BWC Fire Limited
Unit 17
Space Business Centre
Knight Road
Rochester
Kent
ME2 2BF

T 01634 714198
info@bwcfire.com
www.bwcfire.com

Design Note No. DN01

Project VW Hatfield **Date** 9th November 2020

Subject Planning Application Fire Statement

1.0 DOCUMENT CONTROL

Issue	Date	Description	Author	Reviewed
-	09/11/20	Initial issue	BW	BH

2.0 INTRODUCTION

BWC Fire Limited (BWC) has been appointed to produce the fire strategy for development of the site known as the Beadles Volkswagen Van Centre off Comet Way in Hatfield. A formal fire strategy reports documenting all aspects of fire safety will be developed during the Building Regulations stage however this fire statement report provides a summary of the overall fire strategy principles for the purposes of planning.

The fire strategy has been developed for the purposes of Building Regulations with the report based on the guidance in Approved Document B (ADB) to the Building Regulations, September 2019 Edition (and also including the May 2020 amendments which will be applicable to the scheme at the likely time of construction) as well as other relevant guidance, such as British Standard BS5839 Part 6.

Currently no property protection or other stakeholder requirements are known therefore the fire strategy has been solely developed so far to satisfy statutory fire safety requirements.

3.0 BUILDING DESCRIPTION

This report considers the project at the former Beadles Volkswagen Van Centre site off Comet Way in Hatfield. The site consists of a single notionally C-shaped building which is composed of car parking and ancillary accommodation at ground floor level with then a series of residential apartments on the upper floors. There are up to six upper floors of accommodation with the building footprint stepping back towards the uppermost floors.

The building includes four residential staircases with the three most southerly staircases extending to the sixth floor, whilst the most northerly stair terminates at fourth floor level. Due to the setback of the accommodation the north-east and south-east staircases are in a single staircase condition for at least one storey each and therefore this aspect has been considered within the wider fire strategy.

The building forming the former Beadles VW site is classified in the following Purpose Groups under ADB:

Accommodation	Purpose Group
Residential Apartments	1(a)
Car Park	7(b)

Note – The plant and store rooms have been considered ancillary to the main building uses.

4.0 FIRE STRATEGY SUMMARY

The proposals outlined in this document demonstrate a level of fire safety equal to or greater than the general standard implied by compliance with the recommendations in Approved Document B. This level of safety therefore satisfies the functional requirements of the Building Regulations relating to fire safety.

The fire strategy for the sites can be summarised as follows:

- Means of escape will be based on the apartment of fire origin only evacuating in the residential accommodation. The non-residential areas (ancillary stores and car parking areas) are separate fire compartments and therefore will evacuate on an individual basis, with each adopting a simultaneous evacuation in the event of an incident in that accommodation only. No interconnection of fire alarm system or evacuation protocol is proposed between any areas.

- The individual apartments will adopt traditional entrance hallways from which each internal room is accessed. These layouts will be provided with residential sprinklers, LD1 standard fire alarm and detection systems. At this stage the internal entrance halls will also be limited to 9m travel distances and be fire rated to a 30minute standard with FD20 doors to internal rooms. The apartment party walls will afford 60minutes fire resistance with FD30S self closing doors.

- The apartments are accessed from the common staircases by traditional common access corridors in each case. Most floors are served by multiple staircases however on some local floors the south-east and north-east staircases are in a single staircase condition. Travel distances in the common access corridors are limited to 7.5m in dead ends and 30m in multiple direction routes. To achieve these distances on the fourth and fifth floors secondary escape is required across the external amenity decks. Due to the single staircases the common corridor sections that immediately adjoin a staircase will be provided with automatic smoke ventiliaton. The smoke ventilation will be achieved by 1.5sqm natural smoke shafts to the three southern cores and by 1.5sqm natural automatically opening vents (AOV's) to the northern core. This corridor ventilation will be provided at each upper floor level. Where smoke shafts are used these will not serve the uppermost floors so as to avoid a chimney above the roof level, therefore the uppermost floors will be ventilated separately via 1.5sqm natural AOV rooflights. All common staircases will also include a 1sqm natural automatically opening vent at their heads.

