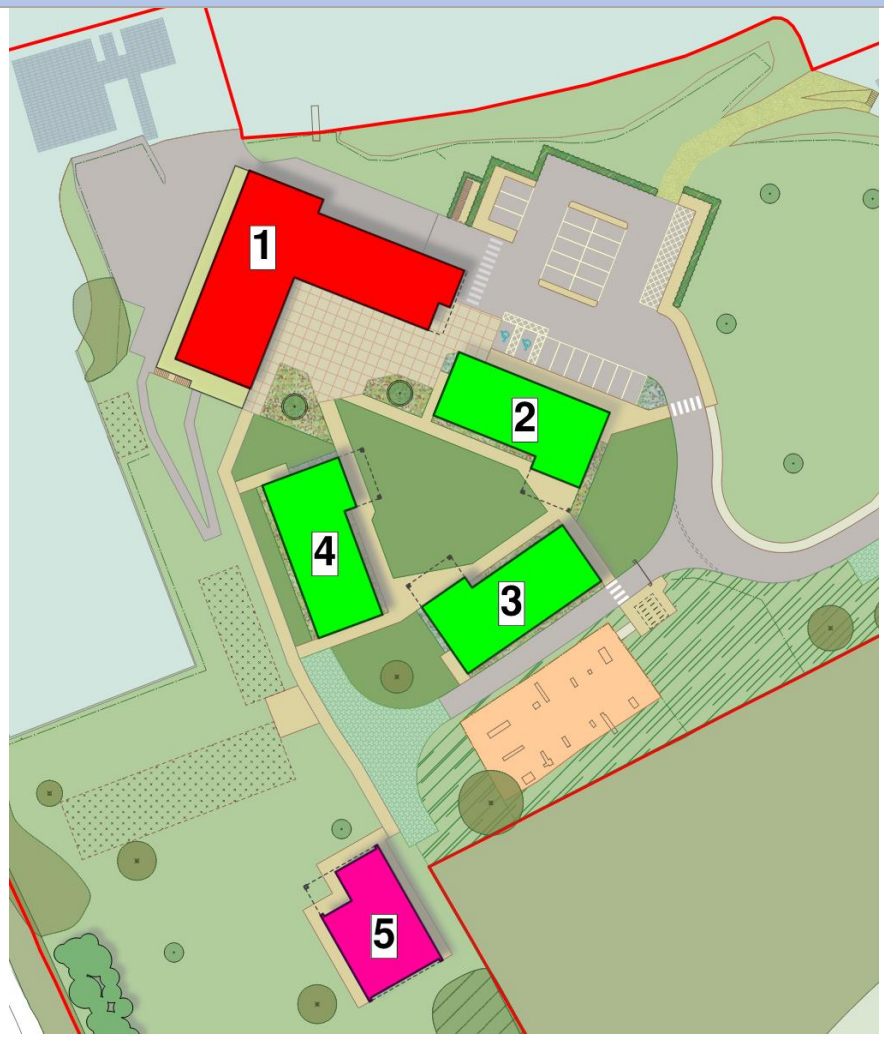
APPLICATION INFORMATION		
1	Site Address Line 1	Riverside Drive
	Site Address Line 2	
	Town	Richmond
	County	London
	Site Postcode (optional)	TW10 7RX
2	Description of proposed development including any change of use (as stated on the application form):	Demolition of existing buildings and construction of replacement buildings with associated residential accommodation, changing block, replacement staff accommodation and outdoor activity equipment including high ropes, climbing wall, coasteering course, supporting pontoons with associated hard and soft landscaping and parking. This Fire Statement has been prepared by Osborn Associates Ltd and details the Fire Statement for the Proposed Development.
3	Name of person completing the fire statement (as section 15), relevant qualifications and experience. Guide: no more than 200 words	This Fire Statement has been written by Subiraj Doraisingam who is a Fire Safety Engineer and a Member of the Institution of Fire Engineers (IFE), a Chartered Engineer with the Engineering Council UK and Member of the Institute of Mechanical Engineers (IMechE). He has been working with Osborn Associates Ltd since 2012.
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	Design team meetings have been attended by Osborn Associates Ltd, with design guidance provided on fire safety design issues including means of escape provisions, evacuation lifts provision, fire service access and facilities including stair protection, external fire spread and internal compartmentation requirements.

