

Derby Market Hall - Door Accessibility Improvements Heritage Statement

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Derby City Council
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Introduction

Derby Market Hall is key and prominent 1864 grade II listed building of brick with stone dressing by Architect Thorburn and later altered by Thompson. It is located within the City Centre Conservation Area, and is a designated heritage assets in NPPF terms.

Following the completion of the Derby Market Hall refurbishment works it has been identified that some of the retained doors at first floor, which provide access from the balcony to the Make & Trade Units, are restrictive to some building users. This has presented accessibility concerns for both tenants and customers when attempting to access these first floor premises.

- There are two primary factors that are impacting visitor accessibility:
- the clear opening width of the existing doors
 - the force required to be applied to open the existing doors.

This report identifies the existing condition of these doors, identifies their performance requirements, outlines options considered and summarises the porposed intervention and alteration to enhance the accessibility of these first floor retail units.

Consideration has been given to the heritage impact of the alteration and a brief assessment of impact has been included.

Existing Doors

The doors in question were installed as part of the 1989 Market Hall refurbishment scheme. It was agreed that these could remain in place and be redecorated as part of the recent building transformation works.

The doors are single leaf opening doors, with a fixed side panel that closely resembles the opening door leaf. They are fabricated from aluminium with single-glazed lozenge design, and feature a fixed central decorative post, against which the opening door leaf closes.

The doors open into the retail unit, with a pivot hinge top and bottom and remain in a hold-open position at 90 degrees, controlled by a concealed floor spring, cast into the concrete floor. There are pull handles to both faces of the door, which further limits the clear opening width. Additionally, users have identified these doors as being as stiff and difficult to operate.

When approaching from 90 degrees, the clear opening width of the existing doors is approximately 790mm (excluding ironmongery). These doors are therefore compliant with current Building Regulations for existing buildings (which require an opening of 750mm - see Table 2).

Under Part M2 of the Building Regulations, new doors would require a clear opening width of 800mm if approached at 90 degrees. The balcony has a width in excess of 2.5m, providing sufficient turning circle for head-on approach to these doors for all users.

These manually operated doors should be fitted with a swing-free door closer, where the opening force required at the leading edge of the door is not more than 30N from 0° (the door in the closed position) to 30° open, and not more than 22.5N from 30° to 60° of the opening cycle.

