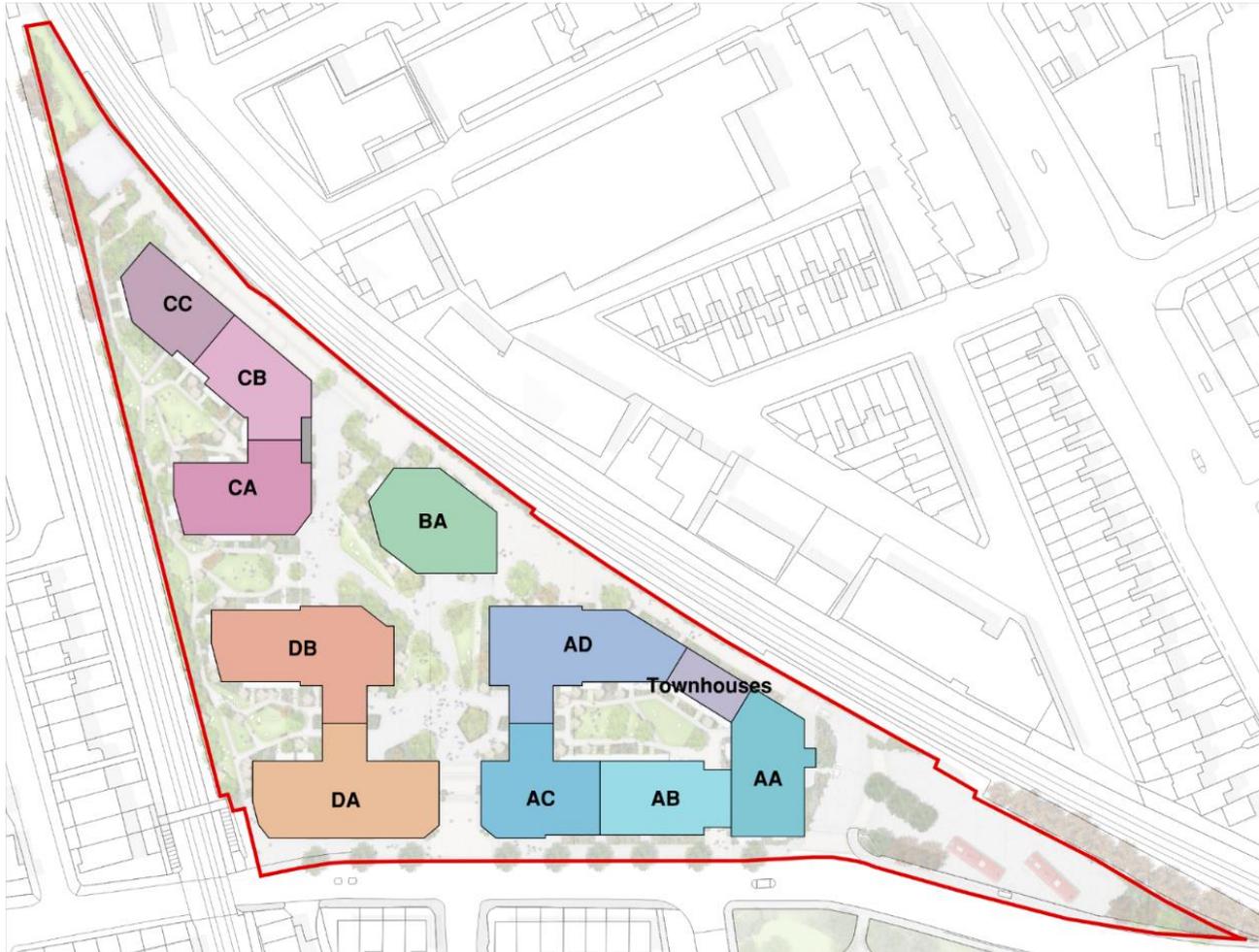


Fire statement form

Application information	
1. Site address line 1	38 Manor Road
Site address line 2	Richmond
Site address line 3	
Town	London
County	Greater London
Site postcode (optional)	TW9 1YB
2. Description of proposed development including any change of use (as stated on the application form):	<p>The proposed Manor Road development consists of two residential and two mixed-use buildings (which also contain residential accommodation). An overview of the proposed development is as follows:</p> <ul style="list-style-type: none"> • Block A consists of four cores (AA, AB, AC and AD) and three self-contained townhouses. <ul style="list-style-type: none"> ○ Core AA contains eight storeys and consists primarily of residential accommodation. ○ Core AB contains four storeys and consists primarily of residential accommodation. ○ Core AC contains four storeys and consists primarily of residential accommodation and commercial space on the ground floor. ○ Core AD contains eight storeys and consists primarily of residential accommodation. • Block B consists of a single core (BA). <ul style="list-style-type: none"> ○ Core BA contains 11 storeys and consists primarily of residential accommodation. • Block C consists of three cores (CA, CB and CC). <ul style="list-style-type: none"> ○ Core CA contains ten storeys and consists primarily of residential accommodation. ○ Core CB contains eight storeys and consists primarily of residential accommodation. ○ Core CC contains eight storeys and consists primarily of residential accommodation and commercial space on the ground floor. • Block D consists of two cores (DA and DB). <ul style="list-style-type: none"> ○ Core DA contains four storeys and consists primarily of residential accommodation. ○ Core DB contains eight storeys and consists primarily of residential accommodation. <p>Following the Government's announcement in July 2023 confirming the intention to mandate second staircases in new residential buildings above 18 metres, the proposals have been revised to ensure all buildings above 18 metres meet these standards and present the highest standard of fire safety.</p> <p>This has been accommodated through internal changes, including improving the efficiencies of circulation space and reductions in unit sizes, and minor external changes, including marginal increases in building footprint. The full extent of the changes are set out in the accompanying DAS Addendum, but are summarised as follows:</p>

