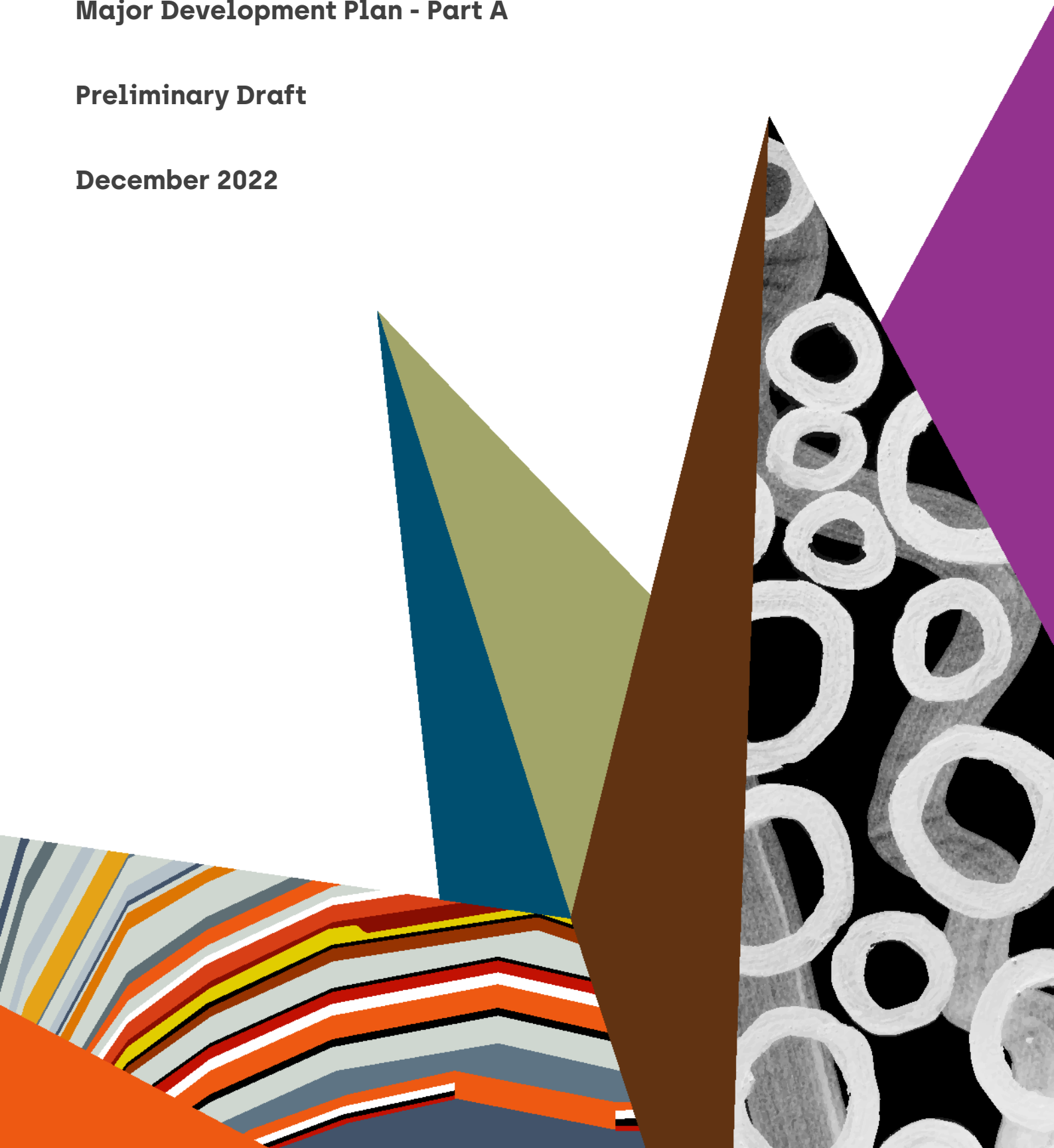


# Airport North

Major Development Plan - Part A

Preliminary Draft

December 2022



This Major Development Plan has been prepared by Perth Airport Pty Ltd (Perth Airport) (ABN 24 077 153 130) to satisfy the requirements of the *Airports Act 1996* (Cth).

While all care has been taken in the preparation of this Major Development Plan:

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## ACKNOWLEDGEMENT OF COUNTRY

*Boorloo worlak kornt kaadatj Wadjak moort Noongar boodja-k wer baalabang kalyakoorl noyinand Noongar boodja-k. Ngalak kaadatj Noongar Birdiya koora-koora yeyi wer boordakan.*

Perth Airport acknowledges the Whadjuk Noongar people as the Traditional Custodians of this region and respects their ongoing connection to this land. We pay our respects to Elders past, present and emerging.

We welcome feedback on the Perth Airport Preliminary Draft Major Development Plan for Airport North.

Written public comment submissions can be made online at [perthairport.com.au/majordevelopmentplans](http://perthairport.com.au/majordevelopmentplans) or sent to the address below between **Friday 2 December 2022 and 5pm (WST) Thursday 2 March 2023**:

Major Development Plan

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# 1 Executive Summary

Perth Airport is Australia's Western Hub linking Western Australia to the world. It operates 24 hours a day, seven days a week, and occupies a position as one of the most important infrastructure assets in Western Australia. As the fourth-largest domestic and international airport in Australia by passenger volume (pre-Covid), Perth Airport was serviced by more than 30 international, interstate and intrastate airline partners that operated to more than 50 destinations.

The Covid-19 outbreak had a catastrophic and immediate impact to the entire aviation sector. Perth Airport was not immune to this with international and interstate passenger numbers being dramatically impacted.

However, Perth Airport continues to plan for the future and is proceeding with its plans as set down in its Master Plan 2020, which was approved by the (then) Deputy Prime Minister and Minister for Infrastructure, Transport and Regional Development in March 2020. These investments will play a vital role in the recovery of the Western Australian economy.

The Perth Airport estate consists of 2,105 hectares and although the primary use of the estate is for aviation purposes, there is a significant amount of land available for non-aviation developments. This Major Development Plan (MDP) has been prepared by Perth Airport for the purpose of seeking Commonwealth approval for works to enable primarily non-aviation related development within the Airport North MDP area. The MDP is consistent with development objectives defined in the approved Perth Airport Master Plan 2020 and includes bringing land not required for long-term aviation services into productive use to support economic development and employment opportunities in Western Australia.

There is a demonstrated need and demand for employment generating land uses to deliver benefits and support the nearby growing resident population and industries. The first step in realising these benefits is the clearing and site preparation works, which form the basis of this MDP, and the approval being sought.

The proposed scope of works within the Airport North MDP area include vegetation clearing and site preparation, earthworks, service diversions and installations, road network construction, and landscaping and signage. These works enabling future development of Airport North are consistent with both long-term State Planning objectives for Western Australia and the planning for the localities adjacent to the airport estate.

The total area for the Airport North MDP is 248.03 hectares, of which the proposed developable land is approximately 125 hectares. The draft concept design for the proposed lot layout allows access predominately via a central road connecting to the Great Eastern Highway Bypass and Kalamunda Road. The MDP proposes changes to the main access points to the area and new internal roads and interchanges. Modelling undertaken indicates the road network will perform acceptably when the MDP area is built out and the likely future land uses become operational. It is noted that future land uses, and the subsequent traffic generation do not form part of the approval sought under this MDP; although this information is provided for additional context.

Construction traffic will be managed to minimise disruption to the road network and surrounding communities through the implementation of a Construction Environmental Management Plan reviewed, approved, administered and monitored via the Airports (Environment Protection) Regulations 1997 by the Airport Environment Officer appointed by Department of Infrastructure, Transport, Regional Development, Communications and the Arts.

The land preparation works approval sought under this MDP is estimated to cost \$178 million. This direct expenditure is expected to then induce a further \$381 million of indirect output in the wider economy, reflecting a total site preparation phase output of \$559 million. This economic output will be injected into the local economy and create direct and indirect employment for the duration of the works. Modelling has been undertaken to calculate these jobs for the work associated with this MDP and it was determined that 372 direct full time equivalent employment positions would be generated with an additional 1,286 indirect full-time equivalents. As such, a total of 1,658 jobs are estimated to be generated by the Airport North MDP site preparation and clearing works. In addition to these jobs and economic output, future ultimate development of the prepared site is estimated to generate in the order of more than 6,200 jobs and \$1.78 billion (for combined direct and indirect jobs and economic output).

The Airport North precinct is a highly constrained area located within a complex mix of existing and planned airport infrastructure and the associated safeguarding criteria, civil infrastructure (roads, drainage), flora and fauna and existing tenants, which combine to make Airport North a challenging precinct to plan. These constraints are addressed in this MDP.

An environmental assessment has been undertaken as per the requirements of the *Airports Act 1996* (Cth) (*Airports Act*), which investigated impacts to geology and soil, surface water and groundwater, flora and vegetation, fauna, wetlands and heritage. Perth Airport is in discussion with the Commonwealth Government on an appropriate offset framework to be applied across the airport estate. Planning work has considered the retention of significant areas of native vegetation and fauna habitat within Airport North. In particular, substantial allowance has been made for native vegetation and fauna habitat retention via ecological corridors, which will enhance ecological value and provide amenity for the future workforce. Ecological benefit and amenity will also be achieved through the establishment of a Living Stream where permissible.

The MDP area also has Aboriginal heritage considerations, and the planning and development work proposes to recognise the cultural significance of the development area, potentially through an interpretive heritage trail or otherwise as determined with Traditional Custodians. Engagement with Traditional Custodians on this project commenced in early 2019 and continues to be undertaken by Perth Airport as these unique opportunities are worked through.

In terms of the impacts to aviation activity associated with the proposed site preparation and clearing works, these have been assessed and Perth Airport is committed to effective engagement and consultation with stakeholders where there may be potential aviation impacts resulting from activity within the Airport North MDP area.

This MDP is presented in two parts as follows, and both parts should be read together as each component addresses various triggers in the *Airports Act*.

- Part A (this report) details project scope, justification, socio-economic assessment, traffic and ground transport implications, relationship to aviation, consultation and ultimate implementation mechanisms, and
- Part B outlines and assesses environmental and heritage considerations including Aboriginal sites, flora, fauna, soils, geology, water resources, wetlands and construction air, noise and vibration impacts.

Before Perth Airport can proceed with development within Airport North, it is required under Section 89(1) of the *Airports Act* to prepare an MDP for Ministerial consideration. Perth Airport is also required to undertake 60 business days of public consultation, with due regard given to all submissions received. Details of the dates for this consultation and how to make a submission can be found on the Perth Airport website.



## 2 Introduction

Perth Airport is located on the traditional lands of the Whadjuk People, a dialect group of the Noongar Nation. Whadjuk are the Traditional Custodians of the Derbal Yerrigan (Swan River), its tributaries and surrounding hills, wetlands and flood plain. Perth Airport is the Whadjuk gateway to the Aboriginal cultural diversity that the state of Western Australia offers. The Perth Airport estate consists of 2,105 hectares and although the primary use of the estate is for aviation purposes, there is a significant amount of land available for non-aviation developments.

This Major Development Plan (MDP) has been prepared by Perth Airport for the purpose of seeking Commonwealth approval for development within the Airport North precinct. This MDP is consistent with development objectives defined in the approved Perth Airport Master Plan 2020 and includes bringing land not required for long-term aviation services into productive use to support economic development and employment opportunities in Western Australia. This MDP recognises the importance of providing strategically identified infill development sites that are connected to suitable transport infrastructure and are appropriately integrated with surrounding compatible land uses to ensure long term sustainability. Furthermore, the MDP scope recognises that Airport North is uniquely positioned to offer ultimate land uses compatible with the highly constrained precinct and by doing so, offers potential to reduce impacts arising from the location of industrial development in other areas of the Perth metropolitan area that are less suited to this land use category. For example, near residential precincts or locations not as well serviced by transport networks.

Perth Airport provides an access point to Western Australia from interstate locations and serves as the central transportation hub for regional destinations, such as significant mining regions and popular tourist destinations. The airport is a vital link in the Western Australian resources sector supply chain, providing connectivity for the fly-in fly-out (FIFO) workforce and for Western Australians who live in remote communities. Non-aviation development located on the airport estate assists in the facilitation of this supply chain, in addition to the creation of employment, economic and social benefits for the region.

Perth Airport is located 12 kilometres east of Perth's Central Business District (CBD) and is well connected and integrated with major highway, freeway and rail networks, including Tonkin Highway, Leach Highway and Roe Highway, linking to the city, north-south and east-west. The location of Perth Airport in relation to the Perth metropolitan region and key transport infrastructure is shown in Figure 2-1, where it can be seen that the airport estate is well located within a broad catchment area for both aviation and non-aviation land uses.

This MDP is the approval mechanism sought for the development of land surplus to long-term aviation needs, which is an important step for Perth Airport. This in turn assists in supporting Perth Airport's maintenance of its core aviation business activities. This need has become more apparent since the Covid-19 pandemic. Further, the MDP maximises land use efficiency within the metropolitan region by delivering much needed and well-connected industrial land (particularly large lots) in a central location to support Perth's continued growth into the future.

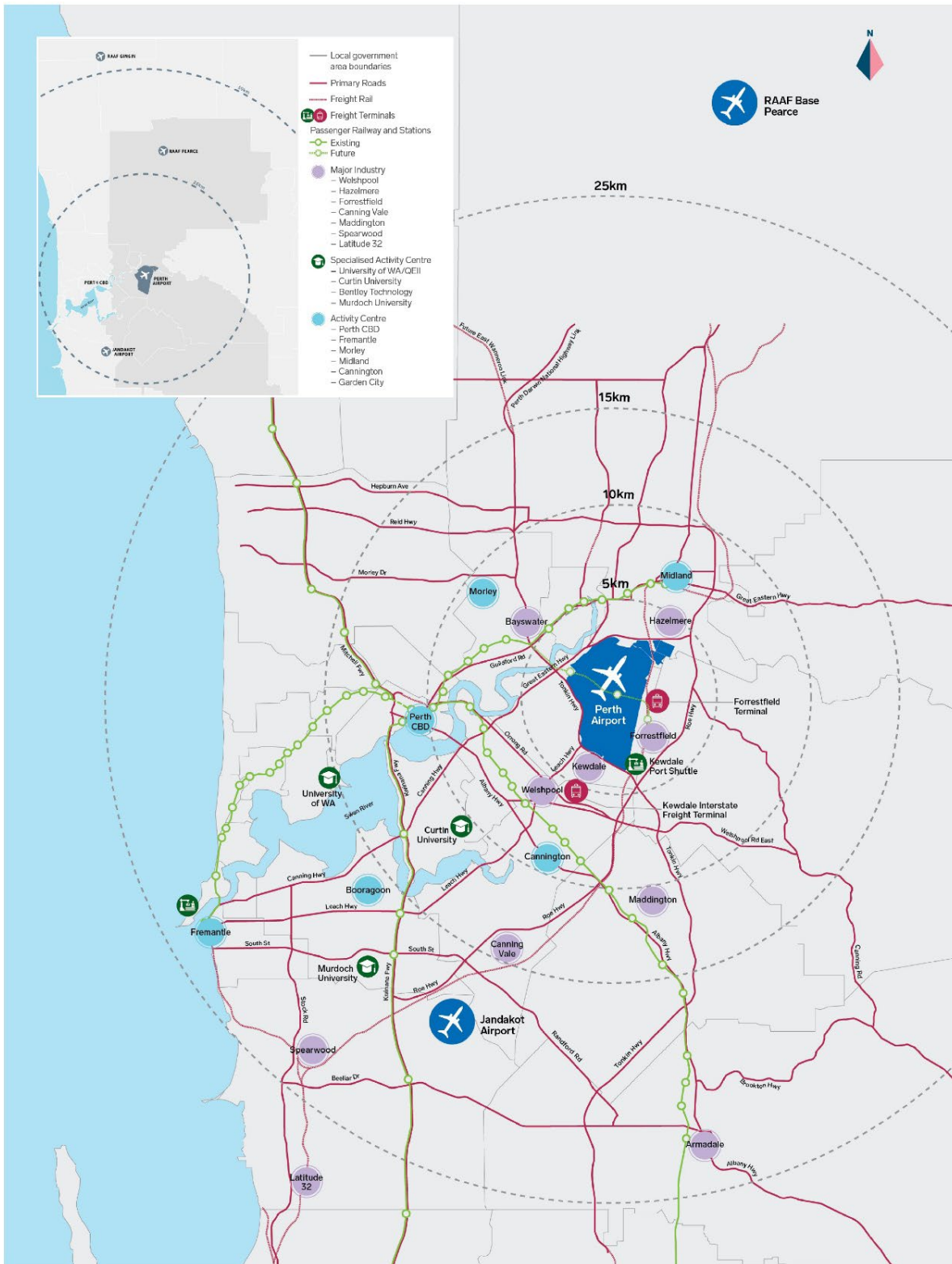


Figure 2-1 Perth Airport in Relation to Key Infrastructure

Source: Perth Airport

## 2.1 Major Development Plan Scope

The proposed scope of works in the Airport North precinct as part of this MDP are as follows for the study area illustrated in Figure 2-2;

- vegetation clearing,
- earthworks and site preparation,
- service diversions and installations,
- road network construction, and
- landscaping and signage.

For the purpose of this MDP, the above works are referred to as 'clearing and site preparation' as an all-inclusive term. With regard to the study area, it should be noted that the area termed "Airport North" is located within the wider Airport North precinct as defined in Perth Airport Master Plan 2020 and associated Land Use Plans. The wider precinct includes a larger area of land to that defined within this MDP. In particular, the area of land within the Airport North precinct that is not part of this MDP is located to the north of Kalamunda Road and is already fully developed with industrial type land uses.

Before Perth Airport can proceed with the proposed works, it is required under Section 89(1)(h) of the *Airports Act 1996* (Cth) (*Airports Act*) to prepare an MDP for the proposal. The Act stipulates various triggers for submission of an MDP, and in this instance, the development requires Commonwealth MDP assessment on the basis that several of these triggers are met. For example, the development will result in environmental impacts to matters listed under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) and has an estimated value of more than \$25 million, which also triggers MDP preparation. Further details concerning the statutory arrangements covering MDP's are provided under Section 6.4 of this document. This MDP meets all stipulated requirements and following subsequent public consultation and associated amendments, will be presented for approval to the Minister for Infrastructure, Transport, Regional Development and Local Government under the *Airports Act*.

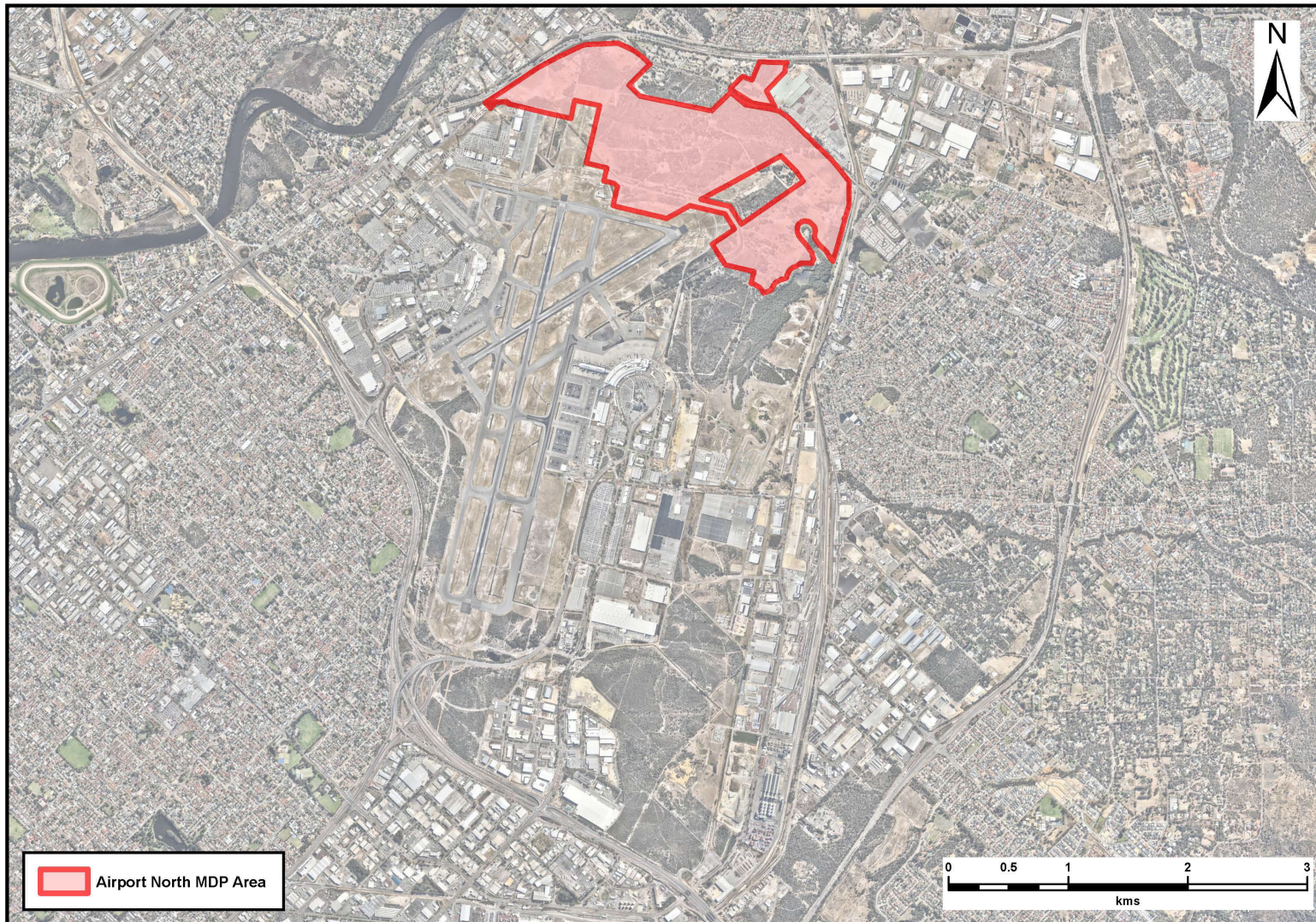


Figure 2-2 Airport North MDP area

Source: Perth Airport

## 2.2 Background

In July 1997, the operation and management of Perth Airport was transferred from the Commonwealth of Australia to Westralia Airports Corporation under a 50-year lease, with a 49-year leasehold option. In 2011, Westralia Airports Corporation changed its trading name to Perth Airport Pty Ltd.

Perth Airport Pty Ltd is a wholly owned subsidiary of Perth Airport Development Group Pty Ltd (PADG). The shareholders of PADG, as at December 2022, are shown in Table 2-1.

Shareholders of Perth Airport Development Group Pty Ltd	Percentage Ownership
Utilities of Australia Pty Ltd ATF Utilities Trust of Australia (UTA)	38.26%
The Northern Trust Company (TNTC) TNTC in its capacity as custodian for Future Fund Investment Company No.3 Pty Ltd (FFIC3), a wholly owned subsidiary of The Future Fund Board of Guardians (FFBG)	30.01%
Utilities of Australia Pty Ltd ATF Perth Airport Property Fund (PAPF)	17.34%
Gardior Pty Ltd as trustee for The Infrastructure Fund	7.19%
AustralianSuper Pty Ltd	5.25%
Australian Retirement Trust Pty Ltd	1.95%

**Table 2-1 Shareholders of Perth Airport Development Group Pty Ltd as at December 2022**

*Source: Perth Airport*

Details regarding the history of Perth Airport can be found in Appendix A.

## 2.3 Report Structure

This document is consistent with the requirements of a Major Development Plan and is presented in two parts and both parts should be read together as each component addresses various triggers in the *Airports Act*.

- **Part A** (this report) details project scope, justification, socio-economic assessment, traffic and ground transport implications, relationship to aviation, consultation and ultimate implementation mechanisms, and
- **Part B** outlines and assesses environmental and heritage considerations including Aboriginal sites, flora, fauna, soils, geology, water resources, wetlands and construction air, noise and vibration impacts.

### 3 Description of Development

The scope of the approval sought within this MDP includes works associated with clearing and site preparation requirements to ready the land primarily for future non-aviation development. Specifically, works required to prepare the site for development are:

- Vegetation clearing,
- Earthworks and site preparation,
- Service diversions and installations,
- Road network construction, and
- Landscaping and signage.

The future development opportunities within the Airport North MDP area following these works (subject to approval) are framed by the surrounding road network, Kalamunda Road/Great Eastern Highway Bypass frontage and the inclusion of a Living Stream running predominately east-west through the MDP area, which serves both drainage and ecological purposes, including an important fauna corridor for this portion of the airport estate. It should be noted that in some locations, the Living Stream will need to be piped to ensure that contamination mobilisation does not occur (refer Section 3.2).

Figure 3-1 illustrates indicative developable areas (concept) once the clearing and site preparation works have been completed along with the associated Living Stream. As noted previously, the ultimate layout for the Airport North MDP area is currently unknown and is subject to commercial demand and may differ from that shown. Notwithstanding this, Perth Airport have estimated that a total of 125.05 hectares of developable area can be achieved within the Airport North MDP area as depicted in Table 3-1 below:

MDP AREAS	Hectares	%
All Development Area	124.72	50.3
Industrial <sup>1</sup>	104.42	
Airport Services	20.3	
Open Space	92.58	37.3
Retained Vegetation Areas	34.38	
Revegetated Areas (including Living Stream)	53.13	
New Landscaping	4.89	
Wastewater pump station	0.06	
Provisional Rail Corridor	0.12	
All Roads	30.73	12.4%
<b>TOTAL MDP STUDY AREA<sup>2</sup></b>	<b>248.03</b>	<b>100%</b>

**Table 3-1 Airport North MDP development summary**

*Source: Grimshaw/Perth Airport (2022)*

<sup>1</sup> – This term encompasses light industrial, industrial, infrastructure, intermodal and commercial land uses

<sup>2</sup> – Excludes Cross Runway area within the Airport North precinct and Airfield precinct overlap

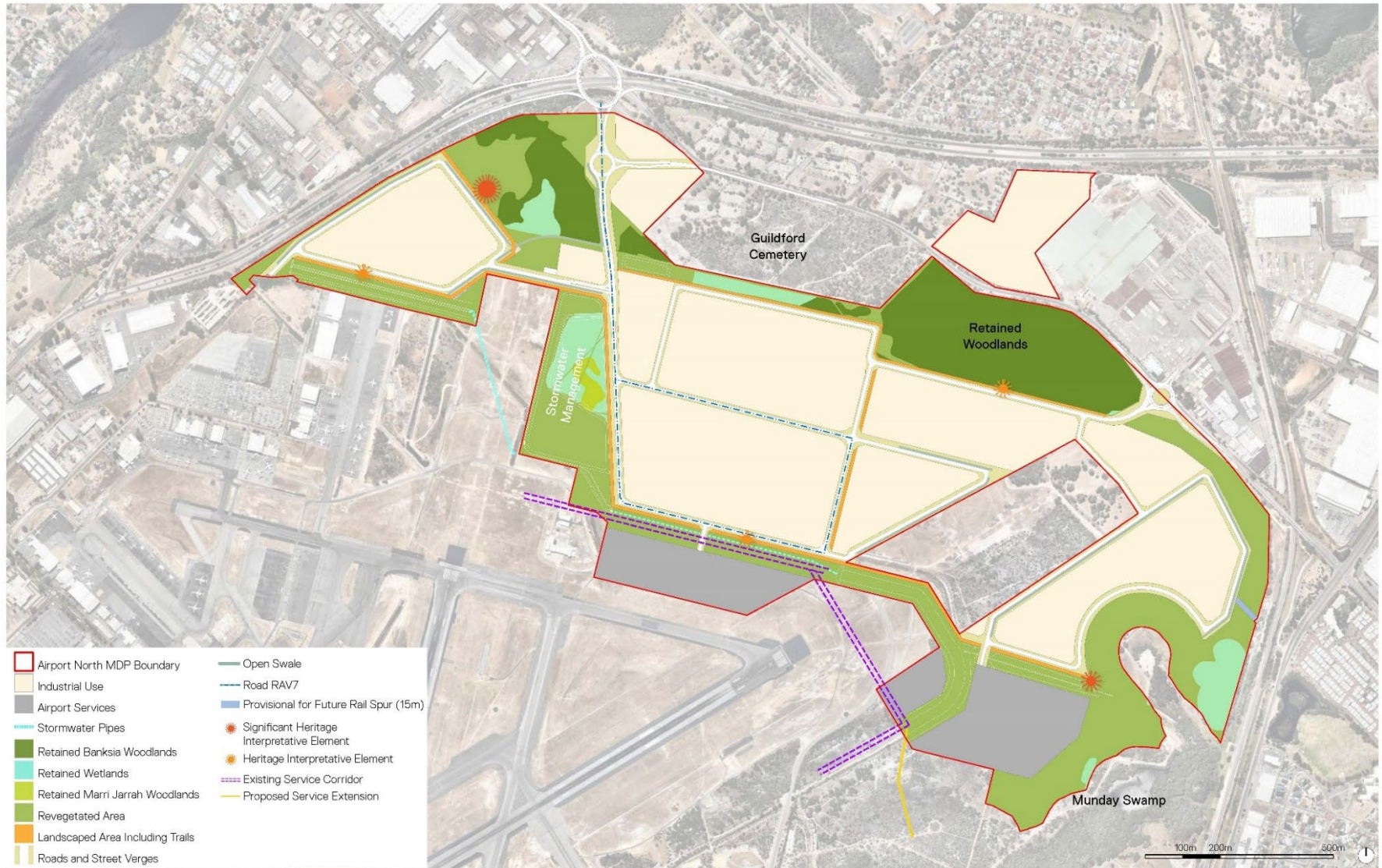


Figure 3-1 Indicative Airport North MDP Layout (subject to change)

Source: Grimshaw (2022)

Figure 3-1 shows a concept development layout which allows market demand to inform ultimate layout and sizes of lots subject to detailed design and stakeholder engagement. The ultimate design will deliver facilities and levels of service to meet the expectations of future tenants and will be consistent with the intent of the Final MDP (subject to approval), retained vegetation, ecological corridors and revegetation areas. For example, the notional road network illustrated in Figure 3-1 is subject to change, but the general design intent and basis for the development detailed within this MDP will remain consistent in future development design iterations.

The Airport North MDP is anticipated to be delivered as a multi-stage development over a period of 10 years or more. Broad staging is considered as follows (refer Figure 3-2):

- **Stage 1:** areas to the west of the cross-runway extension. This includes the land to the north of Kalamunda Road.
- **Stage 2:** land to the east of the cross-runway.

Within these two broad stages, multiple sub-stages will be determined based on market demand.

Provision of the external road network connection to Great Eastern Highway Bypass (GEHB) in the north of the MDP area will likely see development of the central or westernmost areas of Stage 1 occur first. The land to the north of Kalamunda Road is included within in the broader Stage 1 as it can potentially be developed prior to the completion of the road network connection to Great Eastern Highway Bypass. The upgrade to the bridge over the freight rail line at Kalamunda Road/Abernethy Road is underway and will be delivered ahead of an upgrade to the GEHB intersection (refer Appendix B for details). This will ultimately be the first point of access into the precinct for Stage 1

Detailed staging must also take account of existing aviation operational and associated infrastructure, including Air Services Australia and the Bureau of Meteorology.

Further development of this staging proposal will be determined by market demands and additional stakeholder engagement. Perth Airport is committed to effective engagement and consultation with stakeholders for any future development within the Airport North MDP area, including, but not limited to, consultation with Airservices Australia and CASA.



