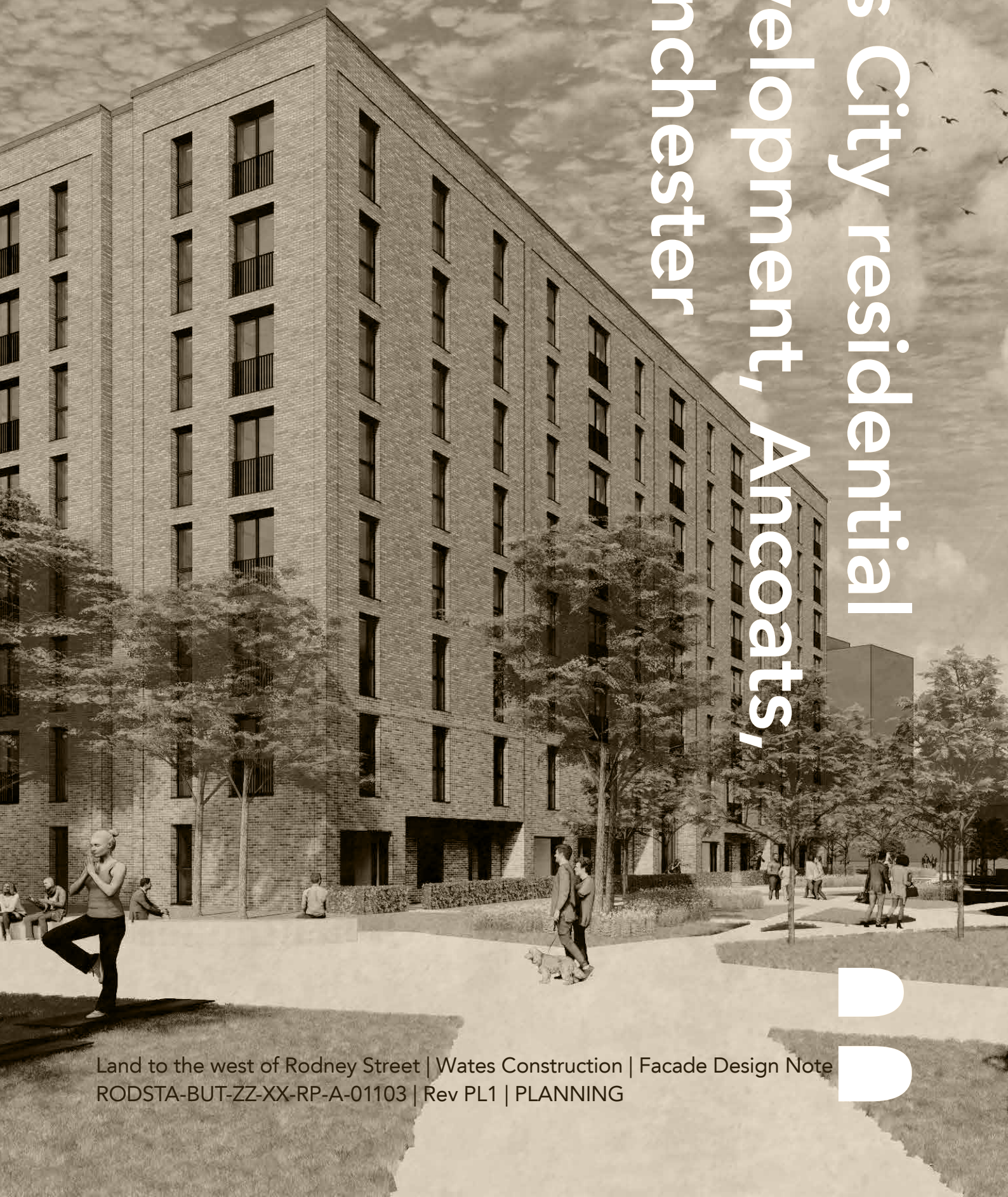


This City residential development, Ancoats, Manchester



Land to the west of Rodney Street | Wates Construction | Facade Design Note
RODSTA-BUT-ZZ-XX-RP-A-01103 | Rev PL1 | PLANNING

Contents

1.0 Level 2 AVO Assessment

2.0 Introduction

3.0 Design Approach

4.0 Current Proposals

5.0 Design Details



1.0 Level 2 AVO Assessment

'A level 2 assessment in line with the Acoustics, Ventilation and Overheating, Residential Design Guide (AVO) has been undertaken for Block A to the north of the site. This building fell into a 'Medium' AVO risk category following the level 1 assessment hence further assessment was deemed necessary.

