Riverdale Maisonettes, Higher Blackley
Design & Access Statement

Corstorphine & Wright

23746 - 8001 - P-02 | October 2025

Revision Log

Revision	Date	Notes
00	April 2024	First Issue
01	April 2025	Second Issue
P-00	May 2025	Planning Issue
P-01	June 2025	Planning Issue: Positions of all ASHP units amended on all Blocks. North, West & South Block Elevations updated..
P-02	October 2025	Planning Issue: Acoustic timber fences added to Ground Floor of South & West Blocks for noise mitigation to ASHP units in rear gardens. Description of Noise Mitigation added to '3.2 Location Strategy of Air Source Heat Pumps' and South & West Block Elevations amended. No change to North Block.

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The Context

1.0

1.0 Introduction

1.1 Site Location

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1.2 Site Layout

View A

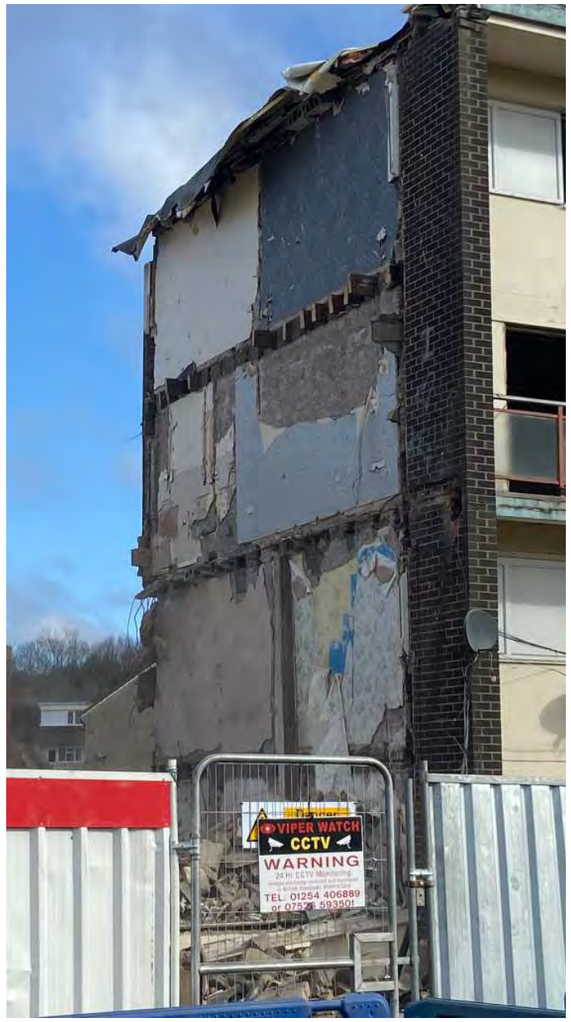
View B

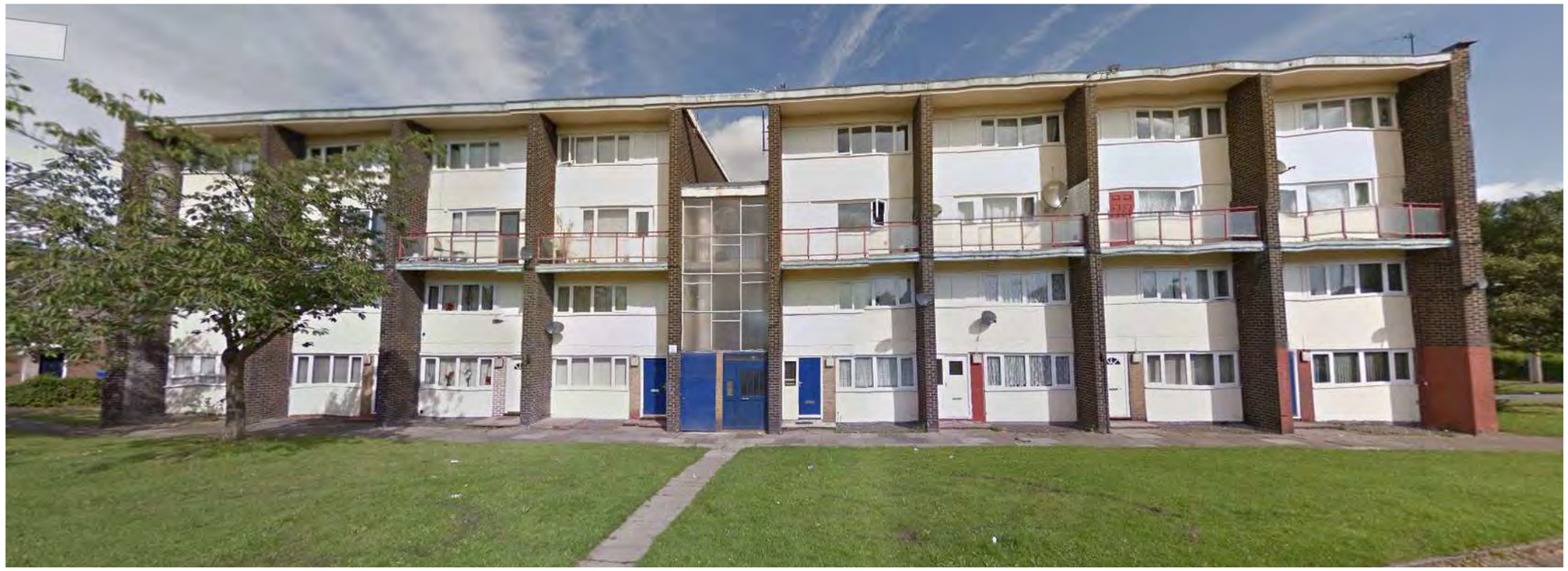
View C

1.3 Demolition

Demolition

The larger southern block, which comprised 16 maisonettes, underwent demolition. This involved the complete removal of the building, infrastructure, and any associated structures on the site. Demolition was carried out due to the poor condition of the building and concerns for safety.





Existing Building

2.0

2.0 Existing

2.1 Plan Arrangement

Flat Architypes

The three existing blocks that remain contain a combination of three apartment varieties.

A - Two bed maisonette road access

B - Two bed maisonette deck access

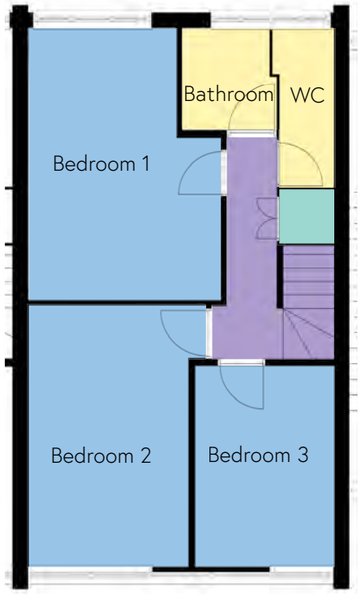
C - Three bed maisonette road and deck access

