



Ffestiniog & Welsh Highland Railways

## **Interpretation and Boston Lodge Project**

**OL-19-00516**

**RIBA Stage 3  
Design Report**

May 2021

14.1 Architect Report

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# 1. Introduction



View of Boston Lodge from the end of the Cob



A working site: A shelf of temperature gauges and other components used by the Railway

Boston Lodge Works is probably the oldest railway workshop in the world that is still in use for its original purpose. It is located at the Meirionnydd end of Madock’s embankment, known as the Cob, less than a mile from the Porthmadog terminus of the Ffestiniog Railway in North Wales. Boston Lodge Works were developed on the quarry site which supplied the stone for the construction of the Cob, later evolving as the Ffestiniog Railway manufactured and repaired its earlier slate wagons and subsequently steam locomotives.

The Ffestiniog Railway is of international significance as it pioneered the use of steam power on a narrow gauge railway and clearly demonstrated the practicability of building narrow gauge railways in terrain where the building of a standard gauge railway would be impracticable or uneconomic. This led to the building of numerous narrow gauge railways throughout the world. It also enabled the transport of local Welsh slate to the rest of the world and as such forms an integral part of the story of the development of the Welsh slate industry.

**Thread** (AABC Accredited Conservation Architect and Lead Consultant) has been appointed by the Ffestiniog and Welsh Highland Railways (FfWHR) to develop, alongside the FfWHR and Consultant Team, a philosophical and practical approach to the conservation of the structures at Boston Lodge Works. This is both in terms of the fabric repairs required and structural and service interventions to support the continued sustainable use of the site.

It is a rare opportunity to enhance, complement and enrich the fragile nature of this richly layered site so that the heritage significance of the current buildings, in support of the Railway’s Heritage, can be better understood by visitors.

We recognise that these buildings are in the service of the railway, so conservation work seeks to enable the site to be secured and understood as a living, breathing and atmospheric working space. In addition, new sensitive, pragmatic and sustainable interventions are required to facilitate the continued unbroken use of this site, as originally intended.

This project has at its core the following main objectives:

- To ensure the importance of the railways’ heritage, and that of the slate industry it served, is communicated to the 250,000 plus visitors a year, who are increasingly unaware of this heritage;
- To conserve, restore and rebuild a number of buildings of historic significance at Boston Lodge Works, some of which are derelict;
- To make these buildings more efficient as a working site and to improve the existing conditions for the staff, apprentices, trainees and volunteers who practise heritage skills there in order to service the heritage railway;
- To open up supervised public access to Boston Lodge Works and its heritage for the first time. This will be via an activity programme which will bring significant numbers of non- traditional railway visitors for managed tours, talks and skills training and via which they can also learn about the significant heritage and world firsts which have taken place at BLW. Additionally, the project will provide Interpretation at key points across the railway network (including at BLW to support guided tours) and on the FfWHR heritage trains; &
- To address a skills shortage in the industrial heritage sector by offering traineeships, work placements, practical workshops and new volunteering opportunities.

**Thread** is working closely with the following consultants who form part of the design team: **Integral Engineering Design** (accredited conservation structural and civil engineers); **E3 Consulting Engineers** (mechanical and electrical consultants) and **C2 Safety** (Principal Designer). Thread has also worked alongside the Activity Planning and Interpretation Design team to develop the proposals.

*This design report should be read together with the Stage 3 reports compiled by Integral Engineering Design, E3 Consulting Engineers and C2 Safety respectively.*

## Consultation

As part of the process of compiling this document, Thread has worked alongside and consulted with the following:

- FfWHR Client team (comprising FfWHR General Manager and Director, Heritage Skills Manager and Heritage Project Manager);
- FfWHR and Festiniog Railway Company directors;
- FfWHR Project Steering Group Committee;
- Integral Design Engineers (accredited conservation structural and civil);
- E3 Consulting Engineers (mechanical and electrical consultants);
- C2 Safety (Principal Designer);
- Greenwood Projects (Quantity surveyors);
- The Creative Core (Interpretation Design);
- Minerva Heritage (Activity planning);
- Anna Cullum Associates with Joanna Graham (Evaluation);
- Cadw and Gwynedd Council; &
- A wider consultation process by the interpretation and activity team, has included FfWHR volunteers and staff, Festiniog Railway Company, Careers Wales, Llandrillo Menai and Snowdonia NPA.

## Relevant Documents

The following documents have been compiled alongside this document and informed it as part of the NLHF heritage project for Boston Lodge Works:

- Integral Engineering Design. Structural and Civil Engineering Stage 3 Report Version A. May 2021;
- E3 Consulting Engineers. Interpretation and Boston Lodge Project: Building Services Stage 3 Report. Ref: 4613 REP02 r2. May 2021;
- C2 Safety. Pre-construction Information. Version 2. May 2021;
- The Creative Core. Railway Interpretation and Boston Lodge: Interpretation & Exhibition Design report. May 2021;
- The Creative Core. Appendix: Consultation Report. October 2020;
- Minerva Heritage in association with Creative Core. NLHF Interpretation and Boston Lodge Works Project: Activity Plan. Draft. April 2021;
- Anna Cullum Associates with Joanna Graham. Interpretation and Boston Lodge Project: Project Outcomes: Draft. February 2021.



2. Site

Boston Lodge Works is situated in the Aberglaslyn Landscape of Outstanding Historical Significance. The Works are built on the site of the floor of a quarry situated at grid reference SH 584378, about a quarter of a mile west north east of Penrhyn Point. Penrhyn Point is the headland between the Glaslyn and Dwyrdd estuaries.

Historically, the main site is divided into three areas known as:

- The top yard
- The bottom yard
- Glan y Mor

The top yard is the oldest part of Boston Lodge. It is surrounded by the residences at The Barracks (No’s 1 and 2 Boston Lodge - the oldest existing building on site), the signals and telegraph stores and telephone exchange, the brass store, the R H R Garraway amenity block, the foundry, the blacksmiths’ shop, Plas Smart and the main line of the Railway. Road access to the Works is through the top yard. A wagon shed, a carpenters’ / joiners’ shop, and an extension to the blacksmiths’ shop and a sawmill once also existed around the yard.

The bottom yard is dominated by the erecting shop and the connecting machine shop with offices above it. An office / stores building and an oil store are on the east side of the yard. The main line of the railway and Glan y Mor form the other two sides of the yard. A boiler house and engine house once separated the machine shop from the foundry and sawmill to the east and a two-road shed and boundary wall separated the yard from Glan y Mor.

Glan y Mor lies to the west of the bottom yard and is dominated by the modern carriage works and carriage shed with a private modern shed between them. The original carriage shed in the south-east corner of Glan y Mor has been extended at its front and the combined shed is now a locomotive shed. Three gunpowder sheds were located at the south-west end of Glan y Mor.

To the east of the main site area, is the original locomotive shed with a weigh house at its far end. Beyond this is a turntable, which now carries a garage, and a further two residences, No’s 3 and 4 Boston Lodge.

*Please refer to Thread’s Existing Site Plan (drawing 81\_GA\_00) for ease of reference.*

Key to Building References:  
(alternative names in brackets)

H0	Old Engine Shed & Weigh House
H1	Plas Smart (Superintendent’s Office)
H2	Blacksmiths Workshop (Smithy)
H3	Old Oil Store
H4	Iron Foundry
H5	Machine Shop ( <i>not part of scope</i> )
H6	Brass Foundry
H9	Waggon Repair Shed (Wagon Shed)
H10	The Barracks (Boston Lodge Cottages 1 & 2)
H14	The Den & Electricians Workshop (Old Carpenters Shop)
H15	NLHF Training and Research Centre (Blacksmiths Extension)
OPS12	The Stores (R H R Garraway amenity block, mess)

Note on orientation:

The true orientation of the site is north east - south west. For clarity, an artificial Site North has been adopted, with Porthmadog and the Cob running North to South, and Boston Lodge Works running West to East, following the railway. References to elevations will refer to this terminology.



View over the Top Yard and out towards the Cob and Porthmadog in the distance



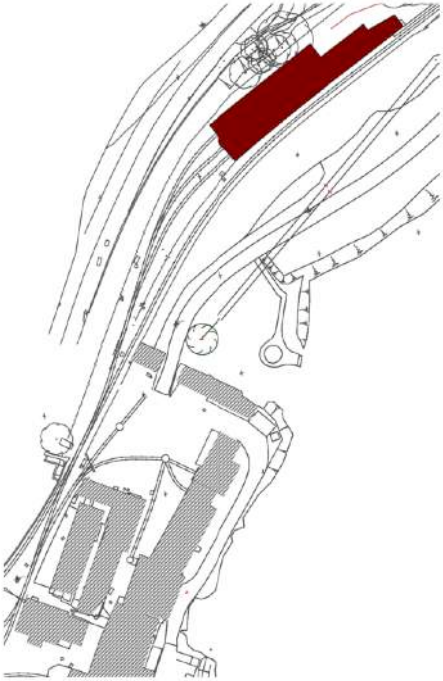
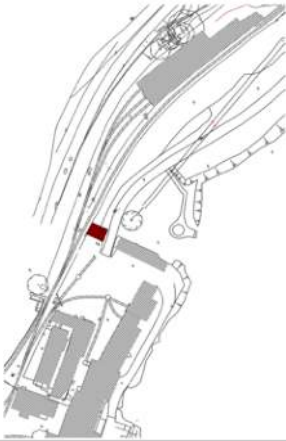
3. Summary of Changes since Round 1

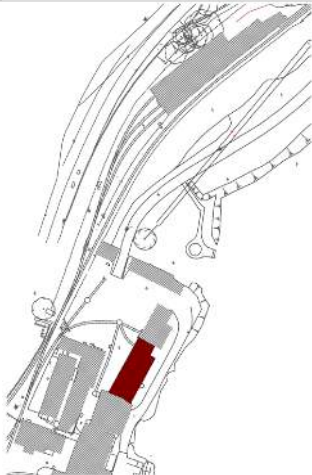
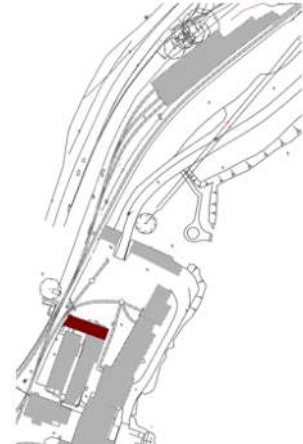
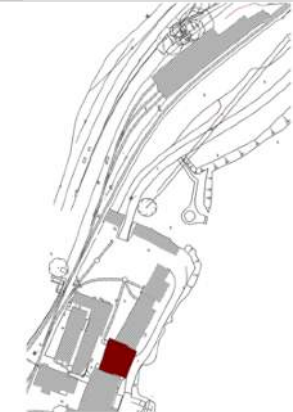
Thread has worked carefully with the Client and Consultant Team to review the Round 1 proposals, to refine the FfWHR’s brief, and to develop design proposals with the objective of :

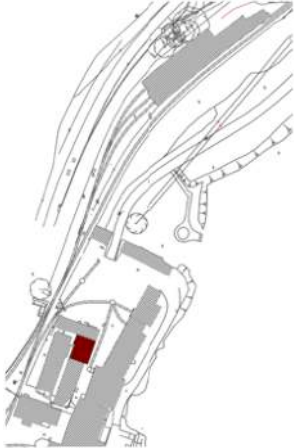
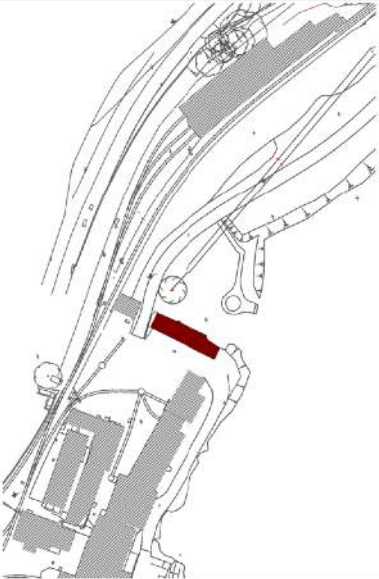
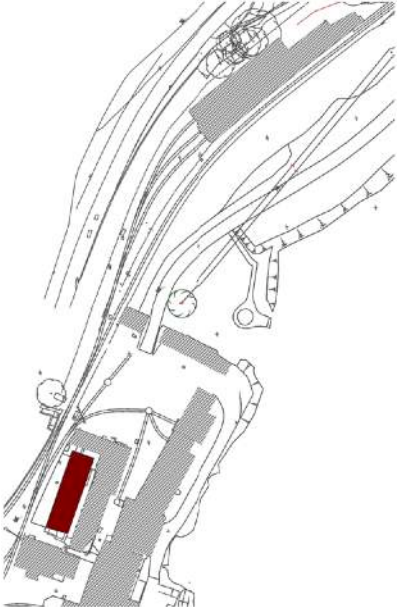
conserving and making the best use of the historic buildings at Boston Lodge.

