

# 06

## LAND USE PLAN

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# OVERVIEW

The 2020 Brisbane Airport Land Use Plan provides the community, industry stakeholders and local, state and national Governments with an understanding of the types of future development activities that could potentially be located on different parts of the airport site.

In line with the requirements of the Airports Act 1996, the Master Plan describes current land use and zoning policies in place on Brisbane Airport, with the definitions, terminology and controls in alignment with the Queensland Planning Act 2016, wherever possible.

The airport is divided into five land use "zones". This chapter shows their location and for each zone provides purpose statements and a guide to permissible uses, designed to advise interested parties on the requirements and conditions applying to proposed future developments in that zone.

## ADJUSTMENTS FROM THE 2014 MASTER PLAN

This Plan is generally consistent with the 2014 Land Use Plan, however the following small adjustments better reflect existing and intended land uses:

01. Export Park and Airport Industrial Precinct has been rezoned from *Mixed Use* to *Industrial*.
02. A parcel of land north of the Gateway Motorway has been rezoned from *Industrial* to *Conservation*.
03. A small area within the terminals precinct has been rezoned from *Special Purpose Airport* to *Mixed Use*.
04. The possible uses within each zone have been subject to minor adjustments.

This Master Plan has been updated to include changes to relevant state and local Government legislative requirements and guidelines affecting planning and development at the airport.

## PARTNERSHIPS AND COMPLIANCE

Brisbane Airport Corporation will continue to work in close partnership with Government at all levels to ensure that airport development activities remain compliant and in line with both development objectives and legislative requirements.

# LAND USE & PROPERTY AT A GLANCE

BNE Property is Brisbane Airport's property division, responsible for developing and managing one of the largest single-owner sites in South East Queensland.

## AUTO MALL

**\$300M**

DEVELOPMENT AT THE HEART OF THE BNE AIRPORT PRECINCT

**TOURISM**

A BENCHMARK DESTINATION FOR QUEENSLAND AND AUSTRALIA

**24/7 OPERATION**

THE ONLY AUTOMOTIVE PRECINCT IN AUSTRALIA OPEN 24/7

MANUFACTURER LAUNCH EVENTS · MEDIA DRIVING EVENTS · DRIVER TRAINING · VEHICLE ENGINEERING AND DEVELOPMENT · CORPORATE EVENTS · TEST DRIVING



## DFO EXPANSION

**4,950m<sup>2</sup>**

ADDITIONAL RETAIL SPACE

**5 NEW**

EATERIES



**1,200m<sup>2</sup>**

COMMERCIAL OFFICE SPACE

**1,000 BAY**

MULTI-DECK CAR PARK

## MIELE



**7,065m<sup>2</sup>**

WAREHOUSE, WORKSHOP AND OFFICE FACILITY

## CAR PARKS



**17,000+**

CAR PARKING SPACES

## BRISBANE AIRPORT LAND USE ZONES

**SPECIAL PURPOSE**  
Aeronautical activities



**MAJOR CENTRE**  
Retail, entertainment and offices



**GENERAL INDUSTRIAL**  
Industrial uses capitalising on proximity

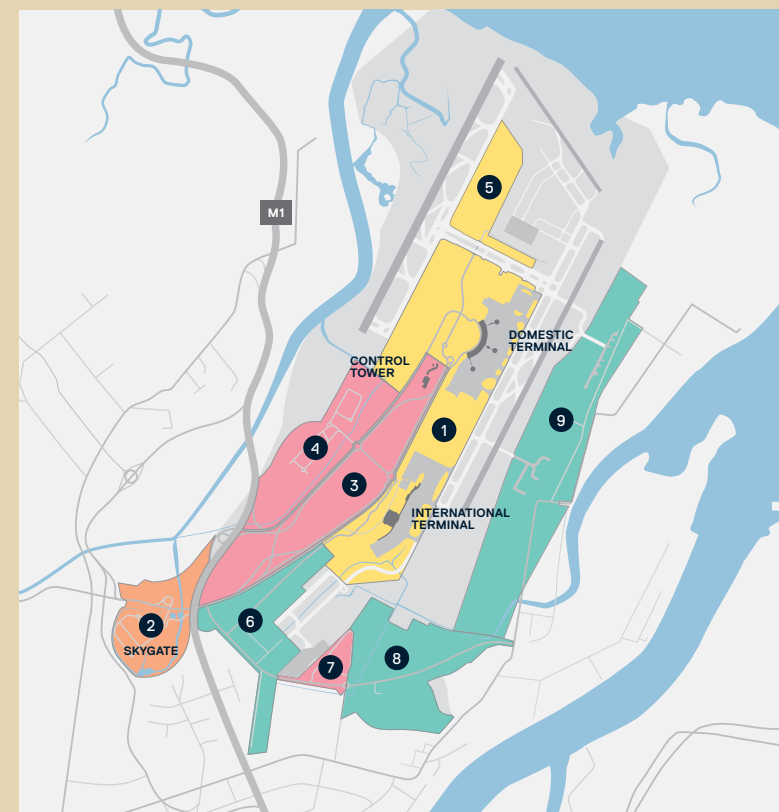


**MIXED USE**  
Diverse range of land use



**CONSERVATION**  
Protection of habitats and biodiversity

## AIRPORT NEIGHBOURHOODS



- 1 THE TERMINALS**  
The heart of the airport and its operations
- 2 SKYGATE**  
The airport's commercial, retail and leisure hub
- 3 AIRPORT CENTRAL**  
24-hour Service Centre and home to BNE Auto Mall
- 4 AIRPORT WEST**  
Includes parking and vehicle charging facilities
- 5 AIRPORT NORTH**  
The airport's logistics and aviation hub
- 6 EXPORT PARK**  
Home to warehousing and distribution operations
- 7 DA VINCI**  
Home to training and education centres
- 8 AIRPORT INDUSTRIAL PARK**  
Includes warehouse, storage and distribution facilities
- 9 AIRPORT EAST**  
Maintenance and associated businesses

# LAND USE PLANNING FRAMEWORK

## LEGISLATIVE ENVIRONMENT

Section 71(6) of the Airports Act 1996 and Regulation 5.02(2) of the Airports Regulations 1997 indicate that a Land Use Plan should, where possible, describe land use, zoning and development proposals in equivalent detail and using terminology consistent with Queensland planning law.

The applicable Queensland Law is the Planning Act 2016 (Qld) which provides the template for all Local Planning Schemes in Queensland. Wherever appropriate, the definitions, terminology and controls from the Planning Act 2016 and the Planning Regulations 2017 have been used.

## SENSITIVE DEVELOPMENTS

Section 71A of the Airports Act 1996 requires an airport Master Plan to identify any proposed 'sensitive developments', defined as development or redevelopment that increases the capacity of a residential dwelling, community care facility, preschool, primary, secondary, tertiary or other education institution or hospital.

A sensitive development does not include an aviation educational facility, accommodation for students studying at an aviation educational facility at the airport, a facility with the primary purpose of providing emergency medical treatment that does not have inpatient facilities, or a facility with the primary purpose of providing in-house training to staff, or an organization conducting operations at the airport.

Sensitive developments are prohibited on Commonwealth-leased airports except in exceptional circumstances, and require ministerial approval to prepare a Preliminary Draft MDP for the proposed development.

There are no specific proposals for sensitive development in the Brisbane Airport 2020 Master Plan.

## ENGAGEMENT WITH GOVERNMENT

As a major employment and economic generator and a vital piece of infrastructure bringing industries, jobs and tourism to Brisbane, the South East Queensland region and the state of Queensland overall, Brisbane Airport has strong business relationships with government at all levels.

As a Federal leased airport, Brisbane Airport is not subject to Queensland Planning Law, however the Airports Act 1996 outlines that the objectives and proposed developments within a Master Plan must address the extent of consistency with state planning schemes. If the Master Plan is not consistent with these schemes, there must be justification for such inconsistencies.

An overview of state legislation relating to land use planning, the relevant state, regional and local planning instruments subject to that legislation, and the consistency of the 2020 Master Plan is provided in this section.

