

17 Utilities Development Plan

17.1 Introduction



The safe, effective and efficient operation of Perth Airport and the activities within the estate depend upon having reliable access to services, including power, water, wastewater, drainage and telecommunications.

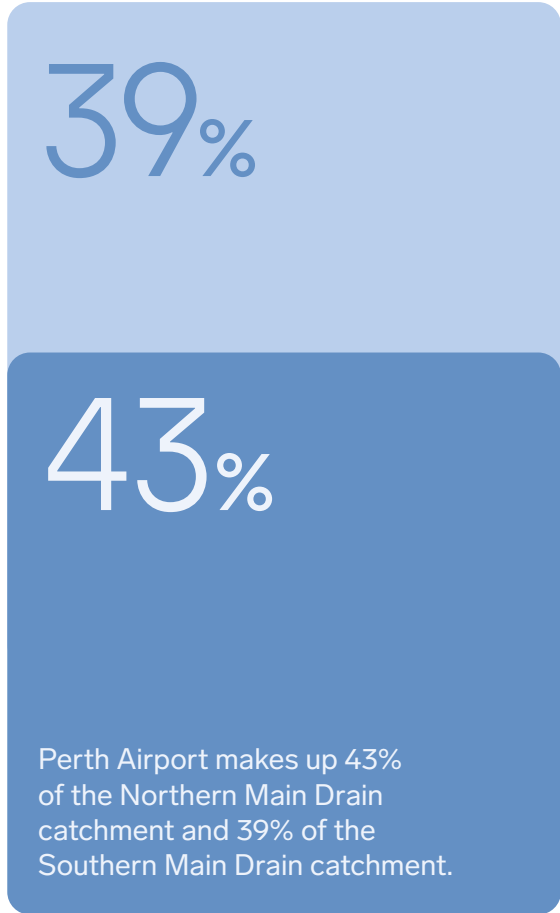
Perth Airport has developed strategies to ensure these services are available to meet current requirements as well as being adaptable to the growing needs of the airport as demand increases.

Perth Airport operates its own internal power, water, wastewater and communication networks, integrating with the State's systems at the estate boundary. Perth Airport also controls stormwater drainage running through the estate. Gas and commercial telecommunications are provided throughout the estate by external suppliers. The power supply is sourced from the Western Power grid, supported by emergency power backup units to ensure that the airport can continue to operate during external power supply interruptions.

Perth Airport works closely with the utility providers to ensure these essential services can support the operation and growth of the airport.

Section 7 presents Perth Airport's Sustainability Framework and Social Value Strategy which outlines sustainability targets for a range of aspects, including power and water use. Section 9 discusses the environmental management of water, power and stormwater, including a five-year action plan. The sustainability and environmental management strategies include measures for Perth Airport to become more sustainable in the use of all major services. This will also have the benefit of limiting the impact that airport developments have on demand for service infrastructure outside the airport estate.

Ongoing commercial development, together with construction of new and expanded terminals within the Airport Central precinct, provides opportunities to include water and energy saving initiatives and incorporate renewable power generation, while innovative design features can be used to reduce service demand.



17.2 Stormwater Drainage

Perth Airport sits within two of the 30 major stormwater catchments of the Swan and Canning rivers system. The Northern Main Drain (NMD) and the Southern Main Drain (SMD) are two open-channel main drains that traverse the airport estate, each draining one of the 30 major stormwater catchments. The NMD catchment (2,367 hectares) and the SMD catchment (2,633 hectares) extend from the top of the Darling Scarp down to the Swan River. The airport estate sits as close as 450 metres to the Swan River and makes up 43 per cent of the total NMD catchment and 39 per cent of the total SMD catchment. There are two smaller, primarily piped catchments—the Fauntleroy Avenue and North East catchments—also within the estate.

Upstream of the estate, the NMD catchment consists primarily of residential areas, while the SMD catchment is primarily residential but with an industrial area just outside the estate to the east. Downstream of the estate, the areas for both catchments are a mix of residential, commercial and light industrial.

