

Fire Strategy Key

Fire Resisting Separations

- 30 minutes; to mitigate fire spread
- 30 minutes; to protect MoE (TBC)

Fire Doors

- FD30S / FD30

General Fire Resistance Comments:

A minimum fire resistance period of 30 minutes applies throughout. The structural / loadbearing fire resistance of the arch is likely to require a longer period subject to rail operator confirmation.

The south elevation requires a portion of fire resistance to mitigate the potential for fire spread to HOME. Initial review indicates that the proposed glazing may be unprotected for this purpose.

Any external wall within 1.8m of the Arches external escape routes must also be fire resisting.

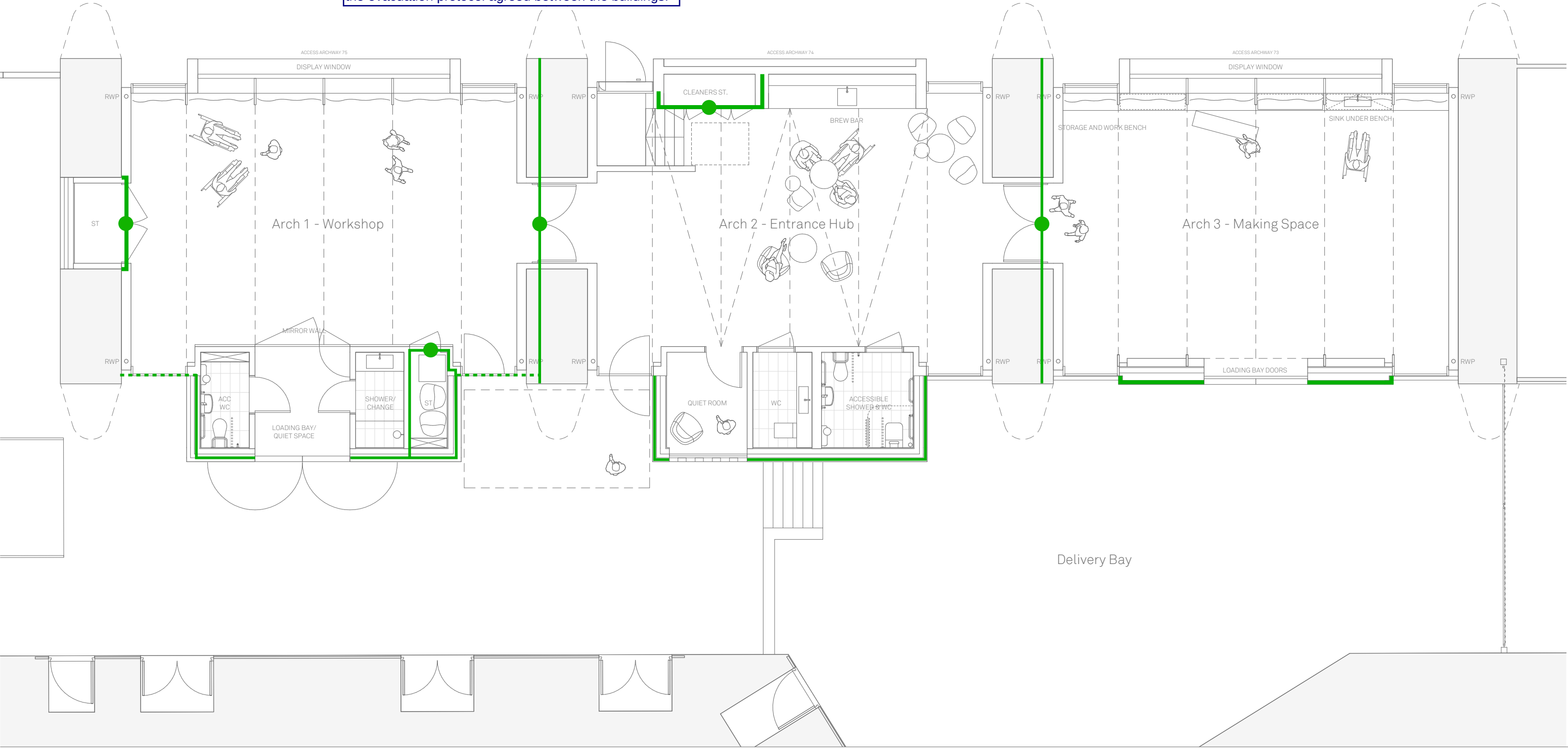
The illustrated fire resistance does not confirm protection of HOME occupants evacuating in the event of a fire in the Arches, which may require fire resistance to further portions of the south elevation, depending on the evacuation protocol agreed between the buildings.