Block B and the Townhouses fell into 'Low' and 'Negligible' AVO risk categories following a level 1 assessment and as such, use of partially opening windows to control overheating for the dwellings in these buildings is considered to be acceptable without further assessment.

3D modelling has been carried out to assess the noise levels outside the apartments, based on the proposed site and building geometry and environmental noise survey results. Assessment of noise ingress via partially open windows to apartments in Block A has also been carried out.

The results indicate that the AVO SOAEL thresholds are expected to be met during the night time with use of partially open windows for the selected apartments, even if windows are open 'most of the time'. There are however bedrooms and living rooms in building A where the SOAEL thresholds of AVO may be exceeded during the daytime depending on the duration that windows need to be opened to control overheating. This will

need to be confirmed by Method through the TM59 assessment.

Approved Document O provides guidance on maximum noise ingress to dwellings during the night-time, though this document is not expected to be applicable for the scheme. Manchester City Council have suggested that these criteria should however ideally be met. The assessment indicates that noise ingress to apartments during the night-time with partially open windows to control overheating would be in line with the Approved Document O criteria.

Extracts from Sandy Brown - Level 2 AVO Assessment

2.0 Introduction

The design of all facades across the Rodney Street scheme has been developed throughout the design process to respond to a number of key requirements including:

- Creating an appropriate design within the immediate context to meet planning and local authority aspirations
- Responding to pre-application feedback from the planning authority
- Considered approach to windows/glazing in response to AVO guidance and TM59 assessments
- Coordination with the wider design team including configuration and proportion of glazing units to optimise daylighting within the constraints of AVO
- Passivhaus/AECB guidance
- Reduction of internal noise levels to optimise internal comfort

Sustainability is a key priority for the future developments coming forward under This City, with the Rodney Street scheme seeking to meet Association for Environment Concious Building (AECB) targets based on Passivhaus standards. A significant period of technical development has been undertaken to ensure that the design meets all key requirements, whilst still meeting the necessary sustainability needs. The designs presented as part of this application are considered to provide a suitable and robust solution.

3.0 Design Approach

The facades across the development have been designed to satisfy a number of criteria (as previously outlined). As reviewed and tested during the design process, many of the requirements are in direct conflict with one another i.e. the size and proportion of windows to meet passivhaus standards can impact on meeting necessary levels for daylighting requirements. In turn, increasing the size of the same windows could lead to spaces suffering from overheating and therefore failing to meet AVO guidance.

The current design proposals respond to current Building Regulations, design team expertise and current products available on the market in order to reach a solution that is viable, deliverable and appropriately addresses planning feedback.

4.0 Current Proposals

The current proposals seek to achieve a coherent facade design across the development, which satisfies necessary building regulations, local authority requirements, daylighting levels, and AVO guidance/TM59 assessments.

Residential blocks A and B share a simple yet considered approach to fenestration, with window sizes and proportions designed in line with the above criteria. Bedroom spaces include a single window configuration (910mmx2475mm) with an openable panel above 1100mm. Living spaces benefit from a larger, double door configuration (1810mmx2475mm) incorporating juliet balconies.

