Client:	**Space Solutions (UK) Ltd**
Project:	**Kingsway Mews (127/143 Kingsway, London SW14 7HN)**
Reference:	**Fire Safety Advice Note for Planning Application**

Issue:	Date:	Author:	Reviewer:	Comment:
Issue 01	13/02/20	K. Wallasch	D. Bostelmann	First issue for design team to comment
Issue 02	15/02/20	K. Wallasch	D. Bostelmann	Final Issue

1. Introduction

General

1.1 This Advice Note relates to the proposed Kingsway Mews development for planning application (No 19/0691/FUL), in particular addressing comments raised in the appeal decision (ref: *APP/L5810/W/18/3213904 Land rear of 127 - 147 Kinsgway, Mortlake, London*, from 11 November 2019) with respect to the proposed fire brigade access.

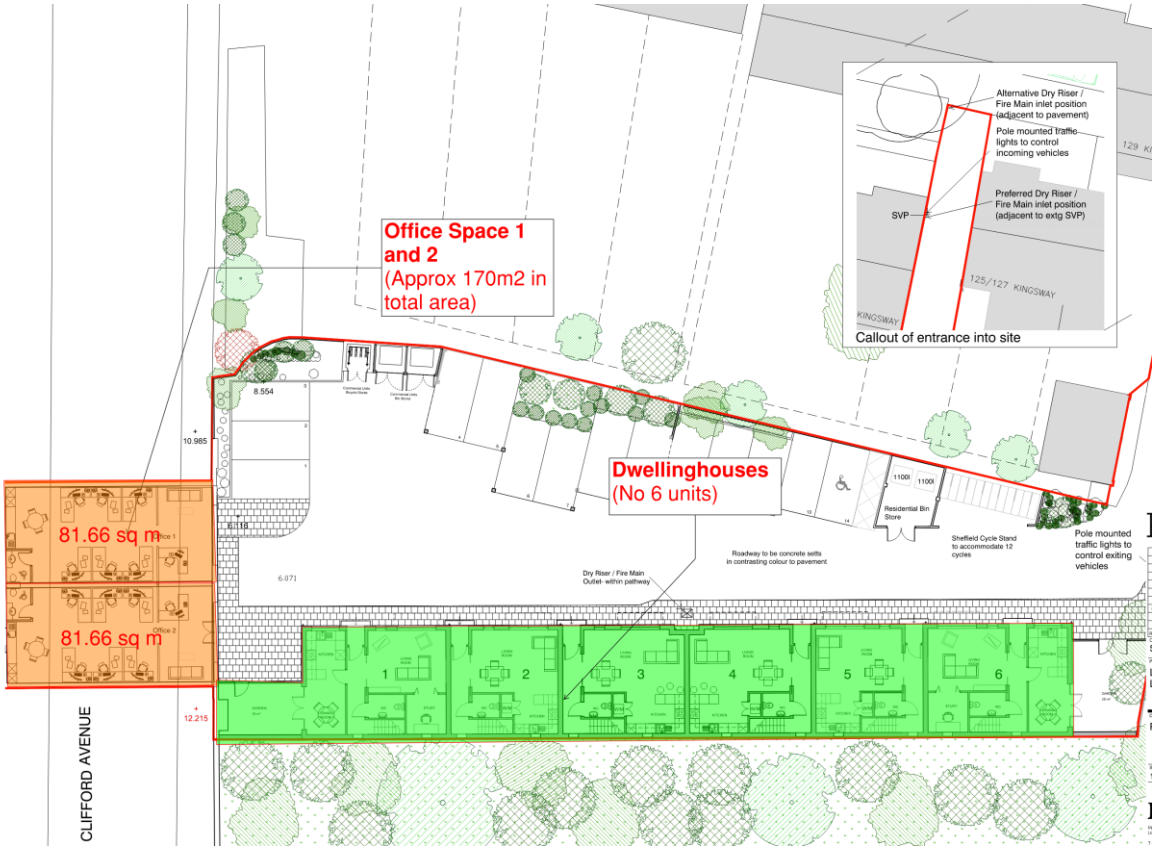
1.2 This Advice Note summarises the proposed principles to address the fire brigade access and facilities for the development. This note has been prepared to support the planning application only.

1.3 Specific comments made during the planning appeal and application about fire brigade access have been addressed in this Note (see Section 3).

1.4 The proposed new Kingsway Mews development is a mixed-use development including the refurbishment single storey office space into two office units (each approx. 82m^2 in area) and six (6) new dwellinghouses. Each dwellinghouse will be a two-storey unit i.e. ground and first floor level. Associated covered but external car parking spaces will be provided on the same site.

