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St Pancras Alms Houses

Design and Access Statement

Revised June 2023

This supporting statement forms part of a Planning/Listed Building Application and is accompanied by the following documents:

Heritage Impact Assessment

Existing situation:
SPA 200 Location plan 1:1250.pdf
SPA 201 Site Plan 1:200 A2.pdf
SPA 202 Roof Plan 1:200 A2.pdf
SPA 203 North Range Ground Floor Plan 1:100 A2.pdf
SPA 204 North Range First Floor Plan 1:100 A2.pdf
SPA 205 North Range Front and Rear Elevations 1:100 A2.pdf
SPA 206 West Range Ground Floor Plan 1:100 A2.pdf
SPA 207 West Range First Floor Plan 1:100 A2.pdf
SPA 208 West Range Front and Rear Elevations 1:100 A2.pdf
SPA 209 South Range Ground Floor Plan 1:100 A2.pdf
SPA 210 South Range First Floor Plan 1:100 A2.pdf
SPA 211 South Range Front and Rear Elevations 1:100 A2.pdf
SPA 212 Guest Accommodation Plan 1:50 A3.pdf
SPA 213 Guest Accommodation Section AA 1:50 A3.pdf
SPA 214 Guest Accommodation Side Elevation 1:50 A3.pdf
SPA 215 Guest Accommodation Rear Elevation 1:50 A3.pdf
SPA 216 Hall Plan 1:50 A3.pdf
SPA 217 Hall Section AA 1:50 A3.pdf
SPA 218 Hall Section BB 1:50 A3.pdf
SPA 219 Hall Elevation South 1:50 A3.pdf
SPA 220 Hall Elevation West 1:50 A3.pdf

Drawings of proposed works:
SPA 301 Site Plan 1:200 A2.pdf
SPA 302 Roof Plan 1:200 A2.pdf
SPA 303 North Range Ground Floor Plan 1:100 A2.pdf
SPA 304A North Range First Floor Plan 1:100 A2.pdf
SPA 305A North Range Front and Rear Elevations 1:100 A2.pdf
SPA 306 West Range Ground Floor Plan 1:100 A2.pdf
SPA 307A West Range First Floor Plan 1:100 A2.pdf
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SPA 309 South Range Ground Floor Plan 1:100 A2.pdf
SPA 310A South Range First Floor Plan 1:100 A2.pdf
SPA 311A South Range Front and Rear Elevations 1:100 A2.pdf
SPA 312 Guest Accommodation Plan 1:50 A3.pdf
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SPA 314 Guest Accommodation Side Elevation 1:50 A3.pdf
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SPA 318 Hall Section BB 1:50 A3.pdf
SPA 319 Hall Elevation South 1:50 A3.pdf
SPA 320 Hall Elevation West 1:50 A3.pdf
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SPA 322 Hall Details Proposed 1:10 A1.pdf

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St Pancras Alms Houses

CONTENTS

1 Introduction

Purpose of the Design and Access Statement

The Design and Access statement illustrates the process that has led to the proposal and explains the design. Conservation led design proposals should positively address the following requirements:

- to retain or reveal significance;
- to identify feasible and compatible uses;
- to meet statutory requirements;
- to work within procurable resources;
- to anticipate opportunities and threats;
- To retain original fabric wherever possible.

The Statement draws on statutory guidance from National Planning Policy Framework prepared by HM's Department for Levelling Up, Housing and Communities.

Relationship to the Heritage Impact Assessment

The Design and Access Statement accompanies the Heritage Impact assessment, which assess in detail the impacts upon the features that contribute to the special architectural and historic interest of the listed building, which sits within the Parkhill Conservation area.

Fig.1 Parkhill Conservation area with St Pancras Alms Housed indicated with a red circle as an adjunct to the CA.

This **Design and Access Statement** covers alterations to the existing Laundry to extend the Guest Accommodation available to all residents of St pancreas Alms Houses, alterations to the public Hall which through the presence of the stage, inadequate heating and inconvenient kitchen facilities is virtually unused. The implementation of a renewable energy strategy to the accommodation units provides insulation, heat recovery ventilation, ASHP driven low temperature under-floor heating and a dedicated solar PV provision to offset potentially ruinous energy costs.

The **Heritage Impact Assessment** seeks to clarify the impacts of these proposals on the historic significance of the building.

Site Description

The site forms an Easterly adjunct to the Parkhill Conservation Area, with a level change and extensive gardens of the neighbouring properties detaching the buildings of the Alms Houses from the rest of the Conservation Area. With the rear of buildings to the North and flank of a Council housing block to the South separated by a slender but mature green perimeter, the site is relatively isolated in urban terms, which is part of its original status as a distinct residential community.

This separate aspect, and the consequent lack of architectural significance demonstrated on the rear elevations of the listed building, in conjunction with the evident architectural importance of the set-piece courtyard informs the design decisions around the use of external wall insulation, location of ASHP units and extension to the existing guest accommodation.

Fig.2 Aerial view of the Alms Houses looking West – note perimeter tree screening to the rear of the ranges.

The orientation of the building complex has important consequences for the location of solar energy generation, which relies on optimal exposure to the South and less than optimal use of East-West rooves. Proximity to overshadowing from trees and the social housing block to the South has required a consideration of how solar PV's are integrated into the setting of the courtyard to best provide for the energy needs of this vulnerable community. The vulnerability is not simply the physical health and age of the resident population, it is also the financial health of the organization facing the consequences of the energy crisis. Dealing with renewable energy and associated energy saving measures to limit the need for heating are fundamental to the long-term viability of the Alms Houses as an organization, without which the buildings would cease their social and historic function. The design of the proposals is entirely informed by this reality, and measures necessary for the energy viability of the buildings and organization have been developed to minimize impact, reduce the need for intervention in historic fabric, reduce waste generation to an absolute minimum and provide essential comfort and amenity value for residents both current and in the future.

The Alms Houses were recently converted to all electric services and there is no gas supply on site.

2 Design and Access Statement

Public spaces and use

The existing spaces and use patterns are generally retained so that the daily lives of the residents are impacted as little as possible during the works. The proposals involve the guest accommodation available to relatives of the residents bookable for a small fee, the shared Hall that was conceived of as a social gathering place able to host events, the residents Library and shared laundry facilities. Alterations or minor relocations of these public facilities form a significant part of the project. In addition to the public spaces, energy saving strategies are proposed for the dwellings (flats) themselves to sustain the residents with reduced heating costs with better ventilation and internal air quality. Working within a listed, solid masonry building requires that vapour-open construction techniques and materials are used throughout.

Impact of proposals: Laundry and Guest Accommodation

Alterations to the existing Laundry involve the incorporation of the existing but unoriginal facility into an extended guest accommodation (which currently comprises a bedroom and shower room), which is available to all residents of St Pancras Alms Houses. The new proposal extends to the rear to provide a separate bedroom, allowing for families to stay, or for guests to stay longer with appropriate facilities. The laundry provision is relocated to existing communal spaces adjacent to the Hall.

The extension is on level with the existing guest spaces, but constructed from engineered timber elements utilizing full fill and over-clad wood fibre insulation. Typical construction using the manufacturers guidance is shown in Fig.3, however to create a continuity with the existing rear extensions adjacent to this proposal, a lime render system to the wood fibre over-cladding is used. Following consultation with the Camden Conservation Officer the side (North) elevation of the extension is set back 150mm from the existing side (North) elevation of the Guest accommodation to ensure the elevation is read as subservient to the original structure, that the change from original stock brick to lime render is handled through a change at the corner, accommodating the relocated rainwater pipe from the main roof (drawing SPA 306).

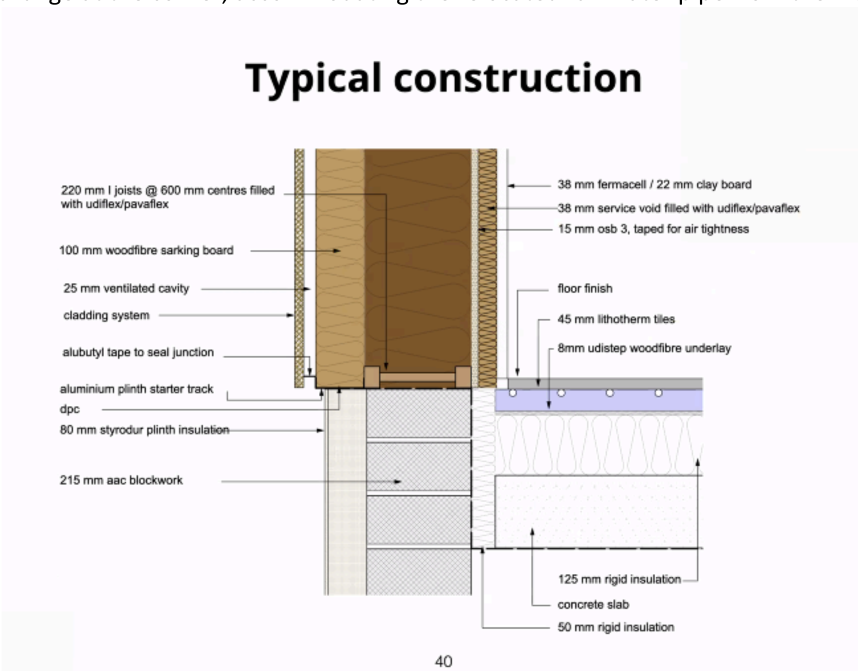


Fig.3 Manufacturers typical detail for new-build extension to the Guest Accommodation.

Material specification will deliver a new floor, wall and roof build-up that complies with current building regulations, whilst requiring as little intervention in the original building fabric as possible. The (consented) creation of the Laundry in 2009 removed the original interior so the re-planning of the shower, WC and kitchenette facilities within the Guest Accommodation has no heritage significance. The Guest Accommodation will be completed first, it then provides a space for each resident to move into while the flats are progressively retrofitted for insulation, underfloor heating and MVHR installation. Details of these installations are within the following descriptions of the dwelling retrofit.

