# Burr Street Planning Gateway 1 — Fire Statement

12 January 2024 17025BC





# **Revision History**

Version	Date	Author	Reviewed By	Comments
01	19/10/2021	Wes Ngo	Phevos Giorgallidis	Initial Issue
01-A	20/06/2022	Wesley Ngo	Phevos Giorgallidis	Updated following planning changes to drawings
01-B	12/01/2023	Lefteris Koutsoloukas	Phevos Giorgallidis	Updated following planning changes to drawings

Document reference
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The validity of this document is dependent upon the recommendations being implemented in full and as described. This document relates to a development that is subject to review from Approval Authorities. It should be ensured that the contents of the document are agreed with all the relevant approval bodies prior to implementation.

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# **Application Information**

#### 1. Site Address

Site Address	
Site Address Line	4-11 Burr Street
Town	Luton
County	Bedfordshire
Site Postcode (optional)	LU2 0HN

# 2. Description of Proposed Development

This application seeks permission for amendments to the approved scheme. The proposed changes involve the construction of four buildings ranging from five to 12 stories (referred to as Block A – Block D), facilitating residential development that includes homes with 1, 2, and 3 bedrooms. The development will also incorporate cycle parking, refuse/recycling storage, plant facilities, and associated landscaping at both ground and roof levels, following the demolition of existing buildings.

It is proposed to deliver a total of 406 new homes, complemented by private amenity spaces, landscaped courtyards, and roof terrace areas. The development considers various demographics, aiming to provide a diverse range of living spaces. This includes an increased number of larger two-bedroom units and onsite provision of family homes, each with its own private amenity space.

Blocks B, C, and D each have a residential floor exceeding 18m high. All of them will be equipped with two staircases and lifts, with one staircase and lift designated specifically for firefighting purposes. In contrast, the top floor of Block A is located below 18m, and it is only provided with a protected staircase and two lifts.

#### Block A - 45 units

5 x 1B1P Units

5 x 2B3P Units

11 x 2B4P Units

17 x 3B4P Units

7 x 3B5P Units

Block B - 76 units

30 x 1B1P Units

44 x 2B3P Units

2 x 3B4P Units

Block C - 128 units

42 x 1B1P Units

16 x 1B2P Unit

70 x 2B3P Units

Block D - 157 units

51 x 1B1P Units

20 x 1B2P Unit

84 x 2B3P Units

2 x 3B4P Unit

# 3. Qualifications & Experience of the Author

Qualifications	
Name	Phevos Giorgallidis
Academic Qualifications	BSc, MSc
FIOIESSIONAL QUANTICATIONS	AlFireE Associate Member Institution of Fire Engineers

#### Experience

Phevos is an Associate Fire Engineer having over 9 years of experience working on a wide range of projects and specialising in complex retail/commercial and residential developments. Phevos has a broad range of skills in the fire safety engineering field developing performance-based solutions for complex projects achieving the client's objectives and gaining approval from the relevant authorities. Phevos has worked in large residential schemes comprising of multiple blocks from concept design to construction stage.

Phevos is in a possession of MSc in Fire and Explosion Engineering with first class honours and a BSc in Civil and environmental engineering. Also, an Associate Member of the IFE and is in the process of obtaining a Chartered Engineer status.

# 4. Consultation (if any) on Issues Relating to the Fire Safety

BB7 had previously been involved in the scheme since February 2021 and provided fire engineering support to the design team. An Outline RIBA Stage 2 Fire Strategy was produced by BB7 for the approved scheme (dated 26th April 2021). A further update to the Outline RIBA Stage 2 Fire Strategy was produced on 28th October 2021.

However, the scheme has been amended since then to incorporate the following changes:

- 1. 77 extra flats inc. 43 additional 2 bed units. Unit mix has changed but 1 beds still not >40% and 3 beds 28.
- 2. Removal of 2nd stair core from blocks A,C & D. Staircase on block A replaced by a triplex.
- 3. All 3 beds now either have private entrance from ground floor or duplexes with private roof garden.
- 4. Block A lighter weight material for access points to private gardens
- 5. Block B replace setback with full floor & extra floor.
- 6. Block B ends of block squared off.
- 7. Block C extra floor whilst retaining 2 floor setback.



- 8. Block D extra floor & concierge.
- 9. Blocks C&D roadside ends extended slightly.

An updated RIBA Stage 2 Fire Strategy has been prepared to reflect the new amendments. (Ref: BB-OFS-11053-0F-01-D).

#### Year 2024:

A second staircase was added to serve Block B, C and D (Blocks over 18m in height). The drawings appended to this fire statement include the latest layouts and the proposed fire strategy.

Consultation relating to fire safety has not been made with the Approving Authorities with regards to the amended scheme. The intention is to discuss the fire strategy with the design team and consult with the Approving Authorities in the upcoming weeks.



# 5. Site Layout Plan with Block Numbering as per Building Schedule Referred to in Section 6



Figure 1 - Site Layout Plan



# 6. Building Schedule – The Principles, Concepts and Approach Relating to Fire Safety That Have Been Applied to the Development

