Helena Thompson Museum, Workington

Feasibility Report

prepared by
URBED

on behalf of
Workington Heritage Group

May 2009

urbed
urbanism environment design

Contents

Introduction

URBED have been asked to prepare initial proposals for the development of the Helena Thompson Museum, Park End Road, Workington.

The objective of this report is to provide information to Allerdale Borough Council and the Workington Heritage Group to assess the viability of proposed improvements to the museum buildings, and to assist in the development of the brief for the project. It is in effect a 'scoping report', which aims to assess the context and potential for development.

Client

The Workington Heritage Group started life as the 'Jubilee Group', which in April 2005 took on the responsibility for day-to-day management of the museum. The local authority, Allerdale Borough Council, retained ownership of the museum buildings and have continued to support the museum financially. The managing group make some additional income by hiring out rooms to community groups and for functions.

In the past four years the Group has done much to improve the services offered by the museum, and to increase visitor numbers. In 2008/09 there were 21,000 visitors, up from just under 8,000 in 1998. Some of these visitors came to view the permanent local history collection, some to visit the various temporary exhibitions, some to use the meeting and community facilities provided in the building, and some were guests at the weddings that the museum is licensed to hold.

This report is prompted by the realisation that, though the museum currently provides a well liked and well used facility for the town, it no longer matches the needs and ambitions of the managing group and its users. The proposals developed in this report aim to show how the fabric of the museum can be improved in order to accommodate these ambitions whilst also respecting the historic character of the buildings. All of this is carried out with the aim of enhancing the benefits to the main use of the building - the museum.

Limitations

This report is based on drawings and information received from the client and site visits and photographs by the author. A full measured building survey has not been undertaken. As such this information is only sufficient for the purposes of this feasibility appraisal. Subsequent development of the scheme design will be subject to full measured topographical (site) and building surveys and other specialist surveys, as deemed necessary – likely to includestructural, timber, damp, asbestos, conservation etc.

Preliminary consultations have taken place with the local authority conservation officer and English Heritage. Formal and statutory approvals have not yet been sought.

Top: Museum building and gardens from the rear car park.
Above: Main entrance from Park End Road.
Right: Aerial view of building showing A66 to the north, with Curwen Hall and its surrounding parkland beyond.

Building History

The building which houses the Helena Thompson Museum was formerly known as Park End House. Built at the end of the 18th century, it was the residence for the steward of the surrounding Curwen estate, which also included Schoose Farm and Workington Hall, residence of the Lord of the Manor. As such it was both a working building and home to a well-to-do middle class family.

The building was gifted to the people of Workington by Helena Thompson, a local philanthropist, on her death in 1940, on condition that it be used as a museum. The museum opened to the public on 8 December 1949 and was managed by the Borough of Workington until local government reorganisation in 1974 when responsibility passed to Allerdale Borough Council. Since 2005 it has been managed by the Workington Heritage Group Ltd, though the building is still owned by Allerdale Borough Council.

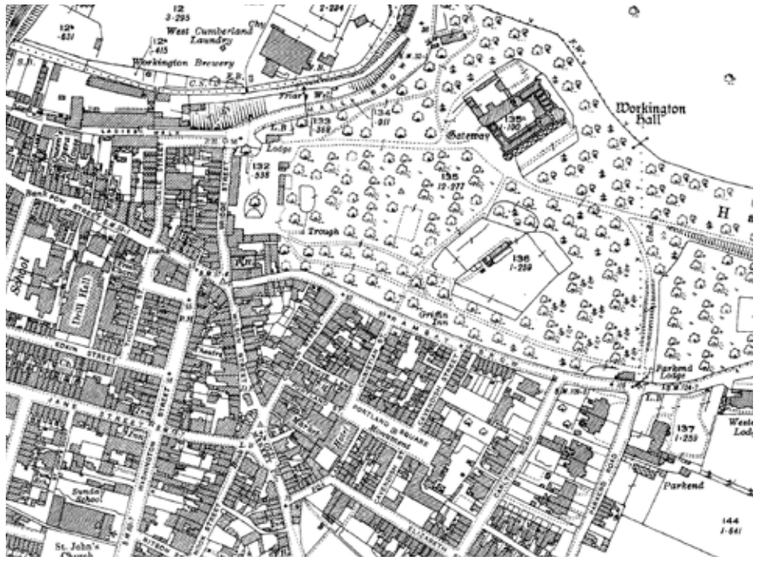
The building was listed in 1957, in recognition of its historic importance. The II* rating places it amongst the top 10 percent most significant listed buildings in the country.

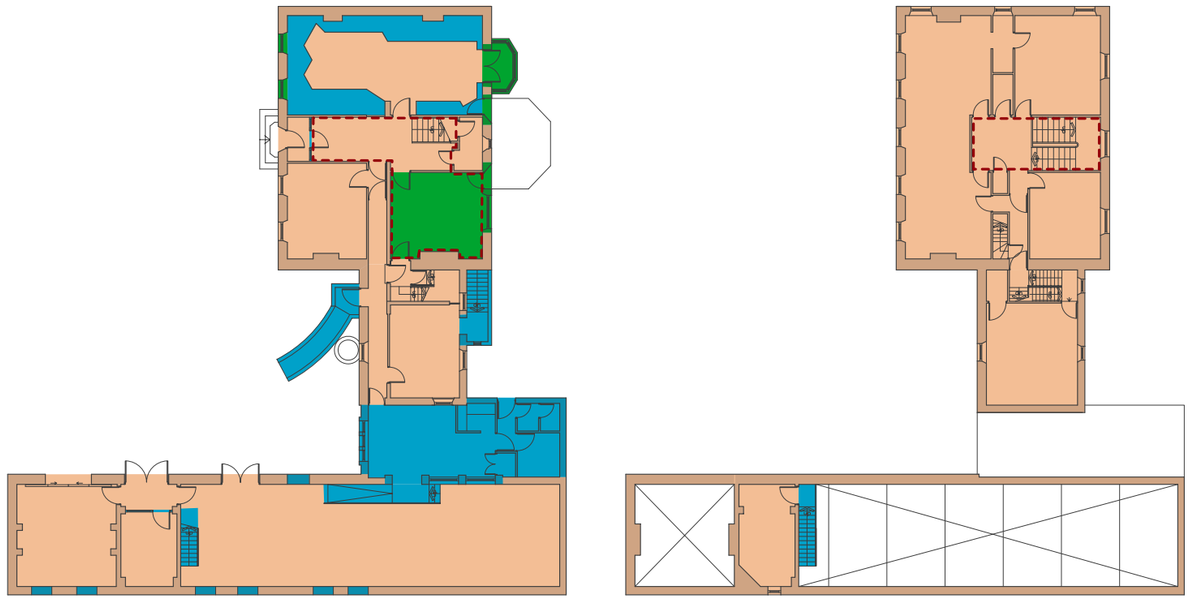
The main building is a substantial rendered brick, Georgian Town House set in a large garden - one of the earliest buildings of this style in the area.. Adjoining this to the south is a smaller two/three storey building, thought to be contemporary with the main building though in a style closer to the local vernacular. This would have housed the kitchens and service quarters. Between this and the stable block is a small flat roofed single storey linking building, which was added in the late 20th century. The stable block forms the southern edge to the development and is also thought to be late 18th century in its origins. Again it is in the local vernacular style with thick sandstone walls and a roof of Cumbrian slate. The ‘service’ buildings of the annex and stable contrast with the Georgian formality of the main house, and are in a subservient relationship with it - generally more modest in style and detailing, and with lower roof ridges.

Throughout the building’s more than two-hundred year history it has undergone various modifications and amendments - all of which will need to be investigated further as proposals are developed.

Prior to the building passing to the local authority, there seem to be few plans or records of the building. One noticeable alteration from this time is the addition and later removal of a conservatory/ sun space on the rear elevation of the building. This element is visible in photographs currently on show in the Costume Gallery, but all that now remains is the raised plinth to the garden.

Further evidence is also visible on historic OS maps of the town, shown above dated 1925. The footprint of the main house, stables and service wing





KEY

- 18th Century
- 19th Century
- 20th Century
- Considerable historic significance and remaining features.

Top left: 1925 OS map of Workington, with museum shown in south east corner.
Top right: Photo of kitchen and workroom (1970s) in the ground floor room of the annex, now known as the ‘Jubilee Room’.
Above: Plans showing the building’s development history.

Building History ctd.

are recognisable. However, between and to the rear of the service annex and the stables is a collection of irregular outbuildings which no longer exist.

After the building passed into public ownership there seem to have been several further phases of renovation and development. Basic preparations were made for the opening of the building as a museum in 1948/49, with some repair and redecoration work undertaken to the main house, but the stables and service wing were left mainly untouched and in partial ruin. The caretaker for the museum lived in the former service annex, whilst the 'Museum' was housed in the main house. Few drawings exist from this time, though it is possible to piece together some of the history through invoices and specifications in the Museum archive.

This arrangement seems to have continued until Allerdale Borough Council took ownership of the museum in the mid 70s and plans were drawn up for its development and improvement. It appears that it was at this time that the current display cabinets were fitted in the costume gallery and rooms on the first floor at the front of the main building were knocked together to form the 'Long Gallery' with display cabinets fitted here to house the museum's local history collection. The historic photographs in this report were used as part of an exhibition explaining the building work undertaken at this time. The car number plates date these photographs to at least 1968, and possibly later.

Plans and photographs suggest that this work also included the removal of separating internal walls and plaster in the attic, restoring the roof timbers and introducing insulation and boarding out the roof space so it could be used for storage. The cellars were also cleared out and timbers here restored. Luckily, not all work on plans from this time was carried out - plans prepared in the late 1970s propose the demolition of all outbuildings, including the stable block.

Further substantial work was carried out in the early/ mid 1980s. This had a significant impact on the appearance and layout of the building. This was the last major work done on the building and is still very much in evidence. The link building between the annex and the stable block was constructed. This is a single storey, flat roofed building, quite unsympathetic to the surrounding 18th century buildings. It contains a refreshment area, small kitchen and WCs. The window to the front elevation has a reinforced concrete surround which is in poor repair. It attempts to match the sandstone surrounds of the original windows, though in a noticably different style.

In addition to the new link building, works were also carried out to the stable block and annex building. The stable block was renovated to it current state, with the construction of a new ramp and steps, new external doors and complete internal re-plaster. Original openings, mostly on the south side of the building, were filled in, the roof was repaired and partly insulated.

Clockwise from top right: Eastern elevation of stable block with evidence of demolished outbuildings and exposed sandstone walls; attic stripped out prior to refurbishment; 'Jubilee Room' in 1970s with original 18th century window; building roof-tops looking south (1970s); front elevation of annex today; front elevation of annex prior to construction of link building.