Due to its low-lying, flat terrain and high water tables, the airport estate is prone to flooding. Stormwater management is required to minimise storm and flood risks that include personal harm, environmental harm, physical damage to infrastructure, and interruption or cancellation of aviation and non-aviation operations. Development controls are applied to account for 100-year flood levels.

The Water Corporation is responsible for managing Perth’s main arterial stormwater drainage network, and local governments manage the local networks within their jurisdiction.

Prior to Perth Airport taking over management of the airport in July 1997, the Water Corporation administered the drainage infrastructure within the estate. Perth Airport is now responsible for the provision and management of stormwater infrastructure, comprising of piped and open channels, within the estate.

The stormwater infrastructure was designed to handle the peak stormwater inflows and storage requirements from upstream sources for 1997 levels. Subject to the suitable management of stormwater inflows into the estate to the legacy 1997 levels, Perth Airport controls outflow from the estate into external infrastructure to the peak flow rates as they were in 1997.

Infrastructure and capacity will be provided to meet the inflows and peak stormwater storage requirements from upstream sources for the legacy 1997 levels, as well as provide relevant peak stormwater storage for all development and infill within the estate since 1997.

Perth Airport has undertaken detailed stormwater modelling of the current network. With the legacy 1997 levels providing the baseline for monitoring peak outflows from the estate, an ultimate concept network has been prepared for the future development of the estate.

Water quality guidelines require controlled nutrient levels for stormwater discharge into the Swan River.

17.2.1 Existing Stormwater Network

17.2.1.1 Northern Main Drain

The NMD is an open unlined channel for most of its length through the airport estate. It drains three open channels that cross the eastern boundary: Poison Gully, which has its source near the top of the Darling Scarp, and two Water Corporation scheme drains. The two Water Corporation scheme drains which enter the estate, discharge directly into Munday Swamp. During times of high flow, the NMD on the estate reaches capacity and overflows into the southern end of Munday Swamp. When Munday Swamp reaches capacity, it overflows at its northern end and drains into the nearby NMD.

Within the estate, the NMD drains the majority of the Airport Central precinct, the majority of the existing cross runway, just under half of the existing main runway, a small portion of the Airport West Precinct, and the Airport North precinct south of Kalamunda Road.

Perth Airport administers the NMD within the estate, the Water Corporation administers its two scheme drains, and the City of Kalamunda manages Poison Gully upstream of the estate. The City of Swan manages the NMD downstream off the estate (where it is known as Limestone Creek).

17.2.1.2 Southern Main Drain

The SMD is an open unlined channel for most of its length through the estate. It drains Crumpet Creek which has its source near the top of the Darling Scarp.

The SMD also drains the Airport South Precinct, just over half of the existing main runway, the majority of the Airport West precinct, some areas of Tonkin Highway and small areas of the neighbouring suburbs of Redcliffe and Cloverdale. It traverses the airside area and runs under the south end of the existing main runway.

A portion of the SMD that runs along the western boundary of the estate has been constructed as a living stream, which is an open channel that mimics the characteristics of natural streams, with suitable in-stream vegetation to improve water quality.

Perth Airport manages the SMD within the estate, the Water Corporation manages it downstream of the estate, and the City of Kalamunda manages the drain upstream (where it is known as Crumpet Creek).

17.2.1.3 Fauntleroy Avenue Catchment

The Fauntleroy Avenue Catchment is a small catchment within the estate. It is an underground piped network for the majority of its length. The network starts in the vicinity of T3 and T4 and drains directly to the Swan River in a pipeline managed by Perth Airport.

This catchment drains T3, T4, part of the terminal aprons, the nearby car parks and part of the General Aviation Area, all of which are in the Airport West precinct.

7.2.1.4 North East Catchment

The North East Catchment has its upper reach located mostly within the estate. It is an underground piped network within the estate. The catchment drains the part of the Airport North precinct north of Kalamunda Road. This is an industrial area, with some flows entering the estate from an adjacent industrial area and a nearby residential area.

The downstream estate boundary is the Great Eastern Highway Bypass. From the airport discharge point, the stormwater drains north into the Helena River which in turn drains into the Swan River.

Perth Airport manages the catchment within the estate, the City of Kalamunda manages the small section upstream, and the City of Swan manages a small section upstream and also the downstream section outside of the airport estate.