Project No: 1854
Sketch No: SK001.0
Date: 14 Sept 21
Author: ACB

Home Arches
Fire Strategy Sketch; Fire resisting separations

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Notes

Project		Title		Scale:	
HOME Arches		Proposed Ground Floor Plan		1 : 50 @ A1	
Drawn	Checked:	Status:	Drawing No:	Rev:	
ER	SA	S2	116-JMA-B1-00-P-A-022200		
Details					

Jon Matthews Architects

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General comments:
BS 9999 has been used as a design basis for developing the fire strategy.

Given the occupants will mostly consist of members of the public, the risk profile used will be B2.

The maximum occupancy for the Arches is 60 persons in each of Arch 1 and Arch 3 as they are both inner rooms. Based on a floor space factor of 1m²/person, the design occupancy for Arch 2 is also 60 people. The total occupancy of Arch 2 & Arch 3 must not exceed 60 persons, as they share a single exit.

Means of Escape & Alarms:
A Category L3 detection & alarm system is required.

A single-stage alarm and simultaneous evacuation protocol is the proposed for the Arches.

Interconnection, and C&E, with the main building requires development. However, it is expected that in the event of a fire in either HOME or the Arches building, only the building of fire origin will evacuate. The building that is not on fire should be alerted, but only evacuate if required. This is to be discussed further with the relevant stakeholders.

The maximum single direction travel distance recommended in BS 9999 is identified on plan (23.6m). Therefore, the layout is very sensitive to fit-out and use.

Should flexibility in use be important or should a number of people require assistance to escape, or take a significant time to reach an exit, external exits from each space may be preferred based on operational risk assessment and management considerations.