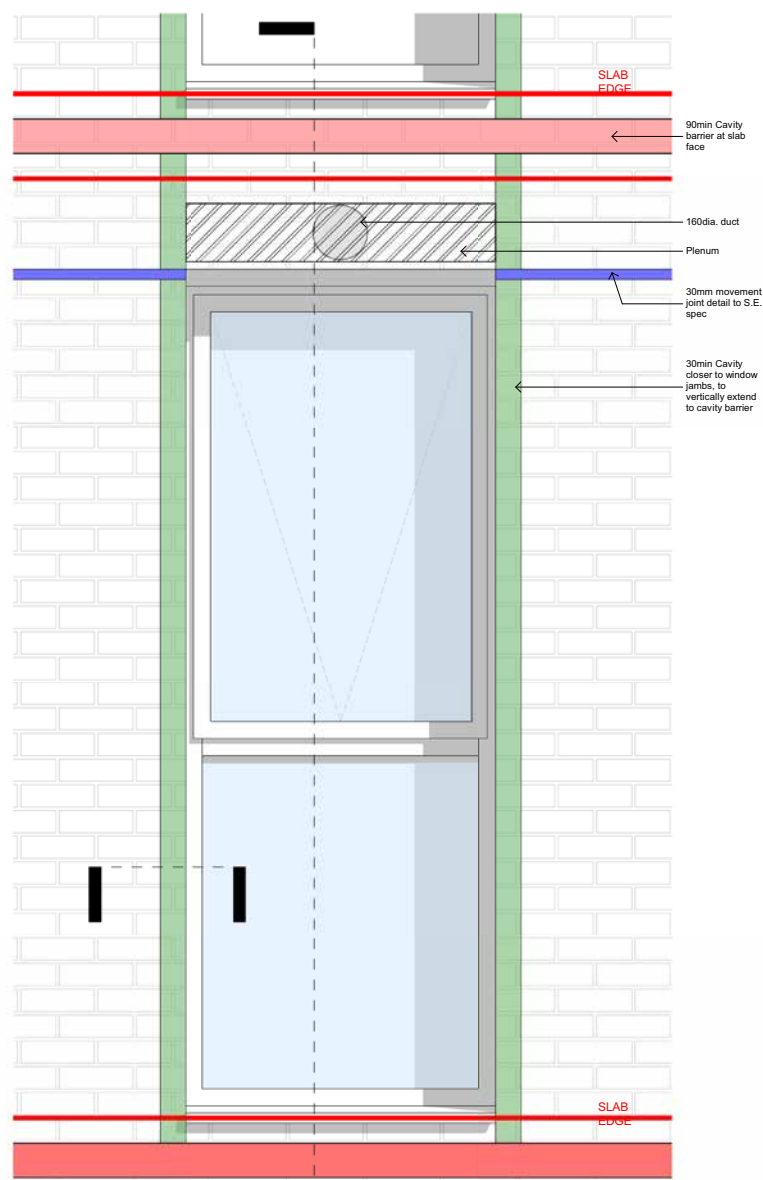
Overall, the designs respond to initial advice within the level 1 AVO assessment, which identified that Block A falls into the 'Medium' AVO risk categories. From a design perspective, the proposals have sought to address some of the risks associated by limiting glazing on noisy elevations (those closer to Oldham Road) where possible.

Feedback from the local planning authority as part of pre-application discussions has helped to inform the current proposals, which seek to omit the inclusion of louvre panels above window heads to conceal extract/intact ductwork.

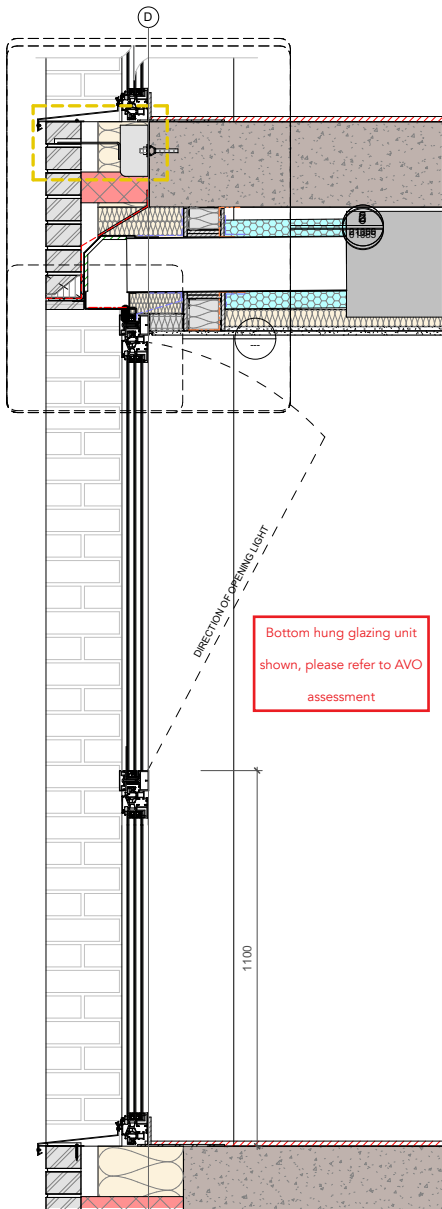
The details outlined on the following pages demonstrate how the current proposals achieve a discrete solution by venting through the soffit of the window reveal, thereby omitting the extract panel above the window itself.

