



Title: Home Farm Planning Fire Statement
Revision: 00
Date: 20th January 2023
Author: Daniel Taylor BSc (Hons) AIFireE
Approver: Richard Baker BEng (Hons)

Marshall Fire Ltd.
Home Farm Planning Fire Statement

Revision	Description	Author	Approver	Date
00	Initial issue for comment	Daniel Taylor	Richard Baker	20 th January 2023

Contents

1.	Introduction	4
1.1	Overview	4
1.2	Purpose of this report	4
1.3	Scheme description	4
2.	Fire Statement	6
2.1	Section 1: Site address	6
2.2	Section 2: Description of proposed development including any change of use	6
2.3	Section 3: Name of person completing the fire statement and relevant qualifications and experience	7
2.4	Section 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	7
2.5	Section 5: Site layout plan with block numbering as per building schedule referred to in section 6	8
2.6	Section 6: Building schedule	9
2.7	Section 7: Specific technical complexities	10
2.8	Section 8: Issues which might affect the fire safety of the development	10
2.9	Section 9: Local development document policies relating to fire safety	10
2.10	Section 10: Fire service site plan	11
2.11	Section 11: Emergency road vehicle access	11
2.12	Section 12: Siting of fire appliances	12
2.13	Section 13: Suitability of water supply for the scale of development proposed	12
2.14	Section 14: Fire service site plan	12
2.15	Section 15: Signature	12
2.16	Section 16: Date	12
2.17	Conclusion	13
3.	References	13

1. Introduction

1.1 Overview

Marshall Fire has been appointed by Selby Capital Holdings Ltd to provide a fire statement for the Home Farm Kennal Road, Chislehurst, BR7 6LY.

Our role is to assist in steering the scheme towards meeting the requirements of Planning Gateway One as well as London Plan Policy D5 and D12 in relation to fire safety and the planning submission for the proposed works.

This Fire Statement will consider the evolution of the development and the principles of the golden thread concept and will form the basis of the developing Fire Strategy.

The 'Golden Thread' refers to a concept where the fire safety information of a building is to be updated and maintained through the whole life cycle of the building. The fire safety information should be maintained and updated as the development evolves in line with the principles of the golden thread. The fire safety information provided at planning application stage should be developed to inform the overall fire strategy for the development. When passing fire safety information to subsequent development stages, consideration should be given to the accessibility, accuracy and relevance of the information to ensure the development is constructed as it has been designed and originally specified.

1.2 Purpose of this report

The purpose of this report is to review the proposals in terms of the London Plan requirements and Planning Gateway One requirements. To demonstrate the development meets the highest standards of fire safety, proportionate to the size and nature of the development.

It should be noted that the project will still need to comply with the requirements of the Building Regulations and therefore the information presented herein may be developed further such that compliance with the requirements of the Building Regulations is demonstrated.

The contents of this report should therefore not be considered sufficient to form a part of the Building Regulations submission for the project and Building Regulation approval should be considered a risk until such time that approval in principle has been granted by the appointed Building Control Body.

The findings of this statement are based on the information available at the time of review. Marshall Fire cannot be held responsible for any subsequent changes to the design that we are not made aware of.

