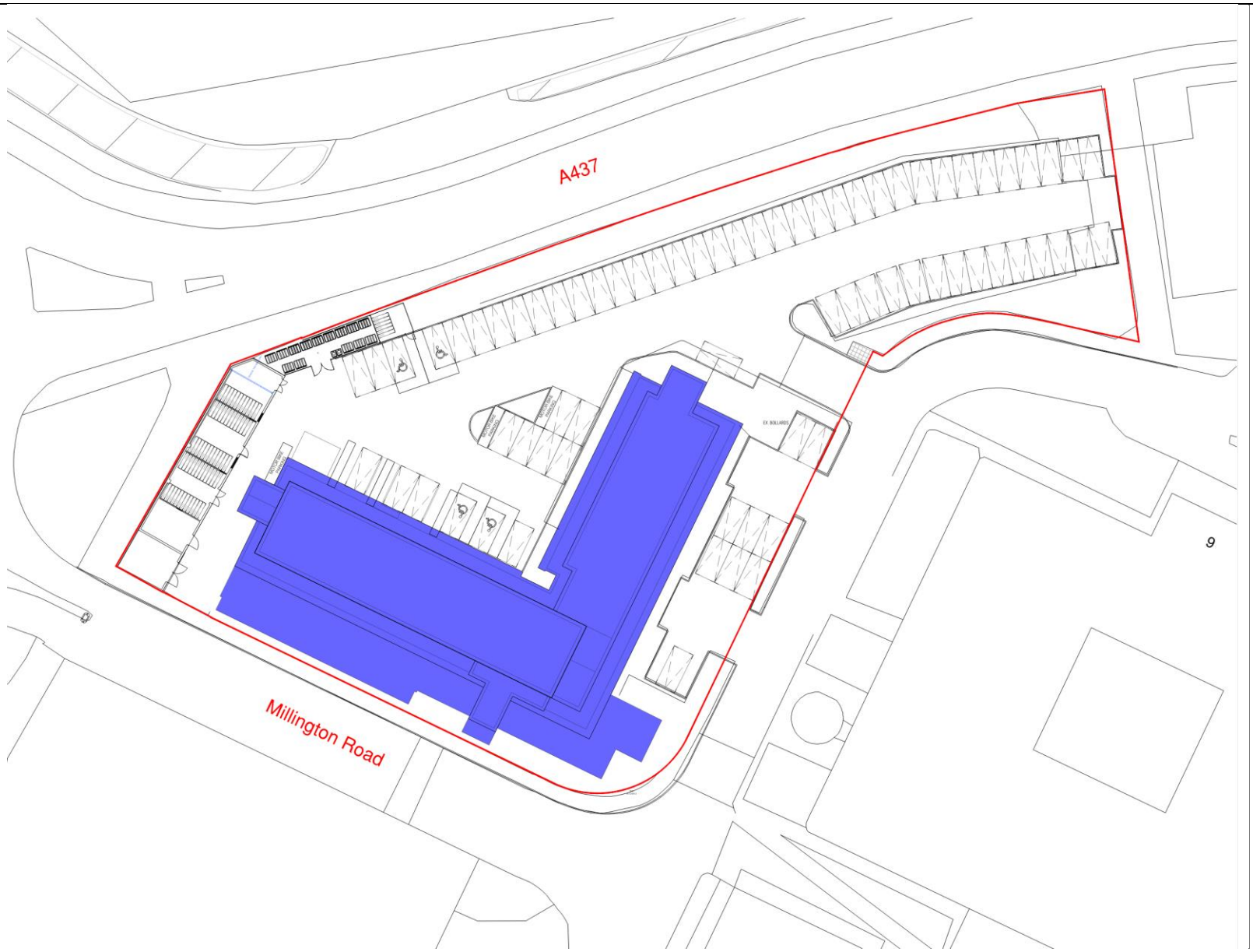
Fire statement form

Application information	
1. Site address line 1	11 Millington Road
Site address line 2	
Site address line 3	
Town	Middlesex
County	
Site postcode (optional)	UB3 4AZ
2. Description of proposed development including any change of use (as stated on the application form):	The proposed development comprises a nine-storey (noted as Ground Level and Levels 1-8) residential development in Hayes, Middlesex located adjacent to Millington Road and the A437. The existing building is a seven-storey office building, however, planning permission for the conversion from office to residential flats throughout has already been granted previously. This scheme is based on the extension of the previously approved residential building to provide an additional two storeys; Levels 7 and 8. The building includes three escape stairs serving all upper levels (except Level 8 which comprises the upper level of duplex flats only) connected via a communal residential corridor. The Ground Level comprises of residential flats which are accessed direct from external, ancillary plant accommodation which are accessed direct from external, managers office and main entrance lobby. The upper levels consist of residential flats exclusively. The height to the top storey (Level 8) of the building from the lowest external ground level is approximately 27.1m.
3. Name of person completing the fire statement (as section 15.), relevant qualifications and experience. Guide: no more than 200 words	Chris Allery, AIFireE MSPE, Director of Artec Fire Chris is an experienced fire engineer with substantial fire engineering experience within the built environment. He has provided fire engineering services on numerous high-profile projects both in the UK and internationally including the Battersea Power Station development and the Whiteleys, Bayswater redevelopment. Chris has experience working within various sectors, including residential, commercial, education, retail, healthcare and industrial. He has knowledge of all design/construction stages from feasibility through to handover and occupation. Dr Rui Sun, CEng MIFireE MIMechE PMSFPE, Director of Artec Fire

	Rui has over 14 years' experience in both consulting and research in fire safety engineering. Rui has significant experience in fire safety design and assessment having worked within multiple sectors including oil and gas, residential, educational, commercial, healthcare, and the construction industry. Rui is a Chartered Engineer with the Institution of Fire Engineers (IFE) and holds full Membership status (MIFireE). Rui is also a Chartered Engineer with the Institution of Mechanical Engineers and holds Member status (MIMechE) and holds a professional membership of Society of Fire Protection Engineers.
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. Guide: no more than 200 words	It is understood that no building control consultation has been carried out for this building prior to the planning application. The fire safety design of the building has generally followed the principle in BS9991:2015 Fire safety in the design, management, and use of residential buildings. Code of practice. Where there is any deviation from BS9991:2015, fire engineering justification is proposed to demonstrate the suitability of the current design to meet the functional requirements of Building Regulations. In additional, due to the recent changes in the guidance of Approved Document B for the residential buildings, where appropriate, considerations have been given to these changes in the design.