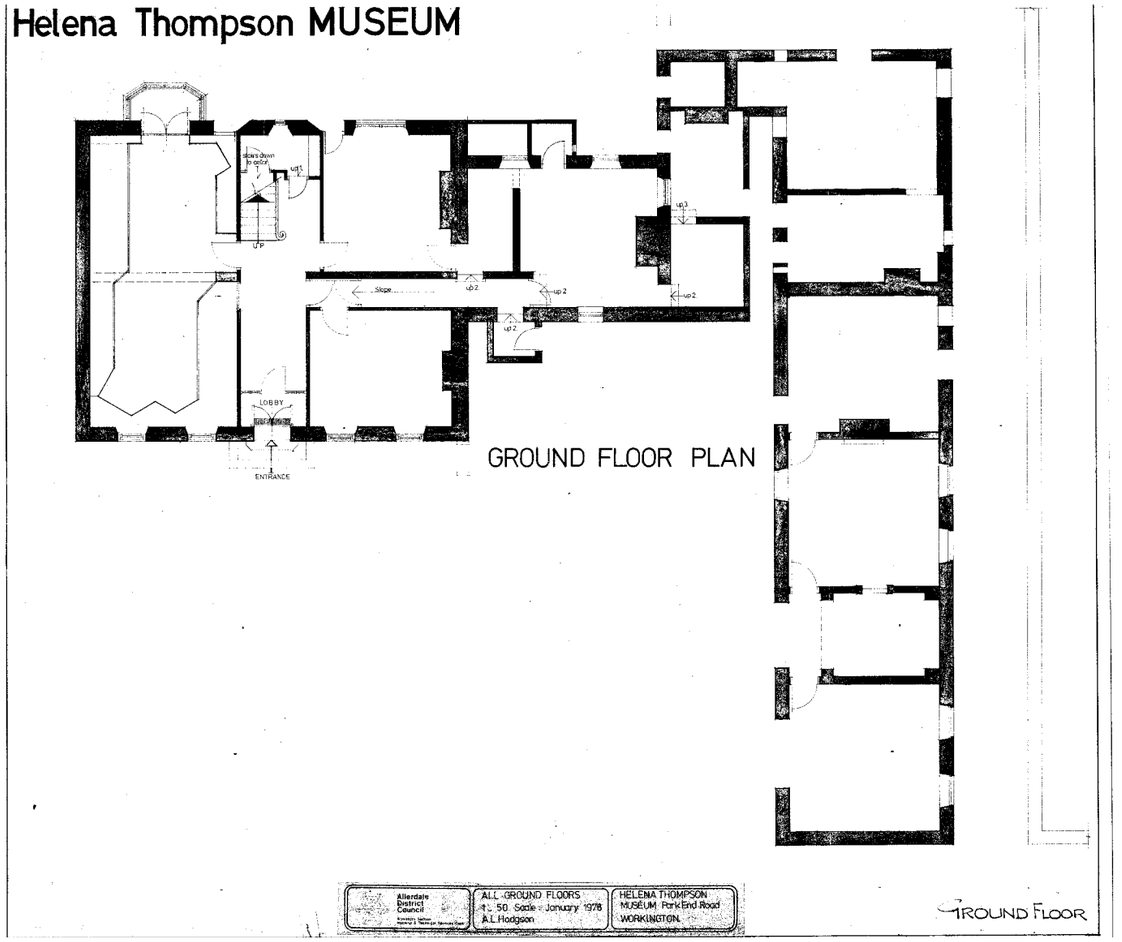
Building History ctd.

The annex was likewise renovated and a new ramp and covered entrance was created from the front courtyard. Both of these buildings were rendered with a wet-dash concrete render, which covers the sandstone walls visible in some of the photographs from the 1970s, whilst at the same time some of the render on the main house appears to have been patched with cement render. - replacing the probable original lime render on the north gable.

It appears that it was also at this time that the southern attic window was reconstructed - as shown on a detailed drawing dated June 1981.

Whilst some of the work carried out on the building over the years has not been sympathetic, many historic features remain. Most of these are in the main house, in particular the original entrance hall and main staircase and the 19th century gothic parlour.

Many of the original sash windows are still in place, though some have been patch repaired. The main building retains for the most part its original external appearance and proportions. One notable exception is the lowered window cills to the left-hand ground floor windows to the front elevation. It is not clear from the record when these alterations were made, however it seems likely that they date from sometime in the 19th century, and are perhaps contemporary with the construction of the small sun space on the rear elevation of this room.



Clockwise from top left: Plan prepared by Allerdale Borough Council, dtaed 1978, showing the previous configuration of the plan of the stable block and outhouses; south elevation of stable block, prior to original windows being blocked up; view of interior of stable block and derelict roof in 1970s; cellars prior to clear-out and restoration of timbers stable building roof-top and south elevation looking east (1970s).

Analysis

Location and Setting
The Helena Thompson Museum is located on Park End Road, Workington, a five-minute walk east from the town centre on the north eastern edge of a largely residential neighbourhood of Georgian and Victorian houses covered by the Portland Square Conservation Area.

To the north, over the A66, a main traffic route into the town, is the country park surrounding the 14th century Curwen Hall and the River Derwent. To the south and east is Thorncroft Gardens, a 1970s and 1980s housing development and beyond that the local secondary school.

The building sits in grounds of approximately 0.36 hectares. To the east is a large open garden and lawn, with several mature trees and views towards the Cumbrian Fells. A car park in the southern corner is accessed via a side road to the south of the stable block. To the north, beyond the gable wall of the main house is a small rose garden. To the west a formal garden fronts onto Park End Road, with a paved courtyard formed by the annex and stable block to the south of this. Many of the garden walls in this area are thought to be original.

Building Fabric
The buildings housing the museum have three main parts - the main house, the service annex and the stable block. The total floor useable floor space (including cellars and attic) is approximately 700 square metres.

The buildings have suffered from a lack of regular maintenance and repair, some of which is being put right now. Since taking on the management of the museum in 2005 the Workington Heritage Group have undertaken essential repairs, such as bringing electrical services in the building up to current safety standards. However, the building remains fundamentally unchanged since the last major redevelopment work was undertaken in the early 1980s.

Though significant historic features remain, particularly in the main house, as has been noted in the previous chapter not all this work was sympathetic to the historic character of the building.

The thermal performance of the building fabric has not been upgraded since the work carried out in the 1980s, and therefore energy costs for the building are high - especially in the stable block and link which has an electric heating system, whilst the main building and annex use a gas central heating system with radiators. The current gas boiler is thought to be at least ten years old and is scheduled for replacement in 2010.

Uses
The main building houses the exhibition galleries displaying the museum's permanent collection and the ground and first floor, with storage for the collection in the attic and cellars. The annex houses meeting rooms and office space. The 1980s link building contains a small kitchen, seating area and two WCs, including one for disabled users. The old stables and coach house contains temporary exhibition space, offices for museum administration, storage and workshops.

As well as its function as an exhibition space and museum, the building also hosts numerous local groups and societies, including arts and craft groups, radio, and local history groups. In recent years activities for local children and school groups have also become more frequent and popular. Rooms are often hired out to groups from the local authority and business groups for meetings and seminars. Thus the building functions as much as a local community facility as a museum.

The building is a popular setting for events such as weddings, which use the large gardens with views to the Cumbrian Fells. However, access from the building to the gardens at present is poor, with visitors having to pass through a small lobby adjacent to the WCs in the link building.

The front entrance to the annex from the courtyard, constructed in the 1980s, is not compliant with current building regulations requirements for disabled access - the ramp is too narrow and too steep and its curve makes manoeuvring wheelchairs difficult.

There is no access to any of the upper floors for those using wheelchairs or with reduced mobility. Due to the sensitive historic nature of the main staircase it is not possible or appropriate to fit a stair lift, and the secondary stairs in the annex are too narrow for a stair lift.

There are only 3 WCs in the whole building, two on the ground floor in the link building, and one on the first floor in the annex. This has proved wholly inadequate - particularly for events. They are not finished to a particularly high standard and are now suffering with age.

The kitchen in the link building is very small and lacking in storage space and facilities - and again has proved inadequate for current needs. The seating area adjacent to this is small and can sometimes become stuffy - suggesting a lack of adequate ventilation.

The stable block provides potentially fantastic double height exhibition space. However, it suffers from a lack of daylight and can become stuffy, again suggesting a lack of adequate ventilation. The ramp and steps which lead to the lower floor in this space from the link building are not compliant with current building regulations requirements for disable access.

The manager's and curator's offices in the stable block are small but

Stable Block


Jubilee Room


View from A66


Kitchen and Seating Area

Analysis ctd.

sufficient. The stone vaulted curator's room is kept at a steady temperature by its high thermal mass - making it the ideal place to store small sensitive items, such as photographic negatives, from the museum collection.

The end bay currently serves as storage, both for catering supplies and the museum collection, However, this double height space has the potential to be put to greater use.

In the main house, the costume gallery is often used for meetings. However, the large fixed display cabinets here make the space inflexible and the blocked up windows to the front elevation mean that it can be quite gloomy - though this is also beneficial for the costumes on display.

The other rooms in the main house, with their Georgian proportions and high ceilings, function well as exhibition space - while the attic and cellars have proved useful as storage space.