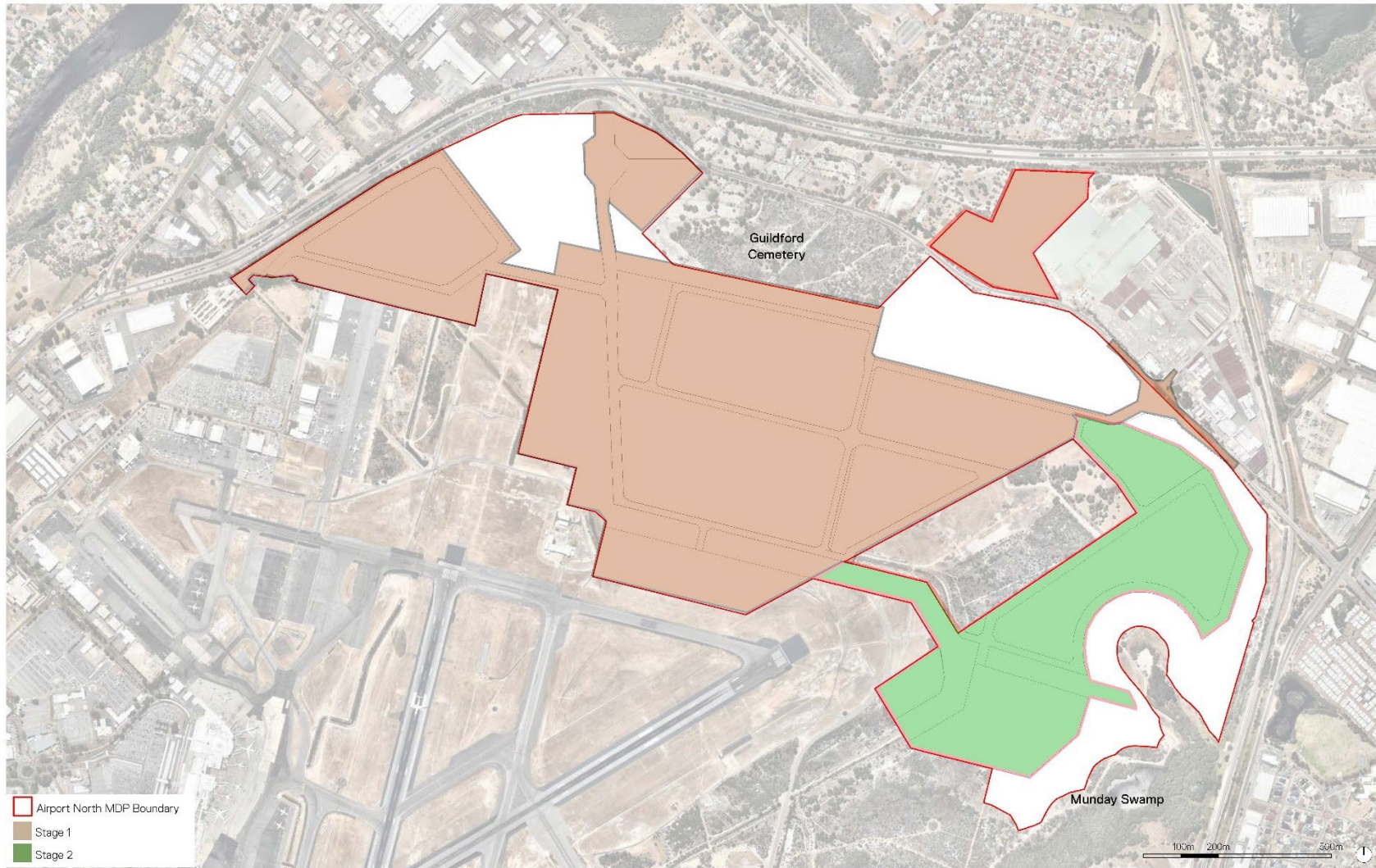


Figure 3-2 Indicative Airport North MDP staging plan (subject to change)

Source: Grimshaw (2022)

### 3.1 Cross Runway Extension

This MDP excludes land associated with the future cross runway extension including land required for taxiways and other supporting infrastructure, such as the Instrument Landing System.

The future of the cross-runway extension is yet to be determined and is subject to Commonwealth approval.

Further detail on the future of the cross runway, and how it interacts with this development, can be found in Section 5.4.

### 3.2 Living Stream

Living Streams are constructed or retrofitted open channels that mimic the characteristics of natural streams with tree canopy, understorey and in-stream vegetation. Local provenance vegetation is used where suitable and water quality improvements may be achieved by aquatic vegetation and natural biological processes, which assist in water oxygenation and removal of both nutrient and non-nutrient contaminants. The development of Living Streams within the airport estate supports the natural surface water management and control of peak flows, whilst improving water quality discharge at the estate boundary. Living Streams also provide general amenity through an improved level of ambiance for visitors and employees. See MDP Part B, Water Resources for further discussion on Living Streams.

The Perth Airport Master Plan notes that the Northern Main Drain (NMD) requires alignment modification to facilitate Perth Airport’s ongoing development, including development in Airport North and elsewhere within the estate. Environmental considerations are paramount to the design and implementation of a Living Stream in Airport North given the presence of PFAS contamination arising from the historical use of PFAS containing products in areas operated by Airservices Australia. Full implementation of a Living Stream through the Airport North MDP study area will require some sections to be piped. In these locations, a Living Stream concept would not be implemented, but the area above the piping would be vegetated to maintain an ecological corridor and local amenity. The final portion of piped and Living Stream sections will be determined during detailed design.

### 3.3 Supporting Infrastructure

This MDP contains (or is directly adjacent to) small portions of supporting infrastructure works which extend beyond the Airport North precinct under Perth Airport Master Plan 2020 into the adjoining Airfield Zone of the Master Plan. These items of supporting infrastructure are considered as ‘utilities and infrastructure’, which is a permitted land use in the Airfield Zone. These are summarised in the following table:

ID	Location Description	Proposed MDP Use
1	Cross runway extension area (portion)	Open drainage, revegetation, ecological corridor
2	Central southern edge of MDP	Piped and open drainage existing services corridor
3	Main runway extension area	Stormwater detention basins, connecting piped drainage
4	North end of main runway extension zone	Public road and footpath
5	Eastern edge, adjacent to wetland	Revegetation, potential heritage interpretation

**Table 3-2 Summary of supporting infrastructure within the MDP area**

*Source: Perth Airport (2020)*

A key component of proposed works under the Airport North MDP is the re-grading of the NMD and creation of stormwater detention basin(s).

While this infrastructure does serve the proposed Airport North MDP area, the majority of the stormwater catchment which this infrastructure serves is the Airfield and Airport Central precinct.

Figure 3-3 illustrates these items that fall outside the MDP area but are within the proposed scope for this MDP. This MDP has considered this land and included the areas in all necessary assessments (e.g., environmental impact) as per MDP requirements.

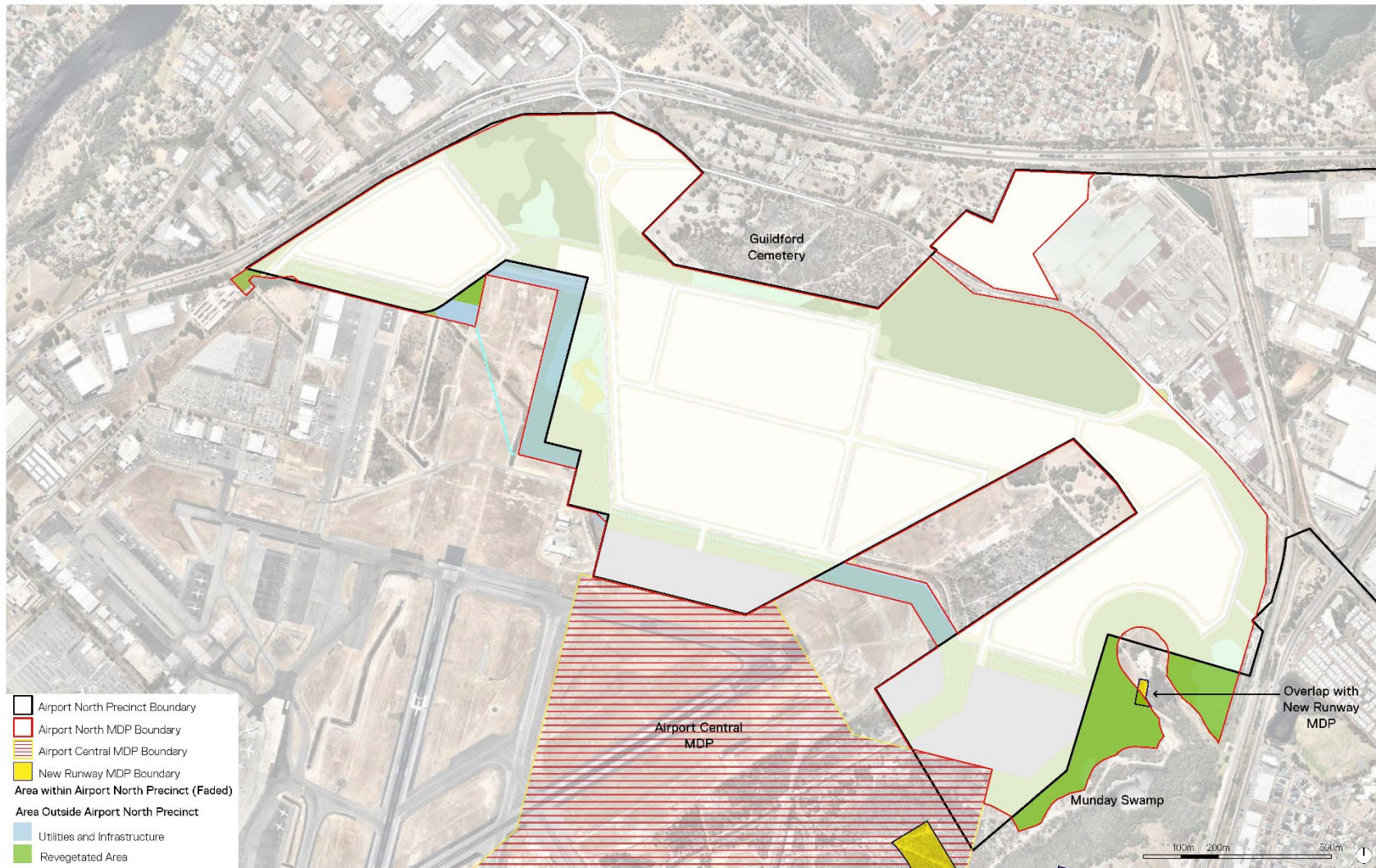


Figure 3-3 Airport North Precinct and MDP boundary overlaps

Source: Grimshaw (2022)

### 3.4 Development of the Airport North Concept

Prior to a discussion on the justification for the approval being sought for Airport North (refer Section 4.0), it is worth considering the design development for the precinct which has taken place over a number of years. It is important to consider this historical perspective to understand how Perth Airport have reached the current concept design and specifically, how Perth Airport have moved towards a design which minimises environmental impacts where possible and one which considers the broader context of property development to make a positive contribution within the limitations posed by site constraints.

#### Design History

On 7 November 2017, Perth Airport submitted an Airport North Exposure Draft MDP to the (then) Commonwealth Department of Infrastructure and Regional Development (now Department of Infrastructure, Transport, Regional Development, Communications and the Arts). The MDP area comprised 243ha and included significant vegetation clearing. The concept plan from 2017 is shown in Figure 3-4, where it can be seen that little consideration for environmental and heritage opportunities were made at the time. The design, however, has evolved significantly since this time with greater consideration of a holistic design as detailed within this section of the MDP.

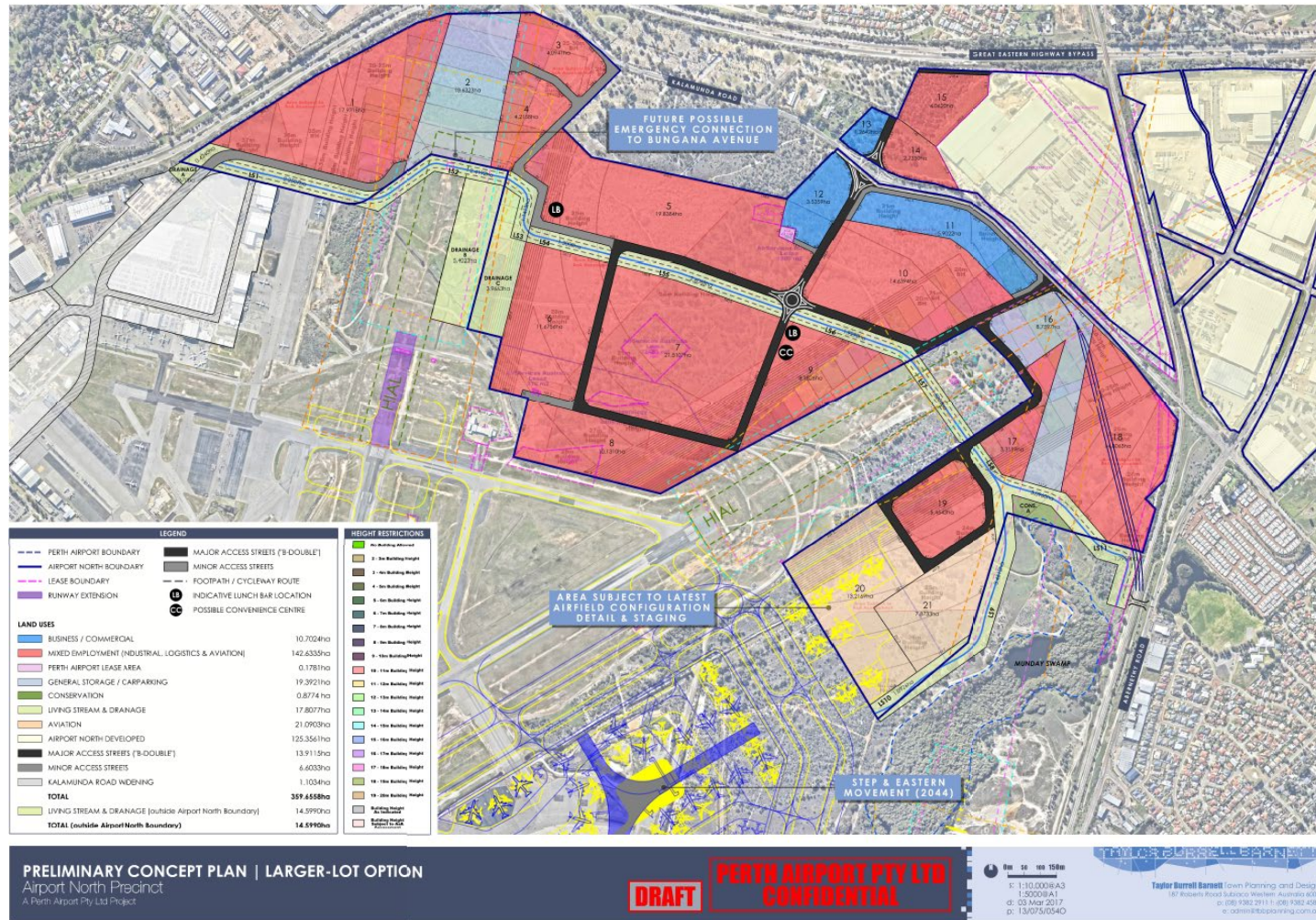


















Figure 3-4 2017 Exposure Draft MDP Concept Development Plan (now superseded – provided for illustrative purposes to demonstrate design development over time)

Source: Taylor Burrell Barnett (2017)

Upon feedback received from the Department of Infrastructure and the (then) Department of the Environment and Energy, Perth Airport made the decision to withdraw the proposed 2017 MDP and reconsider its concept development plan and prepare an alternative proposal (which is the basis of the current MDP).

To enable this alternative proposal, extensive planning and design work was undertaken to develop a new concept development plan. This work was based on an established set of project goals and principles which were focussed on respecting and enhancing the unique cultural and environmental characteristics of the MDP area. The information presented below displays the identified socio-cultural, environmental and economic benefits of high importance, and were the starting point for considering the redesign of the concept development plan.

SOCIOCULTURAL	ENVIRONMENTAL	ECONOMIC	
			Retain, highlight and integrate the unique landscape character of the site and surrounds as an integral part of the master plan to establish a uniquely West Australian sense of place.
			Create a highly connected network of retained, regenerated and enhanced natural environments
			Develop a water sensitive urban design framework which integrates the design of a central ecological corridor with street typologies, pathways, plazas and landscape
			Engage the indigenous community throughout the design framework, incorporating their narrative and consultation feedback throughout the master plan.
			Work with the traditional owners to integrate significant Aboriginal sites and ecological networks into the master plan in a culturally appropriate manner.
			Enable a caring for country approach to the design of the waterways and supporting ecological assets of Munday Swamp via the Poison Gully to Swan River water catchment corridor.
			Maintain access to heritage sites, respect sensitive materials and information.
			Collectively the landscape and open spaces will take a holistic approach to sustainability incorporating biodiversity measures and sustainable strategies to enhance the lives of people and natural systems in an enduring way.

Based on the above, Core Design Principles were established under the three headings of Ecology, Community and Sustainability to create key areas of focus for design development.

Ecology

- Retains, rehabilitates and connects high quality Banksia Woodlands clusters with new native landscape planted links.
- Connects Poison Gully to Swan River via a constructed creek line with enhanced and restored ecological functions and storm event storage capacity (Living Stream)

### Community

- Honours and protects cultural heritage by providing community access to the Living Stream via an interpretative trail which respects the Aboriginal connections to key sites and stories within the area.

### Sustainability

- Set high benchmark for sustainability through the adoption of best practice certification schemes which deliver on the aspirational performance targets for Perth Airport.
- Maximise the integration of sustainable infrastructure to deliver economic benefit and ongoing operational returns

### Design Objectives

- Following the development of above design goals and principles, it was confirmed that the Airport North precinct has unique and widespread ecological and culturally significant areas which required a sensitive and integrated design approach. The following precinct objectives were created as a guide for design and future management of the land to ensure the health and value of the broad ecological systems were preserved, and the economic, social and environmental benefits maximised for those who invest in, occupy and visit the area.

### Fostering a Healthy Ecological Network

- Create a highly connected network of retained, regenerated and enhanced natural environments.
- New and existing connections to and through the masterplan should create a rational interconnected network of human-scaled, green routes that connect the site and landscape into its surrounding context.
- Develop a water sensitive urban design framework which integrates the design of a central ecological corridor with street typologies, pathways, plazas and landscape buffer zones.
- Explore the opportunity for an interpretation point where visitors can learn about the ecological management of the site.
- Considers a sensitive approach to habitat, fauna & dieback free zones.
- Design ecological corridors for stable and rehabilitated ecosystems.

### Respecting Indigenous Heritage

- Engage the Indigenous community throughout the design framework, incorporating their narrative and consultation feedback throughout the masterplan.
- Engage meaningfully with the Noongar people to instil a strong sense of traditional custodianship through all activities and works on site. Invite elders and Noongar people to significant events, hold smoking ceremonies before commencement of new works. Acknowledge Noongar people as traditional custodians and respect ongoing connection to country.
- Work with the traditional owners to integrate significant Aboriginal sites and ecological networks into the masterplan in a culturally appropriate manner.
- Enable a caring for country approach to the design of the waterways and supporting ecological assets of Munday Swamp via the Poison Gully to Swan River water catchment corridor.
- Maintain access to heritage sites, respect sensitive materials and information.
- Explore the opportunity for an interpretation point where visitors can learn about the cultural heritage and the ecological management of the site.

### Embedding Sustainability

- Collectively the landscape and open spaces will adopt a holistic approach to sustainability incorporating biodiversity measures and sustainable strategies to enhance the natural systems.
- Avoid, minimise and mitigate any vegetation impacts.



- Establish minimum performance requirements – for example, Green Star target rating for buildings.
- Provide base building sustainability infrastructure strategies which encourage tenants to develop their own sustainability strategies.
- Develop tenancy sustainability guidelines
- Preserve the groundwater system and implement a policy that does not allow development to contaminate the groundwater system of which the vegetation and ecology depends.
- Regenerate lost and degraded ecology. Re-introduce and reconnect the natural water sources on site, allow for land to be set aside during the restoration process. Provide walking trails for people to witness and admire the strengthening ecology.
- The above objectives informed and led to the creation of design considerations which reflected the intention for future development; these are represented as five 'Key Moves' considered and incorporated into the post-2017 design.

Key Move 1: Retain, rehabilitate, and connect high quality Banksia Woodlands clusters with new native landscape planted green links

- Prioritise retention of dieback free clusters of excellent Banksia Woodlands.
- Implement management measures to dieback infected areas within identified retention areas.
- Implement management measures within moderate to good areas of Banksia Woodlands to enhance to high/excellent quality.
- Retain declared rare flora vegetation cluster.
- Prioritise retention of clusters which facilitate habitat corridors to regional networks, such as Guildford Cemetery and Queens Road Arboretum.
- Connect and enhance green links with native vegetation which supports foraging habitat for Black Cockatoo species

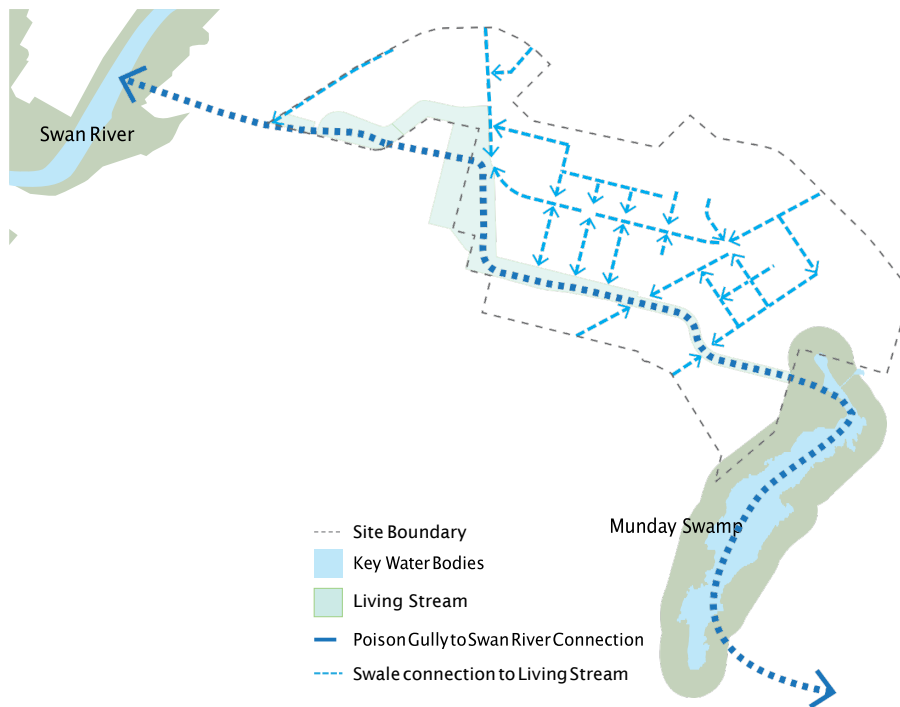


**Figure 3-5 Key Move 1: Banksia Woodlands**

*Source: Grimshaw Architects (2020)*

Key Move 2: Connect Poison Gully to Swan River via a constructed creek with enhanced and restored ecological functions and storm event storage capacity (Living Stream)

- Maximise the asset of the Living Stream through integrating precinct wide water sensitive urban design measures.
- Follow the existing NMD alignment to minimise disturbance to natural ground levels.
- Avoid PFAS contaminated sites where possible.
- Enhance with new species which provide habitat for flora and fauna.
- Ensure species are selected in accordance with the Perth Airport Living Stream Guidelines to minimise chance of bird-strike.



**Figure 3-6 Key Move 2: Poison Gully**

*Source: Grimshaw Architects (2020)*

Key Move 3: Honour and protect cultural heritage by providing community access to the Living Stream via an interpretative trail which respects the Indigenous connections to key sites and stories within the estate

- Create a 100m landscaped buffer zone around Munday Swamp to protect environmental and cultural heritage asset.
- Create an interpretative trail along the Living Stream along the Swan River to Munday Swamp and Poison Gully corridor.
- Consider sites of public and private access in consultation with community.

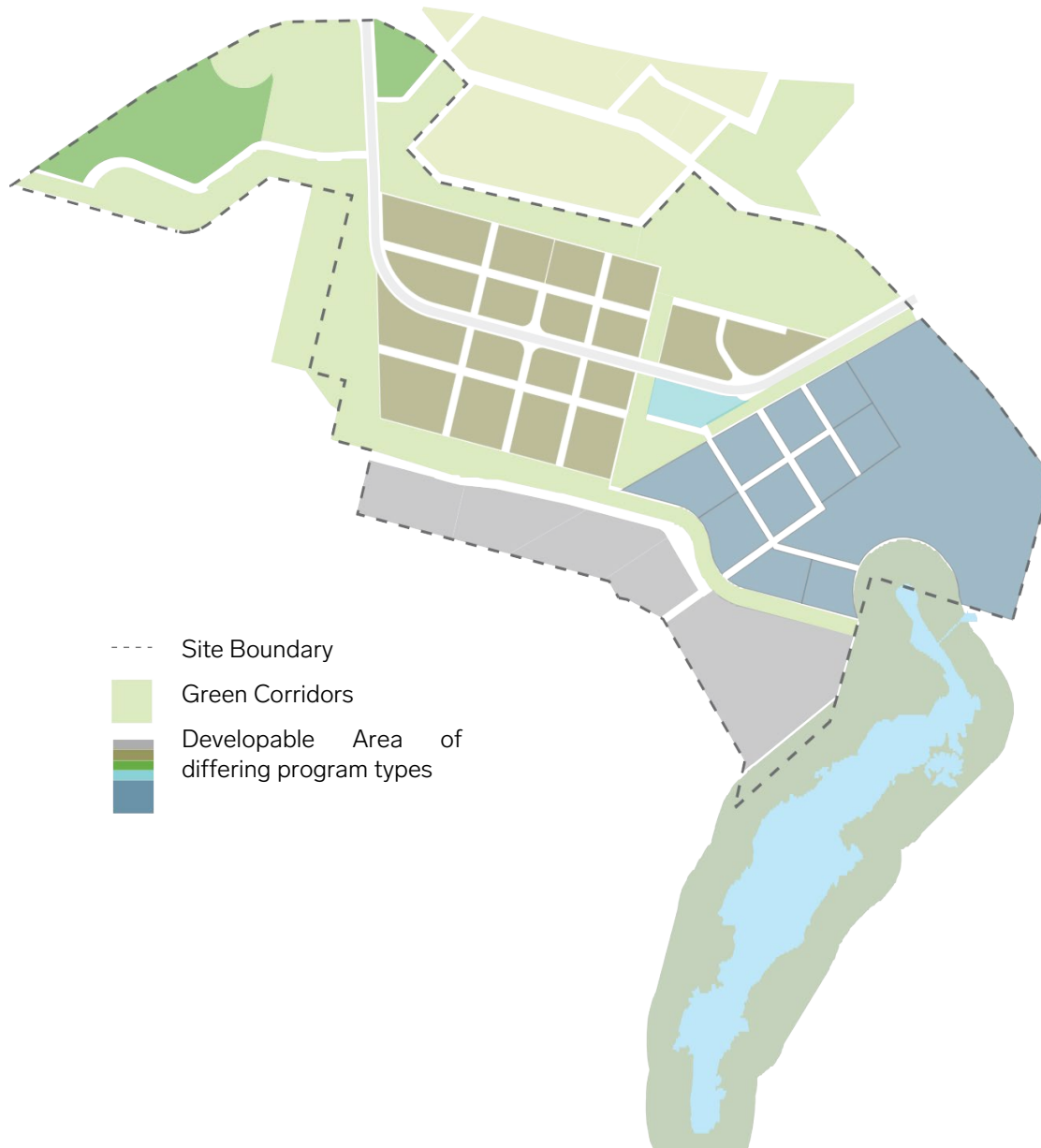


**Figure 3-7 Key Move 3: Connections to Indigenous sites**

*Source: Grimshaw Architects (2020)*

Key Move 4: Set high benchmark for Sustainability through the adoption of best practice certification schemes which deliver on the aspirational performance targets for Perth Airport.

- Several Sustainability rating tools have been investigated and compared, eventually narrowed down to the 3 most suitable scheme, concluding in the selection of Green Star - Communities as the recommended tool.



**Figure 3-8 Key Move 4: Sustainability Tools**

*Source: Grimshaw Architects (2020)*

## Design Outcomes

The current configuration for the Airport North development seeks to maximise the potential for integration of the design with the environment, specifically integration of the newly considered design goals, principles and key moves. Specifically, the proposed Living Stream will reintroduce rich water ecology through the site, using the existing Munday Swamp and offline detention basin, while providing additional floodplain catchment storage capacity that will be required as a result of loss of capacity from developed land and added requirement due to run-off from the development.

The intent is for the Living Stream to follow the existing alignment of the Northern Main Drain, building on existing habitat values. Land forming exercises in the development process will seek to use the existing landscape contours where possible. The alignment of the Living Stream has been informed by known sites of contamination, as such seeking to reduce the potential for development to inadvertently spread contaminants such as PFAS.

The proposed areas of biodiversity retention have been informed by remnant habitat quality. This has resulted in the proposed retention of a large area of Banksia Woodland in the site's north prioritising retention of 'dieback free' excellent condition Banksia woodlands vegetation. This area also provides good quality Black Cockatoo habitat and prioritises areas as part of a connected open space network with links to regional open space corridors. The proposed design seeks to maintain habitat corridors potentially lost to development, providing buffer areas and green strips between development footprints and linking areas of remnant habitat. For example, the design enhances a green link going through existing Guildford cemetery and high value vegetation clusters, allowing future development to capitalize on ecological corridor and Living Stream assets.

Where good quality, die-back free vegetation is to be removed, opportunities to use seeds and other organic material in cleared soils will be deployed in proposed rehabilitation areas. Also, the proposal retains and manages areas of wetland habitat as part of a connected open space network with links to regional open space corridors.

The proposed development is conscious of Aboriginal Cultural Heritage and provides opportunities for messaging and interaction through walking trails and interactive material. Further, the design creates a buffer zone around Munday Swamp to protect cultural heritage and maximizes the potential of the Living Stream as a community asset by acknowledging the cultural heritage and creating an interpretive trail connecting Munday Swamp and Poison Gully through the precinct as close as possible to the Swan River.

Framed within the Airport North redesigned landscape is a series of roads, public realm environments and development sites. The north-south streets have been designed as pedestrian scaled streets with highly planted ecological corridors connecting the Banksia Woodlands to the Living Stream. The retained vegetation and Living Stream are envisaged to accommodate a series of recreational walking trails connecting the site to the surrounding context and include a cultural overlay that connects a series of significant cultural sites that could be developed with Whadjuk Noongar Traditional Owners.

A visual summary of the above design outcomes based on the design principles and key moves is provided in Figure 3-9.

The application of the above design has contributed to the preparation of the current Airport North MDP concept development plan as shown in Figure 3-1. The outcome is a step-change evolution from the 2017 design based on a reduction in the proposed vegetation clearing and a more sensitive design overall which reduces impacts and mitigates potential negative externalities. The application of the design objectives including key moves, core integration of environmental aspects including a vegetation retention philosophy where feasible, application of ecological themes and the concept design strategy has resulted in a greatly improved design from the original 2017 proposal. The positive environmental and social moves since this time have resulted in a future development (subject to approval) of superior quality and the approval is now being sought for this vastly different (and improved) concept. This, when combined with the economic and employment benefits, direct support for government objectives and other benefits presented in the following section provide a solid foundation to the approval being sought under the *Airports Act*.



Figure 3-9 Airport North Concept – Enhanced Ecological Networks

Source: Grimshaw (2020)

## 4 Project Justification

The Airport North MDP is a unique opportunity to provide high quality developable land in a readily accessible location within the eastern corridor of Perth to assist economic growth and generate employment opportunities. These and other benefits are described below and together with additional information presented in Section 8, provide justification for the proposed works.

### 4.1 Economic and Employment Benefits

There is a demonstrated need and demand for businesses which provide goods, services and employment opportunities for the nearby growing resident and employee populations (Pracsys 2020). Development of the MDP area will play a role in activating and satisfying these needs and delivering benefits to attract these groups. Development of the MDP area makes the wider Airport North precinct an attractive place to work and for businesses to locate. As the gateway into Western Australia and a highly accessible area in the Perth metropolitan area, Perth Airport therefore represents an ideal location for all of these benefits to be realised.

Modelling work was undertaken to calculate the employment and economic output benefits likely to be generated from the works associated with this MDP and also the same for likely future development in the Airport North MDP area. This summary is represented in Table 4-1 below. The industry makeup and ultimate development could be different based on industry demand, and it should be noted that the employment opportunities that will occur with developing the land will be realised over time, extending the benefit over many years.

	Direct Employment	Indirect Employment	Total Employment	Direct Output	Indirect Output	Total Output
Site Preparation (this MDP)	372	1,286	1,658	\$178m	\$381m	\$559m
Construction	1,109	5,122	6,231	\$317m	\$1,463m	\$1,780m
Operation	2,810	n/a	2,810	\$961m	n/a	\$961m
Total	4,291	6,408	10,699	\$1,456m	\$1,844m	\$3,299m

**Table 4-1 Employment and Economic Benefits of different development stages of the MDP area**

*Source: Pracsys/Perth Airport (2020)*

Other economic benefits relate to Perth Airport being the developer of the land, and therefore bearing all costs (and risks), which thereby increase the relative benefit for user groups.

### 4.2 Support for Government and Regional Objectives

Part of the justification for the clearing of vegetation and site preparation lies in the location of Perth Airport in close proximity to the Perth CBD and transport networks, including metropolitan public transport links such as the Forrestfield-Airport Link (FAL) project due for completion in 2022. The FAL includes new train stations in the suburb of Redcliffe and High Wycombe and at Airport Central, which are each located a short distance from the Airport North MDP area. This MDP will facilitate the future development of land which will soon be well connected and serviced by public transport for the surrounding and broader catchment. The MDP is therefore considered to support the State and Federal Government's investment in rail through the future provision of employment opportunities within proximity to public transport infrastructure.

The clearing and site preparation works proposed for this MDP also broadly support other Western Australian Government objectives. The State Government 'Diversify WA' economic development framework for the State defines a vision for a strong and diversified economy delivering quality jobs through increased investment across a broad range of industries. The framework provides a blueprint for collaboration between Government, industry and the community and as Western Australia's primary aviation gateway, Perth Airport plays a key role in supporting the creation of more jobs and a strong and diverse economy. The development proposed within this MDP is aligned with and supports the



delivery of the State's vision through the provision of an increase in economic development opportunities promoting employment.

In May 2021 as part of their Infrastructure Investment Program, the Australian Federal Government committed funding of \$85 million towards projects adjoining the Airport North precinct. The State Government has matched this funding (\$85 million) for a total investment commitment of \$170 million towards constructing a grade separated interchange at Great Eastern Highway Bypass and Kalamunda Road and replacing the existing load limited Kalamunda Road Bridge with a new four lane bridge. These projects are currently in design phase and are anticipated to commence construction in 2026. These projects will bring a range of benefits including improved road safety, reduced congestion and improved freight productivity. Further detail, including a map displaying the locations of the projects are shown in Appendix B.