APPLICATION INFORMATION		
5	**Site Layout Plan with Block Numbering as per Building Schedule referred to in Section 6.** (Consistent with other plans, drawings and information submitted in connection with the application) Block Massing Information: (*AOD including top of roof). 1. Main Building – LG+G+1 (*11.5m) 2. Guest Residential – G (*5.8m) 3. Guest Residential – G (*5.8m) 4. Guest Residential – G (*5.8m) 5. Camping Changing Block – G (*5.1m)	

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) • No. of storeys excluding 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 evaluation	i) Automatic suppression	j) Accessible housing provided
1 - Main Building	• 11.5m • Lower Ground, Ground floor plus 1 upper floor	Community use, childcare (not school)	Lower Ground, Ground floor, First Floor	Approved Document B Vol 2	No balconies	Worse than class A2-s1, d0	Simultaneous	None	N/A non-resi.
1 - Main Building	• 11.5m • Lower Ground, Ground floor plus 1 upper floor	Other residential accommodation	First Floor	Approved Document B Vol 2	No balconies	Worse than class A2-s1, d0	Simultaneous	None	None
1 - Main Building	• 11.5m • Lower Ground, Ground floor plus 1 upper floor	Residential flats, maisonettes, studios	First Floor	Approved Document B Vol 1	No balconies	Worse than class A2-s1, d0	Simultaneous	None	None

APPLICATION INFORMATION									
2 - Guest Residential	• 5.8m • Ground floor	Other residential accommodation	Ground floor	Approved Document B Vol 2	No balconies	Worse than class A2-s1, d0	Simultaneous	None	None
3 - Guest Residential	• 5.8m • Ground floor	Other residential accommodation	Ground floor	Approved Document B Vol 2	No balconies	Worse than class A2-s1, d0	Simultaneous	None	None
4 - Guest Residential	• 5.8m • Ground floor	Other residential accommodation	Ground floor	Approved Document B Vol 2	No balconies	Worse than class A2-s1, d0	Simultaneous	None	None
5 - Camping Changing Block	• 5.1m • Ground floor	Community use, childcare (not school)	Ground floor	Approved Document B Vol 2	No balconies	Worse than class A2-s1, d0	Simultaneous	None	N/A non-resi.

THE PRINCIPLES, CONCEPTS AND APPROACH RELATING TO FIRE SAFETY THAT HAVE BEEN APPLIED TO THE DEVELOPMENT	
7	**Specific Technical Complexities** **Main Building** <u>Purpose Group</u> Assembly and recreation, 5 – for Lower Ground – First Floor non-residential areas. Residential, 1(a) – for the First Floor apartment. Residential (other), 2(b) – for First Floor overnight bedroom.

THE PRINCIPLES, CONCEPTS AND APPROACH RELATING TO FIRE SAFETY THAT HAVE BEEN APPLIED TO THE DEVELOPMENT

Evacuation Strategy

Simultaneous evacuation for most of the areas, with residential areas area evacuating as a separate evacuation zone.

Residential Accommodation Interface with Rest of the Building

The residential apartment at First Floor level will be designed in line with the recommendations of Approved Document B Vol 1 for small single stair buildings. It will be provided with protected hallway and the final escape from the apartment via the stair down to Ground Floor level will be separated from the adjacent plant room and the overnight bedroom areas by protected lobbies with 0.4m^2 of permanent natural smoke venting.

Mobility Impaired Occupant Evacuation

Refuges should be provided in all protected stairs and where there is no level escape route directly from outside. Refuges should be at least 900mm x 1400mm and accessible to a person in a wheelchair. Emergency voice communication system should be provided in each refuge.

The lift serving the First Floor areas will be designed as an evacuation lift for compliance with London Plan requirements. This will be in line with guidance on evacuation lift design found in Appendix G of BS 9999.

Automatic Fire Detection and Alarm

Manual fire detection and alarm is sufficient to comply with fire safety requirements for non-residential areas. However, an L2 standard automatic fire detection and alarm system in line with BS 5839-1 should be provided within the building to support the provision of overnight bedroom.

And LD2 standard automatic fire detection and alarm system in line with BS 5839-6 should be provided within the residential apartment.

THE PRINCIPLES, CONCEPTS AND APPROACH RELATING TO FIRE SAFETY THAT HAVE BEEN APPLIED TO THE DEVELOPMENT

Structure and Compartmentation

Special fire hazard areas (such as boiler rooms, storage spaces for fuels, chemicals and other highly flammable substances, oil-filled transformer and switchgear rooms and rooms housing a fixed combustion engine) to be enclosed in 30 minutes fire resisting construction.

The residential area should be separated from non-residential areas by fire resisting construction achieving 60 minutes fire resistance. The protected stair serving apartment should achieve 60 minutes fire resistance. The apartment should be enclosed in 60 minutes fire resisting construction. Protected hallway within the apartment will need to be enclosed in 30 minutes fire resisting construction.