## THE PLANNING ACT

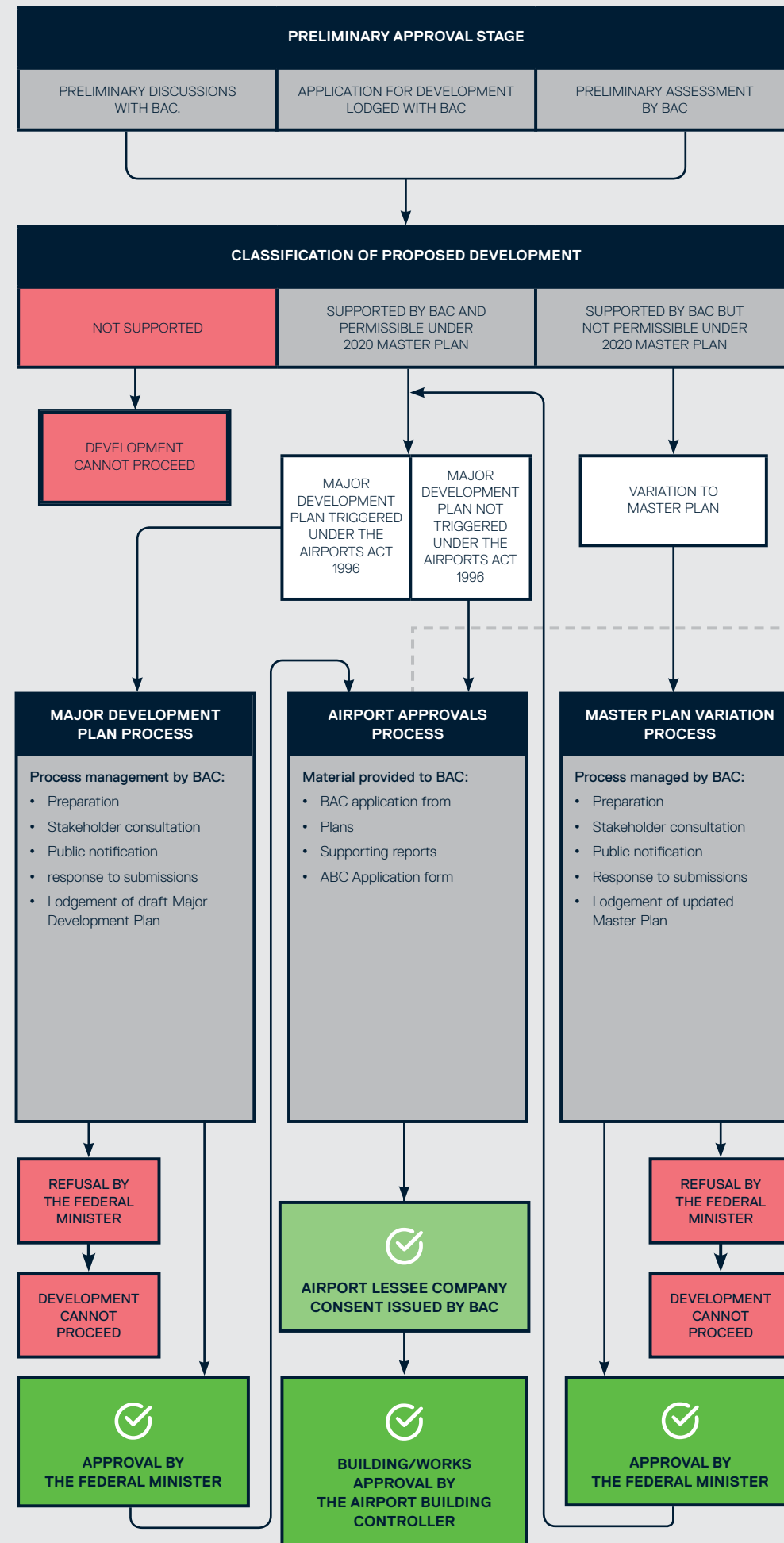
The Planning Act 2016 (Qld) establishes the framework and overarching policy for land use planning and development assessment. State and local Governments share the responsibility for delivery. The Planning Act 2016 and Planning Regulations 2017 (Qld) provide for the making of the planning instruments that guide strategic planning and development throughout the state.

The Queensland State Planning Policy is a planning instrument made by the State Planning Minister which articulates state interests in planning that must be integrated into the planning schemes and development assessment decisions.

Regional Plans are state planning instruments which provide guidance regarding state interests at the regional scale.

The primary document for the regulation of planning outcomes in Queensland is the Planning Scheme, used by local government taking into account the aspirations of their communities as well as the interests of the state.

## DEVELOPMENT DECISION PROCESS AT BRISBANE AIRPORT



**Before decision on an application, consideration must be given to:**

- General**
- The Airports Act 1996 and regulations.
  - The Brisbane Airport Master Plan.
  - CASA Manual of Standards Part 139 – Aerodromes.

- Airport Operations**
- Does the proposal impact on the safe and secure operation of the airport?
  - Is it compliant with prescribed airspace requirements?
  - Does it address the Australian Noise Exposure Forecast and AS2021 requirements?

- Access**
- Is it aligned with the Ground Transport Plan, such as the movement of pedestrians, cyclists and vehicle traffic including waste removal and emergency services?
  - Has consideration been given to car parking, vehicle loading and access to loading bays, including turning circles, where appropriate?

- Use**
- Compatibility with adjoining and nearby land use and aircraft operations.

- Design and Built Form**
- Consideration of whether the proposal contributes to enhancing the amenity of the airport.

- Environmental sustainability**
- The Brisbane Airport Environment Strategy (part of the Brisbane Airport Master Plan).
  - Brisbane Airport's Construction Environmental Management Plan Guidelines.

# ENVIRONMENTAL MANAGEMENT

In addition to working with Government and stakeholders to ensure that all construction and development activities on site are compliant with planning regulations, Brisbane Airport Corporation also has clear guidelines in place to ensure that new construction activity aligns with the stated objectives of the Brisbane Airport Environmental Strategy.

Where any new construction is occurring on-airport, the Brisbane Airport Environmental Strategy requires that all developments undergo an environmental assessment.

All new developments are required to show consideration of environmentally sustainable design elements and to meet BAC's ongoing environmental management requirements. Under the Airports Act, certain development projects may also require a Major Development Plan (MDP). In addition to being required due to cost and size, the requirement for an MDP can also be triggered by a potential environmental or ecological impact.

## ON AIRPORT BUSINESSES

More than 400 diverse businesses and organisations operate at Brisbane Airport. These businesses include tenants (and their subtenants), contractors (and their subcontractors), licensees and other operators.

To ensure the delivery of Brisbane Airport Corporation's commitment to maintaining long term environmental sustainability, it is a requirement that all tenants and contractors working on the airport site ensure that their environmental responsibilities and practices remain closely aligned with all levels of sustainability adopted by BAC.

Brisbane Airport Corporation provides guidance and direction to tenants and contractors on the management of their environmental responsibilities. An environmental risk rating profile is conducted for all airport tenants with regular audits and monitoring programmes in place to promote best practice environmental practices.

## TIMELINE FOR ENVIRONMENTAL APPROVAL

The timeline on the page opposite is a visual representation of the various stages that businesses proposing construction activity must undergo at Brisbane Airport prior to approval and should be read in conjunction with the Land Use Planning Framework on the preceding page.

## ENVIRONMENTAL MANAGEMENT TIMELINE: FROM INITIAL DESIGN TO OPERATION

STEP	PHASE	ENVIRONMENTAL MANAGEMENT ASPECT
1	PRELIMINARY DESIGN	Desktop review of Major Development Plan/Environmental Assessment Reports if required and assessment for compliance against Master Plan
2	DETAILED DESIGN	Development and review of environmental assessment of aspects including: <ul style="list-style-type: none"> <li>Hydraulic Design</li> <li>Stormwater Management Plan</li> <li>Acid Sulphate Soil/Potential Acid Sulphate Soil Report</li> <li>Soil and Groundwater Investigation and Contamination Report</li> <li>Goods and Waste Design</li> <li>Ecologically Sustainable Design Report</li> <li>Hazardous Goods Management Plan</li> <li>Air quality, odour and noise modelling and report</li> <li>Flora, fauna and heritage report</li> <li>Other specialist studies as required</li> <li>Development of documentation to ensure compliance with PFAS National Environmental Management Plan</li> </ul>
3	BUILDING APPROVAL	Submission of environmental reports to Airport Building Controller
4	CONSTRUCTION	Development and implementation of Contractor Construction Environmental Management Plan (CEMP) CEMP Compliance Inspections
5	OPERATION	Review of Tenant Operational Environmental Management Plan (OEMP) Review of BAC EMS Risk Register Tenant OEMP and EMS Compliance Inspections and/or in response to incidents BAC/Airport Environment Officer Landside/Airside Inspections Review Tenant Audit Reports

## LAND USE PLANNING FRAMEWORK

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*The presence of an international airport with the most efficient runway system in Australia and future capacity similar to Singapore and Hong Kong is identified as a major competitive economic advantage.*

Source: "Shaping SEQ"

### STATE PLANNING POLICY (SPP)

The SPP outlines the state's interests in land use planning and development. Promotion of state interests through the plan making and development decisions of both state and local government is designed to help secure a liveable, sustainable and prosperous Queensland.

