



FIRE & ACOUSTIC DETAILS.

SOUTHLEIGH PARK HOUSE

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This report has been prepared by FSL Group to set out the proposed work necessary and to demonstrate an appropriate approach to providing compliant fire safety and acoustic performance which respects the special architectural and historic interest of the listed elements of Southleigh Park House.

Listed Building Consent was granted under APP/17/008634 and this statement has been prepared in answer to condition 5 which states;

“Prior to the commencement of work, details shall be submitted to and approved in writing by the Local Planning Authority to show:-

- a) the means of upgrading the existing doors and frames to meet the prescribed fire safety standards and/or*
- b) the design and construction of any new fire doors/glazed screens.*
- c) the design, location and method of fixing any new fire prevention/detection systems e.g. smoke detectors, alarms.*
- d) the means of providing noise isolation between units.”*

FSL Group have produced this statement with reference to good practice and project experience of restoration of historic buildings. Our RICS Certified Historic Building Professional consultant, Simon Goddard of The Goddard Partnership is employed to provide additional advice and assistance where necessary.

The Southleigh Park House Estate comprises a main house, West wing, Coach House, Stables and a Lodge. The estate and building grew from a farm in 1820 to a significant Gentlemen's estate covering over 380 acres by 1930. The buildings and a parcel of land were purchased by Plessey and used as a research and development centre during which time a large number of unsympathetic alterations were carried out along with minimal maintenance. The site was purchased by Snell & Willcox in the 1980s and a process of renovation and restoration commenced but halted part way through. An application for development was approved in 2017 and Vivid Homes took ownership.

The buildings are now in a poor state of repair.

The proposal is to retain and restore all buildings and convert to residential accommodation in line with the approved planning approval and listed building consent.

Addressing points 'a', 'b' & 'd' relating to fire & acoustic upgrades.

An initial acoustic performance survey was commissioned and carried out by Peak Acoustics with Measurements to British Standard BS EN ISO 140-4 & 7 (1998) and BS EN ISO 717-1 & 2 (1997), following the test procedures in Annex 'B' of Approved Document 'E' of the Building Regulations. The test conditions were the existing building with no preparatory work. The results from the preliminary test allowed detailed designs to be prepared in conjunction with the appointed Approved Inspector, a specialist acoustician and with input from the specialist Heritage Consultant.

Floor & Floorboards

Sound Insulation

Tests and investigation have proven the floors currently fail from a fire and acoustic perspective for compartmentalisation. The proposal is to leave all Manor House Ground and First Floor ceiling surfaces undisturbed other than for local repair and decoration and to lift the chipboard flooring on the upper floor laid in the 1998 refurbishment, address the fire and acoustic issues and to replace the floor with new. The details put forward have the approval of the appointed approved Inspector and are shown in drawing 28473-DT02-C

The introduction of resilient bars is proposed between the existing floor joists and the floor decking.

The modern (late C20th) raised section of floor covering the site of the removed servants staircase within G06 is to be removed. The existing stone slab floor is to be retained.

Fire barriers in the Roof

The introduction of fire barriers in the pitched roof voids is required. These are to be constructed using an approved fire rated system on the line of the party walls between the adjoining apartments.

Doors.

The doors off the main Ground Floor hallway to the principal rooms are of solid oak construction, panelled to one face, smooth veneer to the other and all date from around 1998 at the time of the last office refurbishment. We consider their design to be intrinsic to the character of these spaces, but they are not compliant from a fire perspective. The proposal is that new compliant doors are made to exactly replicate the existing in style and finish. This procedure relates to two existing doors.

Four doors from the main Ground Floor Hall will be redundant based on the new layout and a proposal has been drawn up leaving the existing doors to the corridor in position locked closed with a fire and acoustic build up in the reveal and a new matching oak workshop made door blank fixed into position on the internal side.

The doors off the Ground rear service hallway and first floor are of softwood construction and again mostly date from around 1998 at the time of the last office refurbishment. New compliant entry doors are to be manufactured in hardwood and fitted into existing openings. The doors are to be manufactured as exact copies of the existing doors. The existing doors are to be re-used on the relevant internal apartment layout.

The doors to the upper storeys are invariably painted softwood timber. Some of the doors are formed using a very lightweight construction, and where these would form the new front door, it will not be possible to achieve the sufficient acoustic or fire rating required. We propose that these doors shall be retained as part of the project but re-used as the internal doors within the apartments and others in the same apartment manufactured to match. A new fire door would then be provided within the existing front door opening to a matching pattern.

