166 NORTHWOOD WAY

Fire Safety Strategy

Prepared by:

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PROJECT DETAILS

Client: Satyam Popat, MAYTAS LTD

Location: 166 Northwood Way,
London
HA6 1RB

Title: Fire Safety Strategy

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1.0 Introduction

General

USL Architects have been appointed by MAYTAS LTD to prepare the design proposal.

This document is confidential and for the exclusive benefit of USL Architects and MAYTAS LTD, 166 Northwood Way(client). Please read this in accordance with the drawing package and information submitted by all parties.

1.1 Purpose of the Report

The objective of this report is to develop a Fire Safety Strategy that satisfies the performance requirements of the Building Regulations 2010(as amended) and to outline the Fire Safety Strategy to the design team.

1.2 Basis of Report

This Fire Safety Strategy has been developed based on the information and drawings provided by USL Architects.

1.3 Design Guidance and Legislation

The fire strategy has been developed in accordance with the Building Regulations 2010 (as amended), with primary reference to Approved Document B – Volume 1: Dwellings (2019 edition with 2020 and 2022 amendments).

This report and design approach are tailored towards the life safety of the building occupants only and do not specifically include any third-party or property protection measures/requirements.
Any third-party or insurance requirements that may need to be included within the design are to be confirmed by the client.

1.4 Sources of Information

The information contained in this report is based on the information produced by USL Architects, listed in the table below:

Table 1: Source of information

Drawing number	Title	Project
NWN-PL-100	PROPOSED GROUND AND FIRST FLOOR PLAN	166 NORTHWOOD WAY, HA6 1RB
NWN-PL-101	PROPOSED LOFT AND ROOF PLAN	
NWN-PL-500	PROPOSED SITE PLAN	

2.0 Executive Summary

2.1 Project Background

The project involves the conversion of a detached two-storey property at 166 Northwood Way, HA6 1RB, from office use into residential accommodation. Prior approval under reference no: 18377/APP/2025/2529 for the office-to-residential conversion was recently granted.

The current proposal includes the creation of the fifth self-contained residential flat in the loft floor, together with associated alterations, including a rear ground-floor infill extension.

2.2 Evacuation Strategy

The evacuation strategy for the development is based on a simultaneous evacuation approach**,** where all occupants of the five self-contained flats evacuate upon activation of the fire alarm. Any additional evacuation support or intervention will be managed by the building owner or management, in coordination with the local Fire and Rescue Service if required.

2.3 Fire Detection and Alarm Systems

The minimum required fire detection and alarm system category for the residential flats is Grade D, Category LD2. Fire detection and alarm systems within each flat are to be designed, installed, and commissioned in accordance with BS 5839-6:2019.

The common areas, including the protected staircore, are to be provided with smoke detection systems and suitable fire extinguishers.

2.4 Structural Fire Protection

All structural elements affected by the conversion works will be provided with appropriate fire protection. The common areas, including the protected staircore, will be designed to achieve a minimum fire resistance of 60 minutes, in accordance with Approved Document B.

2.5 Fire Service Access

The communal stair provides fire service access to all five residential flats. Additionally, the ground floor flats benefit from their own rear doors and windows, which serve as alternative escape routes.

3.0 Fire Strategy

3.1 Legislation

The building work will comply with the Building Regulations 2010 (as amended), which focus on ensuring life safety within and around the building. The development will be designed and constructed to meet the requirements of Part B (Fire Safety) of Schedule 1, covering:

B1 – Means of warning and escape

B2 – Internal fire spread (linings)

B3 – Internal fire spread (structure)

B4 – External fire spread

B5 – Access and facilities for the Fire Service

3.2 Evacuation Strategy

The evacuation strategy for the development is based on a simultaneous evacuation approach, where all occupants of the five flats evacuate the building when the alarm is triggered. Any additional evacuation procedures will be coordinated by the building management in liaison with the local Fire and Rescue Service.