This has been rooted in an understanding of the historical development of the site, its historic fabric and processes and the day-to-day operations of the present-day Railway.

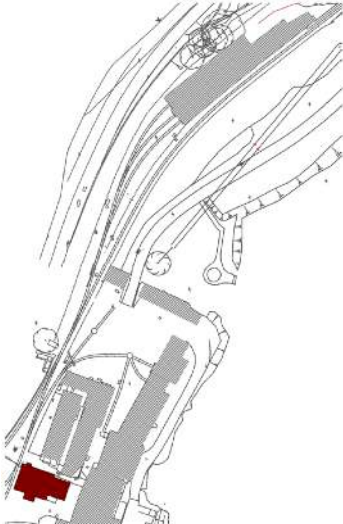
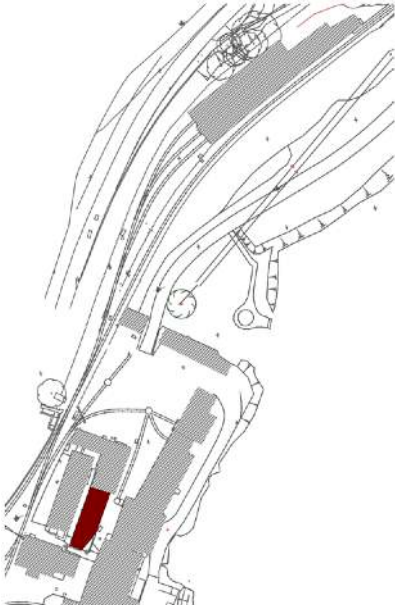
The table below summarises the difference between the Round 1 proposals and the developed design for RIBA Stage 3, and the NLHF Stage 2 Report.

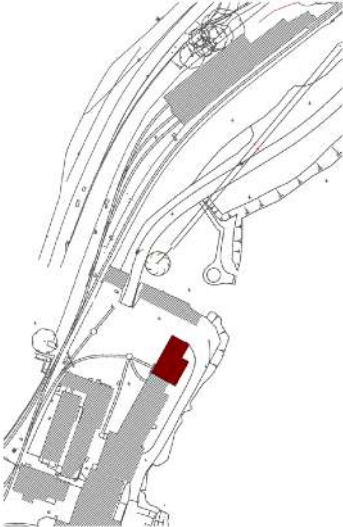
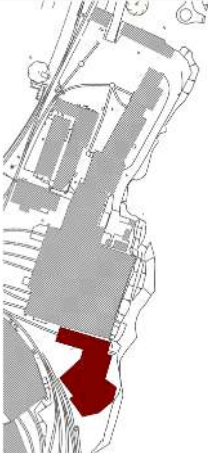
ACCOMMODATION AND PROPOSALS			
BUILDING/STRUCTURE	ROUND 1 PROPOSAL	RIBA STAGE 3 PROPOSAL	MOTIVATION
H0 - Old Engine Shed			
	<ul style="list-style-type: none"><li>• Locomotive Shed;</li><li>• Covered Welcome Area for visitors for tour arriving at the Halt (to the east end – but not including the weigh house);</li><li>• Start of the visitor tour in the north door of the east end of the space, then walking down through the building to exit at the west end.</li></ul>	<ul style="list-style-type: none"><li>• Arrival at Boston Lodge Halt - tour to begin in the Top Yard;</li><li>• Main visitor undercover area for the welcome to be in H9 (see further on);</li><li>• The Old Engine Shed to be accessed at the end of the tour - via the original west entrance - where the full impact of the experience of opening the main doors to the space felt by visitors;</li><li>• Minimal need for architectural intervention to this building - a single partition reinstated;</li><li>• Repairs to the floor to assist accessibility, and light touch conservation only - all smoke blacked plaster to remain;</li><li>• M&amp;E to better illuminate the engines.</li><li>• The majority of the work here will fall under interpretation;</li><li>• No changes to the Weigh House proposed</li></ul> <p><u>Development since mid-term review:</u></p> <ul style="list-style-type: none"><li>• Detailed review of necessary repairs to floor to ensure preservation of historic character while enabling access;</li><li>• Design development of the new partition between engine shed and interpretation space based on the historic evidence of the partition that existed previously when the fitting workshop was in use; &amp;</li><li>• The design of the flexibility of this partition maximised to ensure temporary tracks can be laid into the interpretation space, and engines / wagons can be wheeled into the interpretation space with ease.</li></ul>	<p>Reduced architectural intervention and strategic repair while maintaining and protecting the atmosphere of the Shed.</p> <p>Development of the interpretation experience with Core and the Client to maximise flexibility and potential of the space while preserving its historic fabric.</p>
H1 - Plas Smart			
	<ul style="list-style-type: none"><li>• Completion of Conservation / Repair works</li><li>• Office.</li></ul>	<ul style="list-style-type: none"><li>• Completion of Conservation / Repair works</li><li>• Potential PPE for visitors or heated office space</li></ul> <p><u>Development since mid-term review:</u></p> <ul style="list-style-type: none"><li>• Conservation repairs to external fabric;</li><li>• Addressing missing rainwater drainage.</li></ul>	<p>Completing the external conservation works to the building to ease the protection of the interior. This is an important building in the context of the top yard.</p>

BUILDING/STRUCTURE	ROUND 1 PROPOSAL	RIBA STAGE 3 PROPOSAL	MOTIVATION
H2 - Blacksmiths Workshop			
	<ul style="list-style-type: none"><li>• Interpretation and demonstrations for visitors;</li><li>• Practical use for tasks in support of the railway that echo historic use in the building.</li></ul>	<ul style="list-style-type: none"><li>• Interpretation and demonstrations for visitors;</li><li>• Practical use for tasks, undertaken by volunteers, in support of the railway that echo historic use in the building.</li><li>• <b>Includes 2no. Storage Areas</b> - both independently accessible from the Service route to the south of the building;</li><li>• Note this would replace the lost storage capacity in the Old Oil store or the Blacksmith shop extension;</li><li>• Small inaccessible area to the south of the building will be dedicated to bats as part of the <b>ecological mitigation</b> strategy to support wildlife on the site.</li></ul> <p><u>Development since mid-term review:</u></p> <ul style="list-style-type: none"><li>• Detailed consideration of the relationship of the building with the Training space in H6 and interim space for the britomart Engine and the the flexibility of use between them. As such, doors added into the existing east opening.</li></ul>	<p>The Works are to facilitate bringing the building back into productive and beneficial uses for staff and volunteers, that are also appropriate to the original and making use of the robustness of the building fabric.</p> <p>To enable the building to be well used and to reinstate the relationship and views and complementary uses between the Blacksmiths Workshop and the Training Space.</p>
H3 - Old Oil Store (and telephone exchange)			
Telephone Exchange	<ul style="list-style-type: none"><li>• Proposed for demolition;</li><li>• Relocation of the internal equipment to H3 - Old Oil Store.</li></ul>	<ul style="list-style-type: none"><li>• To be demolished as the modern 1970 construction detracts from the historic views of the Top Yard;</li><li>• Demolition would have a positive effect on the built environment and would be helpful to site operations;</li><li>• Demolition also exposes a window to H6 and door to H3.</li></ul>	Reinstating historic views and building composition within the top yard.
Old Oil Store 	<ul style="list-style-type: none"><li>• IT Hub Building;</li><li>• Requires the relocation of approx. 25m2 of storage (allowing for the locker area, steps and store sorting).</li></ul>	<ul style="list-style-type: none"><li>• 1no. Visitor WC;</li><li>• 1no. Accessible WC (Part M compliant);</li><li>• Both WCs connect easily to existing foul drainage</li><li>• Storage;</li><li>• IT/Data Room;</li></ul> <p><u>Development since mid-term review:</u></p> <ul style="list-style-type: none"><li>• Minimal internal lining to reduce impact on historic fabric and reduce material use;</li><li>• Use of a blocked in earlier opening for mechanical vents to avoid any new wall penetrations facing the railway.</li></ul>	Provision of visitor WCS and dedicated IT room and additional storage.
H4 - Iron Foundry			
	<ul style="list-style-type: none"><li>• Interpretation and demonstrations for visitors</li></ul>	<ul style="list-style-type: none"><li>• Interpretation and demonstrations for visitors;</li><li>• Workshop space;</li><li>• Removal of ceiling and roof replacement;</li><li>• Allowance for storage racks on the south wall to enable flexibility of use for the remainder of the space.</li></ul> <p><u>Development since mid-term review:</u></p> <ul style="list-style-type: none"><li>• Review of roof structure and any potential repairs;</li><li>• Review of balance between storage requirements and workshop to maximise ease of use.</li></ul>	Practical approach for flexibility of use
H5 - Machine Shop			
	<ul style="list-style-type: none"><li>• Minor Conservation Works</li></ul>	Omitted from scope of current project	

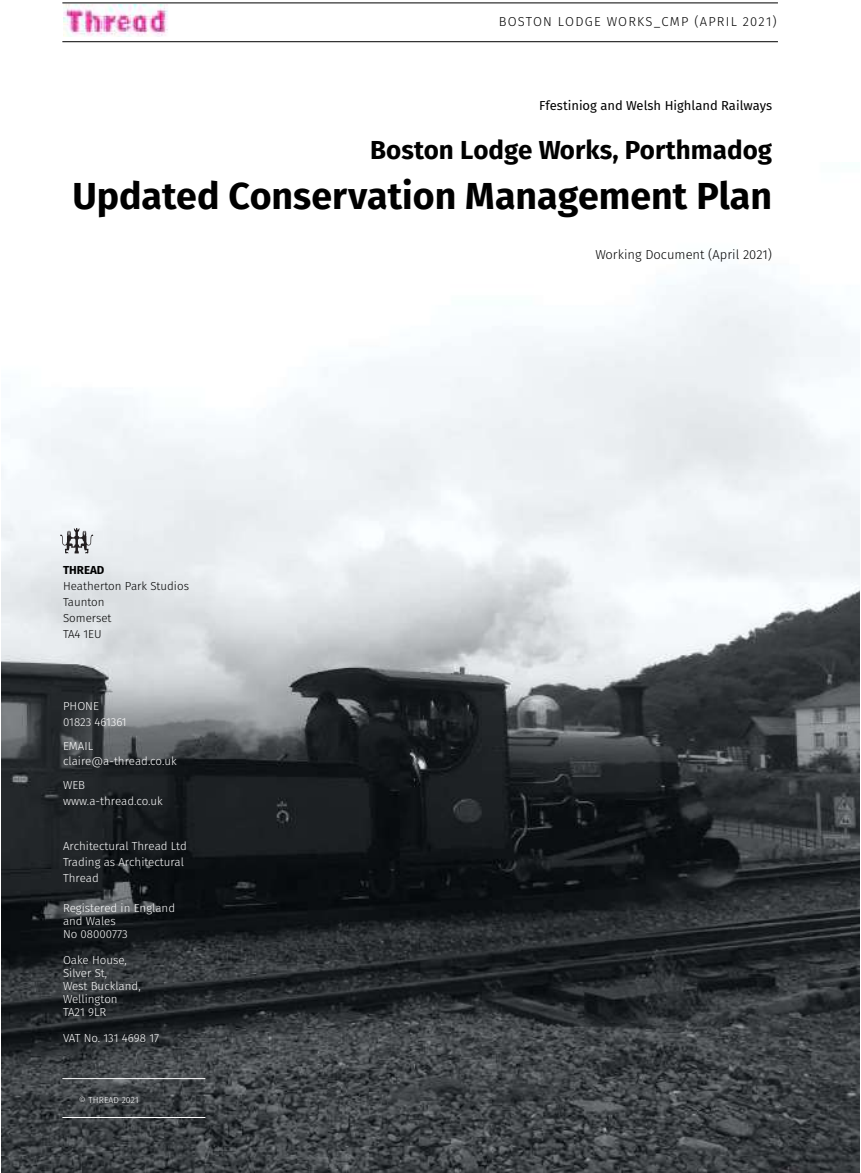
BUILDING/STRUCTURE	ROUND 1 PROPOSAL	RIBA STAGE 3 PROPOSAL	MOTIVATION
H6 - Brass Foundry			
	<ul style="list-style-type: none"><li>• “found in place” store - to retain the charm and feel that it does currently;</li><li>• Forms part of visitor access route;</li><li>• Accessed as Works storage infrequently.</li></ul>	<ul style="list-style-type: none"><li>• <b>Staircase and shelving to be retained in place</b> to retain the unique internal structure (comprising rails as beams and posts integral to the shelves);</li><li>• An <b>alternative experience</b> for visitors is proposed - views through a periscope rather than access via the staircase, which is very steep;</li><li>• Periscope to be formed in-house to echo the reuse of rails etc in this building, and will enable people to ‘spot’ specific items upstairs;</li><li>• Some form of visual access but not physical enables the floor structure and boarding to remain as existing (with minor repairs).</li></ul> <p><u>Development since mid-term review:</u></p> <ul style="list-style-type: none"><li>• Review of roof structure and any potential repairs;</li><li>• Review of masonry and potential repairs.</li></ul>	Minimum intervention to maintain authenticity of current space
H9 - Waggon Repair Shed			
	<p><b>Rebuild:</b></p> <ul style="list-style-type: none"><li>• New build small item storage;</li><li>• Proposal drawings illustrate an enclosed building with windows and doors - similar to the historic photos prior to the building when it fell into disrepair. It is thought that this was the latest phase of the buildings adaption - when the open fronted shed was infilled to form enclosed space.</li></ul>	<p><b>Rebuild:</b></p> <ul style="list-style-type: none"><li>• New build to provide protected storage area for day-to-day deliveries and a flexible open space suitable for slate wagons as part of the visitor experience;</li><li>• Design takes in account position and setting out of archeology to minimise impact and to retain for visitor interpretation - so wagons would be set on original rails - in original position;</li><li>• Design developed to echo the earlier form of the building with a series of open bays and slate piers; &amp;</li><li>• Timber to be used for external doors and visible external cladding in keeping with the historic use of the material on site.</li></ul> <p><u>Development since mid-term review:</u></p> <ul style="list-style-type: none"><li>• Setting out of piers and openings tested against earlier measured survey plans and setting out refined;</li><li>• Linings reduced on the basis of the need for a robust covered space and natural ventilation maximised with cladding detail and door design to allow through passage of air; &amp;</li><li>• Original roof structure assessed carefully enable proposals to replicate the original.</li></ul>	Design guided by earlier form of building, presence of archeology and practical, flexible use of the reinstated space.
H10 - The Barracks			
	<ul style="list-style-type: none"><li>• Ground Floor - 2no. Units of one-bedroom accommodation;</li><li>• First Floor - Office space - open plan to No. 2 which relies on demolition of internal partitions to the first floor of no.2.</li></ul>	<ul style="list-style-type: none"><li>• Ground floor Cottage 1 - one-bedroom accommodation with shared entrance hall to</li><li>• First Floor Cottage 1 - one-bedroom accommodation with kitchenette;</li><li>• Ground floor Cottage 2 - office for up to 5 people with accessible WC and kitchenette;</li><li>• First floor Cottage 2 - office for up to 8 people;</li><li>• The proposed layout keeps accommodation and office use separated by masonry party wall;</li><li>• The proposal however allows for the potential future expansion of the first floor office into Cottage 1 for greater flexibility over time;</li><li>• Landscaping work to form <b>sloped access</b> to the south of H10 allows for full accessibility to the ground floor office (No lift required)</li></ul> <p><u>Development since mid-term review:</u></p> <ul style="list-style-type: none"><li>• Review of Barracks building fabric to assess potential for repairs and evidence of original material (i.e. lath and plaster); &amp;</li><li>• Detailed investigation into the original windows to inform the proposals for new windows.</li></ul>	<p>Enabling a continued use as accommodation which was the original use of the building while also providing good office accommodation with views directly onto the tracks.</p> <p>Also allows for future expansion of office space and accessibility</p>



