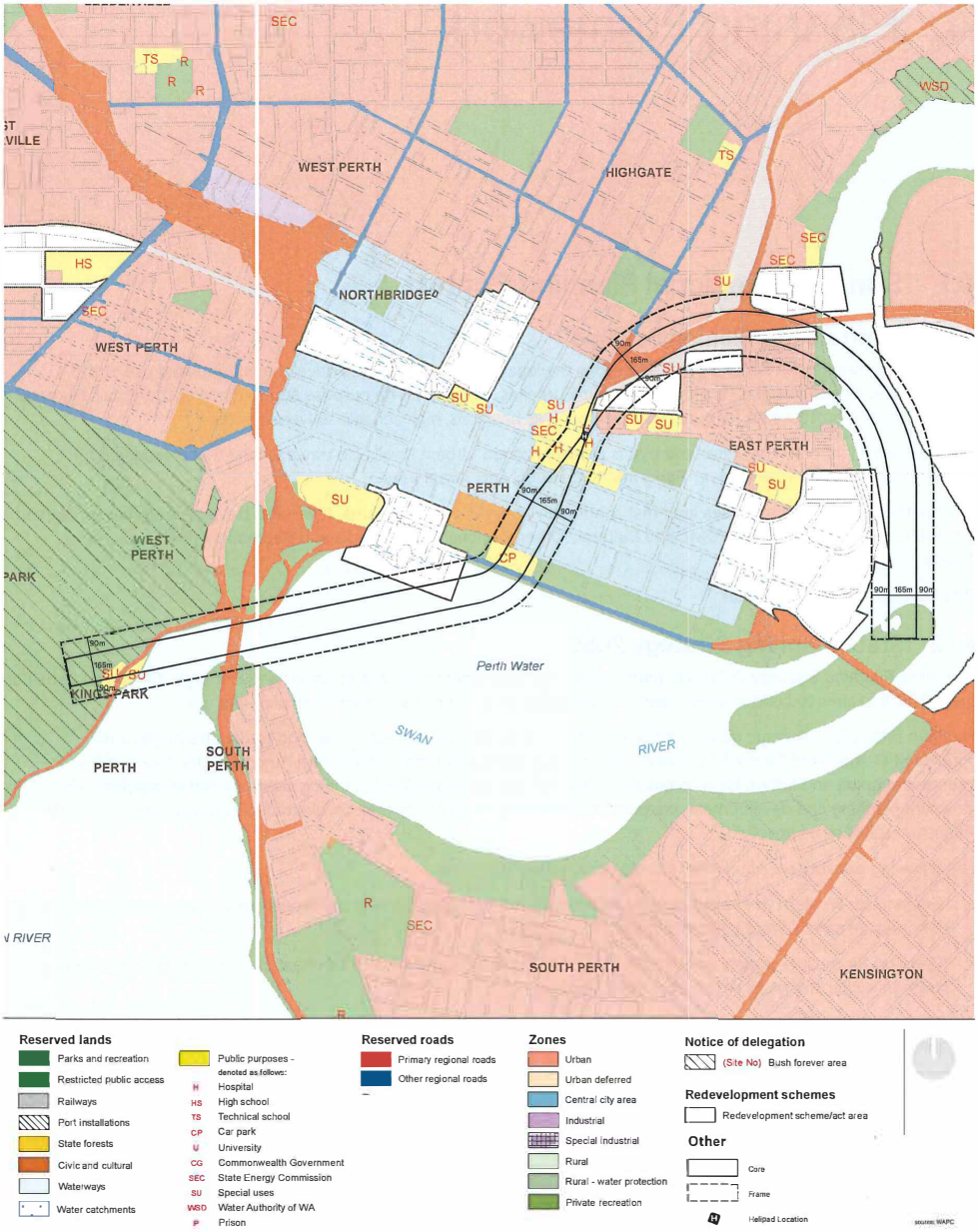


Figure 6. MRS Extract

4.1.3 Perth and Peel @ 3.5 Million

The *Perth and Peel @ 3.5million* strategic suite of documents has been developed to provide a long-term growth strategy for land use and infrastructure for the Perth and Peel regions. The framework outlines a number of overarching objectives in relation to urban form; economy and employment; community and social infrastructure; movement and access; service infrastructure; environment and landscape; and natural resources.

Relevant to the proposed amendment, the document outlines the following objective in relation to community and social infrastructure:

> *To provide a wide range of community and social infrastructure to enhance the health and wellbeing of the community and meet the community's needs including health, education and recreation, while promoting co-location and optimising the use of existing facilities and infrastructure.*

The document states that *"while population growth over time will result in increased demand for regional health facilities, the future focus will be to optimise the use of existing sites in preference to developing facilities on new sites".*

This amendment seeks to protect the ERHS at RPH and its role in supporting the SMTU.

4.1.3.1 Central Sub-Regional Planning Framework

The *Central Sub-Regional Planning Framework* (Framework) forms an integral part of the *Perth and Peel @ 3.5million* strategic suite of draft planning documents. The Framework has been developed to guide further detailed planning and decision-making by State Government agencies and local governments.

Relevant to the proposed amendment, a key principle of the framework is to *"ensure more efficient use of existing and planned service and social infrastructure to achieve a more sustainable urban environment".*

Of relevance to the proposed amendment, the following key strategic directions/priorities in relation to social infrastructure and employment are to:

> *"optimise use of existing infrastructure, with urban infill and employment opportunities utilising the principles of urban consolidation" through review and amendments to the planning framework.*
>
> *'Protect strategic industries and land classified for this purpose, together with their buffers, from the encroachment of non-strategic and/or incompatible land uses'*

The proposed amendment aligns with the broad principles and objectives of the *Perth and Peel @ 3.5million* documents, in that it will allow the existing hospital facility to remain operational and continue to meet the future needs of both the local and regional community. The proposed amendment will ensure a significant employment generator within the sub region is supported and consistent with the last strategic direction/priority outlined above, it seeks to protect the strategic industry and overall successful operation of RPH, which relies on supporting services from helicopters to meet the needs of the State.

4.1.4 Capital City Planning Framework

The Capital City Planning Framework (CCPF) establishes a spatial strategy for Central Perth and indicates how the objectives of *Directions 2031 and Beyond* and the *Central Metropolitan Perth Sub-Regional Strategy* can be delivered in this focus area.

Relevant to RPH, the document identifies the urban form for the site and southern flight path as being 'City', stating the following built form characteristics:

> ***Towers on podium:*** *High-rise elements are balanced with a podium base that reinforces scale and setbacks of the adjacent streetscape, typically four to six storeys in the city centre. Height, proportion and spacing of high-rise elements above podiums adapt to the urban context and contribute to the overall cityscape. This type has evolved to accommodate human-scaled active frontages and mitigate some of the microclimate effects created by 'skyscrapers'.*
>
> ***Modulated urban frontage:*** *Buildings are set back from the front boundary to allow for landscaped forecourts that contribute to streetscapes and the green infrastructure of the city. Buildings generally rise to their full height at their front elevation, creating a strong but less- continuous street frontage.*

The area of land to the east of RPH and in particular the northern flight path corridor is identified as being 'Urban', stating the following built form characteristics:

> ***Urban perimeter block:*** *For areas with consistently high development intensity, strongly defined urban blocks create legible built form and streetscape. Primary frontages are built to the boundary at heights appropriate to pedestrian-scaled streetscapes, typically three to six storeys. Additional levels above may be acceptable according to urban context, with further setbacks to differentiate from the primary frontage. Restrained overall heights maintain contrast with the high-rise development of the city centre and reinforce a hierarchy of building form.*
>
> ***Modulated urban frontage:*** *Buildings are set back from the front boundary to allow for landscaped forecourts that contribute to green streetscapes. Buildings generally rise to their full height at their front elevation, creating a strong but less continuous street frontage.*

Refer to Figure 7 – Capital City Planning Framework Proposed Urban Form

The proposed amendment considers the built form characteristics set out under the CCPF and aims to limit the impact to areas identified as 'City' under the CCPF as far as practically possible. The south western flight path will impact landholdings identified as having a 'City' built form, however, as outlined within the methodology section of this report and having considered all relevant parameters, there are no reasonable alternative flight path options available to the south. Notwithstanding this, the southwestern flight path impacts only a small number of landholdings before continuing over the Swan River.

element.

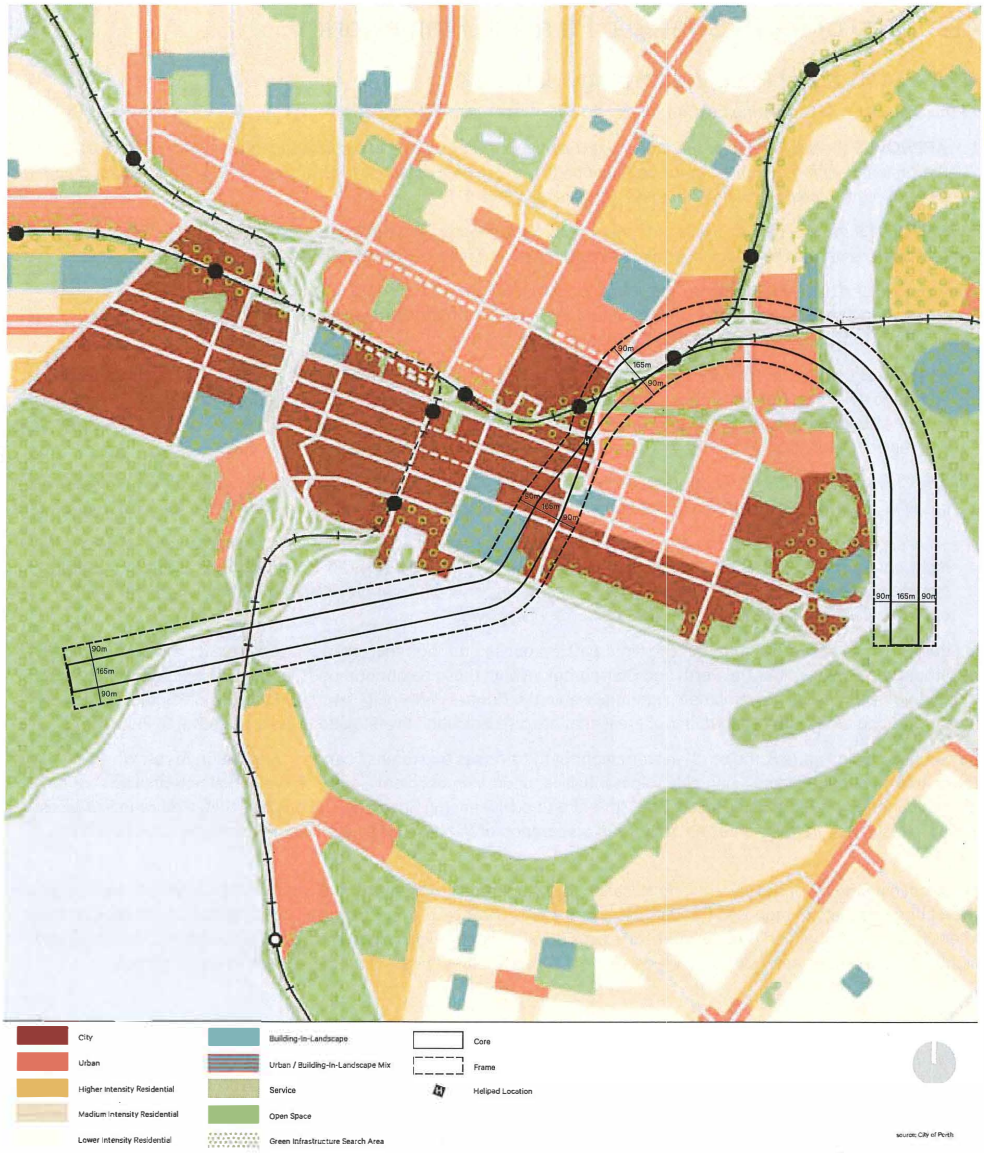


Figure 7. Capital City Planning Framework Proposed Urban Form

4.2 City of Perth Strategic Planning Framework

4.2.1 Draft Local Planning Strategy July 2021

At the Special Council Meeting held on 13 July 2021, Council resolved as follows:

1. ***APPROVES** the submission of the draft Local Planning Strategy, as included in Attachment 6.2A, to the Western Australian Planning Commission for certification for advertising, pursuant to Regulation 12 (1) of the Planning and Development (Local Planning Schemes) Regulations 2015.*
2. ***REQUESTS** the Western Australian Planning Commission to approve the extension of the period for making submissions on the draft Local Planning Strategy from 21 days to 42 days pursuant to Regulation 13(2).*

The updated Draft Local Planning Strategy was formally advertised by the City in the first quarter of 2022. The draft Local Planning Strategy advertised outlines a number of relevant matters to consider with the following outlined on page 54 in respect to the Royal Perth Hospital Helicopter Flight Corridor:

> *As the designated State Trauma Centre for WA Health, Royal Perth Hospital (RPH) is required to maintain efficient access to a hospital helipad for the State Emergency Rescue Helicopter Service. Helicopter operations to and from RPH are conducted in accordance with the Civil Aviation Regulations and associated National Airports Safeguarding Framework Guidelines - Protecting Strategically Important Helicopter Landing Sites.*
>
> *The Civil Aviation Safety Authority has proposed modifications to this regulatory framework which will reclassify air ambulance functions and require flight paths to be established by the relevant planning authorities including the City.*
>
> *To ensure compliance with the above regulations and guidelines, it will be necessary to establish and protect formal flight corridors for RPH within the new Scheme and planning policies. The City is working with RPH and the State Government to determine the optimal location and necessary built form provisions to accommodate the flight corridor while minimising undue impacts on surrounding land.*

In addition to the above, we note that the flight paths proposed through this amendment will locate within the strategy neighbourhood areas of Central Perth and Claisebrook. Within these neighbourhoods, there are no significant changes to building height and/or development potential within the Central Perth neighbourhood area, whereas the Claisebrook neighbourhood area outlines a number of areas that are Intensification Investigation Areas, as shown in Figure 8.

As can be seen in Figure 8, the north eastern flight path traverses two Intensification Investigation Areas. Whilst these areas are identified as being able to potentially support increased development, the actual potential level of intensification is yet to be determined. The City's draft Local Planning Strategy 2021 outlines that, *'Plot ratio increases will be investigated in these areas as part of the preparation of the new Scheme taking into consideration-built form outcomes'.*

In determining the proposed level of intensification that is appropriate within these areas, the City will need to have regard to the flight paths that are proposed through this amendment. The level of impact the proposed flightpaths will have on these Intensification Investigation Areas as a whole is considered to be relatively minor, noting that the location of the proposed flight paths have been carefully considered to have the least amount of impact on these areas as well as others.

element.

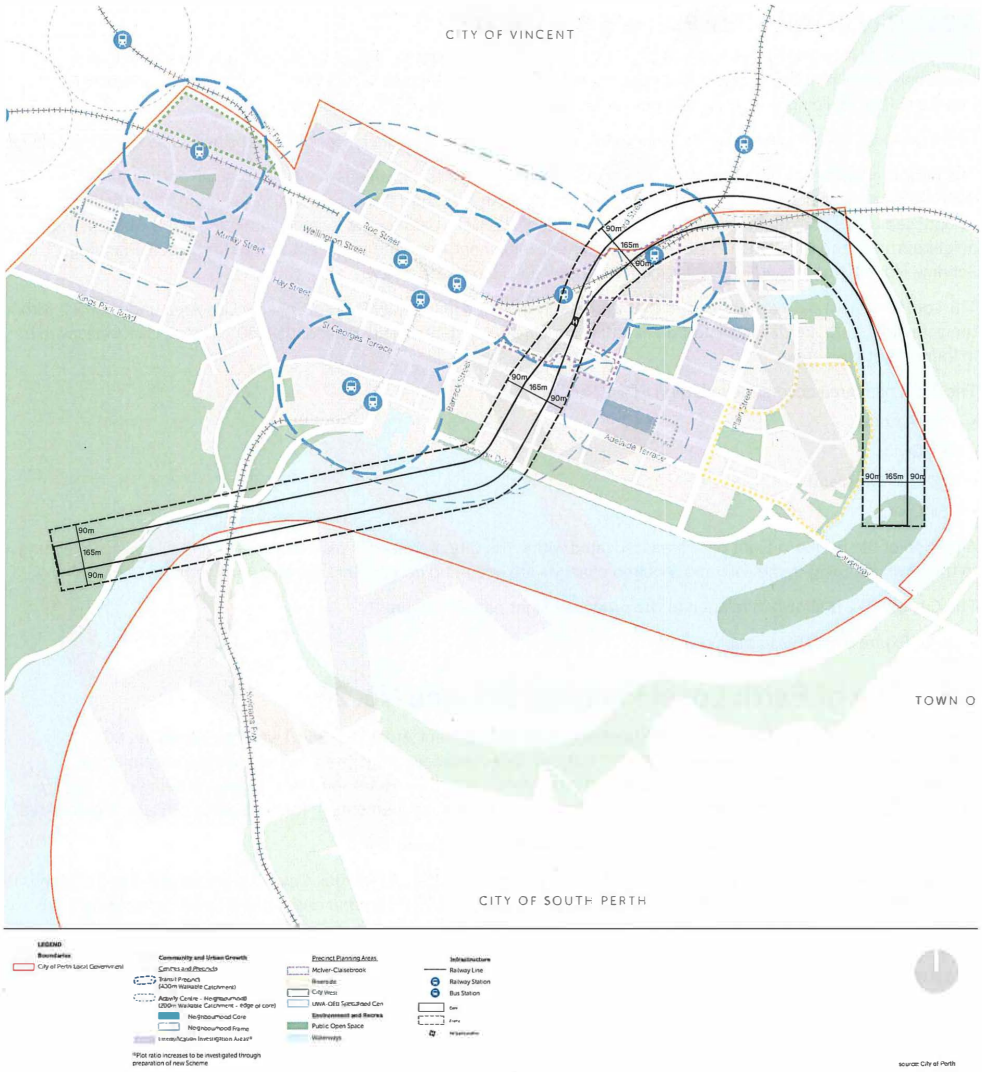


Figure 8. Local Planning Strategy 2021 Urban Growth Map – Intensification Investigation Areas

4.2.2 City of Perth City Planning Scheme No. 2

The City's City Planning Scheme No. 2 (CPS2) is a statutory document setting out the way land is to be used and developed. The City's CPS 2 consists of the Scheme Text, Deemed Provisions, Supplemental Provisions, Scheme Map, Plot Ratio Plan, Building Heights Plan, and a number of plans relating to bonus plot ratio.

CPS 2 provides for the creation of Precinct Plans and Planning Policies, which support and further guide decision making.

The northern flight path areas are largely reserved under the MRS as explained previously. A small portion of the flight path area is included in the 'City Centre' Scheme Use Area, though this is primarily in the frame flight path area as opposed to the core flight path area. The remainder of the flight path area is located within the City's Claisebrook neighbourhood and is included in the Normalised Redevelopment Area, and is subject to the City's Local Planning Scheme No. 26 (Normalised Redevelopment Area), which is discussed below.

The southern flight path traverses land that is primarily included in the 'City Centre' Scheme Use Area under CPS 2 within the core flight path area. A small portion is within the 'Office/Residential' and 'Residential-160' Scheme Use Areas within in frame flight path area.

The flight path area covers the following CPS 2 Precincts:

- P4 Victoria;
- P7 Civic;
- P13 Adelaide; and
- P7 Civic.

A portion of the northern flight path area is located within the City of Vincent's planning control and discussions relating to their own planning framework and required changes are occurring concurrent to discussions with the City.

The City's CPS 2 is shown in relation to the proposed flight paths in Figure 9.

Refer to Figure 9 – CPS2 Extract

4.3 City of Perth Local Planning Scheme No. 26

The City's Local Planning Scheme No. 26 (Normalised Redevelopment Areas) (LPS 26) was introduced in 2007. LPS 26 provides planning provisions for the 'normalised' redevelopment areas (transferred planning control from DevelopmentWA to the City) with the administrative power to determine development applications being provided by CPS 2. LPS 26 is complementary to CPS 2 and details development requirements in the Claisebrook Village Project Area.

The Vision for the Claisebrook Village Project Area is outlined as follows:

> *Claisebrook Village will be a sustainable urban village based on the Claisebrook Cove. It will exemplify the Scheme Principles, through its environmental integrity, a high quality public realm, and diverse land uses and housing in an easily accessible and connected environment. The area will be enriched by its Indigenous and architectural heritage and public art. The area will exhibit contemporary transport planning and design principles which capitalise on its proximity to good public transport and further develop the pedestrian-friendly public realm.*

The flight path area covers the following LPS 26 redevelopment precincts which provide development standards and design guidance:

- Precinct EP4: Silver City
- Precinct EP7: East Parade
- Precinct EP8: Belvidere
- Precinct EP10: Riverbank

Concurrent to this amendment, LPS 26 will need to be amended to indicate that the provisions of the proposed Special Control Area No. 33 provisions will prevail over the LPS 26 scheme provisions.

The City's LPS26 is shown in relation to the proposed flight paths in Figure 10.

Refer to Figure 10 – LPS26 Extract

element.



Figure 9. CPS2 Extract

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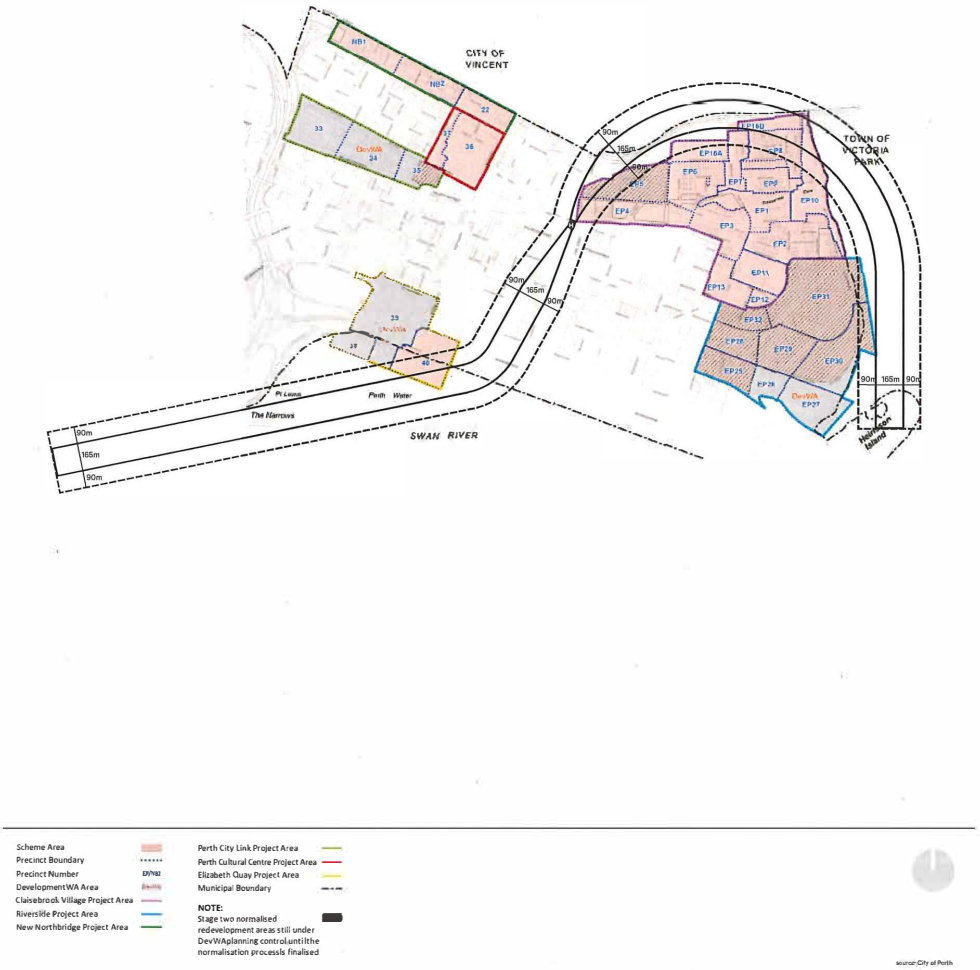


Figure 10. LPS26 Extract

4.4 Royal Perth Hospital Development Context

The area immediately surrounding RPH is characterised by an eclectic mixture of buildings and land uses. The land to the immediate south of the RPH is characterised by a number of medium sized skyscrapers, whereas existing development to the immediate north and east are of a much lower scale and generally taper down toward the Swan River in the eastern most portion of the City's local government area.

There have been a number of developments recently completed in the immediate vicinity of RPH. Notably, the Westin Hotel located immediately south-west of RPH and numerous developments in Northbridge and the Perth City Link. Many of these developments are of a significant scale and their overall height has resulted in ERHS pilots seeking alternative routes in and out of RPH in recent years.

Figure 5 identifies RPH within the context of the applicable planning framework and explores the potential development height of certain landholdings within the vicinity of RPH and the flight paths. It shows the location and height of recent planning approvals in close proximity to RPH and the proposed flight paths. This emphasises the purpose of the proposed amendment being sought and the importance in limiting development height where appropriate to ensure the upgraded HLS facility at RPH is protected and remains operational.

It should be noted that heights under the City's CPS 2 planning framework are taken from the natural ground level and figure 5 is indicative only and has not been used to inform planning controls. The proposed flight path heights are shown in Australian Height Datum (AHD).

Refer to Figure 5 - Indicative Development Potential Surrounding RPH



5. Proposal

5.1 Overview of Proposed Scheme Amendment

The purpose of the proposed scheme amendment and Special Control Area is to protect emergency air ambulance flight paths to ensure the continued successful operation of RPH and the SMTU.

In brief, the proposed scheme amendment to the City's CPS 2 will implement the following changes:

- Introduce the Royal Perth Hospital Flight Path Protection Special Control Area over land as shown in Figure 3, comprised of a Core Flight Path Area and a Frame Flight Path Area;
- Introduce maximum building heights in AHD metres within the Core Flight Path Area;
- Introduce provisions to control permanent development within the Core Flight Path Area;
- Introduce provisions to manage permanent and temporary structures (such as cranes) within the Core Flight Path Area and Frame Flight Path Areas so they are not a flight risk to flight path users; and
- Create a referral process to the owner of Royal Perth Hospital Helicopter Landing Site so they can provide advice on proposed development within the Core Flight Path Area and Frame Flight Path Area.

In addition, a scheme amendment to the City's LPS 26 will be required to amend the scheme text to indicate that the proposed Special Control Area provisions will prevail over the City's LPS 26 scheme provisions.

5.2 Proposed Scheme Amendment Provisions

This amendment seeks to insert provisions into the City's CPS 2 to protect emergency air ambulance flight paths to ensure the continued successful operation of RPH and particularly the SMTU.

To achieve this, it is proposed to amend the City's CPS 2 as follows:

Scheme Amendment Form 2A

1. Inserting a new Special Control Area under clause 39(1) as follows:

   (gg) Royal Perth Hospital Flight Path Protection Special Control Area

Amendments to Schedule 8

2. Inserting the following as Special Control Area 33 in Schedule 8:

33. Royal Perth Hospital Helicopter Flight Path Protection Special Control Area

33.1 Special Control Area

The following provisions apply to the land shown in Figures 33, 33.1 to 33.7 as the Royal Perth Hospital Helicopter Flight Path Protection Special Control Area which comprises Core and Frame Flight Path Areas.

Note: The provisions of this Special Control Area do not apply to the parts of the Special Control Area which are legislated under the Metropolitan Redevelopment Act 2011 or to telecommunication facilities legislated by the Telecommunications (Low Impact Facilities) Determination Act 1997.

33.2 Objectives

The objectives of the Royal Perth Hospital Helicopter Flight Path Protection Special Control Area are –

a. To ensure the continued safe operation of Royal Perth Hospital's Strategic Helicopter Landing Site in support of the hospital's function as the State's Major Trauma Unit.

b. To ensure that permanent development does not encroach into the Core Flight Path Area.

c. To ensure that temporary works and equipment within the Special Control Area do not present a hazard to helicopters using the Core Flight Path Area.

33.3 General Provisions

33.3.1 Where a provision of another Special Control Area is inconsistent with a provision of this Special Control Area, the provisions of the latter are to prevail.

33.3.2 Notwithstanding clause 39(3) of the Scheme, where the heights specified in sub-clause 33.5.1 of this Special Control Area are inconsistent with the heights specified on the Maximum Building Heights Plan, whichever is the lower height shall apply.

33.4 Requirement for Development Approval for Works

In accordance with sub clause 61(6)(a) of the Deemed Provisions, an application for development approval for works that are typically excluded under clause 61(1) of the Deemed Provisions and schedule 7 of the Scheme shall be required for works that are situated above or within 30 metres of the maximum AHD heights specified in Figures 33.2 to 33.7 for the Core and Frame Flight Path Areas.

33.5 Development Requirements

33.5.1 Within the Core Flight Path Area, permanent development, including the parts of a building which are ordinarily excluded from building height calculations, shall not exceed the maximum AHD heights specified in Figures 33.2 to 33.7, as well as intermediate maximum AHD heights determined by a 4.5% gradient as shown in Figure 33.8.

33.5.2 Within the Core and Frame Flight Path Areas, temporary works and equipment shall not present a hazard to helicopters using the Core Flight Path Area.

33.6 Consultation with Other Authorities

Where development and any associated works and equipment are situated above or within 30 metres of the maximum AHD heights specified in Figures 33.2 to 33.7 and/or the intermediate maximum AHD heights specified in Figure 33.8 for the Core and Frame Flight Path Areas, the local government shall provide a copy of the application for development approval to the owner of the Royal Perth Hospital Helicopter Landing Site for objections and recommendations in accordance with clause 66 of the Deemed Provisions.

Note: The Department of Health's East Metropolitan Health Service is the owner of the Royal Perth Hospital Helicopter Landing Site.

33.7 Consideration of Application by Local Government

33.7.1 Development approval shall not be granted for permanent development in the Core Flight Path Area which exceeds the maximum AHD heights specified in Figures 33.2 to 33.7 or the intermediate maximum AHD heights specified in Figure 33.8.

33.7.2 In considering an application for development approval (other than an application for which approval cannot be granted under subclause 33.7.1), the local government is to have due regard to the following matters:

a. the objectives of this Special Control Area; and

b. the views of the owner of the Royal Perth Hospital Helicopter Landing Site in relation to how the application addresses the National Airports Safeguarding Framework - Guideline H, or any other relevant technical guidelines.

33.7.3 Where development and associated works are situated above or within 30 metres of the maximum AHD heights specified in Figures 33.2 to 33.7, or the intermediate maximum AHD heights in Figure 33.8, for the Core and Frame Flight Path Areas, the local government shall include as a condition of development approval, the submission of a Construction and Demolition Management Plan in a form and manner to the satisfaction of the local government.

33.7.4 The local government shall provide a copy of the Construction and Demolition Management Plan, including any subsequent amendments to the plan, to the owner of the Royal Perth Hospital Helicopter Landing Site for recommendations for the local government to consider in determining the acceptability of the plan.

33.7.5 The owner of the Royal Perth Hospital Helicopter Landing Site shall, within 21 days of receiving the Construction and Demolition Management Plan, or within such longer period as the local government allows, provide to the local government a memorandum in writing containing any recommendations with respect to the plan and any subsequent amendments to the plan.

33.7.6 The Construction and Demolition Plan shall provide details of the temporary works and equipment, including cranes, to be used on site for construction and demolition purposes including but not limited to:

a. The duration of the construction period (start date and end date) and the time period in which any crane or other equipment will remain on site;

b. Maximum operating height, maximum operating radius and operating time/s of any crane or other equipment; and

c. The measures to be taken to minimise any potential impact on and/or encroachment into the Core Flight Path Area.

33.8 Definitions

The following definitions apply within the Special Control Area:

Core Flight Path Area - is the protected operational flight paths used by helicopters arriving and departing the Royal Perth Hospital Helicopter Landing Site as defined by the relevant civil aviation guidelines and/or standards as shown in Figures 33.2 to 33.7.

Frame Flight Path Area - is the area adjoining the Core Flight Path Area as shown in Figures 33.2 to 33.7 within which temporary works and equipment need to be considered in relation to their impact on the Core Flight Path Area.

Royal Perth Hospital Helicopter Landing Site – the rooftop landing surface used for the arrival or departure of helicopters associated with the operations of the Royal Perth Hospital State Major Trauma Unit as shown in Figure 33.1.

Permanent development – development which is not temporary works or equipment.

Temporary works and equipment – works and equipment such as cranes, machinery and structures used temporarily to undertake development and/or maintenance.



Figure 33.1 Detail Location Plan

Royal Perth Hospital Flight Path

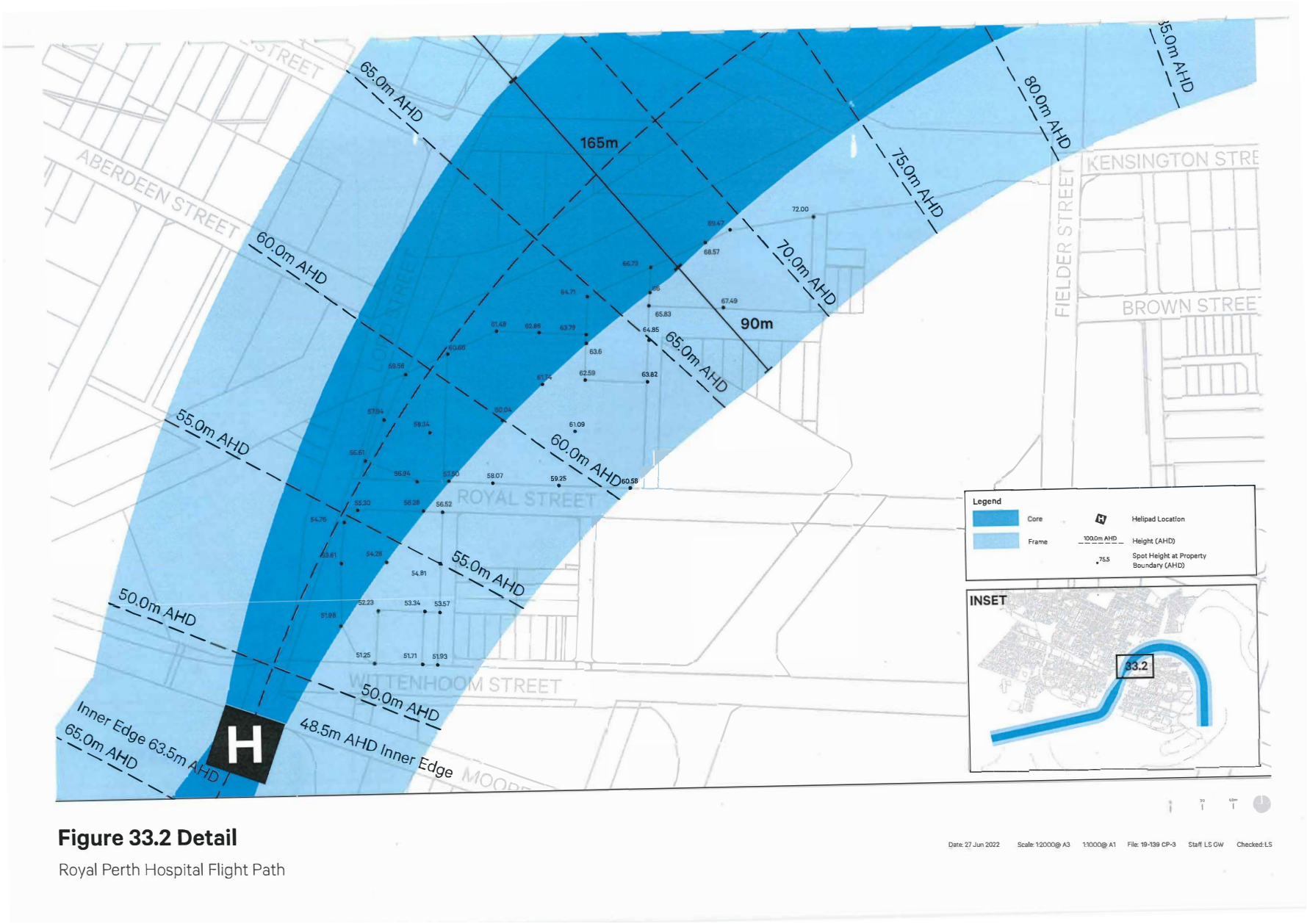


Figure 33.2 Detail

Royal Perth Hospital Flight Path

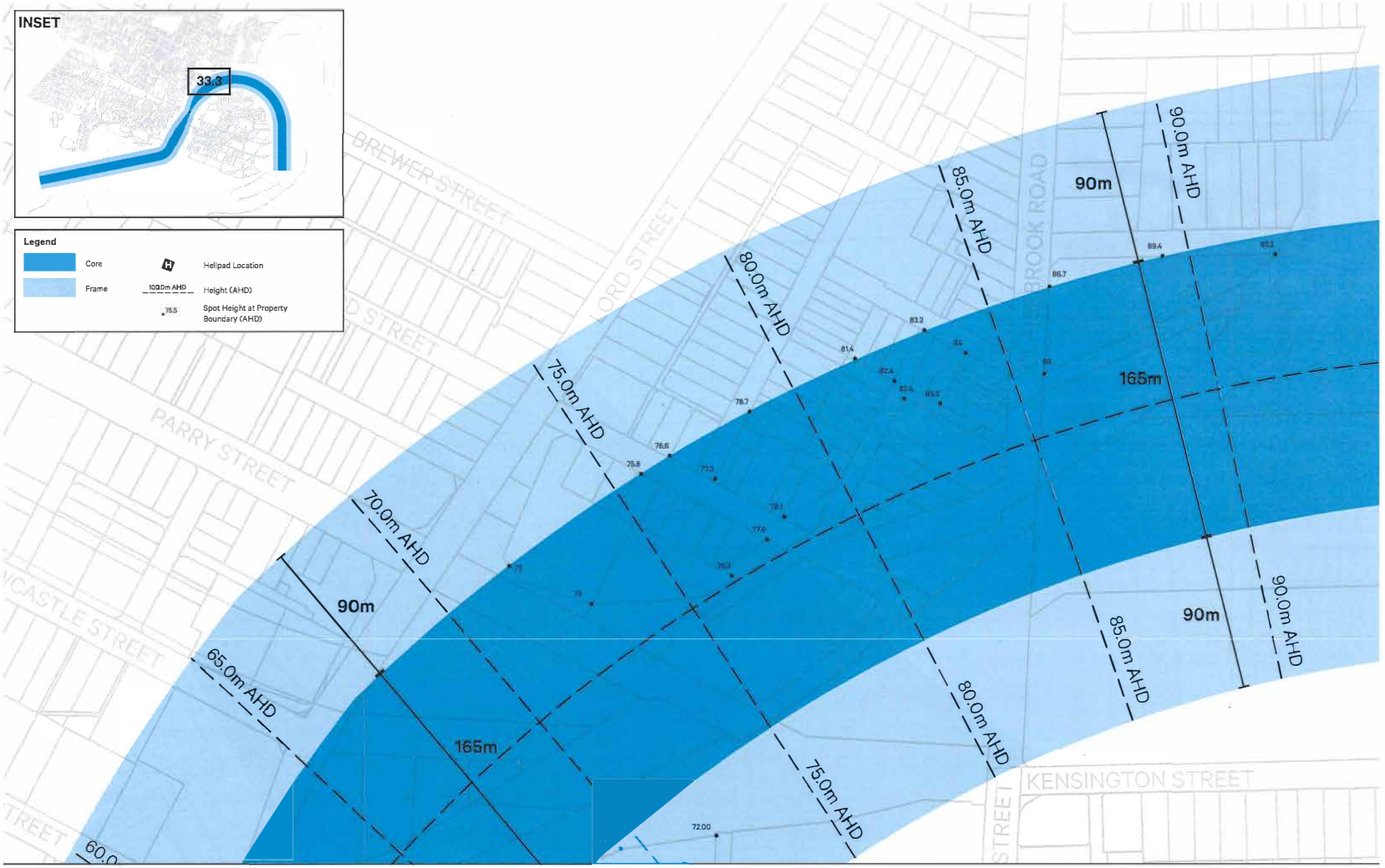


Figure 33.3 Detail

Royal Perth Hospital Flight Path

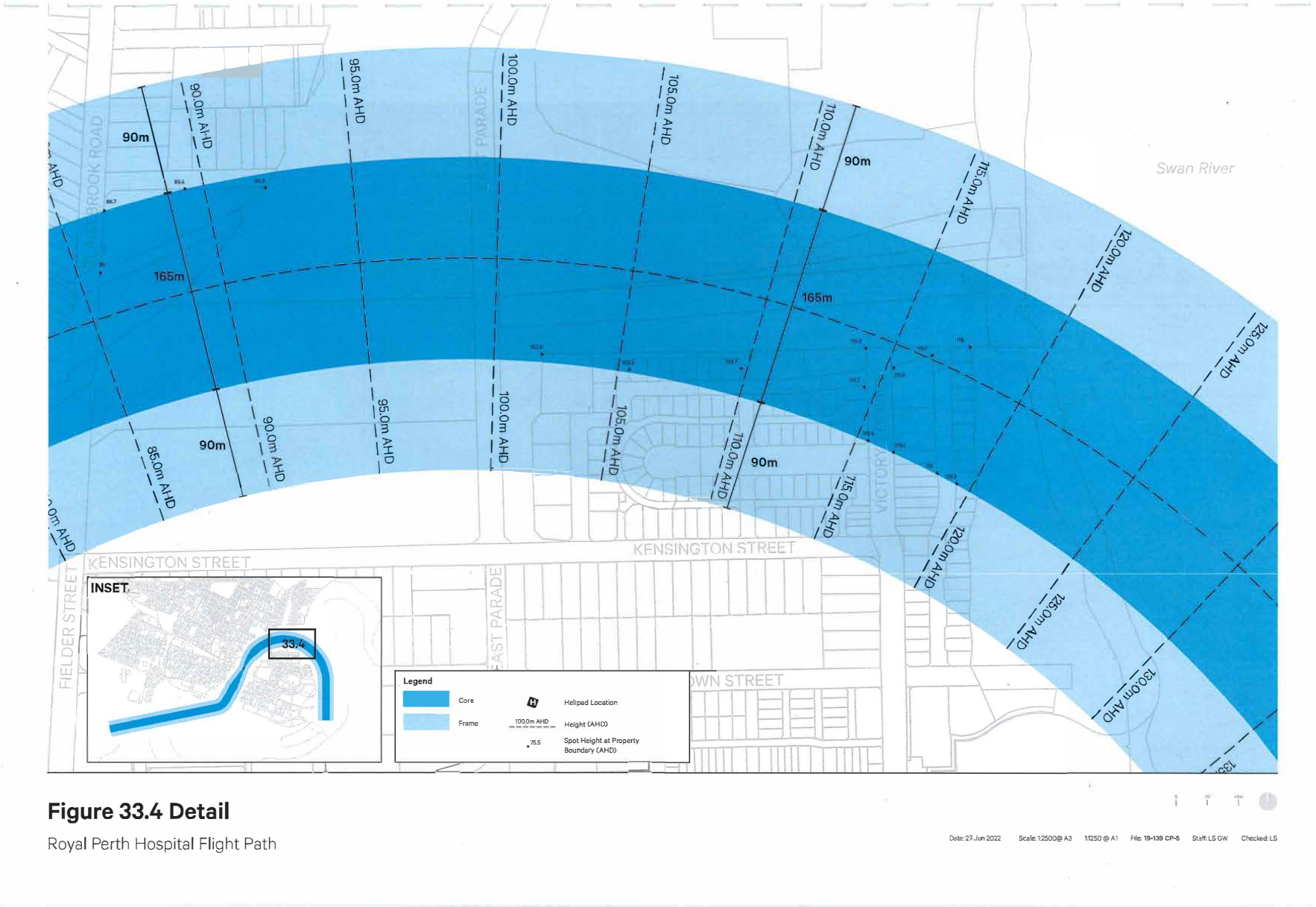


Figure 33.4 Detail

Royal Perth Hospital Flight Path

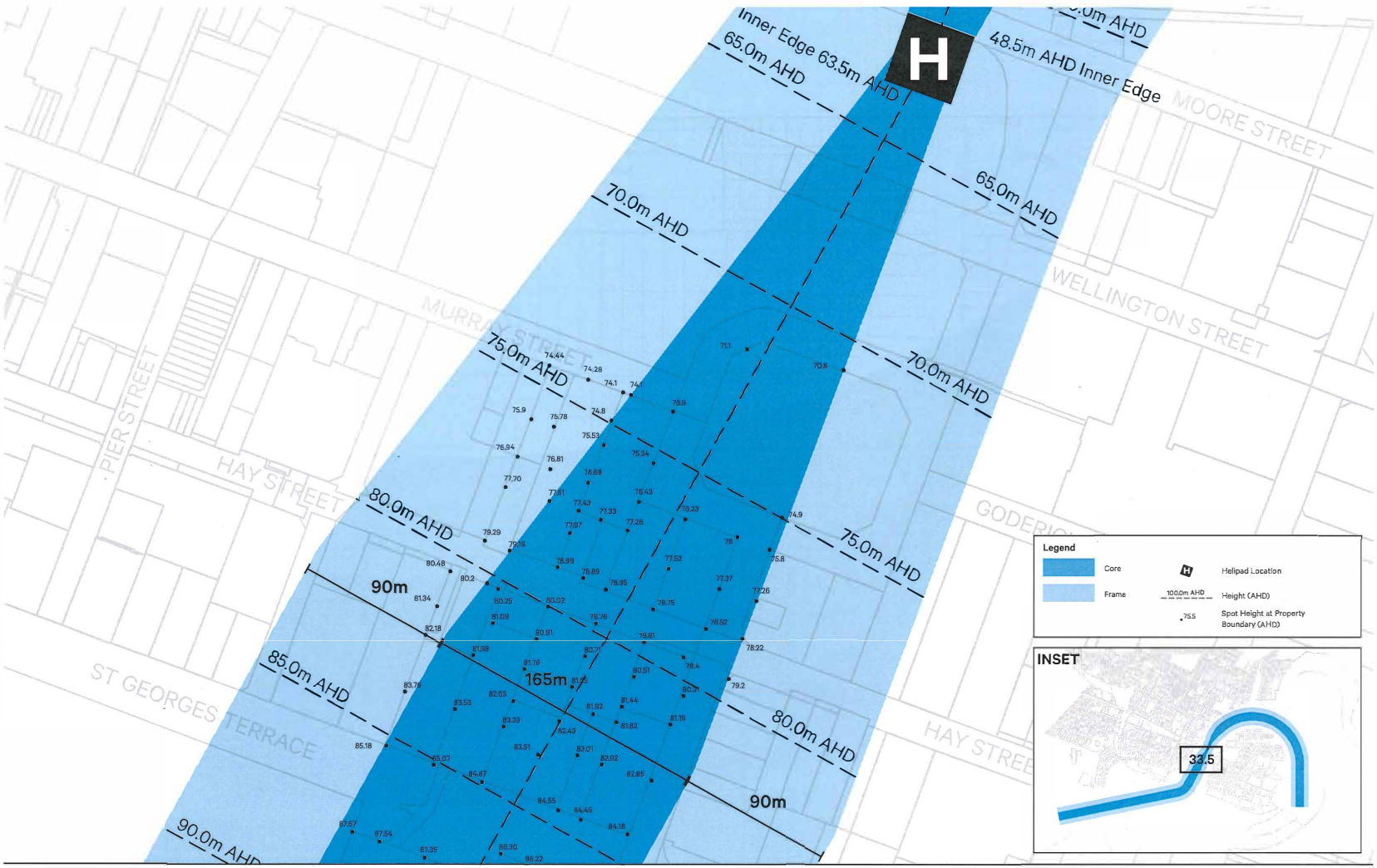


Figure 33.5 Detail

Royal Perth Hospital Flight Path

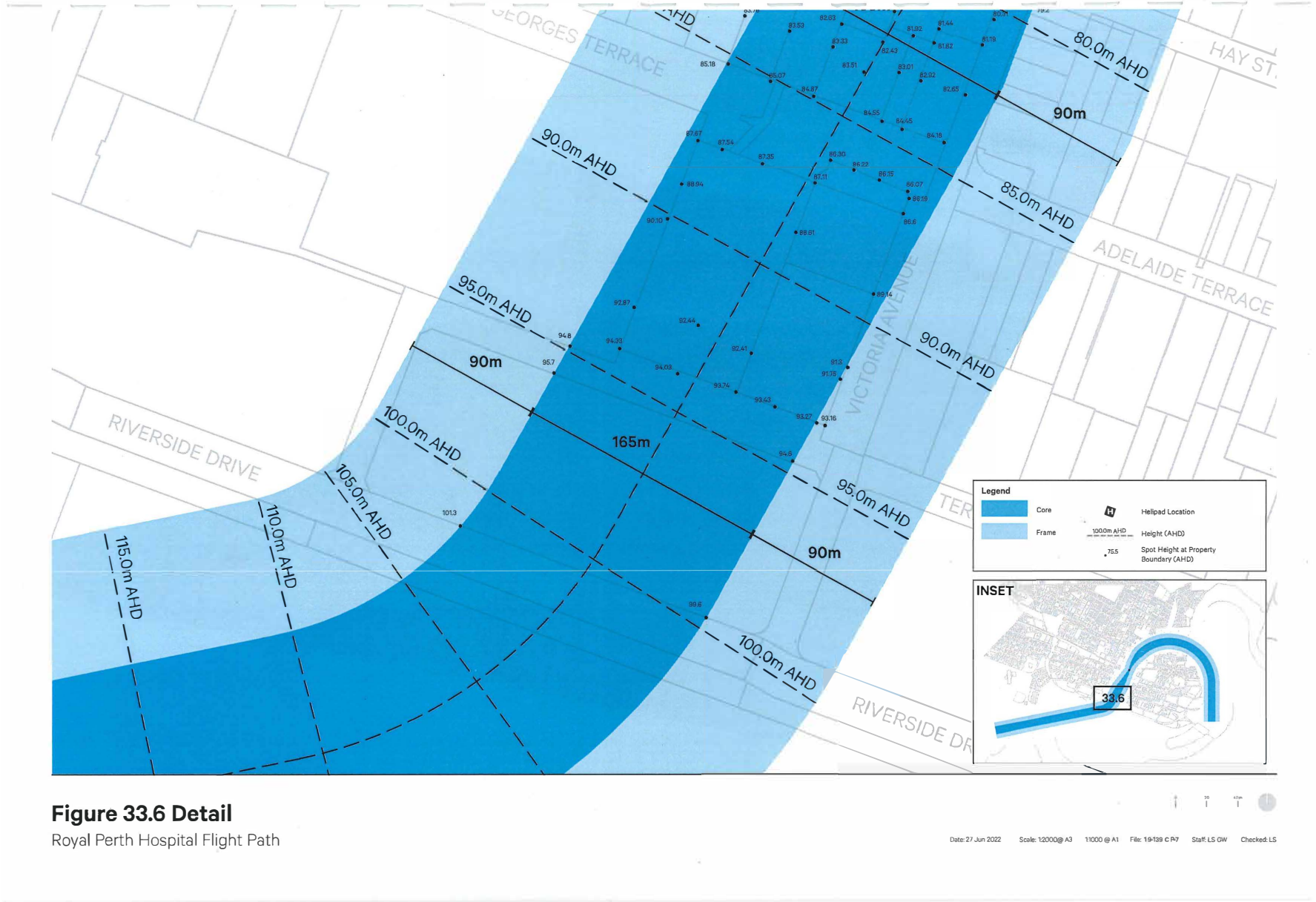


Figure 33.6 Detail
Royal Perth Hospital Flight Path

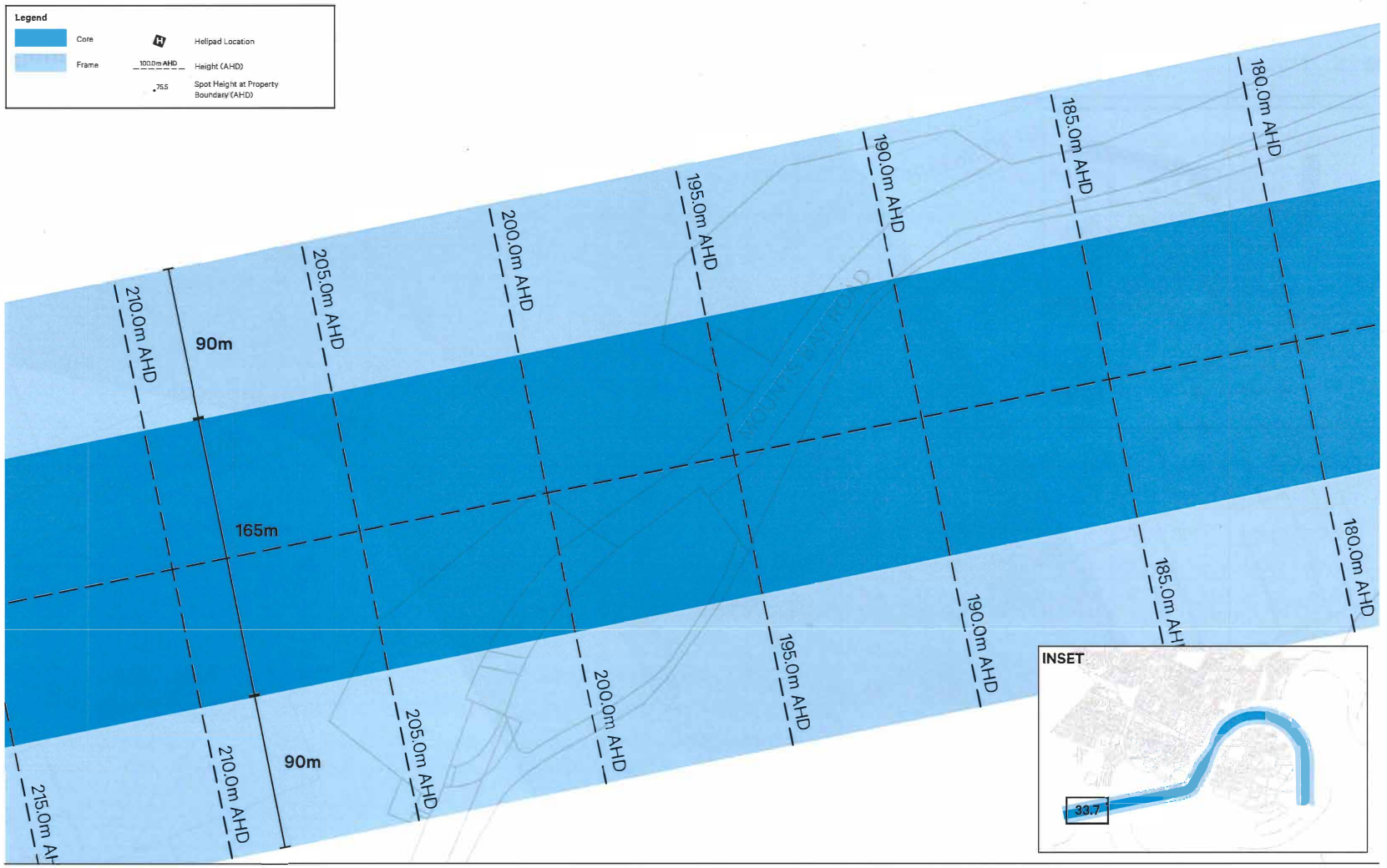
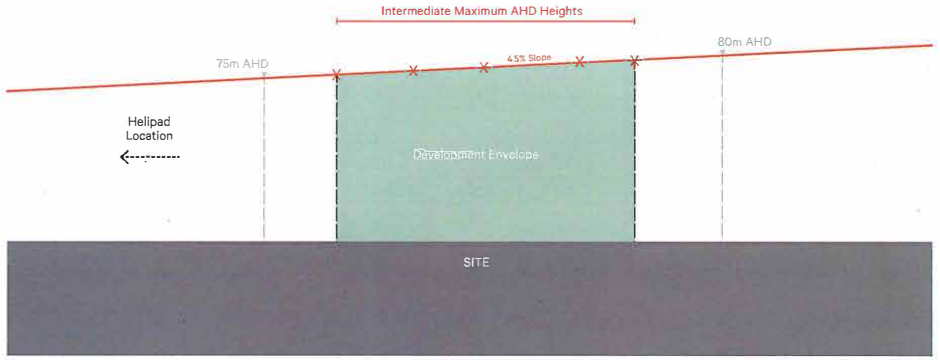


Figure 33.7 Detail

Royal Perth Hospital Flight Path

element.



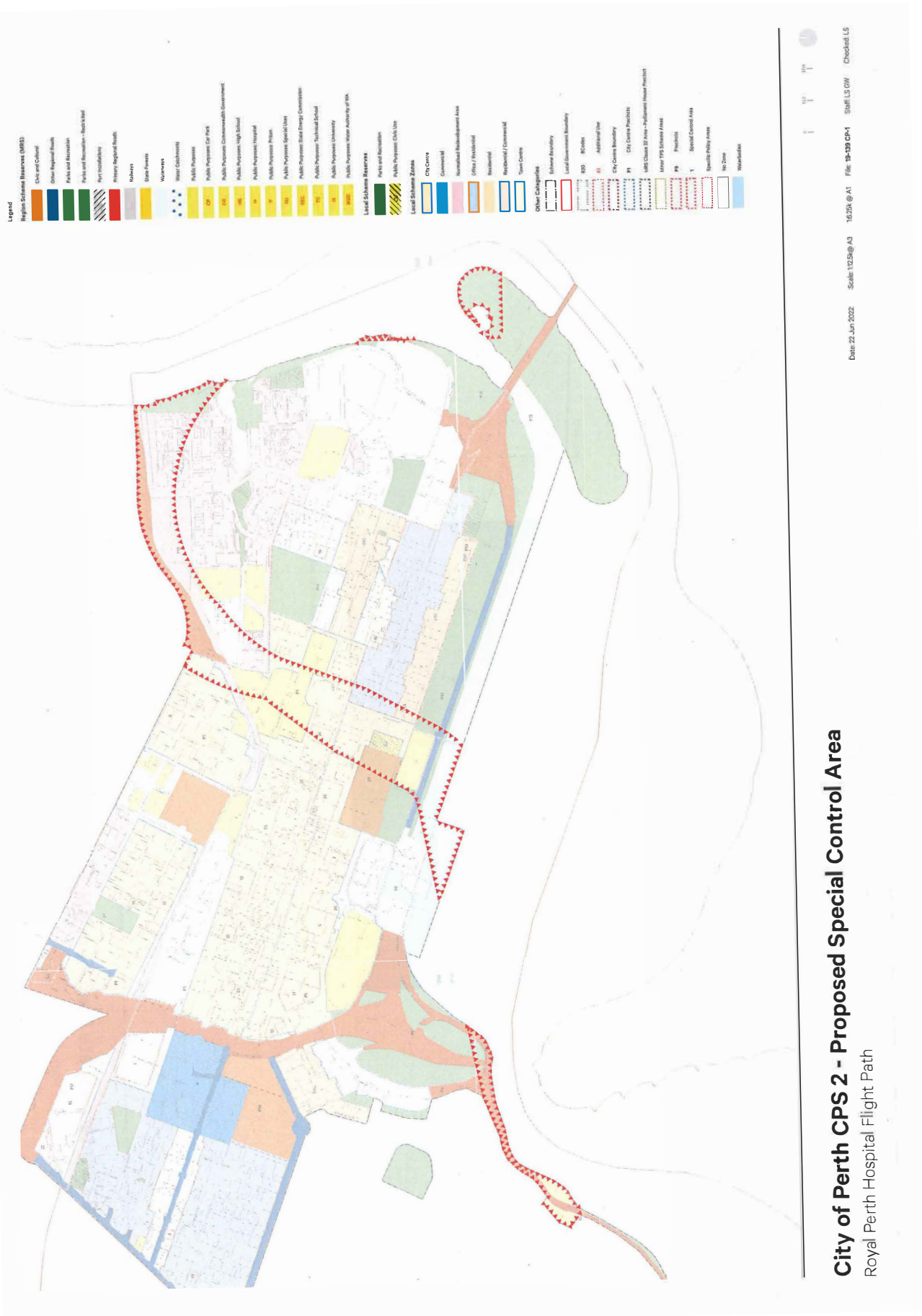
Typical section showing application of intermediate maximum AHD heights.

Note: Proponents will need to consider location, orientation and context of the development site in relation to the Helipad and associated flight paths in calculating intermediate maximum AHD heights.

Figure 33.8 Intermediate Maximum AHD Heights

Royal Perth Hospital Flight Path

Date: 22 Jun 2022 Scale: NTS @ A3 NTS @ A1 File: 19-139 CP-7 A Staff: LS.GW Checked: LS


City of Perth CPS 2 - Proposed Special Control Area
Royal Perth Hospital Flight Path
Legend
Date: 22 Jun 2022
Scale: 1:12.5k@ A3
16.25k @ A1
File: 19-139 CP-1
Staff: LS GW
Checked: LS

5.3 Proposed Scheme Amendment Classification

The *Planning and Development (Local Planning Schemes) Regulations 2015* include three categories for amending Local Planning Schemes, each with their own processes and timeframes to be followed. In this instance, the proposed amendment is considered to align most closely with the definition of a 'complex amendment', which is set out as follows:

> ***complex amendment*** *means any of the following amendments to a local planning scheme —*
>
> *a. an amendment that is not consistent with a local planning strategy for the scheme that has been endorsed by the Commission;*
>
> *b. an amendment that is not addressed by any local planning strategy;*
>
> *c. an amendment relating to development that is of a scale, or will have an impact, that is significant relative to development in the locality;*
>
> *d. an amendment made to comply with an order made by the Minister under section 76 or 77A of the Act;*
>
> *e. an amendment to identify or amend a development contribution area or to prepare or amend a development contribution plan;*

Whilst the City's draft Local Planning Strategy identifies the requirement to protect emergency helicopter flight paths associated with RPH, the WAPC have not endorsed it. The proposed scheme amendment will have an impact on development within the locality and on this basis, the scheme amendment is considered to be 'complex'.

5.4 Planning Justification

5.4.1 Background to Flight Path Evaluation Methodology

To support the development application associated with the new upgraded HLS at RPH, EMHS previously engaged a project team with relevant professional to design and document the optimal helicopter approach and departure flight paths to the upgraded HLS. Two separate flight paths were developed having regard to the relevant guidelines and documentation controlling helicopter operations.

At its meeting of 3 September 2018, the Central Perth Central Planning Committee considered and resolved to:

1. provide support for the amended flight paths as detailed in Attachment 2;
2. provide support for the lodgement of a Development Application relating to the proposed helipad and helicopter flight paths; and
3. provide support for the preparation of a scheme amendment to protect the proposed flight paths from future development.

Refer to Appendix 6 – Central Perth Planning Committee Meeting (3 September 2018)

The flight paths outlined in Attachment 1 of Appendix 6 informed the location of the upgraded HLS and facilitated discussions between key stakeholders in the vicinity of RPH. Development WA (formerly Metropolitan Redevelopment Authority) and the Roman Catholic Archbishop of Perth also provided in principle support for the project and the proposed flight paths.

Refer to Appendix 7 – Letters of Support (previous indicative flight paths)

In respect to Central Perth Planning Committee's resolution outlined above, it is acknowledged that the proposed flight paths forming part of this amendment differ from the previous flight paths given in principle support. Since this time, ongoing detailed analysis and consideration has been given to the proposed flight paths to meet all relevant guidelines and documents controlling aviation operations. Notwithstanding this, the updated flight paths incorporated within this amendment are largely consistent with the existing flight paths that were previously supported. Further detail in this respect can be found within Appendix 4.

Refer to Appendix 4 – HLS Flight path Requirements (Rehbein Airport Consulting)

5.4.2 Requirement to Protect Emergency Flight Paths

The proposed amendment is being undertaken to align with a number of relevant elements that influence the ongoing successful operation of the ERHS at RPH. This includes the interrelationship between the existing planning framework and development opportunities, the National Airports Safeguarding Framework, relevant aviation standards, State government investment and futureproofing the successful operation of the SMTU at RPH to support the States medical emergency needs.

There are currently no set flight paths in place for the existing helicopter operations at RPH. Current flight paths in and out of RPH are determined by the operator of the ERHS, with specific decisions being made by the pilot in charge at the time of operation. Pilots are required to operate the ERHS in accordance with the *Civil Aviation Act 1988, the Civil Aviation Safety Regulations 1998* and associated guidance material. The existing regulatory framework allows pilots to fly in and out of RPH in the most appropriate direction, taking existing obstacles and weather conditions into consideration. As a greater number of buildings with significant scale are developed in the vicinity of RPH, pilots are having to continuously adjust the approach and take off directions, with the overall number of options being reduced as a result.