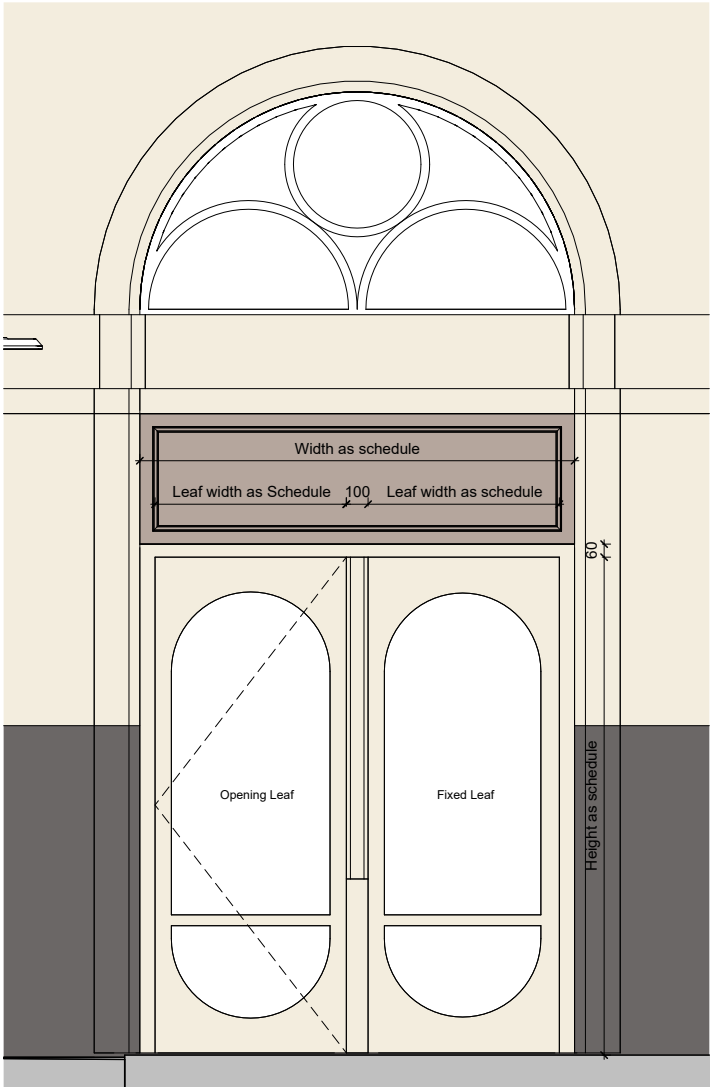


Fig. 1: Existing door - typical elevation

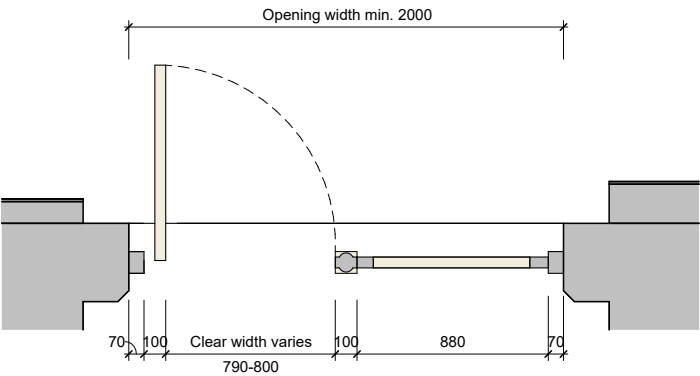


Fig. 2: Existing door - typical plan



Fig. 3: Existing door - typical photo

Table 2 Minimum effective clear widths of doors		
Direction and width of approach	New buildings (mm)	Existing buildings (mm)
Straight-on (without a turn or oblique approach)	800	750
At right angles to an access route at least 1500mm wide	800	750
At right angles to an access route at least 1200mm wide	825	775
External doors to buildings used by the general public	1000	775

Fig. 4: Door opening clear with requirements of Part M

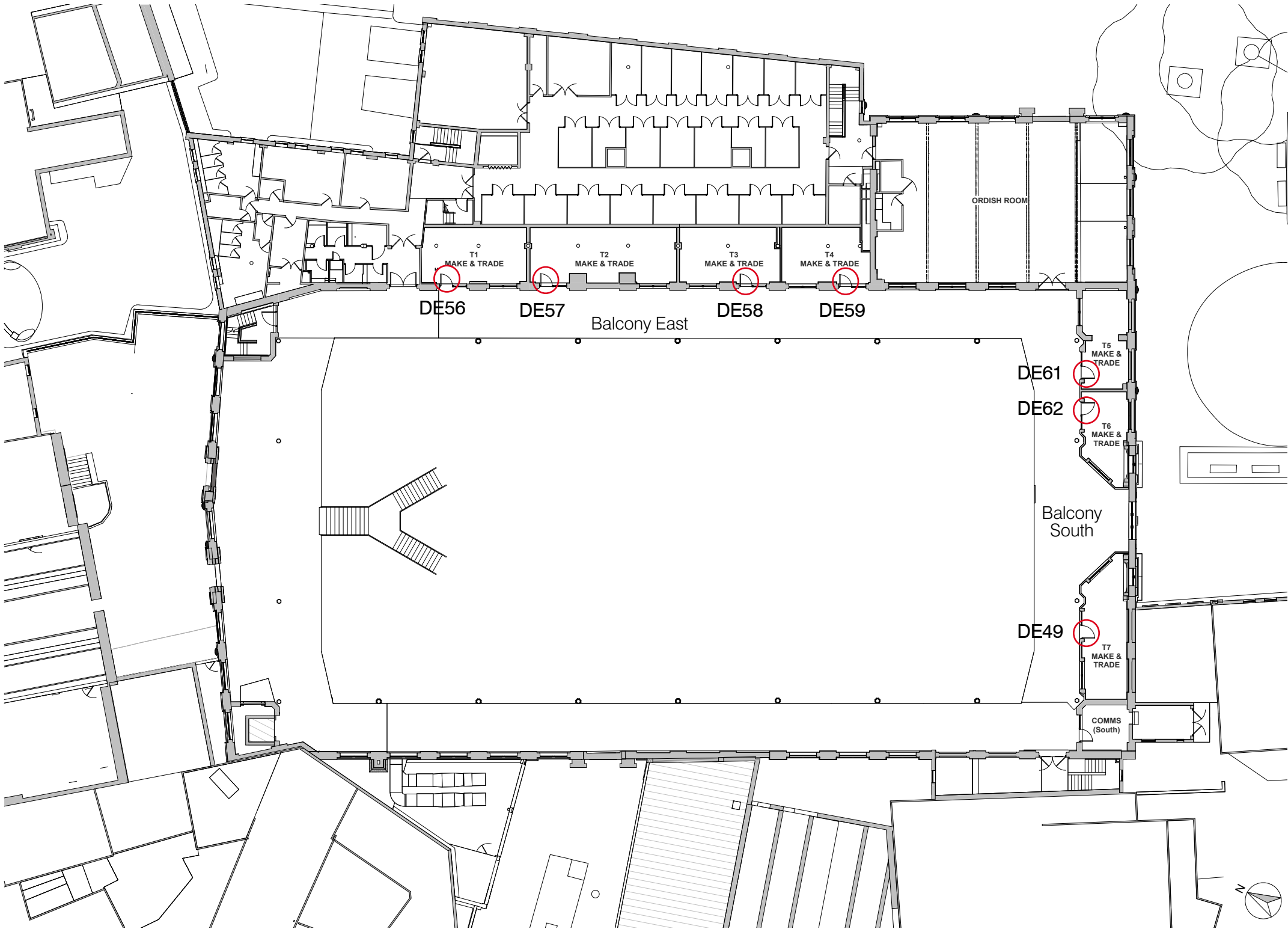
Door Locations - Existing First Floor Plan (Balcony Level)

