

# CLIMATE CHANGE AND BRISBANE AIRPORT

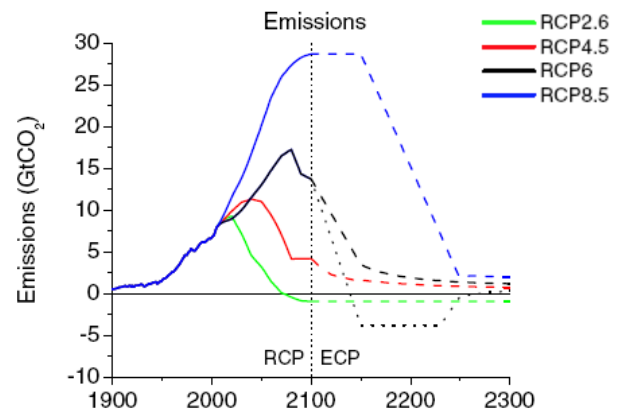
**FACT SHEET –  
JANUARY 2018**

Climate change presents a number of risks and opportunities for Brisbane Airport, both in terms of daily operations and long-term planning. Climate change adaptation incorporates the range of actions that can be taken to reduce vulnerability or increase resilience to projected climate change impacts. Early planning for climate change will help to reduce impacts, but also provide greater opportunities.

The emissions scenarios and their impacts on Brisbane’s climate that are considered are examples of a ‘low’ representative concentration pathway (RCP 4.5) and ‘high’ (RCP 8.5) case in the short term (2030) and long term (2090). The ‘low’ case represents the pathway that current global agreements appear to be capable of achieving, whilst the ‘high’ case is based on business as usual. The more extreme scenarios are not considered relevant at this stage, although projections may be included where relevant for comparison.

**a) RCP 4.5** – Low emissions scenario and <3°C above pre-industrial global mean temperatures by 2100.

**b) RCP 8.5** – High emissions scenario and >5°C above pre-industrial global mean temperatures by 2100.



## Climate Change Adaptation Plan 2017

The Brisbane Airport Climate Change Adaptation Plan 2017 (CCAP 2017) includes a risk register and recommendations for BAC’s future climate change resilience planning. Data used for risks and impacts was based on current Intergovernmental Panel on Climate Change (IPCC) and Commonwealth Scientific and Industrial Research Organisation (CSIRO) data.

The following aspects are included in CCAP 2017:

- A climate projection summary based on model consensus.
- A synthesised review of the current status of the aviation industry and regional response to climate change.
- Risks and impacts to the aviation industry.
- Key internal risks to BAC.
- Current status of external stakeholders’ climate change adaptation planning and external risks posed to BAC.
- Recommendations for resilience planning.

**About Brisbane Airport:** Brisbane Airport is the third busiest airport in Australia and operates 24 hours a day, seven days a week. It is Australia’s largest capital city airport (by land size) and has two major terminals providing services to 28 airlines flying to around 70 national and 28 international destinations. In FY16 Brisbane Airport welcomed more than 22.5 million passengers through its facilities.

### Key risks and impacts of climate change at Brisbane Airport

Risk	Impact
<b>Precipitation change</b>	Airfield flooding, ground subsidence, reduction in airport throughput, inundation of underground infrastructure, inundation of ground transport access (passengers and staff), loss of local utilities provision
<b>Increasing temperatures</b>	Decreased aircraft performance, noise impact, heat damage to airport surfaces e.g. runways and taxiways, increased cooling loads, pressure on utilities providers (power and water), limitations for freight capacity
<b>Changes in wind</b>	Flight paths, route extensions due to convective weather, jet stream increasing en-route turbulence, changes to distribution of noise impact to surrounding areas
<b>Sea-level rise</b>	Loss of airport capacity, impacts on en-route capacity due to lack of ground capacity, loss of airport infrastructure and ground transport access
<b>Extreme events</b>	Disruption to operations, route extensions, disruption to ground transport access and supply of utilities

### Recommendations for future resilience planning

1. Ensure new developments are designed to mitigate the impacts of identified climate change risks and adjust operational procedures as required.
2. Consider climate scenarios in long term infrastructure planning and discern appropriate levels of infrastructure resilience, dependent upon building lifecycles.
3. Review and update the climate change adaptation plan as new data and climate models are released.