Design proposal: Hall

Alterations to the public Hall are required to reverse the minimal use of the space, a situation caused by the inability to heat the space adequately or occupy the space properly due to the presence of an unused and unoriginal stage, the lack of ready access to kitchen facilities (via leaving the Hall and re-entering the adjoining 'Library' with kitchen), and poor decorative treatment.

The proposal seeks to restore the volume of the original Hall by removing the ad-hoc timber stage and plywood proscenium arch and the adjoining glazed lobby structure. The removal of these elements restores the continuity of the space and decoration.

To the rear of the stage a pair of double doors original to the Hall have been reduced at the bottom of the doors to install a short flight of steps up to stage level. The architrave has been retained so the original doors will have the section at the base of the doors reinstated. The pelmet fitted over the door for stage blackout to be removed, with steps adjacent to the external Hall door leading up to the stage, which will be taken away. The removal of the lobby allows the external door to be used as a Summer/warm weather entrance but to use the restored double doors as a Winter/cold weather entrance allowing the existing adjacent 'Library' to act as an entry lobby retaining heat in the Hall.

Underfloor heating works to effectively warm high ceilinged spaces using lower temperature inputs. The radiant heat from the floor provides warmth up to around 2 metres above the floor level, which is the occupation zone, and via efficient air sourced heat reduces energy demand whilst ensuring constant thermal comfort. The existing Hall floor is linoleum on a leveling screed circa 1950's that has replaced the original fireplace hearthstones, with no discernible evidence of under-slab insulation. Removal of this linoleum and screed layer allows for an insulated underfloor panel system to be installed with an engineered timber finish that is not expected to increase the existing floor level.

A ventilation/heat recovery unit will be located in the attic above the ceiling level to service the Hall, kitchen, lobby and WC. Ventilation pipework can run within the attic and will require the provision of discrete grilles that will be painted as per the ceilings.

To support energy efficiency the currently un-insulated volume of the Hall requires attention to retain heat and maintain comfort levels for elderly residents within a pressurized energy economy. Internally the installation of a small section of aerogel is necessary around the external wall to the courtyard to replace the original wall plaster (retaining the cornice in situ), however this is treated as an exceptional situation as the retention of original interior fabric/plaster within this high status space is a priority. Lime plaster will be used over the aerogel level with the retained plaster in the majority of the Hall. As such, and in recognition of the undecorated, workmanlike exterior of the Hall which has only minor visibility, an external wall insulation option has been chosen. The use of a woodfibre insulation system provides fully vapour-open construction that maintains the technical performance of the low-firing temperature stock bricks bedded in lime mortar. A lime finish coat with vapour-open silicate paint in a colour closely matched to the ochre-yellow stock brick is specified.

The energy strategy was primarily informed by an evaluation from a specialist renewable energy consultant (GR Edwardes Ltd) that recommended the scale and type of installation in relation to heat demand:

Community Hall

Design internal air temperature	20 °C		
Design external air temperature	-4 °C		
	Heat loss (kW)		
Expected values in the current state	19.7		
	14°C = 14.775	18°C = 18.0583	20°C = 19.7
effects of floor insulation *	2.2		
effects of secondary glazing	3		
effects of internal/external wall insulation	2.5		
*(in conjunction with an Underfloor heating installation)			
Expected degree days to maintain	14°C = 969	18°C = 1967	20°C = 2590
Expected energy use if none of above adopted	20825 kWh's	42273 kWh's	55661 kWh's
Expected energy use with floor insulation	18499 kWh's	37552 kWh's	49445 kWh's
Expected energy use with floor insulation & secondary glazing	16173 kWh's	32831 kWh's	43229 kWh's
Expected energy use with all of the above measures	13848 kWh's	28110 kWh's	37013 kWh's
expected energy to raise the temp to the design int. temp.	118.2 kWh's	39.4 kWh's	0 kWh's

Fig.4 Extract from GR Edwardes Ltd report March 2022.

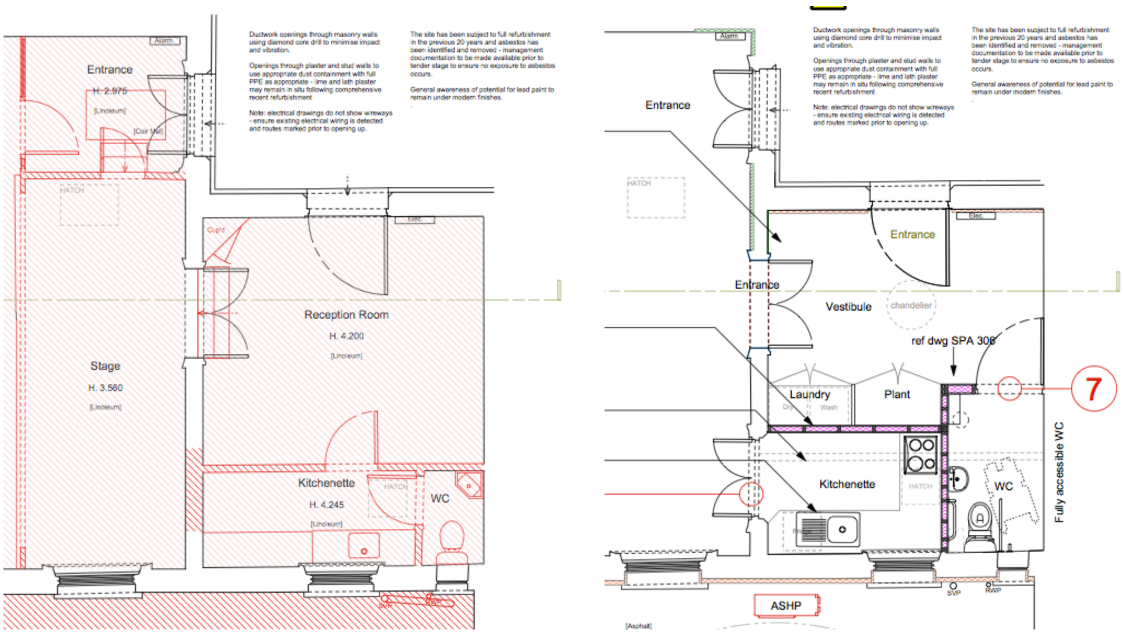
Even with underfloor heating and wall insulation the volume of the Hall will require additional heat input on the coldest days, which would be provided through the use of radiant panels that do not affect the fabric of the listed building. Calculations show that existing energy use for the hall is 55661 kWh’s at 20 degrees C, with insulation, secondary glazing and underfloor heating strategies implemented this reduces to 37013kWh’s. Lower temperature operational savings are even greater.

Details of the external wall insulation are covered under the ‘dwellings’ section.

The external ground level has over time been raised, with layers of impervious tarmac causing the surrounding surfaces to drain rainwater towards rather than away from the Hall. There is considerable water penetration into the walls of the Hall. Intrinsic to the insulation of the Hall is the lowering of the tarmac external surface with the installation of a linear drain against the low retaining wall away from the building. The renewal of the external surface allows for the current poorly organized waste and rainwater pipework to be reinstalled in an orderly way connecting into the existing inspection chamber, the lid of which will be lowered accordingly.

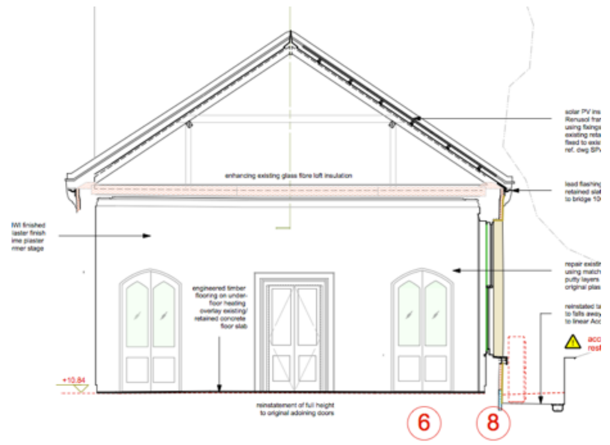
Design proposal: Library alterations

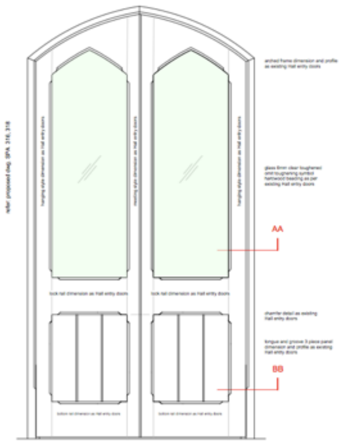
Within the adjacent ‘Library’ the current provision of books will be relocated on freestanding shelving to the Hall which will provide a warm social and study space for residents. The former ‘Library’ will have a new partition wall creating the lobby area for the Hall and house within cupboards (detailed as per the existing double doors to the Hall) the washing machines and access to a Doc M fully accessible toilet for use by residents in the Hall – Figs. 5, 6. Removing the stage gives level access from the Hall to the WC without users needing to go outside then back in again.



