



## Brisbane International Cruise Terminal

# Brisbane International Cruise Terminal: a sustainable approach

Sustainability underpinned many aspects of the new AUD\$177 million Brisbane International Cruise Terminal (BICT), funded and delivered by Port of Brisbane Pty Ltd (PBPL) in mid-2020.



## Building design

The terminal building incorporated sustainable design principles (developed by project architect, Arkhefield) that embrace Brisbane's subtropical climate and lifestyle and improve sustainability.

- **Site preparation and levels** ensure resilience to sea level rise and flooding
- **Building orientation, natural lighting and sun shading** maximise natural light and improve user experience while reduce reliance on artificial energy sources and reduce pollution
- **Building design** supports potential future expansion, if required
- **Natural ventilation** opportunities considered and utilised where possible
- **Outdoor spaces** characterised by sub-tropical landscaping and water-sensitive design
- **Living greenery** provides shade, cools public spaces and reduce the 'heat island' effect of the terminal area
- **Building materials** minimised by optimising structural systems and consolidating service-intensive spaces
- **'Long life / loose fit'** ensures the building design maximises operational flexibility, ensuring it maintains its suitability well into the future
- **Rainwater harvesting** provides water for amenities and landscaping
- **Future energy integration** incorporated into the base design, such as photovoltaic panels and battery storage
- **Solar harvesting** integration in the future has been considered in the base design





## Environment

- **Removed the need for capital dredging** by choosing a location that could access existing marine infrastructure: naturally occurring deep water, swing basin and navigational channels
- **Material re-use** by PBPL's *TSHD Brisbane*, placing 300,000m<sup>3</sup> of clean sand from existing channel maintenance dredging for BICT surcharging requirements. Surcharge was removed and re-used on other PBPL development projects
- **Material re-use** with dredge material used in pavement design and trench backfill
- **Wharf design used precast concrete** to reduce wet concrete construction over water
- **No impact to nearby marine plants**, protecting sensitive natural environment
- An **800kW rooftop solar system** provides shaded carparking for passengers, while generating 1300MWh power annually and reducing the energy draw from the grid
- **Electric Vehicle** charging stations installed for public use
- **New environmental partnership** with Ocean Crusaders trialling a Solar Powered Automatic River Cleaner to remove litter that deposits along the BICT seawall

## Technology

- Technology infrastructure supports **growth, flexibility, and cyber security**
- The greenfield site enabled PBPL to **consider digital trends** including software defined networking, digital sensors, building information modelling and data automation
- Technology infrastructure considers **current and future requirements** of cruise lines' and border agencies' systems and processes





## Collaboration and engagement

- **Close collaboration** over 5+ years with cruise lines, state and local government, border and security agencies, and other key stakeholders – from project inception to delivery – to secure support, understand future industry demand, and ensure facility design met stakeholder needs
- **Engaged with local residents** to seek support and keep informed of progress, including resident information sessions and engagement with local resident's association
- **Broader engagement with the general public** through videos, website, media and social media updates (COVID restricted major events or tours)

## Economic contributions

- **PBPL fully funded** the AUD\$177M project, at no cost to government
- Port of Brisbane and Brisbane City Council jointly invested **AUD\$10 million** to improve the **safety of key local roads** leading to the terminal
- **Australian Principal Contractors completed construction works**, supporting the local construction industry and encouraging local construction and engineering innovation
- On average, **245 jobs supported annually** during construction
- The BICT supported **local construction jobs and local sub-contractors**, including during COVID lockdown
- **Formal partnership with local government** to promote regional tourism
- **Opportunities to support Indigenous cultural tourism and regional economic and education initiatives** aligned with the BICT to be explored through PBPL's Reconciliation Action Plan
- The BICT will play a vital role in **supporting the cruise industry's recovery** post-COVID
- Over 20 years post-COVID, the BICT has the potential to **triple Brisbane's cruise industry** to:
  - support 3,750 jobs
  - bring over 760,000 visitors annually
  - contribute \$1.3 billion in net expenditure into the Brisbane economy





Facility energy demand  
Energy source and supply



Flooding and sea level rise  
Natural disasters



Safe and secure facilities  
Accessible transport facilities



Environmental impacts of dredging  
Downstream water quality issues



Material consumption  
Waste Management



Greenfield development  
Protection of flora and fauna

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