13 Aviation Development Plan

13.1 Introduction

The successful operation of Perth Airport relies on the ongoing development of airfield and terminal infrastructure to ensure that forecast passenger and aircraft demand can be met.

The aviation development plan includes runways, taxiways, aircraft parking areas, navigation infrastructure and terminal facilities, and takes into consideration:

- maximising airport and airspace capacity in the ultimate airfield configuration
- ensuring aircraft movements between runways and terminals deliver the most efficient taxiing, lowest fuel burn and therefore the lowest environmental impact
- the accommodation of all aircraft types up to the largest passenger aircraft (currently the Airbus A380)
- airline partner and aviation and border control authority requirements to meet their respective business and operational needs
- customer experience
- the environmental and Aboriginal heritage values across the Perth Airport estate, and
- roads, car parking and public transport.

There were 160,882 aircraft movements at Perth Airport in FY25, exceeding the previous peak of 156,757 movements recorded in FY24. Growth forecasts predict that aircraft movements will increase by more than 40 per cent to 222,800 movements by FY46.

Perth Airport has a long-held vision of consolidating all commercial passenger services into a central precinct that is supported by a parallel runway system. The first phase of consolidation was achieved through a $1 billion investment that included new and upgraded terminal and airfield facilities. Over the next decade the final stage of consolidation will be achieved through a multi-billion-dollar capital investment program that includes a new runway, new terminal, and upgrades to existing terminals. This transformation will ensure that Perth Airport has the airfield and terminal facilities to meet the future air travel needs of Western Australia well into the future.

Perth Airport's ongoing development ensures airfield and terminal infrastructure meets forecast passenger and aircraft demand.

13.2 Existing Airfield

The existing airfield layout, shown in Figure 13-1, consists of two intersecting runways, associated taxiways and apron areas. The main runway 03/21 is positioned in a north-south alignment and is 3,444 metres long and 45 metres wide. The runway is a flexible pavement, grooved runway and is contained within a 300-metre-wide runway strip.

The cross runway 06/24 is positioned in a northeast-southeast alignment and is 2,163 metres long and 45 metres wide, contained within a 300-metre-wide runway strip.

The runway system is supported by a network of taxiways which provide access from the runways to the various passenger terminals.

Figure 13-1 Current aviation facilities
Source: Perth Airport

13.3 Runway Use

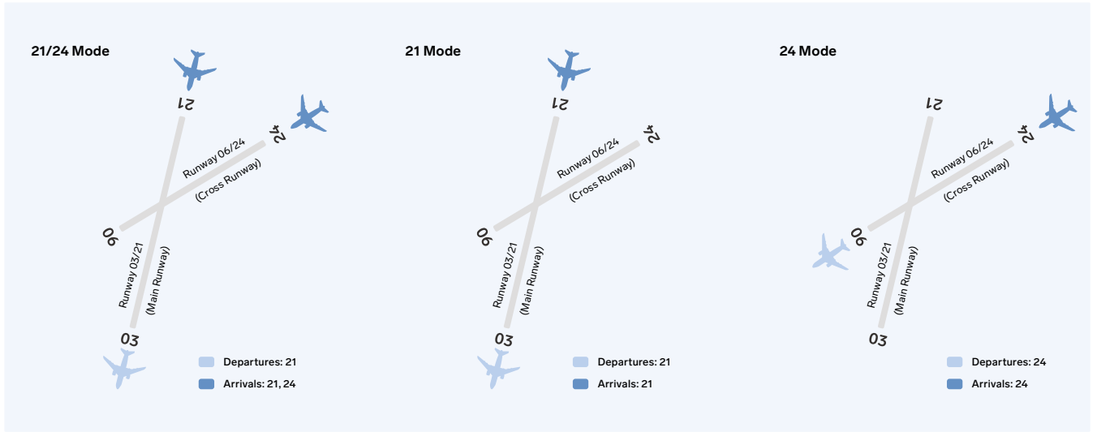
Both ends of a runway can be used for arrivals and departures. The direction being used is referred to as the operating or duty runway. An operating mode is the use of a certain runway, or a combination of runways, and the mode selected is based on a number of factors and selection criteria.

For operations at Perth Airport, aircraft arrivals from the north and departures to the south are referred to as the South Flow, while arrivals from the south and departures to the north are referred to as the North Flow. Single runway operations can occur for all runway directions (03, 06, 21, or 24).

The current runway modes are shown in Figure 13-2. The modes that achieve maximum movement capacity are when both runways are used:

- 03/06 mode—arrivals on runway 03 and departures on runways 03 and 06, and
- 21/24 mode—arrivals on runway 21 and 24 and departures on runway 21.

South Flow



North Flow

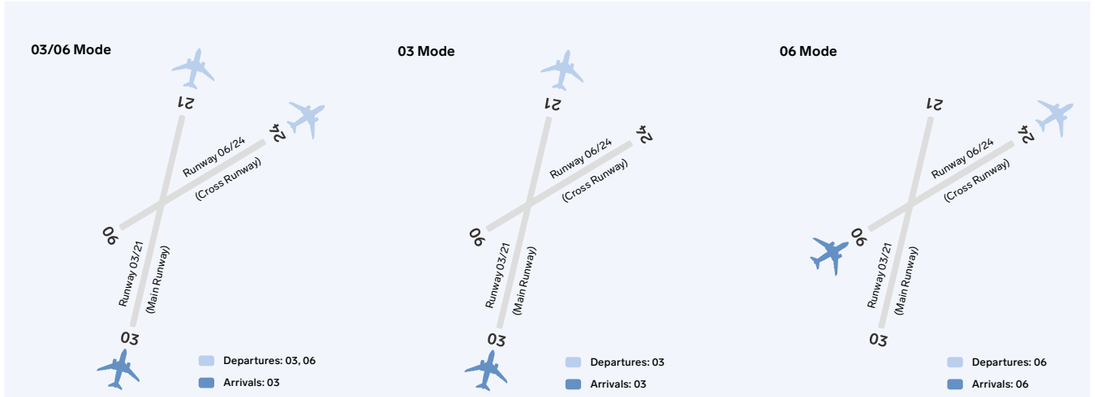


Figure 13-2 Existing runway modes
Source: Perth Airport

The selection of a runway direction for aircraft arrivals or departures is based on many considerations, including weather, local airspace, and traffic demand, and to allow runway maintenance to occur.

Noise abatement procedures (NAPs) are designed to reduce the impact of aircraft noise on the community. They include procedures for runway use and flight paths to reduce flights over residential areas. NAPs are implemented by Air Traffic Control, but their use is not mandatory and is subject to weather conditions and aircraft requirements.

The NAPs have formed the basis for Perth's runway usage since the 1980s. The current NAPs allocate departures to, and arrivals from, the south-southwest using the cross runway 06/24 as the least preferred and are minimised, as there are densely populated suburbs located southwest of Perth Airport with the runway end located 960 metres from residential areas in Redcliffe and Cloverdale. Therefore, the cross runway 06/24 is predominantly used for departures to the north and northeast on runway 06, and for arrivals from the north and northeast on runway 24. The cross runway 06/24 is used for departures to, or arrivals from, the south and southwest, overflying the more densely populated areas of Belmont, Rivervale and Redcliffe in strong crosswind conditions or when runway maintenance works are being completed on the main runway 03/21. Runway use and NAPs are discussed further in Section 16.

13.3.1 Airfield Capacity Enhancement

Since 2012, Perth Airport has been working with Airservices Australia to support an Airport Capacity Enhancement (ACE) program focused on making the best use of the existing infrastructure to maximise operational efficiency, through improvements to the processes and practices of air traffic controllers, airport operators and airline partners.

The ACE program has helped to address capacity issues and meet industry challenges by managing the efficiency and impact of air traffic at Perth Airport. ACE focuses on three main themes:

- harmonisation—the steps taken to increase efficiency needed to be in harmony with current Australian standards and practices, while providing sufficient room for the development of local procedures
- collaboration—every movement matters and every second counts. Over many aircraft movements, the seconds add up to create additional capacity that in turn can reduce delays. The benefits are shared by all and can be achieved collaboratively, and
- performance management—performance must be monitored and measured to tactically manage improvement in Air Traffic Control and pilot performance. By measuring performance, new methods can be assessed and refined.

The ACE study identified several opportunities to enhance the existing airfield and airspace capacity and performance. Based on the three themes, 28 initiatives were considered, of which 22 have been completed or closed and six remain underway or ongoing. Perth Airport was responsible for assessing and delivering seven of the recommendations, including the introduction of a slot coordination system and taxiway layout improvements.

13.3.2 Need for Additional Runway Infrastructure

Perth Airport's existing runways continue to reach capacity during peak periods, resulting in delays to flights and disruption to travellers.

While the ACE initiative has delivered airfield and airspace efficiencies and contributed to a significant reduction in delays and congestion at peak times, it has not resolved the fundamental issue of runway demand exceeding capacity at certain times in the day. Domestic airline on-time performance data, published by the Bureau of Infrastructure and Transport Research Economics, identifies that flight delays at Perth Airport have increased from 14.5 per cent of movements in 2017 to 28.5 per cent in 2024. Delays have been occurring more frequently for arrival flights, which have increased from 16.3 per cent of flights delayed in 2017 to 31.3 per cent delayed in 2024. Delays for departure flights have increased from 12.7 per cent delayed in 2017 to 25.8 per cent delayed in 2024.

Airports play a critical role in ensuring infrastructure has sufficient capacity and does not constrain the ability of airlines to achieve on-time performance. Perth Airport's airfield currently supports a maximum of 38–40 scheduled aircraft movements per hour, depending on the proportion of arriving and departing aircraft, which is considerably less than current runway capacity for the major airports on Australia's east coast. Runway capacity is also heavily influenced by the weather due to increased aircraft separation requirements in low visibility conditions. Depending on the weather conditions, the current runway capacity for departing aircraft is between 30 and 40 aircraft movements per hour, and the arrivals capacity is between 20 and 26 aircraft movements per hour.

Due to the nature of the resource sector's fly-in fly-out (FIFO) workforce deployment and the need to time many international flights to connect to other services at international hub airports, Perth Airport experiences significant peak periods at particular times during the day and night. There is a departures peak in the early morning, which can see up to 40 aircraft departing each hour for a three-hour period, and a second peak in the early- to mid-afternoon. There are also two main peak periods for arriving aircraft, starting mid-morning and in the early evening, which can see up to 26 aircraft arriving each hour (the maximum arrival capacity of the runway system) for a two- to three-hour period. These arrivals peaks are spread over a wider period than the departures peaks, as current airfield and airspace capacity permits fewer arrivals per hour than departures (there is greater spacing required between arriving aircraft due to the aircraft being at a slower speed and typically requiring a longer time on the runway than a departing aircraft). Airline slot demand exceeds available capacity during the busy morning weekday departure peak and the subsequent arrival peak of returning aircraft.

The hourly runway demand for a typical day in 2025 is shown in Figure 13-3.