Apartment Type A

Upper Floor

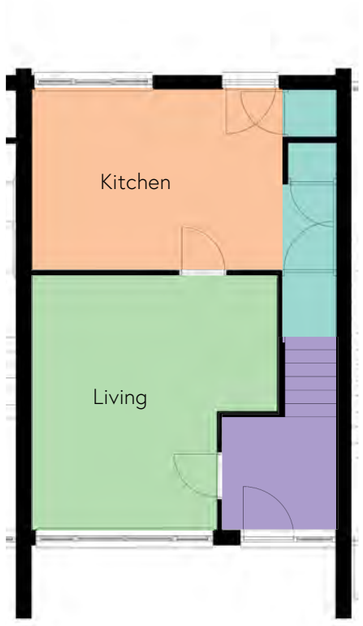
Apartment Type B

Upper Floor

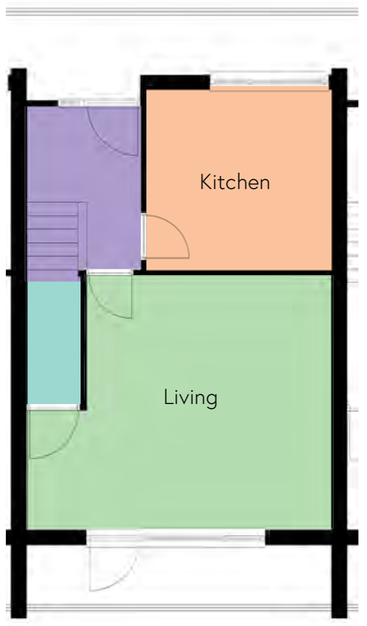


Apartment Type C

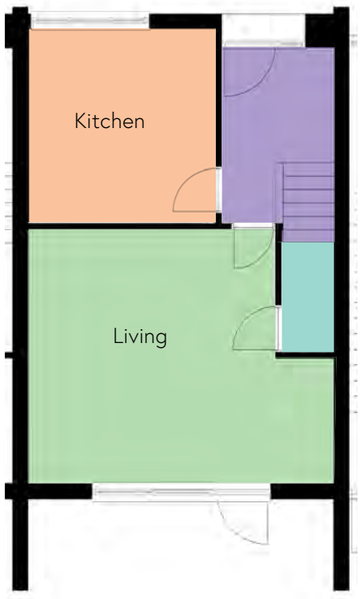
Upper Floor



Lower Floor



Lower Floor

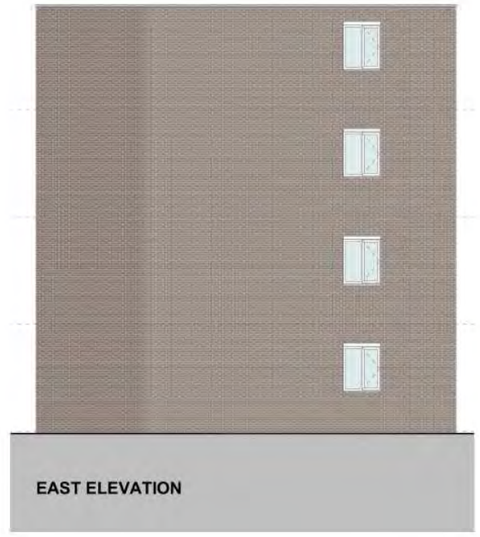


Lower Floor

- Kitchen
- Living
- Bedroom
- Bathroom
- Circulation
- Storage

2.2 Existing Elevations

North Block

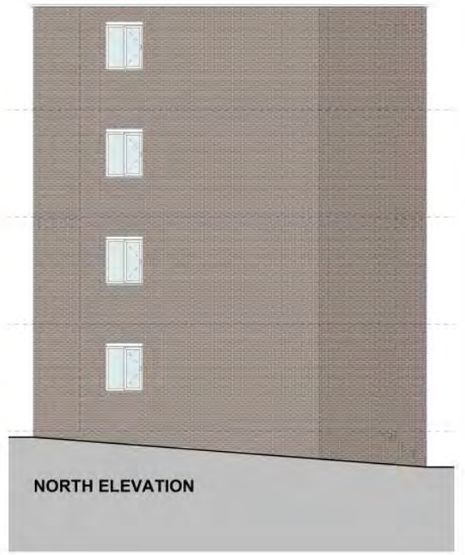


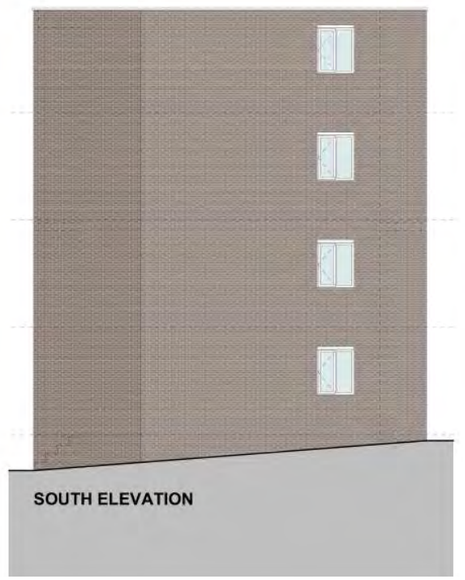
2.3 Existing Elevations

South Block

2.4 Existing Elevations

West Block





2.5 Existing Conditions

Existing Condition

The current state of the maisonette block depicts a scene of neglect and inefficiency. With crumbling facades, poor-quality windows, and deteriorating building materials, the block suffers from significant thermal inefficiencies and overall poor building performance.

