

Application for listed building consent for alterations,
extension or demolition of a listed building.

Planning (Listed Buildings and Conservation Areas) Act 1990

C/55/42G/LB

Publication of applications on planning authority websites.

Please note that the information provided on this application form and in supporting documents may be published on the Authority's website.
If you require any further clarification, please contact the Authority's planning department.

1. Applicant Name, Address and Contact Details

Title:	Mr	First name:	Martin	Surname:	Davies			
Company name:	The National Trust							
Street address:	National Trust Estate Office			Country Code:	National Number:	Extension Number:		
	Malham Tarn			Telephone number:				
	Malham Moor			Mobile number:				
Town/City:	Settle			Fax number:				
County:	North Yorkshire			Email address:				
Country:								
Postcode:	BD24 9PT							
Are you an agent acting on behalf of the applicant?				<input checked="" type="radio"/> Yes	<input type="radio"/> No			

2. Agent Name, Address and Contact Details

Title:	Mr	First Name:	James	Surname:	Innerdale		
Company name:	Paul Crosby Architect						
Street address:	5 West Grove			Country Code:	National Number:	Extension Number:	
				Telephone number:		01539 724745	
				Mobile number:		07743100941	
Town/City:	Kendal			Fax number:			
County:	Westmorland			Email address:			
Country:	United Kingdom						
Postcode:	la9 4pn						james@paulcrosby.com

3. Description of Proposed Works

Please describe the proposals to alter, extend or demolish the listed building(s):

Amendments to proposals for alteration and re-use of Orchid House to form a new education space as granted consent (C/55/42F/LB). Works include:
Increase in section of purlin to new roof structure and introduction of fitch plate to strengthen ridge beam as directed by structural engineer
Change in specification to wall insulation
First floor glazing to be 4:6:4 double glazed timber fan lights
Retention of exg. WC to ground floor at east end and removal of short section of return wall to create enlarged interpretation space
Stained glass panels to windows to interpretation space

Has the work already started without planning permission?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	If Yes, please state the date when the work started:	20/09/2010
Has the work already been completed without planning permission?	<input type="radio"/> Yes	<input checked="" type="radio"/> No		

4. Site Address Details

Full postal address of the site (including full postcode where available)

Description:

House:	<input type="text"/>	Suffix:	<input type="text"/>
House name:	ORCHID HOUSE		
Street address:	MALHAM TARN HOUSE		
	MALHAM MOOR		
Town/City:	SETTLE		
County:	<input type="text"/>		
Postcode:	BD24 9PU		

Description of location or a grid reference
(must be completed if postcode is not known):

Easting:	389370
Northing:	467265

5. Related Proposals

Are there any current applications, previous proposals or demolitions for the site?

Yes No

If Yes, please describe and include the planning application reference number(s), if known:

C/55/42D
C/55/42F/LB

6. Pre-application Advice

Has assistance or prior advice been sought from the local authority about this application?

Yes No

If Yes, please complete the following information about the advice you were given (this will help the authority to deal with this application more efficiently):

Officer name:	<input type="text"/>				
Title:	<input type="text" value="Ms"/>	First name:	<input type="text" value="Susan / Katherine"/>	Surname:	<input type="text" value="Wrathmell / Wood"/>
Reference:	<input type="text" value="Conservation Officer"/>				
Date (DD/MM/YYYY):	<input type="text" value="10/11/2010"/>	(Must be pre-application submission)			

Details of the pre-application advice received:

Amendments acceptable in principle but considered to be a material change and requires a fresh listed building application

7. Neighbour and Community Consultation

Have you consulted your neighbours or the local community about the proposal?

Yes No

If Yes, please provide details:

The site and adjoining land/property is owned by the National Trust.

8. Authority Employee/Member

With respect to the Authority, I am:

- (a) a member of staff
- (b) an elected member
- (c) related to a member of staff
- (d) related to an elected member

Do any of these statements apply to you?