There are 7no. existing doors (as described earlier) that provide access from the balcony to the first floor Make & Trade Units. These are:

- DE49
- DE56
- DE57
- DE58
- DE59
- DE61
- DE62

KEY:

 Location of Doors to be Replaced



Existing Elevations - Internal view cutting through balcony

Internal elevations highlighting the existing 7no. lozenge doors



Fig. 5: Existing elevation showing internal doors along the southern balcony



Fig. 6: Existing elevation showing internal doors along the eastern balcony

Door Design Options

Option 1 - Retain Existing Doors

The clear opening width of these doors is compliant with Building Regulations for existing buildings. However this width does exclude users of electric wheelchairs and mobility aids and requires manual wheelchair users to spend time aligning themselves with the opening to pass through. Significant improvement in accessibility could be provided if the clear width could be improved.



Fig. 7: Existing door option

Option 2 - Replacement Doors

To increase the clear opening width into these retail units, then the doors would need to be replaced. To ensure a consistent appearance along the balcony, the doors should be in the same style as the doors into the Ordish Room. This would have the effect of increasing the clear opening width from 790 to 890mm. This would still mean users of larger electric wheelchairs or mobility aids would struggle to access the units whilst having a slight impact on the significance due to the change in design of the doors.

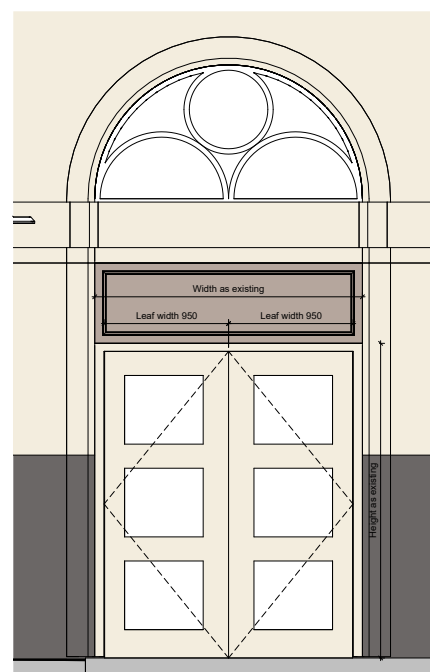


Fig. 8: Replacement door option

Option 3 - Asymmetric Doors

To provide a greater clear opening then new doors would need to be supplied with an asymmetric design. The design of these doors would be consistent with the design of the new doors (DN60). By installing an asymmetric doorset then the greatest clear opening (1000mm+) can be provided improving the accessibility of the units to the greatest degree with minimal additional impact on the significance beyond the replacement of the doors with a symmetrical pair of the same design.



Fig. 9: New asymmetric door option

Door Furniture Options

Option A - Soft opening device

Various options exist for introducing door closer devices, to assist with the opening of the door, either fixed at the door head or integrated within the floor box of a pivot door. This could be retrofitted to the existing doors, or installed on the new doors.