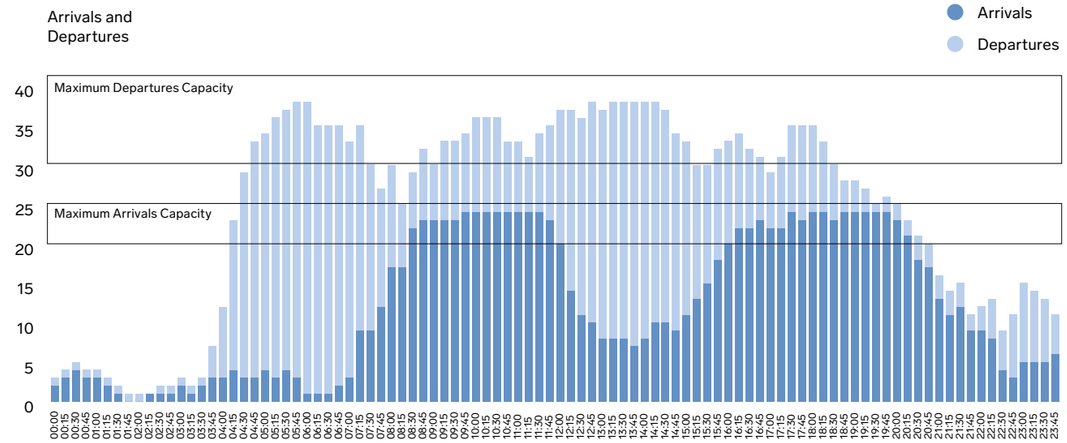


Figure 13-3 2025 typical day arrivals and departures runway demand
Source: Perth Airport

Airports play a critical role in ensuring infrastructure has sufficient capacity and does not constrain the ability of airlines to achieve on-time performance

The nature of the demand at Perth Airport means that Tuesdays, Wednesdays and Thursdays are currently the busiest days of the week, increasing from an average of 460 movements per busy day in 2019 to more than 550 movements per busy day in 2024. Due to the current capacity constraints during the mid-week, Mondays and Fridays have seen considerable growth in movement numbers, increasing from 380 per busy day in 2019 to 450 per day in 2024. Weekend movements have remained consistent at around 220 movements per busy day.

If no additional airfield capacity is provided, modelling indicates that flight delays will reach critical levels by 2035. Departure ground delays would approach 30 minutes on average during the peak periods, as well as additional taxiing time due to the number of aircraft being queued for departure. The runways would be operating at capacity for 12 hours a day, with few viable slots for new services.

To prevent unacceptable delays in aircraft operations, provide for the increasing demand and to support economic growth in Western Australia, a major expansion of airfield capacity is needed. This will be achieved through the construction of a new runway, located parallel to the existing main runway 03/21, which is expected to be operational by 2028.

13.4 Airport Development Plan

Airfield and terminal developments are required to support the forecast levels of passenger and aircraft movement growth at Perth Airport.

The airfield development plan shows the planning for runways, taxiways, aprons, aircraft parking positions and aviation support services to meet forecast demand and safeguard the long-term capacity of the airport. The proposed airfield layout in 2031 is shown in Figure 13-4 and the proposed airfield layout in 2046 is shown in Figure 13-5.

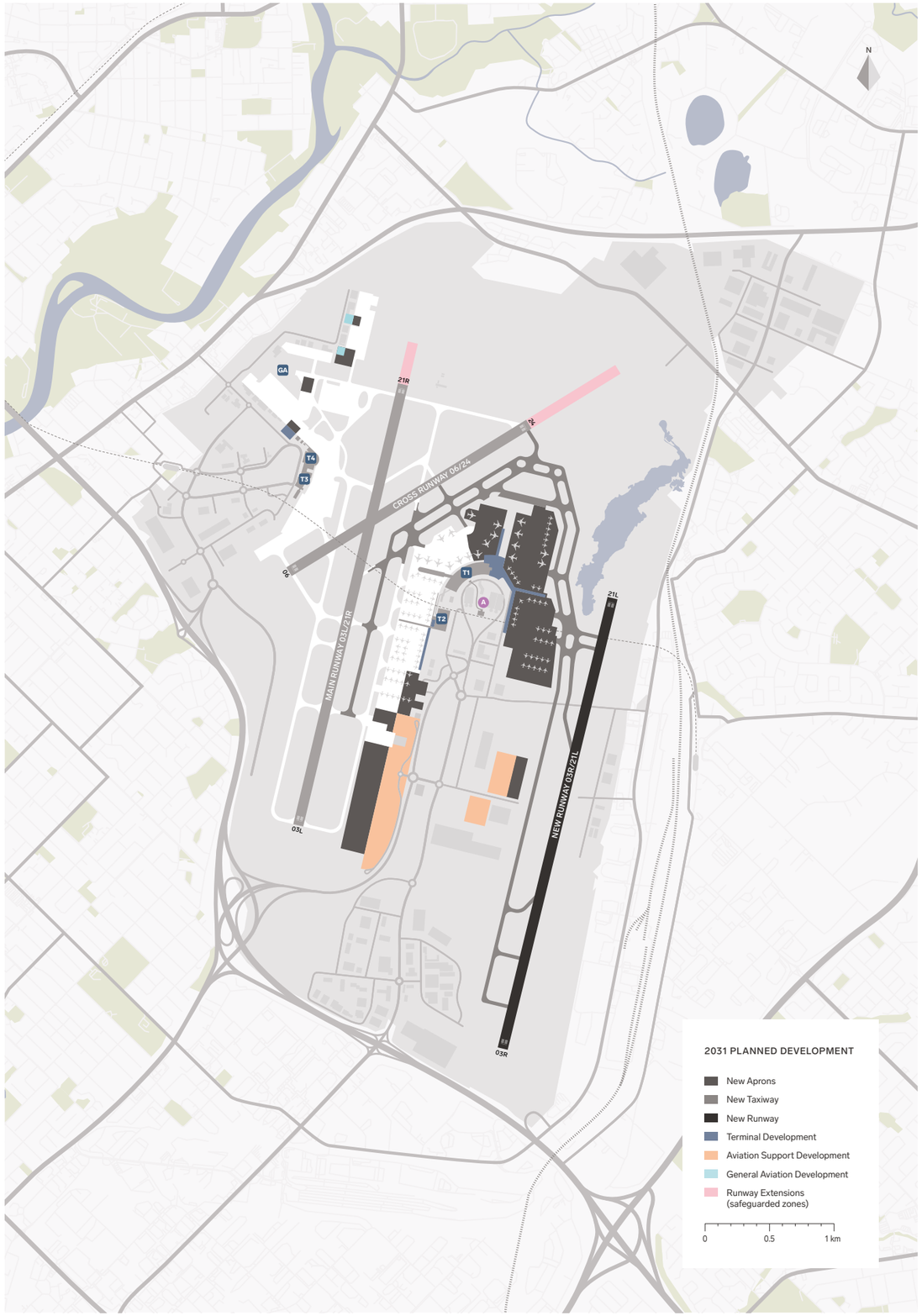


Figure 13-4 Airfield development plan 2031
Source: Perth Airport

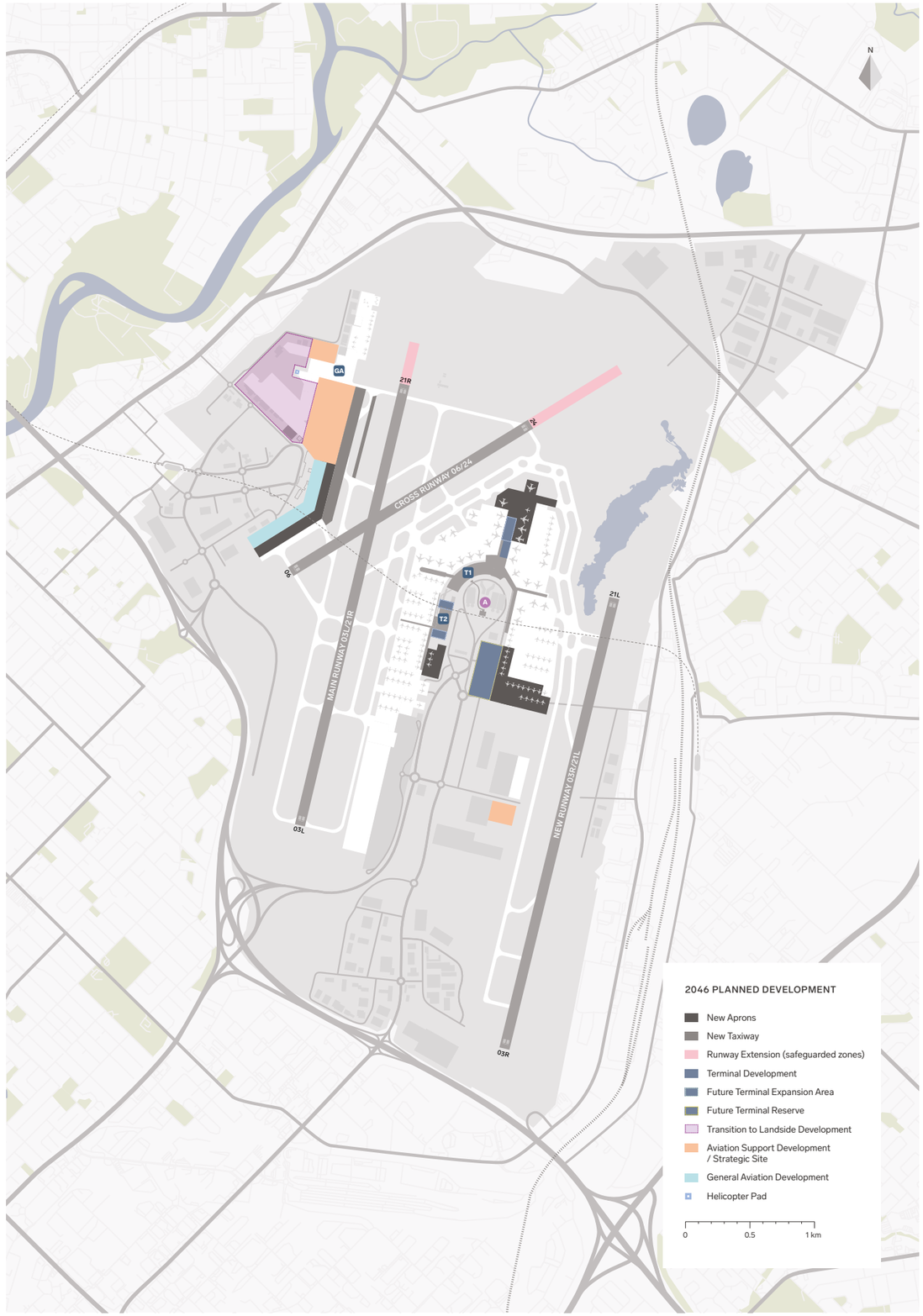


Figure 13-5 Airfield development plan 2046
Source: Perth Airport

13.4.1 Runways

The runway configuration and characteristics, such as runway length and width, are determined by several factors including:

- maximising usability in most wind conditions
- providing adequate runway length to cater for existing and future aircraft operating at maximum take-off weight in hot conditions, and
- International Civil Aviation Organization (ICAO) and Australian design standards and conventions.

