Ryder



# Aviva Studios, External Stair
# Design, Access and Heritage Statement

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# Introduction

## This statement supports proposals for the addition of an external exit stair and associated modifications to pedestrian and vehicle control systems and street furniture at Aviva Studios for Manchester City Council (MCC).

Aviva Studios, home to Factory International, is a major cultural venue located on the River Irwell waterfront in Manchester. The building is designed around highly flexible, large scale spaces capable of accommodating a wide range of artistic and performance uses. The 13,350 sqm development includes the Warehouse, a 21 metre high space with capacity for up to 5,000 standing, which can be subdivided by a full height movable acoustic wall. The Hall provides a flexible stage and seating configuration for up to 1,600 seated or 2,000 standing. The Warehouse and Hall can operate independently or together. Additional internal and external spaces support a varied year round programme of cultural activity.

Currently, Aviva Studios hosts events with a capacity of up to 5,000 people. The proposed external stair, linking the existing external space on the top of the viaduct at the south of the building to Water Street, will provide an additional external exit route and the opportunity to host events with a capacity of up to 7,000 people.

The proposal considers the impact on the grade II listed railway viaduct adjacent to Aviva Studios.

# Context

# Brief

**The client brief is to provide an additional external exit route from existing exit doors at the south of the Warehouse at Level 2 to allow the maximum event capacity to be increased from 5,000 to 7,000 people.**

The new route is only to be used for exiting the building to existing public highway and muster points. It is to be managed by Aviva Studios events staff who would be present along the route during events requiring this capacity. When not in use during applicable events, the new route is to be secure to prevent accidental or misappropriate use.

The new external route must sit comfortably in its surroundings, complimenting the bold architecture of the existing Aviva Studios building, while remaining sensitive to, and limiting impact upon, the surrounding listed buildings and structures.

Existing secure external storage areas adjacent to the south elevation of Aviva Studios which provide temporary holding areas between and during events should be retained as far as possible, along with existing access to services and equipment.

Existing external lighting and CCTV coverage to the south of Aviva Studios is to be reviewed and supplemented as required to ensure it meets the ongoing needs of Factory International.



Aviva Studios Hall interior

# Existing Buildings Assessment

### Aviva Studios

Aviva Studios opened in 2023, with the capability to house events of up to 5,000 people.

The massing composition and use of external materials reflect the key uses:

- Warehouse – a large rectangular volume clad in precast concrete panels
- Hall – an irregular form expressing the two tier performance space and surrounding foyers clad in white profiled metal cladding articulated into large triangular facets
- Towers – office, changing and ancillary accommodation clad in rectangular panels of curtain wall and metal cladding

The use of strong colour is restricted to public entrances and key features for ease of way finding. Existing exit and escape stairs are contained within the overall form apart from an escape stair shaft to the west elevation of the hall which is expressed and clad in black metal panels.



Location plan



Aviva Studios west elevation from River Irwell

### Colonnaded Railway Viaduct at the former Liverpool Road Goods Depot (Grade II)

Aviva Studios is bounded to the south by a historic railway structure. This is made up of brick vaults dating to the 1860's and wrought iron colonnade decks bridging the Museum of Science and Industry site.

At ground level, Aviva Studios inhabits a section of the brick vaults, containing WC and plant spaces. The north elevation of the listed structure is a key feature within the entrance lobby. The southern section of the warehouse spans over part of the brick vaults and has several exits from the south elevation at Level 2 which use the top of the viaduct for external exit east along Victoria Street and then to Lower Byron Street.

During the construction of Aviva Studios, structural, waterproofing and brickwork repointing works were carried out to the section of the viaduct aligned to the previous consent. In adjacent areas to where work was carried out, the current condition varies and local maintenance is required.

### Former Liverpool Road Station (Grade I)

Located to the south of Aviva Studios, the station opened in 1830 as part of the Liverpool & Manchester Railway, is the world's first passenger railway station. Following the closure of the station in 1975, Greater Manchester Council purchased the site. The Science and Industry Museum in Manchester relocated there in 1983, later expanding to occupy the entire former station and warehouse complex. This move allowed the museum to integrate Manchester's industrial heritage directly into its exhibits.

### Former Grape Street Bonded Warehouse (Grade II)

Located to the east of Aviva Studios, this former railway bonded warehouse was completed in 1868 for the London and North Western Railway, modified internally during the 20th century, and recently converted into co working spaces.



North elevation of Colonnaded Railway Viaduct



Aviva Studios south elevation, Former Grape Street Bonded Warehouse and overall view of Former Liverpool Road Station goods depot Studios east elevations




Former Grape Street Bonded Warehouse and part Aviva Studios east elevation

# Options Appraisal

**A feasibility study was conducted to test all viable options for the required additional external escape route. The shortlisted routes are indicated on the adjacent image.**

**Option 1 - Science and Industry Museum route east to Lower Byron Street**

This route would create a new gated opening within the existing southern boundary fence of Aviva Studios external yard at level 2 leading onto a new raised platform with handrails and lighting. This would run east over the existing ballasted area to the north of the non operational Science and Industry Museum (SIM) railway line until it meets the existing central SIM cobbled yard. Continuing east, controlled egress through the existing SIM gates would be required onto Lower Byron Street.

This option was discounted due to uncertainties regarding securing a permanent route over third party land and the impact on third party plans for their site.

**Option 2 - Science and Industry Museum route west to Water Street**

This route would create a new gated opening within the existing southern boundary fence of Aviva Studios external yard at level 2 and onto a new raised platform with handrails and lighting running south over the existing ballasted area to the west of the non operational SIM railway lines. A new external stair would be created at the southern edge of the wrought iron colonnade down to the lower portion of the SIM external yard. Continuing west, controlled egress through the existing SIM gates would be required onto Water Street.

This option was discounted due to uncertainties regarding securing a permanent route over third party land, access constraints for vehicles into the third party site, and heritage impact on the historic colonnade and the existing space and relationship with the group of listed buildings and structures forming SIM.

**Option 3 - Network Rail route south west to Water Street**

This route would create a new gated opening within the existing western boundary fence of Aviva Studios external yard at level 2 and onto a new raised platform with handrails and lighting running south west over the existing ballasted area to the west of the non operational railway line and down the historic stepped ramp onto Water Street.

This option was discounted due to uncertainties regarding securing a permanent route over multiple third party land interests and impact on the historic stepped ramp which would require significant modification to provide a compliant and safe route.

