

Project Name: Duke Street Mill

Initial Fire Strategy Comments

Date: 24/05/2024

Prepared: MS
Reviewed: SB
Authorised: SB

File name: SKT-1923487-04-MS-202024
05 24-Fire Strategy Comments-Rev00

Disclaimer: To the extent required by our appointment, these sketches are purely illustrative and have been prepared during the design phase and are issued for discussion. They are not for construction purposes and they are not replacing a full set of fire strategy drawings which will be produced by others.

This drawing may contain information from more than one source and must be read in conjunction with all other relevant documents.

Any apparent drafting errors and differences between other drawings or reports shall be brought to our attention.

As fire engineers we are not designers or materials experts. Therefore, we cannot confirm the compliance of designs or materials with the fire strategy or building regulations. Those responsible for the design and specification of materials in the project shall remain liable for such matters notwithstanding our comments thereon.

The building has been designed under the guidance of BS 9991 (2015).

Building Height and Sprinkler Protection.

The exact height of the building is currently unknown, however, it is understood to be more than 11m in height as measured from the access level at Ground floor to the uppermost finished floor level. As such, the building is required to be provided with sprinkler protection in accordance with BS 9251 (2021).

It is understood that the Fourth and Fifth floors will be new floor levels added to the existing building. If both floor levels are provided, the building height will be greater than 18m in height and therefore, in accordance with Regulation 7 of the Building Regulations, with will fall into the definition of a relevant building. For the purposes of these comments it is assumed that both levels are to be provided and the building is greater than 18m in height.

Evacuation Strategy

By virtue of the high level of compartmentation in the building, the residential apartments will undergo a 'stay in place' evacuation procedure, whereby only the occupants of the apartment of fire origin will evacuate in the first instance. The open plan and studio apartments are required to be provided with a Category LD1 automatic fire detection and alarm system in accordance with BS 5839-6.

As the building is greater than 18m in height and utilises a stay in place evacuation strategy, and evacuation alert system in accordance BS 8269 is required to be provided to aid firefighting operations.

The ancillary areas of the building (cycle stores, bin stores, plant etc.) are required to be provided with a Category L3 automatic detection system and these areas will undergo a simultaneous evacuation in the event of a fire.

There should be no interconnection between the individual apartment alarm systems or between the apartments and the ancillary areas.

Means of Escape

Single stair above 18m will no longer be permitted in design after 30th September 2026. If initial notice is given or a building control approval application submitted before this date, and building work has started (and sufficiently progressed) within 18 months of that date, the single stair is permitted.

Smoke Ventilation

Each section of the common corridors serving the residential apartments will be required to be provided with smoke ventilation (See discussion on next pages). The ventilation is to be activated upon detection of smoke in the area of corridor which it serves.

A 1.0m2 AOV is required to be provided at the head of each stair, which should activate on the detection of smoke in any common corridor.

Elements of structure.

As the building is greater than 18m in height (but less than 30m) and provided with sprinkler protection, elements of structure should be provided with 60 minutes fire resisting construction.

Each apartment should be separated from each other and all other areas via compartment walls with a minimum of 60 minuted fire resisting construction.

Each floor level is required to be provided as a compartment floor with 60 minutes fire resistance. Any risers passing through the compartment floors should be constructed with 60 minutes fire resistance as a minimum.

As the building is over 18m in height a fire fighting shafts (including the staircase and lifts) should be provided with 120 minutes fire resistance.

External Walls.