Figs.5,6 Extract from SPA 216 existing and 316 proposed Plan showing new kitchen, DocM WC and vestibule

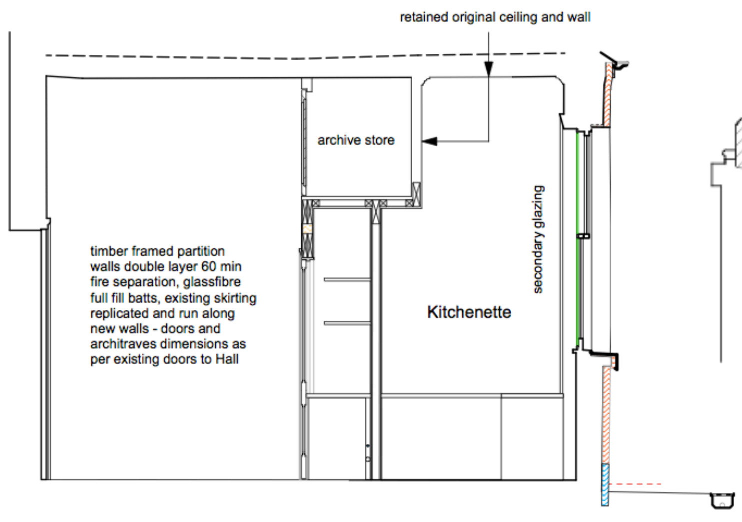
The proposal to enlarge the existing kitchen involves the insertion of a door giving direct access from the Hall and the removal of the recent formica kitchen units. This proposal would facilitate Hall functions as well as everyday use by giving ready access to light duty kitchen facilities, considered by the residents essential to support their activity within the Hall (see appendix 2 and 3). Inserting a doorway is significant as it affects the East elevation of the Hall and impacts on the fabric of the wall itself. The use value given by the location of an adjoining kitchen is paramount to enabling the original social function of the Hall to remain viable, with the positioning of kitchen functions within the Hall itself explored as options for the consultation events. The option to do this was rejected as the housing of supply and waste pipework through the Hall floor would be physically disruptive to the fabric of the building, and result in the division of the space – precisely what the current stage does to the detriment of the original Hall.

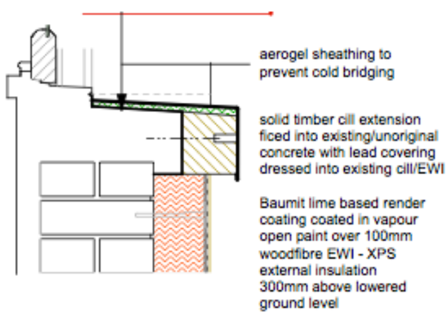




Figs.7,8 SPA 318 and 322 showing new doorway to kitchen and detail of the door.

Fig. 9 shows that the narrow space currently occupied by the kitchen has an original cornice, albeit damaged by water penetration. To preserve the cornice and proportion of the room whilst facilitating a viable kitchen space it is proposed to retain the wall and ceiling at high level by inserting a beam which opens up below the beam for a widened kitchen and disabled access WC. Above the ceiling within the attic the MVHR unit is situated, allowing ductwork serving the Kitchen, WC, vestibule and hall itself to run above the ceiling and minimizing opening up.





Figs.9,10 SPA 306 showing section through the former Library showing retention of original ceiling, extract of SPA 322 showing detail of external wall insulation and extension of existing (retained) concrete window cills to accommodate insulation depth.

Ensuring the original ceiling within the current narrow kitchenette area accessed from the Library is retained, as stepped dividing wall is required to widen the plan to create a fully functioning kitchen area, whilst sustaining the original ceiling and provide for laundry equipment housed within cupboards sited within the new Vestibule. Fig 10 shows the detail of the existing window cills required for the over-cladding of the masonry walls using woodfibre insulation with lime render.

Design proposals: Dwellings

It is acknowledged that the courtyard elevations are the most significant aspect of aesthetic value that the buildings deliver. Any energy installation that has to deal with the presentation of the buildings within the courtyard would require justification, and should therefore be avoided where possible. The preservation of the courtyard elevations requires the consideration of internal wall insulation to optimise energy efficiency whilst protecting the heritage asset. Internal wall insulation requires consideration of the impact on the interior materials and details. This aspect is addressed within the accompanying Heritage Impact Assessment.

Low input, high output technologies for providing electrically operated heating were considered. As such underfloor heating is intrinsic to converting the Alms Houses into a low carbon development. With air source heat pumps (ASHP's) converting 1x electricity input into 3x heat output, the return on heat for £ per Kw is significant, but only if insulation retains the lower temperature operational levels that ASHP's generate. The installation will be in accordance with the latest edition of the following standards and codes of Practice: BS 7671 and Amendments and BS EN 12831.

ASHP technology has to be sized precisely for its demand and ideally operated continually to maximize the life of the pump/compressor elements of the unit. With 'on demand' electric hot water provision recently installed in every flat, replacing this with larger ASHP's is not viable – the precise hot water usage is too variable and the recent installation of adequate 'on-demand' equipment should not be wasted. There is also no available location for a hot water tank in any of the flats.

An 'air to water' ASHP heating system has been chosen to minimise the requirement for ductwork to be inserted within the listed buildings to transport the heated air – particularly important given that the rear of the ranges where the siting of ASHP's is suitable visually and acoustically places them adjacent to the smallest rooms with the lowest ceiling heights, utterly restricting air duct pathways from the ASHP units into the ground and first floor main rooms.

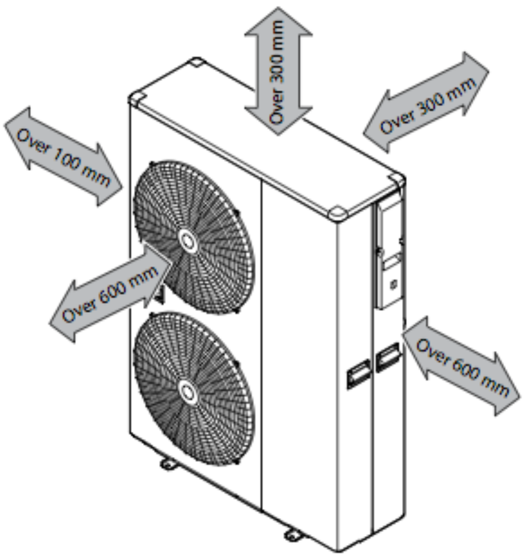


Fig. 11 Grant Aerona HPID12R32 ASHP.

As with the Hall, the use of a minimal depth retrofitted underfloor heating systems allow for the retention of the original floorboards on the first floor dwellings, and the ability to retain the existing floor slabs on the ground floor with minimal intervention. Retaining the ground floor dwelling slabs is not due to intrinsic heritage value of the slabs per-se, it is about minimizing noise and vibration impacts in removing the slabs felt by the building fabric, the operatives having to undertake demolition work (that poses a risk to health), the residents on site, the waste of embodied carbon captured in the Victorian mass-concrete and the financial cost to the Trustees.

The panelized type of water-fed underfloor heating system allows for a dry construction with optimal installation time requirements to minimize the durations that any given resident has to vacate their home. A typical system is illustrated in Fig. 12.

Fig.12 Example of a panel based underfloor heating system for minimal impact retrofit applications.

To the rear of the ranges on ground floor the new rear extensions present poor quality brick cavity wall construction using exposed concrete lintels to windows and rear door heads (Fig. 13). If opening up reveals the cavities to be uninsulated, a full-fill insulation will also be employed. To minimize internal disruption and expedite the works to each flat as swiftly as possible (minimizing in turn the absence from the flat of its elderly resident), and importantly to deal with the cold bridging issues it is proposed to use external wood fibre wall insulation with lime render, retaining the relatively new PVC-u double glazed windows and doors. The PVC-u guttering will be remounted onto matching painted softwood gutter boards with the zinc roofing surface extended to bridge across the additional 100mm wall build up.

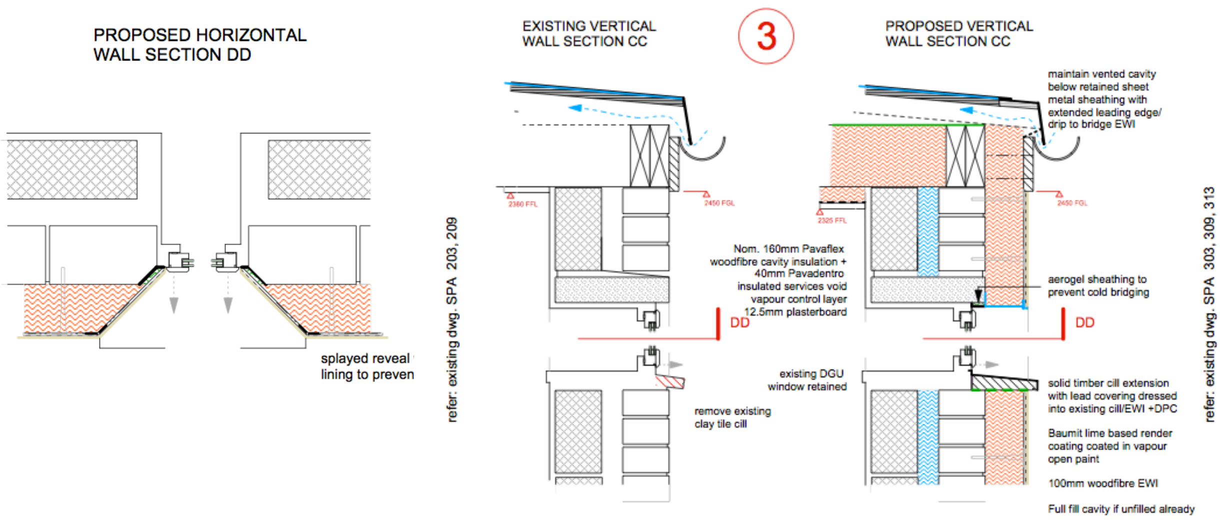


Fig.13 SPA 321 excerpts showing external wall applications at GF extension window junctions.

Woodfibre insulation systems are low embodied carbon construction products that perform adequately, function appropriately under stringent fire testing with a lime render coating, but importantly deliver vapour open layers to the building, ensuring that airborne water vapour passing from the interior to exterior is not trapped within the wall build up (Fig.14). The GF rear extensions are modern construction, so in this case the use of woodfibre is for its low embodied carbon/renewable source credentials, and to simplify the procurement route and guarantee system for the Trustees of the Alms Houses.