The proposed amendment seeks to protect flight paths associated with the ERHS at RPH in accordance with the National Airports Safeguarding Framework. Importantly, this amendment seeks to protect ERHS flight paths in an emergency, one-engine inoperative (OEI) scenario that may occur in the event of an engine failure. Protecting emergency flight paths at RPH in accordance with the National Airports Safeguarding Framework and applicable regulations will ensure that a helicopter can safely continue its flight to an appropriate landing area to protect its crew and the general public from a catastrophic event.

For the majority of the time and in normal operating conditions, the ERHS and pilot in command will continue to determine the most appropriate flight path by considering existing obstacles and weather conditions. Notwithstanding, ongoing development of significant scale in proximity to RPH will continue to limit flight path directions and options available to pilots. Over time, this will see the proposed flight paths become the preferred path of travel as limits ongoing operational risk to the ERHS.

5.4.2.1 National Airports Safeguarding Framework

At the national level, the Department of Infrastructure, Transport, Regional Development and Communities have developed the National Airports Safeguarding Framework (the Framework), which aims to provide guidance on planning and development that may impact upon aviation operations. This includes development around airports and strategically important HLS.

The Framework was developed by an advisory group made up of representatives from Commonwealth Infrastructure and Defence departments, aviation agencies, State and Territory planning and transport departments as well as the Australian Local Government Association.

The Framework comprises a series of Guidelines that each refer to a specific area of aviation. This includes, but is not limited to, matters such as wildlife risk, lighting distraction, communication and navigation. Of importance to this proposed amendment is Guideline H: Protecting Strategically Important Helicopter Landing Sites.

The National Airports Safeguarding Framework Factsheet summarises the importance of HLS and the purpose of Guideline H as follows:

> *'The protection of strategically important helicopter landing sites (HLS) (such as those associated with hospitals) from the adverse impacts of development has become a critical issue in recent years. There have been times where hospital emergency helipads have been closed due to safety concerns arising from the nearby operation of construction cranes. Guideline H seeks to provide a consistent national approach for land use planning in the vicinity of these facilities. State and Territory governments are responsible for identifying HLS that are considered to be of strategic importance, or those that are to be protected in the interest of public safety'.*

Guideline H addresses a number of matters to ensure that:

1. HLS are not compromised by development encroaching into flight paths;
2. new development (and activities) do not present a hazard to helicopters arriving or departing from HLS;
3. lighting does not distract or cause interference with night time operations;
4. noise impacts from helicopter operations are mitigated; and
5. building induced windshear or air turbulence is considered, where this could affect the normal flight of helicopters operating from HLS.

In assessing a proposed development within the vicinity of RPH and the associated flightpaths, the decision maker should have regard to the abovementioned matters and other guidance provided within Guideline H. Consistent with the purpose of Guideline H, the ongoing consideration of these matters by a decision maker as part of a development assessment process will ensure:

a. *the ongoing operation of those SHLS;*

b. *the use of those SHLS are not compromised by any proposed development encroaching into flight paths;*

c. *new development (and associated activities) do not present a hazard to helicopters arriving or departing from those SHLS;*

Of the matters addressed in Guideline H, most of these are matters to be considered by the decision maker, although the following matters are of relevance to the operator of the ERHS in respect to determining the suitability of a HLS location:

- Obstacle Limitation Surfaces;
- Lighting;
- Noise; and
- Windshear and Turbulence.

5.4.3 Helicopter Design Characteristics and Flight Path Design Requirements

The following summarises the key helicopter design characteristics and requirements that have informed the flight paths propose to be protected. These represent a culmination of matters that are addressed within the following documents:

- The Civil Aviation Safety Authority (CASA) Civil Aviation Advisory Publication CAAP 92-2(2) Guidelines for the establishment of on-shore helicopter landing sites (February 2014);
- International Civil Aviation Organisation (ICAO) Annex 14 Aerodromes – Volume II: Heliports (4th edition July 2013); and
- Civil Aviation Safety Authority NPRM 1304OS Regulation of aeroplane and helicopter 'ambulance function' flights as Air Transport Operations.

5.4.3.1 Helicopter Design Characteristics

DFES and the operator of the ERHS have confirmed the following key design characteristics are consistent with the current and future emergency helicopter fleet utilising the upgraded HLS at RPH, which have informed the design requirements for the upgraded helipad and associated flight paths.

D-Value

The D-Value is the largest overall dimension of the helicopter when its rotors are turning. The helicopter fleet utilising the RPH HLS will have a maximum D-value of 21m as shown in Figure 11 below.



Figure 11. Helicopter D-value

Rotor Diameter

The helicopter fleet utilising the RPH HLS will have a maximum rotor diameter of 16.5 m as shown in Figure 12 below.

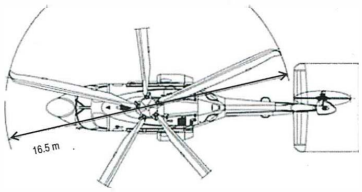


Figure 12. Helicopter rotor diameter

Core Flight Path Width

The proposed flight paths will have an overall width of 165m, being ten times the helicopter's rotor diameter as required by CAAP 92-2(2) for night time operations. The minimum width of a flight path ensures that the area of flight is protected from obstacles. The total width takes crosswinds into consideration.

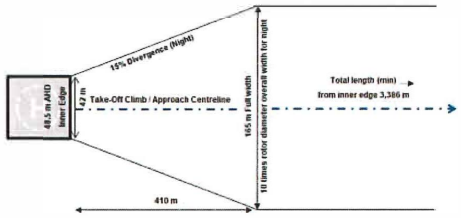


Figure 13. Helicopter flight path width

Performance Class

The helicopter fleet utilising the RPH HLS will be of a Performance Class 1, which effectively means that in the event of an engine failure, sufficient performance is available to enable the helicopter to land safely or continue to fly toward an appropriate landing area, depending on where the failure occurs.

Obstacle Limitation Surface (OLS) Slope

To ensure that the Performance Class 1 helicopter fleet can operate safely on one engine, a maximum take-off climb surface of 4.5% is required as illustrated below. This ensures that there is a minimum level of performance available to clear obstacles and remain within the OLS that is proposed to be protected through this amendment.

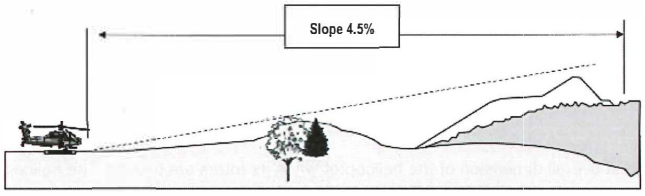


Figure 14. Helicopter take-off climb surface | Source: ICAO Annex 14-II Figure 4-6

Approach and Take-off Climb Surfaces

ICAO Annex 14 and CASA CAAP 92-2(2) requires that a HLS must comprise at least two (2) approach and take-off climb surfaces. These surfaces are required to be separated by a minimum angle of 150°.

ICAO Annex 14 allows for the flight paths to be curved to avoid obstacles or take advantage of a more suitable flight path course, however, only one (1) curve is allowed and it must have a constant rate radius of turn.

The total length of the approach and take-off climb surfaces must be 3,386m. The proposed flight paths for the HLS at RPH are each constructed to 3,400m in total length, bringing each flight path to a total of 201.5m AHD or 153m above the elevation of the HLS.

element.

5.4.3.2 Flight Path Design Characteristics

The project team have continued to work closely with key stakeholders in determining the most appropriate flight paths to be incorporated within this proposed amendment. Importantly, the flight paths have been designed to meet all relevant aviation standards and requirements whilst minimising the impact to landholdings as far as practically possible by limiting flight time over land.

The following matters were considered in determining the most appropriate flight paths:

- Limit impact to landholdings as far as practical by:
  - taking advantage of major road and rail reservations; and
  - utilising the Swan River for a large proportion of the flight path length;
- Consider the existing and future planning framework to:
  - limit the impact on existing development potential as far as practical; and
  - recognise and limit the impact to areas of land that are of strategic importance to the State, the City of Perth, the City of Vincent and DevelopmentWA for future infill development;
- Ensure all relevant aviation safety standards and requirements are met.

For further information related to the flight path design requirements and helicopter design requirements, please refer to Appendix 4.

Appendix 4 - HLS Flight path Requirements (Rehbein Airport Consulting)

North East Emergency Flight Path

A north-eastern flight path is shown in Figure 15 below. This flight path consists of a curved take-off and climb surface and begins to straighten out once over the Swan River before finishing at the northern most portion of Herrison Island, 3.386km away from the RPH HLS.

The north eastern flight path is primarily located within the City of Perth's local government area. The northern most portion also crosses into the City of Vincent's local government area as shown in Figure 15.

Detailed investigation has been undertaken to determine the most suitable flight path course. The analysis considered the various matters outlined above under the flight path design characteristics. Consideration of various options involved ongoing consultation with Rehbein Airport Consulting, EMHS, DFES, the operator of the ERHS, the City of Perth, the City of Vincent and Development WA.

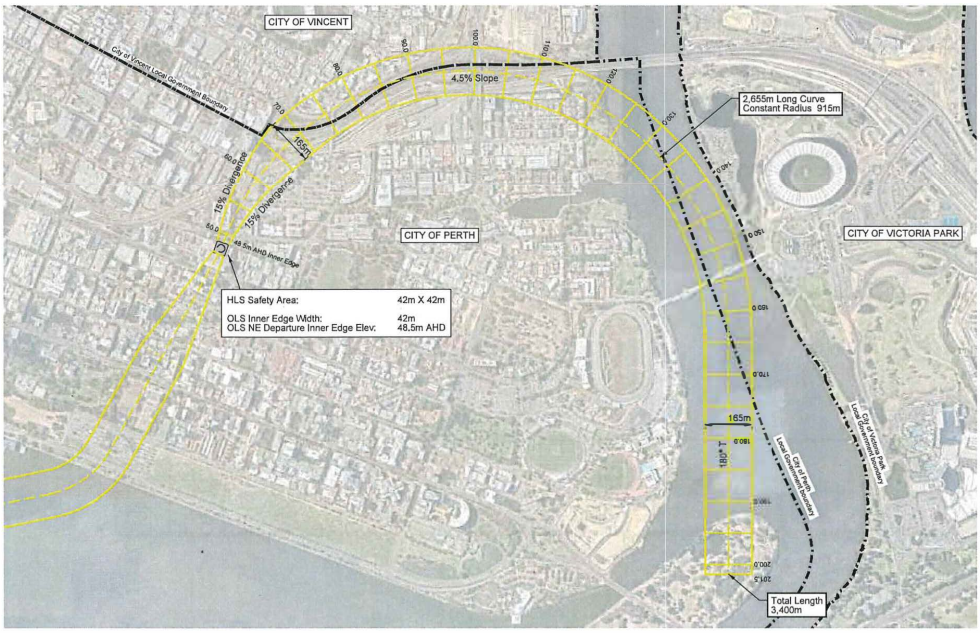


Figure 15. North east flight path

South West Emergency Flight Path

The south western flight path commences with a straight section for a distance of 790m in south westerly direction. The flight path then transitions to a curve at the edge of the Swan River where it continues in a west south westerly direction before finishing over Kings Park, 3.386km away from the RPH HLS as shown in Figure 16.

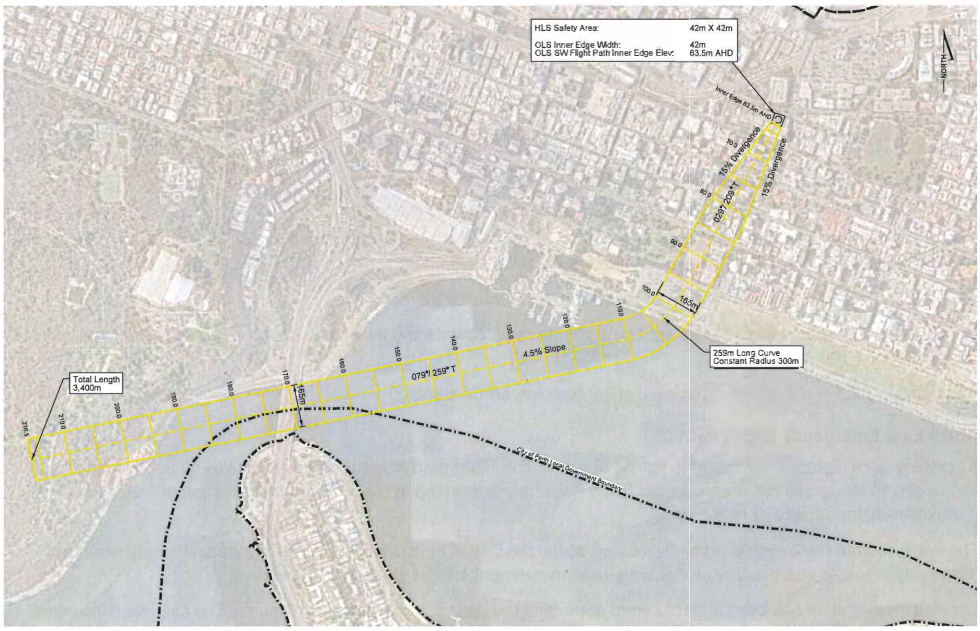


Figure 16. South west flight path

The OLS of the flight path has been designed to begin 15m above the height of the HLS. This is required to ensure helicopters clear an existing RPH building that is located immediately south of the HLS known as 'South block'.

To clear the existing building to the south, during take-off, pilots will to elevate to an appropriate distance during the back-up procedure before continuing its flight in a forward direction. This is a common procedure undertaken by pilots of Performance Class 1 helicopters and is explained below in Figure 17. The take-off procedure has been approved by DFES and the operator of the ERHS during ongoing consultation as part of this process.

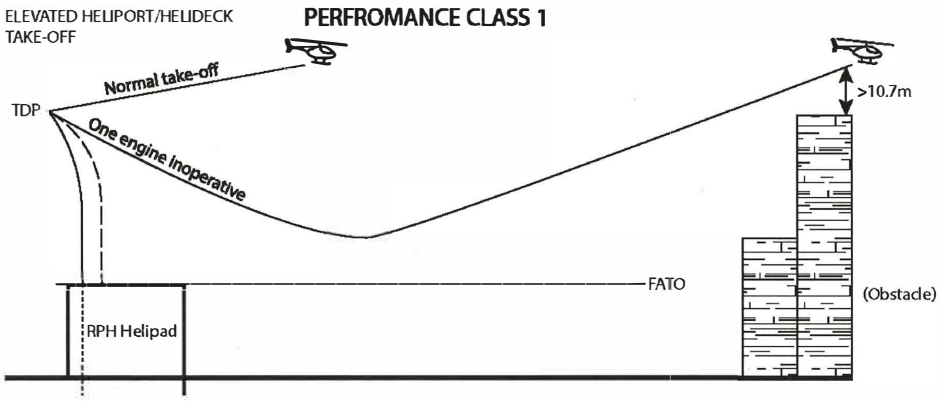


Figure 17. Take-off backup procedure

element.

As undertaken with the north eastern flight path, detailed investigation has been undertaken to determine the most suitable course for the flight path and has considered various matters outlined previously within this report and addressed in more detail within Appendix 4.

Refer to Appendix 4 – HLS Flight path Requirements (Rehbein Airport Consulting)

In addition to this and most importantly, the flight path is positioned to avoid the following existing buildings as also illustrated in Figure 18:

- The Westin Hotel at 480 Hay Street, Perth (approximately 120m AHD);
- Condor Tower at 22 St Georges Terrace, Perth (approximately 103m AHD); and
- 256 Adelaide Terrace, Perth (approximately 83m AHD).

The location and height of these buildings constrain the flight path to the extent that there is no other option that exists without there being a far greater impact to a larger number of landholdings. In addition, the South-Western flight path proposed impacts a number of Government landholdings and therefore reduces the impact to private landholdings.

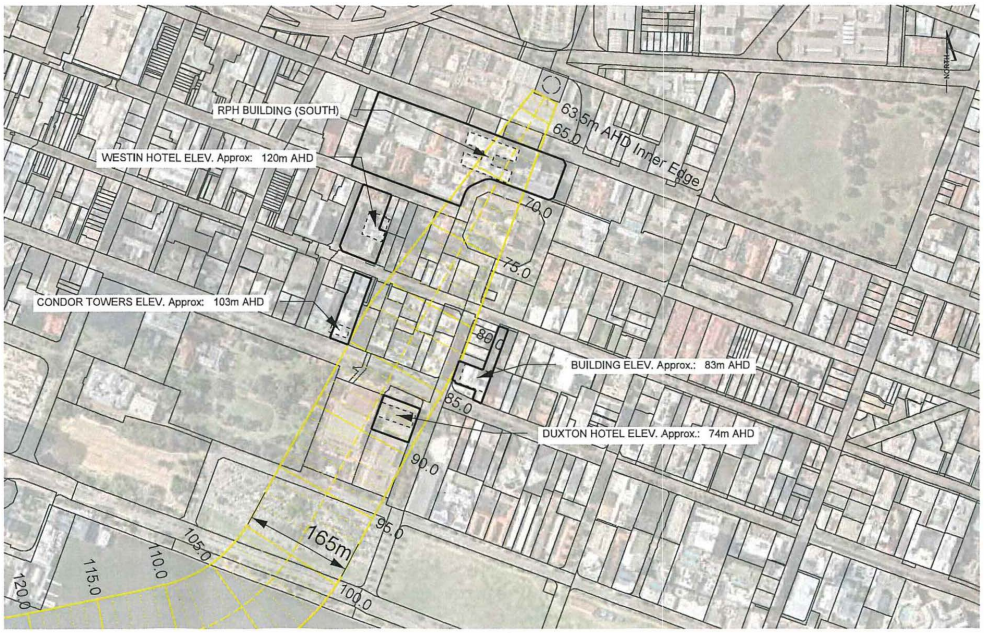


Figure 18. South west flight path and existing buildings

45

5.4.4 Consideration of Impact on Development Potential

5.4.4.1 Land Ownership

As outlined above, careful consideration has been given to limiting the overall impact on landholdings by the designated flight paths, whilst acknowledging that it is not possible for there to be no impacts. Where landholdings are impacted, these are considered to be only minor or relatively minor with substantial development still being able to occur directly beneath and/or adjoining the flightpath. By utilising existing major road and rail alignments, as well as the Swan River, the vast majority of the flight path area will occur over publicly owned land parcels. Only a small portion of the overall area will impact privately owned land parcels as shown in Figure 19 below.



Figure 19. Public/private ownership

The privately owned land parcels identified in the following figures represents approximately 6.13ha, or 5.7% of the total flight path area. 101.03ha, or 94.3% of the total flight path area occurs over publicly owned land parcels.

5.4.4.2 Impact on Building Height

In respect to the potential scale of future development within these privately owned land parcels identified above, the majority of these land parcels will be able to deliver a development of a scale that is as envisaged by the applicable planning framework in terms of prescribed building height.

The height of future development on private landholdings within the north eastern flightpath will not be impacted as shown in figures 20 and 21.

The height of future development on private landholdings within the south western flightpath will be impacted as shown in Figure 22.

Notwithstanding the indicative impact shown in Figure 22, the actual height of a building in this location would need to consider a number of factors including, but not limited to, plot ratio calculations, heritage considerations and a range of other matters to determine the full extent of a buildings potential scale or its ability to support a development or redevelopment at all. In this respect, there are a number of opportunities for landowners to utilise plot ratio available whilst ensuring the overall building does not protrude within the flight path area. For these reasons the indicated impact shown does not analyse properties identified as having heritage significance.

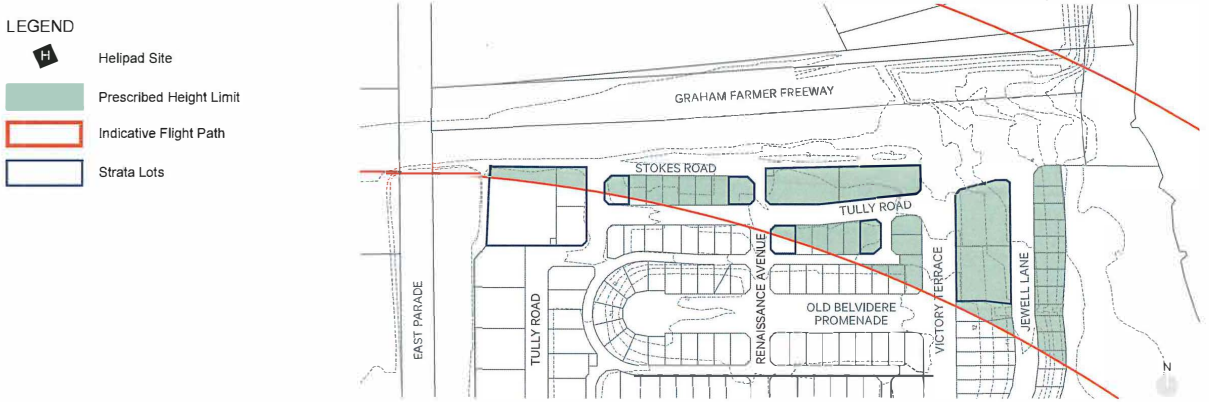
element.



Indicative plan showing sites impacted by the flight path.

Figure 20. Height Impact Study - Northern

47



Indicative plan showing sites impacted by the flight path.

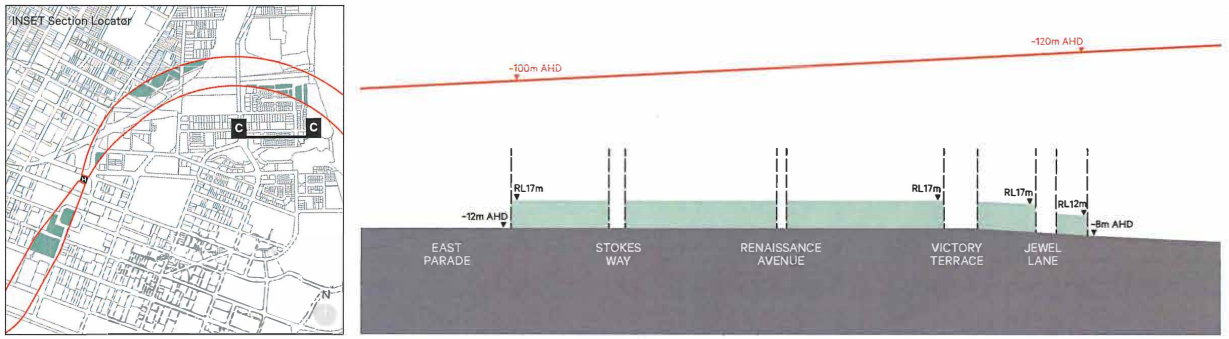
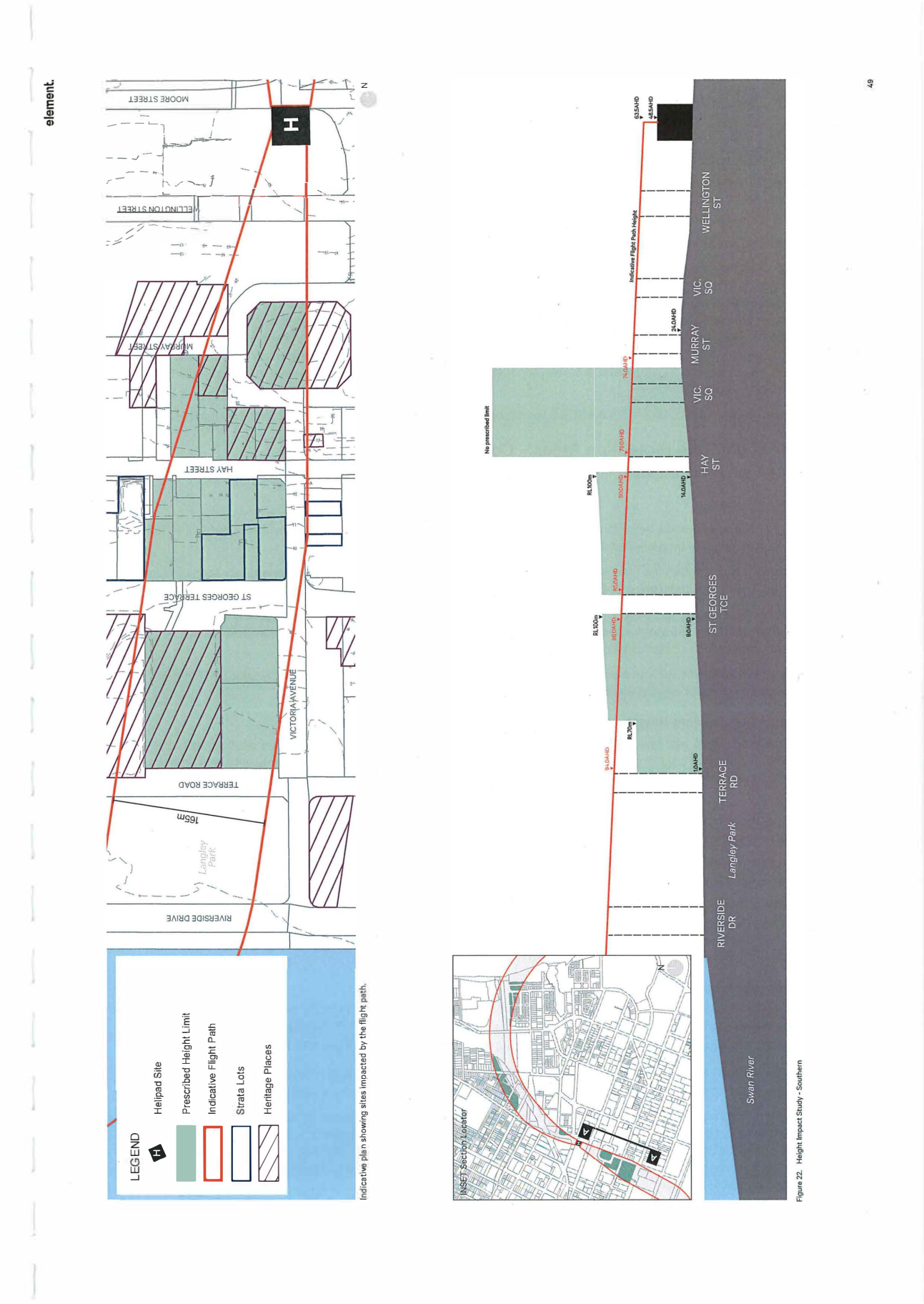


Figure 21. Height Impact Study - Northern (continued)

48


element.
MOORE STREET
WELLINGTON STREET
MURRAY STREET
HAY STREET
ST GEORGES TERRACE
VICTORIA AVENUE
TERRACE ROAD
165m
Langley Park
RIVERSIDE DRIVE
LEGEND
Helipad Site
Prescribed Height Limit
Indicative Flight Path
Strata Lots
Heritage Places
Indicative plan showing sites impacted by the flight path.
WELLINGTON ST
VIC. SQ
MURRAY ST
HAY ST
ST GEORGES TCE
TERRACE RD
Langley Park
RIVERSIDE DR
Swan River
Indicative Flight Path Height
No prescribed limit
INSET Section Locator
Figure 22. Height Impact Study - Southern
49

5.4.5 Appropriateness of Special Control Area

A Special Control Area (SCA) is the most appropriate mechanism to control development spanning various zones and reserves. A SCA will be visible on the City's Scheme Maps, making it very clear to landowners and prospective purchasers of the special circumstances that apply to specific landholdings.

The *Planning and Development (Local Planning Scheme) Regulations 2015*, states the following in respect to SCA's:

> *(This Part is included in the Scheme to identify areas which are significant for a particular reason and where special provisions in the Scheme may need to apply. These provisions would typically target a single issue or related set of issues often overlapping zone and reserve boundaries. The special control areas should be shown on the Scheme Map as additional to the zones and reserves. If a special control area is shown on the Scheme Map, special provisions related to the particular issue would apply in addition to the provisions of the zones and reserves. These provisions would set out the purpose and objectives of the special control area, any specific development requirements, the process for referring applications to relevant agencies and matters to be taken into account in determining development proposals.)*

Based on the above, it is considered that a SCA is the most appropriate way to control development within the flight path area.

5.4.6 Flight Path Protection Areas – Core and Frame

The SCA is split into a 'Core' and 'Frame' area. The purpose of the Core Area and Frame Area is explained below.

5.4.6.1 Core Area

The Core Area is 165m wide, being ten times the helicopter's rotor diameter. This reflects the minimum width of a flight path that is required to be protected from obstacles.

Development that is within the Core Area will locate directly beneath a helicopter flying in an emergency scenario (one engine only) with reduced flight capabilities.

Specific provisions apply to development located within the Core Area to limit the overall development height achievable. This will ensure that a helicopter operating in an emergency scenario (one engine only) will have an appropriate underside clearance to obstacles below.

Two separate provisions apply to a development within the Core Area – Maximum Development Height and Referral Requirements. These provisions are discussed below.

Maximum Development Height

In an emergency flight with one engine only operating, the ERHS fleet of helicopters will have a reduced ability to fly away and clear all obstacles. In considering a helicopter flying away with one engine operating only, very high ambient temperature exists (resulting in low air density) and the helicopter is fully loaded, a minimum elevation gain of 4.5% is possible.

Given the above, a development located within the Core Area cannot extend within the minimum elevation gain of a helicopter flying away from the HLS at RPH as it would form an unavoidable obstacle.

A series of Figures forming part of the SCA (Figures 33.1 -33.8) show the applicable Maximum Development Height achievable within landholdings located in the Core Area.

Pilots will be required to determine their ability to fly away with one engine only if required. In undertaking a backup procedure as discussed in this report previously, pilots will reach a specific altitude before deciding to proceed. This altitude will consider minor projections above buildings that are exempt from the requirement to obtain approval (telecommunications infrastructure) and cannot be overridden by local planning scheme provisions.

Referral Requirement

Where a proposed development and any associated works a situated above or within 30 metres of the maximum AHD heights specified in Figures 33.2 to 33.7, and/or the intermediate maximum AHD heights in Figure 33.8, the application is required to be referred to the EMHS, being the managing authority of the RPH HLS.

This will allow the EMHS to consider a potential development that locates within close proximity to the flight path and to liaise with the operator of the ERHS to identify any matters that may potentially impact on emergency flights.

The provision allows for the EMHS to provide objections and recommendations in relation to a development application and the location and operation of temporary works and equipment, such as construction cranes, directly below the Core Area of the flight path. This will ensure that temporary works and equipment do not encroach within the flight path at all or where considered appropriate, arrange for certain encroachments to occur for a period of time that the EMHS consider suitable.

5.4.6.2 Frame Area

The Frame Area immediately adjoins each side of the Core Area and is 90m wide.

The Frame Area is intended to not limit development, but to ensure the construction of a development does not impact the Core Area by way of inappropriate intrusions into it from temporary structures such as construction tower cranes.

The Frame Area acknowledges that development potential is not impacted in this location, but careful consideration must be given to the type of crane that is used to construct a development.

Referral Requirement

Where development and associated works are situated above or within 30 metres of the maximum AHD heights specified in Figures 33.2 to 33.7, or the intermediate maximum AHD heights in Figure 33.8, the local government will require a Construction and Demolition Management Plan to be submitted as a condition of development approval. A Construction and Demolition Management Plan, and any subsequent amendment to the plan, will be provided to the EMHS for recommendations on temporary works and equipment, such as cranes, to prevent or limit encroachments into the Core Area.

Where a proposed development is located within the Frame Area, does not exceed the heights shown on Figures 33.2 – 33.8 and does not have the potential for construction cranes to extend above these heights, there is no requirement for a proposed development to be referred to EMHS for recommendations.

The provisions are intended to allow lower scale development to occur without the need for a referral to EMHS, where these are considered to have no risk, being below 30m of the applicable height limits as set out in Figure 33.2 – 33.8.

Taller development within the Frame Area may result in a construction crane swinging into the Core Area. The provisions are worded to capture such development and require additional supporting detail for the development, particularly around the ongoing use of a crane, equipment, machinery or structures required during construction activity.

element.

6. Conclusion

element has prepared this report on behalf of the EMHS, in support of a request to amend the City's CPS2 as it relates to a number of landholdings identified as being within essential helicopter flight paths associated with the operation of emergency helicopter operations at RPH.

The proposed amendment is being undertaken to align with a number of relevant elements that influence the ongoing successful operation of the ERHS at RPH, which includes the interrelationship between the existing planning framework and development opportunities, the National Airports Safeguarding Framework, relevant aviation standards, State government investment at RPH and futureproofing the successful operation of the SMTU to support the States medical emergency needs.

This report has considered the existing planning framework in detail and addressed a number of relevant matters that have been used to determine the most suitable flight paths that are required to be protected. The proposed amendment has considered a series of provisions that will seek to control development outcomes directly beneath the emergency flight paths and directly adjoining them. A rationale is provided for each of the provisions and addresses limitations to development height and the requirement for applications to be referred to DFES in certain circumstances that may trigger the need for Crane Management Plan to be required.

The proposed amendment seeks to ensure that the new HLS at RPH continues to operate and support the needs of the State, transferring critically ill patients to the SMTU. Ongoing development within the City may impact the safety of operations into the future, especially where a helicopter is required to fly with one engine inoperable. At present, there is no formal controls in place to limit development potential immediately surrounding the HLS at RPH. Without protection, the HLS may be required to be decommissioned as a result of ongoing development jeopardising the safety and efficiency of operations, in turn having significant impacts on the ability to treat patients that are in need of critical care.

element.

Appendix 1

Letter from WA State Director of Trauma 4 November 2021 (Dr Sudhakar Rao)

Government of Western Australia
East Metropolitan Health Service



Dear Mrs Circosta,

Response: request for further information – Royal Perth Hospital Emergency Flight Path Scheme Amendment

Thank you for the opportunity to provide further information in relation to the RPH Emergency Flight Path Scheme Amendment (email correspondence dated 29 October 2021).

You will be aware, RPH State Major Trauma Centre (SMTC) has been the designated provider of major trauma services for adults in WA since 2008 and continues to provide services to 95% of the State's population, including receiving major trauma patients from regional WA.

The protection of emergency flight paths for RPH is integral to ensuring West Australians (WA) continue to have access to world-class emergency trauma and critical care services, and plays an integral role in the State's Clinical Services Framework (2014-2024) – a framework that lays the foundation for health system planning. Aligned to this framework, the SMTC is a key provider in WA Emergency Response planning which is evidenced in the State Trauma Sub-plan (2014).

As per your request please refer to the below responses to your questions;

3. Scheme Amendment request should include background information as to why the Helicopter Landing Site (HLS) is located where it is and why it cannot be located elsewhere, that is, why other options were ruled out, for example Langley Park.

The need for helicopter emergency medical services to pick up a patient from their location, followed by immediate access to specialist treatment teams on arrival at a hospital is imperative. The location of the new helipad was carefully thought through in order to ensure alignment with the WA State Trauma System objective of optimum speed from injury to specialist trauma treatment at WA's only Level 1 Major Trauma Centre. This eliminates an additional ambulance transfer and increased patient handling risks, as well as additional cost to the State/patient for Langley Park transfers.

In 2018, the RPH Helipad Strategic Overview document was developed and investigated several options for the location of the new helipad. Construction of a new helipad on the north eastern rooftop of RPH R Block (North Block) was selected as the preferred location for various reasons including;

- clinical needs;
- physical building structural limitations, and;
- operational requirements of the helicopters.

Helicopter transport provides the quickest means of transferring critically injured patients to a major trauma service. Off-site landings have been found to result in longer transport to the emergency room, however, the construction of helipads in trauma centres can reduce transport time, in addition to reducing the costs and sequelae of trauma .

The "Golden Hour" concept is one deeply entrenched in trauma systems and the emergency management of trauma victims, indicating that the first 60 minutes following a trauma is a critical period for getting patients to a trauma centre.

It is widely accepted that on-site helipads result in more positive patient outcomes, with no medical disadvantages. The clear need to move toward helicopter landing-areas that are physically on-site at referring and receiving institutions is undeniable. Consideration of on-site HLS were found to be particularly important for medical transport systems to contemplate when building a new helipad.

Acknowledging the increased chances of survival and recovery from on-site HLS, alternative locations such as Wellington Square or Langley Park were determined to be unacceptable for Standard Operating Procedures as both locations would cause delays to patient transfer with an additional ambulance transfer, and risk to life (including increased infection risk). These locations would further pose security and accident risks for the Rescue Helicopter as well as the general public on the ground, thus requiring WA Police intervention for each helicopter landing.

4. Scheme Amendment request should include detail of how frequently the HLS and the emergency flight path are expected to be used. Explain what the current situation is including:

4.2. How many helicopter landings does RPH receive delivering critically ill patients to the State Major Trauma Centre per year.

4.3. What percentage of these are considered major (that is would die without emergency treatment).

Of the three Tertiary Hospitals in Perth, the State's Emergency Rescue Helicopter transports 70.4% of patients to RPH (avg of 354 per year). In 2020, a significant number of helicopter arrivals to RPH were trauma presentations (222) and, of these, 101 were major trauma patients, with 43 (43%) considered severe or critical trauma. These patients generally spend longer in hospital and often require Intensive Care treatment (critical lifesaving interventions) as well as extensive rehabilitation.

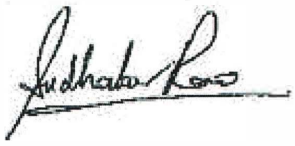
RPH Trauma Data (2020) shows that more than 50% of major trauma admissions to RPH required critical surgical intervention in response to their injuries, further emphasising the importance of time from injury to specialist treatment.

The time critical nature of the relationship between event, definitive tertiary clinical intervention and the patient's survival is the reason why the construction of a new on-site helipad that will allow immediate access for the State Emergency Rescue Helicopter Service's (ERHS's) upgraded helicopter fleet at RPH is critical for the ongoing provision of emergency healthcare in WA.

I trust this information is sufficient to allow the City of Perth to progress the Scheme Amendment Request.

Please do not hesitate to contact Emma Morony at emma.morony@health.wa.gov.au for further information should you require it.

Kind regards,



Dr Sudhakar Rao
State Director of Trauma
Royal Perth Hospital

4 November 2021

Wellington Street Campus 〉 Box X2213 GPO 〉 Perth 6847 〉 Western Australia
Tel: (08) 9224 2244 〉 Fax: (08) 9224 3511

rph.health.wa.gov.au 〉 Where tradition plus innovation equals excellence

element.

Appendix 2

DFES Letter of Support

Government of **Western Australia**
Department of **Fire & Emergency Services**

DFES

Our Ref: 20210129
Your Ref:

Mr. Graeme Jones
Executive Director, Finance and Infrastructure
East Metropolitan Health Service
197 Wellington Street
EAST PERTH WA 6004

Dear Mr. Graeme Jones,

ROYAL PERTH HOSPITAL HELIPORT'S APPROACH AND DEPARTURE PATHS

Following the approval of the East Metropolitan Health Services (EMHS) development application by the State Planning Commission for the construction of a new hospital heliport at Royal Perth Hospital (RPH) in October 2019, consultation commenced with the Department Fire and Emergency Services (DFES) Aviation Services for design input and aviation expertise. As the managing agency for the State's Emergency Rescue Helicopter Service (ERHS) and the primary user of the RPH heliport, DFES Aviation Services have been in consultation with EMHS to address the new heliport operational requirements and provided consultation with aviation regulatory requirements.

These discussions included the securing of approach and departure flight paths from the edge of the RPH heliport Safety Area as mandated under current Civil Aviation Safety Authority (CASA) and International Civil Aviation Organisation (ICAO) legislation and Commonwealth Department of Infrastructure, Transport, Regional Development and Communications (DITRDC) guidelines. Establishment and protection of these flight paths must be ensured by the responsible local government for continued helicopter operations into the new RPH heliport. Failure to comply may result in non-compliance and permanent cease of operations into the RPH heliport.

The flight paths presented to the Central Perth Planning Committee in September 2018 did not meet the regulatory requirements for RPH heliport's approach and departure flight paths. The most prominent issues and non-compliances identified by DFES and their contracted helicopter service provider with the September 2018 flight paths are:

- Length of the approach and departure flight paths were not developed out to the regulatory distance requirement of 3,386 metres;
- Only a one, constant radius of turn is permitted by regulation with the flight paths. The north-eastern flight path was designed with two;
- Width of the flight paths did not incorporate the future ERHS aircraft fleet, or other emergency services helicopters that could operate into the new RPH heliport; and
- Elevations depicted were not compliant with the mandatory 4.5% incline slope commencing from the edge of the heliport's Safety Area. This requirement limit building heights and construction activities underneath and to the side of the flight paths, ensuring compliance and safe operation with the heliport.

Emergency Services Complex I 20 Stockton Bend Cockburn Central WA 6164 I PO Box P1174 Perth WA 6844
Tel (08) 9395 9300 I Fax (08) 9395 9384 I dfes@dfes.wa.gov.au I www.dfes.wa.gov.au
ABN 39 563 851 304

Due to these regulatory non-compliances with the September 2018 approach and departure flight paths, DFES recommended EMHS to consult with an alternative aeronautical consultant to provide revised flight paths to ensure regulatory and legislative compliance. EMHS completed this consultation for design of new approach and departure flight paths in early 2020.

DFES was asked to participate by Rehbein Airport Consulting during this consultation process for the development of the new flight paths, as presented in their report: *'Royal Perth Hospital Helicopter Landings Site Flight Path Requirements'* (revision 2). These north-east and south-west flight paths for RPH's heliport were developed to meet regulatory compliance, whilst minimising impact on Perth International Airport's approach and departure paths and the city building schemes for the City of Perth and City of Vincent.

In 2015, the Royal Melbourne Hospital the heliport / helipad was shut down due to construction of high-rise building impeding into the hospital's heliport flight path. The approach and departure paths were not secured for the hospital's heliport. The Victorian State planning tribunal over-ruled the Melbourne City Council building approval, which resulted in the new construction building height being reduced by three floors. Subsequently, the Commonwealth's DITRDC published the *Protecting Strategically Important Helicopter Landing Sites* document, which was endorsed by all States and Territories. This document directly addressed protecting Strategically Important Helicopter Landing Sites (i.e. hospital heliports) and their respective approach and departure flight paths.

It is critical that the RPH heliport approach and departure flight paths are secured and protected to ensure ERHS helicopter operations into the future. As demonstrated with the Royal Melbourne Hospital, if these flight paths are not secured and protected from future development, there is significant risk that ERHS operations will cease with into the Western Australia's only Level 1 Trauma Centre.

If you have any further queries on the above, please do not hesitate to contact Steven Sartain, Manager Emergency Rescue Helicopter Service, DFES on 6499 1888.

Yours sincerely

TERRY SHEHAN
SUPERINTENDENT AVIATION SERVICES

28 January 2021

2

element.

Appendix 3

Development Approval - Helicopter Landing Site

59

Western Australian Planning Commission

Our Ref : 10-50286-1
Your Ref :
Enquiries : Suzanne Roach (Ph 6551 9181)

Department Of Finance - Building Management & Works
Optima Centre
16 Parkland Road
OSBORNE PARK WA 6017

Application for Approval to Commence Development dated 21 June 2019 received 2 July 2019.

Lot Number	:	916
Location	:	
Plan / Diagram	:	Deposited Plan 183230
Volume/Folio	:	2820/191
Locality	:	No. 212 Wellington Street, Perth
Owner	:	Metropolitan Health Service Board C/- Department Of Health - East Metropolitan Health Service G P O Box X2213 PERTH WA 6847

Under the provisions of the Metropolitan Region Scheme this application has been referred for determination by the Western Australian Planning Commission.

The application has now been considered by the Commission and the formal notice setting out the terms of the decision is attached.

A copy of this decision has been forwarded to the Local Government for information.

Should the applicant be aggrieved by this decision there is a right to apply for a review pursuant to the provisions of Section 252 of the *Planning and Development Act 2005.* Such an application for review must be submitted to the State Administrative Tribunal, Level 6, State Administrative Tribunal Building, 565 Hay Street, PERTH WA 6000 in accordance with Part 14 of the *Planning and Development Act 2005*. It is recommended that you contact the State Administrative Tribunal for further details (telephone 9219 3111) or go to its website: http://www.sat.justice.wa.gov.au.

Ms Sam Fagan
Secretary
Western Australian Planning Commission
6 November 2019

140 William Street, Perth, Western Australia 6000, Locked Bag 2506 Perth, 6001
Tel: (08) 6551 8002; Fax: (08) 6551 9001; Infoline: 1800 626 477
e-mail: info@dplh.wa.gov.au; web address http://www. dplh.wa.gov.au
ABN 35 482 341 493

Western Australian Planning Commission

Our Ref : 10-50286-1
Your Ref :
Enquiries : Suzanne Roach (Ph 6551 9181)

METROPOLITAN REGION SCHEME

City of Perth

APPROVAL TO COMMENCE DEVELOPMENT

Name and Address of Owner and Land on which Development Proposed:

Owner	:	Metropolitan Health Service Board C/- Department Of Health - East Metropolitan Health Service G P O Box X2213 PERTH WA 6847
Lot Number	:	916
Location	:	
Plan / Diagram	:	Deposited Plan 183230
Volume/Folio	:	2820/191
Locality	:	No. 212 Wellington Street, Perth
Application Date	:	21 June 2019
Application Receipt	:	2 July 2019
Development Description	:	Construction Of Roof Mounted Helipad And Associated Structures On North East Corner Of R-Block Building

The application for approval to commence development in accordance with the plans submitted thereto is granted subject to the following condition(s):

1. The development is to be carried out in accordance with the plans date stamped 4 July 2019, subject to any modifications as required by the conditions of approval.

2. The development approval is valid for two years from the date of this letter. If the subject development is not substantially commenced within a two-year period, the approval shall lapse and be of no further effect.

3. Prior to commencement of works, final details of the design and a sample board of the materials, colours and finishes and details of the signage illumination shall be submitted and approved to the specification of the City of Perth and to the satisfaction of the Western Australian Planning Commission.

If the development the subject of this approval is not substantially commenced within a period of two years from the date of this letter, the approval shall lapse and be of no further effect.

140 William Street, Perth, Western Australia 6000, Locked Bag 2506 Perth, 6001
Tel: (08) 6551 8002; Fax: (08) 6551 9001; Infoline: 1800 626 477
e-mail: info@dplh.wa.gov.au; web address http://www. dplh.wa.gov.au
ABN 35 482 341 493

Western Australian Planning Commission

Where an approval has so lapsed, no development shall be carried out without the further approval of the responsible authority having first been sought and obtained.

Ms Sam Fagan
Secretary
Western Australian Planning Commission
6 November 2019

140 William Street, Perth, Western Australia 6000, Locked Bag 2506 Perth, 6001
Tel: (08) 6551 8002; Fax: (08) 6551 9001; Infoline: 1800 626 477
e-mail: info@dplh.wa.gov.au; web address http://www. dplh.wa.gov.au
ABN 35 482 341 493

element.

Appendix 4

HLS Flight path Requirements (Rehbein Airport Consulting)



ROYAL PERTH HOSPITAL
HELICOPTER LANDING SITE
FLIGHT PATH REQUIREMENTS

EAST METROPOLITAN HEALTH SERVICE

REHBEIN Airport Consulting



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Revision	Date	Description	Author	Verifier	Approver
0	12/06/2020	DRAFT	BMW		
1	07/07/2020	FINAL DRAFT for approval	BMW	BJH	BJH
2	10/08/2020	FINAL	BMW	BJH	BJH

Reviewed by:

Steven Sartain
Manager, Emergency Rescue Helicopter Service
Department of Fire and Emergency Services



1. INTRODUCTION

REHBEIN Airport Consulting was engaged by East Metropolitan Health Service (EMHS) to prepare a report on the technical requirements for helicopter flight paths associated with the proposed helicopter landing site at the Royal Perth Hospital (RPH).

The purpose of establishing and protecting helicopter flight paths for the Royal Perth Hospital (RPH) is to ensure new developments (and associated activities) do not prevent helicopters from arriving or departing from the new RPH Helicopter Landing Site (HLS). An effective and safe helicopter service to support emergency services relies entirely on a clear flight path which is free from obstructions.

The responsibility for determining the suitability of a place as a HLS is held, under Civil Aviation Regulation 92, by the pilot-in-command and the organisation that holds the helicopter operating certificate. This means that the pilot in control of the aircraft will decide during each and every mission as to whether it is safe to arrive or depart the RPH HLS. This decision will be based on a number of factors including whether the flight path required is clear of obstructions.

The Australian Government Department of Infrastructure, Transport, Regional Development and Communications in May 2018 published the National Airports Safeguarding Framework Guideline H: *Protecting Strategically Important Helicopter Landing Sites*. Guideline H is intended to assist planners in making decisions around important HLSs that should be safeguarded through land use planning controls and in making decisions about applications, proposals, planning permits or planning scheme amendments that relates to a facility's essential flight paths.

Guideline H provides guidance to State/Territory and local government decision makers to safeguard ongoing operations at strategically important HLSs, as well as to ensure any new HLS is appropriately located. Importantly, this Guideline assists in making decisions around developments encroaching into flights that would render the approach or departure path unsafe and result in the pilot-in-command aborting a mission.

The Guideline identifies a HLS which is associated with a hospital, or one which is elevated within a populated area, as being strategically important.

In Australia, helipads are not currently licensed, certified or regulated in the same way that aerodromes are under Part 139 of the Civil Aviation Safety Regulations 1998 (CASR).

Relevant regulations and references pertaining to the physical characteristics of a HLS as well as the associated flight paths are:

- The Civil Aviation Safety Authority (CASA) Civil Aviation Advisory Publication CAAP 92-2(2) *Guidelines for the establishment of on-shore helicopter landing sites* (February 2014);
- International Civil Aviation Organisation ICAO Annex 14 *Aerodromes – Volume II: Heliports* (4th edition July 2013); and
- Civil Aviation Safety Authority NPRM 1304OS *Regulation of aeroplane and helicopter 'ambulance function' flights as Air Transport Operations*.

The pilots of the helicopter service currently operating the ambulance services have stated that the flight paths must be protected in accordance with ICAO Annex 14 for them to safely conduct flights to and from the RPH HLS.



2. RELATED GUIDELINES AND APPLICABLE STANDARDS

The Civil Aviation Safety Authority (CASA) does not currently have a legal instrument to certify or register HLSs that are not part of a certified or registered aerodrome under Part 139 of the Civil Aviation Safety Regulations 1998.

The responsibility for determining the suitability of a place as a helicopter landing site is held under Civil Aviation Regulation 92 by the pilot-in-command and/or by the helicopter operator.

The primary guidance pilots will use to decide whether to operate to an HLS is the Civil Aviation Advisory Publication (CAAP) 92-2(2) *Guidelines for the establishment and operation of onshore Helicopter Landing Sites*. CAAP 92-2(2) sets out factors that may be used to determine the suitability of a place for the landing and taking-off of helicopters.

In relation to flight paths and their protection from obstacles CAAP 92-2(2) refers to the Standards and Recommended Practices (SARPs) for Heliports, as set out in Volume II of Annex 14 to the Convention of International Civil Aviation (the Chicago Convention).

The International Civil Aviation Organisation (ICAO) sets out international standards and recommended practices for the safe conduct of civil aviation activities in various Annexes to the *Convention on International Civil Aviation (Chicago, 1944),* to which Australia is a signatory.

In 2013 CASA released a Notice of Proposed Rule Making (NPRM) 1304OS *Regulation of aeroplane and helicopter 'ambulance function' flights as Air Transport Operations*. The NPRM provides directional guidance to the future regulatory environment for helicopter medical transport flights in Australia.

2.1 GUIDELINES FOR ESTABLISHMENT AND OPERATION OF ONSHORE HELICOPTER LANDING SITES – CIVIL AVIATION ADVISORY PUBLICATION (CAAP 92-2(2))

CASA CAAP 92-2(2) recommends that approach and departure paths for emergency medical service operations at metropolitan hospital sites should be in accordance with the standards and recommended practices set out in ICAO Annex 14 Volume II Heliports.

The factors that determine the characteristics of the helicopter flight path obstacle limitation surfaces (OLS) are:

- The specifications of the largest helicopter that is intended to use the HLS;
- Certain physical characteristics of the HLS itself; and
- The Performance Class applicable to the helicopter operation.

The Department of Fire and Emergency Services (DFES) and the current aeromedical service provider identified and confirmed the design helicopter characteristics as listed in **Section 3**.

2.2 CASA NOTICE OF PROPOSED RULE MAKING

The Australian Civil Aviation Safety Authority has released in July 2013 a Notice of Proposed Rule Making (NPRM) 1304OS entitled *Regulation of aeroplane and helicopter 'ambulance function' flights as Air Transport Operations*.

The purpose of the NPRM is to advise the public and aviation community of CASA's intent to regulate, to the greatest extent practicable, ambulance function flights to the same safety standards that are currently applicable to air transport operations. This will extend to certification requirements, operating standards and maintenance standards.

Annex A to the NPRM clarifies that helicopters conducting operations to/from a final approach and take-off area (FATO), at a hospital that is located in a populous area and that is used as a Helicopter Medical Transport (HMT) heliport or HMT operating base, will be operated in accordance with the requirements of Performance Class 1 or Performance Class 2 with exposure. The exception to this is when the heliport approach and departure pathways provide sufficient safe forced landing areas for Performance Class 2 operations, in which case Performance Class 2 operations may be used.

Given that safe forced landing areas do not exist in proximity to RPH, what NPRM effectively means is that the flight paths for the RPH helipad need to meet the obstacle clearance requirements associated with Performance Class 1 helicopter operations.

2.3 ICAO ANNEX 14 AERODROMES VOLUME II HELIPORTS JULY 2013

The minimum standards and recommended practices for helipad approach and departure paths are set out in Chapter 4 *Obstacle Environment* of ICAO Annex 14 Volume II.

The objective of these specifications is to describe the clear airspace required around heliports so as to permit intended helicopter operations to be conducted safely and to prevent, where appropriate State controls exist, heliports from becoming unusable by the growth of obstacles around them. This is achieved by establishing a series of obstacle limitation surfaces that define the limits which objects may project into the airspace in the vicinity of heliports.

3. HELICOPTER DESIGN CHARACTERISTICS

The *Royal Perth Hospital Rooftop Helipad Concept Design Report* (Revised 190527) prepared by PSNK Aeronautical Services (hereafter referred to as the 'PSNK Report 190527'), submitted as Appendix A of the Planning Report, and identifies key characteristics of the design helicopter to be:

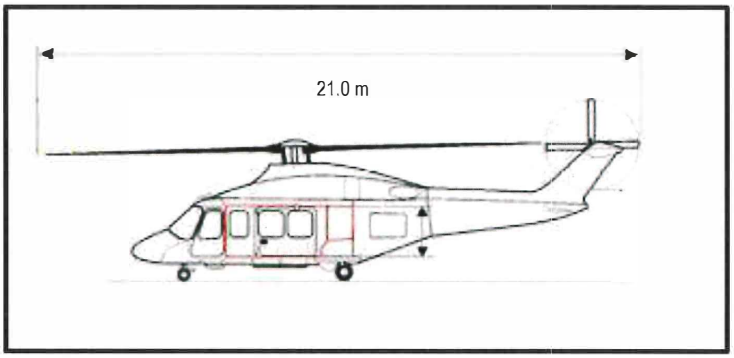
- D-value, the largest overall dimension with rotors turning 21.0 metres
- Rotor diameter 16.5 metres
- Maximum mass 12 tonnes
- Performance Class 1
- Night operations

These specifications have been confirmed by DFES and the current aeromedical services provider as meeting the current and likely future helicopter specifications.

D-Value

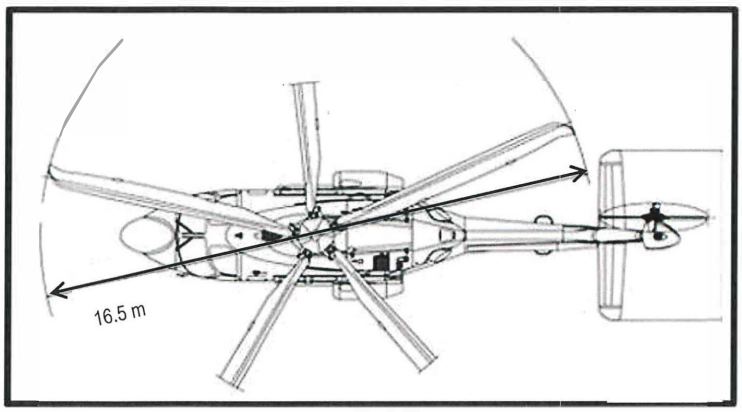
The D-Value is the largest overall dimension of the helicopter when rotor(s) are turning, normally measured from the most forward position of the main rotor tip path plane to the most rearward position of the tail rotor tip path plane. The physical size of the new RPH HLS is 27 x 27m which provides for a civil medical transport helicopters operating in Performance Class 1 to $1.5*D_{18}$, the utilisation of a 21m D-Value for the 'Operational Airspace' accommodates current and potential future medical transport helicopters.

A D-value of 21 m was established as the largest helicopter that may use the facility.



Rotor Diameter

Rotor diameter is the diameter of the main rotor with the engine(s) running. A rotor diameter of 16.5 m was established as the largest helicopter that may use the facility.



Performance Class

Performance Class 1 means the operations where, in the event of failure of an engine, performance is available to enable the helicopter to land within the rejected take-off distance available or safely continue the flight to an appropriate landing area, depending on when failure occurs.

Performance Class 1 is the operation which must be protected for at RPH HLS.

4. ROYAL PERTH HOSPITAL HELICOPTER LANDING SITE

CASA CAAP 92-2(2) defines the basic areas of a helicopter landing site (HLS). Specific to the construction of flight paths the relevant HLS characteristic is the size of the Final Approach and Take-off Area (FATO) and the associated Safety Area. The FATO is the area over which the final approach is completed and the take-off conducted. The Safety Area surrounds the FATO and is free of obstacles, other than those required for air navigation purposes and intended to reduce the risk of damage to helicopters accidentally diverging from the load-bearing area primarily intended for landing or take-off.

Both the FATO and the safety area are determined by the D-value of the largest helicopter intended to use the HLS facility.

The DFES and the East Metropolitan Health Services (EMHS) identified and confirmed the below RPH HLS characteristics. These characteristics were confirmed and reviewed to ensure that all current and potential operations are protected.

The RPH HLS is confirmed through the PSNK Report 190527 to have the following characteristics

- Safety Area (2 x 'D-Value') 42 m x 42 m
- HLS elevation 48.5 m AHD



5. FLIGHT PATH CONSTRUCTION

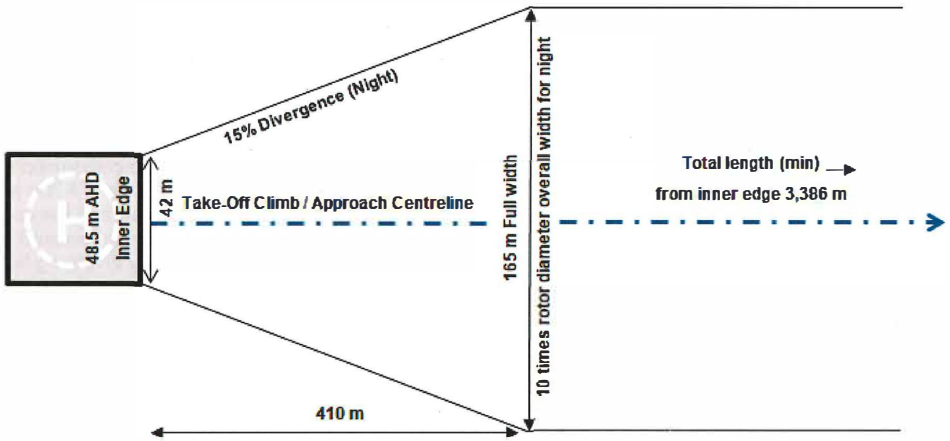
Land-use planning authorities should be aware that all intrusions into the flight paths have the potential to create aviation safety risks and to limit the scope of operations possible from the HLS. This is a determination and responsibility of the pilot on every approach and departure.

The ICAO and CAAP 92-2(2) compliant flight path construction is summarised in **Table 1** and **Figure 1** below with a detailed explanation following.

Table 1: Flight Path Construction

Approach and Take Off Climb Surface and Dimensions	
Length of inner edge	42 m
Elevation of inner edge	48.5 m AHD
Night Use	15%
Total Length	3,386 m (min.)
Slope	4.5%
Outer Width	165 m

Figure 1: Flight Path Construction



Approach and take-off climb surfaces

Both ICAO Annex 14 and CASA CAAP 92-2(2) require a HLS to have at least two (2) approach and take-off climb surfaces. These surfaces must be separated by a minimum angle of 150°.

The flight paths may be curved to avoid obstacles or take advantage of more advantageous flight paths, however only one curve is allowed which must have a constant rate radius of turn.

The approach and take-off climb surfaces slope upwards from the edge of the HLS safety area starting at the height of the Final Approach and Take-Off Area (FATO).

Both surfaces are comprised of an inner edge, two side edges and an outer edge specified as follows.

Inner Edge

The inner edge is equal in length to the minimum specified width of the HLS FATO plus safety area and located at the outer edge of the safety area.

The HLS Safety Area for the RPH HLS is 42 m wide and the elevation of the FATO is 48.5 m AHD as illustrated in **Figure 1** above.

The OLS inner edge is therefore also 42 m wide, 21 m either side of the flight path centreline.

In the absence of restricting obstacles, the elevation of the OLS inner edge shall be the elevation of the FATO. However, for heliports intended to be used by helicopters operated in Performance Class 1 the origin of the inclined plane may be raised directly above the FATO. The intention in raising the origin of the inclined plane may be to avoid already existing obstacles within the flight path.

The south-west flight path at RPH appears to be obstructed by the RPH building to the south. The PSNK Report 190527 identifies the hospital south block as an obstacle. The south-west flight path must pass over the existing hospital building which is approximately 15 m higher than the proposed FATO elevation. Accordingly, the inner edge for the south-west approach and take-off climb surfaces was set at 15 m above the HLS which is at 48.5 m AHD, therefore the inner edge elevation is 63.5 m AHD (Refer GHD Drg No 61-12512706/Figure 01/RevC). Refer **Section 6.2** for further discussion.



Source: Google Earth

Side Edges

The two side edges originate at the ends of the inner edge and diverge uniformly from the centreline at a specified rate. The divergence rate for night operations is 15% each side. The overall width of the approach and take-off climb surfaces increases by 30 m (15 m each side of the centreline) for every 100 m along the centreline.

The final width of the surface for night operations is 10 times the design helicopter rotor diameter. For RPH HLS flight paths this means 165 m (10 x 16.5m). This makes the length of the splayed section 410 m.

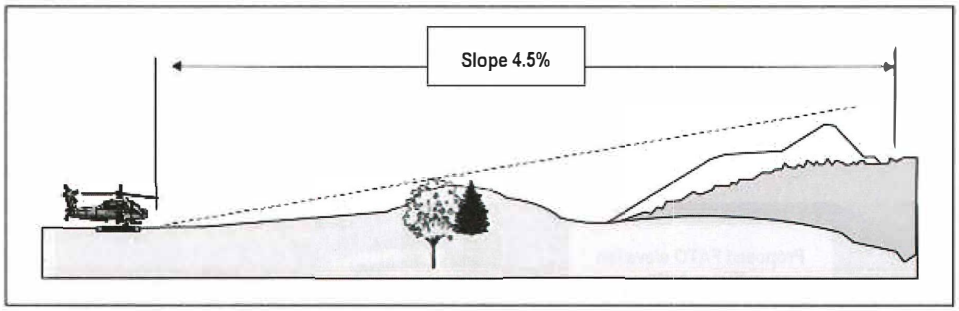
Outer Edge

The outer edge is horizontal and perpendicular to the flight path centreline and located at a specified height of 152 m (500 feet) above the FATO.

Slope of the surface

The slope of the approach and take-off climb surfaces is measured in the vertical plane containing the centreline of the surface. The slope of the surface is determined by the performance class of operations at the HLS.

The operations at RPH HLS are required to be Performance Class 1. As such the maximum slope of the approach and take-off climb surface permitted is 4.5% as illustrated below.



Source: ICAO Annex 14-II Figure 4-6

Curved approach and take-off climb surface

In the case of an approach or take-off climb surface involving a turn, ICAO Annex 14 stipulates that the surface must not contain more than one curved portion.