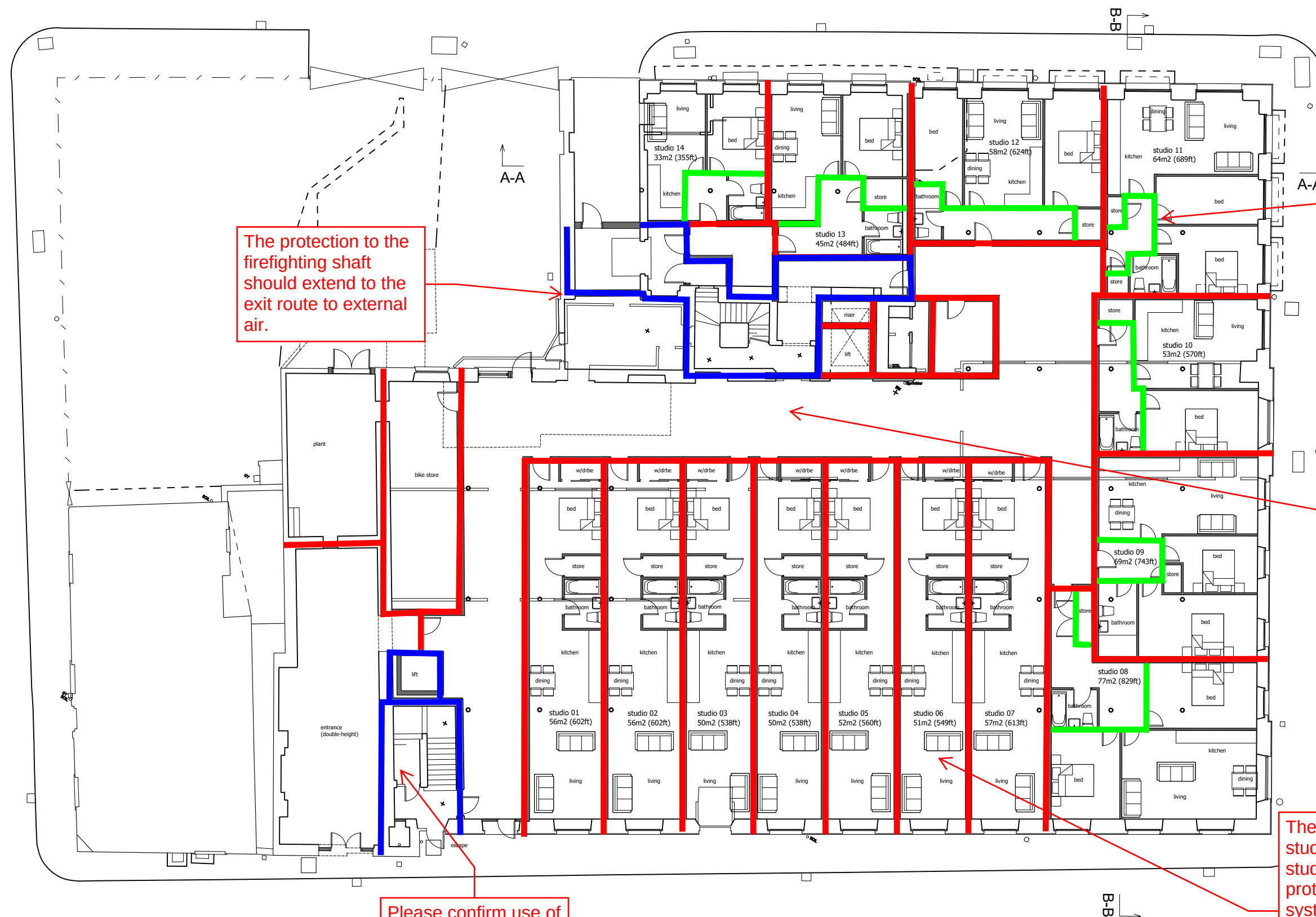
The building falls into the definition of a relevant building and, therefore, all materials in the external walls will be required to meet Class A2-s1, d0 or better.

Firefighting provisions.

The building is greater than 18m in height and therefore should be provided with at least firefighting shaft. Where the floor plate is greater than 900m2 two firefighting shafts are required, both stairs are required to be provided as firefighting shafts. Each shaft should comprise of the following:

- Ventilated firefighting stair.
- Dry rising main.
- Firefighting lift.

Access should be provided for a pump appliance to within 18m of the dry rising main inlet. Outlets should be located such that all areas of all apartments are reached within 60m on a route suitable for laying hose.



The protection to the firefighting shaft should extend to the exit route to external air.

Apartments with a protected entrance hall are required to be provided with a Category LD3 alarm system.

Provide corridor sub-division and ventilate both sides of the corridor accessing each stair.

Ventilation can be provided via a smoke shaft (natural - 1.5m² or mechanical) or via a 1.5m² AOV to outside.

Please confirm use of this space - store cupboards are not permitted in a firefighting stair.

The travel distance from any point in the studio flats should not exceed 20m where the studio is provided with both sprinkler protection and a Category LD1 detection system.

Cooking facilities should be sited away from the flat entrance door and internal escape route.