Residents likely endure discomfort due to temperature fluctuations and high energy bills. To remedy these issues and enhance the block's livability and sustainability, a comprehensive renovation or redevelopment project is necessary, focusing on improving insulation, upgrading windows, and addressing structural concerns.

Design Proposal

3.0

3.0 Design Proposal

3.1 Net Zero Strategy

Fabric First Approach:

This principle in architecture focuses on maximising a building's energy efficiency and comfort by prioritising its basic structure like walls, windows, roof, and floors. It stresses the importance of good insulation, airtightness, and thermal mass to reduce energy needs for heating, cooling, and ventilation.

Social De-Carbonisation:

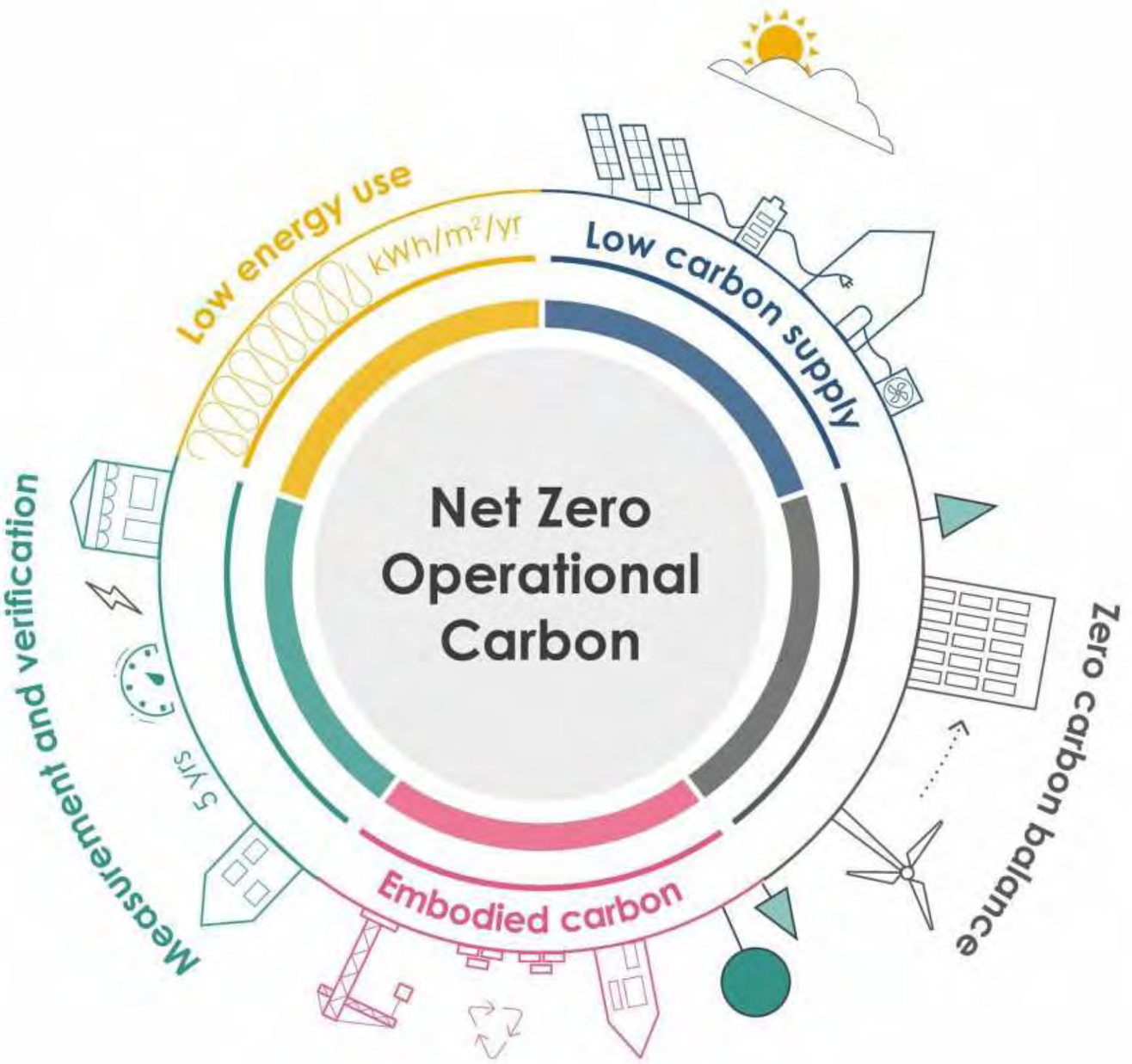
This term refers to efforts to reduce carbon emissions while addressing social fairness. It recognises that moving to a low-carbon economy shouldn't worsen existing inequalities but rather create opportunities for everyone to engage in sustainable practices.