3.3 Fire Detection, Alarm System and Emergency Lighting

Fire detection and alarm systems are designed to provide early warning of fire, enabling all occupants to evacuate safely before escape routes become compromised by smoke, fire, or toxic gases.

Residential Units

Each flat will be provided with a fire detection and alarm system meeting a minimum of Grade D2, Category LD2 standard, in accordance with BS 5839-6:2019.

- Smoke alarms will be mains-powered and conform to BS EN 14604.
- Heat alarms will be mains-powered and conform to BS 5446-2.
- All alarms will be interlinked within each individual flat only and will include a suitable standby power supply (such as a rechargeable or non-rechargeable battery or capacitor).

Alarm coverage will be provided in circulation areas (e.g. hallways) and high-risk rooms such as kitchens, in line with LD2 requirements.

The new habitable flat in the loft is accessed directly from the protected staircore. The stair flight to the loft is separated from the first-floor common area by an FD30 fire door, maintaining a protected escape route. Although Approved Document B requires a minimum of 30 minutes fire resistance for the protected stair enclosure in a building of this scale, the construction will be upgraded to provide 60 minutes fire resistance to enhance the overall fire safety performance of the escape route.

All first-floor flats are provided with internal FD30 protected hallways to ensure safe access to the staircore. The ground-floor flats do not require protected internal hallways, as they have direct escape to open space through front or rear doors and compliant escape windows, in accordance with ADB.

Common Areas

The flats are accessed via a shared protected staircore. As this area serves as a common escape route, smoke detection will be provided in the staircore in accordance with BS 5839-6:2019 guidance for escape routes in multi-occupancy residential buildings. Fire extinguishers will also be provided in appropriate locations within the staircore.

Emergency lighting will also be installed in the common staircore, designed and installed in accordance with BS 5266-1:2016. This ensures that the escape route remains visible and safe in the event of a mains power failure.

Fire extinguishers will be provided in appropriate locations within the staircore to support initial firefighting and as required by the fire risk assessment.

3.4 Horizontal Means of Escape

While prior approval has already been granted for the conversion of the existing two-storey office building into residential use, the current application seeks permission for additional works, including a new loft-level dwelling and a single-storey rear infill extension. These proposed elements have been designed in accordance with Approved Document B (Volume 1) and BS 9991:2015 to ensure safe and compliant means of escape for all occupants

Internal Unit Layouts

- Each flat is entirely self-contained.
- The ground floor flats have direct access to the main shared entrance/exit via the protected common staircore, as well as alternative means of escape through private rear doors and windows.
- The first floor flats are accessed via the protected staircore through a 30-minute fire-protected internal lobby, providing a compliant and safe escape route.
- The new habitable loft-floor flat is accessed directly from the staircore. The stair flight serving the loft is separated from the first-floor common area by an FD30 fire door, forming a self-contained protected enclosure. Although Approved Document B requires a minimum of 30-minute fire resistance for a protected stair in a building of this scale, the stair enclosure will be constructed to provide 60 minutes of fire resistance as an enhanced safety measure.
- No inner rooms are present; all habitable rooms have either direct or protected access to a final exit or escape route.

Common Corridor and Staircore

- All flats are accessed from a common protected staircore entered through a shared external entrance gate.
- In accordance with Figure 7 of BS 9991:2015, all flats open into a common corridor or lobby directly connected to the staircore.
- The travel distance from each flat's entrance door to the staircore is less than 7.5 metres, meeting the relevant standards.

Building Height and Escape Strategy

- The building is a three-storey detached structure with a total height of approximately 9 metres.
- Since the top storey is less than 7.5 metres above ground level, a single protected staircore is sufficient as the primary means of escape under Approved Document B (Volume 1).
- No secondary escape stair or mechanical smoke control system is required.

Occupancy and Number of Escape Routes

- The building is expected to accommodate up to 7 occupants across all five flats.