Table 1 - Building Schedule

Site Information			Building Information			Resident Safety Information			
a) block no. as per site layout plan above	of storeys excluding those	c) proposed use (one per line)	d) location of use within block by storey	e) standards relating to fire safety/ approach applied	f) balconies	g) external wall systems	h) approach to evacuation	i) automatic suppression	j) accessible housing provided
Block A	Ground to Level 5  15.4 m when measured from lowest ground to the topmost occupied storey 12.8m when measured from fire service access level to the topmost occupied storey	Residential Flats	Ground to Level 4 – Residential Apartments  Ground – Residential ancillary areas i.e., refuse store, bike store, plant rooms etc.  Level 4 – Residential area and roof garden.	BS9991 – Residential Areas fire engineered approach – Corridor Smoke Ventilation BS7974 – Corridor Smoke Ventilation	Class A2-s1, d0 or better	Class A2-s1, d0 or better	Stay Put – Residential Apartments Simultaneous – Non- Residential Areas	Yes- Residential sprinklers, full.  In residential Areas, residential ancillary & non-residential areas with a compartment up to 100m². All based on BS 9251:2021.	None
Block B	Ground to Level 7  23.2m when measured from lowest ground to the topmost occupied storey.  23.2m when measured from fire service access level to the topmost occupied storey.	Residential Flats	Ground to Level 7 – Residential Apartments  Ground – Residential ancillary areas i.e., refuse store, bike store, plant rooms etc.	BS9991 – Residential Areas fire engineered approach – Corridor Smoke Ventilation BS7974 – Corridor Smoke Ventilation	Class A2-s1, d0 or better	Class A2-s1, d0 or better	Stay Put – Residential Apartments  Simultaneous – Non- Residential Areas	Yes- Residential sprinklers, full.  In residential Areas, residential ancillary & non-residential areas with a compartment up to 100m². All based on BS 9251:2021.	None
Block C	Ground to Level 9  31.3m when measured from lowest ground to the topmost occupied storey.  29.6m when measured from fire service access level to the topmost occupied storey.	Residential Flats	Ground to Level 9 – Residential Apartments  Ground – Residential ancillary areas i.e., refuse store, bike store, plant rooms etc.  Level 8 – Residential area and roof garden	BS9991 – Residential Areas fire engineered approach – Corridor Smoke Ventilation BS7974 – Corridor Smoke Ventilation	Class A2-s1, d0 or better	Class A2-s1, d0 or better	Stay Put – Residential Apartments Simultaneous – Non- Residential Areas	Yes- Residential sprinklers, full.  In residential Areas, residential ancillary & non-residential areas with a compartment up to 100m². All based on BS 9251:2021.	None
Block D	Ground to Level 11  36m when measured from lowest ground to the topmost occupied storey.  35.6m when measured from fire service access level to the topmost occupied storey.	Residential Flats	Ground to Level 10 – Residential Apartments  Ground – Residential ancillary areas i.e., refuse store, bike store, plant rooms etc.  Level 11 – Roof Garden	BS9991 – Residential Areas  fire engineered approach – Corridor Smoke Ventilation  BS7974 – Corridor Smoke Ventilation	Class A2-s1, d0 or better	Class A2-s1, d0 or better	Stay Put – Residential Apartments Simultaneous – Non- Residential Areas	Yes- Residential sprinklers, full.  In residential Areas, residential ancillary & non-residential areas with a compartment up to 100m². All based on BS 9251:2021.	None

# 7. Specific Technical Complexities

Explain Any Specific Technical Complexities in Terms of Fire Safety (For Example Green Walls) and/or Departures from Information in Building Schedule Above.

### **Corridor Distances**

The recommendations of BS 9991 permit single direction travel distances up 15m where all apartments are provided with sprinkler protection in accordance with BS 9251

There are extended residential corridor travel distances / corridors with non-typical layouts in the following:

- Block A Ground to Level 4
- Block C Ground to Level 9
- Block D Ground to Level 10

A fire engineered solution will be proposed for the extended corridor travel distances which is to incorporate an enhanced mechanical smoke ventilation system. Computational fluid dynamics analysis will be undertaken at later stage in RIBA stage 3 to demonstrate that tenable conditions for means of escape and firefighting can be achieved. The intention is to work closely with the smoke ventilation specialists in the upcoming weeks/months.

## External Fire Spread

The northern elevation of Block C is within 1m to the relevant boundary and will be required to achieve 120-minutes fire rating for integrity, loadbearing and insulation when tested on both sides.

The northern and eastern elevation of Block D appears to be within 1.5m to the relevant boundary and the eastern elevation. As such any requirements for protected areas should achieve 120-minutes fire rating for integrity, loadbearing and 15-minutes insulation when tested from the inside face only.

A full external fire spread assessment will be undertaken at detailed design stage (RIBA Stage 3) to determine the necessary extent of protected areas.

#### Fire Service Access

It is understood that the road towards the north of Block C and D is a private road and there is no fire appliance route available. The dry riser pipework distance and fire appliance parking position distance to the dry riser in all blocks appear to be within the limits of BS 9990.

# 8. Issues Which Might Affect the Fire Safety of the Development

Explain how any issues which might affect the fire safety of the development have been addressed.

See Section 6 and Section 7.

# 9. Local Development Document Policies Relating to Fire Safety

Explain How Any Policies Relating to Fire Safety In Relevant Local Development Documents Have Been Taken Into Account.

N/A. The scheme is located outside of Grader London. Therefore, the London Plan Policies are not applicable.



# **Emergency Road Vehicle Access & Waer Supplies for Firefighting Purposes**

# 10. Explanation of Fire Service Site Plan

Explanation Of Fire Service Site Plan(S) Provided In 14. Including What Guidance Documents Have Informed the Proposed Arrangements for Fire Service Access and Facilities?

## **Emergency Access Roads**

Refer to Section 14 for the indicative emergency access routes and siting of fire appliances.

The proposed fire service access arrangement is to be consulted with the local Fire Authority. The access to the site for firefighting provisions is to be in accordance with guidance in BS 9991:2015 (Residential) and ADB Vol 2 2019 including 2020 amendments (non-residential areas).

it appears that the streets are wide enough to accommodate a pump appliance, but the transport consultant will confirm this at the next design stage.

#### Main Fire Personnel Access Points to the Building

The main fire personnel access point will be via the protected route into the firefighting stair or protected stair core from Burr Street, Back Street and Duke Street.

### Firefighting Shaft & Dry Fire Main

The following blocks are to be provided with a residential firefighting shaft (including a firefighting lift) as they have a top storey more than 18m above fire appliance access level:

- Block B
- Block C
- Block D

The main core serving all floors will be designed as a firefighting shaft.

Block A has a top floor under 18m if access into the core is provided via the west elevation (Back Street) as such a firefighting shaft is not required for this block.

All blocks are to be provided with a dry riser. The dry riser inlet connection point should be provided within 18m and visible from the fire appliance parking position. The dry riser outlet is to be located in the full landing of the firefighting stair (protected stair in Block A) at all levels.

The distance from the fire appliance to the dry riser inlet should not exceed 18m and the horizontal run of the dry riser pipework, from inlet to the point where the dry riser pipework becomes vertical, should not exceed 18m.

The hose laying distances should be within 60m from the residential firefighting shaft and 45m from a dry riser if located in the protected stair of Block A.

#### Fire Hydrants

Hydrants are to be located in positions that are near to building entry points (including entry points containing fire mains) and fire appliance parking positions.