The SPP identifies Brisbane Airport as a critical airport, serving important aviation, tourism, development and economic functions. Consistent with the intent of the Policy, the 2020 Master Plan upholds protection of airport operations, while allowing continued development of associated and supporting land uses. The Brisbane Airport Land Use Plan supports the ongoing development of a commercial centre for business and leisure.

The SPP expressly supports the ongoing expansion of critical airports to enable economic growth through the creation of jobs and economic opportunity, increased trade and distribution of goods, provision of specialist services and to enable the easy movement of people into and out of Queensland.

### SHAPING SEQ – THE SOUTH EAST QUEENSLAND REGIONAL PLAN 2017

'Shaping SEQ' is the statutory Regional Plan for the South East Queensland Region, providing a framework to manage growth, change, land use and development. It is designed to do this by reflecting state interests and guiding local planning instruments responsible for delivering good land use outcomes.

Shaping SEQ identifies Brisbane Airport within the Australia Trade Coast Regional Economic Cluster and as Australia's eastern global gateway to the world.

The presence of an international airport with the most efficient runway system in Australia and future capacity similar to Singapore and Hong Kong airports is identified as a major competitive economic advantage.

Shaping SEQ acknowledges the economic and employment opportunities provided by Regional Economic Clusters and highlights the need to invest in enabling infrastructure to allow further expansion. It also outlines that critical airport operations will be protected to enable ongoing expansion.

The 2020 Master Plan vision for further growth in airport operations, economic development, and expansion closely aligns with the intent of Shaping SEQ. It builds on this vision and moves the airport towards becoming a self-sustaining commercial centre for business and leisure that supports Brisbane's plan to become a new world city.

Projected employment growth at the airport will assist the regional target for the delivery of one million jobs by 2041.

The 2020 Master Plan will also support the sustainable growth of the region by ensuring efficient transport connections are provided to allow the movement of goods, services and people into and throughout the region.

### CONSISTENCY WITH BRISBANE CITY PLAN 2014

Planning for Brisbane Airport is undertaken in accordance with the Airports Act 1996, however the Brisbane City Plan 2014 also provides additional useful guidance on how Brisbane Airport integrates with the city at a strategic level.

The Brisbane City Plan 2014 is Brisbane City Council's plan for future development with a planning horizon of 20 years.

The plan identifies Brisbane Airport as a key centre of economic activity and a crucial gateway to the city for passengers and freight. It envisages that there will be continued development on Brisbane Airport through uses complementary to the airport's passenger, freight, logistics and aviation industry focus.

The property strategy in the following chapter of this Master Plan outlines the ways in which Brisbane Airport will align with both the Brisbane City Plan 2014 and the Brisbane 2022 New World City Action Plan. In addition to ensuring that development is aligned with the requirements of each plan, Brisbane Airport has created nine on airport neighbourhoods in direct alignment with the ambitions of the Brisbane 2022 New World City Action Plan.

The Brisbane City Plan 2014 also acknowledges the need for land uses in proximity to the airport to be compatible with airport operations and acknowledges the varied opportunities for industries to leverage off transport, freight and passenger infrastructure networks.

Brisbane Airport continues to work collaboratively with Brisbane City Council to ensure that alignment continues to be effective in all future development.

### CATEGORISATION IN THE BRISBANE CITY PLAN 2014

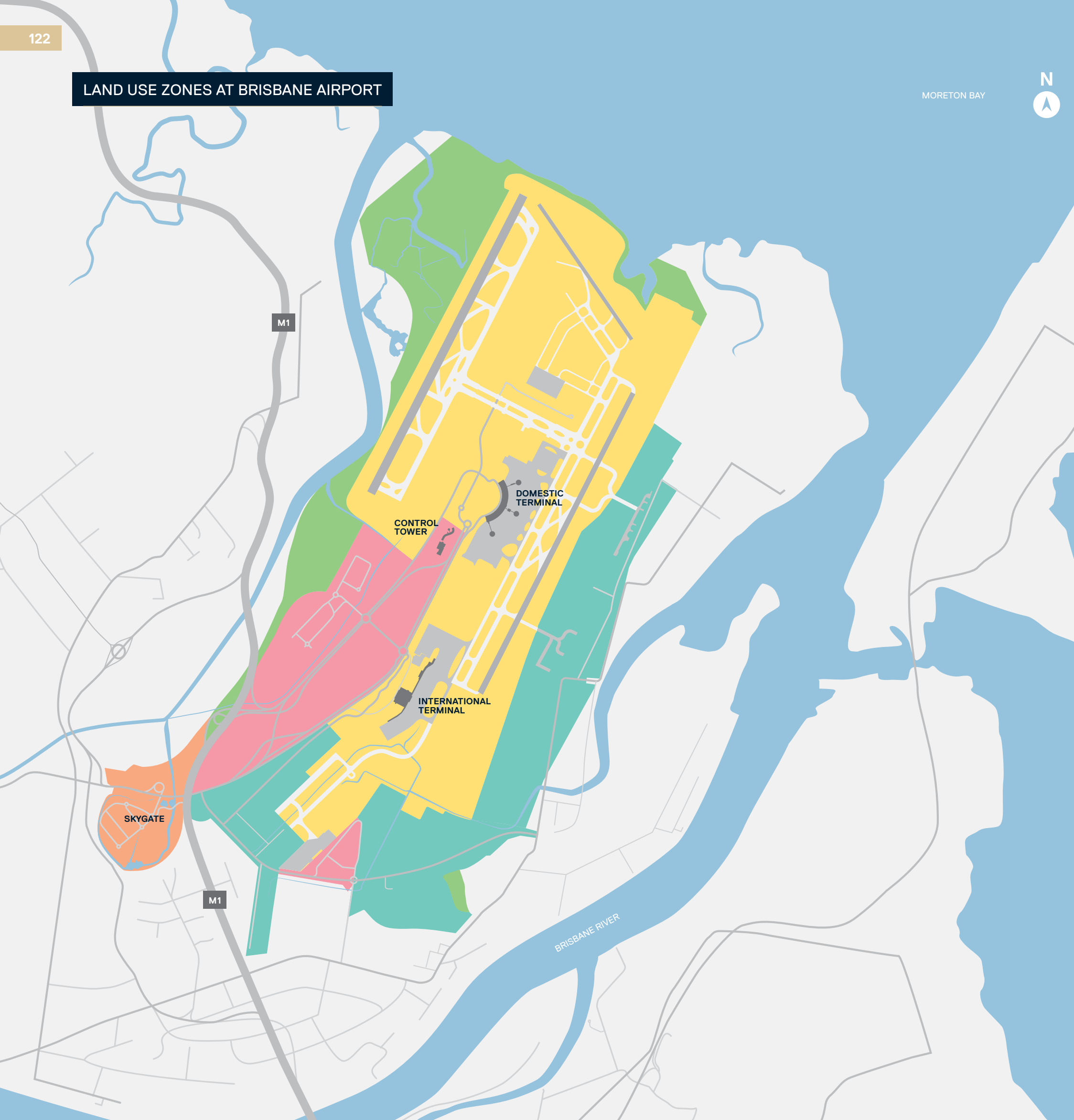
The Brisbane City Plan 2014 categorizes Brisbane Airport as being in both the "Special Purpose Zone" and "Airport Zone Precinct".

The purpose of a Special Purpose Zone is to protect public facilities and infrastructure and to ensure that incompatible uses do not encroach on the public facilities and infrastructure.