**Option 4 - Network Rail route west**

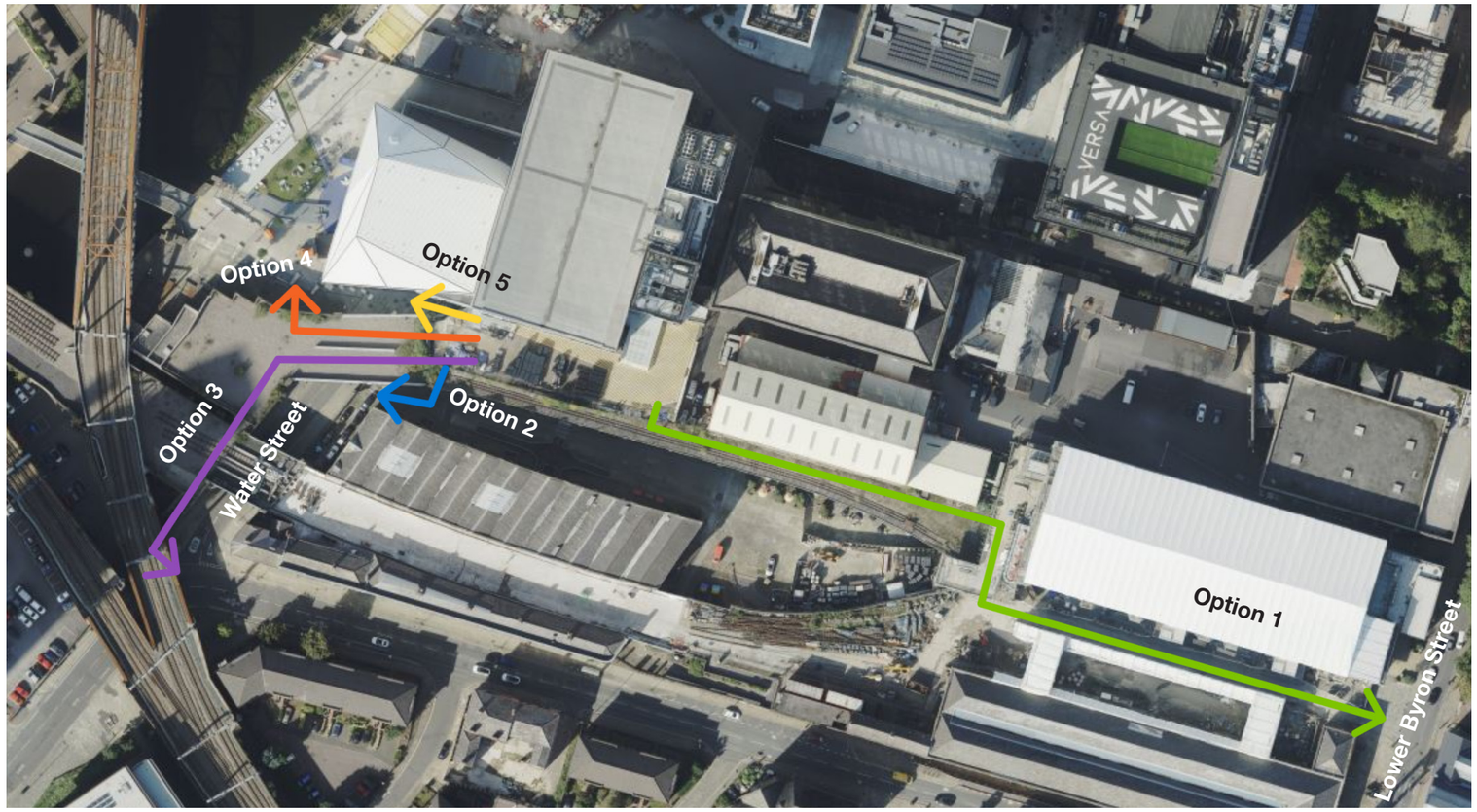
This route would create a new gated opening within the existing western boundary fence of Aviva Studios external yard at level 2 and onto a new raised platform with handrails and lighting running west over the existing ballasted area to a new stair on the west of Water Street landing, in the external space between Aviva Studios and Ordsall footbridge.

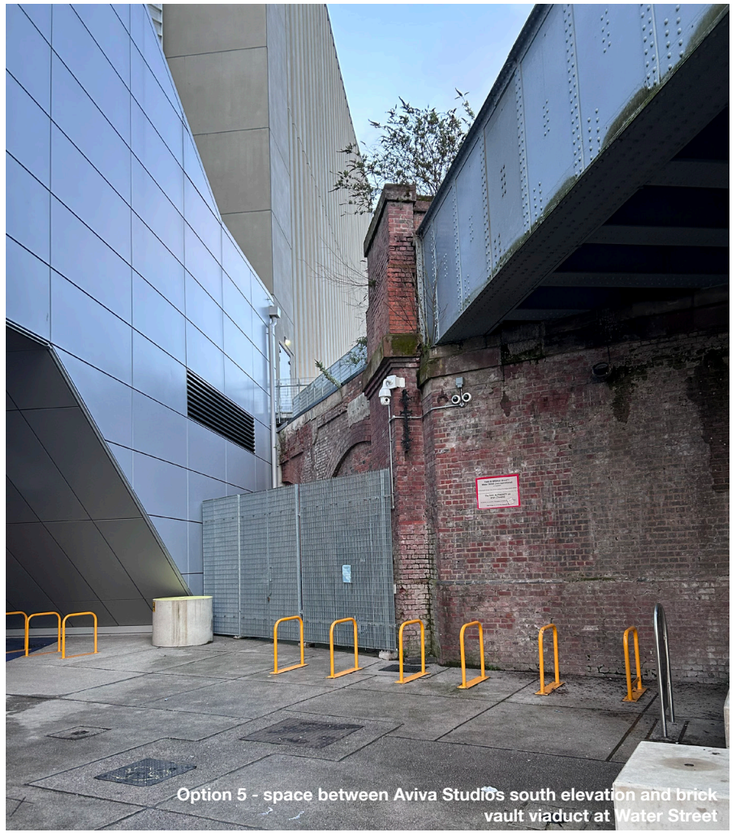
This option was discounted due to uncertainties regarding securing a permanent route over multiple third party land interests.

**Option 5 - west to Water Street**

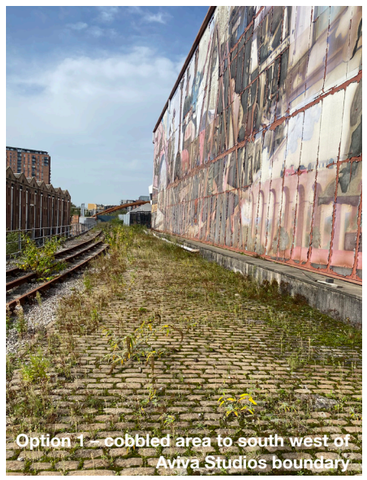
This route would provide a stair directly between the western edge of the Aviva Studios level 2 external yard onto Water Street, requiring modification to the current level 2 balustrade and the secure fence line at ground level.

This option was preferred as it doesn’t involve use of any third party land and minimises additional crowd management requirements. It requires a new stair to be constructed in close proximity to both the existing Aviva Studios building and the historic viaduct and would require careful consideration of both in its design.