Hydrants are to be provided within 90 m of an entry point to the building and not more than 90 m apart. Hydrants are also to be provided within 90 m of dry fire main inlets.

The location and working order of any existing hydrants should be confirmed by the design team.

# 11. Emergency Road Vehicle Access

Specify emergency road vehicle access to the site entrances indicated on the site plan.

Refer to Section 14 for the fire service site plan.

Fire appliance emergency access roads for pump appliances for each block in the development is to be provided via Burr Street, Back Street and Duke Street.

Is the emergency vehicle tracking route within the site to the siting points for appliances clear and unobstructed?

Yes

The tracking route for emergency vehicles (fire appliance for pump appliances) is to be provided by a vehicle tracking specialist. The routes required have been highlighted indicatively in Section 14.

# 12. Siting of Fire Appliances

See Section 6 and Section 10

Fire appliance should be able to park within 18m of the dry riser inlet connection point.

Fire appliance should also be able to either gain access to 15% of the of the perimeter or within 45m of every point of the footprint of the ground floor commercial/non-residential areas.

# 13. Suitability Of Water Supply for The Scale Of Development Proposed

#### Nature of water supply:

Hydrant - Public

To be confirmed by the design team.

Does The Proposed Development Rely on Existing Hydrants and If So, Are They Currently Usable / Operable?

Do not know.

To be confirmed by the design team.