Fire Upgrading

We are proposing an Envirograf system to the 'risk side' of the door only. This will be within the apartments, to protect their appearance from the common areas. The doors will all be fitted with self-closers, recessed into the top rail. This follows the same detail as used already to the WC (G10).

The doors which are to be locked shut, will be fitted with a second dummy door, set further forward within the reveal on the corridor side. This will be constructed using oak, matching the pattern of the original. The existing reveals will be covered using a thin boarding (painted white), and new beading applied to replicate the original work, albeit with a reduced depth. This is shown on Drawing 28473-DT01-C

A schedule of the new and existing doors will be provided with the listed building consent.

The door within plot 4 is a modern part glazed door and it will be removed.

Door DG18 is located on the main corridor is to be retained, but where it contains historic fabric, the panels shall remain as existing (no glazed panels).

Glazed Screens

A glazed screen is due to be retained in the line of the wall to Apartment 4. Building Control will require it to be upgraded to enhance the fire separation, and we are therefore proposing a secondary glazed solution be secured to the risk side (i.e., within the apartment) using a clear sheet of Pyran glass set within a new timber frame.

Party Walls.

Thought has been given to the division of the buildings into apartments to retain as many of the structural walls as possible negating the requirement for unnecessary party walls. Where new walls are required to form the layout a proposal for the main house has been prepared creating 200mm thick walls formed with an insulated metal studwork frame with 2 layers of BG Soundbloc to each face. For the West Wing, Stables and Coach House a 350mm double blockwork wall with an insulated cavity drylined with Soundbloc plasterboard to each face is proposed. The details put forward have the approval of the appointed approved Inspector and are shown on drawing 28473-DT03-C.

Addressing point 'c' relating to fire protection.

Early warning of fire is an essential component of ensuring that residents can evacuate safely from their apartments in the event of a fire. Provision of appropriate smoke (and heat) alarms is a basic requirement of fire safety design for flats.

Although blocks of apartments are not normally provided with communal fire detection and alarm systems, we are proposing that one is installed for building protection rather than life safety.

Individual apartments / townhouses.

Each apartment or townhouse is to be fitted with a stand alone mains powered fire alarm system comprising smoke detectors to corridors and main areas, heat detectors to kitchen areas. All wiring for the ground floor will be installed by means of the chipboard on the upper floors uplifted for fire and acoustic upgrading. The upper floors will be accessed from the loft spaces. As many of the existing detector head positions will be retained to avoid creating a new cable hole.

Common Parts.

The main House is to be fitted with a commercial grade mains powered fire alarm system comprising smoke detectors to corridors, voids and main areas. All wiring for the ground floor will be installed by means of the chipboard on the upper floors uplifted for fire and acoustic upgrading. The upper floors will be accessed from the loft spaces. As many of the existing detector head positions will be retained to avoid creating new cable holes. A new main panel will be installed in the same position as the existing panel. The signal from this panel can be routed off site to a control room at the managing agents.

The installation has been designed to be minimally invasive.

A set of drawings have been created to show the design intent. The work on site will be supervised by the site project and supporting specialist consultant teams.

The following drawings relate to the scope;

28473-Gen-DT01-C	Front Door Details Conservation Alterations
28473-Gen-DT02-C	Floor joist and void upgrade Conservation Alterations
28473-Gen-DT03-C	Party Wall details Conservation Alterations
28473-Site-BC-FF-Grd-C	Fire fighting layout Ground Floor
28473-Site-BC-FF-1st-C	Fire fighting layout First Floor
28473-Manor-Grnd-BC-C	Manor House Ground Floor Fire Plan Layout
28473-Manor- Grnd-1st -BC-C	Manor House First Floor Fire Plan Layout
28473-Stables- Grnd-1st t-BC-C	Stables Ground & First Floor Fire Plan Layout
28473-Coach- Grnd-1st -BC-C	Coach House Ground & First Floor Fire Plan Layout
28473-Lodge-Grnd-1st-BC-C	Lodge Ground & First Floor Fire Plan Layout

Prepared by:

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Henry Carling
Head of Design

FSL Group
M4, Millennium Centre,
Crosby Way,
Farnham, Surrey
GU9 7XX