
VICTORIA NORTH: WATER TREATMENT SCREENING PROPOSAL

Document Control

<u>File Name</u>	<u>Prepared by</u>	<u>Checked by</u>	
2700-ID-013-06-Water Treatment Plant Screening	SC	MS	

Revision Description

01 - Initial issue for ARUP comment

02 - Incorporating ARUP comments

03 - Issued for Submission to MCC

04 - Reissue for Submission to MCC

05 - Further client comments incorporated

06 - Adjacent arch screen removed from visuals

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1 INTRODUCTION

Brief and Location

There is a requirement for water filtration equipment to be located under the north western arch of the footbridge.

This document explores design led screening solutions that integrates into the context becoming a positive opportunity to incorporate further public art and interpretation into the site.

The primary considerations to address are:

- Provide a visually attractive screening solution
- Address the potential safety issues the arch spaces and open ground beyond presents along a key boundary
- Securing the plant equipment from the public



Location of arch highlighted above

(left) Typical image of the main piece of filtration equipment being positioned within arch

Existing Photos



Birds eye view of existing arches - location of screening highlighted



Arch within which screening and water treatment plant is proposed

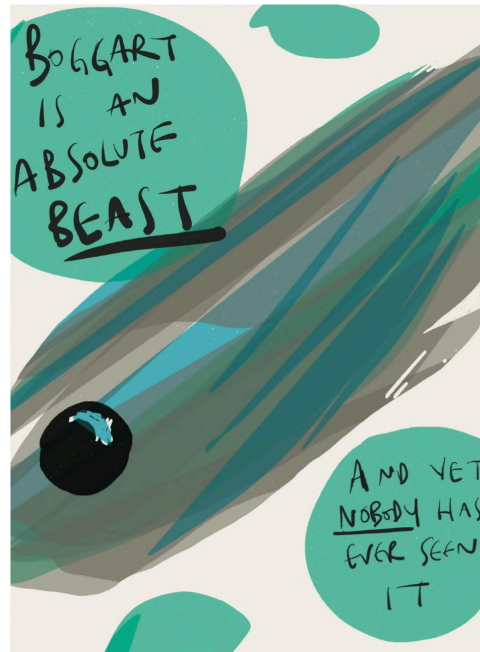
Potential References for Screen Design

Using the screening as a device to interpret the sites history. Potential reference include:



Lowrys Steps

Lowry was a prolific documenter of residents lives in industrial Greater Manchester. His painting 'The Footbridge' (1938) has made the steps a well known location.



The Boggart

Manchester mythical creature reintereted into a sculpture trail as part of the wider masterplan, the screen could incorporate this reference becoming part of the trail.



William Mitchell Totem

The concrete totem (1962) by english sculpter William Mitchell lies (for now) in the nearby Eastford Square and represents an important part of Collyhurts modern history.

Precedent Imagery

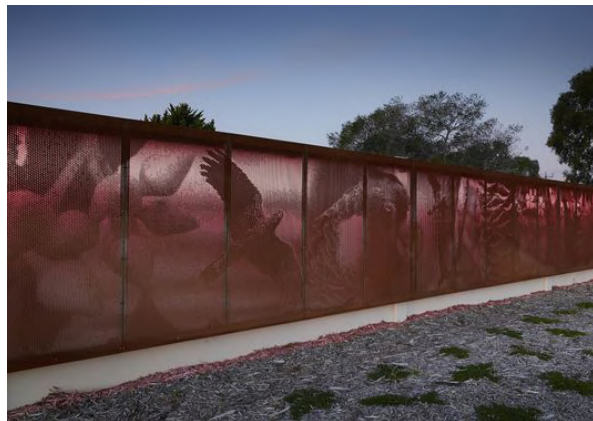
The screen has the practical requirement of needing to address security and visual screening of the equipment behind. It's location, situated prominently at the head of a key pedestrian and vehicular route, also requires it to be attractive and a positive impact on the site.

We proposed to deal with all these separate issues through the use of perforate metal sheets, using a variety of patterns from expanded mesh, to PicturePerf, the technology of creating images within metal sheets.