The Greater Connect Alliance, a consortium comprising private design and construction companies and Main Roads WA, have been awarded a contract to develop, design and construct a large scope of works along the Great Eastern Highway Bypass, along the northern boundary of the Airport North Precinct at Perth Airport. The project is estimated for completion by 2024 and key parts of the scope include (refer Appendix C for further details):

- New Lloyd Street Bridge over Helena River,
- Abernethy Road and Great Eastern Highway Bypass Interchange,
- Upgrades to Abernethy Road,
- Roe Highway and Great Eastern Highway Bypass Interchange,
- Principal Shared Path (PSP) for pedestrians and cyclists, and
- Stirling Crescent and Adelaide Street works.

These infrastructure projects will greatly assist the future development and planning for the Airport North precinct, and strongly demonstrate the Government's commitment to facilitating development of the strategically important land in Airport North for employment generating land uses.

The Airport North Road project is estimated to generate 310 jobs (as outlined by the Federal Government in Appendix B). The Greater Alliance Connect project is anticipated to create hundreds of construction jobs and opportunities for local suppliers (see Appendix C). Development of the airport estate, including the subject Airport North MDP, is closely linked with and supports major government infrastructure projects and the significant employment and economic growth projects they bring. The Airport North MDP is the catalyst for the realisation of these benefits.

Further to this, Perth Airport is referenced in the draft Infrastructure Western Australia strategy and along with being recognised as a critical transport hub, directly relates to a number of the strategy's recommendations including the facilitation and coordination of investment in industrial precincts (Recommendation 38). Once again, the Airport North development supports this State Government objective.

A further example is the Perth and Peel @ 3.5 Million Strategy which designates the airport estate as a 'specialised activity centre', with the airport referenced as a key employment node important to the diversification of the economy, such as through contributions to productivity and a facilitator of business clustering and agglomeration.

The proposed development outlined within this MDP is consistent with the intent of the Perth and Peel @ 3.5 Million Plan, as the works will facilitate the future development of consolidated and expanded aviation facilities and employment.

At a more localised level, the Perth Airport is regarded as an existing economic driver for the region (within the Eastern Metropolitan Regional Council Economic Development Strategy), a key employer in the region and a vital contributor to productivity and clustering, which provides an opportunity for business development through filling supply chain gaps. The Airport North development will increase construction (and in the future, operational) employment whilst providing diversity of employment on airport land. This will naturally generate employment opportunities for residents who will benefit from shorter travel times to employment opportunities of a high quality.

### 4.3 Social Benefits

Given the connection between short term employment and economic benefits arising from clearing and site preparation and ultimate benefits following land development, it is worthwhile noting future social advantages that may be generated from clearing and site preparation in the Airport North MDP area.

The current MDP concept involves the development of a minimum 50-metre-wide ecological corridor that incorporates the Living Stream (refer Section 3.2). Significant retention of native vegetation and new landscaping is proposed throughout the MDP area (refer Part B report). The opportunity for an interpretive walking heritage trail connecting the culturally significant wetland of Munday Swamp on the east of the site with Allawah Grove in the west, and then to connect with public infrastructure to the Swan River, provides a chance to present Noongar culture and traditional ecological knowledge for the benefit of cultural diversity and wide-ranging education, subject to ongoing discussions with Traditional Custodians.

These walking trails can be made available for passive recreation, which would provide amenity for employees and visitors to the area. Passive recreation has social benefits by way of positive mental/wellbeing and physical health impacts. Productivity benefits can also be realised through participation in recreation/exercise, as being physically and mentally healthier can have positive outcomes in the workplace.

#### **4.4 Environmental Benefits**

The project scope includes several elements of works which will lead to environmental improvement, such as revegetation of currently degraded vegetation proposed for retention and improvement, the creation of two green corridors (Living Stream to the south and ecological corridor to the north for fauna) and also improved water quality from the Living Stream.

# 5 Site and Design Considerations

## 5.1 Site and Land Description

The project area for the development that is the subject of this MDP is approximately 248.03 hectares in size and is located within the northern portion of the airport estate. The MDP area is largely undeveloped with the exception of relatively small areas of land used for the Bureau of Meteorology facility, Aviation Rescue Fire Fighting (ARFF) training ground and the associated fire station.

The subject land for this MDP abuts the boundaries of the Airfield precinct (secure airfield fence), Kalamunda Road, Abernethy Road, Great Eastern Highway Bypass, Guildford Cemetery and existing Airport West General Aviation land uses.

The Airport North precinct is surrounded by suburbs including South Guildford, Bassendean, Hazelmere and High Wycombe, which consist of a range of industrial, commercial and residential land uses. The existing developed non-aviation lots to the north of Kalamunda Road, which sit outside the MDP boundary, provide complementary land uses to those proposed within the subject Airport North MDP boundary.

The topography of the Airport North MDP area is generally flat and low-lying, and falls from east to west, which mirrors the movement of water across the site. The character of the landscape within the Airport North MDP area is defined by large areas of cleared or degraded vegetation with some existing tracts of Banksia Woodland. Some wetlands exist within the MDP area. Munday Swamp to the east is the most significant wetland, however, this sits outside the MDP boundary.

## 5.2 Design Considerations

The Airport North precinct as defined under the Master Plan 2020 is the least developed site within the airport estate. It has a high percentage of undeveloped land, a large portion of which contains sensitive environmental, cultural and ecological communities. There are a number of existing and potential considerations that have been addressed in the development of the land use strategy, including that airside services need to be accommodated adjacent to the runway, the north-east corner of the precinct interfaces with an existing industrial area, and the south-east cross runway has potential long term aviation restrictions, subject to the possible closure of this runway, which is yet to be determined or approved.

Key design principles for the Airport North MDP proposal have been built on a framework of the following key elements:

- environment and heritage – respects the key cultural and environmental characteristics of the MDP area including the retention of areas of vegetation.
- ecology – ecologically sensitive design, which includes, where possible, the retention of significant vegetation and wetlands, and provision of ecological corridors through the construction of a Living Stream and revegetated and landscaped areas.
- economy – makes a significant contribution to the local, state and federal economy, facilitating sustainable local employment and investment.
- community – creates a unique destination for people to work, provides amenity for the future workforce through a Living Stream and retained vegetation, with opportunities for passive recreation.
- infrastructure – supports development, flexibility, connectivity and future growth with the possibility of a future rail spur (subject to separate MDP where *Airports Act* triggers are met), intermodal facility and/or fuel storage facility.
- market tested – future proofed/flexible and considered within a property market model for financial robustness.
- connection – provides connection to the greater Perth region for business through the provision of land in a central location, reconnects Poison Gully and drainage to the Swan River, and accommodates a new connection for bikes and pedestrians east to west through an improved movement network.
- sustainability – targeting Green Star Communities rating for the precinct and a minimum 4 Star Green Star buildings rating target for all buildings owned by Perth Airport which are to be leased.

Based on the above key design principles, the Airport North MDP concept layout has been designed to achieve a total developable area of approximately 125 hectares from the total MDP area of 248 hectares. Planning work has considered the retention of areas of significant native vegetation and fauna habitat. Substantial allowance has been made for revegetation and inclusions to enhance elements of ecological value and amenity for the future workforce and visitors, which will be implemented where possible using native species. Species selection shall need to have regard to the close proximity of the Airport North MDP area to the main runway, cross runway and Perth's New Runway – further details are provided in Section 11.3.

### 5.3 Perth Airport Development Objectives

Developments at Perth Airport are guided by a set of development objectives which evolved from the company's vision and corporate objectives. Perth Airport's vision is to be *Australia's Western Hub – connecting lives, businesses and communities to a world full of possibilities*. This MDP is consistent with the below listed Perth Airport Development Objectives as outlined in the Master Plan:

1. Develop a consolidated central terminal precinct maximising efficiency for airline partners and passengers and supporting the State and Commonwealth Government's significant investment in road and rail connections within the central precinct.

To achieve this objective, Perth Airport notes that the MDP supports the State and Federal Government's investment in the Forrestfield-Airport Link project through:

- facilitating economic growth and the future provision of employment generating land uses that will be well connected and serviced by public transport infrastructure, namely the Redcliffe Station and High Wycombe Station, which are both located a short distance from the Airport North MDP area.

2. Deliver aviation services that are guided by airline partners, business enterprises and customer needs and expectations, striking a balance between amenity, cost, value and return on investment.

To achieve this objective, Perth Airport will ensure the proposed development of Airport Services zoned land for aviation support land uses will:

- accommodate demand and consider the potential for a convenient airside/landside interface which brings operational and financial benefits to business, and
- ensure those positive amenity outcomes proposed in the wider MDP area are extended to these aviation support parcels of land.

3. Ensure all facilities are safe and secure for all people who use them or live in the vicinity of the airport,

To achieve this objective, Perth Airport will ensure the proposed MDP works are:

- designed, planned and constructed employing a site-specific approach, extending to airport safeguarding measures for users on-estate and in those areas surrounding it.

4. Bring land not required for long-term aviation services into productive use to support economic development and create employment in Western Australia.

To achieve this objective, Perth Airport will ensure the proposed development:

- is consistent with the Master Plan, including ensuring the land is not identified for long-term aviation purposes, and
- contains appropriate land uses that promote the generation of employment and economic development opportunities.

5. Ensure the airport's development and operations respect the strong bond that exists between the Noongar people and the land that comprises the Perth Airport estate.

To achieve this objective, Perth Airport will ensure the proposed development:

- will align with a co-designed Aboriginal Cultural Heritage Management Plan (ACHMP),

- respects Munday Swamp and Allawah Grove including the provision of a development buffer around Munday Swamp,
- honours and protects cultural heritage through an interpretative heritage trail opportunity which respects the connections to key sites and stories within the estate,
- engage the Aboriginal community throughout the future design framework, incorporating their narrative and consultation feedback where possible, and
- work with the Traditional Custodians to integrate significant Aboriginal sites and ecological networks in a culturally appropriate manner.

6. Ensure that the airport's development and operations minimise adverse impact on surrounding communities and the environment

To achieve this objective, Perth Airport will ensure the proposed design of the development:

- is sensitive to the existing natural environment, retains areas of significant native vegetation and wetlands, and provides opportunities for enhancement and revegetation where possible,
- manages construction traffic appropriately to minimise impact on the surrounding road network,
- reuses topsoil in non-development areas where practical, and
- retains, rehabilitates and connects high quality Banksia Woodlands clusters with new and revegetated green links.

7. Ensure that Perth Airport achieves an adequate and sustained return on investment to support continuing investment in the facilities.

To achieve this objective, the decisions Perth Airport will make regarding future development of the MDP area will take into account:

- the suitability of land uses and development mechanisms which can generate a return over the long term, and
- the flexibility in the design of future developments to cater for adaptable reuse, which makes sustainable use of land and materials where possible.

8. Ensure the ongoing integrity of critical infrastructure that may be impacted by airport development

To achieve this objective, the proposed development will be designed by Perth Airport to operate in a way that

- all future land uses developed will pose no material adverse impact to aviation operations or safety controls.

## 5.4 Future of the Cross Runway (06/24)

Given the proximity of the Airport North MDP area in relation to the cross runway, the property development constraints associated with the use of the cross runway, and its planned extension, have been considered. The development works associated with this MDP will not have an impact on the operation of the cross runway. All development will be subject to the relevant aviation safeguarding assessments at the appropriate times, more detail on this can be found in Section 11.

Decisions on the use of the cross runway, and its planned extension, are yet to be made by Perth Airport and is subject to Commonwealth approval and further consultation with the Civil Aviation Safety Authority, Airservices Australia and airline partners. The concept of operations developed for Perth's New Runway showed that the continued use of the cross runway once a new parallel runway is in operation would reduce the efficiency and overall runway capacity at Perth Airport. As such, the continued operation of the cross runway will be assessed by Perth Airport with the first priority of these assessments being airfield operational requirements. If the cross runway is ultimately approved by the Commonwealth for decommission, there may be development opportunities for the south-eastern lots within the Airport North MDP area.

## 5.5 Aviation Rescue Fire Fighting Station and Training Ground

The ARFF station is located directly adjacent, but outside, the Airport North MDP boundary. The fire training ground is located within the MDP footprint and potential development area. An airside access gate (Gate 05), providing access to the fire training ground is also within the MDP footprint.

Airside/landside access to the existing ARFF station, which is currently provided from Gate 14, will be maintained however alternative arrangements and routes may be required. Should changes to access be required, PAPL will engage with Airservices Australia to understand access requirements and detail any changes likely for development of the precinct.

The existing fire training ground may need to be relocated to facilitate development of the Airport North precinct. Perth Airport will engage with Airservices Australia to find a suitable alternative location should relocation be required.

## 6 Legislative Framework

The proposal contained within this MDP is primarily guided by Commonwealth regulation, which is required as Perth Airport is operated on Commonwealth land through a leasehold agreement. The Airport North MDP is consistent with the applicable legislation and the associated Perth Airport Master Plan 2020, approved Land Use Plan and executed lease, as follows.

### 6.1 Legislation Overview

The key Commonwealth legislation applicable to planning, land use and development on the Perth Airport estate are:

- Aboriginal and Torres Strait Islander Heritage Protection Act 1984,
- Airports Act 1996,
- Airports Regulations 1997,
- Airports (Building Control) Regulations 1996,
- Airports (Control of On-Airport Activities) Regulations 1997,
- Airports (Protection of Airspace) Regulations 1996,
- Airports (Environment Protection) Regulations 1997,
- Airspace Act 2007,
- Aviation Transport Security Act 2004,
- Civil Aviation Act 1988,
- Civil Aviation Regulations 1988,
- Civil Aviation Safety Regulations 1998,
- Environment Protection and Biodiversity Conservation Act 1999,
- Environment Protection and Biodiversity Conservation Regulations 2000, and
- Native Title Act 1993.

Although Perth Airport is located on Commonwealth land, State legislation may apply under the provisions of the *Commonwealth Places (Application of Laws) Act 1970*. This is typically for activities where Commonwealth legislation does not exist, such as for bushfire and Aboriginal heritage management. Where State and Commonwealth legislation conflict, Commonwealth legislation takes precedence. The State legislation relevant to planning and development on the airport estate are:

- Aboriginal Cultural Heritage Act 2021
- Aboriginal Heritage Act 1972,
- Bush Fires Act 1954,
- Dampier to Bunbury Pipeline Act 1997, and
- Heritage Act 2018

### 6.2 Airports Act 1996

Perth Airport is located on land owned by the Commonwealth of Australia and although the day to-day management of Perth Airport was privatised in 1997, the Commonwealth Government continues to play an important regulatory and oversight role through the *Airports Act* and associated regulations. This statutory regime ensures that the public interest is protected.

The *Airports Act* is the principal statute regulating the ownership, management and operation of leased Commonwealth airports. Part 5 and Part 6 of the Act prescribe controls over land use planning, environment management and development at airports, including the requirements of a Final Airport Master Plan and Major Development Plans.

### 6.3 Perth Airport Master Plan 2020

Under Section 70 (1) of the Act, each airport is required to produce a Final Master Plan. The Final Master Plan is one that has been submitted to the Minister as a Draft Master Plan and approved. Prior to submitting a Draft Master Plan, the airport is required to take into account public comments and subsequent developments at the airport must be consistent with the Final Master Plan.

Section 70 of the Act states that the purposes of a Final Master Plan for an airport are to:

- Establish the strategic direction for efficient and economic development at the airport over the planning period of the plan,
- Provide for the development of additional uses of the airport site,
- Indicate to the public the intended uses of the airport site,
- Reduce potential conflicts between uses of the airport site, and to ensure that the uses of the airport site are compatible with the areas surrounding the airport,
- Ensure that all operations at the airport are undertaken in accordance with relevant environmental legislation and standards,
- Establish a framework for assessing compliance at the airport with relevant environmental legislation and standards, and
- Promote the continual improvement of environmental management at the airport.

The Perth Airport Master Plan 2020 was approved by the (then) Deputy Prime Minister and Minister for Infrastructure, Transport and Regional Development in March 2020 and is available on the Perth Airport website ([www.perthairport.com.au](http://www.perthairport.com.au)).

Section 91(1A)(b) of the Act requires that an MDP is consistent with the Final Master Plan for the airport.

As outlined in Section 3 of Master Plan 2020, the wider Airport North precinct comprises 363 hectares and the broad development intention is to deliver an integrated mix of industrial, logistics and related commercial land uses that maximise the precinct's strategic location and road and rail infrastructure. The vision for Airport North is to create a centre for global-reaching businesses and leading-edge smart technology industries.

Section 4 of the Master Plan 2020 details the aviation development plan in the Airport North precinct. With landside access from Kalamunda Road, the precinct will provide a suitable location for the development of aviation support facilities that require access to the General Aviation Area. This section also introduces the potential to develop an intermodal rail terminal, through the construction of a rail spur off the existing Midland freight rail line to service development of the precinct.

Section 5 of Master Plan 2020 details the non-aviation development plan for the Airport North precinct which focusses on land uses that will leverage off the high levels of accessibility the precinct provides, including the opportunity created from a possible rail spur and intermodal facility. Combined with opportunities for airside access to be created for air freight facilitation, the development of an intermodal facility allows for the consideration of new and more diverse land uses which do not currently exist on the estate. Consistent with Section 4, Section 5 notes a potential future fuel storage facility may be developed in the Airport North precinct to serve a dual purpose; firstly, to provide additional fuel security for the airport, and also to promote the development of fuel dependant and logistics land uses. These developments would be subject to separate MDPs where *Airports Act* triggers are met.

Section 6 of Master Plan 2020 provides an outline of the current Ground Transport Plan for Perth Airport, including the intent for ground transport infrastructure and networks to support the planned consolidation of all Regular Passenger Transport (RPT) services to the Airport Central precinct. Kalamunda Road and Abernethy Road are the two main roads servicing the Airport North precinct. Planning is being undertaken, including consultation with Main Roads WA, to provide access points to facilitate future development in Airport North. The land uses that will likely be accommodated in Airport North are centred around those which rely on heavy vehicle or freight rail movements. New road connections and internal roads will be designed to accommodate these vehicles. Section 6 also outlines the potential rail spur off the existing Midland Freight Rail line to directly deliver freight and fuel into a new intermodal facility in Airport North.

Section 8 details Services on the estate and explains there are two open drainage channels than run through the airport estate: with one being the NMD. The NMD is an open channel, and its alignment passes through the Airport North precinct. Other services such as water supply, sewerage, power, irrigation, gas and communications are outlined.



Strategies for all major services will be utilised to support the site preparation and future development of land uses in Airport North.

Section 9 of Master Plan 2020 outlines the Environment Strategy, which builds on the Environmental and Sustainability Framework, and includes policies, strategies and management systems and frameworks relating to environment, sustainability and heritage. Part B of this MDP addresses how environmental and heritage considerations form part of the works associated with this MDP and should be read in conjunction with Part A MDP (this document).

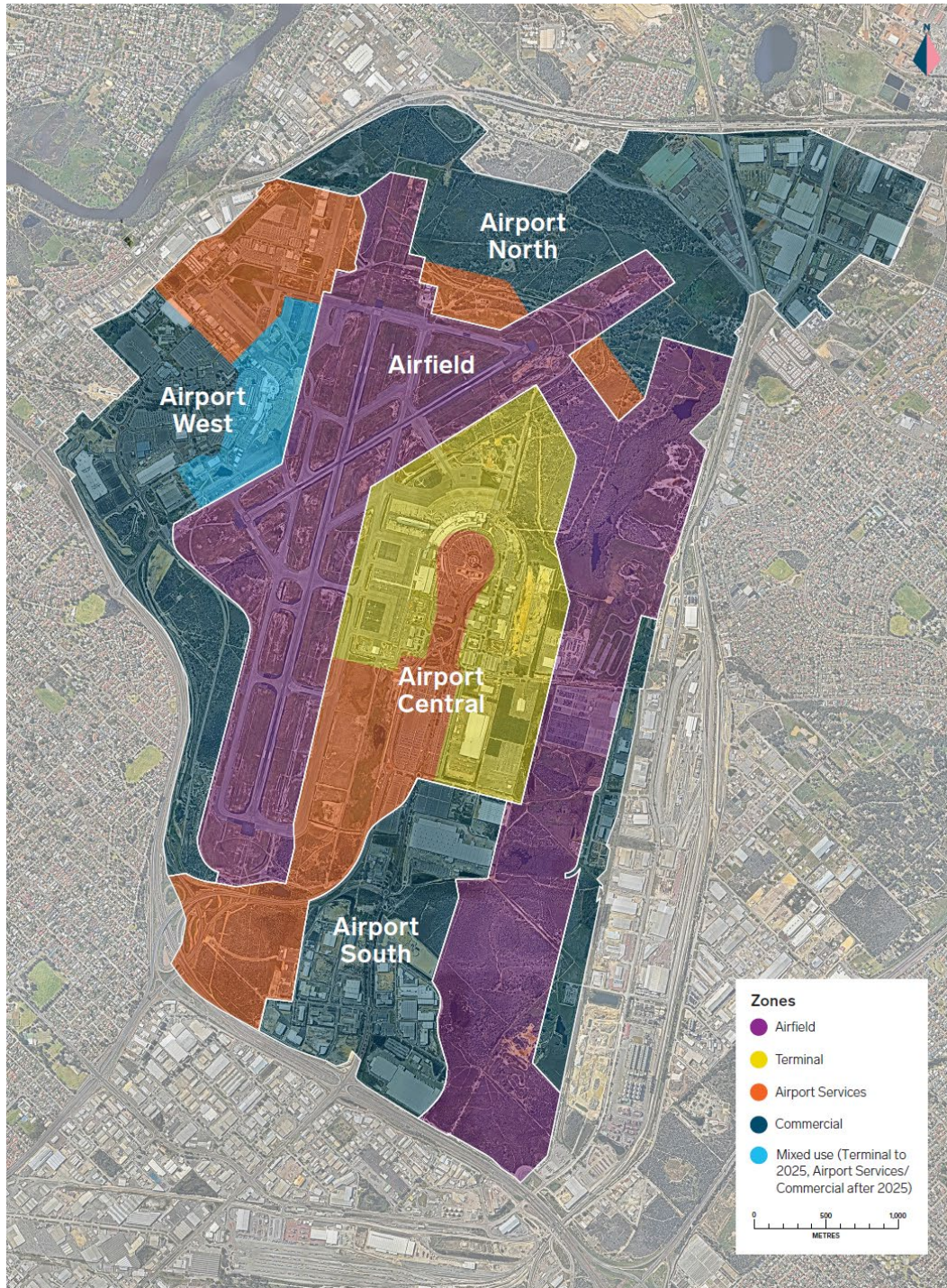
By proposing to prepare land in Airport North for development of the future intended land use types, the current proposal remains entirely consistent with the intent of Perth Airport Master Plan 2020.

### **Perth Airport Land Use Plan**

Section 3 of the Perth Airport Master Plan 2020 outlines the Perth Airport Land Use Plan. Perth Airport is comprised of 2,105 hectares of land, and under the Land Use Plan, is divided into five land use precincts, akin to suburbs:

- Airport Central precinct,
- Airport West precinct,
- Airport North precinct,
- Airport South precinct, and
- Airfield precinct.

Within the five precincts, there are five different zonings which dictate the desired land uses for each of the defined precincts, in a similar way Local Planning Schemes manage land use planning for Local Government areas. The zones overlayed across the airport estate comprise of 'Airfield', 'Commercial', 'Airport Services', 'Mixed Use' and 'Terminal', and are shown in Figure 6-1. Each zone has an applicable Land Use Table within Master Plan 2020, detailing the discretionary land uses which can be approved within the zone.



**Figure 6-1 Perth Airport Precinct and Zones**

*Source: Perth Airport Master Plan 2020*

The MDP area is located within the Airport North precinct and falls within the ‘Commercial’ and ‘Airport Services’ zones. As outlined in Section 3.3, small parts of the MDP area also extend into the Airfield precinct. Objectives of the Commercial zone are included in Table 6-1 with the Airport Services zone objectives outlined in Table 6-2. The MDP is consistent with all listed objectives, and in particular will directly satisfy the intention to enable an integrated mix of land uses to provide employment generating development opportunities, while delivering a high amenity and environmentally and culturally sensitive area that provides a suitable aviation and off-estate interface.

OBJECTIVES

- Facilitate land use and development in line with the characteristics of a 'Specialised Activity Centre' and encourage a mix of uses and intense development around the Redcliffe train station
- Deliver a diversity of appropriate land uses to make best use of land, facilities and services and to provide a suitable interface between the airport boundary and the surrounding areas
- Create through good urban design an attractive, walkable, safe and balanced built form and natural environment
- To provide a focus for industry, business and employment generating development opportunities
- To promote environmentally sustainable design and development outcomes

Discretionary uses

Abattoir <sup>^</sup>	Exhibition centre	Place of worship
Agriculture – intensive <sup>^</sup>	Fast food/take away	Power plant <sup>^</sup>
Animal establishment	Fuel depot <sup>^</sup>	Reception centre
Art gallery	Funeral parlour	Recreation – public
Auction mart	Garden centre	Recreation – private
Automotive charging station	Health centre	Resource recovery centre <sup>^</sup>
Aviation support facilities	Health studio (gym)	Restaurant/cafe
Brewery	Hospital	Service station
Bulky goods/large format retail	Hostel	Serviced apartments
Car park	Hotel	Shop
Child-care premises	Industry – light <sup>^</sup>	Shopping centre
Cinema/theatre	Industry – service	Small bar
Club premises	Liquor store (large)	Tavern
Community purpose	Logistics centre	Telecommunications
Consulting rooms	Market	Tourist development
Convenience store	Medical centre	Trade display
Corrective institution <sup>^</sup>	Motel	Transport depot <sup>^</sup>
Dog kennels	Motor vehicle repair <sup>^</sup>	Utilities and infrastructure
Education establishment (training)	Motor vehicle wash	Veterinary centre
Education establishment (university)	Motor vehicle, boat, or caravan sales/hire	Warehouse <sup>^</sup>
Equipment hires	Office	Waste storage facility <sup>^</sup>

Note: <sup>^</sup>land uses to be minimised within the immediate pedestrian environment surrounding Redcliffe Train Station

**Table 6-1 Commercial Zone, Permissible Land Use Table**

Source: Perth Airport Master Plan 2020

OBJECTIVES

- To provide a range of aviation support activities, services and facilities for use by airline partners, passengers, government agencies, freight businesses and transport providers
- To provide integrated car parking, hotel accommodation, commercial and retail uses that support the airport
- To provide an attractive and functional gateway to the airport
- To provide freight and logistics land use opportunities in appropriate locations
- To provide ground transport facilities and services for efficient access to the airport and terminals

Discretionary uses

Animal establishment	General aviation and support facilities	Office
Automotive charging station	Medical centre	Passenger terminal <sup>^</sup>
Aviation activity	Health centre	Service station
Aviation support facilities	Hostel	Serviced apartments
Car park	Hotel	Shop
Child-care premises	Industry	Small bar
Consulting rooms	Motel	Telecommunications
Convenience store	Motor vehicle repair	Tourist development
Corrective institution	Motor vehicle, boat, or caravan sales/hire	Transport depot
Education establishment (training)	Motor vehicle wash	Utilities and infrastructure
Fast food/take away	Navigational aids	Warehouse
Fuel depot		

**Table 6-2 Airport Services Zone, Permissible Land Use Table**

*Source: Perth Airport Master Plan 2020*

Note: <sup>^</sup> No new development or extension to this land use permitted within the Airport West Precinct

*The land zoned for Airport Services within the Airport North MDP area is proposed to be developed with land uses consistent with Table 6-2 and the zone objectives.*

## 6.4 Major Development Plan

Section 89(1)(m) of the *Airports Act* requires Perth Airport to seek approval, via an MDP, for a development of a kind that is likely to have significant environmental or ecological impacts and/or where the estimated value is greater than \$25 million.

The required contents of an MDP are defined in Section 91 of the *Airports Act* and include:

- The objectives of the proposed development,
- An assessment of the extent to which the future needs of civil aviation users of the airport and other users of the airport will be met by the development,
- A detailed outline of the proposed development,
- An assessment as to whether the proposed development is consistent with the airport’s lease from the Commonwealth,

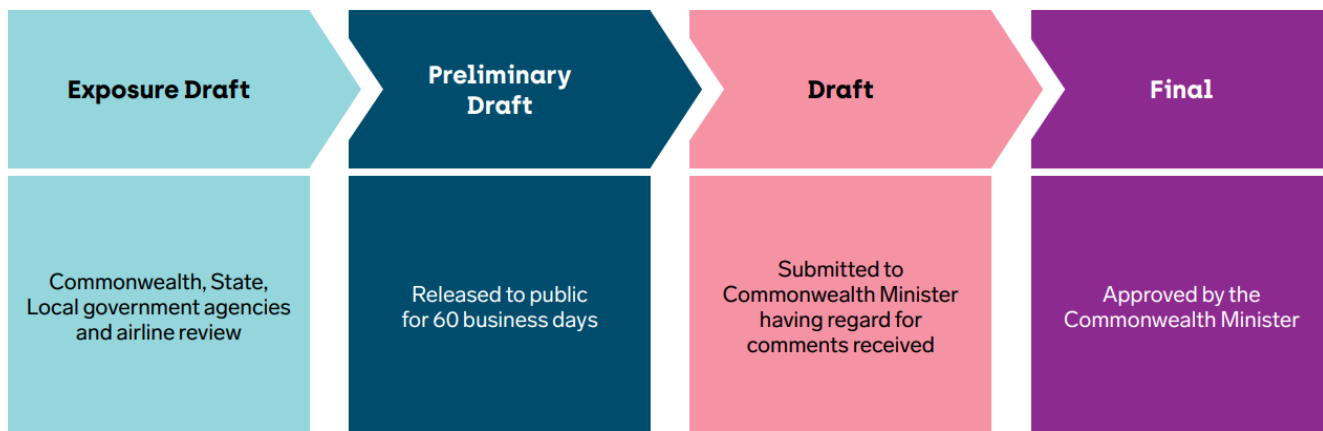
- An assessment as to whether the proposed development is consistent with the Final Master Plan,
- An assessment as to whether the proposed development could affect flight paths and noise exposure levels at the airport and the extent of relevant consultation with airline partners and Local Government,
- An assessment of the effect the proposed development will have on traffic flows at the airport and surrounding the airport, employment levels at the airport and the local and regional economy and community, including how the proposed development fits within the local planning schemes for commercial and retail developments in the adjacent area, and
- An assessment of environmental impacts and the plans for dealing with any such impacts.

Appendix D provides detail of the specific contents of this MDP with correlation to the *Airports Act* requirements for MDPs.

Section 92 of the *Airports Act* requires that prior to the MDP being published for public comment, the proposed document must be drawn to the attention of:

- the Minister of the State in which the airport is situated, with responsibility for town planning or use of land,
- the authority of that State with responsibility for town planning or use of land, and
- each Local Government body with responsibility for an area surrounding the airport.

Section 92 also outlines the requirement for the MDP to be made available for public comment prior to submission to the Minister for consideration. The process for assessment and approval of this MDP is presented in Figure 6-2 below.



**Figure 6-2 Major Development Plan Process**

Source: Perth Airport

## 6.5 Perth Airport Lease

Perth Airport Pty Ltd is the lessee of the 214 lots of land which makes up the airport estate. The lease with the Commonwealth of Australia was executed on 1 July 1997. The term of the lease is for a period of 50 years, with an option of a further 49 years. An essential term of the lease is that the lessee must comply with all legislation relating to the airport site, including the *Airports Act*.

Section 91(1)(ca) of the *Airports Act* requires that a major development is consistent with the airport lease. The proposed development as outlined in this MDP is consistent with the Perth Airport lease. The obligations of Perth Airport to maintain the environment of the airport lease have been addressed in the Part B report, which considers surface water, ground water, soil, subsoils, flora and vegetation, fauna wetlands and Aboriginal heritage.

The airport lease also requires that any development is in accordance with an approved Master Plan.

### Pre-Existing Interests

There are several pre-existing interests that provide for access and use of land within the estate which existed when the operation and management of Perth Airport was transferred from the Commonwealth on 2 July 1997.

In accordance with Section 91(3) of the *Airports Act* and Section 5.04 of the Airports Regulations 1997, Perth Airport is required to address any obligations from pre-existing interests in the airport. No pre-existing interests, as outlined in Perth Airport Master Plan 2020, exist within the Airport North MDP area.

### Pre-Existing Sub-Leases

The proposed development will impact five sub-leases, and their associated tenancies within the Airport North MDP area as shown in Figure 6-3. One sub-lease has a termination notice period of one month.

The proposed development will require Perth Airport to enter into discussions with the sub-lease holders particularly where the tenants are necessary for the ongoing operation of the airfield; these include Airservices Australia and the Bureau of Meteorology. The existing sub-leases will have no impact on the scope of this MDP with lease expiry, and if applicable, any relocation requirements able to be considered within detailed development implementation and staging plans.

Given the notice periods in place for these leases, it is envisaged they will have no material impact on the proposed development detailed within this MDP.



Figure 6-3 Existing Tenants in Airport North MDP Area

LOCATION KEY	
1	Tenant: Airservices Expiry: Hold over
2	Tenant: Airservices Expiry: October 2029
3	Tenant: Airservices Expiry: June 2034
4	Tenant: BOM Expiry: December 2026
5	Tenant: Airservices Expiry: January 2030

# 7 Consistency with State and Local Planning

As discussed in Section 6, Perth Airport is governed by Commonwealth legislation and State and Local planning laws do not apply to the Perth Airport lease area. However, when planning for development on the estate, Perth Airport reviews and considers all relevant State and Local Planning documents to minimise conflict. The following information analyses the alignment between this MDP and these planning documents.