Option 5 - space between Aviva Studios south elevation and brick vault viaduct at Water Street



Option 1 – cobbled area to south west of Aviva Studios boundary




Option 2 – Science and Industry Museum external yard and colonnaded viaduct



Option 3 – historic stepped ramp to Water Street



Option 4 – external space between Aviva Studios and Ordsall footbridge

# Existing site plan

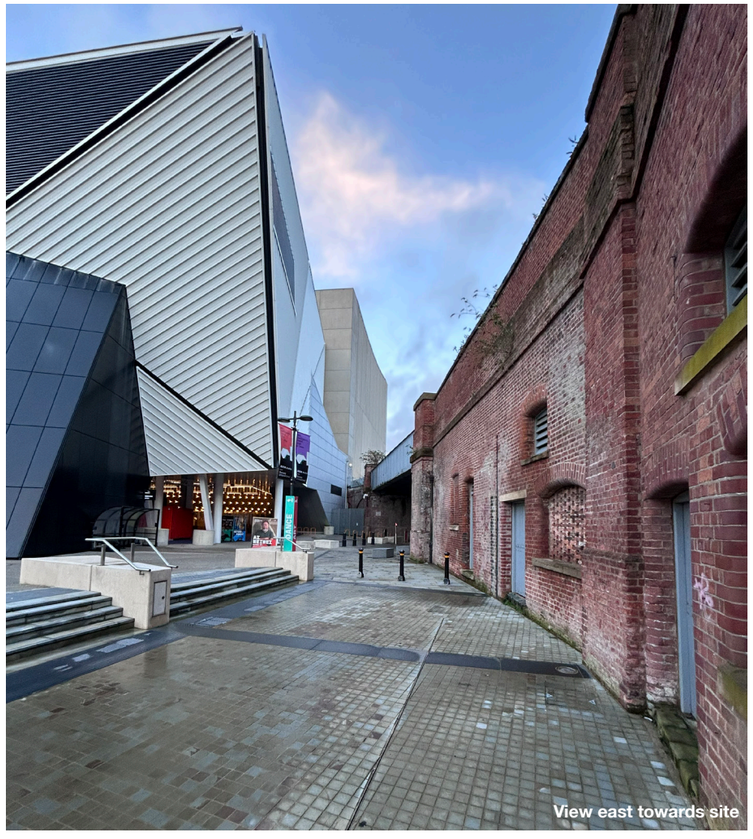
The site is bounded to the north by the south elevation of Aviva Studios, to the west by the eastern end of Victoria Street, Bonded Warehouse and Crystal Maze buildings, to the south by the Science and Industry Museums external exhibition space on the listed viaduct, and to the west by Water Street.

The site is split across two levels, Water Street and on top of the listed brick viaduct, aligning to levels 0 and 2 within Aviva Studios.

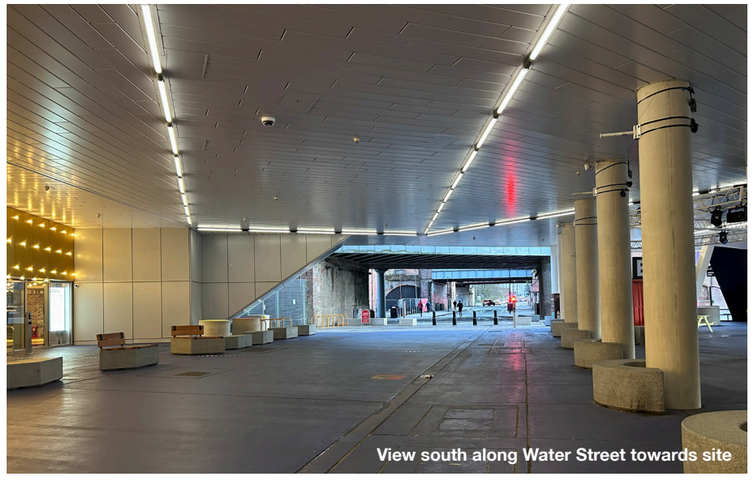
At the Water Street level, the site includes an acute triangular space between Aviva Studios and the viaduct and a pedestrianised area forming part of the east – west Water Street route.  The triangular space is enclosed by a galvanised steel grating fence and gates, and contains two service cabinets and a secure storage area associated with Aviva Studios. Vehicle movement along Water Steet was redefined locally through the construction of Aviva Studios with a shared insitu concrete surface for pedestrians and vehicles and managed access for service and emergency vehicles only. There are existing services, generally running east – west, beneath the entirety of Water Street, severely restricting the opportunity for new foundations in this area and requiring consideration of distributing loads from any new structure. Existing inspection chambers to underground services and hostile vehicle mitigation measures are located within the Water Street zone of the site.

At the higher level, the site provides an existing exit route and storage area for Aviva Studios, accessed via Victoria Street. Galvanised ramps bridge the approximately 600mm difference in level between the main performance spaces at Level 2 of Aviva Studios down to an area of asphalt, laid to falls, forming the roof of the Aviva Studio's WC's occupying the historic brick arches below. No fixings are permitted to penetrate the asphalt waterproofing layer and any significant new loads upon it will need to be adequately distributed. A galvanised steel grating balustrade forms the edge of the change in level at the western end, and a galvanised fence and gates forms the secure line to Victora Street at the eastern end. There is an existing change in level of approximately 200mm to the western edge of the asphalt topping, down to the top level of brick arch viaduct. The southern perimeter of the upper level of the site is bounded by an existing galvanised mesh fence to the Science and Industry Museum.

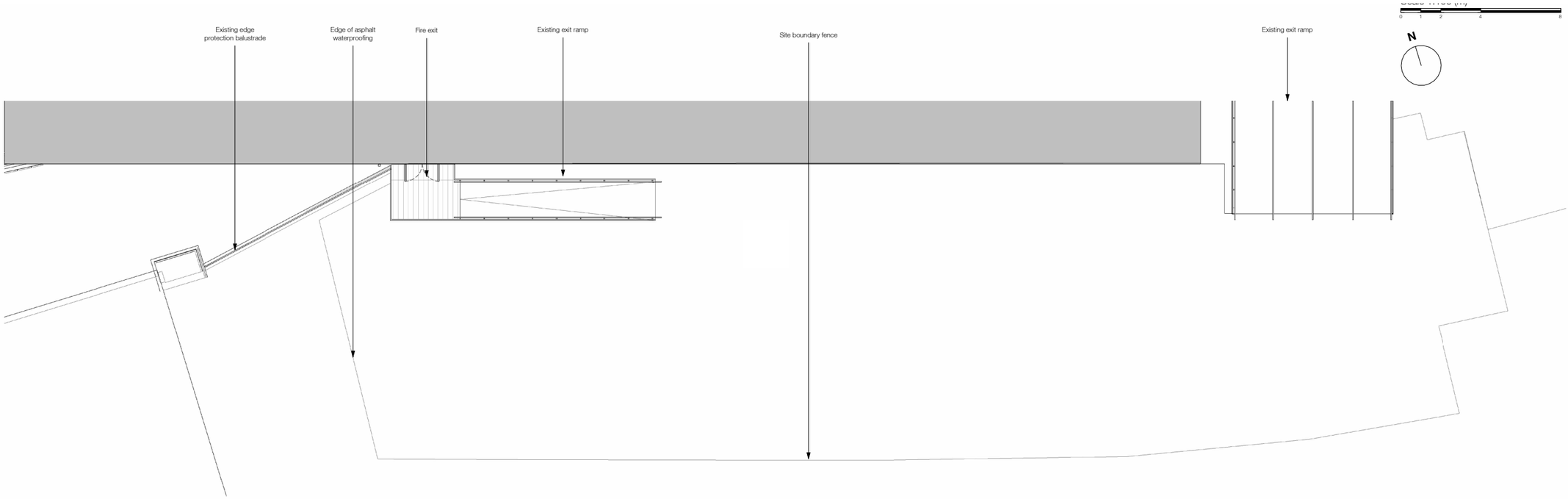
An existing louvre is located on the south elevation of Aviva Studios adjacent the triangular storage area and approximately 4m above Water Street level. Maintaining sufficient air flow from this louvre will need to be considered along with future maintenance to both the existing Aviva Studios elevations and the listed brick vault viaduct.