In addition, the minimum radius of turn permitted is 270 m. The sum of the radius of arc defining the centreline of the approach and take-off climb surfaces and the length of the straight portion originating at the inner edge shall not be less than 575 m.

Total length of the surface

The total length of the approach and take-off climb surface from the inner edge for slope design category A is 3,386 m. This length brings the helicopter to 152 m (500 ft) above the FATO elevation of 48.5 m AHD. Flight paths for the RPH HLS are each constructed to 3,400 m in total length bringing each flight path to a total of 201.5 m AHD or 153 m above the FATO elevation.

6. RPH HLS FLIGHT PATHS

6.1 NORTH-EAST FLIGHT PATH

The North-east flight path is illustrated on **Figure NE-1** included at **Appendix A**. This flight path consists of a curved take-off climb surface initiated from a bearing of 020°True. The radius of turn is 915 metres until it reaches a bearing of 180° True and then continues straight on bearing 180° to its full length of 3,400 metres.

Emergency Rescue Helicopter Service

Consultation with helicopter pilots through DFES ERHS indicated that a bearing of 020° True avoids an obstacle, the hospital stack, in the event of a back–up procedure for departure as per the Flight Manual.

Deviation from this bearing means the hospital stack is an obstacle in their back-up procedure and must be taken into account. This limits the number of pilots that can service RPH safely as special training is required and not all pilots will be suitably qualified to accommodate such a procedure. An initial departure bearing other than 020° True risks the ERHS being unable to access the RPH HLS.

Planning Environment



The North-east flight path is within the City of Perth local government area and crosses partially into the City of Vincent as illustrated on **Figure NE-1**.

Impact on building areas

The impact on building areas as identified allocated by Element Advisory drawing number 19-139 CP-1/A (10 February 2020) *RPH Flight path – Height Limitations* has been assessed. This assessment should be treated as an indicative order of magnitude only. These heights and areas should not be used directly to inform planning controls. Any planning controls should be based on the technical flight path geometry as shown on Figures NE-1 and NE-2.

The orange areas on **Figure NE-2** illustrate the area of land where current/proposed development on land does not exceed the elevation of the HLS and therefore would not be considered as part of the obstacle environment to the OLS. The blue areas represent land where development either currently exists, is planned and could exceed the elevation of the HLS at 48.5 m AHD and therefore may require further consideration.

The total area (blue areas only) affected by the North-east flight path is 34,212 square metres.

The North-east flight path partially covers development areas identified as 4, 6, and 9.

Area 6 is identified as having no prescribed height limit. The flight path OLS covers a small area of 122 metres square of the south-eastern corner of Area 6. The flight path OLS ranges from a lower limit at 61 m AHD to 63 m AHD. The ground elevation is estimated at 12 m AHD therefore the available building height would be in the order of 49 m to 51 m high, depending on the exact location on the block. A newly constructed development / under construction at 40 m (10 storey) is identified as 'H' in Area 6 as per the Element Advisory drawing number 19-139 CP-1/A (10 February 2020) *RPH Flight path – Height Limitations*. Element Advisory has confirmed that this development is outside the flight path OLS.

Areas 4 and 9 are identified as having a limited planning framework in place and therefore no height restrictions have been applied at this stage. Area 4 is the Claisebrook Village precinct numbered 16B in Figure 3 of the City of Perth letter dated 7 October 2019. Area 9 is the Claisebrook Village precinct numbered as 5.

Area 4 is 23,326 square metres in total area. The North-east flight path effectively covers this whole area (23,202 square metres). The flight path OLS ranges from a lower limit of 100 m AHD to an upper limit of 118 m AHD. The ground elevation is estimated at 12 m AHD therefore available building height would be in the order of 88 m to 106 m high depending on the exact location within this precinct.

Area 9 is a total area of 76,670 square metres. The North-east flight path covers 10,797 square metres of the western portion of the block. The flight path OLS ranges from a lower limit of 55 m AHD to 68 m AHD. The ground elevation is estimated at 11 m AHD therefore available building height would be in the order of 44 m to 57 m high depending on the exact location on the block.

6.2 SOUTH-WEST FLIGHT PATH

The south-west flight path is based on the previous GHD Figure 01 Rev C. The current ambulance helicopter service provider for Western Australia, identifies that the dominant period of activity for RPH flights is in the afternoon when there are prevailing winds from the south west, there is a requirement for a south-west flight path so as to provide Performance Class 1 departure capability during this high activity period.

The south-west flight path commences with a straight section bearing 029°/209° True for a distance of 790 m at which point it transitions to a curve radius 300 m then onto a straight section bearing of 079°/259°True for a total length of 3,400 m as illustrated on **Figure SW-1**.

The inner edge width is 42 m at an elevation of 63.5 m AHD. In accordance with ICAO Annex 14 Vol II paragraph 4.1.3 and 4.1.15 the elevation of the inner edge may be raised directly above the FATO, for use by helicopter in performance class 1 and must be approved by an appropriate authority. In the absence of specific CASA rules on this matter, it would be reasonable for the current helicopter operator to be considered the appropriate authority.

The south-west flight path is within the City of Perth local government area as illustrated on **Figure SW-1**.

Surrounding Building Environment



The OLS for the south-west flight path, based on GHD Figure 01 Rev C, commences 15m above the FATO elevation at 63.5 m. It appears the OLS has been raised in this manner in order to clear the building to the south, by applying the provisions of ICAO Annex 14 Vol. II Chapter 4 - *Obstacle Environment*. Given the presence of the building, the OLS as defined in GHD Figure 01 is considered appropriate for the purposes of protecting the OLS from any future intrusions. The flight path direction is positioned so that the OLS avoids the following buildings as illustrated in **Figure SW-2**:

- The Westin Hotel (120 m AHD approx.)
- Condor Tower building at 22 St Georges Terrace (approx. 103m AHD). This building would remain just outside the western edge of the south-west flight path.
- A building at approximately 83 m AHD on the north-east corner of Victoria Ave and St Georges Terrace. This building would remain just outside of the eastern edge of the south-west flight path.

These latter two buildings constrain the location of the south-west flight path to the extent that no other location option exists.

The Duxton Hotel on the south-west corner of Victoria Ave and St Georges Terrace is within the lateral extents of the south-west flight path. The building at approximately 74m AHD would remain below the south-west flight path OLS which will be approximately 87 m AHD over the site.

7. CONCLUSION

The purpose of establishing and protecting helicopter flight paths for the Royal Perth Hospital (RPH) is to ensure new developments (and associated activities) do not prevent helicopters from arriving or departing from the new RPH Helicopter Landing Site (HLS).

The responsibility for determining the suitability of a place as a HLS is held by the pilot-in-command and the organisation that holds the helicopter operating certificate. The pilot in control of the aircraft will make the decision as to whether it is safe to arrive or depart the RPH HLS during each mission.

The North-east flight was developed taking into account the following considerations in the construction of the approach and take-off climb surfaces for helicopters arriving north-easterly direction for RPH HLS:

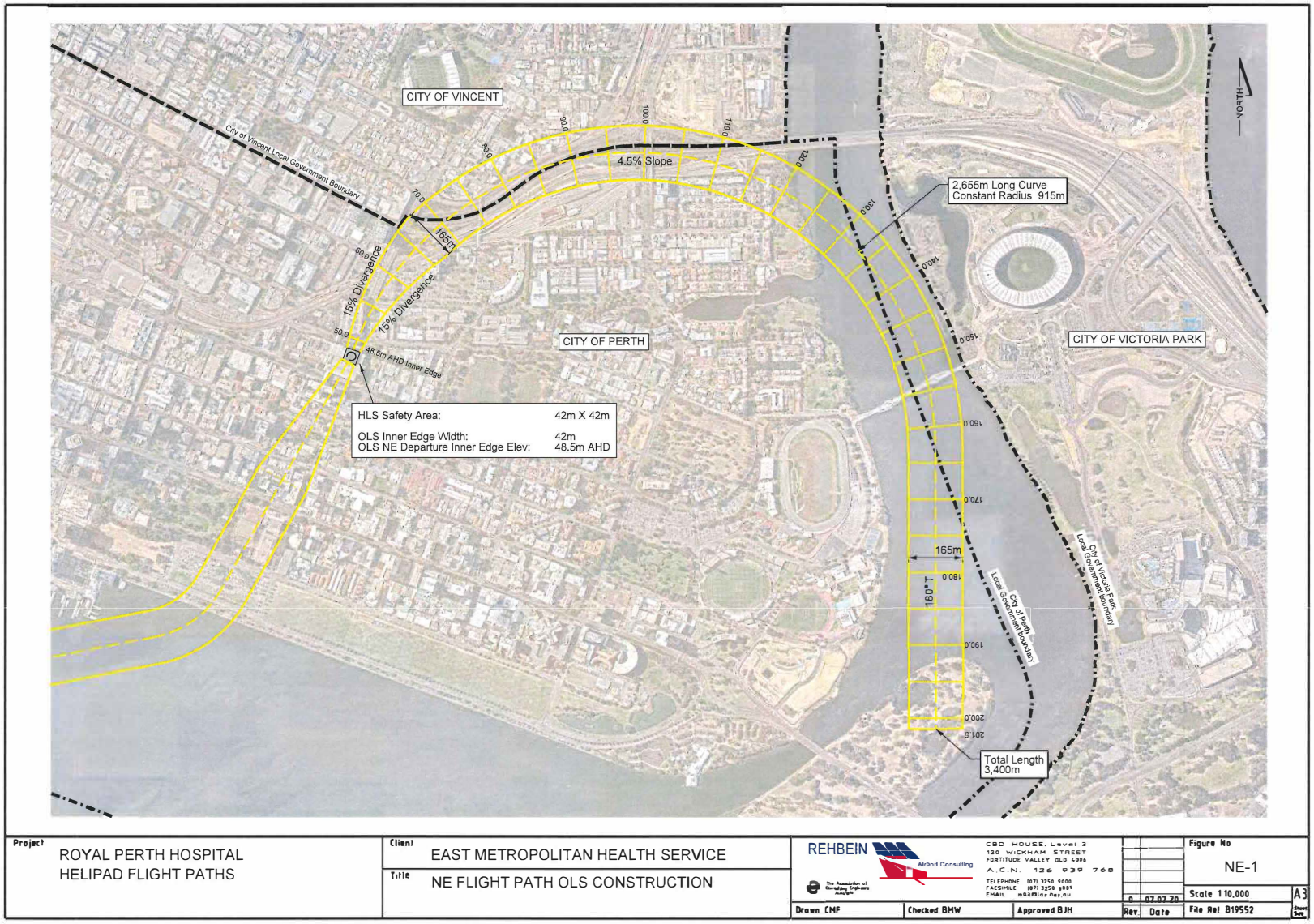
- The physical characteristics and immediate surrounds of the HLS;
- Flight paths must comply with ICAO Annex 14 Volume II criteria;
- Helicopter pilot feedback; and
- The obstacle and planning environment.

The south-west flight path commences 15m above the FATO elevation. It appears the OLS has been raised in this manner in order to clear the building to the south. EMHS should confirm the current aeromedical service provider and DFES that the presence of the RPH South building is accounted for adequately in helicopter operations to the new helipad.

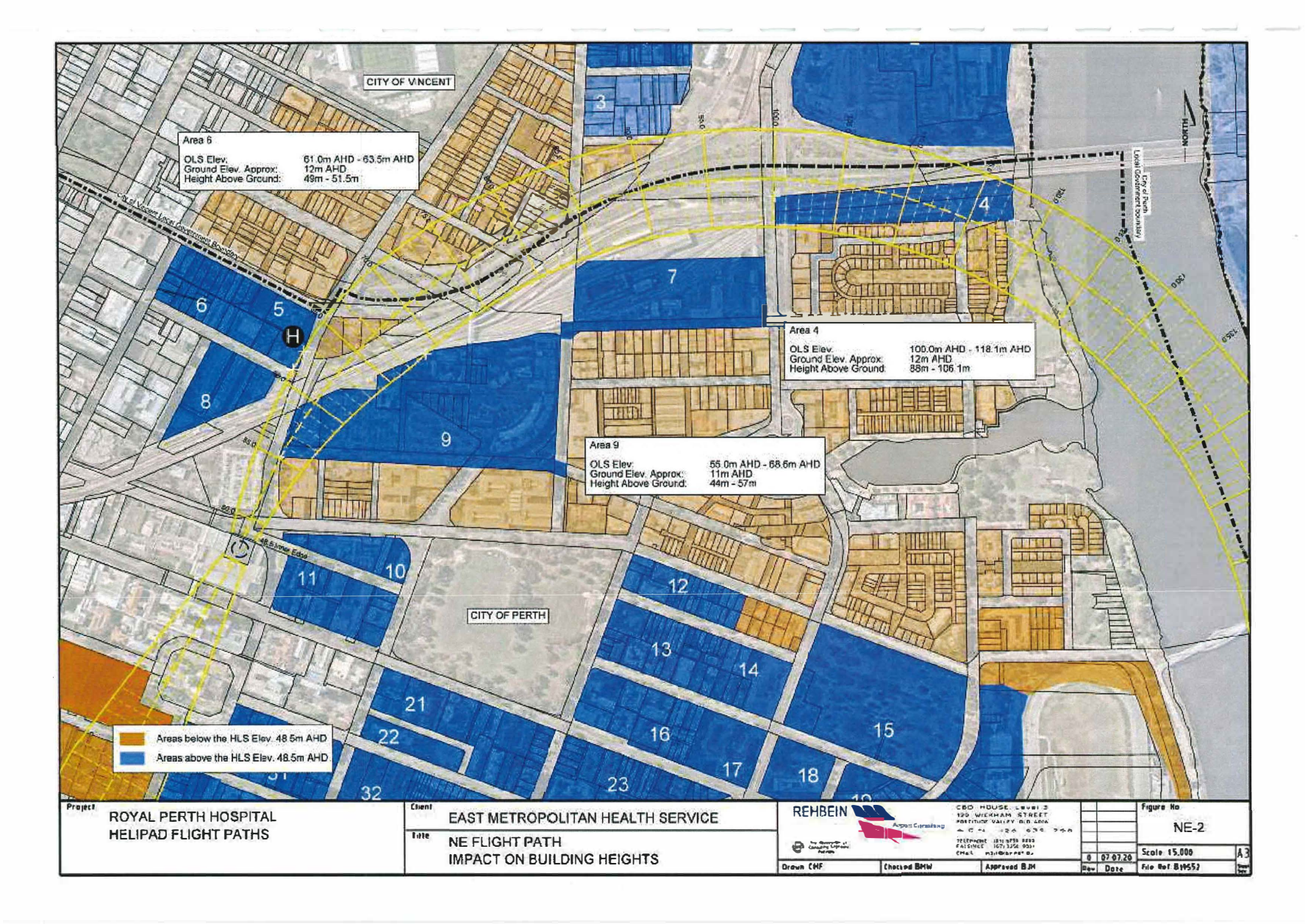


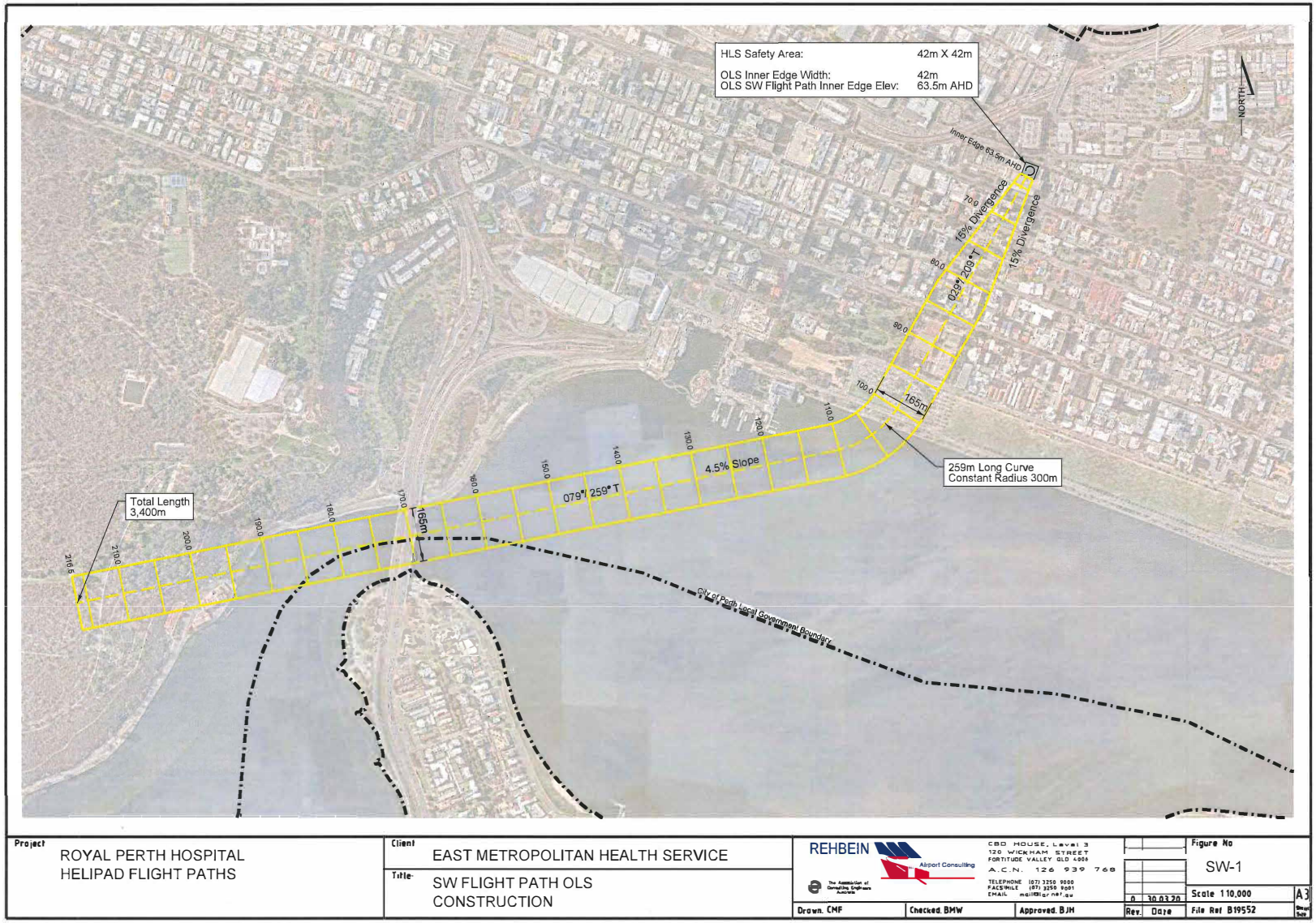
APPENDIX A

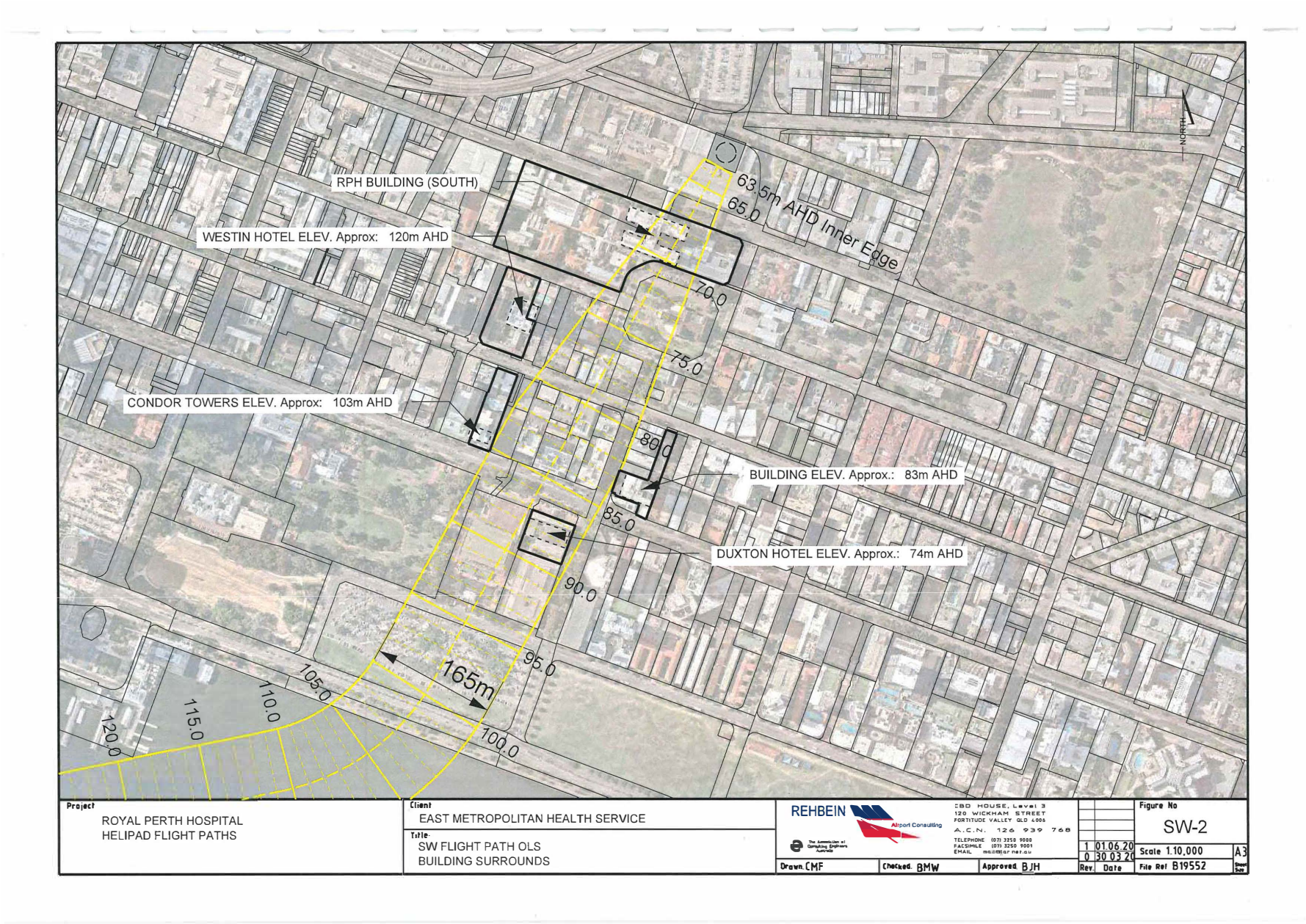
RPH HLS Flight Paths



Project: ROYAL PERTH HOSPITAL HELIPAD FLIGHT PATHS	Client: EAST METROPOLITAN HEALTH SERVICE	REHBEIN Airport Consulting	Figure No: NE-1
	Title: NE FLIGHT PATH OLS CONSTRUCTION	CBD HOUSE, Level 3, 120 WICKHAM STREET, FORTITUDE VALLEY QLD 4006, A.C.N. 126 939 768	Scale 1:10,000 A3
		TELEPHONE (07) 3250 9000, FACSIMILE (07) 3250 9001, EMAIL mail@rlair.net.au	File Ref B19552
	Drawn: CMF Checked: BMW Approved: BJH	Rev. 0 Date 07.07.20	


CITY OF VINCENT
CITY OF PERTH
Area 6
OLS Elev: 61.0m AHD - 63.5m AHD
Ground Elev. Approx: 12m AHD
Height Above Ground: 49m - 51.5m
Area 4
OLS Elev: 100.0m AHD - 118.1m AHD
Ground Elev. Approx: 12m AHD
Height Above Ground: 88m - 106.1m
Area 9
OLS Elev: 55.0m AHD - 68.6m AHD
Ground Elev. Approx: 11m AHD
Height Above Ground: 44m - 57m
Areas below the HLS Elev. 48.5m AHD
Areas above the HLS Elev. 48.5m AHD
NORTH
Project
ROYAL PERTH HOSPITAL
HELIPAD FLIGHT PATHS
Client
EAST METROPOLITAN HEALTH SERVICE
Title
NE FLIGHT PATH
IMPACT ON BUILDING HEIGHTS
REHBEIN
Figure No
NE-2
Scale 1:5,000
A3
Drawn CHF
Checked BMW
Approved BJH
07.07.20
Date


HLS Safety Area: 42m X 42m
OLS Inner Edge Width: 42m
OLS SW Flight Path Inner Edge Elev: 63.5m AHD
Inner Edge 63.5m AHD
15% Divergence
15% Divergence
209° T
029°
4.5% Slope
079° 259° T
165m
165m
259m Long Curve
Constant Radius 300m
Total Length
3,400m
City of Perth Local Government Boundary
NORTH
Project
ROYAL PERTH HOSPITAL
HELIPAD FLIGHT PATHS
Client
EAST METROPOLITAN HEALTH SERVICE
Title
SW FLIGHT PATH OLS
CONSTRUCTION
REHBEIN
Airport Consulting
CBD HOUSE, Level 3
120 WICKHAM STREET
FORTITUDE VALLEY QLD 4006
A.C.N. 126 939 760
TELEPHONE (07) 3250 9000
FACSIMILE (07) 3250 9001
Figure No
SW-1
Scale 1:10,000
A3
Drawn. CMF
Checked. BMW
Approved. BJH
Rev.
Date
File Ref B19552


RPH BUILDING (SOUTH)
WESTIN HOTEL ELEV. Approx: 120m AHD
CONDOR TOWERS ELEV. Approx: 103m AHD
BUILDING ELEV. Approx.: 83m AHD
DUXTON HOTEL ELEV. Approx.: 74m AHD
63.5m AHD Inner Edge
65.0
70.0
75.0
80.0
85.0
90.0
95.0
100.0
105.0
110.0
115.0
120.0
165m
NORTH
Project
ROYAL PERTH HOSPITAL
HELIPAD FLIGHT PATHS
Client
EAST METROPOLITAN HEALTH SERVICE
Title
SW FLIGHT PATH OLS
BUILDING SURROUNDS
REHBEIN
Airport Consulting
CBD HOUSE, Level 3
120 WICKHAM STREET
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Drawn CMF
Checked BMW
Approved BJH
Rev.
1 01.06.20
0 30.03.20
Date
Figure No
SW-2
Scale 1.10,000
A3
File Ref B19552

element.

Appendix 5

Interpretation of Aviation Regulations (Rehbein Airport Consulting)

REHBEIN Airport Consulting

10 February, 2021
Our File Ref: B19552AL001
Contact: Ben Hargreaves

Senior Project Manager
East Metropolitan Health Service
Level 4, Room 4202, O Block (Goderich St)
Royal Perth Hospital
Perth, WA 6000

Attention: Emma Morony

RE: PROPOSED RPH HELIPAD
HELICOPTER FLIGHT PATH PROTECTION

1. INTRODUCTION

REHBEIN Airport Consulting was engaged by East Metropolitan Health Service (EMHS) to review aspects of helicopter flight path protection associated with the proposed Royal Perth Hospital (RPH) helipad, which was recently approved for construction.

Previously, PSNK Aeronautical Services was engaged by EMHS, to provide advice on suitable flight paths for the proposed helipad at Royal Perth Hospital based on the operational needs of helicopters with performance capabilities equivalent to that of the AW139.

The result was report titled *RPH Rooftop Helipad Assessment of Operational Airspace* Version 180424. Following consultation between EMHS and DFES, two points were raised:

- Flight path geometry must be compliant with International Civil Aviation Organisation (ICAO) specifications for obstacle limitation applicable to Performance Class 1 / Category A operations; and
- Obstacle-free airspace must accommodate a wider range of potential future helicopter types.

The purpose of this letter is to confirm the flight path protection requirements, based on the nominated helicopter characteristics and ICAO specifications.

2. RELEVANT REGULATIONS

There are currently no legislative regulations specifically addressing the requirements for physical characteristics of helicopter flight paths and an HLS. Rather, the *Civil Aviation Regulations 1998* Regulation 92 places the responsibility on the pilot-in-command/helicopter operator for determining whether an HLS is safe or not to use.

DIRECTORS Brendan L Rehbein Ashley P Ruffin Steve A Williams Brent F Woolgar
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There is, however, strong and accepted guidance material from the Civil Aviation Safety Authority (CASA) and International Civil Aviation Organisation (ICAO) that is broadly accepted by helicopter operators in Australia and internationally as indicating whether facilities offer acceptable levels of safety.

This is reinforced by the National Airports Safeguarding Advisory Group comprising high-level Commonwealth, State and Territory transport and planning offices who prepared the National Airports Safeguarding Framework which includes Guideline H *Protecting Strategically Important Helicopter Landing Sites.* The purpose of Guideline H is to provide guidance to State/Territory and local government decision makers of identified strategically important HLS particularly in recognition that HLS in Australia are not licensed, certified or regulated in the way that aerodromes are. Strategically important HLS includes an HLS associated with a hospital and an elevated HLS within a populated area.

Relevant regulations and guidance pertaining to the use of a HLS as well as the associated flight paths are:

- *Civil Aviation Regulations 1988* – Regulation 92;
- The Civil Aviation Safety Authority (CASA) Civil Aviation Advisory Publication CAAP 92-2(2) *Guidelines for the establishment of on-shore helicopter landing sites (February 2014)*;
- International Civil Aviation Organisation ICAO Annex 14 Aerodromes – Volume II: Heliports (4th edition July 2013) – herein referred to as ICAO Annex 14-II; and
- Civil Aviation Safety Authority NPRM 1304OS Regulation of aeroplane and helicopter 'ambulance function' flights as Air Transport Operations.

Paragraph 4.6 of CAAP 92-2(2) states:

> '*In keeping with its submissions to ICAO on this topic, CASA recommends owners and operators of an HLS who intend to develop and operate a heliport for the purposes of RPT or Charter operations refer to, and comply with, the SARPs* [standards and recommended practices] *as set out in Annex 14.*'

Per NPRM1304OS, CASA has signalled its intention to create legislation treating emergency medical transport operations in a similar category to RPT and Charter.

Until there exists legislation to the contrary, it is for the relevant service provider, or any operator into and out of RPH, to determine the appropriateness of the RPH HLS facilities and flight path protection. The pilots of the helicopter service currently operating the ambulance services (CHC Helicopter Services) and DFES have stated to EMHS and REHBEIN Airport Consulting that the flight paths must be protected in accordance with ICAO Annex 14 for them to safely conduct flights to and from the RPH HLS. It will, therefore, be for the current helicopter operators and DFES to approve any deviation from the ICAO Annex 14 specifications.

3. HELICOPTER CHARACTERISTICS

The critical characteristics of the design helicopter dictate the physical characteristics of the airspace required to be protected in order to ensure safe operations in a non-normal operating situation (i.e. with one engine inoperative), by reference to the relevant standards and guidance. These characteristics include the helicopter D-value (largest overall length/width) and the main rotor diameter.

The PSNK report v180424 determines flight path characteristics based on a design helicopter with a D-value of 21.0 metres and main rotor diameter of 15.0 metres.

DFES has subsequently advised that the emergency flight path airspace needs to accommodate a design helicopter with a main rotor diameter of 16.5 metres. This is larger than the design helicopter rotor diameter used for the PSNK report and requires a wider overall width of OLS (165 m vs. 150 m).

4. OLS EXTENTS

The PSNK report is predicated on obstacle limitation surfaces (OLS) dimensions for the flight paths as follows. These extents are not compliant with ICAO Annex 14-II requirements, as noted below.

4.1 North-east Flight Path OLS

The north-east flight path OLS (Figure 6 in the PSNK Report – reproduced below) extends a distance of approximately 1,600 metres. The minimum distance for Performance Class 1 OLS is 3,386 metres, per attached extract of ICAO Annex 14-II, Table 4-1.

The PSNK flight path also includes two (2) curved segments. ICAO Annex 14-II only permits one (1) curved portion:

> 4.1.6 In the case of an approach surface involving a turn, the surface shall not contain more than one curved portion.
>
> 4.1.19 In the case of a take-off climb surface involving a turn, the surface shall not contain more than one curved portion.

This requirement is described in the PSNK report and has been applied to the south-west flight path OLS but does not seem to have been adopted for the north-east flight path OLS.[1]

4.2 South-west Flight Path OLS

The south-west flight path OLS is shown in the PSNK Report (Figure 7 – reproduced below) extending a distance of approximately 850 metres, to the Swan River. The remainder of the south-west flight path length (if it was defined by PSNK) is not shown in the PSNK Report. However, by definition above, having already adopted a curved segment on departure from the helipad, the remaining length of 2.5 kilometres approximately would need to be straight in order to comply with ICAO Annex 14-II specifications. Alternatively the curved portion on departure would need to be removed in order to accommodate a curve further out.

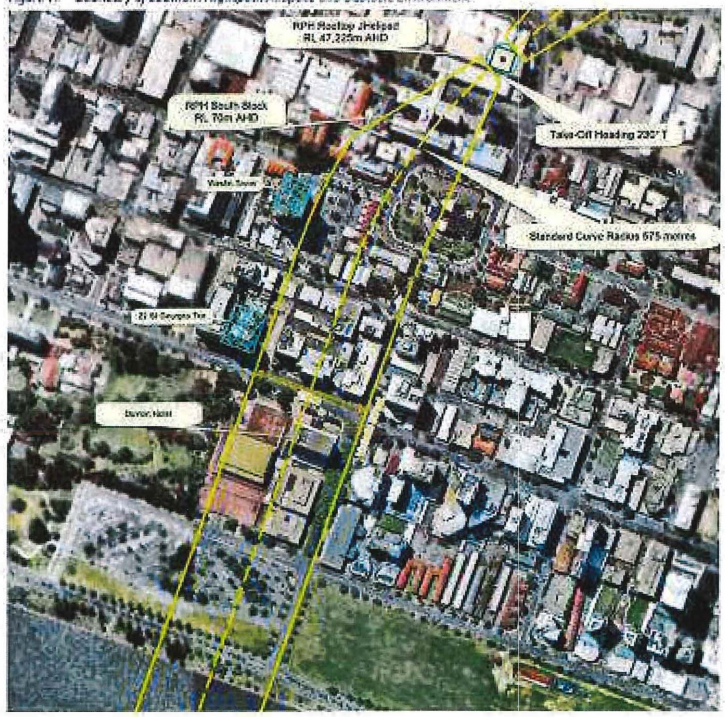
[1] A subsequent version of the PSNK Report (190527) appears to address the limitation to a single curved section, but does not extend the flight path protection to the required length

Figure 6: Airspace extent for northern and southern flightpath tracks



Source: PSNK Report V180424

Figure 7: Boundary of Southern Flightpath Airspace and Obstacle Environment



Source: PSNK Report V180424

5. OLS SLOPES

Annex 14-II specifies the slope design categories which apply to different helicopter performance class operations. For performance class 1 operations, the slope design category is A, and the required slope is 4.5%, per Annex 14-II Table 4-1 and Figure 4-6 (attached).

ICAO Annex 14-II also describes how the inner edge of the 4.5% slope may be raised in order to clear close in obstacles (see Figure 4-4, attached). Raising the inner edge is permitted under Annex 14-II with approval from the appropriate authority.

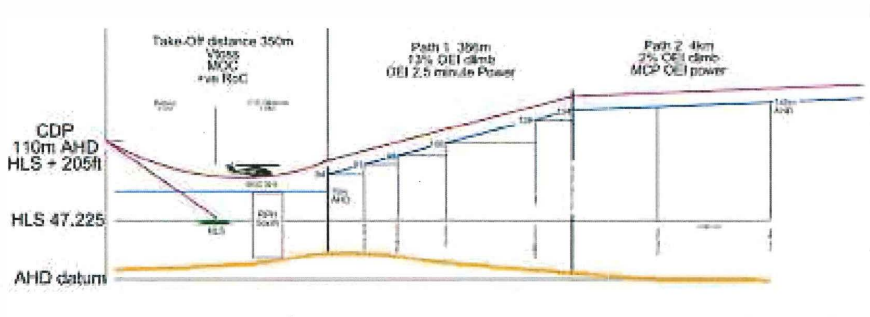
> 4.1.15 The elevation of the inner edge shall be the elevation of the FATO at the point on the inner edge that is intersected by the centre line of the take-off climb surface. For heliports intended to be used by helicopters operated in performance class 1 and when approved by an appropriate authority, the origin of the inclined plane may be raised directly above the FATO.

In Australia currently, the appropriate authority would be the pilot-in-command/Chief Pilot of the helicopter operator, as the responsibility under the available regulations (*Civil Aviation Regulations 1998*) for the safety of operations lies with the operator.

The 4.5% OLS slope specified in ICAO Annex 14-II is a generic slope intended to protect for a wide range of helicopter operating capabilities and conditions. It forms an internationally accepted 'standard' which provides a quantifiable degree of certainty around the obstacle environment.

In our experience, helicopter operators providing emergency medical transport generally expect a 4.5% slope to be protected, as a minimum. For reference the Ministry of Health policy in NSW and Queensland Health guidelines both require a 4.5% slope commencing at the helipad elevation. The Department of Health and Human Services guidelines in Victoria require protection of (RPH-equivalent) helipads with a horizontal segment at the helipad elevation for the first 240 metres, followed by a 4.5% slope for 3,386 metres.

The PSNK report includes a technical analysis demonstrating that the AW139 helicopter, on a representative operating day of 40°C can exceed the 4.5% slope during the early part of the one engine inoperative climb (part of Figure 15 – reproduced below. This is a specific analysis for a particular helicopter type (which we have not verified but assume to be accurate).



Source: PSNK Report V180424 Figure 15 (part)

Although in common use for emergency medical transport operations, The AW139 is not the only type that might operate to the RPH helipad. DFES has noted in consultation that use of the helipad by a range of potential helicopter types must be protected into the future. DFES is not able to specify or guarantee the helicopter type or capability in soliciting future service providers.

While it may be sufficient for current operations to protect the slopes identified in the PSNK report, instead of the 4.5% required by ICAO, this may not be sufficient to ensure future operations.

6. FLIGHT PATH APPROVAL

Under Civil Aviation Regulation 92-2 and Civil Aviation Advisory Publication 92-2(2) a person must not land an aircraft on, or engage in conduct that causes an aircraft to take-off from, a place unless that place is suitable for use for the purposes of the landing and taking-off of aircraft. The assessment of suitability lies with the pilot, including in particular the flight paths available for use in a one engine inoperative or other emergency situation.

Day-to-day approval of the RPH flight path obstacle clearances therefore comes from the Chief Pilot/s of the respective organisations which are required to operate there in providing emergency medical transport services (refer **Section 2**).

However, as custodian of the aeromedical services contract, we suggest DFES would be the appropriate overarching approval authority, in consultation with current and potential future helicopter operators and, at its discretion, CASA. We would expect that consultation to result in adoption of the current CASA guidance and ICAO Annex 14 Volume II specifications for obstacle limitation surface dimensions, geometry and slope.

Yours faithfully
For and on behalf of
LAMBERT & REHBEIN (SEQ) PTY LTD

B.J. HARGREAVES M.Eng, M.Sc, C.Eng MICE, MIEAust, CPEng, RPEQ
SENIOR ASSOCIATE

Enc: ICAO Annex 14 Volume II Table 4-1
ICAO Annex 14 Volume II Figure 4-6
ICAO Annex 14 Volume II Figure 4-4

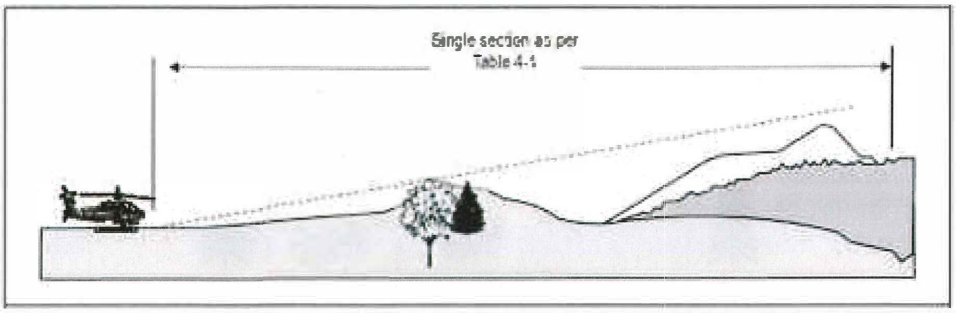
Table 4-1. Dimensions and slopes of obstacle limitation surfaces for all visual FATOs

SURFACE and DIMENSIONS	SLOPE DESIGN CATEGORIES		
	A	B	C
APPROACH and TAKE-OFF CLIMB SURFACE:			
Length of inner edge	Width of safety area	Width of safety area	Width of safety area
Location of inner edge	Safety area boundary (Clearway boundary if provided)	Safety area boundary	Safety area boundary
Divergence: (1st and 2nd section)			
Day use only	10%	10%	10%
Night use	15%	15%	15%
First Section:			
Length	3 356 m	245 m	1 220 m
Slope	4.5% (1:22.2)	8% (1:12.5)	12.5% (1:8)
Outer Width	(b)	N/A	(b)
Second Section:			
Length	N/A	830 m	N/A
Slope	N/A	16% (1:6.25)	N/A
Outer Width	N/A	(b)	N/A
Total Length from inner edge (a)	3 356 m	1 075 m	1 220 m
Transitional Surface: (FATOs with a PinS approach procedure with a VSS)			
Slope	50% (1:2)	50% (1:2)	50% (1:2)
Height	45 m	45 m	45 m

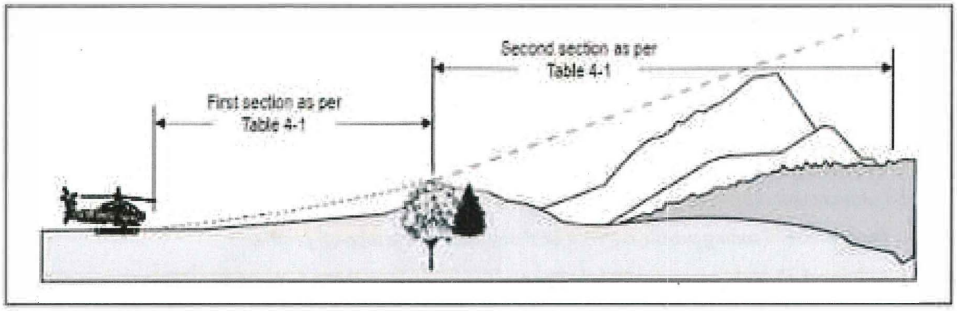
(a) The approach and take-off climb surface lengths of 3 356 m, 1 075 m and 1 220 m associated with the respective slopes, bring the helicopter to 152 m (500 ft) above FATO elevation.

(b) Seven rotor diameters overall width for day operations or 10 rotor diameters overall width for night operations.

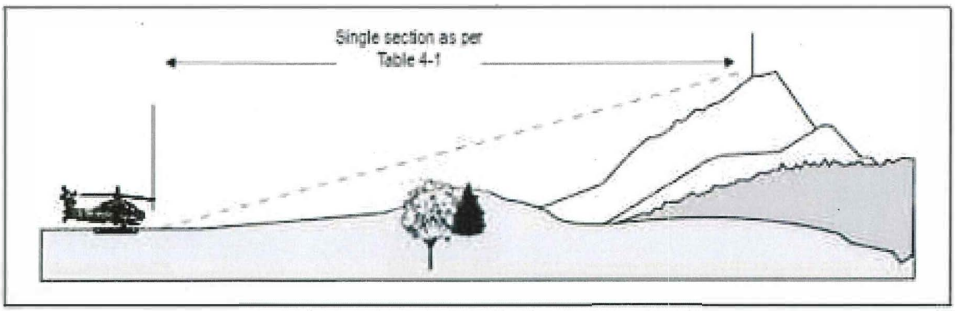
Note — The slope design categories in Table 4-1 may not be restricted to a specific performance class of operation and may be applicable to more than one performance class of operation. The slope design categories depicted in Table 4-1 represent minimum design slope angles and not operational slopes. Slope category "A" generally corresponds with helicopters operated in performance class 1, slope category "B" generally corresponds with helicopters operated in performance class 3, and slope category "C" generally corresponds with helicopters operated in performance class 2. Consultation with helicopter operators will help to determine the appropriate slope category to apply according to the heliport environment and the most critical helicopter type for which the heliport is intended.



a) Approach and take-off climb surfaces - "A" slope profile - 4.5% design



b) Approach and take-off climb surfaces - "B" slope profile - 8% and 16% design



c) Approach and take-off climb surfaces - "C" slope profile - 12.5% design

Figure 4-6. Approach and take-off climb surfaces with different slope design categories

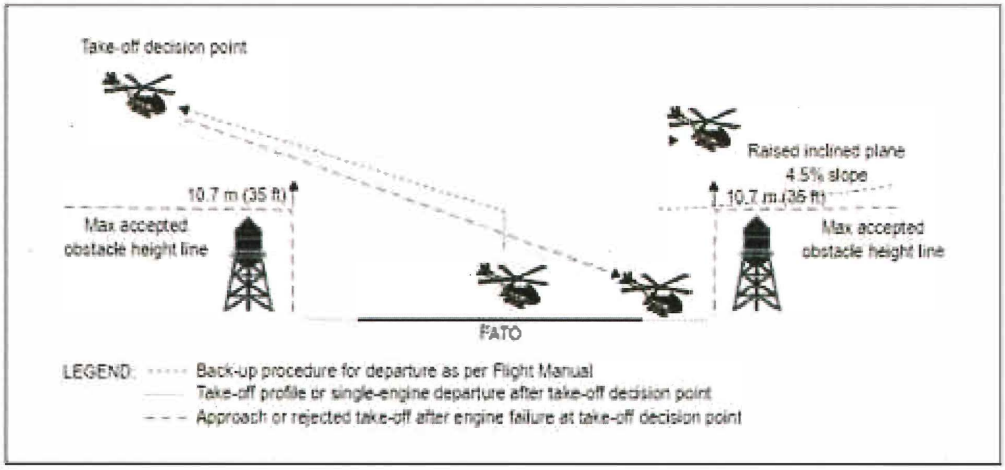


Figure 4-4. Example of raised inclined plane during operations in Performance Class 1

Note 1 — This example diagram does not represent any specific profile, technique or helicopter type and is intended to show a generic example. An approach profile and a back-up procedure for departure profile are depicted. Specific manufacturers operations in performance class 1 may be represented differently in the specific Helicopter Flight Manual. Annex 6, Part 3, Attachment A provides back-up procedures that may be useful for operations in performance class 1.

Note 2 — The approach/landing profile may not be the reverse of the take-off profile.

Note 3 — Additional obstacle assessment might be required in the area that a back-up procedure is intended. Helicopter performance and the Helicopter Flight Manual limitations will determine the extent of the assessment required.

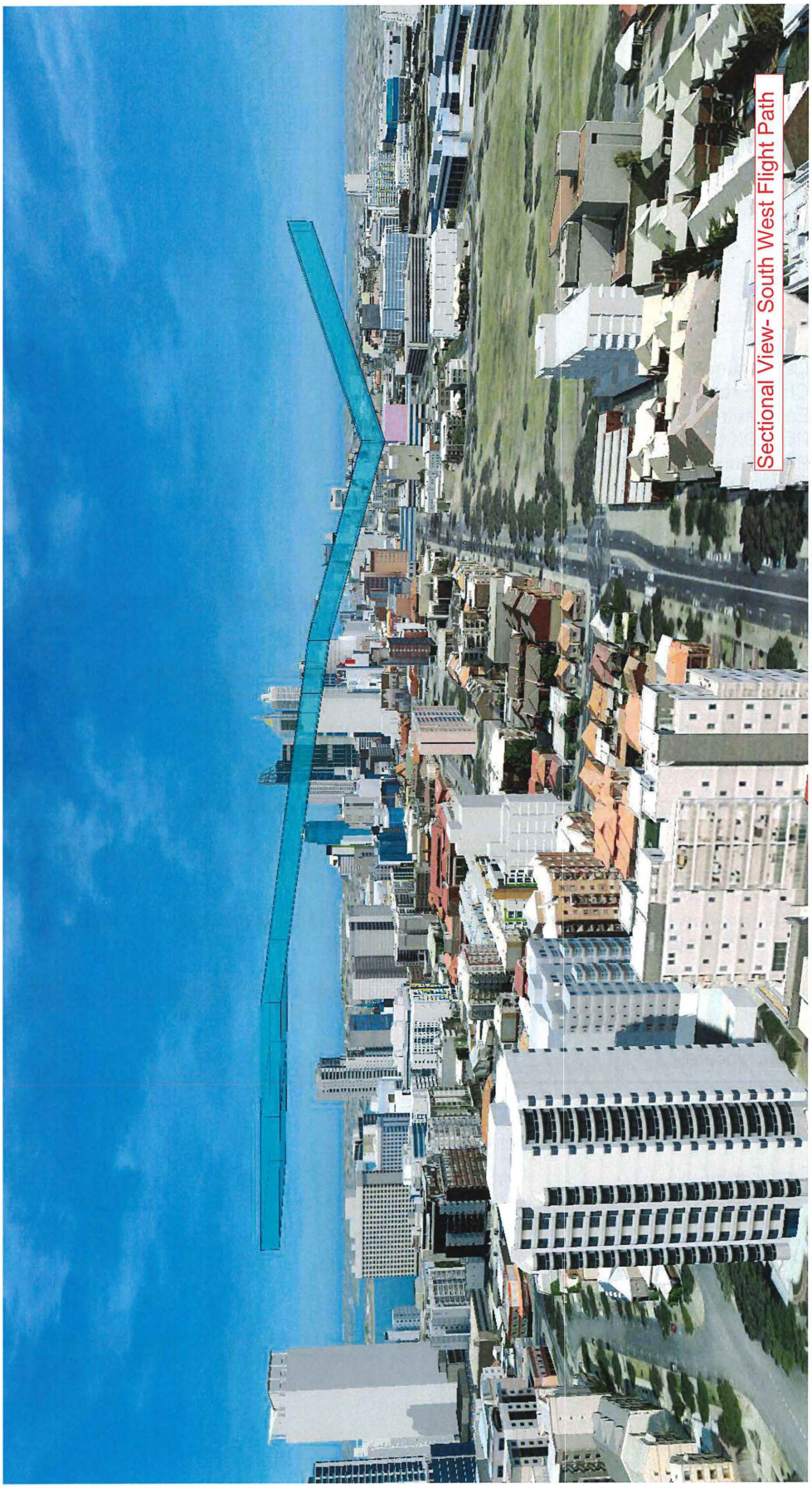
element.

Appendix 6

Central Perth Planning Committee Meeting (3 September 2018)


Plan View - North East and South West Flight Paths


3D View - North East Flight Path


Sectional View- South West Flight Path

GOVERNMENT OF WESTERN AUSTRALIA

Western Australian Planning Commission

Your ref: N/A
Our ref: DP/11/01552
Enquiries: Tyrone Desai (6551 9638)

Liz MacLeod
Chief Executive
East Metropolitan Health Service
PO BOX 8172
Perth Business Centre
PERTH WA 6849

Dear Ms MacLeod

CENTRAL PERTH PLANNING COMMITTEE MEETING – ROYAL PERTH HOSPITAL HELIPAD FLIGHT PATHS

The amended proposal for the Royal Perth Hospital Helipad flight paths was considered by the Central Perth Planning Committee on 3 September 2018 where the following resolution was passed:

That the Central Perth Planning Committee resolves to;

1. *provide support for the amended flight paths as detailed in Attachment 1;*
2. *provide support for the lodgement of a Development Application relating to the proposed helipad and helicopter flight paths; and*
3. *provide support for the preparation of a scheme amendment to protect the proposed flight paths from future development.*

If you have any queries regarding this advice, please contact Tyrone Desai on 6551 9638 or Tyrone.Desai@dplh.wa.gov.au

Yours sincerely

Sam Fagan
Secretary
Western Australian Planning Commission

7 September 2018

Postal address: Locked Bag 2506 Perth WA 6001 Street address: 140 William Street Perth WA 6000
Tel: (08) 6551 8002 Fax: (08) 6551 9001 info@dplh.wa.gov.au www.dplh.wa.gov.au
ABN 35 482 341 493
wa.gov.au


Attachment 1

element.

Appendix 7

Letters of Support (previous indicative flight paths)

Metropolitan Redevelopment Authority

RECEIVED 6/6/18 Reg # 1203

31 May 2018

Ms Elizabeth MacLeod
Chief Executive Officer
East Metropolitan Health Service
PO Box X2213
PERTH WA 6847

File No: MRA-09705
Doc Id: A563193

Dear Ms MacLeod

PROPOSED ROYAL PERTH HOSPITAL HELIPAD AND FLIGHT PATHS

I write in relation to your correspondence received on 7 May 2018 regarding the proposed Royal Perth Hospital (RPH) helipad upgrade and associated flight paths.

The Metropolitan Redevelopment Authority (MRA) understands two designated flight paths have been identified, in accordance with emerging Civil Aviation Safety Authority (CASA) regulations. The proposed northern flight path will pass through a portion of the MRA's Central Perth Redevelopment Area, including portions of Claisebrook Village (at a minimum flight height of 60m) and the East Perth Power Station (at a minimum flight height of 150m).

I can advise that the MRA supports in-principle the proposed northern flight path, as indicated in Attachment 1 to this letter. It is requested that the Department of Health continue to work to minimize impacts on potential development options for the identified sites in the context of ensuring safe flight paths. Please advise the MRA of the final designated flightpaths, so that the MRA can inform prospective purchasers of sites such as the East Perth Power Station that the lots are situated in the vicinity of a designated helicopter flight path route.

The MRA encourages Department of Health to continue to liaise with the City of Perth regarding the southern flightpath.

Thank you for the opportunity to comment on the proposal and should you have any further queries regarding this matter please contact Ms Conor Ward on 6557 0781 or via email conor.ward@mra.wa.gov.au.

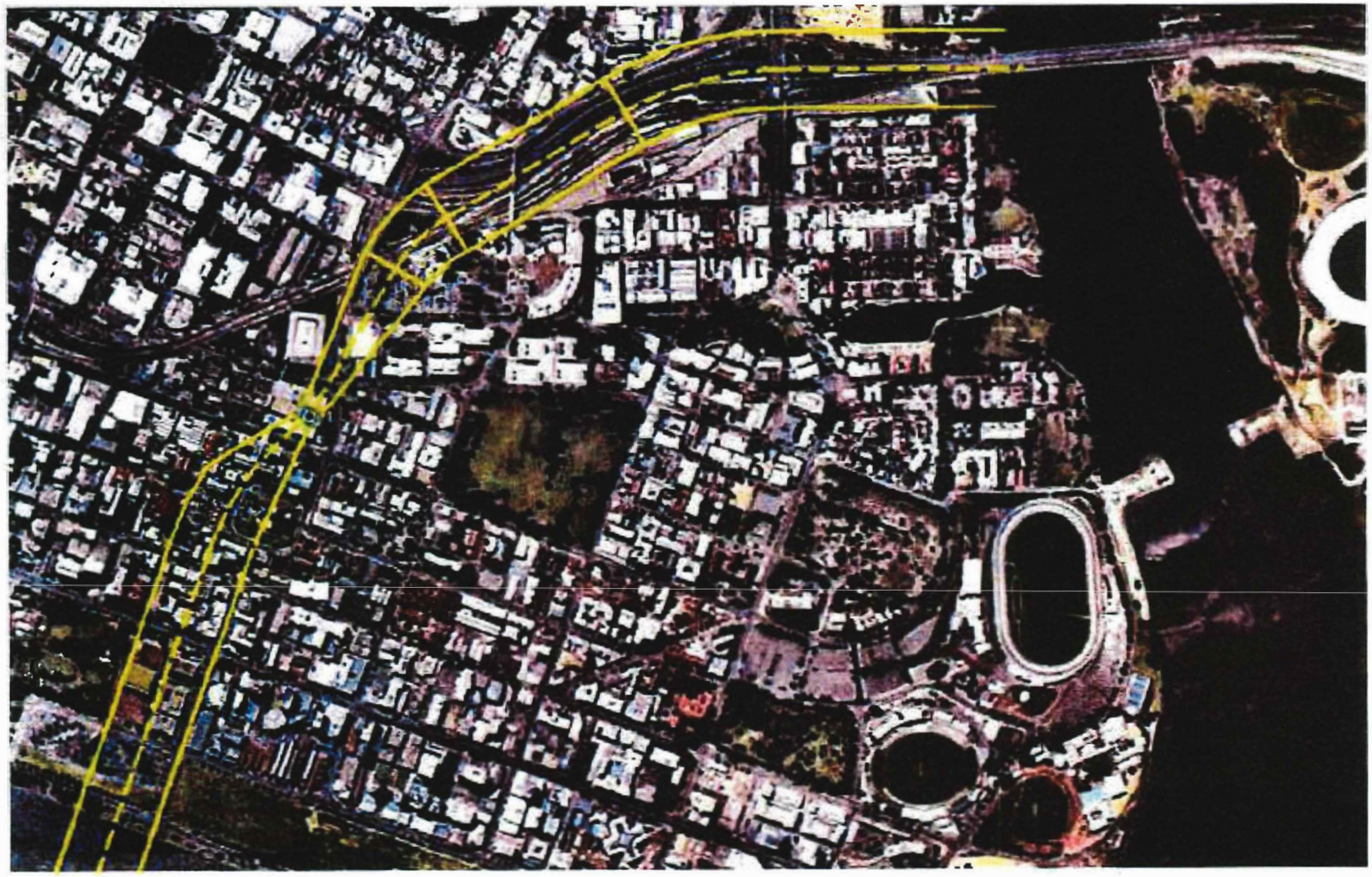
Yours sincerely

Ryan Keys
Executive Director Planning

Att Attachment 1 – Proposed Flight Paths

HEAD OFFICE GPO Building Level 1, Forrest Place, Perth WA
PO Locked Bag 8, Perth Business Centre, WA 6849
T +61 (08) 6552 0700 E reception@mra.wa.gov.au
F +61 (08) 9221 6020 W www.mra.wa.gov.au
ABN 69 902 571 142

Attachment 1 – Proposed Flight Paths (from 'Royal Perth Hospital Helipad Strategic Overview' prepared by PWC April 2018)



CATHOLIC ARCHDIOCESE OF PERTH

Administration Centre

23 August 2018

Mr Brad Caldwell
Director
PricewaterhouseCoopers
GPO Box D198
PERTH WA 6840

Dear Mr Caldwell

Proposed Royal Perth Hospital Helipad and Flight Paths

Further to your recent correspondence I am writing to confirm the following:

The Roman Catholic Archbishop of Perth:

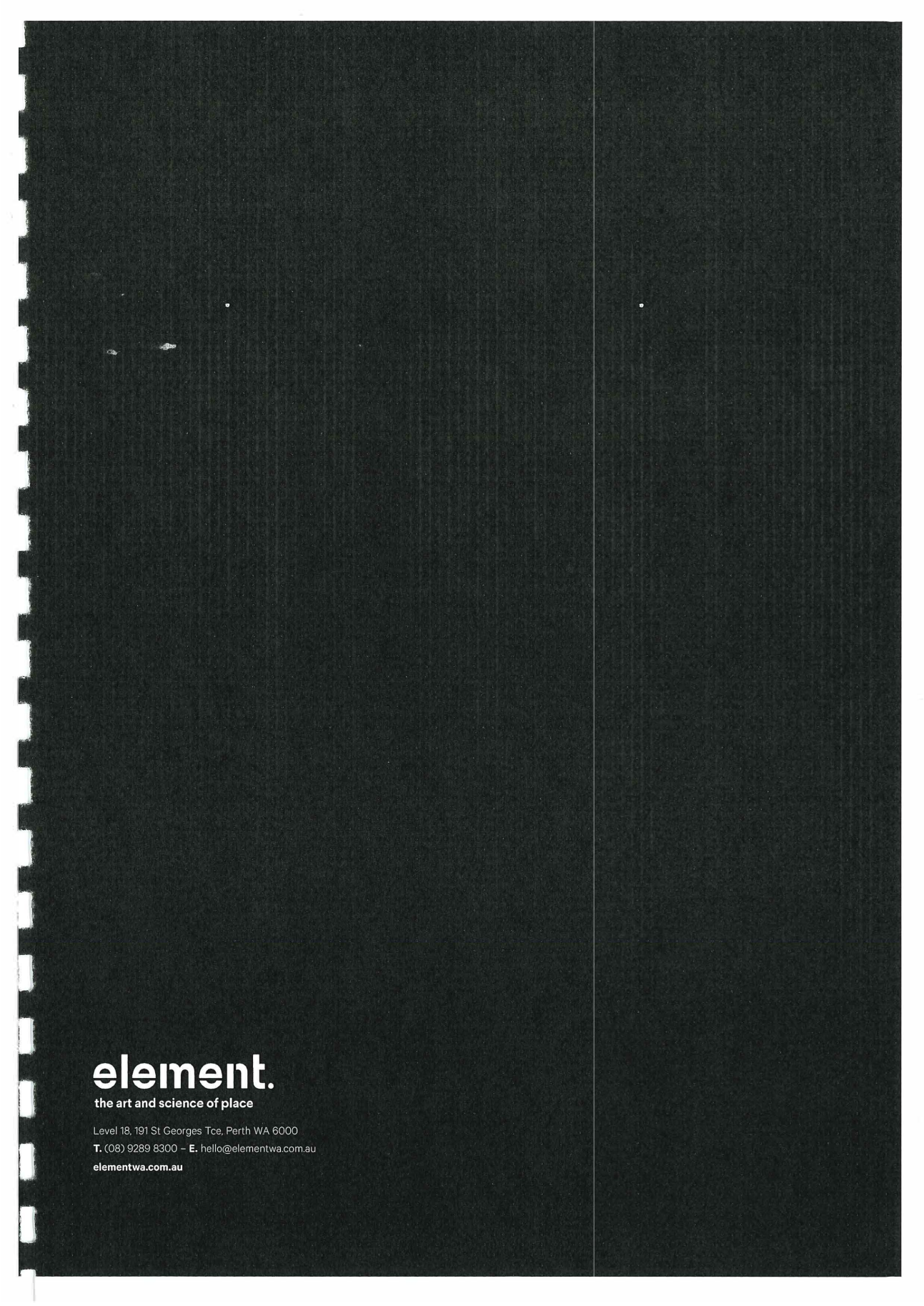
- is the owner of a number of significant properties located within the 'Victoria Square Precinct'.
- is a stakeholder and neighbour of the Royal Perth Hospital
- supports in-principle, the proposed relocation of the existing helipad
- understands the relocation of the helipad is necessary to accommodate the new heavier helicopters being purchased to replace the existing helicopters currently in operation
- acknowledges the proposed protected flight path associated with the helicopter service is required for the service to continue providing this critical service to the community during "emergency" conditions and at other times flight paths will be dictated, as they are now by climatic conditions.

If you have any further queries, please do not hesitate to contract the Catholic Administration Centre.

Yours sincerely

Theresa Carroll
Manager Property

Address: Griver House, Administration Centre, 249 Adelaide Terrace, Perth WA 6000, Australia
Mailing Address: GPO Box M962, Perth WA 6843
Telephone: +61 8 6104 3600
Facsimile: +61 8 6162 0345
Email: admin@perthcatholic.org.au
Website: www.perthcatholic.org.au


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PLANNING AND DEVELOPMENT ACT 2005

RESOLUTION TO AMEND LOCAL PLANNING SCHEME

CITY OF PERTH

LOCAL PLANNING SCHEME NO. 26

AMENDMENT NO. 5

RESOLVED that the local government, pursuant to section 75 of the *Planning and Development Act 2005,* amend the above Local Planning Scheme by:

1. Amending clause 1.6.2 as follows:

   'Where a provision of this Scheme is inconsistent with a provision of the City Planning Scheme, the provision of this Scheme prevails, except where development is located within Special Control Area No. 33 Royal Perth Hospital Flight Path Protection.'