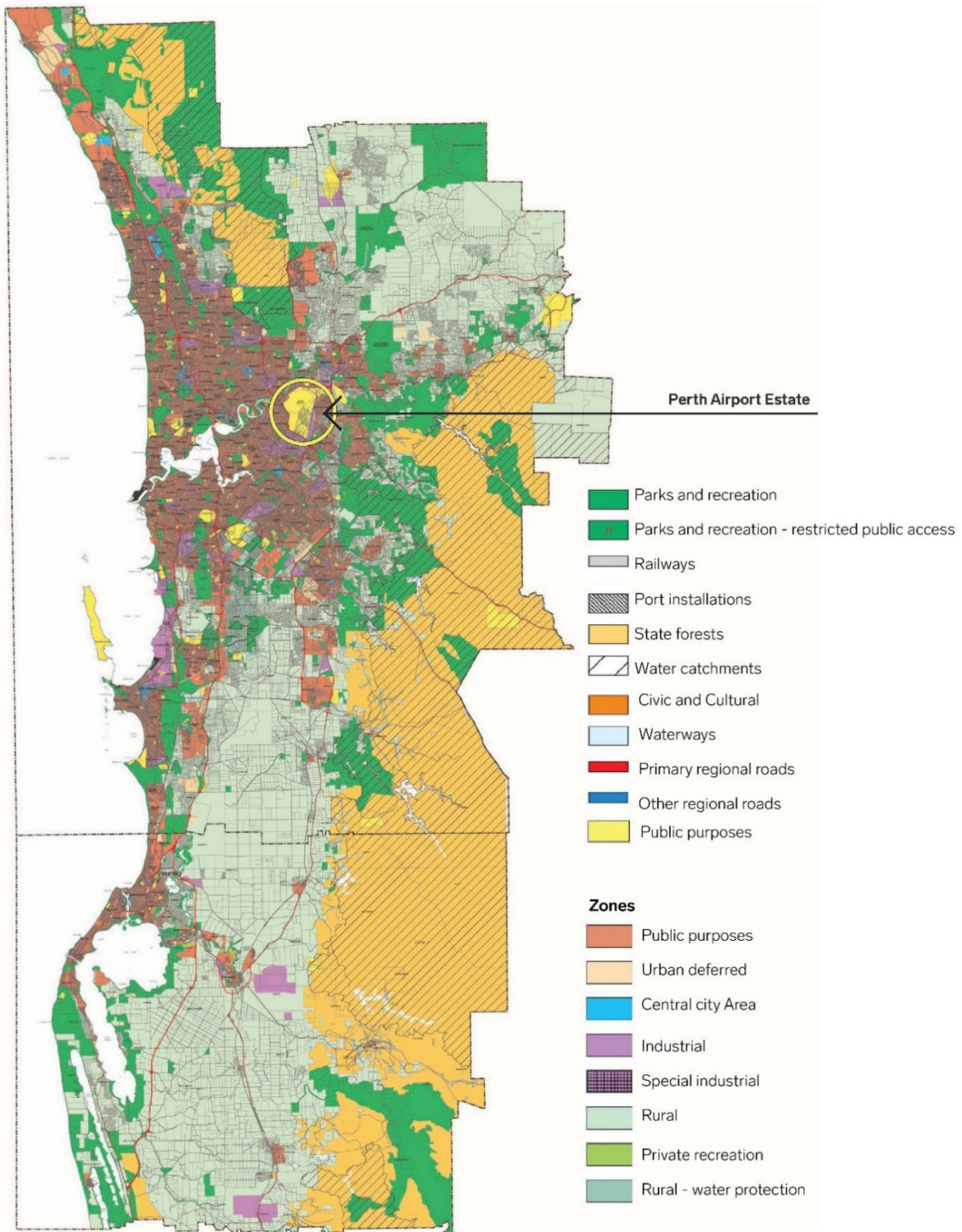
## 7.1 State Planning Policy Overview

State Government planning is controlled by the Western Australian Planning Commission (WAPC), which administers the State Planning Framework and the Metropolitan Region Scheme (MRS) and disseminates policies and strategies on a wide range of planning matters. The planning policies and strategies developed by the WAPC set the strategic context in which the MRS operates.

### Metropolitan Region Scheme

The Metropolitan Region Scheme (MRS) is prepared and administered by the WAPC as the principal planning scheme for the Perth metropolitan region. The MRS considers generalised broad-scale land use zones and sets out regional reservations. Most of the airport estate is reserved for 'Public Purposes: Commonwealth Government' and a small portion (18.2 hectares) is zoned 'Urban' under the MRS. The land zoned 'Urban' is an anomaly, and Perth Airport has worked with the WAPC to pursue rezoning to be consistent with the remainder of the estate. The rezoning request was approved by the WAPC at its meeting held 24 November 2021 and has been forwarded to the Environmental Protection Authority for advice. Subject to the completion of a formal public comment period, the MRS map will be updated (anticipated late 2022). Notwithstanding the above, the portion of the estate zoned as Urban under the MRS does not fall within the Airport North MDP area and has no impact on this MDP scope. The MRS, and the Perth Airport estate in the context of the MRS are shown in Figure 7-1 and Figure 7-2.





**Figure 7-1 Metropolitan Region Scheme Map**

*Source: Western Australian Planning Commission*

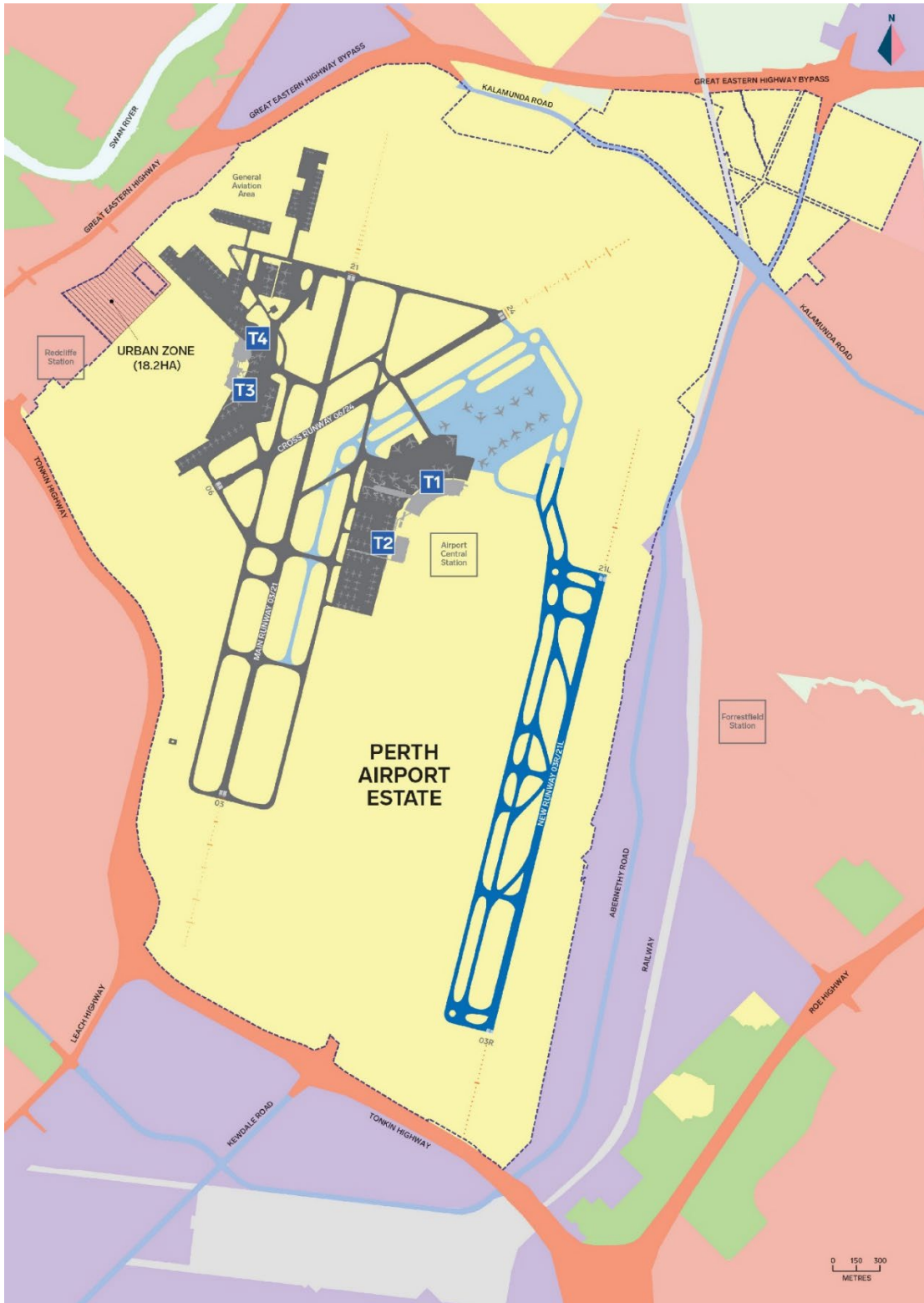


Figure 7-2 Perth Airport in the Context of the MRS

Source: Western Australian Planning Commission

### WA Aviation Strategy 2020

The first State Aviation Strategy (WA Aviation Strategy 2020) was published in February 2015. This Strategy was prepared by the State Department of Transport in conjunction with key State Government agencies covering economic development, planning, tourism, Local Government and regional development.

The State Aviation Strategy is aimed at “supporting the economic and social development of the State through the provision of safe, affordable, efficient and effective aviation services and infrastructure” and “provides a sound framework for policy setting, future planning and investment in Western Australia’s international and domestic air services and airport infrastructure.” It proposes actions that the State will take to work in partnership with airports, regional shire councils, airline partners, and the resources and energy sectors to ensure adequate services continue to meet the needs of Western Australia.

The proposed development is consistent with the intent of the State Aviation Strategy, in that it provides land for aviation support land uses, and it supports economic development while not jeopardising existing or planned aviation infrastructure or services.

The draft Aviation Strategy was released for public consultation on 10 February 2020. Consultation has subsequently been put on hold due to the impact of the Covid-19 pandemic on Western Australian’s air travel patterns.

### State Planning Strategy 2050

The State Planning Strategy 2050, prepared by the WAPC and endorsed by the Western Australian State Cabinet, was launched in June 2014. The strategy provides the strategic guidance for land-use planning within Western Australia until 2050, as well as the vision and principles for coordinated and sustainable development. The State Planning Strategy does not provide a specific land use plan for the Perth metropolitan region; however, it does identify the need to provide efficient transport routes and hubs. It recognises Perth Airport as a key element in the movement network of the State, and as the international gateway to Perth and Western Australia, and focal point for the growth of the tourism industry.

It recognises the importance of providing strategically identified infill development sites that are connected to suitable transport infrastructure and appropriately integrated with surrounding compatible land uses to ensure long term sustainability. Further, a strategic goal of the Strategy as it relates to diversification of the Airport, is achieving ‘Global competitiveness – building on and strengthening the state’s diverse economic base.’

The proposed development is consistent with and supports the intent of the State Planning Strategy 2050, given the project will provide serviced and accessible land to support the State’s economic development.

### Perth and Peel @ 3.5 Million

In March 2018, the State Government released the Perth and Peel @ 3.5 million suite of land use planning and infrastructure frameworks to accommodate 3.5 million people by 2050. The Central, North-East, North-West and South Metropolitan Peel sub-regional planning frameworks provide guidance on future land to accommodate new homes and jobs and to make the best use of existing and proposed infrastructure.

Perth Airport is referenced in the Central, North-East, North-West and South Metropolitan Sub-regional Planning Frameworks, which designate the estate as a ‘specialised activity centre’ in line with other State policy. Perth Airport is also referenced as a key employment node that is important to the diversification of the economy, particularly within the central sub region where Perth Airport is the focus of employment and a major contributor to productivity, and a facilitator of business clustering and agglomeration.

Jobs growth at Perth Airport as outlined in this MDP is predicated in part, on the development of non-aviation land uses. Perth Airport has the capacity to provide land for this development of non-aviation land uses in a central location. The opportunity for employees to live in close proximity to their place of employment is considered to be a future benefit which will grow over time, as more jobs become available and more residents move to nearby areas.

Perth and Peel @ 3.5 Million includes the long-term planning for transport infrastructure for the Perth metropolitan region. The Plan provides a framework to develop an efficient transport network to cater for Perth’s population as it approaches 3.5 million and beyond. A key initiative of delivering a connected city is long-term transport planning that provides a network of strategic roads and public transport linkages

More specifically, the Central Sub-Regional Planning Framework notes that by 2050, the volume of freight movement on the regional road and rail networks will increase substantially. A number of enhancements are proposed including duplicating the single-track sections at the Forrestfield and Kewdale intermodal precincts.

The proposed development is consistent with the intent of the Perth and Peel @ 3.5 Million plan, in providing capacity to support the ongoing growth of Perth's population, in addition to contributing to employment generating land uses which leverage off the regional road network.

### State Planning Policy 2.8 – Bushland Policy for the Perth Metropolitan Region

State Planning Policy 2.8 Bushland Policy for the Perth Metropolitan Region (2010) aims to provide a policy and implementation framework that ensures bushland protection and management issues in the Perth Metropolitan Region are appropriately addressed and integrated with broader land use planning and decision making. The policy identifies measures that apply to proposals or decisions on State land that are likely to have an adverse impact on regionally significant bushland within a Bush Forever site, as identified in the policy and the MRS.

SPP 2.8 identifies Bush Forever sites on the Perth Airport estate. Due to Commonwealth ownership (see Section 2.2) and the hierarchy of legislation, State policies do not directly relate to the activities on the estate. Perth Airport's estate-wide, and MDP specific approach to retention of significant flora is outlined in Part B of this MDP.

MRS Amendment 1334/57 was approved by the Minister for Transport; Planning on 28 February 2020. The purpose of the amendment was to amend various Bush Forever boundaries in Perth in relation to rationalisations of zones and reservations to match cadastral boundaries and generally to ensure the MRS is kept up to date. The Amendment included the removal of a number of areas classified within the Perth Airport estate, however these were outside of the Airport North MDP boundary. There are remaining Bush Forever sites located within the MDP area, which will be considered as per the current approach outlined above using Commonwealth legislative requirements.

### State Planning Policy 4.2 – Activity Centres for Perth and Peel

The State Planning Policy 4.2 Activity Centres for Perth and Peel considers the planning and development of 'activity centres' throughout the Perth and Peel metropolitan region. It details the distribution, function, broad land use and urban design criteria of activity centres, and the coordination of land use and infrastructure planning.

Other purposes of the Policy include:

- the integration of activity centres with public transport,
- ensuring activity centres contain a range of activities to promote community benefits through infrastructure,
- efficiency and economic benefits of business clusters, and
- lower transport energy use and associated carbon emissions.

The Policy also reflects WAPC's intention to encourage and consolidate residential and commercial development in activity centres, so they contribute to a balanced network. Under the policy, Perth Airport is identified as a 'Specialised Activity Centre.' Specialised centres focus on regionally significant economic or institutional activities that generate many work and visitor trips, which therefore require a high level of transport accessibility. Specialised centres provide opportunities for the development of complementary activities, particularly knowledge-based businesses. A range of land uses that complement the primary function of these centres will be encouraged on a scale that will not detract from other centres in the hierarchy. It is noted that Perth and Jandakot airports are subject to Commonwealth legislation and are, therefore, outside the State and local government jurisdictions.

Future developments within the Airport North MDP area will likely consist of an integrated mix of land uses which will focus on industrial and logistics, however, may contain retail. Perth Airport examines such development in the context of the broader area while also acknowledging existing levels of retail development on the estate. Perth Airport ensures that proposals for retail development are considered in accordance with SPP 4.2. The majority of the land will likely be developed with land uses which will be logistics focussed and leverage off the regional transport network, thereby allowing Perth Airport to realise and maximise its designation under this State policy.

Further, the MDP includes the site preparation of 20.28 hectares of land zoned 'Airport Services' under Perth Airport Master Plan 2020. The development of this land for complementary aviation support land uses is entirely consistent with the intent of the Specialised Activity Centre – Aviation and Logistics Services designation under SPP 4.2.

The WAPC has reviewed the current policy and sought comments on a new draft State Planning Policy 4.2 – Activity Centres. Consultation closed in early 2021 and the draft policy is now with the Minister for Transport; Planning; Ports for endorsement.

### State Planning Policy 5.1 – Land Use Planning in the Vicinity of Perth Airport

State Planning Policy 5.1 – Land Use Planning in the Vicinity of Perth Airport (SPP 5.1) applies to land in proximity to Perth Airport which is, or may in the future, be affected by aircraft noise, and states:

“Perth Airport is fundamental to the continued development of the Perth metropolitan region and the State as a whole. Investment in airport infrastructure and the economic opportunities associated with the operation of the airport are now recognised as important and perhaps critical elements in the prosperity of a city such as Perth. Accordingly, the airport and its ongoing development need to be recognised in the planning of the region, and its operation protected, as far as practicable, from development that could potentially prejudice its performance. One of the main issues to be addressed in the planning of areas in the vicinity of the airport is aircraft noise, which is the focus of this policy.”

The role of this policy is to provide guidance to Local Governments in the vicinity of Perth Airport and the WAPC when considering developments on land adjacent to, or affected by, airport operations. In practice, the policy requires relevant Local Government authorities to give due consideration to Perth Airport’s Australian Noise Exposure Forecast (ANEF) contours in local planning decision making.

The intent of this is to ensure that policy measures (such as zoning, residential density, subdivisions, development, notification on titles, and advice) are appropriately applied to applications for development, to avoid potential land-use planning conflicts, which may subsequently impact and restrict airport operations.

The MDP area includes land which is subject to the 20-25, 25-30, 30-35 and 35+ contours of the existing Airservices Australia endorsed 2020 ANEF. All future land uses considered for the area will comply with the intent of SPP 5.1, noting a range of land uses are permitted under the policy in certain contours subject to noise mitigation controls. The works associated with this MDP do not include development of land uses, and therefore there is no assessment required under this policy. However future development of the MDP area must take into account the criteria contained within this policy. Perth Airport will ensure that the ultimate development of land within the Airport North MDP area that is subject to ANEF contours will consider policy objectives and comply with the building site acceptability table contained within SPP 5.1. Given the nature of the land uses conceptually proposed are Light Industrial/Other Industrial/Commercial, it is expected compliance will be readily achieved.

### State Planning Policy 5.4 – Road and Rail Noise

The State Planning Policy 5.4 Road and Rail Noise (2019) identifies the primary freight roads and rail routes within the Perth metropolitan area, with the objective to protect these key corridors from future urban expansion. The policy recognises the hierarchy and jurisdiction of freight road routes into and around Perth Airport and delineates both Tonkin Highway and Great Eastern Highway as Strategic Freight and/or Major Traffic Routes and Kewdale Road and a portion of Horrie Miller Drive as Other Significant Freight/Traffic Routes. Noting the strategic location Perth Airport has in relation to these freight routes, the implementation of SPP 5.4 requirements in planning decisions made off the estate carry importance for the future of the airport. Perth Airport will take into account the provisions of this policy when considering future development of noise sensitive land uses within the MDP area.

### Diversify WA

In July 2019 the State Government released ‘Diversify WA’, an economic development framework for the State. This document sets out a vision for a strong and diversified economy delivering quality jobs through increased investment across a broad range of industries and provides a blueprint for collaboration between Government, industry and the community. As Western Australia’s primary aviation gateway, Perth Airport plays a key role in supporting the creation of jobs and a strong and diversified economy, such as through the tourism, primary industries and resources sectors. The proposed Airport North MDP is consistent with and supports the delivery of the vision outlined in Diversify WA through providing increased economic development opportunities to promote employment within identified sectors.

### Westport: Port and Environs Strategy

The Westport: Port and Environs Strategy and Perth Airport’s potential future development of an intermodal facility within the Airport North MDP area builds on the aim of the strategy to plan for the development of additional container port facilities to service future needs of a growing population. Transporting goods via rail will remove additional freight vehicles from the metropolitan road network, thereby assisting to address traffic congestion. An intermodal facility will improve and strengthen the link between the North-East subregion, the Kewdale/Forrestfield freight hub and the wider

strategic port infrastructure located in the South-West sector, by supporting and facilitating the movement of freight by road and rail. This supports the State Government's rail target mode share for freight movements in WA.

The works proposed in the current MDP scope are the first step required to enable future development consistent with the Westport Strategy. Further consultation with Government stakeholders and subsequent Commonwealth approvals will likely be required should an intermodal facility be considered within the Airport North MDP area.

### Economic and Employment Lands Strategy

The Economic and Employment Lands Strategy: Non-Heavy Industrial (EELS) is designed to facilitate a more proactive approach to industrial land use planning and provides an ongoing understanding of the supply of industrial land to cater for anticipated economic growth in Western Australia. The key elements and purpose of the strategy are to:

- Identify the areas, type and locations of general and light industrial land required over the next 20 years,
- Review the existing industrial land development program and identify possible expansion opportunities,
- Identify and evaluate the suitability of locations for new general and light industrial estates, and
- Develop a strategy to facilitate the ongoing supply of general and light industrial land and assist in the restoration of the Western Australian Government's long term general and light industrial land bank.

The identification and release of industrial land within the Greater Perth area is therefore aligned with and relevant to the EELS. Of particular note is that the Economic and Employment Lands Monitor has specifically identified that there is an insufficient supply of industrial land available to service the needs of the Central Sub-region population. The strategy noted the popularity of the airport for land uses requiring large lots (such as Food Distribution, Logistics and mining companies) due to its central location, good infrastructure and transport connections. The strategy acknowledges the airport estate's potential for a range of land uses other than aviation and its importance as an employment hub.

Action 22 of the strategy is outlined as “Expedite the delivery of additional industrial land in the eastern sub-region in close proximity to Perth Airport and the Kewdale rail freight terminal.”

As such, the development of industrial land in the Airport North precinct is wholly consistent with the aims of the Economic and Employment Lands Strategy.

### State Infrastructure Strategy (July 2022)

Infrastructure Western Australia’s approved strategy titled ‘Foundations for a Stronger Tomorrow’ addresses the State’s infrastructure needs and priorities over the next 20 years and makes recommendations about how to address these. The core themes of the draft Strategy include demand management, infrastructure planning and optimising the existing asset base.

Perth Airport is referenced in the strategy and recognised as a critical transport hub. Of relevance to the Airport North MDP is Recommendation 28 (Facilitate and coordinate investment in industrial and technological precincts). The Airport North MDP will facilitate the release of additional industrial land (and land which can support smart technology land uses) in the Perth metropolitan area. Future development in the Airport North MDP area will consolidate employment generating development around existing and future infrastructure (roads, rail, aviation) resulting in improved amenity for local users and the wider public.

## 7.2 Local Planning Overview

Local Governments are responsible for planning of their local communities by ensuring appropriate planning controls exist for land use and development. Local planning schemes and strategies are prepared by each individual Local Government area to:

- establish how land is to be used and developed,
- classify and determine the acceptability of various land uses, and
- establish the provisions for the coordination of infrastructure and development within the Local Government area.

The Perth Airport estate sits within three Local Government areas, divided between the City of Belmont, the City of Kalamunda and the City of Swan, as demonstrated in Figure 7-3.

The local planning schemes of Local Government Authorities must be consistent with the MRS and State planning policies.

A small portion of the proposed development is located within the City of Kalamunda, with the majority being located within the City of Swan local government area, generally bounded by Great Eastern Highway Bypass, Kalamunda Road, Abernethy Road and the airfield. The area is also adjacent to the suburbs of South Guildford, Hazelmere and High Wycombe. A discussion of the Local Planning Schemes for each of the three surrounding Local Government areas are detailed below to demonstrate broad consistency between this MDP and these schemes.

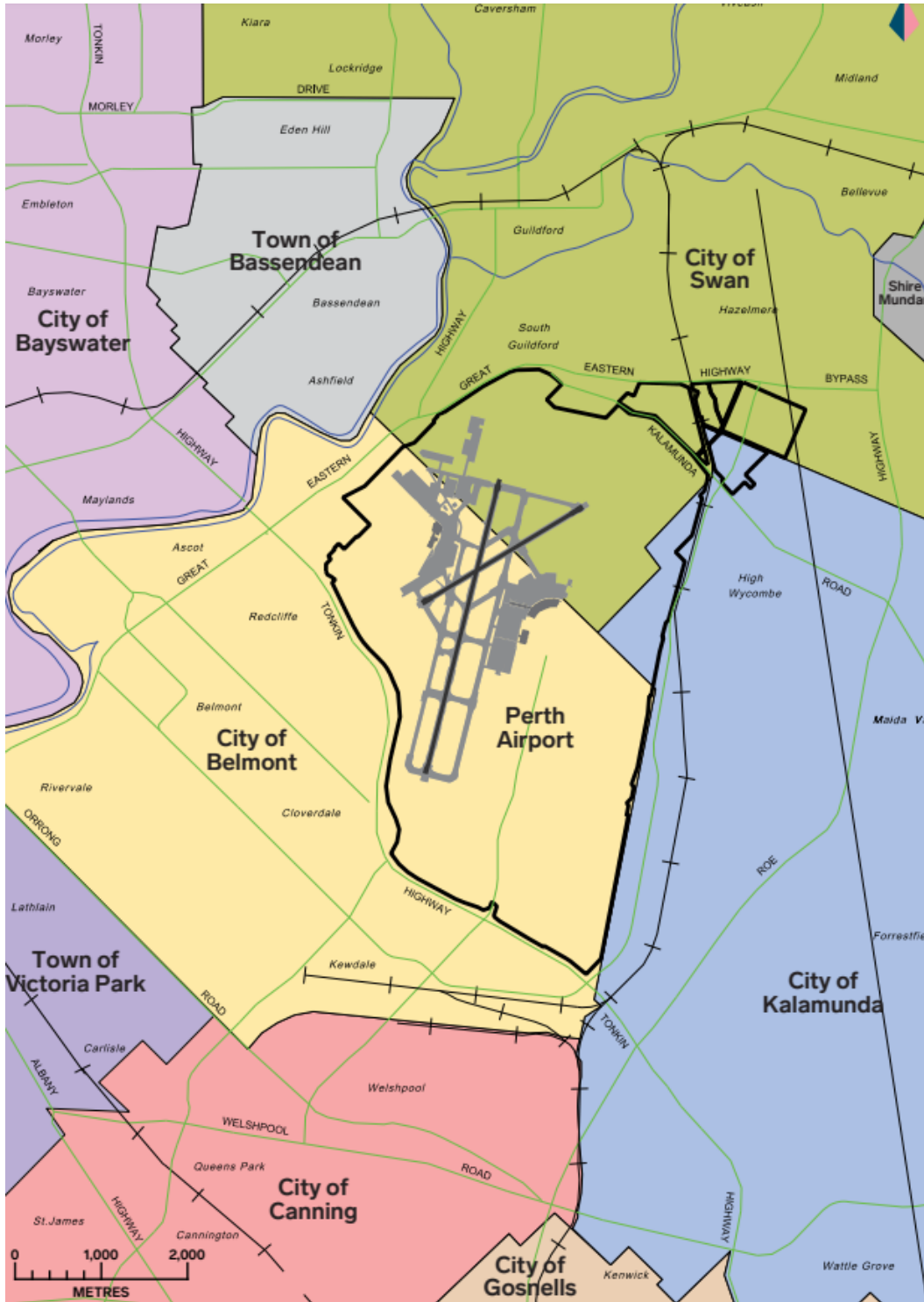


Figure 7-3 Location of Perth Airport – Local Government Areas

Source: Perth Airport



### City of Swan Local Planning Scheme No. 17

The City of Swan Local Planning Scheme No. 17 (LPS 17) provides for 'Industrial', 'Residential' and 'Rural' areas adjacent to the Airport North MDP area in the localities of South Guildford and Hazelmere. The majority of the City of Swan is a mix of 'Residential', 'Commercial' and 'Industrial' and 'Rural' zoned land, serviced by the Midland City Centre, which is classified as a 'Strategic Metropolitan Centre' under the provisions of SPP 4.2.

The intent to develop the Airport North MDP area largely for Industrial land uses is complementary to the existing and future development of a similar type of land use within the City of Swan suburb of Hazelmere, which adjoins the Airport North precinct.

The City of Swan has the largest direct interface with the Airport North MDP area. The development of the Airport North MDP area will provide for amenity and employment opportunities for residents in South Guildford and in the wider City of Swan authority, particularly in those higher density areas around Midland Town Centre.

Key objectives of the City of Swan's Economic Development Strategy 2017-2022 are to attract innovation and entrepreneurship and facilitate new investment. Development of land for industrial uses within the Airport North MDP area will support the development of clusters (refer to Section 8.1) which are characteristically known to foster and develop entrepreneurial ability.

In this regard, the proposed development is consistent with the City of Swan LPS No. 17.

### City of Kalamunda Local Planning Scheme No. 3

The City of Kalamunda Local Planning Scheme No. 3 (LPS 3) provides for 'Industrial' and 'Residential' areas adjacent to the airport estate. The majority of the City of Kalamunda is zoned for residential, rural-residential and rural development, and reserved for State forest and parks and recreation. The City of Kalamunda has a small direct interface with the Airport North MDP area, on the eastern boundary.

The Local Government area is serviced by the Kalamunda City Centre and Forrestfield District Centre, both classified as 'District Centres' under the provisions of SPP 4.2 - Activity Centres for Perth and Peel.

Forrestfield North is a strategic area within the City of Kalamunda. The Forrestfield North Residential Precinct Local Structure Plan was approved by the WAPC in July 2020. The Structure Plan outlines how the 123-hectare area will accommodate the approximate 8,600 estimated population in medium to high density residential housing. While it is acknowledged these additional residents would move into the area over time as development occurs, being located only 1.7km away from the Airport North MDP area, offers a convenient location for employment.

The City of Kalamunda Economic Development Strategy 2018 considers how the City can best allocate its resources to support economic development, which include facilitating investment and jobs. The key local sectors were linked to the local resources sector, with transport, postal and warehousing, mining and construction. The strategy notes a significant portion of industrial land has been allocated for development around the High Wycombe train station. Providing industrial land in the Airport North precinct, which is in close proximity to this area in High Wycombe will assist to fill this gap and support jobs for nearby residents. Given the existence of business clusters, the Airport North MDP will likely support high quality employment opportunities. Further, projected increases in freight (and the land uses that may be provided in the Airport North MDP area) may in turn provide opportunities for businesses in the City of Kalamunda, thereby also increasing employment and economic development opportunities.

The Activity Centres Strategy was adopted by Council in March 2021. This Strategy will inform the future planning and land use decisions that will influence economic growth and employment opportunities in the City of Kalamunda.

The City's Industrial Development Strategy (2018) identifies industrial development within the City's spatial bounds or in close proximity to its resident workforce as strategically advantageous. The Strategy emphasises that the City's existing industrial areas are well situated for further industrial development, given their proximity to major freight routes, established industrial estates and Perth Airport. The strategy also recognises that, despite a relatively low level of regional employment self-sufficiency, a high proportion of the City's resident workforce are currently employed at Perth Airport's industrial and commercial estates. Therefore, industrial development in the Airport North precinct reflects an opportunity for improving North-East Sub-region employment self-sufficiency by delivering high-quality employment close to the City's resident population, in an area already providing significant employment to its resident workforce. The proposed future development of the Airport North MDP area is therefore in close alignment with the objectives of the City of Kalamunda's Industrial Development Strategy.

In this regard, the proposed development is consistent with the City of Kalamunda LPS No. 3.

#### City of Belmont Local Planning Scheme No. 15

The City of Belmont Local Planning Scheme No. 15 (LPS 15) provides for 'Industrial' and 'Residential' zones adjacent to the airport estate, including the major Kewdale industrial area and the residential suburbs of Cloverdale and Redcliffe. The City of Belmont is serviced by Belmont Forum, which is classified as a 'Secondary Centre' under the provisions of State Planning Policy 4.2 – Activity Centres for Perth and Peel (SPP 4.2).

Local Planning Policy No. 14 Development Area 6 Vision (LPP 14) was adopted by Council on the 23 February 2016, following the finalisation of the Forrestfield-Airport Link route, which will incorporate a train station in Redcliffe (to be named Redcliffe Station). The location of the proposed Redcliffe Station is also within Development Area 6, which will leverage off the area's location to the future Redcliffe train station to create opportunities for medium to high density residential infill and commercial development in line with a Transit Oriented Development. With an estimated 5,000 residents to be accommodated over time within DA6, developing the Airport North MDP will provide goods, services, amenity and employment opportunities for the current and future residential population in this important strategic area located approximately 1km to the south-west of the MDP area. In this regard, the proposed development is consistent with the City of Belmont LPS No. 15.

The City of Belmont Corporate Business Plan (2016-2020) assists in translating the City's priorities from the Strategic Community Plan into actions. It highlights the importance that Perth Airport has in assisting residents as a transport hub, facilitating key freight industries located within the City of Belmont and developing and supporting new businesses within the Perth Airport precincts. The development of the Airport North MDP area for industrial/logistics land uses will align with these strategic actions by unlocking the airport for further development and providing high-quality employment opportunities to City residents.

#### Eastern Metropolitan Regional Council Economic Development Strategy 2017-2021

The Eastern Metropolitan Regional Council (EMRC) represents six member Councils located in Perth's Eastern Region and encompasses the land upon which Perth Airport is situated. The eastern metropolitan region is considered the gateway to greater Perth. The region's competitive advantages include air services, freight and logistics expertise and development potential. Perth Airport is regarded as an existing economic driver for the region, a key employer in the region and a vital contributor to productivity and clustering, which provides an opportunity for business development through filling supply chain gaps.