Asset and Estates
Duke Street Mill
Whitehall Street
Rochdale

Proposed Ground Floor Plan

work to figured dimensions

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contract no

3674 08

drawn by
OS

drawing no

date
February 2023

revision

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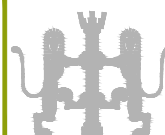
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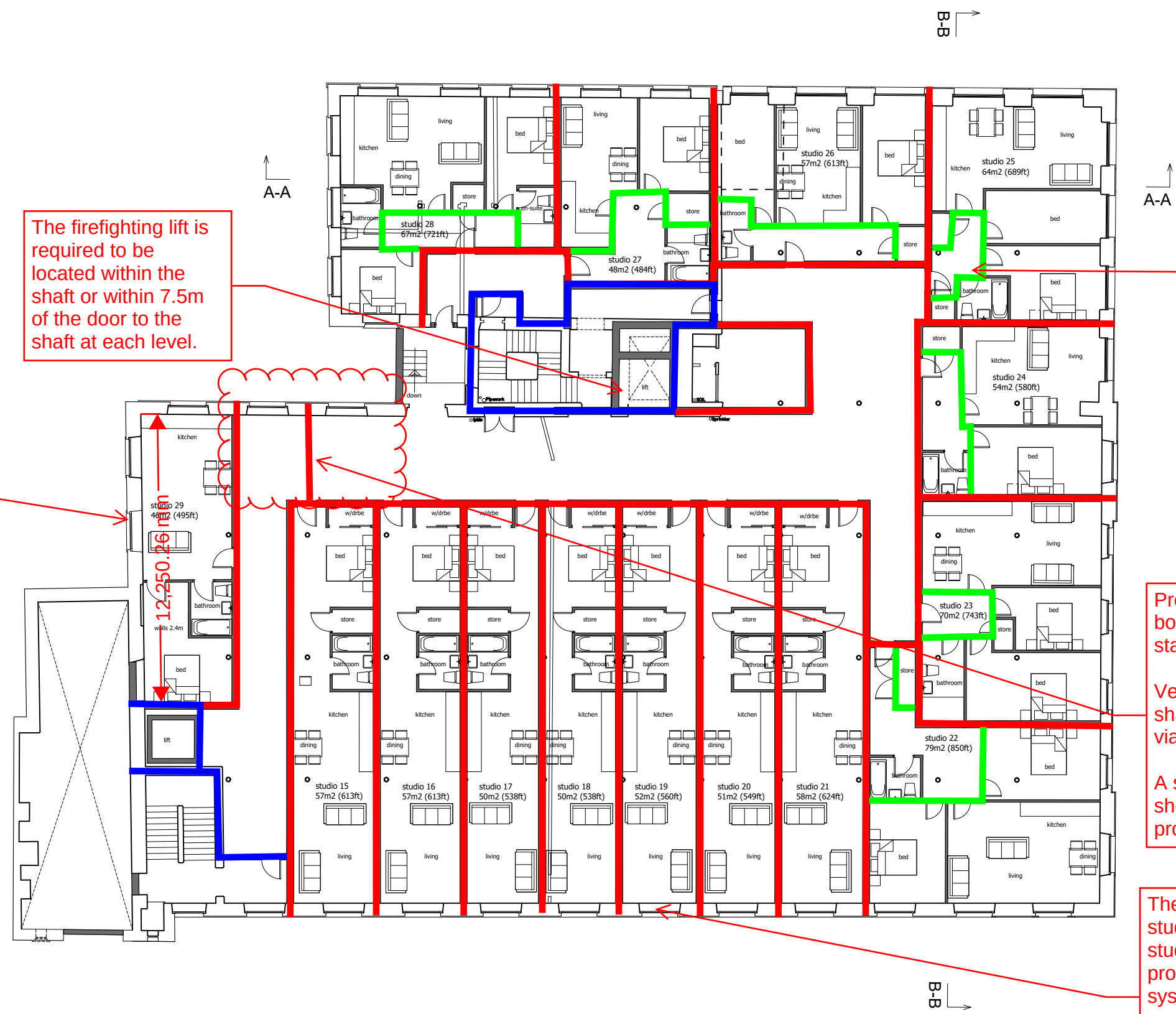
Revisions:
A.

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Open plan apartments should not be greater than 8m x 4m where the kitchen is unenclosed. Therefore, this arrangement may require CFD analysis.

The firefighting lift is required to be located within the shaft or within 7.5m of the door to the shaft at each level.

Apartments with a protected entrance hall are required to be provided with a Category LD3 alarm system.

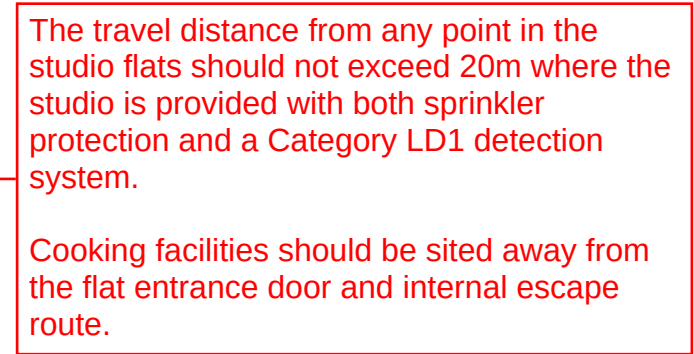
Provide corridor sub-division and ventilate both sides of the corridor accessing each stair.