1.5 The new development is highlighted in Figure 1 below.

Figure 1: Kingsway Mews – Overview



1.6 We understand that the previous planning application was repealed and specific comments have been raised with respect to fire brigade access and facilities (see Section 3).

1.7 It is understood that the proposed development will be designed to comply with Approved Document B (Fire Safety) (ADB) Volume 1: Dwellings (2019); and Volume 2: Buildings other than dwellings (2019).

2. Fire Brigade Access and Facilities

General

2.1 The functional requirements from Part B of Schedule 1 to the Building Regulations 2010 specify the follow with respect to fire brigade access and facilities requirements:

> ***"Access and facilities for the fire service***
> ***B5.***
> - *(1) The building shall be designed and constructed so as to provide reasonable facilities to assist fire fighters in the protection of life.*
> - *(2) Reasonable provision shall be made within the site of the building to enable fire appliances to gain access to the building."*

2.2 In accordance with ADB Volume 1, any area within a dwellinghouse should be covered by a 45m fire hose distance measured from a fire vehicle access point to furthest point in the dwellinghouse. This distance can be increased up to 60m when sprinklers are provided.

2.3 In accordance with ADB Volume 2, an office with up to 2,000m^2 and up to 11m height require either 15% perimeter access by a fire vehicle pump appliance or all areas should be covered by a 45m fire hose distance (as detailed above).

2.4 The proposal includes a private road providing access to the new development from the public road (Kingsway).

2.5 Due to the width of the private road of approx. 3.0m, it is unlikely that a fire vehicle will be able to access this road. Therefore, the fire brigade would have to park their fire vehicle on the public road (Kingsway) and will be faced with travel distance of 108.50m between fire vehicle and furthest point in the office (See also Figure 2 below).

Figure 2: Kingsway Mews – Distance from Public Road to Furthest Point

2.6 The following measures have been discussed with the client and the design team to compensate for the extended travel distance for fire fighters:

- Provision of residential sprinklers (designed, installed and tested in accordance with BS 9251:2014) to each dwellinghouse; and
- Provision of residential sprinklers to the office unit; and
- Provision of an external dry riser system.

2.7 Benefits of each of these proposed measurements are outlined below.

Sprinkler Protection to Dwellinghouses

2.8 The proposal is to provide residential sprinklers to each dwellinghouse (designed, installed and tested in accordance with BS 9251). Research about residential sprinklers and sprinkler fires (e.g. BRE Project Report 204505; NHBC report NF19) has shown that residential – although may not extinguish – will significantly reduce the fire spread and smoke production. It is therefore assumed that if a fire occurs, the fire brigade is likely to be fighting a smaller, controlled fire. Therefore, if travel distance between fire vehicle are extended, and although there may be a short delay to reach the fire, it is likely that the fire will be controlled.

Sprinkler Protection to Office

2.9 Similar to the residential dwellinghouses, it is proposed to provide residential sprinkler protection (BS 9251) to the office space. It is our opinion that the actual office space area and potential fire load is similar to a residential environment. In addition, no sleeping risk is present in the office as occupants will be awake and familiar. The actual design of the sprinkler system should be undertaken during the next stage to confirm location and number of heads, Category etc. It is proposed to provide a detection system to raise alarm and awareness of a fire at an early stage. This will furthermore allow for early means of escape, and result in early call and intervention by the fire brigade. Should the fire develop, the residential sprinklers should be able to control the fire, therefore the fire brigade is likely to fight a smaller and controlled fire. Therefore, even with extended travel between the fire vehicle and furthest point of the office, it is likely that the fire would still be controlled.