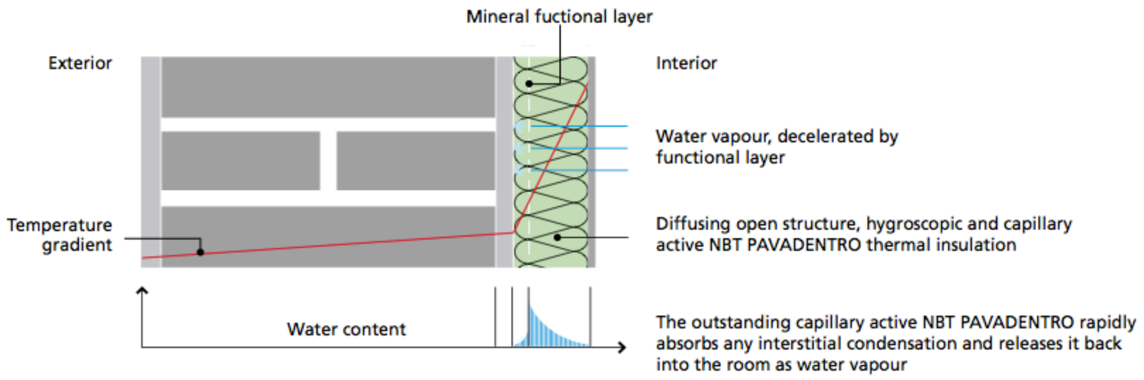


Fig. 14 Manufacturers detail showing vapour route through the externally insulated solid masonry structure.

As noted in the manufacturers data, interlocking panels ensure minimal thermal breaks within the envelope, with reveal situations high performing aerogel insulation prevents cold bridging (note Fig.13). The extent of the internal application of a wood fibre and lime plaster system is used on the external walls on the courtyard and rear first floor elevations of the three ranges, and the entirety of the two Eastern 'pavilion buildings facing the street – the complexity and visibility of which require preservation on their exteriors. The internal masonry return or party walls are also insulated to minimize cold bridging and the risk of mould growth. First floor rear shower and kitchenette fittings will be removed and relocated following the installation of the internal wall insulation.

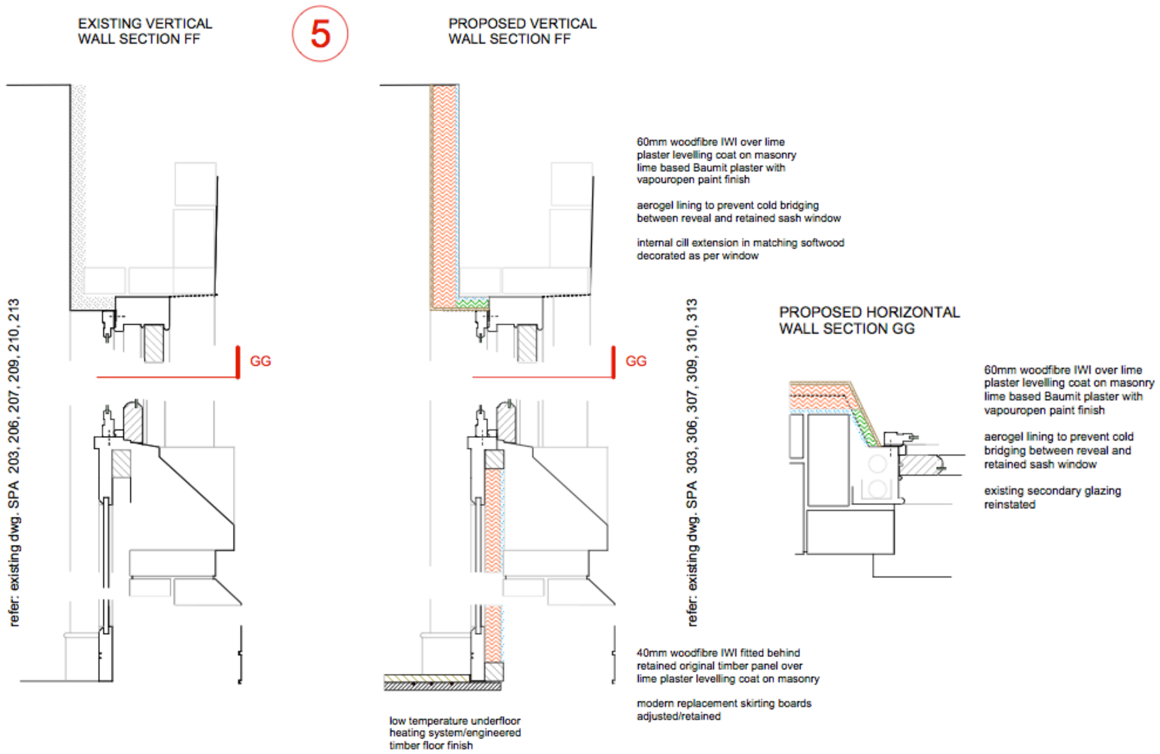


Fig.15 SPA 321 excerpts showing internal wall applications at original GF and FF window junctions.

Internally decorative papers will need removal and modern gypsum plaster removed in order to ensure that the brick has lime plaster, which is adequately vapour open. The woodfibre layer is applied as per the manufacturers guidance, with skirting's re-fixed after application and finished with a Baumit lime plaster.

NBT PAVADENTRO internal wall insulation

Innovative wood fibre insulation board for refurbishment

Size:	600 x 1020 mm
Cover area:	590 x 1010 mm
Thicknesses:	40, 60, 80 & 100 mm
k-value / λ_D:	0.042 W/(mK)
Density:	180 kg/m^3

Fig.16 Manufacturers detail of the internal woodfibre insulation

Alongside insulation and low energy heating provision, responsible retrofit requires that ventilation is addressed comprehensively. This is both for energy saving but also for indoor air quality concerns. Visiting the flats of many resident, there was clear evidence of inadequate ventilation due to concerns over opening windows, with extraction from kitchens and shower rooms turned off. The limiting of ventilation is a significant impact on internal air quality, which as noted by the Chief medical Officer Sir Chris Whitty is under researched but likely more significant a cause of premature deaths than external air pollution which claims over 30,000 lives per year.

Landlords have an explicit duty of care to tenants, so addressing the issues of health with vulnerable tenants has to be systematic and not optional. Ensuring adequate air-changes within the dwelling, and the provision of kitchen and bathroom extract ventilation that recycles heat energy via heat recovery is an intrinsic part of a competent retrofit strategy. The environmental engineer was requested to evaluate the ventilation provision (Fig.17), with 30% heating costs saved when deploying a heat recovery system the economics of installing MVHR are compelling, but require careful integration.

Ventilation strategy

There is also fairly easy access to be gained using a reduced height ceiling in the bathroom and the kitchen to provide ventilation heat recovery which would save another approximately 30% on heating costs. approximate cost for unit, ductwork and grilles	£	2,825.00

note: the above calculations assume a U value of approx. 1.7 for solid masonry walling without insulation. The heat loss is significant and requires greater input into the property to achieve required levels of thermal comfort. If 80mm of woodfibre insulation with a lime plaster internal finish with a U value of 0.36 is applied to the inside face of external walls, then the input ratio is significantly reduced, along with the running costs.

Fig. 17 extract from GR Edwardes Ltd environmental report on the use of heat recovery ventilation.

MVHR is considered 'high risk' as an option by the Sustainable Traditional building alliance (https://stbauk.org/guidance-wheel/) principally due to the issues of duct routing. The location of the relatively large mechanical ventilation and heat recovery units (MVHR) is challenging for historic buildings. Within the ground floor flats the relatively high ceiling levels allows for the small hallway/transition spaces between the living spaces and rear bedrooms to receive a suspended plasterboard ceiling above which the MVHR is fitted with relatively direct duct connections to the range of rooms to remove stale, warm air from and deliver fresh warmed supply air as a low but constant rate.

The intake and extract grilles will be located just above the rear extension roof surface approximately at the height where existing vent grilles are already located. The grilles would be set into the lime rendered external wall insulation to minimize the visual presence of the grilles from ground level, locations are indicated on the SPA rear elevations.

Design proposals: Solar PV installation

The scope of physical interventions in the Laundry/guest accommodation, Hall/Library, external ground levels, the flats and the rooves of the Alms Houses for energy generation have been developed in a way that delivers critical energy generation whilst ensuring that the technology is deployed in deference to the aesthetic and historic value of the listed building complex. In design terms Fig 18 (SPA 306 Proposed roof plan) shows how the panels are less than optimally arranged to ensure a considered placement in relation to historic features.

