Crown House, Huddersfield

Fire Statement

27 November 2022

Abode Residencies

15148BC-PGO-01-A

Introduction

The Government made a commitment[1] to introduce Planning Gateway One, which has been in effect since 1 August 2021.

Planning Gateway One has two key elements:

- To require the developer to submit a fire statement setting out fire safety considerations specific to the development with a relevant application for planning permission for development which involves one or more "relevant buildings", and
- to establish the Health and Safety Executive as a statutory consultee for relevant planning applications.

Under Planning Gateway One, "relevant buildings" are defined as buildings that:

- contain two or more dwellings or educational accommodation, and
- meet the height condition of 18m or more in height, or 7 or more storeys.

"Dwellings" includes flats, and "educational accommodation" means residential accommodation for the use of students boarding at a boarding school or in later stages of education.

Given the above requirements, the Crown House, Huddersfield development involves at least one relevant building and therefore a fire statement is required for Planning Gateway One.

This document constitutes the Planning Gateway One Fire Statement, which sets out the fire safety considerations specific to the development and will be submitted as part of the relevant application for planning permission. This document follows the standard form template as published by the Secretary of State and includes information about:

- the principles, concepts and approach relating to fire safety that have been applied to each building in 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
- how any policies relating to fire safety in relevant local development documents have been taken into account.

[1] A reformed building safety regulatory system: government response to the 'Building a Safer Future'

Application Information

1) Site Address

Site address line 1	Crown House
Site address line 2	Southgate Road
Site address line 3	
Town	Huddersfield
County	West Yorkshire
Site postcode (optional)	HD1 1DE

2) Description of the Development

Application permission form description:

The development at Crown House, Huddersfield comprises the conversion of the existing 10-storey office building to form 200 student studio units.

The building has height of approximately 35m when measured from the lowest adjacent external ground level to top storey (Roof Garden). The floors of the building span from Basement Level, Ground Floor, 1st – 9th Floor, and roof terrace (12 floors in total; 10 above ground).

The building will provide a private car park and residential ancillary areas such as laundry, cycle storage and plant room at basement level, additional residential ancillary areas at ground floor featuring reception area, study areas, lounge and seating areas, cinema, and gymnasium. The upper floors (1st – 9th Floor) will serve as residential accommodation only designed as single-bed studio apartments with en-suite bathrooms. At roof level, the building is afforded a garden room with seating areas.

The building itself is served by 2no. stairs and 3no. lifts. The stairs and lifts serve all floors from basement level up to roof level.

It is noted that from a fire engineering perspective, the basement level is not a true basement as it can be accessed from the outside ground level on two sides due to the sloping nature of the site.

3) Qualifications of the Author

I, Simon Downing, can confirm that I am an Associate member (membership number 49265) with the Institution of Fire Engineers. Prior to starting my professional career, I obtained a bachelor's degree in chemistry and whilst working full time I furthered my academic qualifications with a master's degree in Fire Safety Engineering from the University of Central Lancashire. I have in excess of 13 years' experience in working the fire safety design of buildings and have been responsible for the development of fire safety strategies for a very large number of building projects, many of which are high rise residential developments.

4) Consultation

None to date. Consultation with the approving authorities will take place at the next stages of design.

5) Site Layout Plan

Site layout plan is:

- inserted in the form

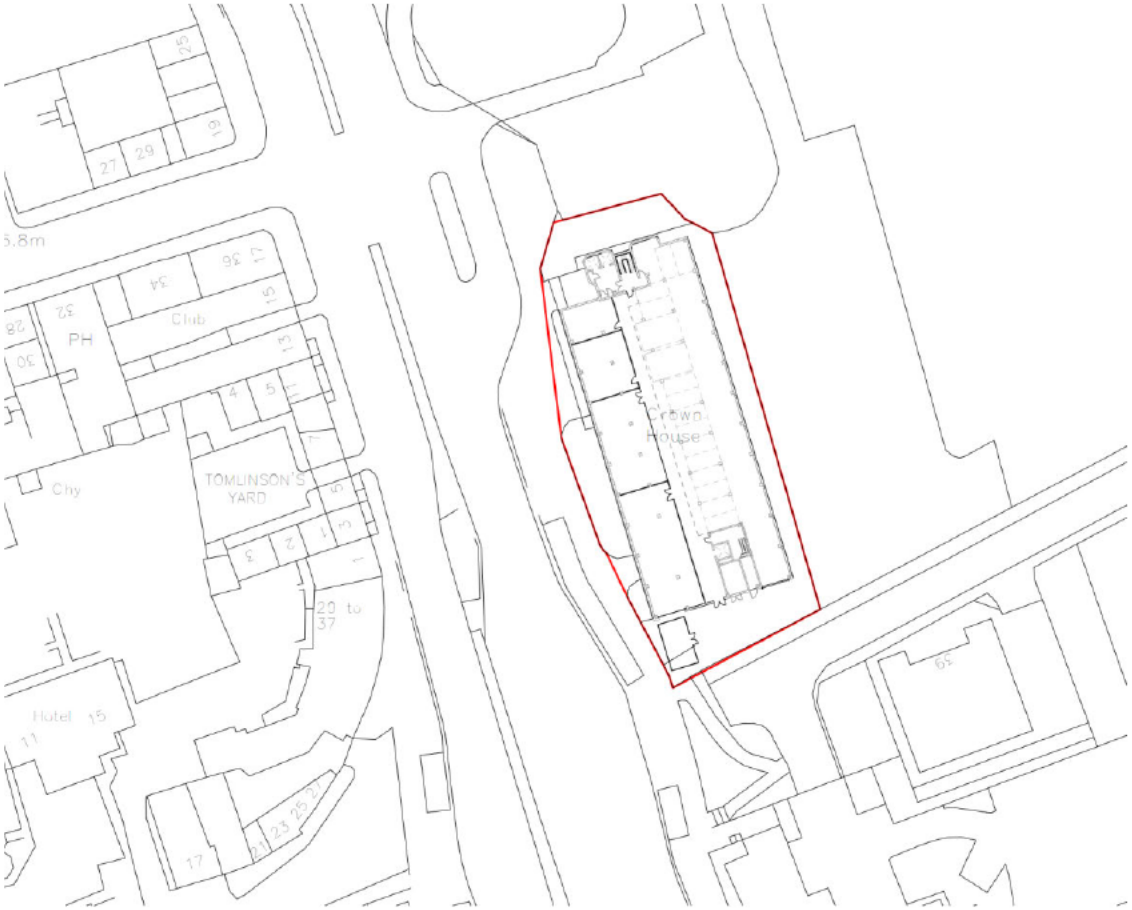

Figure 1. Site layout plan

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
1	Height to the top storey 35.3m 12 storeys excluding those below ground. There are no storeys exclusively below ground.	car parking	Basement	Approved document B vol 2	no balconies	class A2-s1, d0 or better	simultaneous	yes- commercial sprinklers, full	N/A non resi
		other residential accommodation	Basement	Approved document B vol 2	no balconies	class A2-s1, d0 or better	simultaneous	yes- commercial sprinklers, full	N/A non resi
		other residential accommodation	Ground	BS9999	no balconies	class A2-s1, d0 or better	simultaneous	yes- commercial sprinklers, full	N/A non resi
		student accommodation	1st – 9th Floors	Approved document B vol 1	no balconies	class A2-s1, d0 or better	stay put	yes- residential sprinklers, full	M4(2) & M4(3)
		other residential accommodation	Roof Level	Approved document B vol 2	no balconies	class A2-s1, d0 or better	simultaneous	none	N/A non resi

7) Specific Technical Complexities

The fire safety design of the building will follow the guidance of Approved Document B (Volumes 1 and 2, where appropriate), 2022 Edition.

The building will be designed around the typical principles for a large student residential development with a "stay-put" strategy. This is intended to minimise the disruption of false alarms and reduces the risk of residents of the building becoming complacent and ignoring a real fire alarm.

All of the non-residential areas of the building will operate a simultaneous evacuation strategy. The ground floor and basement level will evacuate on detection of a fire anywhere on each of the levels independently. The roof garden will evacuate on detection of smoke in any of the lobbies adjacent to the two stairs providing the means of the escape from the roof.

The building will be provided with a comprehensive fire detection and alarm system. This will allow for a configuration of the cause and effects to support the evacuation strategy of the different areas of the building.