The amendment is complex under the provisions of the *Planning and Development (Local Planning Schemes) Regulations 2015* for the following reason:

- **the amendment will have an impact that is significant relevant to development in the locality.**

FORM 6A
COUNCIL ADOPTION

This Complex Amendment was adopted by resolution of the Council of City of Perth at the Ordinary Meeting of the Council held on the 27 **day of** September 2022



LORD MAYOR

CHIEF EXECUTIVE OFFICER

COUNCIL RESOLUTION TO ADVERTISE

By resolution of the Council of the City of Perth at the Ordinary Meeting of the Council held on the 27 **day of** September **,** 2022 **, proceed to advertise this Amendment.**



LORD MAYOR

CHIEF EXECUTIVE OFFICER

COUNCIL RECOMMENDATION

This Amendment is recommended for support / not to be supported by resolution of the Council of the City of Perth at the Ordinary Meeting of the Council held on the _____ day of _____, _____, and the Common Seal of the City of Perth was hereunto affixed by the authority of a resolution of the Council in the presence of:

LORD MAYOR

CHIEF EXECUTIVE OFFICER

FORM 6A CONTINUED

WAPC ENDORSEMENT (r.63)

_____

DELEGATED UNDER S.16 OF THE *P&D ACT 2005*

_____

DATE

APPROVAL GRANTED

_____

MINISTER FOR PLANNING

_____

DATE



DRAFT

Planning Policy Manual – Part 1

Section 2.1 Applications

NOTE: Proposed Amendments are Shown in Red – pgs. 13-14



Version #	Decision Reference	Synopsis
1	26 June 2001	Adopted
2	30 August 2011	Amended
3	26 February 2013	Amended
4	13 December 2016	Amended
5	11 April 2017	Amended
6	To be inserted	Amended



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AIM

The aim of this policy is to detail the requirements for the submission of an 'application' (as defined by the City Planning Scheme No. 2 as amended) for development approval.

Clause 61 of the Deemed Provisions identifies development for which approval is not required.

POLICY INTENT

This policy provides direction on the level of information and detail to be provided as part of an application for development approval, as follows: -

1. Application forms and fees
2. Application format
3. Accompanying information for general applications
4. Technical reports
5. Applications of a minor nature

Prior to designing their proposal, the applicant should be familiar with the following:-

- City Planning Scheme No. 2 requirements;
- Relevant state, environmental or planning policies;
- Relevant design principles, guidelines and policies.
- The Deemed Provisions; and
- The Supplemental Provisions contained in Schedule A to the Deemed Provisions.

In some instances following an initial assessment, the need for additional plans and information may be identified and requested by the local government in order to properly determine the application.

An applicant should contact the local government's Planning Officers and the City Architect as early as possible in the design process particularly in regard to any major proposals or sites with heritage issues.



1.0 APPLICATION FORMS AND FEES

Specific information is required to accompany an application for development approval. In order for a detailed assessment to be made in a timely manner, all application forms, fees in accordance with the local government's adopted fee schedule, plans and supporting documentation are to be submitted at the time of lodging an application. If an application is incomplete it is not deemed to be a valid application and accordingly will not be processed.

A completed MRS Form 1 and a completed 'Application for Development Approval' form in accordance with clause 86 of the Deemed Provisions are to be submitted together with the application fee and a completed and signed checklist. In addition, where an advertisement/sign is proposed, the additional form in clause 86 '*Additional information for development approval for advertisements*' will need to be submitted.

The forms are to be accompanied by such information as required under the City Planning Scheme No.2 and clause 63 of the Deemed Provisions.

The submissions of the original forms are to be signed by the owner(s) of the land/property. Owner is defined in the Deemed Provisions.

If signing the forms on behalf of the owner(s) of the land a letter of authorisation signed by the owner(s) must be provided. In the instances where a company (or companies) is the owner(s), a Director of each company may sign the forms, printing their full names and stating their position title.

Any proposal affecting common property areas in strata titled development is signed by all strata owners or alternatively is signed by the secretary of a Body Corporate provided the Body Corporate has the written authority to act as a representative agent on behalf of the individual strata owners. A copy of the agreement from the Body Corporate as well as a copy of the Body Corporate minutes must be attached to the application forms.

A current copy of the Certificate of Title (no older than 6 months from date of lodgement) including the diagram, is required to be submitted with the application in order to provide evidence of ownership, to confirm the details and dimensions of the lot/s and to indicate if there are any encumbrances on the title.

Development Assessment Panel Applications

Should an application be required to be determined by a Development Assessment Panel (DAP), the applicant will need to lodge a DAP application form together with the new DAP determination fee. The MRS Form 1 and forms referred to in clause 86 of Deemed Provisions and the local government's fee will also be required. Schedule 1 of the Planning and Development (Development Assessment Panels) Regulations 2011 outlines the fees for DAP applications.

Should the applicant choose to have their application determined by a DAP, the applicant is also required to submit a DAP application form and DAP determination fee where appropriate.

In either case the applicant will be required to make an appointment with a local government's Planning Officers to submit their DAP application form, supporting documentation and fees.



2.0 APPLICATION FORMAT

All applications are to be submitted in two formats, being digital and hard copy as detailed below.

2.1 Hard Copies

Each application is to be accompanied by copies of the plans, drawings, photographs and detailed reports as required by the local government. The number of copies shall be determined by the local government.

2.2 Digital Information

All applications are to be submitted in a digital format (JPEG for images and Adobe PDF for plans). This includes a copy the forms, plans and supporting documentation.

Additional or updated information supplied after the original application is lodged shall be provided in both hard and digital format.

Please note that a digital survey plan of the site is required to be submitted in a data exchange format (or CAD format) as determined by the local government.

2.2.1 3D Digital Model

All new buildings and major alterations and additions to the exterior of an existing building require a 3D digital model to be submitted in a format to be determined by the local government.

In general, relatively minor applications outlined in Section 5 of this policy will not require a 3D digital model.

If post approval, the applicant seeks to amend the development (as approved) the applicant must resubmit a 3D digital model incorporating such amendments.

2.3 Digital Rights Management Policy for 3D Models and Development Applications

Applicants should refer to the local government's ***'Digital Rights Management Policy for 3D Digital Models and Development Applications'*** which details the treatment of digital information, and have completed and signed the *'Development Application Checklist'* prior to submitting an application.



3.0 ACCOMPANYING INFORMATION FOR APPLICATIONS

The specific requirements for each application will vary with the nature of the proposal, its complexity and location.

3.1 Plans/ Drawings/ Photographs

The following will generally be a minimum requirement for each application:

3.1.1 Location Plan

This plan should include a north point and be drawn to a scale of at least 1:1000 and clearly identify the dimensions and area of the subject site in the context of its locality.

3.1.2 Site analysis /feature survey plan(s)

The plan(s) should include a north point and illustrate existing site conditions and the relationship of the proposal to surrounding land and buildings. It should also be drawn to a standard scale of 1:100 or 1:200. The plan(s) should indicate the following: -

(a) All boundaries and area dimensions – (to be consistent with the attached Certificate of Title of the subject site);

(b) Street names and lot numbers;

(c) The location of any easement(s) within the site;

(d) Existing and natural ground levels and proposed levels of the site to an established Australian Height Datum (AHD) datum, including 0.5 metre contour intervals and spot heights (where applicable);

(e) The location, height and proposed use of any existing buildings and/or structures to be retained and any existing buildings and/or structure to be removed;

(f) The outline and height of any buildings proposed;

(g) The location and height of buildings on adjoining properties, including the location of any major openings, or private open spaces, recreational areas (pools or courtyards) and floor levels situated adjacent to the side and rear boundaries of the subject site;

(h) Existing and proposed means of access for vehicles to and from the site, including the location and dimensions of any existing or proposed crossovers;

(i) The type and height of boundary fencing/retaining walls on the subject site;

(j) The location, dimensions, design and details of any existing and proposed landscaped areas;

(k) Views and vistas;

(l) Existing trees (over three metres in height) on the site proposed to be retained or removed;

(m) Noise sources;



(n) Street verges, street trees, power/light poles, street furniture; adjacent footpaths including levels, kerbing, road islands, bus shelters or one way traffic routes adjacent to the site and any other obstructions which restrict access to the site;

(o) Location of services and drainage, including storm water, sewer, gas, telecommunications, potable and fire water, hydrants and adjacent booster cabinets; and

(p) Additional information particular to the site that would help to set the context for the locality within which the development is proposed.

3.1.3 Design Plans

These plans are to be drawn to a standard scale of 1:100 or 1:200. Please note that the building heights are to be measured in metres from the AHD. These plans should include the following: -

(a) **Site plan(s)** indicating the existing development on site and a building footprint of the proposed development and the proposed internal finished ground floor level(s) and external ground/ paving levels indicated in AHD, vehicle access ways, location of fire escapes (where appropriate), pedestrian paths, landscaped areas, proposed retaining wall and fencing (including height levels in AHD and top of wall calculations), the location of any existing street trees and street furniture, and the outline of the buildings on the adjacent sites indicating the location of any openings.

(b) **Floor plans** for each floor of the proposed development or for each typical floor level, and the proposed finished floor levels for each floor level. These plans should delineate the site boundaries and setback requirements of the CPS2 including policies, guidelines and where appropriate, the R- Codes. Each floor plan should also identify the existing and proposed use of the area, window and door openings. Proposed alterations to existing buildings must clearly indicate the existing building layout and what changes are proposed to the building. The corresponding floor levels and any major openings of adjoining buildings are also required to be submitted.

(c) Each floor plan should indicate the amount of floor space dedicated to each use such as retail, office or residential. The total amounts of floor space for each use should also be provided.

(d) A roof plan indicating the location of plant and service equipment will also be required.

(e) The appropriate plans shall show the proposed car parking layout including the location, numbered and dimensions of vehicle bays, aisle widths; vehicle circulation patterns and means of vehicle access, including the width of any crossover(s). The provision of bicycle bays and the details of end of trip facilities to be identified. Other special purpose bays including motor cycle, delivery and service vehicles, and universal bays are also required to be identified. In regards to on site servicing of commercial buildings, the plans should depict the location and dimensions of any area proposed to be provided for the loading and unloading of vehicles and the means of access to and from those areas.



(f) **Elevation drawings** of each elevation of the proposed development (sides, rear and front), delineating the proposed colours, materials and finishes, roof pitches, windows (clear and/or obscured). Proposed alterations to existing buildings must clearly indicate what changes are proposed to the facades. The building height dimensions to be in metres.

(g) Street elevations drawn showing the proposed development and the whole of the existing development on each lot immediately adjoining the land the subject of the application, and drawn as one continuous elevation.

(h) In particular, proposed locations of all extraneous services including fire booster cabinets, fire hydrants, air conditioner units and pipe work and associated details are to be provided on drawings submitted.

(i) **Sections** through both the length and width of the development, including floor to ceiling heights and any proposed basement levels are to be provided.

(j) **Landscape details**– indicating the location, dimensions, and design of any proposed landscaping area. This information may be included as part of the site or ground plan. Further details may be required at the Building Licence stage.

(k) **Overshadowing plan** - in order to ascertain overshadowing implications of proposed developments which may impact on the availability of sunlight onto adjoining properties or public spaces, a shadow cast diagram will be required indicating the shadow cast by the development at 9am, midday, and 3pm on the winter solstice (21 June) and on the equinox. The shadows cast by any adjacent buildings are to be identified separately and the cadastral boundaries, streets and the outline of the surrounding buildings are required to be included in the diagram. This information may also be provided as part of the applicant's submitted 3D digital model.

3.1.4 Photomontage and/or coloured perspectives

At least one photomontage superimposing the proposal into the streetscape, or a colour perspective of the proposed development showing the street elevation(s) of the proposal from a pedestrian perspective being submitted (including A4 and A3 coloured copies). The perspective/photomontage should include the adjacent buildings for the purpose of showing the proposal in context within the streetscape and any impacts on critical/sensitive views from both the public and private domain. Other views may be included if helpful to the assessment of the proposal.

3.1.5 Signage Strategy

Where a new building, substantial changes to an existing building or signage on a place on the Heritage List are proposed and there will be/are multiple tenants a Signage Strategy is required to be submitted with an application to demonstrate that signage has been given appropriate consideration and will be integrated within the building design and/or coordinated across a site.

The Strategy should include details of the location, type, size, method of illumination and total number of signs that are intended for a proposed development and details of the sign



content if known. Where a Strategy relates to a place on the Heritage List or within a Heritage Area it should also indicate proposed materials, colours and fonts. Plans and drawings should be to a standard scale of 1:50 or 1:100.

3.2 Planning Report

Each application should be accompanied by a Planning Report, which will include a written explanation of the project. The purpose of this is to provide specific details relevant to the site to accompany the Site Analysis Plan and Proposed Design Plans. It is intended to explain design principles and concepts that have informed the proposed development and to demonstrate that the proposal has emerged from a full assessment of a site's characteristics and circumstances including the surrounding locality.

In reporting on the proposed development an applicant needs to provide information on the following: -

3.2.1 Site Description and Context

A description of the existing situation including:-

(i) location;

(ii) property and tenure;

(iii) the current uses of the site;

(iv) the current buildings located on the site;

(v) an analysis of existing site conditions;

(vi) site context; and

(vii) any history relating to the development of the site to date (if any) or details of any heritage significance and listings of the buildings or place.

3.2.2 Proposed Development

Outline the nature and details of the proposed development, including an Architectural Statement indicating particular design concepts/ elements where appropriate, and how the development incorporates environmentally sustainable principles into the design.

Outline the key opportunities and constraints for the proposed development that have affected and/ or constrained the proposed design outcomes.

3.2.3 Planning Considerations, Policies and Development Control

Outline how the proposal meets with all relevant development requirements and standards, therefore providing the planning considerations for the site including:-

(i) City Planning Scheme No. 2, Minor Town Planning Schemes and Local Planning Schemes;

(ii) the Deemed Provisions;

(iii) the Supplemental Provisions contained in Schedule A to the Deemed Provisions;



(iv) Planning Policies and Development Guidelines;

(v) Relevant Precinct Plan(s) and Statements of Intent;

(vi) Any relevant local government adopted Planning Study;

(vii) Relevant strategies;

(viii) Any State Planning Policy of the Western Australian Planning Commission (including the R- Codes) if appropriate.

It will be necessary to provide planning justification for any areas of non-compliance with any development requirements and standards.

3.2.4 Plot Ratio Calculations

Details of the calculations of the proposed plot ratio are essential and should include an A4 or A3 set of floor plans (to scale – 1:100 or 1:200) indicating the areas included in the plot ratio floor area calculations. Justification for any plot ratio bonus or transfer thereof in accordance with clauses 27, 28 and 30 of City Planning Scheme No. 2 and any relevant Planning Policies should be provided.

3.2.5 Bonus Plot Ratio Applications

In the case of applications seeking bonus plot ratio, additional documentation will be required to be submitted in order to assess compliance with the bonus plot ratio provisions of City Planning Scheme No. 2 (refer clause 28). Specific details of the required documentation are contained within the Bonus Plot Ratio Policy.

3.2.6 Transfer of Plot Ratio

Transfer of plot ratio takes place in two stages. Firstly a request for approval of a place as a donor site is initiated by the landowner completing the relevant form (Transfer Plot Ratio Donor Site Form). Plans, documentation and information identified by the City Planning Scheme No.2 and the Transfer Plot Ratio Policy will need to be submitted to the local government to assess whether approval shall be granted and identify the quantity of plot ratio transfer.

Once a donor site is listed in the Register of Transfer of Plot Ratio, the local government may approve the use of its transferable plot ratio, in whole or part, at a recipient site. A development application will need to be submitted in addition to information outlined in the Transfer Plot Ratio Policy.



4.0 TECHNICAL REPORTS

Other technical reports prepared by relevant experts may be required to be submitted at the time of lodgement of a development application to address such matters as traffic impacts and parking management, noise impacts, wind impacts, lighting impacts, access audits and heritage assessment.

4.1 Contaminated Sites

Where a development is proposed on a contaminated site, an environmental assessment report is required to be prepared by a qualified environmental consultant, consistent with the 'Contaminated Sites Act 2003' and submitted to the local government for consideration.

4.2 Acid Sulphate Soils

Where a development may be affected by Acid Sulphate Soils, a report to be prepared by a qualified environmental consultant to provide an appropriate level of assessment for the proposed development in accordance with the relevant Local Authority provisions, State Government policy statements and the Environmental Protection Authority standards, and submitted to the local government for consideration.

4.3 Acoustic Report

A report prepared by a suitably qualified acoustic consultant is to be submitted in support of any application for development that may generate a noise impact (i.e.: liquor licensed premises, live or amplified entertainment) or for noise sensitive developments in proximity to noise generating establishments.

The report shall demonstrate how the proposed development has been acoustically assessed and designed for the purpose of minimising the effects of noise intrusion and/or noise emissions. In this regard, residential development should deliver an appropriate level of amenity for residents by attenuating noise between dwellings, other building uses and activities, external noise sources, and from mechanical plant and equipment. Please refer to the Residential Design Policy (Appendix 2 – noise requirements).

For noise sensitive development which will not be situated within close proximity to current noise generating establishments, a preliminary acoustic report may only be required at the time of lodging a development application, with a detailed acoustic report being submitted for approval by the local government, prior to a building licence being submitted.

4.4 Water Sensitive Urban Design and Energy Efficient Design

As part of an application for every new building or major refurbishment of an existing building, applicants will be required to provide a Water Sensitive and Energy Efficient Design Statement undertaken by an appropriate consultant. The development should aim to achieve high energy efficiency ratings in an accredited system for energy efficient building design and maintenance and keep abreast of any relevant legislative requirements including the Building Code of Australia – Energy (Section J). The proposed development should also



incorporate appropriate water sensitive design measures in accordance with the principles outlined in the City Planning Scheme No.2, Policy Manual.

4.5 Traffic and/or Parking Impact and Management

A Traffic and/or Parking Impact Statement report prepared by a suitably qualified transportation planner or engineer will need to be provided for all applications:

(a) seeking additional commercial tenant car parking beyond that permitted under City Planning Scheme No. 2;

(b) for any public car parking proposals or alterations to an existing parking facility;

(c) for any residential development providing in excess of 50 car parking bays;

(d) for any developments that in the local government's opinion are likely to significantly impact on traffic generation/movement and parking within the locality; and

(e) for signage that incorporates animated or variable content and will be visible from a road.

The report is required to assess the impact of the proposal on the local road and traffic network and pedestrian movement and the safety of motorists, cyclists and pedestrians. In the case of applications referred to in (a) to (d) the proximity to public transport should be considered and the cumulative impact of vehicular traffic for specific proposals such as the use of laneways or availability of existing public car parking within the area should also be investigated.

4.6 Universal Access

As part of the application, where appropriate, applicants will be required to provide an Access Statement undertaken by a suitably qualified consultant demonstrating the proposal's consideration of universal access principles and the obligations of the Disability Discrimination Act 1992. The types of information the Access Statement will provide will vary according to the scale, nature and complexity of the proposed development.

Furthermore, all development will be required to comply with the Disability (Access to Premises – Buildings) Standards 2010 and the relevant provisions of the Building Code of Australia (as amended).

4.7 Wind Impact

For development which may impact on the microclimate of the surrounding public realm, a wind impact statement prepared by a suitably qualified consultant will be required to be submitted. For significant high-rise developments (typically when the height is greater than 10 storeys but may be required below this height in some circumstances), the results of a full wind tunnel test will be required to be submitted as part of any application. The report is to identify and analyse the effects of wind conditions on pedestrians within the site, on the street at footpath level and in other areas in the vicinity. The report is to compare and analyse the current situation with the likely impacts created by the new development, and document measures to reduce impacts.



4.8 Cultural Heritage/ Conservation Plans

A heritage impact assessment prepared by a suitably qualified heritage consultant is to be provided with all applications relating to properties:

(a) located or proposed to be in or on a place that has been entered in the Register of Heritage Places under the *Heritage of Western Australia Act 1990*;

(b) entered in the local government's Heritage List; or

(c) located within an existing Heritage Area;

This is also relevant for development that includes the demolition of a building within a Heritage Area.

If the building proposed is a place on the Heritage List, adjacent to a place on the Heritage List or within a Heritage Area, it is necessary to articulate the impact of the proposed development on the heritage place or area. This needs to demonstrate how the proposed development looks to enhance the principles of the relevant Heritage Area or heritage place.

Additional requirements are outlined in the Heritage Policy and the Transfer of Plot Ratio Policy.

4.9 Lighting Impact Assessment

A Lighting Impact Assessment may be required to be submitted for applications that involve lighting that could impact on the amenity of a locality, including signage that incorporates illumination and/or animated or variable content. It should be prepared by a qualified lighting engineer, lighting designer or other appropriately qualified person and assess the light impact that the proposal will have on the public realm and the adjacent building occupants. The assessment should consider the light intensity and impact relative to existing and foreseeable conditions (including environmental conditions and the cumulative impact of lighting in the area) statutory requirements and Australian Standards (including AS 4282-1997), appropriate maximum luminance levels and where applicable the objectives, principles and provisions of the Signs Policy.

4.10 Sign Management Plan

A Sign Management Plan may be required to be submitted for an application that proposes signage with illumination, animated, variable, third party advertising and/or on-premises advertising content. The Plan should identify the operational and content management, maintenance and complaints handling arrangements. Content management should include the establishment of an activity log by the operator which is available to the local government to monitor compliance with any conditions of development approval.

4.11 Royal Perth Hospital Flight Path Protection

An application for development approval within Special Control Area No. 33 – Royal Perth Hospital Flight Path Protection must demonstrate how the application will address considerations outlined in the *National Airports Safeguarding Framework – Guideline H:*



Protecting Strategically Important Helicopter Landing Sites, or any other relevant technical guidelines.

An application for development approval within Special Control Area No. 33 must be accompanied by the following information:

- The location as well as existing and proposed ground levels (AHD) of the subject land;
- The location and height (AHD) of the existing main features, including buildings, structures, trees and other tall features, on the subject land; and
- The location and height (AHD) of proposed buildings, structures, works and equipment (where appropriate);

relative to the height (AHD) of the flight path protection area.

5.0 ACCOMPANYING INFORMATION FOR APPLICATIONS OF A MINOR NATURE

The local government may require less information to be submitted for the following types of relatively minor developments: -

5.1 Minor external alterations and/or additions to existing buildings

In submitting an application for such works the following minimum information is required:

(a) Application Forms and Fees;

(b) Application Format - in most instances a 3D digital model will not be required. However, it is advisable to contact a planning officer to discuss the scope of works being proposed;

(c) Planning considerations, Policies and Development Control;

(d) A plan, properly dimensioned and scaled (1:100 or 1:200), of the site (including any alterations/additions to the existing building footprint);

(e) Design Plans including - plans depicting the existing building and any buildings (or portions of buildings) to be demolished; graphically differentiating between new and existing structures and specifically how the proposal will impact on the existing architectural features, fenestration, doors, main materials, and decorative treatments. Also details on the proposed material, colour and finishes to be employed on new architectural features, fenestration, doors and decorative treatments; and

(f) Plans to include sufficient detail to demonstrate that universal access and facilities will be provided in accordance with the expectations of the Disability Discrimination Act 1992, and the Disability (Access to Premises – Buildings) Standards 2010 as appropriate.

5.2 Change of Use applications

In submitting an application for a change of use, the following minimum information is required:

(a) Application Forms and Fees;

(b) Applications Format - a 3D digital model will not be required;



(c) Planning Considerations, Policies and Development Control;

(d) A plan, properly dimensioned and scaled (1:100 or 1:200), of the site (including any buildings) showing how it is proposed to use the site, and any proposed changes to the site and/or buildings including parking layouts and the total floor area to be occupied by the proposed use(s); and any proposed external alterations;

(e) A written submission on the proposal including the current approved use of the premises, the proposed use of the premises and such details as the hours of operation, number of staff/practitioners, type of liquor licence being sought (where appropriate), and any other details that would assist in the accurate assessment of the use;

(f) Plans to include sufficient detail to demonstrate that universal access and facilities will be provided in accordance with the expectations of the Disability Discrimination Act 1992, and the Disability (Access to Premises – Buildings) Standards 2010 as appropriate.

(g) Details as to whether a licence for the proposed use is required under the Dangerous Goods Act 1985;

(h) Details of the transporting of materials or goods to and from the site;

(i) Consideration of potential adverse impacts of the proposed use on the amenity of the surrounding locality; and

(j) Details of any new signage required for the new use.

5.3 Signs and Advertisements

In submitting an application for advertisements or signs the following minimum information is required:

(a) Application Forms and Fees;

(b) Planning Considerations, Policies and Development Control with particular regard to the Signs Policy;

(c) A properly dimensioned and scaled site plan (1:100 or 1:200) including any building(s) on the site and showing the location of any existing signage and all proposed signs;

(d) Plans showing the dimensions, materials, supporting structure, colours and content of each proposed sign;

(e) Details on any proposed illumination, including animated or variable content; and

(f) A photograph of the site and/or building with the proposed signage superimposed showing the sign in context (including adjoining buildings), is required.

Where an application involves signage on a place on the Heritage List and there will be/are multiple tenants a Signage Strategy should be submitted for approval by the local government if there is not an approved Strategy already in place.

Additional technical reports may be required to be submitted for signage that incorporates animated or variable content and illumination. These reports include, but are not limited to, a Lighting Impact Assessment and a Traffic Impact Assessment.



5.4 Demolition

Clause 37 of City Planning Scheme No. 2 identifies specific provisions relating to the determination of applications. In submitting an application for the demolition of any building or part of a building the following minimum information is required:

(a) Application Forms and Fees;

(b) Application Format - a 3D digital model will not be required;

(c) Planning Considerations, Policies and Development Control;

(d) A plan, properly dimensioned and scaled (1:100 or 1:200), of the site and appropriate plan(s) depicting the existing building(s) and/or any structures (or portions of buildings and or structures) to be demolished; and

(e) A written submission on the proposal including details of the age and condition of the building(s) or part of the building to be demolished; a management plan dealing with screening, dust management etc, evidence of a valid planning approval for the current site.

NOTE: *1. For properties of heritage value refer to Section 4.8 of this policy and any other relevant policies under City Planning Scheme No. 2.*

5.5 Excavation and Fill

Examples of types of excavation proposals may be in relation to remediation works, removing contaminated soil from a site, and replace with compacted clean fill.

In submitting an application for any excavation works the following minimum information is required:

(a) Application Forms and Fees;

(b) Application Format – a 3D digital model will not be required;

(c) A plan, properly dimensioned and scaled (1:100 or 1:200), of the site including any building(s) on the site, the outline of any buildings on the adjacent sites; and showing the extent of the area to be excavated and the proposed level of fill indicated in AHD; and

(d) A written submission on the proposal including geo-technical details together with management plans dealing how truck movements, dust, noise and removal of contaminants will be controlled.



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Planning Policy Manual – Part 2

Planning Policies and Design Guidelines for Normalised Redevelopment Areas

Section 2.3
East Perth – Area 3
Belvidere

NOTE: Proposed Amendments Are Shown In Red – pg. 7



Version #	Decision Reference	Synopsis
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2	17 March 2015	Amended
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5	To be inserted	Amended



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Design Guidelines – Section 2.3

East Perth Area 3 – Belvidere

1.0 INTRODUCTION

Area 3 'Belvidere' represents the rejuvenation of a landholding within the Claisebrook Village Project Area characterised by a past history of commercial and industrial uses. This area has been planned to provide a variety of development opportunities ranging from single and multi-unit residential to mixed (home/business) and commercial uses.

These guidelines are intended to facilitate the creation of a strong sense of local identity within the Claisebrook Village Project Area. The area was configured to foster physical and visual links with the Swan River, Claisebrook Inlet and the greater redevelopment area.

These guidelines describe the various development approaches for the mix of land uses incorporated into this predominantly residential area. Compliance with these standards will enable properties to be developed in a manner which is consistent with the overall concept of the Scheme.

1.1 Architectural Character

The architectural character promoted by these guidelines is of a contemporary nature with a consistency of form, materials and detailing which, whilst allowing for freedom of design expression, will unify new development within this area.

Built form requirements are described in detail in the individual sections of this document dealing with the various categories of development. Generally the required design solution will include the following:

- Strong and clear expression of building forms.
- Articulation of buildings into separate elements which express distinct forms, provide an interplay of light and shade and establish variety within the development. The design form of each building should be cognisant of the form, scale and the design elements of any existing neighbours and aim at achieving a common design thread which, whilst facilitating individual expression, contributes to a consistency of the streetscape.
- Clearly defined roof forms.
- Expressed structural elements with finely detailed lightweight steel or timber preferred as an aesthetic over mass reinforced concrete.
- Consistent detailing aimed at reducing the perceived visual bulk of building mass and enhancing the identity of individual buildings through the use of materials, structural elements, colour, texture, elements of the built form such as awnings, canopies, verandahs, sun screens, balconies and the building form itself.
- Consistency of window opening proportions and size.
- Controlled use of a rich palette of colours and materials including red brick, rendered/painted masonry, light framing with profiled steel sheet cladding, timber boards/panels etc. The inclusion of some red face brickwork will be required to commercial and mixed use developments as a reference recognising the significant heritage contribution to the 'East Perth Vernacular' made by various warehouse/commercial buildings and specifically exemplified by the old Boans warehouse.
- Particular design emphasis to corner sites. These sites tend to play a special role in defining the quality of the adjoining public spaces, often becoming landmarks which assist people's understanding of the local environment. Consideration should be given to the use of feature elements to give prominence to corner buildings and in some instances the opportunity is provided for extra building height to be introduced. These instances are illustrated in the relevant building envelope diagrams.

- Design which complements neighbouring buildings through the sensitive use of form, materials, details etc.
- Avoidance of a design approach which makes a superficial stylistic reference to historical design periods.
- Avoidance of commercial developments exhibiting minimal design input.

2.0 APPLICATION

Area 3 is contained within the East Parade Precinct EP7 and the Belvidere Precinct EP8 as defined by the City of Perth Local Planning Scheme No.26 (Normalised Redevelopment Areas) (herein called 'the Scheme'). These guidelines apply to Lots 151-243 inclusive as shown in Figure 1. The area is wholly bound by East Parade, the Railway Reserve, Victory Terrace and Kensington Street.

East Parade located to the west, is a major arterial road characterised by high traffic volumes. The incorporation of commercial development adjacent to East Parade provides good commercial exposure and a transition to the adjacent residential area.

The Railway Reserve to the north will be landscaped along its southern boundary.

Victory Terrace to the east is comprised of primarily residential uses and provides a direct pedestrian, cyclist and vehicular link to the Claisebrook Inlet and the greater Claisebrook Village Project Area.

Existing commercial and light industrial uses are located along the southern boundary of Kensington Street. These are expected to be redeveloped over time to reflect the contemporary land uses and values within the locality.

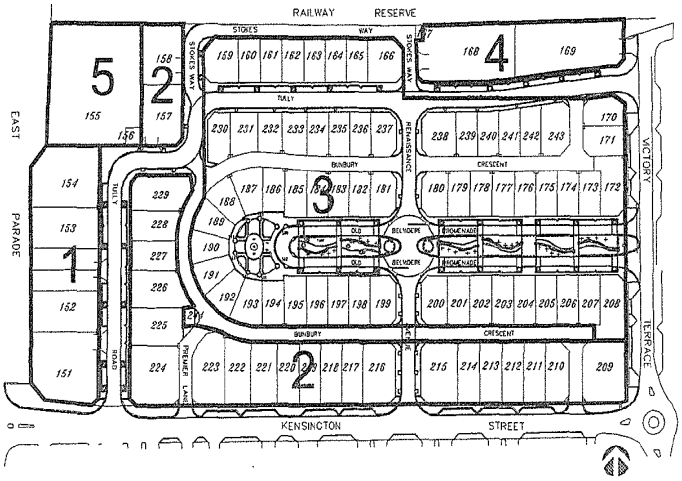


Figure 1 – Area 3 'Belvidere'

LEGEND

1. Western Commercial Lots



2. Kensington Street / Tully Road Mixed Use Lots
3. Residential Lots
4. Tully Road Multiple Unit Residential Lots
5. Western Power Lot

3.0 RELATIONSHIP TO PLANNING SCHEME AND PLANNING POLICIES

These Design Guidelines are intended to supplement the provisions of the Scheme and should be read in conjunction with the Scheme Text, in particular those provisions relating to the Claisebrook Village Project Area, Precinct EP7 East Parade and Precinct EP8 Belvidere, and the Planning Policies.

The Deemed Provisions set out in the *Planning and Development (Local Planning Schemes) Regulations 2015* also form part of the Scheme Text.

The Scheme Text identifies Preferred, Contemplated and Prohibited uses for Precincts EP7 and EP8 and stipulates maximum plot ratio. In determining any application for planning development, the local government will have regard to these Design Guidelines, the Scheme and Planning Policies.

4.0 ABOUT THESE GUIDELINES

These guidelines apply to all lots and describe the various forms of development permitted. Section 5 covers conditions which are common for all lots while Section 6 consists of a series of specifications detailing those design considerations that are relevant to the specific land use categories.

These design guidelines set out the desired approach to the various criteria which will have a bearing on the character and built form of the area. A harmonious and attractive living and working environment which will be appreciated by both residents and the general community as a whole is the principal objective of these guidelines.

4.1 Geotechnical Site Conditions

The site is classified "A" in accordance with Australian Standard AS2870.1 - 1988. It is the responsibility of owners to ensure that the structural design of buildings and associated structures including boundary and garden walls is suitable for the site conditions applicable to each lot.

5.0 COMMON CONDITIONS

5.1 Crossovers

Crossovers are to be used where provided at lots 151-155, 157, 158, 168 and 169. Elsewhere vehicular access to lots is generally off laneways, however where, crossovers are required these are to be to local government's specifications and at the developers expense.

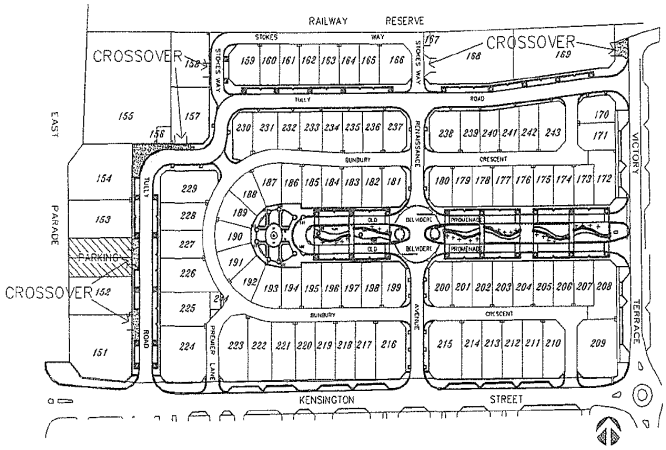


Figure 2 - Crossover Locations

5.2 Building Envelopes and Height

The height and bulk of each building is to be contained within a prescribed building envelope. The local government may approve a projection for a landmark feature which in its opinion contributes to the character and identity of the area without affecting the amenity of surrounding properties. It should be noted that:

- Projections may be approved for elements such as chimneys, dormer windows and gables.
- Balconies, awning structures and verandahs may project beyond the building envelope in accordance with the specific guidelines applicable to these features.
- Heights of building envelopes are from the finished ground levels of streets, lanes or retaining walls at the perimeter of the lot as per the building envelope diagrams.
- Building envelopes define the limits of building bulk. It is not intended that the building profiles should mirror the building envelope. Rather the building form must be contained within the envelope.
- Building envelopes must be considered in conjunction with plot ratio, site coverage, open space and setback requirements.



- Building envelopes are depicted in Section 6 setting out the requirements for lots in the various Development Lot Categories.

Where the heights specified in this Policy are inconsistent with the heights specified in Special Control Area No. 33 – Royal Perth Hospital Flight Path Protection under City Planning Scheme No. 2, whichever are the lower heights shall apply.

5.3 Retaining Walls and Fences

- Materials used for dividing fences are to be compatible with those used on the front fence or for the building and may be of solid construction.
- Generally front retaining walls and fences are to be constructed of masonry or stone with visually permeable infill panels. There are varying height requirements for retaining walls and front fences within the different development categories.
- Fibre cement, profiled sheet metal and timber lap picket dividing fences are not permitted.
- Dividing fences are to match the height of the front fence for a distance of 1m back from the front boundary and may then rake or step up to a maximum of 1.8m above the adjoining paved level.

5.4 Landscape Elements

- In order to increase on-site water absorption and reduce run-off, permeable segmental pavers are to be generally used for all hard paving surfaces. Within commercial lots, bitumen or concrete paving will be considered for use in service areas subject to truck usage, pending a satisfactory stormwater drainage design being submitted.
- Where paving inside a lot abuts and is visible adjacent to paved surfaces in streets, the new paving should be co-ordinated in colour, texture and scale with the surface in the public area.
- Select suitable tree species which will mature to a size, form and scale which relate to, but do not overwhelm the building mass. The careful selection of plant species to minimise water consumption requirements is also encouraged.

5.5 Services

- Apart from lots 168 and 169 and those lots allocated for "public utilities", all other lots are provided with service easements for the connection of water, gas and electrical services. All meters are to be contained within the easement with its screening or other architectural treatment to be integrated into the overall landscape and building design.
- All pipes and wired services, air conditioners, evaporative coolers, clothes drying areas, TV antennae, satellite dishes and hot water storage tanks are to be concealed from street and public area view. Solar panels and solar water heaters may be visible where they are in the same plane as the roof and there is no alternate location that can provide a similar level of solar efficiency.
- The location of air conditioner plant, clothes drying areas, hot water units, solar panels and solar water heaters and bin storage areas are to be shown on plans submitted for both development approval and building licence application.
- All air conditioning and evaporative cooling plant shall be located and acoustically screened so as to minimise the level of noise intrusion into neighbouring properties to within the limits



set out by the *Environmental Protection Act 1986: Environmental Protection (Noise) Regulations 1997*.

- A stormwater Drainage Plan is to be provided with all building licence applications and is to satisfy the 10 year worst case flood standard.
- All stormwater is to be contained within the site. Connection to the local government's stormwater drainage system will not be permitted.
- Domestic rubbish bin storage areas are to be provided within property boundaries and are to be screened from public view. Where possible these areas should be combined with and incorporated into service easements.
- A number of lots will be required to accommodate public laneway light fittings attached to the buildings (at the local government's expense). Public lighting will be installed by the local government to all laneways (Stokes Way, Bunbury Crescent) once all affected buildings are constructed. These lights will be installed on rear walls/fences and buildings on the rear boundary at a height of 3m. Arrangements for wiring and fitting appropriate cover plates will need to be made at the building licence application stage. Appropriate electrical safety signage will be required to be installed in each lot's switchboard advising that laneway lighting is on a separate circuit. This requirement applies to lots 159, 160, 162, 164, 166, 170, 174, 176, 178, 180, 181, 183, 185, 187, 188, 189, 190, 191, 192, 193, 195, 197, 199, 200, 202, 204, 206.

5.6 Proportion of Openings

All openings are to be of a vertical or square proportion. No openings apart from door/window combinations and shopfront openings are permitted to be wider than they are high unless they fit into an overall composition which complies with the spirit of this clause and are integral to the architectural merit of the project.

5.7 Letterboxes

Letterboxes for all development categories are to be located on the primary street boundary and are not permitted to rear or side laneways.

5.8 Roof Materials

Permitted roofing materials are described under the clauses dealing with the various development categories. Shade cloth and profiled clear acrylic roof sheeting is not permitted in locations visible from public spaces.

6.0 DEVELOPMENT CATEGORIES

In keeping with the differing forms of development surrounding the area, a variety of development categories have been allocated within it and are described below. The local government will consider the compatibility of proposed uses with those of surrounding developments.

In order to facilitate easy access to information pertinent to the differing development types, guidelines have been prepared which are specific to each category (there may be some repetition of conditions from one category to another).

6.1 Western Commercial Lots: Lots 151 - 154 Tully Road, backing onto East Parade (refer Figure 1).

6.1.1 Desired Character



Development on the Western Commercial Lots will provide a visual introduction to Belvidere, and as such should set a benchmark which is indicative of the development standard required for the balance of the estate.

The intent is to create a commercial usage area with a "strong design edge" which is robust in form and reinforces the urban nature of the locality whilst being compatible with the adjoining mixed use and single residential development areas.

Although direct vehicular access is not possible from East Parade, lots 151 - 154 allow good visual exposure and accordingly buildings will be required to be of sufficient scale and articulated to provide a "second face" towards it. Development on lot 151 will be required to address all three street frontages. A minimum of 2 storey development or its equivalent (minimum wall height 7m) will be required.

Where East Parade elevations project above the line of the street or are setback 4.5m or more from the street boundary, they are to have 40% of the wall area devoted to glazing. This may be in the form of smaller windows in a regular pattern or larger shopfronts offset by wall panels. West facing glazing should be protected by appropriate solar screening devices.

6.1.2 The Use of Red Brickwork

As a unifying element and heritage reference, all developments on the Western Commercial Lots are required to contain a component of red clay face brickwork on external walls.

This face brick component may be in conjunction with other finishes such as rendered/painted masonry, painted tilt up panels, glazing, metal cladding etc., and will be required to comprise a minimum of 50% of the ground floor wall area after the deduction of window openings.

Red brickwork which complements the traditional pattern and form existing in the area (such as that in the former Boans Warehouse) will be required. Appropriate brickwork will make reference to such matters as types of bond, colour, size and jointing. The proposed red clay bricks will require the approval of the local government, with a sample to be provided which is indicative of colour variation.

6.1.3 Preferred Uses

Appropriate uses at street level should have a shopfront quality providing a visual focus for businesses. Commercial uses would also be suitable for upper floors.

6.1.4 Pedestrian Access

Pedestrian access to the lots is to be directly from the footpath level without steps. Key access issues to be considered include the provision of covered protection and suitability for people with impaired mobility.

6.1.5 Motor Vehicle and Service Access and Parking

- On-site parking shall be via the crossovers provided. Lots 152 and 153 shall utilise the common crossover provided for the reciprocal parking area.
- Access for on site parking shall be off Tully Road.
- Parking areas are required to be separated from the street and adjoining property boundaries by a minimum 1m wide landscaped strip. At street boundaries the landscaped strip may be traversed by a pathway of 1m maximum width providing access to the parking bay (See Figure 3).

- Provision is to be made for service areas incorporating rubbish and storage receptacles and other plant in such a way that they are screened from public view, whilst being easily accessed by service vehicles.

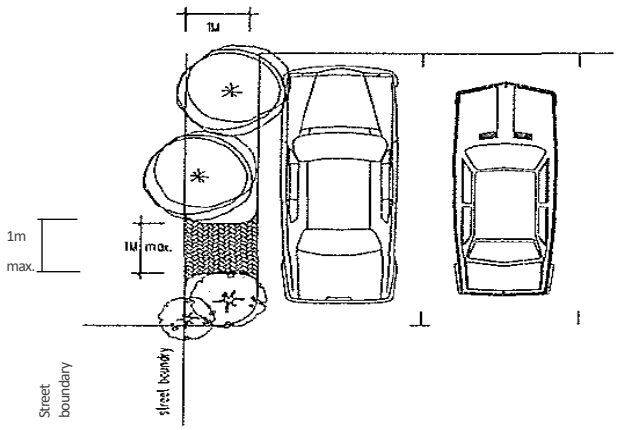


Figure 3 - Separation of parking areas

6.1.6 Security

- Building design should contribute to the creation of a safe environment for occupants and customers by creating open public spaces which are easily monitored from both inside and outside the building.
- Parking areas and any other open space contained within the development should be well lit to enhance the safety of users. Physical design elements such as landscape features, raised planters, bollards and raised ground floor window sill heights should be considered as deterrents to vehicle ramming.
- Care should be taken with the design of walls and fences to ensure that enclosed spaces for which surveillance is difficult are not created.

6.1.7 Retaining Walls and Fences

- If a retaining wall is necessary, it is to be no greater than 0.6m high when measured from the adjacent footpath.
- The combined heights of retaining walls and fences are not to exceed 1.8m when measured from the adjacent footpath. Where walls extend from retaining walls the materials should be integrated. Walls should be detailed to minimise the sense of bulk and scale.
- Generally, buildings constructed to lot boundaries are preferred over fences.
- Where infill fencing is required, materials should match the building walls.



- Where ground or floor levels of adjoining properties differ, it is each property owner's responsibility to maintain the structural integrity of pre-existing walls and fences on the adjoining property.

6.1.8 Awnings and Balconies

- Where developments are built up to street boundaries substantially continuous awning structures over footpaths are:
- required to lot 51 fronting onto the corner of East Parade, Kensington Street and Tully Road; and
- recommended to lots 152, 153, 154 Tully Road.
- Awning structures over footpaths may take the form of awning/canopy structures or balconies and may project to within 0.6m of the road edge at Kensington Street and Tully Road.
- Awning structures are not to be built over street parking bays and allowances should be made to accommodate the unimpeded growth of any street tree.
- Awning structures are to be cantilevered or suspended. Post or column supports will not be permitted
- Awning structures are to be roofed in sheet metal, tensile membrane fabric, polycarbonate sheeting etc. Canvas or tiles are not permitted.
- Generally an awning must have a clearance above footpath level of 3.3m and where necessary can be stepped to conform with the grade of the footpath which in the commercial lots will be nominal. In such cases the steps should not exceed 600mm and the clearance above footpath level may be reduced to a minimum of 3.0m.
- Awnings are intended to provide continuous cover at abutting buildings. Where one abuts another the connection is to be treated so as to prevent the penetration of rain. It is the responsibility of the property owner erecting the latter structure to affect this result.
- The preferred form of awning roof structures is lightly framed with fine design lines. The maximum depth of any fascia to a pedestrian awning is to be 300mm with signage prohibited from the face or on top of the facia.
- Awnings over openings in walls on the East Parade boundary are permitted to project over the property boundary by a maximum of 1.5m.

6.1.9 Balustrades

Aluminium or cast iron lace work is not permitted.

A sign identifying the name of the building may be permitted in a location not specified above subject to it being designed as an integral part of the building's architecture. Proposals for such signs will be considered on their merits.

BUILDING FORM

6.1.10 Articulation



Building forms are required to be articulated (broken into distinct visual elements). Projections such as verandahs, awnings, canopies, balconies and bay windows should be used to project visual interest.



6.1.11 Detail

The public faces of buildings should be detailed in order to provide richness and variety with accentuated elements aimed at reducing the perceived building bulk.

6.1.12 Roof Form

Roofs are to be pitched between 30° and 45° with gable forms addressing streets preferred. The provision of parapets with shallow roofs beyond may be considered where integral to the architectural design. Similarly mono-pitched roofs of less than 15° or curved roofs may be considered where integral to the architectural design. Lower pitches are permitted to awnings and verandah roofs.

6.1.13 Roof Materials

- Roofs shall be coloured corrugated metal decking in Off White, Merino, Gull Grey, Slate Grey, Stone, Armour Grey, Birch or equivalent colours.
- Zincalume finish may be permitted where it can be demonstrated that glare and reflectivity will not be a problem to neighbouring properties or surrounding activities.

6.1.14 Corner Lots

Extra height at corners through the use of parapets, tower elements or similar features helps to give prominence to these buildings and is therefore encouraged. Consideration should be given to such treatment at lot 151 - corner of East Parade/Kensington Street to signify a "gateway" statement into the estate. Refer to relevant building envelope diagrams for the potential for such elements.

6.1.15 Blank Walls

Blank walls abutting public spaces are not permitted. Walls are to be detailed to provide visual interest and where built up to public boundaries are to be treated as "front elevations" containing elements such as openings, recesses, balconies, awnings, canopies, verandahs and windows.

6.1.16 Tilt Up Construction

The use of the tilt up construction method may be approved provided it can be demonstrated that the requirements relating to articulation, detail and blank walls have been satisfied.

6.1.17 Wall Finishes

Should be predominantly a combination of the following finishes:

- Red clay face bricks as previously described.
- Concrete face blocks.
- Painted or coloured renders in ochres, terracottas, reds, earthy blues/greens, greys with an earthy base and limewash colours.
- Glazed shopfronts.
- Sections of coloured corrugated metal cladding, particularly on upper floors with colours as described under "Roof Materials".

6.1.18 Glazing

- The use of reflective glass is not permitted. Exterior shading devices should be used where it is necessary to protect windows from direct sunlight.
- The use of obscure glass is generally not permitted for major openings or windows adjoining pedestrian or public areas.



- The use of glass blocks may be approved where it can be demonstrated that they fit into a composition which complies with the spirit of the guidelines and are integral to the architectural integrity of the project.

6.1.19 Setbacks

Lot No.	Boundary	Setback
Lot 151	All boundaries	Nil
Lot 152	East, South	Nil
	West	2.0m
	North	9.5m ground floor, 8.5m first floor
Lot 153	East, North	Nil
	West	2.0m
	South	9.5m ground floor, 8.5m first floor
Lot 154	All boundaries	Nil

See Awnings clause for permitted projections over the boundary.

6.1.20 Development Height

Lot 151	2 storey or equivalent required 3 storey permitted on corner of East Parade/Kensington Street
Lots 152, 153 and 154	2 storey or equivalent required

In addition a mezzanine or loft will be permitted within the roof structure.



6.1.21 Building Envelopes

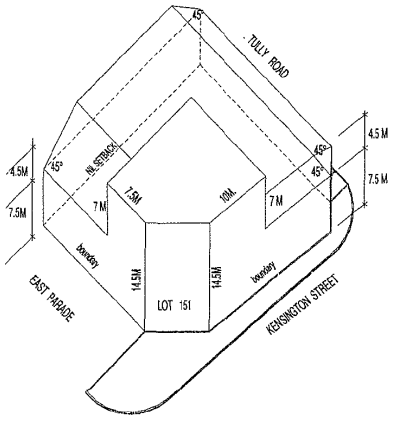


Figure 5 - Lot 151

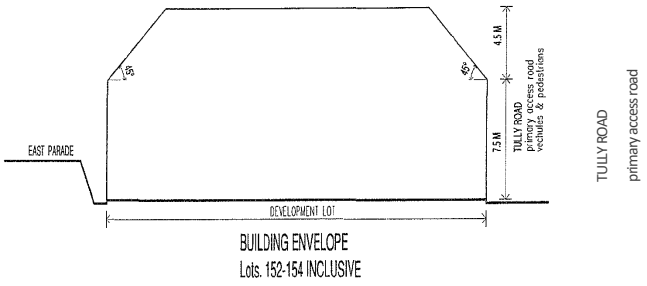


Figure 6 - Lot 152, 153, 154



6.2 Kensington Street / Tully Road Mixed Use Lots

The Kensington Street/Tully Road Mixed Use Lots (Mixed Use Lots) comprise Lots 157, 158 and 209-229 Kensington Street/Tully Road/Stokes Way inclusive (refer Figure 1).

6.2.1 Desired Character

This unique parcel of land separates the single residential component of the area from both the existing commercial usage area to the south of Kensington Street, the Western Commercial Lots and the Western Power Lot. These lots are considered an important transitional area suitable for a mixture of residential and commercial (or "home/business") development.

With over half of the Kensington Street frontage comprised of 10m wide lots, the opportunity exists to develop a strong vertical rhythm to the streetscape.

It is envisaged that most individual lots will be developed to accommodate both residential and commercial usages with the business component required to be predominantly located at ground floor level.

The intent is to synthesise elements of commercial and residential design to provide a built form which is contemporary in nature and provides a strong pattern for the anticipated eventual redevelopment of the existing commercial development on the south side of Kensington Street.

6.2.2 The Use of Red Brickwork

As a unifying element and heritage reference, all developments on the Mixed Use Lots are required to contain a component of red clay face brickwork on external walls visible from Kensington Street, Tully Road and Stokes Way. This may be in conjunction with other finishes such as rendered/painted masonry, glazing, metal cladding etc.

Red brickwork which complements the traditional patterns and form existing in the area (such as that in the former Boans Warehouse) will be required. Appropriate brickwork will make reference to such matters as types of bond, colour, size and jointing.

6.2.3 Development Potential

Development of the Mixed Use Lots is to be predominantly residential in nature. Commercial development is generally to be at ground floor level although a minor commercial component is permitted on upper floors.

The development potential for lots 209 and 224 (4 storey maximum) is as follows:

- For lot 209, due to its key landmark nature, a maximum of four commercial and dwelling units is permitted. Otherwise the additional floor is to be included into one of the residential units.
- Alternatively due to the additional width of these lots it may be possible to divide floors to accommodate two residential units.

6.2.4 Preferred Uses

Where the Scheme permits, appropriate uses at street level should have a low key shopfront quality. Appropriate use above ground floor level is predominantly residential development.

6.2.5 Pedestrian Access

Front pedestrian access shall be off Tully Road, Stokes Way, Kensington Street and Victory Terrace.

6.2.6 Motor Vehicle and Service Access and Parking

Access for on site parking shall be off Bunbury Crescent and Premier Lane apart from lots 157 and 158 where access shall be off Tully Road and Stokes Way.

6.2.7 Security

- Building design should contribute to the creation of a safe environment for occupants and customers by creating open public spaces which are easily monitored from both inside and outside the building.
- Physical design elements such as landscape features, raised planters, bollards and raised ground floor window sill heights should be considered as deterrents to vehicle ramming.
- The parking areas off Bunbury Crescent should preferably be secured with lockable garage doors.

6.2.8 Floor Levels

- Ground floor levels to all lots must be set at or above the adjacent footpath level at the Tully Road, Kensington Street and Stokes Way frontages.
- The maximum level a ground floor may be set at, is 0.6m above the adjoining footpath level. Where floor levels of commercial units are higher than adjoining footpath levels, pedestrian access must be ramped.

6.2.9 Retaining Walls and Fences

- The combined height of retaining walls and fences is not to exceed 1m with piers not to exceed 1.2m above the adjacent footpath in Kensington Street, Tully Road and Stokes Way (See Figure 7).
- Where property owners fill sites to a maximum of 0.6m above the adjoining ground levels it is their responsibility to set footings below the existing ground level and to provide appropriate retaining.
- Where property owners excavate below existing ground levels it is their responsibility to maintain the structural integrity of pre-existing walls, fences and retaining walls on adjoining properties.

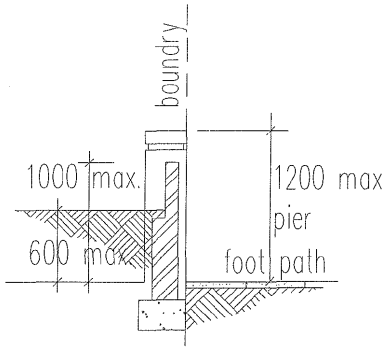


Figure 7 - Fence detail



6.2.10 Balconies, Verandahs and Awnings

- Awning and canopy structures which project no closer than 0.6m from the road edge are permitted to lots 157, 209 and 224.
- Awnings and canopy structures which project no further than 1.5m over the property boundary are permitted to lots 215 and 216.
- Awning, balcony or verandah structures for all other lots in the Mixed Use Lots are to be contained wholly within the property boundary.
- Awning structures over footpaths are not to be built over street parking bays and allowance should be made to accommodate the unimpeded growth of any nearby street tree.
- Awning structures over footpaths are to be cantilevered or suspended. Post or column supports will not be permitted.
- Awning structures over footpaths are to be roofed in sheet metal, tensible membrane fabric, polycarbonate sheeting etc. Canvass or tiles are not permitted.
- An awning must have a clearance above footpath level of 3.3m min.
- The preferred form of awning roof structures is lightly framed with fine design lines. The maximum depth of any fascia to a pedestrian awning is to be 300mm with signage prohibited from the face or on top of the fascia.
- Post or column supports are permitted to balcony and verandah structures contained wholly within the property boundary.

6.2.11 Balustrade

Aluminium or cast iron lace work is not permitted.

6.2.12 Signage

Signs on buildings may be located in an approved combination of the following (refer Figure 8):

A. Suspended beneath awning structures over footpaths or awning/verandah structures within the property at right angles to the building, provided that there is a minimum clearance between the bottom of the sign and the pavement of 2.7m and the maximum dimensions of the sign are 2m in length, 600mm high and 0.9m^2 in area.

B. Above door and window transoms on ground floor facades, provided that no such sign is more than 400mm high. The maximum area of such signs will be determined by the City taking into account the scale and design of the building.

C. On ground floor windows provided that the sign is limited to 15% of the glazed area of the window and non-fluorescent colours used.

D. Vertical wall mounted signs not to exceed 450mm wide or 1.5m high.

E. Flush wall mounted/painted signs.

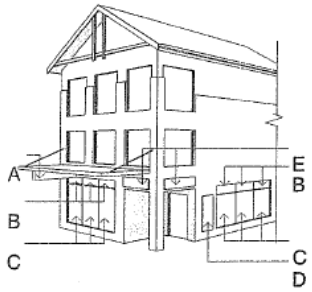


Figure 8 – Permitted sign locations.

In addition to those stipulated in Policy 1.1 – Claisebrook Village Project Area, the following signs are not permitted on buildings:

- Signs above the first floor level;
- Fascia signs to pedestrian awning structures;
- Internally illuminated signs;
- Flashing signs;
- Rotating or moving signs;
- Box like or three dimension signs;
- General advertising signs; and
- Pylon signs.

BUILDING FORM

6.2. 13 Articulation

Building forms are required to be articulated (broken into distinct visual elements). Projections such as verandahs, awnings, canopies, balconies and bay windows should be used to project visual interest.

6.2.14 Detail

The public faces of buildings should be detailed in order to provide richness and variety with accentuated elements aimed at reducing the perceived building bulk.

6.2.15 Roof Form

Roofs are to be pitched between 30° and 45° with gable forms addressing the street preferred. The provision of parapets with a shallow roof pitch beyond may be considered where integral to the architectural design. Lower pitches are permitted to awnings and verandah roofs.



6.2.16 Roof Materials

Roofs shall be:

- Coloured corrugated metal decking in Off White, Merino, Birch, Gull Grey, Slate Grey, Stone, Armour Grey or equivalent colours.
- Zincalume finish may be permitted where it can be demonstrated that glare and reflectivity will not be a problem to neighbouring properties or surrounding activities.
- Slate or slate look roof tiles, preferably in light colours in keeping with energy efficiency principles.

6.2.17 Corner Lots

Extra height at corners through the use of parapets, tower elements or similar features helps to give prominence to these buildings and is therefore encouraged. Consideration should be given to such treatment for lots 209 and 224 (4 storey maximum) to contain the otherwise 3 storey elevation of Kensington Street. Refer to the relevant building envelope diagrams for the potential for such elements.

6.2.18 Blank Walls

Blank walls abutting public spaces are not permitted. Walls are to be detailed to provide visual interest and where built up to public boundaries are to be treated as "front elevations" containing elements such as openings, recesses, balconies, awnings, canopies, verandahs and windows or the like.

6.2.19 Tilt Up Construction

The use of the tilt up construction method may be approved provided it can be demonstrated that the requirements relating to articulation, detail and blank walls have been satisfied.

6.2.20 Wall Finishes

Should be predominantly in combination of the following finishes:

- "Red" clay face bricks as previously described
- Concrete face blocks
- Painted or coloured renders in ochres, terracottas, reds, earthy blues/greens, greys with an earthy base and limewash colours
- Glazed shopfronts
- Sections of coloured corrugated metal cladding, particularly on upper floors with colours as described under "Roof Materials".
- Sections of stained or painted timber cladding, particularly on upper floors.

6.2.21 Glazing

- The use of reflective glass is not permitted. Exterior shading devices should be used where it is necessary to protect windows from direct sunlight.
- The use of obscure glass is generally not permitted for major openings or windows adjoining pedestrian or public areas.
- The use of glass blocks may be approved where it can be demonstrated that they fit into a composition which complies with the spirit of the guidelines and are integral to the architectural integrity of the project.



6.2.22 Setbacks

Primary Street	Lots 157, 158 (Tully Road, Stokes Way)	Nil
	All other lots (Kensington Street, Tully Road, Victory Terrace)	• 3m to walls. • Generally Nil to verandahs and balconies. • Lots 209, 224 awning or canopy may project to within 0.6m of road edge. • Lots 215, 216 awning or canopy may project 1.5m over boundary.
Secondary Street	Lot 157 (Tully Road including truncation)	Nil
	Lot 209 (Victory Terrace, Bunbury Crescent)	• Nil at ground level for commercial uses, 1m at ground for residential use and all other levels. • Nil to verandahs and balconies.
	Lot 210 (Bunbury Crescent)	• 1m to walls. • Nil to verandahs and balconies.
	Lots 215, 216 (Renaissance Avenue)	• 1m to walls. • Awning or canopy may project 1.5m over boundary.
	Lot 223 (Premier Lane)	• 1m to walls. • Nil to verandahs & balconies.
	Lot 224 (Tully Road)	• Nil at ground level for commercial uses, 3m at ground for residential use and all other levels. • Awning or canopy may project to within 0.6m of road edge.
	Lot 229 (Tully Road)	• 1m to walls. • Nil to verandahs and balconies.
Rear	Bunbury Crescent, Premier Lane, Western Power Lot	Nil
Side	(including Westrail boundary Lot 158)	Nil

6.2.23 Development Height

- Lots 209, 224: 4 storey maximum.
- Lots 157, 158, 210-233, 225-229: 3 storey maximum.
- In addition a mezzanine or loft level is permitted within the roof structure.

6.4.24 Building Envelopes

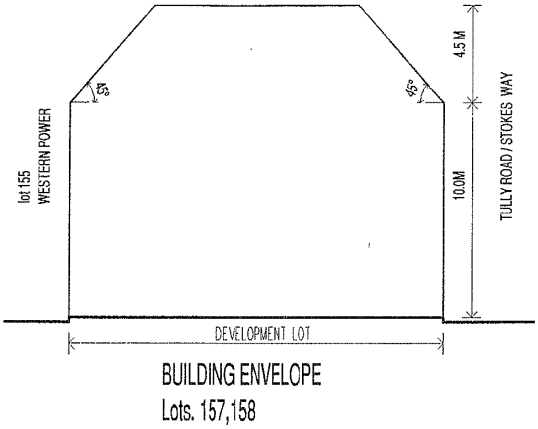
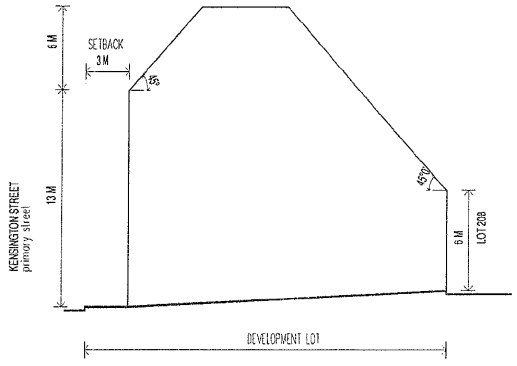


Figure 9 - Lot 157, 158

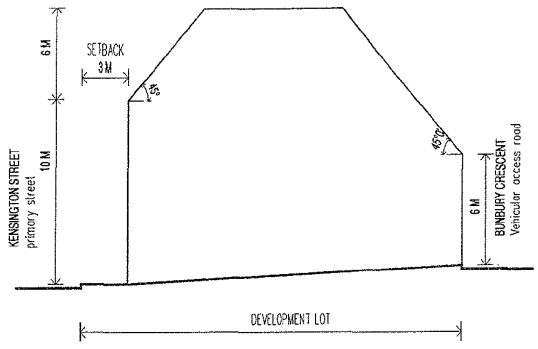
Note: Lot 157, 158: Where the buildings are constructed up to the rear Western Power Lot boundary, openings are not permitted.

Lot 158: Where the building is constructed up to the Railway Reserve side boundary, openings are permitted.



BUILDING ENVELOPE
Lot. 209

Figure 10 – Lot 209



BUILDING ENVELOPE
Lots. 210-223 INCLUSIVE

Figure 11 – Lots 210-233

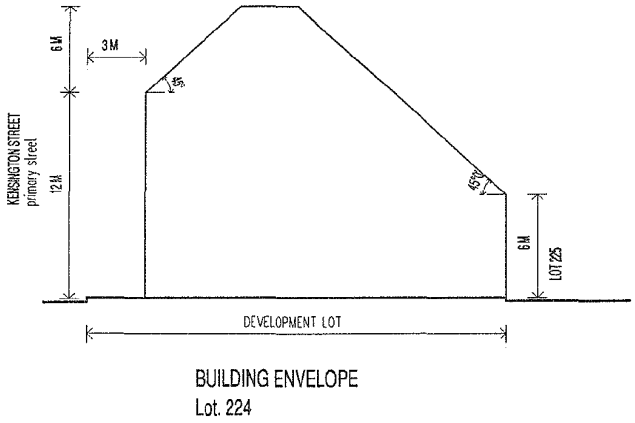


Figure 12 – Lot 224

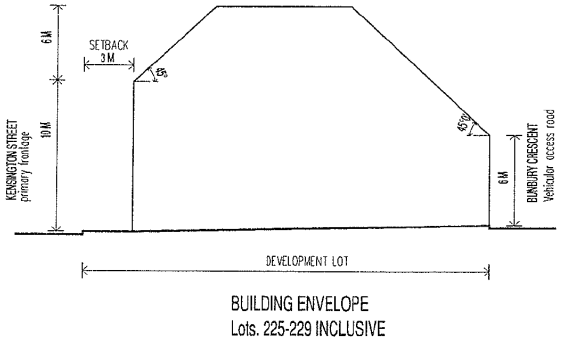


Figure 13 – Lots 225-229

6.3 Residential Lots

The balance of the area apart from the Western Power Corporation and Telstra lots and the multi-unit lots 168 and 169 are for the development of single or duplex residential units. The Residential Lots are comprised of (refer Figure 1):

- Lots 159-166 Tully Road;
- Lots 170-171 Victory Terrace;
- Lots 172-208 Old Belvidere Promenade; and



- Lots 230-243 Tully Road.