The EMRC economic development strategy has identified four priority areas. Priority areas relevant to the provision of new industrial land in the Airport North precinct include the following:

- **Priority Area 1: Business and Industry Growth**

The Strategy defines achievement of a high value of economic output through a focus on promoting increased resilience, creativity and innovation as a goal for the region's businesses and industry. The provision of industrial land in the Airport North precinct will be a key facilitator of this objective. The development of specialised industry clusters and the ability for aeronautical or logistical clusters to expand in nearby areas will support innovation, creativity and resilience within the EMRC region.

- **Priority Area 2: Education and Employment Opportunities**

The Strategy identifies a goal to develop a skilled and confident workforce aligned with current and future job opportunities within the region. In order to achieve this, the Strategy indicates the importance of maximising the employment of local people by local businesses and providing enhanced job opportunities for Eastern Region residents. The construction and subsequent operation of innovative industrial activity in the Airport North MDP area will generate these enhanced employment opportunities for local residents, who will also benefit from shorter travel times to high quality employment opportunities.

### **7.3 Conclusion**

The proposed development is consistent with the long-term State and Local Planning objectives for Western Australia, and for the localities adjacent the airport estate.

## 8 Socio-Economic Assessment

Perth Airport conducted an assessment which analysed the benefits of preparing the land identified within the MDP area for development per the scope of this MDP. The benefits of potential future land development were also analysed for information to enable full community and Stakeholder consideration. The assessment considered not only the economic and social benefits which could be created, but also whether there is an established or anticipated future need, or demand for the area to be developed with non-aviation land uses. The assessment focussed on the scenario of the Airport North MDP area being solely developed for industrial purposes.

### 8.1 Need and Demand Analysis

New businesses, and the staff they employ, need to be located in an area that meets their requirements and Perth Airport has inherent advantages that other locations cannot offer, including:

#### Central location

- Industrial land uses are typically trip generators i.e., vehicles are needed to move goods into and out of the estate, while also servicing the general public. The Airport North MDP area is a central location for an industrial estate and has the ability to save kilometres travelled and travel time for employees and freight movements. More discussion on this point is included in Section 8.3.

#### Transport accessibility (includes transport options by road, rail and air)

- Convenient proximity to existing major arterial roads (Tonkin Highway, Great Eastern Highway and Great Eastern Highway Bypass, Roe Highway, Abernethy Road) and planned road upgrade projects (e.g., Lloyd Street Bridge, grade separation of Roe Highway and Great Eastern Highway Bypass),
- The Forrestfield-Airport Link, comprising the Redcliffe and High Wycombe train stations which are due for completion in mid-2022 will provide an alternate transport mode for users within the surrounding area, and
- Unmatched proximity and access to air freight options.

#### Infrastructure duplicity

- The scope of this MDP is to produce 'development ready' lots fully serviced and accessible by a custom designed internal road network. With much of the infrastructure existing following implementation of clearing and site preparation works, there will be no need for establishing businesses to provide additional infrastructure. This infrastructure will de-risk private investment in the area as these inputs will quickly unlock land for strategic employment and represents an efficient way to build upon the job stock within the Western Australian economy without needing to duplicate costly infrastructure such as roads and railways.

#### Building on existing industry clusters in the developed north-eastern area of the Airport North precinct

- Continuing to build on the clustering of businesses can bring agglomeration benefits of improved innovation, entrepreneurship, productivity and economic growth.

#### Scarcity of new industrial land in the region

- There is a lack of industrial land in the region and Perth Airport is one of the last places which can locally support industrial land

#### Flexibility of development sizes and options

- The ability to customise the design and construction of lots, developments and infrastructure to suit new business and industry. Given the likely specific infrastructure demand such as that found and created at Perth Airport, it is expected this will also translate into demand for business to establish in this area.

Further to the above, demand for industrial and employment generating land uses will be extensively driven by population growth. Conservative population forecasts as outlined in WA Tomorrow Report No.11 by the Department of Planning, Lands and Heritage indicates consistent growth over the next 10 years. Population projections in the central sub-region to 2031 range in excess of 160,000 additional people. As outlined in Section 7.2, a proportion of these additional residents are being planned to be strategically accommodated in areas surrounding the airport estate.

Strong growth in demand for industrial land therefore needs to be accommodated and the development of the Airport North MDP area will contribute to the fulfilment of this demand keeping in mind that clearing and site preparation is the first step in realising potential benefits.

As outlined in Section 2.1, this MDP is for clearing and site preparation works only. However, an indicative future industrial land use (which includes light industrial, industrial, infrastructure, intermodal and aviation support) was modelled for the purposes of demonstrating benefits of potential future development. This information is provided in the following section.

## 8.2 Economic and Employment Benefits

Perth Airport is a major centre of employment in the Perth metropolitan region and employs (directly and indirectly) 9,950 aviation-related full-time employees who contribute \$2.285 billion to the gross regional product (GRP). The number of non-aviation related full time employees is estimated at 6,770 and they contribute approximately \$1.274 billion to the GRP. Perth Airport’s direct contribution of economic activity to the Western Australian economy is about 1.4 per cent of gross state product (GSP).

A concept plan has been produced which shows lot and road layouts for the area (Figure 3-1). The clearing and land preparation of the Airport North MDP area is estimated to cost \$178 million. This direct expenditure is expected to induce a further \$381 million of indirect output in the wider economy, reflecting a total site preparation phase output of \$559 million, as shown in Table 8-1.

	Direct	Indirect	Total
Site Preparation Economic Output	\$178m	\$381m	\$559m

**Table 8-1 Economic Output from Airport North Site Preparation MDP**

*Source: Pracsys (2020)*

This economic output will be injected into the local economy and create direct and indirect jobs for the duration of the works. Specific modelling was undertaken to calculate employment impacts from the works associated with this MDP. As displayed in Table 8-2, direct and indirect employment anticipated to be created from the clearing and site preparation works defined within this MDP is 1,658 full-time equivalents.

	Direct	Indirect	Total
Site Preparation Employment (Full-time equivalents)	372	1,286	1,658

**Table 8-2 Employment Figures from Airport North Site Preparation MDP**

*Source: Pracsys (2020)*

Although future land use development is not part of the approval sought for this MDP, a future land use mix was selected (based on the best current planning) for the purpose of providing stakeholders with information on the future economic and employment benefits anticipated to arise from the ultimate development of the Airport North MDP area for the purpose of providing development context. This land use is designated as ‘Industrial’ however would likely contain a combination of uses including light industrial and general industrial, logistics, infrastructure (intermodal), commercial and aviation support services. It is noted that the ultimate land use mix will be determined based on commercial conditions and demand. The land use mix was not used to rigidly prescribe what may be built in future, but rather to illustrate the magnitude of employment and output effects based on a current conceptual mix of possible land uses which may be developed under the applicable zoning.

The economic impact of the estimated land use construction phase is illustrated in Table 8-3 and was calculated based on an estimated construction cost of \$317 million, derived from benchmarking to comparable industrial centres in Greater Perth. The \$317 million of direct land use construction expenditure is estimated to induce a further \$1,463 million in indirect output, combining for an estimated \$1.8 billion in total output. The large multiplying effect on total output is indicative of the significant amount of industry-to-industry inputs within the construction sector, such as through the purchasing of materials that are manufactured within Australia.

	Direct	Indirect	Total
Construction phase of land use developments – Economic Output	\$317m	\$1,463m	\$1,780m

**Table 8-3 Economic Output from Ultimate Construction of Land Uses in the Airport North MDP area**

*Source: Pracsys (2020)*

The employment impact of the land use construction process in the Airport North MDP area has been estimated by applying industry-specific output-per-employee values to the direct construction expenditure of \$317 million. It has been estimated that the land use construction phase will directly generate 1,109 FTE employment opportunities. A further 5,122 FTE jobs are expected to be stimulated in the wider economy through the land use construction process, yielding a total additional employment effect of approximately 6,231 jobs, as shown in the breakdown in Table 8-4.

	Direct	Indirect	Total
Construction phase of land use developments – Employment (Full-time equivalents)	1,109	5,122	6,231

**Table 8-4 Employment Figures from Ultimate Construction of Land Uses in the Airport North MDP area**

*Source: Pracsys (2020)*

It should be noted that a high-level estimate of infrastructure construction costs was used to demonstrate construction impacts. These costs are estimates only and are subject to change based on the nature of built form which is ultimately constructed. Due to this degree of uncertainty, conservative estimates of the nature of industrial built form were used based on benchmarking to existing industrial centres in Perth. The prospective Airport North MDP is likely to exhibit a higher quality of built form and a more specialised function than existing general industrial areas in Perth, therefore modelling results outlined in this MDP should be viewed as conservative.

Following construction, it is estimated that the ongoing operation of the developed Airport North MDP area will generate approximately \$961 million of direct output each year. This direct output will induce further indirect output in the wider State economy.

The operational output will support the creation of new employment opportunities; approximately 2,810 FTE ongoing, at full operation. As the nature of land uses and therefore ongoing economic activity in the MDP area is indeterminate at this stage, impact modelling reports only the direct employment and output attributable to the MDP area’s ongoing operations. This therefore reflects a conservative lower-bound estimate of true project impact.

The figures presented in this section are a significant increase in not only local employment opportunities for the eastern metropolitan region, but also across the Perth metropolitan area. The industry makeup could be vastly different to this scenario, however the employment opportunities that will occur with developing the land will be realised over time, extending the benefits over many years.

The setting of Aboriginal employment or procurement targets for works associated with the MDP will also be considered. Perth Airport's Reconciliation Action Plan (RAP) has a deliverable to increase the percentage of Aboriginal employment in our workforce and to engage with Aboriginal businesses to undertake work on the estate.

Overall, there are wide and significant economic and employment benefits which can be realised with the development of the Airport North MDP, initially through the clearing and site preparation works associated with this MDP, but also through ultimate development of land uses (subsequent MDPs where relevant) and future operations.

### **8.3 Social Benefits**

The planned retention of large areas of native vegetation and the future development of a Living Stream proposed by this MDP will support passive recreational spaces in the area. Passive recreational land uses have social benefits by way of positive mental/wellbeing and physical health impacts. Productivity benefits can also be realised as being physically and mentally healthier can have positive outcomes in the workplace.

Airport North's location is central and offers prime accessibility for employees from nearby residential areas. This can also drive beneficial health outcomes for employees and productivity gains for businesses as shorter commuting times are linked to lower levels of stress, which are linked to increased productivity. This is particularly important for industrial land uses, which will be facilitated by the clearing and site preparation works contained within this MDP. Industrial developments are often unable to offer flexible working environments to offset negative mental health effects. As such, Airport North's central location and the provision of amenity for the future workforce will serve to mitigate these potential negative effects found elsewhere.

This MDP proposes to recognise the cultural significance of existing heritage sites within Airport North, through an interpretive heritage trail along the Living Stream and other opportunities proposed by the Traditional Custodians. By recognising the heritage of the area, this trail may allow for more sustainable recognition of the Whadjuk Traditional Custodians and the wider Noongar Community. Perth Airport will continue to work with the Traditional Custodians on this concept as planning and design for the MDP area continues.

Figures C-1 and C-2 (Appendix E) show typical landscaped sections that demonstrate how an interpretive trail may be integrated with both the road and water management systems in an appropriate landscaping strategy.

### **8.4 Civil Aviation User Benefit**

Master Plan 2020 identifies two land use zones within the Airport North precinct: Airport Services and Commercial. As outlined in Section 6.3, a key objective of the Airport Services Zone is to provide a range of aviation support activities, services and facilities for use by airline partners, passengers, government agencies, freight businesses and transport providers.

Master Plan Section 4.7 identifies the Northern Aviation Support Area, located within the wider Airport North precinct and the Airport North MDP area. With landside access from Great Eastern Highway Bypass and Kalamunda Road, this area will provide a suitable location for the development of aviation support facilities that require access to the General Aviation area.

The works associated with the Airport North MDP will improve access to, and unlock Airport Services zoned land, thereby facilitating future development of aviation support land uses, for example, potential fuel storage. The potential development of a larger fuel storage facility could provide a greater level of certainty in fuel storage and supply into the future, thereby providing confidence for future tenants.

The development of the Airport North MDP will not conflict with the future needs of civil aviation and other users of Perth Airport.

## 8.5 Conclusion

There is a demonstrated need and demand for businesses which provide goods, services and employment opportunities for the nearby growing resident and employee populations. Overall, development of the Airport North MDP area will play a role in activating and satisfying these needs by taking advantage of Perth Airport's natural positive characteristics to attract businesses and employees. Development of the Airport North MDP area will bring employment, economic, social (including heritage) and aviation user benefits over many years. As the gateway into Western Australia and a highly accessible area in the Perth metropolitan region, Perth Airport therefore represents an optimal location for development to actualise these benefits. The first step in realising these benefits is the clearing and site preparation works which form the basis of this MDP and the Commonwealth approval being sought.



# 9 Traffic Assessment & Ground Transport Infrastructure

Section 91 (ga) of the *Airports Act* requires that an MDP address the likely effect that a proposed development will have on traffic flows. Section 6 of Master Plan 2020 outlines the vision for ground transport at Perth Airport and the development detailed within this MDP is consistent with that vision.

## 9.1 Existing Conditions

### Road Network

The primary access road to the Airport North precinct is currently through Kalamunda Road (refer Figure 9-1), a Regional Road in the Metropolitan Region Scheme (MRS). Kalamunda Road is a two-lane cross section, running adjacent to the airport estate and through the Guildford Cemetery. The road is under the care and control of the City of Swan in the vicinity of the airport estate and south of Abernethy Road, is managed by the City of Kalamunda.

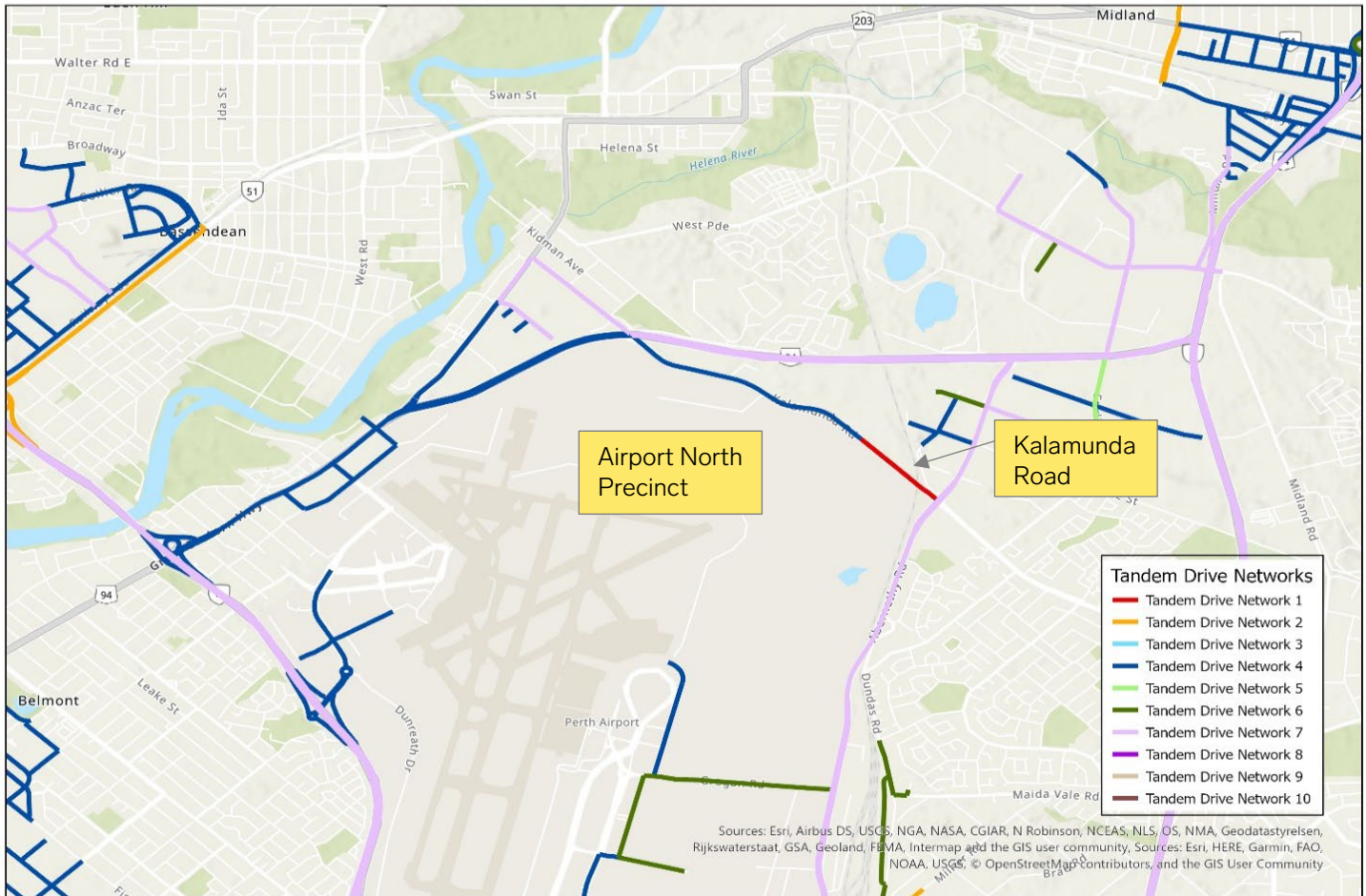
A 28-metre road reserve has been identified in the MRS to allow for the road to be upgraded to a dual-lane carriageway, however, this is generally viewed as a minimum reserve width required for a major regional road. The posted speed limit along this carriageway is 70km/h.

To the east of the airport estate, Kalamunda Road crosses the Metropolitan Freight Rail over a weight restricted two-lane bridge. Figure 9-1 shows the Restricted Access Vehicle (RAV) network around the Airport North precinct. Kalamunda Road itself is rated to RAV 4 with permits required from the asset owner (City of Swan) west of the existing BGC central access gate. The western end of Kalamunda Road intersects with the Great Eastern Highway Bypass (GEHB), a Primary Regional Road in the MRS, a designated freight route for heavy vehicles up to RAV 7 classification (36.5m maximum length) under the authority of Main Roads WA (classed as a State Road).

Kalamunda Road remains a single-lane carriageway from GEHB to Roe Highway, with approaches to the Abernethy Road and Roe Highway intersections widened to two-lanes in each direction to provide additional traffic capacity, where the road transitions through industrial and suburban land uses.

Whilst Kalamunda Road passes along the northern perimeter of the airport estate, it does not currently serve as direct access for any significant amount of current airport generated traffic.

Kalamunda Road services High Wycombe and Guildford suburban traffic to the south-east and north-west respectively. Kalamunda Road also provides direct access to the BGC central site and indirect access (via Abernethy Road) to a large light-industrial estate and distribution centre; located on the airport estate but outside the MDP area.

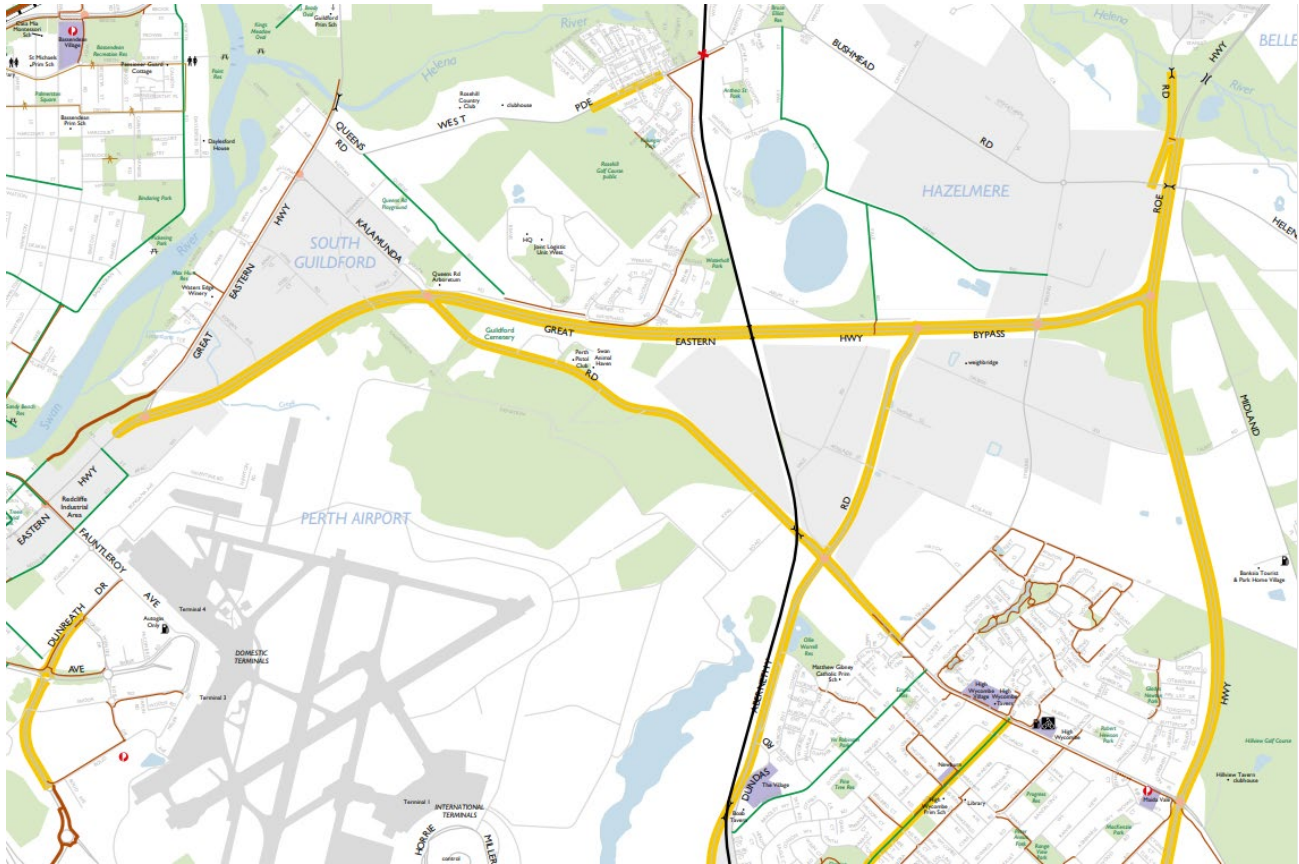


**Figure 9-1 Restricted Access Vehicle - Tandem Drive Network**

Source: Main Roads WA, 2020

### Pedestrian Access

There are no footpaths along Kalamunda Road in the vicinity of the Airport North MDP area, but a short section of path exists on both sides of the road in the vicinity of a Transperth bus stop located at the South Guildford cemetery. There is a small median at this location which allows for an un-signalised staged mid-block pedestrian crossing of Kalamunda Road, noting that the cemetery site spans both sides of Kalamunda Road. The existing cycle and pedestrian networks are illustrated in Figure 9-2.



### Legend

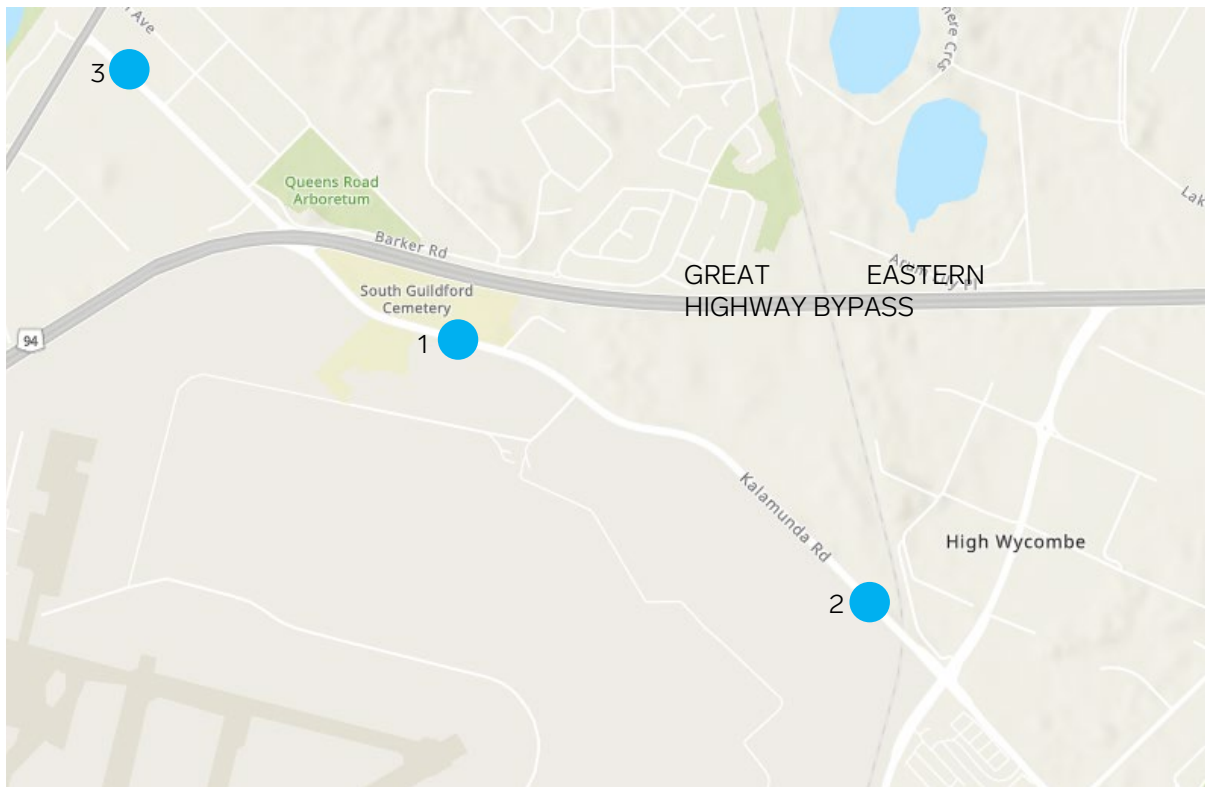
	Principal Shared Path (PSP)		Bike Repair Station
	High Quality Shared Path		Bike Pump Station
	Other Shared Path (Shared by Pedestrians & Cyclists)		Road Bridge, Foot Bridge, Underpass
	Good Road Riding Environment		Railway
	Perth Bicycle Network (PBN) - Continuous Signed Routes		Underground Railway
	Bicycle Boulevard		Freight Railway, Railway Crossing
	Gradient Arrow		Train Transfer, Train and Bus Transfer
	Bicycle Lanes or Sealed Shoulder Either Side		Train Station, Special Events Station
	Contra Flow Bike Lane		Bus Station, Ferry Terminus
	Traffic Direction, Traffic Light		Petrol Station
	Bike Shop		Public Toilets, Accessible Toilet
	Bike Hire		Pleasant Rest Area, Post Office
	Bike Locker		Walking Trail
	Bike Shelter		Shopping Area
	Bike Parking		Parks, Ovals and / or Bushland
			Industrial Area
			Point of Interest

Figure 9-2 Existing Cycling Network around Kalamunda Road and Great Eastern Highway

Source: Department of Transport, 2016

Traffic

Traffic volumes sourced from Main Roads WA’s traffic map over the past seven years have indicated a reduction in vehicular traffic demand along the Kalamunda Road carriageway. The average annual growth rate is indicated to be declining by six per cent between 2015 and 2019 at the count sites illustrated in Figure 9-3. However, with recent 2022 traffic information sourced from the Main Roads WA traffic map, Kalamunda Road between GEHB and Abernethy Road is shown to present a 2% average annual growth between 2019 and 2022. Raw traffic data obtained for these sites is presented in Table 9-1.



**Figure 9-3 Historical Traffic Count Locations**

*Source: Main Roads WA, 2020*

This traffic reduction is likely the result of changing travel patterns influenced by construction and completion of major road projects within the surrounding area such as the grade separated Roe Highway/ Kalamunda Road interchange. In addition, grade separated interchanges at Roe Highway and Abernethy Road intersections with the GEHB are proposed commence construction in Early 2023 as part of the Great Eastern Highway Bypass Interchanges project (Source: Main Roads WA website 15/11/2022). As these projects proceed to the delivery phase of works, there is likely to be variable travel patterns within the surrounding area, influencing historical traffic growth measures. These proposed interchange upgrades will not only enhance safety but will future-proof for ensuing traffic growth and provide desirable travel times for road users.

	Section	Year 1	Count 1 (Daily)	Year 2	Count 2 (Daily)	Average Annual Growth (p.a.)
1	East of Great Eastern Highway Bypass	2015/16	15,042	2018/19	11,345	-8%
1	East of Great Eastern Highway Bypass	2018/19	11,345	2021/22	12,518	3%
2	North of Abernethy Road	2015/16	13,979	2016/17	13,809	-1%
2	North of Abernethy Road	2016/17	13,809	2017/18	12,038	-13%
2	North of Abernethy Road	2017/18	12,038	2021/22	12,447	1%
3	South of Great Eastern Highway	2015/16	8,384	2018/19	7,628	-3%

**Table 9-1 Traffic Count Data for Locations along Kalamunda Road**

*Source: Main Roads WA traffic map*

The observed directional traffic flows along the aforementioned sections of Kalamunda Road are presented in Table 8-2 indicating the proportion of eastbound and westbound traffic along Kalamunda Road on an average weekday. Table 9-2 also indicates the proportion of heavy vehicle (HV) traffic in operation, which comprises of approximately 11% of total traffic, with higher proportions at the edge of the Airport North MDP area.

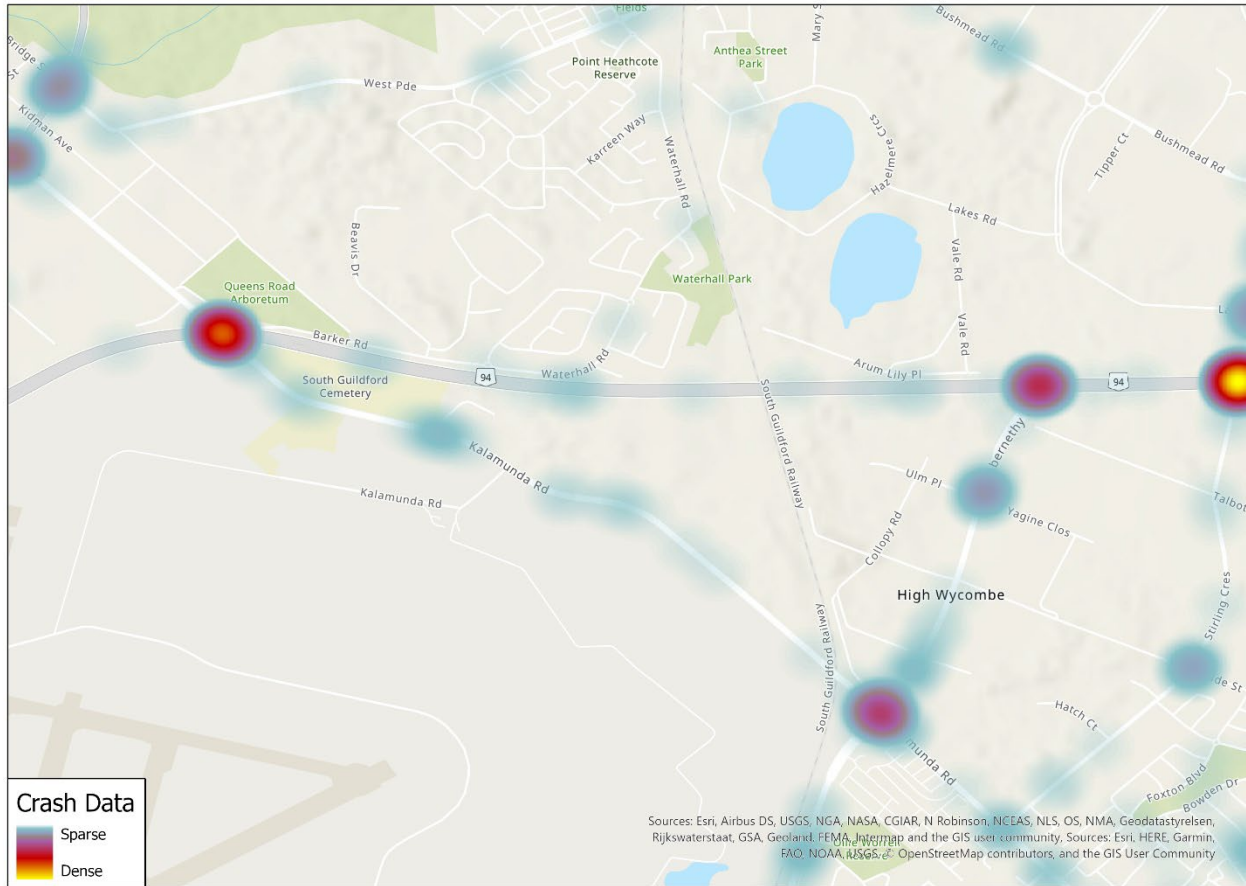
	Section	Year	Eastbound	Westbound	Total	% HV
1	East of Great Eastern Highway Bypass	2015/16	7,324	7,718	15,042	8.8%
		2018/19	5,531	5,814	11,345	9.2%
		2021/22	5,812	6,706	12,518	12.9%
2	North of Abernethy Road	2015/16	7,144	6,835	13,979	9.4%
		2016/17	6,965	6,844	13,809	9.4%
		2017/18	6,088	5,950	12,038	16.1%
		2021/22	6,766	5,681	12,447	11.4%
3	South of Great Eastern Highway	2015/16	4,024	4,360	8,384	14.5%
		2018/19	3,921	3,707	7,628	9.9%

**Table 9-2 Traffic Count Data by Direction**

*Source: Arup (2020)*

## Road Safety

Kalamunda Road currently transitions between multiple road categories and surface treatments, likely attributed to its location between multiple Local Government Authorities. Figure 9-4 shows a heat map of road crashes over the last five years with crash statistics presented in Table 9-3.