	<ul style="list-style-type: none"> • Block A, Core A: a 450mm (or 45cm) extension in footprint to the south; • Block A, Core AD: a 225mm (or 22.5cm) extension in footprint to the south; • Block B: a 112.5mm (or 11.25cm) extension in footprint to the south and a 112.5mm (or 11.25cm) extension to the north; • Block C, Core A: a 225mm (or 22.5cm) extension in footprint to the north and north-east and a 112.5mm (or 11.25cm) extension to the east; • Block C, Core C: an infill of the recessed part of the façade to the south-east; • Block D, Core B: a 225mm (or 22.5cm) extension to the north and north-west. <p>The extensions in footprint have been accommodated to facades facing into the central landscaped area of the Site. There are no extensions in footprint proposed to the façades facing the site boundaries and, as such, there are no reductions in the distance of the proposed buildings to neighbouring residential receptors.</p> <p>The footprint extensions have led to minor changes to the elevations of the affected blocks. The total floorspace of the proposed development has increased by 2,037.2 sqm (GIA). The number of homes and mix of unit types remains unchanged.</p>
<p>3. Name of person completing the fire statement (as section 15.), relevant qualifications and experience.</p> <p>Guide: no more than 200 words</p>	<p>Prepared by Stephen McColgan – Fire Engineer - Stephen is an Associate member (AIFireE) of the Institute of Fire Engineers (IFE) and has a Master's degree of Science and a Bachelor (Honours) of Engineering degree in Fire Safety Engineering. Stephen has over two years' experience in developing and advising on fire safety design spanning across various sectors including but not limited to mixed-use, residential, industrial, commercial, assembly and recreation schemes across both the UK and Internationally.</p> <p>Reviewed by Taj Shuriquie – Principal Fire Engineer – Taj is an Associate member (AIFireE) of the Institution of Fire Engineers (IFE) and is into his fifth year of working in a fire safety consultancy role. Taj has a Bachelors (with honours) degree in Architecture and Environmental Engineering. Taj also has completed a Masters in Fire Safety Engineering at the University of Central Lancashire (UCLAN). His experience in developing and advising on the fire safety design spans across various sectors, including residential, educational, and commercial.</p> <p>Approved by Adam Eaton – Director of Fire Safety (Midlands, South West and Wales) – Adam is Hydrock’s Midlands, South West and Wales Director of Fire Safety and has significant Fire Engineering experience, working on a large variety of projects throughout the UK and Internationally – leading projects from 45,000-seater FIFA World Cup Stadia in Qatar to 160m tall residential buildings in the UK and a large scale 1,400 home development in Birmingham spanning over 30 mid to high rise apartment buildings. Adam is experienced in numerous Fire Engineering techniques/methods, such as Computational Fluid Dynamics (CFD), evacuation modelling and smoke control calculations. Adam is a Chartered Engineer with the Institution of Fire Engineers (IFE) and holds Member status (MIFireE).</p>