Due to the sloping site, the two stairs will exit to external ground level of two different levels of the building. The north stair (firefighting stair) exits at ground level and the south stair (protected stair) exits at basement (lower ground) level.

Each stair is provided with a fire sterile ventilated lobby at all levels to minimise the risk of smoke from a fire entering the stair and compromising the means of escape. Each ventilated lobby will be provided with a smoke shaft and an automatically opening vent (AOV) that opens on the floor of fire origin. Due to the height of the building, the smoke shafts will be mechanically ventilated. Each stair will also be provided with an AOV at the head of the stair.

On account of the height of the building, the required period of structural fire resistance will be to 120 minutes fire resistance (REI 120). All floors will be constructed as compartment floors and all studios will be designed as fire compartments. Additionally, the two ground floor areas will be fire separated to minimise size of a fire at this level. Fire separation of other areas in the building will also be provided in line with best practice guidance, for example fire rated construction surrounding the laundry, plant rooms and stores.

The enclosures to the firefighting facilities (north stair) will be in accordance with the guidance and therefore stairs and lifts will be enclosed in 120 minutes fire resisting construction. Similarly service risers and the protected stairs (south stair) will also be enclosed in 120 minutes fire rated construction.

The building will be provided with a Category 4 residential sprinkler system to the above ground levels in accordance with BS9251:2021. All of the non-residential areas (on the Ground Floor and Basement Floor) will be provided with a commercial sprinkler system in accordance with BS EN 12845:2015+A1:2019.

8) Issues which Might Affect the Fire Safety of the Development

In the studios, the travel distances will be limited to within 9m from the front door to the most remote point. Additionally, the cooking facilities will be located remote from the escape route.

At first floor of the development, there are two green roofs which are accessible from each of the stair cores. The green roofs are to comply with the best practice guidance of *Fire Performance of Green Roofs and Walls* published by the Department for Communities and Local Government (DCLG).

As the car park (at basement/lower ground level) is at external ground level on two sides, it cannot be considered as an open-sided car park and instead will be provided with a

mechanical smoke ventilation system. A mechanical smoke ventilation system would require 10 air changes per hour in a fire condition.

The building's external wall construction will be made primarily of non-combustible materials achieving at least a classification of A2-s1,d0 to EN 13501-1 in accordance with the Building Regulations 2010 (as amended).

9) Local Development Document Policies Relating to Fire Safety

None.

Emergency Road Vehicle Access and Water Supplies for Firefighting Purposes

10) Fire Service Site Plan Details

The following provisions are made for the building in order to assist Fire Service personnel:

- Provision of a firefighting shaft equipped with:
  - 120-minute fire rated enclosed stair.
  - Dry rising fire main with an outlet on each floor including basement, ground and roof level.
  - 1.0m^2 automatically opening vent (AOV) at head of stair.
  - Firefighting lift accessed from a ventilated firefighting lobby.

These provisions are marked up on the site location plan to form a Fire Service access plan which is provided.

Fire Service access is provided via the external access direct into the firefighting stair (north stair). From here, access can be made into the firefighting lobby containing the firefighting lift.

The dry riser will be conspicuously located adjacent to the main entrance on ground level to the north of the building and will be accessible within 18m of where the fire appliance can park.

An additional dry riser will be provided to the south stair to provide fire service operational redundancy.

Water supplies for firefighting purposes will be provided by local fire hydrants. There are at least two fire hydrants provided in close proximity to the building, one is close to the north stair fire entry point and another is close to the south stair which will also be provided with a dry riser.

11) Emergency Road Vehicle Access

These provisions are illustrated on the Fire Service site plan.

The road network providing access to the development is existing and no works are proposed to the surrounding roads.

Vehicular access to the development is afforded from Southgate (A62) with traffic flowing from the north. Additional fire service access to the basement level (lower ground) can be made from Old Leeds Road to the south of the building.

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

- yes

12) Siting of Fire Appliances

There is sufficient space for a fire appliance to park within 18m of the dry riser inlet which is adjacent to the main entrance doors.

The main entrance offers a reception area which provides access to the firefighting lift and firefighting stair.