1.3 Scheme description

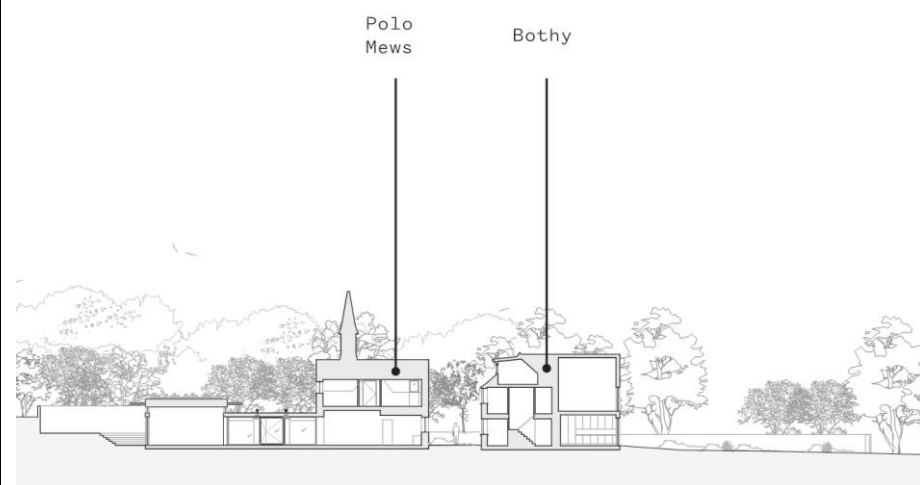
The project consists of the demolition of some extensions and rebuilding with better design intent but merely increasing the building footprint. Improvements to open space, landscaping and other infrastructure will be included as part of the scope of works. This will also be the first hydrogen powered house within a London Borough. The development consists of many buildings/out buildings but with works focused on the following:

- Bothy House – 2 dwelling houses, 3 storey (ground plus two upper floor level).
- Polo Mews – 1 large dwelling house, 2 storey (ground plus one upper floor level).
- New Vine house – 1 large dwelling house, single storey.

See Figure 1 for the current design proposals.



Global view of site building



Development elevation

Figure 1: Design intent drawings

Commented [RB1]: Where's vine house 😊

2. Fire Statement

2.1 Section 1: Site address

The development is located at or the Home Farm Kemnal Road, Chislehurst, BR7 6LY.

2.2 Section 2: Description of proposed development including any change of use

The project consists of the demolition of some extensions and rebuilding with better design intent but merely increasing the building footprint. Improvements to open space, landscaping and other infrastructure will be included as part of the scope of works. This will also be the first powered house within a London Borough The development consists of many buildings/out buildings but with works focused on the following:

- Bothy – 2 dwelling houses, 3 storey (ground plus two upper floor level).
- Polo Mews – 1 large dwelling house, 2 storey (ground plus one upper floor level).
- New Vine house – 1 large dwelling house, single storey.

An elevation of the buildings is shown below.



BOTHY - ELEVATION 1



POLO MEWS - ELEVATION 2
1:100 @ A1

Glazed link
between buildings

Buff brick to
proposed wall to
match existing

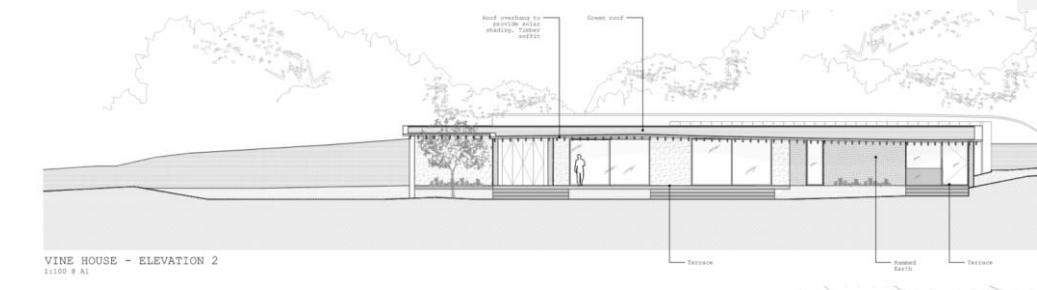


Figure 2: Proposed building Elevation

The following is a summary of the buildings key parameters:

Table 1: Building key parameters

Designation	Designated purpose group	Topmost Story Height	Number of Storeys	Sprinklers	Firefighting Shaft	Elements of structure
Bothy	1b	5.5m	3 storeys	Yes	No	30 minutes*
Polo Mews	1b	4.1m	2 storeys	No	No	30 minutes
Vine House	1b	0.0m	1 storey	No	No	30 minutes

Note: * A minimum of 30 minutes in the case of three storey dwellings, increased to 60 minutes minimum for compartment walls separating buildings.

2.3 Section 3: Name of person completing the fire statement and relevant qualifications and experience

This document was completed by Daniel Taylor. He has a BSc (Hons) in Fire Safety Engineering and is an Associate member of the Institution of Fire Engineers. He is a Senior Fire Engineer at Marshall Fire and has 4.5 years' experience in the industry.