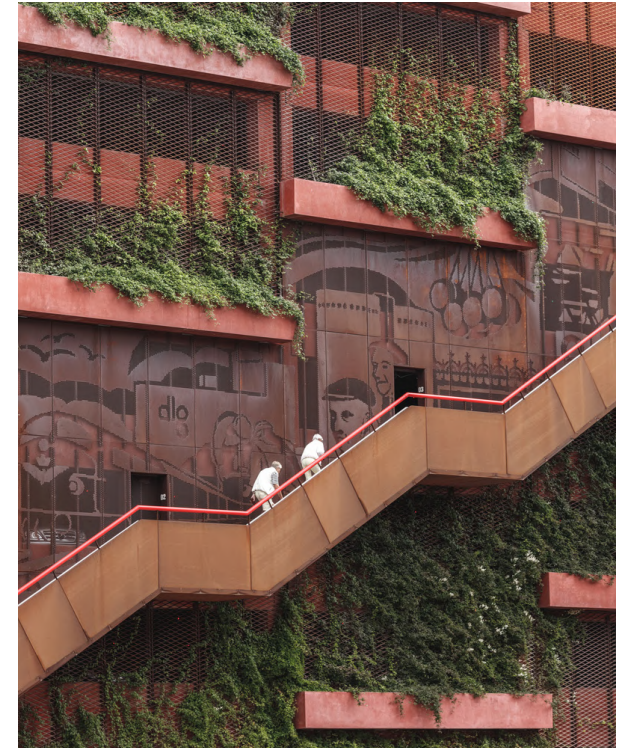
The use of varying perforation patterns creates interest and the ability to display images allows the screen to become a piece of historic interpretation specific to the site and its history.



Example of Picture Perf technology, translating images onto metal sheets



Integrating lighting into the screen to remain an attractive feature into the evening time



Mixed use of expanded mesh, perforated images and planting to break down a large scale facade