Yes No

9. Materials

Please provide a description of existing and proposed materials and finishes to be used in the build (demolition excluded):

Windows - add description

Description of *existing* materials and finishes:

To first floor blockwork infill to exg. opening with two no. metal framed lights between.
To ground floor vented boarding to openings

Description of *proposed* materials and finishes:

To first floor painted softwood double glazed, inward opening fanlights.
To ground floor to east end within interpretation space, stained glass panels (illustrating local flora) within new painted softwood frames with protective clear glass panel to external face.

9. Materials (continued)

Internal walls - add description

Description of *existing* materials and finishes:

Rubble stonework and later brickwork, with a mix of decayed lime and cement based plaster finishes

Description of *proposed* materials and finishes:

To ground floor locker room and first floor education room - remove existing plaster finish, re-point in lime and line out walls with knauf 'earthwool' insulation between battens fixed back to waterproof membrane, with plasterboard finish.

To ground floor east end retain existing WC and dividing brick wall, remove existing short parallel section of return wall within interpretation space to create enlarged display space.

Internal doors - add description

Description of *existing* materials and finishes:

Where exg. painted ledged, braced and boarded doors

Description of *proposed* materials and finishes:

New or repaired ledged braced and boarded doors

Others - add description

Other

Roof structure

Description of *existing* materials and finishes:

Central ridge beam with softwood rafters of section to support glazed roof

Description of *proposed* materials and finishes:

Existing ridge beam retained and strengthened using metal fitch plate, to support new roof structure and partial slate finish. New purlins to new structure to be 175 x 225 Exg. rafters retained and re-used to underside of exg. roof structure.

Are you supplying additional information on submitted drawings or plans? Yes No

If Yes, please state plan(s)/drawing(s) references:

AS existing
055/01/01, 02, 03
As proposed
055/02/011, 02H, 03H, 15C
Design and Access Statement

10. Demolition

Does the proposal include total or partial demolition of a listed building? Yes No

11. Listed building alterations

Do the proposed works include alterations to a listed building? Yes No

If Yes, will there be works to the interior of the building? Yes No

Will there be works to the exterior of the building? Yes No

Will there be works to any structure or object fixed to the property (or buildings within its curtilage) internally or externally? Yes No

Will there be stripping out of any internal wall, ceiling or floor finishes (e.g. plaster, floorboards)? Yes No

If the answer to any of these questions is Yes, please provide plans, drawings and photographs sufficient to identify the location, extent and character of the items to be removed, and the proposal for their replacement, including any new means of structural support, and state references for the plan(s)/drawing(s).

State references for these plan(s)/drawing(s):

12. Listed Building Grading

If known, what is the grading of the listed building (as stated in the list of Buildings of Special Architectural or Historical Interest)? Don't know Grade I Grade II* Grade II

Is it an ecclesiastical building? Don't know Yes No

13. Immunity from Listing

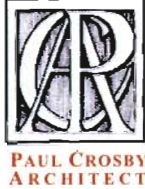
Has a Certificate of Immunity from listing been sought in respect of this building? Yes No

14. Site Visit

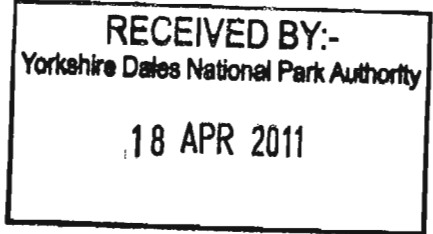
Can the site be seen from a public road, public footpath, bridleway or other public land? Yes No

If the planning authority needs to make an appointment to carry out a site visit, whom should they contact? (Please select only one)

The agent The applicant Other person



PAUL CROSBY
ARCHITECT



SUPPORTING STATEMENT
ACCOMPANYING
A LISTED BUILDING APPLICATION

for

**AMENDMENTS TO PROPOSALS FOR THE
REPAIR, ALTERATIONS AND RE-USE**



of

**ORCHID HOUSE, MALHAM TARN FIELD STUDIES CENTRE,
MALHAM TARN, SETTLE**

Prepared for

The National Trust

2011



INTRODUCTION

Consent was granted in ??? for the repair, alterations and re-use of Orchid House to form a new education space. The National Trust have been seeking to secure the future of this small but interesting listed building for a number of years. The poor condition of the structure having led to its nominal use over recent years.