6.3.1 Desired Character

The "grand" nature of Old Belvidere Promenade with its crescent shaped termination, provides a formal setting for a built form of terrace housing focussing on a communally shared facility in the landscaped, central pedestrian spine.

The east-west axis of Old Belvidere Promenade links to the residential development and the Swan River beyond, while the north-south axis of Renaissance Avenue provides a pedestrian link to Claisebrook Inlet and Haig Park.

The built form addressing this key intersection should reinforce the emphasis of this central focal point. Design issues relating to this intersection and others are addressed in the clauses relating to corner lots and setbacks and the specific building envelope diagrams.

6.3.2 Development Potential

Generally, one dwelling unit per lot may be constructed, apart from Lots 159, 166, 238 and 243 where a maximum of two dwelling units may be constructed.

Requirements for Duplex Developments

Lots 159, 166, 243	Where development takes the form of two residential units on a lot both units are to address Tully Road. Letterboxes and points of primary pedestrian access are to be on Tully Road.
Lot 238	Where development takes the form of two residential units, the corner unit is to be articulated with openings, balconies etc to address both Tully Road and Renaissance Avenue. Letterboxes and points of primary pedestrian access are to be on Tully Road.

6.3.3 Pedestrian Access

Primary pedestrian access shall be off Old Belvidere Promenade, Tully Road and Victory Terrace.

6.3.4 Motor Vehicle Access and Parking

Access for on site parking shall be off Bunbury Crescent and Stokes Way.

6.3.5 Security

- Building design should contribute to the creation of a safe environment for residents by avoiding the formation of "blind spots" which are difficult to monitor from the residence or street.
- External areas such as courtyards should be well lit, preferably with light fittings connected to motion sensors for automatic operation.



- Parking areas off Bunbury Crescent and Stokes Way should be secured with lockable garage doors.

6.3.6 Floor Levels

- Ground floor levels to all lots must be set at or above the adjacent footpath level at the Old Belvidere Promenade, Victory Terrace, and Tully Road frontages.
- The maximum a ground floor level may be set at is 0.6m above the adjoining footpath level.

6.3.7 Retaining Walls and Fences

- The combined height of retaining walls and fences is not to exceed 1m, with piers not to exceed 1.2m above the adjacent footpath in Old Belvidere Promenade, Tully Road and Victory Terrace,
- Where a site is filled to a maximum of 0.6m above the adjoining ground level, it is the property owner's responsibility to set footings below the existing ground level and to provide appropriate retaining.
- Where excavation is to occur below existing adjoining ground levels, it is the property owner's responsibility to maintain the structural integrity of pre-existing walls and fences on the affected adjoining properties.

6.3.8 Front Fences: Lots 186-194 Old Belvidere Promenade

Lots 186-194 together are to provide the crescent shaped culmination to Old Belvidere Promenade.

The importance of this site will be marked by the installation of a public artwork in the form of a totum sculpture and a surround of colourful deciduous shade trees. In keeping with the significance of this focal element a consistent front fence treatment to all of the above lots is required.

- Construction of masonry piers/fencing shall be in accordance with Figure 14. Infill panels and gates to the property owners design (in steel or timber pickets) shall be painted white.
- The entry gate to each lot shall be located at the centre point of the front boundary. Piers at adjoining property boundaries shall be built centrally over the boundary.
- It is the responsibility of the property owner first constructing a front fence to complete piers at the adjoining boundaries.
- All masonry piers/fencing shall be finished in sand finish render and painted.

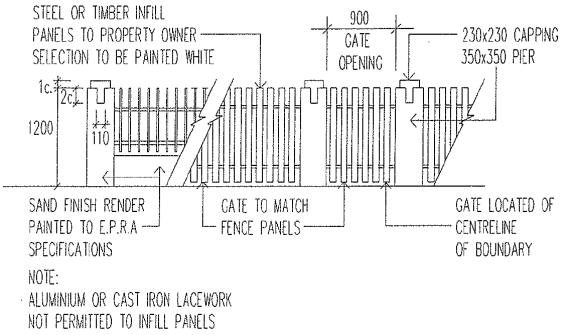


Figure 14 - Front Fence Details

6.3.9 Balconies

- The use of balconies to assist in the composition and articulation of buildings is encouraged. Balconies should be large enough to be of practical use, with a minimum dimension of 1.5m and wherever possible protected by solar shading devices.
- The use of balconies and terraces as private open space is encouraged.
- Juliette balconies (a small balcony with a maximum depth of 750mm) are permitted but will not be counted as private open space.
- Balconies and decks may project into the front setback by 2m.
- A balcony or terrace must be set back a minimum of 1m from any adjoining lot. Any balcony or terrace set back less than 2m from an adjoining lot must incorporate an approved screen (minimum 1.8m high) on that side.

6.3.10 Balustrades

Aluminium or cast iron lace is not permitted.

BUILDING FORM

6.3.11 Articulation

Building forms are required to be articulated (broken into distinct visual elements). Projections such as verandahs, awnings, canopies, balconies and bay windows should be used to project visual interest.

6.3.12 Detail

The public faces of buildings should be detailed order to provide richness and variety, with accentuated elements aimed at reducing the perceived building bulk.

6.3.13 Roof Form: Generally

Roofs are to be pitched between 30° and 45°. The provision of a parapet with a shallow roof pitch beyond may be considered where integral to the architectural design. Lower pitches are permitted to awnings and verandah roofs.



6.3.14 Roof Form: Lots 186 - 194 Old Belvidere Promenade

In view of the objective of obtaining a cohesive built roof form following the curve generated by the radiating nature of these lots, all roofs are to pitch away from the street boundary at 40° with a minimum roof pitching height of 6.5m and with dormer forms and minor gables permitted to project from the pitched roof plane toward the street. The heights and levels of roof ridges, pitching points, gutters, eaves and parapets must match the adjoining property or vary by a minimum of 500mm.

6.3.15 Roof Materials

Roofs shall be:

- Coloured corrugated metal decking in Off White, Merino, Birch, Gull Grey, Slate Grey, Stone, Armour Grey or equivalent colours.
- Zincalume finish will be permitted where it can be demonstrated that glare and reflectivity will not be a problem to neighbouring properties or surrounding activities.
- Tiles or slate, preferably in light colours in keeping with energy efficiency principles.

6.3.16 Entry Porticos

The construction of a freestanding or attached entry portico on the front boundary may be permitted provided that:

- The design is integral to that of the main building.
- The wall finish matches that of the main building or front boundary walls.
- The roof material matches that of the main building.
- The roof pitch matches or is steeper than that of the main building.
- Where a parapet is proposed to an attached portico, it is to be integral with an element of the main building such as the balustrade to a balcony or terrace.
- The height of the portico above the paved level does not exceed 4.5m for pitched roofs and 3.5m for parapets (2 storey entry portico are not permitted).
- A free standing column and beam entry portico may be permitted where it can be demonstrated as being an integral landscape element.

6.3.17 Corner Lots

Extra height at corners through the use of parapets, tower elements or similar features helps to give prominence to these buildings and is therefore encouraged. Key intersections are:

- Old Belvidere Promenade / Renaissance Avenue:
- This is the major intersection within the residential area. The "grand" nature of Old Belvidere Promenade is a point of focus, marked by the lineal pedestrian park and its associated landscape features.
- The built form to lots 180, 181, 199 and 200 should reinforce the civic nature of this space with key elements focussing on the intersection (refer to the clause covering setbacks and the building envelope diagrams for these elements).
- Old Belvidere Promenade / Victory Terrace:
- This T-junction forms the entry point into Old Belvidere Promenade, connecting the intersection with Victory Terrace with the Mardelup Park and the Swan River foreshore.



- Lots 172 and 208 are ideally located to provide an entry statement into the promenade through the construction of tower elements addressing the intersection which may also take advantage of the vista down the pedestrian way to the river (refer to the clause covering setbacks and the building envelope diagrams for the potential to develop these elements).

6.3.18 Blank Walls

Blank walls abutting public spaces are not permitted. Walls are to be detailed to provide visual interest and where built up to public boundaries are to be treated as "front elevations" containing elements such as openings, recesses, balconies, awnings, canopies, verandahs and windows.

6.3.19 Tilt Up Construction

Tilt up or precast concrete construction methods are not permitted within the residential lots, other than for side walls adjacent to other lots where Nil setback requirements have been predominantly observed.

6.3.20 Wall Finishes

The following construction materials are acceptable:

- Red or Terracotta face bricks
- Natural stone including limestone
- Rammed earth or limestone
- Painted or coloured render in ochres, terracottas, reds, earthy blues/greens, greys with an earthy base and "limewash" colours.
- Light weight cladding in the form of painted or stained weatherboards or sheet timber panels, painted fibre cement panels or corrugated metal sheet (custom orb or mini orb profile) as minor portions of the building elevation.
- The well considered use of a combination of the above finishes. Changes in finish to separate the ground floor from the upper or parts of the upper floors are encouraged.

6.3.21 Glazing

- The use of reflective glass is not permitted. Exterior shading devices should be used where it is necessary to protect windows from direct summer sunlight.
- The use of obscure glass is generally not permitted for major openings or windows adjoining pedestrian or public areas.

6.3.22 Private Open Space

- All private open space is to be of useable area and dimension. All dwellings must have access to ground level private open space with a minimum dimension of 4m x 4m.
- The provision of additional private open space is encouraged. This may be provided as a balcony, deck or roof terrace.
- Private open space must be open directly off a living area and where possible should be north facing.
- Roof terraces greater than 4m x 4m in dimension should have a roof or shade structure covering a portion of the terrace which is consistent with the scale and elevation of the dwelling and assists with climate control.
- All private open space must be designed to minimise overlooking of adjoining properties and maximise privacy for its users.



6.3.23 Setbacks

Lots 180,181,199,200 Old Belvidere Promenade / Renaissance Avenue:

Old Belvidere Promenade	•	Nil within 3.5m of and including the truncation at Renaissance Avenue. • 3m to walls for the balance of the Old Belvidere Promenade boundary with balconies and verandahs permitted to project to within 1m of the boundary.
Renaissance Avenue	•	Nil within 3.5m of and including the truncation at Old Belvidere Promenade. • 1m to walls for the balance of the Renaissance Avenue boundary with balconies permitted to project up to the boundary.
Side Setback	•	Nil
Rear (Bunbury Crescent) Setback	•	Nil

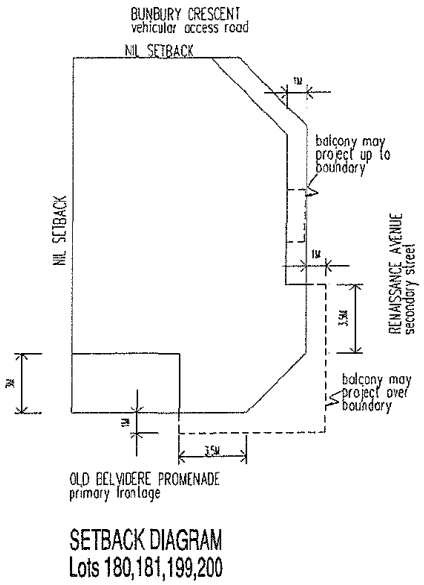


Figure 15 – Lots 180, 181, 199 & 200

Note: Diagram illustrates extent of setbacks only, minimum open space requirements must be satisfied.

Lots 172, 208 Old Belvidere Promenade / Victory Terrace:

Old Belvidere Promenade	•	1m within 3m of and including the truncation at Victory Terrace with balconies permitted to project up to the boundary.
	•	3m to walls for the balance of the Old Belvidere Promenade boundary with balconies and verandahs permitted to project to within 1m of the boundary.
Victory Terrace	•	1m up to and including the truncation at Old Belvidere Promenade with balconies permitted to project up to the boundary.
Side Setback	•	Nil
Rear (Bunbury Crescent) Setback	•	Nil

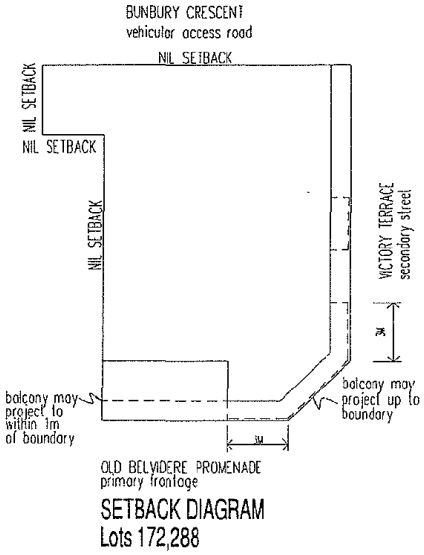


Figure 16 – Lots 172 & 288

Note: Diagram illustrates extent of setbacks only, minimum open space requirements must be met.

Lots 159 -166 Tully Road:

Tully Road	•	3m with balconies permitted to project to within 1m of boundary.
Secondary Street	•	1m with balconies permitted to project up to the boundary.
Side Setback	•	Nil
Rear (Stokes Way) Setback	•	Ground Floor: 1.5m with 45° clear site lines to road.
	•	First Floor: Cantilevered to Nil
Balance of Residential Lots:		
Primary Street (Old Belvidere Promenade and Tully Road)	•	3m with balconies permitted to project to within 1m of the boundary.
Secondary Street	•	1m with balconies permitted to project up to the boundary
Side setback	•	Nil
Rear setback	•	Nil



6.3.24 Development Height

- Lots 180, 181, 199, 200 Belvidere/Renaissance Avenues, Lots 172, 208 Old Belvidere Promenade/Victory Terrace:
- Generally 2 storeys at Old Belvidere Promenade with lofts permitted within the roof form.
- 3 storey corner tower element with lofts permitted within the roof form (refer to the applicable building envelope diagrams).
- Balance of Residential Lots: 2 storeys at Old Belvidere Promenade, Tully Road and Victory Terrace with lofts permitted within the roof form.

6.3.25 Building Envelopes

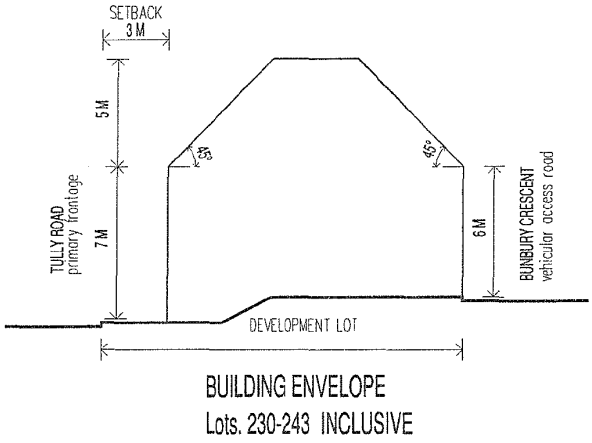


Figure 17 – Lots 230-243

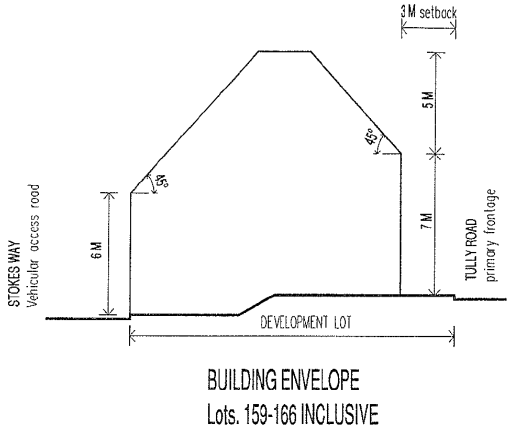


Figure 18 – Lots 159-166

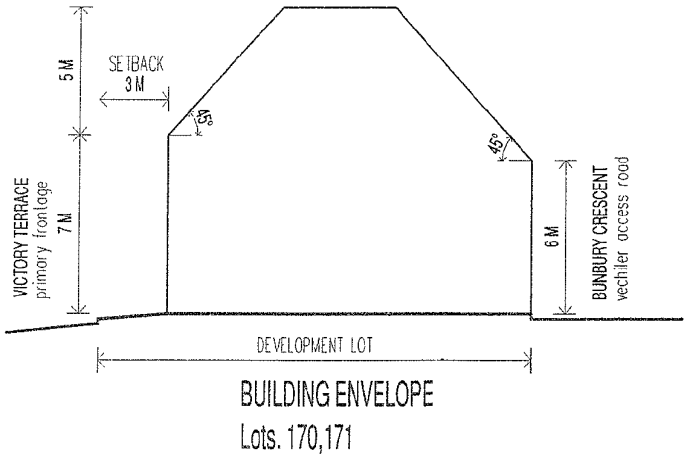


Figure 19 – Lots 170 & 171



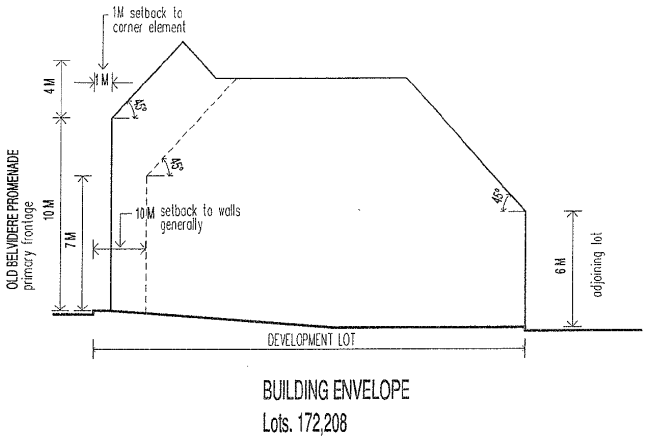


Figure 20 – Lots 172 & 208

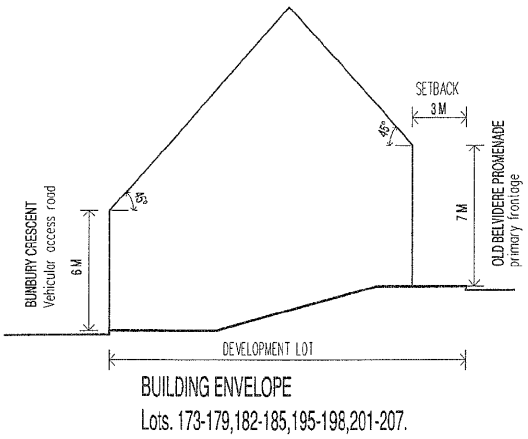


Figure 21 – Lots 173-179, 182-185, 195-198 & 201-207

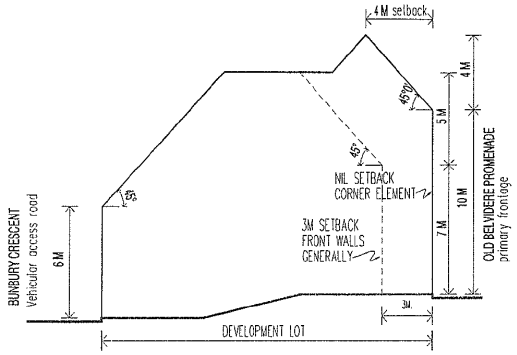


Figure 22 – Lots 180, 181, 199 & 200

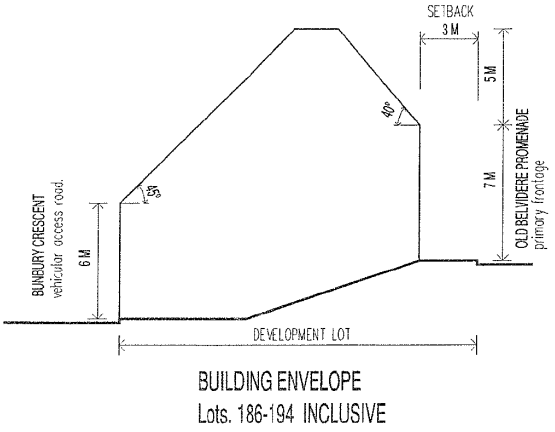


Figure 23 – Lots 186-194

6.4 Tully Road Multiple Unit Residential Lots

Lots 168 and 169 Tully Road are designated for grouped and/or multiple dwellings (refer to Figure 1).



6.4.1 Desired Character

Lots 168 and 169 constitute the only significant multiple residential sites within the area and as such, present unique development opportunities. Lot 169 in particular provides the opportunity to develop a significant landmark element which will be visible from both inside and outside the area and which will enable upper floors to maximise views toward the Darling Escarpment and the city.

Development on these lots is required to provide a robust and clear expression of articulated building forms, with lot 168 making reference to the scale, height and character of the mixed use and residential components of the area and lot 169 providing a contemporary tower element which emphasises the termination of Victory Terrace.

6.4.2 Maximum Development Potential

- Lot 168: 12 units
- Lot 169: 14 units

6.4.3 Pedestrian Access

- Primary pedestrian access shall be off Tully Road and Victory Terrace.
- Occupants must be able to access any basement parking from within the building.

6.4.4 Motor Vehicle Access and Parking

- Access for on site parking shall be via crossovers provided from:
- Lot 168 - Stokes Way; and
- Lot 169 - Victory Terrace.
- On site parking is to be screened from public view with the preferred location within a basement/undercroft.

6.4.5 Security

- Building design should contribute to the creation of a safe environment for residents by avoiding the formation of "blind spots" which are difficult to monitor from units or the street.
- External areas should be well lit, preferably with light fittings in public areas connected to photo-electric cells for automatic night time operation.
- Parking areas should be secured with automatic security gates.

6.4.6 Retaining Wall and Fences

- The combined heights of solid retaining walls and fences are not to exceed 1.8m when measured from the adjacent footpath (max pier height 2m). Where a solid fence extends from a retaining wall the materials should be integrated. Walls should be detailed to minimise the sense of bulk and scale.
- Where the ground or floor levels of adjoining properties differ it is the property owner's responsibility to maintain the structural integrity of pre existing walls and fences on the adjoining property.

6.4.7 Balconies

- The use of balconies to assist in the composition and articulation of buildings is encouraged. Balconies should be large enough to be of practical use, with a minimum dimension of 2m and wherever possible protected by solar shading devices.
- The use of balconies and terraces as private open space is required on upper floors.



- Juliette balconies are permitted but will not be counted as private open space.

6.4.8 Balustrades

Aluminium or cast iron lace is not permitted.

BUILDING FORM

6.4.9 Articulation

Building forms are required to be articulated (broken into distinct visual elements). Projections such as verandahs, awnings, canopies, balconies and bay windows should be used to project visual interest.

6.4.10 Detail

The public faces of buildings should be detailed in order to provide richness and variety, with accentuated elements aimed at reducing the perceived building bulk.

6.4.11 Roof Form: Generally

Roofs are to be pitched between 30° and 45°. The provision of a parapet with a shallow roof pitch beyond may be considered where integral to the architectural design. Lower pitches are permitted to awnings and verandah roofs. Where lifts are included, the lift overrun is to be incorporated within the pitched primary roof structure.

6.4.12 Roof Materials

Roofs shall be:

- Coloured corrugated metal decking in Off White, Merino, Birch, Gull Grey, Slate Grey, Stone, Armour Grey or equivalent colours.
- Zincalume finish will be permitted where it can be demonstrated that glare and reflectivity will not be a problem to neighbouring properties or surrounding activities.
- Tiles or slate, preferably in light colours in keeping with energy efficiency principles.

6.4.13 Blank Walls

Blank walls abutting public spaces are not permitted. Walls are to be detailed to provide visual interest and where built up to public boundaries are to be treated as "front elevations" containing elements such as openings, recesses, balconies, awnings, canopies, verandahs and windows.

6.4.14 Tilt Up Construction

The use of the tilt up construction method may be approved provided it can be demonstrated that the aforementioned requirements relating to articulation, detail and blank walls have been satisfied.

6.4.15 Wall Finishes

Should be predominantly a combination of the following finishes:

- Red or Terracotta face bricks
- Concrete face blocks
- Natural stone including limestone
- Rammed earth or limestone
- Painted or coloured render in ochres, terracottas, reds, earthy blues/greens, greys with an earthy base or "limewash" colours.



- Light weight cladding in the form of painted or stained weatherboards or sheet timber panels, painted fibre cement panels or corrugated metal sheet (custom orb or mini orb profile) as minor portions of the building elevation.

6.4.16 Glazing

- The use of reflective glass is not permitted. Exterior shading devices should be used where it is necessary to protect windows from direct sunlight.
- The use of obscure glass is generally not permitted for major openings or window adjoining pedestrian or public areas.

6.4.17 Private Open Space

- Dwellings must be provided with private open space in the form of a balcony, deck, terrace or a courtyard with a minimum dimension of 4m x 4m for ground floor units.
- Private open space must open directly off a living area and where possible should be north facing.
- Roof terraces greater than 4m x 4m in dimension should have a roof or shade structure covering a portion of the terrace which is consistent with the scale and elevation of the building and assists with climate control.
- All private open space must be designed to minimise overlooking of adjoining properties and maximise privacy for its users.

6.4.18 Power Easement

A Western Power Corporation easement extends along the Tully Road lot frontages and traverses lot 168 to the Railway Reserve. The construction of building structures over the power easement is prohibited.

6.4.19 Setbacks

Lot 168	Tully Road	3m minimum (or as required to clear easement)
	Stokes Way	Nil
	Rail Reserve	Nil
	Side Boundary	Nil
Lot 169	Victory Terrace	3m
	Tully Road	3m minimum (or as required to clear easement)
	Rail Reserve	Nil
	Side Boundary	Nil

Maximum Development Height:

- Lot 168: 3 storey plus undercroft.
- Lot 169: 7 storey plus undercroft.
- In addition a mezzanine or loft is permitted within the roof structure.

6.4.20 Building Envelopes

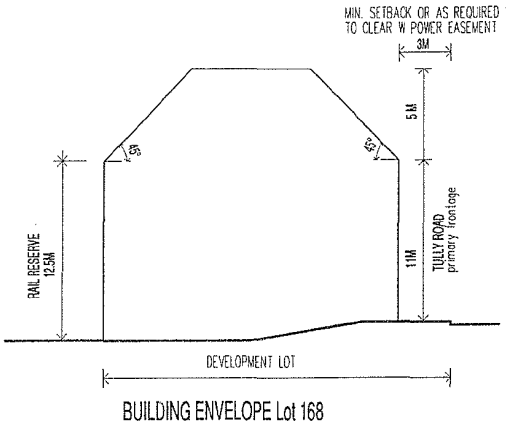


Figure 24 – Lot 168

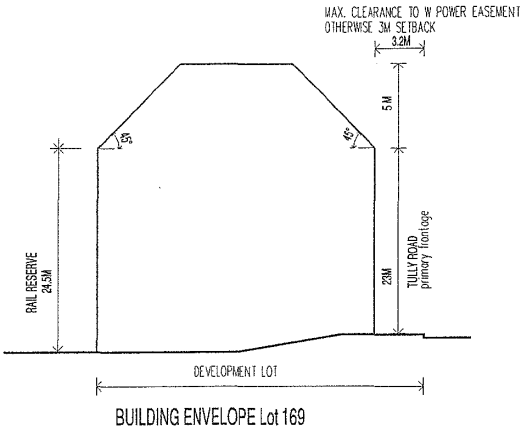


Figure 25 – Lot 169



6.5 Western Power Lot

Lots 155 and 156 Tully Road have been allocated to Western Power Corporation. Lots 155 and 156 are of such a combined size as to comprise a considerable component of the area (refer to Figure 1).

6.5.1 Desired Outcome

Lots 155 and 156 together comprise a substantial component of the area with the capacity to impact on both public and private properties. The desired outcome is to accommodate the Western Power Corporation infrastructure requirements in such a way as to minimise the potential for visual and acoustic intrusion, while ensuring that the form of buildings and fencing is consistent with that required for other forms of development within the area.

6.5.2 Machinery, Plant and Equipment

All machinery, plant and equipment are to be screened or housed in roofed buildings on the site. Buildings are to be constructed of materials and/or set back sufficiently from property boundaries to ensure the operations contained within do not pose a hazard or constitute noise intrusion to surrounding properties.

6.5.3 Building Form

Buildings housing machinery, plant and equipment are to be articulated (broken into distinct visual elements) to project visual interest and will be required by the local government to be compatible with the other categories of development within the area. Metal shed and other "warehouse" type structures exhibiting minimal design input will not be permitted.

6.5.4 Roof Form

Roof forms are to be consistent with those required for the balance of the subdivision and are to be pitched between 30° and 45°. The provision of parapets with shallow roofs beyond may be considered where integral to the architectural design. Lower pitches are permitted to awnings and verandah roofs.

6.5.5 Roof Materials

- Roofs shall be coloured corrugated metal decking in Off White, Merino, Gull Grey, Slate Grey, Stone, Armour Grey, Birch or equivalent colours.
- Zincalume finish may be permitted where it can be demonstrated that glare and reflectivity will not be a problem to neighbouring properties or surrounding activities.

6.5.6 Blank Walls

Blank walls abutting public spaces are not permitted. Walls are to be detailed to provide visual interest and where built up to public boundaries are to be treated as "front elevations" containing elements such as openings, recesses, awnings, canopies and verandahs.

6.5.7 Tilt Up Construction

The use of the tilt up construction method may be approved provided it can be demonstrated that the aforementioned requirements relating to building form and blank walls have been satisfied.

6.5.8 Wall Finishes

Should be predominantly in combination of the following finishes:

- "Red" clay face bricks.
- Concrete face blocks.



- Painted or coloured renders in ochres, terracotta reds, earthy blues/greens, greys with an earthy base or limewash colours.
- Sections of coloured corrugated metal cladding.

6.5.9 Perimeter Fences

- Perimeter fencing will be required to lots 155, 156.
- Perimeter fencing to public areas and the rail reserve will be required to be constructed of masonry or stone, and be solid to maximum height of 1.8m with expressed piers to a maximum height of 2m.
- Fence and entry gate design will be required to be of a high standard and will require the approval of the local government.

6.5.10 Landscaping

Open areas within the property will be visible from the upper levels of surrounding developments and from East Parade and are to be landscaped to the satisfaction of the local government.



DRAFT

Planning Policy Manual – Part 2

Planning Policies and Design Guidelines for Normalised Redevelopment Areas

Section 2.4
East Perth – Area 4
Victory Terrace

PLEASE NOTE: Proposed Amendments Are Shown In Red – pg. 7



Version #	Decision Reference	Synopsis
1	11 March 2008	Adopted
2	17 March 2015	Amended
3	11 April 2017	Amended
4	To be inserted	Amended



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1.0 RESIDENTIAL DESIGN GUIDELINES

1.1 Application

The Belvidere subdivision is within the Belvidere Precinct (EP 8), as defined in the City of Perth Local Planning Scheme No. 26 (Normalised Redevelopment Areas) (herein called 'the Scheme'). These Guidelines apply to Lots 37 to 44 inclusive as shown in Figure 1.

1.2 Relationship to Planning Scheme and Planning Policies

These Design Guidelines are intended to supplement the provisions of the Scheme and should be read in conjunction the Scheme, in particular those provisions relating to the Claisebrook Village Project Area and Precinct EP8: Belvidere, and other Planning Policies.

The Deemed Provisions set out in the *Planning and Development (Local Planning Schemes) Regulations 2015* also form part of the Scheme Text.

The Scheme Text identifies Preferred, Contemplated and Prohibited uses for Precinct EP8: Belvidere and stipulates maximum plot ratio. In determining any application for development approval, the local government will have regard to these Design Guidelines, the Scheme and other Planning Policies.

1.3 About These Guidelines

These guidelines describe the character sought for this area and the design elements required to achieve the required character and form. Although detailed, they allow a considerable amount of design freedom. It should be noted that whilst variations to some elements may be considered, the local government may refuse Development Approval for developments not considered to be in keeping with the intent of these Guidelines. Variations to building heights and setbacks and building envelopes will not be contemplated.

2.0 BUILDING PARAMETERS

2.1 Development Potential

Lot 37 .....Ten dwellings.

Lot 38 .....Nine dwellings.

Lots 39 to 43 .....One dwelling per lot.

Lot 44 .....Two dwellings.

It is noted that Lots 37 and 38 are intended to be developed with separate building/s. In the event that the lots are purchased with the intention of constructing one development across the land, the development should appear as two or more buildings that comply with the guidelines in terms of the specified setback and building envelope requirements. The objective in this regard is to achieve visual separation between buildings for the purpose of 'breaking' the extent of built form across the two larger lots.

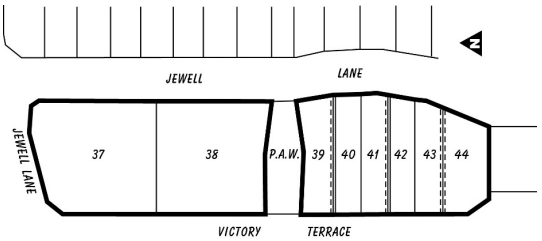


Figure 1 - Lots 37 to 44 Victory Terrace, showing nil setbacks dotted.



2.2 Setbacks

Setbacks are measured at right angles from the relevant boundary to the closest section of wall.

Required setbacks are as follows:

BOUNDARY	MIN	MAX
Lot 37		
Side and North (Jewell Lane)	3m (with minor projections as shown in Figure 2)	n/a
Jewell Lane (East)	3m	n/a
Victory Terrace	3m	4m
Lot 38		
P.A.W.	1m (see Note 1)	4m
Side	3m (with minor projections as shown in Figure 2)	n/a
Jewell Lane	3m	n/a
Victory Terrace	3m	4m
Lot 39		
P.A.W.	1m (see Note 1)	4m
South	Nil	Nil
Jewell Lane	3m (see Note 2)	5m
Victory Terrace	3m	4m
Lots 40 and 42		
Side	Nil	See Note 3
Jewell Lane	3m (see Note 2)	5m
Victory Terrace	3m	4m
Lots 41		
Side	Nil	See Note 3
Jewell Lane	3m (see Note 2)	5m
Victory Terrace	3m	4m
Lots 43		
Side	Nil	See Note 3
Jewell Lane	3m (see Note 2)	5m
Victory Terrace	3m	4m
Lot 44		
P.A.W.	1m (see Note 4)	4m
North	Nil	Nil
Jewell Lane	3m (see Note 2)	5m
Victory Terrace	3m	4m

For the purpose of maintaining the traditional relationship of residences to street and consistency in terms of streetscape appearance, the main walls of street elevations and the front of garage or carport structures on Lots 39 to 44 are required to be at right angles to the side boundaries of the lots (within the confines of the required setback distances and the building envelope). In addition, walls of street elevations should be setback the same distance as those on adjoining lots, or vary within the confines of the permitted setback distances by a minimum of 500 mm (refer Figure 3).

Note 1: For Lots 38 and 39, one section of dwelling/building not less than 8m or more than 12m long must be setback 1m from this boundary. The balance of the dwelling/building must be setback at least 2m.

Note 2: A single storey garage or carport may be constructed with a nil setback to a maximum width of 6m (7m - Lot 44) however, parking must not dominate the street elevation.

Note 3: Maximum nil setback is required for northern boundaries of Lots 40 and 42. Maximum nil setback is required for southern boundaries of Lots 41 and 43 (refer Figure 1). Other side boundaries for these lots may be setback, but if setback, not less than one third of the total depth of the dwelling must be setback 1m. This is to ensure the visual consistency of dwelling spacing. Setbacks between 0 and 1m are not permitted.

Note 4: For Lot 44 (refer Figure 8), one section of dwelling not less than 4m or more than 6m long must be setback 1m from this boundary. The balance of the dwelling must be setback at least 2m.

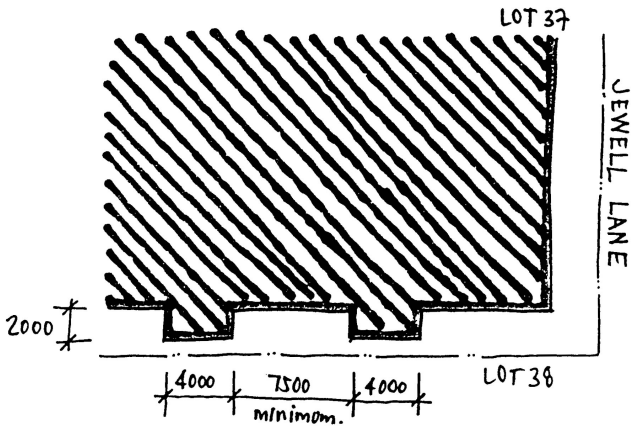


Figure 2 - Permitted intrusion into setback - Lots 37 and 38

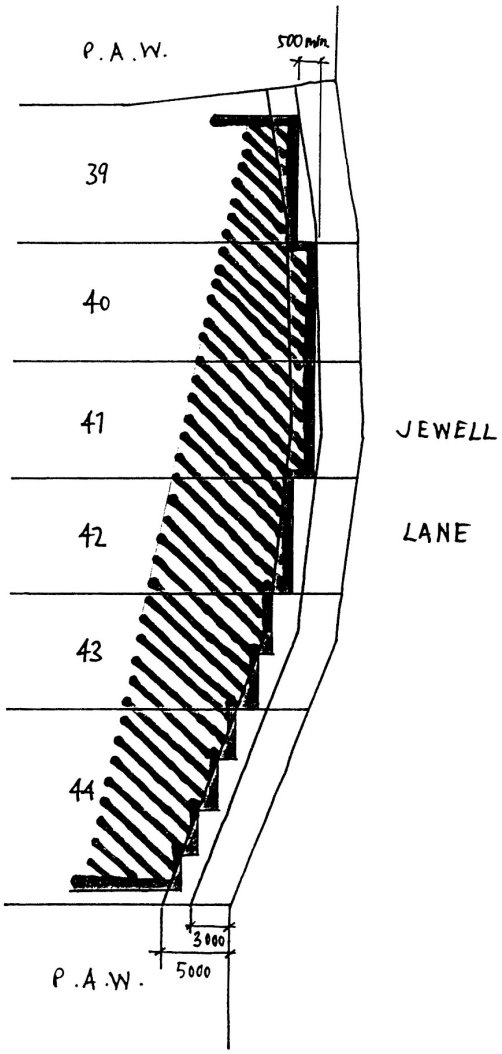


Figure 3 - Jewell Lane Setbacks - Lots 39 to 44

2.3 Building Envelopes and Height

- Building height and bulk is to be contained within the building envelope, with only minor projections allowed for such items as chimneys, finials, pergolas, small portions of bay and dormer windows, Juliette balconies and minor portions of other balconies, and approved features which in the opinion of the local government contribute to the character and identity of the area. Balconies and enclosed rooms must not project past the lot boundaries. The building envelope defines the limits of building bulk and it is not intended that the building profile should mirror that of the envelope.
- The maximum height of the envelope is measured from the highest finished level of the street at the perimeter of the lot.
- Generally building heights are intended to be two to three storeys (up to 9.0 metres) plus usable roof space (3.0m), in the form of a loft, attic or roof terrace. A minimum of two storeys (up to 6.0 metres) is required adjacent to the street frontage of lots. Basement structures are not permitted with the exception of Lots 37 and 38 where basement or undercroft parking is permitted.
- Building envelopes are depicted in Figures 4 to 8 as follows:

  Figure 4: Lot 37
  Figure 5: Lot 38
  Figure 6: Lot 39
  Figure 7: Lots 40 to 43
  Figure 8: Lot 44

- Where the heights specified in this Policy are inconsistent with the heights specified in Special Control Area No. 33 – Royal Perth Hospital Flight Path Protection under City Planning Scheme No. 2, whichever are the lower heights shall apply.
- Allowances should be made for the variations in lot shape between lots when reading these diagrams. If a boundary is comprised of more than one section (ie: there is an angle in the boundary) then the building envelope will have a corresponding number of sections on that boundary.

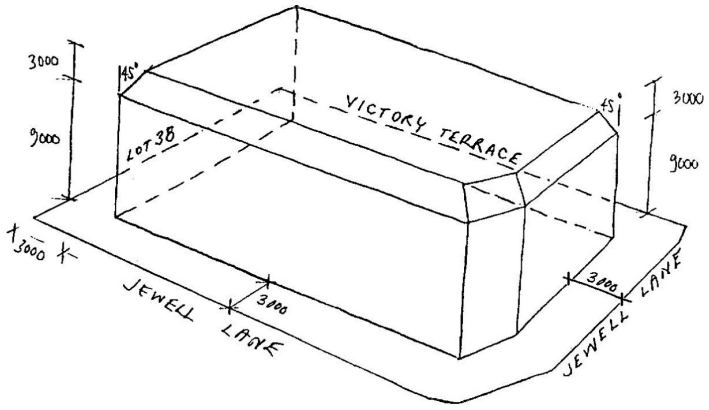


Figure 4 - Building Envelope for Lot 37

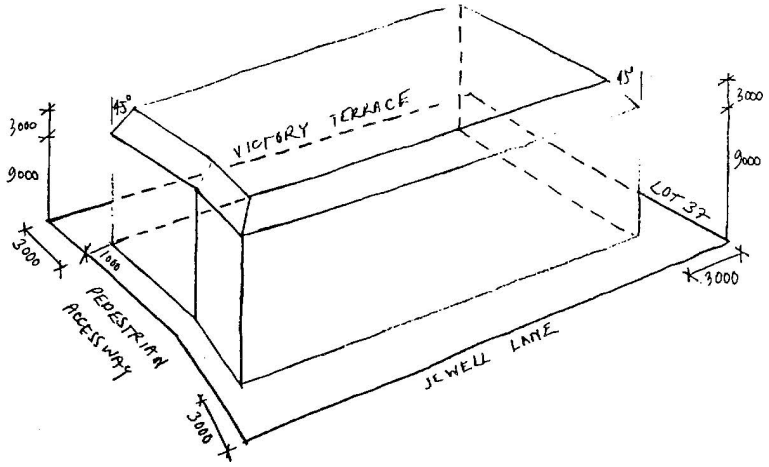


Figure 5 - Building Envelope for Lot 38

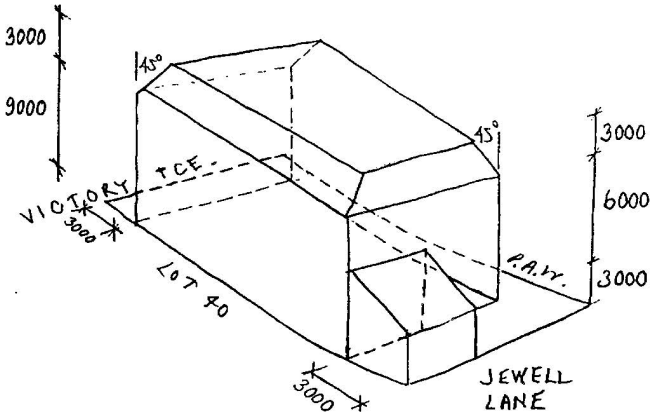


Figure 6 - Building Envelope for Lot 39

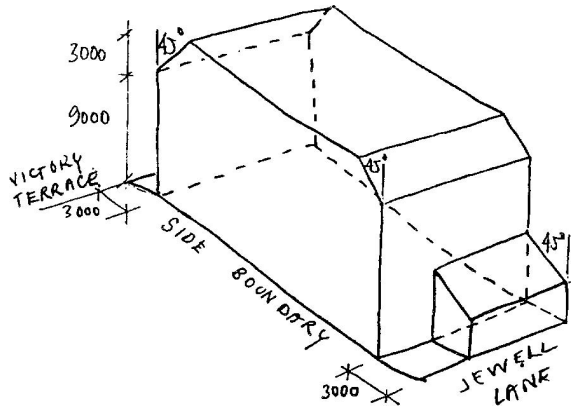


Figure 7 - Building Envelope - Lots 40 and 42. This envelope is mirrored for Lots 41 and 43.

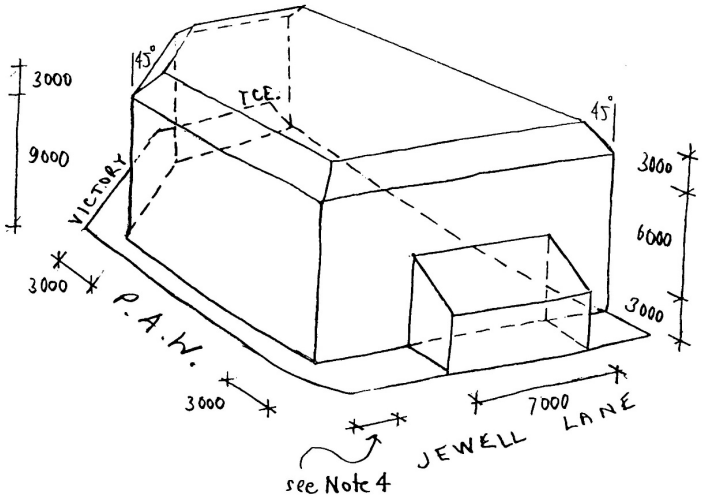


Figure 8 - Building Envelope for Lot 44



3.0 BUILDING DESIGN

3.1 Sloping Sites

It is expected that the slope of sites will be accommodated within the design of dwellings through the use of split levels.

3.2 Impact on Neighbouring Construction

Each dwelling must be designed to prevent structural impact on adjoining lots, and must not cause adjoining owners to compromise the design of their dwellings such that retaining structure is required in excess of that which would otherwise be required.

3.3 Floor levels

The minimum ground floor to first floor height is 3m.

3.4 Privacy

A high standard of acoustic and visual privacy is expected with particular attention to:

- construction materials and techniques to reduce noise transmission between dwellings;
- site and dwelling layout to separate potentially conflicting uses;
- balcony and window location and design to avoid overlooking neighbouring windows and private open space;
- building design should contribute to the creation of a safe environment by avoiding the formation of "blind" spaces which cannot be seen from inside the most used rooms.

3.5 Balconies

- The inclusion of balconies to take advantage of views is encouraged. Balconies can also assist the composition, articulation and visual interest of buildings. They should be of usable dimensions with a minimum dimension of 1.5m and wherever possible be enhanced by the provision of shading from summer sun.
- Juliette balconies are permitted but will not be counted as private open space. A Juliette balcony is a small balcony with a maximum depth of 750mm.
- A balcony may project into a required minimum setback, other than nil setbacks, by a maximum of 1m except on Victory Terrace if the adopted setback is less than 4m.
- A balcony must be set back a minimum of 1 m from any adjoining lot. Any balcony set back less than 2m from an adjoining lot must incorporate an approved screen (minimum 1.8m high) on that side.



3.6 Roof Form

- Where it is visible from public areas and streets, the majority of the roof pitch is to be between 30 to 45 degrees (sloping away from the public boundary), with a shallower pitch acceptable for verandahs and canopies, small areas of skillion roofs, and small areas of flat roofs where screened behind parapets. The use of dormer/attic windows, verandahs and awnings is encouraged to reduce the apparent scale of development, add visual interest and assist with climate control.
- The heights and levels of roof ridges, pitching points, gutters, eaves and parapets must either match those on the adjoining property or vary by a minimum of 600mm.
- Roofs sharing the same pitching point as the adjoining property and in the same plane should match the roof pitch of the adjoining property.

3.7 Articulation, Detailing and Street Presence

- Each dwelling is to be designed as a separate visual entity from its neighbours. This is achieved through the use of contrasting colours, materials and/or textures.
- Buildings are expected to address all public frontages. Jewell Lane is to be treated as an address rather than as a service lane.
- Dwellings are to be orientated towards public spaces.
- The plan layout should enable casual surveillance of the lot and surrounds from habitable rooms and balconies.
- Buildings should provide a modulated street frontage with an articulated facade and use of elements such as verandahs, balconies, awnings, dormers and window projections to provide visual interest and establish a fine grained scale to development.
- Porticos may project into a required minimum setback by up to 750mm.
- Generally, detailing should provide visual richness and variety, interest and identity and assist in reducing the visual bulk of building mass.
- Buildings on corner lots are to address both frontages, with special treatment encouraged to mark corners and link streets e.g. additional floor height, distinct roof form, articulation of corner wall elements, variation in materials and colours, special balcony treatments. Extra height at corners through the use of decorative parapets, tower elements or similar is encouraged. In approved instances, a "tower element" may take the form of an additional storey if the local government is satisfied that it contributes to the landmark quality of the building.
- Garages (particularly doors), carports and fencing are to be detailed so as to reduce their visual impact and add interest at the pedestrian level.

3.8 Windows

- Overall window opening proportion must be vertical or square. Horizontally proportioned window openings are acceptable only if integral to the elevation and a minor element of the overall elevational composition.
- All main rooms must have at least one opening window to facilitate natural ventilation.
- Door and window shutters, if fitted, must be operable.



3.9 Chimneys

Chimneys are encouraged. Chimneys should have cowls or contain some shape and form to the chimney capping.

3.10 Balustrades

Metal is preferred over other materials for balustrades. Aluminium or cast iron "lace" is not permitted.

3.11 Blank Walls

- Blank walls abutting or facing public spaces are to be kept to a minimum. Walls are to be detailed to provide visual interest and pedestrian scale.
- Parapet walls up to 6m in height are permitted. Higher parapet walls are permitted where they are hidden from view by a parapet wall on the adjoining lot. Where exposed, parapet walls are to be detailed and finished to the local government's satisfaction.

3.12 Access and Parking

- Vehicle crossovers, where required, are to be constructed to the local government's specifications at the developer's expense.

Lots 37 and 38

- Principal pedestrian access is to be from Victory Terrace. Pedestrian access is also required from Jewell Lane.
- Vehicular access is to be via a double crossover (to a maximum width of 7m) from Jewell Lane (refer Figure 9). The location of vehicular access is to be close to, or south of the centre of the lot for Lot 37, and in the centre of the lot or north of the centre for Lot 38.

Lots 39 to 43

- Pedestrian access is to be provided separate from vehicle access and is to be from both Victory Terrace and Jewell Lane. Vehicular access is to be from Jewell Lane in accordance with the parking locations shown in Figure 9.
- Vehicle parking in front of the building setback line must not exceed 6m in width for each lot. Carports or garages designed to integrate with the design of the dwelling and having good presentation to the street are permitted. Preference will be given to designs which minimise the visual prominence of vehicle parking on the elevation of the building.

Lot 44

- Pedestrian access is to be provided separate from vehicle access and is to be from both Victory Terrace and Jewell Lane. Vehicular access is to be from Jewell Lane.
- Although Lot 44 has development potential for two dwellings, only one single width crossover will be permitted for each dwelling in the location shown in Figure 9 (maximum combined garage width 7m). If it is intended to provide two car spaces for each dwelling, then both spaces must be able to be served from the single crossover without further modification to the public domain, for example by providing the bays in a "tandem" configuration.

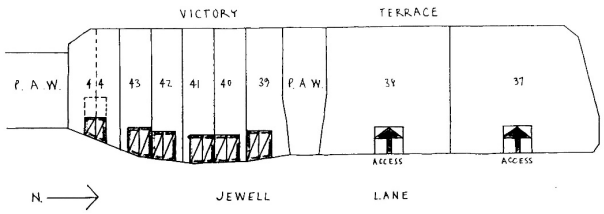


Figure 9 - On-Site Parking Location and Access Lot 37 to 44

3.13 Open Space

- All private open space is to be of usable area and dimension, and where possible should have a northern aspect.
- All dwellings other than apartments must have access to ground level open space with a minimum dimension of 4m and directly accessible from a living area. The opportunity exists on Lots 39 to 43 to create a central courtyard for the purpose of private open space, light access and ventilation.
- At least 75% of ground level open space must be open to the sky. Any overhanging eave, balcony, deck or terrace must not protrude over the north side of the open space or more than 1.5m over any other side and must have a minimum clearance of 3m above the finished ground level of the open space. The provision of additional private open space is encouraged. This may be provided as a balcony, deck or roof terrace. Balconies must have a minimum dimension of 1.5m.
- Roof terraces greater than 4m x 4m in dimension must have a pitched roof or shade structure covering the majority of the terrace, in keeping with the scale and elevation of the dwelling. This is in order to add visual interest, reduce apparent scale and assist with climate control.
- All private open space must be designed to minimise overlooking of adjoining properties, provide privacy to users and permit adjoining properties to share available views.

4.0 MATERIALS AND COLOURS

4.1 Walls and Windows

- Generally walls are to be red or terracotta coloured brick or similarly coloured masonry, limestone, or rendered finish. Light, cream coloured or imitation limestone bricks are generally not acceptable unless used in conjunction with other permitted wall materials.
- Render may be paint finished in ochres, reds and similar wash colours.
- Timber and lightweight cladding (paint finished or stained) is acceptable on upper floors and as a minor element at ground floor level.
- The considered combination of more than one material or use of more than one finish is encouraged as it adds variety and reduces perceived building bulk. Finishes that separate ground and upper floors or parts of upper floors are encouraged.
- Reflective glass or dark tinted glass is not permitted. Generally 6mm float glass is acceptable.



4.2 Colour

- Well considered colour schemes are encouraged, as distinct from predominantly monochrome colour schemes.
- Trim colours which enhance and complement the wall and roof colours are preferred. The local government retains the right of final decision on the acceptability of a colour scheme.

4.3 Roofs and Shade Structure Covering

- Roof materials are to be selected from within the following colour range: tiles in autumn or terracotta tones; shingles in slate grey; corrugated metal decking in Colorbond Off White, Merino, Wheat, Birch Grey, Saltbush, Beige, Homestead, Mist Green or Gull Grey, or comparable colours.
- A Zincalume finish is acceptable only where it can be demonstrated that glare and reflectivity will not be a problem to neighbours and surrounding activities, including those on the opposite shore of the river. Shadecloth and profiled clear acrylic roof sheeting are not permitted in locations visible from public areas.

4.4 Fences and Retaining Walls

- Every lot boundary abutting a street, public walkway, or other public area is to be fenced in a manner compatible with the overall design quality of the area.
- In order to maintain consistency of fencing throughout the subdivision, the standard fencing style depicted in Figure 10 is to be used. This consists of piers to a maximum of 2m high, with a fence base and infill wrought iron or metal railings to a combined maximum of 1.8m high. On boundaries abutting public walkways, heights are measured from the top of the existing walls. No fence base in addition to the existing retaining wall is permitted. On other boundaries, the heights are measured from the finished ground level of the adjacent street or footpath and piers and or maximum 500mm high fence base may be constructed in limestone, face brick or coloured or painted concrete or rendered brick finished to match the dwelling.
- Retaining walls on property boundaries within the public walkways are under the care and control of the local government. Whilst building fences on top of these walls may be desirable therefore (having regard for the design controls mentioned above), the authority to do so is the responsibility of the local government.
- In order to avoid the duplication of piers at boundaries between adjoining properties, piers are to straddle the dividing boundary as shown in Figure 11.
- No fibre cement or similar style fencing is permitted. Dividing fences should be of a style reflecting and compatible with the overall subdivision style.
- At least 50% of the boundary length of street frontage fencing is to contain visually permeable infill panels.
- No retaining walls other than those already provided are permitted on the boundaries abutting public areas. The height of existing retaining walls may not be altered. Designs which minimise the height of retaining walls for dwellings are sought.
- Fencing details are to form part of the application for development approval.

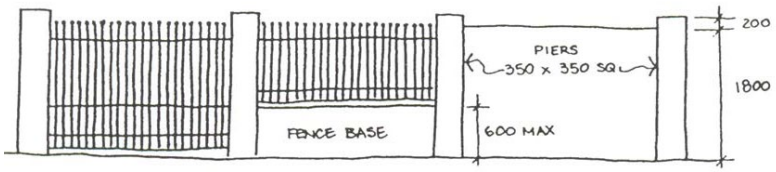


Figure 10 - Standard Fencing

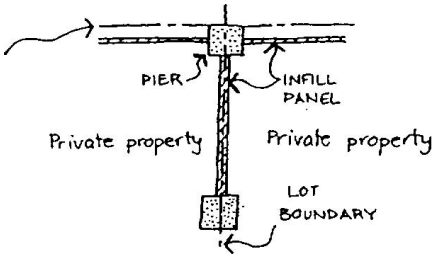


Figure 11 - Fencing on common boundaries

4.5 Landscape

- Permeable segmental paving is to be used for all hard surfaces in order to increase on-site water absorption.
- Where paving abuts sealed surfaces in streets or mews and is visible from public areas, its colour, texture and scale should be integrated with the existing paving.
- Trees selected should be suitable for small gardens, and the mature tree size, form and scale should relate to, but not overwhelm the building mass.
- A landscape proposal plan showing general garden layout and location and species of any trees is to be submitted at the time of making a Building Licence application.
- The careful selection of plants to minimise water consumption requirements is encouraged. No groundwater bores are permitted within this subdivision.

4.6 Services

- A service easement area is defined for each lot and all meters and connections are located within it. All such fittings are to be integrated into the overall landscape and building design. Building over these easements is not permitted.
- All piped and wired services, air conditioners, clothes drying areas and hot water storage tanks are to be concealed from street and public area view. Solar panels and solar water heaters may be visible where they are in the same plane as the roof and there is no alternative location that can provide a similar level of solar efficiency.
- A Stormwater Drainage Plan is to be provided with all building licence applications. A stormwater connection pit is provided near the Jewell Lane frontage of each lot and all stormwater on this side of the lot is to be discharged to it. Drainage grates are not to be obstructed. On other parts of the site stormwater is to be disposed of on-site.



- Provision is to be made for the storage of domestic bins, screened from public view.

4.7 Geotechnical Site Conditions

Owners are advised that geotechnical briefing notes are available for inspection at the local government's offices if required, however it is the responsibility of each owner to ensure that the design of their dwelling and associated structures is suitable for the site conditions of their lot.



DRAFT

Planning Policy Manual – Part 2

Planning Policies and Design Guidelines for Normalised Redevelopment Areas

Section 2.5
East Perth – Area 5
Jewell Lane

NOTE: Proposed Amendments Are Shown In Red – pg. 5



Version #	Decision Reference	Synopsis
1	11 March 2008	Adopted
2	18 March 2015	Amended
3	11 April 2017	Amended
4	To be inserted	Amended



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Design Guidelines – Section 2.5

East Perth Area 5 – Jewell Lane

1.0 APPLICATION

The Belvidere subdivision is within the Belvidere Precinct (EP 8), as defined in the City of Perth Local Planning Scheme No. 26 (Normalised Redevelopment Areas) (herein called 'the Scheme'). These Guidelines apply to Lots 1 to 23 and 26 to 33 inclusive as shown in Figure 1.

2.0 RELATIONSHIP TO PLANNING SCHEME AND PLANNING POLICIES

These Design Guidelines are intended to supplement the provisions of the Scheme Text and Planning Policies and should be read in conjunction with the Scheme, in particular those provisions relating to the Claisebrook Village Project Area and Precinct EP8: Belvidere, and other Planning Policies.

The Deemed Provisions set out in the *Planning and Development (Local Planning Schemes) Regulations 2015* also form part of the Scheme Text.

The Scheme identified Preferred, Contemplated and Prohibited uses for Precinct EP8: Belvidere and stipulates maximum plot ratio. In determining any application for development approval the local government will have regard to these Design Guidelines, the Scheme and other Planning Policies.

3.0 ABOUT THESE GUIDELINES

These guidelines describe the character sought for this area and the design elements required to achieve the required character and form. Although detailed, they allow a considerable amount of design freedom. It should be noted that whilst variations to some elements may be considered, the local government may refuse Development Approval for developments not considered to be in keeping with the intent of these Guidelines. Variations to building heights and setbacks and building envelopes will not be contemplated.

4.0 DEVELOPMENT POTENTIAL

Lots 1 to 23 and 27 to 33

One dwelling per lot.

Lot 26

Two dwellings.

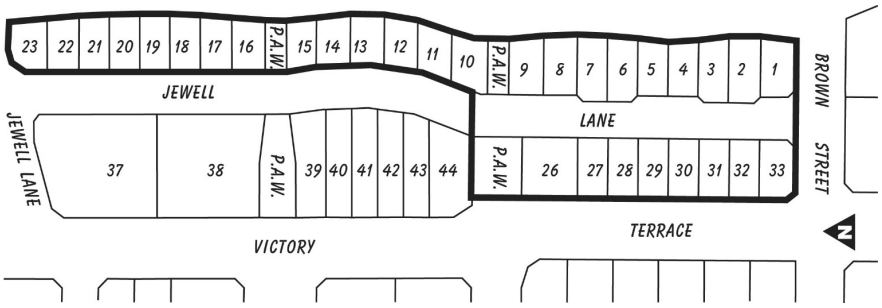


Figure 1 - Lots 1 to 23 Jewell Lane, Lots 26 to 33 Victory Terrace and Lots 37 to 44 Victory Terrace (Lots 37 to 44 Victory Terrace subject of separate Design Guidelines).



5.0 SETBACKS

Setbacks are measured at right angles from the relevant boundary to the closest section of wall. Required setbacks are as follows:

BOUNDARY	MIN	MAX
Lot 1		
North	Nil	Nil
Brown Street	1m (See Note 1)	4m
Mardalup Park	4m	4m (See Note 4)
Jewell Lane	3m (See Note 2)	n/a
Lots 2 to 8, 11 to 14 and 17 to 22		
Jewell Lane	3m (See Note 2)	n/a
Side	Nil	See Note 3
Mardalup Park	4m	4m (See Note 4)
Lots 9 and 15		
P. A. W.	1m (See Note 1)	4m
South	Nil	Nil
Mardalup Park	4m	4m (See Note 4)
Jewell Lane	3m (See Note 2)	n/a
Lots 10 and 16		
P. A.W.	1m (See Note 1)	4m
North	Nil	Nil
Mardalup Park	4m	4m (See Note 4)
Jewell Lane	3m (See Note 2)	n/a
Lot 23		
North	1m (See Note 1)	4m
South	Nil	Nil
Mardalup Park	4m	4m (See Note 4)
Jewell Lane	3m (See Note 2)	n/a
Lot 26		
P. A.W.	1m (See Note 1)	4m
South	Nil	Nil
Jewell Lane	3m (See Note 2)	n/a
Victory Terrace	3m	4m
Lots 27 to 32		
Side	Nil	See Note 3
Jewell Lane	3m (See Note 2)	n/a
Victory Terrace	3m	4m
Lot 33		
North	Nil	Nil
Brown Street	1m (See Note 1)	4m
Jewell Lane	3m (See Note 2)	n/a

Please see notes overleaf



Note 1: For Lots 1, 9, 10, 15, 16, 23, 26 and 33, one section of dwelling not less than 4m or more than 6m long must be set back 1m from this boundary. The balance of the dwelling must be set back at least 2m.

Note 2: A single storey garage or carport may be constructed with a nil setback to a maximum width of 6m however parking must not dominate the street elevation.

Note 3: Maximum nil setback is required for northern boundaries of Lots 2, 4, 6, 8, 12, 14, 18, 20, 22, 27, 29 and 31. Maximum nil setback is required for southern boundaries of Lots 3, 5, 7, 11, 13, 17, 19, 21, 26, 28, 30 and 32. Figure 1 refers. Other side boundaries for these lots may be set back but if set back, not less than one third of the total depth of the dwelling must be set back 1m. This is to ensure visual consistency of dwelling spacing. Setbacks between 0m to 1m are not permitted.

Note 4: Setback may be increased to 5m if a 2m deep balcony is provided. Refer to "Building Design" sub-section on Balconies.

6.0 BUILDING HEIGHT

- The building height and bulk is to be contained within a building envelope, with only minor projections allowed for such items as chimneys, finials, pergolas, small portions of bay and dormer windows, Juliette balconies and minor portions of other balconies, and approved features which in the opinion of the local government contribute to the character and identity of the area. Balconies and enclosed rooms must not project past the lot boundaries. The building envelope defines the limits of building bulk and it is not intended that the building profile should mirror that of the envelope.
- The maximum envelope height is measured from the highest finished level of the street or existing retaining wall (as the case may be) at the perimeter of the lot.
- Generally building heights are intended to be two to three storeys (min 6m, max 9m) plus usable roof space, (3m) in the form of a loft, attic or roof terrace. A minimum of two storeys (or equivalent 6m height) is required.
- Building envelopes are depicted in Figures 2 to 6, as follows:
  - Figure 2: Lots 2 to 8, 11 to 14 and 17 to 22
  - Figure 3: Lots 1, 9, 10, 15, 16 and 23
  - Figure 4: Lots 27 to 32
  - Figure 5: Lot 26
  - Figure 6: Lot 33
- Where the heights specified in this Policy are inconsistent with the heights specified in Special Control Area No. 33 – Royal Perth Hospital Flight Path Protection under City Planning Scheme No. 2, whichever are the lower heights shall apply.
- Allowances should be made for the slight variations in lot shape between lots when reading these diagrams. If a boundary is comprised of more than one section (i.e. there is an angle in the boundary) then the building envelope will have a corresponding number of sections on that boundary.