17.2.1.5 Gate 4 Catchment

The Gate 4 catchment is a small, piped network that drains to a retention basin where water is infiltrated into the ground or evaporates.

17.2.2 Drainage System Considerations

The development of the drainage system within the airport estate takes into consideration:

- external system capacity (upstream and downstream)
- internal system capacity
- modifications required for future land uses
- design criteria to manage a one-in-100-year storm event for the existing runways (main runway and cross runway), the new runway, taxiways and the terminal buildings
- design criteria to manage a one-in-50-year storm event for major access roads, aprons and short-term car parking suitable service levels for other infrastructure and land development, based on stormwater industry standards
- managing environmental impact from airport and commercial development operations, and
- maintaining or improving stormwater runoff quality entering receiving environments by managing (retaining, detaining and treating, if required) stormwater runoff from constructed impervious surfaces generated by the first 15mm of rainfall at-source as much as practical.

17.2.2.1 External System Capacity

Prior to the privatisation of the airport in 1997, the Water Corporation administered the NMD and SMD. As part of this management, land within the airport estate was used for the detention of stormwater due to stormwater infrastructure limitations downstream of the airport. Perth Airport now administers this legacy of detaining stormwater volumes generated upstream, based on 1997 levels.

Construction of the new runway, together with the planned development of the airport estate, will result in alternative uses for some of the land historically used for stormwater detention purposes. It is therefore essential that upstream authorities continue to increase detention volumes to provide suitable storage for all stormwater volume increases generated by off-airport developments since 1997.

Alternatively, approval would need to be obtained to increase outfall capacity to match inflow from upstream catchments as a minimum and ideally allow for a reasonable proportion of run-off generated on the airport site to be disposed of in the main drains. Perth Airport will continue to work with the Water Corporation and the surrounding local governments to achieve the required outcomes through increased upstream compensation, and/or downstream outfall capacity, to reduce the amount of compensation required on the airport estate.

17.2.2.2 Internal System Capacity

Extensive stormwater modelling was undertaken to develop a Master Drainage Strategy. This strategy is used to inform land use planning decisions and detailed stormwater designs, to help ensure the network is integrated and keeps peak flow discharge off the estate to the 1997 values, subject to inflows remaining the same.

The NMD and SMD have several limitations which contribute to the potential for localised flooding in peak flow events, including:

- limited open channel capacity based on size
- flat gradients of the drains (the NMD is as flat as 1 in 3,300 and the SMD is as flat as 1 in 2,500)
- various culverts along the drain have insufficient capacity for the larger flows
- the 1,200-millimetre diameter pipe under the main runway and Horrie Miller Drive has insufficient capacity for the larger SMD flows
- the drains downstream of the airport have several restrictive culverts and bends, and
- maintenance of the drains downstream of the estate is not under Perth Airport control.

17.2.3 Drainage Network Development Plan

Perth Airport’s Master Drainage Strategy was updated in 2022 to address future stormwater needs for the estate, ensuring that stormwater management continues to support both safety and environmental outcomes. The potential infrastructure projects include:

- various flood mitigation options within the airport estate
- the need for detention basins, and
- realignment of sections of the NMD and SMD.

The run-off created by Perth Airport’s ongoing development needs to be managed. The option of upgrading infrastructure downstream of the airport estate relies on the cooperation and timeliness of other parties. Initial system upgrades are likely to be undertaken on the airport estate, and discussions with State and local government authorities will continue to achieve the best overall outcome.

The Master Drainage Strategy is currently being updated in 2025 to reflect the latest Australian Rainfall and Runoff (ARR) guidelines, including updated rainfall intensities and temporal patterns.