BUILDING/STRUCTURE	ROUND 1 PROPOSAL	RIBA STAGE 3 PROPOSAL	MOTIVATION
H14 - The Den & Electricians Workshop			
	<ul style="list-style-type: none"><li>• Welcome and Learning, Archive and Lecture Space</li><li>• Need to relocate approx 45m2 of storage;</li><li>• Need to relocate 36 lockers (full height)</li></ul>	<p><b>Refurbishment, Reinstated Gable and Extension</b></p> <ul style="list-style-type: none"><li>• Proposed new Den, Kitchen, Locker Area, Wash Off area, WCs and showers, Electricians Workshop &amp; Store;</li><li>• Space for 56 full height lockers;</li><li>• Dedicated wash off area into Den for all staff and volunteers coming from the workshop;</li><li>• Close to the foul drainage and with a good connection to the bottom yard</li></ul> <p><u>Development since mid-term review:</u></p> <ul style="list-style-type: none"><li>• Layout of WCs revised following further consultation with FfWHR staff - the proposed arrangement better meets their needs;</li><li>• Detailed review of the Electricians storage requirements to ensure it meets their needs;</li><li>• Review of build ability against the back of the Barracks - and amendment to reduce risk and improve ease of building;</li><li>• Review of all materials and textures against the existing to develop a pallet of materials for the new building elements.;</li></ul>	<p>New location for Den reinstates its original use;</p> <p>It also improves connections to the works facilities and practical flow for staff and volunteers while significantly improving inclusivity, quality and quantity of amenities for staff and volunteers.</p>
Later Porch structure	Proposed for demolition	<ul style="list-style-type: none"><li>• Proposed for demolition - following careful consideration of historic photographs and reinstatement of gable above oil store;</li><li>• Proposed new lobby and wash up area will serve the role of the porch.</li></ul>	Reinstatement of historic views of this significant building within the bottom yard.
Oil Store	Gabled first floor reinstated and incorporated into the proposed new Mess room and first floor offices.	<ul style="list-style-type: none"><li>• First floor and gable reinstated;</li><li>• Ground floor to be used as Lobby and Wash-off area, WCs and Showers leading into Locker Area and Den (as noted above);</li><li>• Extension to accommodate more WCs and new Electricians Workshop and Store to ground floor;</li><li>• First floor to be fully insulated as possible office space and storage;</li><li>• Well located for access to works facilities</li></ul> <p><u>Development since mid-term review:</u></p> <ul style="list-style-type: none"><li>• Detailed review of the Electricians storage requirements to ensure it meets their needs;</li><li>• Ensure robustness of this building as it is set adjacent to the main vehicle route to the bottom yard.</li></ul>	Improved flexibility of use and better flow to work with operations
OPS12 - The Stores			
	<p><b>General:</b></p> <ul style="list-style-type: none"><li>• Existing 1970s building demolished;</li><li>• New two storey replacement using existing Den footprint and extending into the old store (south end of H14);</li><li>• Footprint extends to touch south wall of H10</li><li>• Mess room;</li><li>• Separate male and female WCs and 3 showers;</li><li>• Locker stores;</li><li>• Offices</li></ul>	<p><b>General (ground floor only):</b></p> <ul style="list-style-type: none"><li>• Existing 1970s building to be demolished;</li><li>• New single storey replacement with smaller footprint (shorter and not touching H10 - to open up the access route between H14 and H4/H5;</li><li>• New internal storage space and external plant store;</li><li>• The use and flow of the den facilities was considered to be better suited to a wider building H14 (refer to above);</li><li>• Allows for ramped access to H10 to the north for full accessibility of office space.</li></ul>	Reduced New Build Area sensitive to surrounding historic buildings

BUILDING/STRUCTURE	ROUND 1 PROPOSAL	RIBA STAGE 3 PROPOSAL	MOTIVATION
H15 - NLHF Training & Research Centre			
	<p><b>New build:</b></p> <ul style="list-style-type: none"><li>• Arrivals and Handling Storage;</li><li>• Storage for small items = 43m2 approx;</li><li>• Palletised storage = 43m2 approx; &amp;</li><li>• Gap between H15 and H9 for vehicles to access the back of the machine shop.</li></ul>	<p><b>New build:</b></p> <ul style="list-style-type: none"><li>• New training room and Britomart engine shed (in location of previously demolished Britomart Shed)</li><li>• Pallet undercover storage to south of building and full access by forklift and vehicles between H9 and H15 and quarry face (enhances visual experience of Top Yard but fully functional);</li><li>• Views from the end of H15 through to the Blacksmiths and Iron Foundry door;</li><li>• Insulated timber frame construction with corrugated iron cladding to reference historic structures.</li></ul> <p><u>Developed since interim preview</u></p> <ul style="list-style-type: none"><li>• Pallet storage maximised to reduce in depth to ensure ease of vehicle movements in the area to use the storage;</li><li>• Design development of the elevations and assessment of earlier elevation to review fenestration;</li><li>• Collaboration with engineer to develop structural design reminiscent of the angle iron trusses in place previously.</li></ul>	<p>Reinstatement of historic views and relationships with the Blacksmiths while also creating a modern training space with all associated practical requirements.</p> <p>Completion of the courtyard of buildings to the Top Yard - being complimentary to H9 (Waggon Shed).</p>
OPS8 - Small Loco Shed			
	<p>Proposals developed in-house by FFWHR with established suppliers / contractors</p>	<ul style="list-style-type: none"><li>• Outside of Thread's scope of work - <i>refer to volunteer-led report on small loco shed.</i></li></ul>	
Landscaping and drainage			
	<p>Improved path between Old Engine Shed and Top Yard:</p> <ul style="list-style-type: none"><li>• New clay bound gravel (hoggin) surfacing from the Boston Lodge halt (station), to the entrance point to the top yard.</li><li>• New timber crossing across main line;</li><li>• New railings;</li><li>• Timber gates to Top Yard between Plas Smart and Wagon Shed reinstated</li></ul> <p>Surfacing to Top Yard:</p> <ul style="list-style-type: none"><li>• Levels to be reduced in relation to historic buildings to reduce water ingress and associated damp issues;</li><li>• Renewal of surfacing;</li><li>• Land Drainage</li></ul>	<p>Improved path between Old Engine Shed and Top Yard:</p> <ul style="list-style-type: none"><li>• New self-binding slate waste gravel surfacing from the Boston Lodge halt (station), to the entrance point to the top yard.</li><li>• New timber crossing across main line;</li><li>• Timber gates to Top Yard omitted as they would hamper the day-to-day running of the site;</li></ul> <p>Surfacing to Top Yard:</p> <ul style="list-style-type: none"><li>• Levels to be reduced minimally in relation to historic buildings to reduce water ingress and associated damp issues (refer to Landscaping Strategy);</li><li>• New free-draining sub-base topped with Type 1 slate waste gravel;</li><li>• Comprehensive new Land Drainage (<i>refer to Integral's Stage 2 report</i>)</li></ul> <p><i>Extent of level reduction reduced to minimum needed for H9.</i></p>	<p>Practical proposal rooted in understanding of the archaeological build-up and locally available materials and to enable the fast removal of surface water.</p>
Total Storage			
	<p>H6, H9, H15 (excluding external pallet storage)</p>	<p>H2, H3, H6, H9 (excluding pallet storage in H15)</p>	<p>The use of existing buildings is maximised without harm to their significance while operational activities are all maintained</p>

4. Historical Analysis



The Conservation Management Plan provides detailed information of the site’s significance and individual building descriptions

The design proposals are based on a thorough understanding of the site’s historical development and significance.

Thread initially reviewed all available information from the Round 1 submission as well as the information supplied by the FfWHR, including the current Conservation Management Plan.

Historical Development Drawings

Careful analysis of this existing information showed that there was a need to collate the site’s listed buildings; historical development; and historical uses and processes, as much of this information was only available in a series of separate written reports for individual buildings. This research has been compiled by Thread in a visual format that presents the site’s significance as a whole, so that it can be better understood in the design process, by the client and by other stakeholders.

Thread’s historical analysis drawings highlight the following:

- Historical Listings by Cadw across the entire site, as well as local designations (the first available drawing to bring all of the relevant listings together on one sheet) - refer to drawing 81\_1\_001;
- Historical Development of the whole site, summarising the changes to the site’s buildings - refer to drawing 81\_1\_002;
- Historical Uses and Processes across the site, highlighting those buildings which have not had significant changes to their function - refer to drawing 81\_1\_003; &
- Historical Rail Road Layouts, showing the general development of the site from the Top Yard, to the Bottom Yard and later expansion to Glan y Mor - refer to drawing 81\_1\_004.

From the above drawings it becomes clear that H10 (The Barracks) and the Top Yard are the points from which the site developed - from its early slate quarry days, to the repair of the Railway’s slate wagons, the arrival of steam locomotives and passengers. The Top Yard thus marks the start of Boston Lodge’s story.

Wider Heritage Context

Built as a gravity and horse-drawn line, to transport slate from the quarries in the mountains around Blaenau Ffestiniog to the harbour at Porthmadog, the Ffestiniog Railway forms part of a wider area which is acknowledged as being integral to the internationally significant Slate Landscape of Northwest Wales.

The UNESCO World Heritage Site nomination of the Slate Landscape of Northwest Wales attests to the significance of this landscape. The outcome of the nomination will be decided by UNESCO in 2021. A successful inscription of the Slate Landscape as a World Heritage Site would mean that this landscape is acknowledged as being one of the world’s

“places of Outstanding Universal Value to the whole of humanity. This means that their cultural and/or natural significance is so exceptional as to transcend national boundaries and to be of common importance for present and future generations of all humanity.” (UNESCO)

This section is to be read in conjunction with the Updated Conservation Management Plan document for further information on the site’s significance and individual building descriptions.