This could either be:

- cam-action door closer with slide channel, to reduce force required to open door
- fully electrically operated door opening
- replacement concealed floor spring.

To minimise the impact a mechanical cam assisted closer would be minimally intrusive whilst still providing the necessary reduction in opening force. This device could also incorporate a mechanical hold open to minimise visual clutter whilst still providing the necessary functionality



Option B - Open assist device

If the weight of the door requires excessive force to open it, then an EasyAssist low-energy door closer with amplified motor transmission could augment the force applied by the user to assist in its ease of opening.

This is an electrically operated closer that is activated by the force applied by the user, and accelerated by the motor, thereby requiring less effort by the user to open the door.

To install this device cabling would need to be installed to supply power to the device which would need to be run across the surface and could impact the fabric whilst providing minimal benefit over the mechanical device. Given the doors will often be left open an electrical device provides minimal benefit.



Option C - Automatic opening device

To provide a fully automatic door opening solution then push buttons would need to be mounted both inside and outside of each retail unit. This would required two surface mounted buttons (as per the below examples), and surface-mounted conduit to provide the power supply.

This solution would be the most expensive and most visually impactful on the building. This alteration would provide greatest improvement to the accessibility of the units but this would be largely unnecessary as the doors are intended to be held open during regular operation. This negates much of the benefit of fully automatic doors which does not justify the additional impact on the fabric.



Proposed Elevations - Showing replacement internal doors

Internal elevations showing the asymmetric replacement doors shown to all existing Make & Trade units at the balcony level.