View east towards site


Site at Water Street level

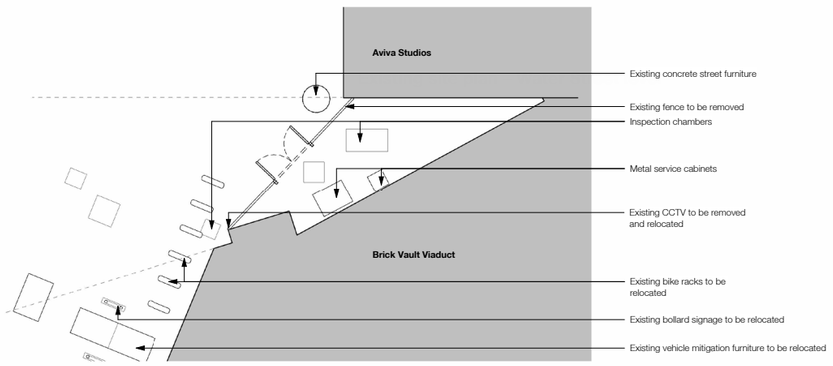

View south along Water Street towards site


View north along Water Street towards site




02 Exisiting GA Plan - Level 02

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01 Exisiting GA Plan - Level 00

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**Existing GA plans – Level 00 (Water Street) and Level 02 (top of viaduct)**

# Brick Vault Viaduct

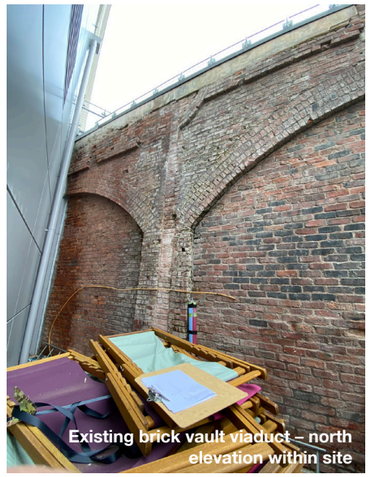
The listed brick vault viaduct forms part of a significant group of historic buildings associated with the early development of the railway. A section of the listed structure forms the southern edge of Aviva Studios with WC and plant accommodation inhabiting several of its arches. This zone has been waterproofed by the addition of a layer of asphalt as part of the recent works. The main performance level spans across a section of the viaduct and uses its top as part of the exit route from the south elevation. The existing galvanised metal grating service yard secure line fence and vehicular gates to Victoria Street are secured to freestanding concrete bases, avoiding the need to penetrate the waterproofing layer below.

The north elevation of the viaduct, within the proposed site and directly to the west of the Aviva Studios footprint, was modified in the last ten years through consented works to remove an external stair and associated railings and make good brickwork. This section of the viaduct has recessed, matching brick arch infills and an incomplete brick parapet, made safe by the addition of a concrete capping and a galvanised steel grate balustrade. The Water Street bridge abutment has a pronounced brick pier which retains its masonry detailing. Self seeded vegetation requires attention at the upper areas of the brickwork.

The section of the north elevation within the site can be viewed from close and medium range from the west, partly viewed though a galvanised metal security fence, and obscured on longer views from the River Irwell and Salford by the Hall of Aviva Studios. The existing view from the north along Water Street is obscured by Aviva Studios until in close proximity, where it is partly viewed through a galvanised fence.

Floor mounted service cabinets associated with rising bollards within Water Street are located directly in front of the north elevation.

CCTV cameras and associated metal conduits are fixed to the brickwork and form part of the current Aviva Studios security system.



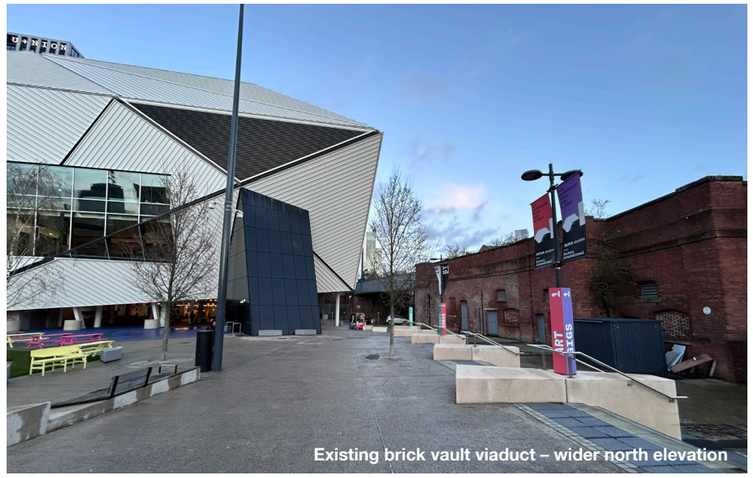
Existing brick vault viaduct – north elevation within site



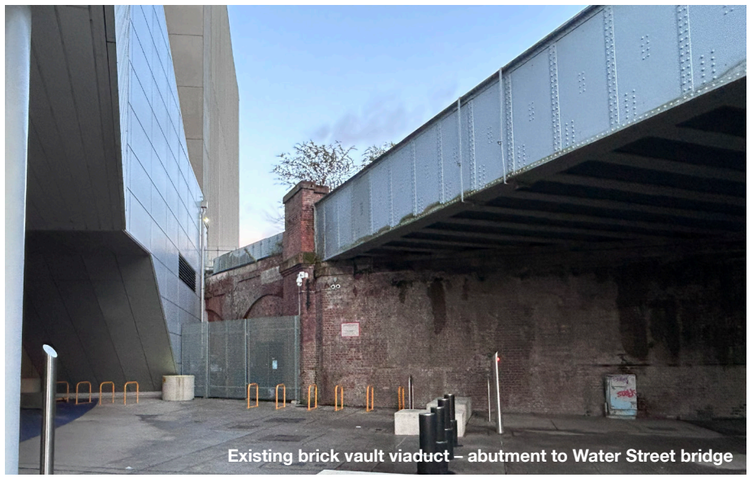
Existing brick vault viaduct – north elevation within site



Existing brick vault viaduct – north elevation within site



Existing brick vault viaduct – wider north elevation



Existing brick vault viaduct – abutment to Water Street bridge

# Proposal

# Proposal

### Use

The proposals create an additional exit route from Aviva Studios existing level 02 south elevation exits to Water Street. This will allow Factory International to hold events of up to 7,000 people, an increase of 2,000 from the current maximum capacity, in a format that they have not been able to offer to date.