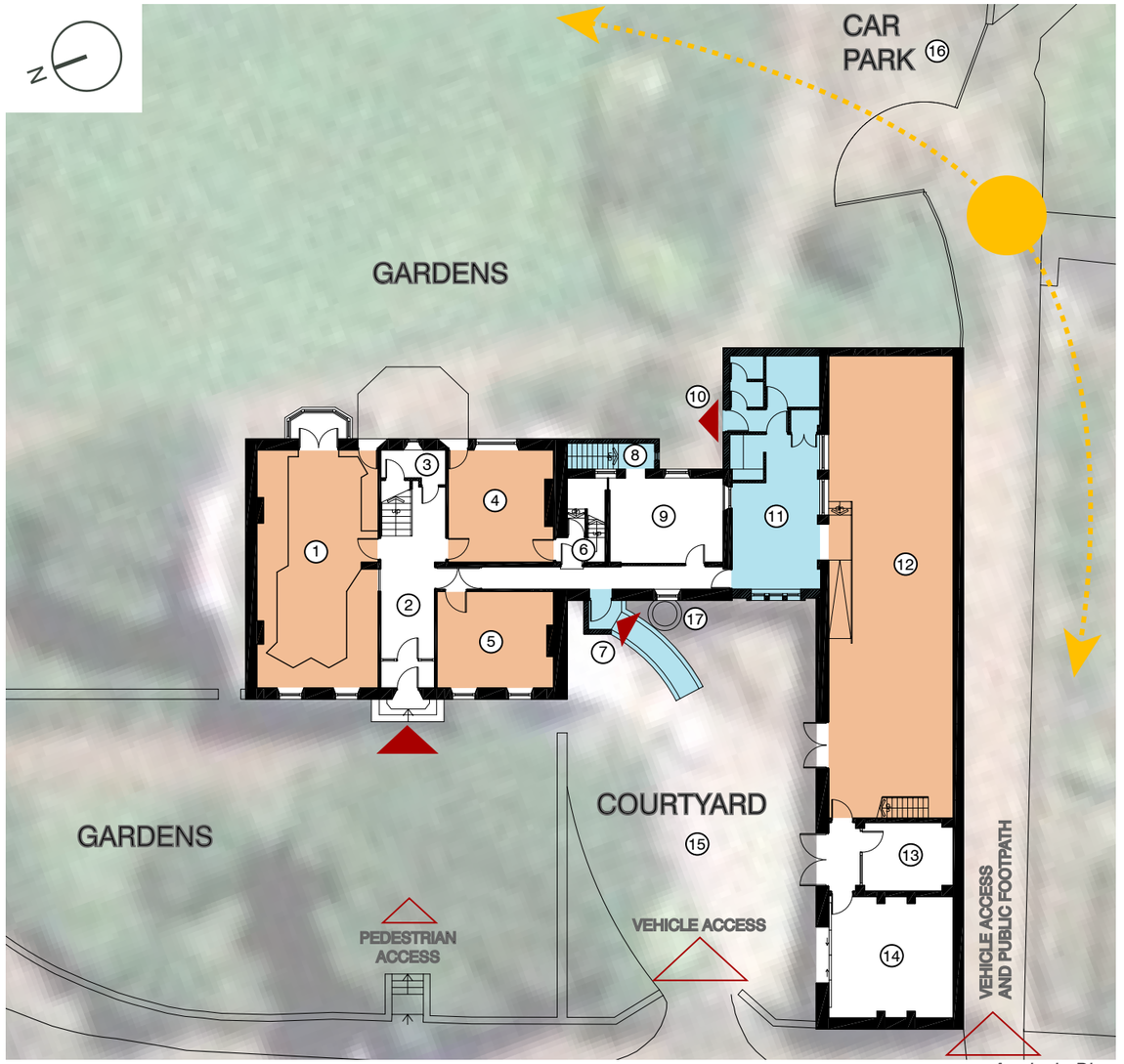
The annex building now serves as mainly as meeting space for the museum, with the 'Jubilee room' on the ground floor holding approximately 10 people for formal meetings, an archive and resources room on the first floor, and the radio group room in the attic.

View from north east of garden

Plan Key

- Museum exhibition spaces
- 20th century buildings
- Building entrance

1. Costume Gallery
2. Main Entrance Hall
3. Attendant's Office
4. Gothic Parlour
5. Georgian Room
6. Annex Stairs
7. Annex Entrance
8. Cellar Stairs
9. Jubilee Room
10. Garden Access
11. Link Building
12. Temporary Exhibition Space
13. Curator's Office
14. 'End bay' Store
15. Courtyard
16. Car Park
17. Disused Water Well



Analysis Plan

Costume gallery

Attic

Exit to garden

Manager's Office

Brief

The brief for the project has been informed by discussion with the Workington Heritage Group, the museum management, and through them the various user groups of the building.

As noted above, there are a number of areas where the building is currently lacking in facilities, or where facilities are poor, and it is these areas which it is felt should be addressed in particular. However, it is hoped that the opportunity could be taken for additional facilities to be provided, and the whole building benefit, for example by improving energy efficiency.

An outline of the specific requirements of the brief as currently understood is set out below. This will be developed further throughout the planning and design process.

Building Access - Building accessibility should be improved. All new entrances should be designed to accommodate level access for wheelchairs and to comply fully with current standards and regulations.

Toilets - WC provision should be doubled from 3 to 6 cubicles. These should be located to be easily accessible from all parts of the building.

Kitchen - A larger kitchen is needed. This will provide hot and cold drinks and cold snacks during normal day-to day operation of the museum and 'warm up' facilities for events, where catering will be provided by outside contractors bringing in prepared food. The specific brief for this element will be developed in further detail in consultation with the museum management.

Kitchen Storage - Adequate and accessible storage will need to be provided for the kitchen. This will include large lockable chest freezers, catering equipment, cutlery and crockery and storage for wine.

Cafe - A small seating area with tables and chairs should be provided alongside the kitchen. Preferably this should be more separate from the stable block exhibition space than the current arrangement, to minimise disturbance to those using this space.

Lift - This will provide greatly improved accessibility to the upper floors of the building for those with impaired mobility, and should be positioned to give access to the varied levels in the building. If possible, it could also be used to transfer items from the collection storage in the attic of the main building, which is currently only accessed via a steep narrow staircase.

Garden Access - New facilities should be arranged to create improved access to the rear of the building, to make better use of the pleasant gardens and views, and to increase the ease of access from the rear car park. This may particularly improve the setting for weddings and similar events.

Costume Gallery - It is intended that the current inflexible display cabinets these should be replaced so that this room could also be used for meetings and functions, as well as display. The windows to the front elevation of the building should be opened up to admit controlled daylight.

Garden Room - A new room at ground floor level making full use of views of the garden. This room would be used for wedding ceremonies and other functions and be designed to hold up to seventy people.

Meeting Rooms - There is a need for a larger meeting room to accommodate approximately twenty people, as this gives greatest flexibility of use.

Public Access Archive/ Resources Room - The public access archive and resources room should be retained. This will contain the museum library, IT resources and public access to the collection catalogue.

Stable Block - The existing large stable doors which face onto the front car park are to be replaced with glazed screens. This is to provide interest to the car park elevation, whilst also providing day-lighting to these spaces. North-facing roof-lights could also be added for this purpose. The existing ramp and steps should be replaced to meet current standards.

Access to Cellars - Access to the cellars is required for storage of museum materials. The ease of moving these materials should be considered.

Storage Generally - Storage space should be provided for user groups, and storage in general should be rationalised where possible.

Building Services and Energy Efficiency - Building services should be improved and upgraded generally. In particular there is a need for an improved telecommunications system, IT and security systems. Where possible the energy performance of the building should be improved - with the primary aim of reducing long-term running costs and insuring against rising fuel prices, thereby improving the museum's financial sustainability, but also to make the building more environmentally sustainable.

Historic Context - In making all these additions and amendments to the building, its significant historic context should not be neglected. Indeed, the aim of any building works should be to enhance and emphasise this context so that the building itself is considered as part of the museum, rather than just housing the collection. In this way the building itself can become a tool for learning about history.

Landscape works - The car park to the rear and the courtyard should both be resurfaced. The design should reduce run-off as far as possible to the surrounding area - especially as Thorncroft Gardens is downhill from the museum and prone to flooding. The use of Sustainable Urban Drainage systems should be investigated.

Quality of finish and durability - All new build and refurbishment works should be carried out to the highest standards and use high quality, durable materials. This will reduce long-term maintenance costs. It will also help to ensure that facilities continue to be look good in years to come and will continue to be well used for functions such as weddings.

Programme - The building is well used by various community groups and visitors. Any disruption to these groups and visitors caused by building works should be kept to an absolute minimum. If the museum is closed for any length of time there is a risk that these groups will go elsewhere and not return. This may require the phasing of works and the consideration of methods such as 'off-site' construction, to ensure that building work is completed as quickly as possible.

Above: Children taking part in an art workshop in the stable block.
Right: Signing the register in the Gothic parlour.

Precedents and Design Approach

The design approach proposed for the works to the museum follows two basic principles:

- The historic significance of the existing building fabric should be respected, preserved and revealed. Any disturbance of historically significant fabric should be minimal and well considered.
- New build interventions should be distinct from the existing fabric, yet complimentary to it in scale, form and materials. It should be possible for visitors to the museum to discern which elements are 18th century and which are 21st century. Pastiche should be avoided.

By following these principles it is hoped that not only will the development create successful architectural interventions in the existing fabric, but also the historic fabric will be revealed to visitors. The building itself then becomes a valuable historic exhibit and teaching tool.

The images to the right show various recent projects where new facilities have been successfully integrated with historic buildings. Many of these are from the English Heritage publications *'Constructive Conservation'* and *'Shared Interest'*. Many follow similar principles to those described above.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1. PTEa head office, London, by PTEa; 2. Brooklands, English Heritage East of England headquarters, vHH Architects; 3. Staircase by Malcolm Fraser Architects; 4. Compton Verney by Stanton Williams Architects; 5. Hugh Lane Gallery, Dublin; 6. York Early Music Centre, vHH Architects; 7. Gallery interior, Whitby Abbey Visitor centre, Stanton Williams Architects; 8. Rear elevation, Whitby Abbey Visitor Centre, Stanton Williams Architects; 9. Whitechapel Art Gallery, London Robbrecht & Daem; 10. Brooklands, English Heritage East of England headquarters, vHH Architects; 11. Office building by Malcolm Fraser Architects; 12. Bluecoat Arts Centre, Liverpool, Biq Architects; 13. York Early Music Centre, vHH Architects; 14. Domestic extensiion by Malcolm Fraser Architects.

Design Proposals

The simple block plan and 3D sketch models here illustrate the strategic approach to the works to the museum building. In order to meet the requirements of the brief set out above, a series of interventions are proposed to the existing building fabric.

The first of these is the demolition of the single storey link building constructed in the 1980s, and the creation of a new two-storey element in its place. This, alongside the refurbished annex building, would function as a 'hub' for museum activities. It would include fully accessible front and rear entrances, a new reception area, with new WCs, a cafe seating area, kitchen and meeting facilities.

A new lift would be introduced, which for the first time would provide access to the upper floors of the building for those with impaired mobility. This would be tucked in the junction between the main house and the annex building, where all the many different levels in the building meet.