# 14. Fire Service Site Plan



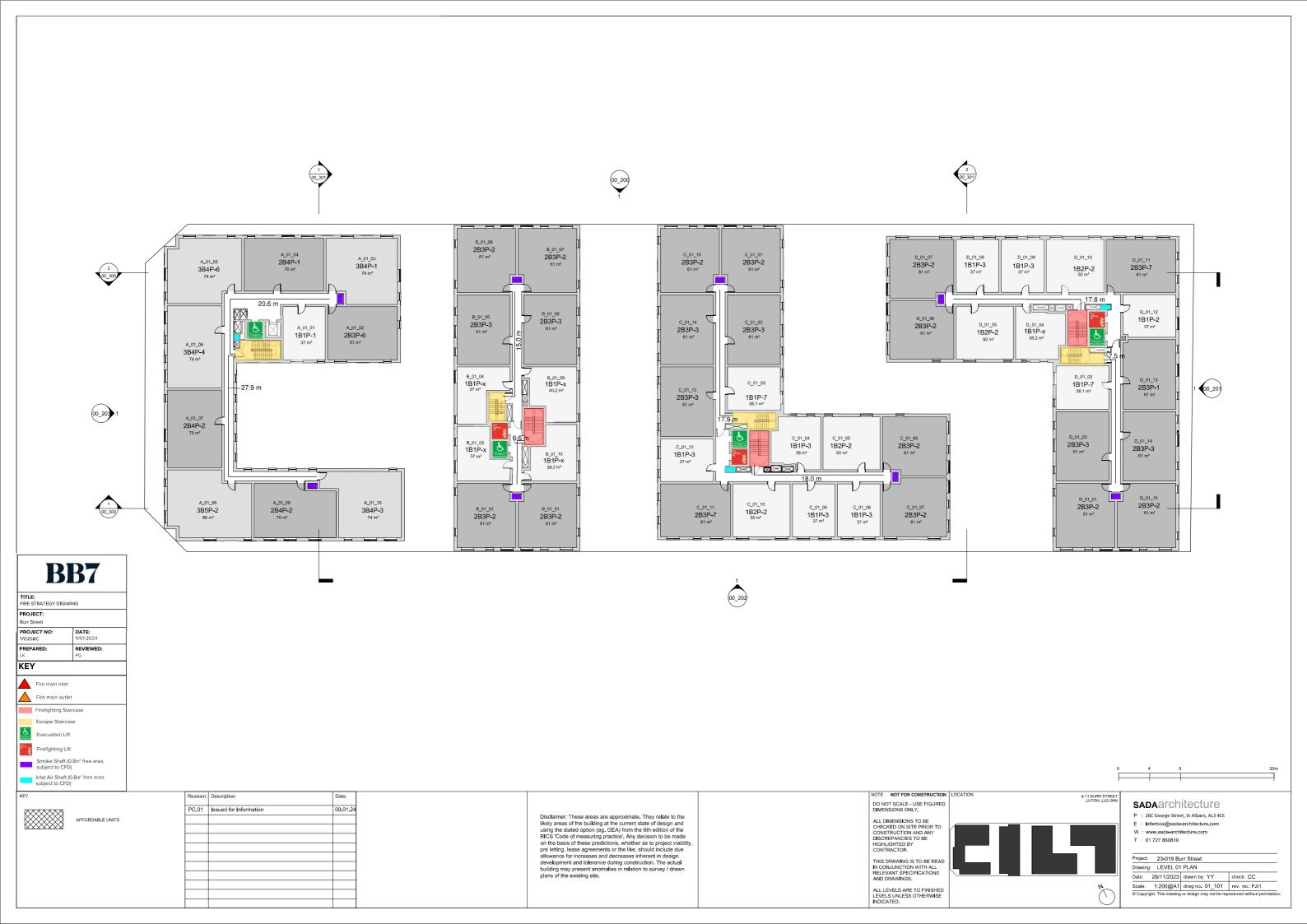
Figure 2 - Fire Service Site Plan

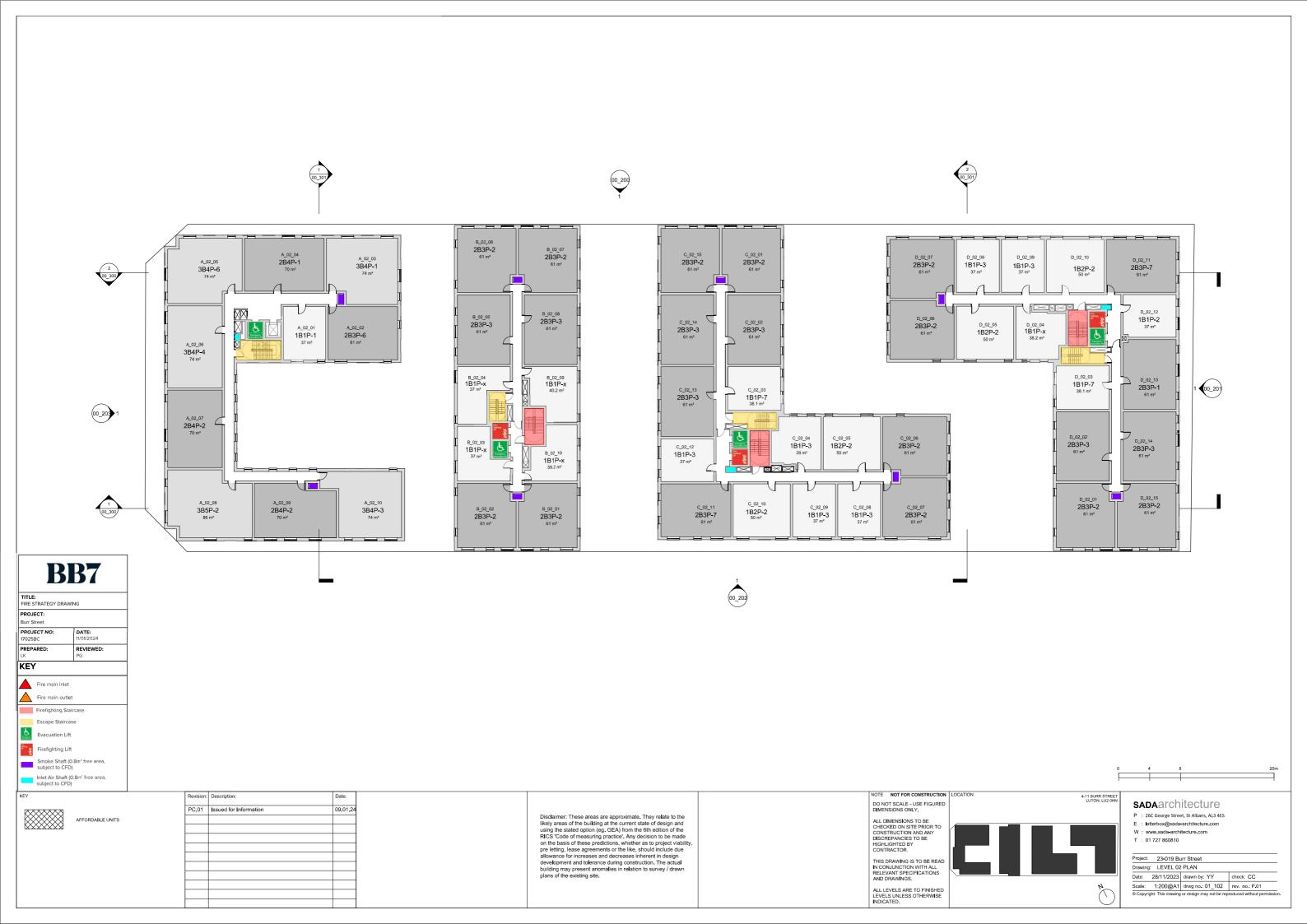


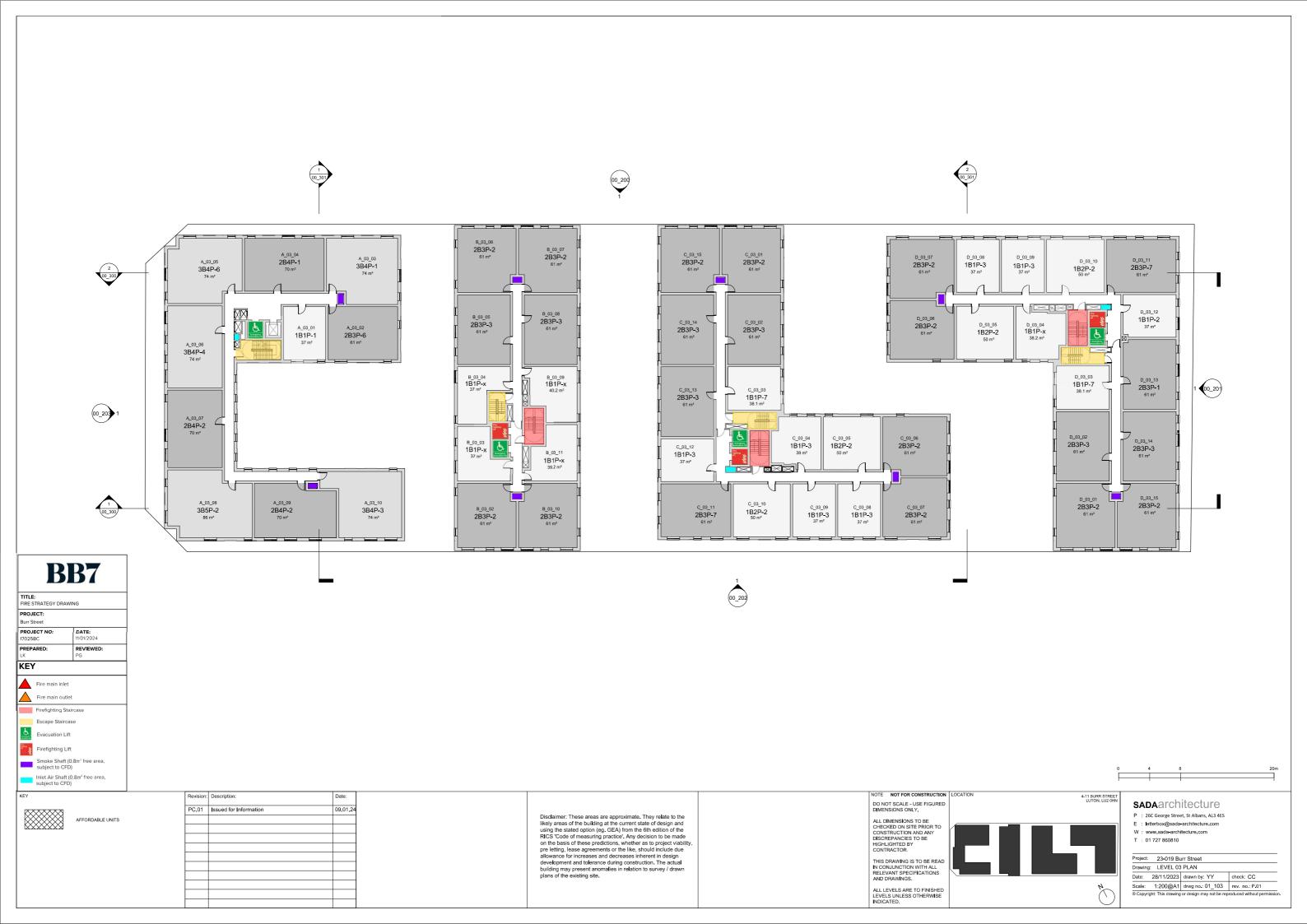
Fire Statement Completed By: Phevos Giorgallidis			
Signature	Pheros G		
Date	12/01/2024		