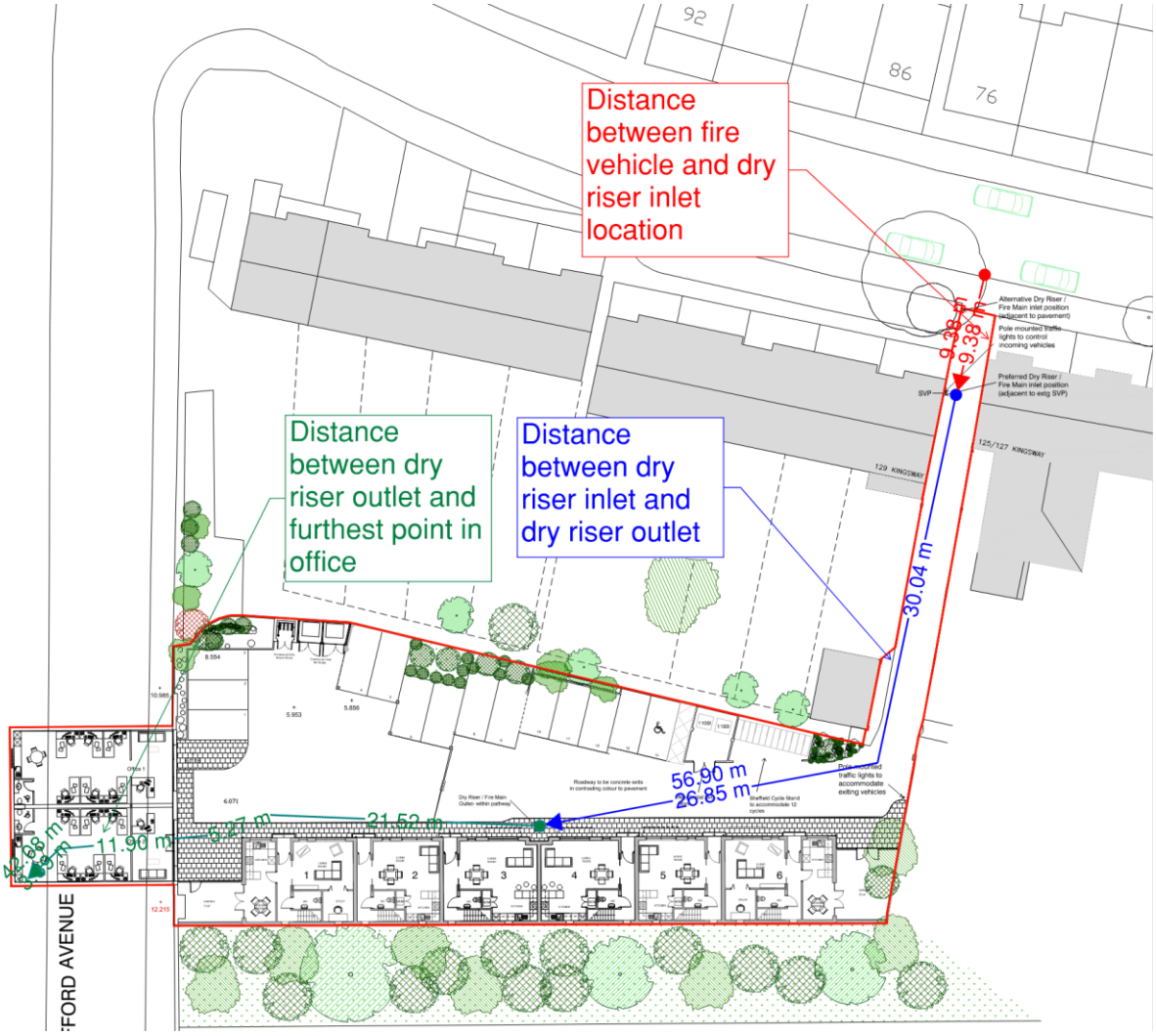
External Dry Riser

2.10 Another fire safety measure discussed with the team is the implementation of an external dry riser pipe system. The dry riser inlet should be located within 18m and visible from the fire vehicle arriving at Kingsway. The fire brigade can then use this dry riser system with an external outlet which should be located such that all areas within the dwellinghouses and the office area are covered by a 45m hose distance (. Both dry riser inlet and outlet should be located vertically.

2.11 Details of the dry riser system, exact inlet/outlet location, management and maintenance regime should be outlined in detail during the next stage and presented to the Local Fire Brigade as part of the Building Regulations application process.

2.12 Figure 3 below outlines the walking distance between dry riser inlet and outlet and fire hose distance from dry riser outlet to furthest point in this development.

Figure 3: Kingsway Mews – (Approx.) Distances with Dry Riser System



3. Response to Appeal Decision

3.1 The following outlines our response to item 3-8 of the Appeal Decision (ref: APP/L5810/W/18/3213904, hearing held on 10 September 2019) addressing access for emergency services.

3.2 Item 3

> The appeal site is located to the rear of a number of residential properties and is accessed by a track which at its widest point, measures slightly in access of 3 metres. It is not disputed between the parties that it would not be possible for a fire engine to access the appeal site via this track as a minimum clearance of 3.7 metres is required for fire tenders.