In June 2004 this practice were instructed to carry out a conditions survey of the building and in October 2006 a planning and listed building consent were granted consent. The applications proposed a programme of repairs and alterations to allow the re-use of the upper floor as an education/meeting room, with the ground floor left open for interpretation. Whilst the current proposals include for the addition of a small kitchen area at ground floor and enlarged disabled WC, the use of the building remains the same and following discussions with the Planning Officer it is our understanding that the planning consent remains relevant. As there are though a number of proposed changes to the detailed fabric repairs and alterations a new listed building application is required.

The following report has therefore been prepared to accompany the listed building application and associated drawings. The report falls into three sections:

An Architectural Assessment,

to examine the quality and importance of the building fabric through its historical development.

The Proposals,

to explain the design approach and illustrate how the works will be carried out and their impact on the historic fabric.

A Photographic Record,

to illustrate the building, particularly those elements effected by the works.



ARCHITECTURAL ASSESSMENT

The national architectural and historical importance of Malham Tarn Field Studies Centre/Tarn House is recognised by its grade II listing. The building was listed in 1989 and does not specifically refer to the Orchid House, but should be considered as either part of the listed building or a cartilage structure due to its close proximity to Tarn House. The listing description for Tarn House is shown below:

IoE number:	324725
Location:	TARN HOUSE, TARN HOUSE ROAD (south side) MALHAM MOOR, CRAVEN, NORTH YORKSHIRE
Date listed:	04 May 1989
Date of last amendment:	04 May 1989
Grade	II

SD 86 NE MALHAM MOOR TARN HOUSE ROAD (south side) 14/139 Tarn House II Country house, now National Trust Field Centre. c.1780 for Thomas Lister, Lord Ribblesdale, with extension to rear c.1802 and 1853 and additions to the east in 1862-85 for Walter Morrison. Dressed medium-grained sandstone, greyslate roofs. 2-storey, 3 x 3 bay C18 range with 1 x 3 bay later C19 east range, and other C19 additions to rear, not of special interest. South front C18 range has centre breaking forward as a 2-storey canted bay and later C19 glass-roofed verandah; recessed sashes throughout, with plate glass to ground floor and with glazing bars to first floor; eaves band; hipped roof; ridge stacks flanking central bay and 2 more to left return. On right, bow fronted east range has tall windows to ground and first floor, with architraves and sill band; eaves band and cornice. left return: rendered with raised quoins; square central window with tall stair window above; flanking sashes with glazing bars in projecting stone surround. Right return: main entrance in porch with large doors in moulded architrave and cornice on brackets. Interior: the east (entrance) range has a fine staircase with wrought iron balustrade. Thomas Lister was MP for Clitheroe in Lancashire until 1790 when he retired to his estate at Gisburn Park. He was created Baron Ribblesdale of Gisburn Park in 1797 and built Tarn House (then called Malham Water House) as a hunting box occupied by his agent Thomas Collins (d.1816). In 1852 Lister's son sold the extended house to James Morrison whose son lived there until his death in 1921. the Morrisons were visited by Charles Kingsley who was inspired to write "The Water Babies" while staying there, and John Ruskin probably influenced the design of the east entrance wing which had a tall campanile above the entrance (demolished after 1963) A. Raistrick, *Old Yorkshire Dales*, 1967, p.138 A. Raistrick, *Malham Tarn House*, *Field Studies-Vol.1 No. 5 1963*, p.89.