The proposed window units are also designed to be high performing triple glazed systems, thereby contributing to an overall approach which meets the necessary requirements and criteria.

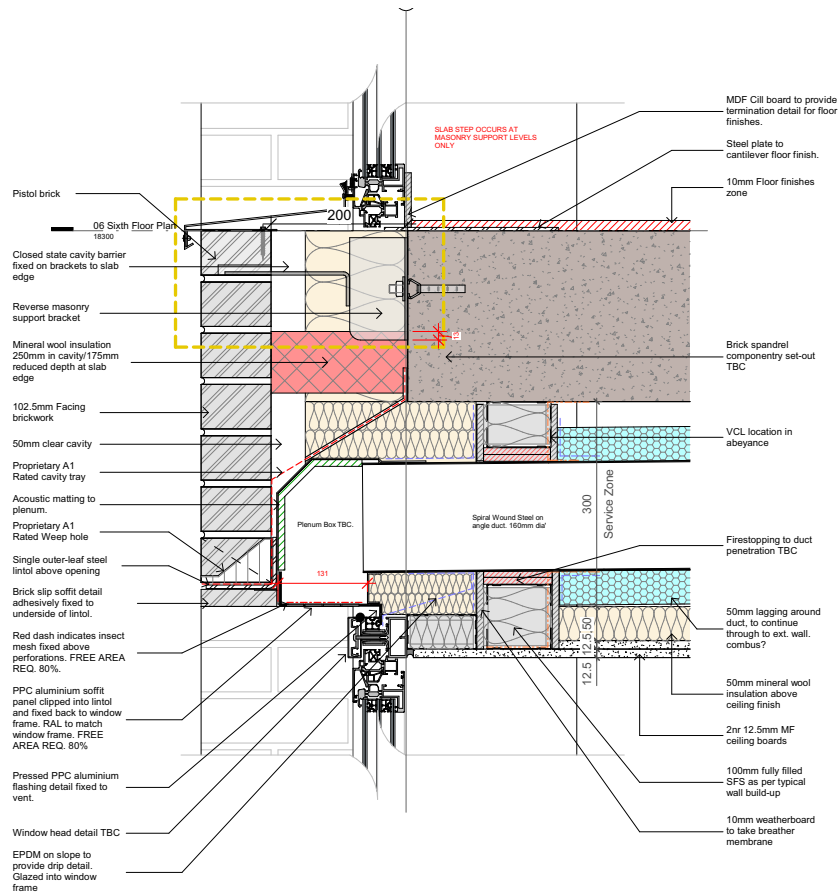
5.0 Design Details



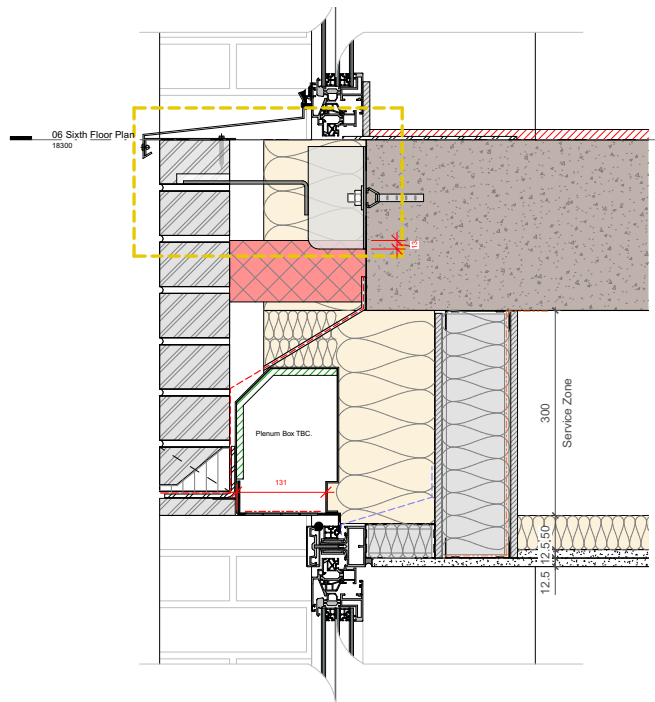
Bedroom Window Type Elevation
(indicating location of structure)
1:10



Bedroom Window Type Section
1:10



Typical Window Head Detail (MVHR)
1:5



Typical Window Head Detail (No MVHR)
1:5

Buttress

Architects | Masterplanners | Heritage Consultants