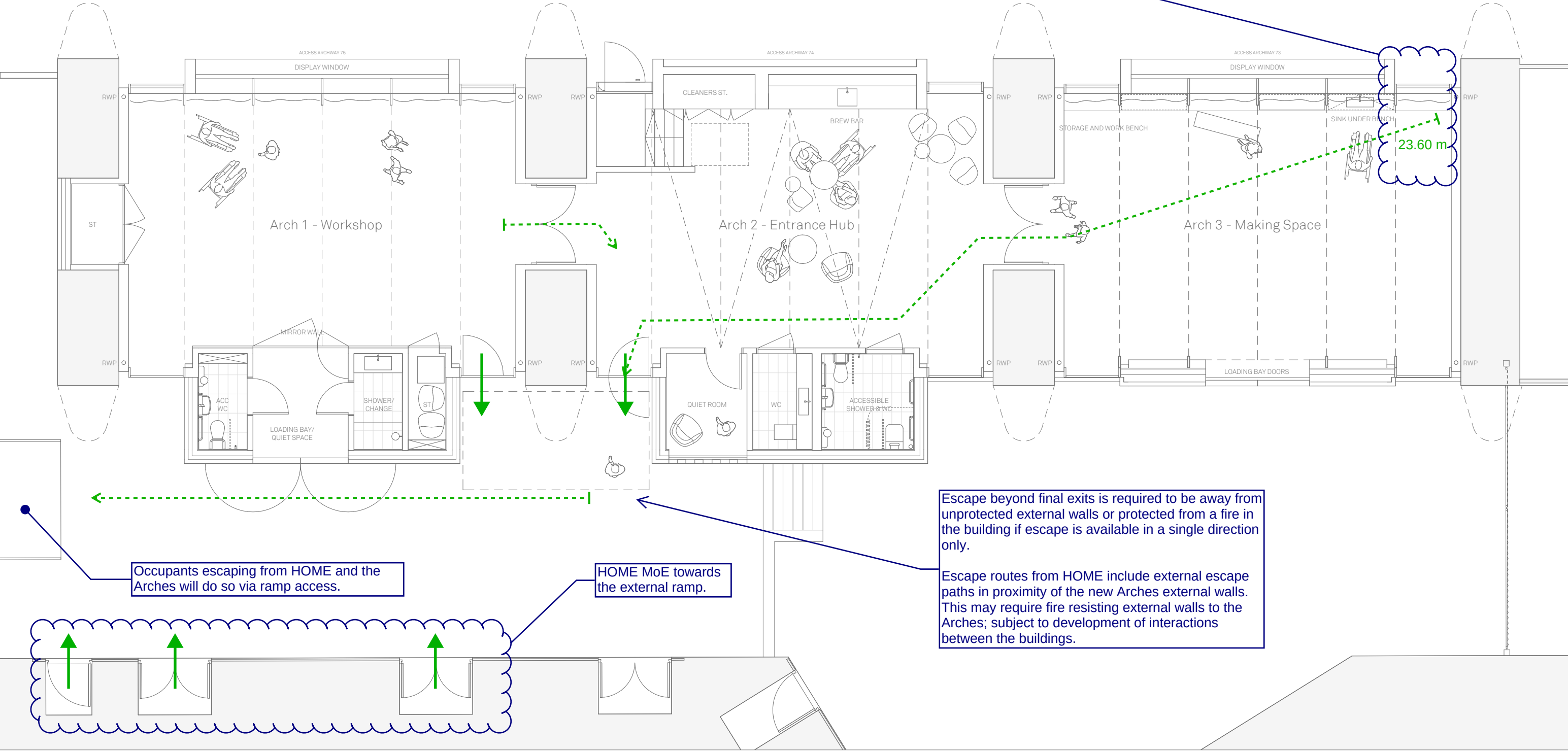
Any stepped egress would require a protected refuge space and staff response to assist escape. Each compartment would be an appropriate refuge from a fire in another compartment.



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Home ARCHES
Fire Strategy Sketch;
Means of escape (MoE)

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Occupants escaping from HOME and the Arches will do so via ramp access.

HOME MoE towards the external ramp.

Escape beyond final exits is required to be away from unprotected external walls or protected from a fire in the building if escape is available in a single direction only.

Escape routes from HOME include external escape paths in proximity of the new Arches external walls. This may require fire resisting external walls to the Arches; subject to development of interactions between the buildings.

Internal linings and Fire Load:
All internal linings should achieve Class 0 or Class 1.

The risk of fire, fire load and potential growth rate of a fire in the access room, will be of particular importance for operational risk assessments of any inner room scenarios.

External fire spread:
There is no requirement for protected area for the elevation facing Whitworth Street West.

From the HOME fire strategy, it is understood that the relevant boundary is 1.8m from that building. Initial review indicates that the proposed glazing may be unprotected for the purpose of mitigating fire spread between the buildings. However, external wall fire resistance may also be required to protect MoE.

Fire Service Access:
An external access point is provided to Arch 2 from Whitworth Street West. This provides sufficient access to the Arches.

As there are fire main inlets to both opposing buildings, appropriate hydrant provision is understood to exist.