- According to BS 9991:2015, a single means of escape is acceptable for buildings with an occupancy of fewer than 60 people.
- Therefore, the single protected staircore provides a sufficient and safe escape route for all residents.

Ancillary Accommodation

- There are no ancillary areas within the building requiring separate escape routes or travel distance considerations.

3.5 Vertical Means of Escape

Each of the five self-contained flats is served by a single protected internal staircore connecting the ground, first and loft floors. The vertical means of escape has been designed in accordance with the guidance of Approved Document B (Volume 1) for three-storey residential buildings.

Key features include:

- The building's top floor level is below 7.5 metres from ground level, allowing for a single protected staircore to serve all flats as the primary means of vertical escape.
- The staircore leads directly to a final exit at the ground floor level through a shared external entrance gate. Where required, escape routes within the staircore include short protected lobbies formed with 30-minute fire-resistant construction and FD30 fire doors to ensure fire compartmentation.
- All habitable rooms on the first floor are accessed via the protected staircore and internal lobbies, with no inner rooms present that would compromise escape routes.
- The new loft-floor flat is accessed via the staircore, with an FD30 door at first-floor level creating a self-contained 60-minute protected escape route.
- This arrangement provides a compliant and safe vertical means of escape for all occupants in the event of a fire.
- No alternative vertical escape route is required under Approved Document B due to the building's height and layout.

Escape signage:
Escape signage will be provided within all common escape routes, designed and installed in accordance with BS 5499-4:2013. The signage used throughout the building will be consistent and comply with BS ISO 3864-1:2011.

The Regulatory Reform (Fire Safety) Order (RRFSO) applies to this development and remains the responsibility of the landlord to manage and maintain fire safety compliance.

3.6 Internal Fire Spread

The fire safety strategy for internal fire spread in relation to the proposed loft-level dwelling and associated extension works follows the guidance set out in Approved Document B (Volume 1), which addresses the functional requirements of the Building Regulations for residential buildings. Where appropriate, supplementary guidance has also been taken from BS 9991:2015, which provides best-practice recommendations for fire safety design and management in residential developments

Elements of structure
The top occupied storey of the building is approximately 6 metres above ground level. Therefore, in accordance with Approved Document B, all structural elements that support floors are required to achieve a minimum of 30 minutes fire resistance.

The roof structure does not require a fire resistance rating unless it forms part of an escape route, supports a fire-resisting external wall, functions as a floor, or forms part of a portal frame where the roof and supporting structure are integrated.

Compartmentation
Each of the five self-contained flats will be treated as an individual fire compartment, as required by Approved Document B(Volume 1).

Floors between the ground, first and loft floor flats will be constructed or upgraded to act as 30-minute compartment floors, limiting the spread of fire between levels.

Each flat is separated from all common areas, including the protected staircore and lobbies, with 30-minute fire-resistant construction. Where flats open onto common corridors or staircore, FD30 fire doors fitted with self-closing devices will be provided to maintain fire compartmentation.

Escape route protection
Escape routes, including the common staircore and protected internal lobbies, will be enclosed in fire-resistant construction to ensure safe egress during a fire. This includes appropriate fire-rated doors and partitions, and careful detailing to avoid any weaknesses in the escape route enclosure.

Fire stopping
All new service penetrations through fire-resisting walls, floors, and ceilings will be properly sealed to maintain compartmentation.
Fire stopping will be provided in the following locations:

- At all penetrations through new compartment walls and floors
- At junctions where new fire-resisting elements meet the retained existing external walls

As the external walls of the building are retained and not substantially altered, no further fire resistance upgrades are required to those walls, except at points of interface with new internal construction or service penetrations.

Ductwork and services
Where mechanical ventilation systems or ductwork pass through compartment walls or floors, fire integrity will be maintained by the use of fire dampers or suitable sealing in accordance with the relevant standards and manufacturer guidance.