Airport Zone precincts are designed to accommodate airport and related operations and ancillary activities for airport workers, passengers and visitors, including shopping, food and drink outlets and tourism services.

Working in alignment with the Brisbane City Council, this Master Plan considers the further development of Brisbane Airport to become a self-sustaining commercial centre and a key enabler of Brisbane's transformation into a new world city.

Consistent with that intent, this 2020 Master Plan outlines the ongoing development of the airport and facilities including suitable commercial, tourism, industrial and retail developments, while protecting core airport functions.



# MANAGING LAND USE

In line with state and local government planning approaches, Brisbane Airport is divided into five separate designated land use “Zones”.

For each, a broad purpose statement and list of allowed uses is provided on the following pages to guide interested parties on the specific requirements and conditions that apply to potential development in each zone.

## BRISBANE AIRPORT LAND USE ZONES

- Special Purpose Airport Zone
- Mixed Use Zone
- Major Centre Zone
- General Industrial Zone
- Conservation Zone

To ensure that the future development of Brisbane Airport is sustainable and minimises environmental impacts, a rigorous development assessment process has been established to ensure compliance with obligations under the Airports (Building Control) Regulations 1996 (Cth.). The structure of the zones are generally consistent with the planning schemes prepared in accordance with relevant Queensland Planning Legislation as required by Airports Act 1996 (Cth.).

All development proposals at Brisbane Airport are subject to a planning and environmental impact assessment that ensures that the 2020 Master Plan, the Brisbane Airport Environment Strategy, Airports Act 1996 and all other legislative requirements are considered before granting a development approval.

Where that assessment indicates that a proposed development is likely to have a significant environmental impact or affects an area identified as environmentally significant in the Environment Strategy, a dedicated Major Development Plan (MDP) must be prepared for consideration prior to approval. MDP's are also required for other developments such as runways and terminals, new buildings costing more than \$25 million and other infrastructure which significantly increases airport capacity. Developments at Brisbane Airport are also guided by the National Airports Safeguarding Framework.

# SPECIAL PURPOSE AIRPORT ZONE

## PURPOSE

The Special Purpose Airport Zone applies to the aeronautical operational areas of Brisbane Airport including airside activities, runways and infrastructure, the Domestic and International Terminals and landside areas providing necessary, compatible and complementary land uses. The Special Purpose Airport Zone includes the Domestic and International Terminals and Airport North neighbourhoods.

## DEVELOPMENT OBJECTIVES

- Development contributes to the function of the Brisbane Airport aeronautical facilities to maximise the operational efficiency of airport infrastructure.
- Development provides housing, servicing, maintenance and repair of aircraft; landing and departure of aircraft; assembly and dispersal of passengers and goods on or from aircraft.
- Ancillary activities serving the needs of workers, passengers and visitors to an airport, including shops, food and drink outlets; tourism services; freight handling and shipping; training, education and aviation facilities.
- Development is appropriately located and has a function, scale, height and bulk compatible with the aeronautical functions of the airport.
- Development provides goods and services to domestic and international travellers at a standard and quality which meets expectations for a world-class transport hub.
- Development facilitates high quality road, rail, public transport and active transport connections enabling efficient and safe movement of people, goods and freight.
- Developments are compliant with aviation standards and relevant regulations and guidelines.
- Development creates a variety of high quality building forms, materials and façade treatments that contribute positively to passenger experiences.
- Complementary uses are of an appropriate scale to serve the needs to employees, passengers and visitors within the zone.
- Development achieves a high standard of environmental performance by incorporating principles of sustainable and efficient design in both the construction and operational phases.
- Development supports efficient movement of goods and freight through the airport to facilitate trade and employment growth.
- Development is designed, constructed and operated to maintain the safety and security of people and property.
- Interim land uses which do not prejudice future development are supported prior to land being needed for its ultimate land use.
- Development complies with the National Airports Safeguarding Framework.



## SPECIAL PURPOSE AIRPORT ZONE POSSIBLE USES

- Advertising device
- Air services
- Boating facility
- Car park
- Distribution centre
- Emergency services
- Entertainment facility
- Food and drink outlet
- Freight handling facility
- Function facility
- Health care services
- Hotel
- Indoor sport and recreation
- Industry
- Industrial retail outlet
- Liquid fuel depot and distribution facility
- Navigational aids
- Office
- Park
- Place of worship
- Public safety area
- Public transport facility
- Research and technology industry
- Research station or centre
- Shop
- Short term accommodation
- Showroom
- Sport and recreation facility
- Telecommunications facility
- Temporary use
- Tourist information centre
- Transport depot
- Utility installation
- Warehouse
- Wholesale supplies
- Works depot



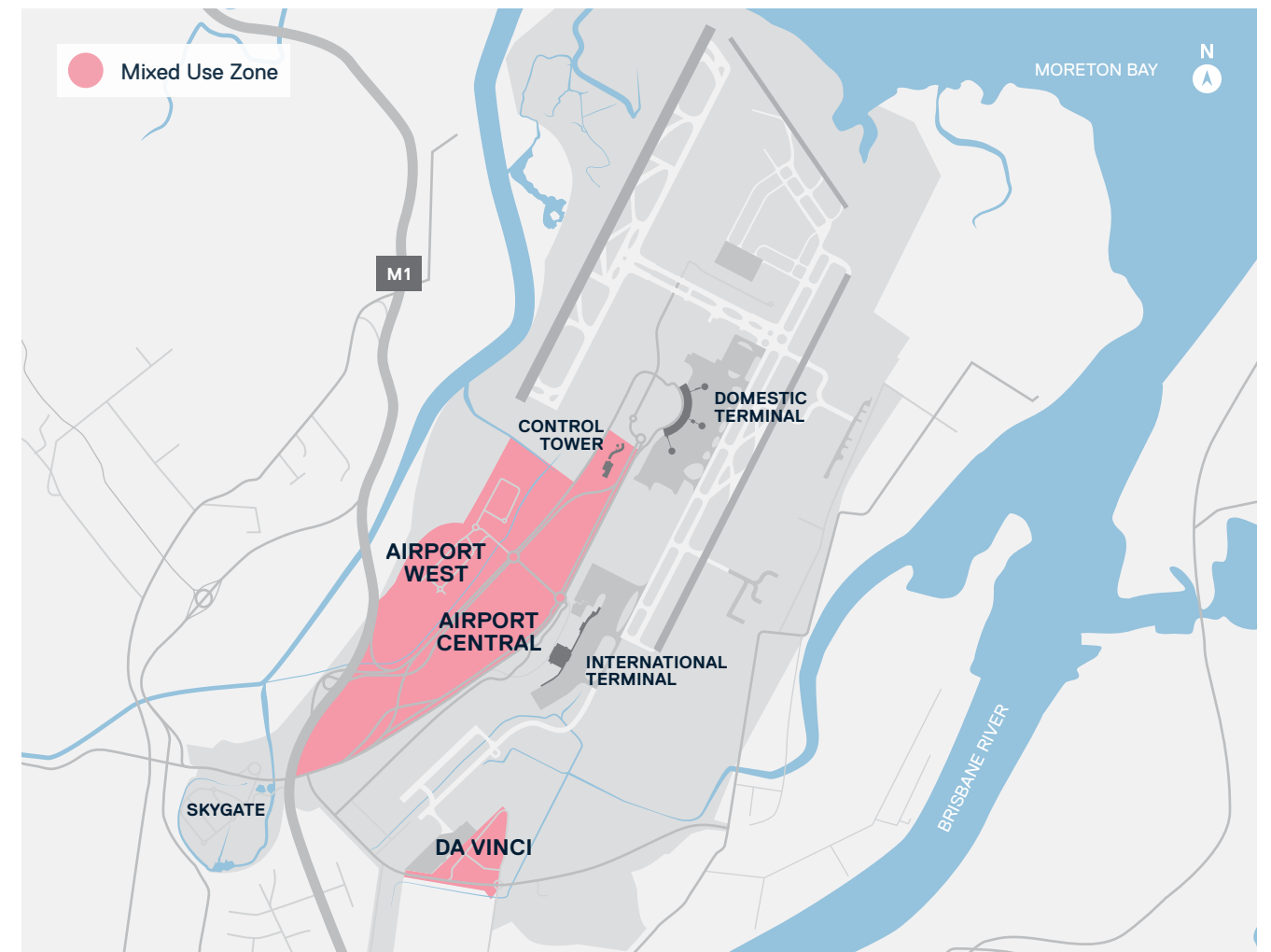
# MIXED USE ZONE

## PURPOSE

The Mixed-Use Zone allows for a diverse range of land use including business, retail, tourism, short term accommodation and industrial. The Zone provides opportunities for compatible employment generating activities to be clustered into commercial nodes, with highly accessible locations capitalising on the proximity to airport operations. It includes Airport Central, Airport West and the Da Vinci Neighbourhoods.