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: inserted in the form The site only contains a single block as illustrated in blue as foilows	


A437
Millington Road
9

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
1	Level 8 is 27.1m above ground level 9 storeys above ground (Ground + 8) No basement storeys)	residential flats, maisonettes, studios	Ground Level – Residential flats, ancillary plans rooms Levels 1-8 – residential flats	BS9991	no balconies	class A2-s1, d0 or better	stay put	yes- residential sprinklers, full	none

7. Specific technical complexities

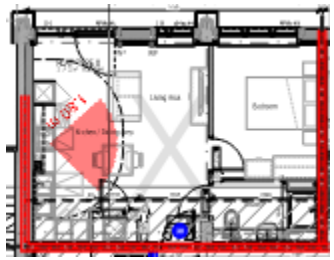
Explain any specific technical complexities in terms of fire safety (for example green walls) and/or departures from information in building schedule above

Guide: no more than 500 words

The development is generally to be designed in accordance with the recommendations of BS9991:2015. The main complexities (deviations from prescriptive guidance) may be summarised as follows:

- Flat Layouts

  The building includes 3 types of flat layout; single storey open plan, single storey entrance hall and duplex protected stairway. The single storey entrance hall and duplex protected stairway are considered in accordance with BS9991:2015, however, the single storey open plan arrangements deviate from this guidance since these flats exceed 8m x 4m and the kitchens are open to the living accommodation, The proposed arrangements are considered to satisfy the functional requirements of the Building Regulations.



Typical Single Storey Open Plan Flat Arrangement

- Firefighting Entrance

  In accordance with Clause 20.2.2 of BS9999:2017, access to a firefighting shaft should be either direct from external or via a protected route which is provided with the same level of ventilated lobby protection as the firefighting stair. It is proposed for the firefighting stair to discharge via the firefighting lobby at ground level.

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

The proposed deviations from prescriptive guidance in [7] are considered to satisfy the functional requirements of the Building Regulations as follows:

- Single Storey Open Plan Flats:

  Open plan flats are generally to be designed in accordance with Clause 9.7 of BS9991:2015 as follows:
  - The size of the flats is not to exceed 16m x 12m
  - The flats are to be situated on a single level only (i.e. no open-plan duplex flat arrangements)
  - The floor-to-ceiling height within these flats is to be no less than 2.25m

Additionally, in accordance with Clause 9.7 of BS9991:2015, the kitchen should be enclosed in open-plan flats having an area exceeding 8m × 4m and cooking appliances in open-plan flats having an area smaller than 8m × 4m should not be adjacent to the entrance of the flat. However, the proposed open plan flat arrangements are considered to satisfy the functional requirement B1 of Schedule 1 to the Building Regulations 2010 based on the following (subject to agreement with the approving authorities):