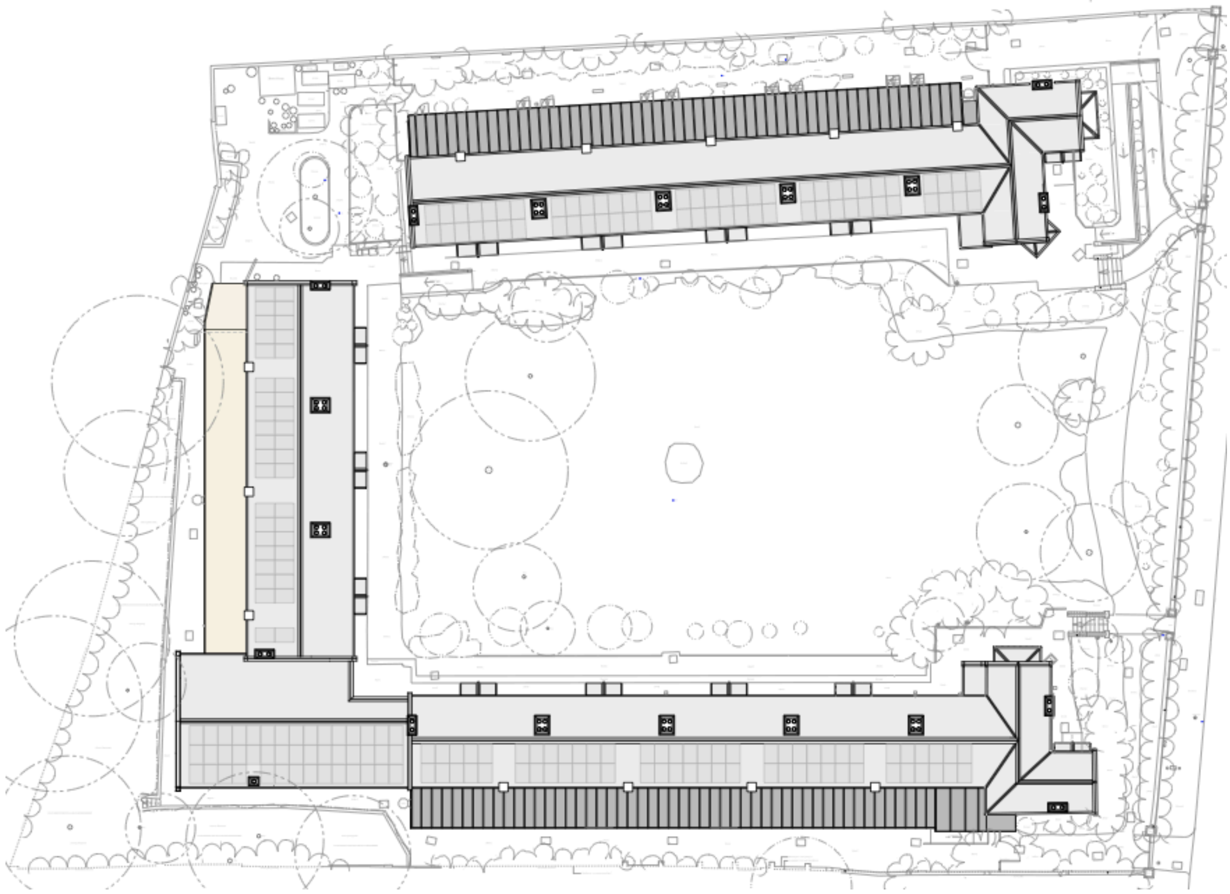
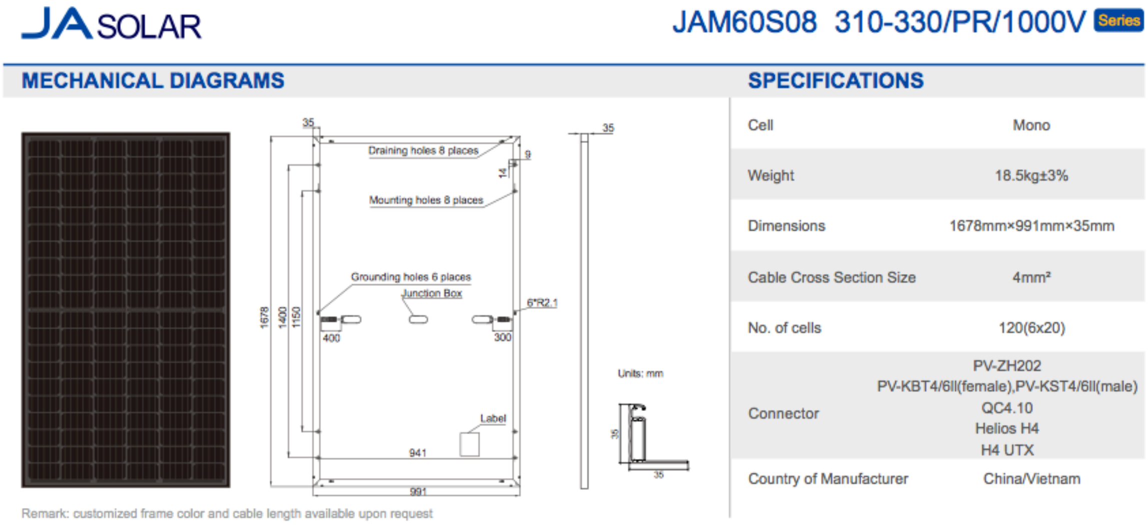


Fig. 18 SPA 306 showing arrangement of PV panels in relation to the chimney stacks, ridges and gables.

The panels themselves (Fig.19) are specified as black edged to minimize the distracting highlights associated with aluminium framed units, arranged vertically to accentuate the vertical emphasis that the gothic style imposes.



SPECIFICATIONS

Cell	Mono
Weight	18.5kg±3%
Dimensions	1678mm×991mm×35mm
Cable Cross Section Size	4mm²
No. of cells	120(6x20)
Connector	PV-ZH202 PV-KBT4/6II(female),PV-KST4/6II(male) QC4.10 Helios H4 H4 UTX
Country of Manufacturer	China/Vietnam

Fig.19 Black cell matrix and framing specified.

The installation on the Welsh slate roof requires the specification of a support system that minimizes weight on the original framed timber roof structure, whilst creating as few interventions in the slates themselves as possible. There is no evidence of the diapered slate patterns shown to have been used in the original roof on the pitches facing away from the courtyard (where the majority of panels are located), the South pitch on the North range is proposed as its optimal orientation provides considerable capacity for energy generation. Here the diaper design is not immediately evident. However, in order to follow the principle of minimal intervention even if the slate roof is not the original covering, the selected Renusol system provides anchor brackets that require only the notching of a minimal number of slates, the vast majority of slates remaining in situ (Fig.20). This system allows for the removal of the PV installation with negligible impact on the original/early replacement slates.

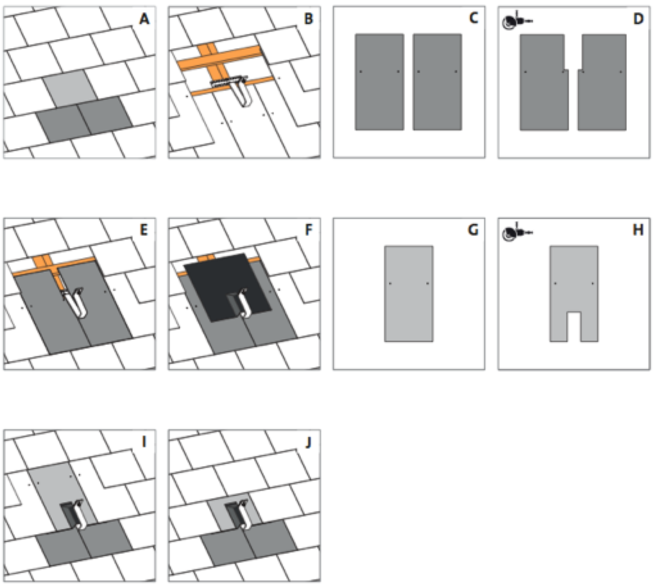


Fig. 20 Renusol installation diagrams showing minimal slate adaptation for support anchors.

This 'above slate' system is not in accordance with Camden's guidance (Camden planning guidance Energy Efficiency and Adaptation January 2021 adopted 15 January 2021) on the installation of photovoltaic panels, which directs the use of 'flush to the roof' systems, however, the reversibility of the Renusol system is appropriate for the listed building. In this regard there is no evidence of bat roosts within the rooves, with the dense urban development encircling the site and relatively minimal undergrowth precluding a bat population.

Whilst a larger PV scheme would increase the potential surplus electricity generated it would result in a much greater degree of harm to the heritage assets that would not be overcome by the benefits of the scheme. For example the roofscape directly facing the courtyard and the street whilst providing a suitable location for Solar PV is left as existing.

The more modest scheme does utilise the south pitch of the North Range roof but integrates the panels within the ordering of the facades and rhythm of chimneys. Whilst producing smaller scale benefits this compromise would, nevertheless, result in a reduction in CO_2 emissions and produce a small surplus of electricity that could be fed back into the national grid. This would represent a substantive environmental benefit that would justify the harm that the amended proposal would cause to the heritage assets. Details of the heritage impact of the renewable energy strategy are included in the Heritage Impact Assessment.

Engagement

The Residents: The initial design options which looked at a variety of internal arrangements for the hall and kitchen provision, as well as for the Guest accommodation were shared with the Residents Representatives on 21st October 2021 to take soundings on how acceptable the proposals would be and to gather advice and insights into how the options could be developed for a full Residents engagement event. Appendix 2 is the report to the Trustees and Residents Representatives present at the meeting. At this stage the brief was only to make internal alterations to the Hall and extend the Guest accommodation – the energy crisis had not broken and the renewable energy/insulation and ASHP measures were not in scope.

Following the invasion of Ukraine and the energy market fluctuation a period of reevaluation followed, with the Trustees renegotiating energy contracts and re-briefing the project team to include energy saving and generation measures across the site. An energy strategy was developed with GR Edwardes and appropriate low carbon/vapour open technologies were evaluated, with a building Inspector commissioned to run a plancheck to ensure that listed building consent was deliverable and required no significant changes of design after consent had been achieved.