<p>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.</p> <p>Guide: no more than 200 words</p>	<p>Hydrock have been commissioned by Avanton to provide a Planning Gateway One Fire Statement document, as requested following formal consultation with the Health and Safety Executive (HSE), to support the planning application for the proposed residential developed located on the existing Homebase site at 38 Manor Road, Richmond Site, London TW9 1YB.</p> <p>Hydrock have also produced a London Plan Fire Statement document to satisfy the requirements of the London Plan through the planning application stage.</p> <p>Hydrock have undertaken extensive reviews of the proposed layouts in the form of fire safety comments mark-ups outlining any risks and issues from a fire safety perspective. Additionally, the scheme has undergone consultation, as outlined above, with the HSE and the design has undergone a redesign exercise to de-risk the connections between ancillary accommodation (plant rooms, refuse stored, cycle stores etc.) and the residential escape stair.</p> <p>Following this exercise, all ancillary and non-residential areas within the blocks, with the exemption of Blocks AA, AD and B, no longer communicate/connect to any residential floor levels containing flats/apartments. The connections between ancillary and residential accommodation within Blocks AA, AD and B are deemed acceptable on the basis of two escape stairs are provided, the ancillary areas are separated from residential accommodation via a permanently ventilated (min 0.4m²) protected lobby and the common residential corridors are served by a mechanical smoke ventilation system, which shall be capable of maintain tenable conditions within. All buildings with an occupied floor level measured above 18m include a 2 stair design approach satisfying the Fire Chief Council's recommendation for high-rise residential buildings, to future proof the building design, at the request of the client.</p> <p>BS 9991: 2015 has been utilised as the Basis of Design (BoD) for the fire statement documents (London Plan and Gateway One). Cognisance has been taken to other design guidance documents where BS 9991: 2015 lacks detail/guidance.</p>
<p>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)</p>	
<p>Site layout plan is: [inserted in the form]</p> <p>The various blocks/cores of the Manor Road residential development can be seen illustrated in the figure below:</p>	



Refer to description stated in row Item 2 for description of block heights and general use.

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
AA	The building consists of nine storeys, including one basement floor level. The height of the top storey is approximately 23.5m above ground level.	residential flats, maisonettes, studios	Basement + Ground floor to seventh floor.	BS9991	class A2-s1, d0 or better	class A2-s1, d0 or better	stay put	yes-residential sprinklers, full	M4(2)
AB	The building consists of four storeys (ground + three upper	residential flats, maisonettes, studios	Ground floor to third floor.	BS9991 – used for residential areas and supporting	class A2-s1, d0 or better	class A2-s1, d0 or better	stay put	yes-residential sprinklers, full	M4(2)

	<p>floors), none of which are below ground level.</p> <p>The height of the top storey is approximately 10.2m above ground level.</p>			<p>ancillary accommodation.</p> <p>BS9999 used for commercial unit situated at ground level.</p>					
AC	<p>The building consists of four storeys (ground + three upper floors), none of which are below ground level.</p> <p>The height of the top storey is approximately 10.2m above ground level.</p>	residential flats, maisonettes, studios	Ground floor to third floor.	BS9991	class A2-s1, d0 or better	class A2-s1, d0 or better	stay put	yes-residential sprinklers, full	M4(2) & M4(3)
AD	<p>The building consists of eight storeys (ground + seven upper floors), none</p>	residential flats, maisonettes, studios	Ground floor to seventh floor.	BS9991	class A2-s1, d0 or better	class A2-s1, d0 or better	stay put	yes-residential sprinklers, full	M4(2) & M4(3)