Fig. 14: New elevation showing replacement internal doors to southern balcony

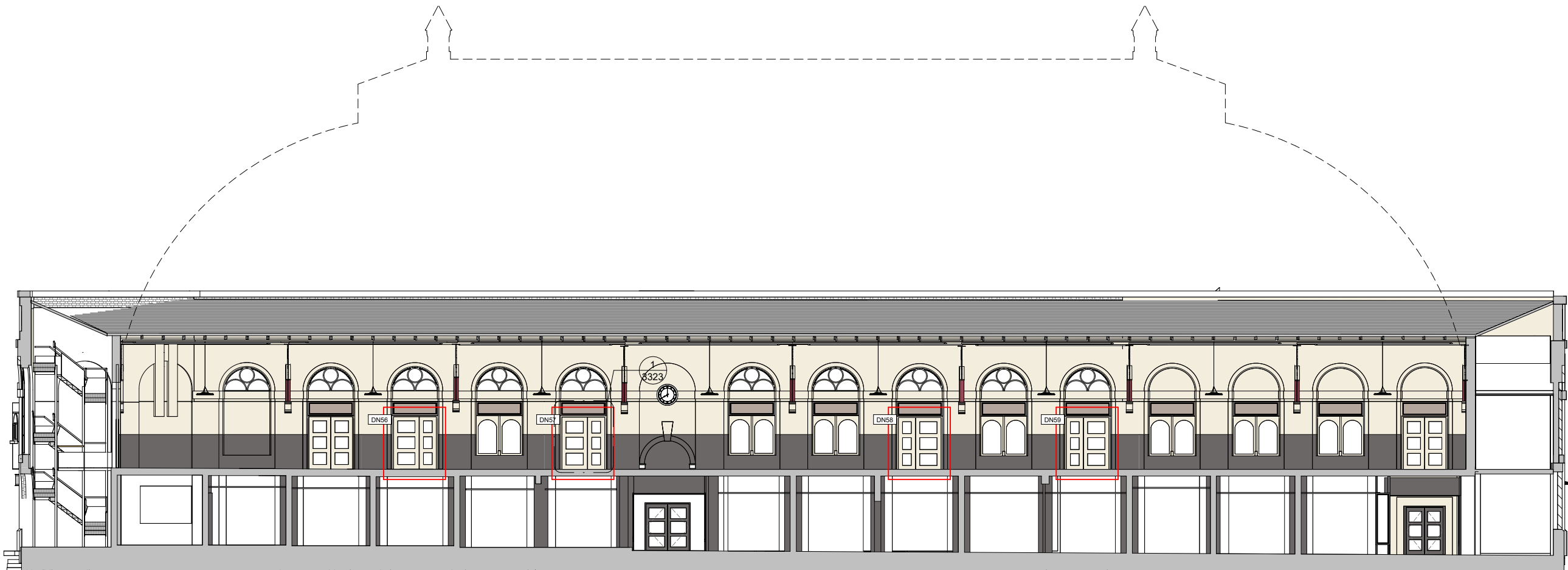


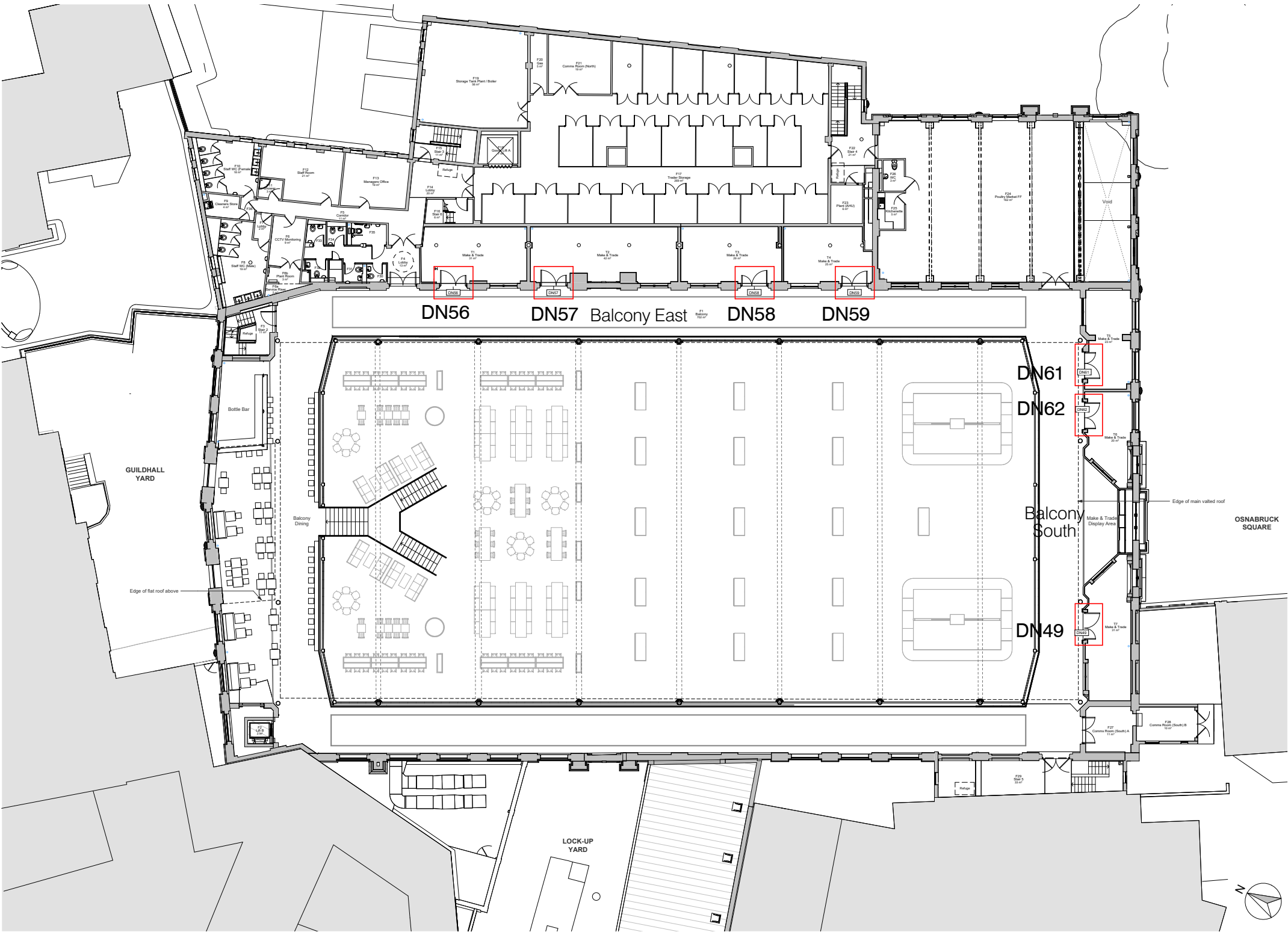
Fig. 15: New elevation showing replacement internal doors to eastern balcony

Door Locations - Proposed First Floor Plan (Balcony Level)

Plan showing proposed 7no. replacement doors that provide access from the balcony to the first floor Make & Trade Units. These are:

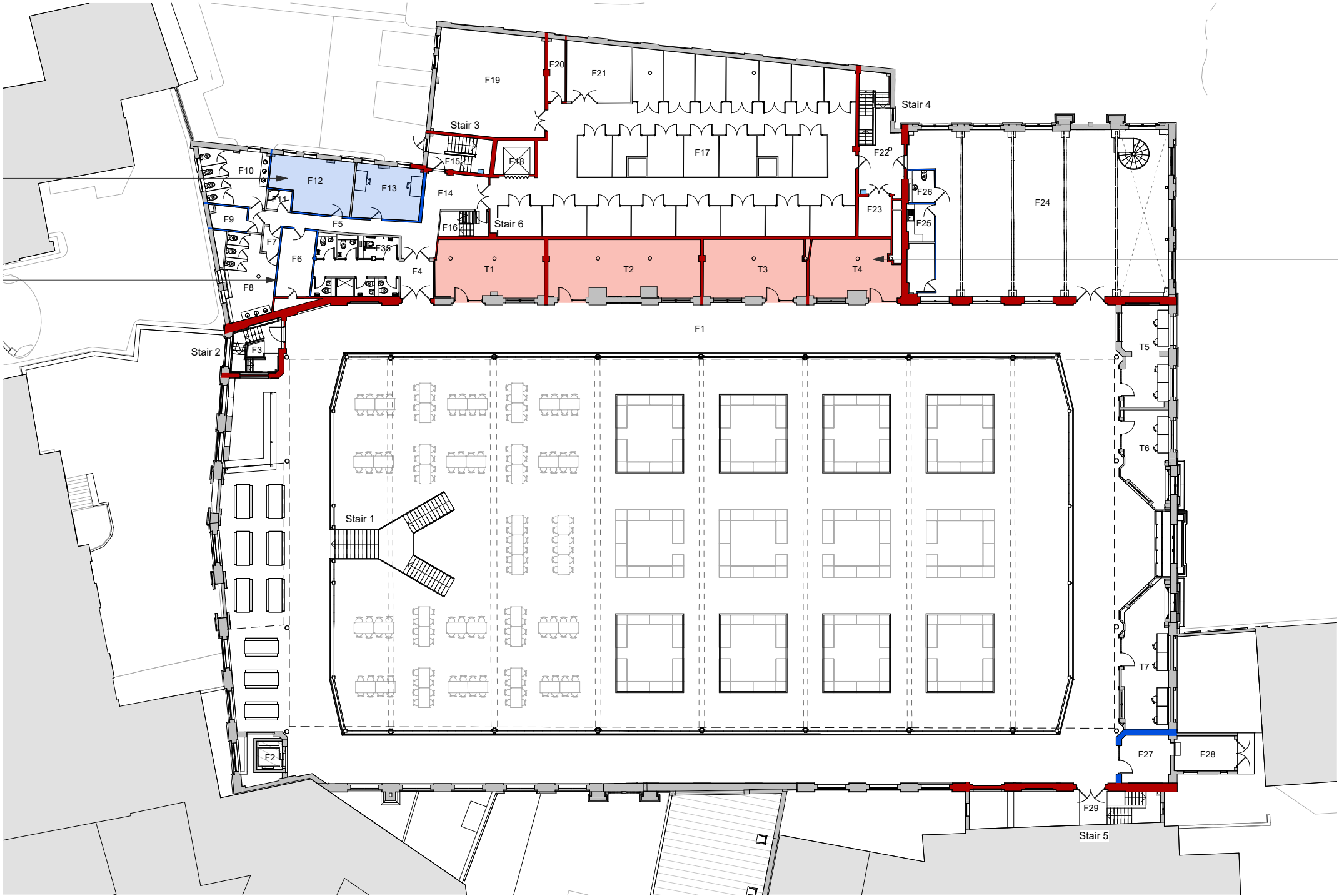
- DN49
- DN56
- DN57
- DN58
- DN59
- DN61
- DN62

KEY:
 Location of Proposed Doors



Door Fire Performance

As can be seen from the Fire Strategy Plan, the Make & Trade units are designed as part of the main Market Hall compartment and as such the doors do not require any specific fire performance. This removes the need for the doors to have hold opens which can be interlinked with the fire alarm. This also means there is no specific fire performance required from the glazing.