**Figure 9-4 Heat Map Analysis of Road Traffic Collisions within the Last Five Years**

*Source: Main Roads WA*

Between the Great Eastern Highway Bypass and Abernethy Road, Kalamunda Road recorded 81 crashes with the distribution of severity ranging from minor property damage to medical and hospital treatment. The main location of crashes was found to be at the intersections of Kalamunda Road with GEHB and Abernethy Road. It is noted from Figure 9-4 that the majority of crashes was most prevalent at signalised intersections of Abernethy Road and GEHB. Main Roads WA is currently planning upgrades to these areas, which will address both road safety and capacity issues.

Severity	Number of Crashes (2015-2019)
Property Damage Only (Minor)	27
Property Damage Only (Major)	42
Medical	9
Hospital	3
Total	81

**Table 9-3 Crash Data by Severity Along Kalamunda Road**

*Source: Main Roads WA*

### Public Transport

The Airport North Precinct currently has no public transport services operating, consistent with the low-density land use in the area. Previously, Kalamunda Road between GEHB and Abernethy Road was serviced by the 295, 296 and 299 Transperth operated bus routes. As of October 9<sup>th</sup>, 2022, these services were decommissioned as part of the opening Forrestfield-Airport Link.

## 9.2 Future Conditions

### Planned Road Network Upgrade

Separate from the Airport North MDP, upgrades to the surrounding road network are being planned by the State Government with these works split into seven work packages as part of the GEHB Interchanges Project undertaken by the Greater Connect Alliance on behalf of Main Roads WA. The upgrades impacting the Airport North MDP include:

- Committed and funded upgrades to the GEHB between Roe Highway and Abernethy Road, including major grade separated interchange upgrades at Roe Highway and Abernethy Road,
- Committed and funded upgrades to strengthen the weight-limited Kalamunda Road bridge over the existing freight rail line, including provisioning for a four-lane cross section, and a grade separated interchange at Kalamunda Road and GEHB intersection (see Section 4.2 and Appendix B),
- Duplication of Abernethy Road, north of Kalamunda Road between Yagine Place and Lewis Road and
- Planning, but no funding commitment, for the upgrade of the GEHB from Kalamunda Road to Tonkin Highway. A preliminary design has been undertaken for this upgrade.

This infrastructure, alongside the Forrestfield Airport Link, would service suburbs to the east of the Airport such as High Wycombe and Hazelmere.

## 9.3 Trip Generation and Distribution

### Clearing and Site Preparation

As already stated, the purpose of this MDP is to gain approval for site clearing and preparation works, readying the land within the Airport North MDP area for future, primarily non-aviation development. To achieve a site with minimal ground surface level changes and the necessary clearances to the 1 in 100-year flood levels in the adjacent NMD, it will be necessary to import approximately 650,000m<sup>3</sup> of fill. This will be either sourced from elsewhere within the airport estate or imported as clean fill from external sources. If imported, GEHB, Kalamunda Road and Abernethy Road will be used to access the site. It is anticipated that approximately 16,450 truckloads of fill will be required and will be staged over time to coincide with the overall Airport North MDP detailed staging and implementation plan, which will be dictated by market demand.

Traffic generation through construction of roads and services will be significantly less than the traffic generated when the site is fully developed. Construction traffic will be managed through a Traffic Management Plan and any potential construction traffic impacts such as noise or dust will be addressed through the project Construction Environment

Management Plan which is reviewed, approved, administered and monitored via the Airports (Environment Protection) Regulations 1997 by the Airport Environment Officer appointed by DITRDC.

**Possible Future Development**

Whilst traffic impacts which may arise from the future development are outside the scope of this Airport North MDP, an assessment has been undertaken based on the indicative land use mix noted previously.

This future development of the Airport North MDP area has been assessed to determine the impact on the existing road network with respect to possible trip generation and distribution, as well as in relation to the level of service of the road network performance both now and into the future, assuming a maximum development lot yield.

The development of the Airport North MDP area will predominantly access the road network through Kalamunda Road, although additional connectivity to the south of the development will also be provided. The Airport North MDP area will access Kalamunda Road through two additional intersections placed at the eastern and western ends of Kalamunda Road between GEHB and Abernethy Road. By providing development connections to the east and west, future development of land uses within the Airport North MDP area is not anticipated to increase the volume of traffic along the existing Kalamunda Road alignment between the two major Airport North MDP access locations.

The proposed land use mix is anticipated to be a combination of industrial uses, with the proximity to major transport hubs meaning there is likely to be a large proportion of logistics and distribution type uses. The trip generation rate for this land use type is given in Table 9-4, derived from a combination of Department of Planning Lands and Heritage Transport Impact Assessment Guidelines (Vol 5) and Institute of Transport Engineers (ITE) Trip Generation Rates 9th Edition. The development areas shown within Figure 9-5 are for the total lot areas, therefore a floorspace conversion factor has been applied to determine the building floorspace as a ratio of the total plot area.

Land Use Type	Trip Generation Rates (100m <sup>2</sup> )				Site coverage factor
	AM IN	AM OUT	PM IN	PM OUT	
Logistics and Distribution	0.392	0.098	0.098	0.392	0.35

**Table 9-4 Trip Generation Rates Used in the Assessment of the Airport North MDP**

*Source: Arup (2020)*



Figure 9-5 also illustrates the locations of each of the proposed intersections and the assessment includes analysis of the western access roundabout only, as this is the critical intersection for flows associated with future Airport North MDP development.



**Figure 9-5 Proposed Development Area (beige) within Airport North MDP and Access Intersections**

Source: Perth Airport

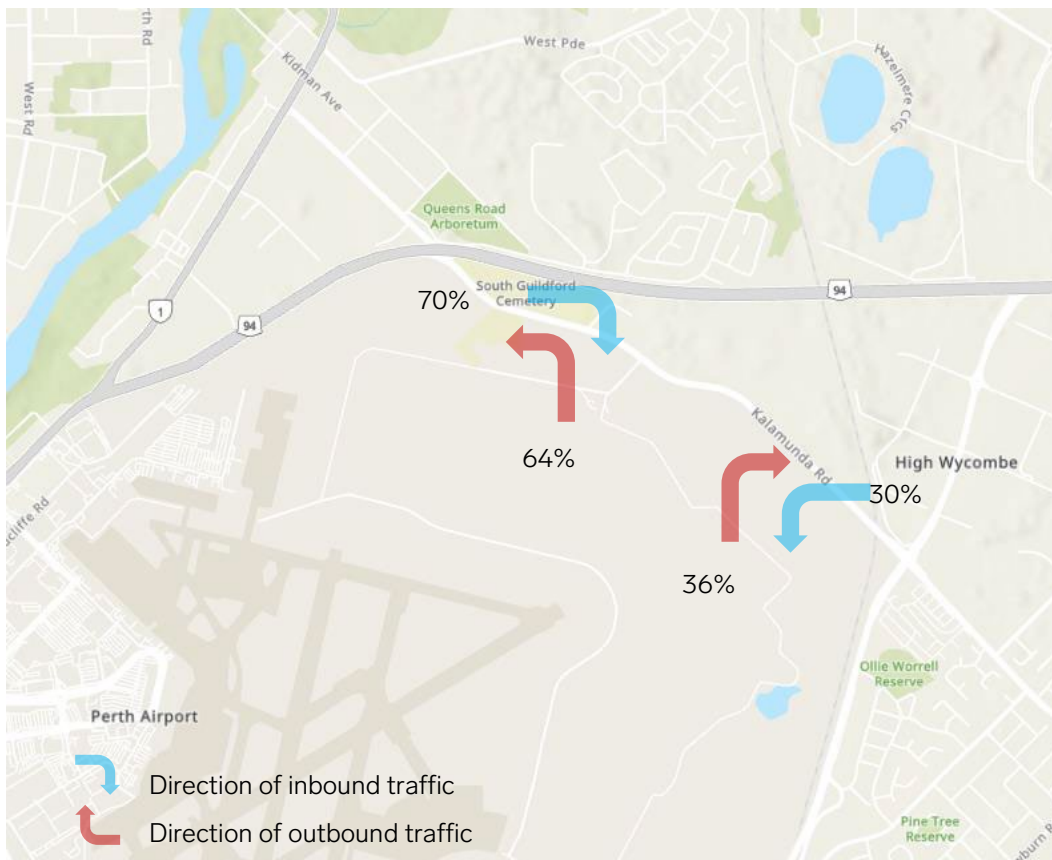
To determine the proportion of vehicles associated with the future development travelling to/from the east and west, existing directional splits were extracted from the mesoscopic model developed for the Airport North MDP. It has been assumed that vehicles accessing the Airport North MDP study area utilise the access intersection closest to their direction of onward travel (vehicles to/from the east would use the eastern intersection and vice versa). Table 9-5 shows the inbound and outbound vehicle distributions associated with the Airport North MDP development.

Approach	Exit	Ratio
Airport North MDP	Kalamunda Road West (GEHB)	0.64
Airport North MDP	Kalamunda Road East	0.36
Kalamunda Road West (GEHB)	Airport North MDP	0.70
Kalamunda Road East	Airport North MDP	0.30

**Table 9-5 Vehicle Distribution: Airport North MDP Development Traffic**

Source: Arup (2020)

This vehicle distribution is also shown in Figure 9-6 which illustrates the vehicle proportions for inbound (blue) and outbound (red) movements associated with the Airport North MDP development.



**Figure 9-6 Airport North MDP Traffic Movement Distribution**

Source: Arup (2020)

The resultant distribution indicates no vehicles egressing the Airport North MDP site via a right turn movement (from the south) at the western access roundabout. This right turn movement reduces the effective capacity of the northern approach. Furthermore, with low volumes assumed to turn right at this location, this would allow the northern approach to operate with limited impediment and would reduce the potential risk of vehicle queues extending north and impacting GEHB/ Kalamunda Road interchange operations. It is likely that some vehicles would utilise this movement due to the proximity of development lots on the eastern side of roundabout.

### Traffic Capacity Analysis

To assess the effectiveness of the proposed interventions on Kalamunda Road, a SIDRA network model was developed consisting of the western development access roundabout and the adjacent at-grade roundabout treatment for the proposed GEHB/ Kalamunda Road intersection (refer to Figure 9-7).

Note: At the time this traffic assessment was undertaken, the proposed treatment for the GEHB/ Kalamunda Rd intersection was an at-grade roundabout. Since, the proposed treatment for this intersection has been further developed into a grade separated interchange, included as part of the Greater Connect Alliance works on the Great Eastern Highway Bypass Interchanges Project, as Work Pack 7. This work is currently in the SELECT stage of works.

The SIDRA model combines the forecast background traffic growth with proposed development traffic, which are derived from development yields based on defined development areas.

The per annum background traffic growth rate has been assumed at 0.5%; this provides an increase in forecast background traffic despite historical growth trends indicating an overall decline in vehicle traffic. An alternative growth rate has been derived from the Main Roads WA's ROM24 strategic traffic model. Based on ROM24 plot version 4.4, this has indicated a forecast growth rate of 4% per annum in background traffic to 2031, with this version of ROM24 assuming Kalamunda Road to be duplicated (four-lane cross section) by 2031.

The model outputs from Main Roads ROM24 are largely based on land-use input from the Metropolitan Land Use Forecasting System (MLUFS) which may assume a level of development within the Airport North MDP site. If the

output from Main Roads ROM24 is to be assumed, the proposed background traffic growth estimate from ROM24 may be double-counting anticipated traffic to/from the Airport North MDP development. The development traffic yields are provided in Table 9-6.

	Development Traffic Yield			
	AM IN	AM OUT	PM IN	PM OUT
Total traffic volume	1,728	432	432	1,728

**Table 9-6 AM and PM Peak (1 hour) Development Traffic Volumes**

*Source: Arup (2020)*

These traffic volumes were distributed between vehicle classification groups using the observed vehicle classification proportions along Kalamunda Road, sourced from the Main Roads WA TrafficMap. These proportions are shown in Table 9-7. Whilst there is the desire for the development to cater for RAV 7 vehicles, it is likely these movements would be external to peak hours for the wider transport network, as the current distribution shows the prevalence of rigid heavy vehicles over larger vehicle classes currently permitted on the network.

Austroroads Vehicle Classifications	% Distribution
1 (Short Vehicle)	90.8%
2 – 5 (up to four axle Truck)	7.2%
6 – 9 (three to six axle articulated vehicle)	1.5%
10 (B Double)	0.4%
11 (Double Road Train)	0.1%
12 (Triple Road Train)	0.0%

**Table 9-7 Existing Kalamunda Road Vehicle Classification Proportions**

*Source: Arup (2020)*

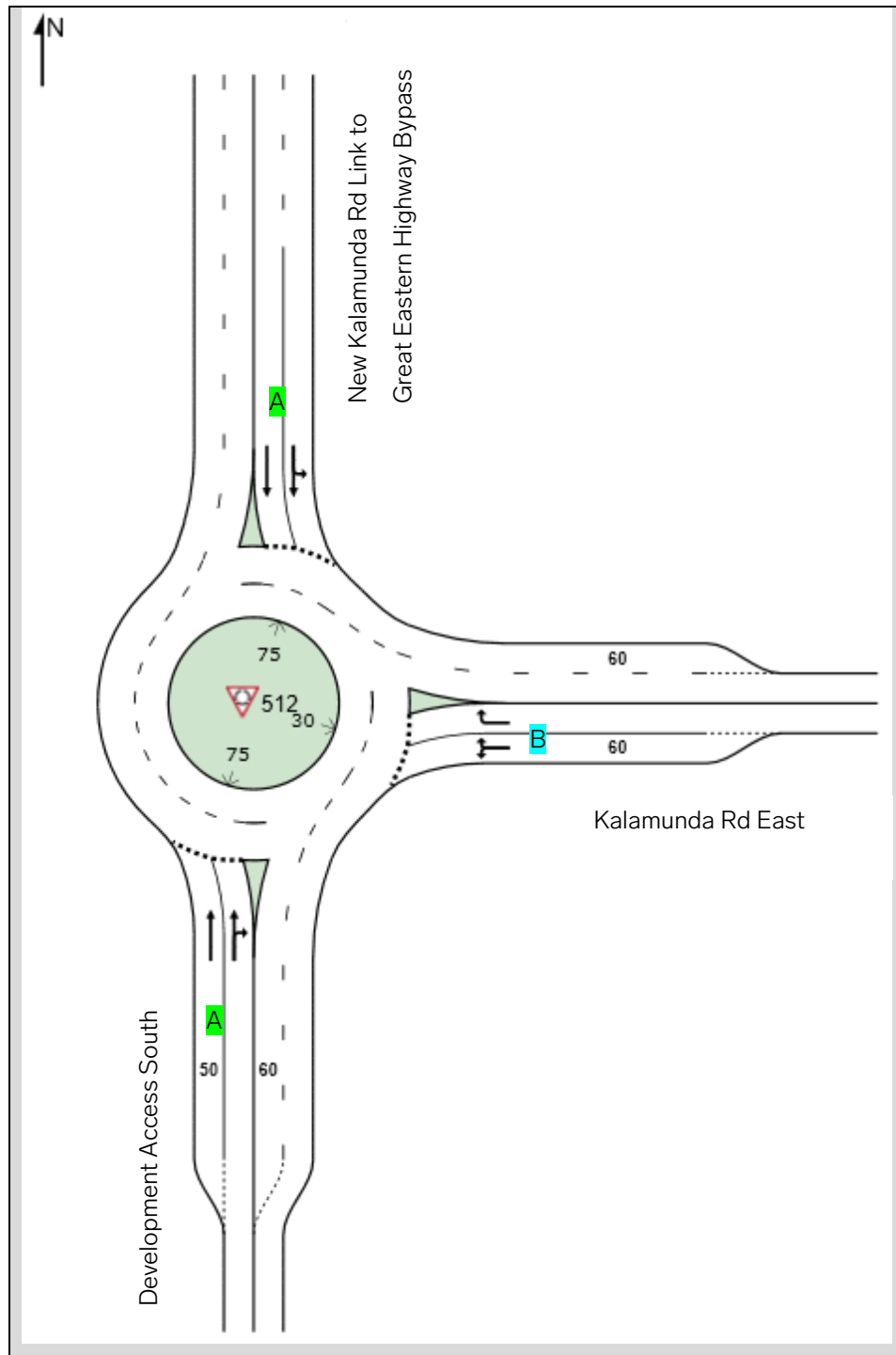


Figure 9-7 Modelled Intersection Geometry in SIDRA with Level of Service Categorisation

Source: Arup (2020)

Analysis has been conducted to understand the operating efficiency of the intersection. This analysis uses the Level of Service (LOS) metric which categorises the intersection performance based on a scale from A to F, with A being the category with most efficient operation and F least efficient. The LOS metric is defined by the anticipated vehicle delay along each approach and intersection. The AM and PM peak hour analysis of the western development access roundabout on Kalamunda Road is shown to operate at an overall LOS A.

Table 9-8 shows the LOS for each approach of this intersection (as illustrated in Figure 9-7) with the outcome being that all approaches will operate at an acceptable level of service, with overall intersection operations at the optimal LOS A.

	Approaches			Intersection
	South	East	North	
AM	A	B	A	A
PM	A	B	A	A

**Table 9-8 Level of Service for the Western Development Access Roundabout**

*Source: Arup (2020)*

### Road Construction and Staging

Development of the road network within the Airport North MDP area will be concurrent with the phased build-out of development of land uses over a 10-to-15-year period. The western development access roundabout can be constructed offline and then tied into the existing Kalamunda Road alignment. As the development build out continues, the eastern roundabout will be constructed based on current planning and conditions at that point in time.

The construction timing and funding of the intermediate at grade roundabout at the intersection of GEHB and Kalamunda Road will be determined through negotiation between Perth Airport and Main Roads WA (State Government); these discussions have commenced and are progressing. Following the intermediate roundabout construction, Main Roads WA will determine the construction timeline for a grade separated fly-over based primarily on the level of operation of GEHB through traffic.

Before commencing works, the Contractor will be required to prepare a Construction Management Plan to demonstrate how the impacts of the work on access and the road network will be managed. This will include details of how the works will be staged, materials delivered to site and how off-site impacts such as dust and noise will be managed. Specifically, potential construction traffic impacts such as noise or dust will be addressed through the project Construction Environment Management Plan which is reviewed, approved, administered and monitored via the Airports (Environment Protection) Regulations 1997 by the Airport Environment Officer appointed by DITRDC

The construction of all transport infrastructure will be reviewed as development progresses to ensure the proposals reflect current trends and emerging conditions.

Roads outside of the Perth Airport estate will remain the responsibility of the relevant local or state authority to manage and maintain.

### Public Transport

The State Government, through the Public Transport Authority (PTA), is responsible for providing public transport services within the Perth and Peel metropolitan region in addition to provisioning services to and within Western Australia’s regional centres.

Currently, there are wider changes planned to the state’s public transport network, notably to heavy rail through state government investment into the METRONET program, which endeavours to provide greater heavy rail connectivity to Perth and Peel’s northern, southern and eastern suburbs. Of note, this program includes the delivery of the new Forrestfield-Airport Link.

The entire MDP area is located within a 4km catchment of the proposed Redcliffe Station to the west and the terminus station, High Wycombe to the south-east. In future, there may be changes to the bus network within the surrounding area which would impact the Airport North MDP area. Notwithstanding this, Perth Airport will continue to work closely with the PTA through any future provisions of bus services within the area.

Much of the developable land within the Airport North MDP area is located within a 500-metre walk of Kalamunda Road. Planning is presently underway for the bus network to support all stations along the new rail line. Perth Airport will continue to work with PTA to ensure adequate public transport options are maintained. Although the Airport North MDP does not rely on the rail station being constructed with supporting bus feeder routes to stations, the combination of additional bus services, the provision of rail and appropriate active transport infrastructure would enable public transport to become a viable mode for staff and visitors to the area.

## Active Transport

There are sealed shoulders on Kalamunda Road that are suitable for cycling by experienced cyclists. These connect to a broader network of sealed shoulders/cycle lanes on GEHB in the north and Abernethy Road in the south. The area is also relatively flat, making it conducive to cycling, however, there are no off road/ dedicated shared paths servicing the site and combined with a notable proportion of heavy vehicles using Kalamunda Road, GEHB and Abernethy Road means that cycling to this location is likely to only be undertaken by experienced cyclists.

Future levels of walking and cycling as a means of transport to the Airport North MDP area may be affected by the following factors:

- The planned low-density development,
- The percentage and type of heavy vehicles on the network and the fact that Kalamunda Road forms part of the restricted access vehicle network, and
- The lack of current and planned dedicated footpath and cycle paths/routes in the wider network.

Notwithstanding, the future road network within the development will provide for a footpath on at least one side of roads to support walking within the development.

## 9.4 Conclusion

Perth Airport recognises that the road network on the estate must be designed so it integrates with the surrounding regional road network. This section has outlined the strategy for developing road network access to the Airport North MDP area, focusing on the western end being the proposed first stage of development. Perth Airport is continuing to engage with Main Roads WA through its planning and delivery for upgrades of the GEHB and its integration to the Airport North MDP area to develop suitable access arrangements between Kalamunda Road and GEHB as development intensifies. Key findings and outcomes of the ground transport plan for the Airport North MDP area include:

- Traffic volumes on Kalamunda Road have been declining in recent years,
- Kalamunda Road as an existing two-lane road remaining in its current form apart from works to tie in at the western end of the study area on approach to GEHB,
- The addition of a new access roundabout at the western end of Kalamunda Road within the study area, and a new roundabout on the eastern end of the study area immediately east of the Guildford Cemetery,
- Subject to further planning by Main Roads WA, provision of an improved treatment for the GEHB/ Kalamunda Road intersection is being investigated to address pre-existing capacity and safety issues, tying into the Airport North MDP area internal road network,
- Provision of cycling and walking facilities where possible within the Airport North MDP area,
- The traffic generated from future construction works associated with this MDP will be significantly less than the traffic generated when the site is fully developed. Construction traffic will be managed through a Traffic Management Plan required at the time of Perth Airport Consent (refer Section 12) and the Construction Environment Management Plan which is reviewed, approved, administered and monitored via the Airports (Environment Protection) Regulations 1997 by the Airport Environment Officer appointed by DITRDC, and
- Further review of the eastern access arrangements onto Kalamunda Road will be undertaken as development within the Airport North MDP area occurs.

# 10 Environmental and Heritage Assessment

Part B of the MDP provides details around the environmental and heritage considerations for the project and should be read in conjunction with Part A (this report).

In particular, Part B report details a review of the baseline environmental and heritage conditions in addition to an assessment of potential impacts associated with the Airport North MDP including;

- the environmental and heritage approval process,
- the environmental impact assessment process,
- the environmental context of the project area which identifies environmental factors/issues relevant to the project,
- a description and impact assessment for each environmental factor relevant to the project,
  - Flora and vegetation,
  - Fauna,
  - Soils and geology,
  - Water resources,
  - Wetlands,
  - Construction air, noise and vibration, and
  - Heritage,
- a Whole of Environment assessment,
- a summary of mitigation measures, and
- proposed offsets.

A high-level overview of the key environmental and heritage considerations identified, and the management and design considerations to address these, are summarised below. All environmental and heritage considerations are discussed in detail within the Part B report.

## Flora and Vegetation

- The majority of the Airport North MDP area is infested with dieback. Proposed vegetation retention areas shown in the MDP layout have prioritised alignment with vegetation uninfested with dieback.
- The vegetation retention areas are primarily aligned with the most intact and highest quality condition vegetation in the north-east and north-west of the MDP area, which align with occurrences of the 'Banksia Woodland of the Swan Coastal Plain' TEC.
- The MDP layout proposes revegetation areas and ecological linkages. Further work is required to determine the proposed specification of revegetation in these areas, as this may contribute to mitigating impacts to flora and vegetation values, including for:
  - One Commonwealth listed threatened ecological community (TEC) 'Banksia Woodland of the Swan Coastal Plain'.
  - One State listed threatened ecological community (TEC) 'SCP 3b *Corymbia calophylla* - *Eucalyptus marginata* woodlands on sandy clay soils of the southern Swan Coastal Plain' TEC.
  - One flora species listed as threatened at the Commonwealth and State level - *Conospermum undulatum*.
  - Six State listed 'priority' flora species.

## Fauna

- Conservation significant species that regularly occur or are resident in the airport estate include Carnaby's, Baudins and Forest Red-tailed Black Cockatoos, Quenda, Rakali, a suite of bird species that have declined in the Perth area, Lea's Froglet and possibly three invertebrates.
- The MDP layout also provides for the retention of the most intact fauna habitat areas, including the areas of retained Banksia woodland in the north-west and north-east, in addition to the Munday Swamp and associated buffer zone.
- Approximately 30 trees within the MDP area meet the criteria for potential breeding habitat for Black Cockatoos and will be cleared, of which two contain hollows of suitable morphology to support Black Cockatoo nesting. No evidence of hollow usage by Black Cockatoos, or any other evidence of nesting or breeding activity was observed. The loss of these trees is unlikely to be considered a significant impact.
- There are no known Black Cockatoo roosts within the MDP area.
- The Banksia Woodland area requiring clearing within the MDP area represents foraging habitat for Black Cockatoos.

## Soils & Geology

- There are locations of PFAS contamination within the MDP area.
- The placement of a section of the NMD in a culvert removes a pathway for groundwater contaminated with PFAS to enter surface water.
- The MDP layout, together with a Construction Environmental Management Plan (CEMP) during construction work and an estate wide PFAS Management Plan post construction, will be combined for the consideration of PFAS constraints and appropriate management.

## Water Resources

- Studies undertaken in 2020 have indicated that combined surface and groundwater modelling is required to fully understand interactions. Further modelling will be completed by Perth Airport as design progresses.
- The MDP layout includes a modified NMD alignment and the required additional storage /retention basins to accommodate a post development 1 in 100-year storm event (1% AEP, the standard drainage design criterion).
- The redesign of the NMD will result in the MDP layout having no significant flood or surface water impacts.
- Groundwater occurs at depths between 1 and 6 m below ground level within the shallow, unconfined aquifer underlying the MDP area. Groundwater monitoring shows a relatively quick response to rainfall events with a seasonal variation of 1-2 m.
- The NMD intersects the groundwater table at various locations, partially draining the MDP area and controlling maximum groundwater levels.
- Based on a 2017 study, which assumed a different alignment of the NMD, it is expected that any ongoing groundwater drawdown, caused by the realigned NMD, in wetland areas will not be significant, at less than 0.3 m at a distance of 50 m on each side of the NMD.
- 2017 mapping of the maximum groundwater level pre-development and post-development across the MDP area show that no significant change to groundwater level is expected across the site.



### Wetlands

- Conservation-significant wetlands within the MDP area relate directly to, or interface with, occurrences of shallow groundwater.
- 12 priority wetlands are either entirely or partially within the MDP boundary.
- The MDP layout has included the retention of the entirety of two Resource Enhancement Wetlands and a portion of one Conservation Category Wetland.
- The MDP layout includes a 50 m wetland buffer zone around Munday Swamp, which the MDP identifies for revegetation. Further work is required to determine the proposed specification of revegetation within the buffer.

### Heritage

- Four registered and three lodged Aboriginal heritage sites were confirmed to be located within the MDP area.
- Munday Swamp and Surrounding Bushland is listed an Indicative Place on the Commonwealth Heritage list.
- In addition to being a registered Aboriginal heritage site, Allawah Grove has been identified as having other cultural heritage values and is currently being assessed by the Heritage Council of Western Australia for listing under the *Heritage Act 2018 (WA)*.
- In response to the heritage values within the MDP area, heritage sites have been excluded from the development footprint; a 100 m buffer zone has been designed around Munday Swamp; and the MDP layout has included provision for heritage interpretation places.

The Part B report provides details of the baseline environment and heritage conditions along with the proposed management and mitigation measures.

# 11 Relationship to Aviation

A review of the impacts of aviation activity associated with the clearing and site preparation of the Airport North MDP area has been undertaken with the following key areas identified as requiring assessment;

- Aircraft noise exposure levels,
- Effect on flight paths,
- Airspace requirements,
- Lighting in the vicinity of the aerodrome,
- Windshear,
- Protection of communication, navigation and surveillance infrastructure,
- Bird and animal hazard management, and
- Public safety areas.

These considerations are guided by, but not limited to, the National Airports Safeguarding Framework (NASF) guidelines. Perth Airport continues to consider the NASF guidelines in its ongoing planning and development and the manner in which the NASF guidelines have been considered for this development are outlined below.

NASF Guideline	MDP Section
Guideline A: Measures for Managing the Impacts of Aircraft Noise	Section 11.1
Guideline B: Managing the Risk of Building Generated Windshear and Turbulence	Section 11.2
Guideline C: Managing the Risk of Wildlife Strikes in the Vicinity of Airports	Section 11.3
Guideline D: Managing the Risk of Wind Turbine Farms as Physical Obstacles to Air Navigation	Not addressed in this MDP. No windfarms are planned as part of this project.
Guideline E: Managing the Risk of Distraction to Pilots from Lighting in the Vicinity of Airports	Section 11.4
Guideline F: Managing the Risk of Intrusions into Protected Airspace of Airports	Section 11.6
Guideline G: Protecting Aviation Facilities – Communications, Navigation and Surveillance (CNS)	Section 11.7
Guideline H: Protecting Strategically Important Helicopter Sites	Not addressed in this MDP. No helicopter sites are proposed as part of this project.
Guideline I: Public Safety Areas	Section 11.8

**Table 11-1 NASF Guidelines**

*Source: Perth Airport*

This section also addresses the effect this development will have on flight paths, and the consideration of operational risks and mitigation measures.

## 11.1 Aircraft Noise Exposure Levels

### Air-Based Noise

The *Airports Act* requires that an MDP identifies whether the proposed development will affect noise exposure levels and outlines the airport’s plan for managing aircraft noise within the area. The proposed development will have no impact on the air based or ground-based aircraft noise exposure levels that currently exist on, or off-estate as future land uses that may be accommodated within the Airport North MDP area are not aeronautical in nature.

Although this MDP addresses clearing and site preparation, an assessment of possible future developments against the ANEF has been conducted. As shown in Figure 11-1, the subject site sits entirely within the endorsed 2020 ANEF, with portions within the 20-25, 25-30, 30-35 and +35 contours. When determining aircraft noise attenuation, future buildings will predominantly be classified as ‘commercial’, ‘light industrial’ or ‘other industrial’ given the nature of their use and operation. Australian Standard 2021:2015 (AS2021:2015) provides guidelines for:

- determining the acceptability of aircraft noise intrusion in buildings within ANEF contours of a given aerodrome (see Table 11-2),
- the level of noise reduction measures to be taken, and
- the types of attenuation measures that should be put in place based on the classification of the building.

Under AS2021:2015, commercial land uses are classified as ‘acceptable’ or ‘conditionally acceptable’ in the highest ANEF contours the MDP is subject to (i.e., +35 ANEF). Light and other industrial land-uses will also be considered and are less noise-sensitive. When the site is development-ready, the current ANEF and AS2021 will be considered on a case-by-case basis. Perth Airport will remain committed to land-use planning that ensures noise-sensitive developments are avoided in areas significantly impacted by aircraft noise.

Building type	Forecast Noise Exposure Level		
	Acceptable	Conditionally acceptable	Unacceptable
House, home, unit, flat, caravan park	Less than 20 ANEF	20 to 25 ANEF	Greater than 25 ANEF
Hotel, motel, hostel	Less than 25 ANEF	25 to 30 ANEF	Greater than 30 ANEF
School, university	Less than 20 ANEF	20 to 25 ANEF	Greater than 25 ANEF
Hospital, nursing homes	Less than 20 ANEF	20 to 25 ANEF	Greater than 25 ANEF
Public building	Less than 20 ANEF	20 to 30 ANEF	Greater than 30 ANEF
Commercial building	Less than 25 ANEF	25 to 35 ANEF	Greater than 35 ANEF
Light industrial	Less than 30 ANEF	30 to 40 ANEF	Greater than 40 ANEF
Other industrial	Acceptable in all ANEF zones		

**Table 11-2 ANEF Levels for Building Types**

*Source: Department of Planning, Lands and Heritage*



**Figure 11-1 Airport North MDP in Relation to the ANEF**

*Source: Perth Airport*

Guideline A of the NASF considers N-above contours. Guideline A uses “noise above” contours as its reference, which relate to the specific number of events that a decibel level is exceeded across an average 24-hour period. The N65 (the number of events exceeding 65dBA during an average day) is a ‘noise above’ metric, and is produced because, although the ANEF is a useful tool for land use planning, it is not well suited to conveying aircraft noise exposure to the community, as over-flight frequency and the sound level of single events (typically two factors that determine how a person will react to noise) are not clearly translated by the ANEF system. Perth Airport produces the N65 (refer Figure 11-2), which demonstrates the likely effect of aircraft noise exposure on an area or a development, at the ultimate airfield capacity.

An additional NASF recognised noise metric is the N60, which shows the number of events in excess of 60 decibels that can be expected over an average night (11pm–6am) (refer Figure 11-3). The lower threshold was chosen to reflect people’s increased sensitivity to noise in this period. For any eventual sites that are not expected to operate 24 hours per day this contour is less relevant.