Updated Conservation Management Plan

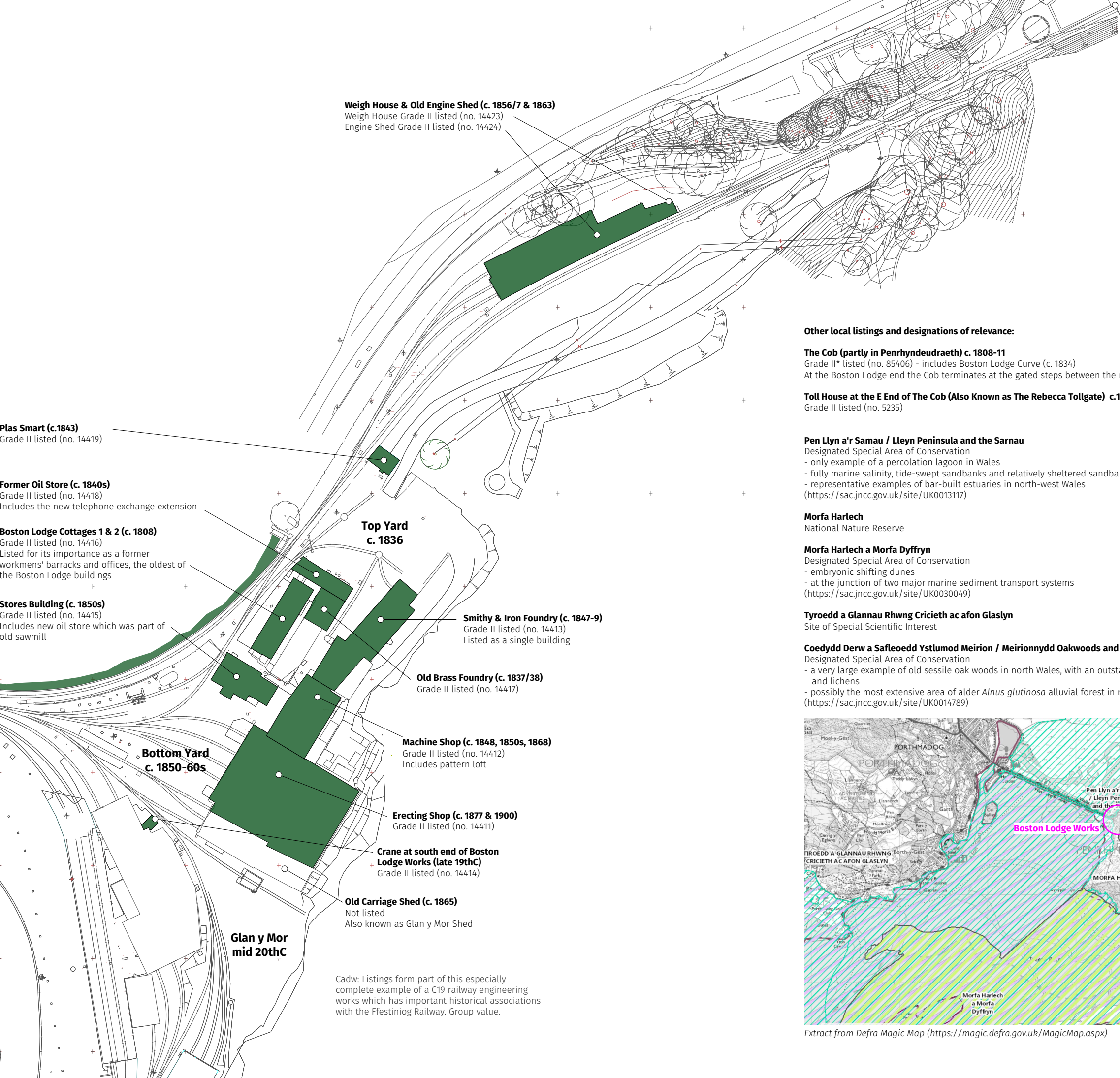
The study of the site’s historical development and significance has enabled Thread to update the FfWHR’s Conservation Management Plan (included as part of the appendices). This document has been compiled by Thread, and comprises their work, and an assimilation of the work and research of John Alexander and Dr Dafydd Gwyn, which form the basis of the earlier versions of the conservation management plan. The valued input of the FfWHR Client Team; and that of the FfWHR Project Steering Group has also informed this document.

The Conservation Management Plan is intended to ensure that the FfWHR and all relevant parties follow best practice in conservation legislation, and integrate the best interests of the historic fabric of the buildings with an operational works suitable for the 21<sup>st</sup> century.

The historical analysis and associated conservation management work has informed an understanding of the relationship between the existing buildings, those which have been lost, and the potential for new structures to preserve and enhance the spaces between.

With the collective aim of reducing the development’s impact on the site’s historical significance, and meeting the FfWHR’s brief to sustain a working, living site whilst enhancing its understanding for visitors, Thread’s design proposals are set out in the following pages.





**Plas Smart (c.1843)**  
Grade II listed (no. 14419)

**Former Oil Store (c. 1840s)**  
Grade II listed (no. 14418)  
Includes the new telephone exchange extension

**Boston Lodge Cottages 1 & 2 (c. 1808)**  
Grade II listed (no. 14416)  
Listed for its importance as a former workmens' barracks and offices, the oldest of the Boston Lodge buildings

**Stores Building (c. 1850s)**  
Grade II listed (no. 14415)  
Includes new oil store which was part of old sawmill

**Top Yard  
c. 1836**

**Smithy & Iron Foundry (c. 1847-9)**  
Grade II listed (no. 14413)  
Listed as a single building

**Old Brass Foundry (c. 1837/38)**  
Grade II listed (no. 14417)

**Machine Shop (c. 1848, 1850s, 1868)**  
Grade II listed (no. 14412)  
Includes pattern loft

**Erecting Shop (c. 1877 & 1900)**  
Grade II listed (no. 14411)

**Crane at south end of Boston  
Lodge Works (late 19thC)**  
Grade II listed (no. 14414)

**Old Carriage Shed (c. 1865)**  
Not listed  
Also known as Glan y Mor Shed

**Glan y Mor  
mid 20thC**

Cadw: Listings form part of this especially complete example of a C19 railway engineering works which has important historical associations with the Ffestiniog Railway. Group value.

**3 & 4 Boston Lodge Cottages (c. 1851 & 1856/7)**  
Not listed



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1:500 @ A1 / 1:1000 @ A3

**Key to historical listing status:**

- Grade II listed
- Not listed

**Other local listings and designations of relevance:**

**The Cob (partly in Penrhyndeudraeth) c. 1808-11**  
Grade II\* listed (no. 85406) - includes Boston Lodge Curve (c. 1834)  
At the Boston Lodge end the Cob terminates at the gated steps between the railway line and the road.

**Toll House at the E End of The Cob (Also Known as The Rebecca Tollgate) c.1836/1857**  
Grade II listed (no. 5235)

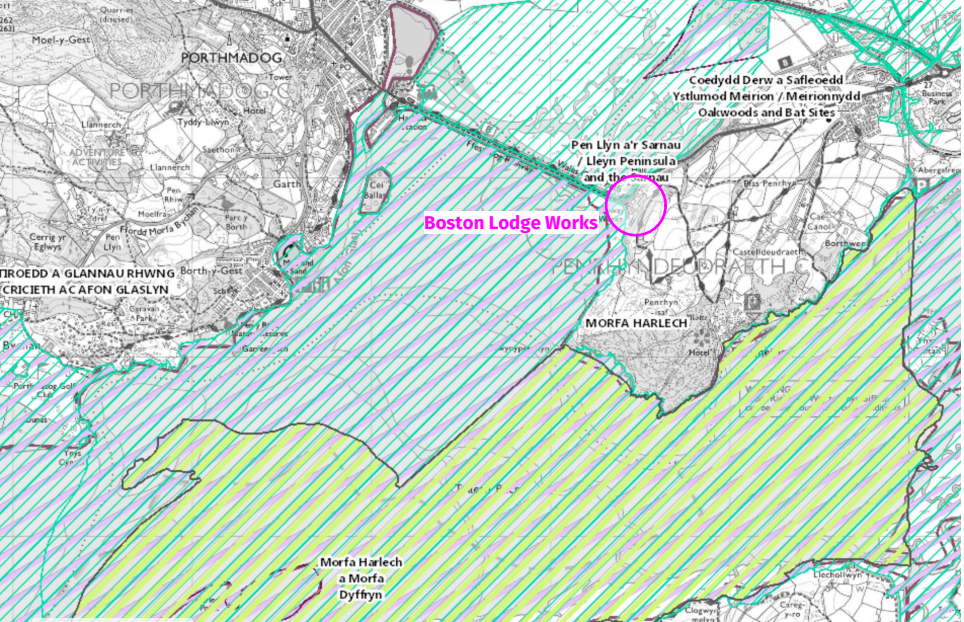
**Pen Llyn a'r Samau / Lleyen Peninsula and the Sarnau**  
Designated Special Area of Conservation  
- only example of a percolation lagoon in Wales  
- fully marine salinity, tide-swept sandbanks and relatively sheltered sandbanks  
- representative examples of bar-built estuaries in north-west Wales  
(<https://sac.jncc.gov.uk/site/UK0013117>)

**Morfa Harlech**  
National Nature Reserve

**Morfa Harlech a Morfa Dyffryn**  
Designated Special Area of Conservation  
- embryonic shifting dunes  
- at the junction of two major marine sediment transport systems  
(<https://sac.jncc.gov.uk/site/UK0030049>)

**Tyroedd a Glannau Rhwng Cricieth ac afon Glaslyn**  
Site of Special Scientific Interest

**Coedydd Derw a Safleoedd Ystlumod Meirion / Meirionnydd Oakwoods and Bat Sites**  
Designated Special Area of Conservation  
- a very large example of old sessile oak woods in north Wales, with an outstanding Atlantic flora of bryophytes and lichens  
- possibly the most extensive area of alder *Alnus glutinosa* alluvial forest in north Wales  
(<https://sac.jncc.gov.uk/site/UK0014789>)



Extract from Defra Magic Map (<https://magic.defra.gov.uk/MagicMap.aspx>)

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**REVISIONS**  
Rev A (2 Nov 2020): Site north included, revisions to notes

**Thread**

Client: FWHR  
Project Architect: Claire Fear

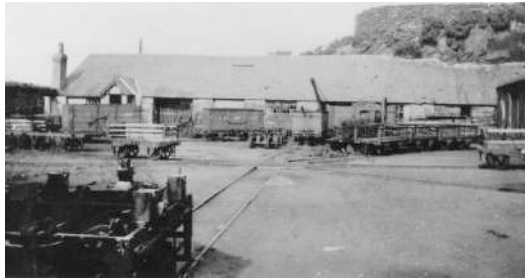
BOSTON LODGE WORKS

**HISTORICAL LISTING  
WHOLE SITE**

Scale:  
**1:500 @ A1 / 1:1000 @ A3**  
Date:  
**SEPTEMBER 2020**

**81\_1\_001 A**





Plas Smart (left) as part of longer range, post 1881 (FR Archives)



Top Yard from the west, July 1959 (Dennis Corley)

#### Plas Smart (c.1843)

Fish-belly rail track in former Wagon Store indicates possible use 1832-42  
Described as a store in 1856  
Converted into office for Locomotive Superintendent c. 1881  
-porch, internal floor, fireplace and screen installed  
Wagon Store likely to have become timber store by 1915  
Timber Store roof demolished early 1960s  
Chimney demolished after 1984

#### Boston Lodge Cottages 1 & 2 (c. 1808)

Barracks constructed to house men working on the cob c. 1808/09 - stables likely by FR c. 1837  
The quarry on site was opened at the same time  
Originally called Penrhyn Cottage, later named Boston Lodge in 1811  
Accommodation for weighmaster and constable of the railway, stables retained in 1836  
Four stables combined to form store in 1856  
No.1 was converted into separate flats - 19th C partitions remain  
No.2 was gutted and converted into single dwelling in 1960s

#### Stores Building (c. 1850s)

Constructed as the carpenter's shop and linked to old sawmill, with no rail access  
New carpenter's shop built in 1877, old one became the new Stores and Works office  
The Sawmill was gutted by fire in 1939  
Most of the sawmill was demolished in 1956/7  
Remainder of sawmill converted to oil store in 1960s

#### Bottom Yard c. 1850-60s

#### Glan y Mor mid 20thC

(part-rented 1877,  
purchased 1972)

#### Weigh House & Old Engine Shed (c. 1856/7 & 1863)

Weigh House constructed to east of toll gates c. 1856-1857  
First phase Engine Shed c. 1863 (likely single road)  
Engine Shed extended to join Weigh House c. 1867-1870  
First timber-framed extension to north in 1878  
Extension extended to north east in 1891  
Slate roof of shed damaged by fire c. 1930  
New corrugated iron roof by 1946 - loss of distinctive ventilators  
Replaced extension with concrete block construction 1972  
Concrete extension replaced with new timber frame construction in 2008  
Shed and Weigh House reroofed in slate in 2008  
Angled north-west side of the 1863 shed reconstructed in blockwork on a new alignment in 1970s, reconstructed in stone in 2008

