



Fire
Safety
Engineering
Consultancy

Summerfield House
104 Calverley Lane
Leeds LS13 1HE

Date of report: 28th April 2021
Report prepared by R Taylor
Ref PB/RT/555/2021

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Assent Building Control
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Station Approach
Staines
Surrey
TW18 4LY

**Fire Engineering submission in support of the
proposed residential development**

at

**56 The Vineyard
Richmond
Surrey TW10 6AT**

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Introduction

FSEC Fire Safety Engineering Consultancy has been commissioned by William and Ana Charles to develop the design and to provide a report for the alterations to be carried out at 56 The Vineyard Surrey. This is to satisfy the functional requirements of the Building Regulations on the basis of fire engineering principles.

The layout of the dwelling is compliant with the recommendations of the prescriptive guidance document Approved Document B volume 1 2019. Therefore, the object of this report is to demonstrate compliance with the functional requirements of Building Regulations. The final objective is to produce a level of life safety. The assessment has not primarily considered any requirements associated with property protection additional to those which are inherent within the prescriptive guidance and any discussions associated with variations to the prescriptive approach are on the basis of life safety.

It is considered that the recommendations in this report will provide sufficient guidance to obtain approval from the relevant authorities and achieve a satisfactory level of safety commensurate with the risks of the occupied premises.

Building description

The premises are used as a single private dwelling consisting of a Basement, ground and two upper floors, the top floor being more than 4.5m above ground level.

The main entrance to the dwelling is located at the front of the building which leads into an entrance hall. From the entrance hall there are doors that give access to a reception room/TV room, study/library and a door leading down to the basement. The basement consists of an open-plan kitchen/dining room with doors leading to a play room and pantry.

Within the entrance hall there are stairs that give access to a master bedroom on the first floor and two bedrooms and a study on the second floor.

Dwellings designed to Approved Document B Volume 1 2019

Approved Document B B1 section 2 Means of escape from dwellings, 2.5 states that escape from dwellings with one storey more than 4.5m above ground level where served by only one stair, should comply with either of the following:

- A) Provide a protected stairway separated by fire resisting construction (minimum REI 30) at all storeys, that complies with one of the following:
 1. Extends to a final exit.
 2. Gives access to a minimum of two ground level final exits that are separated from each other by fire resisting construction (minimum REI 30) and door sets (minimum E20).
- B) Alternative escape route from the top storey separated from the lower storeys by fire resisting construction (minimum REI 30) and with an alternative escape route leading to its own final exit.
 - The proposals are to provide a protected stairway from the second floor to the final exit door located at ground level at the front of the dwelling.

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Matters for consideration.

The proposals are to provide the following:

- Good early warning and detection
- Fire Compartmentation
- Alternative means of escape

Fire detection

- The fire detection and alarm system provided within the dwelling will meet the requirements of BS5839, Part 6, Grade D2, LD2.
- The system will provide smoke detectors in the following areas:
Basement, living area.
Ground floor, entrance hall, study/library and reception room.
First and second floor landings.
- Heat detection will also be provided within the kitchen area.
- Sound levels in each bedroom will achieve 75DbA at the bedhead and 85DbA at 3m in all other areas.

Fire compartmentation

- The fire compartmentation between floors will be a minimum 30 minutes' standard both vertically and horizontally. This will include a 30 minute glazed screen located at the head of the basement stairs.
- The following substantial doors will be treated with envirograph paint to ensure they provide a minimum 20-minute fire-resisting standard:
Ground floor: Study/library, reception room, at the head of the stairs leading down to the basement.
First floor: Master bedroom door and utility room.
Second floor: Two bedrooms and study.

Alternative means of escape

There is an alternative means of escape from the basement that leads into the rear garden. There will also be an alternative means of escape from the first floor master bedroom.

The escape window will be in accordance with the following.

- The window will have an unobstructed openable area of at least 0.33m² and at least 450mm high and 450mm wide. In order to achieve the openable area of 0.33m² where one dimension is 450mm the other should be at least 750mm.

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- The bottom of the openable area for standard window should not be more than 1100mm above the floor.