Perth Airport has developed Design and Technical Requirements (DATR) to provide guidance about environmental and sustainability considerations to designers and consultants working on Perth Airport development projects. All new and upgraded stormwater infrastructure will be informed by the DATR, ensuring that the resulting infrastructure will:

- manage the run-off of stormwater through the estate to protect people, property and the environment
- minimise any adverse impact on the quality of run-off water that is entering the receiving water system
- minimise any adverse impact that the quantity of run-off has on the surrounding earth, vegetation, and infrastructure
- provide adequate stormwater capacity for the catchments and consider future developments within the catchments
- where available, incorporate the stormwater network into the capture and re-use system
- minimise, and where possible, avoid impact to the habitat of significant biodiversity values on the estate
- result in an extended or upgraded stormwater network with the most optimal lifecycle cost, and
- provide water-sensitive design integrated with the objectives of the Master Drainage Strategy.

Perth Airport will continue to review climate modelling inputs to assess how the latest projections can be integrated into future planning.

On-site investigations into contamination on the estate has indicated the presence of per-and polyfluoroalkyl substances (PFAS) on airport in soil, surface water and groundwater. Refer to Section 11.2.6 for more information.

As part of future developments that require alterations to surface water drains, including but not limited to the NMD and SMD, Perth Airport will, among other assessment criteria, consider the potential to improve water quality (particularly in relation to PFAS and nutrients) through design and construction methods such as culverting, diversions, or retention basins.

The drainage network development plan and stormwater catchments within the estate are shown in Figure 17-1.

17.2.3.1 Northern Main Drain

Modifications to the alignment and the configuration of the NMD are planned to facilitate Perth Airport’s ongoing development. The current NMD alignment passes through land required for:

- the new runway
- extensions of terminals and a new terminal in the Airport Central precinct
- proposed future extension of the cross runway, and
- development of the Airport North precinct.

To support the construction of the Perth Airport’s new runway (described in Section 13.4.1.3), the NMD drainage system will be realigned to ensure safe runway operations and sufficient drainage capacity during storm (up to one exceedance per year) and flood events. This realignment includes critical design features such as a pollution-capturing basin and an infiltration basin, and measures to control the velocity and quality of existing water flow into Munday Swamp. Perth Airport’s drainage design aims to reduce potential impacts on wetlands by preserving the current hydrological balance and minimising contamination risks from stormwater. The redirection of the high NMD flows through Munday Swamp is engineered to keep peak water levels and inundation times close to the current conditions, remaining within tolerance levels of the wetland flora and fauna.

Aboriginal traditional custodians have indicated that Poison Gully historically drained into Munday Swamp. The drainage works planned as part of the new runway project will realign and restore the original natural water flows, with a restored connection of Munday Swamp upstream to Poison Gully Creek (through the eastern hills area) and downstream to Limestone Creek (which connects to the Swan River).

Additional stormwater storage is planned for the development of the Airport North precinct.

17.2.3.2 Southern Main Drain

Modifications to the alignment and the configuration of the SMD will be required to allow Perth Airport’s ongoing development. The current SMD alignment passes through land required for:

- the new runway, and
- development of the Airport South and Airport West precincts.

The planned development of these areas will incorporate a realignment of the SMD. Provision for additional storage is planned for the Airport Central, Airport South and Airport West precincts. The continued detention of the legacy 1997 storage volumes will be incorporated into the SMD network.

17.2.3.3 Fauntleroy Avenue Catchment

As consolidation of commercial air services continues, with the relocation of Qantas operations to the Airport Central precinct, land uses in the Airport West precinct will change and complementary upgrades to the drainage system will be progressively undertaken.

17.2.3.4 North East Catchment

The stormwater network within the North East Catchment consists of a pit and pipe system with three detention storage basins. The development of the network in this area was completed in 2015.

17.2.3.5 Wetlands

There are several wetland areas within the airport estate, including Munday Swamp.

For most of the time, wetland areas only obtain surface water from their own localised catchments or rising ground water following winter rains. However, in times of high flow, wetland areas may receive varying amounts of overflow water from the NMD or SMD.

The airport drainage design endeavours to minimise adverse impacts on the wetlands on the airport estate resulting from changes to the hydrological regime, and potential contamination from stormwater. The redirection of the high flows of the NMD through Munday Swamp, as part of the construction of the new runway, has been designed to keep peak water levels and inundation times close to the existing scenario and within tolerance levels of the wetland flora and fauna.