## DEVELOPMENT OBJECTIVES

- Development provides a diverse mix of land uses compatible with wider airport operations and a level of economic and social activity to serve the intended mix of passengers, visitors and employees.
- Provision is made for businesses seeking to combine corporate office and manufacturing/distribution functions.
- Development provides a diverse mix of industrial activities, commercial enterprises and workshops, supported by office activities set in a business park environment.
- Development provides for a wide range of industry and business uses, including research and technology facilities, knowledge creation and entrepreneurial activities and service industries that are more compatible with urban areas.
- Development facilitates a variety of uses operating at different times through each day to create a vibrant commercial environment.
- Building height, bulk, scale and forms create a high-quality commercial environment with intensity and form tailored to the specific location.
- Developments are compliant with aviation standards and relevant regulations and guidelines.
- Development provides for uses which capitalise on the areas proximity to the Australian Trade Coast and Brisbane Airport commercial environments.
- Development achieves a high standard of environmental performance by incorporating principles of sustainable and efficient design within both the construction and operational phases.
- Development is appropriately located and has a function, scale, height and bulk that are compatible with the aeronautical functions of Brisbane Airport.
- Development provides compatible built forms and landscape treatments which create a cohesive streetscape and provide for efficient pedestrian connections.
- Development is sensitively designed and operated to avoid or mitigate any potential adverse impact on adjoining uses.
- Interim land uses which do not prejudice future development are supported prior to land being needed for a future land use.
- Development complies with the National Airports Safeguarding Framework.



## MIXED USE ZONE POSSIBLE USES

- Animal husbandry
- Animal keeping
- Advertising device
- Air services
- Boating facility
- Car park
- Childcare centre
- Community use
- Distribution centre
- Emergency services
- Entertainment facility
- Event facility
- Food and drink outlet
- Freight handling facility
- Function facility
- Hardware and trade
- Health care services
- Hotel
- Horticultural activity
- Indoor sport and recreation
- Industry
- Industrial retail outlet
- Intensive horticulture
- Major sport and recreation and entertainment facility
- Market
- Navigational aids
- Nightclub entertainment facility
- Office
- Outdoor sales
- Park
- Produce market
- Public safety area
- Public transport facility
- Research and technology industry
- Research station or centre
- Service station
- Shop
- Short-term accommodation
- Storage premises
- Showroom
- Storage premises
- Temporary use
- Tourist information centre
- Transport depot
- Utility installation
- Veterinary services
- Warehouse
- Wholesale nursery
- Wholesale supplies
- Works depot

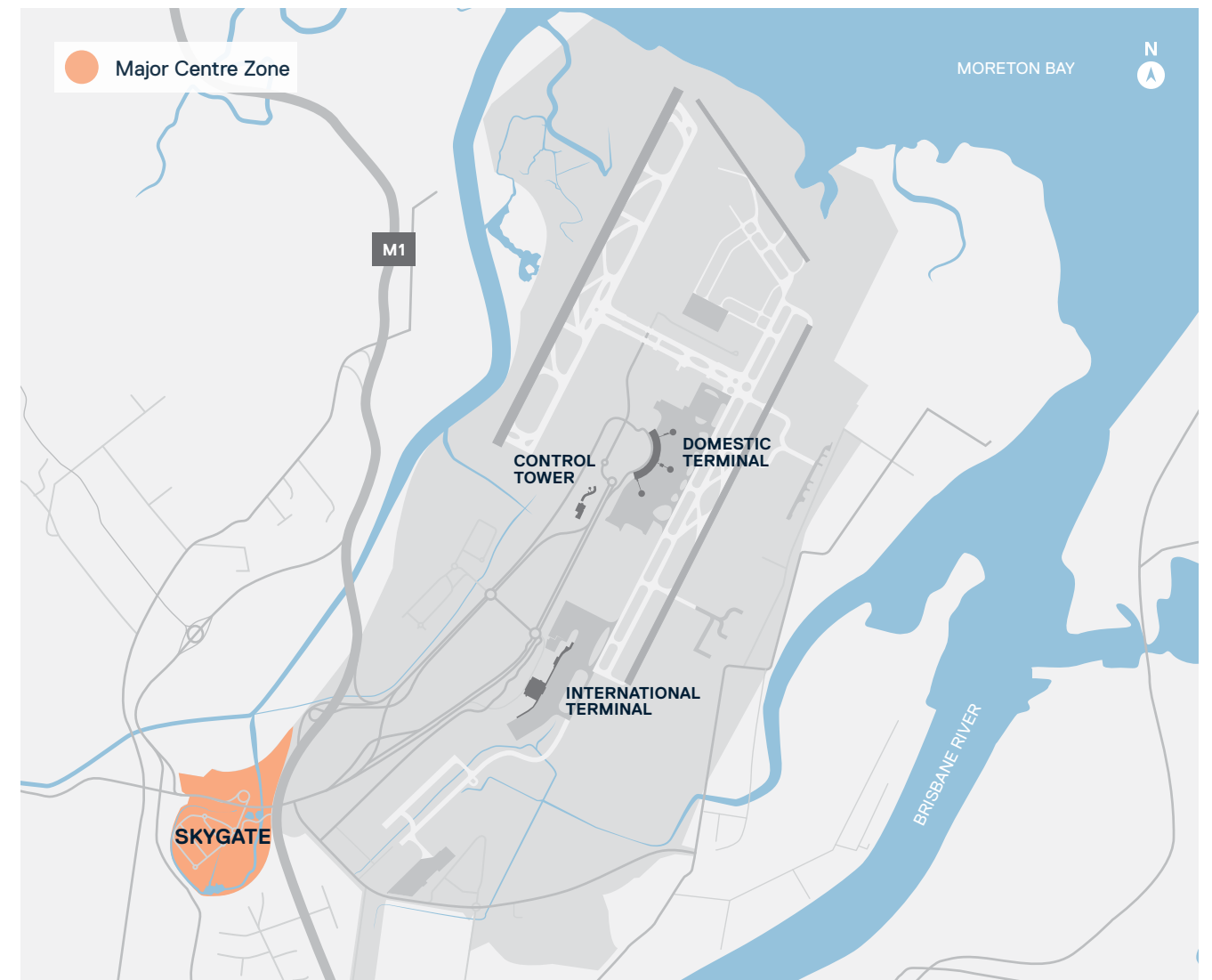
# MAJOR CENTRE ZONE

## PURPOSE

The Major Centre Zone allows for a diverse use mix that includes concentrations of retail, commercial, offices, tourist attractions, short-term accommodation, administrative and health services, community, cultural and entertainment facilities and other uses capable of servicing Brisbane Airport and the surrounding local areas. The Skygate Neighbourhood is the sole major centre zone at the airport.

## DEVELOPMENT OBJECTIVES

- Development creates a diverse range of activities, comprising business, commercial, retail, government, service, community and cultural activities, recreation and entertainment functions such as restaurants, hotels and other leisure facilities to provide 24/7 activity.
- Development provides for high order retail and commercial activities that create a focus point for subregional employment and branch government functions including health, education and cultural services.
- Building height, bulk, scale and forms create a high quality commercial and retail environment with an intensity and form tailored to the specific location.
- Development capitalises on proximity to suburban or inter-urban public transport networks.
- Development provides high quality public spaces and landscaping that softens built form, provides breathing space between buildings, encourages outdoor activity and facilitates safe, convenient and attractive pedestrian connectivity.
- Developments are compliant with aviation standards and relevant regulations and guidelines.
- Buildings address and interface with the street through the provision of active uses at ground level to ensure active streets and to facilitate surveillance of the public domain.
- Development occurs in an integrated and coordinated manner both within the site and in relation to surrounding land uses.
- Development is appropriately located and has a function, scale, height and bulk that are compatible with the aeronautical functions of Brisbane Airport.
- Development is sensitively designed and operated to avoid or mitigate any potential adverse impact on adjoining uses.
- Interim land uses which do not prejudice future development are supported prior to land being needed for it's ultimate land use.
- Development complies with the National Airports Safeguarding Framework.