On the 5th July the developed energy strategy and internal reorganization of the Hall and Library/kitchen were presented to residents (Appendix 3). This presentation was informed by consultation on the full range of Hall reorganization options with Camden Planning and Conservation Officers (see below). Option 3 referred to in the excerpts below is the current submitted proposal:

> *Residents pretty unanimously preferred Option 3 for the Hall, the option which provides the most flexibility for main space (see attached slides). This is the Option that you both preferred I believe and that Simon and Patricia were also most positive about.*
>
> *After we explained the rationale behind the Energy strategy there appeared to be little concern about it, and no overt dissension to the solar panels, ASHPs or insulated render to the rear of the ranges. Residents were very positive about the concept of underfloor heating for their flats and the ventilation strategy with heat recovery.*
>
> *Of course it is possible that some attendees were not happy and did not want to speak up in public, but we certainly had quite a lot of positive comments and support given during the session. We stated that Trustees were keen to invest in the proposed upgrades to ensure that energy usage was minimised for residents, and to bring the Hall back into comfortable use. Residents were very grateful that Trustees have absorbed half the cost of the increased electricity costs to date.*

The options and feedback from the residents meeting was presented to the Board of Trustees on the 31st October 2022 for comment and approval, which signed off the current proposals.

Camden Planning consultation: Appendix 4 documents the outcomes of the site visit held on the 18th March 2022 with Gary Bakall and Nick Baker to review the elements of the current proposal and clarify the decision making process behind them. The design alterations to the rear of the guest accommodation were considered acceptable if original features are retained and the extension to the North elevation is set back from the existing line of the flank wall. External wall insulation to the rear extensions throughout was not seen as contentious, similarly the use and location of the ASHP units and solar to the rear was in principle acceptable. The use of a minimal, integrated PV framing system retaining the existing roof aims to provide justification for addressing the strategic energy response. Justification for external wall insulation and solar PV provision to original elevations and the courtyard roof pitches were considered to need justification, which the proposal and Design statement seeks to provide.

Within the Hall the alterations to the Library/Kitchen were broadly acceptable, so too the removal of the stage and use of underfloor heating where the slab screed/floor finishes lack heritage value. The retention of cornices and internal plaster has driven the use of external wall insulation to the Hall.

Building Inspector: Mullee Associates specialize in works to heritage buildings and reviewed the plans prior to the development of the final drawings, mapped against Parts A-R and Regulation 7 of the Building Regulations. Comments on fabric compliance were incorporated.

3 Conclusions

The Design and Access Statement, in conjunction with the accompanying Heritage Impact Assessment and drawings, seeks to clarify the design decisions in relation to the retention of historic fabric in every area of the design, such as retaining the original corniced ceiling above the existing communal kitchen whilst reconfiguring the space below it to provide a fully accessible WC and suitably sized communal kitchen to serve the Hall.

Reversible material installation has been specified where significant visual impacts are unavoidable, such as the use of lime and woodfibre insulation to the exterior rear elevations of the Hall and the techniques used to install solar PV arrays.

The design also aims to enhance the original aesthetic qualities of the building at every opportunity. This latter aspect is particularly significant in the Hall, where the original volume and coherence of the space and its decoration is reinstated. This principle has also guided the positioning of solar PV, MVHR and ASHP units across the site.

The key driver for the energy strategy and the consequent proposals is to secure the long-term viability of the Alms Houses as a provider of housing for elderly or vulnerable residents. Following the emergence of the Energy Crisis efficiency and on-site generation have become existential issues that the design has sought to respond to in sympathy with the significance of the built fabric.

An important precedent was set with the approval of an appeal by the Planning Inspector for the listed St Mary's Church in the Primrose Hill Conservation Area for the installation of Solar PV's (see heritage Impact Assessment). Here public benefit was understood as being relevant to wider energy and environmental challenges. In the case of St Pancras Alms Houses, public benefit must also include forty current residents and the organization itself, such is the impact of energy costs now and going forward.

4 Appendix

Appendix 1: GR Edwardes Ltd Energy report (six pages)

GR Edwardes Ltd

FAO Luisa Auletta
OBO Arts Lettres Techniques ltd
Acting on behalf of St Pancras Alms-houses (SPA)
Regnart Court,
Southampton Road,
London
NW5 4HU.

7th March 2022

Dear Luisa

Thank you for your valued enquiry into the various heating and energy opportunities for the SPA.
I include below a summary of my calculations, an evaluation of the existing energy markets, my recommendations based on the site findings and industry standard heating patterns. an estimate for performance and an estimation & comparison of costs to provide the solutions recommended. Please note that due to the projects being separated I have included a report and best strategy for each in their own right, This should enable the client to prioritise the schemes in the order they see fit.

firstly a note on the proportionate amount of energy for each process within a typical dwelling

		Average annual requirement (kWh's)	
Heating	60.00%	5500-7500	
Hot water	20.00%	1061	per person per day
Electricity	20.00%	2000-2500	
Total		9311	

An introduction into the 'opportunities' that exist
Energy costs are rising. In order to safeguard your bills from rising costs there are 3 main techniques.

1. Use less energy.

combustion appliances and heaters that use direct electricity are likely to have an efficiency of between 80% and 100%.
There are products available that have a higher seasonal performance factor than 1, which means they use energy but also benefit from some 'free energy' usually provided by latent heat provided by the Sun in the UK.
The simplest example of this is an Air source heat pump. For every 1kW of energy it uses to drive a compressor you should receive between 3.5-4.5 units of heat. Therefore this type of technology is 350-450% efficient saving you 3.5 to 4.5 times the cost of heating. This type of technology can also provide water heating at an average seasonal efficiency of 250%
You can also use less energy by installing more accurate heating controls which stop the dwellings from overheating and provide a much more consistent environment allowing the heat source to run at it's optimum efficiency.
installing insulation, low energy lighting, A rated appliances such as Fridges/Freezers & washing machines.
providing external space to dry washing rather than relying on the ventilation within the space or a tumble drier.
you could also control the ventilation of each dwelling better to optimise air quality and reduce heating costs by over ventilating a property. For instance opening the bathroom window when the shower is on.

2. Produce some energy on site that can be used within the property immediately or stored and used within the property at a later date. This could be captured using Solar panels to provide electricity or hot water

3. the final method is to use energy when it is cheapest and to shop around for the best unit rate of electricity.
Something which was, until late, fast emerging was the deployment of real time billing. It is a little known secret that the wholesale price of energy fluctuates each hour, it is a 'supply & demand ' market, so there are naturally high points and low points during a 24 hour period. therefore the use of a storage battery that can both store energy produced on site and energy during 'off peak' times with a view to discharging the battery when the wholesale price of energy is at a high point.
Each energy service has a different rate of cost usually calculated per 'kWh' or 'unit'.
Until recently the price of energy in the UK has been very low however this is rising.

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Actual energy consumed

It is hard to say for sure what if any heating has been provided to the hall in recent years due to its prolong lack of use.
The energy usage in each flat will be a little varied with occupancy , but the figures above are a starting point
The figures listed below are taken from your site usage as issued to me by email I assume the hall is on top of the figures quoted? Please confirm
As some/most of the flats are all on shared meters for the purpose of this exercise I have divided each bill proportionately by the m2 area of the 3 flats/property

Metering

It will be difficult to split the metering without involving significantly increased costs to the project. As currently each house could benefit from 1 x ASHP to heat 3 x homes. If you individually meter the electricity then you need to decide where this is located. You could install sub metering to each flat to monitor everything but the heating without much additional cost.
Approximately £120-150 per apartment.
I would recommend heat metering each zone/flat so you know how much heat each one uses, to allow you to set a reasonable charge for a 'service charge' these can be read remotely and could be located in the communal services cupboard to give easy access to the Facilities manager for reading and reporting.

Capital cost and funding

ASHP & heating installations

there is soon to be launched a scheme that provides £5000 to each domestic property, however I believe the costs involved with you meeting the eligibility criteria for this are going to outweigh the grant.
There are some local authority grants available that you/your residents could qualify for based on incomes and circumstances

Solar

You essentially get paid for all exported energy on a metered basis, but this is not that great when comparing to the value of the energy saved. And therefore it is better to match a smaller system to the load profile of the on site requirement than install a system that mainly exports, power. This can certainly contribute to the running costs of the system as you are currently on electric and it would seem any future system would still use electricity as it's primary energy source.

Batteries

No funding to date and time of use tariffs have not become common place as they should have been by now, mostly due to the world energy crisis and delayed roll out of smart meters. Without time of use tariffs I believe these would not be deemed as 'good value for money' at this time.

Ground Source Heat Pumps

The only feasible scheme for GSHP's on site would be boreholes, and whilst a shared borehole would be, in the end much lower impact, the cost both financial and disruptive during the drilling process would render the project unviable, and this would be after a soil survey and ground structural survey are carried out. The efficiencies of ASHP are much closer to GSHP than out-dated textbooks suggest and the capital outlay for ASHP is approx. 40% of a ground source project. In addition it is easier to guaratee the airflow with certainty, but the ground loops would need to be very large to accommodate the heat losses of the almshouses.Also if you were to go GSHP's the central 'green space' would be completely redone and not very 'green' for a couple of years.

42 x dwellings contained within 13 metered properties comprising 13 x 2 bedroom 1st floor flats and 26 x single bedroom ground floor apartments and an office

Total energy across 13 x meters	313362	kWh's
	8034.92	per flat

Due to the lack of internal space for plant, and the unknown usage for hot water I would recommend installing the ASHP's only for heating production as this keeps the plant size and installations costs very low.
this also targets the largest single energy use and enables further expansion of the systems to provide water heating at a later date should the trust decide this necessary.
The reason we have concluded on this is the process of water heating is small in terms of the energy used by the apartment and this process is the least efficient process of the ASHP (seasonal efficiency of 2.5 / 250% efficient) you also currently have no storage cylinders in each of the apartments and the usage is also varied between 1 and 2 users, therefore the choice of point of use water heaters is probably the best value for money rather than requiring to change every shower and install a hot water distribution system within each flat.

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Installation requirements

Internally pipework would be required to be run into each flat from its ASHP, the ASHP itself we would look to locate either on antivibration mounts ontop of the flat roofs or in the gardens. Each property would have it's own zone and zone thermostat that can demand heat, pipework would integrate in the communal hallway cupboard.