17.2.3.6 Pollution Control

Pollution control is an integral part of any drainage system. All developments at Perth Airport must satisfy the requirements of the *Airports (Environment Protection) Regulations 1997* (AEP Regulations).

The greatest potential source of pollution related to airport operations has been identified as oil and fuel spills during aircraft servicing and refuelling. Hydrocarbons from these areas are intercepted prior to reaching the main drains or the Fauntleroy Avenue catchment outlet. Hydrocarbon interceptors are specified on all new apron construction projects that provide bays for aircraft refuelling operations. All apron constructions include these measures. Regular monitoring and maintenance are undertaken to ensure operational efficiency is continued.

Pollution control is also required to be implemented directly by tenants. This may be in the form of ensuring appropriate spill kits are available, hydrocarbon interceptors, or the installation of water-quality protection infrastructure and procedures. These requirements are administered through tenant Environmental Management Plans and tenant audits (described in Section 9).

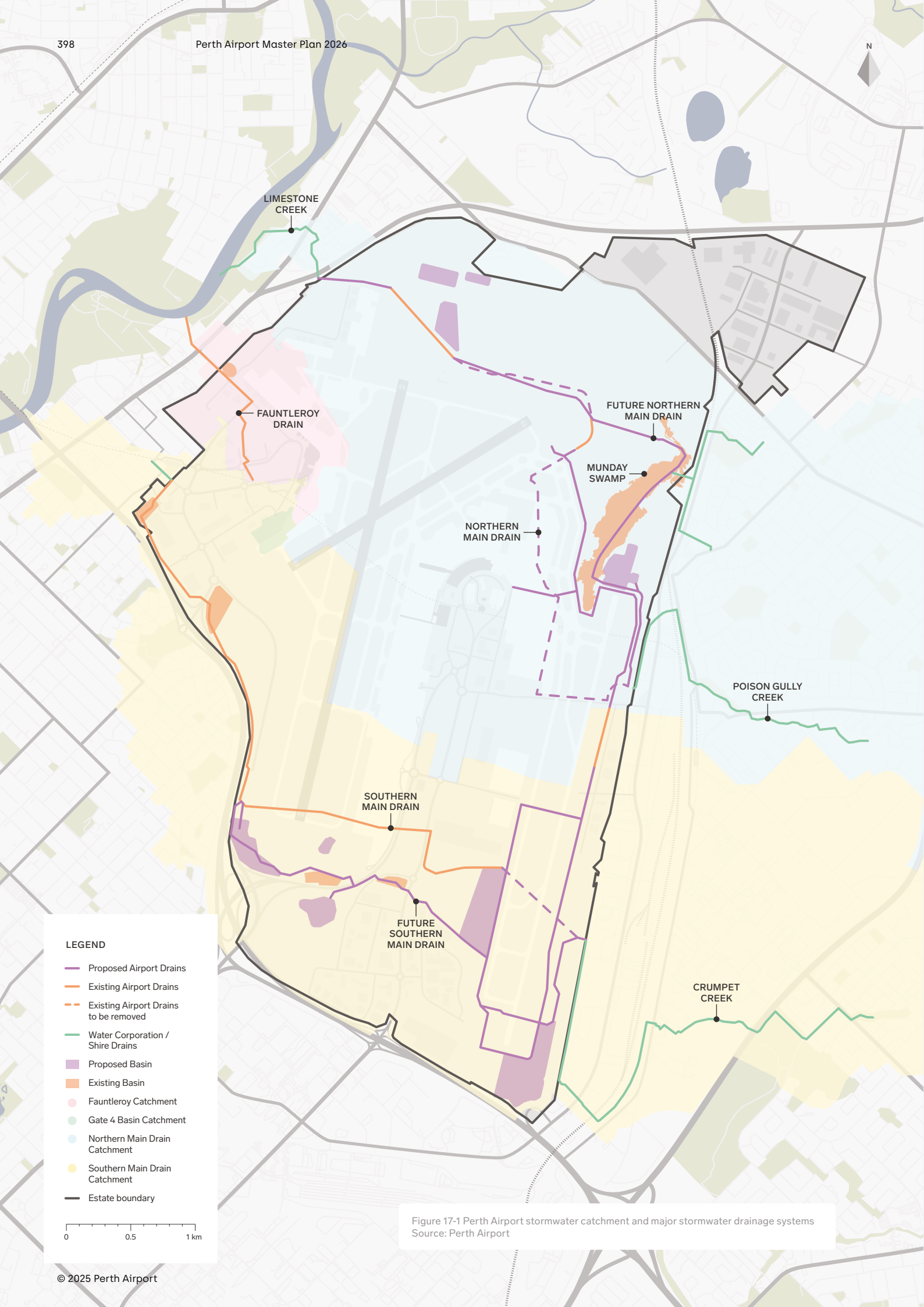


Figure 17-1 Perth Airport stormwater catchment and major stormwater drainage systems
Source: Perth Airport

17.2.3.7 Water Quality and Management

The AEP Regulations require Perth Airport to manage water quality. Management measures will continue to be implemented so as to mitigate any impact on water run-off and quality resulting from development on the airport estate.

Water quality at Perth Airport is monitored on a quarterly basis. Perth Airport has a large groundwater monitoring bore network and surface water monitoring locations, which are consistently sampled during each monitoring event.

Estate tenants also undertake water quality monitoring, and this is reported to Perth Airport as part of each tenant's Annual Environment Report.

Further information on Perth Airport's water quality monitoring program is provided in Section 11.2.9.

Perth Airport requires individual leased sites on the estate to retain and infiltrate the first 15 millimetres of rainfall from each storm, in line with the State guidelines for stormwater management in urban areas. This helps to provide at-source pollution control and ecological protection for receiving waterways and avoid overland overflow into the Perth Airport drainage network.

17.2.3.8 Hydrogeology

Perth Airport is located over the Cloverdale groundwater flow system. The groundwater beneath the estate is an unconfined water table within the Bassendean Sand (the surface geological unit) and within the mostly unconfined Guildford Formation geological unit below that sand.