It is understood the Orchid House was built towards the end of the 19th Century (Most probably between 1862-85 as Walter Morrison inherited the property in 1857 and commenced enlargements to the Estate House, now the Field Studies Centre, during this period. The style of the house is said to be influenced by Ruskin, a frequent guest of Morrison) Whilst there are records for the main Field Studies Centre, unfortunately there appear to be no historic accounts or photographic records of the Orchid House available. Various known as 'the Generator House', 'The Fernery' as well as 'the 'Orchid House' the building is now used as a simple store.

A 1½ storey stone structure built into a man-made cutting, possibly a small quarry, at the foot of Highfolds Scar adjacent to Field Studies Centre and is separated from the rear of the house by an access road now used to get to the entrance of the Centre.

The first indication of the building's function is that roof was originally glazed, turning the first floor space into a greenhouse. In addition around the perimeter there are slate shelves on chamfered timber brackets fixed to metal legs, presumably for taking the plants, heated from below by heating pipes that run around the perimeter of the room. Along the front elevation at low level earlier openings for louvres or further glazing have now been blocked up.

The roof structure is supported long the centre line of the room two internal cast iron columns raised on roughly cut stone pedestals. These sit on a slate flagged floor, which judging by their size are from the Horton quarry. The flagstones themselves are all supported on iron 'T' beams.

The ground floor is much simpler in form, presumably designed to service the main room above. Originally sub-divided into two rooms access to first floor is to the west end via a flagstone stairs, with metal reinforcement to the underside.

The heating pipes from first floor come down to the left hand/west room, referred to as the 'boiler room', from which the stair is also accessed. The floor was originally flagged, but using smaller stones. This room appears to have been altered slightly, probably early C20th, prior to its recent use as a store, with the short section of brick wall forming a separate store under the stone stairs and a brick plinth to take the oil tank. There are also two drainage channels within the floor with the remains of metal gratings.

The eastern half is much simpler, with no plasterwork to the walls. Again more recent brick walls divide the space in two, with a further sub-division to form a W.C. to the far right hand.

Current Condition

Whilst the National Trust's Vernacular Buildings Survey of 1988 show glazing to the front (south) roofslope, in recent years this has all been removed and the roof structure is now covered with felt sheeting and battens with asbestos cement corrugated sheeting to the rear slope (north). The 1988 images do however show timber shoring fixed under the rafters to the south side. The report also indicates that the ground was still in part being used as an electricity sub-station at that time.

Externally the main front elevation is made up of coursed roughly dressed limestone with smoothly dressed gritstone lintels, jambs and cills with a gritstone band at first floor level. As indicated above concrete blocks have been used to infill the original glazed openings at the first floor level. At ground floor two stone mullions are missing from the right hand side windows and the doorway to the understairs at the west end also appears to have been a window with a mutilated dressing. The end gables are rough random limestone rubble with heavy C20th concrete copings.

Internally the slate shelving at first floor has also partially collapsed, although the slate flooring itself appears undamaged.

When viewed from ground floor it is however evident that the iron floor structure has suffered significant rust corrosion and expansion and expert advice has been sought from structural engineer Charles Blackett-Ord.

At ground floor the walls are rough random limestone rubble, with a lime plaster/limewash finish to the 'boiler room'. A large section of the flagged floor has also been lost, being replaced by a concrete slab or screed???????????

THE PROPOSALS

DESIGN APPROACH

Having met with the Planning and Conservation Officers on site and set the proposed changes in writing, it is our understanding there is general support for the revised proposals, which look to see the building returned to active re-use whilst at the same time address the National Trust's recently adopted minimum environmental standards for their buildings.

As indicated above the use of the proposed re-use of the building is as per that previously granted consent, however the current proposals look to make greater use of the sections of the ground floor, providing within the west/left side, a larger disabled toilet and additional kitchen and locker storage for groups using the education/meeting room at first floor.