Consistent with the previous six master plans, Master Plan 2026 continues to safeguard for future airfield infrastructure. These are:

- a new 3,000 metre runway 03R/21L (expected to be operational by 2028)
- extending the cross runway 06/24 to the north-east to a total length of 3,000 metres, and
- extending the main runway 03/21 to the north to a total length of 3,800 metres.

Technical analysis has shown that the proposed long-term airfield layout could cater for a maximum theoretical capacity of more than 433,000 annual aircraft movements. This capacity is based on a flattening of the departure and arrival peak periods currently experienced at Perth Airport and spreading the traffic over the day. As discussed in Section 6, Perth Airport is forecast to grow from the current 160,882 annual aircraft movements in FY25 to more than 222,000 movements by FY46. Therefore, these runway developments are expected to safeguard for aviation needs well beyond the 20-year planning period of this Master Plan 2026.

13.4.1.1 Main Runway

The main runway 03/21 (to be renamed 03L/21R once the new runway is operational) was built in 1949 and has been lengthened, widened and strengthened over the years.

A future extension of the main runway from the existing 3,444 metres to 3,800 metres continues to be planned for. The benefit from increasing the length of the main runway is to accommodate large aircraft at maximum take-off weight on ultra-long-haul flights in hot conditions. The planned extension is based on the expectation that future large aircraft types will have this extended flight range.

The extension will not provide any increase in arrival and departure airfield capacity but simply cater for larger aircraft. The timing of the extension to the main runway will therefore depend on future demand for ultra-long-haul flights.

13.4.1.2 Cross Runway

The cross runway, referred to as runway 06/24, is 2,163 metres long with a northeast-southwest orientation. It was initially constructed in 1944.

Consistent with previous master plans, Master Plan 2026 retains provision for a possible future extension of the cross runway to 3,000 metres.

With suitable noise abatement procedures, an extended cross runway could accommodate all aircraft types, including large Code F aircraft such as the Airbus A380, and would allow a small increase to capacity for arrivals in the southerly flow of traffic on runway 24 through the use of Land and Hold Short Operations, which would allow some aircraft to land on the cross runway and hold short of the intersection with the main runway while another aircraft lands or takes off from the main runway. However, it provides no improvement in the northerly flow, and scheduling for higher capacity therefore carries a risk of increased aircraft delays depending on which flow is used on the day. The extension of the cross runway would only deliver short-term capacity enhancements.

In 1999, a deed of agreement between the City of Bayswater and Perth Airport was developed in relation to any future extension to the cross runway 06/24. The deed reaffirms a commitment that the proposal to extend the cross runway 06/24 to the northeast will include the adoption of strict and explicit use procedures, such as take-offs to, and landing from, the southwest, which will only occur:

- in emergencies
- in extreme weather conditions, or
- through the loss of the use of main runway.

The current noise abatement procedures in place for aircraft greater than 20,000 kilograms (maximum take-off weight) arriving on runway 06 and departing from runway 24 would be maintained in the event of the extension of the cross runway.

Consistent with the previous two approved master plans, this Master Plan 2026 maintains cross runway 06/24 under review as part of broader considerations for future operational needs. The Concept of Operations for the parallel runway system showed that the continued use of the cross runway 06/24 once the new runway is operational would reduce the efficiency and overall runway capacity at Perth Airport, potentially negating capacity benefits of the new runway. Several factors will influence all future cross runway plans and extensive consultation with a range of stakeholders including aircraft operators, Airservices and the Civil Aviation Safety Authority, the community, and local, State and Federal governments.

13.4.1.3 New Runway

Construction of the new runway 03R/21L commenced in early 2025 and is expected to be completed in 2028. The new runway will be 3,000 metres long and located parallel—with a two-kilometre spacing—to the existing main runway 03/21.

The need for a second parallel runway at Perth Airport was first identified in 1973. The location of the runway was determined in the late 1970s by the then Federal Department of Aviation, and additional land was acquired for its future development. The layout for the consolidation of terminals into a central precinct and the location of the new runway, was first released for public comment as part of the Master Plan 1985 planning process.

The key benefits of the new runway are:

- operational benefits from expanding the airfield capacity to operate efficiently and avoid congestion and flight delays
- cost savings (such as fuel and staffing costs) for airlines through delay avoidance
- maintaining flexibility for airlines to operate in the most efficient manner aligned to their business, including optimal use of aircraft types and preferred flight schedules, and
- economic and social benefits as a result of providing capacity for the growth of aviation services.

The location of the new runway remains unchanged from the original planning, with the runway length reduced from the initial planned 3,800 metres to 3,000 metres in recognition of the cultural heritage importance of Munday Swamp.

In 2020, the Federal Government approved the Major Development Plan (MDP) for the new runway and associated infrastructure. The MDP process involved years of engagement with airline partners, stakeholders and all levels of government on a range of issues, including aviation operations, airspace management and flight corridors, aircraft noise, Aboriginal heritage and environmental impacts, as well as one of the largest ever community consultation efforts for a major project in Western Australia.

13.4.2 Taxiways

A system of taxiways is provided to connect runways with the various terminals via aircraft aprons, and the existing airfield. The taxiway network is planned to avoid congestion on the ground while aiming to minimise taxiing distances and thereby reducing fuel burn. The taxiway system includes rapid exit taxiways, parallel taxiways and various link taxiways to provide flexibility for traffic management of aircraft while on the ground.

Further expansion of the existing taxiway system at Perth Airport is being completed as part of the works for the new runway and the Airport Central airfield upgrade projects. The MDP for the Airport Central project was approved by the Federal Minister for Infrastructure in February 2025 and includes a new taxiway system that provides connectivity between the new runway, new aircraft parking aprons and the existing airfield. These works are planned to commence in 2026.

Additional taxiway works may also occur within the 20-year planning period of this Master Plan and may be subject to Ministerial approval under the Airports Act (either as part of other projects or approval in its own right). Likely taxiway expansions are summarised below.

13.4.2.1 Parallel Taxiways

Parallel taxiways maximise the efficiency and operation of the airfield by allowing arriving aircraft to manoeuvre directly to parking positions without being impeded by other aircraft pushing back from the apron or taxiing for departure. This reduces delays and minimises aircraft taxiing requirements.

Parallel taxiways will be constructed to support the new and expanded terminals within Airport Central as well as the new runway 03R/21L. The parallel taxiways will be adjacent to each of the terminal parking aprons and at each end of the new runway.

13.4.2.2 Runway Entry and Exit Points

To improve runway efficiency, multiple runway entry points and rapid exit taxiways (RETs) are planned for both the main runway 03L/21R and the new runway 03R/21L. RETs (or high-speed taxiways by definition) are designed to expedite aircraft turning off the runway after landing, which reduces the amount of time an aircraft occupies the runway. By reducing the runway occupancy times, runway capacity can increase in certain modes of operation.

Two RETs will initially be developed as part of the construction of the new runway, with the location for a further two RETs safeguarded for future development. Future RETs may also be developed for the main runway. Forecasts and simulation modelling will determine when construction of future RETs will be required.

13.5 Terminals

Airport terminals are complex structures which contain the multitude of functions required to process passengers efficiently and deliver a good level of customer experience.

Terminal capacity is typically expressed as the total number of passengers the facility can handle in a given year; however, this does not recognise the daily passenger flow peaks and troughs. Infrastructure provision is therefore typically based on responding to the periods when the terminal is busiest.

Perth Airport generally uses the 95 per cent design busy hour to establish the size of its passenger terminals and passenger facilities. Using this methodology, five per cent of passengers could experience the terminal operating above its theoretical design capacity in the selected design year. This approach seeks to deliver an adequate level of service for most of the time, while avoiding the costly overprovision of facilities that designing for the absolute peak would entail. Level of Service guidelines are then applied to each operational process (such as check-in or security) to determine the recommended space and queuing time requirements.

Other planning parameters that influence overall terminal size include the size and number of commercial facilities, the number of required contact gates, facilities required by business partners and aviation and border control authorities, along with site specific constraints.

As detailed in Table 13-1, there are currently five terminals located within two precincts at Perth Airport:

- T1 International, T1 Domestic and T2 located in the Airport Central precinct, and
- T3 and T4 located in the Airport West precinct.

The General Aviation Area (GA Area), also located in the Airport West precinct, has several passenger processing facilities owned and operated by private companies and used for both general aviation operations and FIFO charter flights to regional areas in Western Australia.

Perth Airport remains focused on delivering a fully consolidated terminal precinct, in line with the consolidation strategy outlined in the previous master plans.

Consolidation of all commercial passenger services into the Airport Central precinct will address capacity constraints, provide passengers with an improved experience, and provide airlines which operate in both domestic and international markets with significant operational savings through co-location of operations.

Construction of the T2 and T1 Domestic terminals delivered the first stages of the consolidation strategy, with Virgin Australia Regional Airlines (formally Skywest) and Alliance Airlines moving their operations to the Airport Central precinct. Other carriers operating FIFO and regular scheduled passenger services to mine sites and regional airports have subsequently commenced operations from T2, followed by Jetstar relocating its domestic interstate services from T3 to T2 in September 2024.