Ventilation can be provided via a smoke shaft (natural - 1.5m² or mechanical) or via a 1.5m² AOV to outside.

A suggested location for corridor split is shown - with each of the windows to be provided as AOVs to external air.

The travel distance from any point in the studio flats should not exceed 20m where the studio is provided with both sprinkler protection and a Category LD1 detection system.

Cooking facilities should be sited away from the flat entrance door and internal escape route.





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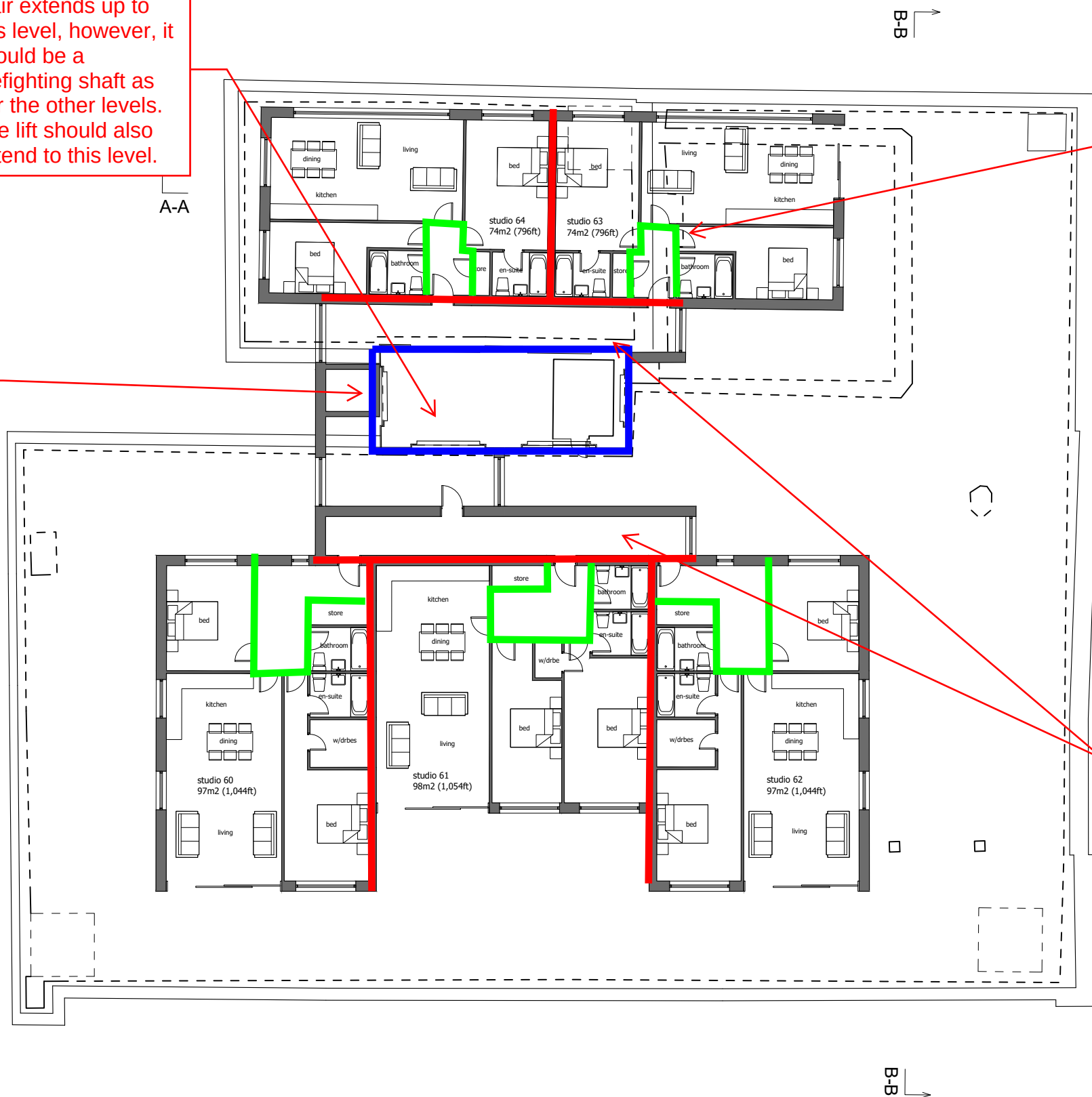
Asset and Estates Duke Street Mill Whitehall Street Rochdale	Proposed Third Floor Plan	contract no	drawing no	revision	draft Revisions: A.	Blue Pit Mill Queensway Castleton Rochdale OL11 2PG +44 (0)1706 631347 info@cjpartnership.com www.cjpartnership.com	
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It is not clear how the stair extends up to this level, however, it should be a firefighting shaft as per the other levels. The lift should also extend to this level.