	<p>of which are below ground level.</p> <p>The height of the top storey is approximately 23.8m above ground level.</p>								
Block A - Townhouses	The building consists of three storeys, none of which are below ground level.	residential flats, maisonettes, studios	Ground floor to second floor	BS9991	class A2-s1, d0 or better	class A2-s1, d0 or better	stay put	yes-residential sprinklers, full	M4(2)
BA	The building consists of eleven storeys (ground + ten upper), none of which are	residential flats, maisonettes, studios	Ground floor to tenth floor.	BS9991	class A2-s1, d0 or better	class A2-s1, d0 or better	stay put	yes-residential sprinklers, full	M4(2)

	<p>below ground level.</p> <p>The height of the top storey is approximately 31.8m above ground level.</p>								
CA	<p>The building consists of ten storeys (ground + nine upper floors), none of which are below ground level.</p> <p>The height of the top storey is approximately 29.7m above ground level</p>	residential flats, maisonettes, studios	Ground floor to ninth floor.	BS9991	class A2-s1, d0 or better	class A2-s1, d0 or better	stay put	yes-residential sprinklers, full	M4(2)
CB	<p>The building consists of eight storeys (ground + seven upper floors), none of which are</p>	residential flats, maisonettes, studios	Ground floor to seventh floor.	BS9991	class A2-s1, d0 or better	class A2-s1, d0 or better	stay put	yes-residential sprinklers, full	M4(2) & M4(3)

	<p>below ground level.</p> <p>The height of the top storey is approximately 23.1m above ground level.</p>								
CC	<p>The building consists of eight storeys (ground + seven upper floors), none of which are below ground level.</p> <p>The height of the top storey is approximately 23.1m above ground level.</p>	residential flats, maisonettes, studios	Ground floor to seventh floor.	BS9991	class A2-s1, d0 or better	class A2-s1, d0 or better	stay put	yes-residential sprinklers, full	M4(2) & M4(3)
DA	<p>The building consists of four storeys (ground + three upper floors), none of which are</p>	residential flats, maisonettes, studios	Ground floor to third floor.	BS9991 - used for residential areas and supporting ancillary accommodation.	class A2-s1, d0 or better	class A2-s1, d0 or better	stay put	yes-residential sprinklers, full	M4(2) & M4(3)

	<p>below ground level.</p> <p>The height of the top storey is approximately 10.0m above ground level.</p>			<p>BS9999 used for commercial unit situated at ground level.</p>					
DB	<p>The building consists of eight storeys (ground + seven upper floors), none of which are below ground level.</p> <p>The height of the top storey is approximately 23.7m above ground level.</p>	<p>residential flats, maisonettes, studios</p>	<p>Ground floor to seventh floor.</p>	<p>BS9991</p>	<p>class A2-s1, d0 or better</p>	<p>class A2-s1, d0 or better</p>	<p>stay put</p>	<p>yes-residential sprinklers, full</p>	<p>M4(2) & M4(3)</p>

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

Extended Travel Distances within Residential Common Corridor:

CFD modelling is to be undertaken by the smoke control specialist for the mechanical smoke extract systems in the residential common corridors. CFD modelling is to be undertaken to demonstrate a suitable level of fire safety has been achieved for the arrangement by testing the efficacy of the smoke

control mechanical shaft systems deployed within the common corridor arrangements that compensate for the marginally extended travel distances within 2 blocks. Typically, this is to be undertaken by the specialist sub-contractor at a later design stage. However, preliminary CFD models may be undertaken at an earlier design stage to establish the feasibility of the corridor arrangement for the purposes of progressing the design. It is advised to consider early engagement with the specialist ventilation subcontractor and the Approving Authorities. Alternatively, undertaking preliminary CFD models in order to mitigate the risks associated with the extended travel distance corridors. The results of the CFD modelling may lead to some refinement in the proposed specification and operation of the mechanical ventilation systems. The CFD modelling is to be undertaken in accordance with the following documents:

- SCA (Smoke Control Association) – “Guidance on Smoke Control to Common Escape Routes in Apartments” Rev 3.1, July 2020;
- SCA (Smoke Control Association) – “CFD Analysis for Smoke Control Design in Buildings” Rev.1 January 2021; and
- BS 7974: 2019

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

Single-level/Open-plan Flats:

In accordance with subclause 9.7 of BS 9991:2015, kitchens in open-plan flats exceeding 8m x 4m (32m²) should be enclosed. The kitchens in the open-plan flats within the Manor Road development do not comply with this requirement. However, this is considered acceptable based on the following justification (subject to discussion and agreement with the approving authorities): research on the design of open-plan flats conducted by the NHBC concluded that the size of flats does not make a significant difference to the time needed to escape. Although travel distances within large flats may be longer, larger flats will also increase the duration of tenable conditions due to the enlarged volume (i.e., longer smoke filling time) and where kitchens are unenclosed, the activation time of any detectors is expected to be quicker. Therefore, the open-plan flats are considered to satisfy the functional requirements of the Building Regulations 2010 (as amended).

Stair/Evacuation Lift Discharge:

In accordance with Clause 34 of BS 9991:2015, protected stairways should discharge either directly to a final exit or into a protected corridor leading to a final exit which is itself lobbied from any accommodation. The protected stairways and evacuation lifts within cores AC, AD, DA and DB do not comply with this requirement because they discharge to external undercroft areas. However, this is considered acceptable based on the following justification (subject to discussion and agreement with the approving authorities): the external undercroft areas are well ventilated (open to air on two sides) and shall be maintained as ‘fire sterile’ areas (virtually free of any potential sources of fire) as part of the fire safety management plan for the building. Therefore, the external undercroft areas are deemed to pose no immediate danger from fire and the current design proposals are considered to satisfy the functional requirements of the Building Regulations 2010 (as amended).

In addition, the evacuation lift within Block B discharges into the same common corridor as a number of residential apartments, which is a deviation from the guidance. However, this is considered acceptable based on the following justification (subject to discussion and agreement with the approving authorities): in accordance with Figure 6 of BS 9991:2015, common escape routes in single stair buildings with a floor level more than 11m above

ground are permitted to have a 7.5m travel distance through the unventilated portion of the common corridor, which is analogous to the proposed arrangement. In addition, the common corridor is to be maintained as a 'fire sterile' area and provided with a mechanical smoke control/ventilation system.

Extended Travel Distances within Residential Common Corridor:

As outlined above, CFD modelling to be undertaken by the smoke control specialist at the detailed design stage (i.e. when the design has developed further) to justify the extended single direction of travel distances within the common residential corridors and to ensure that tenable conditions are maintained for Means of Escape and Firefighting Phases.

Connections between Single Residential Stair and Ancillary Accommodation

In accordance with Clause 38 of BS 9991: 2015, where a common stair forms part of the only escape route from a flat/apartment, unless is designed as a small single-stair building, it should not also serve any covered car park, boiler room, fuel storage space or other ancillary accommodation of similar fire risk. This would imply that where the building is not a considered a "small building" (i.e., has a floor level greater than 11m in height) and is provided with a single escape stair, it is acceptable for connections to ancillary accommodation of low or medium risk (i.e., other than those mentioned previously) to exist, provided they are separated by way of a protected ventilated lobby.

However, it noted that following the consultation and comments received from the HSE regarding the connections of the ancillary areas with the residential demise, the design team have undertaken a re-design exercise to omit any connections between the residential demise and the ancillary areas, where all ancillary areas are to be directly accessed from outside/open air. Connections between ancillary areas and residential stairs may still be present within Cores AA, AD, BA, CA, CB, CC and DB, this is deemed acceptable on the basis that the building is served by two escape stairs, the ancillary areas shall be separated from the residential demise via a permanently ventilated (minimum 0.4m²) protected lobby and the common residential corridors shall be served by mechanical smoke ventilation extract systems capable of maintain tenable conditions.

It is noted that there are only connections between ancillary/non-residential areas and the residential demise within the Blocks AA, AD and B building, which is considered acceptable on the basis of the provisions outlined above.

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

Hydrock have developed a London Plan Fire Statement (Doc Ref: 26439_HYD_FESE_Manor Road_London Plan Fire Statement_230825_Rev.05) to support the planning application for the development and ensure that the fundamental fire safety requirements with regard, but not limited, to the following have been considered with respect to complying with the functional requirements of Part B – Fire Safety of the Building Regulations 2010 (as amended): Means of Escape and Warning, Active Fire Safety Measures, Passive Fire Safety Measures and Construction Details, Access and Facilities for the Fire and Rescue Services, Fire Safety Management and Future Development.

