

TAILORING THE MARINE DESIGN FOR THE BRISBANE INTERNATIONAL CRUISE TERMINAL TO CATER FOR MEGA-SHIPS AND CHALLENGING CONSTRAINTS

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INTRODUCTION

Port of Brisbane (PBPL) is developing the new AUD\$177 million Brisbane International Cruise Terminal (BICT) located at Luggage Point at the mouth of the Brisbane River. The project has successfully progressed through the detailed design phase, and construction is currently underway. BICT will be the first purpose-built mega-cruise ship terminal in Australia when it opens in 2020. It will cater for cruise vessels of all sizes including the world's largest ocean-going ships and will function as both a base port and port of call facility.

THE SITE

The greenfield site had several overall constraints, which had to be considered for the development of the cruise terminal masterplan (refer Figure 1) including:

- Offshore berth pocket, hence wharf remote to site and terminal building
- Narrow shape of site on land
- Limited space for movement of vehicles and cargo
- Existing underground services
- Existing navigation aids
- Soft ground conditions

CHALLENGING MARINE DESIGN

The marine design included the wharf, dolphins, access

bridges, seabed stability, revetment and navigation aids.

The additional challenges for the marine design were:

- Land access to turnaround vessel on time
- Facilitating efficient logistic operations on wharf
- Passenger access via elevated walkway
- Passenger boarding bridges operations
- Sewer main through wharf footprint
- Steep underwater slope

The wharf and marine works design was tailored to address all project specific constraints and requirements. In addition, the wharf was optimized to the logistics requirements to reduce footprint and costs. Another cost saving measure was to adopt a modular concept without compromising durability.

CONCLUSION

The planning and design of an international cruise terminal requires a fully integrated multi-disciplinary approach. There are a number of inter-dependencies from different disciplines based on a number of variables. This presentation will explore how the terminal masterplan was developed to address the key site constraints and how significant challenges for the marine design were overcome.

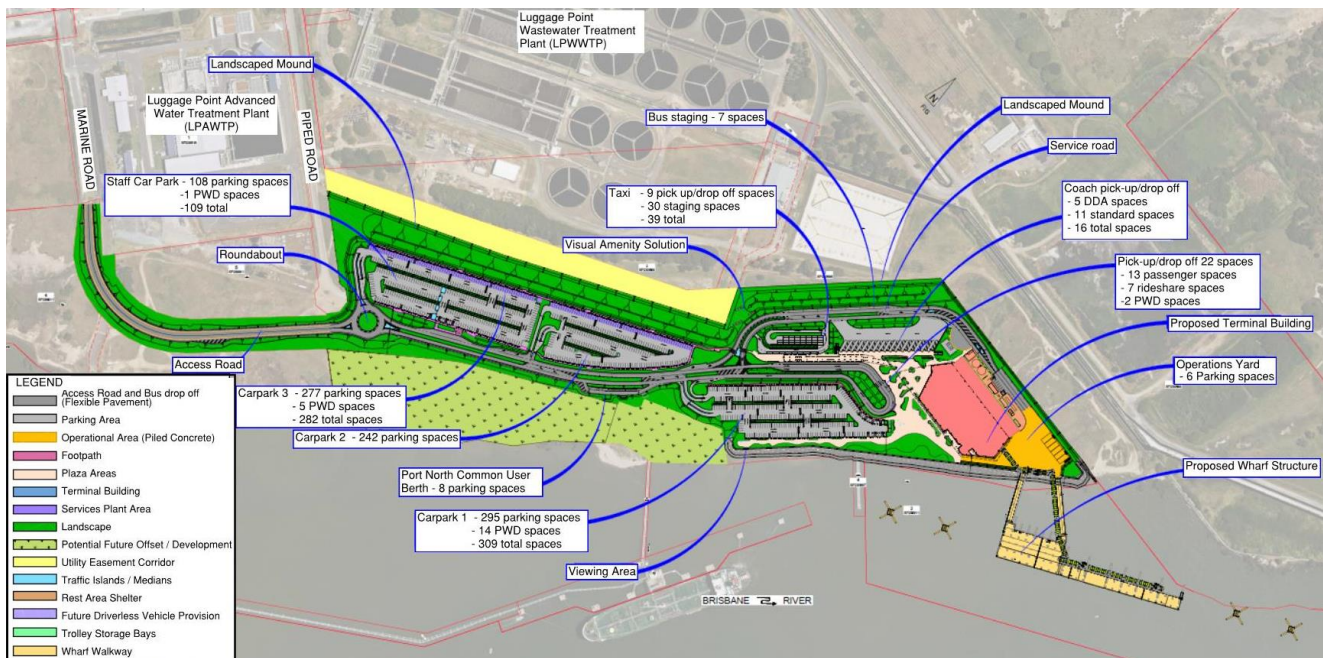


Figure 1 - Final BICT Masterplan Site Layout