Approach to existing building fabric
A balanced approach has been adopted to maintain necessary fire resistance while minimising unnecessary disruption to the retained elements of the building. Upgrades will focus on the areas impacted by new construction or where the existing fire performance does not meet current standards.

This fire strategy for internal spread ensures compliance with current fire safety regulations and provides adequate protection to occupants, allowing for safe evacuation and limiting the potential for fire development within and between dwellings.

3.7 External Fire Spread

The existing external envelope of the building will be largely retained; however, the roof ridge height will be raised to create a habitable loft, and a single-storey rear infill extension will be constructed.

All new external elements, including the roof structure, any dormer windows or rooflights, and the walls of the rear extension, will be constructed using materials and assemblies that comply with Approved Document B, Volume 1, ensuring adequate resistance to external fire spread.

Existing walls, doors, and windows on the ground and first floors (excluding the rear extension) will remain unchanged. New openings introduced in the roof or the extension (e.g., windows or doors) will be designed in accordance with ADB guidance to ensure that the conversion does not increase the risk of fire spreading on the building's external envelope.

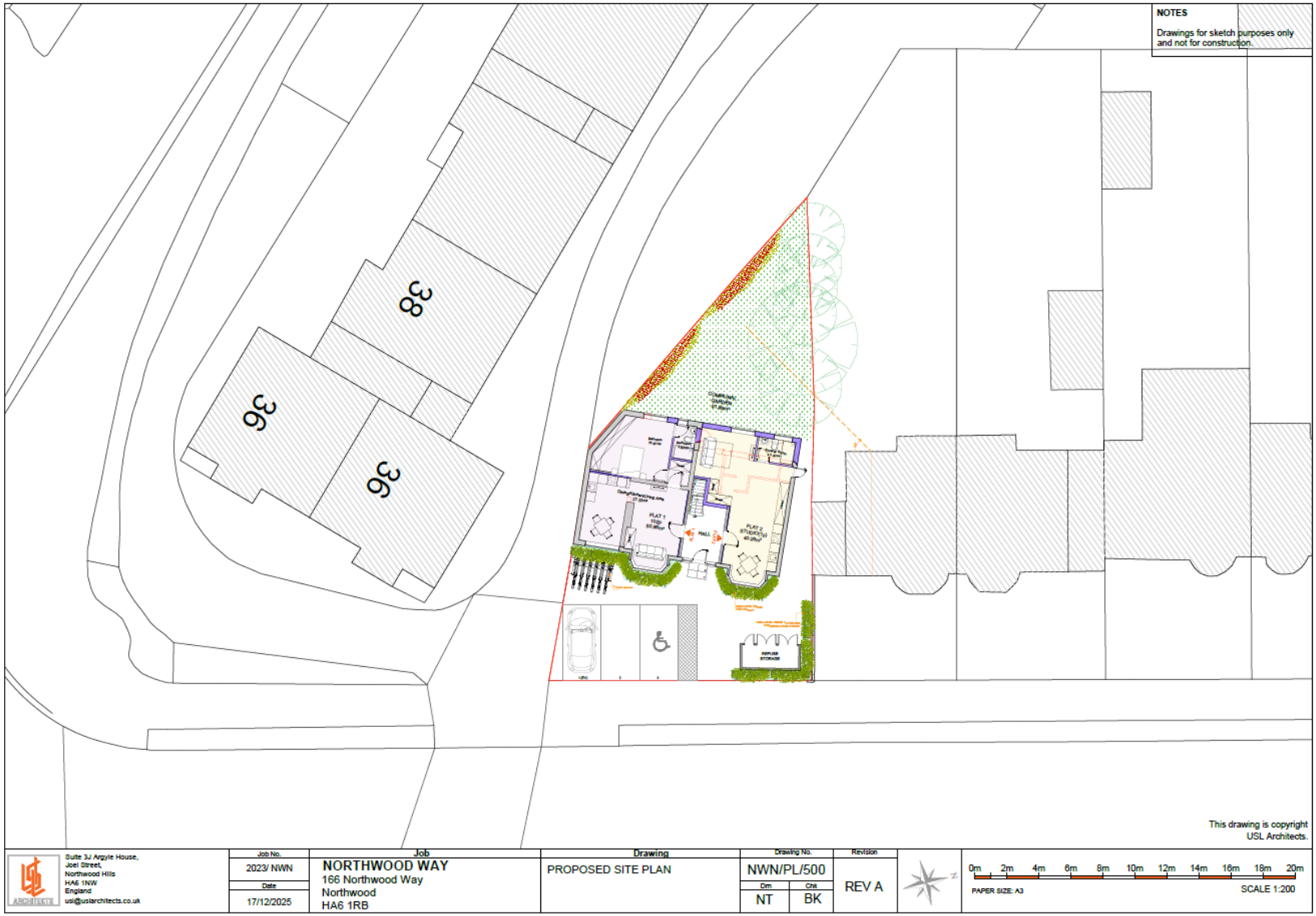
3.8 Firefighting Access

In accordance with Requirement B5 of Schedule 1 to the Building Regulations 2010 (as amended), the following provisions will apply to the proposed development at 166 Northwood Way, HA6 1RB: fire and rescue service access is provided via the shared main entrance, with a fire appliance able to approach within 45 metres of all flat entrance doors, measured along the route of the hose. The building consists of five self-contained flats served by a protected internal staircore, and no extended internal corridors or complex common areas are present. As such, no additional firefighting measures are required beyond standard access provisions for domestic dwellings under Approved Document B – Volume 1).

4.0 Conclusion

This Fire Safety Information Report outlines the key fire safety measures associated with the proposed additional works at 166 Northwood Way, HA6 1RB, namely the formation of a new habitable loft floor and a single-storey rear infill extension. These works form part of the wider scheme to provide five self-contained residential flats, for which prior approval for the office-to-residential conversion has already been granted under application reference no: 18377/APP/2025/2529 . The design of the proposed elements complies with the relevant requirements of the Building Regulations 2010 (as amended), with reference to Approved Document B (Volume 1) and BS 5839-6:2019 for domestic fire detection and alarm systems.

