

THE LUAS SPENCER DOCK BRIDGE HAS BEEN COMPLETED AND WILL BE PARTIALLY OPEN TO TRAFFIC FROM 16 JUNE 2009 FROM 4PM

Traffic on the new Luas Spencer Dock bridge in the different phases:

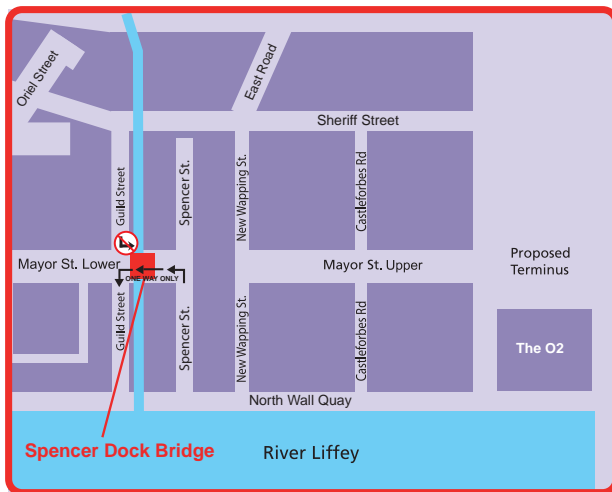
Phase 1 - 16 June from 4pm

From 4pm on 16 June 2009 the bridge will be open to westbound vehicular traffic exiting from Spencer Dock. Vehicles using this route to exit from Spencer Dock will be required to turn left (southbound) onto Guild Street in the direction of North Wall Quay.

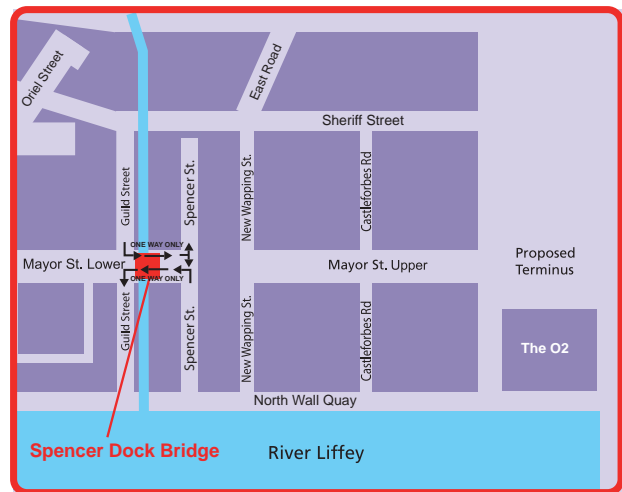
Phase 2 – during August 2009

It is planned to open the bridge to eastbound vehicular traffic in August / September when the traffic signals are installed at the junction of Guild Street and Mayor Street. The viewing galleries will be opened at this time.

PHASE 1



PHASE 2



How the Spencer Dock Luas Bridge came together over the last 15 months:

- The Royal Canal bed was pumped dry to facilitate the construction of the foundations piles, bridge central piers, and construction of the temporary structure to support construction of the bridge deck. Seventy two piles (individually reinforced concrete columns) were constructed to carry the bridge.
- Building this bridge was like putting a giant jig saw puzzle together. Due to the shape and features of the bridge deck, the underside of the bridge deck was formed using a carefully assembled arrangement of 250 individually profiled expanded polystyrene blocks founded on a temporary scaffolding structure in the canal bed.
- The parapet system on the bridge is made up out of 34 unique precast parapet units which were manufactured from specially designed individual expanded polystyrene moulds to achieve the graceful sweeping curves on the bridge.
- Piecing the bridge together like a jigsaw, allowed us to achieve the bridge's geometrically undulating soffit forming a two-dimensional (or 'doubly') curved surface.
- In September 2008, when all the blocks and steel reinforcement of the bridge deck were in place, the team was ready to cast the concrete bridge spine. Eighty trucks of concrete were poured during one day. This allowed for a smooth finish of the underside of the bridge deck.
- To give the bridge its strength, 500 'post tensioning' steel cables were fixed into the bridge deck. The team constructed the footpaths and viewing galleries as twenty eight individual (discrete) reinforced structural concrete elements. When all the concrete in the bridge deck had cured, the 500 steel cables were tensioned and grouted. This extra strength allowed for the concrete elements to be cantilevered and gives the visually spectacular curved shapes.

Passengers on board late 2009/early 2010

LUAS Docklands (Line C1)

Construction Phase Update

SPECIAL EDITION

16 June 2009

- Since the Spencer Dock Bridge will carry the Luas for the Docklands Extension, tracks needed to be installed. The installation of the track was particularly challenging as the rails had to be suspended from special frames to enable the reinforced concrete in the track areas to be completed. The tracks installed over the bridge comprise a 'floating' track system which is essentially separated from the bridge structure by a specialist rubber mat system to minimise the noise and vibration impact when the future trams are running over the bridge.
- The bridge then received a special final surfacing layer. This surfacing product, whose main component is special stone aggregate material called carborundum, has reflective properties that sparkle in the sunlight.
- The Spencer Dock Bridge will also carry cars and pedestrians. Ten low level lights are in place to provide light for road and tram traffic. The road safety crash barriers will separate the cars from the pedestrians. These safety barriers also hold lighting units to provide lighting to the footpaths for pedestrians.
- The construction team are currently getting ready to install the poles which will carry the overhead contact system (OCS). The OCS poles will have the dual function of serving as a lighting pole and carry the power for the future Luas trams.

Some Quick facts about Spencer Dock Bridge:

- The length of the bridge spans some 40m over the Royal Canal.
- The bridge is 25m wide on average.
- The middle part of 15 metres is reserved for trams and motorised vehicles
- Pedestrians will be able to walk on the fins of the manta ray shaped bridge
- Total Weight of bridge is +/- 3250 Tonnes
- Total amount of concrete is +/- 1300 m3

MARCH 2008



JULY 2008



AUGUST 2008



JUNE 2009



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