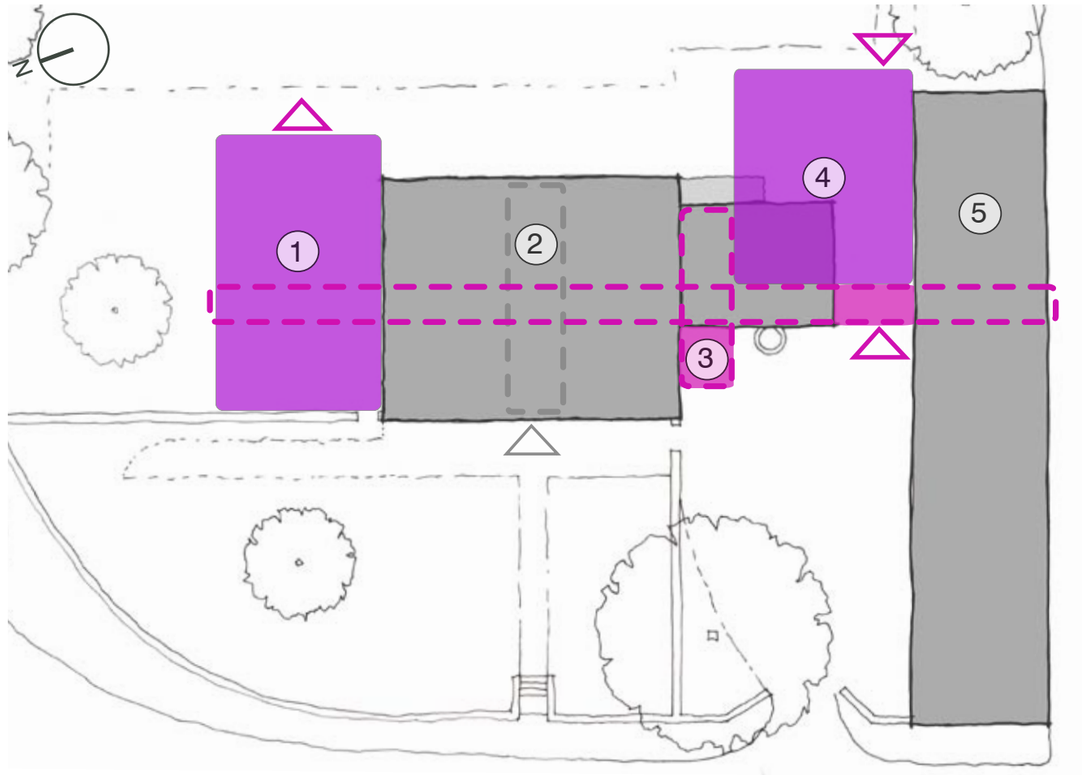
The third intervention is the creation of a new 'Garden Room', adjoining the north gable wall of the main house. This would provide a high quality function facility for the museum, and would be screened from the front elevation by the existing original garden wall.

A circulation route running north-south, from one end of the building to the other, would tie these elements together and into the existing building fabric.

All of these new elements would be designed to complement the existing buildings. Taking their lead from the stable block and annex, they would be proportioned in deference to the main house.

The new building elements described above will dramatically improve facilities for the museum, not just providing more useful space, but also by improving less tangible things like the relationship of the building to its gardens.

The construction method used for the new build elements will require careful thought and investigation. A prefabricated framed or panel timber system with off-site construction could be considered. This would have several advantages over traditional masonry construction. They are relatively lightweight, so foundations could be minimal, reducing the impact on the existing structures; the form of construction means that at a later date, if someone wished to strip back to the original historic fabric it would be a relatively straightforward process; and finally, they can be very quick to put up, reducing the time taken for the build and therefore any potential negative impacts on the day-to-day running of the museum.



Plan Key

1. *New garden function room*
2. *Existing main house - museum exhibitions and collections*
3. *Vertical circulation with new lift to access all levels*
4. *Museum 'hub' - cafe, kitchen, WCs, meeting rooms.*
5. *Existing stable block*

Existing building

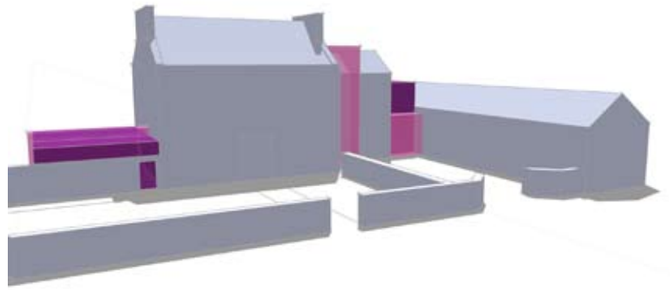
New building/ intervention

Existing building entrance/ exit

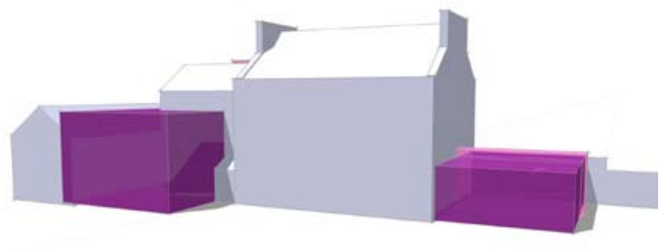
New building entrance/ exit

Existing circulation axis

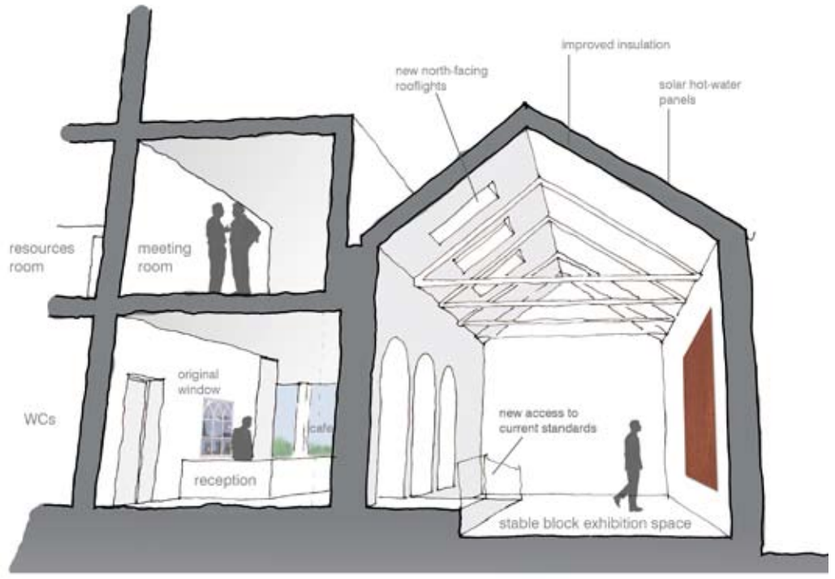
New/ refurbished circulation axis



front block elevation - to Park End Road



rear block elevation - to gardens



sketch section of museum 'hub' and temporary exhibition space

Proposed Building Plans

The plans to the right show the latest iteration of the design, following input from the board of the Workington Heritage Group and the museum management. However, this is not the ‘final design’. The scheme will continue to be worked up in consultation with the client, curatorial staff, user groups and statutory authorities.

Plan Key

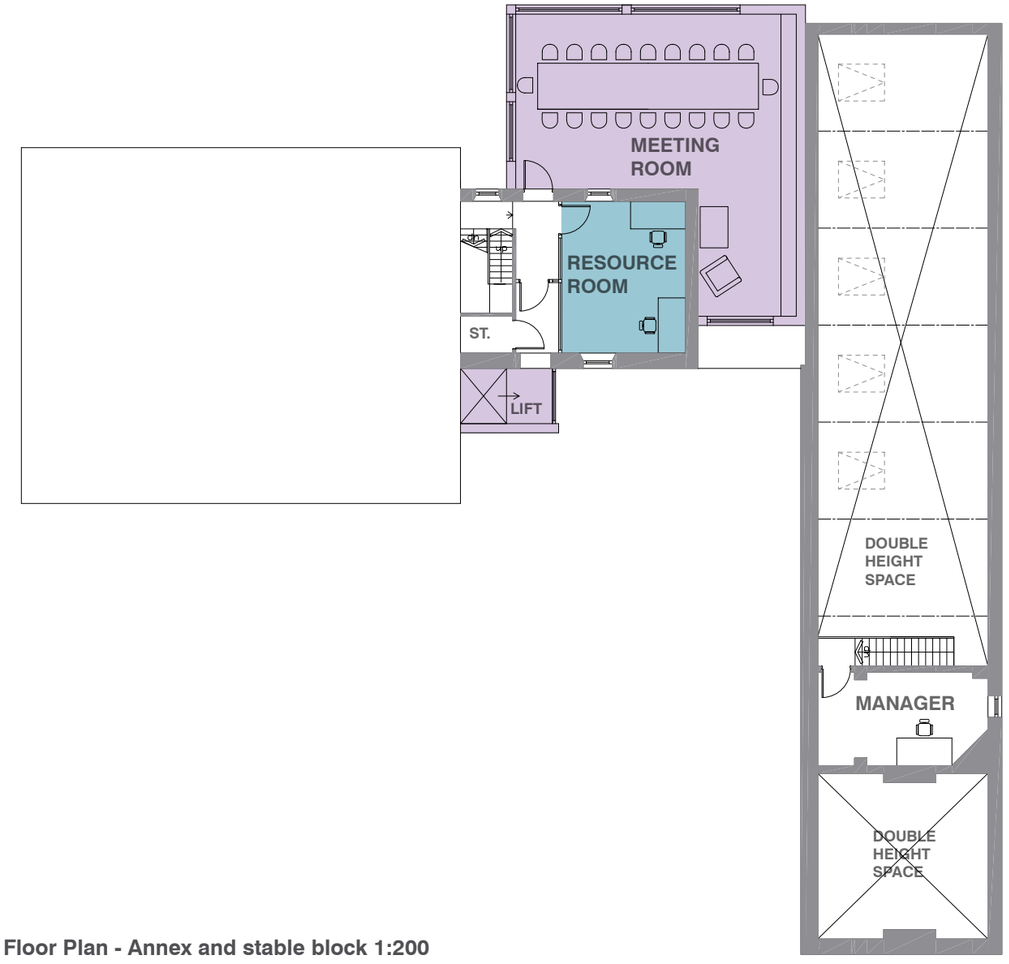
- Museum exhibition spaces - no major architectural interventions
- New build elements
- Alterations/ renovation

1. Glazed doors onto terrace and gardens.
2. Access to cellars for collection and catering store for garden room/ costume room.
3. Cleaner’s store beneath stairs to first floor.
4. Access to cellars for kitchen and catering.
5. Entrance from rear car park with canopy.
6. Entrance lobby.
7. Ramp and steps to modern standards.

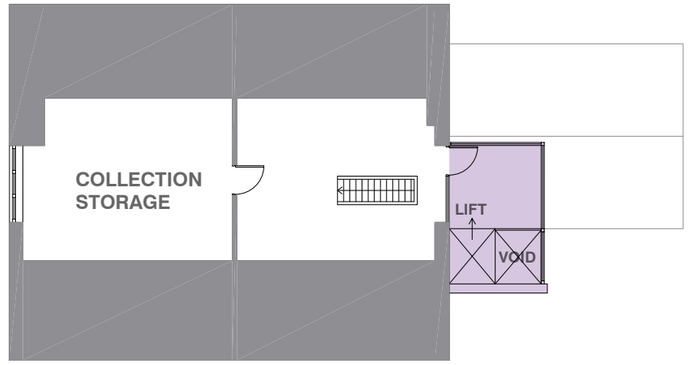
Note on parkIng:
The car park to the rear of the building has the potential to accommodate up to 8 cars, with additional disabled parking and drop-off space to the front courtyard. This will accommodate the museum staff, plus a few more Overspill parking is available in the local authority car park just over the A66. The museum is within walking distance of residential areas and several schools, as well as being next to the town centre and public transport connections.