Emergency road vehicle access and water supplies for firefighting purposes

10. Fire service site plan

Explanation of fire service site plan(s) provided in section 14. including what guidance documents have informed the proposed arrangements for fire service access and facilities?

Guide: no more than 200 words

In accordance with the recommendations of BS 9991:2015, each core within the Manor Road development with a storey more than 18m above fire service access level (i.e., cores AA, AD, BA, CA, CB, CC and DB) is to be provided with a fire-fighting shaft, containing a fire-fighting lift and a dry riser outlet.

A single firefighting shaft is deemed sufficient within the cores outlined above that are greater than 18m in height, on the basis that the footprint of the floorplate does not exceed 900m² and all areas of the floor plate are reachable within 60m of the dry riser outlet located within the firefighting stair enclosure, measured on a route suitable for laying hose.

It is noted that the floor area within the East block of Block C (Cores CB and CC) is greater than 900m², measuring circa 940m². This is due to the merging of Cores CB and CC to provide two escape stairs as the building exceeds 18m in height. However, both cores within this part of the building shall be designed and constructed as firefighting shafts and therefore, sufficient facilities and access for the Fire and Rescue Service is considered to be provided.

Access for a fire pumping appliance shall be provided within 18m of each fire main inlet connection point, with the inlets visible and within sight from the fire appliance access roadway.

In accordance with Section 50.2.2 of BS 9991: 2015, as the building is to be provided with sprinkler protection in accordance with BS 9251: 2021, firefighting shafts provided with fire mains are to be sited such that every part of every storey is no more than 60m from a fire main outlet in a firefighting shaft, as measured on a route suitable for laying hose. Additionally, the most remote point within the townhouses located in Block A shall be accessible within 45m of fire tender pumping appliance access roadway/parking location.

In blocks that are greater than 18m in height, containing two escape stairs, fire mains may be omitted from the secondary escape cores (i.e. the non-firefighting core or core with no lifts), on the basis that all parts of the floorplate are reachable within 60m from the dry riser outline within the stair, measured along a route suitable for laying hose.

Fire hydrants are provided within 90m of each dry rising main inlet serving the development.]

11. Emergency road vehicle access

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

Guide: no more than 200 words

The site is located in Richmond and sits between Manor Road, the North London railway line and the South Western railway line.

The nearest fire station to the Manor Road development is the Richmond Fire Station (H42) located at 323 Lower Richmond Road, Richmond TW9 4PN, approximately 0.3 miles from the site.

Fire service vehicles can access the site via Manor Road, as shown in the fire service site plan in Section 14, the internal site roadways shall be sufficiently sized such as that access is possible around the site for a fire tender pumping appliance to within 18m of the dry riser inlet valves of all respective blocks.

Where the length of a dead-end on the fire service access route exceeds 20m, turning facilities have been provided.

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

yes

12. Siting of fire appliances

Guide: no more than 200 words

As outlined above, The nearest fire station to the Manor Road development is the Richmond Fire Station (H42) located at 323 Lower Richmond Road, Richmond TW9 4PN, approximately 0.3 miles from the site.

All cores within the Manor Road development are to be provided with dry fire mains.

Fire service access for a pumping appliance is to be provided such that all dry riser inlet connection valves on the faces of the buildings are reachable (i.e., within 18m) and clearly visible and within sight from the pumping appliance parking location.

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

Guide: no more than 200 words

Should sufficient existing fire hydrants not be available, Fire hydrants are located within 90 m of the dry fire main inlet valve and not more than 90m apart from each other.

The usability of the existing hydrants is under review and will be confirmed at a later stage subject to flow testing requirements of the existing hydrants to ensure that they are capable of providing a minimum water supply flow rate of not less than 1,500 l/min in accordance with Section 6.1 of BS 9990 (2015).

Hydrock understand a new ring main is being proposed for the development which will see the introduction of sufficient Hydrants surrounding the development.