This enables these facilities to be separated from the interpretation area open to the general public located within the front section of the east/right side. Whilst this change requires the addition of partitioning to create the new toilet, the existence of bedrock at floor level and limited headroom at the east end prevent the introduction of a new floor structure. This separation also enables a simple treatment of the right side where suitably interpretation will in part be related to the cave spiders that currently occupy part of the space

Where ever possible the building has been simply repaired and designed to avoid the unnecessary loss of historic fabric, however although a full restoration of the upper floor was considered, complete re-glazing of the roof would restrict the use of the first floor, which is otherwise a useful open space. There was however a desire for any alterations and re-use to reflect the original purpose of the building and retain an architectural continuity with the main Field Studies Centre.

The improved environmental standards have principally involved improving the insulation levels with the building. This has been relatively easy to achieve as part of the roofing works and within both the repaired existing first floor structure as well as and the new limecrete ground floor. It has however been necessary to line out the existing masonry walls internally, although the breathability of the construction is maintained with the use of insulation board and a lime plaster finish and is also reversible.

THE WORKS

Roof

The rafters/glazing bars to the original glazed roof structure remain. There is however extensive decay to many of the timbers on the south face, particularly at wall plate level, although the timbers to the north face are in a good condition. Whilst it is proposed to retain as many of these timbers as possible, they are of insufficient size to take the loading of a slate roof.

We therefore propose to introduce a new roof structure which will be raised slightly above the existing to enable the original rafters to be exposed, as well as providing sufficient depth for multi foil insulation between the new rafters.

To provide additional natural lighting to the education room as well as reflecting the original 'glasshouse' roof to the building, a continuous run will also run either side of the central ridge at high level.

External Walls

The formal main elevation is of dressed stone surrounds and detailing, with rubble stone infill. Generally any re-pointing of the stonework that proves necessary will be carried out in NHL 3.5 lime mortar.

To ground floor it is proposed to reinstate missing mullions to openings at the east end. It is hoped that these may still be stored on site, however if they are not found it is proposed to replace them with timber.



The gable ends the rubble stonework is pointed in a mixture of cement based and lime mortar. These will be raked out and re-pointed in an NHL 3.5 Hydraulic lime mortar.

Windows

To the ground floor new painted softwood casement windows will replace the existing boarding. The simple single pane nature of the windows will also allow the use of 4:6:4 double glazed units, without detriment to the external character of the building.

Above the string course at first floor it is proposed to remove the C20th rendered blockwork infill to the earlier full length opening to be replaced with new painted timber inward opening fanlights. Whilst there is no detailed record of the original construction the fanlights look to reflect the former use of the upper floor as a glass house 'glasshouse', although the introduction of double glazed units again recognises the C21st use of the building and the National Trust's desire to improve the energy efficiency of the building's construction.

Doors

The existing ledged braced and boarded doors to the existing external door openings will be repaired and retained to the east side, where the spaces remain principally unchanged.

To west side to allow additional natural light into the locker room/kitchenette, the existing boarded door will also be replaced by a partially glazed, framed and boarded door. This will match the detail of similar doors within the Field Studies Centre and will reflect the change in use of the space.

To the southwest corner, with the creation of the new disabled toilet, the opening to the understairs store will necessarily be blocked internally, although the pattern of the openings externally will be retained with false boarded doors.

New partitioning

To minimise the impact on the character of the existing boiler room, the new disabled toilet has been positioned under the stairs. This has necessarily required the removal of the more recent brick partition and slightly cutting back the staircase supporting wall, but without compromising the bearing support of the first floor 'T' beams and/or the stone staircase itself.

As indicated above it will also be necessary to blank off the door opening to the understairs store from the outside. The new partitioning will though be formed in insulated stud partitioning that can be removed to allow a return to the realier plan form of the as part of any future use.

Internal Walls

At ground floor the boiler room retains lime plaster and to a number of walls, whilst at first floor both gable ends have been finished in a harder cement based, smooth plaster finish lined out to resemble ashlar stonework. In both instances however the plaster has either cracked and coming away from its backing coat or is sufficiently decayed that it is necessary to re-plaster the walls.