Ground Floor Plan 1:200

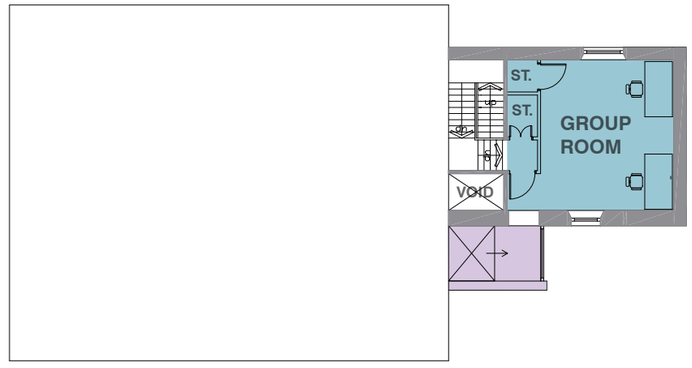
Proposed Building Plans ctd



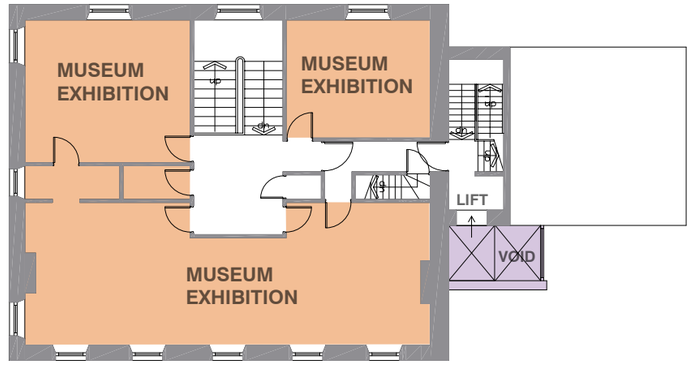
First Floor Plan - Annex and stable block 1:200



Attic Plan - Main Building 1:200



Second Floor Plan - Annex 1:200



First Floor Plan - Main Building 1:200

Plan Key

- Museum exhibition spaces - no major architectural interventions
- New build elements
- Alterations/ renovation

Building Services and Fabric

All new elements will be built to high standards of energy efficiency. We would suggest that as an absolute minimum they be built to meet the requirements of the 2010 Building Regulations, and preferably to exceed them.

'Consequential improvements' in the existing building fabric and services may be required by the Building Regulations, due to the proposed increase in floor area. Even if not, some improvements may be desirable for the future use and sustainability of the museum.

Energy costs for the museum have increased since the heritage group took over the museum management. The combined gas and electricity bills rose from just over £3000/ year in 2004/2005 to almost £4,800 in 2006/2007

It is important for the long-term sustainability of the museum that these costs are kept to a minimum. With fuel costs likely to rise in the future, the opportunity should be taken now to improve the building fabric and renew building services. Allerdale Borough Council are currently conducting an energy audit of their building stock - this should be used as a baseline to inform decisions about environmental improvements to the museum. Once a baseline for current energy use is established, a target for reduction of building energy demand and carbon emissions should be agreed. As a minimum we would suggest that there should be no net increase in energy use following the implementation of proposals for increased floor area.
An 'Energy Performance Certificate' rating of B or C for the whole building should be sought.

Building Fabric
From the records it appears that some insulation was included in the work to the roof of both the main house and the coach house in the 70s/80s. However much of this will now have degraded over time and will have only been fitted to the minimal standards of the day. It is highly likely that there will be room for significant improvement.

We would suggest that the first step in improving the energy efficiency of the building is to improve the levels of insulation. This should be done in a way that is sensitive to the historic context and the needs of a traditionally built and aged structure. The areas to target for improvement are the attics, roofs and floors of the main house, annex and coach house. Treatment for damp should also be considered in the cellars, to improve their useability. We do not believe it would be appropriate or necessary to replace the original single glazed windows with double glazing. Instead the use of internal shutters, some originals of which are still in place, and draught proofing of windows should be considered.

Heating and Hot Water
Having reduced the level of demand for energy by reducing heat loss through the fabric, the next step would be to improve the efficiency of the heating system. Currently the main house and annex are served by a gas boiler, coming to the end of its useful service life, and radiators. The link building and stable block use electric storage heaters - which are energy intensive and expensive to run.

We suggest that the whole building should run off one heating system, which would be zoned to allow flexibility for each of the different areas and uses in the building. For example, the environmental and climatic needs of the museum collection are quite different to those of the kitchen and different again to those of any meeting or function rooms. This will require further investigation and specialist advice from an environmental engineer. Disruption to the historic building fabric could be minimised by re-using existing pipe-work routes and radiators wherever possible.

The power for this heating system could be supplied from a variety of primary energy sources - and potentially from a combination of several different sources. An outline of the pros and cons of some energy sources is set out in the table to the right - though again this will require further investigation and specialist advice. By ensuring that the energy demands of the building are reduced as far as possible first, the costs associated with these systems will be reduced.

Power
The electricity use of the building currently accounts for almost two-thirds of its overall energy costs. Part of this is due to the electric heating in the link building and stable block. However, a significant amount will also be due to the use of power for lighting. The simplest and quickest way to reduce this is to install low energy lighting wherever possible. The installation of lighting control systems has the potential to create energy savings - with the use of movement and daylight sensors. In addition to this, day-lighting should be maximised wherever possible and appropriate.

To this end we recommend the introduction of roof-lights in the north-facing roof of the stable block - which currently has no day-lighting at all. These could have the dual function of improving the ventilation and airflow in this space. This will improve the internal environment whilst also reducing the need and therefore the costs of artificial lighting. These roof lights should be fitted with adjustable blinds, to maintain flexibility of use in this area. It may also be possible to re-open some of the original openings elsewhere in the stable block, and glaze some of the existing door openings to admit more light.

The potential use of renewable sources of electricity located on site, for example solar photo-voltaic panels, could also be investigated.

Water
Water charges also contribute to the running costs of the museum. Measures could also be taken to improve the efficient use of water in the building.
The simplest way to do this is to specify low-water sanitary appliances, for example 'spray-head' taps throughout the building. There is a disused well on the site - the potential uses of this could be investigated - as could the collection and use of rainwater on the site. As a minimum we would suggest a water butt should be installed to provide water for the gardens collected from the building roofs.

When taken together, all of the above measures have the potential to dramatically decrease the energy costs of running the museum.

Energy Source*	Pro	Con
High Efficiency Gas Condensing Boiler	- common technology, easily maintained and understood.	- likely increasing fuel costs in future - limited reduction in CO^2 emissions from non-renewable fuel source
Biomass Boiler (Fuelled by wood logs, chips or pellets)	- renewable fuel source - likely to be cheaper to run than gas - potential to support local suppliers	- need to locate reliable local supply of fuel - small amount of manual labour required to stock up - large, dry storage space required
Solar Hot Water Panels	- could be located on south facing stable block roof, not visible from the main building elevations and ideal orientation for maximum solar gain. - 'free energy' once installed - increasingly common and well-understood technology	- initial capital costs and potentially lengthy financial pay-back time - potential visual impact - provides greatest supply of hot water when there is the lowest demand, in summer.
Ground Source Heat Pump	- potentially reduced CO2 emissions compared to gas	- would require extensive digging in historic garden - not a completely renewable fuel source (requires approx. 1kW electricity input for 3kW heat output)

* Direct electric heating has been discounted as likely to be too costly, both financially and environmentally. Combined Heat and Power has been discounted due to the intermittent use of the building and the reduced demand for heating in summer.

Restoration and Conservation

The work programme to improve the museum buildings should also be taken as an opportunity to restore and conserve the important historic fabric of the original buildings. A conservation plan should be worked out so that the most important and urgent works are carried out to the highest standard possible and new works do not adversely affect the existing buildings.

From a preliminary visual inspection of the building, we would suggest that these works should include:

- The removal of the inappropriate concrete render on the annex building and coach-house. This render may be causing damage to the building fabric. It is vapour impermeable, so any water vapour travelling from inside to out is trapped beneath the render, where it is liable to condense and cause damp problems. This render should be replaced with a breathable lime-based render. Specialist advice to be sought on this.
- An investigation of the render on the main building - removing any inappropriate concrete render if appropriate and restoring the original lime-based render, for reasons given above. Records suggest that much of the north gable has been covered in concrete render, and this could be a contributory factor to the damp problems in this are.
- The replacement of any uPVC rainwater goods with cast iron or cast aluminium materials with profiles to match the original. This is both more appropriate for a listed building and will reduce long-term maintenance costs: cast iron and aluminium have life spans in excess of 30 years. uPVC in this situation normally has to be replaced every 10-15 years.
- The repair and refurbishment of original cast-iron rainwater goods.
- The refurbishment and draught-proofing of original timber windows.
- Investigate further the possible reinstatement of Georgian windows to the Costume Gallery front elevation, to restore the original proportions of this elevation - under advice from conservation specialist and following further historical research.

Above: uPVC rainwater pipe on stable block with inappropriate 'wet-dash' concrete render.
Above Right: Windows to costume gallery.
Right: Original Georgian windows in front elevation.
Below Right: example of roof lights in a conservation setting

example of roof-lights in a conservation context

Conclusion and Next Steps

It is hoped that this report will help the various people involved in the future of the Helena Thompson Museum to arrive at some positive decisions about its future.

As has been demonstrated, there is significant potential to improve the facilities offered by the museum and thereby improve its long-term sustainability as a valuable historical, educational and community resource.

However this report is simply the first step in the process of design and development of these new facilities. An outline of the likely next steps in this process is set out below:

Brief Development and Consultation
In order for the redevelopment of the museum to be a success it will need broad support from the museum management, current users, the local authority and the wider local community.

This will require a careful programme of brief development and consultation with everyone involved. To this end we would suggest that a series of design workshops is held prior to the submission on any applications for statutory approvals. Study trips to similar completed buildings may also be valuable in developing client preferences and the brief. This process will also help to ensure that the new facilities meet the needs of all their potential users - and will therefore help to ensure their full use and support by the local community.

Surveys
In order to prepare more detailed design proposals for listed building consent and construction a number of surveys of the building and its ground will be required. These are likely to include:

- A full measured survey of the building and grounds.
- A conservation survey and conservation plan for the building.
- Asbestos surveys, prior to any building work being carried out.
- Survey of land ownership and any easements or public rights of way.
- A building condition survey, investigating any incidence of damp, rot etc.
- A structural survey to ensure the existing building is sound.

Statutory Approvals and Regulations
Planning Approval: Planning permission is likely to be required for any changes made to the external appearance of the building. This involves the submission of drawings and a 'Design and Access Statement' describing the proposed scheme. The local planning authority should be consulted to confirm requirements.

Listed Building Consent: As a Grade II* listed building, consent is required for any works which affect the building or its setting - whether these are part of the original Georgian building or not. This follows a process very similar to planning consent, with drawings and reports being submitted for approval to the local authority. These will be considered by the local authority's Conservation Officer - but as a Grade II* building English Heritage will also be formally consulted.