Daniel has a high level of understanding Fire Safety compliance and has worked on a wide range of projects including residential, commercial and mixed-use residential development schemes across the UK of varying scales whilst acting as the lead fire engineer leading projects from RIBA Stage 2 to RIBA Stage 6 successfully.

This document was reviewed by Richard Baker. Richard has a high level of understanding of the functional requirements to the Building Regulations and how to develop designs to achieve compliance. He has worked on a wide range of projects including commercial, mixed use and residential developments across the UK and internationally from project conception (RIBA Stage 2) through all design and construction phases to commissioning and completion.

2.4 Section 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

Yes, a Design Review Panel chaired by Design South East has been undertaken. No other consultations have been undertaken and no information regarding proposed fire safety measures has been submitted with the application to date.

2.5 Section 5: Site layout plan with block numbering as per building schedule referred to in section 6

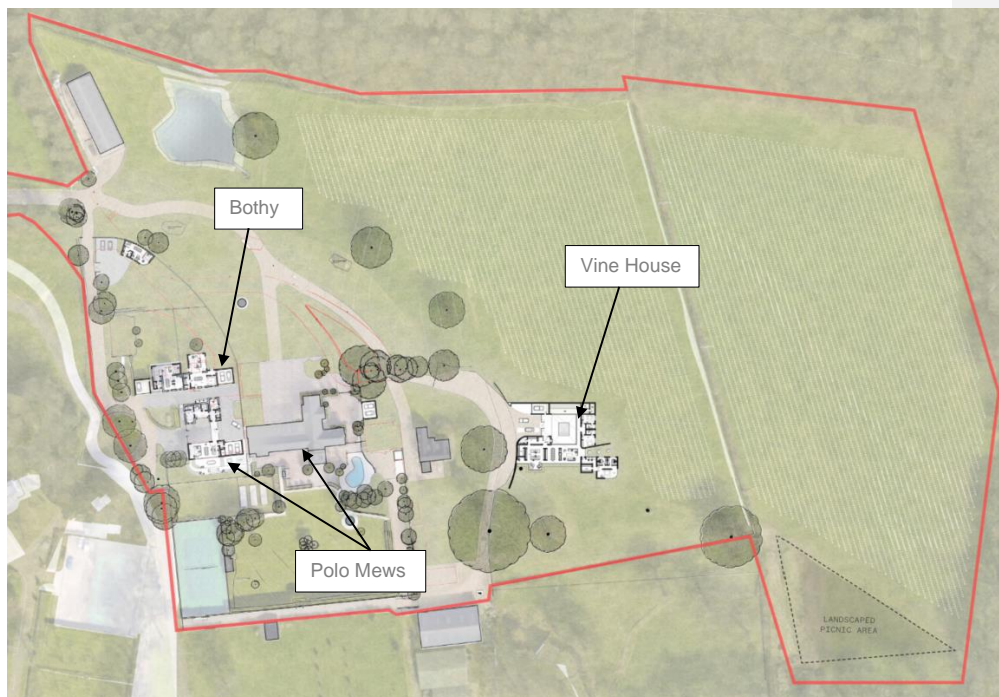


Figure 3: Building Identification

Marshall Fire Ltd.

London Road, Datchet Fire Statement

2.6 Section 6: Building schedule**Table 2: Buildings Schedule Table***Notes: The proposed guidance will be adopted from Approved Document B, Volume 1, 2019 + 2022 amendment.*

Site Information				Building Information		Resident Safety Information		
No.	Block height (m)	No. of Storeys	Proposed use	Balconies	External Wall Systems	Evacuation approach	Sprinklers	Accessible housing provided
Bothy	7.5m to the eaves/roof level from ground level.	Up to 3 storeys	Residential house	Yes	*No provision as the boundary is greater than 1000mm.	Simultaneous Evacuation	Yes, due to ground + 2 storeys + open kitchen design.	Refer to Architect's information.
Polo Mews	7.1 to the eaves/roof level from ground level.	Up to 2 storeys	Residential house	No	*No provision as the boundary is greater than 1000mm.	Simultaneous Evacuation	No	Refer to Architect's information.
Vine	3.8m to the eaves/roof level from ground level.	Up to 1 storey	Residential house	No	*No provision as the boundary is greater than 1000mm.	Simultaneous Evacuation	No	Refer to Architect's information.