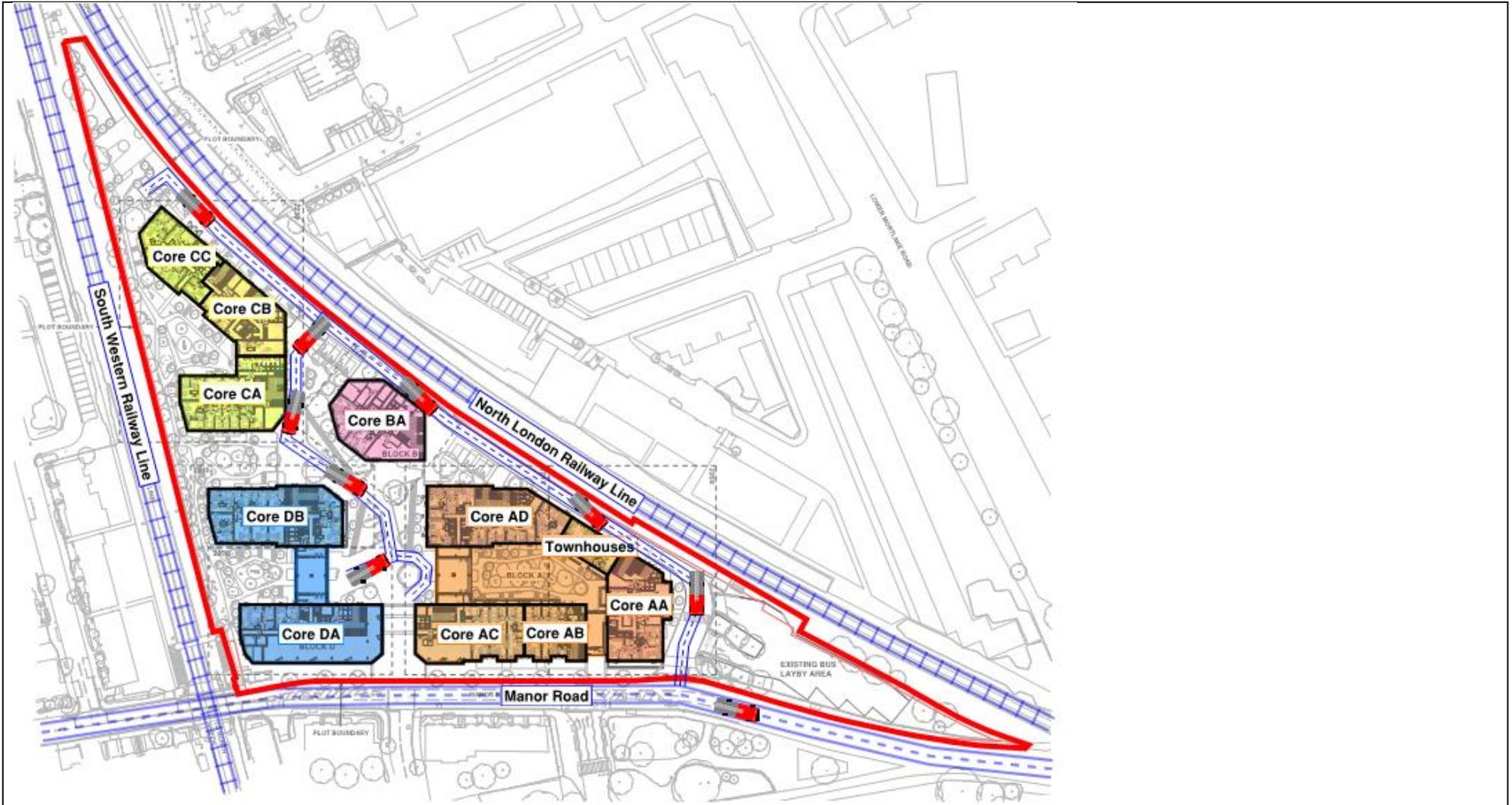
Nature of water supply:
hydrant- public

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

14. Fire service site plan

Fire service site plan is:
inserted in the form

]



Fire statement completed by

15. Signature

	Prepared By	Checked By	Approved By	
	Stephen McColgan	Taj Shuriquie	Adam Eaton	
		<i>Taj Shuriquie</i>	<i>AEaton</i>	
16. Date	25/08/2023			