### Amount

The additional exit route does not add any internal building area.

### Layout

The additional exit route utilises existing space on top of the brick vault viaduct and a triangle of existing space between the south elevation of Aviva Studios theatre, the north elevation of an exposed section of the brick vault viaduct, and Water Street.

The new route is conceived as a continuous element bridging the changes in level between Water Street and the top of the viaduct and responding to the geometry and constraints of its surroundings. It is comprised of a stair and a ramped walkway.

### Landscape

Existing concrete hostile vehicle mitigation cubes will be relocated to suit the new stair and retain functionality, along with existing cycle racks and signage associated with the Water Street rising bollards.

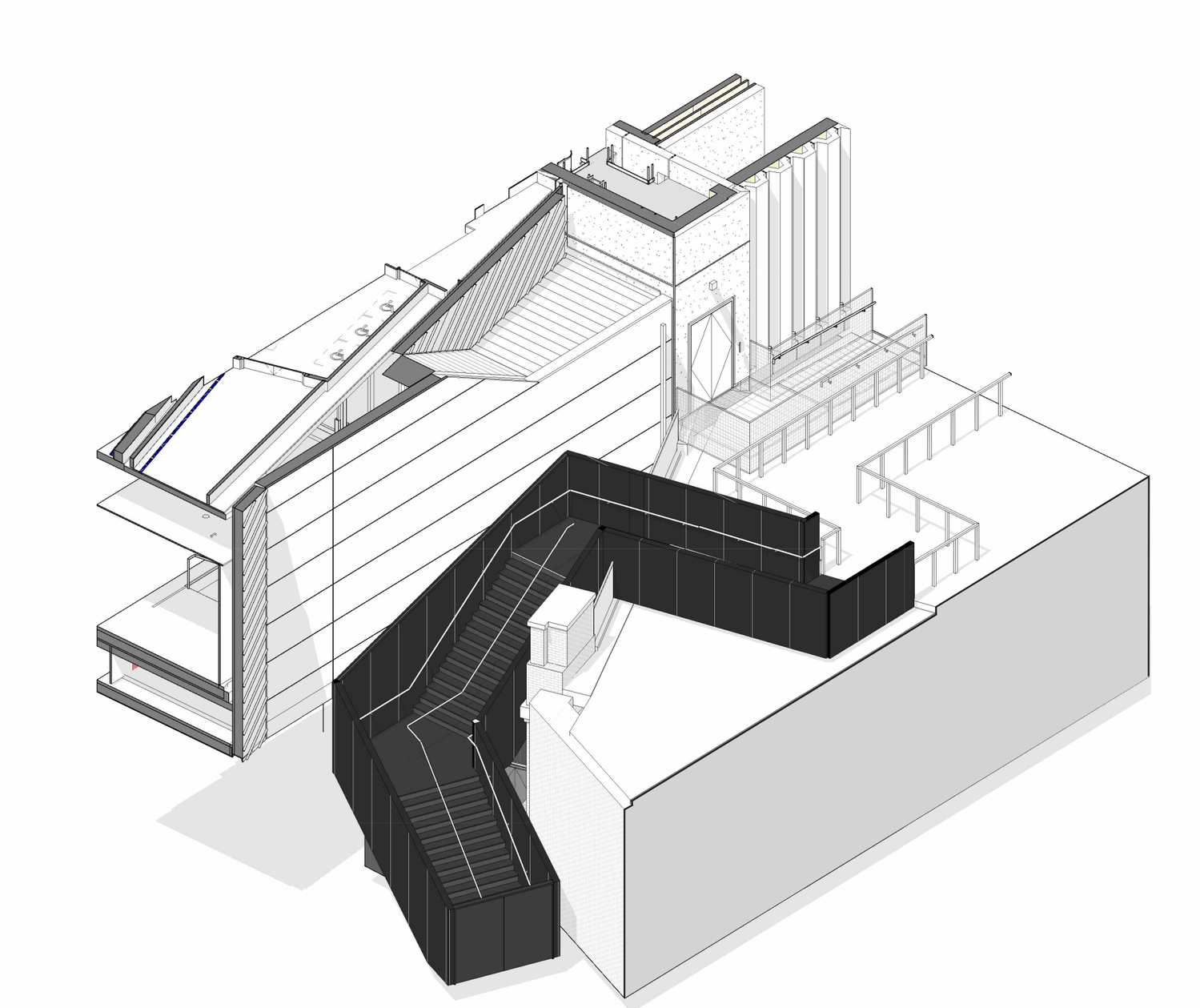
Existing secure lines to storage areas at both upper and lower levels will be retained.

### Scale and appearance

The scale of the stair cladding responds to the existing Aviva Studios facades. Black powder coated metal panels will match the colour and appearance of the existing stair enclosure to west elevation of the Hall.

### Public benefits

The additional exit route will provide the ability for the public to experience larger capacity events in different formats than is currently available at Aviva Studios.



**Proposed axonometric view**

## Heritage impact

The addition of an additional external exit route to the south of Aviva Studios requires careful consideration of its impact upon the significant group of surrounding historic buildings and structures. The initial options appraisal contained at pages 10 and 11 considered heritage impact as one of the key aspects of viability.