- As there are generally multiple staircases serving the apartments it is proposed that the ancillary and car park areas of the building are acceptable as being accessed from the common staircases. However, such links will be via a fire rated lobby that reflects the same fire resistance as the associated staircase with FD60S self closing doors. In addition each access lobby will be provided with a 0.4sqm permanent natural vent to outside. It should be noted that as part of the support for this arrangement the first floor apartments off the most northerly core should each be provided with an escape window.

- The car parking area will be a completely self contained fire compartment with standalone evacuation strategy. Travel distances and exit widths for the accommodation will be designed to adopt the recommendations of Approved Document B. The car park will also include ventilation for the purposes of daily environmental conditions as well as smoke clearance. This ventilation will be based on natural ventilation that is primarily distributed between opposing walls and has an aggregate vent area of at least 5% of the car park floor area. It should be noted that as the building is over 11m high the car park may potentially require commercial sprinklers, however this item needs discussion with the Building Control body as Approved Document B states that sprinklers are not typically needed in car parks.

- Structural fire resistance to all elements of structure in the building will be 90minute structural fire resistance as the building is over 18m high.

- Each floor in each block will be constructed as a 90minute fire rated compartment floor. Each apartment will form its own 60 minute fire resistant compartment. The fire resistance to walls and floors that separate different accommodations (i.e. the non-residential areas) will be 90minutes fire resistance. The two most southerly cores are fire fighting shafts that will afford 120minutes fire resistance. All other vertical shafts within the building will adopt 90minute fire resistances similar to the elements of structure. As the building is over 11m high automatic fire suppression will be provided to all apartments and non-residential accommodation.

- Fire alarm and detection systems within the building will be:
  - All Apartments – LD1 (BS5839 Part 6)
  - Residential Common Areas – L5 (BS5839 Part 1) – only provided to operate smoke venting
  - Car Park – Manual standard fire alarm systems to BS5839 Part 1
  - Residential Ancillary Areas – No fire alarm systems.

- Emergency lighting will be provided to all communal and non-residential areas of the sites in accordance with Approved Document B guidance and designed to BS5266 Part 1. Emergency signage will also be provided to all areas of the building. The signage will be in accordance with the May 2020 amendments to Approved Document B.

- Residential sprinklers will be provided throughout all apartments and the ancillary stores but not to the common corridors or staircases. The residential sprinklers will be designed in accordance with BS9251 and to a Category 3 standard. If sprinklers are provided to the ground floor car park then these will be designed in accoerdance with BS EN 12845.

- Fire service vehicle access to the residential apartment building is generally based on dry rising water mains within the residential common staircases (this applies to all three of the most southerly staircases only, the northern staircase does not need a dry rising main). All parts of the apartments will be covered within 45m hose distances of dry main outlets within the staircases provided. Fire service vehicle access will be achieved to within 18m of the dry main inlet points which will be located on the face of the buildings ideally by the core entrances. All non-residential areas will be based on all parts of these compartment footprints being covered within 45m of a fire appliance parking position. The two most southerly cores within the building will be upgraded to fire fighting shafts that include an upgraded staircase (120minute fire rated and minimum 1100mm wide) and a fire fighting lift in addition to the dry rising mains. Public or private fire hydrants will be available to within 90m of the entrance doors into the car park area and dry rising main inlets to the residential cores.

5.0 REPORT LIMITATIONS

This report is the copyright of BWC Fire Limited and applies only to the project known as the Beadles VW site in Hatfield. It must not be used in support of any other project without the written agreement of BWC Fire Limited. This report may only be forwarded to a third party if reproduced in full and without amendment to the content or presentation.

In preparing this report it has been assumed that detailed aspects of the design and construction will, unless stated otherwise in this report, be in accordance with the recommendations of the relevant Approved Documents to the Building Regulations, applicable British Standards and other relevant codes of practice.

This report relates only to statutory requirements associated with Building Regulations and the Regulatory Reform (Fire Safety) Order 2005. Additional fire safety measures necessary during construction/remedial works or for insurance, loss prevention or environmental protection purposes are not considered.

The terminology “will” or “will be” as used in this report represents the recommendation/understanding of BWC Fire Limited regarding the proposed design, construction or management of the premises. The validity of this report is reliant upon these items being implemented as described.

This report relates to a project that is subject to third party ratification and it must be ensured that the contents of this report are agreed with all the relevant approval bodies prior to implementation.