Door Schedule

Schedule of doors to be replaced and details of new doors

Reference	Level	Location	Type	Leafs	Opening Size † = to suit existing opening		Glazing	Fire Rating*	Access & Security						Manufacturer Spec. ref	Finish	Notes
					Width (mm)	Height (mm)			Opening Assist	Closer	Hold open	Lockable	Suiting	Emergency Exit			
DN49	01	T7 Make & Trade	A	2	2030†	2300†	Partial Glazing	-	⦿	⦿	⦿	⦿	UMK	-	To match existing (DN60)	Formica Laminate F1192 Porcelana	Assymetric door with min. 1110mm wide main leaf
DN56	01	T1 Make & Trade	A	2	2000†	2350†	Partial Glazing	-	⦿	⦿	⦿	⦿	UMK	-	To match existing (DN60)	Formica Laminate F1192 Porcelana	Assymetric door with min. 1110mm wide main leaf
DN57	01	T2 Make & Trade	A	2	2000†	2350†	Partial Glazing	-	⦿	⦿	⦿	⦿	UMK	-	To match existing (DN60)	Formica Laminate F1192 Porcelana	Assymetric door with min. 1110mm wide main leaf
DN58	01	T3 Make & Trade	A	2	2000†	2350†	Partial Glazing	-	⦿	⦿	⦿	⦿	UMK	-	To match existing (DN60)	Formica Laminate F1192 Porcelana	Assymetric door with min. 1110mm wide main leaf
DN59	01	T4 Make & Trade	A	2	2000†	2350†	Partial Glazing	-	⦿	⦿	⦿	⦿	UMK	-	To match existing (DN60)	Formica Laminate F1192 Porcelana	Assymetric door with min. 1110mm wide main leaf
DN61	01	T5 Make & Trade	A	2	2000†	2300†	Partial Glazing	-	⦿	⦿	⦿	⦿	UMK	-	To match existing (DN60)	Formica Laminate F1192 Porcelana	Assymetric door with min. 1110mm wide main leaf
DN62	01	T6 Make & Trade	A	2	2010†	2300†	Partial Glazing	-	⦿	⦿	⦿	⦿	UMK	-	To match existing (DN60)	Formica Laminate F1192 Porcelana	Assymetric door with min. 1110mm wide main leaf

General Notes:

All doors to include new (per door):

- 6no. Ball Race Hinge
- 2no. SSS Kick Plates
- 2no. SSS Push Plates
- 2no. SSS 300 X 22mm Pull Handle
- 1no. Overhead Easy-Open Door Closer with mechanical hold open
- 2no. Lever Action Flush Bolts
- 1no. Easy Clean Floor Socket
- 1no. SSS Floor Door Stop

To be salvaged and reused from existing doors (per door):

- 1no. SSS EURO Cylinder Dead Lock
- 1no. SSS Euro Cylinder & Turn
- 2no. SSS Euro Cylinder Escutcheon

Heritage Impact Assessment & Conclusion

A range of options were considered for the replacement of the existing doors, and it is felt that the current proposal to replace the doors with sympathetically designed sets of asymmetric doors which match the details used on other modern doors is the least harmful way to achieve the required improvement in accessibility to support the continued use of the Make & Trade Units.

The elements being replaced are modern (1980s) interventions of an incongruous design which contribute little to the space. Their replacement with new modern doors, which align with the design and finish elsewhere would have a slight negative impact on the significance of the space due to the change creating a mismatch with the retained windows to the units. However the door style would be more sympathetic to and consistent with the modern doors installed during recent refurbishments works on this elevation.

The improved clear width and ability to open both doors would present a benefit both for customers in regular operation and for traders when moving stock into their units, as with both leaves openable the full width of the opening can be used when loading larger items into the space. Above all this would address the accessibility concerns raised by the client, to allow more users to access these balcony spaces, with minimal impact to the significance of this important heritage asset.

Location	Category	Proposed Intervention	Scale of Impact	Significance of Residual Impact	Comment
Derby Market Hall (Balcony)	Very High	Replace 7 no. 1980's glazed metal doors with new assymetric glazed laminate timber doors	Slight	Neutral	The design of the doors would match the modern doors installed elsewhere through the course of the project including the doors into both the Ordish room and the first floor toilets The proposed change would enhance the accessibility of the units and improve their function for traders providing both improved access for customers and stock allowing traders to bring larger items into the spaces better suipporting their use for makers.

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