



IABSE Future of Design Manchester 2020

Young Designer's Competition: Design Brief

Salford Quays Moving Footbridge

1.0 Brief

Salford Quays near the end of the Manchester Ship Canal. Previously the site of Manchester Docks, it became one of the first and largest urban regeneration projects in the United Kingdom following the closure of the dockyards in 1982.

Built by the Manchester Ship Canal Company, Salford Docks was the larger of two that made up Manchester Docks; the other being Pomona Docks to the east. They were opened in 1894 by Queen Victoria. At their height the Manchester Docks were the third busiest port in Britain, but after containerisation and the limit placed on vessel size on the Manchester Ship Canal, the docks declined in the 1970s.

In 1983, Salford City Council acquired parts of the docks from the Manchester Ship Canal Company with the aid of a derelict land grant. The area was rebranded as Salford Quays and redevelopment by Urban Waterside began in 1985 under the Salford Quays Development Plan. Between 1986 and 1990, the infrastructure of the docks was modified to create an internal waterway network. Roads and bridges were built and a promenade along the waterfront constructed and landscaped.

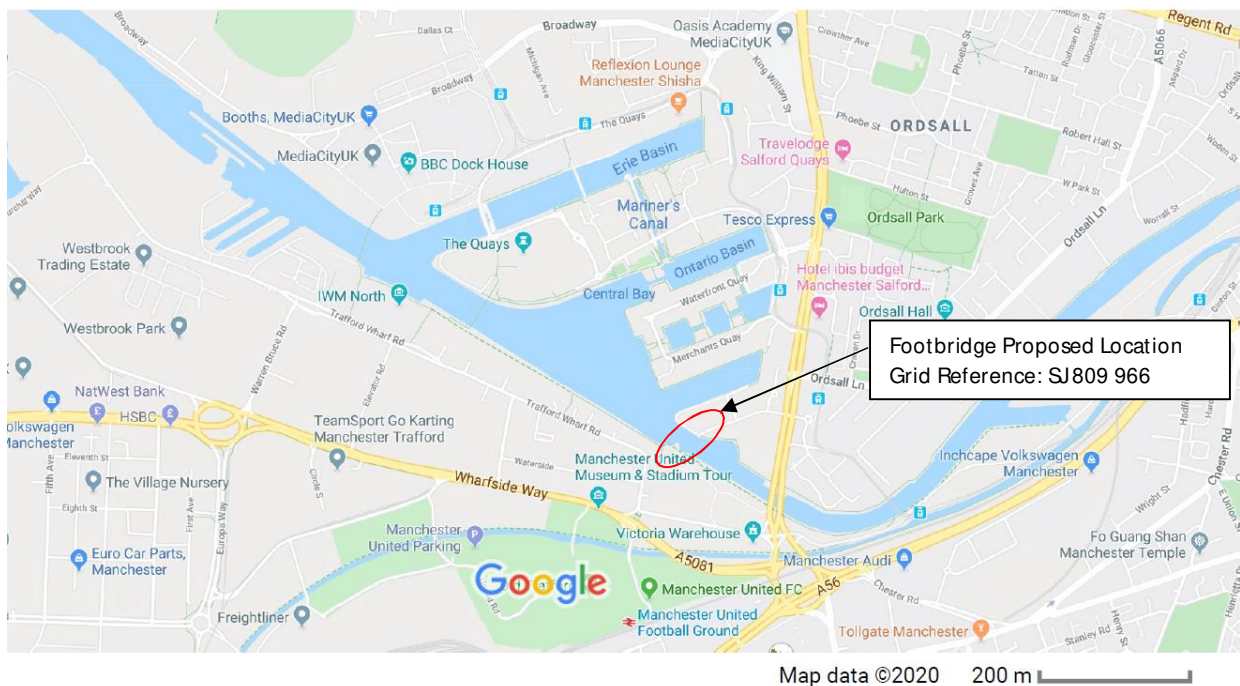


Figure 1 - Salford Quays & Location of Structure

As part of the regeneration of Salford Quays you have been asked to complete a proposal for the design of a new footbridge which will span 66m across the Manchester Ship Canal. Today this area is now largely used by pleasure craft but continues to support many marine related industries in the vicinity.

The bedrock can be presumed to be sandstone which can be assumed to be in good condition for structural purposes.

You are asked to propose a low-level modern structure that does not detract from the surroundings. Also, specific navigational requirements are defined to accommodate clearances for both leisure craft and larger vessels. Therefore, this bridge must be able to be opened in order to allow for larger vessels to pass beneath. How you achieve this is up to you

Your task is to propose a design for a footbridge which will be able to span 66m across the canal, connecting the two sides of Manchester Ship Canal.

A location of Salford Quay and footbridge proposed location is shown in Figure 1 and a cross section of the canal and required headroom for small and large vessels at the structure location are shown in Figure 2 and Figure 3.