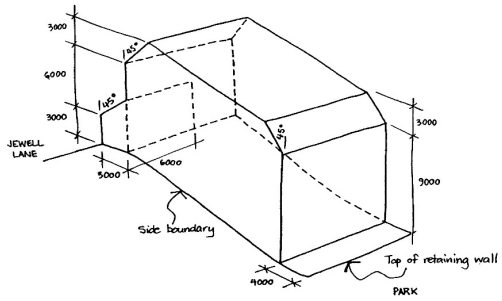


Figure 2 - Building Envelope for Lots 3, 5, 7, 11, 13, 17, 19 & 21.

This envelope is mirrored for Lots 2, 4, 6, 8, 12, 14, 18, 20 & 22.

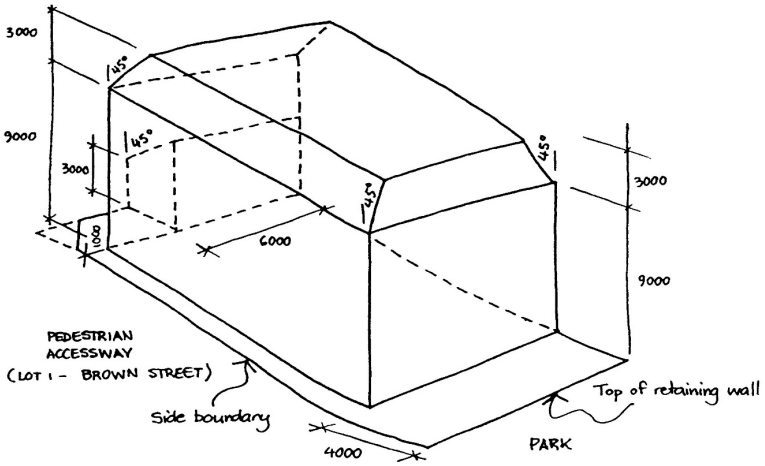


Figure 3 - Building Envelope for Lots 1, 10 & 16. This envelope is mirrored for Lots 9, 15 & 23.

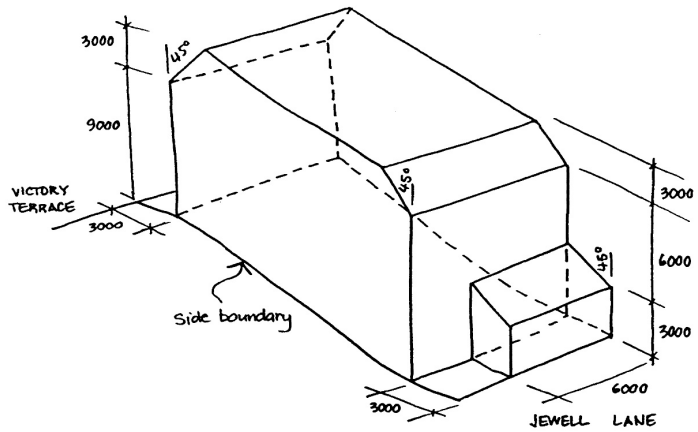


Figure 4 - Building Envelope for Lots 27, 29 and 31. This envelope is mirrored for Lots 28, 30 & 32.

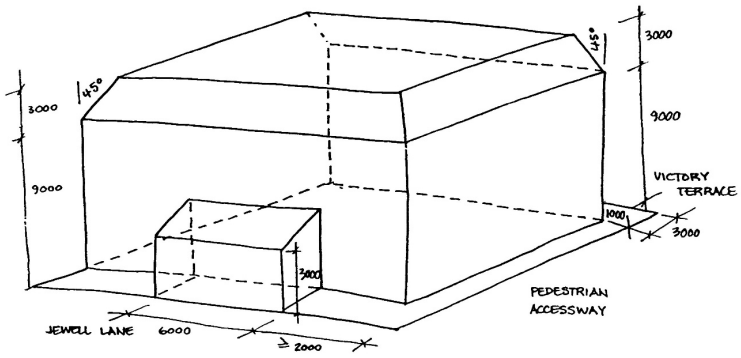


Figure 5 - Building Envelope for Lot 26.

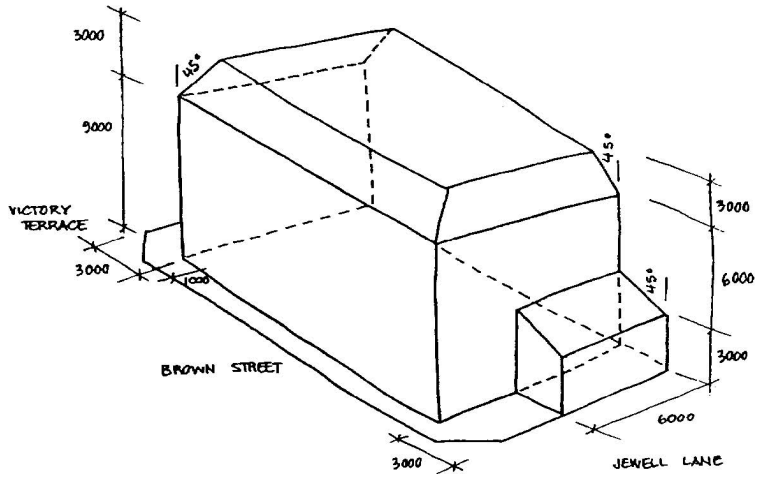


Figure 6 - Building Envelope for Lot 33.

7.0 BUILDING DESIGN

7.1 Sloping Sites

- It is expected that the slope of sites will be accommodated within the design of dwellings through the use of split levels.
- Impact on Neighbouring Construction.
  - Each dwelling must be designed to prevent structural impact on adjoining lots, and must not cause adjoining owners to compromise the design of their dwellings such that retaining structure is required in excess of that which would otherwise be required.

7.2 Floor levels

- The minimum ground floor to first floor height is 3m.
- The finished floor level of the dwelling adjacent to the Mardalup Park setback line should be no more than 400mm higher than the top of the existing retaining wall.

7.3 Privacy

A high standard of acoustic and visual privacy is expected with particular attention to:

- construction materials and techniques to reduce noise transmission between dwellings;
- site and dwelling layout to separate potentially conflicting uses;
- balcony and window location and design to avoid overlooking neighbouring windows and private open space;
- building design should contribute to the creation of a safe environment by avoiding the formation of "blind" spaces which cannot be seen from inside the most used rooms.



7.4 Balconies

- The inclusion of balconies to take advantage of views to the water and parkland is encouraged. Balconies can also assist the composition, articulation and visual interest of buildings. They should be of usable dimensions with a minimum dimension of 1.5m and wherever possible be enhanced by the provision of shading from summer sun.
- Juliette balconies are permitted but will not be counted as private open space. A Juliette balcony is a small balcony with a maximum depth of 750mm.
- A balcony may project into a required minimum setback other than nil setbacks by a maximum of 1 m except on Victory Terrace if the adopted setback is less than 4m.
- Balconies may protrude into the Mardalup Park setback by 1m but if protruded must be 2m deep. If this option is adopted the face of the building may be located 1m behind the setback line.
- A balcony must be set back a minimum of 1m from any adjoining lot. Any balcony set back less than 2m from an adjoining lot must incorporate an approved screen (minimum 1.8m high) on that side.

7.5 Roof Form

- Where it is visible from public areas and streets the majority of the roof pitch is to be between 30 to 45 degrees (sloping away from the public boundary), with a shallower pitch acceptable for verandahs and canopies, small areas of skillion roofs, and small areas of flat roofs where screened behind parapets. The main ridge lines visible from public areas are to be parallel with the public boundary (i.e. they run "across" the lot). Gables are permitted as minor roof elements.
- The use of dormer/attic windows, verandahs and awnings is encouraged to reduce the apparent scale of development, add visual interest and assist with climate control.
- The heights and levels of roof ridges, pitching points, gutters, eaves and parapets must either match those on the adjoining property or vary by a minimum of 600mm.
- Roofs sharing the same pitching point as the adjoining property and in the same plane should match the roof pitch of the adjoining property.

7.6 Articulation, Detailing and Street Presence

- Each dwelling is to be designed as a separate visual entity from its neighbours. This is achieved through the use of contrasting colours, materials and/or textures.
- Buildings are expected to address all public frontages. Jewell Lane is to be treated as an address rather than as a service lane.
- Dwellings are to be orientated towards public spaces.
- The plan layout should enable casual surveillance of the lot and surrounds from habitable rooms and balconies.
- Buildings should provide a modulated street frontage with an articulated facade and use of elements such as verandahs, balconies, awnings, dormers and window projections to provide visual interest and establish a fine grained scale to development.
- Generally detailing should provide visual richness and variety, interest and identity and assist in reducing the visual bulk of building mass.



- Buildings on corner lots are to address both frontages, with special treatment encouraged to mark corners and link streets e.g. additional floor height, distinct roof form, articulation of corner wall elements, variation in materials and colours, special balcony treatments. Extra height at corners through the use of decorative parapets, tower elements or similar is encouraged. In approved instances a "tower element" may take the form of an additional storey if the local government is satisfied that it contributes to the landmark quality of the building.
- Garages (particularly doors), carports and fencing are to be detailed so as to reduce their visual impact and add interest at the pedestrian level.

7.7 Windows

- Overall window opening proportion must be vertical or square. Horizontally proportioned window openings are acceptable only if integral to the elevation and a minor element of the overall elevational composition.
- All main rooms must have at least one opening window to facilitate natural ventilation. Door and window shutters, if fitted, must be operable.

7.8 Chimneys

Chimneys are encouraged. Chimneys should have cowls or contain some shape and form to the chimney capping.

7.9 Balustrades

Metal is preferred over other materials for balustrades. Aluminium or cast iron “lace” is not permitted.

7.10 Blank Walls

- Blank walls abutting or facing public spaces are to be kept to a minimum. Walls are to be detailed to provide visual interest and pedestrian scale.
- Parapet walls up to 6m in height are permitted. Higher parapet walls are permitted where they are hidden from view by a parapet wall on the adjoining lot. Where exposed, parapet walls are to be detailed to the local government’s satisfaction.

8.0 ACCESS AND PARKING

- No direct pedestrian access is permitted from lots into Mardalup Park or the pedestrian accessways.
- Pedestrian access to lots is to be provided separate from vehicle access. Pedestrian access for Lots 26 to 33 may be provided from Jewell Lane and/or Victory Terrace.
- All vehicular access is to be from Jewell Lane.
- Vehicle parking in front of the building setback line must not exceed 6m in width for each lot. Carports or garages designed to integrate with the design of the dwelling and having good presentation to the street are permitted. Preference will be given to designs which minimise the visual prominence of vehicle parking on the elevation of the building.
- Vehicle parking transition ramps if required must be accommodated within the property boundary.
- Vehicle crossovers, where required, are to be constructed to the local government’s specifications at the developer's expense.



9.0 OPEN SPACE

- North facing private open space should be provided wherever possible.
- Each dwelling must have access to ground level private open space with a minimum dimension of 4m, directly accessible from a living area.
- At least 75% of this ground level open space must be open to the sky. Any overhanging eave, balcony, deck or terrace must not protrude over the north side of the open space or more than 1.5m over any other side and must have a minimum clearance of 3m above the finished ground level of the open space.
- Additional private open space is encouraged. Balconies, decks and roof terraces are all acceptable forms of private open space.
- Roof terraces greater than 4m x 4m in dimension must have a pitched roof or shade structure covering the majority of the terrace, in keeping with the scale and elevation of the dwelling. This is in order to add visual interest, reduce apparent scale and assist with climate control.
- All private open space is to be of area and dimension. As a guide, ground level private open space should have an area with a minimum dimension of 4m, whilst a balcony should have a minimum dimension of 1.5m.
- All private open space must be designed to minimise overlooking of adjoining properties, provide privacy to users and permit adjoining properties to share available views.

10.0 MATERIALS AND COLOURS

10.1 Walls and Windows

- Generally walls are to be red or terracotta coloured brick or similarly coloured masonry, limestone, or coloured render finish.
- Render may be paint finished in ochres, reds and traditional wash colours.
- Timber and lightweight cladding (paint finished or stained) is acceptable on upper floors and as a minor element at ground floor level.
- The considered combination of more than one material or use of more than one finish is encouraged as it adds variety and reduces perceived building bulk.
- Finishes that separate ground and upper floors or parts of upper floors are encouraged.
- Reflective glass or dark tinted glass is not permitted. Generally 6mm float glass is acceptable.

10.2 Colour

- Well considered colour schemes are encouraged, as distinct from predominantly monochrome colour schemes.
- Trim colours which enhance and complement the wall and roof colours are preferred.
- The local government retains the right of final decision on the acceptability of a colour scheme.



10.3 Roofs and Shade Structure Covering

- Roof materials are to be selected from within the following colour range: tiles in autumn or terracotta tones; shingles in slate grey; corrugated metal decking in Colorbond Off White, Merino, Wheat, Birch Grey, Saltbush, Beige, Homestead, Mist Green or Gull Grey, or comparable colours.
- A Zincalume finish is acceptable only where it can be demonstrated that glare and reflectivity will not be a problem to neighbours and surrounding activities, including those on the opposite shore of the river.
- Shade cloth and profiled clear acrylic roof sheeting are not permitted in locations visible from public areas.

11.0 FENCES AND RETAINING WALLS

- Every lot boundary abutting a street, public walkway, park or other public area is to be fenced in a manner compatible with the overall design quality of the area.
- In order to maintain consistency of fencing throughout the subdivision, the standard fencing style depicted in Figure 7 is to be used. This consists of piers to a maximum of 2m high, with a fence base and infill wrought iron or metal railings to a combined maximum of 1.8m high. On boundaries abutting Mardalup Park and public walkways, heights are measured from the top of the existing walls. No fence base in addition to the existing retaining wall is permitted. On other boundaries the heights are measured from the finished ground level of the adjacent street or footpath and piers and maximum 600mm high fence base may be constructed in limestone, face brick or coloured or painted concrete or rendered brick finished to match the dwelling.
- In order to avoid the duplication of piers at boundaries between adjoining properties, piers are to straddle the dividing boundary as shown in Figure 8.
- No fibre cement or similar style fencing is permitted. Dividing fences should be of a style reflecting and compatible with the overall subdivision style.
- At least 50% of the boundary length of street frontage fencing is to contain visually permeable infill panels.
- No retaining walls other than those already provided are permitted on the boundaries abutting public areas. The height of existing retaining walls may not be altered. Designs which minimise the height of retaining walls for dwellings are sought.
- Fencing details are to form part of the application for development approval.
- On boundaries fronting abutting the Mardalup Park limestone piers have already been provided on lot boundaries. Infill is to be provided to the design shown in Figure 9.
- In the setback area adjacent to Mardalup Park, the railings shown on Figure 9 as 700mm in height can be increased in height to be compliant with the relevant Australian Standards and local government requirements for swimming pool fences.
- The infill wrought iron or metal railings comprising the standard fencing to Mardalup Park are to measure 100mm below the top of the existing limestone piers. The dimensions of the vertical intermediate posts as shown on Figure 9 to be 100mm x 100mm x 6mm thick, to the height of the infill railings (i.e. not the dimensions shown on Figure 9).
- Infill panels abutting Mardalup Park are to be black in colour, in order to achieve a consistent appearance from within the park.

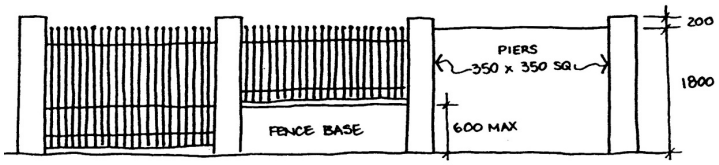


Figure 7 - Standard fencing.

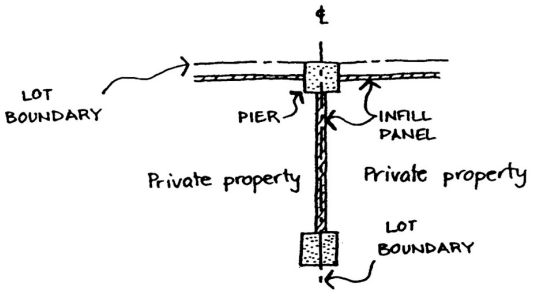


Figure 8 - Fencing on common boundaries.

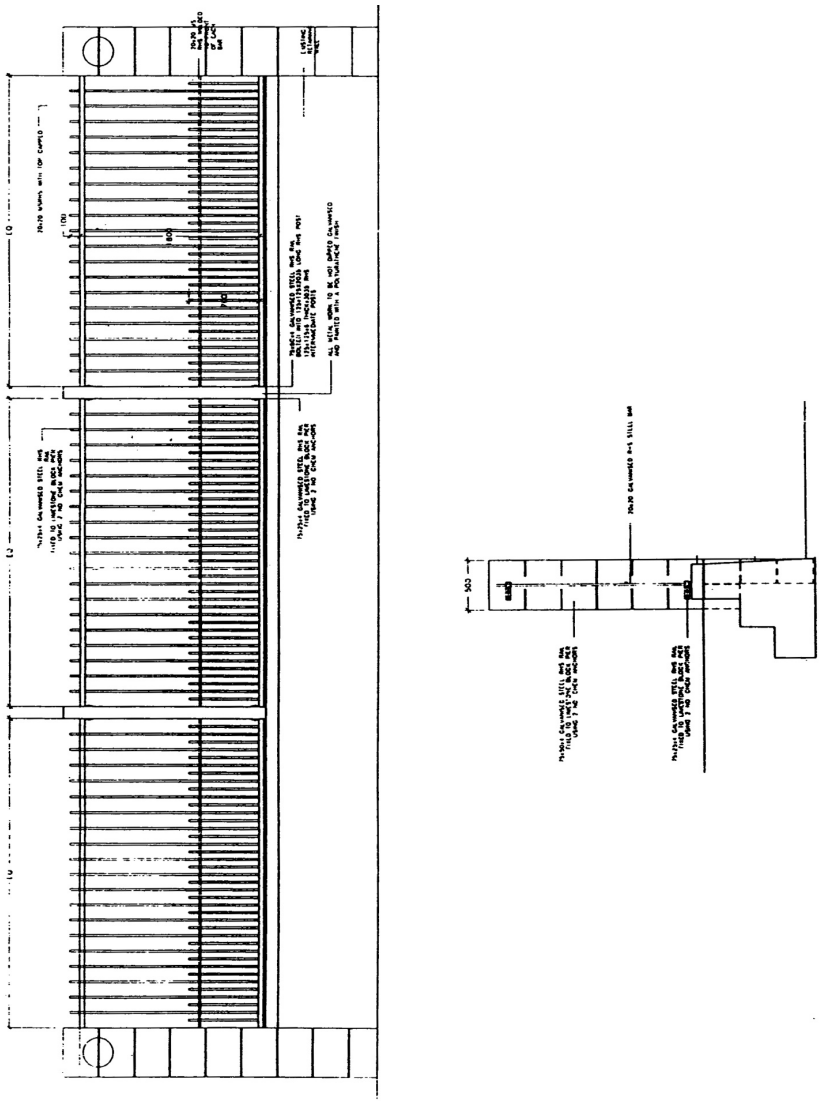


Figure 9 - Fencing facing Mardalup Park.



12.0 LANDSCAPE

- Permeable segmental paving is to be used for all hard surfaces in order to increase on-site water absorption.
- Where paving abuts sealed surfaces in streets or mews and is visible from public areas, its colour, texture and scale should be integrated with the existing paving.
- Trees selected should be suitable for small gardens, and the mature tree size, form and scale should relate to, but not overwhelm the building mass.
- A landscape proposal plan showing general garden layout and location and species of any trees is to be submitted at the time of making a Building License application.
- The careful selection of plants to minimise water consumption requirements is encouraged.
- No groundwater bores are permitted within this subdivision.

13.0 SERVICES

- A service easement area is defined for each lot and all meters and connections are located within it. All such fittings are to be integrated into the overall landscape and building design. Building over these easements is not permitted.
- All piped and wired services, air conditioners, clothes drying areas and hot water storage tanks are to be concealed from street and public area view. Solar panels and solar water heaters may be visible where they are in the same plane as the roof and there is no alternative location that can provide a similar level of solar efficiency.
- Television antennae and satellite and microwave dishes are to be located in accordance with the City of Perth's Policy 1.15. One antennae and one dish per dwelling may be permitted. Antennae and dishes located on the apex or ridges of roofs will not be supported.
- A Stormwater Drainage Plan is to be provided with all building license applications. A stormwater connection pit is provided near the Jewell Lane frontage of each lot and all stormwater on this side of the lot is to be discharged to it. Drainage grates are not to be obstructed. On other parts of the site stormwater is to be disposed of on-site.
- Provision is to be made for the storage of domestic bins, screened from public view.

14.0 GEOTECHNICAL SITE CONDITIONS

Owners are advised that geotechnical briefing notes are available for inspection at the local governments offices if required, however it is the responsibility of each owner to ensure that the design of their dwelling and associated structures is suitable for the site conditions of their lot.



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Planning Policy Manual – Part 2

Planning Policies and Design Guidelines for Normalised Redevelopment Areas

Section 2.14
East Perth – Area 14
Lord and Norbert Streets

NOTE: Proposed Amendments Are Shown In Red – pg. 4



Design Guidelines – Section 2.14

East Perth Area 14– Lord and Norbert Streets

Version #	Decision Reference	Synopsis
1	11 March 2008	Adopted
2	17 March 2015	Amended
3	11 April 2017	Amended
4	To be inserted	Amended



Design Guidelines – Section 2.14

East Perth Area 14– Lord and Norbert Streets

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1.0 APPLICATION

These guidelines apply to land between Lord, Wittenoom, Norbert and Royal Streets and the former East Perth Primary School, which is within the Silver City Precinct (Precinct EP4), as defined in the City of Perth Local Planning Scheme No. 26 (Normalised Redevelopment Areas) (herein called "the Scheme"). These guidelines apply to that area as shown in Figure 1.

2.0 CONTEXT

The land is situated between Lord Street to the west, the former East Perth Primary School to the east, Royal Street to the north and Wittenoom Street to the south. The Precinct includes the school site. Lord Street is the Claisebrook Village Project Area's western boundary.

Existing uses are commercial, educational and government with the Education Department and Health Department occupying the area east of Clotilde Street. The City of Perth Car Park 4B, the AMTC and City Farm are located opposite on Royal Street. Wellington Square is opposite the Education Department building on Wittenoom Street.

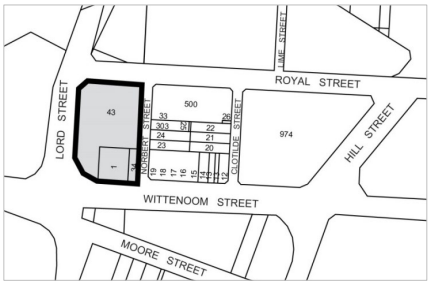


Figure 1:- Location Plan

2.1 General Site Characteristics

The site is characterised by multi-storey buildings to the east and one and two storey buildings to the west. Setback distances vary substantially. Vacant land comprises two-thirds of the block between Clotilde and Norbert Streets. The topography of the Precinct is essentially flat.

Given the western portion of the site's varied built form, low intensity of development, and proximity to a major road and proximity to parkland, it is anticipated that some redevelopment of the land will occur in the medium to long term.

A continuous building frontage will be sought to Lord Street and around Wellington Square. Buildings are to assume streetscape presentation to all street frontages.

2.2 Scheme Provisions

These Design Guidelines are intended to supplement the provisions of the Scheme and should be read in conjunction with the Scheme, in particular those provisions relating to the Claisebrook Village Project Area, Precinct EP4: Silver City, and other Planning Policies.

The Deemed Provisions set out in the *Planning and Development (Local Planning Schemes) Regulations 2015* also form part of the Scheme Text.

The Scheme identifies Preferred, Contemplated and Prohibited uses for Precinct EP4: Silver City and stipulates maximum plot ratio. In determining any application for development approval, the local government will have regard to these Design Guidelines, the Scheme and other Planning Policies.

The local government encourages the recycling of buildings where this is viable and makes a positive contribution to the streetscape and amenity of the area.

2.3 Setbacks

The setback to all street frontages is to be nil. Other than those stated above, setbacks are to be in accordance with the R-Codes.

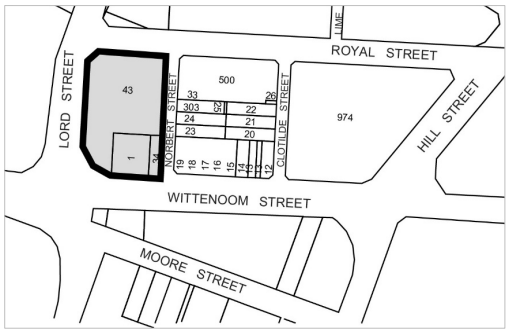


Figure 2:- Setbacks

3.0 BUILDING FORM

3.1 Building Height

STREET	NUMBER OF STOREYS
Royal, Norbert Streets	4 storeys (12.4m)
Lord Street	6 storeys (18.6m)
Wittenoom Street (west)	4 storeys (12.4m)

Note: Height is to be read as the number of storeys shown plus usable loft space (up to 4.5m). Ground to first floor height is 3.1m.

Where the heights specified in this Policy are inconsistent with the heights specified in Special Control Area No. 33 – Royal Perth Hospital Flight Path Protection under City Planning Scheme No. 2, whichever are the lower heights shall apply.

3.2 Parking and Access

Undercroft or basement parking concealed from public view is preferred, although open air car parking at the rear of sites will be considered. Any commercial development will also be required to provide for cyclist access and parking.

At-grade pedestrian access for all users into buildings is to be provided from Street frontages. Safe and attractive pedestrian access into buildings is also to be provided from any car park on site. Generally, one crossover only will be allowed for each lot.

3.3 Building Character

Buildings should respect the scale of the street or place and of their neighbours. The buildings should also be sympathetic in scale, massing and proportions to adjacent buildings and those of heritage significance. The opportunity exists to create a strong sense of identity and an innovative inner city style of residential, commercial and mixed use development with interesting facade treatments and roof lines.

Buildings will be assessed for the contribution to the legibility and identity of East Perth, the public-private interface, streetscapes, grain and sense of place. Aspects such as roof line, materials and the scale and massing of buildings will be carefully considered by the local government in the assessment of development applications.



Materials in new development will be encouraged to complement those of the East Perth area generally. The range of building styles in the Precinct gives the encouragement to expressive contemporary/modern architecture.

Buildings should primarily be of a solid construction nature such as brickwork, stone masonry or rendered concrete type materials, with lighter materials used for suspended, lightweight or cantilevered building elements such as awnings, feature panels, roof sections and balconies.

The use of courtyards and/or balconies is encouraged to provide amenity for residential development where required, and to take advantage of any views. All elevations are to be well detailed and are to relate to a pedestrian scale.

3.4 Roofs

Generally roofs should be pitched, with a slope of between 30° and 45°. Curved roofs or lower pitch roofs screened by parapets may be considered.

Roof forms/profiles should generally be expressed in a way which complements the architectural style of the building, and which provides clear silhouettes and minimises visual clutter.

3.5 Walls and Windows

Blank walls abutting a public space must be minimised. Walls are to be detailed to provide visual interest and pedestrian scale. Proportions of solid wall to openings should reflect the scale of adjacent spaces.

Windows are to have a vertical or square proportion. Where the overall window opening shape is of a horizontal nature, glazing shall be broken up to reflect the required square or vertical proportion. Reflective or dark tinted glass is not permitted.



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Planning Policy Manual – Part 2

Planning Policies and Design Guidelines for Normalised Redevelopment Areas

Section 2.15
East Perth – Area 15
Norbert and Clotilde Streets

NOTE: Proposed Scheme Amendments Are Shown In Red – pg. 5



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1.0 APPLICATION

This street block, immediately west of the large Health and Community Services Departments building, is situated within the Silver City Precinct (Precinct EP4) as defined in the City of Perth Local Planning Scheme No. 26 (Normalised Redevelopment Areas) (herein called 'the Scheme'). These guidelines apply to that area as shown in Figure 1. These Guidelines are complementary to and should be read in conjunction with the provisions of the Scheme Text and other Planning Policies, particularly as they relate to Precinct EP4: Silver City.

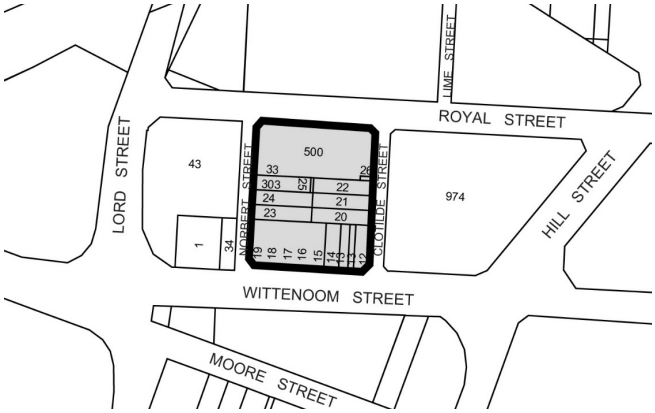


Figure 1: - The Site

2.0 CONTEXT

The area is comprised of numerous small titles and some rights-of-way, and has a total land area of approximately 7,713m^2. This site is highly accessible by road and public transport. The surrounding area exhibits a variety of building forms, which vary from domestic scaled single storey buildings to the monolithic multi-storey office buildings from which the Precinct derives its name.

2.1 Scheme Provisions

The Scheme identifies Preferred, Contemplated and Prohibited uses for Precinct EP4: Silver City and stipulates maximum plot ratio. In determining any application for development approval, the local government will have regard to these Design Guidelines, the Scheme and other Planning Policies.

The Deemed Provisions set out in the *Planning and Development (Local Planning Schemes) Regulations 2015* also form part of the Scheme Text.



3.0 GUIDELINES

3.1 Building Form and Character

Having four street frontages, the site is highly visible and accordingly all frontages should be addressed in the design of the development. A single building is not a requirement - development of the site may comprise individual components provided that the overall result is cohesive and meets the objectives for the site. Good presentation of the development from all angles will be important, requiring special attention to be paid to the integration of car parking and service areas, including bin stores.

An interesting and articulated built form is sought. All elevations are to be provided with windows and other fenestration - blank walls will not be accepted.

Shelter for pedestrians will be important, with the preferred form being a colonnade on the Royal Street and Wittenoom Street frontages. The colonnade should be a minimum of 2.5m wide.

Full site coverage is not expected, although it will be considered provided that the development is contained within the designated building envelope.

3.2 Colours and Materials

Careful selection of colour and materials is required in order to achieve a development that is interesting at both pedestrian level and as viewed as part of the streetscape. The considered use of a variety of colours and materials is preferred over monotones and uniform finishes.

3.3 Building Envelope

The envelope is a maximum of 14m high, projected at 45° from a point 11m above the finished ground level of the footpath adjacent to each boundary. Figure 2 refers.

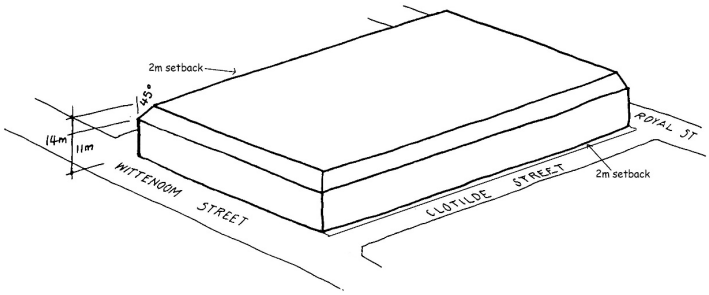


Figure 2: - Building Envelope

3.4 Building Height

Overall, a minimum of 2 storeys and a maximum of 4 storeys (14m max height including the roof space however the roof space should not be used as loft) is sought. Consideration will be given to the development of a single storey building or buildings if necessary, for physical needs of the client group or occupiers, provided that the building's height is maximised through design techniques aimed at giving the impression of greater height.



Where the heights specified in this Policy are inconsistent with the heights specified in Special Control Area No. 33 – Royal Perth Hospital Flight Path Protection under City Planning Scheme No. 2, whichever are the lower heights shall apply.



3.5 Setbacks

FRONT SETBACKS	MIN	MAX
Royal Street	Nil	4m
Wittenoom Street	Nil	4m
Clotilde Street	2m	n/a
Norbert Street	2m	n/a

The setbacks are not intended to depict the building footprint - open areas such as courtyards, and articulated frontages are expected.

3.6 Access and Parking

- Pedestrian access must be provided at grade from all street frontages. Access for people with impaired mobility should be incorporated into the design. Building design should emphasise pedestrian entrances. Pedestrian access within the site is to be addressed, with the opportunity for public access through the site being provided where possible.
- Vehicular access may be gained from Norbert Street and Clotilde Street. Crossovers to Royal Street and Wittenoom Street are not permitted. Adequate vehicle sight lines are to be maintained at all crossovers and at all street intersections.
- Car Parking: Open air car parking is acceptable provided that it does not have frontage to Royal Street or Wittenoom Street, and should not exceed 50% of the total site area. Suitably screened basement and undercroft parking may also be accepted.
- Bicycle Parking: Provision is to be made for the parking of bicycles within the development. At least one shower/change room is to be provided for use by non-residential occupants of the development, to encourage the use of bicycles as an alternative to the car as a mode of transport to work.

3.7 Retaining walls and fences

Fencing and retaining walls should not be necessary. However, if fencing is required it should be visually permeable, using metal railings or other approved material. Fencing should consist of capped masonry piers to 2m high, with infill panels to 1.8m high. Retaining walls, if necessary, should not exceed 1.2m in height. The combined height of retaining walls and fences should not exceed 2m.

3.8 Security

Provision is to be made for the safe movement of people within the site through careful design of paths and accessways to eliminate potentially dangerous alcoves, areas of deep shadow and areas that can not be seen from within the most used rooms of the development.

3.9 Landscaping

There are a number of mature trees on the site which contribute to the amenity of the neighbourhood and would also enhance future development on the site. Every effort is to be made to retain the significant trees on the site, and to protect them from damage during construction.

Open areas such as car parks and courtyards are to be appropriately landscaped with segmental paving, to maximise on-site absorption of water run-off, and suitable planting.

3.10 Land Assembly

Amalgamation of the many small titles will be required in order to achieve land holdings that reflect the development parcel or parcels within the site. It is recommended that the existing rights-of-way be closed and amalgamated with the adjoining title or titles, a procedure under the Local Government Act that must be undertaken through the local government.



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Planning Policy Manual – Part 1

Section 4.4
Building Heights and Setbacks

NOTE: Proposed Scheme Amendments Are Shown In Red – pg. 10



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1	26 June 2001	Adopted
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1.0 INTRODUCTION

Central Perth has its own special character. Its outstanding natural setting on the Swan River, adjacent to the Mount Eliza escarpment and Kings Park, together with the foreshore park lands and the city skyline provide a dramatic visual identity.

Within the city, the layout of the streets, the pattern of development and grouping of various activities portrays a particular image and character to the city user.

Perth is renowned for its pleasant climate having a large number of days of sunshine throughout the year. It is, however, susceptible to strong winds, heavy showers and extreme heat. The local climate (micro-climate) has a significant influence on ones' perception as well as enjoyment and use of the city.

The built form that the city takes will help shape its character. The heights and setbacks of buildings are key factors in this regard.

This policy draws upon the local government's Urban Design Framework which sets out its vision for the physical form of development of the city. The policy should also be read in conjunction with the City Planning Scheme No. 2's design related planning policies.

Structure and Application

The policy includes a set of overarching objectives and is divided into two key sections, one relating to building heights and the other relating to building setbacks. Each section includes a set of principles and standards.

The objectives outline the desired outcomes and expectations for development and must be achieved.

The principles outline ideals and rules that shall be considered when making decisions.

The standards prescribe how the objectives and principles of the policy are generally intended to be satisfied.

The local government acknowledges that there will be instances where variations to the standards may be warranted. A section on variations has been provided at the end of the policy to provide guidance in relation to these.

2.0 OBJECTIVES

To ensure that the heights and setbacks of buildings contribute to the creation of a city which:

- has functional buildings;
- has a high level of amenity within buildings;
- has functional and attractive pedestrian areas and public spaces;
- has an attractive skyline and outlook from the public realm;
- is diverse and interesting in character; and
- conserves, respects and enhances places of cultural heritage significance.



3.0 POLICY AREA

This policy shall apply to all land:

- classified within a City Planning Scheme No. 2 use area; or
- reserved under City Planning Scheme No. 2 for Public Purposes – Civic Use

with the exception of the areas covered by the following instruments made pursuant to the Scheme:

- Precinct Plan 9 – Matilda Bay;
- Office/Residential Use Area in Precinct Plan 10 – West Perth;
- Precinct Plan 11 – Hamilton;
- Mount Street Design Policy;
- Terrace Road Design Policy;
- Goderich Design Policy; and
- King Street Heritage Precinct Design Guidelines.

4.0 DEFINITIONS

The terms **'height'**, '**setback**' and **'street building height area'** are defined in Attachment 4 Definitions of City Planning Scheme No. 2.

For the purposes of this policy:

'**laneway'** means a narrow (generally 6 metres wide or less) road, right of way or right of carriageway, in either public or private ownership, which provides access to the side or rear of lots principally for servicing adjoining land uses and activities. Laneways are generally open to the sky.

'lower building levels' means those levels of a building at or below the street building height prescribed on the Street Building Height and Setback Plan of City Planning Scheme No.2.

'narrow lot' means a lot which is:

- <15 metres in width in the case of a 3 metre setback standard;
- <17 metres in width in the case of a 4 metre setback standard; or
- <19 metres in width in the case of a 5 metre setback standard.

'upper building levels' means those levels of a building above the street building height prescribed on the Street Building Height and Setback Plan of City Planning Scheme No.2.

'**street building heights'** are prescribed on the Street Building Height and Setback Plan of City Planning Scheme No. 2 and apply to the street building height area.

5.0 BUILDING HEIGHT

5.1 Street Building Heights

5.1.1 Principles

The street building height of a development should:



- generally be of a low scale;
- generally be consistent with other street building heights within the street;
- generally relate to the role of the street in the local government's hierarchy of streets as outlined in the local government's Urban Design Framework;
- maximise sunlight penetration into streets, public spaces and buildings, and provide for moderate to high levels of sunlight penetration into key pedestrian areas and public spaces in the middle of the day (10am to 2pm) from August to April; and
- respect the street building heights of places of cultural heritage significance within the street.

5.1.2 Standards

- The street building height should comply with the Street Building Height and Setback Plan of City Planning Scheme No.2.

5.2 Maximum Building Heights

5.2.1 Principles

The maximum building height of a development should:

- reinforce established character areas of the city;
- maximise sunlight penetration into streets, public places and buildings, and to provide for moderate to high levels of sunlight penetration into key pedestrian areas and public spaces in the middle of the day (10am to 2pm) from August through to April; and
- provide for a transition in building heights at the interface with lower scaled developments in adjoining local government areas.

5.2.2 Standards

- The maximum height of a building should comply with the Maximum Building Height Plan of City Planning Scheme No. 2.
- In the areas indicated as having 'no prescribed height' on the Maximum Building Height Plan, the maximum building height should be determined through reference to the objectives and principles of this policy and other built form controls such as plot ratio, street building heights and setbacks.
- Within parts of the city, as indicated on the Maximum Building Height Plan, development is required to be contained within a 45 degree angled height plane. This 45 degree angled height plane relates to the angle of the sun at noon on the 21 August and 21 April. Containment of development within this plane will ensure that the solar access objectives of this policy are met. Whilst it is expected that development should be contained within this plane, it is not intended that development should take this precise form.
- Note – the building height and setback provisions of the Office/Residential Scheme Use Area and the Mount Street Design Policy in Precinct 10 – West Perth also apply to portions of the State Government's Parliament House Precinct as indicated on the Maximum Building Height Plan.



5.3 Specific Area Building Heights

- Specific building height controls may also apply within Special Control Areas of City Planning Scheme No. 2 and Minor Town Planning Schemes.
- Specific building height controls may also apply within the area covered by the State Government's Parliament House Precinct Policy.

6.0 BUILDING SETBACKS

6.1 Street Setbacks

6.1.1 Principles

Lower Building Levels

The lower levels of a building should generally have a nil street setback to:

- provide for a consistent building line along the street; and
- provide for a continuous building edge along the street to maximise opportunities for interaction between the private and public realms.

Upper Building Levels

The upper levels of a building should generally be setback from the street to:

- assist in distinguishing between the lower and upper building levels;
- provide for an attractive street outlook by opening up views of the sky;
- minimise adverse wind impacts on the pedestrian environment; and
- maximise sunlight penetration into streets, public places and buildings, and to provide for moderate to high levels of sunlight penetration into key pedestrian areas and public spaces in the middle of the day (10am to 2pm) from August through to April.

The street setback for both the lower and upper levels of a building should also:

- respect the street setbacks of places of cultural heritage significance within the street; and
- have regard to the street setbacks of other buildings within the street.

6.1.2 Standards

Buildings should be setback from the street in accordance with the Street Building Height and Setback Plan and Maximise Building Height Plan of City Planning Scheme No. 2.

6.2 Side and Rear Setbacks

6.2.1 Principles

The side and rear setbacks of buildings should:

- ensure natural light access and ventilation and privacy within and outlook from buildings appropriate to their use and location within a city centre environment;



- provide separation between upper building levels to provide an attractive city skyline and outlook from the public realm by enabling daylight access and opening up views of the sky;
- respect the side and rear boundary setbacks of places of cultural heritage significance within the street; and
- have regard to the side and rear setbacks of buildings on adjoining land.

Notwithstanding these principles, a continuous lower level building edge should generally be provided along the street to maximise opportunities for interaction between the private and public realms along the street.

6.2.2 Standards

- The lower and upper levels of buildings should be setback from side and rear lot boundaries as set out in the tables below except along the street frontage where the lower levels of a building shall have a nil side setback.

Residential and Special Residential Use Groups

Building Elevation Condition	**Minimum Side/Rear Setbacks**	
	Lower Building Levels	Upper Building Levels
No Openings or Balconies	Nil	• 3 metres (up to 65 metres in building height[1]) • 6 metres (over 65 metres in building height[1])
Openings and/or Balconies	4 metres	• 4 metres (up to 65 metres in building height[1]) • 8 metres (over 65 metres in building height[1])

Other Use Groups

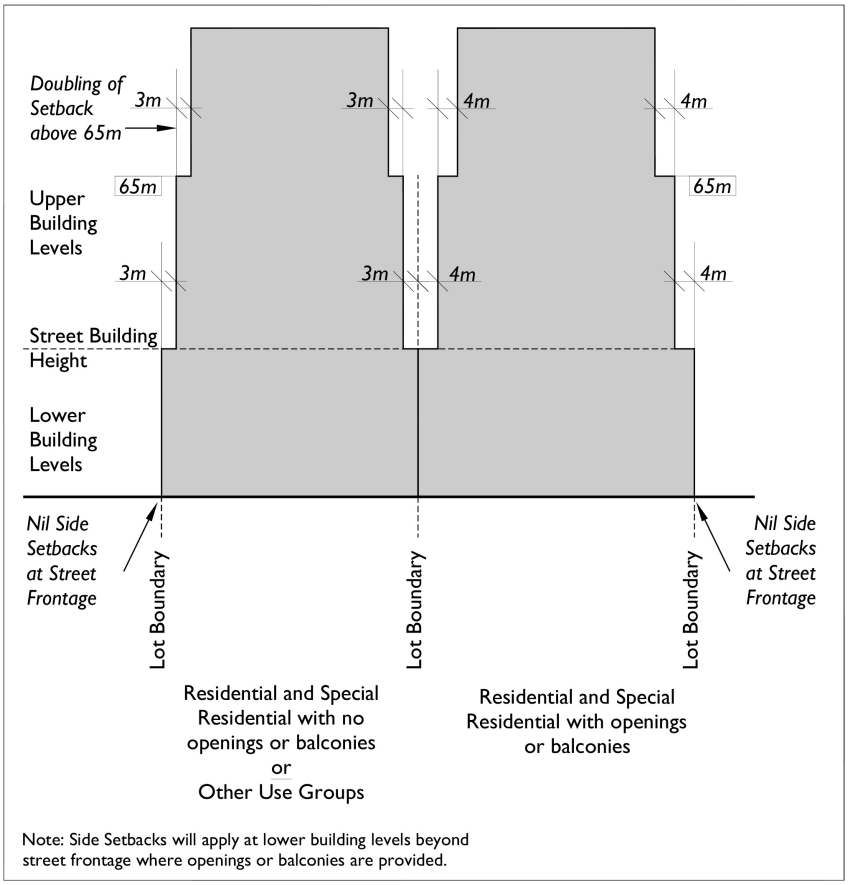
Building Elevation Conditions	**Minimum Side/Rear Setbacks**	
	Lower Building Levels	Upper Building Levels
No Openings and/or Balconies	Nil	• 3 metres (up to 65 metres in building height[1]) • 6 metres (over 65 metres in building height[1])
Openings and/or Balconies	3 metres	• 3 metres (up to 65 metres in building height[1]) • 6 metres (over 65 metres in building height[1])

Note: *1. Building height shall be measured in accordance with the definition of height in Attachment 4 of City Planning Scheme No. 2 and includes both the lower and upper building levels.*

- Figure 1 – Street Elevation of Minimum Side Setbacks illustrates the side setbacks standards.
- Where more than one tower above the lower building levels is located on the same site, they should be separated as if there were a boundary between them.
- Although the standards allow for lower building levels to have nil side and rear setbacks, the local government may require openings and/or balconies to be provided within the lower building levels to achieve private amenity objectives. In these cases, setbacks will be required.

Figure 1

Street Elevation of Minimum Side Setbacks



Note: Side Setbacks will apply at lower building levels beyond street frontage where openings or balconies are provided.



6.3 Specific Area Setbacks

Specific setback standards apply to specific areas of the city as set out below.

6.3.1 St Georges Precinct

Street Setbacks

The lower and upper building levels should be setback from the street in accordance with the street setback standards outlined in section 6.1 of this policy.

Side/Rear Setbacks

The lower and upper levels of buildings shall be setback from side and rear lot boundaries as set out in the table below except along the street frontage where the lower levels of building shall have a nil side setback.

Building Elevation Conditions	**Minimum Side/Rear Setbacks**	
	Lower Building Levels	Upper Building Levels
No Openings and/or Balconies	Nil	• 5 metres (up to 65 metres in building height[1]) • 10 metres (over 65 metres in building height[1])
Openings and/or Balconies	5 metres	• 5 metres (up to 65 metres in building height[1]) • 10 metres (over 65 metres in building height[1])

Note: *1. Building height shall be measured in accordance with the definition of height in Attachment 4 of City Planning Scheme No. 2 and includes both the lower and upper building levels.*

6.3.2 Civic Precinct – Terrace Road

For the land fronting Terrace Road within the Civic Precinct and indicated on the Maximum Building Height Plan of City Planning Scheme No. 2 as having a maximum building height of 70 metres, the following setback standards apply:

Street Setbacks

The lower and upper building levels should be setback from the street in accordance with the street setback standards outlined in Section 6.1 of the policy.

Side/Rear Setbacks

The lower and upper building levels should be setback from side and rear boundaries in accordance with the setback standards outlined in Section 6.2 of the policy, except that no additional setbacks shall apply over 65 metres in building height.

6.3.3 Laneways

- For the purposes of this policy, laneways are not to be regarded as streets.
- Along laneway frontages, the lower building levels should generally have a nil setback. The local government may however require or consider allowing setbacks to accommodate uses which would activate the laneway, if appropriate, or which would otherwise enhance the laneway.
- Along laneway frontages, the upper building levels should generally be setback in accordance with the side and rear setback standards outlined in section 6.2.2 of this policy. The local government may however consider reducing these where:



- a laneway provides adequate separation between the upper building levels on lots on opposite sides of a laneway;
- this is unlikely to have any adverse impact on any special character of the laneway; and
- the objectives of this policy are met and appropriate regard has been given to the principles of this policy.

6.3.4 Other Areas

- Specific setback standards may also apply within Special Controls Areas of City Planning Scheme No. 2 and Minor Town Planning Schemes.
- Specific setback standards apply within the area covered by the State Government's Parliament House Precinct Policy.

7.0 VARIATIONS TO STANDARDS

The local government acknowledges that there will be circumstances where variations to the building height and setback standards may be warranted to enable design flexibility for innovation and response to a site's context. Specific circumstances are identified in this section for guidance, however this section is not intended to be limiting.

Variations will not be granted as of right. The local government shall only approve variations to the building height and setback standards where it is satisfied that the proposed development:

- complies with clause 36 – Determination of Non-Complying Applications of City Planning Scheme No. 2;
- meets the objectives of this policy and has appropriate regard to the principles of this policy; and
- complies with the provisions of Special Control Area No. 33. - Royal Perth Hospital Flight Path Protection, under City Planning Scheme No. 2.

7.1 Building Height Standards

Street Building Heights

The local government may consider variations to the maximum street building height standards:

- at street corners in recognition that these may benefit from special design emphasis; or
- where different maximum street building heights are specified for each of the frontages of a corner lot.

In determining an appropriate maximum street building height in these instances, the local government shall have particular regard to the:

- functionality of the building;
- impact on the streetscape; and
- sunlight penetration and wind principles of this policy.

Maximum Building Heights

The local government may consider variations to the maximum building height standards by allowing for minor building projections outside of the 45 degree angled height plane where it



can be demonstrated that the objectives of this policy relating to pedestrian and public spaces are achieved and appropriate regard has been given to the sunlight penetration principles of this policy.

7.2 Building Setback Standards

7.2.1 Street Standards

Lower Building Levels

Notwithstanding the nil street setback standard for lower building levels the local government may require for lower building levels to be setback from the street:

- to provide vistas to places of cultural heritage significance, other important city landmarks or public spaces;
- to provide for appropriate public space (the City Planning Scheme No. 2 Bonus Plot Ratio Policy should be referred to determine what is considered an appropriate public space); or
- having regard to the street setbacks of lower building levels within the street.

Upper Building Levels

Whilst generally street building height should be low scale and upper building levels should be setback from the street, the local government may consider allowing portions of the upper building levels to be built up to the street where it can be demonstrated that:

- it meets the objectives of this policy and has regard to the sunlight penetration and wind principles of this policy; and
- it will provide for an enhanced design outcome and meets the objectives and has appropriate regard to the principles of the City Development Design Guidelines.

7.2.2 Side and Rear Setbacks

Lower Building Levels

The local government may consider reducing or averaging the side and rear setback standards for the lower levels of a building where appropriate visual privacy and outlook is achieved and appropriate amenity is provided within any adjoining space.

Visual privacy appropriate to the use of buildings and in the context of a city centre environment may be achieved through:

- offsetting openings and balconies; and
- designing openings and balconies to obscure views to and from boundaries with neighbouring properties.

The effective location and design of openings and balconies is preferred to the use of screening devices or obscured glazing, however, where these tools are used they should be integrated into the building design.

The spaces created by any setbacks should have an appropriate level of amenity. A contiguous area of open space between the building and the relevant boundary is preferred to a series of light wells. Nil side or rear setbacks may be preferable to small side or rear setbacks (<1.5m) that result in unusable and inaccessible spaces.

Upper Building Levels

The local government may consider reducing the side setback standards for upper building levels on narrow lots where adherence to these would unreasonably impact on the functionality of the building.

For narrow lots within the areas shown in Figure 2 – Side Setback Discretion for Narrow Lots, the upper building levels may have a nil setback on both side boundaries.

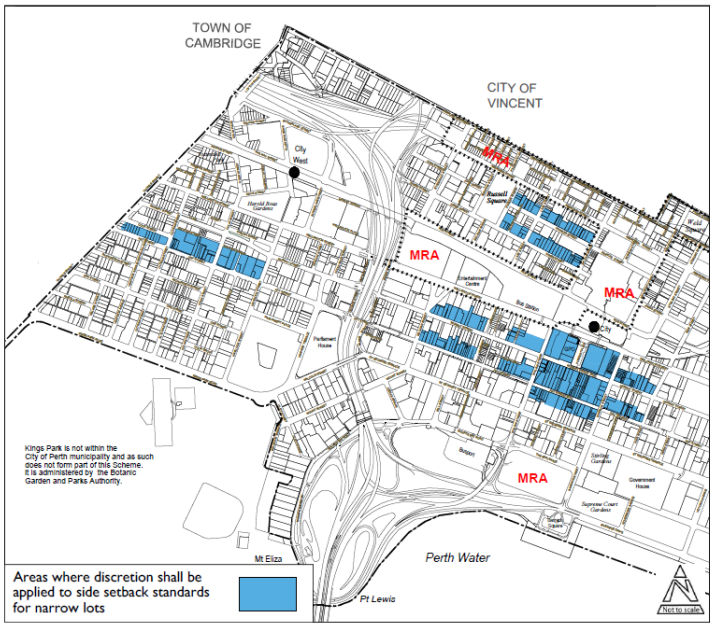
For narrow lots in other areas, consideration will be given to allowing a nil side setback on one boundary (particularly where the wall will abut a wall on an adjoining lot of a similar or greater dimension) provided that the side setback proposed on the other boundary is equal to or greater than the minimum side setback standard.

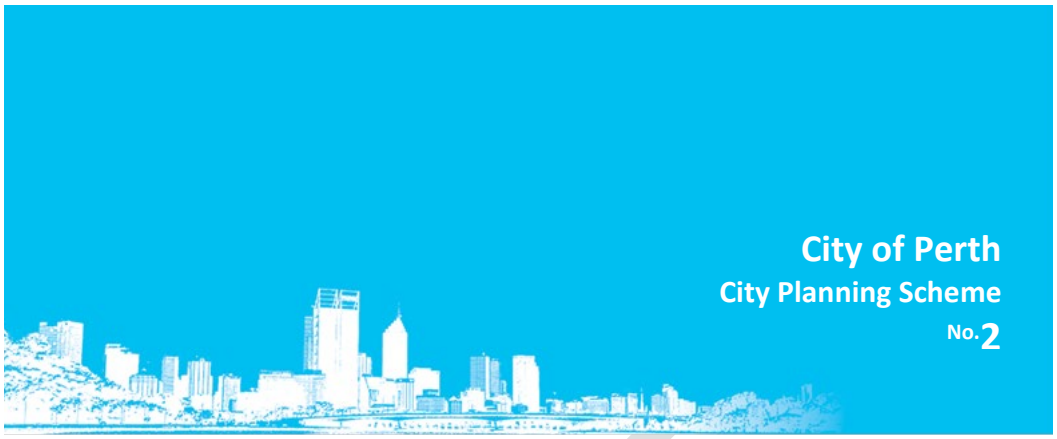
Where reduced setbacks (rather than nil setbacks) are proposed, visual privacy should be achieved with the use of appropriate design measures as indicated for lower building levels.

The local government may require the side and rear setback standards to be increased for upper building levels which have a significantly wide elevation (>50m) to satisfy the objectives of this policy and to have regard to the principles of this policy.

Figure 2

Side Setback Discretion for Narrow Lots





DRAFT

Planning Policy Manual – Part 1

Section 6.3
Goderich Design Policy

NOTE: Proposed Scheme Amendments Are Shown In Red –

pgs. 9 & 18



Version #	Decision Reference	Synopsis
1	26 June 2001	Adopted
2	1 February 2005	Amended
3	11 September 2014	Amended
4	11 April 2017	Amended
5	To be inserted	Amended



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1.0 OBJECTIVES

The intent of this policy is to encourage new development in the policy area which meets the following specific objectives:

- Establish a diverse residential environment where a high standard of amenity is provided, where historical themes are built upon, and where a variety and sense of urban richness will be evident.
- Promote a variety of housing types to accommodate a socially and culturally diverse community.
- Establish an identifiable retail and community focus for residents, employees and visitors in the Town Centre on Hay Street.
- Encourage a mix of uses in which commercial opportunities are provided, for people from both within and outside the area, while maintaining an overall residential theme. As part of this mix home offices should be actively promoted within the policy area.
- Strengthen the legibility of the public domain and provide friendly, active and people orientated streets.

2.0 POLICY AREA

This policy shall apply within the area designated on Figure 1 – Goderich Design Policy Area. Streets within the policy area are also divided into Categories A and B, as designated on Figure 1 and detailed in Section 4.3.1.

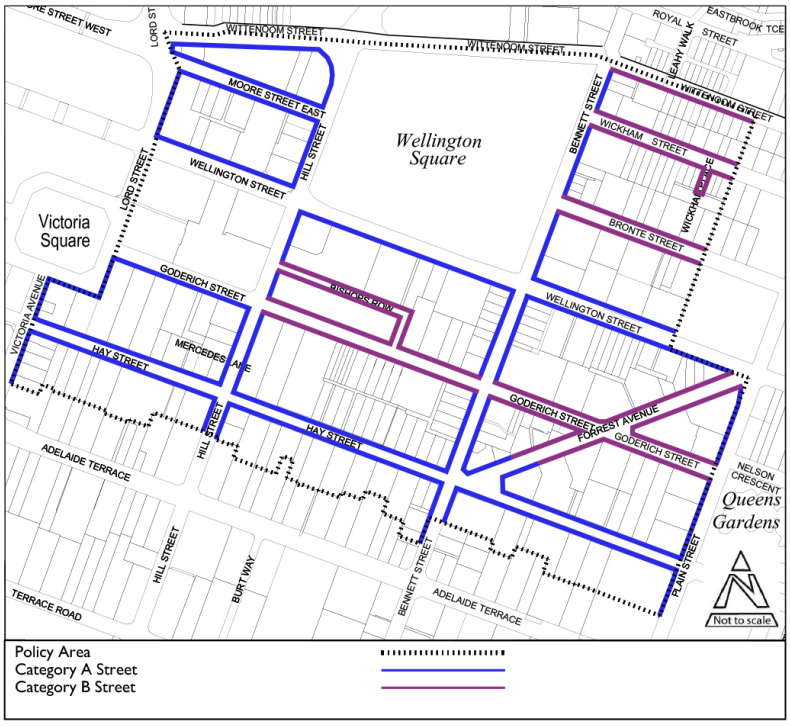


Figure 1 – Goderich Design Policy Area



3.0 DEFINITIONS

The terms '**height**', '**setback**' and '**street building height area**' are defined in Schedule 4 Definitions of City Planning Scheme No. 2. References to the Street Building Height and Setback Plan and Maximum Building Height Plan in the definition of 'street building height area' shall be taken however to refer to those plans included in this policy.

For the purposes of this policy:

'**laneway**' means a narrow (generally 6 metres wide or less) road, right of way or right of carriageway, in either public or private ownership, which provides access to the side or rear of lots principally for servicing adjoining land uses and activities. Laneways are generally open to the sky.

'**lower building levels**' means those levels of a building at or below the street building height prescribed on the policy's Street Building Height and Setback Plan.

'**narrow lot**' means a lot which is:

- <15 metres in width where proposed development would require a 3 metre setback standard under Section 4.3.5 of this policy; or
- <17 metres in width where proposed development would require 4 metre setback standard under Section 4.3.5 of this policy.

'**upper building levels**' means those levels of a building above the street building height prescribed on the policy's Street Building Height and Setback Plan.

'**street building heights**' are prescribed on the policy's Street Building Height and Setback Plan and apply to the street building height area.



4.0 POLICY

4.1 Land Use

Objective:

- To actively encourage the development of a wide range of inner city residential opportunities augmented by complimentary supporting services and employment opportunities within the area, with a strong focus on the Town Centre on Hay Street.

4.2 Density/Plot Ratio

Objective:

- To provide a control on building mass that will assist in directing development to areas in which it is desired, and achieves the land use and built form objectives for the area.

4.3 Built Form

Objectives:

- To ensure that residential and residential/commercial use areas have high levels of amenity which are conducive to residential use;
- To define and enclose Wellington Square and major streets within the area with a continuous edge of appropriately scaled peripheral buildings of relatively consistent height, abutting the front boundaries of their sites;
- To establish a Town Centre with an active people orientated environment characterised by well defined streetscapes, sheltered footpaths, and encourage the active use of the public domain for sitting, sunning and outside eating;
- To create functional buildings with a high level of amenity;
- To create functional and attractive pedestrian areas and public spaces;
- To create an attractive skyline and outlook from the public realm;
- To create areas of diverse and interesting character; and
- To conserve, respect and enhance places of cultural heritage significance.

4.3.1 Street Categories

In order to facilitate the land use and built form objectives of this policy, two distinct street categories have been identified within the policy area. Streets have been identified as either Category A Streets or Category B Streets on Figure 1 and a number of the provisions of the policy vary accordingly.

- Category A Streets – In these streets opportunities for interaction between the public and private realms should be maximised at lower building levels while separation between buildings at upper building levels should be provided to ensure appropriate amenity for occupants of buildings and enhance the outlook from the public realm.
- Category B Streets – In these streets greater separation between buildings and the public realm, and between buildings on adjoining lots, should be provided to ensure higher levels of residential amenity within a landscaped setting.



4.3.2 Street Building Heights

Principles

The street building height of a development should:

- generally be of a low scale in Category A Streets and of a medium scale in Category B Streets;
- generally be consistent with other street building heights within the street;
- generally relate to the role of the street in the city's hierarchy of streets as outlined in the local government's Urban Design Framework;
- maximise sunlight penetration to streets, public spaces and buildings, and provide for moderate to high levels of sunlight penetration within the Town Centre and key public spaces in the middle of the day (10am to 2pm) from August to April; and
- respect the street building heights of places of cultural heritage significance within the street.

Standards

- The street building height should comply with Figure 2 – Goderich Design Policy - Street Building Height and Setback Plan.
- Notwithstanding the street building height specified for a lot on the Street Building Height and Setback Plan, in Category B Streets where reduced side setbacks are proposed on narrow lots, the street building height should also be reduced to ensure appropriate amenity is maintained for occupants of existing or future buildings on adjacent land. Refer to Section 5.2.1.

Note: *Refer to Section 5.2.1 where different maximum street building heights are specified for each of the frontages of a corner lot.*

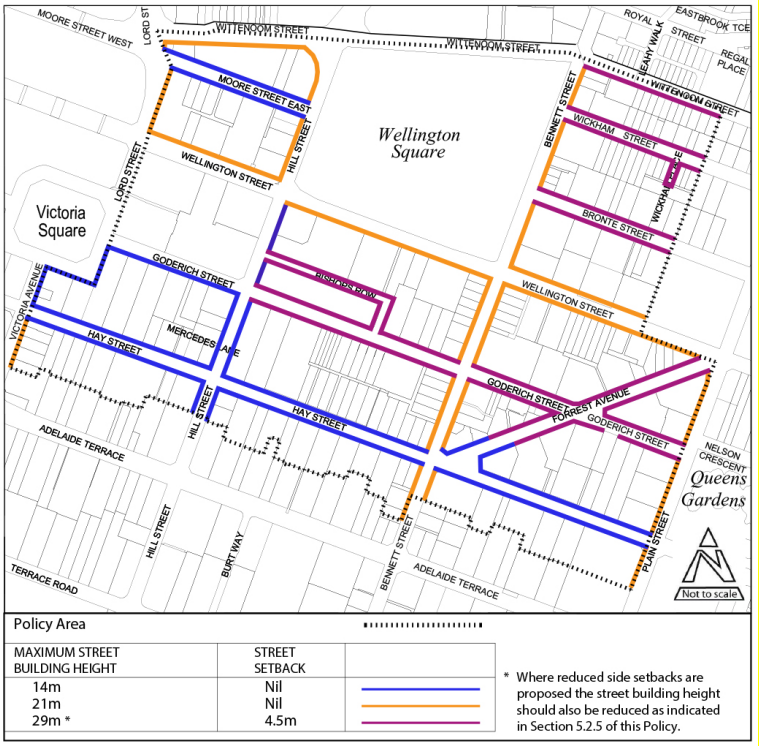


Figure 2 – Goderich Design Policy – Street Building Height and Setback Plan

4.3.3 Maximum Building Heights

Principles

The maximum building height of a development should:

- maximise sunlight penetration to streets, public places and buildings and provide for moderate to high levels of sunlight penetration into the Town Centre and key public spaces in the middle of the day (10am to 2pm) from August through to April; and
- provide for an appropriate level of amenity for existing and future residential uses on adjacent land.