The general direction of the groundwater flows is north-west, towards the Swan River. The groundwater level sits at a shallow depth (surface to four metres below ground level) across the estate. Soil conditions vary, and seasonal changes are generally experienced, with various areas of the airport estate becoming inundated or waterlogged in the winter months.

Site specific assessment of groundwater conditions will be required when proposed developments are likely to be impacted by groundwater.



Figure 17-2 Perth Airport potable water mains
Source: Perth Airport

17.3 Water Supply

The Water Corporation supplies potable water to the majority of the Perth Airport estate through three main connections which feed into the internal water ring main system. The ring mains provide redundancy in the water network to support upgrades, maintenance and unplanned events.

The internal main infrastructure is owned and managed by Perth Airport. The estate has a significant water pipe network, ranging from small domestic feeds to larger supply mains, and serves both potable and fire water needs.

The main supply points are located at Fauntleroy Avenue, Boud Avenue and Horrie Miller Drive.

17.3.1 Water Supply Development Strategy

Perth Airport works with the Water Corporation to ensure potable water supply for the airport estate. To meet the increased demand from aviation and commercial development, additional ring mains are planned to be installed within the estate to enhance supply continuity and water pressure. New supply points are also planned to be installed along Beyer Place (eastern boundary of the estate) as well as Waterhall Road, to service future development in the Airport North precinct. Where possible, Perth Airport will aim to avoid and minimise the impact to existing biodiversity on the estate when delivering water supply network upgrades or realignment.

The estate is a large user of water within its buildings, tenant usage and landscaping, and sustainable water management is a key priority for Perth Airport (described in Section 9).

Figure 17-2 shows current and future water potable water mains on the estate.

17.4 Sewerage System

Perth Airport manages the sewer infrastructure within the estate. The existing wastewater collection system includes a sewer reticulation network that serves both tenants and aviation facilities. Wastewater is collected via gravity pipes and discharged at various locations to a network of 15 minor pumping stations and four major pumping stations via sewer pressure mains.

There are three discharge connection points from the estate into the Water Corporation network at the following locations:

1. Airport South precinct (PS1)—discharges into a sewer on Kewdale Road near Collie Street in Welshpool
2. Airport Central precinct (PS2)—discharges into the Dubs Close pumping station at the southeast boundary of the estate, and
3. Airport West precinct (PS12)—discharges into a sewer at the intersection of Moreing Street and Smiths Avenue in Redcliffe.