A meeting to discuss initial proposals took place on site on 21 April 2009 between the local conservation officer and a representative of English Heritage. They support the development in principle, though they are keen to see further design details. They will be kept fully informed throughout the design development process, with ongoing discussions prior to submission of a listed building application and continuing through to detailed design and development on site.

Construction and Design Management Regulations 2007 (CDM): These cover health and safety on building projects. The client, designer and contractor all have responsibility to ensure that the requirements contained within these regulations are met. The client's primary responsibility is to ensure that a CDM Co-ordinator is appointed for the project. They will then advise and oversee health and safety on the project.

Building Control: Work carried out to the building is likely to come under the provisions of the Building Regulations and will require Building Control Approval. This is usually applied for once proposals have Planning Approval, with the architect and consultant engineers working up their designs in sufficient detail to satisfy the building inspector.

The building regulations are primarily concerned with health and safety, including fire safety (Part B), but also cover conservation of fuel and resources (Part L) and building accessibility (Part M). As the project involves work to existing historic buildings there are potential dispensations and allowances, which should be discussed with the building inspector and conservation officer. It is acknowledged that any requirements should be economically viable and should not detrimentally affect the historic character of the building.

Part L potentially has the greatest impact in terms of costs for the project. If the floor area of any extension exceeds 25% of the existing floor area in an original building of less than 1000 sq m such as this one, it will lead to the requirement for consequential improvements. The extension would then have to meet the requirements demanded of new buildings, and consequential improvements to energy efficiency would be required throughout the rest of the building.

Part L also sets out the requirements for the thermal performance of any new or replacement building elements, such as windows, roofs and walls in existing buildings and smaller extensions. Meeting these requirements is not only a legal obligation, but will also help to keep running costs down by reducing the amount of heat wasted.

It should be noted that all of the building regulations are revised from time to time. Part L is due to be revised in 2010, with increased energy efficiency standards.

Consultants and Specialist Advice
In order to comply with statutory approvals and develop the designs for construction additional advice will be required from various specialists and consultants. The list below sets out some of the most likely and necessary, though is not exhaustive:

- *CDM Co-ordinator:* It is the client's duty under the CDM regulations (described above) to appoint a CDM Co-ordinator .
- *Structural Engineer:* A structural engineer will be able to advise on the most appropriate and efficient methods for the construction of the new build elements of the scheme, whilst also assessing the structural integrity of the existing building and providing calculations for building control and construction purposes.
- *Environmental/ Services Engineer:* A services engineer will be able to advise on the most appropriate building services for the scheme, and ensure that the designs comply with building regulations requirements for day-lighting, energy conservation and ventilation.
- *Quantity Surveyor:* A quantity survey should be appointed to provide independent advice on costs.
- *Conservation Specialist:* A conservation specialist might be required to advise on restoration work to the existing buildings.
- *Landscape Architect:* for works to the gardens and surrounding grounds it may be beneficial to appoint a landscape architect.

Procurement
The procurement of the project should be carefully considered. The form of contract and the appointed contractor will have a significant impact on whether the project has a successful outcome. We would suggest that a contract should be chosen which allows the client to retain significant control over quality, given the sensitive nature of the existing fabric. The contractor should have experience of working with historic buildings and a proven track record of buildings finished to a high quality and durability.

In addition, the programme and timing of the building works is important to the future success of the museum. This should be worked out at an early stage and any phasing of works agreed and carefully in early discussions with the chosen contractor.

Appendix A: Listed Building Description

Building Name: Helena Thompson Museum And Former Stables
Parish: Workington
District: Allerdale
County: Cumbria
Postcode: CA14 4DE
LBS Number: 72282
Grade: II*
Date Listed: 06 June 1951
Date Delisted: N/A
Grid Reference: NY0087828563

Listing Text:

NY 0028 WORKINGTON PARK END ROAD (East-side) Workington

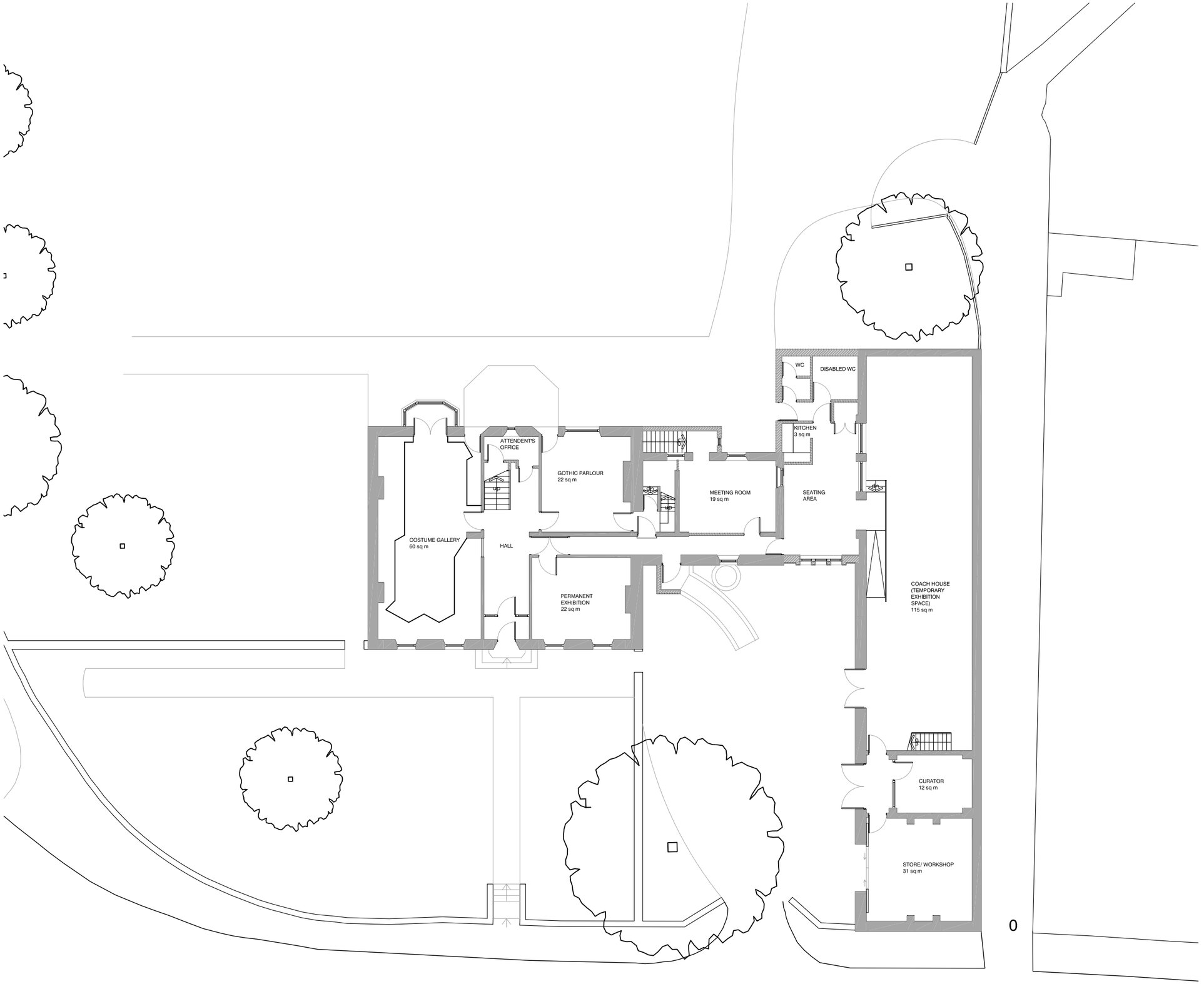
10/58 Helena Thompson
Museum and former
6.6.51. stables
(formerly listed as
Parkend House)

II*

House and stables, now Museum. Late C18 for the Curwen estate. Cement rendered walls, with dentilled cornice under blocking course, and V-jointed quoins, on chamfered plinth. Graduated greenslate roof with coped gables; large cement rendered end chimney stacks. 2 storeys, 5 bays, with lower 2-storey, 2-bay right wing and adjoining former stables at right-angles, forming overall L-shape. Panelled double doors with interlace overlight, within panelled reveals, in fluted-pilaster doorcase with dentilled pediment. Sash windows with glazing bars, those on ground-floor left C20 and enlarged below sills, all in eared architraves. Return walls have Venetian attic windows, that to right rebuilt. Wing has C20 porch and sash windows in painted stone surrounds. Stables have C20 garage doors and gable roundel. Return wall has blocked windows. Interior has many C18 and C19 features. Rear ground-floor room has heavily-moulded Gothic plaster ceiling. Staircase has 3 turned balusters to each tread with moulded handrail and panelled dado. Built for the steward of the Curwen estate and came to the Thompson family as stewards in the early C19. Purchased by Helena Thompson in 1934 and bequeathed at her death to Workington as a Museum, which opened in 1949.

Listing NGR: NY0087828563

Appendix B: Existing Plans



NOTE:
DRAWING BASED ON EXISTING PLANNING DRAWINGS AND PRELIMINARY SURVEY. A FULL MEASURED SURVEY HAS NOT BEEN UNDERTAKEN. ALL DIMENSIONS TO BE CHECKED ON SITE.

Title:
Project: Existing Site Plan
Helena Thompson Museum

Dwg No: SK001 Rev: -
Scale: 1:200@A3 Date: 08 05 09

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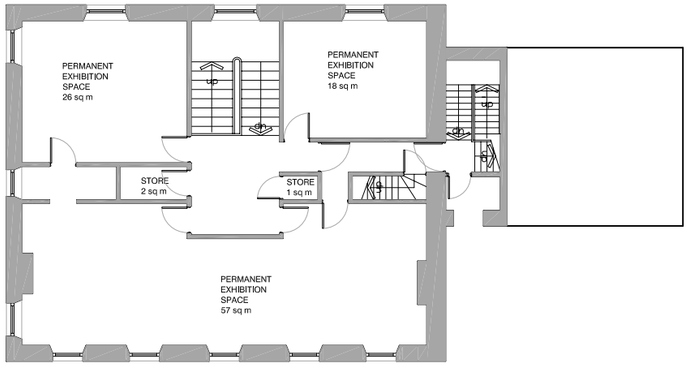

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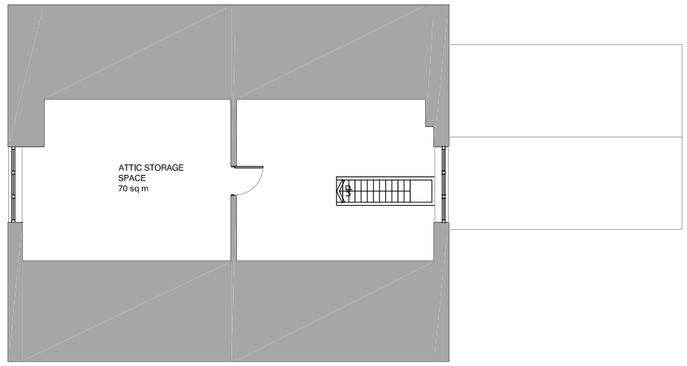