Standards

- The maximum building height should comply with Figure 3 - Goderich Design Policy - Maximum Building Height Plan.
- Within the street block bounded by Hay Street, Hill Street, Goderich Street and Bennett Street, as indicated on the Maximum Building Height Plan, development is required to be contained within a 45 degree angled height plane measured from Hay Street. This 45 degree angled height plane relates to the angle of the sun at noon on the 21 August and 21 April. Containment of development within this plane will ensure that the solar access principles of this policy are met. Whilst it is expected that development should be contained within this plane, it is not intended that development should take this precise form.
- Where a lot is indicated on the Maximum Building Height Plan as having 'no prescribed height limit', the maximum building height should be determined through reference to the objectives and principles of this policy and other built form controls such as plot ratio, street building heights and setbacks.

  Notwithstanding if a lot is indicated on the Maximum Building Height Plan as having no prescribed height limit, in Category B Streets where reduced side setbacks are proposed on narrow lots, maximum building heights will apply to ensure appropriate amenity is maintained for occupants of existing or future buildings on adjoining land. Refer to Section 5.2.2.
- Where the heights specified in this Policy are inconsistent with the heights specified in Special Control Area 33 - Royal Perth Hospital Flight Path Protection under City Planning Scheme No. 2, whichever are the lower heights shall apply.

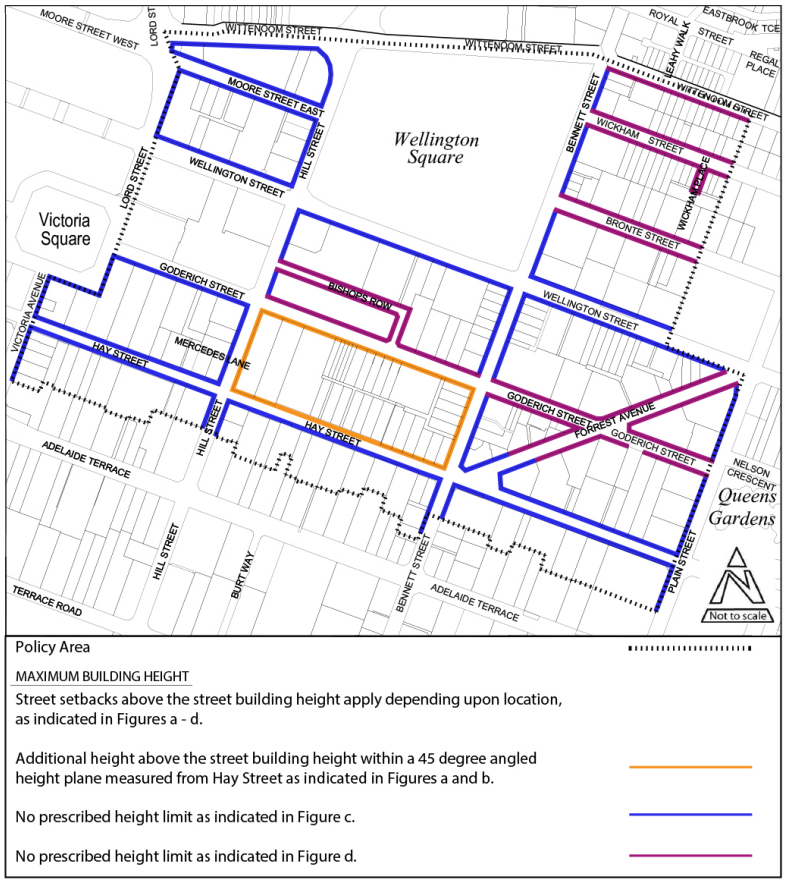


Figure 3 – Goderich Design Policy – Maximum Building Height Plan (1 of 2)

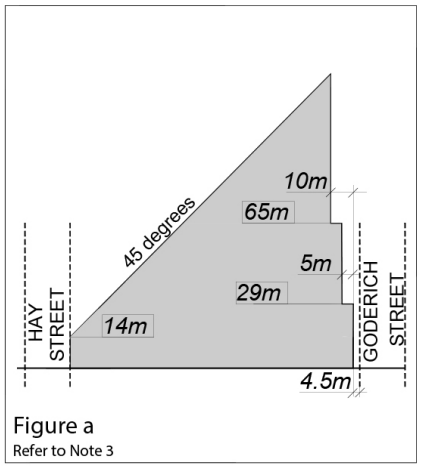


Figure a
Refer to Note 3

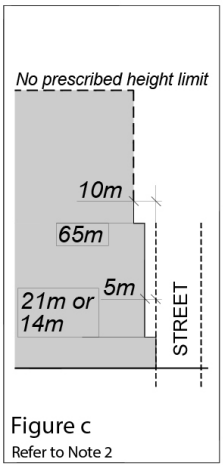


Figure c
Refer to Note 2

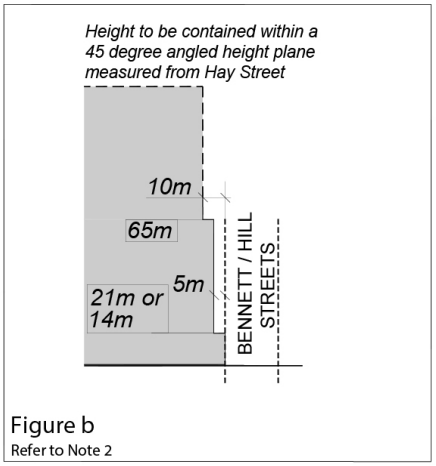


Figure b
Refer to Note 2

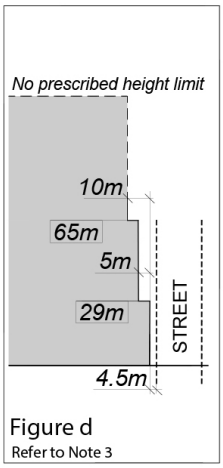


Figure d
Refer to Note 3

Notes:

1. Side and rear setbacks apply as indicated in this Policy.
2. Street building heights should be in accordance with Figure 2 - Street Building Height and Setback Plan.
3. Figures a and d - where reduced setbacks are proposed on narrow lots in Catergory B Streets the maximum building height should also be reduced as indicated in Section 5.2.5 of this Policy.
4. Laneways are not to be regarded as streets for the purpose of this Policy.

Figure 3 – Goderich Design Policy Maximum Building Height Plan (2 of 2)



4.3.4 Street Setbacks

Principles

Lower Building Levels

- The setback of lower building levels should generally provide a consistent building line fronting the street.
- Lower building levels in Category A Streets should generally be built to the street frontage to maximise interaction between the private and public realms.
- Lower building levels in Category B Streets should generally be setback from the street to provide landscaped setback areas which maximise residential privacy and amenity.

Upper Building Levels

The upper levels of a building should generally be setback from the street to:

- assist in distinguishing between the lower and upper building levels;
- provide for an attractive street outlook by opening up views of the sky;
- minimise adverse wind impacts on the pedestrian environment; and
- maximise sunlight penetration into streets, public places and buildings, and to provide for moderate to high levels of sunlight penetration into the Town Centre and key public spaces in the middle of the day (10am to 2pm) from August through to April.

The street setback for both the lower and upper levels of a building should also:

- respect the street setbacks of places of cultural heritage significance within the street; and
- have regard to the street setbacks of other buildings within the street.

Standards

- Buildings should be setback from the street in accordance with Figure 2 – Goderich Design Policy - Street Building Height and Setback Plan and Figure 3 – Goderich Design Policy – Maximum Building Height Plan.
- Where a corner lot has frontages to a Category A Street and a Category B Street, a 4.5 metre street setback should generally apply to the street building height for the entire frontage to the Category B Street.

4.3.5 Side and Rear Setbacks

Principles

The side and rear setbacks of buildings should:

- ensure natural light access and ventilation and privacy within and outlook from buildings appropriate to their use and their location within a central city environment, and in the case of Category B Streets, their location within a key residential environment. Notwithstanding this, in Category A Streets a continuous lower building edge should generally be provided along the street to maximise opportunities for interaction between the private and public realms;
- for upper building levels of buildings fronting Category A Streets, and at all building levels of buildings fronting Category B Streets, provide appropriate separation between



buildings to provide an attractive city skyline and outlook from the public realm by enabling daylight access and opening up views of the sky;

- respect the side and rear setbacks of places of cultural heritage significance within the street; and
- have regard to the side and rear setbacks of buildings on adjoining land.

Standards

Category A Streets – Side and Rear Setbacks

The lower and upper levels of buildings should be setback from side and rear lot boundaries as set out in the tables below except along the street frontage where the lower building levels should have a nil side setback.

Residential and Special Residential Use Groups

Building Elevation Condition	**Minimum Side/Rear Setbacks**	
	Lower Building Levels	Upper Building Levels
No Openings or Balconies	Nil	3 metres (up to 65 metres in building height) 6 metres (over 65 metres in building height)
Openings and/or Balconies	4 metres	4 metres (up to 65 metres in building height) 8 metres (over 65 metres in building height)

Other Use Groups

Building Elevation Condition	**Minimum Side/Rear Setbacks**	
	Lower Building Levels	Upper Building Levels
No Openings and/or Balconies	Nil	3 metres (up to 65 metres in building height) 6 metres (over 65 metres in building height)
Openings and/or Balconies	3 metres	3 metres (up to 65 metres in building height) 6 metres (over 65 metres in building height)

Note:

- *Building height shall be measured in accordance with the definition of height in Schedule 4 of City Planning Scheme No. 2 and includes both the lower and upper building levels.*
- *Where more than one tower above the lower building levels is located on the same site, they should be separated as if there were a boundary between them.*
- *Although the standards allow for lower building levels to have nil side and rear setbacks, the local government may require openings and/or balconies to be provided within the lower building levels to achieve private amenity objectives. In these cases, setbacks will be required.*



Category B Streets – Side Setbacks

Buildings should be setback from side lot boundaries as set out in the table below.

Building Elevation Condition	Minimum Side Setbacks
No Openings or Balconies	3 metres (up to 65 metres in building height[1]) 6 metres (over 65 metres in building height[1])
Openings and/or Balconies	4 metres (up to 65 metres in building height[1]) 8 metres (over 65 metres in building height[1])

Note:

- Building height shall be measured in accordance with the definition of height in Schedule 4 of City Planning Scheme No. 2 and includes both the lower and upper building levels.
- Where more than one building is located on the same site, they should be separated as if there were a boundary between them.

Category B Streets – Rear Setbacks

Buildings should be setback from the rear lot boundary a minimum of four metres for building heights up to 65 metres, and a minimum of eight metres for building heights over 65 metres.

Lots with Frontages to Category A and Category B Streets

Where a lot has frontages to both a Category A Street and a Category B Street the setback from each side and rear boundary should be the same as the required setback standard which applies to that boundary on the adjoining lot.

4.3.6 Laneways

For the purposes of this policy, laneways should be treated as a rear boundary and the applicable rear setback standard should apply.

4.4 Building Design

Objective:

- To encourage innovative and high-quality design which, while cognisant of the traditional patterns present in the existing context, will make a contemporary contribution to fulfilling the 'Built Form' objectives of this policy.

URBAN SETTING AND CONTEXT

4.4.1 Context

New developments shall take into account the scale, mass and grain of surrounding buildings and, without seeking to copy or imitate existing structures, new buildings should respond positively to their contexts.

Unsympathetic contrasts of scale and materials relative to adjoining buildings should be avoided.

Where existing streetscapes have strong patterns of either vertical or horizontal emphasis, new buildings should seek to reflect this emphasis.



4.4.2 Subdivision Pattern

In areas where the traditional subdivision pattern contributes to the character of the streetscape new development should recognize this pattern.

4.4.3 Relationship to the Street

Buildings are to address the street and reinforce the traditional relationship of building to street (i.e. building facades should be parallel to the street, the main entrance to the building should face the street, and windows should overlook the footpath and street).

All buildings should provide an entry which is clearly defined and visible from the street.

New developments shall establish ground floor uses which promote activity and informal surveillance of the street. While the demarcation between public space and private space is to be clearly established blank walls, heavy planting, screen walls, or roller shutters are to be avoided.

On residential sites, front fencing should generally be of an open construction with masonry piers and a dado wall. Piers shall be of a maximum of 1800 mm high, and any solid dado shall have a maximum height of 500 mm. These heights shall be calculated above the adjoining pavement level. Infill panels shall have a minimum of 75% of the surface area permeable.

4.4.4 Ground Floor Levels

Basement level car parks shall be treated to ensure the protection of the visual amenity of the development site and adjoining area. In Category B Streets any basements constructed in the street setback area should be below the mean natural level of the relevant street boundary of the lot.

The ground floor levels of buildings shall not be more than 1.0 metre above level of the existing footpath, or where there is no footpath the existing road verge, at the centre of the street boundary of the lot.

The level of the main entrance to the building should be at or near the level of the existing footpath at the street boundary of the lot. Ramps within the street setback area are discouraged, other than those ramps which run directly from the street to the entrance. Any changes in level should generally be dealt with inside the building.

The local government may vary this requirement in the case of steeply sloping sites. In determining whether or not to grant the variation, the local government will determine if the proposed ground floor level meets the local government's objective of maintaining an interactive streetscape and in the case of Category B Streets, a landscaped street setback area.

4.4.5 Pedestrian Shelter

In the City Centre and Town Centre Scheme Use Areas buildings shall incorporate pedestrian shelter over the footpath. This pedestrian shelter shall comply with any relevant local government's Local Laws.



ARTICULATION AND MODELLING

4.4.6 Articulation and Modelling

A variety of architectural expression will be encouraged with strong emphasis on promoting high quality contemporary design. Development should however establish sets of design elements, details, and finishes which break down the bulk of developments, and provide visual interest through the articulation and modelling of their built form.

4.4.7 Corners

Buildings should define street corners and create landmark features on prominent sites. Building corners may be emphasized by greater scale or differing geometry relative to the remainder of the project, or surrounding development. This could include chamfering, curving, additional height, different roof forms, verandahs, balconies or other design elements which accentuate building corners.

4.4.8 Skyline

New high rise developments should incorporate well designed roof tops which add visual interest to the city skyline. Roof level service structures shall be integrated into the building design.

4.4.9 Materials and Finishes

New buildings are not expected to imitate the materials, colours or finishes of the existing area. The emphasis is on the blending of a new building with the best elements of the existing townscape. A variety of materials is encouraged although large expanses of reflective glass are discouraged.

4.5 Environment and Amenity

Objective:

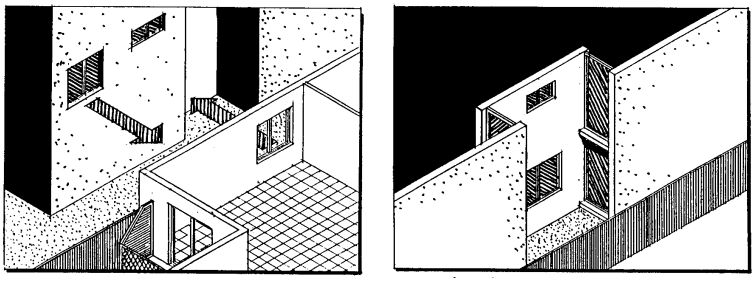
- To ensure that the impacts of new buildings on the environmental amenity of existing and potential development within the policy area are kept within acceptable limits.

4.5.1 Visual Privacy

While overlooking of public shared space is encouraged to promote security, to ensure that new development does not unreasonably diminish the privacy of existing or future occupants, overlooking of windows (particularly bedroom and living area windows) and private open space should be avoided as far as is practicable.

Visual privacy appropriate to the use of buildings and in the context of a city centre environment may be achieved through:

- offsetting openings and balconies; and
- designing openings and balconies to obscure views to and from boundaries with neighbouring properties.



The effective location and design of openings and balconies is preferred to the use of screening devices or obscured glazing, however, where these tools are used they should be integrated into the building design.

4.5.2 Acoustic Privacy

Construction materials and techniques used should enhance acoustical privacy between dwellings and be designed to reduce noise from external elements, particularly in areas of mixed land use.

4.5.3 Overshadowing

All development should be designed to maximise sunlight penetration into streets, public spaces and buildings and provide for moderate to high levels of sunlight penetration into the Town Centre and key public spaces in the middle of the day (10am to 2pm) from August through to April.

4.5.4 Wind Protection

The design of new buildings should not result in detrimental wind patterns causing discomfort at street level. The use of verandahs and modelling of facades should be used to minimize wind effects.

4.5.5 Energy Efficiency

Buildings should be designed to reduce energy consumption by siting buildings to maximize solar access, appropriate external shading, thermal insulation of roofs, the use of solar hot water heating, and appropriate landscaping.

4.5.6 Landscaping

In Category B Streets the majority of the street setback area should be landscaped. This landscaping should include a significant proportion of in-ground planting, although this planting should still allow for views from the building to the street.

Where side and rear setbacks are provided these should be landscaped, with in ground planting where possible, to screen new development from surrounding buildings.

Trees should be planted in open car parking areas to provide shade.

In residential developments the open space requirements of the R - Codes may be relaxed subject to the provision of external private open space to each residential unit (this may be in the form of balconies or terraces with a minimum dimension of 2 metres and minimum area of 10m^2).



4.5.7 Heritage

Where existing buildings are deemed by the local government to have cultural heritage significance and are included on the Heritage List the local government will, where practicable, seek to conserve or enhance such buildings in whole or in part by granting modifications to development requirements under the provisions of the City Planning Scheme and clause 12 of the Deemed Provisions.

The design of buildings on sites adjoining properties of heritage significance shall as far as possible complement, without miming or copying, the built character of such items in terms of scale, building form, materials, external finishes and colour.

5.0 GENERAL PROVISIONS

5.1 R - Codes

Where this policy does not explicitly establish development standards for residential development the provisions of the R - Codes shall be applied.

5.2. Variations to Policy Provisions

The local government, in dealing with an application within the policy area, may relax any relevant requirements of the R - Codes where such relaxations will comply with the general objectives, principles or standards of this policy.

The local government, in dealing with an application within the policy area, may relax specific standards or provisions of the policy where warranted to achieve a functional building, to enable design flexibility for innovation and/or to respond to a site's context. Specific circumstances are identified in this section for guidance, however they are not intended to be limiting.

Variations will not be granted as of right. The local government shall only approve variations to policy standards or provisions where it is of the opinion that the proposed development:

- complies with clause 36 – Determination of Non-Complying Applications of the Scheme,
- fulfills the objectives of this policy and has regard to the principles of this policy;
- does not adversely affect the amenity of the area; and
- complies with the provisions of Special Control Area No. 33. - Royal Perth Hospital Flight Path Protection, under City Planning Scheme No. 2.

5.2.1 Street Building Heights

- The local government may consider variations to the maximum street building height standards:
  - at street corners in recognition that these may benefit from special design emphasis; or
  - where different maximum street building heights are specified for each of the frontages of a corner lot.

  In determining an appropriate maximum street building height in these instances, the local government shall have particular regard to the:
  - functionality of the building;
  - impact on the streetscape; and
  - solar access and wind principles of this policy.



Where a corner lot has frontage to a Category A Street and a Category B Street priority will be given to protecting the residential amenity of the streetscape in the Category B Street.

- In Category B Streets where side setbacks are reduced on narrow lots the maximum street building height should also be reduced to 14 metres. This is required in order to ensure appropriate amenity is provided for residents of existing or future buildings on adjoining land. Refer to Section 5.2.5.

5.2.2 Maximum Building Heights

- The local government may consider variations to the maximum building height standards applicable to the lots within the street block bounded by Hay Street, Hill Street, Goderich Street and Bennett Street by allowing for minor building projections outside of the 45 degree angled height plane where it can be demonstrated that the objectives of this policy relating to pedestrian and public spaces are achieved and appropriate regard has been given to the sunlight penetration principles of this policy.

- In Category B Streets where side setbacks are reduced on narrow lots the maximum building height should also be reduced to 14 metres. This is required in order to ensure appropriate amenity is provided for residents of existing or future buildings on adjacent land. Refer to Section 5.2.5.

5.2.3 Category A Streets - Street Setbacks

(a) Lower Building Levels

Notwithstanding the nil street setback standard for lower building levels, the local government may require or allow for lower building levels to be setback from the street:

- to provide vistas to places of cultural heritage significance, other important city landmarks or public spaces;

- to provide for appropriate public space (the Bonus Plot Ratio Policy should be referred to determine what is considered an appropriate public space); or

- having regard to the street setbacks of lower building levels within the street.

Where a corner lot has frontages to a Category A Street and a Category B Street, a 4.5 metre street setback should generally apply to the street building height for the entire frontage to the Category B Street.

(b) Upper Building Levels

Whilst generally street building heights should be low scale and upper building levels should be setback from the street, the local government may consider allowing portions of the upper building levels to be built up to the street where it can be demonstrated that:

- it meets the objectives of this policy and has regard to the sunlight penetration and wind principles of this policy; and



- it will provide for an enhanced design outcome and meets the objectives and has appropriate regard to the principles of the City Development Design Guidelines.

5.2.4 Category A Streets - Side and Rear Setbacks

(a) Lower Building Levels

The local government may consider reducing or averaging the side and rear setback standards for the lower levels of a building where appropriate visual privacy and outlook is achieved and appropriate amenity is provided within any adjoining space.

The spaces created by any setbacks should have an appropriate level of amenity. A contiguous area of open space between the building and the relevant boundary is preferred to a series of light wells. Nil side or rear setbacks may be preferable to small side or rear setbacks (<1.5m) that result in unusable and inaccessible spaces.

(b) Upper Building Levels

- The local government may consider reducing the side setback standards for upper building levels on narrow lots where adherence to these would unreasonably impact on the functionality of the building.

  For narrow lots within the areas shown in Figure 4 – Goderich Design Policy – Side Setback Discretion for Narrow Lots, the upper building levels may have a nil setback on both side boundaries.

  For narrow lots in other areas, consideration will be given to allowing a nil side setback on one boundary (particularly where the wall will abut a wall on an adjoining lot of a similar or greater dimension) provided that the side setback proposed on the other boundary is equal to or greater than the minimum side setback standard. However where the lot adjoins a lot within a Category B Street, particular consideration will be given to ensuring appropriate residential amenity is provided for occupants of buildings on the adjoining lots.

- The local government may require the side and rear setback standards to be increased for upper building levels which have a significantly wide elevation (>50m) to satisfy the objectives of this policy and to have regard to the principles of this policy.

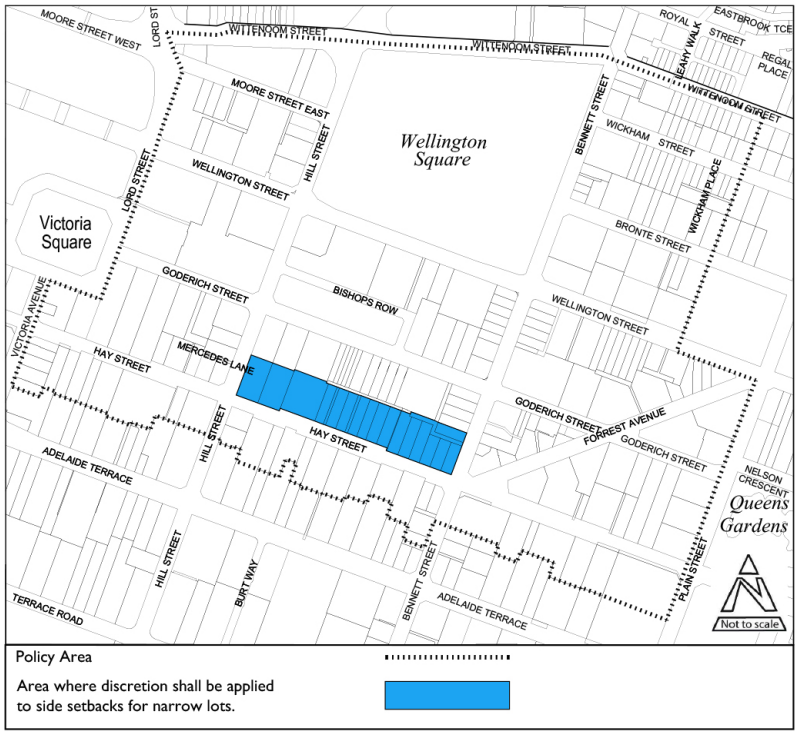


Figure 4 – Goderich Design Policy – Side Setback Discretion for Narrow Lots.

5.2.5 Category B Streets – Side and Rear Setbacks

- The local government may consider reducing side setback standards on narrow lots where adherence to the side setback standards would unreasonably impact on the functionality of the building.

  Where a variation is supported, nil side setbacks are preferred to side setbacks between nil and three metres which result in spaces which are inaccessible and of limited value.

  Where side setbacks are reduced, the maximum street building height and the maximum building height should also be reduced to 14 metres.

- The local government may consider reducing the side and rear setbacks at the rear of the site at ground floor level to nil where adherence to setback standards would unreasonably restrict the provision of tenant car parking on the lot.

  Where buildings are permitted to extend within this setback area, the maximum building height within the setback area should be four metres.



- The local government may require the side and rear setback standards to be increased for buildings which have a significantly wide elevation (>50m) to satisfy the objectives of this policy and to have regard to the principles of this policy.

5.2.6 Laneways – Setbacks

The local government may consider reducing the setback standard for a laneway where:

- the laneway assists in providing adequate separation between the buildings on lots on opposite sides of the laneway, with appropriate levels of privacy and amenity;
- this is unlikely to have any adverse impact on any special character of the laneway; and
- the objectives of this policy are met and appropriate regard has been given to the principles of this policy.

APPENDIX 1

Glossary of Terms

TERM	DEFINITION
Acoustic privacy	The seclusion of residential units from the impacts of intrusive externally generated noise.
Amenity	Defined in the Deemed Provisions.
Articulation	The division or dissaggregation of a building into distinct segments or parts with a clear delineation of the joints between the constituent parts.
Building mass	The magnitude or overall volume of a building.
Built form	The configuration of the aggregate of all buildings, structures, etc which make up the physical environment of the locality.
Bulk	The size or mass of a building; generally referring to structures which in their context appear relatively large.
Chamfer	An oblique surface constructed by cutting off an edge or corner of a building or structure.
Cohesive	Harmonious grouping of complementary elements. A cohesive townscape contains objects and architectural elements which have a consistent or complimentary overall effect.
Context	The environment within which a building is located. The context is relevant in that much of the building's significance or impact is derived from its relationship with, or its effect on its environs.
Contrasts of scale	Substantial differences between the relative size of buildings or structures. Generally refers to buildings which are large or overbearing in comparison with their context or what is generally accepted.
Grain	Texture of a surface, building, or section of built fabric generated by the arrangement and size of their constituent parts.
Heritage	Buildings, structures or places having aesthetic, historic, scientific or social value for past, present or future generations.
Historic themes	The historical content of the place, with particular reference to the ways in which its fabric has been influenced by historical forces in the course of its development.



TERM	DEFINITION
Home Offices	The carrying on of any business conducted in a dwelling, or by the occupier of a dwelling within the boundaries of the lot upon which the dwelling is constructed. Such businesses do not, however, include those involving the sale or hire of any goods.
Informal surveillance	The casual periodic observation of the public domain from buildings abutting it.
Interactive frontages	Buildings which in areas abutting the street contain uses which provide surveillance of, and bring interest and activity to, the street.
Landmark features	A conspicuous and easily recognizable object in a place or locality which assists in providing legibility to the urban fabric.
Legibility	Urban fabric which, through the clarity of its organization and its wealth of distinguishing features, may be easily read and comprehended.
Mass	The overall size or bulk of a building.
Microclimate	The effects of local patterns of wind, solar access, overshadowing, precipitation etc. on a locality.
Modelling	A wall or building which is sculptured in relief and thus characterized by extensive shadow patterns.
Non-habitable rooms	A room such as a bathroom, laundry, toilet and other spaces of a specialized nature occupied neither frequently nor for extended periods.
Overshadowing	Structures or buildings which block the access of direct sunlight to habitable areas of surrounding buildings or public and private open space.
Public domain	Areas of the city which belong to the community as a whole; generally refers to streets, squares, parks etc.
R - Codes	Defined in the Deemed Provisions.
Scale	Relative size. A large scale building is big in comparison with its context or what is generally accepted. A human scale building has a size or many architectural elements which we can identify with, i.e. their size and proportion are related to our bodily dimensions.
Screen	To conceal or obscure from view.
Skyline	The city's outline. This is most easily seen at dawn or dusk as a dark profile thrown up against the lighter background of the sky.
Social and cultural diversity	An area characterized by residents and occupiers drawn from a range of different income groups and ethnic backgrounds.
Solar access	Areas penetrated by sunlight over extended periods of time during both summer and winter.
Subdivision pattern	The configuration of the original cadastral layout and the influence this layout had on the subsequent development of built form within the locality.
Undercroft	A predominantly open area located below the ground floor level of a building and usually used for parking, storage and other such service uses.
Urban richness	Built fabric characterized by a variety of environmental conditions, diverse uses, and a wide choice of sensory experiences.
Visual integrity	Urban fabric characterized by complementary elements within an environment ordered by consistent and perceptible principles.



TERM	DEFINITION
Visual privacy	The isolation of residential units and external private open space from the intrusive overlooking of occupants of neighbouring properties.
Visual richness	An urban environment characterized by perceptual complexity and interest.



DRAFT

Planning Policy Manual – Part 1

Section 6.4
Terrace Road Design Policy

NOTE: Proposed Scheme Amendments Are Shown In Red – pg. 6



Version #	Decision Reference	Synopsis
1	26 June 2001	Adopted
2	1 February 2005	Amended
3	26 February 2013	Amended
4	26 August 2014	Amended
5	11 April 2017	Amended
6	To be inserted	Amended



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1.0 OBJECTIVES

The intent of this policy is to encourage new development in the policy area which meets the following specific objectives:

- To provide for a wide variety of high density residential accommodation, including tourist and short stay accommodation, such as hotels, serviced apartments and hostels.
- To encourage a range of incidental and complimentary commercial uses adjacent to street frontages in order to increase the level of activity along both Terrace Road and the existing north/south streets.
- To encourage built form of a moderate scale which, while making a coherent contribution to the cityscape of Perth, also establishes an appropriately scaled edge to Langley Park, and minimises wind and overshadowing effects on Langley Park and adjoining land.
- To ensure that where development sites extend from Terrace Road to Adelaide Terrace the more intensive elements of development proposals are located towards Adelaide Terrace rather than Terrace Road.
- To promote, where possible, the amalgamation of sites to facilitate redevelopment.

2.0 POLICY AREA

This policy shall apply within the area designated on Figure 1.

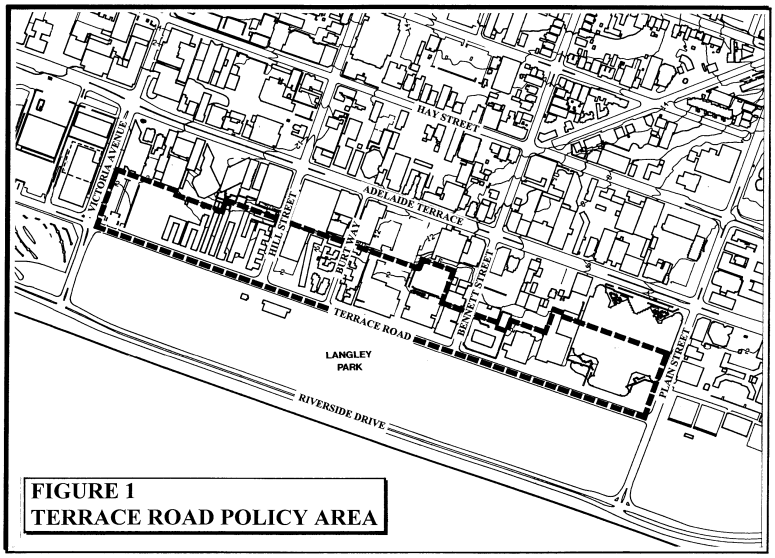


FIGURE 1
TERRACE ROAD POLICY AREA



3.0 POLICY AND GUIDELINES

3.1 Land Use

Objective:

- *To actively encourage a wide variety of high density residential development supported by a range of complimentary commercial uses along the Terrace Road frontage.*

Commercial uses which complement and support the residential uses of the area will be encouraged in the policy area where they fulfil the following criteria:

- Residential usage shall be maintained on the upper floors of buildings facing Terrace Road or other streets in the policy area (the top floors of two storey buildings, and the top two floors of two and three storey buildings).
- Uses such as kiosks, coffee shops, restaurants and local shops shall complement the residential uses in the area in the sense that a substantial proportion of their turnover could be expected to fulfil local demand.
- Office uses are either directly associated with a residence on the property (home offices) or small scale (maximum of 100m^2 per tenancy).

3.2 Density/Plot Ratio

Objectives:

- *To establish an intensive inner city residential environment of quality.*
- *To ensure that the intensity of development assists in achieving the built form objectives of this policy.*
- *Where development sites extend from Terrace Road to Adelaide Terrace to ensure development responds to its urban context by establishing more intensive development elements towards Adelaide Terrace.*

3.3 Built Form

Objectives:

- *Built form should make a coherent contribution to the cityscape of Perth. It should create a graded increase in the scale of the built fabric from the buildings along Terrace Road to the more intensive development characterising Adelaide Terrace.*
- *Built form should establish an appropriately scaled, and generally continuous, urban edge to Langley Park.*
- *The built form should actively facilitate the inclusion of commercial uses along Terrace Road and existing north/south streets in order to create an active frontage to the street.*
- *The continuity of the urban edge should be maintained on north/south streets.*

3.3.1 Height (see Figure 2)

In order to achieve the objectives set out above the following height guidelines have been established:

In the area of sites located within ten metres of street boundaries:

Maximum 14 metres. Minimum 6 metres.

The minimum (two storeys) is the minimum required to establish an effective urban edge along Terrace Road. The maximum (four storeys) will ensure that Langley Park is not overshadowed, and that views from the rear of the site over such buildings will not be unacceptably infringed.

Over the remainder of sites:

Maximum 52 metres (subject to the setback requirements set out in clause 3.3.2).

This maximum reflects the height of the highest existing building on Terrace Road. It also constitutes an appropriate intermediate height between the proposed urban edge on Terrace Road and the higher buildings on Adelaide Terrace, and when combined with setback provisions will ensure that Langley Park is not unacceptably overshadowed.

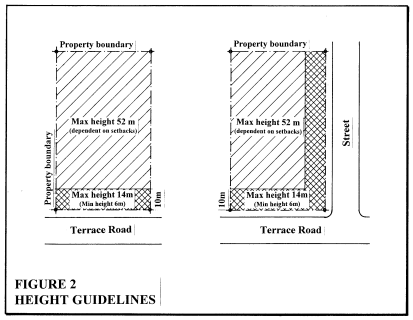


FIGURE 2
HEIGHT GUIDELINES

All heights shall be measured from the existing footpath level on Terrace Road at the centre of the site.

Where the heights specified in this Policy are inconsistent with the heights specified in Special Control Area No. 33 – Royal Perth Hospital Flight Path Protection under City Planning Scheme No. 2, whichever are the lower heights shall apply.

3.3.2 Setbacks (See Figure 3)

This policy establishes setback provisions by creating building envelopes. This approach has been used to provide flexibility in maximising plot ratio, ensure solar access and limit the impacts of development on adjoining lots.

Street Setbacks

In order to strengthen the streetscapes in the area by reinforcing the edge condition buildings will generally be required to be built up to the street boundary.

Where breaks in the continuity of the urban edge are necessary they shall be limited to less than 25% of the length of the front boundary (up to a maximum of 15 metres), or preferably be provided within the building envelope.

Limited setbacks may be provided on the ground floor if they support active commercial use such as restaurants and are provided within the building envelope.

Beyond 10m from the Terrace Road boundary the setback will be established by the angle required to minimise winter overshadowing of Langley Park. This line will be 34 degrees measured from a point 30m beyond the front property boundary (see Figure 3).

Side and Rear Setbacks

In order to strengthen the streetscapes in the area by reinforcing the edge condition on Terrace Road, nil side setbacks will be encouraged within 10m of street boundaries.

Over the remainder of the site side and rear setbacks will be established by an angle which seeks to minimise impacts on, and overshadowing of, adjoining properties, while facilitating solar access to development facing Terrace Road. This line will be 75 degrees measured from the relevant property boundary (see Figure 3).

In addition to the above, any part of a building in excess of 10m from the street boundary will have a minimum setback of 3m.

Semi-basement parking may be built up to the side boundary if it does not protrude more than 1.5 metres above the current ground level.

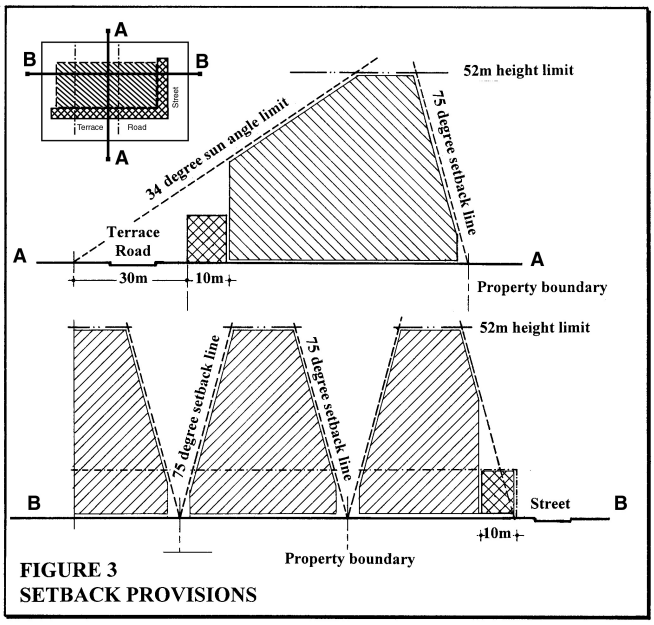


FIGURE 3
SETBACK PROVISIONS

3.4 Building Design

Objective

- *To encourage buildings which in both their form and materials make a positive contribution to this important city-front location.*
- *To foster innovative contemporary design which provides a high standard of residential amenity.*

3.4.1 Context

New developments shall seek to:

- Establish, in the context of other new buildings facing the park, a coherent and integrated urban edge to Langley Park.
- Create a tiered gradation of height from Terrace Road, to higher development towards the rear of the site and finally to the still higher development characterising Adelaide Terrace.
- Establish a built fabric characterised by formal continuity of the urban edge along Terrace Road and more informal variety of built form towards the rear of sites.

Where amalgamation provides large sites the buildings at the rear of such sites shall be differentiated into a series of perceptually separate structures (particularly above four storeys) rather than provided in the form of long east/west slab blocks.

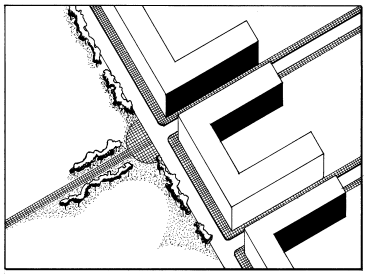
- Taller buildings within developments should generally be characterised by rectangular forms rather than attempt to literally interpret the building envelope.

3.4.2 Relationship to Street

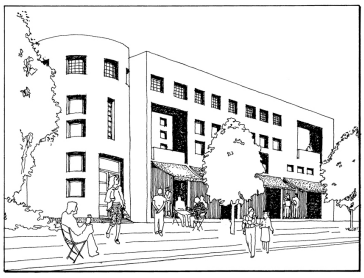
Buildings are to address the street, with facades generally parallel to the street, windows facing the street, and with clearly definable entry points visible and accessed from the street.

Buildings should establish an interesting and attractive edge to the public domain with ground floor uses which promote activity and informal surveillance of the street. Blank walls and roller shutters are to be avoided.

Balconies over the footpath will be permitted subject to the provisions of City of Perth Local Laws covering Awnings and Verandahs over Streets.



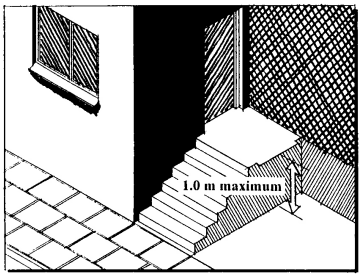
"a consistent urban edge will strengthen the legibility of the public domain"



"maintaining an active edge to Terrace Road"

3.4.3 Ground Floor Levels

In order to maintain an interactive relationship with the street in buildings facing Terrace Road or other streets in the policy area, the ground floor shall not be more than 1.0 metres above the existing pavement level.



"maintaining a relationship between ground floor uses and the street"

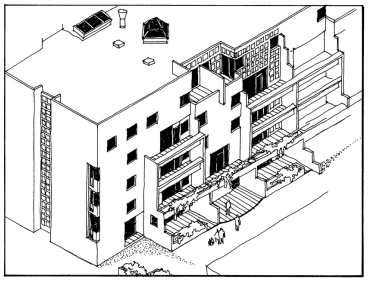
3.4.4 Articulation and Modelling

Buildings shall be articulated to break up their perceived bulk. Detail design should be used to add complexity and interest in complementing the overall design. Unsympathetic contrasts of scale and materials should be avoided.

3.4.5 Skyline

New developments, and particularly the taller components of developments, should incorporate well designed rooftops which add visual interest to the city skyline. Roof level service structures shall be integrated into the building design.

Roof top design should also give consideration to appearance when viewed from properties on Adelaide Terrace.



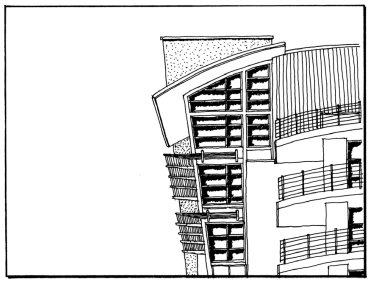
"articulating buildings to provide identity and reduce bulk"

3.4.6 Materials

New buildings are not expected to imitate the materials, finishes or colours of the existing area.

The emphasis will be on the blending of new buildings along Terrace Road to establish an urban edge characterised by complementary materials and finishes.

A variety of contemporary materials will be encouraged subject to the above criteria although large expanses of reflective glass will be discouraged.



"providing interest through articulation and detailing"

3.4.7 Heritage

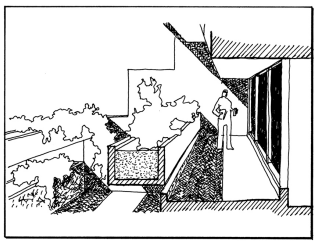
Where existing buildings are deemed by the local government to have cultural heritage significance and included on the Heritage List the local government will, where practicable, seek to conserve or enhance such buildings in whole or in part by granting modifications to development requirements under the provisions of the City Planning Scheme and clause 12 of the Deemed Provisions.

The design of buildings on sites adjoining properties of heritage significance shall as far as possible compliment, without miming or copying, the built character of such items in terms of scale, building form, materials, external finishes and colour.

3.5 Environment and Amenity

Objective:

- *To ensure that new buildings do not substantively diminish the environmental amenity of existing and potential development within the policy area.*
- *To ensure any overshadowing of Langley Park is minimised.*
- *To ensure that substantial areas of landscaped relief are provided within the built environment.*



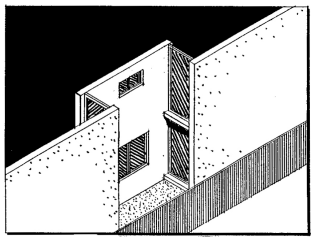
"the screening of balconies will reduce overlooking"

3.5.1 Visual Privacy

While overlooking of public shared space is encouraged to promote security, overlooking of windows (particularly bedroom windows) and private open space should be avoided as far as is practicable.

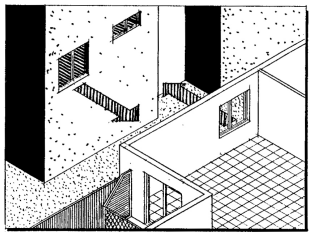
Overlooking shall be reduced to a minimum through the arrangement of windows and the use of screening devices such as:

- vegetation
- lattice screens to balconies



"setting windows in from the external wall increases privacy"

- side window screens
- canopy projections
- high level windows, and
- obscure glass to non-habitable rooms.



"offsetting major openings will reduce visual intrusion"

3.5.2 Acoustic Privacy

Construction materials and techniques used shall enhance acoustic privacy between buildings.

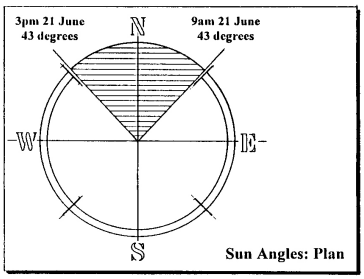
3.5.3 Overshadowing

The effect of any new development will be considered in terms of the potential overshadowing of residential units within the development, existing buildings and private and public outdoor spaces on neighbouring property, and Langley Park.

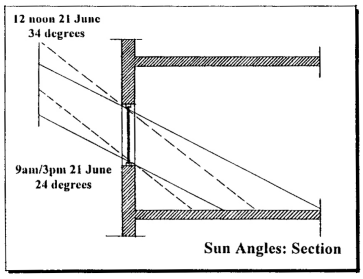
Development shall maintain at least two hours direct sunlight between 9.00am and 3.00pm on 21 June to a habitable room of each residential unit, and shall not reduce the solar access of residential units on neighbouring properties below this same standard.

For any development which would overshadow any residential property the applicant will be required to provide shadow diagrams showing the effect of the proposal on neighbouring properties at 9.00am, 12 noon and 3.00pm on the 21 June.

Winter overshadowing of Langley Park shall be limited under the provisions of the setback provisions established by clause 3.3.2.



"ensuring adequate winter sun reaches residential units"



3.5.4 Landscaping

Where possible in ground planting should be provided along the side and rear boundaries to help screen new development from surrounding buildings, and trees should be planted in open car parking areas to provide shade.

The open space requirements of the R - Codes may be relaxed subject to the provision of external private open space to each residential unit (this may be in the form of balconies and terraces), and an area of mature trees (other than landscaped parking areas) to provide landscaped relief within the built environment.

3.5.5 Energy Efficiency

Building design should seek to reduce energy consumption by siting buildings to maximise solar access, the utilisation of appropriate external shading, thermal insulation of roofs, the use of solar hot water heating, and appropriate landscaping.



4.0 GENERAL PROVISIONS

4.1 R - Codes

Where this policy does not explicitly establish development standards the provisions of the R - Codes shall be applied.

4.2 Variations to the Policy Provisions

The local government, in dealing with an application within the policy area, may relax any relevant requirements of the R - Codes where such relaxations will comply with either the general objectives or specific provisions of this policy.

The local government, in dealing with an application within the policy area, may relax specific provisions of the policy where it is of the opinion that the proposed development fulfils the objectives of the policy, conserves a place of cultural heritage significance, does not adversely affect the amenity of the area and complies with the provisions of Special Control Area No. 33 – Royal Perth Hospital Flight Path Protection under City Planning Scheme No. 2.

REFERENCE TO RELATED PLANNING MATERIAL:

Precinct:

Precinct Plan P13 Adelaide Precinct

Policy:

Residential Development Policy

Parking and Access Policy

Strategies:

Public Places Enhancement Strategy.



APPENDIX 1

Glossary of Terms

TERM	DEFINITION
Acoustic Privacy	The seclusion of residential units from the impacts of intrusive externally generated noise.
Amenity	Defined in the Deemed Provisions.
Articulation	The division or disaggregation of a building distinct segments or parts with a clear delineation of the joints between the constituent parts.
Building Envelopes	Indicative three dimensional constructs which delineate the extremities of potential building development on any particular site.
Built Form	The configuration of the aggregate of all buildings, structures, etc which make up the physical environment of the locality.
Bulk	The size or mass of a building; generally referring to structures which in their immediate context appear relatively large.
Complimentary Commercial Use	A commercial use which draws a substantial proportion of its turnover from the demand of residents in the immediate locality.
Complimentary Materials	Materials which have an affinity, general resemblance, or perceptual relationship with other materials located in the immediate vicinity.
Conserve	All the processes of looking after a place so as to retain its cultural significance.
Contemporary Design	A design which is modern and of its time.
Context	The environment within which a building is located. The context is relevant in that much of the building's significance or impact is derived from its relationship with, or its effect on, its environs.
Contrasts of Scale	Substantial differences between the relative size of buildings or structures. Generally refers to buildings or parts of buildings, which are large or overbearing in comparison with their context or what is generally accepted.
Contribution to Cityscape	Buildings which while making a legible individual contribution to the built form of the city, augment or enhance the overall fabric of the city by harmonising with the character of the existing fabric.
Cultural Significance	Aesthetic, historic, scientific or social value for past, present, or future generations.
Graded Increase in Scale (includes tiered gradation)	Built fabric characterised by successive stepping up from lower buildings at the front to higher buildings at the rear.
Heritage	Buildings, structures or places having aesthetic, historic, scientific or social value for past, present or future generations.
Home Offices	The carrying on of any business conducted in a dwelling, or by the occupier of a dwelling within the boundaries of the lot upon which the dwelling is constructed. Such businesses should not, however, include those involving the sale or hire of any goods.
Incidental Commercial Use	A small scale use which forms a minor and subordinate



TERM	DEFINITION
	component of the dominant residential use within the locality.
Intensity (of development)	Development characterised by buildings which are, in comparative terms, of a large scale both in height and bulk, and are located in close proximity to their neighbours.
Interactive (relationship with the street)	Building which in areas abutting the street contain uses which provide surveillance of, and bring interest to, the street.
Legibility	Urban fabric which, through the clarity of its organization, and its wealth of distinguishing features, may be easily read and comprehended.
Mass	The overall size of bulk of a building.
Modelling	A wall or building which is sculptured in relief and thus characterised by extensive shadow patterns.
Non-Habitable Rooms	A room such as a bathroom, laundry, toilet or other spaces of a specialised nature occupied neither frequently or for extended periods.
Overshadowing	Structures or buildings which block the access of direct sunlight to habitable areas of surrounding buildings or public and private open space.
R - Codes	Defined in the Deemed Provisions.
Scale	Relative size. A large scale building is big in comparison with its context or what is generally accepted.
Screen	To conceal or obscure from view.
Skyline	The city's outline. This is most easily seen at dawn or dusk as a dark profile thrown up against the lighter background of the sky.
Solar Access	Areas penetrated by sunlight over extended periods of time during both summer and winter.
Streetscape	The perceptive quality of a street established by the buildings which line it, and the additional elements which are contained within the spatial frame formed by those buildings.
Undercroft	An open area located below the ground floor of a building and usually used for parking, storage and other such services.
Urban Edge	A contiguous set or grouping of buildings which establish a clear perceptual boundary between the built fabric and the public domain.
Visual Privacy	The isolation of residential units and external private open space from the intrusive overlooking of residents of neighbouring properties.

SCHEDULE 3 - EXISTING CITY CENTRE PRECINCTS 1-8 PLAN (P1-8)

City Planning Scheme No.2

CITY CENTRE - Precincts 1-8

CITY CENTRE:

Will continue to develop as the focus of business, retail, civic, cultural and entertainment activities in Western Australia

PRECINCTS:

The City Centre contains the following Precincts

P1 - Northbridge
P2 - Cultural Centre
P3 - Stirling
P4 - Victoria
P5 - Citiplace
P6 - St Georges
P7 - Civic
P8 - Foreshore

PARLIAMENT HOUSE AND SURROUNDS:

A Clause 32 area which maintains the visual prominence of Parliament House and the aesthetic quality of development in the area.

MINOR TOWN / LOCAL PLANNING SCHEMES (TPS / LPS):

The additional Schemes which apply in the city centre are:

TPS 11 - Wesley Trust and WA Travel Centre
TPS 13 - State Government Insurance Office
TPS 16 - David Jones Site (now Central Park)
TPS 21 - FAI Site
TPS 23 - Paragon
LPS 26 - Normalised Redevelopment Areas

SPECIAL CONTROL AREAS:

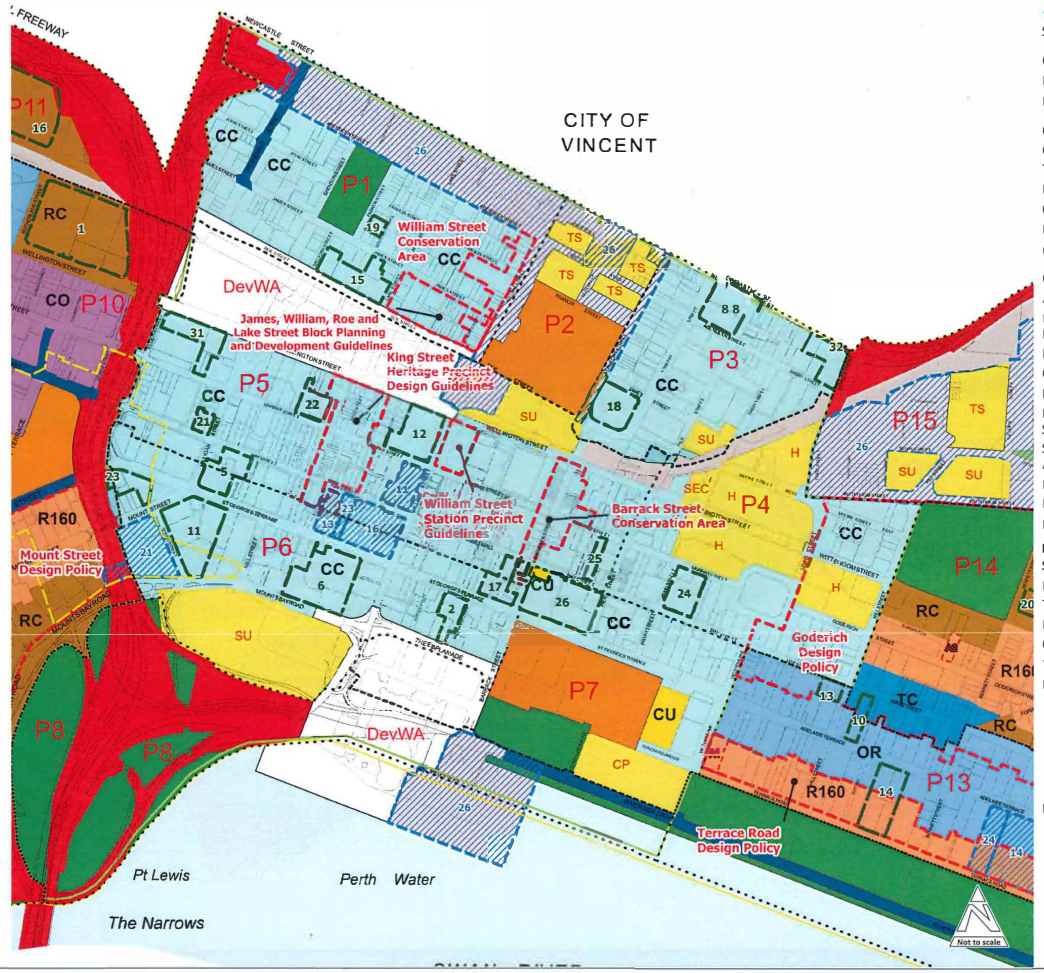
Special control areas apply in the city centre for these areas:

2 - CTA Building
5 - 240 St Georges Tce & 899-915 Hay St
6 - 141 & 125-137 St Georges Tce & 18 Mounts Bay Rd
8 - 126-144 Stirling St
11 - 225-239 St Georges Tce (Bishops See)
12 - 298-316 Murray St
15 - 92-120 Roe St
17 - St Martins
18 - 30 Beaufort St
19 - 2-6 (Lot 40) Parker St
21 - Melbourne Hotel
22 - 396, 370-372 & 378-392 Murray St
23 - 251 (Lot 11), 255 (Lot 412), 267 (Lot 10) St Georges Tce
24 - 480 (Lots 23 & 350) Hay St & 15-17 (Lot 500) Murray St
25 - 560 Hay St & 101 Murray St
26 - 553 and 565-579A Hay St, 38A St Georges Tce & 28 Barrack St
31 - 707-725 (Lots 14 & 101) Wellington St & 482-488 (Lots 1,2, & 66) Murray St
32 - 11 (Lot 100) & 27 (Lot 700) Newcastle St

PLANNING POLICIES:

Planning and design guidelines apply in the city centre for these areas:

- James, William, Roe & Lake Street
- King Street
- Goderich
- William Street Station Precinct



LEGEND

Scheme Area Boundary

CITY OF PERTH SCHEME RESERVES

Parks & Recreation
Public Purposes - Civic Use

CITY OF PERTH SCHEME USE AREAS

City Centre
Town Centre
Residential
Office/Residential
Residential/Commercial
Commercial

OTHER

Additional Uses
Normalised Redevelopment Area
DevelopmentWA Area
City Centre Boundary
MRS Clause 32 Area
Minor Town / Local Planning Schemes and Number
Special Control Areas and Number
Planning Policy Areas
Precinct Boundary
Precinct Number

METROPOLITAN REGION SCHEME RESERVES

Parks & Recreation
Town Centre
Railways
Civic & Cultural
Waterways
Public Purposes
- Hospital
- Car Park
- University
- SECWA
- Special Uses

ROADS

- Primary Regional Roads
- Other Regional Roads

NOTE 1: The Department of Planning should be consulted for full information on the actual land requirements for all Metropolitan Region Scheme Reserves

NOTE 2: This map should be read in conjunction with City Planning Scheme No. 2 Scheme Map.

City of Perth | City Planning Scheme No.2
City Centre P1 to P8

Amended - 6 May 2022

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SCHEDULE 4 - PROPOSED CITY CENTRE PRECINCTS 1-8 PLAN (P1-8)

City Planning Scheme No.2

CITY CENTRE - Precincts 1-8

CITY CENTRE:

Will continue to develop as the focus of business, retail, civic, cultural and entertainment activities in Western Australia

PRECINCTS:

The City Centre contains the following Precincts

- P1 - Northbridge
- P2 - Cultural Centre
- P3 - Stirling
- P4 - Victoria
- P5 - Citiplace
- P6 - St Georges
- P7 - Civic
- P8 - Foreshore

PARLIAMENT HOUSE AND SURROUNDS:

A Clause 32 area which maintains the visual prominence of Parliament House and the aesthetic quality of development in the area.

MINOR TOWN / LOCAL PLANNING SCHEMES (TPS / LPS):

The additional Schemes which apply in the city centre are:

- TPS 11 - Wesley Trust and WA Travel Centre
- TPS 13 - State Government Insurance Office
- TPS 16 - David Jones Site (now Central Park)
- TPS 21 - FAI Site
- TPS 23 - Paragon
- LPS 26 - Normalised Redevelopment Areas

SPECIAL CONTROL AREAS:

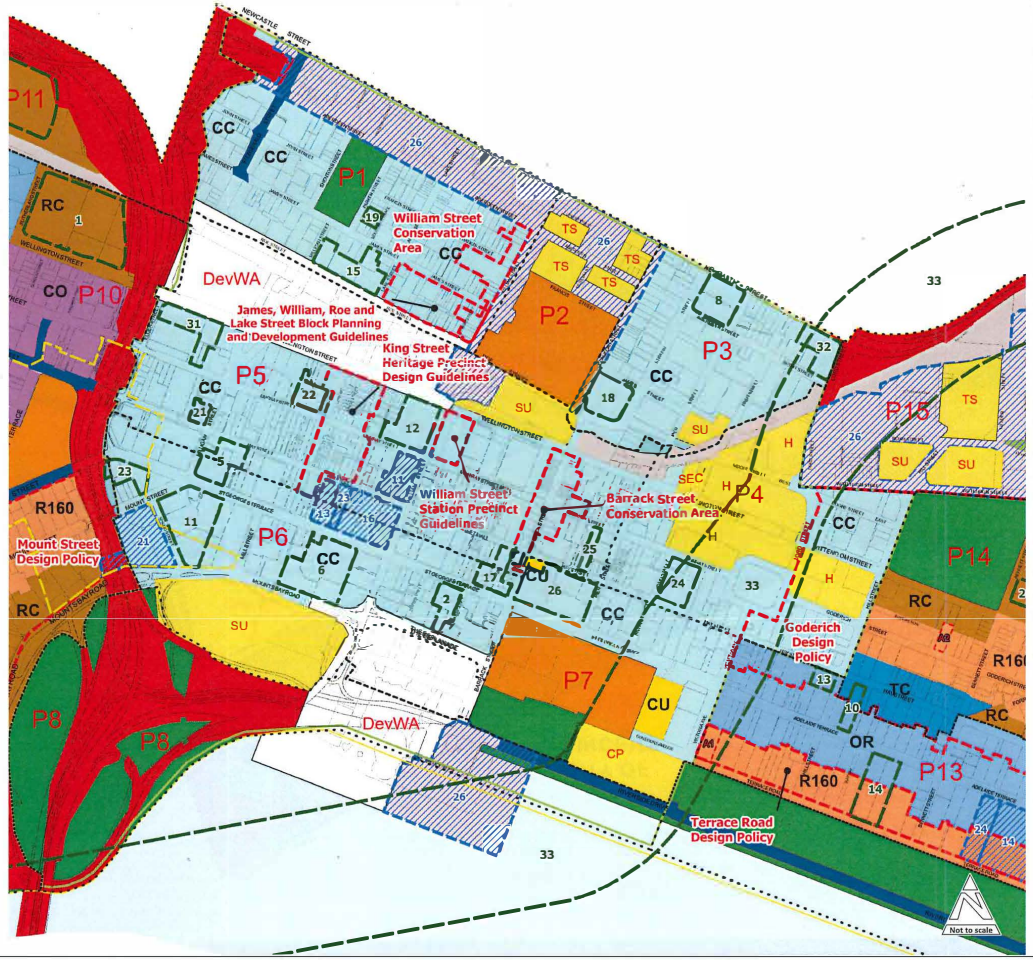
Special control areas apply in the city centre for these areas:

- 2 - CTA Building
- 5 - 240 St Georges Tce & 899-915 Hay St
- 6 - 141 & 125-137 St Georges Tce & 18 Mounts Bay Rd
- 8 - 126-144 Stirling St
- 11 - 225-239 St Georges Tce (Bishops See)
- 12 - 298-316 Murray St
- 15 - 92-120 Roe St
- 17 - St Martins
- 18 - 30 Beaufort St
- 19 - 2-6 (Lot 40) Parker St
- 21 - Melbourne Hotel
- 22 - 396, 370-372 & 378-392 Murray St
- 23 - 251 (Lot 11), 255 (Lot 412), 267 (Lot 10) St Georges Tce
- 24 - 480 (Lots 23 & 350) Hay St & 15-17 (Lot 500) Murray St
- 25 - 560 Hay St & 101 Murray St
- 26 - 553 and 565-579A Hay St, 38A St Georges Tce & 28 Barrack St
- 31 - 707-725 (Lots 14 & 101) Wellington St & 482-488 (Lots 1,2, & 66) Murray St
- 32 - 11(Lot 100) & 27 (Lot 700) Newcastle st
- 33 - Royal Perth Hospital Flight Path Protection

PLANNING POLICIES:

Planning and design guidelines apply in the city centre for these areas:

- James, William, Roe & Lake Street
- King Street
- Goderich
- William Street Station Precinct



LEGEND

- Scheme Area Boundary

CITY OF PERTH SCHEME RESERVES

- Parks & Recreation (P&R)
- Public Purposes - Civic Use (CU)

CITY OF PERTH SCHEME USE AREAS

- City Centre (CC)
- Town Centre
- Residential (R60)
- Office/Residential (OR)
- Residential/Commercial (RC)
- Commercial (CO)

OTHER

- Additional Uses (A)
- Normalised Redevelopment Area
- DevelopmentWA Area (DevWA)
- City Centre Boundary
- MRS Clause 32 Area
- Minor Town / Local Planning Schemes and Number (12)
- Special Control Areas and Number (2)
- Planning Policy Areas
- Precinct Boundary
- Precinct Number (P7)

METROPOLITAN REGION SCHEME RESERVES

- Parks & Recreation
- Town Centre
- Railways
- Civic & Cultural
- Waterways
- Public Purposes
  - Hospital (H)
  - Car Park (CP)
  - University (U)
  - SECWA (SEC)
  - Special Uses (SU)

ROADS

- Primary Regional Roads
- Other Regional Roads

NOTE 1: The Department of Planning should be consulted for full information on the actual land requirements for all Metropolitan Region Scheme Reserves

NOTE 2: This map should be read in conjunction with City Planning Scheme No. 2 Scheme Map.