Wastewater from the land north of Kalamunda Road, in the Airport North precinct, is conveyed to the Water Corporation network via a combination of gravity and pumping mains.

Sewer transfer systems, which accept waste taken from aircraft, are located in the Airport Central and Airport West precincts.

Figure 17-3 shows the locations of the major pumping stations, their associated wastewater catchment areas, and the discharge points into the Water Corporation network.

17.4.1 Sewerage System Development Strategy

Perth Airport engages with the Water Corporation on capacities and quality of sewage being discharged from the estate.

To meet projected demand driven by passenger numbers, proposed developments, and asset end-of-life replacements, the sewerage system is planned to be expanded by:

- upgrading all four major pumping stations to accommodate increased pump duty rates and ensure safe maintenance access
- realigning existing sewer lines to accommodate new major developments, and
- installing a new major pumping station in the Airport North precinct to service future development, which will connect to a new rising main that ultimately discharges into the Dubs Close pumping station.

Where possible, Perth Airport will aim to avoid and minimise the impact to existing biodiversity on the estate when delivering sewage system upgrades or realignment.



Where possible, Perth Airport will aim to avoid and minimise the impact to existing biodiversity on the estate when delivering sewage system upgrades or realignment.



Figure 17-3 Perth Airport sewerage infrastructure
Source: Perth Airport

17.5 Power Supply

Perth Airport operates a 22KV embedded distribution network system that supplies power across most of the estate. The network has two supply connection points from the South West Interconnected System:

- Dunreath 22KV substation on the western boundary which supplies power to the Airport West precinct. This substation is supplied from Belmont 132KV substation outside the curtilage of the Perth Airport estate, and
- Munday 132KV substation on the airport eastern boundary, which supplies power into the Airport Central precinct. The precinct is supported by a natural gas fired co-generation power plant with waste heat recovery providing electrical power generation, space heat and cooling services to T2 and T1 Domestic.

The area of the Airport North precinct that is north of Kalamunda Road, is supplied directly from Western Power's distribution network and is not operated or managed by Perth Airport.

Emergency backup power to support Perth Airport operations in the event of a loss of supply from Western Power, is provided by a combination of the co-generation power plant (for terminals within the Airport Central precinct) and backup diesel generators.

17.5.1 Power Supply Development Strategy

The energy landscape continues to evolve on the transformational journey to reduce emissions. Perth Airport's approach to managing energy and delivering the best energy solutions to its customers is also evolving, requiring a holistic approach to energy procurement, renewable asset deployment, energy modelling, network modelling, energy data analysis, optimised infrastructure design, and capital and operational investment.

To support projected passenger growth and proposed land developments, Perth Airport plans to increase the capacity of the Munday and Dunreath substations to 60MW within the next five years. This includes adding 5MW from an on-site thermal plant and another 5MW from an on-site solar farm. Perth Airport has significant potential for future photovoltaic (solar) energy systems and continues to collaborate with Western Power to plan for the integration of solar generated power.

Perth Airport is also exploring options to power the future development of the Airport North precinct.

Figure 17-4 shows the proposed high-voltage upgrades across the Perth Airport estate, which include infrastructure works to support the new runway, new terminal and existing terminal expansions, new airport hotel, and the multi-storey car park developments. Electrical infrastructure is also planned for development to support electric ground equipment charging on aircraft aprons, landside electric vehicle charging facilities, and future electric aircraft requirements.

Where possible, Perth Airport will aim to avoid and minimise the impact to existing biodiversity on the estate when delivering power supply upgrades or realignment.

17.5.2 Renewable Energy

Perth Airport's use of renewable energy is a key element of the Perth Airport's Sustainability Framework to achieve sustainability goals.

Development of the first 5MW (Megawatt) solar farm, located on a portion of land to the east of the General Aviation Area, commenced in 2025 with generation anticipated in 2026. The solar farm will produce an annual energy yield of 10GWhr (Gigawatt-hour) and is planned to be complemented by other energy systems, including:

- electrification of vehicle and equipment fleets
- additional solar farms and the expansion of roof top solar systems
- battery energy storage systems supporting the solar farm and rooftop solar systems, and
- pyrolysis generation from wood waste.