Sustainability and Zero Carbon:

Meeting current needs without compromising future generations' ability to meet their own. Zero carbon aims to eliminate carbon emissions, offsetting any remaining ones through removal or mitigation measures.

Retrofit:

Upgrading existing buildings, infrastructure, or systems to improve performance, energy efficiency, and sustainability. Project such as this one look to include upgrades to insulation, installing energy-efficient windows. Retrofitting is crucial for reducing the environmental impact of existing infrastructure and meeting sustainability goals, especially in urban areas where much of the built environment already exists.



3.2 Location Strategy of Air Source Heat Pumps & Noise Mitigation

In addition to the external façade refurbishment works to all three blocks, as a more sustainable and efficient alternative to traditional heating systems, this retrofit scheme proposes to change the existing use of gas-powered boilers to that of air source heat pumps for the heating and cooling of all existing properties. This is also a very energy efficient method of providing domestic hot water heating to all homes and reducing carbon emissions from the development generally.

As such, the installation of 28no. air source heat pump units will be to all existing residential units and will be to assist all residents in energy-saving and lowering their annual heating costs, as part of the fabric first approach to this scheme.

The proposed locations of these units are based on the maximum pipe lengths that we are able to achieve with a typical unit, and from discussions with various manufacturers of these units, it is apparent that exceeding the recommended pipe lengths of 10-15m (from hot water cylinders to these units) would affect their general performance.

The strategy is therefore to locate all 28no. units in a split arrangement over the site:

- with 14no. units being located locally to the back gardens for all ground floor properties; and

- 14no. units being located on the main roofs to serve the top row of maisonettes on each block.

Proposed Site Plan (Showing Locations of ASHPs & Acoustic Fencing at Ground Floor)

In essence, the locations of these air source heat pump units work on the principle that the shorter the pipe runs, the more efficient the units become. This is to primarily ensure that the optimum performance and overall efficiency of the air source heat pumps are not compromised, and that all units can best serve each maisonette as efficiently and cost effectively as possible.

Locating all of the air source heat pumps on the roofs and to the back of ground floor maisonettes is also intended to reduce the overall visual impact of them on the street scene. All units will be fully accessible on ground floor for general maintenance, whilst a single roof access hatch with a retractable ladder will be provided on the lower roofs of each block above the communal stairwells, to allow for access to those units located on the main roofs.

Provided as part of the Planning Application, a Comparison Report for the potential sizes of the units to be used on the scheme has been provided by Harley Haddow, who are the MEP Engineer on the project. This is accompanied by the Proposed Heating Schematic drawing provided (drg. no 312169-HAH-XX-XX-D-M-05601), demonstrating the pipe runs between levels.