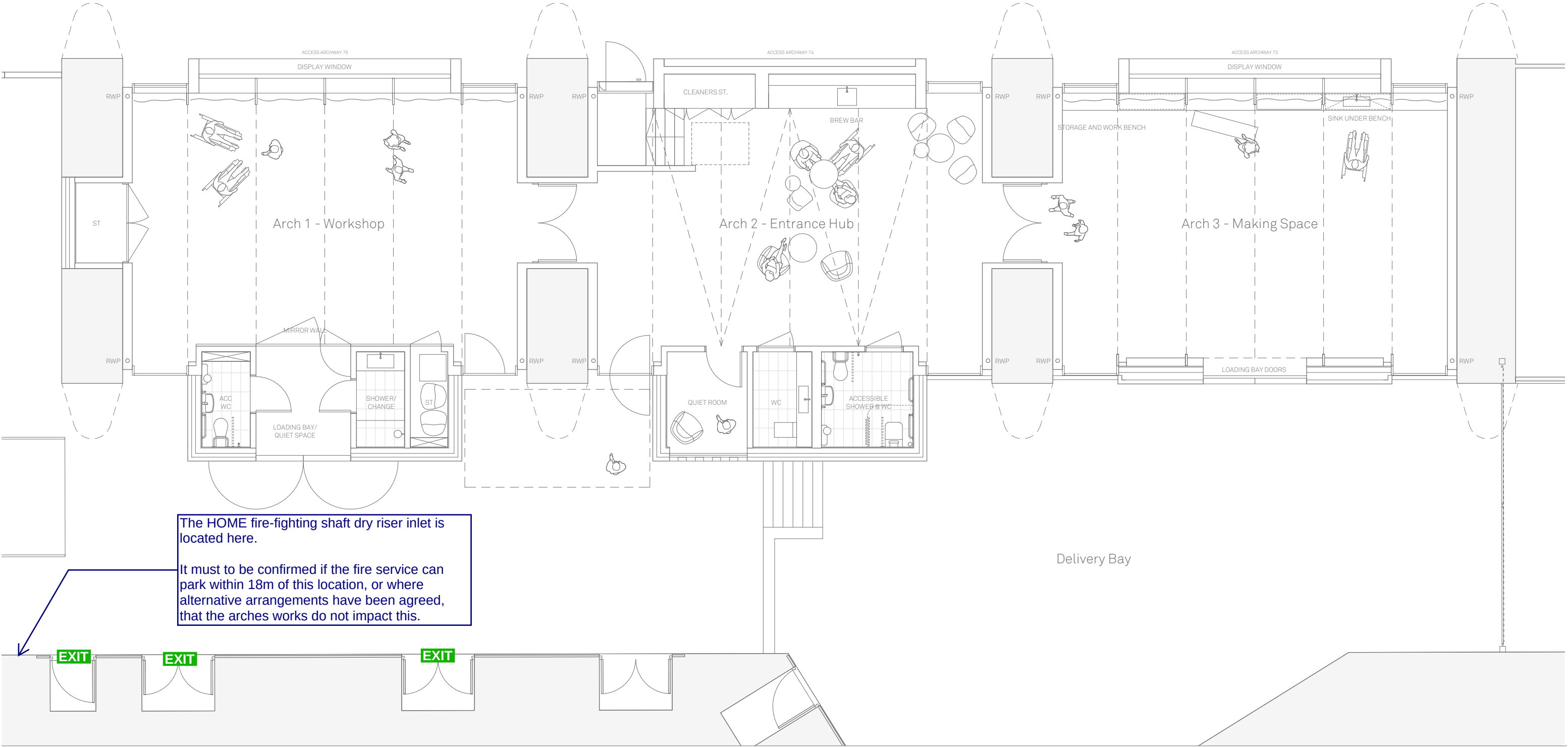
The HOME fire strategy suggests that the fire service access to the HOME fire main inlet is within 18m. From site information, the access path is unclear and should be confirmed. Based on existing hoarding it is understood that Arches 1-3 do not provide the HOME fire-fighter access route and therefore, no impact on existing arrangement has been identified.



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Home Arches
Fire Strategy Sketch;
Parts B2, B4 & B5

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The HOME fire-fighting shaft dry riser inlet is located here.

It must to be confirmed if the fire service can park within 18m of this location, or where alternative arrangements have been agreed, that the arches works do not impact this.

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