#### Former Oil Store (c. 1840s)

Walled coal storage yard constructed in the 1840s  
linked to rail system in Top Yard  
Present building constructed in 1855/6 (roofed)  
Strowger Telephone exchange housed in new extension in 1970

#### Smithy & Iron Foundry (c. 1847-9)

Constructed with three hearths c. 1847/8  
Extended to the east c. 1868 and 1877/78  
At least one hearth in the smithy remained in use in the late 1950s  
Internal fixtures, hearths and chimneys removed in the 1960s  
Substation constructed on south side in 1974

#### Old Brass Foundry (c. 1837/38)

Constructed as a smithy  
Became brass foundry in 1870s  
Major repairs in 1962 (following collapse of rear wall)  
- 2no. original chimneys and pigeon-box ventilator removed  
- Mezzanine floor constructed on rail structure  
East-facing window was blocked when Telephone Exchange was constructed in 1970  
West window blocked by amenity block 1977

#### Machine Shop (c. 1848, 1850s, 1868)

Early Machine shop (Engine House No.1) constructed c. 1848  
Machine shop extension (Engine House No.2) constructed c. 1856  
Single-storey extension with corrugated roof in 1877  
Electricity substation constructed 1974  
First floor extension constructed in 1979

#### Erecting Shop (c. 1877, 1900, 1972, 2004)

Corrugated iron clad structure first erected c. 1877  
Blew down in 1899  
New slate structure erected in 1900 to replace the old structure - wider than 1877 structure  
Road 4 installed and floors concreted in the 1960s  
New Erecting Shop extension erected in 1973  
Gap between extension roofed over in 2004

#### Old Carriage Shed (c. 1865 & 1880s)

North-east extension built c. 1875  
Two road west extension c. 1886/1889  
North-east extension demolished c. 1900-1914  
1886 extension hit by falling rock c. 1954  
Roof of 1886 shed dismantled in 1956  
Walls of extension demolished in 1958  
Three road steel frame extension in 1964-68  
Little change to old carriage shed since 1875

#### 3 & 4 Boston Lodge Cottages (c. 1851 & 1856/7)

A loop line ran to the north west of the cottages in 1854  
Rear Extension to No.3 in 1868/9 and 1889 (possibly 1881)  
Turntable installed in 1869  
No.3 retains many original internal features  
No.4 has been altered significantly within  
Garage built on top of turntable between 1936-1961

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#### Key to historical development:

- c. 1808 - 1814
- c. 1836 - 1848
- c. 1851 - 1857
- c. 1863 - 1867
- c. 1867 - 1877
- c. 1886 - 1900
- c. 1936 - 1964
- c. 1972 - 1979
- c. 1993 - 2008

Images on this sheet: extracts from Historic Building Assessments (Bob Zeepvat, Bancroft Heritage Services)

#### REVISIONS

Rev A (24 Sept 2020) - Woodworking Shop added to Top Yard, coal stores and yard enclosures indicated.

Rev B (2 Nov 2020) - Site north included, revisions to notes

# Thread

Client: FWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

## HISTORICAL DEVELOPMENT WHOLE SITE

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Date:  
**SEPTEMBER 2020**

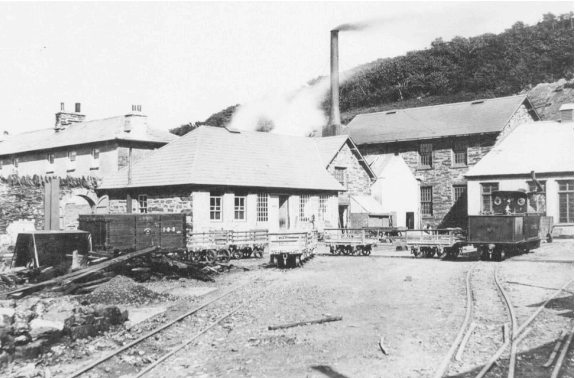
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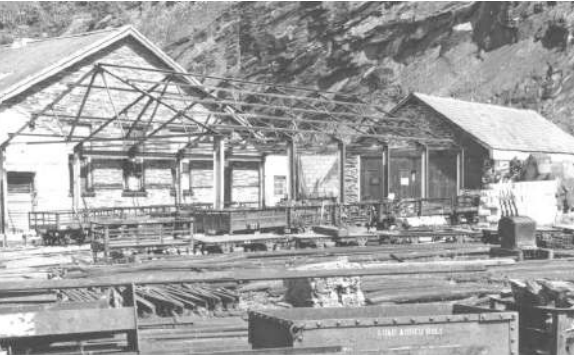
Old Engine Shed, 1887 (FRHG 2004, plate 20)



Smithy and foundry in foreground - note the chimneys for each of the hearths, 1956 (John Halsall)



Old Carpenter's Shop, end of Sawmill, Machine Shop and portion of Erecting Shop as viewed from Bottom Yard, 1887 (after R.H. Bleasdale: FRHG 2003, plate 18)



Old Carriage Shed - steel frame extension, 1964 (JLA)

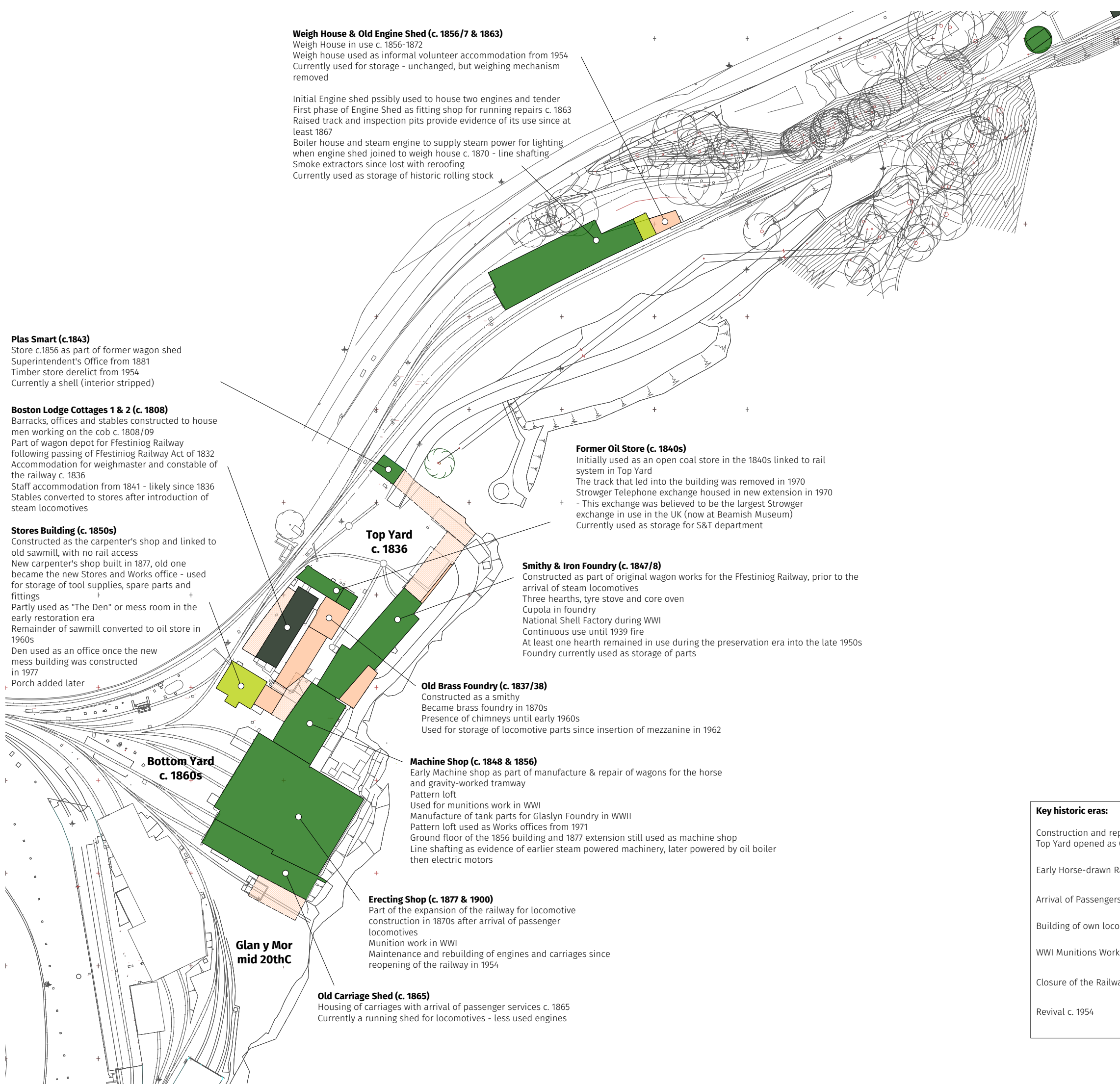


Brass Foundry as viewed from Top Yard, 1952 (J.B. Snell)



Old Carriage Shed - extension on the right before demolition, 1958 (David Ronald)





**Weigh House & Old Engine Shed (c. 1856/7 & 1863)**  
Weigh House in use c. 1856-1872  
Weigh house used as informal volunteer accommodation from 1954  
Currently used for storage - unchanged, but weighing mechanism removed

Initial Engine shed pssibly used to house two engines and tender  
First phase of Engine Shed as fitting shop for running repairs c. 1863  
Raised track and inspection pits provide evidence of its use since at least 1867  
Boiler house and steam engine to supply steam power for lighting when engine shed joined to weigh house c. 1870 - line shafting  
Smoke extractors since lost with reroofing  
Currently used as storage of historic rolling stock

**Plas Smart (c.1843)**  
Store c.1856 as part of former wagon shed  
Superintendent's Office from 1881  
Timber store derelict from 1954  
Currently a shell (interior stripped)

**Boston Lodge Cottages 1 & 2 (c. 1808)**  
Barracks, offices and stables constructed to house men working on the cob c. 1808/09  
Part of wagon depot for Ffestiniog Railway following passing of Ffestiniog Railway Act of 1832  
Accommodation for weighmaster and constable of the railway c. 1836  
Staff accommodation from 1841 - likely since 1836  
Stables converted to stores after introduction of steam locomotives

**Stores Building (c. 1850s)**  
Constructed as the carpenter's shop and linked to old sawmill, with no rail access  
New carpenter's shop built in 1877, old one became the new Stores and Works office - used for storage of tool supplies, spare parts and fittings  
Partly used as "The Den" or mess room in the early restoration era  
Remainder of sawmill converted to oil store in 1960s  
Den used as an office once the new mess building was constructed in 1977  
Porch added later

**Bottom Yard c. 1860s**

**Glan y Mor mid 20thC**

**Top Yard c. 1836**

**Former Oil Store (c. 1840s)**  
Initially used as an open coal store in the 1840s linked to rail system in Top Yard  
The track that led into the building was removed in 1970  
Strowger Telephone exchange housed in new extension in 1970 - This exchange was believed to be the largest Strowger exchange in use in the UK (now at Beamish Museum)  
Currently used as storage for S&T department

**Smithy & Iron Foundry (c. 1847/8)**  
Constructed as part of original wagon works for the Ffestiniog Railway, prior to the arrival of steam locomotives  
Three hearths, tyre stove and core oven  
Cupola in foundry  
National Shell Factory during WWI  
Continuous use until 1939 fire  
At least one hearth remained in use during the preservation era into the late 1950s  
Foundry currently used as storage of parts

**Old Brass Foundry (c. 1837/38)**  
Constructed as a smithy  
Became brass foundry in 1870s  
Presence of chimneys until early 1960s  
Used for storage of locomotive parts since insertion of mezzanine in 1962

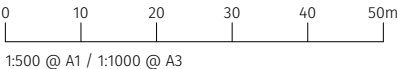
**Machine Shop (c. 1848 & 1856)**  
Early Machine shop as part of manufacture & repair of wagons for the horse and gravity-worked tramway  
Pattern loft  
Used for munitions work in WWI  
Manufacture of tank parts for Glaslyn Foundry in WWII  
Pattern loft used as Works offices from 1971  
Ground floor of the 1856 building and 1877 extension still used as machine shop  
Line shafting as evidence of earlier steam powered machinery, later powered by oil boiler then electric motors

**Erecting Shop (c. 1877 & 1900)**  
Part of the expansion of the railway for locomotive construction in 1870s after arrival of passenger locomotives  
Munition work in WWI  
Maintenance and rebuilding of engines and carriages since reopening of the railway in 1954

**Old Carriage Shed (c. 1865)**  
Housing of carriages with arrival of passenger services c. 1865  
Currently a running shed for locomotives - less used engines

**3 & 4 Boston Lodge Cottages (c. 1851 & 1856/7)**  
No.3  
Housing for a company official/locomotive superintendent c. 1851-1928  
Converted to ramblers' hostel c.1933-36  
Let to Major I de Thierry c. 1936 - 1970s  
Currently housing for FR staff

No.4  
Cottage for the weighing clerk c. 1856  
Let to warden of hostel c.1930s  
Let to Rev. Timmy Phillips c.1936-1960  
Currently let.