5MW

Development of the first 5MW (Megawatt) solar farm, located on a portion of land to the east of the General Aviation Area, commenced in 2025 with generation anticipated in 2026.



Figure 17-4 Perth Airport high voltage power supply network
Source: Perth Airport

17.6 Irrigation

The majority of irrigation within the estate is sourced from groundwater. There are currently 21 groundwater bores located across the airport estate. Perth Airport recognises that groundwater supplies in the area are limited and therefore seeks to rationalise their use.

Future irrigation demands will be determined through assessment of groundwater monitoring data, resource analysis and usage requirements.

17.7 Gas Supply

Gas supply to the airport estate is currently provided by Synergy through a piped network mostly owned and maintained by ATCO Gas Australia. The existing system includes gas reticulation mains along Horrie Miller Drive, Brearley Avenue and Fauntleroy Avenue.

A high-pressure gas main runs along the western side of Horrie Miller Drive and services the Airport South precinct, Airport Central precinct and surrounding developments. This line is reticulated from a gas main running adjacent to Tonkin Highway at the southern end of the estate. A further gas pressure main supplies airport tenants located north of Kalamunda Road.

The gas mains under Perth Airport's direct control are the distribution mains that service T1 and T2 from the co-generation power plant.

There are two high-pressure gas transmission lines that run through dedicated easements on the estate:

- Parmelia Pipeline, which passes through a portion of the Airport North precinct to the north of Kalamunda Road, and
- Dampier to Bunbury Natural Gas Pipeline, which runs from north of Kalamunda Road in the Airport North precinct and then along entire length of the eastern airport boundary.

17.7.1 Gas Supply Development Strategy

Perth Airport's commitment to decarbonisation (discussed in Section 7) is expected to result in a reduction to future gas use and network coverage. Consequently, no new gas services installations are forecast across the estate.

Perth Airport's co-generation power plant, which is gas powered, supplies the primary heating, ventilation and air conditioning (HVAC) system for T1 Domestic, T1 International and T2, as well as emergency backup power. A key component of the decarbonisation works will be the decommissioning of the co-generation power plant by 2027.

Perth Airport will undertake a staged approach to decommissioning the existing network.

A key component of the decarbonisation works will be the decommissioning of the co-generation power plant.

17.8 Communications

Reliable communications systems are necessary to ensure safe and efficient aircraft navigation and airport operations. Communications infrastructure within the airside boundary are primarily the responsibility of Perth Airport, although a substantial network of airside communication cables for control of navigational aids and associated communications, is owned by Airservices Australia.

Perth Airport has an extensive network of communications systems consisting of air-to-ground and point-to-point radio communications utilising:

- high frequency transmitter and receiver stations
- microwave links, and
- land-line communications via underground cables and optic fibre.

Commercial telecommunications are provided throughout the airport estate by various third-party service providers, such as Telstra, Optus and NBN Co Ltd, whose distribution utilises the Perth Airport duct networks or their own dedicated containment.

17.8.1 Communications Development Strategy

Communications systems will be upgraded as required to maintain or increase capacity and effectiveness in line with Perth Airport's communications strategy. The strategy considers development of communications across the airport through the establishment of additional cable/fibre containment, equipment rooms and integration with fibre distribution centres. Perth Airport is also investigating the benefits of wireless communications networks for connectivity to a wider range of facilities, including airport operations, facility monitoring and for some commercial applications.

Existing communications services along Grogan Road need to be relocated for the construction of the new runway.

New communications rooms will be required to service the new terminal, with one of the rooms to be used as a hub for the fibre ring.

Following the relocation of Qantas operations to the Airport Central precinct, the existing communications hub at T3 and T4 will be repurposed and relocated to serve as a hub for the expanding Airport West commercial development.

A new communications hub will also need to be established within the Airport North precinct to service the planned developments.

The safeguarding of aviation communication, navigation and surveillance systems is discussed in Section 16.8.