Terminal	Airlines	Pax pa (FY25)	Aerobridge contact gates	Non-aerobridge contact bays	Stand-off bays
T1 International	All international services except Qantas	4.77 million	6 (including two swing gates)	1	4
T1 Domestic	Virgin Australia (interstate and some regional services)	3.21 million	8-10 (excluding swing gates)	Nil	Nil
T2	Alliance Airlines (regional services), Virgin Australia (most regional services), Regional Express Airlines (regional services), Nexus Airlines (regional services) (Note: Jetstar relocated to T2 as of September 2024)	2.41 million	Nil	20	16
T3	Qantas (international, interstate and regional services)	2.55 million (domestic) 363,003 (international)	5	4	16
T4	Qantas (interstate and regional)	3.29 million	4	4	7

Table 13-1 Perth Airport terminals summary
Source: Perth Airport

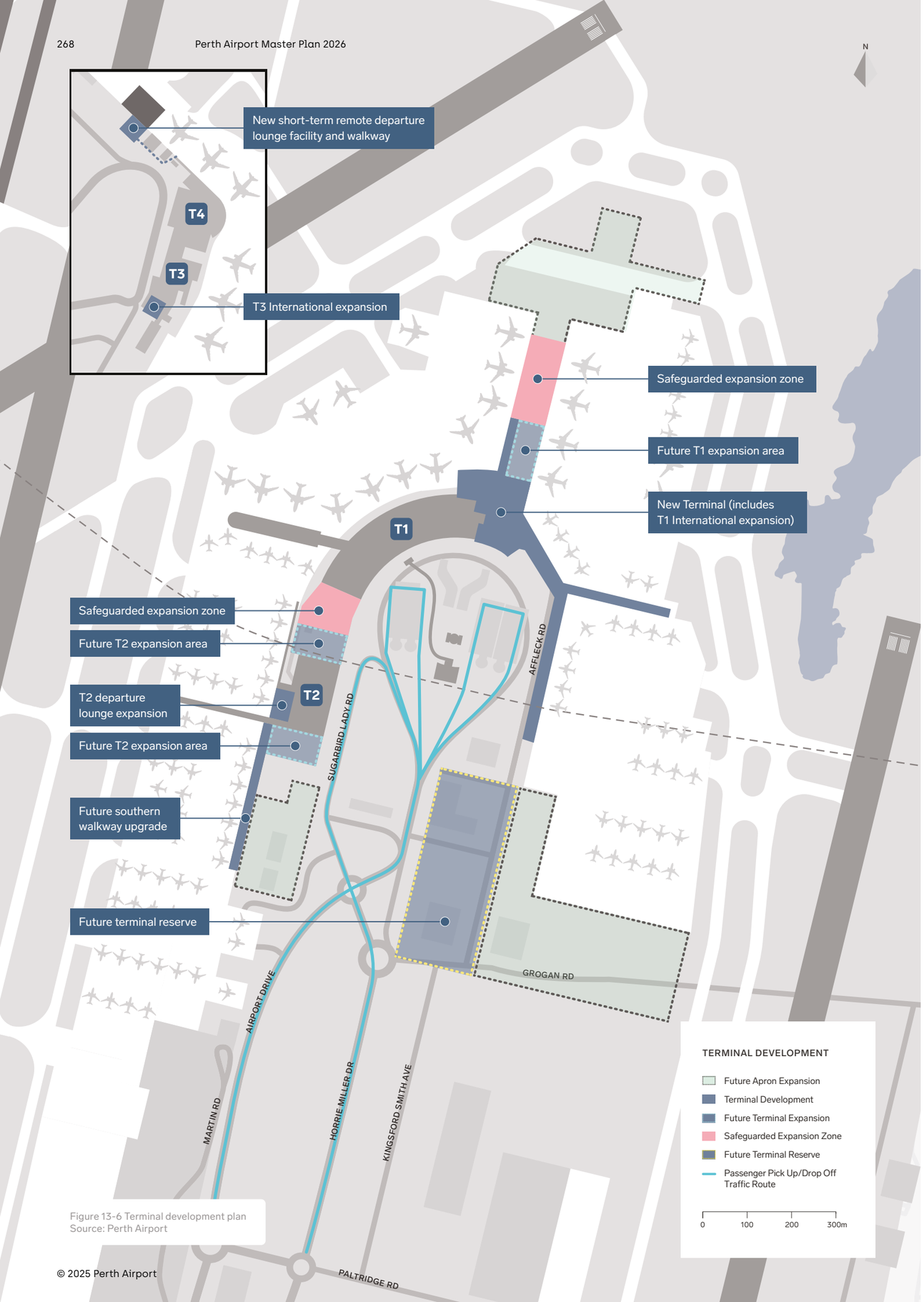


Figure 13-6 Terminal development plan
Source: Perth Airport

The final stage of consolidation of all commercial passenger services into Airport Central will be achieved following the construction of the new terminal, providing sufficient terminal capacity for the relocation of Qantas Group operations from Airport West as well as delivering sufficient capacity for forecast domestic and international passenger growth in the precinct. The new terminal is anticipated to be completed and operational around 2031. It will require Ministerial approval through the Major Development Plan process prior to construction of the terminal commencing.

Perth Airport has prepared a long-term development plan to cater for growth beyond the consolidation of all commercial air services into Airport Central. Post consolidation, it will be necessary to expand terminal facilities over time in order to meet demand and maintain acceptable service levels for airline partners and passengers.

The need for terminal upgrade and expansion projects is reviewed regularly and informed by passenger forecasting studies, ongoing monitoring and capacity analysis of the terminal facilities, and feedback and survey results from airline partners, passengers and other Perth Airport stakeholders.

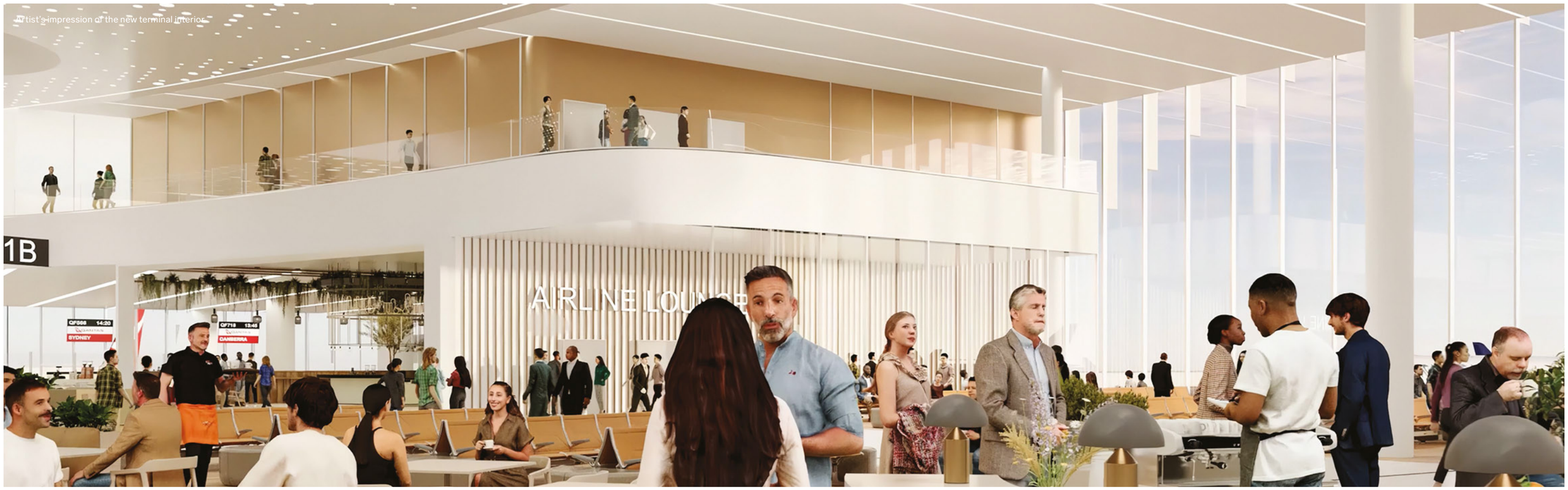
The new terminal will be designed to target 5-Star Green Star Building certification.

The principles upon which the long-term expansion planning for terminal facilities will be undertaken include:

- responding to the forecast traffic growth
- ensuring sufficient aircraft parking apron area for the long-term demand
- balancing the runways and aprons, as much as possible, to reduce taxiing distances, reduce fuel usage (and therefore emissions), and increase runway capacity
- maintaining safe, efficient and free flowing ground movement of aircraft on taxiway and apron areas
- clustering terminals around an inner precinct as far as practicable to ensure efficiency and connectivity, fully integrated with the Airport Central rail station
- maintaining terminal piers that are perpendicular to taxiways for maximum efficiency of apron operations
- ensuring that facilities are barrier free to the greatest extent possible so they can be used by passengers with a disability
- adopting terminal layouts that optimise potential commercial performance, and maximise flexibility of common-use infrastructure between airlines and international and domestic operations
- safeguarding for integration between terminals and processes such as seamless passenger and baggage transfers
- safeguarding for future innovation and technology within the terminal layout, considering future trends in passenger behaviour, technology use and travel expectations
- integrating roads, passenger drop-off/pick-up and car park facilities with the terminals, and
- adopting terminal layouts that facilitate future stages of expansion.

The terminal development plan is shown in Figure 13-6.

Artist's impression of the new terminal interior



Artist's impression of the new terminal interior

13.5.1 Terminal 1 International

T1 International was opened in 1986 and has seen significant upgrades and expansions over the years.

T1 International provides passenger processing facilities for all international services, with the exception of the Qantas services currently operating from T3. The terminal is common use, with facilities shared between 23 international airline partners across the 24 hours, seven days a week schedule.

T1 International has eight aerobridge serviced gates, four of which have swing capabilities (to allow use for either domestic or international operations) and are Airbus A380 capable, and a range of retail and food and beverage options both landside and airside.

Recent upgrades undertaken in T1 International include:

- the installation of 36 common use self-service kiosks and 16 bag drop facilities to improve the efficiency of the check-in process
- replacement of three aerobridges with dual head apron drive aerobridges, and installation of ramps and lifts at each of these gates, eliminating the need for passenger boarding via stairs from the second-floor departure lounge
- relocation of the Singapore Airlines SilverKris Lounge
- construction of the Aspire passenger lounge that features panoramic views of the airfield and Perth city skyline. The Aspire Lounge was awarded the Best Airport Lounge in Oceania at the World Travel Awards in September 2022, and Airport Excellence Commercial Award at the National Airport Industry Awards in 2022
- development of a Sensory Room that provides a calming and supportive environment for passengers with sensory sensitivities or specific needs departing on international services from T1 International
- construction of Changing Places facilities, which provide secure, suitable facilities for people who cannot use standard accessible toilets. Facilities include a shower, ceiling hoist, an adult sized change table and privacy screen
- construction of Service Animal Relief Areas, providing dedicated toilet and watering facilities for assistance animals, and
- upgrades to the level 2 departure lounge to provide expanded food and beverage and retail offerings.

Image above: Artist's impression of the new terminal interior

International traffic at Perth Airport has continued to grow over recent years and is forecast to continue increasing. Capacity and service quality analysis indicates that a number of key terminal functions are already, or will soon be reaching capacity in coming years, including:

- international aircraft parking stands are near or at capacity during peak periods
- the departure hall check-in infrastructure is at capacity during peak periods
- the passenger security screening area has sufficient capacity until the late 2020s to early 2030s, with no additional area available for expansion in its current location
- the international departure lounge provides a lower level of service due to its narrow linear configuration and being split across two levels
- the outbound baggage system is at capacity during peak periods, and
- considerable congestion in the landside arrivals hall is currently experienced in the peak periods, requiring an expansion to provide additional space.

To ensure international capacity at Perth Airport is maintained and to deliver an improved experience that meets international traveller expectations, an expansion and modernisation of the terminal facilities is required.

The construction of the new terminal (described in Section 13.5.5) includes an expansion of T1 International and is anticipated to be completed and operational around 2031.

Perth Airport is undertaking extensive planning on future options and engagement with international airline partners and the Australian Government border agencies to inform the design of the new facilities. The expansion will increase the capacity of international operations at Perth Airport, enhance the international passenger departures and arrivals experience and facilitate more efficient airline operations. Key design aspects are:

- seamless connection to existing T1 International infrastructure
- construction of additional contact aircraft parking positions for wide-bodied aircraft
- additional baggage make-up capacity
- new airline lounges providing sufficient area to meet airline requirements and with the potential for direct boarding
- repositioning and/or expansion of border agency (biosecurity, immigration and customs control) facilities
- improved accessibility for persons with a disability, and
- aircraft taxi lanes and aprons to allow access to the new aircraft parking positions.