The lobbies to the plant room and overnight bedroom should be enclosed in 30 minutes fire resisting construction.

External Wall Surfaces

There are no restrictions on the external wall surface fire performance, as the buildings are more than 1m from the notional boundaries.

Firefighting Access

There should be vehicle access for a pump appliance to small buildings to either:

- 15% of the perimeter; or
- within 45m of every point on the projected plan area (or 'footprint') of the building

Guest Residential Buildings

Purpose Group

Residential (other), 2(b)

Automatic Fire Detection and Alarm

An L2 standard automatic fire detection and alarm system in line with BS 5839-1 should be provided within the building.

THE PRINCIPLES, CONCEPTS AND APPROACH RELATING TO FIRE SAFETY THAT HAVE BEEN APPLIED TO THE DEVELOPMENT

Inner Rooms

There are inner rooms, i.e. rooms where escape is only available via another room, within the building. Therefore, one of the following will need to be provided:

- The enclosures (walls or partitions) of the inner room should be stopped at least 500mm below the ceiling
- A suitably sited vision panel not less than 0.1m2 should be located in the door or walls of the inner room, to enable occupants of the inner room to see if a fire has started in the outer room
- The access room should be fitted with a suitable automatic fire detection and alarm system to warn the occupants of the inner room of the outbreak of a fire in the access room.

Structure and Compartmentation

Structural elements of the building should achieve 30 minutes fire resistance.

Special fire hazard areas (such as boiler rooms, storage spaces for fuels, chemicals and other highly flammable substances, oil-filled transformer and switchgear rooms and rooms housing a fixed combustion engine) to be enclosed in 30 minutes fire resisting construction.

The corridor serving the bedrooms will be designed as a protected corridor achieving 30 minutes fire resistance.

External Wall Surfaces

There are no restrictions on the external wall surface fire performance, as the buildings are more than 1m from the notional boundaries.

Firefighting Access

There should be vehicle access for a pump appliance to small buildings to either:

- 15% of the perimeter; or
- within 45m of every point on the projected plan area (or ‘footprint’) of the building

THE PRINCIPLES, CONCEPTS AND APPROACH RELATING TO FIRE SAFETY THAT HAVE BEEN APPLIED TO THE DEVELOPMENT	
	Camping Changing Block Purpose Group Assembly and recreation, 5. Automatic Fire Detection and Alarm Manual fire detection and alarm is sufficient to comply with fire safety requirements. Structure and Compartmentation Structural elements of the building should achieve 30 minutes fire resistance. Special fire hazard areas (such as boiler rooms, storage spaces for fuels, chemicals and other highly flammable substances, oil-filled transformer and switchgear rooms and rooms housing a fixed combustion engine) to be enclosed in 30 minutes fire resisting construction. Firefighting Access There should be vehicle access for a pump appliance to small buildings to either: • 15% of the perimeter; or • within 45m of every point on the projected plan area (or 'footprint') of the building External Wall Surfaces There are no restrictions on the external wall surface fire performance, as the buildings are more than 1m from the notional boundaries.
8	**Issues which may affect the Fire Safety of the Development** **Use of Timber and CLT Construction Elements** The guidance does not restrict the materials used for construction of the structural elements, provided they are designed to achieve the structural fire resistance required for the specific building. Therefore, structural design of the buildings could incorporate timber or CLT elements if they are designed to achieve the required structural fire resistance for the building.

THE PRINCIPLES, CONCEPTS AND APPROACH RELATING TO FIRE SAFETY THAT HAVE BEEN APPLIED TO THE DEVELOPMENT	
	The use of timber and CLT elements in the design of the external wall build up is also not restricted, as none of the buildings have restrictions on the materials used in the design of the external walls, as per Approved Document B Vol 1 and 2 guidance. Where used as part of roof covering systems, build ups incorporating these materials will need to be shown to achieve the required fire performance.
9	**Local Development Document Policies relating to Fire Safety** The London Plan 2021 introduced two new policies relating to fire safety: Policy D5 (Inclusive Design) and Policy D12 (Fire Safety). Policy D5 sets the design requirements for new developments to achieve good and inclusive design. Policy D12 specifically relates to fire safety and sets the requirements for all developments to achieve the highest standards of fire safety. For instance, incorporating items such as evacuation assembly points, means of escape, high quality construction and suitable access for emergency vehicles. As this is a proposed development, works are being reviewed to ensure the building is up to a satisfactory level of fire safety in line with the London Fire Plan 2021 statements. **The London Plan, Policy D12, Paragraph A2** *(Buildings) are designed to incorporate appropriate features which will reduce the risk of life and the risk of serious injury in the event of a fire: including appropriate fire and alarm systems and passive and active fire safety measures.* • No automatic fire detection is to be provided within the Camping Changing Block. The Guest Residential buildings will be provided with L2 standard automatic fire detection and alarm system, designed in line with BS 5839-1 guidance recommendations. In the Main Building, manual fire detection and alarm is sufficient to comply with fire safety requirements for non-residential areas. However, an L2 standard automatic fire detection and alarm system in line with BS 5839-1 should be provided within the building to support the provision of overnight bedroom. LD2 standard automatic fire detection and alarm system in line with BS 5839-6 should be provided within the residential apartment.