Approximate costs for the design, supply & installation of our recommendations

Installation of 1 x 17kW ASHP, wiring & pipework to connect to 3 x flats on	£	12,350.00	
3 x individual circuits within independent time & temperature control & App based monitoring			
optional extra for individual heat metering (supply & Install)	£	425.00	*price per flat*
Heat emitter installation			
Option A - Radiators on individual zone with room thermostat	£	2,500.00	*5 x radiators*
Option B, Overlay Underfloor heating retrofitted over existing slab*	£	3,200.00	*40m2 UFH*
**Requires full access of the flat in 'vacant possession'*			
Hot water system - Electrical direct acting water heaters,	£	1,100.00	*1 x shower,2 x basin + Kitchen sink & 1 x appliance*
Current system may still be suitable			
Ventilation strategy	£	2,825.00	

There is also fairly easy access to be gained using a reduced height ceiling in the bathroom and the kitchen to provide ventilation heat recovery which would save another approximately 30% on heating costs.

Note: the necessity to run the system on lower temperature hot water due to the limitations of output from the ASHP units means relatively large radiators used in five locations throughout each flat. This creates some issues with the siting of the radiators given the scale of the accommodation. The underfloor system gices some thermal cushioning to the existing concrete slabs to the ground flor, and avoids the necessity for surface run flow and return pipework - assuming that there are no usable voids to run the pipes.

New residential flat following fabric updates & new heating system with ASHP

The relocation of the existing Laundrette to the community hall space would provide another lettable apartment which could include some advances to the existing fabric and a new heating system. Whilst the plans are still being decided it is worth noting that during this renovation is the time to present to the residents the types of heating installations they could have and the reduced running costs that go hand in hand with this type of improvement.

apartment floor Area	40	m2	Est. heating requirement	4066	kWh's
Heat loss	2000	Watts	Est Hot water requirement	1070	kWh's
			Est. electrical demand	2000	kWh's

Installation of ASHP, wiring & pipework to connect	£	6,250.00
optional extra for individual heat metering (supply & Install)	£	425.00
Heat emitter installation		
Option A - Radiators on individual zone with room thermostat	£	2,500.00
Option B, Overlay Underfloor heating retrofitted over existing slab	£	3,200.00
Hot water system - Electrical direct acting water heaters,	£	1,100.00

Ventilation strategy

There is also fairly easy access to be gained using a reduced height ceiling in the bathroom and the kitchen to provide ventilation heat recovery which would save another approximately 30% on heating costs.	£	2,825.00

approximate cost for unit, ductwork and grilles

note: the above calculations assume a U value of approx. 1.7 for solid masonry walling without insulation. The heat loss is significant and requires greater input into the property to achieve required levels of thermal comfort. If 80mm of woodfibre insulation with a lime plaster internal finish with a U value of 0.36 is applied to the inside face of external walls, then the input ratio is significantly reduced, along with the running costs.

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Installation requirements

Internally pipework would be required to be run into each flat from its ASHP, the ASHP itself we would look to locate either on antivibration mounts ontop of the flat roofs or in the gardens. Each property would have it's own zone and zone thermostat that can demand heat, pipework would integrate in the communal hallway cupboard.

Community Hall

Design internal air temperature	20 °C		
Design external air temperature	-4 °C		
	Heat loss (kW)		
Expected values in the current state	19.7		
	14°C = 14.775	18°C = 18.0583	20°C = 19.7
effects of floor insulation *	2.2		
effects of secondary glazing	3		
effects of internal/external wall insulation	2.5		
*(in conjunction with an Underfloor heating installation)			
Expected degree days to maintain	14°C = 969	18°C = 1967	20°C = 2590
Expected energy use if none of above adopted	20825 kWh's	42273 kWh's	55661 kWh's
Expected energy use with floor insulation	18499 kWh's	37552 kWh's	49445 kWh's
Expected energy use with floor insulation & secondary glazing	16173 kWh's	32831 kWh's	43229 kWh's
Expected energy use with all of the above measures	13848 kWh's	28110 kWh's	37013 kWh's
expected energy to raise the temp to the design int. temp.	118.2 kWh's	39.4 kWh's	0 kWh's

Heat emitters & Heating plant

Following the unsurprisingly high heat losses listed above, we would recommend the following options dependant upon the 2 x worked examples of heating strategy below

With regard to heat sources, to enable a cost efficient solution we would advise the client on the running costs of each of the following systems:

1. Air source heat pump (ASHP) delivering heating to UFH circuit to maintain internal temperature of 14°C

and either

1A. ASHP to provide heating to hydronic or cast iron radiators to supplement in times of use

or

1B. Electric fan convector heaters to supplement ASHP in times of use

The adoption of electric back up heaters would vastly reduce the size of the ASHP plant and the heat emitter sizes within the hall with a lesser impact on the overall energy cost of heating the hall see worked example below.

Part 1 - Strategy to maintain the room at a base level of 14°C and wishes to 'boost' the system when in use.

we would recommend a heat emitter system to be able to output at least double the heat loss requirement at the design conditions, this would be made up of Underfloor heating and radiators and if none of the above energy efficiency measures some well sited 'fan coil/Hydronic convector heaters' also to enable a warm re-heat of the space.

note: as above the calculations assume a U value of approx. 1.7 for solid masonry walling without insulation. If 60mm of woodfibre insulation with a lime plaster internal finish with a U value of 0.44 is applied to the inside face of external walls, then the input ratio is significantly reduced, along with the running costs. This wil allow the Hall to achieve required internal temperatures without the necessity for boosting the underfloor/hot water outputs

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Costs and final performance predictions to be included here			
Base for maintaining 14 degrees internal temp			
Install 1 x ASHP 12kW T'cap ASHP J Series		£	10,850.00
Buffer, HW cylinder, Master slave controls		£	2,250.00
Underfloor heating			
Opt. A - (Overlay 50mm EPS, with Concrete board bonded 'floating floor over existing		£	10,560.00
will require a new floor covering and would raise the existing floor by 70mm + final floor covering			
costs for which will probably run to an additional	£7,800 *		
Opt. B - (DPM, 50mm EPS insulation, VCL, screed		£	9,240.00
will require digging out the existing subfloor, and a new floor finish would need to be provided,			
costs for which will probably run to an additional	£15,000 *		
Expected project cost for Option A - UFH		£	23,660.00
Expected project cost for Option B - UFH		£	22,340.00
** This sum is not included in our total sums, but is anticipated 'boilers work in connection with our services'*			

Part 2 - Auxiliary heating to raise the temperature from 14 to 20 degrees internal air temperature

Please find below 2 recommendations for auxiliary heating to this space. Due to the unknown use of this space,
I have costed each 'event' (being each time the temperature is raised from 14-20 degrees)
If the client maintains the space at regular intervals above 18 degrees C, then it is clearly better value of money to install option 1 (below), however Option 2 (below) gives a lower cost option which if only raising the temperature in the Summer months and an occasional basis in the winter, the client may opt to spend the capital difference on other schemes within the scope to enable the best 'value for money'

Costs and final performance predictions to be included here

Option A - renewable heat 'boost'		
Additional 12kW ASHP	£	5,850.00
Fan convectors or trench heating circuit to output remaining 'boost' heat emitters	£	12,000.00
	£	**17,850.00**
Option B - Electric direct acting 'air curtains' or infra red heaters	**£**	**7,250.00**

Energy requirement for each 'Event' of raising internal temperature from 14 to 20 deg C

	No days	Option A			Option B		
SCOP/efficiency		3.7			1		
		Energy	Cost*	CO2 (kg.)	Energy	Cost*	CO2 (kg.)
Summer	92	7.07	£ 2.01	0.98	26.15	£ 7.44	3.61
Autumn	91	21.98	£ 6.25	3.03	81.32	£ 23.14	11.22
Winter	90	33.54	£ 9.54	4.63	124.08	£ 35.31	17.12
Spring	92	31.88	£ 9.07	4.40	117.95	£ 33.57	16.28

Example - you boost to 20 every day of the year Option B would cost >£6,600 more than option A in electricity

* costs are based on the new rates agreed by the SPA Day 17hrs =28.458 p/kWh night 7 hours = 24.924 p/kWh
We have calculated based on the peak rate as any raise in temperature is likely to happen in 'Peak hours'

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Further measures

There is considerable opportunity for Solar PV (Electric) panels to be installed. There is considerable 'standing load' which could be benefitting from some self generation. When using electricity for heating, even with ASHP's you will never produce enough energy from the panels in Winter however it is best to try to match the properties' load profile for Spring/Autumn generation and usage. With the current saving on electricity a well sited solar installation could contribute to the 'running costs of the community hall which will be able to take most of the energy produced from October to March and any excess generation would be exported to the grid for payment.

We would recommend fitting panels to the South side of the 'northern block' including the Hall roof and to the East and West sides of the 'Western block'. This balances the load profile well throughout the day, but is likely to meet resistance from the Conservation Officer regarding appearance. The South side of the Southern block and East side of the Eastern Block are approximately X% of the required supply to power the Hall and Laundry/kitchen proposal.

A further shade analysis of the southern side of the southern block should be done to confirm its feasibility.

It is likely that significant pollarding to surrounding trees to the South of this roof may be desirable to optimise efficiency.