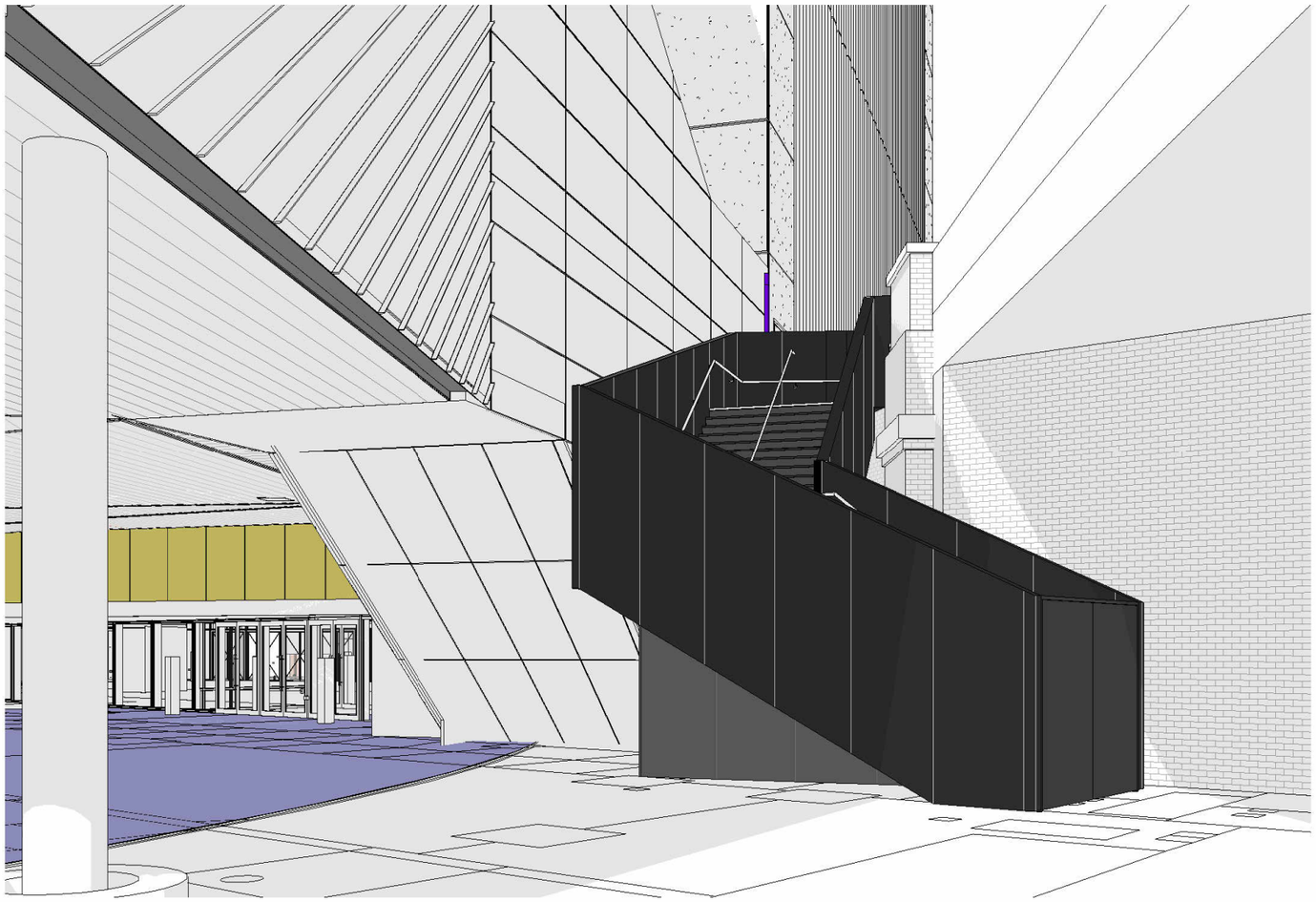
In developing proposals for the additional exit route, we have adopted several design principles to ensure that its impact is mitigated. These are

1. The proposed exit route is not attached to the listed brick vault structure, it is supported from Water Street, bridging over the existing parapet, and spanning onto the viaduct top.
2. The ramped walkway at the upper level is supported by concealed metal spreader plates sat on the top of the brick vaults, no penetrating fixings are proposed.
3. The stair geometry maximises the available space between the new stair and the historic structure.

In considering the appropriate form and materials for the new stair, the visual impact upon the existing brick elevation was balanced against the practical need to ensure that the new stair could not be confused as a new entrance to Aviva Studios. This negated consideration of a more transparent design approach.

The proposed new stair continues the design language of the existing and adjacent Aviva Studios exit stair enclosure to the new stair through a solid, geometric form, with black metal cladding.

The current close range views of this section of elevation of the brick vault viaduct will be impacted through being partially obscured by the new stair, however the primary area of interest, namely and abutment detailing would remain unobscured from the majority of viewpoints.



**Water Street – proposed view from West**

# Proposed Site Plan

The new stair provides a three metre clear exit width and has two flights, the lower aligned to Water Street and the upper to the south elevation of Aviva Studios.

The stair is located to provide adequate air flow to the existing louvre on the south elevation of Aviva Studios, and has been positioned to maximise the available space to the existing façades of Aviva Studios and the brick vault viaduct, within the constraints identified.

The stair geometry retains access to existing below ground service inspection chambers and above ground cabinets.

The existing galvanised steel grating fence and gates forming the secure storage area within the triangular space to the north of Water Street are to be removed with the remaining maintenance space surrounding the new stair base secured by elephant grating gates. The existing galvanised steel balustrade forming the edge protection to the viaduct is to be adapted to allow the new stair to land at the upper level.

Steel columns supporting the stair are encased by metal cladding panels forming an inset central plinth. There are no below ground foundations proposed.

At the upper level a continuation of the stair top landing becomes a walkway which links to the current top of asphalt level. The walkway is supported by recessed steel spreader plates, avoiding the need for fixings penetrating the waterproofing layer.

Crowd management railings, pedestrian and vehicular gates defining the residual storage area at the upper level are a proprietary cantilever or counterweight system.

### Materials and Precedents

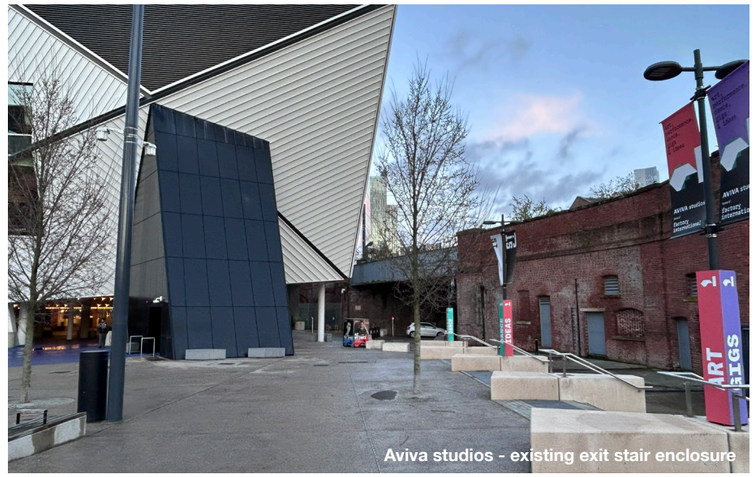
The proposed stair cladding will match the colour, material and form of the existing black cladding to the stair enclosure to the west elevation of the Hall to Aviva Studios. This continues the existing colour palette and use at Aviva Studios, where entrance is clearly signified by vibrant tones and exit is subdued.