The planning considers the need to accommodate both international and domestic growth in the Airport Central precinct with efficient airside and landside interfaces. It is envisaged that gates that sit on the interfaces between international and domestic operations will have swing capability to be used for either operation.

13.5.2 Terminal 1 Domestic

T1 Domestic is located adjacent to T2 and is integrated with the T1 International building and associated ground transport. Virgin Australia commenced domestic operations from this purpose-built facility in November 2015, relocating operations from T3 in the Airport West precinct and marking another important stage towards consolidation.

T1 Domestic provides self-service check-in facilities for passengers including kiosks and automated bag drops, passenger screening, a central retail and dining area, baggage reclaim services, a Virgin Australia lounge, and 12 aerobridge serviced gates, including up to four swing gates that can be used for either domestic or international operations.

13.5.3 Terminal 2

T2 opened in March 2013 principally to meet the needs of regional services. The construction of T2, and subsequent relocation of some of the flight operators from T3, was the first stage of consolidation of commercial air services to the centralised terminal precinct.

T2 is currently used by Aerlink, Alliance Airlines, Jetstar, Nexus, Rex Airlines, and Virgin Australia Regional Airlines, which operate services to regional ports and mine sites.

The single-level terminal was designed to be quick and easy to expand given the rapidly changing resource industry demand. It provides a check-in area, passenger screening point, and departure lounge with speciality retail and food and beverage outlets, and airline lounges. A central boarding zone leads out to covered passenger walkways servicing 20 contact gate parking positions. T2 is connected to T1 Domestic via an air-conditioned link, providing a seamless connection for passengers between regional and Virgin interstate services.

In late 2024, two additional boarding gates were installed together with an expansion of terminal departure lounge to accommodate the growth in the number of peak period passengers. The upgrade also provided an enhanced and expanded retail offering and a refresh of the departure lounge amenities.

Further upgrades are planned for T2 in 2026 to facilitate the forecast growth in passenger numbers and the planned relocation of some FIFO services from the GA Area. Planned upgrades include:

- installation of common-use self service check-in infrastructure
- further expansion of the departure lounge beyond the current terminal layout
- an additional passenger security screening lane
- relocation of the goods screening point to the oversize baggage area
- expansion of the baggage hall
- ability to handle Barrow Island flights which require additional quarantine procedures
- additional airline offices and facilities for ground handling agents, and
- an expansion of the existing passenger walkway to the south of the terminal.

There is sufficient space for additional expansions of facilities in T2 to accommodate future growth.

In late 2024, two additional boarding gates were installed together with an expansion of the T2 departure lounge to accommodate the growth in the number of peak period passengers. The upgrade also provided an enhanced and expanded retail offering and a refresh of the departure lounge amenities.

13.5.4 Terminal 3 and Terminal 4

There are currently two multi-user passenger terminals within the Airport West precinct. T3 and T4 are linked and are currently used for Qantas services.

The two terminal buildings were constructed by Ansett and Qantas in the 1980s for their respective operations. Both terminals are now operated and managed by Perth Airport, with T3 purchased by Perth Airport following the collapse of Ansett in 2001, and T4 transferred to Perth Airport in 2019 following the expiry of a 30-year lease for T4 with the Qantas Group.

In March 2018, Qantas commenced direct Perth-London flights from T3 using Boeing 787 Dreamliner aircraft. To facilitate these services and seamless passenger transfers from Qantas domestic flights, the existing T3 building was upgraded to accommodate limited international operations until the relocation of Qantas operations to the consolidated Airport Central precinct. Qantas currently operates Perth-Singapore, Perth-Paris and seasonal Perth-Rome services out of T3.

To facilitate ongoing operations and future growth opportunities of Qantas operations ahead of relocation to the new terminal in the Airport Central precinct, Perth Airport will be undertaking upgrades at T3 and T4 between 2025 and 2027. These works include:

- new passenger lifts in T3
- construction of a new short-term remote lounge facility connected to T4 by a walkway
- new enclosed walkway for international arrivals
- 750 square metre expansion to T3 to improve border agency examination areas for international services,
- upgrades to the baggage system, and
- optimising the retail offering.

Following consolidation of Qantas Group operations to the Airport Central precinct, the T3 and T4 buildings will be decommissioned and associated landside infrastructure repurposed for alternative commercial uses.

13.5.5 New Terminal

The final stage of consolidation of all commercial air services to the Airport Central precinct requires the construction of a new terminal that consists of:

- a new domestic terminal
- an expansion of the current T1 International facilities (described in Section 13.5.1), and
- associated aircraft aprons.

The new domestic terminal will be located to the east of, and connect to, the T1 International expansion.

Perth Airport is working with the Qantas Group to define the operational requirements for the design phases. The new domestic terminal is anticipated to be constructed and operational around 2031 and includes:

- a terminal layout which optimises operational efficiencies and customer experience, and is flexible by design to enable future adjustment of functional needs and cater for the evolution of technology and systems
- a diverse range of passenger and airline lounges and retail offerings
- sufficient aircraft stands and apron capacity to cater for current and future operations and facilitate balanced runway usage
- suitable access and connectivity to T1 International, T1 Domestic and T2 with integrated efficient operations wherever possible to benefit both passengers and airline partners, and
- integrated ground transport infrastructure.

There will be area safeguarded for future terminal expansion to the north of the new terminal, likely required beyond the planning period of this master plan.

Consistent with Perth Airport's Social Value Strategy (described in Section 7), the new terminal will be designed to target 5-Star Green Star Building certification.

13.5.6 Common Departure Lounge

A Common Departure Lounge (CDL) concept allows both domestic and international departing passengers to comingle in a single, shared departure lounge rather than in two separate, fully segregated areas.

This approach, already implemented at a number of international airports, delivers a number of operational and customer experience benefits. They can include a reduced building footprint through a more efficient layout, a greater choice of retail outlets and the optimisation of departure gates.

While current legislation does not permit CDL operations in Australian airports, Perth Airport is planning the New Terminal development to be 'CDL ready', ensuring that, should the position change in the future, it can be accommodated.

13.5.7 Future Terminal Reserve

An area to the south of the new terminal is being safeguarded for a future terminal that is anticipated to be required beyond the 20-year planning horizon of this Master Plan 2026. While the specific operational requirements for the terminal are yet to be determined, it is likely to be of a similar nature to T2, primarily catering to domestic and regional traffic.

13.5.8 Aircraft Parking

There are currently 133 aircraft parking (contact and remote) positions located proximate to the passenger terminals, in addition to more than 66 parking positions located within leased apron areas which are controlled by various tenants.

Recent upgrades of aircraft parking facilities include:

- expansion of T2 stand-off parking apron to provide two additional Code C parking positions, and
- construction of 42,000 square metres of aircraft apron to the south of T2, providing six new aircraft parking stands, with a further 57,800 square metre expansion to provide an additional 11 aircraft parking stands planned for 2025.

Upgrades to the T3/T4 apron are planned to support the continued growth of Qantas operations prior to Qantas services being relocated to the Airport Central precinct at the time of consolidation. This includes the construction of a 9,000 square metre apron supporting three additional parking bays and a further 5,000 square metre apron supporting two additional remote parking bays; both expansions accommodate Code C aircraft. In addition, two aircraft parking bays within the adjacent freight apron, to the south of T3, are planned to be upgraded to accommodate larger freight aircraft.

Further extensive apron works will be undertaken to support the consolidation of passenger services into the Airport Central precinct. The construction of the new terminal will include direct contact parking bays as well as a remote parking apron suitable for a range of aircraft types.

Future stand demand is forecast by developing 'design day schedules', from which busy hour demand, hourly movement demand and aircraft stand demand can be derived. The design day is a representative busy day projected forward from current aircraft traffic, considering the profile of traffic over the baseline for the various travel segments (international, domestic and regional). Unlike annual forecasts, this approach takes into account the peak period nature of traffic at Perth Airport.

The stand demand is based on a reference code, which refers to the grouping of aircraft types based on characteristics such as aircraft wingspan and outer main gear wheel span.

The groupings of regular passenger aircraft types operating at Perth Airport are the Dash-8 Q400, Fokker 100, Embraer E190, Airbus A320 and Boeing 737 (Code C), Airbus A330, Airbus A350, Boeing B777 and Boeing B787 (Code E), and the Airbus A380 (Code F).

The larger stands are typically configured to also accommodate smaller aircraft types.

The forecast stand demand for the Airport Central consolidation is summarised in Table 13-2.

Works to expand the apron capacity in Airport Central are planned to commence in 2026. These works are detailed in the MDP for the Airport Central (Airfield Upgrade) which was approved by the Federal Minister for Infrastructure in February 2025. The project will deliver sufficient apron capacity to service the existing terminal facilities as well as the new terminal and future terminal expansions.

Artists impression of the new terminal development

	ACTIVE STANDS			NON-ACTIVE STANDS		TOTAL STANDS	
Financial Year	**Code F**	**Code E**	**Code C**	**Code E**	**Code C**	**Total**	**Code C Equivalent**
Terminal 1 International							
FY23 (Actual)	2	3	1	–	–	6	11
FY31	2	6	1	1	–	10	19
FY46	–	12	–	2	–	16	32
Terminal 1 Domestic							
FY23 (Actual)	–	–	8	–	–	8	8
FY31	–	–	8	–	2	10	10
FY46	–	1	7	–	4	12	13
Terminal 2							
FY23 (Actual)	–	–	20	–	20	40	40
FY31	–	–	20	–	32	52	52
FY46	–	–	22	–	39	61	61
New Terminal							
FY31	–	5	15	2	23	26	50
FY46	–	7	18	2	31	35	65

Table 13-2 Airport Central stand demand
Source: Airbiz
Note 1: Active stands are those used for actual passenger processing, being either contact stands (i.e. those served by an aerobridge or walk-up) or, passengers can be bussed to and from other locations.
Note 2: Non-active stands are those where aircraft not carrying out an immediate turnaround are towed and parked. Aircraft parking demand is impacted by Perth Airport's intensive aircraft movements at certain times of the day, due to FIFO operations.

13.6 Aviation Support

Aviation support facilities are crucial for the seamless and efficient operation of the airport. Perth Airport caters for the needs of more than 30 airline partners which rely on the services of aviation support operators to provide in-flight catering, ground handling, aircraft maintenance, fuel and air freight facilities.

The current facilities are located across the Airport Central and Airport West precincts, and include:

- three catering companies
- six ground handling operators
- 13 maintenance providers
- three air cargo terminal operators, and
- an aviation fuel terminal and hydrant network.