**Key to changes of use:**

- No change in use since initial construction
- Minimal changes in use, or reverted back to original use
- Significant changes in use, but sympathetic to fabric
- Destructive changes in use

REVISIONS
Rev A (2 Nov 2020) - Site north included, revisions to notes

Key historic eras:
Construction and repairs of the Cob c. 1808-14 Top Yard opened as Quarry to supply the Cob
Early Horse-drawn Railway and Top Yard works c. 1836 - 1863
Arrival of Passengers & Steam Locomotives c. 1863-65
Building of own locomotives c. 1877 - 1885 and 1971 onward
WWI Munitions Works/National Shell Factory c. 1915-1919
Closure of the Railway c. 1946 - 1954
Revival c. 1954

# Thread

Client: FWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

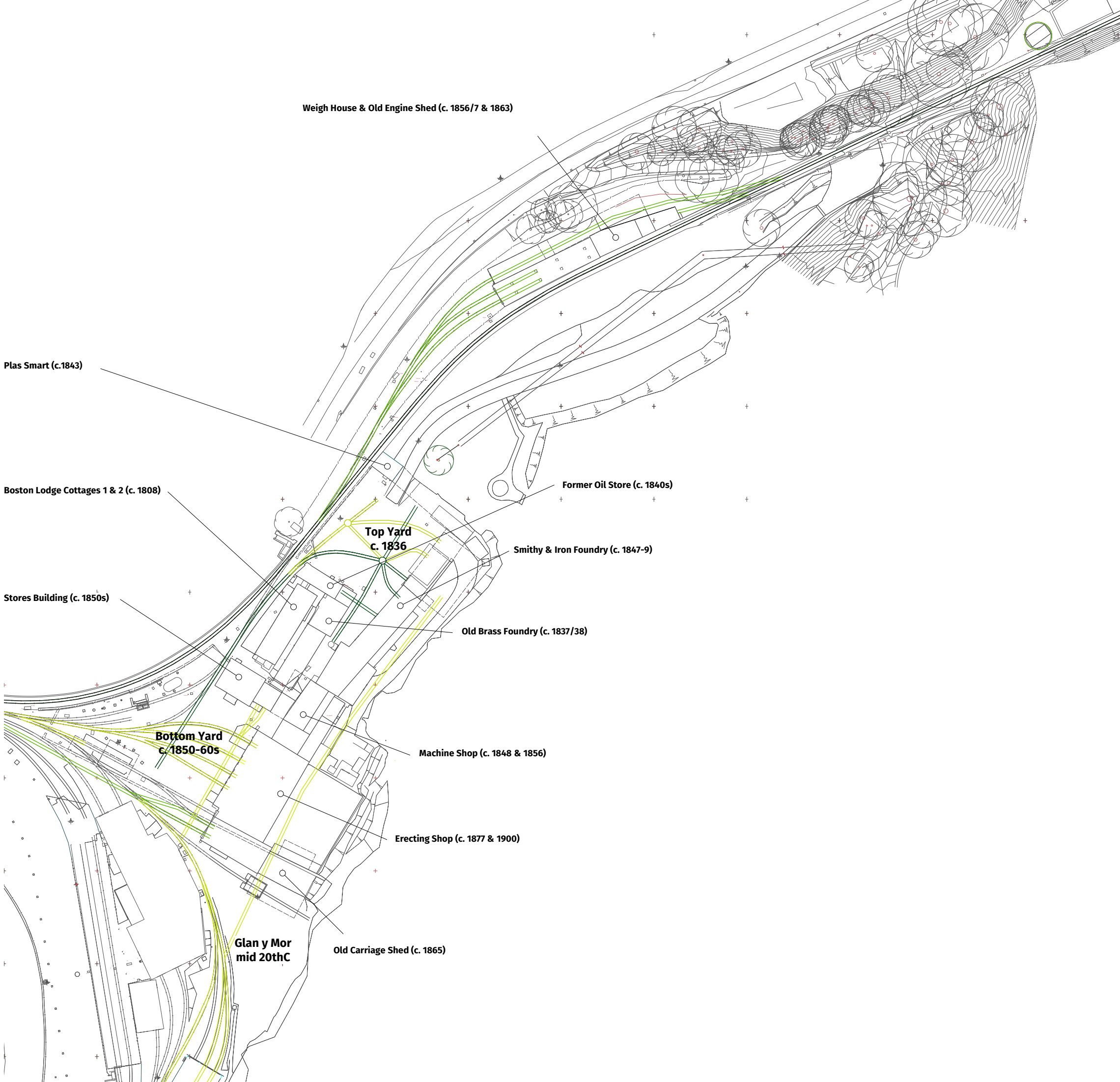
## HISTORICAL USE AND PROCESSES WHOLE SITE

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Date:  
**SEPTEMBER 2020**

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**3 & 4 Boston Lodge Cottages (c. 1851 & 1856/7)**




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**Key to historical development:**

- c. 1808 - 1814
- c. 1836 - 1848
- c. 1851 - 1857
- c. 1863 - 1867
- c. 1867 - 1877
- c. 1886 - 1900
- c. 1936 - 1964
- c. 1972 - 1979
- c. 1993 - 2008

**REVISIONS**

**Thread**

Client: FWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

**HISTORICAL RAIL ROAD LAYOUTS**

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**1:500 @ A1 / 1:1000 @ A3**

Date:  
**SEPTEMBER 2020**

81\_1\_004

## 5. Design Approach

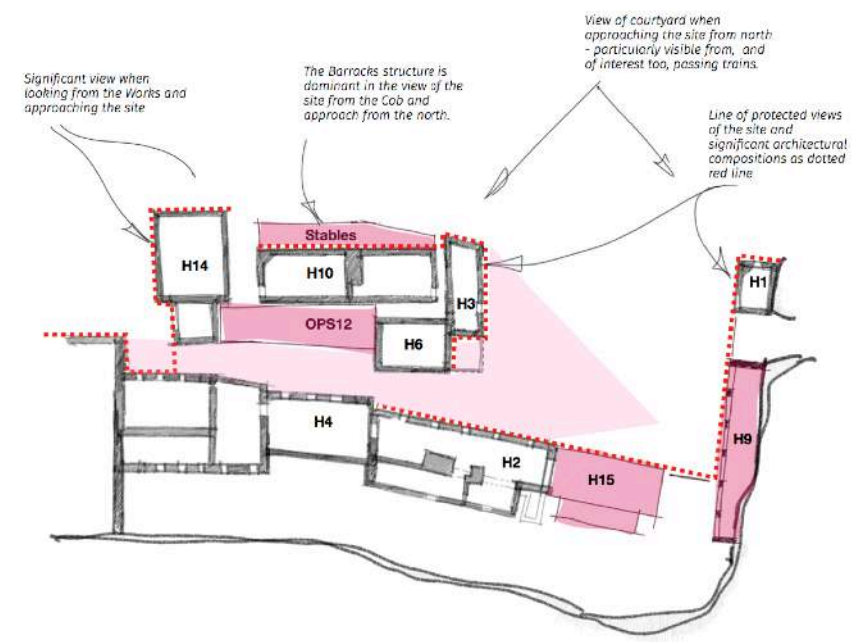
This section summarises the design decisions which have formed the proposed design for the site as a whole, and the individual buildings which form part of Thread’s scope of work. All decisions have been based on the historical analysis of the site, the guiding conservation principles and policies developed as part of the Conservation Management Plan, site analysis, accommodation reviews, testing of proposals and regular client and design team discussions.

- Early opportunities for (re)consideration were discussed and based on the following:
- Significant and Historic Views & Lost Buildings;
  - Works, Storage & Operations;
  - Mess Room & Works Facilities for Staff and Volunteers;
  - Visitors Facilities;
  - Office & Residential Provision.

### Protecting and Reinstating Key Historic Views

- The following historic views should be preserved or enhanced:
- The top yard, to be developed as the heritage area of the Works;
  - The prominent external views of the H10 (the Barracks) from the railway and road;
  - The historic view of the South and East sides of the bottom yard should be protected;
  - The historic view of the 1860s Old Engine Shed and surrounding buildings should be protected;
  - Future buildings, particularly those that will be visible from outside the works, should be designed to complement the historic Boston Lodge scene.

The significant views into and within the site guide the design development of the proposed structures. The FfWHR’s aim is to reinstate and protect these historic views which contribute to the site’s special character.

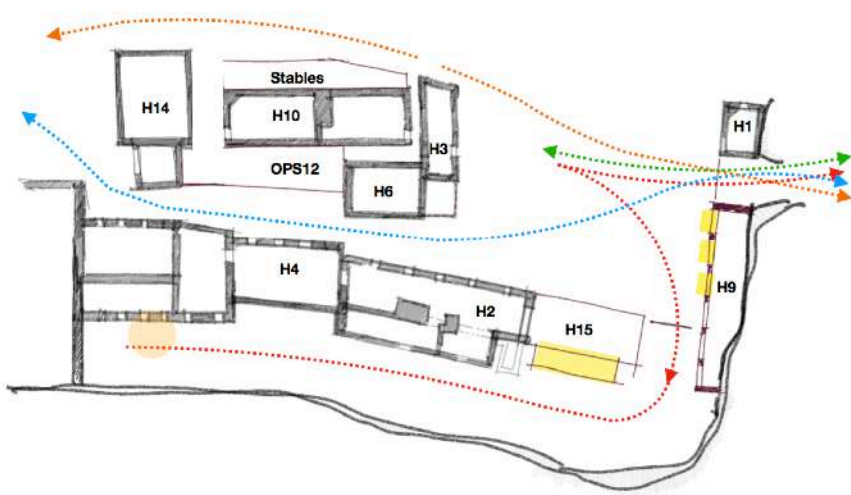


### Works, Storage and Operations

Thread’s design intention and brief is to enable the site to be secured and understood as a living, breathing and atmospheric working space. In addition, new sensitive, pragmatic and sustainable interventions are required to facilitate the continued unbroken use of this site, as originally intended. As such, full understanding of the FfWHR’s storage and access requirements was required. The proposals seek to improve on the volume of storage available, whilst maximising the use of existing buildings without harming their

significance or the protected views of the site. Two skips, a waste oil tank and stackable pallet storage are also required.

The early analysis sketch below illustrates the vehicle movements across the site, including delivery of long lengths of steel and pallets (red); daily small deliveries (green); transit van deliveries - current OPS12 roof often gets hit (blue); and limited controlled access onto railway (orange).



### Mess Room and Works Facilities

- The design intention is to improve the efficiency of the mess room layout by providing:
- Ease of access to facilities when Works staff and volunteers are completing dirty works;
  - Improved access from main working yard;
  - Good views of the site during breaks;
  - More flexible facilities as the proportion of male and female staff changes;
  - New inclusive facilities for all - not just the office users.

The proposal to use H14 for this purpose echoes its past use and releases significant space within the footprint of OPS12 for essential storage use.

### Visitor Facilities

The Round 1 proposal located the main visitor welcome area at H0 (Old Engine Shed), which is situated a short walking distance from the Top Yard. Although not far from the Top Yard, the Old Engine Shed seems dislocated from the activity of the working site at the rest of Boston Lodge Works.

Thread’s proposals aim to bring the welcome area to the Top Yard (refer to H9 and H15) enables the visitor to start at the beginning, at the heart of Boston Lodge’s layered history, to enhance their understanding of the site’s history and significance. This does not take away from the proposed interpretation in H0 (Old Engine Shed), but instead will allow visitors to approach H0 on their way back to Boston Lodge Halt, and experience it as if discovering it for the first time, just as it was discovered by volunteers in the 1950s.

### Office and Residential Provision

- Key aims of the proposal are:
- To concentrate residential and office accommodation in separate areas of H10, with a vertical dividing wall (existing) - better for sound and fire proofing requirements;
  - To enable flexibility and future-proofing;
  - To provide a safe and accessible route for FfWHR staff to the new office in Cottage No. 2.

This addresses the 1.5 metre level change from the Top Yard to the railway below, and allows users to access the office without having to walk directly alongside the railway line. It also ensures that the office is accessible to those of all abilities, without the need for the installation of a lift, which in turn minimises cost and change to the existing historic fabric.

### Environmental Sustainability & Resilience to Climate Change

The strategy for Boston Lodge Works is to avoid specifying any fossil fuel boilers or other equipment burning fossil fuels; to maximise the opportunity for heat pump technology for space heating; to investigate opportunities for solar photovoltaics to provide zero carbon electricity generation on site; to enhance the thermal performance of building fabric where practicable; to provide natural ventilation to maintain comfortable internal conditions in summer; to specify low energy LED lighting and lighting controls systems; and to minimise external light spill.