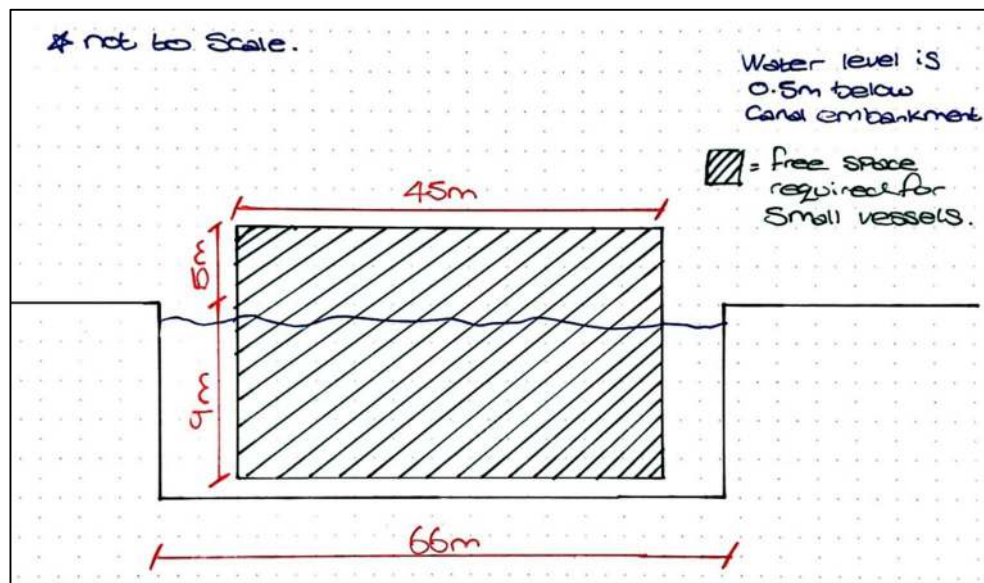


Figure 2 - Cross Section showing required headroom of closed structure

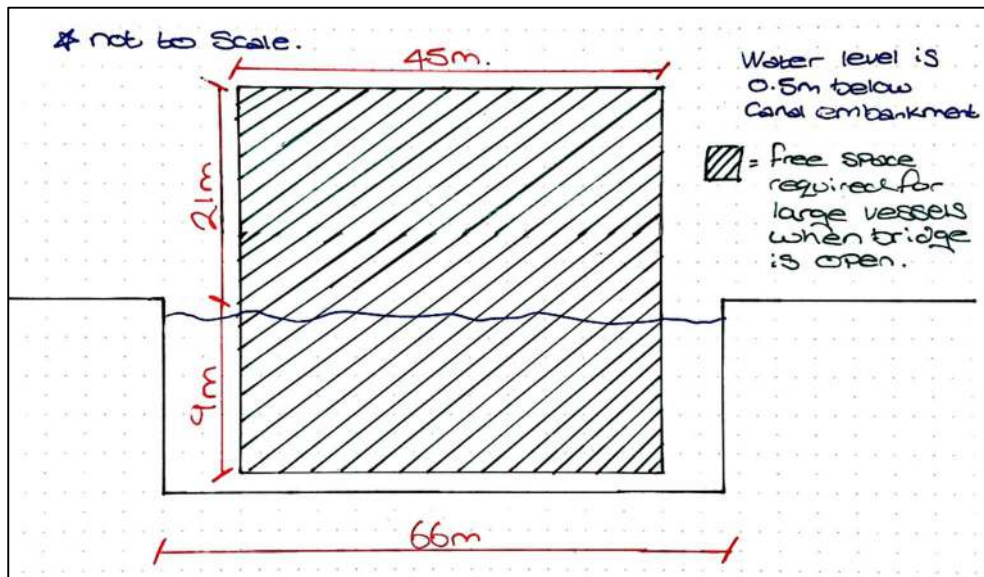


Figure 3 - Cross Section showing required headroom / free space for open structure

2.0 Characteristics of the bridge

The local authority who commissioned the new structure has the following requirements for the design:

- The structure must span 66m and maintain a footpath of 3.5m minimum width.
- An envelope below the structure of 5m x 45m must be maintained for vessel passage whilst closed and an envelope of 21m x 45m must be maintained when the structure is opened (Figure 2 and Figure 3).
- The visual impact of the structure should be a low-level modern structure that does not detract from the surroundings. This is due to the iconic structures already present here.
- A construction sequence is to be presented to demonstrate the constructability of the design.
- What is the proposed opening operational requirements?
- How will the structure be maintained?

3.0 Proposal

While choosing the typology of bridge they prefer, designers are expected to propose designs which meet the requirements in Figure 2 and Figure 3. As well as the conceptual design element, designers should demonstrate that they have considered more technical aspects of the design. (However, no detailed calculations are required!)

The judging criteria will be as follows:

- Structural feasibility
- Visual impact and suitability
- Constructability

- Opening requirements
- Consideration of material durability and maintenance

The submissions will be judged by a jury of engineers and architects based on these criteria.

It should be noted that the judging criteria focus on the solution to the brief, rather than the mode of presentation. While the quality of the presentation may affect the judges' decision, it is not essential to produce computer rendered images of the scheme; high quality hand sketches are an adequate communication device.

Depending on the number of submissions received, the jury may decide to shortlist three (or more) schemes to be exhibited at the conference.

Prizes will be awarded at the jury's discretion.

4.0 Submission details

4.1. Format

Submissions are to consist of a single A2 size board, submitted in pdf format by email to fodmanchester@iabse.org.uk. Boards should include the team's identification number clearly located in one corner. No other identifying marks (e.g. entrant names, company/organisation names or logos) is to be displayed on the boards.

Entries must be submitted before 8am, 20th March 2020. Entries received later than this time will be rejected.

Entries should be accompanied by the name of a team member who will be attending the conference. Entries will not be considered for shortlisting if none of the team are available to attend.

The organising committee will arrange for the shortlisted schemes to be printed. These boards will be displayed for public viewing throughout the conference and will be available for collection at the end of the day.

Teams may consist of up to four team members. All entrants must be under 35 years of age on the date of the conference. A prize of £200 will be awarded to the winning team.

4.2. Programme:

21 st January 2020	Design Brief issued
7 th February 2020	End of questions period. Any questions about the brief or the competition should be sent to fodmanchester@iabse.org.uk Answers will be made available to all competitors and published on the IABSE UK website.
6 th March 2020	Application for Team Identification Number to fodmanchester@iabse.org.uk
20 th March 2020	Deadline for competition submission
6 th April 2020	Shortlisted entries notified
17 th April 2020	Display and judging at the IABSE FoD Conference