THE PRINCIPLES, CONCEPTS AND APPROACH RELATING TO FIRE SAFETY THAT HAVE BEEN APPLIED TO THE DEVELOPMENT	
	The London Plan 2021, Policy D12, Paragraph A3 *Buildings are constructed in an appropriate way to minimise the risk of fire spread.* • Regulation 7 requires that all materials used in building work are appropriate for the circumstances in which they are used. None of the buildings are relevant buildings, so requirements set in Regulation 7(2) in respect of external walls and specified attachments to achieve a minimum class A2-s1, d0, do not apply. The external elevations of the buildings will therefore be designed in line with relevant guidance recommendations, either Approved Document B Volume 1 or Volume 2, for building type, height, and boundary distances, as referenced in Section 7 of this fire statement. **The London Plan 2021, Policy D12, Paragraph A4** *(Buildings) Provide suitable and convenient means of escape and associated evacuation strategy for all building users.* • Buildings should always be designed and constructed so that there are appropriate provisions for the early warnings of fire, and appropriate means of escape to a place of safety outside the building in the case of a fire. The lift in the Main Building serving the First Floor will be designed as evacuation lifts in line with recommendations of Annex G of BS 9999. **The London Plan 2021, Policy D12, Paragraph A5** *Develop a robust strategy for evacuation which can be periodically updated and published, and in which all building users can have confidence.* **The London Plan 2021, Policy D12, Paragraph 3.12.5** *Developments, their floor layouts, and cores need to be planned around issues of fire safety and a robust strategy for evacuation from outset, embedding and integrating a suitable strategy and relevant design features at the earliest possible stage, rather than features or products being applied to pre-determined developments which could result in less successful schemes which fail to achieve the highest standard of safety. This is of particular importance with blocks of flats, as building users and residents may be less familiar with evacuation procedures.* • Simultaneous evacuation strategy will be employed for all buildings forming part of the development. The residential areas of the Main Building will evacuate independently from the rest of the building. The internal layouts of the buildings will be designed in line with relevant guidance recommendations to enable safe evacuation of the occupants.

THE PRINCIPLES, CONCEPTS AND APPROACH RELATING TO FIRE SAFETY THAT HAVE BEEN APPLIED TO THE DEVELOPMENT

The London Plan 2021, Policy D12, Paragraph3.12.6

Suitable suppression systems (such as sprinklers) installed in buildings can reduce the risk to life and significantly reduce the degree of damage caused by fire and should be explored at an early stage of building design.

- There are no guidance recommendations to provide sprinklers for any of the buildings forming part of the development. Therefore, it is not proposed to install fire suppression systems within the buildings.

The London Plan 2021, Policy D12, Paragraph 3.12.7

The provision of stair cores which are suitably sized, provided in sufficient numbers and designed with appropriate features to allow simultaneous evacuation, should also be explored at an early stage and be provided wherever possible.

- There is no requirement to provide firefighting shafts within the building. The escape stair in the Main Building will have a clear width of at least 1000mm.

The London Plan 2021, Policy D12, Paragraph B1

(The Fire Statement will detail how the development proposal will function in terms of) the building's construction: Methods, products and materials used, including manufacturers' details.

The London Plan 2021, Policy D12, Paragraph B2

(The Fire statement will detail how the development proposal will function in terms of) the means of escape for all building users: suitably designed stair cores, escape, for building users who are disabled or require level access, and associated evacuation strategy approach.