Apartments with a protected entrance hall are required to be provided with a Category LD3 alarm system.

Ventilation is required in both sections of corridor at this level.
Ventilation can be provided via a smoke shaft (natural - 1.5m2 or mechanical) or via a 1.5m2 AOV to outside.

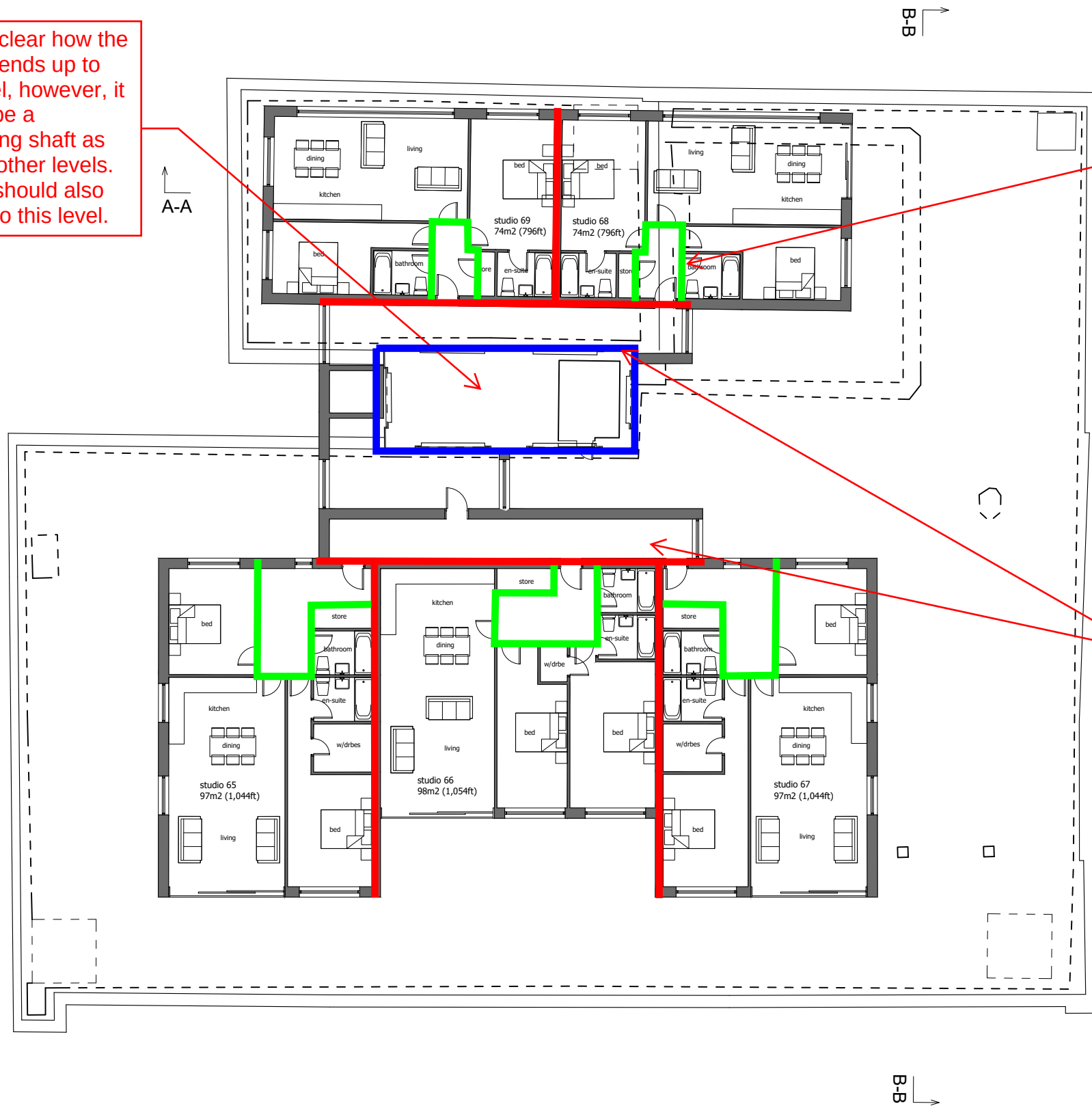


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Proposed Fifth Floor Plan

work to figured dimensions

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