## MAJOR CENTRE ZONE POSSIBLE USES

- Advertising device
- Air services
- Bulk landscape supplies
- Car park
- Childcare centre
- Club
- Community use
- Emergency services
- Entertainment facility
- Environment facility
- Event facility
- Food and drink outlet
- Function facility
- Garden centre
- Hardware and trade supplies
- Health care services
- Hotel
- Indoor sport and recreation
- Major sport, recreation and entertainment facility
- Market
- Navigational aids
- Nightclub entertainment facility
- Office
- Outdoor sales
- Park
- Place of worship
- Produce market
- Public safety area
- Public transport facility
- Research and technology industry
- Service station
- Shop
- Shopping centre
- Short-term accommodation
- Showroom
- Sport and recreation activity
- Telecommunications facility
- Temporary use
- Tourist information centre
- Tourist shop
- Transport depot
- Utility installation
- Wholesale nursery
- Wholesale supplies
- Works depot

# GENERAL INDUSTRIAL ZONE

## PURPOSE

The General Industrial Zone provides for a wide range of industrial uses capitalising on proximity to Brisbane Airport aeronautical operations, extensive transport networks, Port of Brisbane and Australia Trade Coast. Business and other non-industrial uses that complement industrial activities are supported where appropriate separation and buffers are achieved to adjoining uses. The General Industrial Zone includes Export Park, Airport Industrial Park and Airport East.

## DEVELOPMENT OBJECTIVES

- Development provides for a broad range of industrial, business and supporting activities maintaining the long-term viability of the zone and facilitating economic interaction with the Zone.
- Development for an industrial use is located, designed and managed to maintain safety to people, avoid significant adverse effects on the natural environment and minimise impacts on adjacent non-industrial land.
- Development provides for uses which capitalise on the areas proximity to Australia TradeCoast and Brisbane Airport commercial environment.
- Development responds to land constraints and mitigates any adverse impacts on environmental values.
- Building height, bulk, scale and forms create a high-quality industrial environment with an intensity and form tailored to the specific location.
- Development achieves a high standard of environmental performance by incorporating principles of sustainable and efficient design within both the construction and operational phases.
- Development is appropriately located and has a function, scale, height and bulk that are compatible with the aeronautical functions of Brisbane Airport.
- Development provides compatible built forms and landscape treatments which create a cohesive streetscape and provide for efficient pedestrian connections.
- Development is sensitively designed and operated to avoid or mitigate any potential adverse impact on adjoining uses.
- Interim land uses which do not prejudice future development are supported prior to land being needed for an intended land use.
- Development complies with the National Airports Safeguarding Framework.



## INDUSTRIAL ZONE POSSIBLE USES

- Advertising device
- Air services
- Animal keeping
- Animal husbandry
- Boating facility
- Bulk landscape supplies
- Car park
- Distribution centre
- Emergency services
- Food and drink outlet
- Freight handling facility
- Hardware and trade supplies
- Horticulture activity
- Indoor sport and recreation
- Industry
- Industrial retail outlet
- Intensive horticulture
- Liquid fuel depot and distribution facility
- Major sport, recreation and entertainment facility
- Navigational aids
- Office
- Outdoor sales
- Park
- Produce market
- Public safety area
- Public transport facility
- Research and technology industry
- Service station
- Shop
- Showroom
- Sport and recreation activity
- Storage premises
- Telecommunications facility
- Temporary use
- Transport depot
- Utility installation
- Veterinary services
- Warehouse
- Wholesale supplies
- Works depot

# CONSERVATION ZONE

## PURPOSE

The Conservation Zone provides for the protection, restoration and management of areas identified as supporting significant biological diversity and ecological integrity. Areas in the Conservation Zone will be managed to retain their biodiversity values in a way that does not compromise airport safety, particularly from wildlife hazards. The Conservation Zone also provides opportunities for nature-based outdoor recreation, where considered appropriate.

## DEVELOPMENT OBJECTIVES

- Land is managed to maintain the integrity of local area wildlife, habitats and other significant ecological assets and processes over time, where consistent with safe airport operations.
- Nature conservation values and ecological functions are protected and maintained where this is consistent with safe airport operations.
- Outdoor recreation and nature-based educational activities are provided where best practice planning and management are applied to minimise potential impacts on environmental values and functions.
- Development responds to land constraints and mitigates any adverse impacts on environmental values whilst protecting the existing and future infrastructure.
- Development protects the values and function of the Conservation Zone through innovative design, planning and construction approaches, including application of noise, light and physical buffers external to the values being conserved.
- Development is appropriately located and has a function, scale, height and bulk that are compatible with the aeronautical functions of Brisbane Airport.
- Development complies with the National Airports Safeguarding Framework.



# UTILITIES

Brisbane Airport Corporation owns and operates a substantial utility network. The network includes an electrical network and networks for, potable and recycled water and sewers. The airport telecommunications network includes an optical fibre network.

This section outlines the details and plans for Brisbane Airport's utility network and details existing arrangements with supporting utility suppliers.

## MAJOR INITIATIVES SINCE THE 2014 MASTER PLAN

Brisbane Airport continues to actively plan, develop and maintain the utilities network across the airport, to ensure that it operates reliably and grows in a proactive manner.

Major initiatives in the last five years include:

- High Voltage, communication and hydraulic network expansions to support the new runway.
- Installation of 14 distribution substations to support new aeronautical and commercial developments.
- Installation of solar electrical power generation with a capacity of 6800kW.
- Commissioning a new recycled water supply from QUU STP Luggage Point.
- Extending the distribution network to allow a 50 per cent increase in recycled water use to more than 300 millilitres per annum.
- Establishment of a new sewer discharge point to QUU trunk, including reconfiguration of the airport sewer network increasing capacity and improving network reliability.

The location of those initiatives are shown on the map opposite.

## ELECTRICAL NETWORK

Energy Queensland is the Distribution Network Service Provider (DNSP) for the Brisbane Airport site. It supplies power through three 33/11kV main intake substations.

In addition, Brisbane Airport has three 11kV zone substations and a large distribution network including multiple 11kV/415V substations.

The network is supported through stand-by generators, capable of maintaining essential airport operations in the event of a mains supply outage.

## POTABLE WATER

Brisbane Airport's potable water network is supplied by dual major intakes provided by Queensland Urban Utilities at the Sugarmill Road intake point.

The network, which is reticulated across airport via a network of pipes and valves, is owned and managed by Brisbane Airport.