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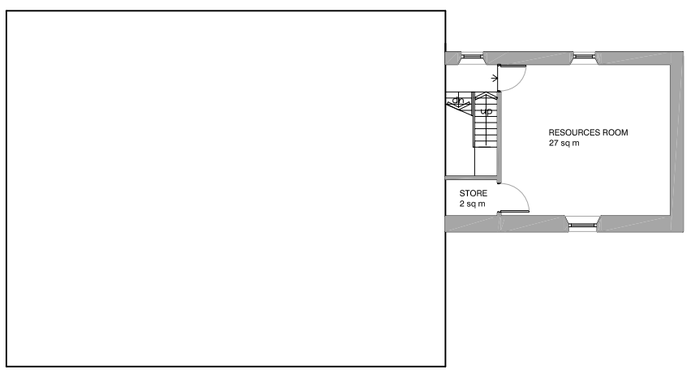

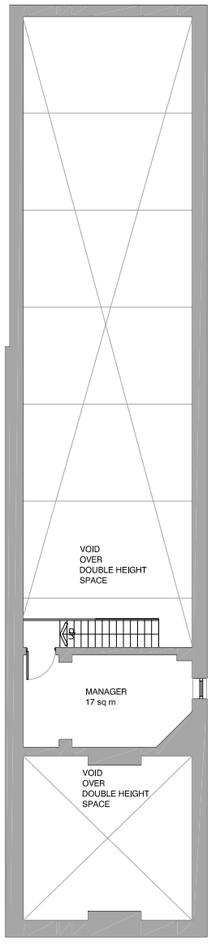

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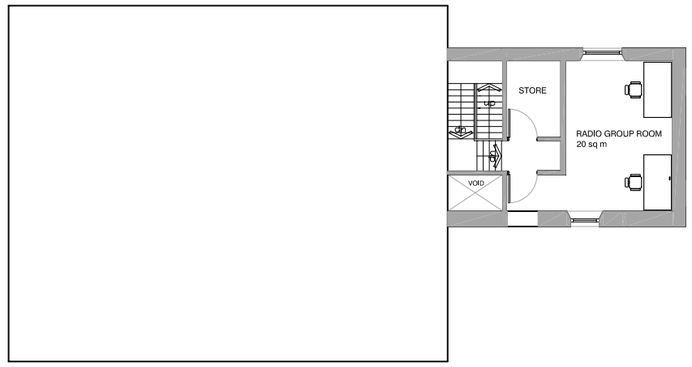

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NOTE:
DRAWING BASED ON EXISTING PLANNING DRAWINGS AND PRELIMINARY SURVEY. FULL MEASURED SURVEY HAS NOT BEEN UNDERTAKEN. ALL DIMENSIONS TO BE CHECKED ON SITE.

Title:
Project: Existing Upper Floor Plans
Helena Thompson Museum
Dwg No: SK003 Rev: -
Scale: 1:200@A3 Date: 08 05 09

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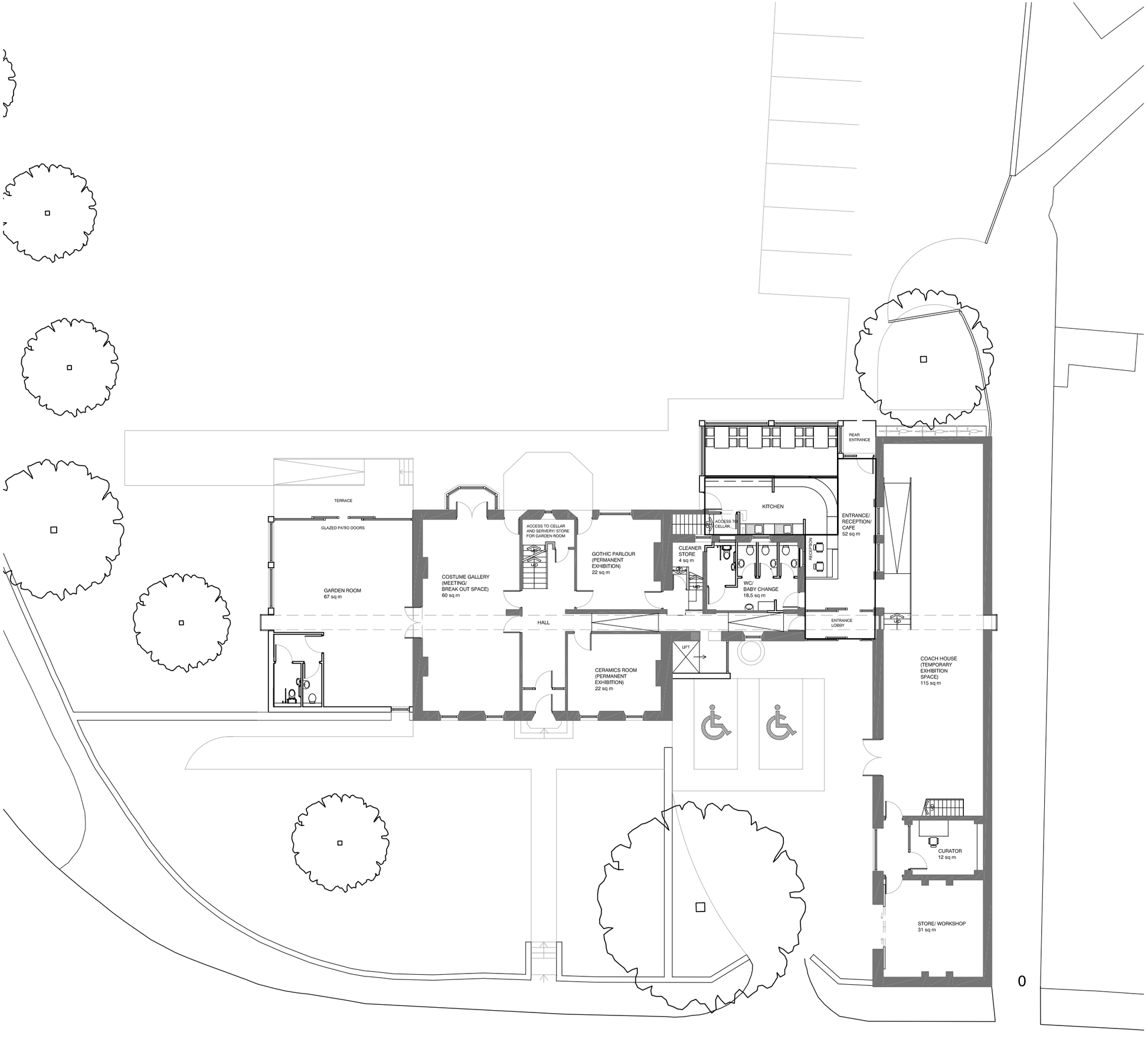
Appendix C: Proposed Plans



NOTE:
DRAWING BASED ON EXISTING PLANNING DRAWINGS AND PRELIMINARY SURVEY. FULL MEASURED SURVEY HAS NOT BEEN UNDERTAKEN. ALL DIMENSIONS TO BE CHECKED ON SITE.

Title:
Project: Proposed Ground Floor Plan
Helena Thompson Museum

Dwg No: SK101 Rev: -

Scale: 1:200@A3 Date: 31 05 09

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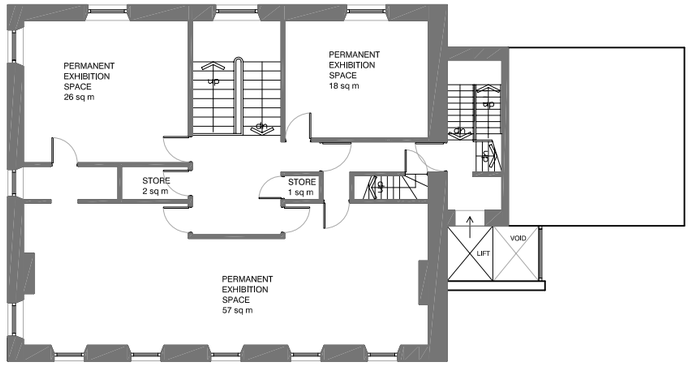

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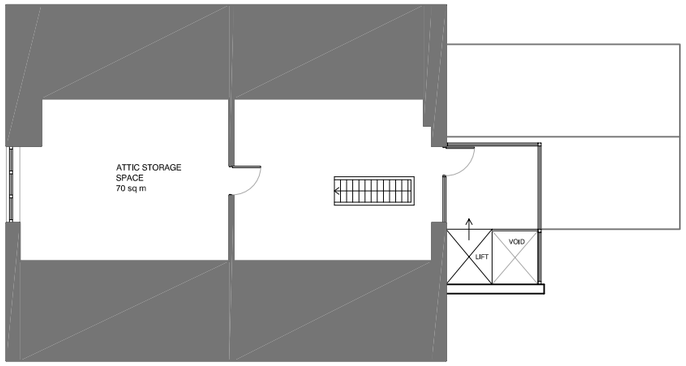

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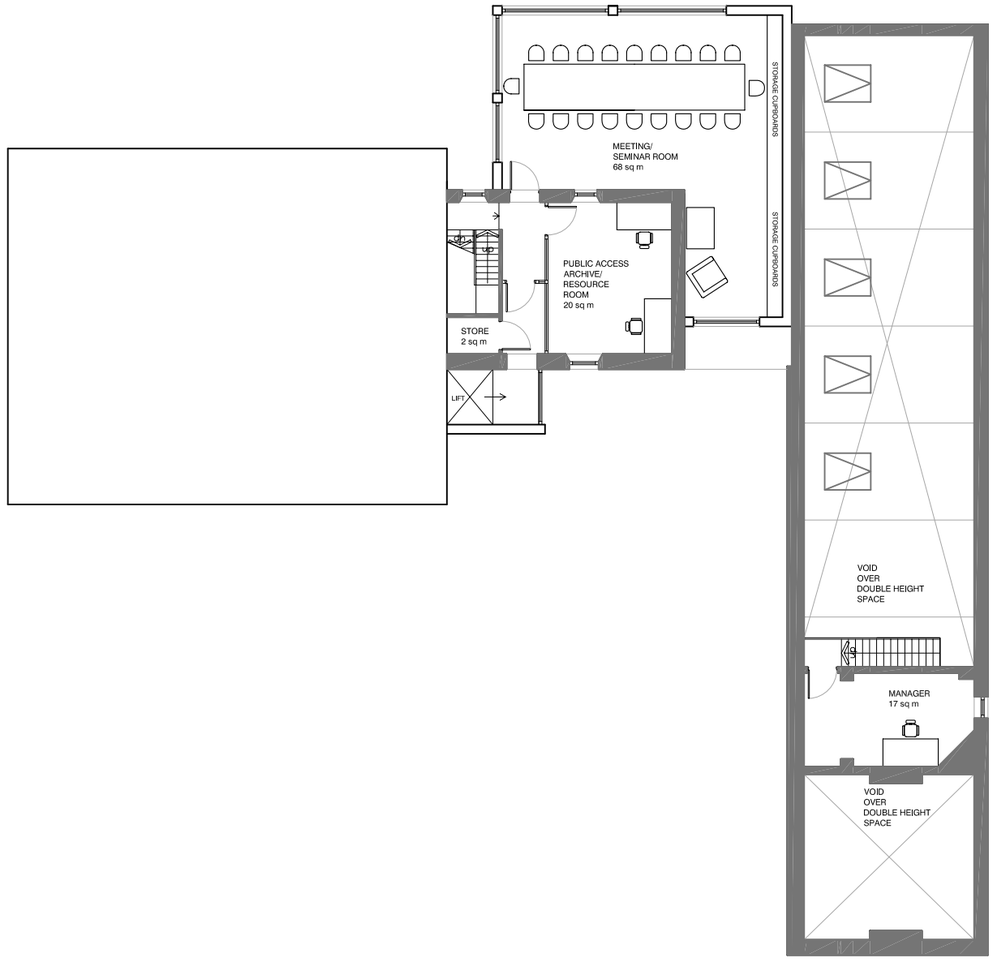