13) Suitability of Water Supply for the Scale of Development Proposed

There are existing fire hydrants adjacent to the building that are well within 90m to the dry riser inlet points to each stair. Operation of the existing fire hydrant should be confirmed by the utilities provider.

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

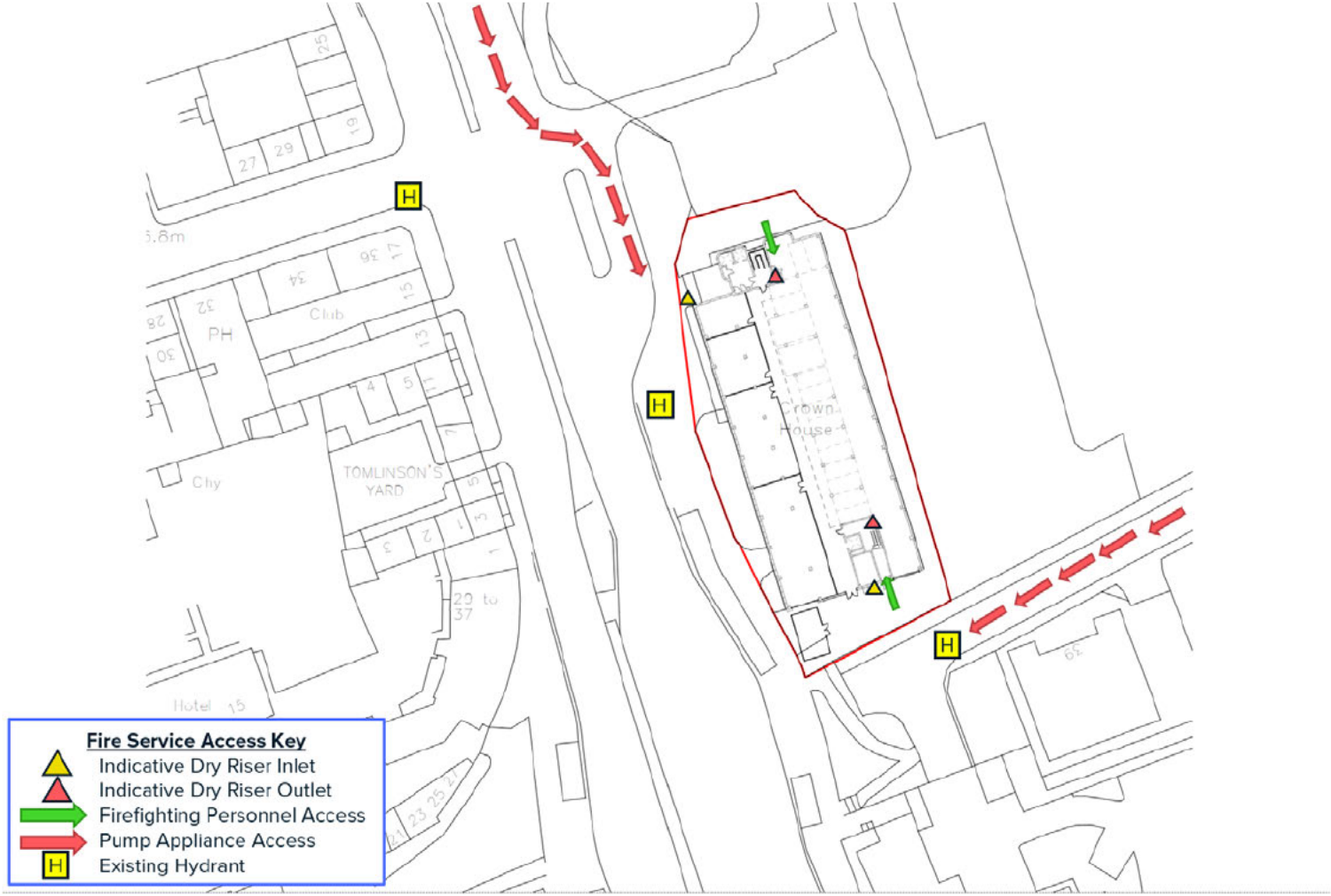

Figure 2. Fire Service site plan.

Fire Statement completed by	
Name	Simon Downing BSc (Hons), MSc
Position	Director
Signature	
Date	27/11/2022