As indicated previously the National Trust are keen to improve the thermal performance of the building. It is though important to retain the breathability of the fabric. It is therefore proposed to remove the remains of the existing plaster and line out the walls using a breathable pavadentro insulation board to be again faced with an hydraulic lime plaster and limewash finish. The thickness will vary from 40 to 80 mm dependent on the space available and where necessary the wall will be pre-lined with an absorbent plaster finish where there are particularly high levels of damp within the walls.

To the east side of the ground floor the external walls are simply pointed with a build up of calcite on the wall face. Similarly the brick dividing walls are generally uncovered and other than some small scale rebuilding to the head of the brick pier within the front, which has collapsed causing the beam lintel over to drop, it is not proposed to change the character of this spaces.



Floors and ceilings

The flags to the first floor is supported on iron 'T' beam floor joists, generally exposed on their underside within the ground floor. These show evidence of significant corrosion, but having taken advice from structural engineer Charles Blackett-Ord, the beams appear to have retained sufficient integrity to allow them to be retained.

It will however be necessary to take up the flags to allow full wire brushing of the beams prior to painting. At the same time a new insulated underfloor heating system will be installed between the joists described elsewhere.

Around the perimeter of the room the slate shelving it to be repaired, with some rebuilding necessary along the south wall where the shelving and supports have collapsed. Where slate shelves have been lost or are broken it is hoped to replace these with sections in timber. The central cast iron columns will simply be brushed down and re-painted.

The floor finish to the ground floor boiler room is a mixture of stone flags and concrete/screed repairs. To introduce heating into this space it is proposed to take up the existing floor and lay a new limecrete floor with underfloor heating. finish????? To allow full use of the space it will also be necessary to remove the more recent and un-used brick plinth and metal gratings to the drainage channels within the concrete section of the floor.

The ceiling to the boiler is currently t&g boarded. It is proposed to retain and repair the boards where possible and replace where missing.

To the front of the east side of the ground floor are a number of smaller flags. They are though not continued through to the back store due to the closeness of the bedrock to floor level. The level of the floor in fact rises to the northeast corner following the line of the bedrock. Some plant associated with the ground source heat pump will be located in the back store, but will be raised off the ground.

Services

The building already has a single phase electricity supply laid to the corner of the building from the Field Studies Centre.

The first floor space was originally heated via new underfloor heating system to the first floor and the west end of the ground floor will be served by an air sourced heat pump. The main unit will be located externally against the east gable of the building at the higher level. The boiler and other plant will be located to the northeast corner of the ground floor, separated from the public space by a security grille, but will be visible to the public as it is proposed to provide interpretation on the use of renewable energy systems in the building as part of the works.