Over the next 20 years, continuing demand for aviation support facilities is anticipated, including:

- facilities for line or base maintenance of aircraft by airline engineering or maintenance repair overhaul service providers
- facilities for cargo terminal operators or integrators for air freight transfer, consolidation and interim storage
- aircraft parking associated with aviation support activities or for layover parking associated with adjacent terminal activities
- in-flight catering facilities, and
- facilities for the maintenance and storage of ground support equipment.

Following the relocation of Qantas operations from T3/T4, the Airport Central precinct will become the heart of Perth Airport's passenger operations. This is expected to result in aviation support organisations wanting to relocate or develop purpose-built facilities to be closer to airline operations in the Airport Central precinct.

To meet this demand, Perth Airport has planned for a dedicated aviation support area to the south of T2 and bounded by Airport Drive and Taxiway Charlie. It encompasses approximately 44 hectares of land, with 24 hectares located airside and 20 hectares located landside. This area is specifically designed and reserved for operations requiring airside access and/or apron areas for aeronautical operations, such as aircraft hangars, ground support equipment providers, flight catering and airfreight logistics. The first built-form development was the 4-Star Green Star rated Virgin Australia Regional Airlines maintenance hangar, which was completed in 2024 and comprises a 5,000 square metre office and hangar building alongside a 10,000 square metre apron.

Perth Airport has also designated an area within the eastern part of the Airport Central precinct for aviation support purposes. Accessible via Paltridge Road, this area complements adjacent land uses, including future jet fuel infrastructure and freight forwarder sites. Its location also offers convenient access to the new runway and new terminal, enhancing its suitability for aviation-related activities.

The GA Area in Airport West caters for a variety of aviation support services, including airline catering and aircraft maintenance. Aviation support operators will continue to be located in the GA Area, and the planned future development of the area (described in Section 13.7) will also provide opportunities for expanded and new aviation support services.

The Airport North precinct provides additional suitable locations for the development of aviation support facilities, particularly along the southern boundary which has direct airside access.

Located adjacent to Airport Central, the Airport South precinct also presents opportunities for aviation support development to cater for demand in excess of land availability within Airport Central.

Figure 13-7 shows the aviation support services within the Perth Airport estate.


VARA Maintenance Hangar

Perth Airport supports more than 30 airline partners through 13 maintenance providers, six ground handling operators, and three catering companies.

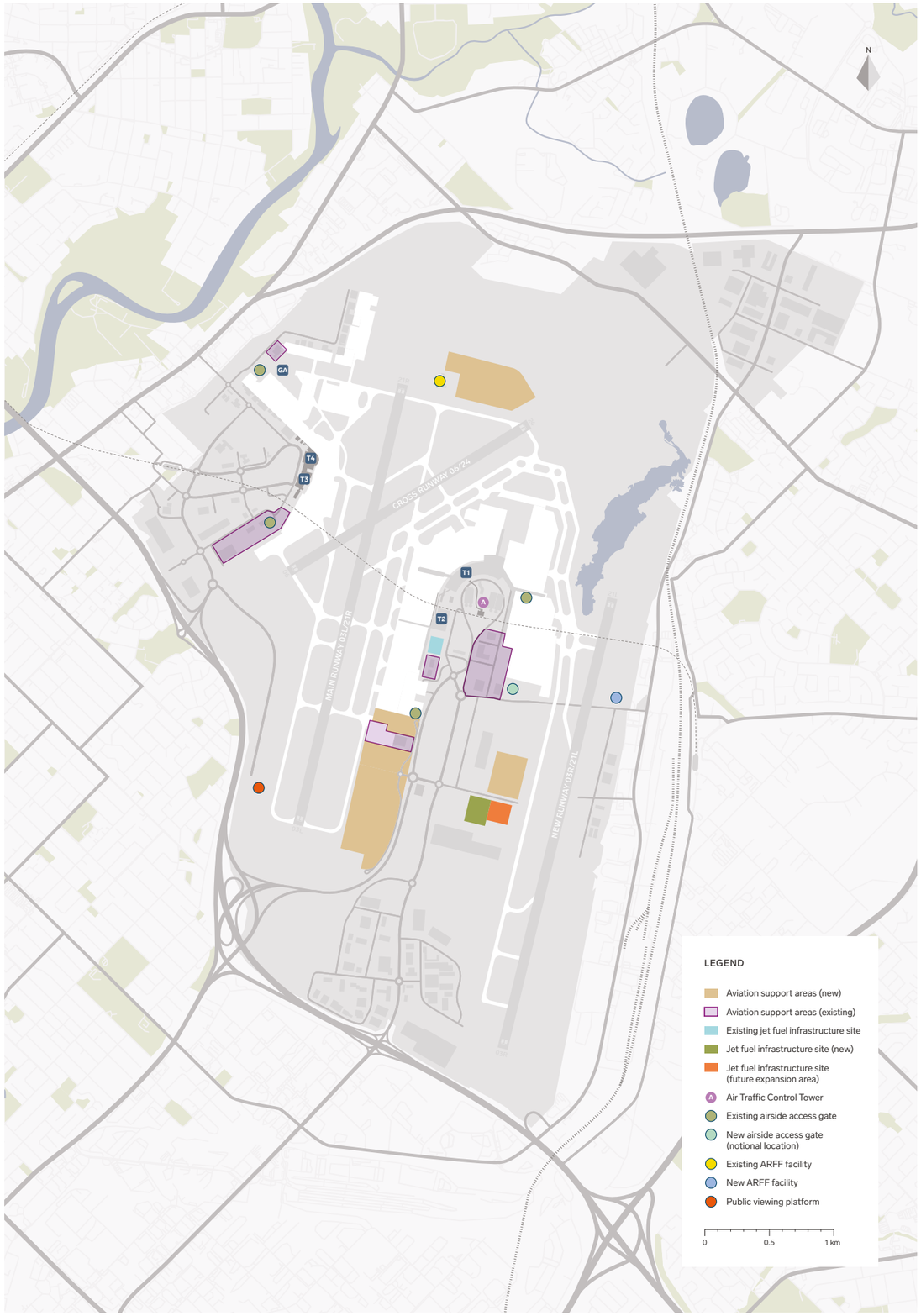


Figure 13-7 Aviation Support Services
Source: Perth Airport

13.6.1 Aviation Fuel

Jet A-1 fuel is supplied to the airport from off-airport storage facilities via an underground pipeline. The on-airport tank farm is located in the Airport Central precinct. It has three storage tanks with a maximum capacity of 6.6 million litres, which currently provide capacity for up to two days of reserve fuel storage.

Approximately 6 kilometres of underground pipeline connect the on-airport tank farm site to 125 aircraft refuelling hydrants located on terminal aprons.

In August 2023, Perth Airport acquired the jet fuel infrastructure (JFI) facility. Perth Airport's ownership provides for open and transparent access to aviation fuel for airline customers. Perth Airport has appointed a third-party operator to operate and maintain the JFI facility.

A fuel depot in the Airport West precinct has Jet A-1 tanker loading point to supply bowser trucks for fuelling aircraft which do not have access to hydrant points.

Avgas is supplied from tankers for fuelling of piston engine aircraft.

13.6.1.1 Future Fuel Development

The current aviation fuel supply chain at Perth Airport is constrained by the throughput capacity of the off-airport pipeline and on-airport storage capacity, which is less than 50 per cent of that recommended by the International Air Transport Association. This does not provide appropriate levels of supply security or redundancy to manage a supply disruption, and multiple modes for fuel delivery and increased on-airport storage are needed to mitigate the risk of a single point of failure and supply disruption.

Perth Airport's acquisition of the JFI facility acquisition in 2023, together with capital investment into additional jet fuel infrastructure, will enable an improved open access regime to increase competition among existing and new fuel suppliers, and improve jet fuel security of supply into Perth.

In the short-term, Perth Airport is implementing measures to improve open access and storage capacity, with tanker loading available at the tank farm, as well as planning for the development of a new facility to enable existing and new suppliers to establish additional supply chains to the airport by road.

By 2046, it is estimated that fuel demand will reach between 4.7 million and 6.7 million litres per day. This was determined by analysing the routes served by various aircraft types, the average flight hours, and fuel burn rates (including improved efficiency).

Based on this forecast demand, and the requirement for three days of fuel storage at any given time, a minimum 24-million litre tank capacity would be required for on-airport storage.

Previous Perth Airport Master Plans have identified that the current aviation fuel storage will need to be relocated in the future, as the existing JFI site will eventually be acquired for apron expansion to the south of T2.

Planning studies have been undertaken to identify suitable locations for the future JFI site. The potential sites proposed in Master Plan 2014 (within Airport South) and Master Plan 2020 (within Airport North) have since been assessed as unsuitable due to factors such as space availability and airspace height restrictions.

A new site on Paltridge Road, within the Airport Central precinct, is now safeguarded for the future JFI facility. This site has adequate space and height to accommodate storage tanks and fuel receipt facility. Additionally, its connection to the existing road network is well suited for fuel tanker access. The adjacent site, currently used for aviation support operations, is suitable for additional fuel storage tanks and is being safeguarded for the long-term expansion of the future fuel facility.

To accommodate the projected fuel demand, Perth Airport will assess opportunities to provide two fuel pipeline connections to the new JFI site which is planned to be in operation by 2032.

13.6.1.2 Sustainable Aviation Fuel

Perth Airport's ownership of the JFI supports the strategic goal of preparing for the introduction of future fuels in aviation, such as sustainable aviation fuel (SAF). SAF is a 'drop-in' fuel that is blended with conventional Jet-A1 fuel and delivered to aircraft via the existing fuel supply channels.

Due to SAFs producing fewer carbon emissions than traditional fossil jet fuel, it will be essential for domestic and international airlines to have access to SAF in order to meet the Australian Government's commitment to achieving net zero emissions by 2050.

There is currently no SAF production in Australia; however, the Australian Government is working on a range of initiatives to encourage a domestic SAF production industry. The planning for the new JFI site considers the requirements for the introduction of SAF when it becomes available.

13.6.2 In-flight Catering

There are currently three in-flight catering facilities serving Perth Airport: one in Airport West and two in Airport Central. These facilities include buildings, vehicle manoeuvring spaces for catering and supply trucks, catering vehicle loading and unloading bays, and catering truck parking/staging areas.

Catering growth responds directly to passenger volumes, and the current facilities on-airport are sufficient to meet demand.

Consistent with operations at other airports, catering operators are able to operate from locations on- and off-airport. However, Perth Airport will continue to support on-airport catering operations to help maintain efficient aviation support services.

13.6.3 Aircraft Maintenance Facilities

Perth Airport has aircraft maintenance facilities located in the GA Area and the Airport Central precinct. The existing hangars are limited to narrowbody sized aircraft.

A new $35 million maintenance hangar built by Perth Airport for Virgin Australia and their regional subsidiary Virgin Australia Regional Airlines, was opened in September 2024 and is located near T2 in Airport Central.

The relocation of Qantas operations from Airport West to Airport Central is planned to include new aircraft maintenance facilities located within the precinct.