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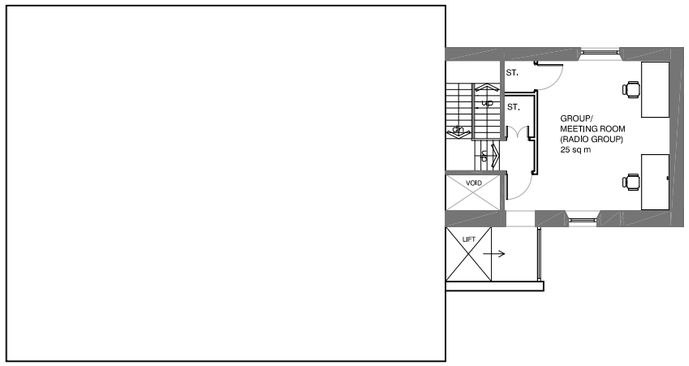

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NOTE:
DRAWING BASED ON EXISTING PLANNING DRAWINGS AND PRELIMINARY SURVEY. FULL MEASURED SURVEY HAS NOT BEEN UNDERTAKEN. ALL DIMENSIONS TO BE CHECKED ON SITE.

Title:
Project: Proposed Upper Floor Plans
Helena Thompson Museum
Dwg No: SK103 Rev: -
Scale: 1:200@A3 Date: 31 05 09

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Appendix D: Accommodation Schedules

Helena Thompson Museum -
Existing Accommodation Schedule
13 May 2009
(to be read in conjunction with feasibility report, May 2009)

Location/ Description	Existing[1] (sq m)
Main House	
exhibition galleries - inc costume gallery	215
attic storage	75
cellar storage	55
circulation	50
Sub-total	395
Annex and Link	
kitchen/servery	3
seating area	26
archive/ resource room	27
group room (attic)	20
stores	7
WCs	10
circulation	18
Sub-total	111
Stable block	
temporary exhibition space	115
manager's office	17
curator's office	12
end bay' - (storage/ workshop space?)	35
circulation	5
Sub-total	184
Total	**690**

N.B. All areas are approximate gross internal floor areas (GIFA). A full measured survey has not been conducted.

Helena Thompson Museum - Development Proposals
Accommodation Schedule
13 May 2009
(to be read in conjunction with feasibility report, May 2009)

Location/ Description	Demolished (sq m)	Existing[1] (sq m)	Alterations (sq m)	New Build (sq m)
Main House				
exhibition galleries - inc costume gallery	0	155	60	0
attic storage	0	75	0	0
cellar storage	0	55	0	0
circulation	0	50	0	0
Sub-total	0	335	60	0
Garden room				
function room	0	0	0	67
WCs and cloaks	0	0	0	10
circulation	0	0	0	0
Sub-total	0	0	0	77
Annex and Extension				
demolished (kitchen, WCs, seating area)	50	0	0	0
entrance lobby/ reception	0	0	0	30
kitchen/servery	0	0	0	23
café seating	0	0	0	20
archive/ resource room	0	0	20	0
seminar room	0	0	0	60
group room (attic)	0	0	25	0
stores	0	6	0	7
WCs	0	0	20	0
lift	0	0	0	30
circulation	0	18	5	0
Sub-total	50	24	70	170
Stable block				
temporary exhibition space	0	0	115	0
manager's office	0	17	0	0
curator's office	0	12	0	0
end bay' - (storage/ workshop space?)	0	0	30	0
circulation	0	5	0	0
Sub-total	0	34	145	0
Total	**50**	**393**	**275**	**247**
Grand Total	**915**			

N.B. All areas are approximate gross internal floor areas (GIFA). A full measured survey has not yet been conducted.
1. It is expected that many existing areas of the building will undergo some degree of refurbishment, for example improving the level of insulation in the attic.

Appendix E: Outline Schedule of work

This Outline Schedule of Work is to be read in conjunction with the accompanying feasibility report and drawings. It is an indication of the likely work involved in the proposed scheme, and is not to be considered as exhaustive or comprehensive.

	Location	Description	Notes
1.0 New Build	1.1 Garden Room	Construct single storey 'garden room' to act as function facility for museum. To high quality spec with durable, non-toxic finishes and materials.	No materials rated category C or below in BRE 'Green Guide to Specification' to be used. Target U-values: Walls,Roof,Floor - 0.15 W/Km2 Glazing - 1.0 W/Km2 All WCs and taps to be low flush/ low water usage
	1.2 Meeting Room, Kitchen and Cafe	Construct new two storey building between annex and stable block. To high quality spec with durable, non-toxic finishes and materials.	No materials rated category C or below in BRE 'Green Guide to Specification' to be used. Target U-values: Walls,Roof,Floor - 0.15 W/Km2 Glazing - 1.0 W/Km2 All taps and water fittings to be low water usage
	1.3 Lift	• Construct lift and enclosure to link all building levels at junction between main building and annex. To be constructed to high quality spec with durable, non-toxic finishes and materials. • Create openings in existing annex building to allow access to new lift.	No materials rated category C or below in BRE 'Green Guide to Specification' to be used. Target U-values: Walls,Roof,Floor - 0.15 W/Km2 Glazing - 1.0 W/Km2
2.0 Alterations/ renovation	2.1 Annex - Ground Floor	• Construct new WC and baby change facilities with new door opening etc. • Block existing exit from cellar to jubilee room. • Restore original 18th century/ 19th century windows as necessary.	All WCs and taps to be low flush/ low water usage. No materials rated category C or below in BRE 'Green Guide to Specification' to be used.
	2.2 Annex – First Floor	• Construct new fire-rated glazed partition to resource room to create corridor between lift and head of stairs. • Restore and draught-proof original 18th/ 19th century windows.	No materials rated category C or below in BRE 'Green Guide to Specification' to be used.
	2.3 Annex - Attic	• Reconfigure internal partitions to enlarge group room and create new storage space. • Restore and draught-proof original 18th/ 19th century windows. • Introduce enhanced levels of insulation to loft/ roof space.	No materials rated category C or below in BRE 'Green Guide to Specification' to be used. Insulation specified to be vapour permeable, to allow the building to breathe (eg. 'Thermafleece'). 0.15 W/Km2 target U-Value for loft/roof space.
	2.4 Stable Block Roof	• New north facing roof lights fitted with electronically controlled blinds. • Improved levels of insulation between rafters and purlins. • Potential for solar thermal panels to south facing roof.	No materials rated category C or below in BRE 'Green Guide to Specification' to be used. Insulation specified to be vapour permeable, to allow the building to breathe (eg.'Thermafleece') Rooflights U-Value – 1.8 W/Km2 maximum.

	Location	Description	Notes
3.0 Refurbishment and Restoration	2.5 Stable Block	• Insulate floor (investigate possibility of raising floor level). • Remove non-compliant ramp and steps and replace. • Re-open some original windows. • Replace 'barn' style doors with glazed screens.	New windows/ doors U-value - 1.8 W/Km2 maximum
	2.6 Main House – Costume Gallery	• Remove existing display cabinets and replace with more flexible versions. • Unblock windows to front elevation and investigate possibility of restoring to original Georgian proportions. • Create opening in north gable wall to new garden room.	No materials rated category C or below in BRE 'Green Guide to Specification' to be used.
	3.1 Main House – Caretaker's office/ Stairs to Cellar	• Reopen staircase to cellar beneath main stair. • Install shelving and storage here to act as 'secondary' catering store for 'Garden Room'.	
	3.2 Main House – Attic	• Remove boarding and old insulation and replace with new insulation and new boarding. • Review building services in this area, especially pipe-work to header tank etc. • Create opening through existing south gable window (not original) for access to lift.	No materials rated category C or below in BRE 'Green Guide to Specification' to be used. Insulation specified to be vapour permeable, to allow the building to breathe (eg. 'Thermafleece'). 0.15 W/Km2 target U-Value for loft/roof space.
	3.3 Main House – Windows	• Restore and draught-proof original 18th/ 19th century windows.	
	3.4 Existing Buildings - General External Works – Main House, Annex and Stable	• Check all render and replace any inappropriate concrete render with lime based render. • Check all roof tiles and replace as necessary. • Check all flashing and lead work and repair as necessary. • Check all and drainage goods, repair and replace as necessary. Cast iron to be used as preference. All uPVC goods to be replaced with cast iron.	No materials rated category C or below in BRE 'Green Guide to Specification' to be used. Lime-based render will allow building to breath, reducing damp and condensation problems. Detailed specification to be provided by a specialist.

	Location	Description	Notes
4.0 Landscape Works	4.1 Gardens	• Construct new surface to car parking areas front and rear – permeable paving system to be used, to reduce run-off. • Other landscaping works as shown on plans – new paths etc.	
5.0 Building Services	5.1 Whole Building	• Low energy light fittings to be specified throughout. • Potential for 'zero-carbon' space-heating and hot-water system to be considered. • Low-water appliances to be specified throughout.	All building services design to take due account of Grade II* status and historic building fabric. Minimum disturbance should be caused to existing building. Due consideration to be given to potential problems of condensation and water vapour build up within existing fabric.
6.0 Environmental standards	6.1 Whole Building	• As a minimum standard – increase in floor area should result in no net increase in carbon emissions. • Suggested target 'Energy Performance Certificate' rating of B/C. • Non-toxic and low-environmental impact materials to be used wherever possible. PVC to be avoided.	BREEAM and BRE 'Green Guide to Specification' to be used for guidance. Consider adopting as standards.
7.0 Work to Historic Buildings	7.1 Whole Building	• Historic nature of existing buildings to be taken into full consideration in all designs. • Minimum physical disruption to be caused to	