- The guidance regarding open-plan flat design is based on the NHBC Report 'Open plan flat design – Assessing life safety in the event of fire' (2009). Conclusion point 2 of the NHBC Report states that the size of apartments does not make a great deal of difference. It is noted that travel distances within larger apartments may be longer, however, larger apartments will also increase the tenability conditions by increasing the volume of the upper layer / hot layer and therefore increasing the smoke fill time.
- The enclosure to kitchens in open-plan apartments exceeding 8m x 4m is not required to be fire rated and the kitchen door is not required to be smoke sealed or self-closing. Therefore, in the instances where the kitchen door is open, the enclosure will provide no benefit to protection of the escape route from the bedrooms with regard to smoke ingress. Therefore, in the instances where the kitchen door is open, the only benefit provided by the kitchen enclosure to protection of the escape route from the bedroom is protection from radiant heat in the early stages of fire (prior to failure of the kitchen enclosure). It is, subsequently, considered that, providing the cooking facilities (high risk areas) are located at least 1800mm from the escape route from the bedroom, the enclosure of the kitchen, for the purposes of protection from radiant heat, is not considered necessary.
- Where the kitchen is not enclosed, the fire/smoke detection time is expected to be reduced compared to an arrangement with an enclosed kitchen since the smoke will activate the smoke detector in the living area earlier than compared to the time it takes for a heat detector to be activated in the kitchen. This is supported by the article 'Open plan apartments – revisiting risks in light of contemporary demands', published in the International Fire Professional Journal in November 2016, which examines some of the limitations of the initial NHBC study.

- <u>Firefighting Entrance:</u>
  The proposed arrangement is considered acceptable (subject to agreement with the approving authority and local Fire Service) based on the following:
  - The lobby to the firefighting stair is provided with smoke ventilation via the 1.5m^2 (minimum free area) natural smoke shaft at this level protecting the firefighting stair from smoke ingress
  - Alternative firefighting access and stair discharge is available via the managers office lobby and the main entrance lobby (i.e. in the event one of these routes being blocked by fire/smoke the other routes are protected and expected to be available
  - The post boxes are to be enclosed within fire rated construction and the entrance lobby is to be free of any other combustible material. Smoke ventilation is provided to this lobby via the main entrance door (manually openable) in accordance with BS9991:2015
  - The managers office lobby is to be provided with smoke ventilation via the external door (manually openable) in accordance with BS9991:2015
  - All areas of the building are provided with alternative means of escape via the alternative escape stairs
  - Alternative firefighting access to the firefighting lift is also available via the alternative escape stairs to Level 1

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 proposed extension development is located in the London Borough of Hillingdon and is, therefore, subject to the London Plan 2021 (including policies D5 and D12 which specifically relate to fire safety). The extension works are not considered a major development since this only includes an additional 9 residential units to the existing building.

It is noted that Policy D5 of the London Plan 2021 recommends that all buildings provided with lifts are to be provided with at least one evacuation lift within each escape core in the building. However, the existing building is not provided with any lifts within the two escape stairs at the remote ends of the common corridors. Since the proposed development under consideration within this Fire Statement only includes a 2-storey extension to the existing building, it is not considered reasonable to provide a new evacuation lift within each escape core at the remote ends of the corridor serving all levels of the building.

However, it should be noted that it is proposed to design both lifts within the central core as firefighting lifts (i.e. with secondary power supply, etc.) which will remain in operation in a fire scenario, allowing disabled occupants in the upper levels to use the lifts for escape, until Fire Service arrival, when further evacuation will be managed by the Fire Service. It should be noted that the additional firefighting lift (which may be used as an evacuation lift) provides additional resilience should one of the escape stairs be out of service for repair or maintenance.

The proposed design is considered to be in accordance with BS9991:2015.,

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?

Guide: no more than 200 words

The provision of the fire service access to the site is to be in accordance with the requirements of BS9991:2015. The firefighting stair of the building will be provided with dry riser vertically running within the staircase. The location of the inlet of the fire main is yet to be confirmed, however, it will be installed adjacent to the entrance point leading to the firefighting shaft from Millington Road, with the inlet visible from the fire appliance. Fire tender access is available to within 18m of the dry riser inlet location.

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

Fire tender access to the building is available from Millington Road. This roadway is considered to exceed the minimum requirement of 3.7m between kerbs. Access is available to within 18m of the dry riser inlet adjacent to the entrance to the firefighting shaft from Millington Road. These access roadways do not include any dead-end sections requiring turning facilities.