Conclusion

Given that the design of this building having one storey more than 4.5m above ground level which is served by only one stair. The premises meet the functional requirements of Building Regulations for the following reasons.

- The premises will be provided with a fire alarm system fitted to BS5839 Part6 Grade D2 LD2 standard.
- A protected stairway will be provided from the second floor to the final exit door located at ground level.
- A suitable alternative means of escape is provided from the basement.
- It should also be noted that there is an alternative escape window from the first floor master bedroom.

This report is therefore submitted as an acceptable remedy to meet the functional requirements of B Regulations in this matter.

I hope this meets your requirements and please contact me at any time for any further items for discussion.

Yours sincerely

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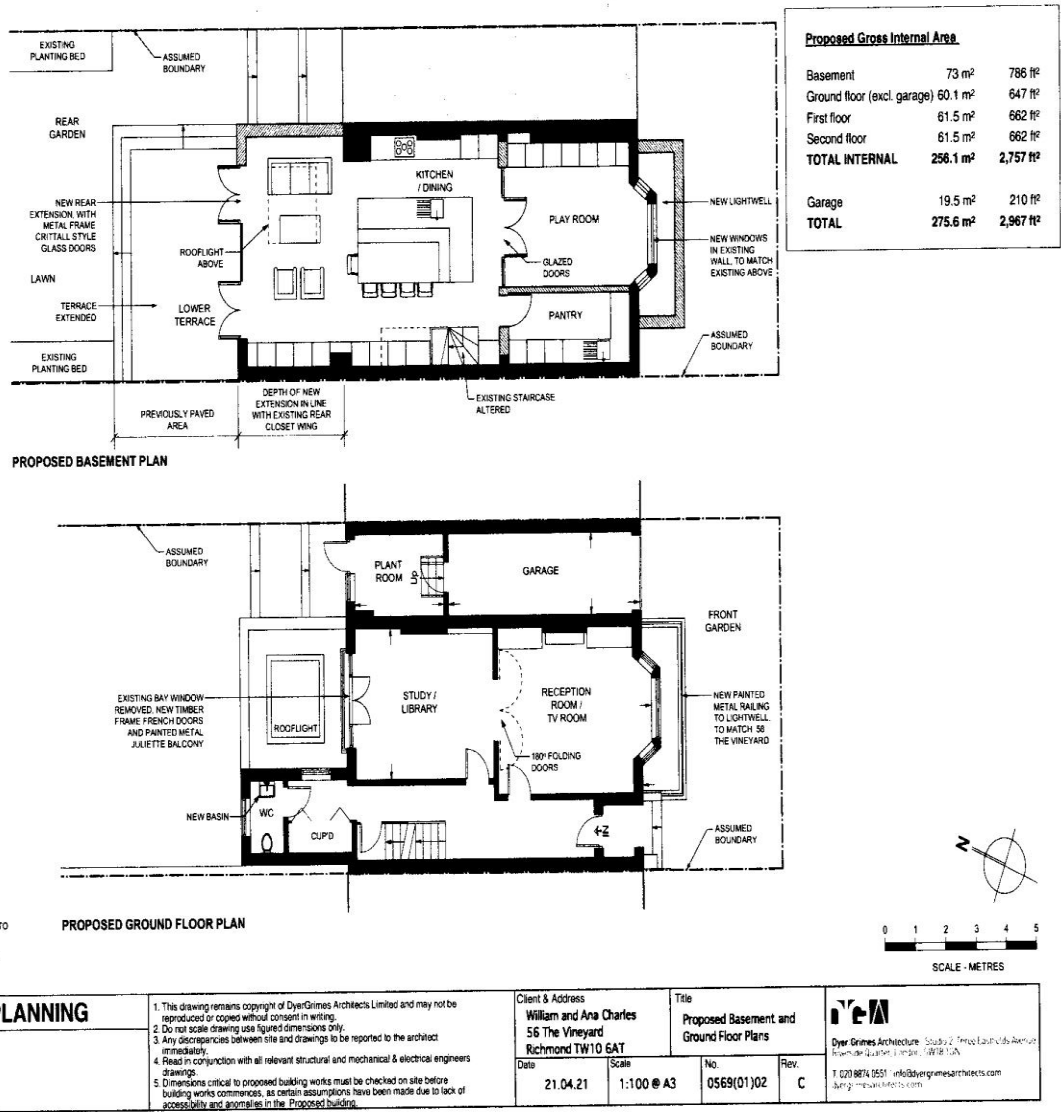
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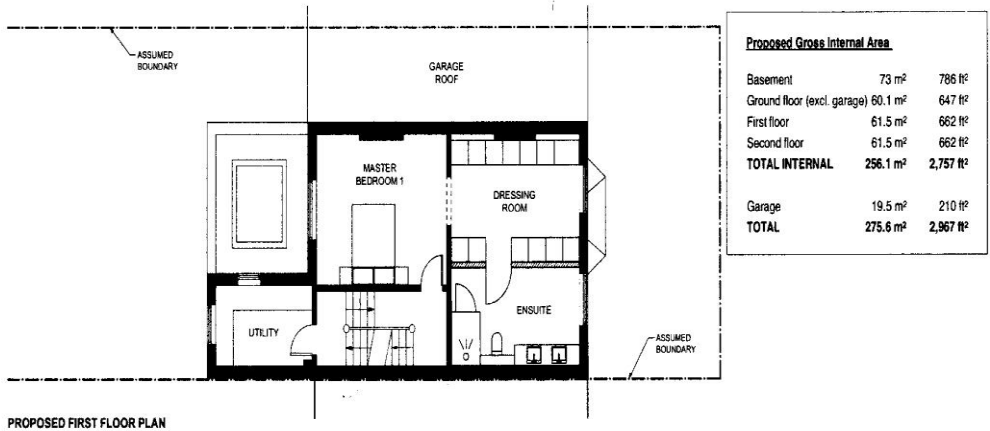
Nationally accredited fire risk assessor under Warrington Exova FRACS scheme