13.6.4 Ground Support Equipment

Ground support equipment (GSE) refers to the variety of vehicles and equipment that are used for passenger and cargo loading and unloading, maintenance, and other activities while an aircraft is on the apron. This includes passenger boarding stairs, tugs, baggage carts, container dollies and loaders, ground power units, aircraft refuelling trucks, aircraft waste disposal vehicles and catering vehicles.

GSE storage areas are typically located close to aircraft parking aprons and are maintained by airlines or their ground handling companies. New GSE storage areas will be needed for the new aircraft parking bays that will be constructed for the new terminal and planned terminal expansions.

GSE maintenance facilities are required to service and repair vehicles and equipment. There is currently a single dedicated GSE maintenance facility operating within the Airport Central precinct. There is opportunity for additional GSE maintenance facilities to be developed in Airport West once Qantas relocates from T3/T4 to the new terminal.

Perth Airport is working with airline partners and ground handling service providers to support the introduction and progressive uptake of battery electric powered GSE. As shown in Figure 13-8, the annual carbon emissions from GSE equipment during aircraft turnarounds exceeds the combined Scope 1 and Scope 2 emissions for all Perth Airport owned facilities (for example, the terminal buildings). The electrification of ground handling activities and GSE equipment will therefore make a significant contribution to the reduction of aviation carbon emissions, and Perth Airport is actively planning to facilitate the use of electric GSE.

An initial assessment has been conducted into new ground handling technologies, and their potential application and associated requirements, for future use at the airport. Potential suitable locations and essential infrastructure have been identified, including the installation of charger point services.

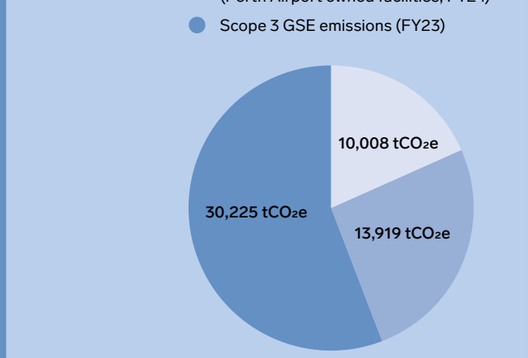


Figure 13-8 Comparison of annual carbon emissions for Scope 1 + 2 and GSE equipment
Source: Airbiz

13.7 General Aviation and Helicopters

General aviation is a broad term applied to almost all aircraft operations other than major international and domestic passenger and freight services. The Aviation White Paper defines general aviation as including:

- emergency services—aviation which enables the provision of essential and potentially lifesaving services to the Australian public, requiring priority access to airspace and airport infrastructure, for example, aero-medical flights, emergency services, law enforcement and search and rescue
- charter and freight—businesses or individuals that provide small scale transport services for freight or charter transport services for passengers
- aerial work—businesses and individuals that provide services such as mustering, spraying, banner towing and surveying
- flight instruction—businesses that provide commercial and non-commercial flight instruction
- ground aviation services— businesses or individuals that operate on land on or off airports, which provide aviation services such as maintenance and navigation, and
- recreational flying—businesses that provide recreational flight services to the public, and individuals who fly for pleasure, including sport and recreation associations.

Perth Airport recognises the importance of the general aviation sector to aviation workforce training and supporting regional and remote areas of Australia, where it facilitates the delivery of critical education, health and emergency response services.

Perth Airport has a dedicated GA Area located within the Airport West precinct, in close proximity to the airfield.

The GA Area includes leased hangars and aprons from which fly-in fly-out (FIFO) and private charter services operate, as well as aircraft maintenance, fixed base operators (handling of private aircraft and charters), maritime aerial surveillance and search and rescue, regional freight, and other aviation support services companies. Perth Airport maintains a common-use aircraft parking apron.

From 2008, the level of activity in the GA Area increased significantly, due mainly to the demand for charter services by the resource sector's FIFO workforce deployment model. Perth Airport responded to this growth by completing the construction of T2 and providing upgrades to airside infrastructure and terminal facilities at T3. These investments afforded facilities suitable for charter and regular passenger services.

There is no current requirement for further significant terminal or passenger processing facilities in the GA Area beyond that necessary to support small scale regional and charter movements (seating capacity of fewer than 40 passengers). Perth Airport continues to work with general aviation operators looking to transition new operations that are not suitable for the GA Area into existing and future common use terminals.

The relocation of Qantas services into the Airport Central precinct will result in the decommissioning of T3/T4, providing a strategic opportunity to realign the GA Area and provide additional land for hangars, maintenance and freight.

The potential reconfiguration requires a staged relocation of some general aviation tenants to new sites, the development of a dedicated maintenance area, expansion of taxiway Alpha and construction of a new taxiway to the west of taxiway Alpha. It aims to provide twice the amount of area for general aviation compared to the existing arrangement, which is nearing full capacity.

A potential ultimate layout for an expanded GA Area is shown in Figure 13-9. This layout accommodates the 20-year forecast requirements for general aviation operators, and also safeguards strategic sites for future aviation support facilities, including vertical take-off and landing operations.

13.7.1 Helicopters

There are currently no dedicated helicopter landing facilities at Perth Airport. Current ad-hoc helicopter movements are managed by Air Traffic Control as and when required.

Due to wake turbulence requirements, where helicopters must be held and separated from large fixed-wing aircraft, there are only limited areas on the estate where helicopters could operate independent of mainstream airfield operations. The GA Area is considered the most suitable location for helicopter operations.

Should Perth Airport be approached by an operator, the need for helicopter facilities on the airfield will be investigated in consultation with Airservices Australia, and would consider current airfield design standards, airspace management and potential aircraft noise.

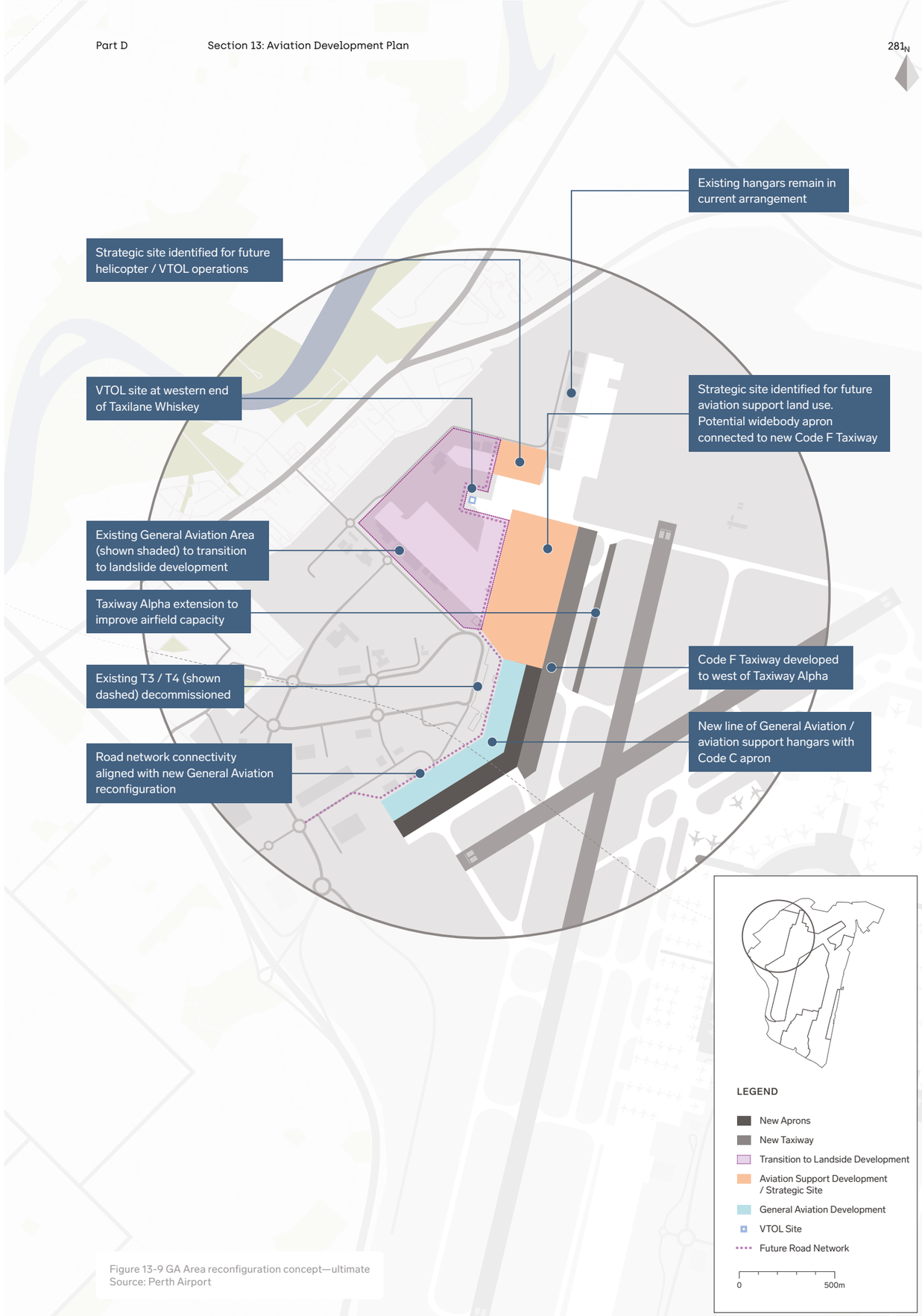


Figure 13-9 GA Area reconfiguration concept—ultimate
Source: Perth Airport

13.8 Air Freight

Perth Airport is working with industry and the State Government to grow air freight capacity, including the identification of infrastructure that will enhance the efficient movement of air freight as volumes grow.

Cargo terminal operators currently operate in the Airport Central and Airport West precincts. They require efficient landside and airside access to support the movement of goods from trucks to passenger aircraft or dedicated freighter aircraft.

The relocation of Qantas Group operations into the Airport Central precinct and the planned future expansion of the T2 apron will require the relocation of a number of the existing cargo operators on the estate, providing an opportunity to increase the efficiency of the air freight logistics chain.

Perth Airport is also considering additional airside and landside cargo facilities such as cold storage, in line with State Government's Revitalising Agricultural Region Freight Strategy—Responding to Change (2020), as well as scanning and freight holding facilities to service the future growth in air freight capacity and movements.

To facilitate improved air freight operations, new facilities will be centred on future airside access gates. Possible future locations are within the Airport West, Airport North, and Airport Central precincts.

13.9 Air Navigation Facilities and Services

The safe operation of aircraft requires a range of air navigation facilities and services.