Careful consideration has been given to how these technologies are installed and implemented to ensure that they do not have a detrimental effect on the physical fabric or on the historic views or character of the buildings and site as a whole.

**Reuse of materials** on site is a key design strategy which has been adopted to reduce the need for new, virgin materials. This echoes much of the work of the Railway itself - evident in the many shelves of components stored for reuse in the repair of locomotives in the workshops. The reuse of stone sourced from the site ensures that the historic character of the former quarry site is preserved. The FfWHR possesses a large collection of reclaimed building elements from previous structures such as window frames and timber joinery which are to be reused in the proposals. This contributes to the character of the site and helps to tell the story of the buildings and their development over time.

The Anglesey and Gwynedd Joint Local Development Plan 2011-2026 and the Well-being of Future Generations (Wales) Act 2015 have informed this approach.

- Strategic Policy PS 5: Sustainable Development
- The proposals aim to reuse previously developed land and buildings;
  - The proposals aim to preserve and enhance the quality of the built and historic environment assets (including their setting), improving the understanding, appreciation of their social and economic contribution and sustainable use of them in accordance with Strategic Policy PS 20;
  - The proposals aim to reduce the effect on local resources, avoiding pollution and incorporating sustainable building principles, largely through the reuse of materials;
  - The proposals aim to support the local economy and businesses by providing opportunities for lifelong learning and skills development in accordance with Strategic Policy PS 13;
  - The proposals aim to promote high standards of design that make a positive contribution to the local area, accessible places, that can respond to future requirements.

- Strategic Policy PS 6: Alleviating and adapting to the effects of climate change
- The proposals aim to reduce energy demand and increase energy efficiency.

- Strategic Policy PS 7: Renewable energy Technology
- The proposals aim to include renewable energy technologies, whilst protecting the distinctive landscape character.

- Strategic Policy PS 19: Conserving and where appropriate enhancing the natural environment
- The proposals aim to protect, retain and enhance the local character and distinctiveness of the area.

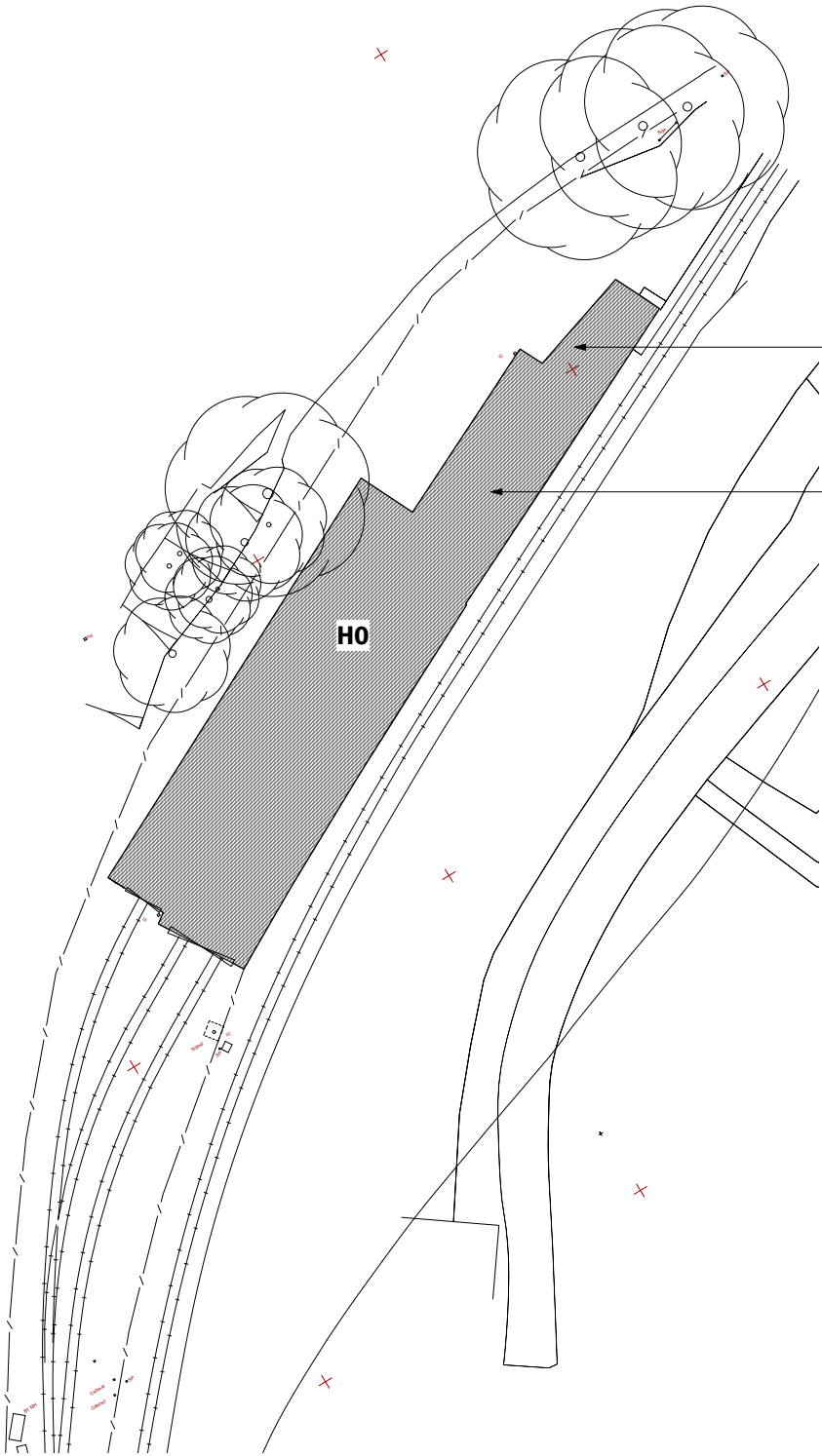
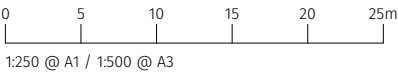
The design proposals are set out in the following pages.

# Thread

## Design Proposals

Strategic Overview





**WEIGH HOUSE**  
(not currently in scope)

**OLD ENGINE SHED**  
**Proposed Use: Visitor interpretation space and engine store**

Light touch architecturally - mainly conservation and addressing access and level issues - finale exhibition.

#### REVISIONS

A - Building names and uses updated post Stage 2 (March 2021)

# Thread

Client: FWHR  
Project Architect: Claire Fear

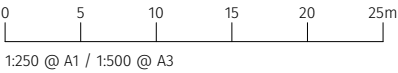
BOSTON LODGE WORKS

## GENERAL SITE STRATEGY (Part 1 of 2)

Scale:  
**1:250 @ A1 / 1:500 @ A3**

Date:  
**October 2020**

81\_GA\_01 A



**PLAS SMART**  
**Proposed Use:** Restored small office/ PPE for visitors as part of experience

**OLD OIL STORE**  
**Proposed Use:** Visitor WCs, Store & IT/Data

**BRASS FOUNDRY**  
**Proposed Use:** Storage as existing with Visitor Access to Ground Floor only

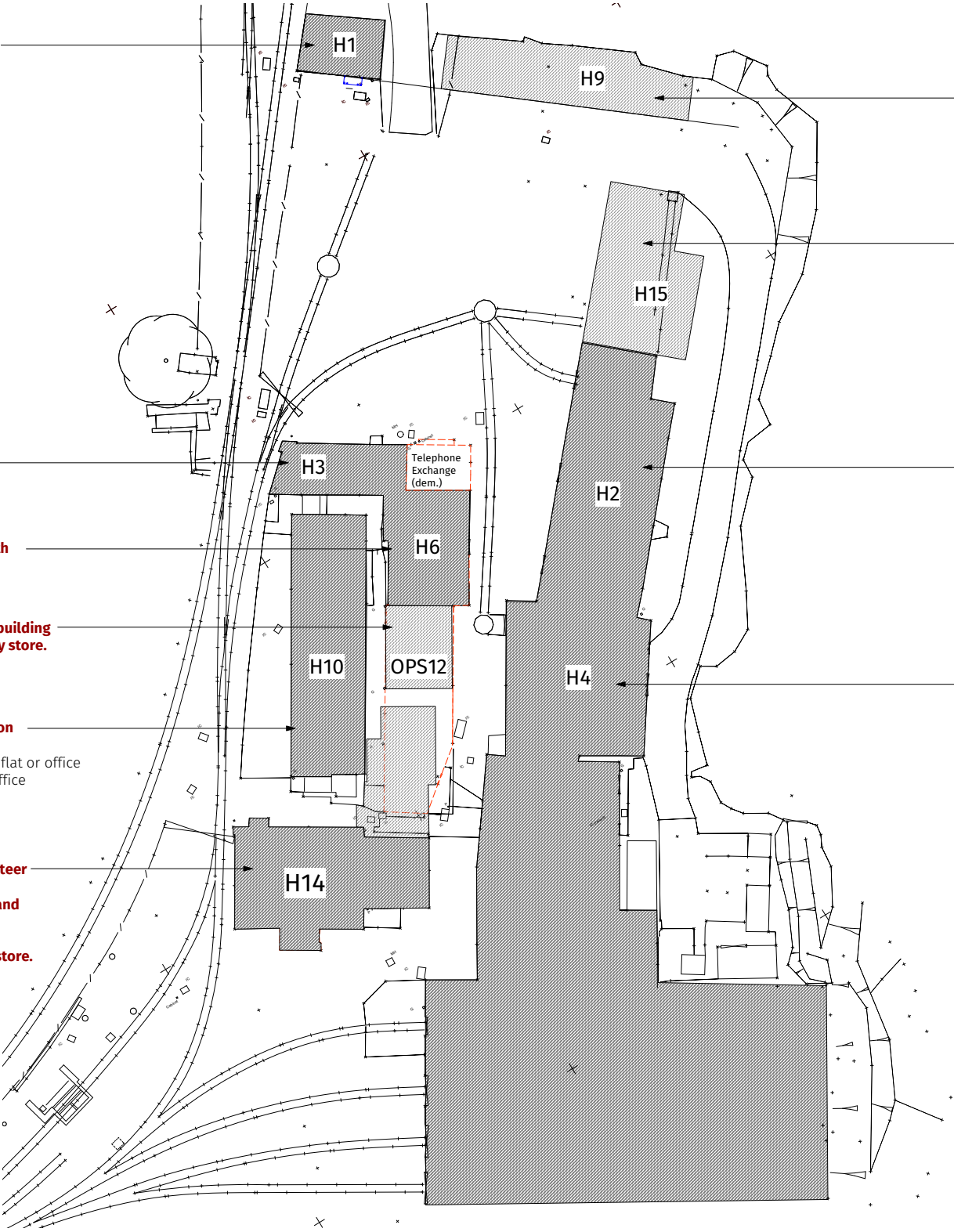
**THE ELECTRICIANS WORKSHOP**  
**Proposed Use:** Demolition of Existing building and construction of small single storey store.

**THE BARRACKS**  
**Proposed Use:** Office & Accommodation

Cottage 1 - ground floor flat; first floor flat or office  
Cottage 2 - Ground floor & first floor office

**THE DEN**  
**Proposed Use:** Den, Lockers and Volunteer Facilities. Extended Old Oil Store to accommodate Electricians Workshop and store.

First floor space / office, archive and store.



**WAGGON REPAIR SHED**  
**Proposed Use:** Visitor Covered space for introduction and stores.

New construction of earlier Wagon Shed - aligned with H1. Also location of Archaeology.

**NLHF TRAINING AND RESEARCH CENTRE**  
**Proposed Use:** Training Space and pallet storage to the East.

An extension to H2 but thermally separated with the ability to use H2 and H15 together or separate.  
Also to enable locomotive to park within H15.

**BLACKSMITHS WORKSHOP**  
**Proposed Use:** Working volunteer Space and Storage

No impact on existing building - with volunteer and visitor access.

**IRON FOUNDRY**  
**Proposed Use:** Working volunteer Space with retained element of storage

Light touch on existing building - with volunteer and visitor access.  
Retention of storage cases to the south and west walls.