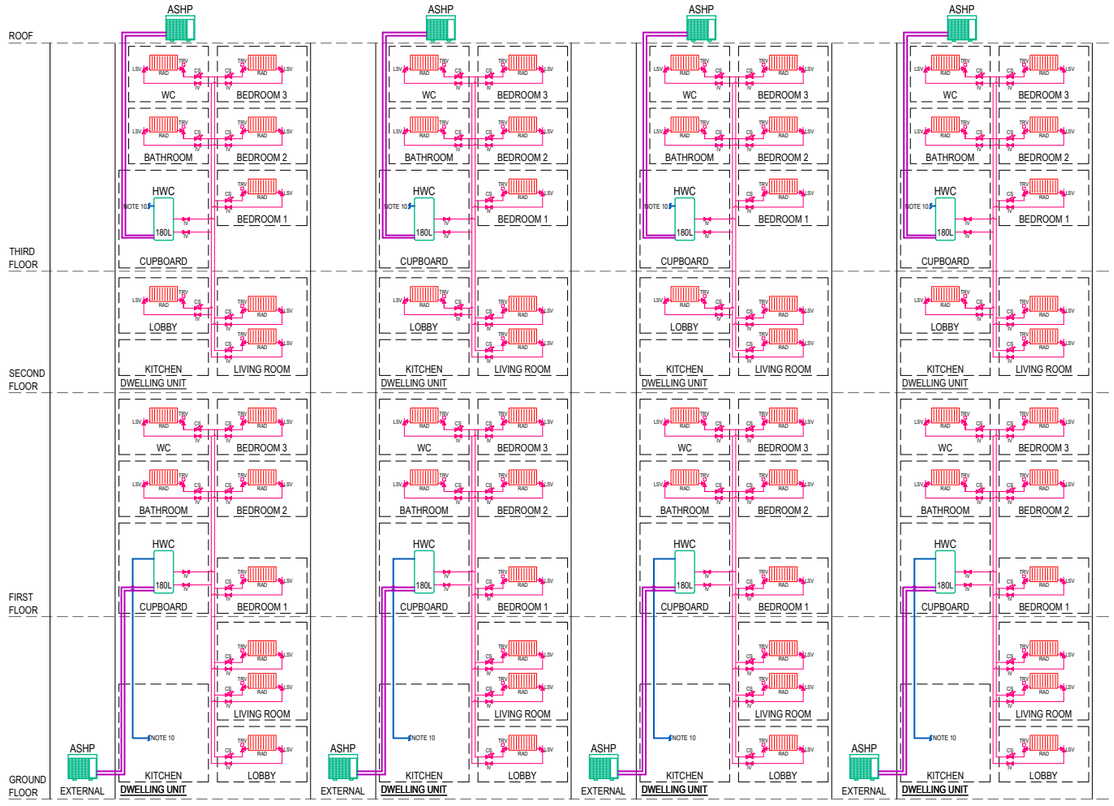
The final specification and sizes of the units will be determined based on a preferred model, when the proposed heating system and strategy has been fully developed by the MEP Engineer with the chosen manufacturer of the units.

Suitable measures and advice on how the noise levels produced by these units will be contained can be found in the Noise Impact Assessment by the Acoustic Engineer, which is to be also submitted as part of the application.

But as the scheme will effectively need to comply with Microgeneration Certification Scheme (MSC) Planning Standards, the MCS 020a noise limits for the air source heat pumps must meet the calculated noise level of 37 dB(A) or less at the nearest windows or doors of each neighbouring building.

Given the close proximity of the units along the rear elevations of the South and West Blocks, the introduction of a minimum 2.8m high fin wall or noise barrier between each maisonette will be required, as per the Acoustic Engineer's recommendations. This will result in noise levels being reduced and compliant with the MSC 020a noise limits for both on and off-site receptors, such as the air source heat pumps. Refer to the calculations provided in the Noise Impact Assessment for further information.

As such, the use of acoustic timber fencing on all ground floor properties has been integrated into the overall design and strategy to both the South and West Blocks, which in principle provides the noise reduction required to meet the MSC20a criteria. The location of these acoustic timber fences can be seen on the Proposed Site Plan, and they are used primarily to assist in mitigating general noise levels, and reducing the sound generated by the air source heat pumps - where two or more units are located in close proximity to one and another.



Proposed Typical Heating Schematics

Acoustic Timber Fencing: Jacksons Fencing - Jakoustic Reflective Acoustic Barrier

Although kitchens occupy the back of both the South and West Blocks on the ground floor maisonettes, and are deemed as non-habitable rooms, the specific use of Jacksons Fencing's Jakoustic Reflective Acoustic Barriers, or equal-performing acoustic timber fencing systems here, will significantly reduce noise levels nonetheless to these rooms:

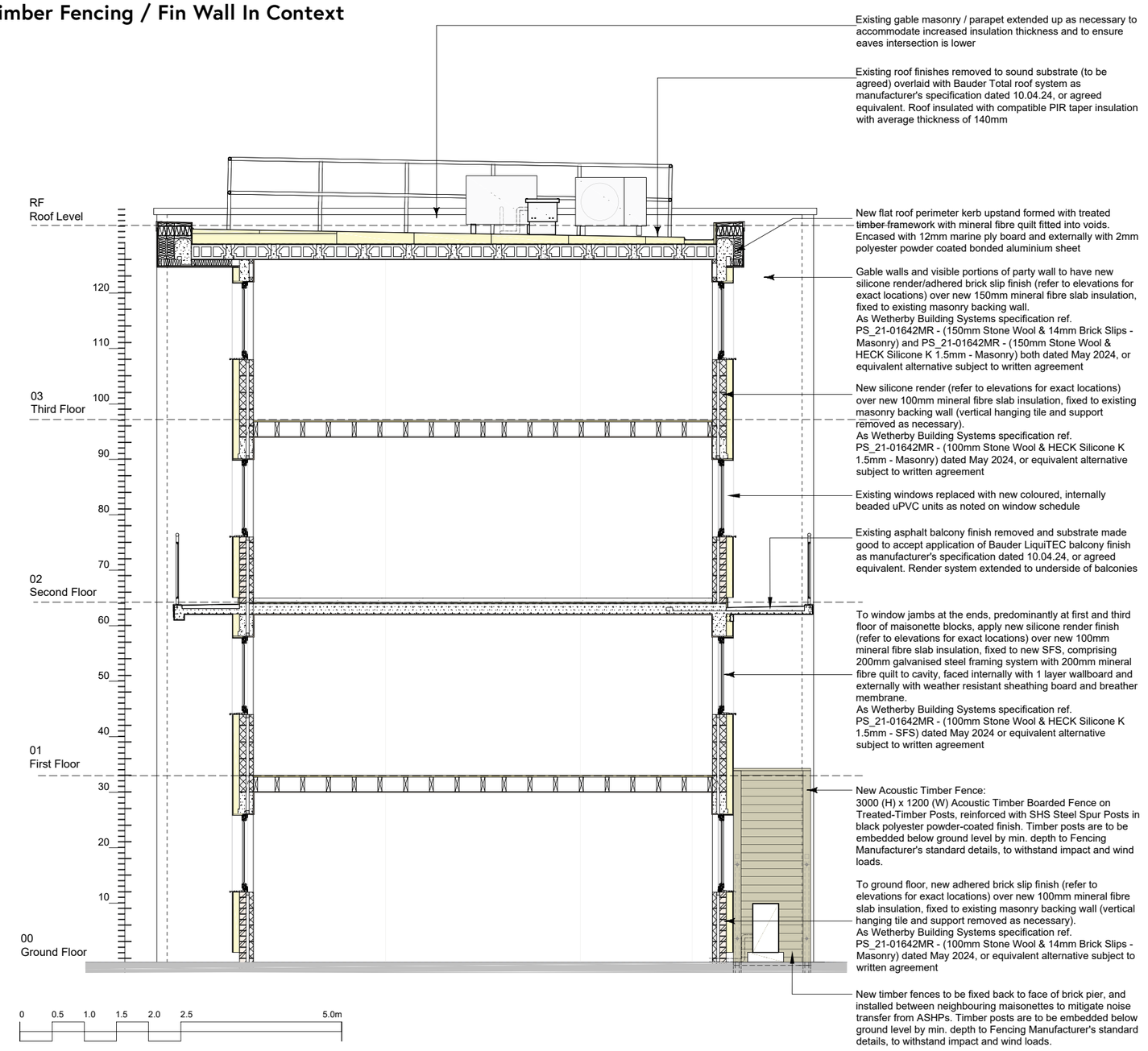
- by reflecting sound away from neighbouring properties by using solid, tightly interlocked timber boards; and

- by providing a suitably-sized noise barrier (3000 x 1200mm), fixed back to the building and preventing sound from travelling through gaps.

These Jakoustic Reflective fences are ideally suited to open spaces like back gardens, where additional noise and sound transfer from air source heat pumps, and all other on and off-site receptors, are likely to be an issue and need to be contained. This is especially important when localized air source heat pump enclosures cannot be considered for the models the scheme will be looking to install.