Note:* Boundaries less than 1m and under 18m will need to satisfy Class B-s3, d2 or better.

2.7 Section 7: Specific technical complexities

To ensure that the proposals works offer the highest level of fire safety, the fire strategy will be developed using guidance from Approved Document B, Volume 1, 2019 + amendments. The evacuation will be based on a traditional 'simultaneous evacuation policy' given these are dwelling house where only the house of fire incident will evacuate.

The dwellings are to have fire detection and alarm systems in accordance with BS 5839-6 with level of detection proposed as:

- Vines House as a single storey house to have a Category LD2 system with smoke detection in the circulation space, rooms adjacent to the circulation space and high-risk areas. This will also include a heat detector within the kitchen.
- The two-storey Polo Mews and Bothy houses, and three-storey Bothy House having the living/kitchen area open to the stair are to have a Category LD1 fire detection system with smoke detection throughout the dwelling to allow early warning. Where the stair is enclosed and leads directly to the final exit then the alarm can reduce to Category LD2.

Sprinklers are traditionally not required within a dwelling house as the stair is enclosed leading to a final exit. However, from review of the plans, Bothy House has an open plan ground floor with the stair open to the kitchen living area, so this requires sprinkler protection. A door (traditional hinged or sliding door) is required at the base of the stair to prevent the smoke from rising to the first floor as this will be the escape route for occupants on the second who will then need to use the emergency egress windows from the habitable rooms on the first storey.

The Polo Mews house is also designed with open plan living but as it is only two storey, with habitable rooms having an emergency egress window, then the risk is reduced and sprinklers are not considered necessary.

The cooking hobs are to be located as remotely as practicable from the escape route within the dwellings. General guidance is no less than 1800mm clearance from the escape path.

The following compartmentation is required within the apartment building and dwelling houses, but not limited to:

- 60 minutes for compartment walls separating adjacent dwellings (i.e Party Wall).
- 30 minutes for stair enclosures with FD20 fire doors.
- 30 minutes separation between integral garage and the house.

An evacuation lift for dignified escape is deemed exempt and not a requirement within a dwelling house.

The new dwelling is proposed to have rammed earth, a green roof and structure to be confirmed but either steel or concrete most likely. The remodelled dwellings extensions will be formed using brickwork, glazing and steel frame. Some elements will include steelwork. All internal partitions will be constructed from lightweight metal stud walls and gypsum plasterboard.

All façade construction is required not to be a medium of fire spread and as the external wall surface is proposed as brick and glass it will be Class A2-s1, d2 or better.

Firefighting intervention for dwelling houses will consist of 45m hose coverage from a location where a fire tender can access.

2.8 Section 8: Issues which might affect the fire safety of the development

The following issues are noted as departures that require gaining the approving authorities' sign off.

1. The open plan design without a stair enclosure is high risk and whilst the sprinklers and enhanced alarm with mitigate the risk, providing a sliding door or enclosed stair allows for much greater time for occupants on the second floor to reach the escape windows at first floor without having to travel through a smoke logged stair.

2.9 Section 9: Local development document policies relating to fire safety

The proposed development has taken the steps to design for future guidance requirements and allow necessary improvements for life safety so that the project has the highest level of fire safety.

2.10 Section 10: Fire service site plan

The fire service will have the ability to park on a hardstanding directly outside the houses and meet the furthest point within 45m using hose coverage.

The design team will provide a site plan with the hydrant locations for the site as part of Section 12 and Section 14. Figure 4 below identifies the fire main locations and hardstanding areas.