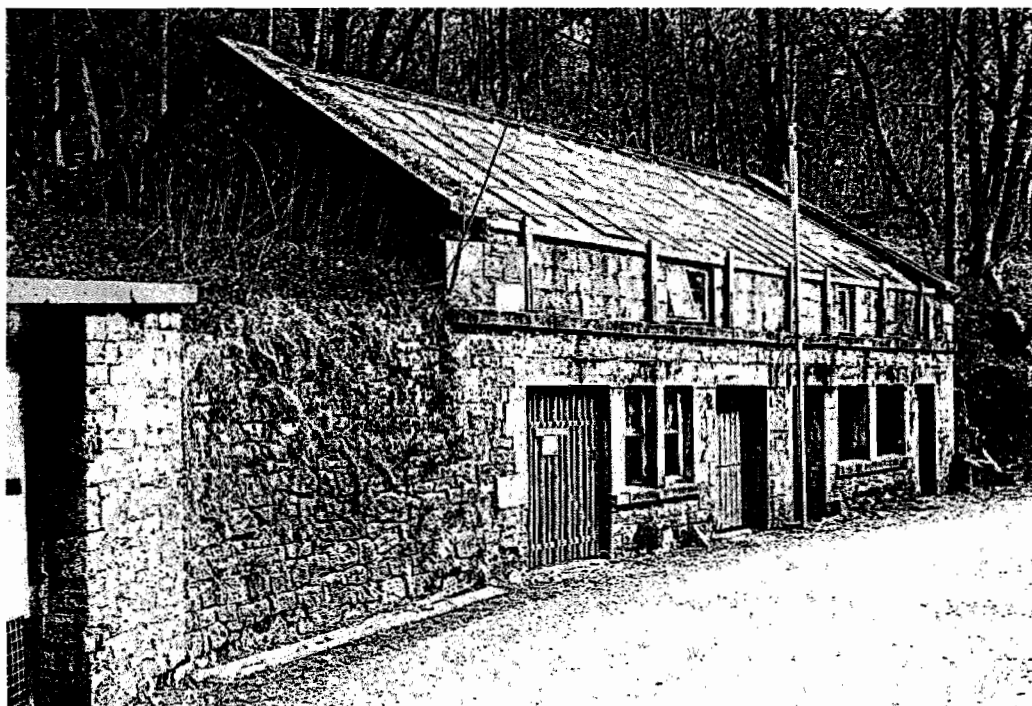
A drainage connection into the building, together with an external vent stack already exist to the east end of the building. It is proposed to extend this to connect with the new disabled toilet to the west end and the roof rainwater and land drain run offs at the east end.

External works

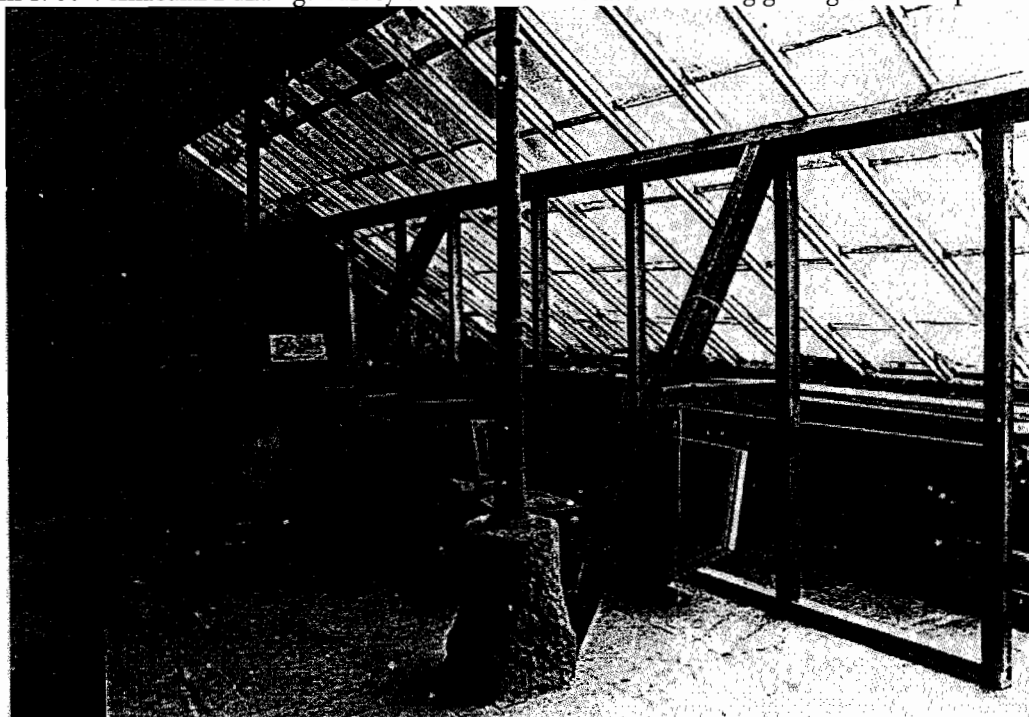
The Dales Way runs directly in front of the building and it is not intended make any changes in this area, other than the works required in laying the new drainage run. Some limited works will be necessary to the rear and side of the property as part of the introduction of the air source heat pump as well as reducing the level of vegetation growth and ensuring effective water run off from the rear roof slope.