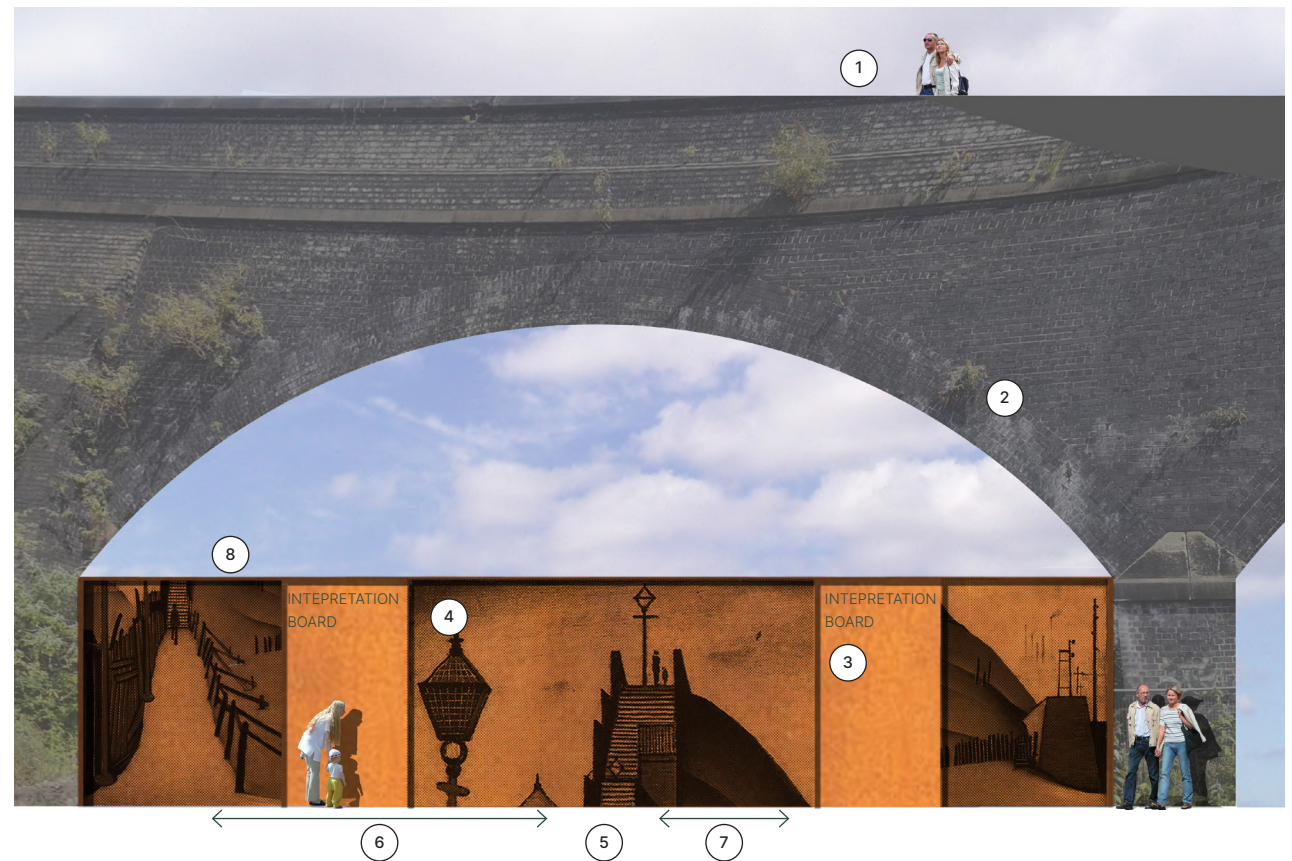
2 SCREEN DESIGN

Proposed Screen Design

A partial height screen simplifies the structural requirements and cost greatly whilst still screening the equipment behind.

This option again uses the Lowry painting as reference through panelising interesting parts of the image to set up a rhythm of picture and interpretation panels.

The upper section is open allowing the form of the masonry arch to be fully expressed and retaining views through to beyond.



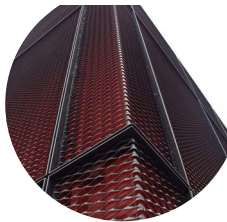
Note: final panel sizes and access requirements to be confirmed with specialist equipment supplier. Input required for maintenance and plant replacement methodology.

Key

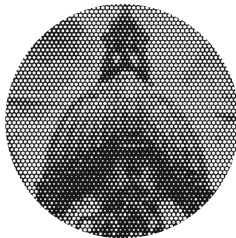
- | | | |
|--|---|--|
| ① Footbridge above | ④ Picture perf panels | ⑦ Width of associated plant equipment - enclosure additional to this, size TBC |
| ② Existing bridge structure | ⑤ Lighting integrated into base of panels | ⑧ Corten infill panels with expressed corten frame |
| ③ Interpretation / corten expanded mesh panels | ⑥ Width of plant tank (5m) - enclosure additional to this, size TBC | |

