

Wharf upgrade program design considerations

The NSW Government is progressively upgrading wharves across Sydney to improve ferry services for customers. New and upgraded wharves are being delivered as part of the NSW Government's Transport Access Program – an initiative to deliver modern, safe and accessible transport infrastructure. A key objective of this program is to minimise construction impacts to customers and wharf operations.

Design objectives

Accessible public transport

Improve access for mobility impaired customers and customers with prams and include accessibility features for sight and hearing impaired customers. For all wharves to achieve compliance by 2022 (where possible) with the *Disability Discrimination Act 1992 (DDA)* standards and codes of practice.



Quicker and efficient boarding and disembarking

The aim is to provide the safest and most efficient access for customers and ferries. Ferry masters are consulted to ensure operational knowledge and experience is considered in the design process.



Customer safety

Includes effective lighting, help points and clear safety screens in addition to improving accessibility for all customers.



Protection from the wind, rain and sun

Improve amenity and comfort with covered waiting spaces and seating for ferry customers.



Sufficient berthing capacity to meet future demands

As part of the Sydney's Ferry Future strategy, ferry service frequencies and operating hours will expand. To support the expansion of services some existing and new wharves will have capacity for dual berthing to provide quick and efficient operations. The new wharves are designed with a 50 year lifespan.



Meeting the design objectives

The wharf structures are designed to deliver the objectives of the Transport Access Program's improvements to transport infrastructure.

Pontoon

A **floating pontoon** is considered the safest and most efficient design for ferry operations and supports DDA compliance.

To achieve compliance in a tidal environment the new wharf design includes a floating pontoon and a fixed entry bridge connected by a gangway and ramp.

While the floating pontoon is anchored by piles it is free to move up and down with the tide providing safe, level access between the ferries and pontoon.

The **size of the pontoon** is determined by the environmental influences and maritime activities in each location. Larger pontoons are required in locations experiencing choppy conditions to maintain the stability of the floating pontoon and to provide a safe platform for customers and ferries to operate.

A larger pontoon may also be used in locations experiencing calmer conditions if customer demand requires more waiting space on the pontoon.

Placement of the pontoon is influenced by the local environmental conditions and maritime activities, and operational requirements including land side access to the wharf.

Environmental conditions and maritime activities to be considered include:

- Water depth for safe and efficient ferry access
- 100 year weather occurrences and changing climatic conditions
- Fetch (wind and wave conditions) effecting the stability of the pontoon and therefore DDA compliance and safe efficient operations. The fetch in a specific location is the longest distance over which incoming winds and waves can be measured.

Operational requirements to be considered include:

- Safe and efficient ferry operations
- Minimising wharf closure time due to weather and maritime conditions
- The number of berths required to meet current and future service demands
- Efficient connections between transport modes on the land side.



Gangway

To meet DDA compliance the changing levels of the pontoon influence the **length of the gangway** connecting the pontoon and ramp. The gangway should be a minimum of 18 metres long to maintain the required gradient for wheelchair access in tidal conditions.

The minimum **gangway width** of 2.4 metres enables two-way flow of passengers and makes access easier and safer for those customers using mobility aids or who have prams. The use of tactiles on the floor of wharf structures provides the visually impaired with warning of changes in level and directional guidance.



Services pod

The services area is standardised for all wharves to hold life rings, essential equipment and information for customers, including the FOCIS system which displays ferry timetable information. The height of the pod allows service people to work in the space. The area set aside has been kept as small as possible to provide as much open space on the pontoon as possible. Accessibility considerations include; audio and visual destination information, a hearing loop to assist hearing impaired customers is positioned in an accessible location and accessible emergency help points.



Shape, form and materials and colours

The shape and form is designed to visually complement the harbour and river while maintaining water views from the wharf. Materials and colours have been selected to fit into the surrounds and minimise potential visual impacts. The zinc roof sheeting is a natural product that will weather and form a natural patina over time.

The design of the wharf is distinctive to unify and identify all of Sydney's commuter ferry wharves.