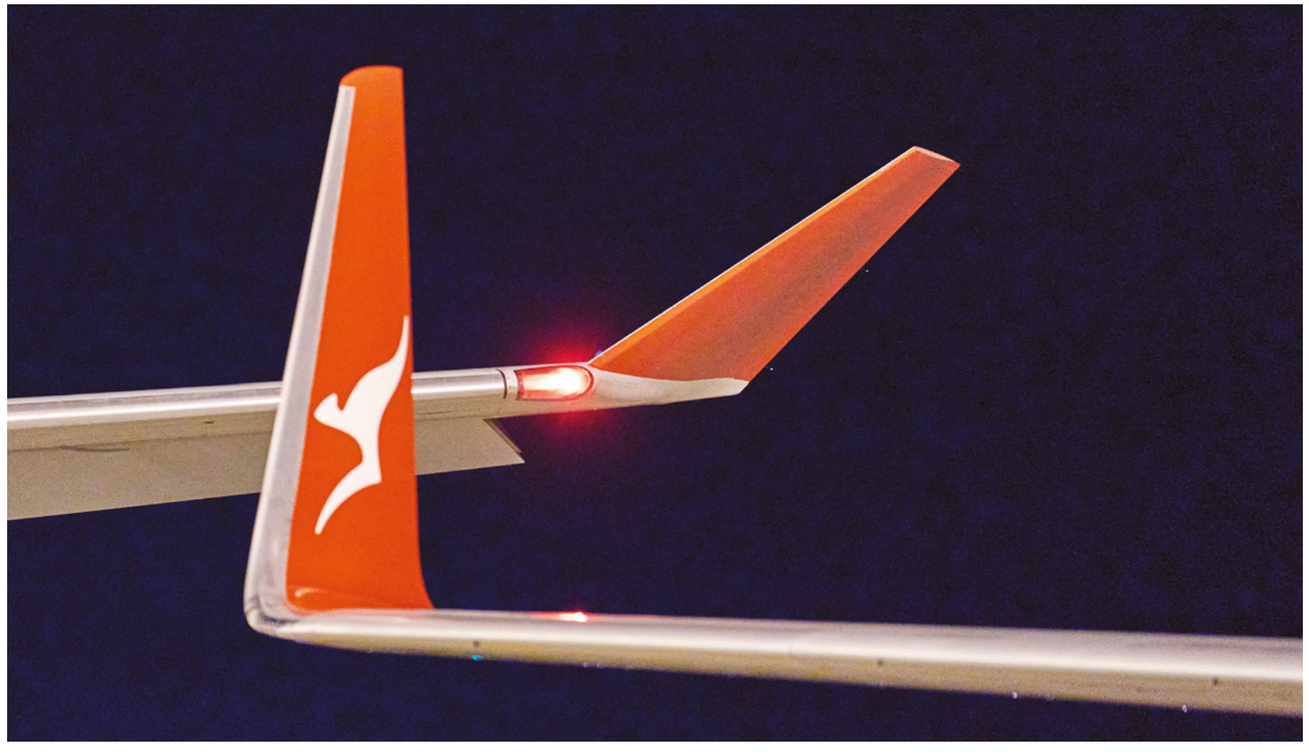
Airservices Australia, which is owned by the Australian Government, is responsible for navigational services, air traffic control, and aviation rescue and firefighting services at Perth Airport.

13.9.1 Air Traffic Management

Airservices Australia undertakes air traffic management at Perth Airport through two control units, the Air Traffic Control (ATC) tower and the Terminal Control Unit (TCU). The ATC tower is responsible for the control of aircraft on the ground and on approach to the airport. The TCU is responsible for aircraft operating in airspace around Perth up to 36 nautical miles from Perth Airport.

The ATC tower was constructed in 1986 and is located within the Airport Central precinct, between the main runway 03/21 and the site of the new runway 03R/21L. The tower has an eye level of 65 metres above ground level, providing air traffic controllers with a good view of all parts of the existing airfield movement area and the new runway. The operational requirement to maintain the line of sight for the ATC tower to the ends of the runways imposes limits on the height of developments in the building areas to the south of the tower.

The TCU is located within the Airport West precinct.



13.9.2 Aviation Rescue and Fire Fighting

Airservices currently operates a single Aviation Rescue and Fire Fighting (ARFF) station, located adjacent to the runway 21 threshold. This facility was opened in 2010 and provides response for aviation incidents at Perth Airport, as well as first aid, motor vehicle accidents and fire alarm events on the airport estate.

Based on CASA and ICAO regulations, ARFF has varying levels of service which dictate the required amount of water and foam needed to be carried, the response times, water discharge rates and the number of personnel. The Perth Airport ARFF station provides a Category 9 level of service 24 hours per day. A Category 10 level of service is needed for Code F (Airbus A380) services and the ARFF station upgrades to Category 10 at the times that the A380 operates.

The construction of the new runway 03R/21L will require relocation, upgrades, and installation of new Airservices infrastructure, including a potential additional ARFF station.

Airservices also operates a hot fire training ground, within the Airport North precinct, that is likely to be relocated in the future. The training ground is used for preparedness training which requires all ARFF personnel to respond to a mock aircraft disaster at least once every 90 days. The new location will be determined in consultation with Airservices.

The relocation of Qantas Group operations into Airport Central will increase efficiency.

13.9.3 Communication, Navigation and Surveillance Infrastructure

Communication, navigation and surveillance (CNS) facilities are critical for the safe and efficient operation of aircraft. They enable communications between pilots and air traffic controllers, navigation by pilots, and monitoring of aircraft movements and air routes by air traffic control.

Perth Airport has a variety of CNS infrastructure in place, including:

- instrument landing system (ILS)
- VHF omnidirectional range/distance measuring equipment
- advanced surface movement guidance and control system (A-SMGCS)
- anemometers (which measure wind speed)
- terminal approach radar
- meteorological radar, and
- high frequency, very high frequency and microwave data links.

It is expected that the high frequency data link and the terminal approach radar may be relocated during the period of this Master Plan. Perth Airport has assessed potential alternative locations within the estate where the facilities could be relocated if required, taking into consideration factors such as land availability, infrastructure requirements, accessibility, proximity to existing airport operations and equipment, environmental considerations and regulatory requirements. Coverage analysis was also undertaken to ensure that the proposed locations maintain or enhance the coverage required for safe and efficient operations.

The sites being safeguarded for the potential relocation of these facilities are shown in Figure 13-10.

The proposed site for the terminal approach radar is located on the south side of Airport Drive. The site currently houses a mains power line and communication network, which will be available to support the terminal approach radar. Additional security measures will need to be implemented to protect the radar site.

The proposed site for the high frequency data link is located within a vacant area in the north-east corner of the estate.

The construction of the new runway requires the installation of new CNS infrastructure. This includes:

- an ILS
- meteorology anemometers
- runway visual range sensors, and
- additional infrastructure associated with the A-SMGCS.

The safeguarding considerations for the communications, navigation and surveillance equipment are discussed in Section 16.8.

13.10 Outdoor Viewing Platform

Perth Airport opened the outdoor viewing platform in 2010, offering views of the main runway 03/21 through a purpose-built facility which has capacity for 100 people and was designed to incorporate elements of aircraft history. The wheelchair-accessible facility is located in the Airport West precinct, with access provided via Dunreath Drive. In suitable weather conditions, around 450 vehicles per day will visit the viewing platform.

Perth Airport will explore further opportunities for aircraft viewing areas as part of the detailed planning for the new runway and new terminal projects.

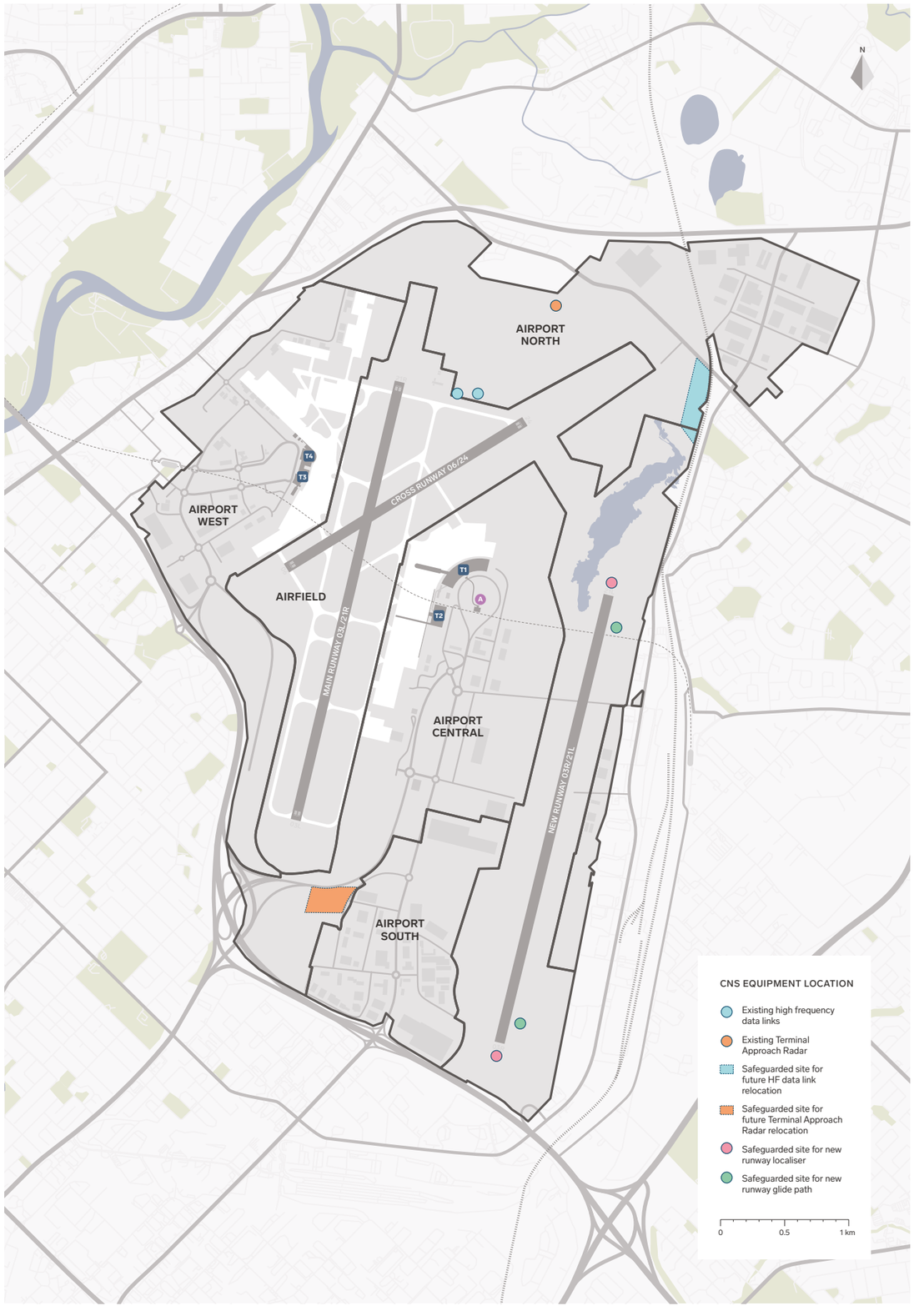


Figure 13-10 Proposed safeguarded sites for future relocated CNS equipment
Note: The location of localisers and glide paths on the new runway are indicative only. Final locations will be determined by Airservices Australia and Perth Airport.
Source: Perth Airport