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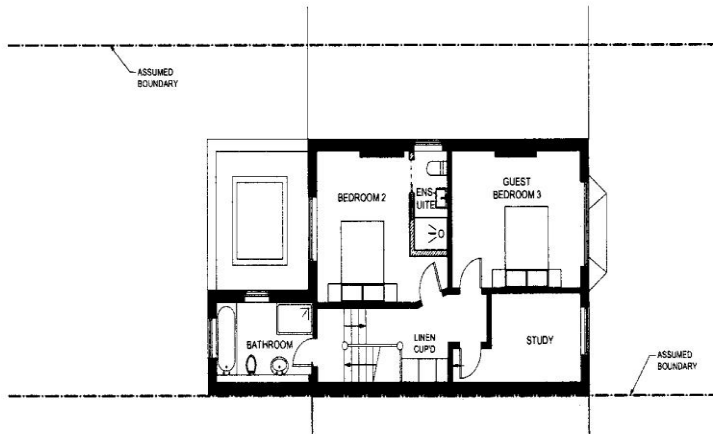
Floor plans (not to scale)



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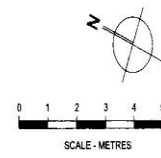
PROPOSED FIRST FLOOR PLAN



PROPOSED SECOND FLOOR PLAN

LEGEND

- EXISTING FABRIC TO BE RETAINED
- PROPOSED NEW CONSTRUCTION



Status	PLANNING	1. This drawing remains copyright of DyerGrimes Architects Limited and may not be reproduced or copied without consent in writing. 2. Do not scale drawing use figured dimensions only. 3. Any discrepancies between site and drawings to be reported to the architect immediately. 4. Read in conjunction with all relevant structural and mechanical & electrical engineers drawings. 5. Dimensions critical to proposed building works must be checked on site before building works commences, as certain assumptions have been made due to lack of possibility and anomalies in the Proposed building.	Client & Address William and Ana Charles 56 The Vineyard Richmond TW10 6AT	Title Proposed First and Second Floor Plans		
Revisions			Date 21.04.21	Scale 1:100 @ A3	No. 0569(01)03	Rev. C
		Dyer Grimes Architecture (incorporating Dyer Grimes Architects) Ltd First Floor, 100, London, SW1B 7TA T: 020 8674 0551 info@dyergrimesarchitects.com dyergrimesarchitects.com				

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