Although the ANEF is the primary planning tool for land use planning, it is important for the N-above contours to be considered both on and off-estate.

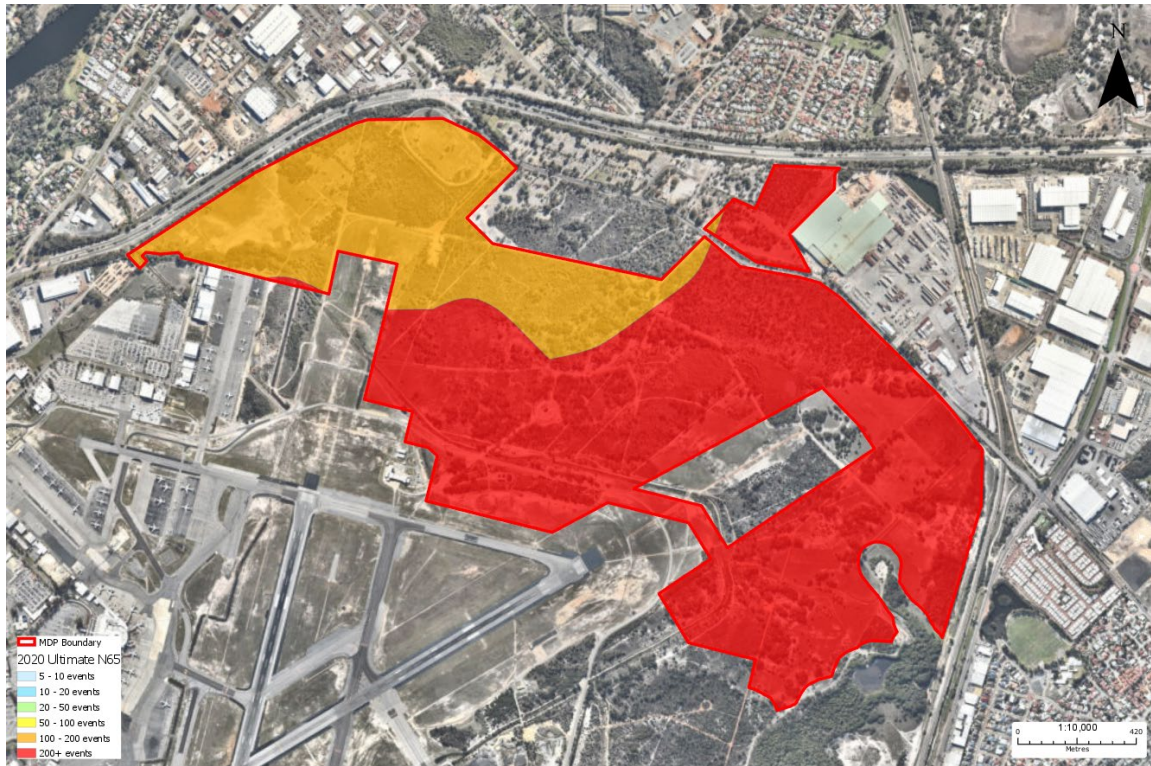


Figure 11-2 Airport North MDP in Relation to the N65

Source: Perth Airport

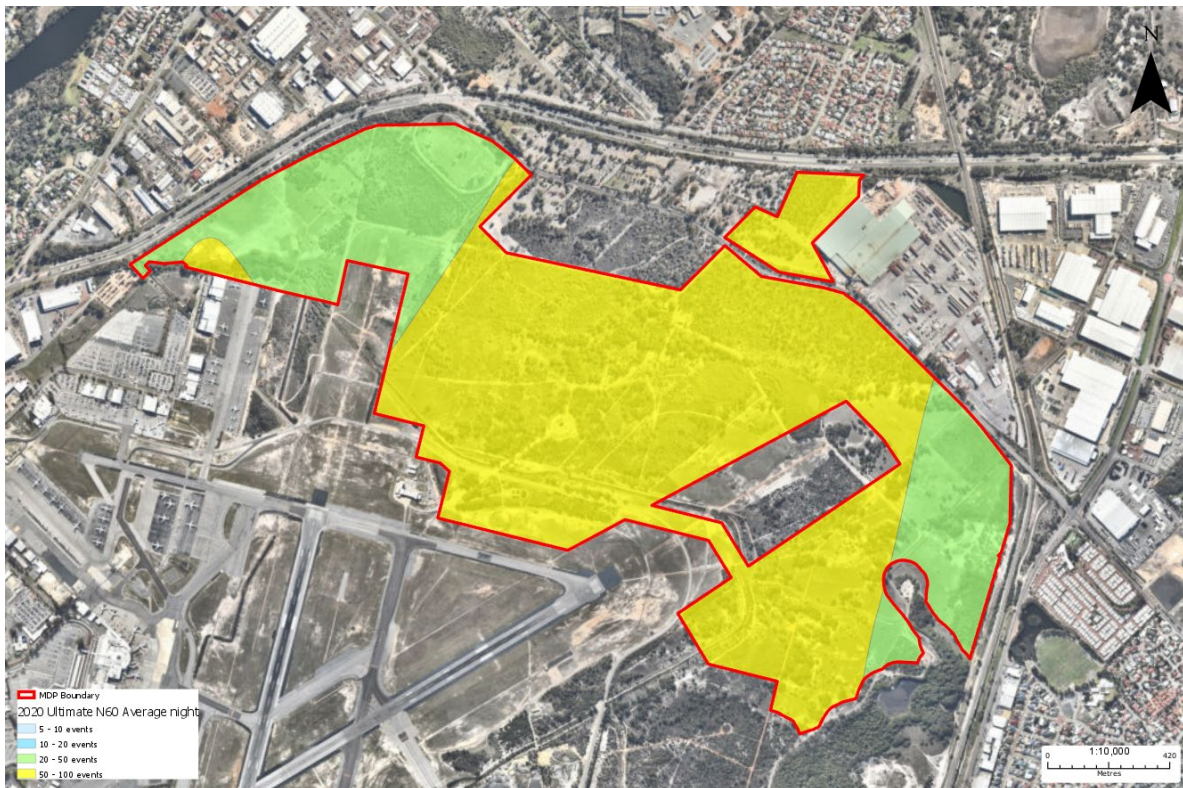


Figure 11-3 Airport North MDP in Relation to the N60 night

Source: Perth Airport

### Ground-Based Noise

Although not mandated by the *Airports Act*, Perth Airport commissioned modelling to determine the impact of ground-based noise on surrounding communities as part of the New Runway Project MDP and this modelling is also relevant to the current MDP. Ground-based noise sources considered included;

- Engine ground running (for testing purposes),
- Aircraft taxiing on both the existing and future taxiway layout, and
- Aircraft use of Auxiliary Power Unit (APU) whilst on existing and future bays.
- There will be no increase in the intensity or frequency of ground-based noise from any of these sources as a result of works associated with this MDP.

## 11.2 Building-Generated Windshear and Turbulence

The proposed development is located within the assessment trigger area for potential building induced windshear as specified in the National Airports Safeguarding Framework (NASF) – Guideline B. The Guideline states that buildings in the assessment trigger area that are more than 35 times their height from the relevant runway centreline (i.e., they do not penetrate the 1:35 surface) will not pose a risk and do not require aerodynamic modelling (refer Figure 11-4). As this MDP only seeks approval for clearing and site preparation, it does not represent any increased windshear risk.

Future developments on the site will be assessed for windshear impacts in accordance with NASF Guideline B to ensure there is no impact on aircraft operations due to building-generated windshear and turbulence. This will be considered for every development on a case-by-case basis with the cumulative impact of all existing developments investigated.



Figure 11-4 Windshear 1:35 surface within the Airport North MDP

Source: Perth Airport

### 11.3 Bird and Animal Hazard Management

Perth Airport is required to monitor and control the presence of birds and animals in accordance with CASA requirements. Perth Airport maintains a vigilant Bird and Animal Hazard Management System to remove and reduce potential high-risk bird species. The clearing and site preparation development in the Airport North MDP area will be subject to the Bird and Animal Hazard Management system.

Future developments within the Airport North MDP area will also be subject to the Bird and Animal Hazard Management system. This will include consultation with members of the Bird and Animal Hazard Management Committee (BAHMAC) in relation to the design and operation of the facilities. The landscaping for development will have regard for aviation safety and not introduce any bird attracting plant species. The overall design of facilities will consider best practice techniques of minimising access for birds and animals, including the use of bird spikes where appropriate. Particular attention will also be given to the roof designs, lighting and waste management on the site. Lighting will be considered in the planning and operation of the site during construction and operation.

### 11.4 Lighting in the Vicinity of the Aerodrome

There are portions of the subject site within Lighting Intensity Control Zones A, B, C and D as specified in the Civil Aviation Safety Authority (CASA) Manual of Standards (MOS) Part 139 and illustrated in Figure 11-5. The maximum intensity of external light sources on the site, measured at three degrees above the horizontal, will be limited to:

- Zone A – 0 Candela
- Zone B – 50 Candela
- Zone C – 150 Candela
- Zone D – 450 Candela

Assessment of lighting for specific future developments are outside the scope of this MDP and will be assessed in subsequent MDPs (where applicable) and through consultation with the relevant authority to ensure there are no impacts to aircraft operations and air traffic control.

Solar panels may be installed on the roofs of future developments within the Airport North MDP area. The panels will be assessed in consultation with CASA at the relevant time.

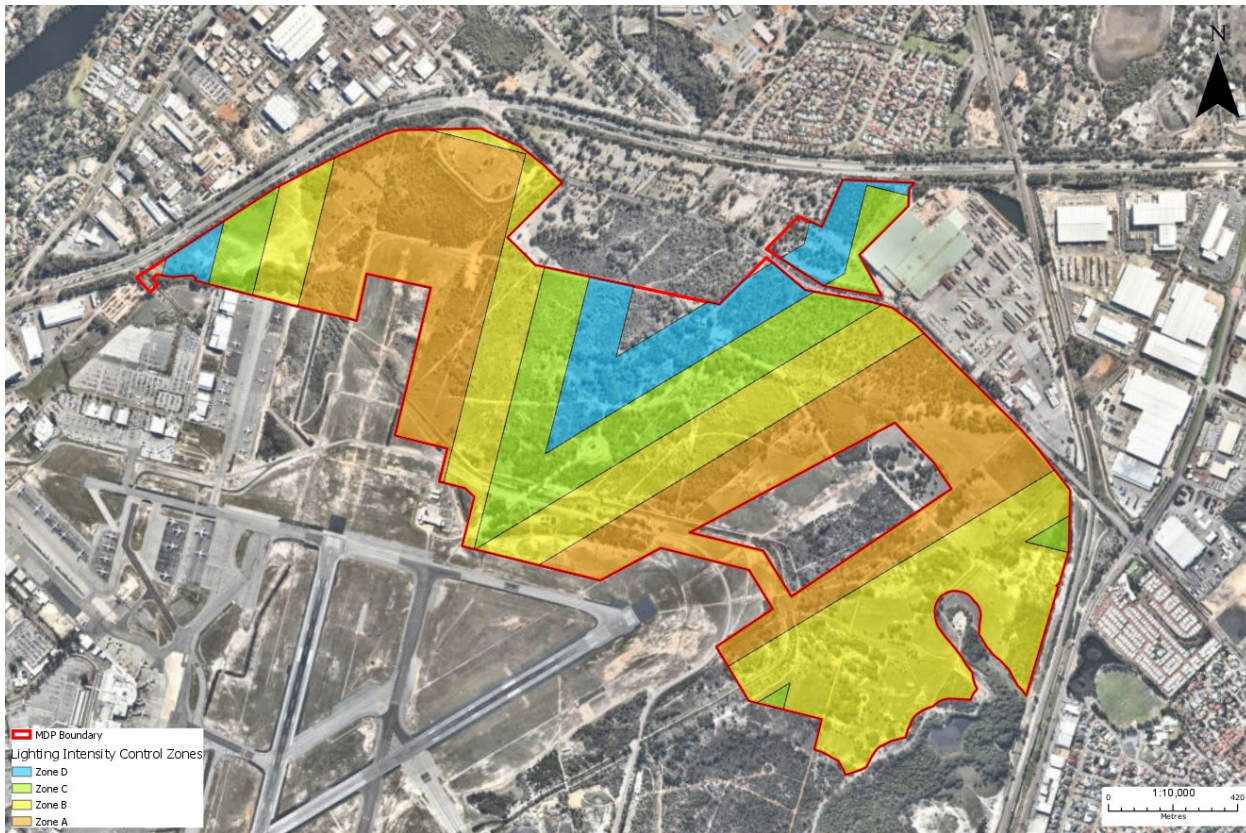


Figure 11-5 Airport North MDP – Lighting Intensity Control Zones

Source: Perth Airport

### 11.5 Effect on Flight Paths

The *Airports Act* requires an MDP to outline if a development could affect flight paths at the airport. Given this MDP is for clearing and site preparation, there will be no impact on flight paths. Future development impacts on flight paths are unlikely given the anticipated nature of future land use types.

### 11.6 Airspace Requirements

Protection of airspace required for Perth Airport’s current and future needs is essential to provide a safe, predictable environment for the arrival and departure of aircraft using Perth Airport in all weather conditions.

The Airports (Protection of Airspace) Regulations 1996 prescribe airspace around airports for protection from activities that could pose a hazard to air navigation.

Prescribed Airspace comprises the airspace above the lower of two sets of defined invisible surfaces above the ground known as the Obstacle Limitation Surfaces (OLS) and Procedures for Air Navigation Services – Aircraft Operations (PANS-OPS) surfaces.

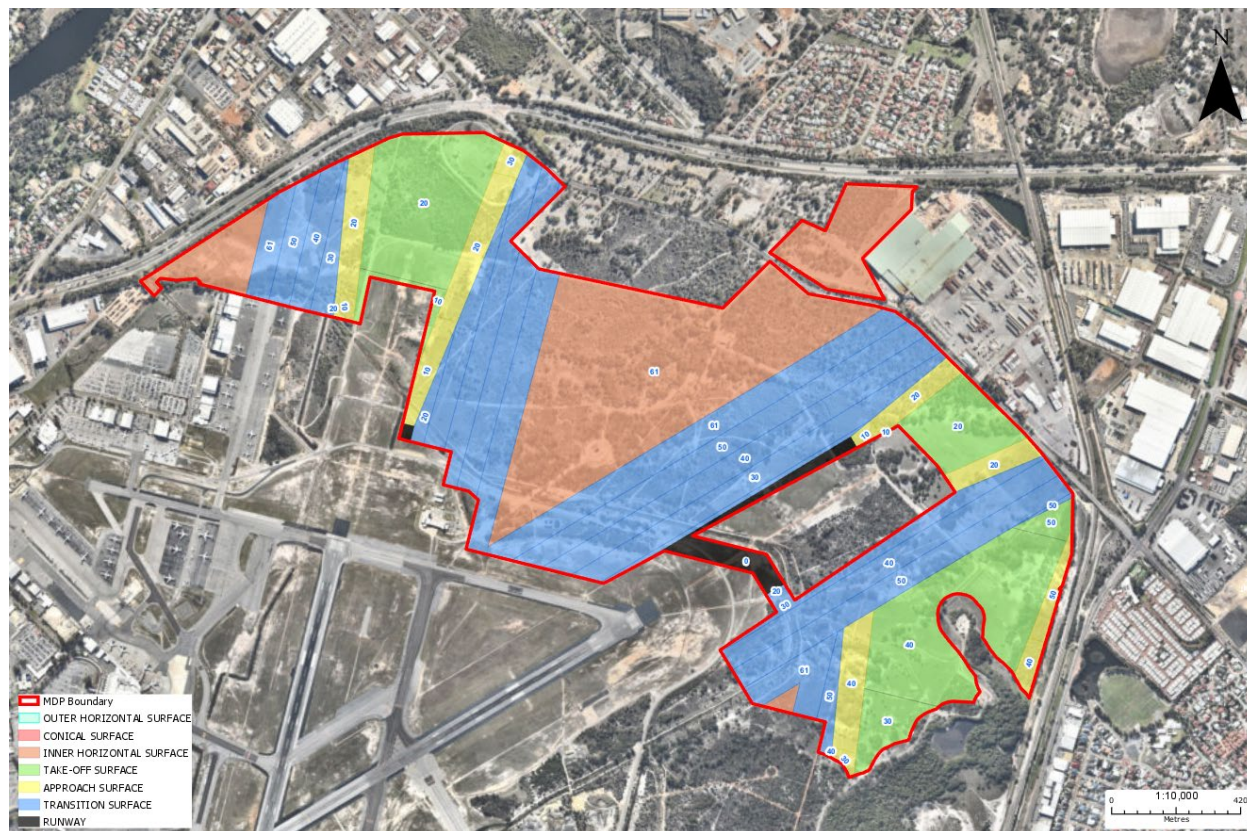
#### Obstacle Limitation Surfaces (OLS)

The volume of airspace above the Obstacle Limitation Surfaces (OLS) is generally the lowest critical surface. These surfaces are designed to provide protection for aircraft flying into or out of the airport when the pilot is flying by sight. Figure 11-6 illustrates the lowest level of the OLS over the portion of the site that is overflown by aircraft. The OLS are very constraining in those portions of the site in close proximity to the extended runway centrelines. In these areas any future developments will be heavily scrutinised. Elsewhere, the OLS slope up to the height of the inner horizontal at 61m AHD.



If any unavoidable controlled activities are required during the clearing and site preparation works, they will be assessed in accordance with the Airport (Protection of Airspace) Regulations 1996, Civil Aviation Safety Regulations 1998 and the Civil Aviation Regulations 1988, ensuring the protection of airspace.

Future developments will be similarly assessed on a case-by-case basis to ensure they do not impact aircraft operations. This is especially critical in those portions of the site where aircraft will overfly in the final stages of approach or initial stages of departure. Although infringements to the OLS are permissible following assessment by Airservices Australia, CASA and the Department of Infrastructure, Transport, Regional Development, Communications and the Arts, Perth Airport typically does not allow the most critical of the surfaces; the take-off or approach to be infringed. Accordingly, it is acknowledged that the airspace constraints in some portions of the site are significant. Any future developments in this area will be planned such that there is no permanent infringement to the take-off, approach or transitional surfaces.



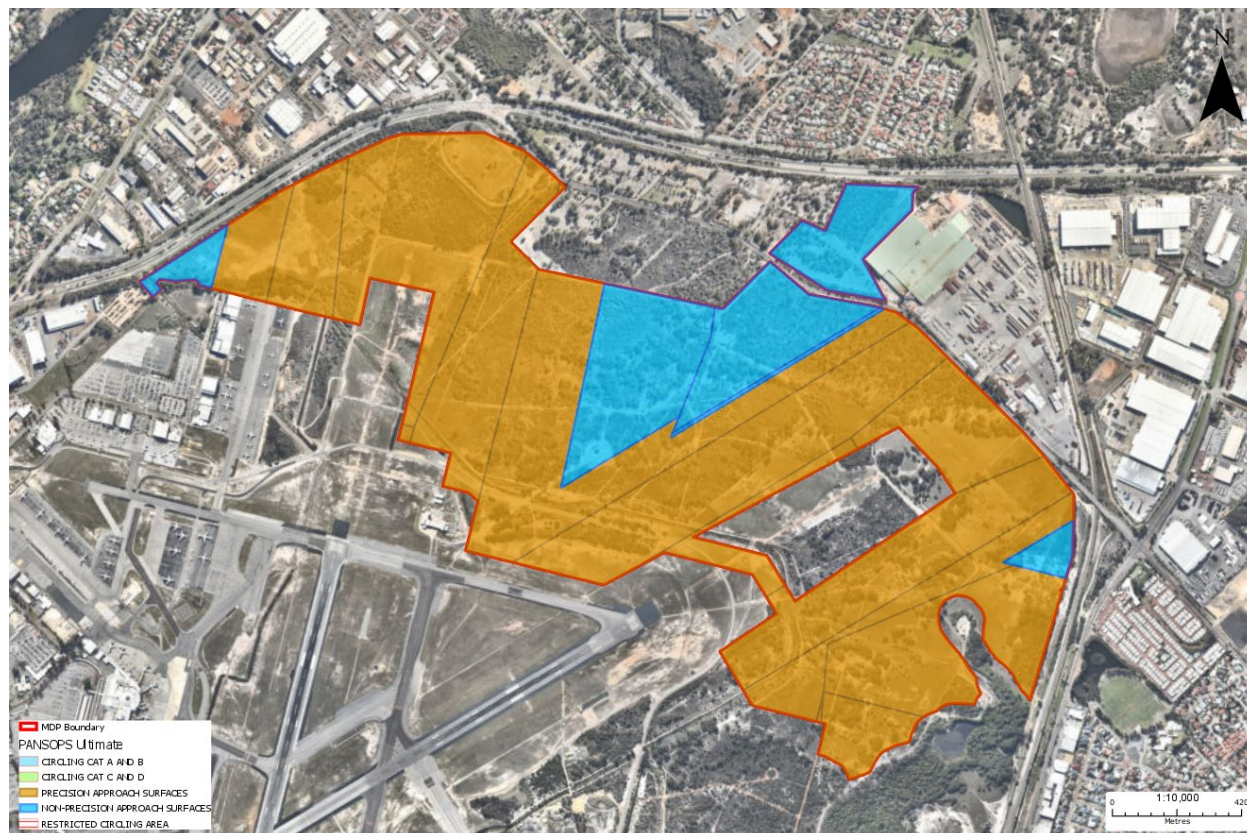
**Figure 11-6 Airport North MDP – Obstacle Limitation Surfaces**

*Source: Perth Airport*

**Procedures for Air Navigation Surfaces – Aircraft Operations (PANS-OPS)**

The combined PANS-OPS surface over the subject site is complex (Figure 11-7), as the extended centrelines of runway 06/24 and 03/21 traverse the site. If any unavoidable controlled activities are required during the clearing and site preparation works they will be assessed in accordance with the Airport (Protection of Airspace) Regulations 1996 and Civil Aviation Regulations 1994.

Subsequent developments on this site will be subject to their own assessment and approvals process including those described in Section 11.6 to protect critical airspace. Perth Airport does not allow developments that intrude into PANSOPS surfaces and will engage with Airservices on individual developments as and when required.



**Figure 11-7 Procedures for Air Navigation Surfaces – Aircraft Operations**

*Source: Perth Airport*

### Crane Activity During Construction

It is unlikely that crane activity will be required for clearing and site preparation works as defined within this MDP. Nevertheless, construction contractors will be required to lodge their applications with Perth Airport’s Protected Airspace Assessment Tool (PAAT) in accordance with Perth Airport’s Airspace Protection Policy. It is at this point that the location and height of the equipment are stipulated by the construction contractor. Any activity that may constitute a ‘Controlled Activity’ will be referred to Airservices Australia, CASA and possibly the Department of Infrastructure, Transport, Regional Development, Communications and the Arts for assessment in accordance with Perth Airport’s established airspace protection processes and the Airports (Protection of Airspace) Regulations 1996.

The proposed development will follow the ‘Process Application’ under the Airports (Protection of Airspace Regulations) 1996 Guidelines for Operations of Federal Airports, as published by the (then) Department of Infrastructure and Regional Development. Perth Airport engages early with contractors with regards to airspace so that construction methodologies can be designed to avoid any infringement of the OLS or PANS-OPS. However, should such an activity be unavoidable it will only be undertaken following consultation with local air traffic control and Perth Airport operations in addition to the referral process described above to minimise any operational impact.

Once controlled activities have been properly assessed, Perth Airport issues a permit to the contractor with any mitigations recommended incorporated as conditions of that approval. The exception is when the approval must be issued by the Department rather than Perth Airport. Contractors are made aware of their responsibilities under these approvals at the various project planning meetings that take place. Perth Airport’s safety officers monitor the airport’s airspace continuously for infringements and are involved in the management and mitigation measures required for some controlled activities. This process applies to all plant or equipment that may infringe airspace, not just cranes.

### Vertical Exhaust Plumes and Efflux

Equipment such as cooling towers or exhaust fans can cause exhaust plumes of moderate or higher turbulence intensity, which have the potential to affect the safety of aircraft operations, such as aircraft in critical stages of flight (periods of high pilot workload) and low-level flying operations. Such plumes are considered controlled activities.

It is unlikely that any vertical exhaust or plumes will be generated as a result of clearing and site preparation. However, as the proposed future land use of the site is industrial it is possible that future land uses may do so. As aircraft will continue to overfly the site at critical stages of approach and departure, any applications such as these will be subject to a high level of scrutiny. Should any of these plumes require assessment under the latest revision Advisory Circular 139-05 Plume Rise Assessments, Perth Airport will ensure the referral is made to CASA in accordance with this document.

## 11.7 Protection of Communication, Navigational and Surveillance Equipment

There are several radio navigation aids and communication installations that provide guidance to aircraft and which are operated by Airservices Australia, including Distance Measuring Equipment (DME), VHF omnidirectional range radio (VOR), Advanced Surface Movement Guidance and Control System (ASMGCS) and Instrument Landing Systems (ILS) (glide path and localiser), Terminal Area Radar (TAR) as well as various radio and microwave communications systems. These systems rely on the transmission of radio waves that must be protected from any structure or obstacles that could cause signal refraction or interference.

The known navigation aid clearances were taken into consideration as part of the assessment conducted for this MDP. Perth Airport will continue to engage with Airservices Australia during the clearing and site preparation phase (subject to approval), as well as in the planning of future developments to ensure there is no negative impact on the navigational equipment used.

Perth Airport notes that there may be impacts for future developments within this site and these impacts will be addressed in future MDPs where required once detail, including design, is better understood.

## 11.8 Public Safety Areas

Public Safety Areas (PSA) are areas of land at the ends of the runways, identified by quantifiable risk contours, within which development is restricted in order to control the number of people on the ground at risk of death or injury in the event of an aircraft accident on take-off or landing. PSA risk contours are developed based on runway use statistics correlated against international crash data and provide an objective basis for precautionary planning decisions in those areas of highest risk.

Perth Airport has adopted the United Kingdom (UK) approach to PSAs, as referenced in NASF Guideline I, to assist with assessing appropriate developments.

Under the UK model, the PSA is generally divided into two areas representing 1-in-10,000 and 1-in-100,000 probabilities of being killed or injured per year from an aircraft accident. Although the boundary of a PSA generally corresponds with the 1-in-100,000 contours, the predicted level of risk within this area may be higher. The model considers the maximum tolerable level of individual third-party risk of being killed as a result of an aircraft accident as 1-in-10,000 per year. Any occupied residential properties, or commercial and industrial properties occupied as normal all-day workplaces, within the 1-in-10,000 are not recommended.

In the remaining PSA between the 1-in-10,000 and 1-in-100,000 individual risk contours, developments which involve a low density of people working or congregating is considered acceptable. For example, this may include car parking, open storage or certain types of warehouse development.

Perth Airport has developed 1-in-10,000 and 1-in-100,000 PSA contours that reflect the ultimate development and demand of the airport (refer Figure 11-8). Future developments within the Airport North MDP area will be planned with the PSA contours taken into consideration in accordance with NASF Guideline I to ensure no unacceptable safety risk is created.



**Figure 11-8 Public Safety Areas**

*Source: Perth Airport*

## 11.9 Airside Access

Access will be maintained to airside facilities such as the Aviation Rescue Fire Fighting (ARFF) station. Whether alternative arrangements are agreed (e.g. new access gates provided) or existing access is maintained, will be determined in consultation with relevant stakeholders.

## 11.10 Consultation on Operational Risks and Mitigation Measures

Perth Airport is committed to effective engagement and consultation with stakeholders that are impacted by the development. Perth Airport will continue to work with Airservices Australia to ensure its assets and infrastructure are not detrimentally impacted. The design of the elements included in this MDP development will meet CASA and Airservices Australia requirements.

# 12 Implementation

Subsequent to the consideration and of the Draft MDP by the Commonwealth Minister, Perth Airport will submit a Final MDP within the statutory timeframe, subject to approval. In addition, the following approval steps are required for specific development within the approved Final MDP.

## 12.1 Development Application

A Development Application is required for all major works within the airport estate. The Development Application must include plans and relevant information for the proposed development. Perth Airport reviews the application to ensure that the proposed construction is consistent with any relevant Perth Airport Design Guidelines, Lease Agreement, the Final Airport Master Plan and any applicable MDP. An approval issued by Perth Airport may contain conditions that are required to be complied with. Any requested changes must be made prior to submitting the Perth Airport Consent and Airport Building Controller applications.

## 12.2 Perth Airport Consent

All building activity within the Perth Airport estate requires Perth Airport Consent assessment and approval. Perth Airport assesses the proposed activity with regards to:

- Occupational Safety and Health,
- environmental and heritage impacts,
- protected airspace,
- noise impacts,
- utilities and services,
- choice of building materials,
- public access, and
- consistency with the Final Master Plan, relevant Lease Agreement and/or MDP.

The approved Perth Airport Consent may contain conditions that require compliance.

## 12.3 Airport Building Controller

An Airport Building Controller (ABC) and Airport Environment Officer (AEO) are appointed by the Department of Infrastructure, Transport, Regional Development, Communications and the Arts to administer the building approvals required under the *Airports Act* and the Airports (Building Control) Regulations 1996.

The Regulations require a Building Permit to be obtained from the ABC (with advice from the AEO) for all developments within the Perth Airport estate.

The ABC assesses the activity under the *Airports Act* and Regulations, National Construction Codes and applicable Australian Standards. The ABC will also consider any conditions of approval of the Perth Airport Consent.

## 12.4 Construction Environmental Management Plan

As detailed in Part B MDP Section 12, a Construction Environmental Management Plan (CEMP) will be reviewed approved, administered and monitored via the Airports (Environment Protection) Regulations 1997 by the Airport Environment Officer. The Plan will address design, construction and operational phases of the project and include the management measures outlined throughout this MDP, input from key technical specialists and conditions of approval (subject to approval). Comment will be sought from and review periods provided to the Airport Environment Officer to enable CEMP assessment.

## **12.5 Part 13 Permit Under the EPBC Act**

Under Part 13 of the EPBC Act, a permit to clear threatened species and ecological communities must be obtained from the Department of Climate Change, Energy, the Environment and Water prior to clearing any Matters of National Environmental Significance. This process will be completed in parallel to this MDP public comment and approvals process.

# 13 Consultation

One of the objectives of the *Airports Act* is to ensure an appropriate level of vigilance, transparency and scrutiny of airport planning, so that the public interest requirements are met as the airport's development progresses. Successful development of Perth Airport therefore depends on productive interactions with a wide range of stakeholders who are impacted by and who may impact the development of the airport, including clearing and site preparation of the Airport North MDP area.

In October 2012, the (then) Department of Infrastructure and Transport released the 'Airport Development Consultation Guidelines' to provide guidance for consultation activities undertaken as part of the MDP process. According to these guidelines, an effective consultation program ensures that a "proposal has been fully explored, concerns identified, and alternatives considered". However, it "does not necessarily mean that all interested parties will be satisfied with the outcome".

Further, the guidelines note that the goals of a consultation strategy include:

- Information – to inform stakeholders about on-airport land use, planning and developments; get input on alternative approaches and options; who will be responsible for making decisions; and what the airport-lessee company has done, is doing and plans to do,
- Airport-lessee company – to build and maintain transparent and stakeholder-focused relationships,
- Legal – to meet the airport-lessee company's legal and regulatory obligations, and
- Process – to provide stakeholders with the opportunity to influence the views of key decision makers.

## 13.1 Stakeholder Consultation

Perth Airport is committed to effective and transparent engagement and employs a range of ongoing consultation and education mechanisms to:

- Inform stakeholders and the community about on-airport land use planning, developments and potential impacts,
- Seek input on alternative approaches and options,
- Maintain transparency, accountability and stakeholder-focused relationships,
- Provide feedback opportunities and one-on-one information sessions,
- Provide a conduit for information exchange between Perth Airport and key stakeholders, including the community,
- Meet legal and regulatory responsibilities, and
- Provide stakeholders with the opportunity to influence the future of Perth Airport.

Part of Perth Airport's ongoing consultation process with stakeholders include the airport's facilitation of, and involvement in, various forums. These forums enable Perth Airport to engage with Commonwealth, State and Local Government authorities, airlines and the community.

Perth Airport currently engages regularly through the following forums and each group will be involved in (or has already been involved in) consultation activities for the Airport North MDP.

### Perth Airport Planning Coordination Forum

The Perth Airport Planning Coordination Forum (PCF) aims to foster high level strategic discussions on a quarterly basis between Perth Airport and Commonwealth, State and Local Government representatives to promote better planning outcomes in relation to airport developments in the context of the broader urban setting. PCF representatives include Airservices Australia, WA Department of Planning, Lands and Heritage, WA Department of Transport, Main Roads WA, Public Transport Authority, City of Belmont, City of Swan, City of Kalamunda, Chamber of Minerals and Energy WA and the Commonwealth Department of Infrastructure, Transport, Regional Development, Communications and the Arts.

### Perth Airports Municipalities Group

Perth Airport actively participates in the Perth Airports Municipalities Group (PAMG) which includes 13 Local Government authorities whose communities have an interest in Perth and Jandakot Airports (Local Government Authorities of Armadale, Bassendean, Bayswater, Belmont, Canning, Cockburn, Gosnells, Kalamunda, Melville, Mundaring, South Perth, Swan and Victoria Park). The group meets quarterly to discuss matters which are of interest to the community such as aircraft noise, flight paths, and off-airport and on-airport development. The PAMG has proven to be an important means of engagement with local communities for more than 30 years. The PAMG has and will continue to be consulted regarding the Airport North MDP. Further information on the PAMG can be found at [pamg.com.au](http://pamg.com.au).