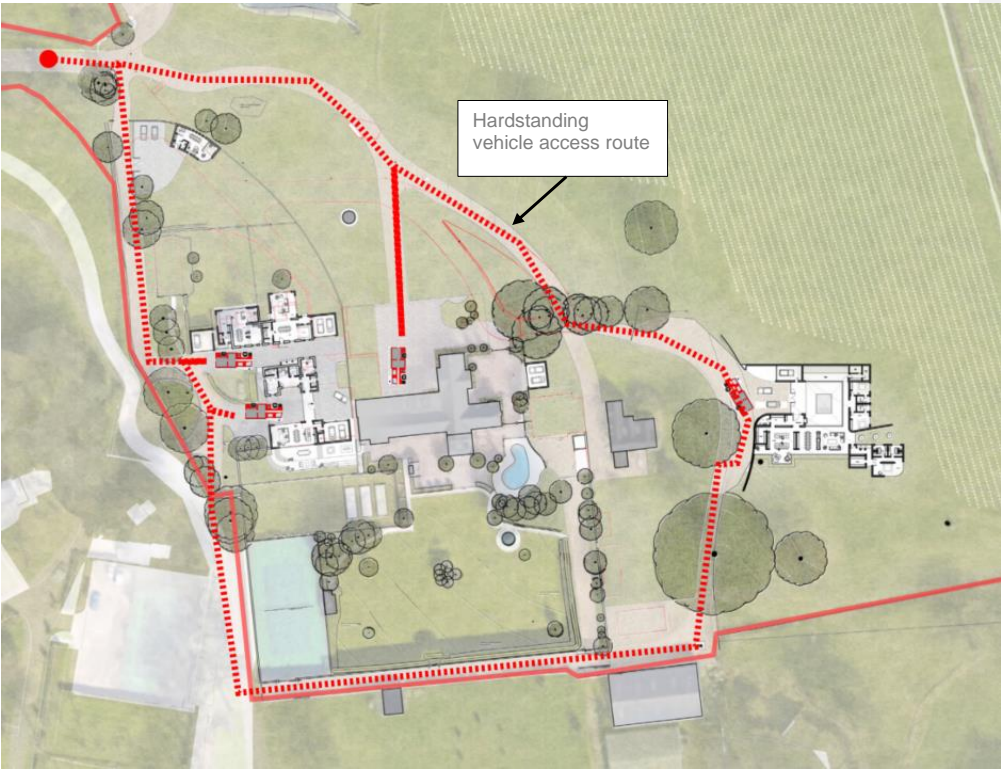


Figure 4: Fire tender hardstanding access roads

2.11 Section 11: Emergency road vehicle access

Firefighting access is key for successful firefighting and therefore the appropriate provisions must be made regarding site access.

Turning facilities should be provided in any dead-end access route that is more than 20m long. This can be by a hammerhead or turning circle. From inspection of the plans, this will be via a hammerhead turning point.

Table 3: Pump appliance access route requirements

Appliance Type	Min. width of road between kerbs	Min. width of gateways	Min. turning circle between kerbs	Min. turning circle between walls	Min. clearance height	Min. carrying capacity
Pump	3.7	3.1	16.8	19.2	3.7	12.5*
High Reach	3.7	3.1	26.0	29.0	4.0	17.0*

Note: * The minimum carrying capacity should be checked with the local fire brigade.

2.12 Section 12: Siting of fire appliances

Siting of the fire appliances will be to the front of the main entrance points to the dwelling houses on the ground floor. This has been illustrated in Figure 4.

2.13 Section 13: Suitability of water supply for the scale of development proposed

Existing public hydrant locations for the site are required to be checked and new hydrants provided if required to ensure hydrants are located within 90m of an entry point to the dwelling house and not more than 100m apart. The water supplies will be via the public mains.

From review of the plans, additional hydrants required to support the fire service and to ensure adequate water supplies. Design Team to review with M&E team.