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

Please refer to Section 14 of this statement

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

Guide: no more than 200 words

In accordance with Clause 51.2 of BS9991:2015, for buildings provided with dry fire mains, a fire hydrant should be provided within 90m of dry riser inlets. It is observed a fire hydrant is located right next to the building site, well within the 90m limit. The location of the fire hydrant is illustrated in Section 14 of this table. The performance of the public fire hydrant will be reviewed by the design team at a later stage.

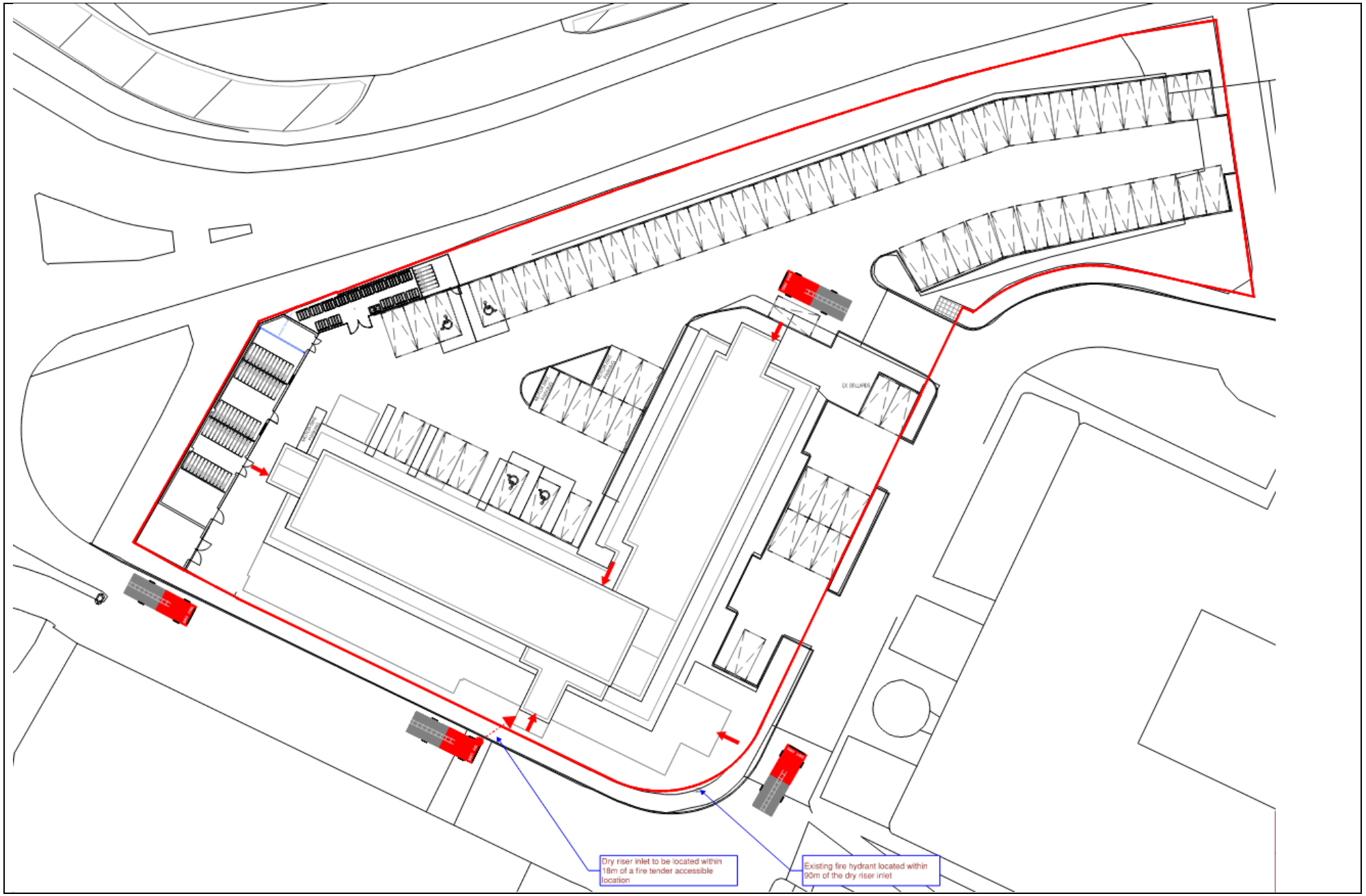
Nature of water supply:

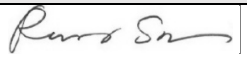
hydrant- public

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

don't know

14. Fire service site plan
Fire service site plan is:
inserted in the form


Dry riser inlet to be located within 18m of a fire tender accessible location
Existing fire hydrant located within 90m of the dry riser inlet

Fire statement completed by	
15. Signature	
16. Date	19/04/2023