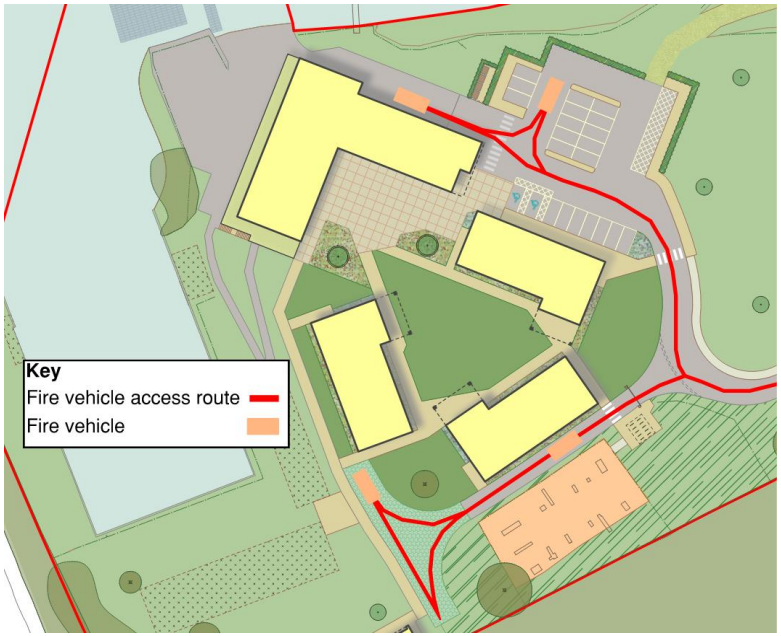
- Escape routes and final exits should not present a barrier for disabled people to exit the building during a fire. Refuge points will be provided where there ae no level access routes within the building.

- The lift provided serving the Main Building will be designed as evacuation lift in line with guidance provided within Appendix G of BS 9999 and will have protected level escape route to outside at ground floor level.

THE PRINCIPLES, CONCEPTS AND APPROACH RELATING TO FIRE SAFETY THAT HAVE BEEN APPLIED TO THE DEVELOPMENT	
	The London Plan 2021, Policy D12, Paragraph B3 *(The Fire statement will detail how the development proposal will function in terms of) features which reduce the risk to life: fire alarm systems, passive, and active fire safety measures and associated management and maintenance plans.* **The London Plan 2021, Policy D12, Paragraph B4** *(The Fire statement will detail how the development proposal will function in terms of) access for fire service personnel and equipment: how this will be achieved in an evacuation situation, water supplies, provision and positioning of equipment, firefighting lifts, stairs and lobbies, any fire suppression and smoke ventilation system proposed, and the ongoing maintenance of monitoring these.* • The buildings will be designed and constructed as to provide reasonable facilities to assist fire fighters in the protection of life. Reasonable provisions will be made within the site of the building to enable fire appliances to gain access to the building. **The London Fire Plan 2021, Policy D12, Paragraph B5** *(The Fire Statement will detail how the development proposal will function in terms of) how provision will be made within the curtilage of the site to enable fire appliances to gain access to the building.* • Please see sections of the fire statement below regarding the provision of firefighting access to site.

EMERGENCY ROAD VEHICLE ACCESS AND WATER SUPPLIES FOR FIREFIGHTING PURPOSES	
10	**Fire Service Site Plan** Fire service access to the development will be provided in line with the guidance in Approved Document B Volume 1 and 2, as follows: • Main Building – to 15% of the perimeter or within 45m of every point on the projected plan area (or 'footprint') of the building • Guest Residential Buildings – to 15% of the perimeter or within 45m of every point on the projected plan area (or 'footprint') of the building • Camping Changing Block – to 15% of the perimeter or within 45m of every point on the projected plan area (or 'footprint') of the building

EMERGENCY ROAD VEHICLE ACCESS AND WATER SUPPLIES FOR FIREFIGHTING PURPOSES	
11	**Emergency Road Vehicle Plan** The fire vehicle access routes will be unobstructed and easily accessible. There will be no requirement for fire vehicles to reverse more than 20m in a dead-end access situation.
12	**Siting of Fire Appliances** All the buildings on site will be accessed externally from fire vehicle parking positions across the site, via achieving access to either of the below: • 15% of the perimeter; or • within 45m of every point on the projected plan area (or 'footprint') of the building.
13	**Suitability of Water Supply for the Scale of Development Proposed** The water supply for firefighting to the development is provided via existing hydrants located on site. It should be confirmed whether they are operable or usable by the infrastructure engineers. Nature of water supply: hydrant- public Does the proposed development rely on existing hydrants and if so, are they currently usable / operable? Yes.

EMERGENCY ROAD VEHICLE ACCESS AND WATER SUPPLIES FOR FIREFIGHTING PURPOSES		
14	**Fire service site plan**	

FIRE STATEMENT COMPLETED BY		
15	Signature:	
16	Date:	30-09-2022