5.0 Appendix


NOTES
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usl@uslarchitects.co.uk
Job No. 2023/ NWN
Date 17/12/2025
Job NORTHWOOD WAY 166 Northwood Way Northwood HA6 1RB
Drawing PROPOSED SITE PLAN
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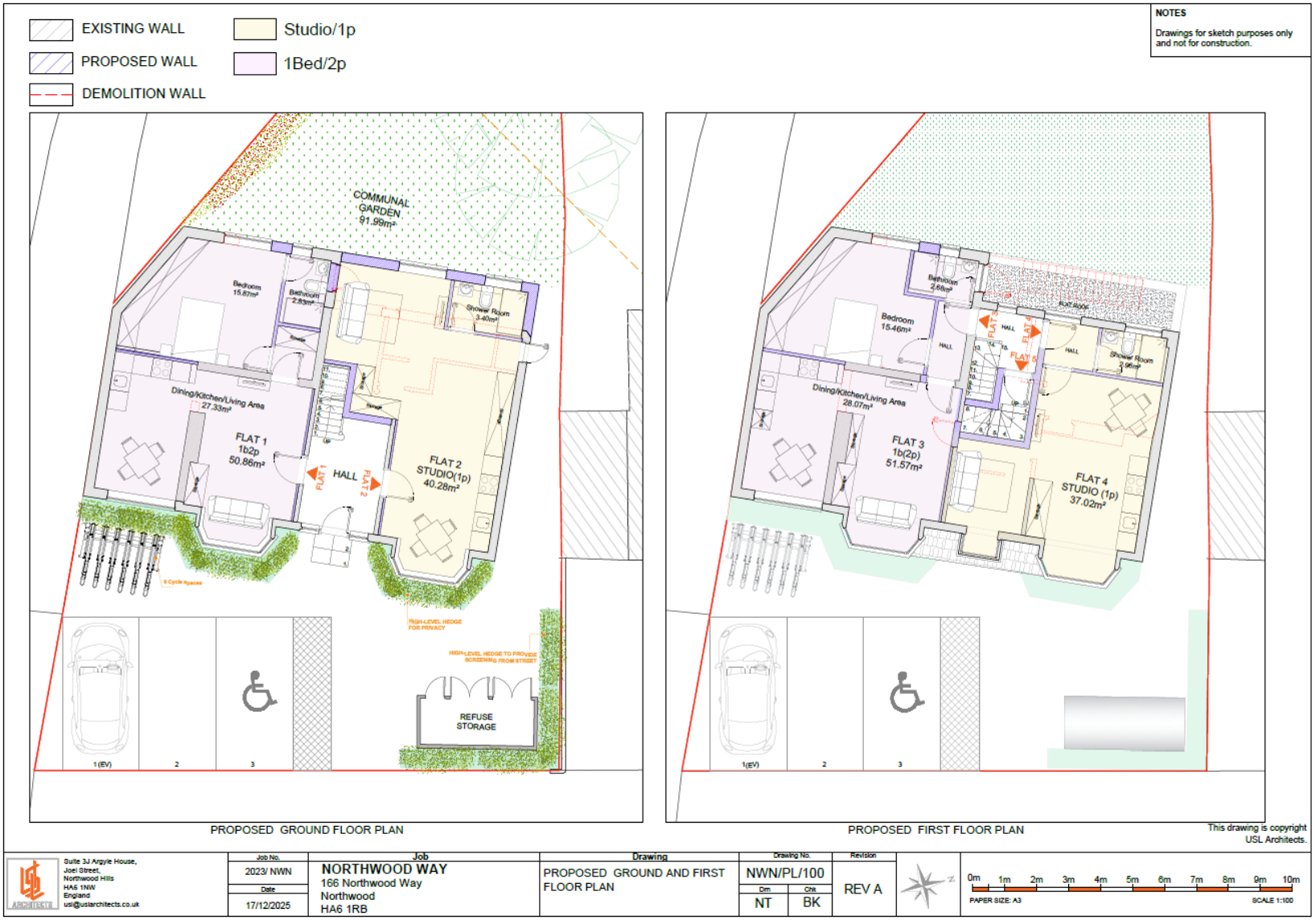
EXISTING WALL
PROPOSED WALL
DEMOLITION WALL
Studio/1p
1Bed/2p
NOTES
Drawings for sketch purposes only and not for construction.
COMMUNAL GARDEN 91.99m²
Bedroom 15.87m²
Bathroom 2.83m²
Shower Room 3.40m²
Dining/Kitchen/Living Area 27.33m²
FLAT 1 1b2p 50.86m²
HALL
FLAT 2 STUDIO(1p) 40.28m²
REFUSE STORAGE
1 (EV)
2
3
PROPOSED GROUND FLOOR PLAN
Bedroom 15.46m²
Bathroom 2.88m²
Shower Room 2.96m²
Dining/Kitchen/Living Area 28.07m²