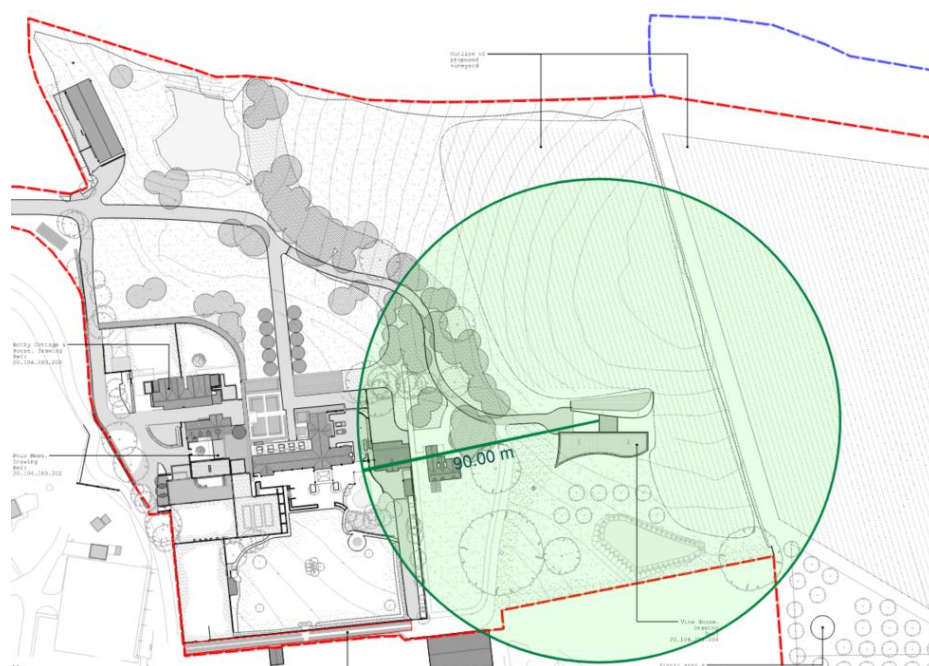


Figure 5: Additional Fire Hydrant required and existing to be checked.

2.14 Section 14: Fire service site plan

The design team will provide a site plan as stated in Section 12. See also Figure 4.

2.15 Section 15: Signature

The following overview has been produced by Daniel Taylor.

D. Taylor

2.16 Section 16: Date

The following fire safety statement is dated 20/01/2022.

Marshall Fire Ltd.
London Road, Datchet Fire Statement

2.17 Conclusion

Having reviewed the documentation issued to Marshall Fire Ltd by Selby Capital Holdings and Hollaway Studio, we agree with the overall design proposals and conclusion presented in the drawings which can be developed to satisfy the functional requirements of the Building Regulations.

Further design development will include the necessary changes to prevent smoke rising above first floor level in Bothy house and with escape windows at first floor within all multiple storey buildings.

Review of the existing hydrants and proposal for a new hydrant to serve the new vine house.

It is considered that the scheme meets the Planning Gateway 1 requirements plus any London Plan Policy D12 requirements. The evolution of the design development and the principles of the golden thread concept will form the basis of the developing Fire Strategy through further design, construction and operation of the building.

We would however reiterate that the findings are limited to the information reviewed only and the installation, maintenance and ongoing maintenance are not our responsibility.

3. References

- i.** Approved Document B, Volume 1, 2019 + 2022 amendments: Fire Safety in residential buildings
- ii.** Fire Statement Guidance, Annex D Gov.co.uk
- iii.** BS 5839-1:2017, Fire detection and fire alarm systems for buildings. Code of practice for system design, installation, commissioning and maintenance.
- iv.** BS 5839-6:2019, Fire detection and fire alarm systems for residential buildings. Code of practice for system design, installation, commissioning and maintenance.
- v.** BS 9990:2015, Non automatic fire-fighting systems in buildings. Code of practice.
- vi.** BS 476 series: 1987, Fire tests on building materials.
- vii.** BS EN 1366-3:2009, Fire resistance tests for service installations. Penetration seals.
- viii.** BR 187: 2014 External Fire Spread Building Separation and Boundary Distances.
- ix.** London Plan Guidance, Fire Safety Policy D12(A), March 2021 Pre-consultation draft.
- x.** BS 9251: 2021 Fire sprinkler systems for domestic and residential occupancies. Code of practice.