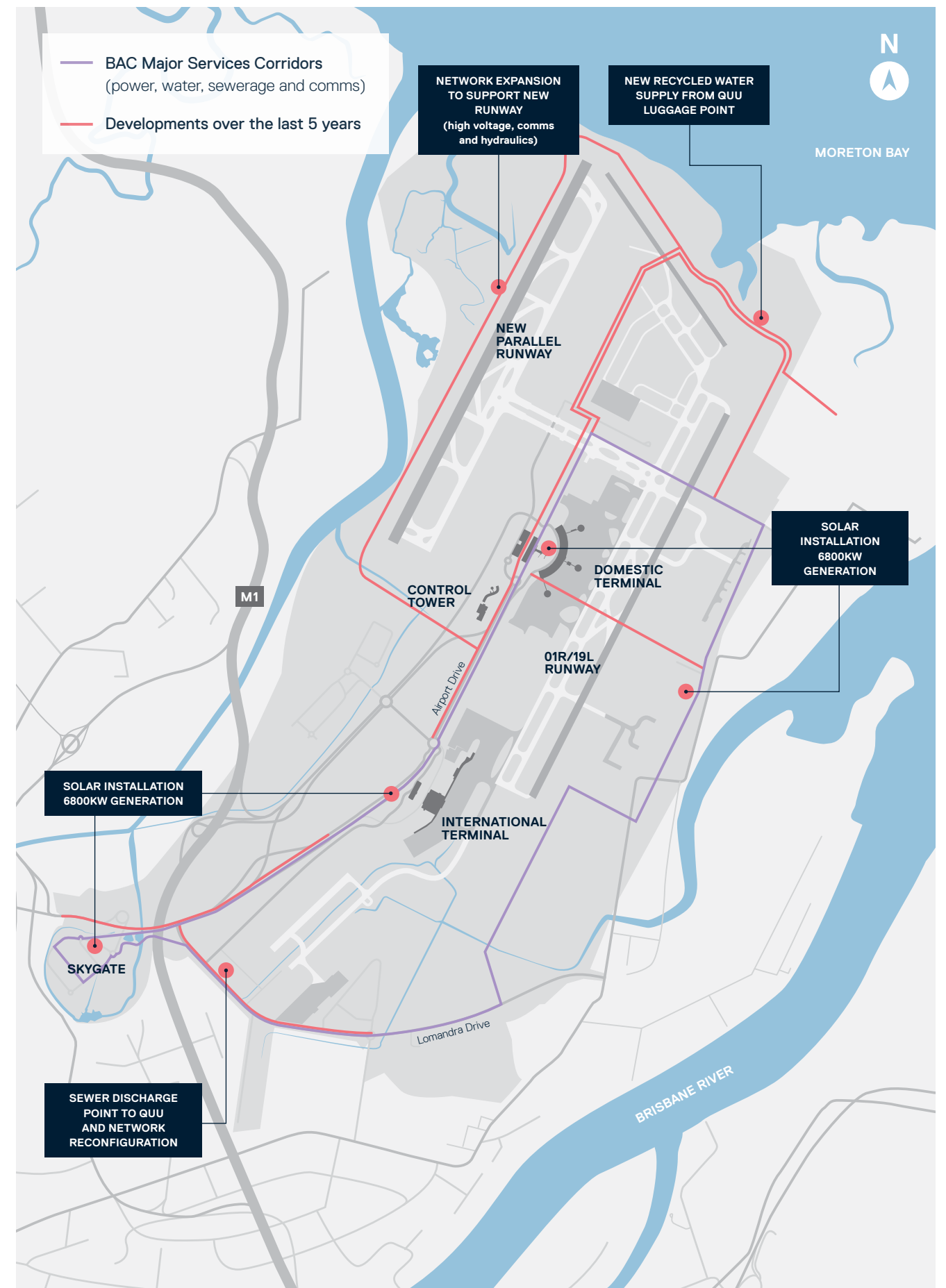
## RECYCLED WATER

Recycled water supply is also provided by Queensland Urban Utilities (QUU). The network operates through dedicated lines originating from the Gibson Island and Luggage Point Treatment plants.

Stormwater from onsite lakes in Skygate supplement the recycled water supply, benefiting airport construction projects and reducing the consumption of potable water.

From the intake point of supply, Brisbane Airport owns and manages a recycled water network that supplies class A and class A plus recycled water to several sites including the International and Domestic Terminals.

## UTILITIES PROJECTS SINCE 2014



## SEWER

Through a combination of gravity and rising mains supported by pump stations, Brisbane Airport's sewer network is connected to the off-airport QUU sewer network at four locations, Airport Drive (connecting to Nudgee Road), Viola Place, Lomandra Drive and Pandanus Avenue (connecting to Luggage Point).

As part of its sewerage services, Brisbane Airport manages the sewerage system and the discharge of trade waste from airport business premises to the QUU sewerage network. These separate discharge points have the benefit of allowing a level of redundancy by design where re-routing of on airport sewer can occur in the event of a line or mains failure.

## TELECOMMUNICATIONS

Brisbane Airport has a complex telecommunications network which services a variety of functions including telephony and data transfer. It also assists in aviation management systems via relationship agreements with Airservices Australia.

Brisbane Airport owns and manages an optical fibre infrastructure network to service its own requirements, as well as an extensive duct and access pit network to allow for telecommunications carriers to provide for the needs of their customers.

Telecommunication carriers including Telstra, Optus and Vodafone own and maintain an array of telecommunication towers and antennae and maintain in-ground cables ducts and pits, providing services direct to their business connections.

To explore opportunities for optimising the network and infrastructure, Brisbane Airport and telecommunication carriers have established an ongoing working group. The working group will focus on developing a strategy for accommodating technology advancements, such as the roll out of the 5G network, and other digital innovations at Brisbane Airport.

## GAS SUPPLY

Brisbane Airport is not currently serviced by gas mains. Negotiations are underway with gas suppliers and distributors for the provision of a natural gas main to the airport.

Businesses on airport that rely on gas supply currently have their needs accommodated by gas cylinders or tanks located on premises. It is Brisbane Airport's intention in future to manage their demands from a dedicated gas supply reticulated from a mains network.

## PLAN FOR UTILITIES DEVELOPMENT

The supply requirements of energy, water, sewer services, telecommunications and gas are expected to increase consistent with the rate of development at the airport.

Brisbane Airport takes its challenge to the reliability, redundancy, sustainability and relationship management response seriously, with a dedicated team actively planning and managing the utility network and continually researching methods to provide a sustainable utility network.

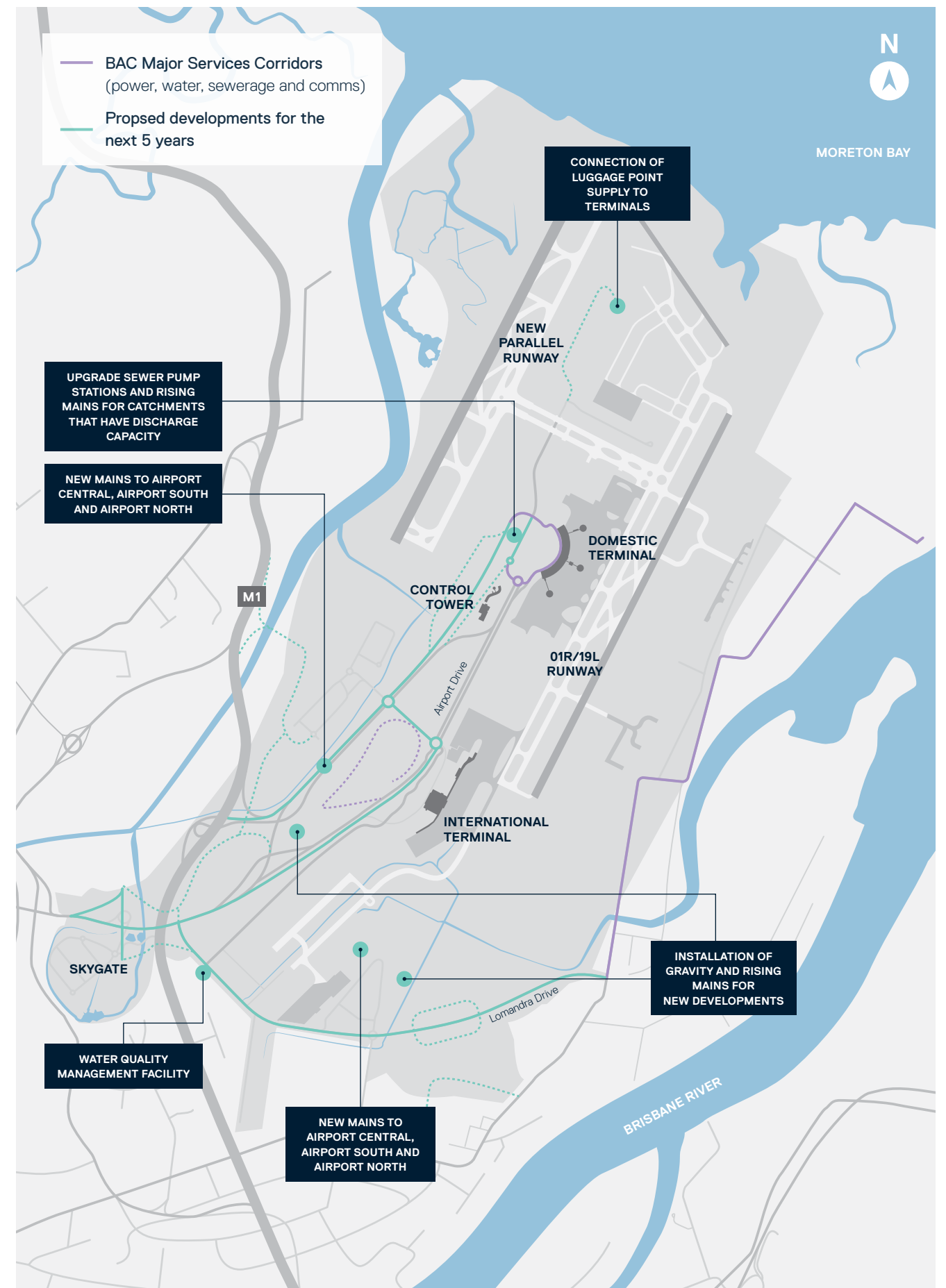
Over time, continued development may place pressure on Brisbane Airport's infrastructure capacity with network upgrades required to accommodate increasing demands.

