



Fire Statement – Land to the west of Rodney Street

Project No.: MA22046

Date: 09/08/2022

Revision: R02

Author: MH

Reviewer: CB

Approver: RR

1 INTRODUCTION

OFR Consultants (OFR) have been appointed by Wates Construction Ltd. to develop a Planning Gateway One fire statement for the proposed residential development located at land to the west of Rodney Street, Manchester. The fire statement aims to provide an abridged version of a fire strategy, and follows the process as outlined within the UK Government Guidance¹ first published on 24/06/21 that came into effect on 01/08/21 – which requests submission via a form published by the Secretary of State (or a form to similar effect) containing the particulars specified or referred to in the form, which includes information about (not exhaustive list):

- The principles, concepts and approach relating to fire safety that have been applied to the development
- The site layout
- Emergency vehicle access and water supplies for firefighting purposes
- What, if any, consultation has been undertaken on issues relating to the fire safety of the development; and what account has been taken of this

The full fire strategy for this project is detailed in the Fire Strategy report, produced by OFR Consultants '220513-R00-MA22046-Rodney Street Stage 3 Fire Strategy-DF-CIC', dated 13th May 2022 and the OFR Smoke Modelling Report '220808-R00-MA22046-WP3-CFD Report-DN-CIC'.

The following pages contain the Planning Gateway One fire statement, in the format provided by the UK government.

¹ 24 June 2021, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/997770/Fire_statement_form_-_guidance.pdf.

2 FIRE STATEMENT FORM

Application information	
1. Site address line 1	Land to the West of Rodney Street
Site address line 2	
Town	Manchester
County	
Site postcode (optional)	M4 6JJ
2. Description of proposed development including any change of use (as stated on the application form):	Erection of two residential apartment buildings (Use Class C3), one of 8 storeys (68 apartments) and one of 5 storeys (50 apartments), to form a total of 118 residential apartments; and erection of 10, 3 storey townhouses (Use Class C3); together with car and cycle parking provision, hard and soft landscaping including public realm, access, substation and other associated works.
3. Name of person completing the fire statement (as section 15.), relevant qualifications and experience. Guide: no more than 200 words	Consistent with the UK Government guidance for the development of this fire statement, the statement has been prepared by someone who is third-party independent and suitably qualified. The approver of this document is a registered engineer with the Engineering Council with the post-nominals CEng (Chartered Engineer) and is registered with the Institution of Fire Engineers with the post nominals MIFireE. Richard Rankin MEng (Hons), CEng, MIFireE Design Director 16 years' experience of fire engineering working in both the UK and the Middle East. Richard has gained considerable experience of UK and International regulations and approval processes whilst designing fire strategies for a wide range of projects, from simple single storey projects to large and complex mixed-use schemes. Primary skill is to develop innovative fire strategies for large and complex buildings whilst maintaining the architectural integrity, achieving the client's objectives and gaining approval from the relevant authorities.

4. State what, if any, consultation has been undertaken on issues relating to the fire safety of the development; and what account has been taken of this.	OFR are not aware of any formal consultation that has been undertaken at present. Building Control have been in attendance at recent design team meetings.
5. Site layout plan with block numbering as per building schedule referred to in 6. (Consistent with other plans drawings and information submitted in connection with the application)	
Site layout plan is:	



Figure 1 –Site plan

The principles, concepts and approach relating to fire safety that have been applied to the development

6. Building schedule

Site information				Building information			Resident safety information		
a) block no. as per site layout plan above	b) • block height (m) • number of storeys excluding those below ground level • number of storeys including those below ground level	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	21.4m 8 storeys No basement	Residential flats	All Levels	BS 9991	Class A2-s1, d0 or better	Class A2-s1, d0 or better	Stay put	Yes – residential sprinklers, full	All units M4(2)
Block B	12.858m 5 storeys No basement	Residential flats	All Levels	BS 9991	Class A2-s1, d0 or better	Class A2-s1, d0 or better	Stay put	Yes – residential sprinklers, full	All units M4(2)

Townhouses	5.7m 3 storeys No basements	Residential houses	All Levels	BS 9991	Worse than Class A2-s1, d0	Worse than Class A2-s1, d0	Stay put	None	All units M4(2)
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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

Guide: no more than 500 words

Block A has a single staircase central to the block, this causes a maximum single direction travel distance of 22m, 7m more than the maximum recommended by BS 9991. A mechanical smoke control system is proposed to ensure tenable conditions are maintained within the common corridor during evacuation and fire fighter intervention. The suitability of this arrangement has been demonstrated via CFD modelling. A summary of the Block A smoke shaft provisions is as follows:

- Both shafts need to have an extract fan such that smoke can be pulled away from the stair with inlet air provided naturally via free spin fan in the other shaft. These are not needed as reversible fans, a push-pull system is not required.
- Required extract rate is 4.5m³/s.
- AOV at head of the stair requires minimum 1m² geometric free area.
- An AOV is required at low level in the staircase (Level 1), this requires a minimum 0.5m² geometric free area.

At the ground floor of Block A the staircase discharges direct to outside and provides access to ancillary spaces. The staircase and lifts will be separated from the ancillary spaces via ventilated protected lobby. From this ventilated lobby there is access to a reception area and access to a second ventilated lobby leading to the bin and cycle stores i.e., double lobby protection provided to the staircase and lifts.