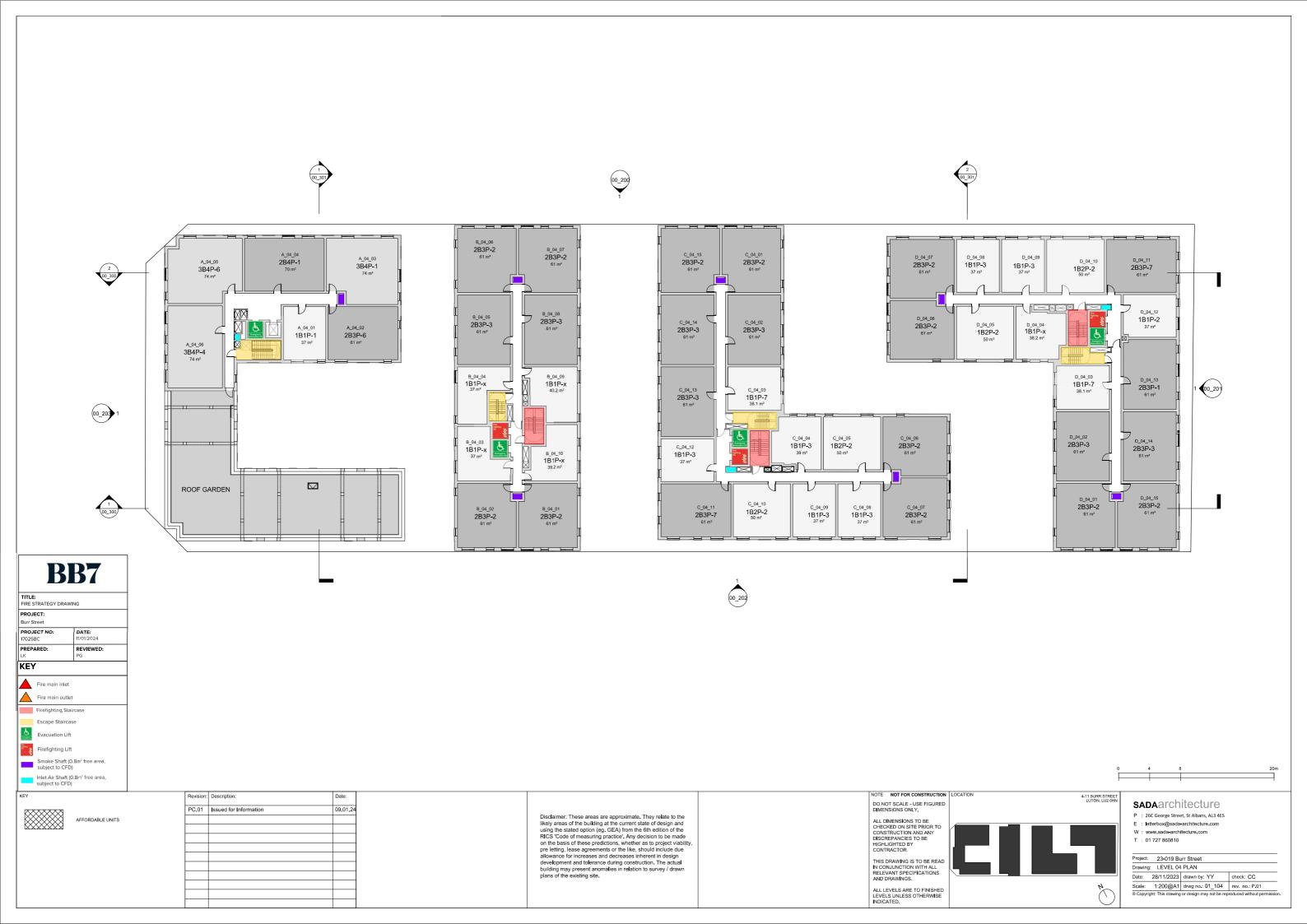
Appendix 1 – Fire Drawings

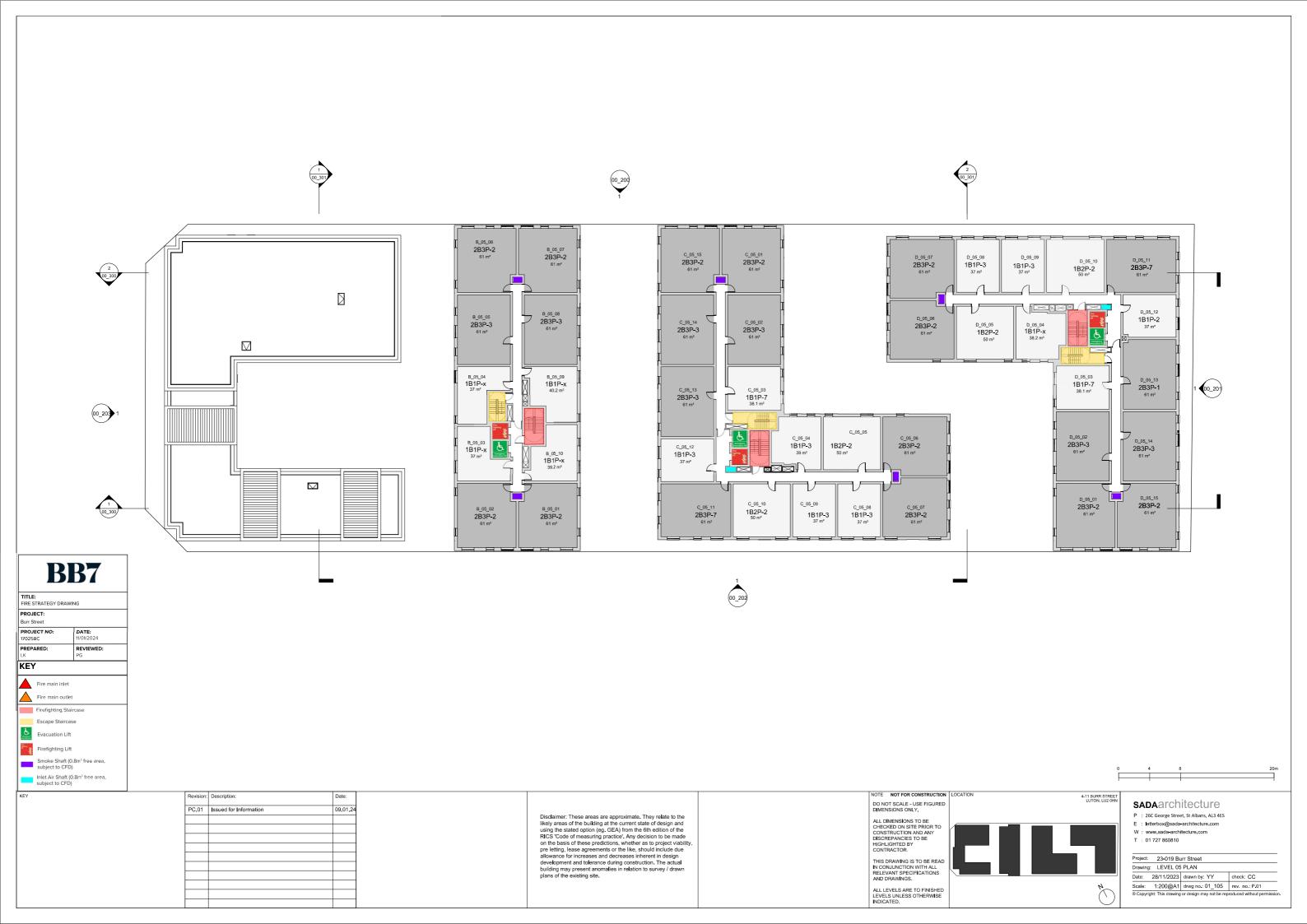


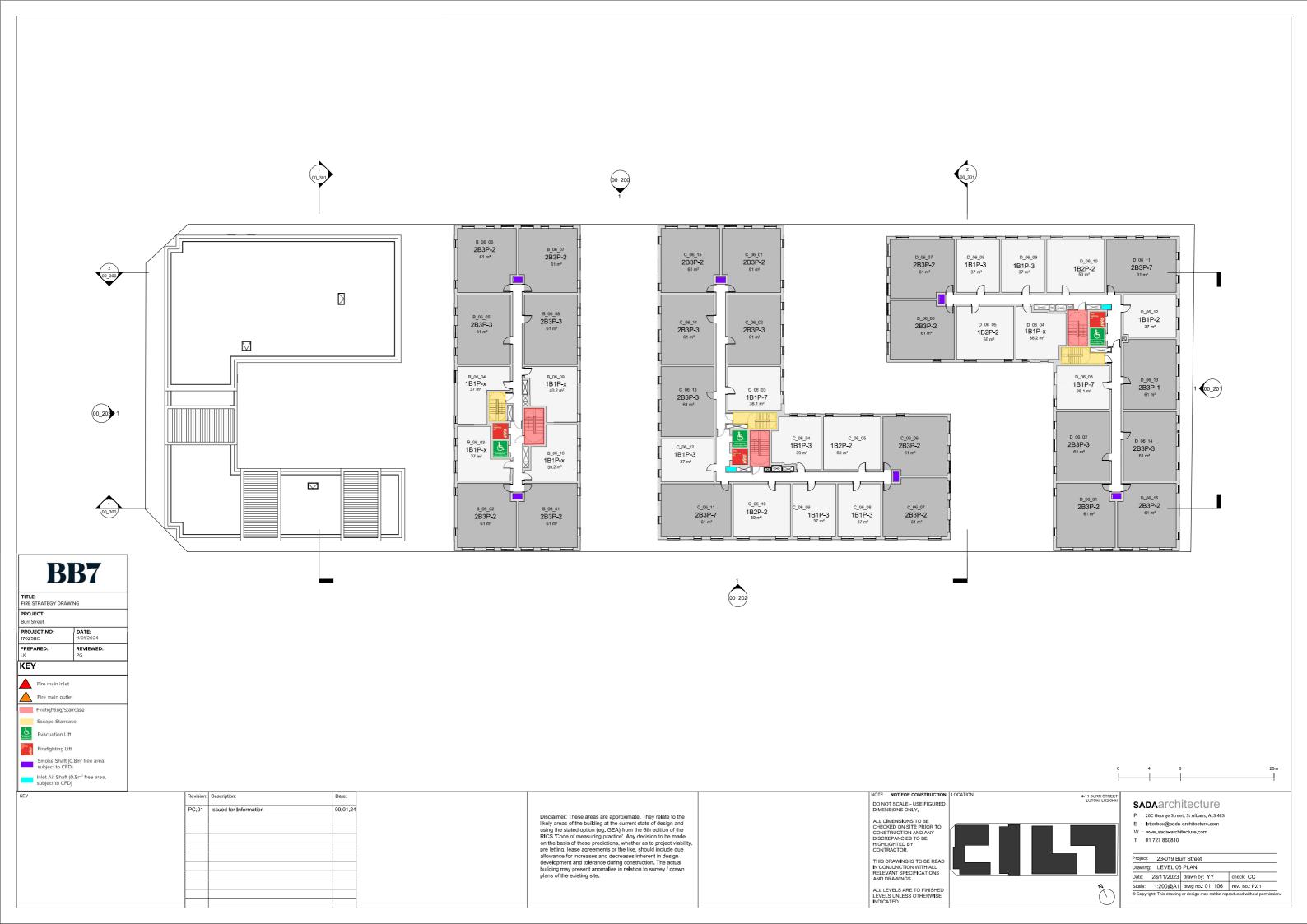




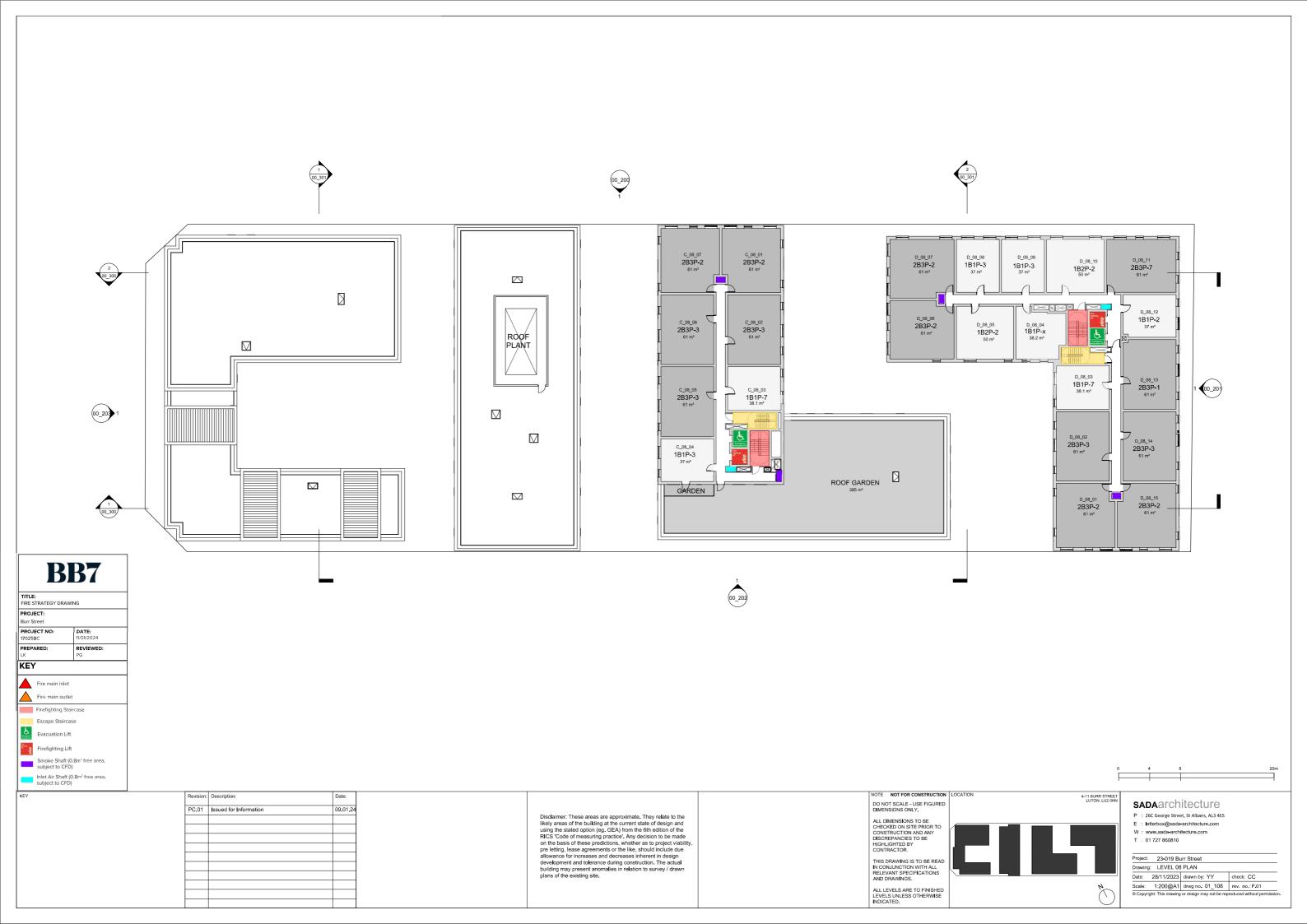




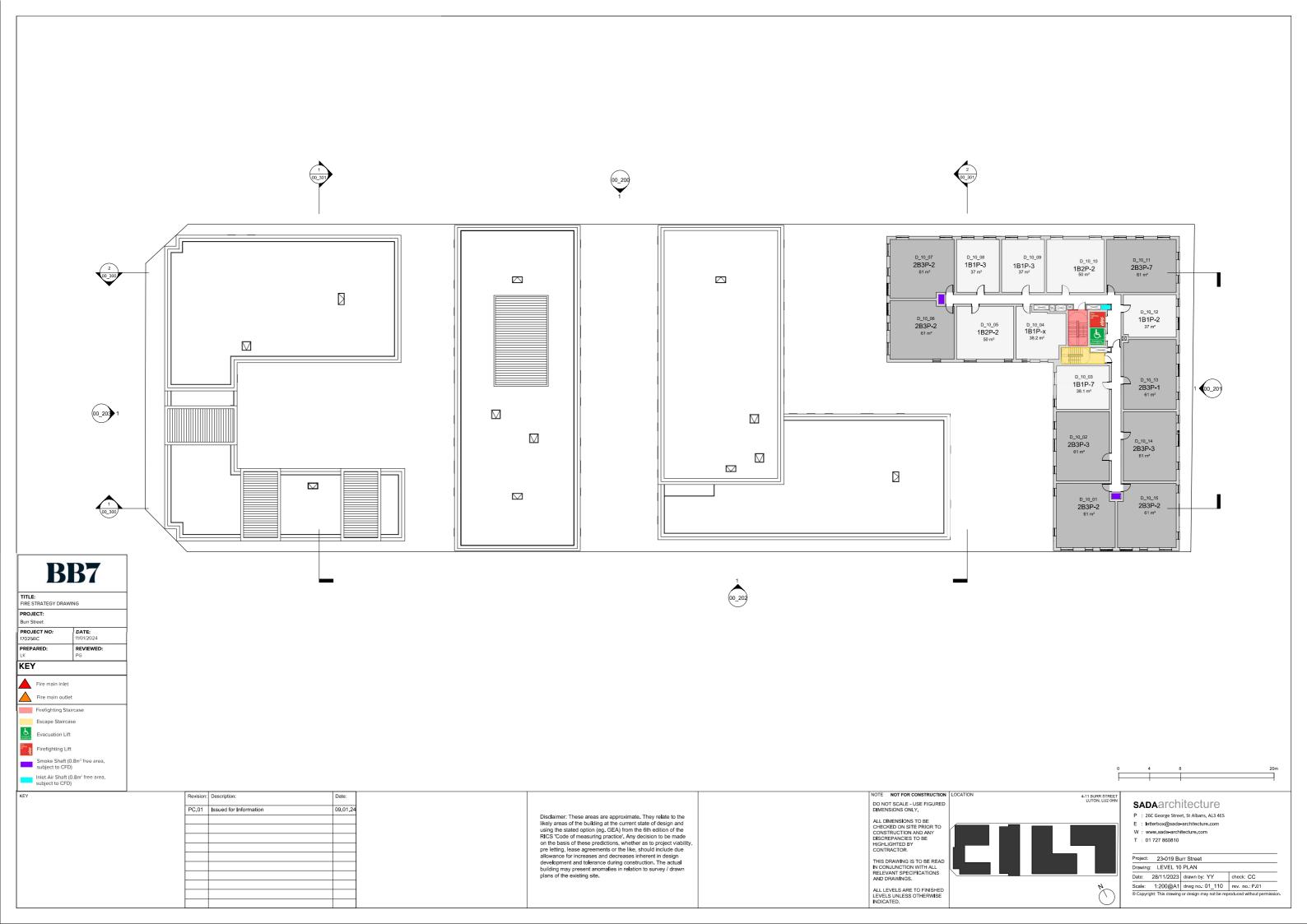


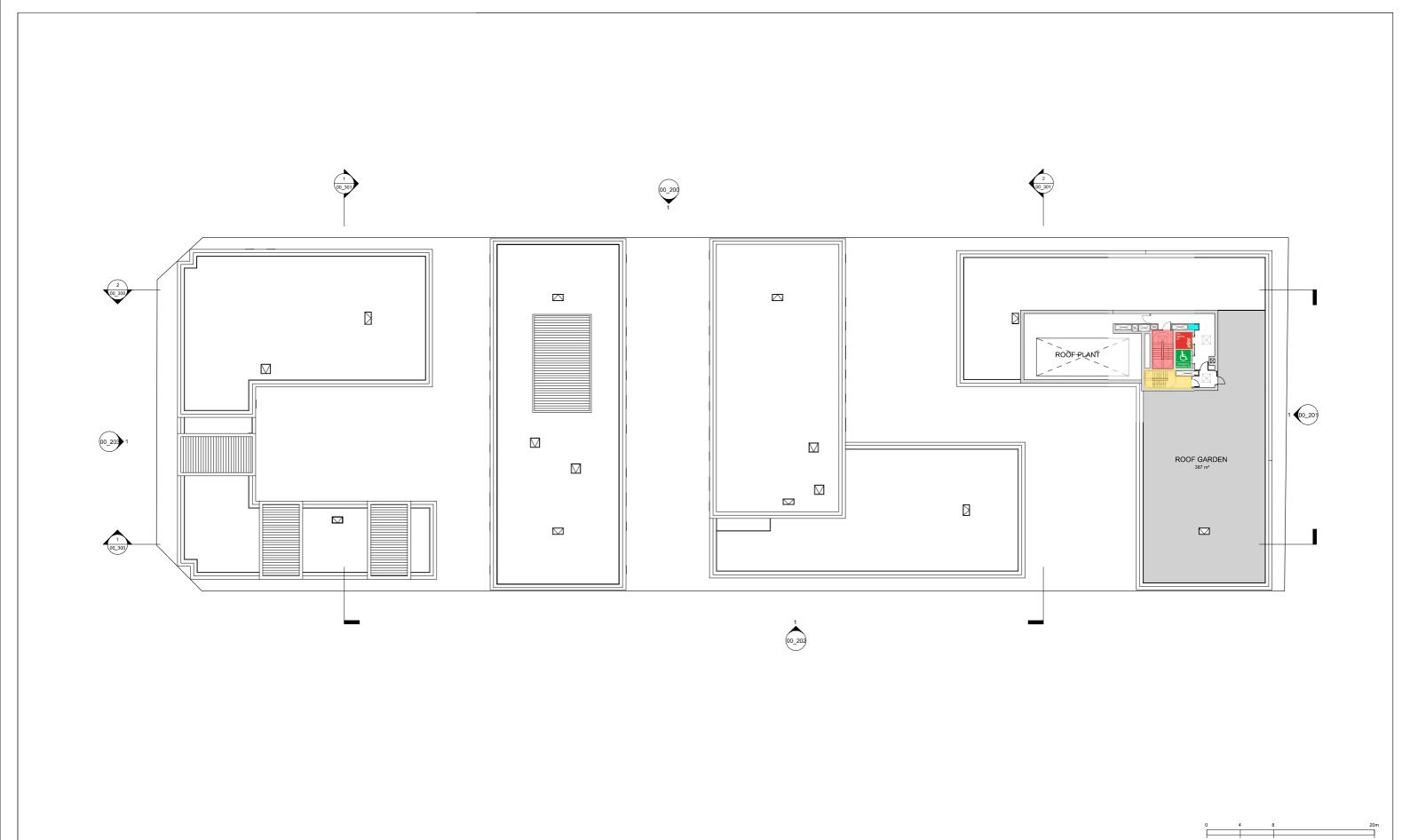


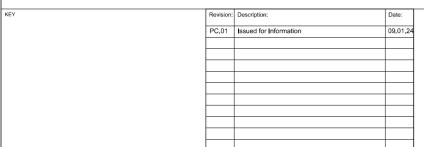












Disclaimer: These areas are approximate. They relate to the likely areas of the building at the current state of design and using the stated option (eg. SEA) from the 6th edition of the RICS 'Code of measuring practice'. Any decision to be made on the basis of these predictions, whether as to project viability, pre letting, lease agreements or the like, should include use allowance for increases and decreases inherent in design development and tolerance during construction. The actual building may present anomalies in relation to survey / drawn plans of the existing site.

NOTE NOT FOR CONSTRUCTION LOCATION DO NOT SCALE - USE FIGURED DIMENSIONS ONLY.

ALL DIMENSIONS TO BE CHECKED ON SITE PRIOR TO CONSTRUCTION AND ANY DISCREPANCIES TO BE HIGHLIGHTED BY CONTRACTOR.

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT SPECIFICATIONS AND DRAWINGS.



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Project: 23-019 Burr Street						
Drawing: LEVEL 11 PLAN						
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Scale:	1:200@A1	drwg no.: 01_111	rev. no.: P.01			
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