FLAT 3 1b(2p) 51.57m²
FLAT 4 STUDIO (1p) 37.02m²
PROPOSED FIRST FLOOR PLAN
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Job No. 2023/ NWN
Date 17/12/2025
Job NORTHWOOD WAY 166 Northwood Way Northwood HA6 1RB
Drawing PROPOSED GROUND AND FIRST FLOOR PLAN
Drawing No. NWN/PL/100
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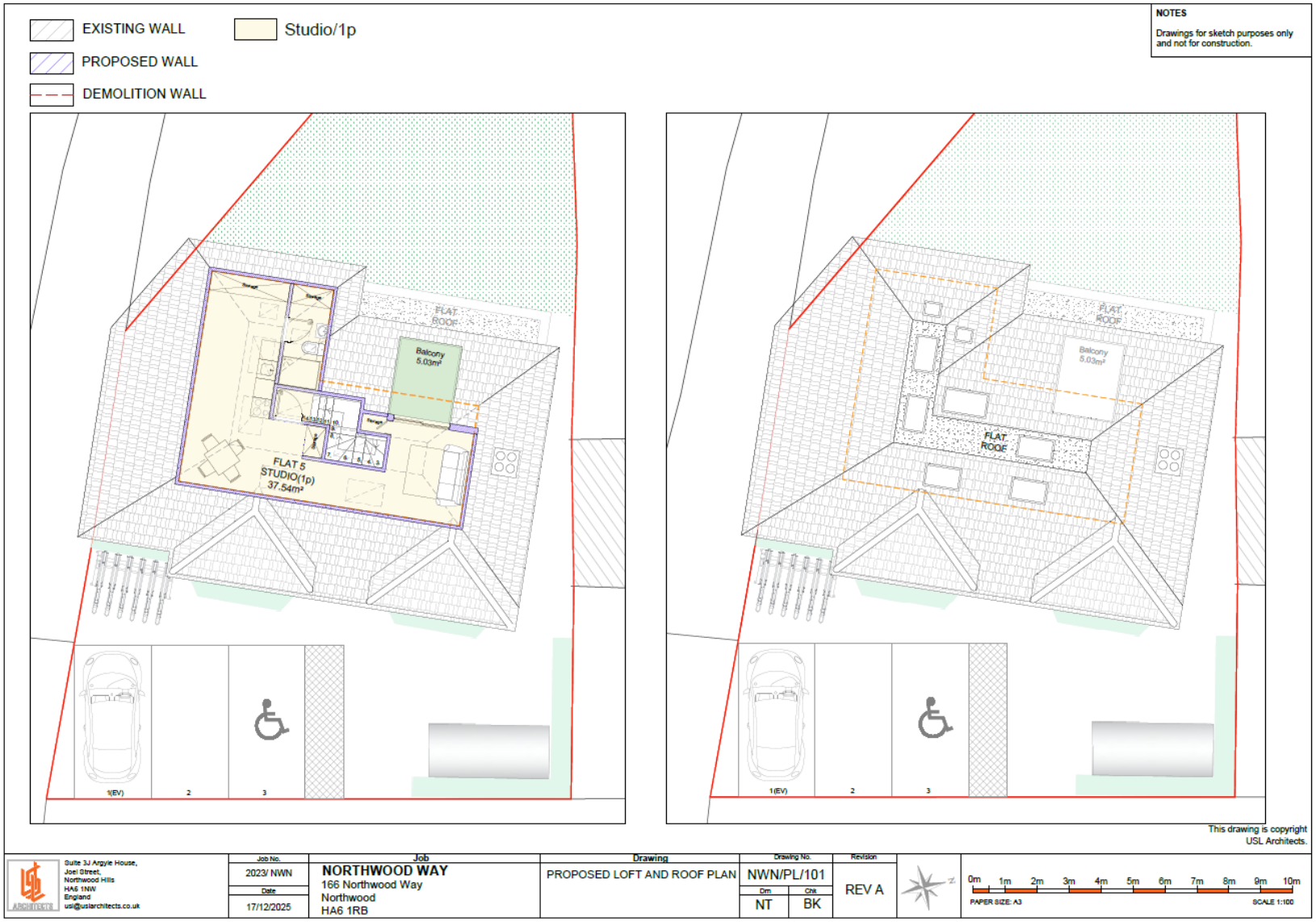
EXISTING WALL
PROPOSED WALL
DEMOLITION WALL
Studio/1p
NOTES
Drawings for sketch purposes only and not for construction.
FLAT ROOF
Balcony 5.03m²
FLAT 5
STUDIO(1p)
37.54m²
1(EV)
2
3
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Job No. 2023/ NWN
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166 Northwood Way
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