It is proposed to include lifts suitable for self-evacuation of any mobility impaired occupants in Blocks A and B. The smoke ventilation provisions have been proposed with this in mind, and an additional smoke shaft above that recommended in guidance is proposed to protect the area in front of the lifts in Block B. This is not necessary in Block A, tenable conditions are maintained in the corridor via the system summarised above.

It has been demonstrated via CFD modelling that tenable conditions will be maintained in front of the lift doors in both blocks, and therefore the suitability of the arrangement regarding self-evacuation of persons with reduced mobility. A summary of the Block B smoke shaft provisions is as follows:

- The two shafts close to the lifts will be push-pull with reversible fans.
- The third shaft, furthest from the lifts, will be extract only.
- All fans when operating in extract mode need to achieve a 6 m³/s volumetric flow rate.
- All fans when operating in supply mode need to achieve a 2 m³/s volumetric flow rate.

- AOV at head of each stair requires minimum 1m² geometric free area.

Note that the quantitative analysis carried out via CFD modelling aligns with the principles described in PD 7974 and is adopted to demonstrate an adequate level of fire safety can be achieved (for both means of escape and for fire service access). This approach is as recommended by Annex A3 of BS 9991.

There are some amenity spaces within Block B (two at ground and one at first floor), for use by the residents. These will be separated from the residential space via fire compartmentation and protected lobbies per the guidance in BS 9991.

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.

Guide: no more than 500 words

Any issues relating to fire safety identified at this stage are recorded and addressed in the Stage 3 fire strategy. The purpose of the fire strategy currently is to inform the design team as to how the functional requirements of the Building Regulations can be achieved, and if any amendments are recommended to the current proposals.

The design broadly aligns with standard fire safety guidance with the exception of the extended travel distance noted in section 7 above. The approach to demonstrating suitability of this deviation has been carried out as summarised above. This approach aligns with recommendations in relevant guidance documents.

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.

Guide: no more than 500 words

The fire strategy for the development is premised on satisfying the Building Regulations, including all updates applicable at the time of preparation of this statement. There are currently no local fire safety guidance documents or regulations specific to the project location.

Emergency road vehicle access and water supplies for firefighting purposes

10. 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?

BS 9991 dictates that for a residential building where the topmost story is over 18 m above access level, there should be at least one fire-fighting shaft, comprising a firefighting lift and firefighting stair provided with a dry riser. Ventilated firefighting lobbies are not recommended for residential buildings, the stairs and lifts are

protected via ventilated common corridors. The top floor height for Block A is 21.4 m. Owing to the size of the floor plan (< 900 m²), one firefighting shaft will be provided, this will be accessible directly from outside at ground level. The suitability of the proposed arrangement in the Block A common corridors has been demonstrated as suitable to maintain tenable conditions for the fire service in line with the criteria in PD 7974.

The base of the staircase and lifts in Block A will be separated from ancillary spaces via a ventilated lobby. The staircase is accessible direct from outside or internally via the protected lobby.

The top storey of Block B is 12.858m above access level therefore there is no recommendation within guidance to provide a firefighting shaft. A dry riser will be provided in the main stair, this provides suitable hose coverage in line with BS 9991. The ventilation proposed for this block will also aid in firefighting access as it serves to protect the staircases.

Vehicle access within 18m will be provided to the dry riser inlets in Blocks A and B.

The ground floor apartments in Blocks A and B are accessible direct from outside (not accessible internally from the staircase(s) or ancillary areas). Fire service access to these apartments also aligns with the recommendations in BS 9991, access to a sprinklered dwelling within 75m of the fire service parking position.

As the Townhouses are not sprinklered this distance is reduced to 45m, access to all areas of each of the townhouses is within 45m of a fire service vehicle parking position as per BS 9991 guidance.

Figure 2 (in 14.) shows the ground floor fire service entry points for all buildings. |

11. Emergency road vehicle access

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

| Rodney Street/Butler Street, Jersey Street and Wadeford Close provide fire service vehicle access to the building. From these access roads, the dry riser inlets will be within the 18m limit specified in BS 9991. Provision is being made for a turning facility to ensure fire service vehicles will not need to reverse in excess of guidance recommendations. |

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

Yes

12. Siting of fire appliances

| Blocks A and B will be fitted with dry risers, with inlets on the outside of each block. Vehicle access to the inlets will be provided within 18m of a suitable fire service parking position.

Block A will have a firefighting shaft, accessible direct from outside. Block B is provided with a protected staircase including dry riser. The main fire service access route is via the building secondary entrance which provides a protected route to the base of the staircase, there is also a separate alternative route from the base of the staircase.]

13. Suitability of water supply for the scale of development proposed

Guide: no more than 200 words

[Hydrant provisions align with current guidance, one existing hydrant may be moved to accommodate the location of the new blocks. External fire hydrants will be provided within 90 m of the dry riser inlets. The water main supplying these will provide pressure and flow in accordance with BS 9990:2015. This will be confirmed by the MEP engineer during detailed design.]

Nature of water supply:

Hydrant- public

Does the proposed development rely on existing hydrants and if so, are they currently usable / operable?

Yes

Existing hydrants will be surveyed and supplemented with new / additional hydrants installed as necessary to ensure satisfactory provisions in terms of pressure, flow rate, distance from dry riser inlets and fire service vehicle locations (i.e. 90 m).

14. Fire service site plan

Fire service site plan is:





15. Signature	
16. Date	09/08/2022