### Elevations

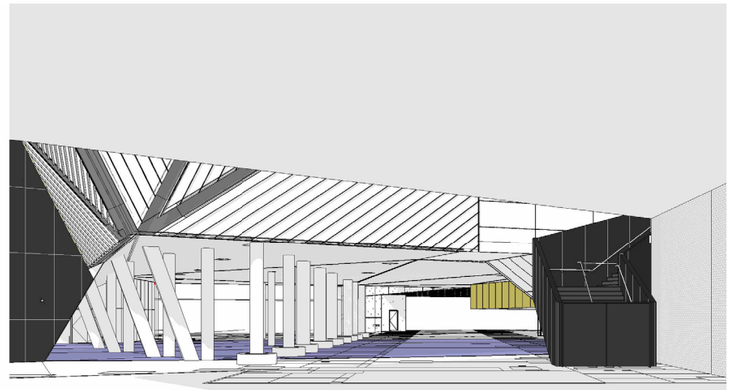
The stair and walkway is designed as a single, continuous element bridging the change in level and responding positively to all of the constraints of the location. The balustrade has been increased in height to conceal the function of the exit stair at Water Street and to allow it to sit comfortably adjacent to Aviva Studios. The balustrade elevations taper simplifying the functional stair geometry within, providing visual interest and access to existing Water Street service inspection chambers. All elevations, balustrade interior and exterior, and soffit are clad in large format, metal panels with concealed fixings. The panels to the elevations have a vertical orientation and to the soffit are triangular, accommodating the required three dimensional geometry. The base of the stair is enclosed by a large pair of doors which are concealed by matching cladding panels and minimal visible ironmongery externally.

### Access

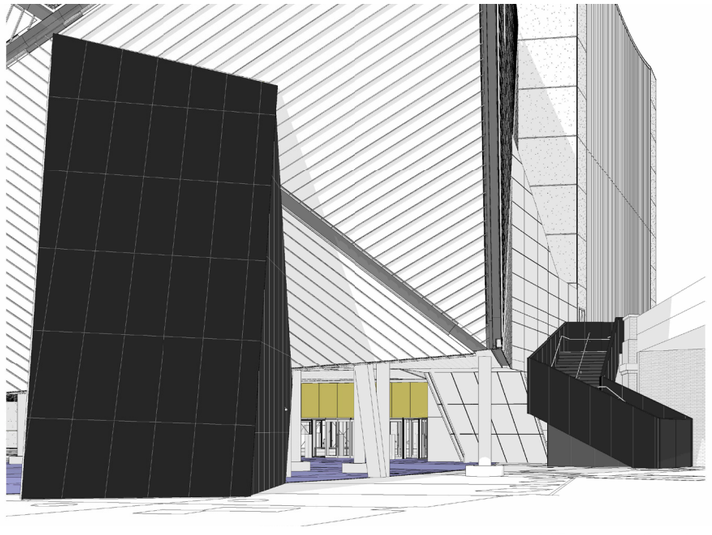
Primary access to Aviva Studios will be unchanged by these proposals. Wheelchair users will not use the proposed additional exit route and will use existing lifts between the entrance and upper levels within the building.