In planning, constructing and maintaining utility services, Brisbane Airport applies the following key objectives;

- Ensuring distribution networks meet the required future demand and continue to improve network performance.
- Promote energy efficiency and sustainability by harnessing available technologies and encouraging tenants to adopt sustainable operations.
- Active engagement with utility suppliers to ensure that the key objectives are addressed in future plans.
- Establish collaborative relationships with the local, state and federal governments.
- Meet all legal, compliance and corporate governance obligations.

Details of utilities initiatives planned for the next five years and their locations are shown on the map on the facing page.

## UTILITIES PROJECTS PLANNED 2020-2025



# RESPONDING TO CLIMATE CHANGE

## CLIMATE CHANGE IN AUSTRALIA

There is a wide body of evidence available to suggest that Australia's climate has already changed significantly, particularly over the last 50 years. Some of the key changes currently observed (CSIRO & BoM, 2016), at a national scale indicate that:

- Australian sea levels rose by ~20 cm between 1880 to 2015.
- Substantial warming has occurred in the oceans surrounding Australia, with sea surface temperatures having increased by almost 1°C since 1900. The last 3 years have all been in the top 5 warmest years on record.
- Australian temperatures have increased on average by 1°C since 1910, with further temperature rises expected by 2030. 2015 was the 39th consecutive year of above-global average temperature.
- Rainfall has declined across most of eastern and south-western Australia since 1950.

There are several sources of reliable scientific and technical reporting for climate change projections based on historical climate data, these include:

## CLIMATE CHANGE RISKS

Key climate change risks that will need to be addressed by BAC as part of its approach to climate change adaptation include:

- Increased sea levels
- Raised groundwater levels
- Storm and cyclone events
- Heatwave
- Drought.

## PLANNING AHEAD

### FLOOD IMMUNITY

As part of ongoing operations, Brisbane Airport has undertaken master drainage planning for the entire airport site since 1997. This analysis has identified that a storm surge event would lead to the highest potential flood levels across the airport site.

As a result, in all planning, the Minimum Development Levels resulting from a 1 per cent Annual Exceedence probability (AEP) storm surge event coincident with a 10 per cent AEP local catchment event have been adopted for key airport infrastructure. An allowance of 800mm for long term climate change to 2100 is included in the adopted Minimum Development Level as part of the mandated planning process on the airport, risk assessments are undertaken to determine the flood immunity required for each new development on the airport site.

### INDUSTRY GUIDANCE

A review of the latest Industry Guidance on Climate Change, including the Intergovernmental Panel on Climate Change (IPCC) AR5 has revealed that the most significant climate stressors for Brisbane Airport are expected to be:

- Sea level rise – 0.14m to 2030 and up to 0.87m (0.45m to 0.87m) by 2090 in a high global emissions scenario.
- Rainfall – an increase in the intensity of rain events and an increase in drought durations.
- Temperature – more frequent occurrences of extreme heat days, warmer winter and summers, with annual average temperature increasing by up to 2.6 to 4.8°C by 2090 in a high emissions scenario.

## BRISBANE AIRPORT CLIMATE CHANGE

### RISK ASSESSMENT REGISTER

Brisbane Airport's process for responding to climate change involves the approach of relating actions to "trigger points". Under this approach, specific mitigation measures or changes in approach are implemented as a result of particular targets being met. In addition to measures outlined in the Brisbane Airport Environment Strategy and in order to achieve the desired outcomes in response to the effects of climate change, Brisbane Airport has developed a Climate Change Risk Assessment Register.

Measures being monitored include:

- Continual review of sea level risk allowance predictions and observations.
- Long term sea level rise reviews (to include increased MDLs, protection measures for key areas and managed retreat).
- Monitoring of groundwater levels and salinity.

The Climate Change Risk Assessment Register will be maintained and updated in accordance with IPCC and CSIRO updates, and to ensure compliance with any new government legislation.

TABLE 1 KEY CLIMATE CHANGE DATA SOURCES

SOURCE	NAMES	PURPOSE AND APPLICATION
International	United Nations' Framework Convention on Climate Change (UNFCCC)	An overall framework for intergovernmental efforts to address the challenges posed by climate change.
Australian government	Intergovernmental Panel on Climate Change (IPCC)	A scientific body responsible for reviewing and assesses the most recent scientific, technical and socio-economic information produced worldwide relevant to the understanding of climate change.
	Department of the Environment and Energy	Greenhouse gas reporting and climate science in Australia.
	Climate Change in Australia	Historic data and future climate projections based on the IPCC standardised emissions scenarios. Sponsored by the Department of Environment and CSIRO.
	Australian online coastal information	Produced by Geoscience Australia and providing modelling and environmental data on Australian coastal environments.

## RESPONDING TO CLIMATE CHANGE

### HEATWAVE

Extended periods of elevated temperatures will have a number of impacts for the airport site. Longer periods of hot temperatures will increase the electricity usage, for example to maintain adequate air conditioning, and may affect the operation of overall system. Airside operations, and other outside manual work, would be affected by the elevated temperatures and measures would need to be implemented to protect personnel and potentially equipment. Heatwave may prevent aircraft from operating safely. Heat affects internal components of aircraft and makes it harder for planes to get off the ground as hot air is less dense. This reduces the aerodynamic capabilities of the plane (thrust), increasing runway distance required and reducing climb performance.

The load/passenger numbers may be restricted when temperatures are very high. Smaller jets and propeller aircraft are more likely to be affected than larger aircraft that are better equipped for extreme temperatures. A clear example of this was in 2017 at Phoenix Sky Harbor International Airport where regional flights on American Eagle were the most affected because they use Bombardier CRJ planes that can only operate at temperatures of 118 F degrees or below.

This type of event requires additional assessment to determine the types of aircrafts currently using the airport and when introducing new airlines to BNE.

### DROUGHT

Climate change predictions for South-east Queensland include a greater frequency of hot years from 1 in 22 years to 1 in 1.7 years by 2040. Drought will become an increasing reality in South-east Queensland in the decades ahead.

During Queensland's recent experience of drought, Brisbane Airport introduced a range of adaptation measures. The key to addressing drought impacts for the airport is to have a strong focus on site water management including options such as stormwater harvesting, reuse and appropriate drought tolerant vegetation.

Drought can also impact on the growth and maintenance of vegetation across the airport. In particular, the grassed areas of the airfield pose a significant risk. Should these areas become dry they could pose a grass fire risk and if the grass dies completely then the risk of dust generation is high. Dust generation would be extremely hard to control in the airfield and could significantly impact on aircraft movements and operations.

A further risk is contamination of runoff from these affected areas, with high erosion potential leading to risk of siltation and contamination of waterways/drainage structures.

Solutions like the implementation of a Landscape Setting Strategy and the ongoing implementation of Recycled water network will reduce the impacts of this climate risk.

### CYCLONE EVENTS

Climate change is projected to increase the relative intensity of storms, east coast lows and cyclones experienced at a particular latitude. Increased storm intensity will have an impact on the rainfall intensities and wind speeds.

The 2018 'State of the Climate' report indicates that there is a statistically significant downward trend in the number of tropical cyclones in the Australian region. In contrast to the number of tropical cyclones, the statistical significance of any observed trend in tropical cyclone intensity is overshadowed by large uncertainties due to the short satellite record and high variability.

So, in summary, there is likely to be a decrease in frequency of Tropical Cyclones, but a possible increase in cyclone intensity and a southern shift in cyclone travel. From this BAC is looking into operational management procedures to ensure the potential impacts from cyclones are mitigated.