3.3 TRIGON: The assumption is correct which is that the fire vehicle has to stop at Kingway and fire fighters will have extended walking distance. However, it is our considered opinion that the proposal which includes sprinkler protection to all dwellinghouses and the office area as well as a new dry riser system will significantly assist the fire fighters and therefore allow for extended walking distances.

3.4 Item 4

> During the hearing the concept where a number of dry risers would be located along the accessway into the site to provide for a fire engine to park on the highway, and still serve the proposed units in the event of an emergency was discussed at length. No technical details were submitted to illustrate how this would work for this scheme, however it was explored as a concept that has been used elsewhere in London, specifically for mews developments.

3.5 TRIGON: Details of the actual dry riser system design, inlet/outlet locations, management and maintenance regime should be provided during the detailed design stage and prior to applying for Building Regulations approval.

3.6 Item 5

> I have carefully considered the relative distances, the furthest units from the highway would be the commercial units which are in excess of 90 metres from the site entrance. The residential units would then be located in a row facing into the site along the rear boundary. All units would be accessed via the single point of entry along the access track which is approximately 28 metres. Whilst I accept that an approach incorporating dry risers could be implemented in principle, I am not satisfied that it has been demonstrated such a concept would be appropriate for this site. I acknowledge that this approach has been used elsewhere, however I do not have specific details of those schemes that would allow me to make any meaningful comparisons. Furthermore, each site must be considered individually, and taking into account the seriousness of the issues a blanket approach to this concept would not be appropriate.

3.7 TRIGON: By providing sprinkler protection throughout and a dry riser system, it is our considered opinion that the functional requirements of the Building Regulations 2010 can be met. This will be subject to providing details during the next design stage and discussion with Statutory Authorities as part of the Building Regulations approval process.

3.8 Item 6

> It is fundamental that development is provided in a manner that is safe for future occupants. The fire Brigade should be consulted at an early stage within the planning process to work alongside and confirm functionality of any proposals that would be used for this due to the site being inaccessible for fire tenders. There is no evidence to suggest that the appellant entered into consultation with the fire brigade either throughout the application or appeal process and therefore there is no confirmation from the fire brigade that this approach would be suitable for this particular development. Failure to provide adequate access for fire tenders, or to provide confirmation from the fire services that an alternative approach would be suitable, means that the development cannot demonstrate it would be safe for future occupiers.

3.9 TRIGON: We understand your comment and understand that early consultation with the Local Fire Brigade has taken. This Advice Note can be presented to the Local Fire Brigade.

3.10 Item 7

> As part of the hearing the use of a pre-commencement condition to secure the agreement of a Fire Safety Strategy to include the provision of dry risers was discussed. Conditions should be used to enable development to proceed by mitigating adverse effects of that development where it would otherwise have been necessary to refuse planning permission. With regards to the scheme before me, I am not satisfied that without prior consultation with the fire services in relation to the very particular circumstances of this site such mitigation can be achieved. Therefore, it is not possible for me to impose a condition that would meet the relevant tests, particularly those relating to enforceability and the need for precision.

3.11 TRIGON: We have carefully considered the options and a workable solution as outined in this Advice Note has been presented. We therefore recommend forwarding this Advice Note to the Local Fire Brigade.

3.12 Item 8

> As such, I cannot conclude that the proposal would provide a suitable access with particular regard to the ability of the emergency services to tend to the site. Accordingly, I find that the proposal would conflict with Policy LP44 of the London Borough of Richmond Upon Thames Local Plan 2018 (the Local Plan) with specific regard to the council's aim to promote safe, sustainable and accessible transport solutions.

3.13 TRIGON: Our proposal to include sprinkler protection throughout and provide an external dry riser pipe system should be developed into a detailed fire safety strategy during the next

detailed design stage. However, the concept presented in this Advice Note outlines at strategic level how the proposal would comply with the functional requirements of the Building Regulations 2010 with respect to B5 requirements: Fire Brigade Access and Facilities.

4. Conclusions

4.1 This Advice Note has been prepared following our initial review of the proposed Kingsway Mews scheme during planning application. This note does not replace a detailed fire safety strategy report and should not be used for Building Regulations application.

4.2 Following our review, it is our considered opinion that the proposal presents a route to comply with B5 of the functional requirements of the Building Regulations 2010, subject to detailed development during the next detailed design stage.

4.3 It is our considered opinion that the proposal which includes sprinkler protection to all dwellinghouses and the office area as well as a new dry riser system will significantly assist the fire fighters and therefore allow for extended walking distances.