Materiality

Expressed corten framed panels



Picture Perf corten panels with image applied



Intepretation board with lettering cut out of corten panels



Integrated lighting - front lit uplighters



Visual 01



Visual 02



Visual 03



Visual 04



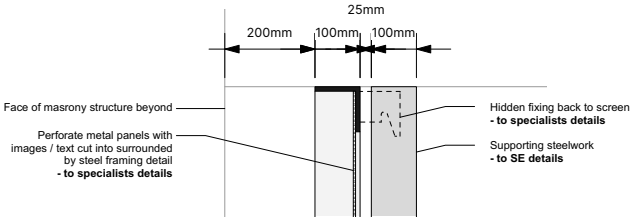
Visual 05

GRP enclosure around
plant equipment TBC
specialists input

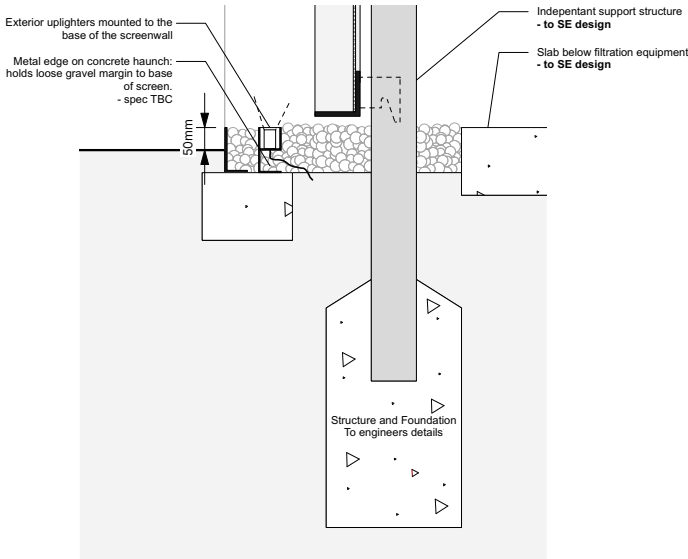


Indicative Details

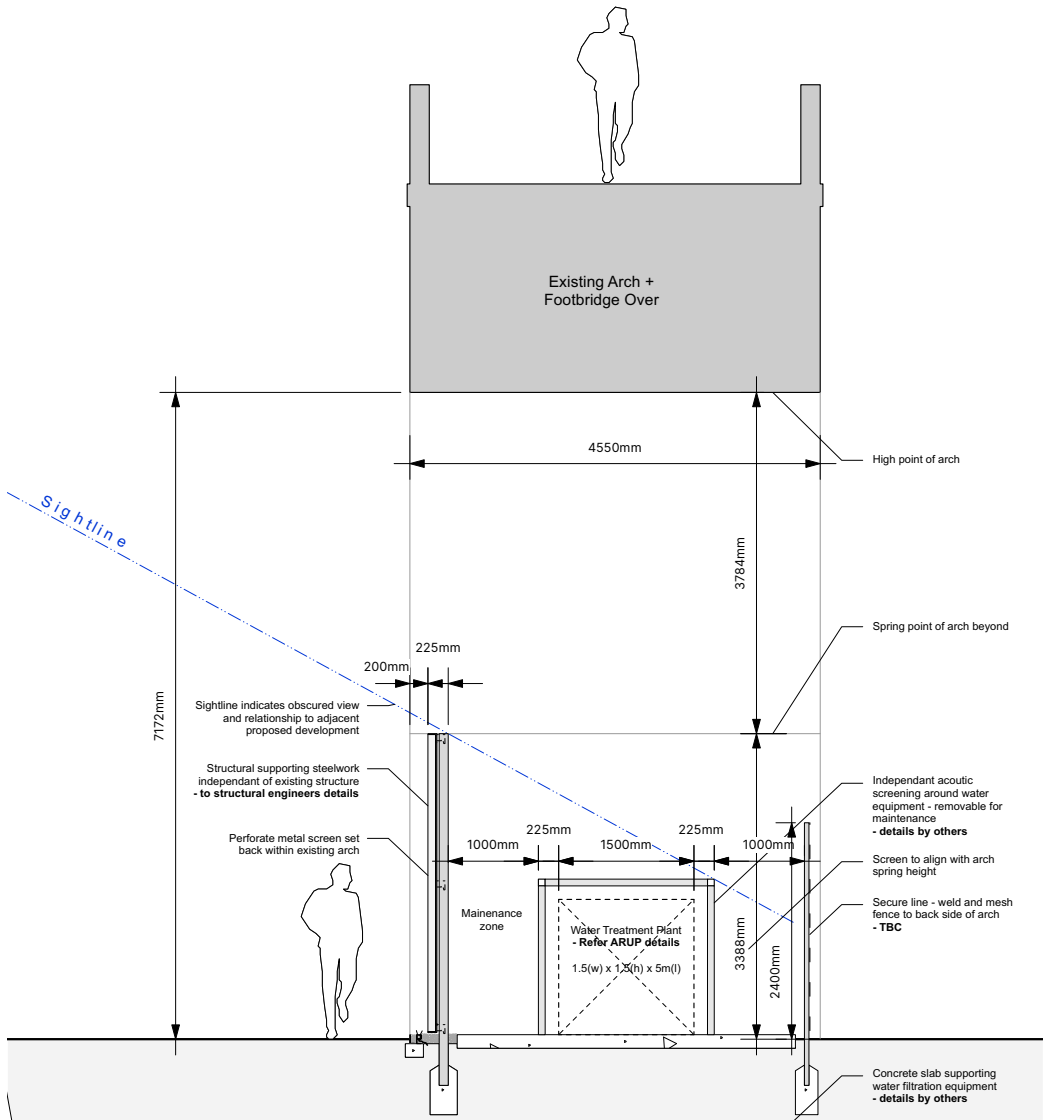
Details indicative: to be confirmed during WS4 - detailed design.



Detail: Screen Head
1:50



Detail: Screen Base
1:50



Screen/Arch Section
1:50

Considerations

The following commentary is to assist decision making towards which option to carry forward, further input from a structural engineer is recommended to help guide costs better:

Costs

Cost efficient option to screen equipment, alternative being to fill entire arch which could prove to be cost prohibitive.