The issue of sound transfer from neighbouring properties on the North Block will be less of an issue, as the air source heat pumps are separated by existing brick piers, which are then to be clad with the new external wall insulation and brick slips at ground floor.

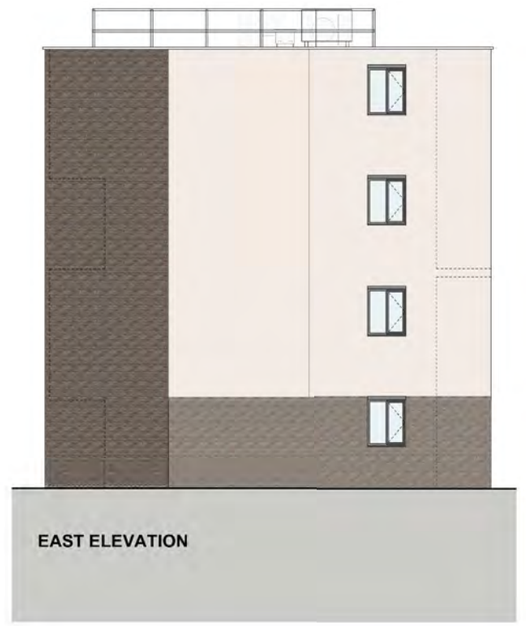
Acoustic Timber Fencing / Fin Wall In Context



3.3 Proposed North Block

NORTH ELEVATION

SOUTH ELEVATION

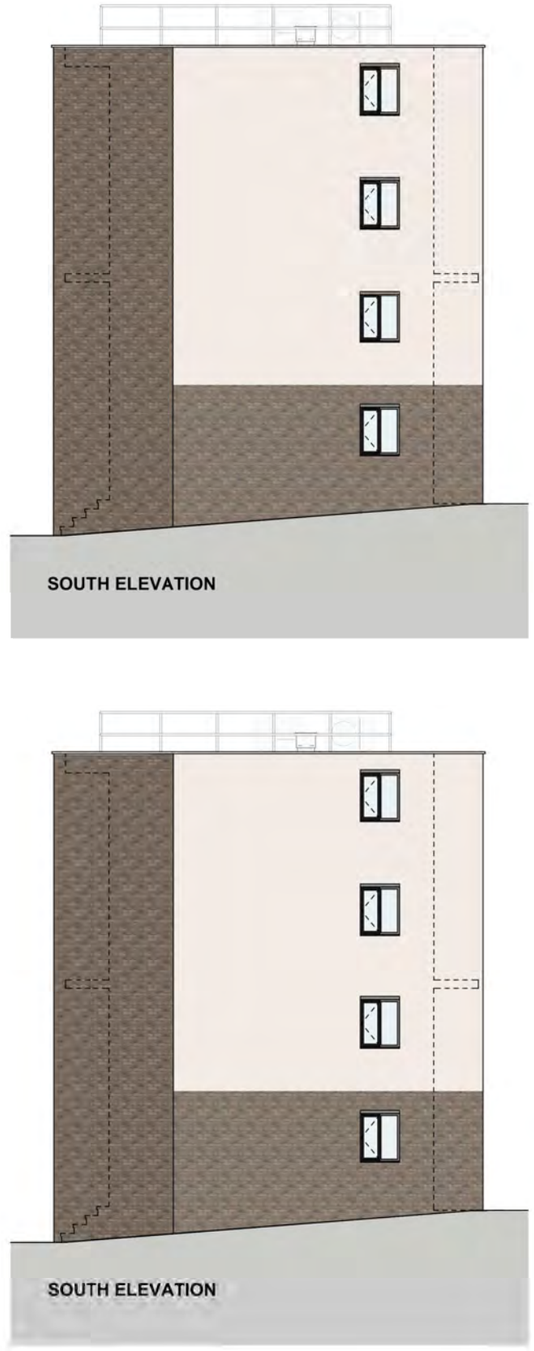


EAST ELEVATION

WEST ELEVATION

3.4 Proposed South Block

3.5 Proposed West Block



3.6 Proposed Street View

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