PHOTOGRAPHIC RECORD



From 1988 Vernacular Buildings Survey view of south elevation showing glazing to roofslope now lost

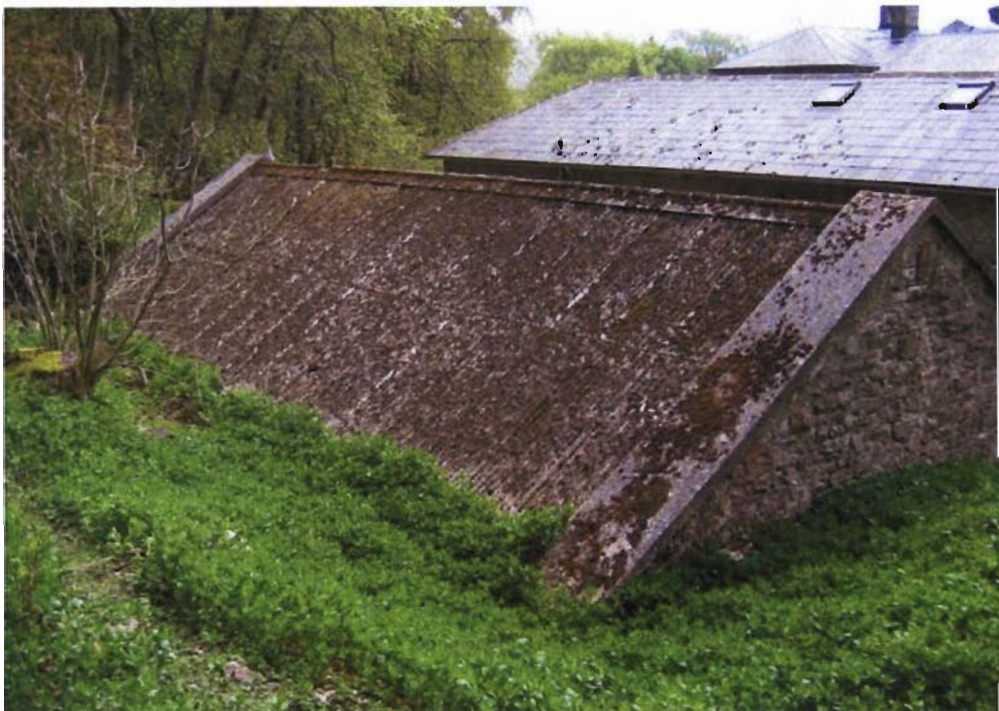


PAUL A CROSBY · B.A. (HONS) (OXON) · B.A.RCH. (STRATHCLYDE) · R.I.B.A.
CONSULTANT · JAMES INNERDALE · B.A. (HONS) · DIP.ARCH.

From 1988 Vernacular Buildings Survey internal view showing glazing to south roofslope



Main elevation from east showing battened felt covering over rafters to original glazed roofing.



Rear/north roofslope, with concrete copings, all to be removed and replaced by new slate roof with new central strip of roof glazing as exg. consent.

PAUL A CROSBY · B.A. (HONS) (DUN) · B.ARCH. (STRATHCLYDE) · R.I.B.A
CONSULTANT · JAMES INNERDALE · B.A. (HONS) · DIP.ARCH.





Main elevation showing missing mullions to right hand window openings at ground floor. Boarding to openings to be replaced to left hand side by new painted glazed timber casement windows as exg. consent and new stained glass panels in softwood frames to right hand side . Blockwork infill to first floor to be replaced by new painted double glazed fanlights.



First floor space looking to west gable. Rafters to earlier glazed roof to be retained below new roof structure to take slate roof. Exg. ridge beam retained and strengthened. Render finish to walls to be removed to take insulated lining.





First floor opening with block infill removed



Toilet to right side to be retained, repaired and re-plastered, with fittings.