If you require any further information regarding this document, please do not hesitate to contact me,

Yours Sincerely

Robert Edwardes
G R Edwardes Ltd

Appendix 2: Confirmation of Residents meeting 21.10.21 page 1 of 2

arts lettres techniques ARCHITECT

St Pancras Almshouses, NW5

Residents Meeting 1   21/10/21

Attendees
Resident Representatives: Fr. Bob Hanson; Jane Massey; Lydwina McInerny
Assistant Manager: Simon Rabone (for first part)
Architect: Luisa Auletta (LA) and Alan Chandler (AC) of Arts Lettres Techniques (ALT)

Purpose
- to meet the resident representatives and introduce ourselves
- to share our relevant Practice experience which lead to our appointment
- to discuss how best to engage with the widest possible community within the Almshouses
- to refine the brief further in an inclusive way prior to starting to design

ALT appointment
AC and LA presented relevant architectural projects, as shown previously to the Trustees. Experience with diverse communities, including dealing with HS2 as representatives on behalf of our own local community, will inform our work with residents at Fraser Regnart Court. ALT wish to ensure that residents' own views help to shape both our initial brief, and the development of the project. This is why there are no designs or proposals to show at this meeting.
LA emphasised that there are no preconceptions about the current brief, and that additional requirements may arise during communications with residents. LA had already had a useful meeting with Patricia and Simon, who had provided helpful insights into the managers' requirements and roles.
AC noted that ALT would also be taking on board further comments during the realisation of the project, as designs develop.

Planning and Listed Building requirements
ALT explained that the Listed building requires careful consideration, with areas of high significance limiting or directing certain options for the project. If conflicts arise between the building's status and the brief this can be discussed at a future meeting to find the best resolution.
BH mentioned "the elephant in the room" being the placing of functions within the shared grand Committee Room (Community Hall). ALT noted that this is an instance where the significance of a room will influence how it is planned. It is highly unlikely that dividing up the integrity of the room would be acceptable to Camden Conservation Officers. Some compromises may be needed elsewhere in order to fit all requirements in.

Engagement process
It was agreed that ALT should present initial options to the resident representatives to gain early feedback, before offering a wider public presentation of preferred options to all residents for discussion.

Initial observations

Committee Room / Community Hall

• The hall is far too cold and damp feeling to be welcoming. The need for warmth without draughts was agreed as essential, and the use of energy technology to bring heating costs down would be welcome.
• Original features such as fireplaces are liked: "it is a fine room".
• Despite appreciated attempts to clear it up, the room still feels over-stuffed with too many disparate pieces of furniture and things in it "like a jumble sale".
• The stage is considered as potentially unnecessary, with public performances such as choirs not needing the platform.

The following facilities should be included:
• A comfortable seating area.
• The beautiful long table.
• Open floor space for activities such as yoga and exercise with equipment.
• Some kind of storage facility for chairs and other items (ideally this would be elsewhere).
• Information panels should be retained somewhere but perhaps mounted on a wall, rather than the freestanding screens, or could be in another space.
• Large TV or projector facility for film nights / football etc.
• The library may potentially be co-located in the hall.

In addition the following is desired:
• A nicer, more sociable, kitchen area, not so narrow.
• The WC needs improvement - possibly with two cubicles if space is available.
• The bird feeding area needs to be included as a facility but may be better located elsewhere as it potentially attracts vermin. ALT should investigate the potential for a suitable alternative space such as a purpose built shed that could also support the valuable gardening efforts of residents.
• The existing laundry is inhospitable and hard to keep clean – it has no comfortable place to wait for the laundry. It would benefit from being located closer to the other communal facilities.
• Guest accommodation, preferably on the ground floor, was agreed as being important, with coffee/tea-making facilities. It was agreed this could be sited somewhere else in order to make space for another flat.
• Keble College's addition to its quad in Oxford may be worth looking at for the way they have extended by replicating the building.

LA/AC
26/10/21

Appendix 3: Confirmation of Residents meeting 06.07.2022

--- Original message ---
Subject: SPA Update following Residents Presentation 06/07/22
From: architect <architect@artslettres.com>
To: John Malpass <johnmalpass54@gmail.com>, Jill Fraser <jillfras@hotmail.co.uk>
Date: Thursday, 07/07/2022 9:12 AM

Dear John and Jill,

This is to update you, following our engagement session yesterday evening with the residents.

I'm pleased to report that everything seems to have gone well. Just over a third of the residents attended the session, and we presented and discussed the strategies together for an hour and a half. We also spoke to a few residents afterwards for another half an hour.

Residents pretty unanimously preferred Option 3 for the Hall, the option which provides the most flexibility for main space (see attached slides). This is the Option that you both preferred I believe and that Simon and Patricia were also most positive about.

After we explained the rationale behind the Energy strategy there appeared to be little concern about it, and no overt dissension to the solar panels, ASHPs or insulated render to the rear of the ranges. Residents were very positive about the concept of underfloor heating for their flats and the ventilation strategy with heat recovery.

Of course it is possible that some attendees were not happy and did not want to speak up in public, but we certainly had quite a lot of positive comments and support given during the session. We stated that Trustees were keen to invest in the proposed upgrades to ensure that energy usage was minimised for residents, and to bring the Hall back into comfortable use. Residents were very grateful that Trustees have absorbed half the cost of the increased electricity costs to date.

I've attached the slides we presented herewith for your information. They deliberately do not have much text (to encourage people to listen rather than be distracted by reading) and we tried to keep everything relatively simple in the presentation. I can meet you both, if you'd like, to review the slides together informally, but I am also happy to present to all Trustees formally on the 31st August if desired.

We will shortly provide the slides to Simon and Patricia and they are going to print out a couple of sets and leave them in the hall for people to look at, at their leisure. We've made it clear we would be pleased to take further feedback via Simon or answer any questions that arise over the next couple of weeks. Simon attended the presentation also.

If you have any queries about the above do please let me know. We'll continue to work on the Listed Building and Planning Application meantime, and will wait to hear from you about the 31st August.

Kind regards,

Luisa Auletta

for and on behalf of
arts lettres techniques limited
ARCHITECTURE CONSERVATION DESIGN

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ARTS LETTRES TECHNIQUES LIMITED REGISTERED IN ENGLAND Number 3799388
DIRECTORS LUISA AULETTA ALAN CHANDLER AA Dipl. RIBA SCA FHEA

Appendix 4: Confirmation of site meeting with Camden Planning and Conservation Officers

Subject: SPA Site Visit 18/03/21
From: architect <architect@artslettres.com>
To: Gary Bakall <Gary.Bakall@camden.gov.uk>, Nick Baxter <Nick.Baxter@camden.gov.uk>
Date: Monday, 21/03/2022 9:11 AM

Dear Gary and Nick,

Thank you for meeting us at the Almshouses on Friday. I have set out briefly below our understanding of the approach that is most likely to be taken by the LA. Do please let me know if you have any further comments to add to this.

Hall

• The use of the adjoining room as an entrance vestibule / draught lobby including laundry facility, fully accessible WC and potentially also a kitchenette is likely to be considered appropriate.
• The removal of the non-original stage and entrance lobby could be justifiable to achieve this new arrangement.
• Providing additional facilities in the hall may also be acceptable (e.g. alternative kitchen arrangement) but not if mezzanines are to be included.
• Both external and internal wall insulation is of concern, however the provision of secondary glazing and underfloor heating (if the existing floor is non-original concrete) is acceptable, with the retention of cornice, fireplaces and existing windows welcomed.

New flat in the west range (current guest room / laundry)

• This alteration and extension is considered acceptable if designed sensitively with any original features that remain to be kept in situ. The rear extension should be slightly recessed back from the existing flank wall of the range.

Retrofit / Energy interventions to ranges

• External Wall Insulation on the non-original rear extensions is not considered to be of concern.
• EWI to the rear upper floor original brickwork is controversial and would need further justification.
• Internal Wall Insulation on the interior of the front facades may be acceptable subject to retention of any cornices and other existing original features.
• The use of ASHPs is acceptable subject to siting the units in suitable locations at the rear of the ranges.
• Solar panels may be supported on rear roof slopes, however the provision of panels on the South face of the North range would be controversial as it faces the Almshouse garden. Considerable justification would need to be provided for this to be considered positively.

We will be working with the Board of Trustees and engaging with residents of the Almshouses to refine the options we have discussed with you and hope to make a submission later this year. Thank you again for your time.

kind regards

Luisa

Luisa Auletta

for and on behalf of

arts lettres techniques limited

Appendix 5: Urban Greening Factor Calculator

Minimal/no intervention in the existing green site provision is proposed. Site access and storage spaces are restricted to hard paved areas with green protection plans required for the duration of the works.

St. Pancras Almshouses Urban Greening Factor Calculation 29/11/2022

Urban Greening Factor Calculator				
Surface Cover Type	**Factor**	**Area (m²)**	**Contribution**	**Notes**
Semi-natural vegetation (e.g. trees, woodland, species-rich grassland) maintained or established on site.	1	261	261	
Wetland or open water (semi-natural; not chlorinated) maintained or established on site.	1		0	
Intensive green roof or vegetation over structure. Substrate minimum settled depth of 150mm.	0.8		0	
Standard trees planted in connected tree pits with a minimum soil volume equivalent to at least two thirds of the projected canopy area of the mature tree.	0.8		0	
Extensive green roof with substrate of minimum settled depth of 80mm (or 60mm beneath vegetation blanket) – meets the requirements of GRO Code 2014.	0.7		0	
Flower-rich perennial planting.	0.7	53	37.1	
Rain gardens and other vegetated sustainable drainage elements.	0.7		0	
Hedges (line of mature shrubs one or two shrubs wide).	0.6	735	441	
Standard trees planted in pits with soil volumes less than two thirds of the projected canopy area of the mature tree.	0.6		0	
Green wall –modular system or climbers rooted in soil.	0.6		0	
Groundcover planting.	0.5		0	
Amenity grassland (species-poor, regularly mown lawn).	0.4	940	376	
Extensive green roof of sedum mat or other lightweight systems that do not meet GRO Code 2014.	0.3		0	
Water features (chlorinated) or unplanted detention basins.	0.2		0	
Permeable paving.	0.1		0	
Sealed surfaces (e.g. concrete, asphalt, waterproofing, stone).	0		0	
Total contribution			**1115.1**	
Total site area (m²)			4400	
Urban Greening Factor			**0.253431818**	

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