### Perth Airport Community Forum

The Perth Airport Community Forum (PACF), previously referred to as the Community Aviation Consultation Group, is an event held quarterly at various PAMG Local Government venues. The PACF provides the opportunity for members of the public to meet with representatives from Perth Airport and invited guests such as Airservices Australia and the Aircraft Noise Ombudsman.

The PACF provides members of the public with the opportunity to raise and discuss issues relating to the operation and development of the airport and MDP's, such as for Airport North.

The forum's purpose is to recognise and enhance:

- the long-term sustainability and growth of Perth Airport,
- Perth Airport's reputation as a responsible corporate citizen within the local and broader community, and
- Perth Airport's role as a major economic contributor for Western Australia.

Notification of PACF events, including date, time and location, are generally advertised in the West Australian or community newspapers, through Perth Airport social media, and the PAMG website, [pamg.com.au](http://pamg.com.au).

The PACF model of engagement is being reviewed and a new community engagement format is anticipated to be in operation in December 2022 with information to be available on the Perth Airport website.

### Perth Airport Consultative Environment and Sustainability Group

The Perth Airport Consultative Environment and Sustainability Group (ACES) meets quarterly and is comprised of representatives from Commonwealth, State and Local Governments as well as airport tenants, conservation groups, catchment groups and community members. The Group discusses topics related to the environmental management of the estate. It is also an opportunity for tenants to learn and work together to minimise the environmental impacts of their operations and to facilitate improved environmental outcomes.



### Partnership Agreement Group

The Partnership Agreement Group (PAG) was established in 2009 to facilitate active engagement between Perth Airport and Traditional Custodians. The PAG is a high-level steering group focussed on the cultural heritage management and ongoing development of the airport. This is further discussed in Part B report – Environment and Heritage Assessment.

## 13.2 Exposure Draft Consultation

The Exposure Draft MDP was submitted to the following organisations for comment with the offer of a presentation as requested where clarification or further detail are required.

- Commonwealth Government agencies, via Department of Infrastructure, Transport, Regional Development, Communications and the Arts
- Airservices Australia,
- Civil Aviation Safety Authority, and
- Department of Climate Change, Energy, the Environment and Water.
- State Government agencies, via Department of Premier and Cabinet
- Department of Biodiversity, Conservation and Attractions,
- Department of Water and Environmental Regulation,
- Department of Planning, Lands and Heritage,
- Department of Transport (Main Roads WA and Public Transport Authority),
- Department of Jobs, Tourism, Science and Innovation,
- Environmental Protection Authority, and
- Western Australian Planning Commission.
- Local Government authorities
  - City of Belmont,
  - City of Swan, and
  - City of Kalamunda.

A second Exposure Draft was also prepared for Commonwealth consideration prior to release of this Preliminary Draft MDP.

### 13.3 Release of Preliminary Draft Major Development Plan for Public Comment

Following the receipt of Exposure Draft comments from the above organisations, Perth Airport considered all comments and produced a Preliminary Draft MDP (this document) for the 60 business day public comment period required in accordance with the Airports Act. Written public comment submissions can be made online at [perthairport.com.au/major development plans](http://perthairport.com.au/major-development-plans) or sent to the address below between Friday 2 December 2022 and 5pm (WST) Thursday 2 March 2023:

Major Development Plan

Perth Airport Pty Ltd

PO Box 6

CLOVERDALE WA 6985

Queries regarding this Preliminary Draft Major Development Plan can also be directed to telephone 08 9478 8888 or via email [mdp@perthairport.com.au](mailto:mdp@perthairport.com.au)

### 13.4 Draft Major Development Plan

Following public consultation, all submissions received will be given 'due regard' with changes incorporated into the Draft MDP where applicable. A Supplementary Report will also be prepared as per Section 79 of the *Airports Act*. The Supplementary Report will include the following:

- A copy of written submissions received during the public comment period,
- A written certificate signed on behalf of Perth Airport, containing:
  - A list of names and organisations that provided written comments to the MDP,
  - A summary of the comments received,
  - Evidence that Perth Airport has given due regard to those comments in preparing the Draft MDP, and
  - Setting out such other information (if any) about those comments as is specified in the regulations.

### 13.5 Publication of Final Major Development Plan

In accordance with Section 86 of the *Airports Act*, within 50 business days of Ministerial approval of the Draft MDP, Perth Airport will undertake the following notifications:

- Publish a newspaper notice advising that the MDP has been approved,
- Make copies of the plan available for inspection or purchase at Perth Airport, and
- Make a copy of the approved MDP available on the Perth Airport website, [perthairport.com.au](http://perthairport.com.au).

## 14 Conclusion

This Major Development Plan has been prepared by Perth Airport for the purpose of seeking Commonwealth approval for clearing and site preparation works within the Airport North project area which comprises land surplus to long-term aviation needs. The proposed scope of works in Airport North as part of the approval currently sought include vegetation clearing and site preparation, earthworks, service diversions and installations, road network construction, and landscaping and signage.

These works enabling future development of the Airport North MDP area are consistent with both long-term State Planning objectives for Western Australia and the planning for the localities adjacent to the airport estate. The proposed works are also consistent with the approved Perth Airport 2020 Master Plan, including the approved Land Use Plan.

The MDP proposal maximises land use efficiency within the metropolitan region by delivering much needed and well-connected industrial land (particularly large lots) in a central location to support Perth's continued growth into the future. It is anticipated that the works associated with this MDP will inject over \$550 million into the economy and provide over 1,600 full-time equivalent jobs (direct and indirect). The proposed MDP works will facilitate the future development of the MDP area, where further significant employment and economic benefits can be realised, and sustained for the duration of operation of future land uses.

An assessment of the proposed works on aviation activity concluded negligible impact and Perth Airport is committed to continued effective engagement and consultation with stakeholders. Furthermore, the environmental assessment undertaken investigated impacts to geology and soil, surface water and groundwater, flora and vegetation, fauna, wetlands and heritage. Perth Airport are in discussion with the Commonwealth Government for an appropriate offset framework to be applied within the Perth Airport estate.

Before Perth Airport can proceed with the proposed works, it is required under Section 89(1)(h) of the *Airports Act* to prepare an MDP for Ministerial approval. Perth Airport is also required to undertake 60 business days of public consultation, with due regard given to all submissions received. Written public submissions can be made online at [perthairport.com.au/major-development-plans](http://perthairport.com.au/major-development-plans) or sent to the address below between Friday 2 December 2022 and 5pm (WST) Thursday 2 March 2023:

Major Development Plan  
Perth Airport Pty Ltd  
PO Box 6  
CLOVERDALE WA 6985

Queries regarding this Preliminary Draft Major Development Plan can also be directed to telephone 08 9478 8888 or via email [mdp@perthairport.com.au](mailto:mdp@perthairport.com.au)

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# 16 Glossary and Acronyms

ABC	Airport Building Controller
ACES	Airport Consultative Environment and Sustainability Group
AEO	Airport Environment Officer
AHD	Australian Height Datum
Airports Act	Airports Act 1996
ANEF	Australian Noise Exposure Forecast
AS	Australian Standard
AS2021:2015	Australian Standard 2021:2015
BC Act	Western Australian Biodiversity Conservation Act 2016
CASA	Civil Aviation Safety Authority
CBD	Central Business District
CCW	Conservation Category Wetland
CEMP	Construction Management Plan
CNS	Communications Navigation and Surveillance
DA6	Development Area 6
DAWE	Department of Agriculture, Water and the Environment
DBCA	Department of Biodiversity, Conservation and Attractions
DME	Distance Measuring Equipment
DoE	Department of Energy
DPLH	Department of Planning, Lands and Heritage
DWER	Department of Water and Environmental Regulation
EMP	Environmental Management Plan
EPA	Environmental Protection Authority
EPBC	Environment Protection and Biodiversity Conservation
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
FAL	Forrestfield – Airport Rail Link
FFIC3	Future Fund Investment Company No.3 Pty Ltd
FIFO	Fly-in fly-out
GSP	Gross State Product
Heritage Act	Heritage of Western Australia Act 1990
ICAO	International Civil Aviation Organisation
ILS	Instrument Landing System
ITE	Institute of Transportation Engineers
LPS	Local Planning Scheme
LPS 15	Local Planning Scheme No. 15
LPS 17	Local Planning Scheme No. 17



LPS 3	Local Planning Scheme No. 3
MDP	Major Development Plan
MOS	Manual of Standards
MRS	Metropolitan Region Scheme
NASF	National Airports Safeguarding Framework
OLS	Obstacle Limitation Surfaces
PACF	Perth Airport Community Forum
PADG	Perth Airport Development Group Pty Ltd
PAG	Partnership Agreement Group
PAMG	Perth Airports Municipalities Group
PANS-OPS	Procedures for Air Navigation Services – Aircraft Operations
PAPF	Utilities of Australia Pty Ltd ATF Perth Airport Property Fund
PAPL	Perth Airport Proprietary Limited
PCF	Perth Airport Planning Coordination Forum
PFAS	Per and Poly Fluoro Alkyl Substances
PFOS	Per Fluorooctane Sulphonate
PSA	Public Safety Areas
PTA	Public Transport Authority
PUDO	Pick Up and Drop Off
Qantas	Queensland and Northern Territory Aerial Services Ltd
RAAF	Royal Australian Air Force
RPT	Regular Passenger Transport
SPP	State Planning Policy
SPP 4.2	State Planning Policy 4.2 - Activity Centres for Perth and Peel
SPP 5.1	State Planning Policy 5.1 – Land Use Planning in the Vicinity of Perth Airport
T1	Terminal 1
T2	Terminal 2
T3	Terminal 3
T4	Terminal 4
TFI	Tourism Futures International
TNTC	The Northern Trust Company
UTA	Utilities Trust of Australia
VOR	VHF omnidirectional range Radio
VPD	Vehicles per day
VPH	Vehicle per hour
WAPC	Western Australian Planning Commission

# 17 Appendix A: History of Perth Airport

There is a long and rich history of activity on the Perth Airport estate, which provide a foundation to the current airport development objectives and proposals, such as those contained within this MDP. In recognition of this, it is important to understand the history of the Perth Airport estate and current corporate objectives, as summarised below.

## Aboriginal History

The land on which the estate is located forms part of the traditional network of communication routes, meeting places and camping sites of the Noongar people. Noongar groups traditionally lived throughout the south-west corner of Western Australia. As the Traditional Custodians, the Noongar people maintain a strong interest in the airport and its operations. A number of archaeological and ethnographic sites have been identified on the airport estate – refer Part B report – Environment and Heritage Assessment.

## Early Airport Development History and Development Objectives

The first recorded flight in Western Australia occurred in 1911, when Joseph Hammond flew a biplane from a makeshift airstrip at the Belmont Racecourse over the city of Perth and Kings Park. In 1919, Norman Brearley started operating demonstration flights and joy flights from the Western Australian Cricket Association ground in East Perth, before moving in 1920 to Langley Park, located along the Swan River adjacent to the Perth city centre. In 1925, Norman Brearley relocated his fledgling airline, Western Australian Airlines, to the newly constructed Maylands Aerodrome.

Maylands Aerodrome quickly grew with increasing air traffic movements and the development of larger aircraft. To accommodate growth, the Dunreath Golf Course and market garden land was acquired in 1938 as the site of the new Guildford Aerodrome. In early 1942, this land was converted to a Royal Australian Air Force (RAAF) base and the first runway (the now closed runway 01/19), designed for RAAF aircraft, was built in 1943 by Western Australia's Main Roads Department. A second runway (now the cross runway 06/24) was laid down a year later. As Maylands Aerodrome was too small for the larger passenger aircraft being used, in 1944 the Government agreed to allow Australian National Airways and the Queensland and Northern Territory Aerial Services Ltd (Qantas) to share Guildford Aerodrome with the RAAF. Guildford Aerodrome continued to operate as a RAAF base until 1945. A third runway (now the main runway 03/21) was constructed in 1949.

In 1952, Guildford Aerodrome was officially renamed Perth International Airport and facilitated its first international flight to South Africa. In the same year, the first international terminal was built with second-hand wartime materials at a cost of £180,000.

In 1962, the main domestic airline partners moved out of their individual hangars and into the first combined domestic and international terminal, which was opened to coincide with that year's British Empire and Commonwealth Games hosted by Perth.

The main runway was extended and upgraded in 1966 to cater for larger jet aircraft such as the Boeing 707. By the time Qantas flew the first Boeing 747 (Jumbo) flight to Perth on 3 September 1971, the facilities at Perth Airport were battling to cope with the demand for domestic and international flights.

## Airport Expansion

In 1973, a Joint State and Commonwealth Working Group completed a study which confirmed that the Perth Airport site would continue as the sole RPT airport for the Perth region. A final report on the aviation requirements for the Perth Region was released by the Commonwealth Department of Transport in 1979. The working group concluded that Perth Airport should be developed as the primary airport for the Perth metropolitan region and that it be based on a parallel runway system. Following the working group's recommendations, additional land was acquired to the east to accommodate the long-term expansion of the airport, including a proposed parallel runway system.

During this period, the main runway was also extended by 300 metres to its current length of 3,444 metres.

Formalising the planning from the Joint Working Group, the Commonwealth Department of Aviation released Perth Airport's first public Master Plan in 1985. The Master Plan 1985 outlined:

- The planning concept for consolidation of terminals into a central location,
- The alignment and location for a parallel runway system, comprising the existing main runway and a new runway,
- An aircraft noise footprint, in the form of an Australian Noise Exposure Forecast (ANEF), for the future runway infrastructure options, and

The need to ensure appropriate land-use development around the airport to minimise the impact of future operations on surrounding communities.

On 25 October 1986, Prime Minister Bob Hawke opened a new \$60 million International Terminal Complex (Terminal 1) on the eastern side of the airport, along with a new Air Traffic Control tower.

In the late 1980's, Qantas constructed the now T4 and Ansett Australia constructed the now T3 for their individual domestic operations on the western side of the estate.

The Federal Airports Corporation (FAC) was formed in 1988 to manage Australia's largest and busiest airports, including Perth Airport, as a self-funding commercial entity. In 1992, FAC continued compulsory acquisition of land for the long-term development of the Perth Airport site.

# **18 Appendix B: Australian Government Infrastructure Investment Program: Perth Airport Precinct**



**Australian Government**

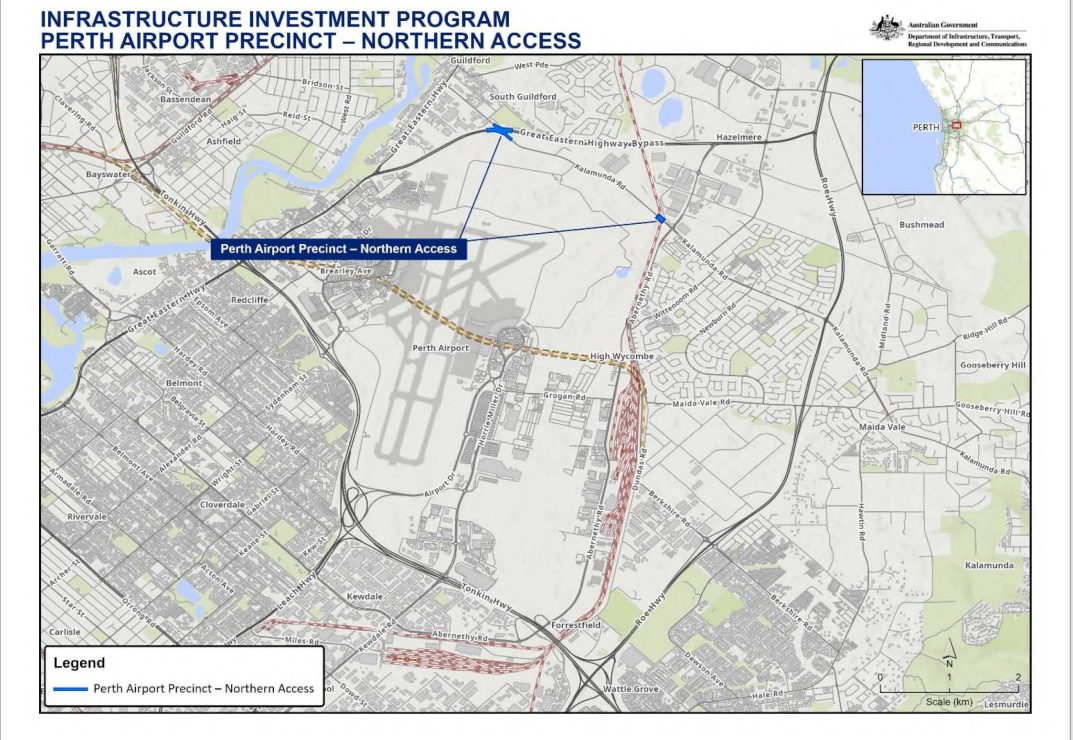
**BUILDING OUR FUTURE**



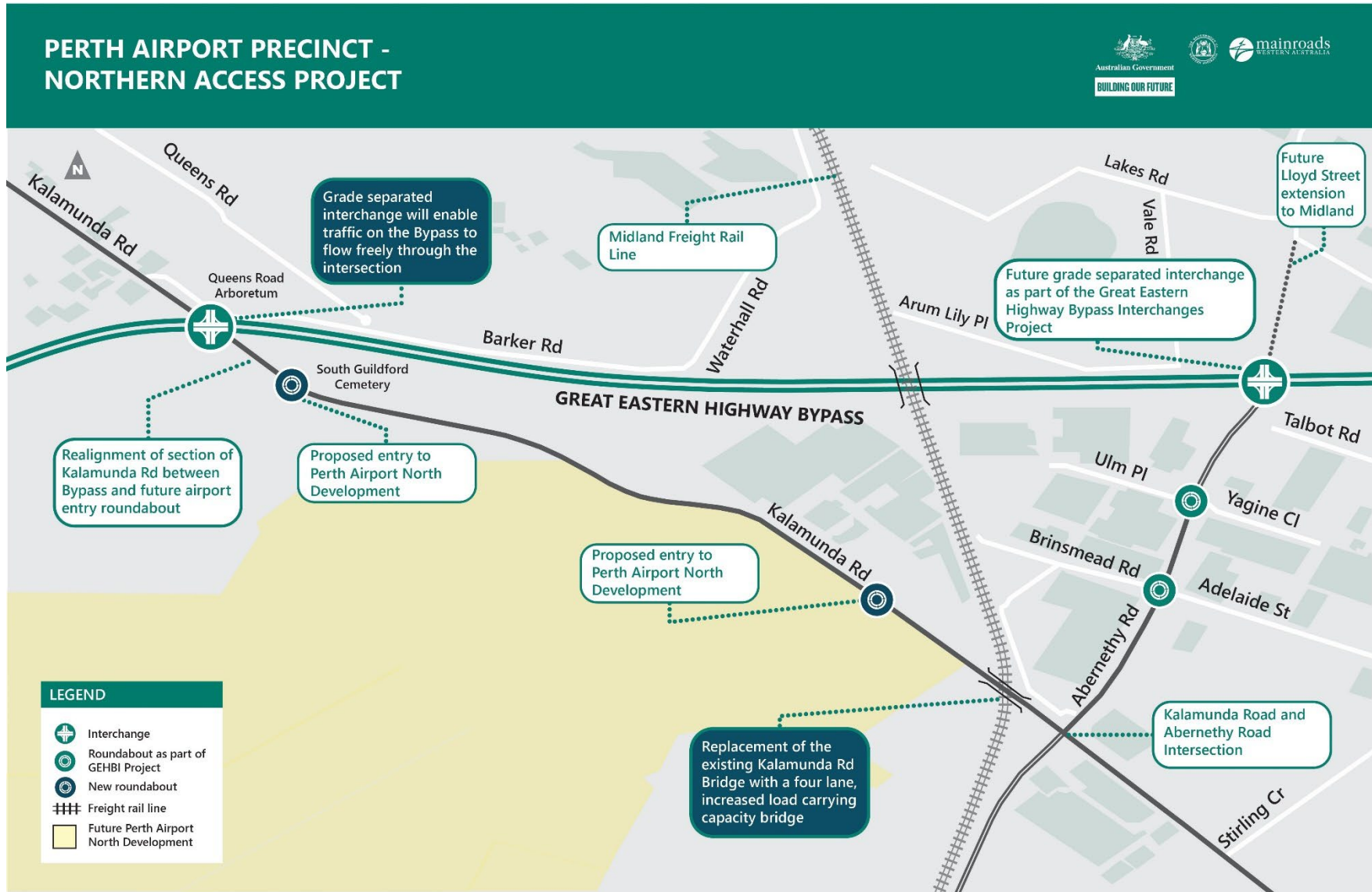
## Infrastructure Investment Program

Perth Airport Precinct - Northern Access  
Western Australia

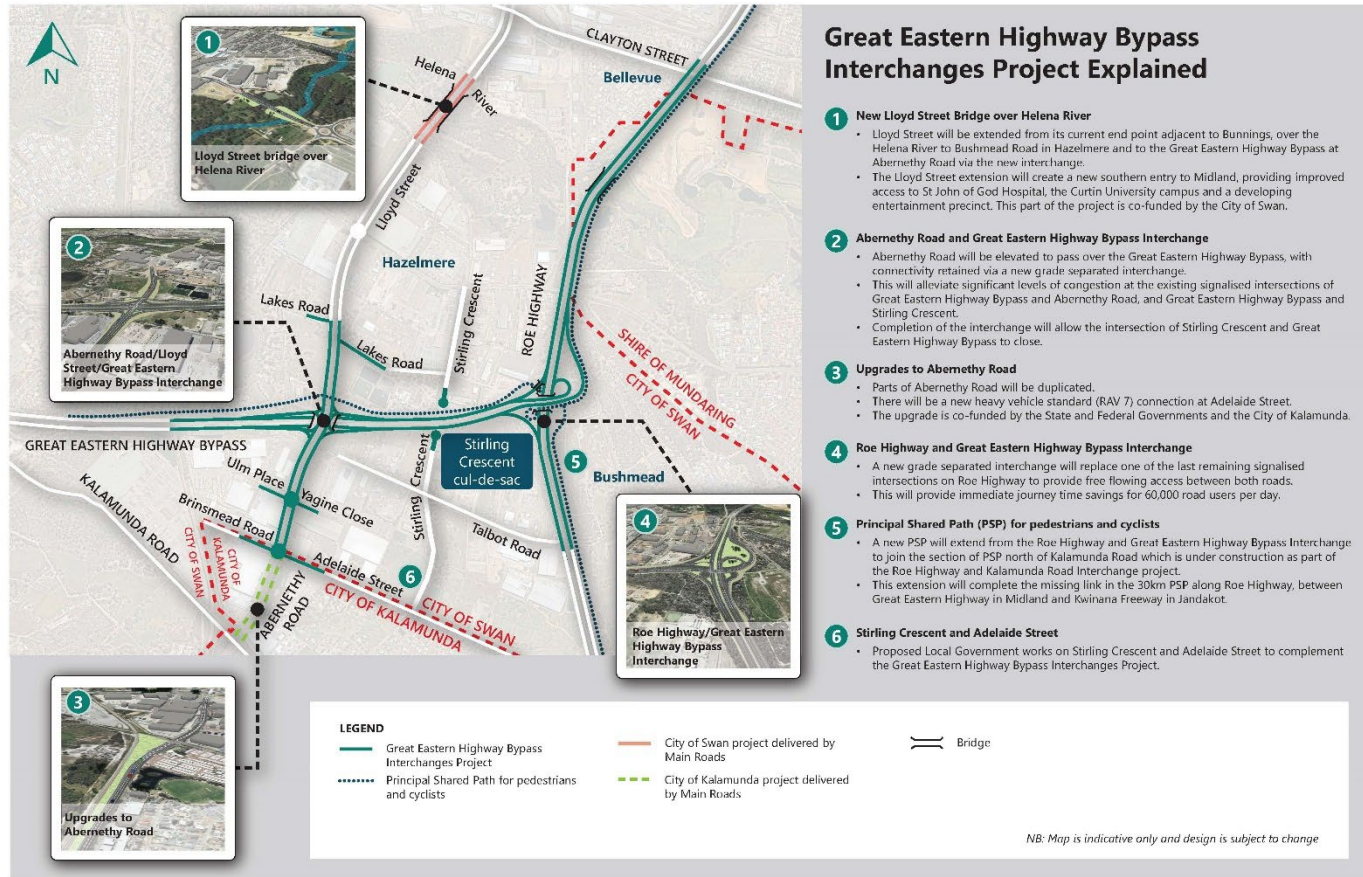
<p><b>Australian Government funding: \$85.0 million</b></p> <p>Western Australian Government contribution: \$85.0 million <b>Total: \$170.0 million</b></p> <p><b>Project description</b></p> <p>The project will construct a grade separated interchange at Great Eastern Highway Bypass and Kalamunda Road and replace the existing load limited Kalamunda Road Bridge over rail with a new four lane bridge with full carrying capacity.</p>	<p><b>Jobs supported</b></p> <ul style="list-style-type: none"> <li>This project is expected to support 310 direct and indirect jobs based on Australian Government estimates</li> </ul> <p><b>Project benefits</b></p> <ul style="list-style-type: none"> <li>Improved road safety for all road users</li> <li>Reduced congestion and improved travel times</li> <li>Improved efficiency and network reliability</li> <li>Improved freight productivity</li> </ul> <p><b>Project timelines</b></p> <ul style="list-style-type: none"> <li>This project is expected to start construction in late 2023 and be finished construction by mid 2026</li> </ul>
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Budget 2021-22



# 19 Appendix C: Greater Connect Alliance – Great Eastern Highway Bypass Interchanges Project



## 20 Appendix D: Consistency with Airports Act 1996

		SECTION
91 (1)	A major development plan, or a draft of such a plan, must set out:	
(a)	the airport-lessee company's objectives for the development; and	Section 3 Section 4
(b)	the airport-lessee company's assessment of the extent to which the future needs of civil aviation users of the airport, and other users of the airport, will be met by the development; and	Section 8
(c)	a detailed outline of the development; and	Section 3 Section 5
(ca)	whether or not the development is consistent with the airport lease for the airport; and	Section 6
(d)	if a final master plan for the airport is in force—whether or not the development is consistent with the final master plan; and	Section 6
(e)	if the development could affect noise exposure levels at the airport—the effect that the development would be likely to have on those levels; and	Section 11
(ea)	if the development could affect flight paths at the airport—the effect that the development would be likely to have on those flight paths; and	Section 11
(f)	the airport-lessee company's plans, developed following consultations with the airlines that use the airport, local government bodies in the vicinity of the airport and—if the airport is a joint user airport—the Department of Defence, for managing aircraft noise intrusion in areas forecast to be subject to exposure above the significant ANEF levels; and	Section 11
(g)	an outline of the approvals that the airport-lessee company, or any other person, has sought, is seeking or proposes to seek under Division 5 or Part 12 in respect of elements of the development; and	Section 2
(ga)	the likely effect of the proposed development that are set out in the major development plan, or the draft of the major development plan, on:	
(i)	traffic flows at the airport and surrounding the airport; and	Section 9
(ii)	employment levels at the airport; and	Section 8
(iii)	the local and regional economy and community, including an analysis of how the proposed developments fit within the local planning scheme for commercial and retail development in the adjacent area; and	Section 7 Section 8
(h)	the airport-lessee company's assessment of the environmental impacts that might reasonably be expected to be associated with the development; and	Section 10 and Part B
(j)	the airport-lessee company's plans for dealing with the environmental impacts mentioned in paragraph (h) (including plans for ameliorating or preventing environmental impacts); and	Section 10 and Part B



		SECTION
(k)	if the plan relates to a sensitive development – the exceptional circumstances that the airport-lessee company claims will justify the development of the sensitive development at the airport; and	N/A
(4)	In specifying a particular objective or proposal covered by paragraph (1)(a) or (c), a major development plan, or a draft of such a plan, must address: <ul style="list-style-type: none"> <li>a) the extent (if any) of consistency with planning schemes in force under a law of the State or Territory in which the airport is located; and</li> <li>b) if the major development plan is not consistent with those planning schemes – the justification for the inconsistencies.</li> </ul>	Section 7
(6)	In developing plans referred to in paragraph (l)(f), an airport-lessee company must have regard to Australian Standard AS2021—1994 ('Acoustics—Aircraft noise intrusion—Building siting and construction') as in force or existing at that time.	Section 11

# 21 Appendix E: Concept Landscape Plans from Section 8



Figure C-1 Airport North landscaping section concept

Source: Grimshaw (2022)

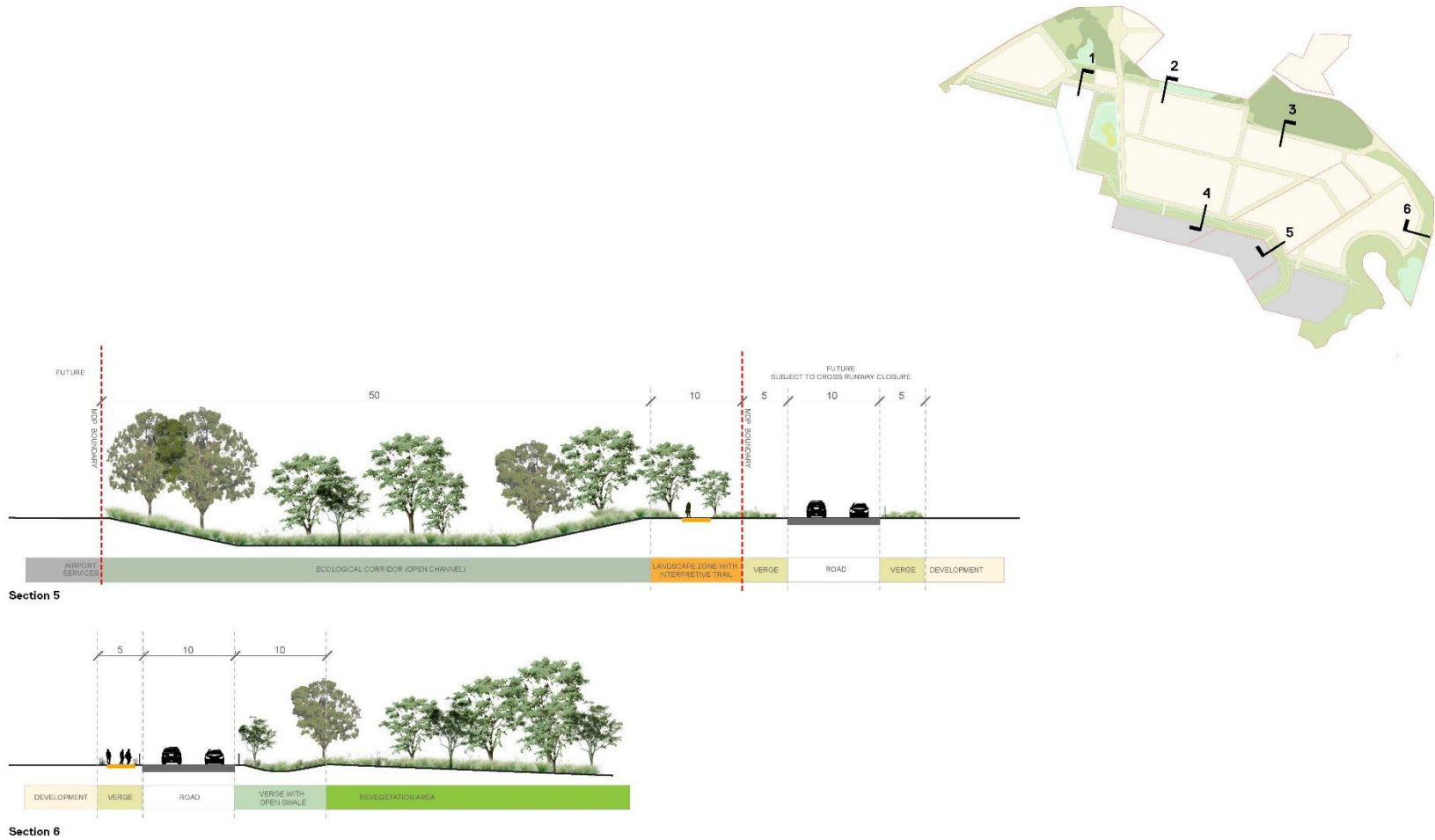
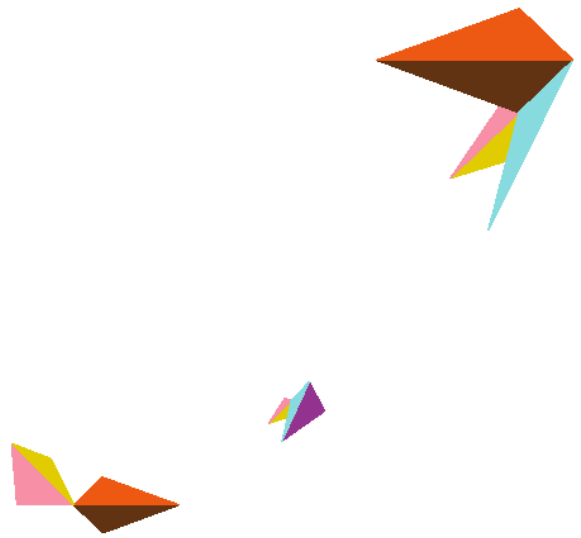


Figure C-2 Airport North landscaping concept plan

Source: Grimshaw (2022)



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