City of Perth | City Planning Scheme No.2
City Centre P1 to P8

Amended - 6 May 2022

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SCHEDULE 5 - EXISTING MATILDA BAY PRECINCT 9 PLAN (P9)

City Planning Scheme No.2

MATILDA BAY - Precinct 9

MATILDA BAY:

The features of the University of Western Australia, the Swan River, Kings Park and the Crawley Residential Area make the Precinct one of the most attractive entry points to the City.

CRAWLEY RESIDENTIAL AREA:

Will develop as an area of spacious high quality dwellings. New development will:

- reflect and reinforce the distinct natural topography of the Residential Area and the Mt Eliza escarpment; and
- maintain the amenity of the river foreshore by minimising overshadowing and building bulk.

RESIDENTIAL COLLEGES:

Future development of this land is to be designed generally in accordance with the style and character of the adjacent land. Development is not to exceed 10 metres in height and is to reflect the historic character and scale of existing university college buildings.

KINGS PARK:

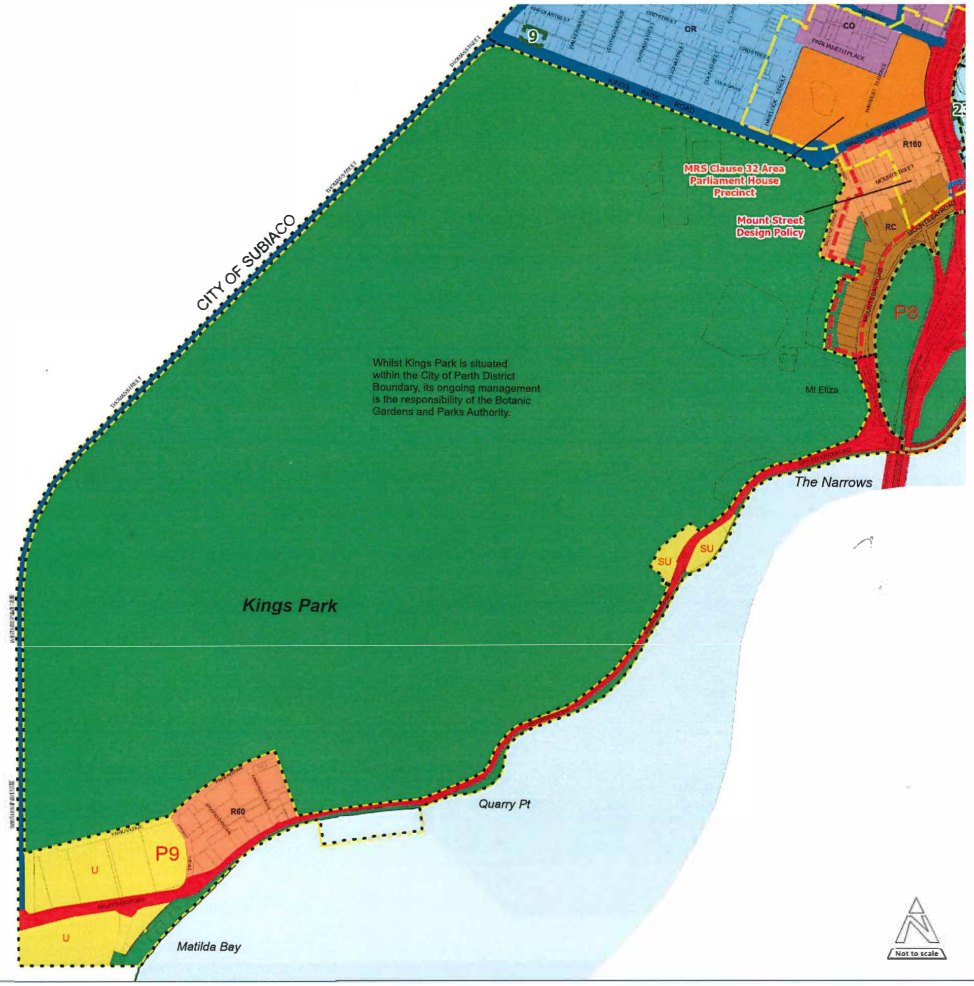
Whilst Kings Park is situated within the City of Perth District Boundary, its ongoing management is the responsibility of the Botanic Gardens and Parks Authority. In addition to its great beauty and physical prominence, Kings Park is one of the best known attractions in Perth. The impact that development would have on the park will be carefully accessed.

RIVER FORESHORE:

Public access is to be maintained at all times along the foreshore area. The limestone wall is an integral part of the foreshore character and is to be maintained.

OLD SWAN BREWERY SITE:

The former Swan Brewery remains a very prominent public site. Works should respect the heritage importance and environmental quality of the area.



LEGEND

- Scheme Area Boundary

CITY OF PERTH SCHEME RESERVES

- Parks & Recreation (P&R)
- Public Purposes - Civic Use (CU)

CITY OF PERTH SCHEME USE AREAS

- City Centre (CC)
- Town Centre
- Residential (R60)
- Office/Residential (OR)
- Residential/Commercial (RC)
- Commercial (CO)

OTHER

- Additional Uses (A1)
- Normalised Redevelopment Area
- DevelopmentWA Area (DevWA)
- City Centre Boundary
- MRS Clause 32 Area
- Minor Town / Local Planning Schemes and Number (M)
- Special Control Areas and Number (2)
- Planning Policy Areas
- Precinct Boundary
- Precinct Number (P7)

METROPOLITAN REGION SCHEME RESERVES

- Parks & Recreation
- Town Centre
- Railways
- Civic & Cultural
- Waterways
- Public Purposes
  - Hospital (H)
  - Car Park (CP)
  - University (U)
  - SECWA (SEC)
  - Special Uses (SU)

ROADS

- Primary Regional Roads
- Other Regional Roads

NOTE 1: The Department of Planning should be consulted for full information on the actual land requirements for all Metropolitan Region Scheme Reserves

NOTE 2: This map should be read in conjunction with City Planning Scheme No. 2 Scheme Map.

SCHEDULE 6 - PROPOSED MATILDA BAY PRECINCT 9 PLAN (P9)

City Planning Scheme No.2

MATILDA BAY - Precinct 9

MATILDA BAY:

The features of the University of Western Australia, the Swan River, Kings Park and the Crawley Residential Area make the Precinct one of the most attractive entry points to the City.

CRAWLEY RESIDENTIAL AREA:

Will develop as an area of spacious high quality dwellings. New development will:

- reflect and reinforce the distinct natural topography of the Residential Area and the Mt Eliza escarpment; and
- maintain the amenity of the river foreshore by minimising overshadowing and building bulk.

RESIDENTIAL COLLEGES:

Future development of this land is to be designed generally in accordance with the style and character of the adjacent land. Development is not to exceed 10 metres in height and is to reflect the historic character and scale of existing university college buildings.

KINGS PARK:

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RIVER FORESHORE:

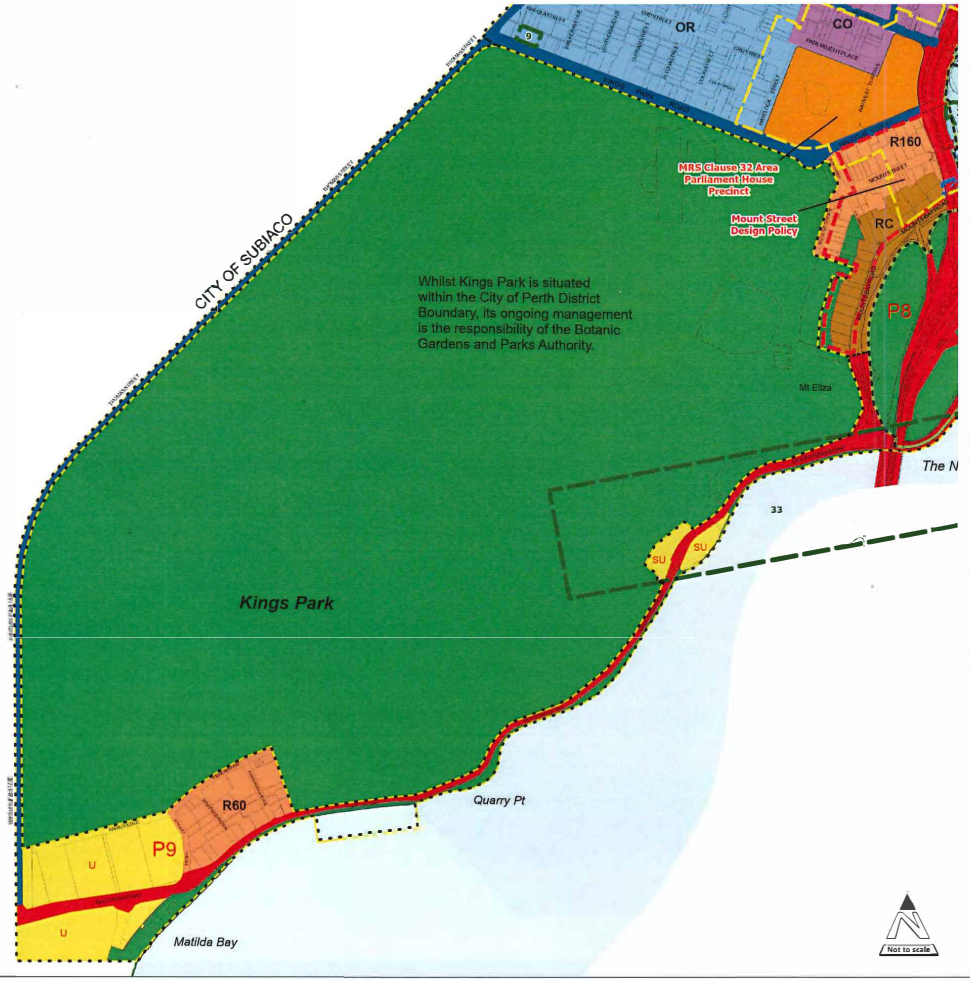
Public access is to be maintained at all times along the foreshore area. The limestone wall is an integral part of the foreshore character and is to be maintained.

OLD SWAN BREWERY SITE:

The former Swan Brewery remains a very prominent public site. Works should respect the heritage importance and environmental quality of the area.

SPECIAL CONTROL AREAS:

33 - Royal Perth Hospital Flight Path Protection



LEGEND

Scheme Area Boundary

CITY OF PERTH SCHEME RESERVES

Parks & Recreation — P&R
Public Purposes - Civic Use — CU

CITY OF PERTH SCHEME USE AREAS

City Centre — CC
Town Centre
Residential — R60
Office/Residential — OR
Residential/Commercial — RC
Commercial — CO

OTHER

Additional Uses — A1
Normalised Redevelopment Area
DevelopmentWA Area — DevWA
City Centre Boundary
MRS Clause 32 Area
Minor Town / Local Planning Schemes and Number — 12
Special Control Areas and Number — 2
Planning Policy Areas
Precinct Boundary
Precinct Number — P7

METROPOLITAN REGION SCHEME RESERVES

Parks & Recreation
Town Centre
Railways
Civic & Cultural
Waterways
Public Purposes
- Hospital — H
- Car Park — CP
- University — U
- SECWA — SEC
- Special Uses — SU

ROADS

- Primary Regional Roads
- Other Regional Roads

NOTE 1: The Department of Planning should be consulted for full information on the actual land requirements for all Metropolitan Region Scheme Reserves

NOTE 2: This map should be read in conjunction with City Planning Scheme No. 2 Scheme Map.

City *of* Perth | City Planning Scheme No.2
Matilda Bay P9

Amended - 6 May 2022

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SCHEDULE 7 - EXISTING LANGLEY PRECINCT 12 PLAN (P12)

City Planning Scheme No.2

LANGLEY - Precinct 12

LANGLEY:

A focus for recreation and leisure pursuits which also provides a dramatic setting for the city centre.

FORESHORE ACTION PLAN:

The Action Plan aims to maintain and enhance public access and use of the Swan River foreshore. The use of Riverside Drive primary as a scenic route will improve linkages between the city centre and the foreshore and create an envrionment conducive to walking and cycling. Point Fraser is to be developed as a major visitor node on the foreshore, with secondary activity points at the end of Plain Street and Victoria Avenue. Elsewhere on the foreshore structures are to be minimal in scale and number to preserve the parkland character of the area.

LANGLEY PARK:

Will continue to be used for a wide range of leisure and recreational activities, particularly those which add to or draw from the experience of the river. Further alienation of the open space will not be permitted, although use of the space for large temporary events may be permitted.

HEIRISSON ISLAND:

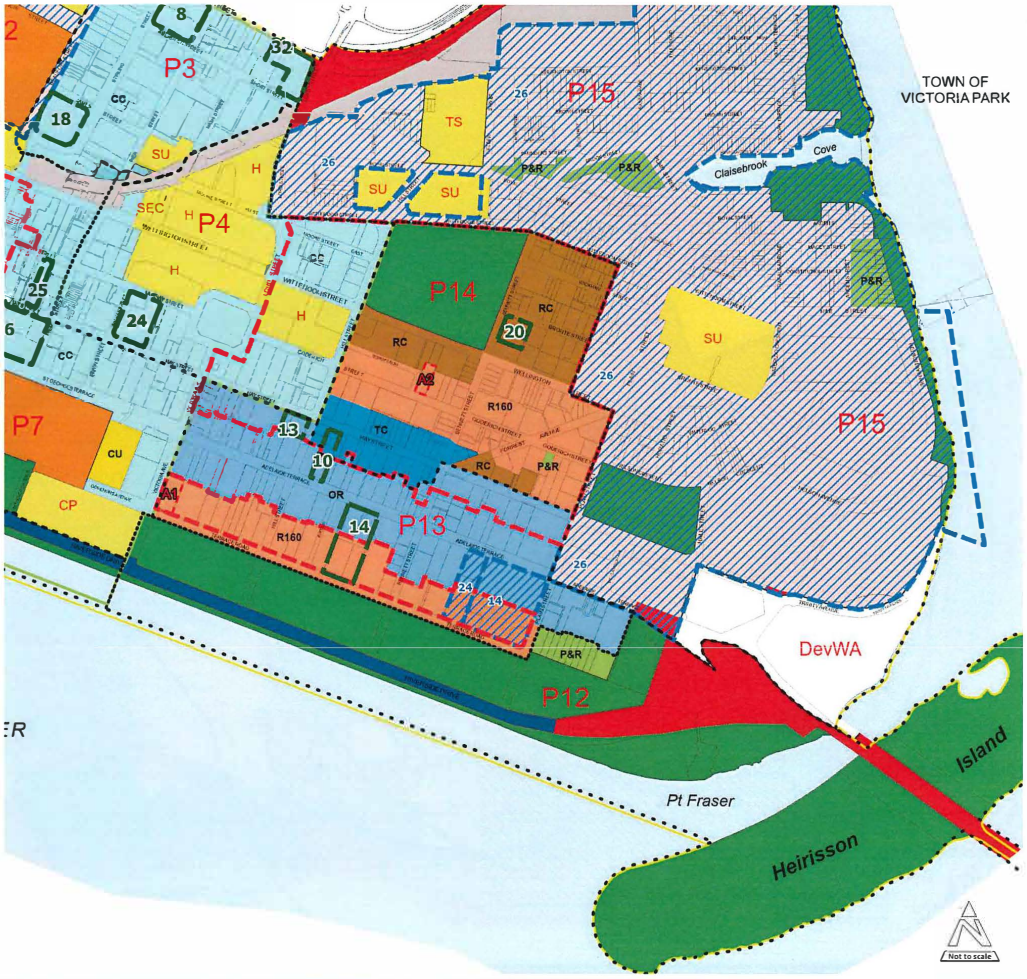
The Island will remain a passive recreation and wildlife refuge area. General vehicular access will be restricted. Improved pedestrian access from the foreshore is considered an important basis for increasing the enjoyment of visitors to this area.

CITY GATEWAY:

The Causeway and surrounding parkland will be enhanced to a standard reflecting the role of this road as a major entry route for visitors to the city centre.

PERTH WATER:

Perth Water, the waterfront and the foreshore will continue to be promoted as one of the city's major venues for public events. The use of the water for intensive motor powered leisure craft will be discouraged in favour of manual and wind propelled craft. Recreational boating facilities for short stay use may be appropriate where they do not conflict with other river transport.



LEGEND

- Scheme Area Boundary

CITY OF PERTH SCHEME RESERVES

- Parks & Recreation — P&R
- Public Purposes - Civic Use — CU

CITY OF PERTH SCHEME USE AREAS

- City Centre — CC
- Town Centre
- Residential — R60
- Office/Residential — OR
- Residential/Commercial — RC
- Commercial — CO

OTHER

- Additional Uses — A1
- Normalised Redevelopment Area
- DevelopmentWA Area — DevWA
- City Centre Boundary
- MRS Clause 32 Area
- Minor Town / Local Planning Schemes and Number — 12
- Special Control Areas and Number — 1
- Planning Policy Areas
- Precinct Boundary
- Precinct Number — P7

METROPOLITAN REGION SCHEME RESERVES

- Parks & Recreation
- Town Centre
- Railways
- Civic & Cultural
- Waterways
- Public Purposes
  - Hospital — H
  - Car Park — CP
  - University — U
  - SECWA — SEC
  - Special Uses — SU

ROADS

- Primary Regional Roads
- Other Regional Roads

NOTE 1: The Department of Planning should be consulted for full information on the actual land requirements for all Metropolitan Region Scheme Reserves

NOTE 2: This map should be read in conjunction with City Planning Scheme No. 2 Scheme Map.

City of Perth | City Planning Scheme No.2
Langley P12

Amended - 6 May 2022

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SCHEDULE 8 - PROPOSED LANGLEY PRECINCT 12 PLAN (P12)

City Planning Scheme No.2

LANGLEY - Precinct 12

LANGLEY:

A focus for recreation and leisure pursuits which also provides a dramatic setting for the city centre.

FORESHORE ACTION PLAN:

The Action Plan aims to maintain and enhance public access and use of the Swan River foreshore. The use of Riverside Drive primary as a scenic route will improve linkages between the city centre and the foreshore and create an envrionment conducive to walking and cycling. Point Fraser is to be developed as a major visitor node on the foreshore, with secondary activity points at the end of Plain Street and Victoria Avenue. Elsewhere on the foreshore structures are to be minimal in scale and number to preserve the parkland character of the area.

LANGLEY PARK:

Will continue to be used for a wide range of leisure and recreational activities, particularly those which add to or draw from the experience of the river. Further alienation of the open space will not be permitted, although use of the space for large temporary events may be permitted.

HEIRISSON ISLAND:

The Island will remain a passive recreation and wildlife refuge area. General vehicular access will be restricted. Improved pedestrian access from the foreshore is considered an important basis for increasing the enjoyment of visitors to this area.

CITY GATEWAY:

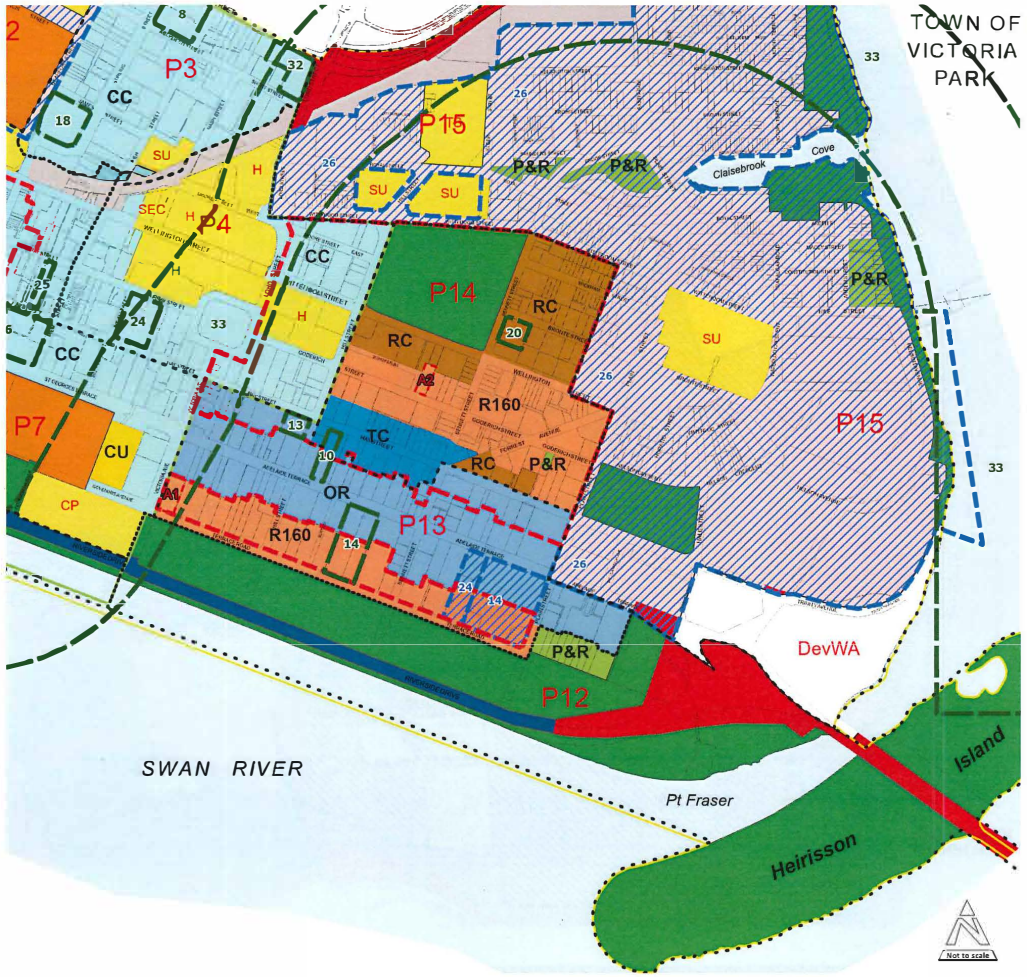
The Causeway and surrounding parkland will be enhanced to a standard reflecting the role of this road as a major entry route for visitors to the city centre.

PERTH WATER:

Perth Water, the waterfront and the foreshore will continue to be promoted as one of the city's major venues for public events. The use of the water for intensive motor powered leisure craft will be discouraged in favour of manual and wind propelled craft. Recreational boating facilities for short stay use may be appropriate where they do not conflict with other river transport.

SPECIAL CONTROL AREAS:

33 - Royal Perth Hospital Flight Path Protection



LEGEND

Scheme Area Boundary

CITY OF PERTH SCHEME RESERVES
- Parks & Recreation — P&R
- Public Purposes - Civic Use — CU

CITY OF PERTH SCHEME USE AREAS
- City Centre — CC
- Town Centre
- Residential — R60
- Office/Residential — OR
- Residential/Commercial — RC
- Commercial — CO

OTHER
- Additional Uses — A1
- Normalised Redevelopment Area
- DevelopmentWA Area — DevWA
- City Centre Boundary
- MRS Clause 32 Area
- Minor Town / Local Planning Schemes and Number — 12
- Special Control Areas and Number — 3
- Planning Policy Areas
- Precinct Boundary
- Precinct Number — P7

METROPOLITAN REGION SCHEME RESERVES
- Parks & Recreation
- Town Centre
- Railways
- Civic & Cultural
- Waterways
- Public Purposes
  - Hospital — H
  - Car Park — CP
  - University — U
  - SECWA — SEC
  - Special Uses — SU

ROADS
- Primary Regional Roads
- Other Regional Roads

NOTE 1: The Department of Planning should be consulted for full information on the actual land requirements for all Metropolitan Region Scheme Reserves

NOTE 2: This map should be read in conjunction with City Planning Scheme No. 2 Scheme Map.

SCHEDULE 9 - EXISTING ADELAIDE PRECINCT 13 PLAN (P13)

City Planning Scheme No.2

ADELAIDE - Precinct 13

ADELAIDE:

A residential and office area adjacent to both central city development and an extensive open space network.

ADELAIDE TERRACE:

Will be the formal approach to the centre of the city and an attractive, open, sunny and colourful boulevard. Building will be set back from the street with landscaped forecourts.

OFFICE / RESIDENTIAL AREA:

Will provide for an office area adjacent to the city centre where mixed uses and independent residential developments are strongly encouraged. This area will develop as an office district set in spacious landcaped surrounds. Tourist, leisure and recreation oriented activities will be encouraged.

RESIDENTIAL DEVELOPMENT:

Will continue to be strongly encouraged throughout the majority of the Precinct, both independently and in conjunction with office and commercial uses. The outlook to the foreshore and the river, as well as the proximity to Langley Park and the city centre, will be highlighted in the promotion of this Precinct as a residential locality.

TERRACE ROAD DESIGN POLICY AREA:

Will provide for a wide variety of high density residential accommodation, including tourist and short stay accommodation, such as hotels, serviced apartments and hostels. Non-residential uses which serve the residents, such as coffee shops and restaurants, will be supported where they are part of a residential use. Development will minimise wind and overshadowing effects.

SPECIAL CONTROL AREAS

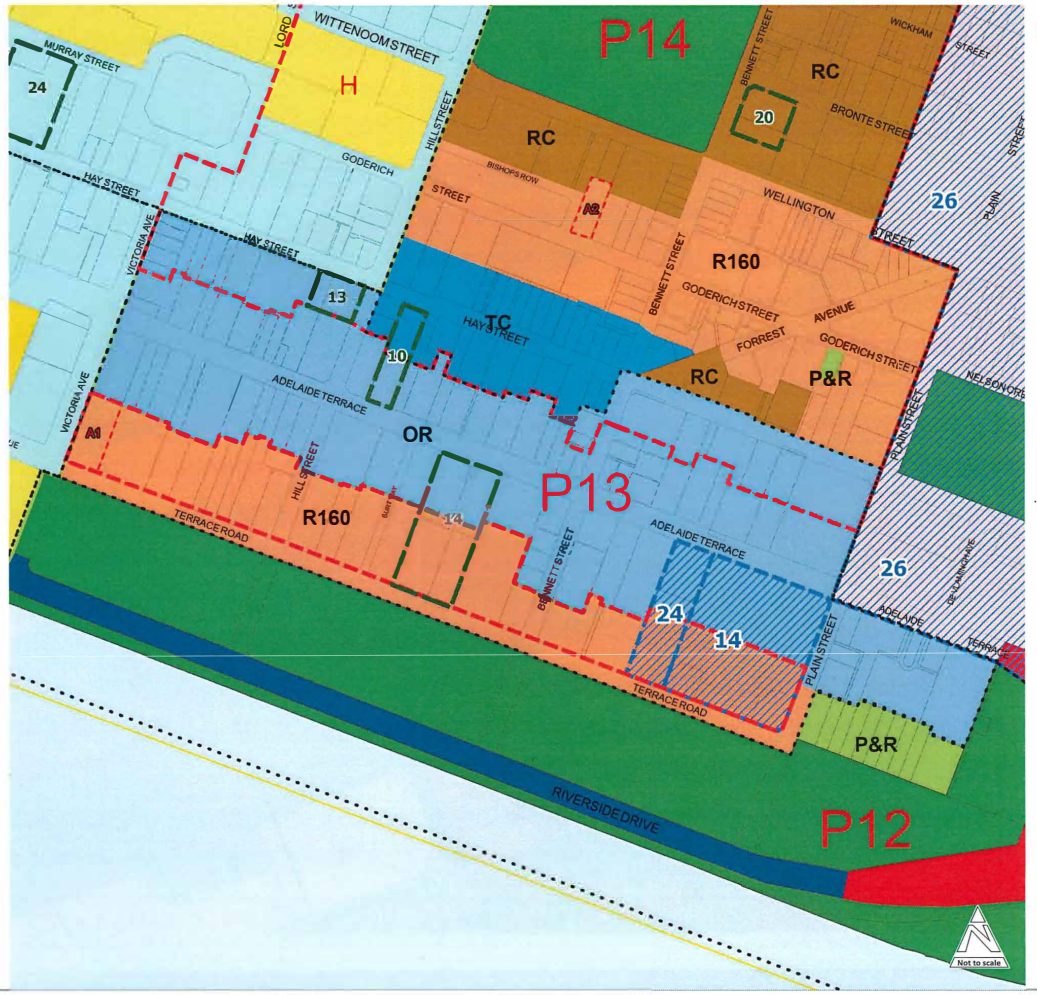
Special control areas apply in the city centre for these areas

10 - 208-210 Adelaide Terrace
13 - 339-341 and 347 Hay St
14 - 187-193 Adelaide Terrace and 82-94 Terrace Road

MINOR TOWN PLANNING SCHEMES

The additional scheme will apply for these areas:

TPS 14 - Withernsea
TPS 24 - 131-137 Adelaide Terrace
LPS 26 - Normalised Redevelopment Areas



LEGEND

Scheme Area Boundary

CITY OF PERTH SCHEME RESERVES

Parks & Recreation — P&R
Public Purposes - Civic Use — CU

CITY OF PERTH SCHEME USE AREAS

City Centre — CC
Town Centre
Residential — R60
Office/Residential — OR
Residential/Commercial — RC
Commercial — CO

OTHER

Additional Uses — A1
Normalised Redevelopment Area
DevelopmentWA Area — DevWA
City Centre Boundary
MRS Clause 32 Area
Minor Town / Local Planning Schemes and Number — 12
Special Control Areas and Number — 2
Planning Policy Areas
Precinct Boundary
Precinct Number — P7

METROPOLITAN REGION SCHEME RESERVES

Parks & Recreation
Town Centre
Railways
Civic & Cultural
Waterways
Public Purposes
- Hospital — H
- Car Park — CP
- University — U
- SECWA — SEC
- Special Uses — SU

ROADS

- Primary Regional Roads
- Other Regional Roads

NOTE 1: The Department of Planning should be consulted for full information on the actual land requirements for all Metropolitan Region Scheme Reserves

NOTE 2: This map should be read in conjunction with City Planning Scheme No. 2 Scheme Map.

City of Perth | City Planning Scheme No.2
Adelaide P13

Amended - 6 May 2022

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SCHEDULE 10 - PROPOSED ADELAIDE PRECINCT 13 PLAN (P13)

City Planning Scheme No.2

ADELAIDE - Precinct 13

ADELAIDE:
A residential and office area adjacent to both central city development and an extensive open space network.

ADELAIDE TERRACE:
Will be the formal approach to the centre of the city and an attractive, open, sunny and colourful boulevard. Building will be set back from the street with landscaped forecourts.

OFFICE / RESIDENTIAL AREA:
Will provide for an office area adjacent to the city centre where mixed uses and independent residential developments are strongly encouraged. This area will develop as an office district set in spacious landcaped surrounds. Tourist, leisure and recreation oriented activities will be encouraged.

RESIDENTIAL DEVELOPMENT:

Will continue to be strongly encouraged throughout the majority of the Precinct, both independently and in conjunction with office and commercial uses. The outlook to the foreshore and the river, as well as the proximity to Langley Park and the city centre, will be highlighted in the promotion of this Precinct as a residential locality.

TERRACE ROAD DESIGN POLICY AREA:
Will provide for a wide variety of high density residential accommodation, including tourist and short stay accommodation, such as hotels, serviced apartments and hostels. Non-residential uses which serve the residents, such as coffee shops and restaurants, will be supported where they are part of a residential use. Development will minimise wind and overshadowing effects.

SPECIAL CONTROL AREAS

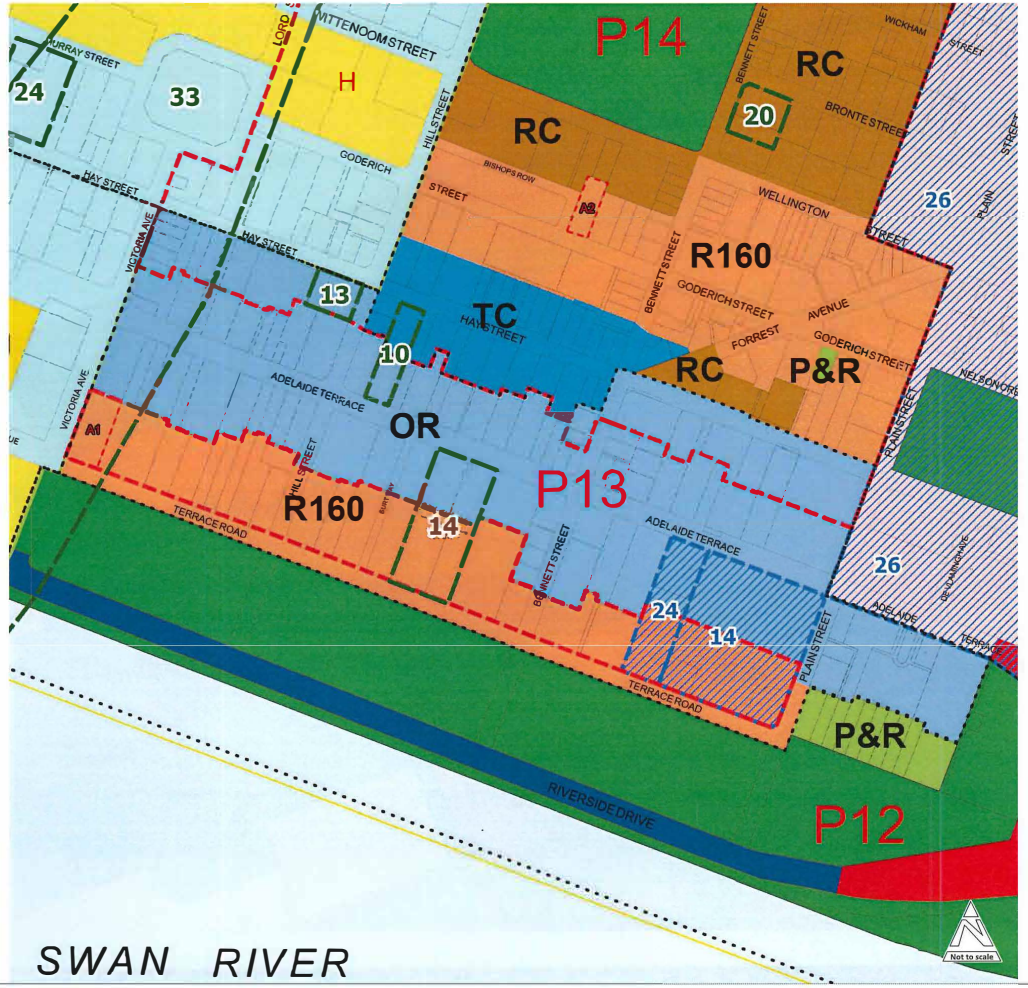
Special control areas apply in the city centre for these areas

10 - 208-210 Adelaide Terrace
13 - 339-341 and 347 Hay St
14 - 187-193 Adelaide Terrace and 82-94 Terrace Road
33 - Royal Perth Hospital Flight Path Protection

MINOR TOWN PLANNING SCHEMES

The additional scheme will apply for these areas:

TPS 14 - Withernsea
TPS 24 - 131-137 Adelaide Terrace
LPS 26 - Normalised Redevelopment Areas



LEGEND

Scheme Area Boundary

CITY OF PERTH SCHEME RESERVES
Parks & Recreation — P&R
Public Purposes - Civic Use — CU

CITY OF PERTH SCHEME USE AREAS
City Centre — CC
Town Centre
Residential — R60
Office/Residential — OR
Residential/Commercial — RC
Commercial — CO

OTHER
Additional Uses — A1
Normalised Redevelopment Area
DevelopmentWA Area — DevWA
City Centre Boundary
MRS Clause 32 Area
Minor Town / Local Planning Schemes and Number — 12
Special Control Areas and Number — 2
Planning Policy Areas
Precinct Boundary
Precinct Number — P7

METROPOLITAN REGION SCHEME RESERVES
Parks & Recreation
Town Centre
Railways
Civic & Cultural
Waterways
Public Purposes
- Hospital — H
- Car Park — CP
- University — U
- SECWA — SEC
- Special Uses — SU

ROADS
- Primary Regional Roads
- Other Regional Roads

NOTE 1: The Department of Planning should be consulted for full information on the actual land requirements for all Metropolitan Region Scheme Reserves

NOTE 2: This map should be read in conjunction with City Planning Scheme No. 2 Scheme Map.

City of Perth | City Planning Scheme No.2
Adelaide P13

Amended - 6 May 2022

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SCHEDULE 11 - EXISTING EAST PERTH PRECINCT 15 PLAN (P15)

City Planning Scheme No.2

EAST PERTH - Precinct 15

EAST PERTH:

A compact, mixed use, riverside neighbourhood centred on the Claisebrook Inlet.

PRECINCT BOUNDARY:

The area shown on the Precinct Plan Map as the East Perth Precinct reflects two areas as follows:-

- the area which was formally under the planning control of DevelopmentWA (DevWA) formerly MRA, but which is now under the planning control of the City of Perth, otherwise known as the "Normalised" area; and
- the area of land that remains is regulated by DevWA in accordance with the Metropolitan Redevelopment Authority Act 2011 that is not included in the normalised area of Precinct 15.

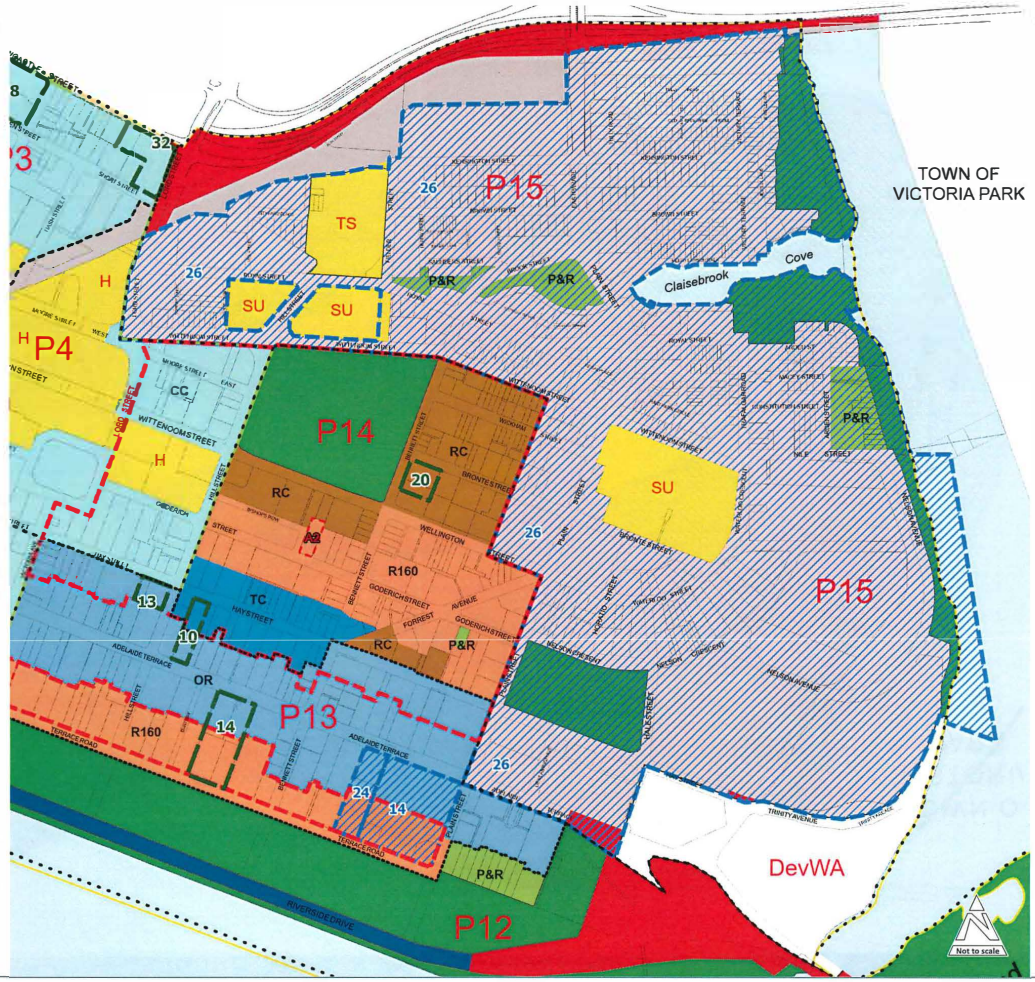
For the "Normalised" area of the East Perth Precinct the Council is the responsible authority for development approvals.

DEVELOPMENTWA (DEVWA):

For DevWA regulated areas, development approvals must be obtained from DevWA. This includes Stage 2 redevelopment precincts: Royal Street West, Queens, Queens Gardens, WACA, Trinity College, Gloucester Park and Hillside until the normalisation process is finalised.

The local government is asked to comment on development applications, administer building, health and related controls and at times is involved in other major works including transport related matters.

The broad objectives for Precinct 15 will assist with the future development of the area, and includes the areas managed by the two separate regulatory bodies. It is aimed to facilitate a highly integrated living environment, incorporating shopping, civic, health, commercial, educational, entertainment, recreational and cultural facilities and therefore provide the basis for a diversified employment base.



LEGEND

Scheme Area Boundary

CITY OF PERTH SCHEME RESERVES
- Parks & Recreation — P&R
- Public Purposes - Civic Use — CU

CITY OF PERTH SCHEME USE AREAS
- City Centre — CC
- Town Centre
- Residential — R60
- Office/Residential — OR
- Residential/Commercial — RC
- Commercial — CO

OTHER
- Additional Uses — A1
- Normalised Redevelopment Area
- DevelopmentWA Area — DevWA
- City Centre Boundary
- MRS Clause 32 Area
- Minor Town / Local Planning Schemes and Number — 12
- Special Control Areas and Number — 3
- Planning Policy Areas
- Precinct Boundary
- Precinct Number — P7

METROPOLITAN REGION SCHEME RESERVES
- Parks & Recreation
- Town Centre
- Railways
- Civic & Cultural
- Waterways
- Public Purposes
  - Hospital — H
  - Car Park — CP
  - University — U
  - SECWA — SEC
  - Special Uses — SU

ROADS
- Primary Regional Roads
- Other Regional Roads

NOTE 1: The Department of Planning should be consulted for full information on the actual land requirements for all Metropolitan Region Scheme Reserves

NOTE 2: This map should be read in conjunction with City Planning Scheme No. 2 Scheme Map.

Not to scale

City of Perth | City Planning Scheme No.2
East Perth P15

Amended - 6 May 2022

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SCHEDULE 12 - PROPOSED EAST PERTH PRECINCT 15 PLAN (P15)

City Planning Scheme No.2

EAST PERTH - Precinct 15

EAST PERTH:

A compact, mixed use, riverside neighbourhood centred on the Claisebrook Inlet.

PRECINCT BOUNDARY:

The area shown on the Precinct Plan Map as the East Perth Precinct reflects two areas as follows:-

- the area which was formally under the planning control of DevelopmentWA (DevWA) formerly MRA, but which is now under the planning control of the City of Perth, otherwise known as the "Normalised" area; and
- the area of land that remains is regulated by DevWA in accordance with the Metropolitan Redevelopment Authority Act 2011 that is not included in the normalised area of Precinct 15.

For the "Normalised" area of the East Perth Precinct the Council is the responsible authority for development approvals.

DEVELOPMENTWA (DEVWA):

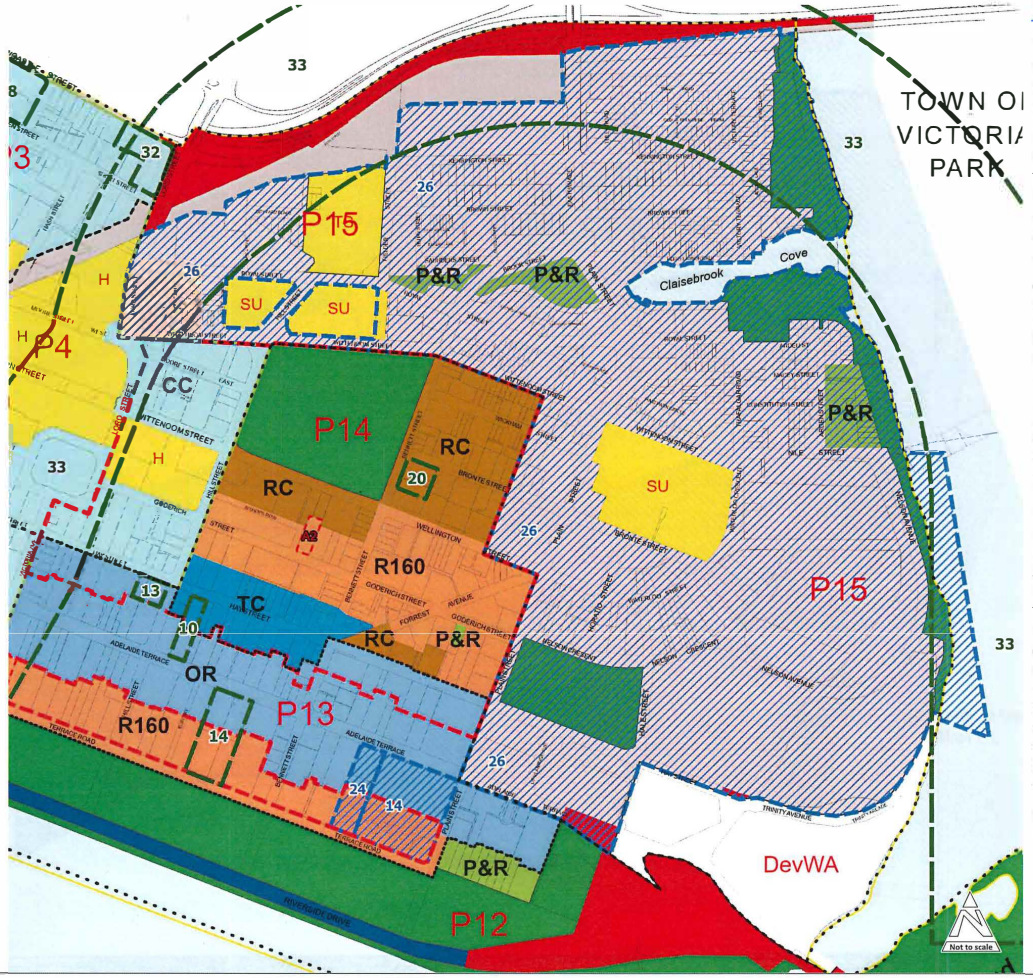
For DevWA regulated areas, development approvals must be obtained from DevWA. This includes Stage 2 redevelopment precincts: Royal Street West, Queens, Queens Gardens, WACA, Trinity College, Gloucester Park and Hillside until the normalisation process is finalised.

The local government is asked to comment on development applications, administer building, health and related controls and at times is involved in other major works including transport related matters.

The broad objectives for Precinct 15 will assist with the future development of the area, and includes the areas managed by the two separate regulatory bodies. It is aimed to facilitate a highly integrated living environment, incorporating shopping, civic, health, commercial, educational, entertainment, recreational and cultural facilities and therefore provide the basis for a diversified employment base.

SPECIAL CONTROL AREAS:

33 - Royal Perth Hospital Flight Path Protection



LEGEND

Scheme Area Boundary

CITY OF PERTH SCHEME RESERVES

- Parks & Recreation — P&R
- Public Purposes - Civic Use — CU

CITY OF PERTH SCHEME USE AREAS

- City Centre — CC
- Town Centre
- Residential — R60
- Office/Residential — OR
- Residential/Commercial — RC
- Commercial — CO

OTHER

- Additional Uses — A1
- Normalised Redevelopment Area
- DevelopmentWA Area — DevWA
- City Centre Boundary
- MRS Clause 32 Area
- Minor Town / Local Planning Schemes and Number — 12
- Special Control Areas and Number — 2
- Planning Policy Areas
- Precinct Boundary
- Precinct Number — P7

METROPOLITAN REGION SCHEME RESERVES

- Parks & Recreation
- Town Centre
- Railways
- Civic & Cultural
- Waterways
- Public Purposes
  - Hospital — H
  - Car Park — CP
  - University — U
  - SECWA — SEC
  - Special Uses — SU

ROADS

- Primary Regional Roads
- Other Regional Roads

NOTE 1: The Department of Planning should be consulted for full information on the actual land requirements for all Metropolitan Region Scheme Reserves

NOTE 2: This map should be read in conjunction with City Planning Scheme No. 2 Scheme Map.

City *of* Perth | City Planning Scheme No.2
East Perth P15

Amended - 6 May 2022

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Schedule of Submissions

Amendment No. 47 to City Planning Scheme No. 2 and Amendment No. 5 to Local Planning Scheme No. 26

	Submitter	Affected Property	Comment	City Response
1.	Water Cooperation	General submission	**No objection** Thank you for referring this to us. Water Corporation has no objection to the proposed Special Control Area.	Noted.
2.	Botanic Gardens and Parks Authority (Department of Biodiversity, Conservation and Attractions)	General submission	**No objection** Thank you for your letter dated 16 March 2023 inviting the Botanic Gardens and Parks Authority (BGPA) the opportunity to provide a response to the proposed scheme amendments to create a Special Control Area to protect an emergency helicopter flight path. While the proposed path does impact a portion of the Western Australian Botanic Garden, an internal operational review has indicated no potential conflict to operations. As such, BGPA has no objection to the proposal. Congratulations to the City of Perth for a well-considered proposal, given the complex issues to be negotiated.	Noted.
3.	Department of Fire and Emergency Services	General submission	**No objection** The Department of Fire & Emergency Services (DFES) provides the following comments pursuant to *State Planning Policy 3.7 Planning in Bushfire Prone Areas* (SPP 3.7) and the *Guidelines for Planning in Bushfire Prone Areas* (Guidelines): i. The proposal does not fall into an area designated as bushfire prone pursuant to the *Fire and Emergency Services Act 1998 (as amended)* as identified on the *Map of Bush Fire Prone Areas*. ii. The proposal was referred internally to the Education and Heritage Building	Noted.

			(educationandheritage@dfes.wa.gov.au) and Operations Capability and no comments or objections were received.	
4.	Development WA	General submission	**No objection** Thank you for bringing the proposed scheme amendment to the attention of DevelopmentWA. We appreciate the opportunity to review the Special Control Area documentation in the context of our redevelopment areas, particularly the East Perth Power Station project. After considering the documentation, we have determined that the proposed scheme amendment is unlikely to have any unforeseen impacts on our project areas. Therefore, we would like to confirm that DevelopmentWA has no objection to the proposed scheme amendment.	Noted.
5.	Mental Health Commission	General submission	**No objection** With reference to AMENDMENT 47 TO CITY PLANNING SCHEME NO.2, AMENDMENT 5 TO LOCAL PLANNING SCHEME. 26, AND AMENDMENT TO LOCAL PLANNING POLICIES as referenced in your letter dated 16/03/23 ref: 41643/23, the Mental Health Commission (Commission) is not a property owner within the proposed 'Special Control Area' therefore there is no further comment from the Commission.	Noted.
6.	Swan River Trust (Department of Biodiversity, Conservation and Attractions)	General submission	**No objection** Thank you for providing the Swan River Trust (the Trust) with the opportunity to comment on the above Scheme Amendments and proposed amendments to the City of Perth's Local Planning Policies received on 21 March 2023. The Scheme Amendments propose to create a Special Control Area to protect an emergency helicopter flight path for Royal Perth Hospital. The proposed Special Control Area will intersect a portion of land and waters contained within the Swan Canning Development Control Area.	To provide context to the flightpath, the SCA has been shown in its entirety which includes land reserved under the Metropolitan Region Scheme (MRS) and within the City of Vincent. The Special Control Area will only apply to land zoned or reserved under the CPS2 and LPS26. The applicant (Element) may wish to investigate options to integrate the SCA into the MRS map. However, this is a separate planning process and is a matter to be considered between the applicant and Department of Planning, Lands and Heritage.

			While DBCA has no objections to the proposal and supports the formal recognition of the emergency helicopter flight path, the City of Perth may wish to consider whether the proposed mechanism of a Special Control Area can apply over a Metropolitan Region Scheme Reserve which sits outside of the scope of a Local Planning Scheme. The *Swan and Canning Rivers Management* Act (SCRM) 2006 applies over land and waters within the Swan Canning Development Control area and in conjunction with the *Planning and Development Act* 2005 regulates development and use within this area. It is possible that a significant development application may be determined under the SCRM Act and the DBCA would be happy to discuss with you how the protection of the emergency helicopter flight path could be recognised within DBCA's statutory framework.	
7.	Main Roads WA	General submission	**No objection** In response to correspondence received on 22 March 2023 please be advised Main Roads has reviewed the supporting information for Amendment No.47 and Amendment No.5 and has no objections to the proposed amendments. Main Roads understands that the intent of the above proposed amendments is to create a Special Control Area to protect an emergency helicopter flight path for the Royal Perth Hospital. The proposed changes are not considered to alter or present additional impact to the safety, efficiency or performance of the State road network. For the City's consideration, please find Main Roads' calculations of the separation distance between the proposed flight path and Main Roads structures below.	Noted.

<table>
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<td colspan="2">Table 1: Separation distance between flight path and bridge structures (Australian Height Datum)
<table>
<tr><th>Bridge No.</th><th>Name</th><th>Max Structure AHD (m)</th><th>Flight Path AHD (m)</th><th>Calculated Separation (m)</th><th>Comment</th></tr>
<tr><td>5182</td><td>Lord Street Rail Bridge</td><td>30.05</td><td>57.95</td><td>27.90</td><td></td></tr>
<tr><td>9152</td><td>Claisebrook Footbridge over Graham Farmer Freeway</td><td>43.88</td><td>76.96</td><td>33.07</td><td></td></tr>
<tr><td>1437</td><td>East Parade over Graham Farmer Freeway</td><td>31.85</td><td>99.14</td><td>67.29</td><td></td></tr>
<tr><td>9046</td><td>Matagarup Pedestrian Bridge</td><td>73.55</td><td>130.00</td><td>56.45</td><td>Based on nearest flight path data in Fig 33.4 which is conservative.</td></tr>
<tr><td>1491</td><td>Narrows Bridge</td><td>27.62</td><td>115.00</td><td>87.38</td><td>Based on flight path data in Fig 33.6 which is nearest conservative data available in document</td></tr>
</table></td>
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<tr>
<td>8.</td>
<td>Australian Government, Civil Aviation Safety Authority (CASA)</td>
<td>General submission</td>
<td>No objection

I am writing to correct the statement ‘protection of emergency helicopter flight paths is a requirement of the Civil Aviation Safety Authority’. CASA does not administer any legislation requiring the protection of helicopter flight paths to uncertified aerodromes such as the Helicopter Landing Site located at Royal Perth Hospital.

Guideline H (Protecting Strategically Important Helicopter Landing Sites) of the National Airports Safeguarding Framework (NASF) provides guidance to land use planning authorities to ensure that the use of Strategic Helicopter Landing Sites (SHLS) is not compromised by any proposed developments encroaching into flight paths and that new developments and associated activities do not present a hazard to helicopters arriving or departing from those SHLS.</td>
<td>Section 5.1 and Section 5.2 of Amendment No. 47 Report and Amendment Report No. 5 Report (Attachment A and B) have been updated to remove reference that the protection of emergency air ambulance flight paths as a CASA requirement. It is noted that Section 5.4.2.1 of the Reports provides an overview of Guideline H and its role in protecting strategically important helicopter landing sites.</td>
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</table>

			CASA therefore recommends that your consultation documents should be amended to state that the Special Control Area is proposed to protect helicopter access to Royal Perth Hospital pursuant to the provisions of NASF Guideline H. I've attached a copy of NASF Guideline H for your convenience.	
9.	Private landowner	No. 467 and No. 447 Hay Street, Perth	**Objection** Severely impacts on the commercial viability on future developments on lots 150 and 151 diagram 89390 contained in volume 2765 folio 90 and 91. Also lot 5 deposited plan 26513 volume 1311 folio 303.	Submission 9 and 10 are from the same properties and both submitters represent UNIR 18. One response has been provided to address the matters raised in these submissions. <u>Reduced Development Potential</u> City Planning Scheme No.2 (CPS2) controls built form via two mechanisms, maximum building height and maximum plot ratio. CPS2 defines plot ratio as the ratio of the floor area of a building to an area of land within the boundaries of the lot or lots on which the building is located. Under CPS2, the subject sites have a maximum permitted building height of 100 metres and maximum base plot ratio allowance of 5.0:1.0. The City has undertaken built form calculations and 3D built form modelling to assess the impact of the Special Control Area (SCA) on the development potential of private properties. Building heights will vary depending on how a developer chooses to configure a development. Buildings with larger floorplates will result in lower building heights. Buildings with smaller floorplates will result in taller buildings. The two floorplate scenarios listed below were used to assess the different development options available to the two sites:
10	Private landowner	No. 467 and No. 447 Hay Street, Perth	**Objection** On behalf of UNIR 18 Pty Ltd (the "Company"), we hereby submit our strong opposition to the suggested flight path. The proposed height restrictions would infringe the legitimate development of the captioned parcel of land situated on Lots 150 &151 and Lot 5 on Diagram 89390//467 Hay Street, Perth (the "Project") and on Deposited Plan 26513//447 Hay Street, Perth. The proposed height restrictions would infringe the legitimate development of the captioned parcel of land situated on Lots 150 &151 on Diagram 89390 // 467 Hay Street, Perth. (the 11 Project") The Company has diligently planned to develop the Project into a prestigious key signature building to enhance the landmark and community value of the area, with an assigned height limited of 100m. The proposed height restrictions to lower it to 80-85m will materially compromise the aesthetic outlook and functionality of the building. It will further increase the technical burdens and construction complexities as well as substantial increase in costs and expenses due to the proposed	

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<td>change, which will adversely affect the feasibility, commercial and social value of the Project.

Another pertinent concern is the noise pollution and safety risk associated with the flight path, particularly for people living and working in the core areas. This would diminish the value of the surrounding buildings due to resultant environmental issues.

Therefore, we earnestly request that the City of Perth prioritise both the safety factor and interest of affected landowners equally when planning for the flight path route. Without prejudice, we reserve our rights to protest and claim for any potential loss and concession for compensation in due course, if necessary. Thank you for keeping our submission details confidential.

For and on behalf of UNIR 18 Pty Ltd.</td>
<td>1. One building on each lot using the largest size floorplate possible on all lots.
2. Two buildings using smaller floorplates on No. 467 Hay Street and one building on No. 447 Hay Street.

Residential, office and hotel land use development scenarios were modelled considering key planning requirements of CPS2 and the Residential Design Codes.

The modelling shows that notwithstanding the building height limits introduced by the SCA, both 467 Hay Street and 447 Hay Street can develop to the permitted maximum base plot ratios.

This modelling has been illustrated in Figure 1 and Figure 2, below.

It is acknowledged the introduction of the SCA reduces the 100m maximum permitted building heights as follows:
<table>
<tr><th></th><th>Current Maximum Height</th><th>Proposed Maximum Height</th></tr>
<tr><td>No. 447 Hay</td><td>100</td><td>65</td></tr>
<tr><td>No. 467 Hay</td><td>100</td><td>65.5 metres</td></tr>
</table>

Although the submitter has raised objection to this aspect, the modelling shows redevelopment of 467 Hay Street and 447 Hay Street would unlikely reach the maximum building height of the SCA limits, as the lots would not have sufficient plot ratio to build to the SCA height limit, irrespective of the previous 100m height limit.

<u>SCA would adversely affect the project feasibility, due to cost increases because of construction complexities</u>

The SCA will manage the use of temporary works and equipment. This includes equipment used in the</td>
</tr>
</table>

				construction process such as cranes. The SCA does not prohibit these structures being used during construction or potentially protruding into the SCA for select periods of time. Rather, the SCA seeks to manage this process through establishing a consultation process with the East Metropolitan Health Service. This is to ensure temporary structures do not present a hazard to the operation of the emergency flight path. <u>Concerns of reduced aesthetic of the building</u> The reduction in maximum building height does not reduce the potential for the site to deliver an aesthetic, high-quality development that contributes to the streetscape. <u>Noise concern and safety risk associated with the flight path</u> The introduction of the SCA will not result in any intensification on existing operations. The scheme amendment report (Attachment A) details the flight path is intended for emergency use and the introduction of an SCA formalises an existing arrangement. The SCA would support a safe flight path for the emergency helicopter rescue service. <u>Compensation for potential loss</u> The modelling undertaken demonstrates there are development options available to utilise all of the permitted maximum plot ratio without intruding into the flight path. The proposed flight path has sought to reduce the impact on development potential of private properties by taking advantage of existing road and rail infrastructure, the Swan River and publicly owned land parcels. Privately owned landholdings represent approximately 5.7% of the SCA.

				The City has not received any proposals for the development on the two sites that are subject to these submissions. Should a development proposal for the sites be pursued in the future, the City will work with the landowners to ensure an appropriate development outcome for the sites.

Figure 1 Scenario 1 – single building on No. 447 and No. 467 Hay Street

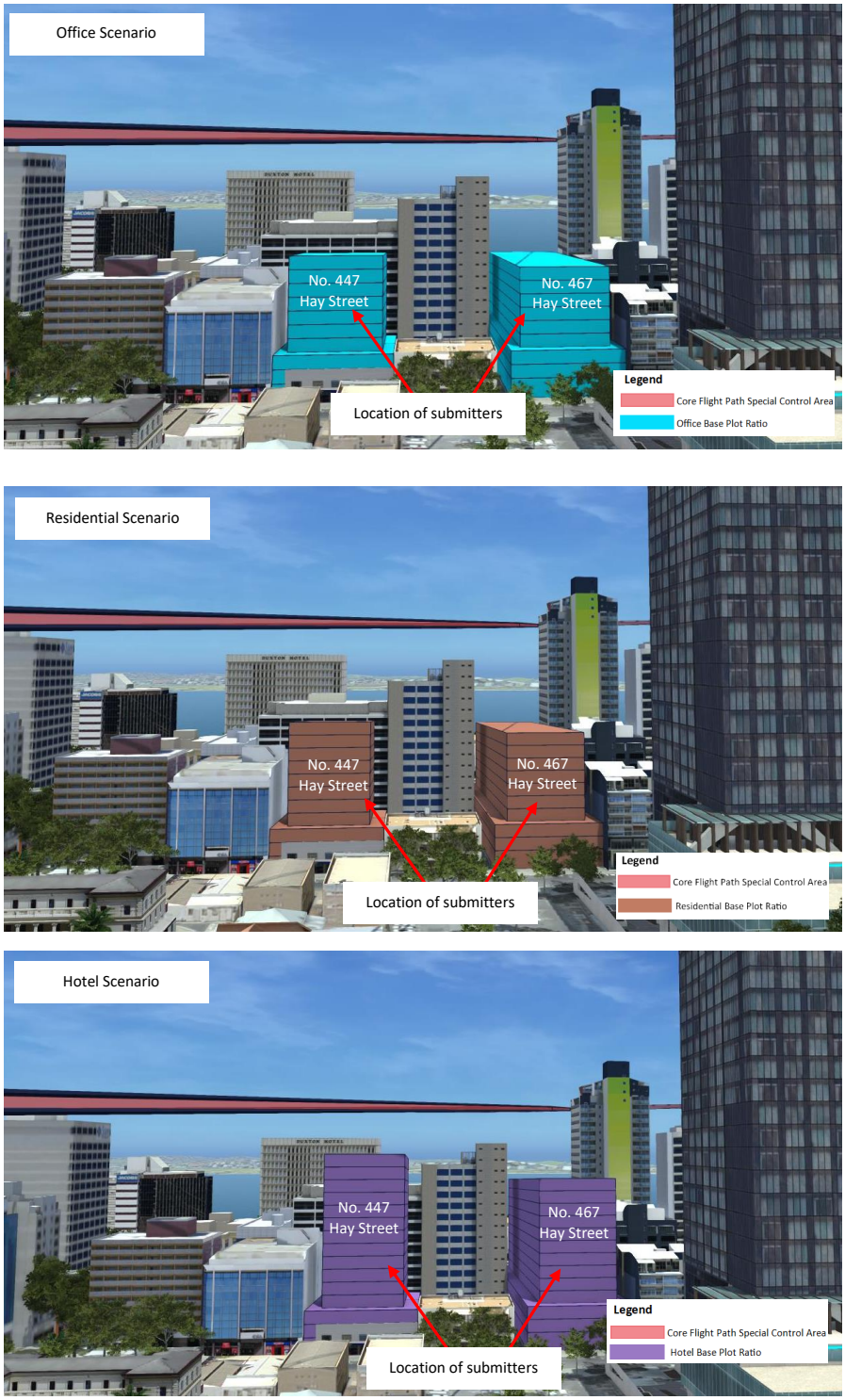


Figure 2 Scenario 2 – Single building on No. 447 Hay Street and two buildings on No. 467 Hay Street