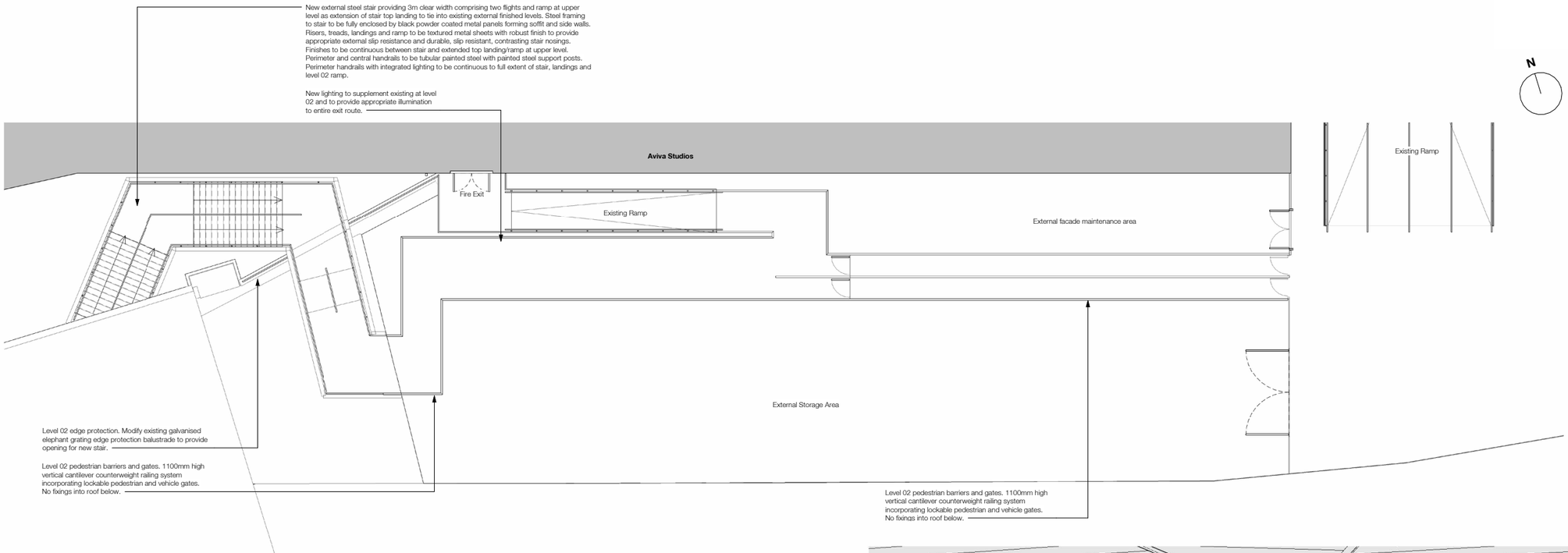

Aviva studios - existing exit stair enclosure



Water Street – proposed view from south

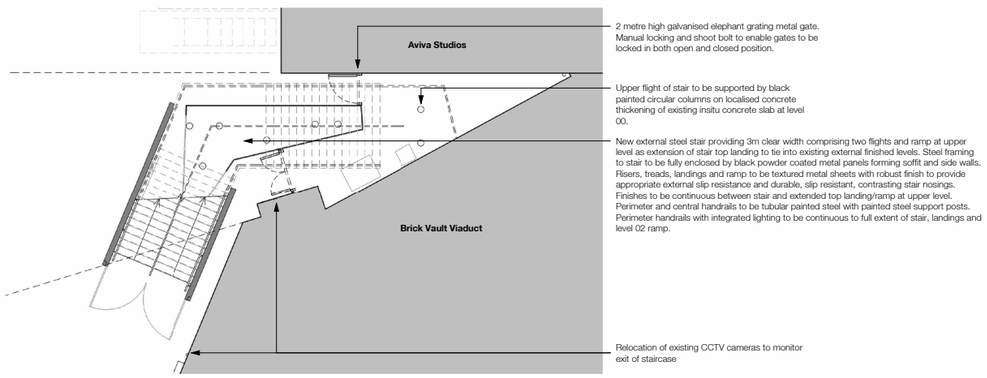


Proposed 3D perspective view

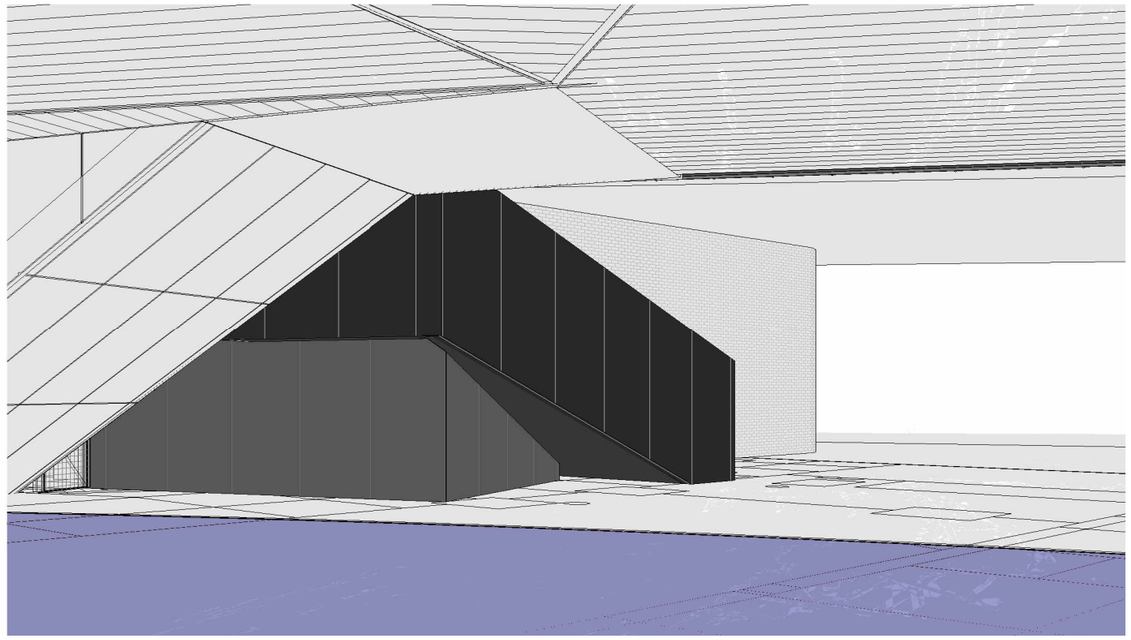



## 02 Proposed GA Plan - Level 02

**1 : 100**




## 01 Proposed GA Plan - Level 00



**Water Street – proposed view from north**

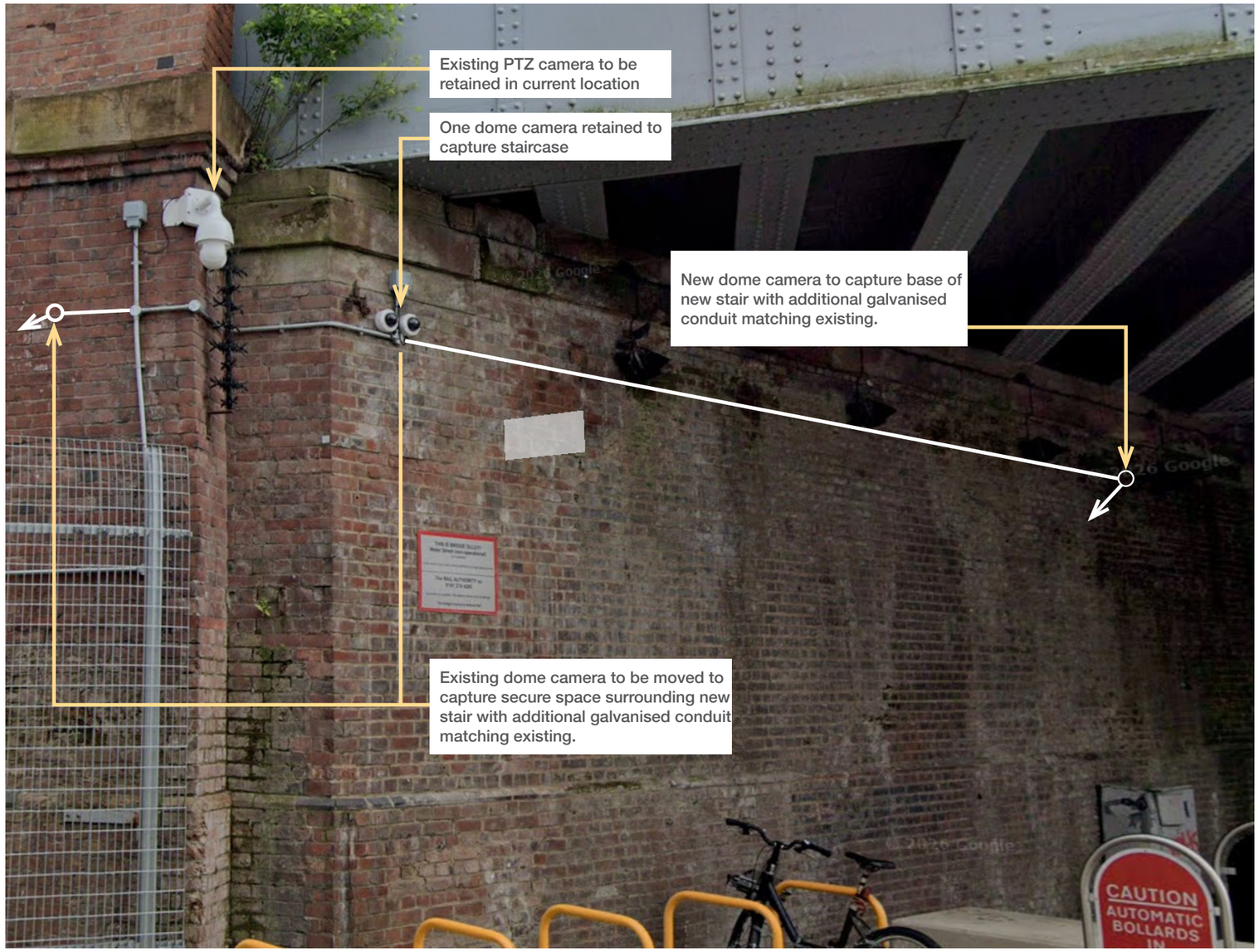
## CCTV

The existing Aviva Studios CCTV system requires modification to incorporate additional coverage requirements arising from the new exit route and external stair. The modifications ensure that the system remains fit for purpose.

There are three existing cameras to the Water Street bridge abutment, one motorised Pan Tilt and Zoom (PTZ), which will remain in its current location, and two dome cameras. The proposed condition retains one of the dome cameras in its current position, repositions one of the dome cameras south to a new location which can look back to the base of the new stair, and adds a third on the north elevation of the viaduct. Additional galvanised conduit, matching existing, link the camera positions.

An additional camera is required to the south west corner of the Aviva Studios Hall soffit, which will capture the area surrounding the new stair. This camera will match those existing on the soffit.

An additional camera is required to be mounted to the precast concrete south elevation of the Aviva Studios Warehouse. This will cover the external space to the south of the warehouse, route to the new stair and upper flight.




**Amendments to CCTV at Water street bridge abutment**

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