Maintenance / Access

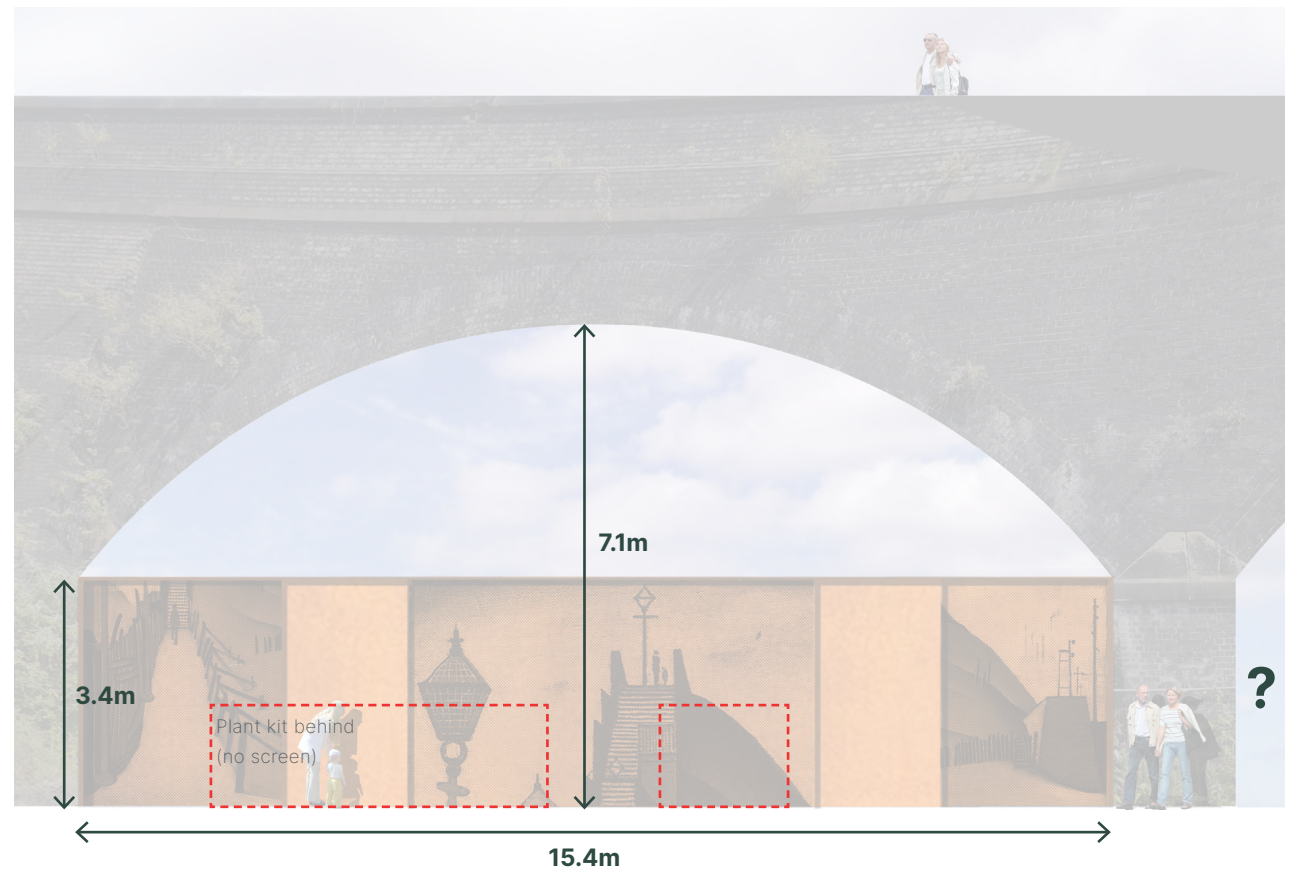
Visual inspection of the bridge/arch can be completed quickly, maintenance and repair of a low screening will not require as specialised equipment as for a full height screening proposal.

Structural

This option is structurally simple as the screening area is smaller, which means a shallower foundation will be required (less wind load) and less if any requirement to fix into the bridge structure.

Lower Environmental Impact

Retaining a portion of the arch as open minimises disruption to local wildlife and habitats both during stripping plant operation and possible maintenance works



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