#### REVISIONS

A - Building names and uses updated post Stage 2 (March 2021)

# Thread

Client: FWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

## GENERAL SITE STRATEGY (Part 2 of 2)

Scale:  
1:250 @ A1 / 1:500 @ A3

Date:  
October 2020

81\_GA\_02 A

# Thread

## Design Proposals

Buildings H0 - H15



H0     Old Engine Shed

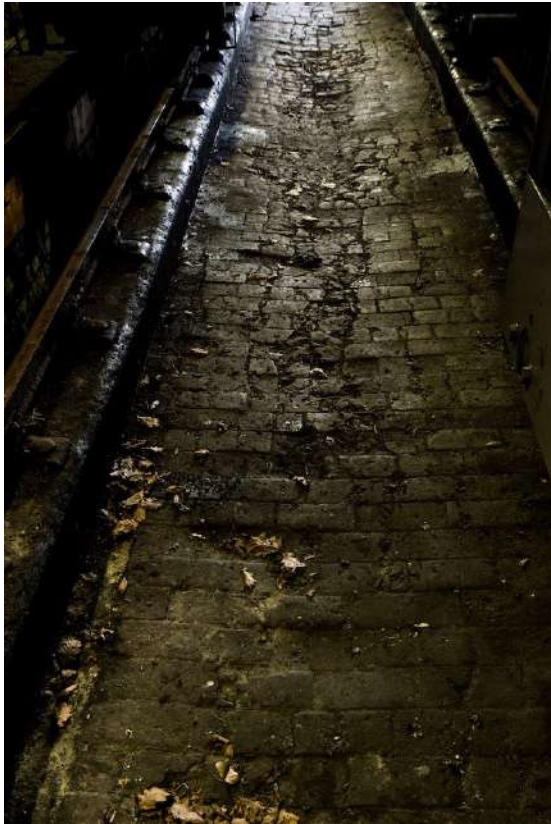
Grade II listed (Cadw 14424)

The proposal aims to bring the visitor welcome area to the Top Yard, the historical heart of Boston Lodge Works (refer to H9 and H15). The Old Engine Shed can then be accessed by visitors on their way back to Boston Lodge Halt, entered from the main west entrance - with the full impact of the experience of opening the doors, just as it was experienced when the abandoned site was rediscovered in the 1950s after the Railway's decline, and brought back to life by its dedicated volunteers.

The need for architectural intervention to this building is minimal - restricted to conservation repairs to the floor to assist with accessibility, light-touch conservation repairs to joinery, and M&E installations to better illuminate the engines housed within. The proposal includes the removal of the later added railway track extension into the former fitting workshop. The fitting workshop was a later extension to the east of the 1863 engine shed, and as such, these tracks did not extend into this section of the building until later. The majority of the work here will be in the form of interpretation displays.

A new internal vertically boarded timber partition with bi-fold doors is proposed to match the existing high-level timber partition at truss height. This partition echoes the partition that previously existed to separate the engine shed and the fitting workshop, as shown in the 1932 and 1946 photographs included within the drawing pack for this project.

*Refer to drawings 81\_H0\_0\_01-02 and 81\_H0\_3\_01-02.*





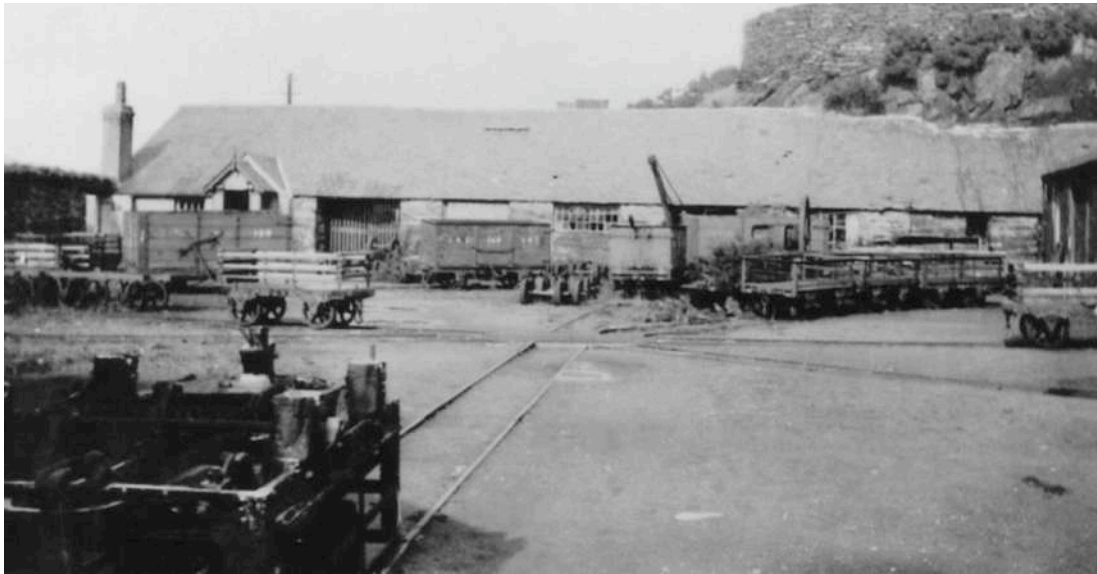


**H1    Plas Smart**

Grade II listed (Cadw 14419)

This building was previously partially restored externally, including repairs to its roof. The floor, internal partition and internal joinery were previously removed and it currently contains no services. The intention is to complete the external repair works to ensure it is protected from water ingress by providing new cast iron rainwater goods and connecting these to the proposed new drainage installation.

*Refer to drawings 81\_H1\_0\_01-02 & 81\_H1\_3\_02*



*Plas Smart as part of the Wagon Shed, post 1881 (FR Archives)*







## H2 Blacksmiths Workshop

Grade II listed (Cadw 14413)

The Blacksmiths Workshop was recently comprehensively repaired, including full roof repairs and the reinstatement of the historic chimneys and roof ventilators. The proposed architectural works are therefore minimal, with the intention of providing a flexible, practical space that can be used by volunteers in support of the Railway's activities and historic use.

Two areas, in the lower lean-to space to the south of the building have been identified as storage areas and a permanent roost for lesser horseshoe bats, for the following reasons:

- They can be visually separated from the main space;
- They are dark, relatively narrow spaces which do not lend themselves to working areas;
- They can be directly accessed from the southern vehicular access route behind the building;
- No alterations to the building are required.

A small portion of the least accessible of these two storage areas will be dedicated to bats, as part of the ecological mitigation of the site.

Conservation repairs to the joinery and masonry are proposed to ensure the longevity of the building and its continued use.

*Refer to drawings 81\_H2\_0\_01-04 & 81\_H2\_3\_01-04.*





H3      Old Oil Store

Grade II listed (Cadw 14418)

Careful consideration was given to whether the Old Telephone Exchange structure should be demolished as per the Round 1 proposal. It was built in the 1970s to house the Strowger Telephone Exchange, which has since been removed and is located in the Beamish Museum. Without this equipment, the modern structure has little heritage significance, and detracts from the historic views of the Top Yard.

Its demolition enables the reinstatement of the east window to H6 (Brass Foundry) and the southern door into H3. This allows for external access to a new visitor/contractor WC. Only conservation repairs are proposed to the exterior of H3, whilst inside, a new insulated timber-framed lining will enclose the new visitor WC, Accessible WC, storage and IT/data room - all of which are ideally located for connection to existing services.

Refer to drawings 81\_H3\_0\_01-04 & 81\_H3\_3\_01-04.



Top: Old Oil Store as seen today, with 1970s Telephone Exchange structure  
Bottom: Old Oil Store in the 1950s, before the Telephone Exchange was built  
(Norman Pearce in Bancroft Heritage Services HBA, 2015)



**H4     Iron Foundry**

Grade II listed (Cadw 14413)

The proposed architectural intervention is minimal, except for the removal of the modern ceiling and later corrugated sheeting to be replaced with an insulated corrugated iron roof. The existing sheeting is in a poor condition and new rainwater goods are also required. This will allow for the historic timber roof structure to be repaired and to be exposed from below to better reveal the construction at the site of the previously removed cupola, once an integral component of the working Iron Foundry.

Due to its proximity to the Machine Shop, a row of storage racks is proposed on the south wall to ensure ease of access and maintain flexibility of use for the remainder of the space by leaving it open for workshop use.

*Refer to drawing 81\_H4\_0\_01-04 & 81\_H4\_3\_01-04.*







## H6 Brass Foundry

Grade II listed (Cadw 14417)

Although no longer used for its earlier purpose as a brass foundry, this building has evolved into a unique home for a collection of railway artefacts and components. Its special character is seen also in the bespoke reuse of rails to form the structural posts and beams which support the upper floor and metal shelving which holds these artefacts.

This forms part of the Railway's story, and the intention is to retain this internal structure, with minimal conservation and repairs to the building, so that visitors can see this collection as part of their tour of Boston Lodge.

The staircase to the upper floor is however very steep and not readily accessible for the average visitor - an alternative visitor experience is proposed through the provision of a periscope, constructed in-house, so that visitors can view specific items upstairs. This approach will restrict access to the upper floor and reduce the need for structural changes.

*Refer to drawings 81\_H6\_0\_01-05 & 81\_H6\_3\_01-05.*





**H9     Waggon Repair Shed**

Not listed (site of former Waggon Repair Shed)

The proposals aim to restore the main historic view of the Top Yard and this lost building - The evidence of the earlier form of this building as an open fronted Waggon Repair Shed can be seen in historic photos and is discussed in the Historic Building Assessments for the site and Archaeological report on the excavations in this area in 2015. There are also significant archeological finds in this area, which have been protected (and hidden) by the surface layers built up above them.

Based on this information Thread examined possible uses for the building which would enable this open fronted form of building to be reinstated so that the historic views of the Top Yard and its days as a hub of slate transport and slate wagon repairs can be better understood by visitors.

The existing Plas Smart building and roof structure, and the visible remains of where the Wagon Shed's roof once joined into the quarry face provided good evidence of the required new structure, while an analysis of historical photographs enabled the setting out of the masonry piers and bays of the main elevation.

*Refer to drawings 81\_H9\_0\_01 - 81\_H9\_3\_07.*





Bottom image: Historic photograph taken from the Cob towards Boston Lodge, showing the Toll House below and the prominent Boston Lodge Cottages 1&2 along the edge of the Railway.



**H10    The Barracks**

Grade II listed (Cadw 14416)

This building is a prominent structure forming one of the primary historic views of the site from the Cob and the Railway as it passes through Boston Lodge Works.

External works visible in this view are proposed as conservation repairs only. The challenge presented by the approximately 1.5 metre difference from the front ground level to internal ground floor level of the proposed new office, has been addressed by forming a gently sloped landscaped access to the rear of the building, between H10 and OPS12. This will not have a visual impact on the main protected view, and makes use of a currently underused in-between space.

The proposed layout keeps accommodation and office use separated by the existing masonry party wall which minimises change to the historic fabric and the need for acoustic or fire separation between the two uses.

Works have also progressed to establish if evidence of the suspected stables to the north of the Barracks remain. This excavation has been completed by Bancroft Heritage Services and the findings presented in the report in Appendix B. In summary the excavation of this area revealed primary structural evidence of the earlier stables building in the form of two partition walls and edge set slate flooring. It is proposed that this excavation will be expanded as part of the ongoing works to understand more of the heritage of the site.

*Refer to drawings 81\_H10\_0\_01 - 81\_H10\_3\_05.*



**H14     The Den & Electricians Workshop**

Grade II listed (Cadw 14415)

As H14 (The current stores building) once accommodated the Den, it is one of the significant structures as part of the site's working history. This building is the proposed new location for the Den, including the Wash Up Lobby, WCs and Showers and Locker area. The location improves connections to the works facilities, views on the site and practical flow through the space, based on the practical needs of the FfWHR's staff and volunteers.

The entrance to the oil store through the wide existing door provides access to a lobby space with a large trough sink for all to use, to enable some cleaning off of oil and grime before accessing the Den or men's WCs. This prevents unnecessary dirt being tracked into the Den space where food is eaten. The East porch provides access to a smaller lobby and locker space which provides access to the women's WC's. The proposed new lobby and wash up area will serve the role of the later porch addition, which is to be demolished to reinstate the west elevation to its appearance as shown by historic photographs (*refer to drawings*).

The design intention is to reinstate the lost first floor and gable of the old Saw Mill, as part of the extension of the Oil Store. This contributes to the recreation of lost historic views and allows for the provision of the larger WCs and shower facilities and proposed new Electricians Workshop and Store.





OPS12 The Stores

Not listed (on site of current RHR Garraway Amenity Block)

Lost Structure (Saw Mill) - The current Den or RHR amenity block, a modern 1970s construction, occupies the site of what was once the Saw Mill. The view from the Top Yard down through the gap between these buildings has lost a pitched roof in this area. This pitched roof relates to the previous gabled form of the Oil Store, south of H14, and its reinstatement will complement the wider composition of buildings (refer to H14 above).

The proposed new OPS12 structure is a single storey replacement with a smaller footprint to what was previously proposed in an NLHF Round 1 application - a significant reduction in new-build area. The proposed plan is shorter and does not come up against H10 - in order to open up the access route between H14 and H4/H5. It is intended as a new store and is designed to complement the extension to H14. It is intentionally subservient to H6 (The Brass Foundry) and H14 (The Den) to enhance the understanding of the historical significance of the adjacent buildings.

Refer to drawings 81\_OPS12\_0\_01-81\_OPS12\_3\_02.



Historic photograph shows the Brass Foundry as dominant to any adjacent building





Black & white images:  
Top: Smithy interior looking towards Blacksmiths Extension (1959, JL Alexander);  
Middle: Smith interior from the extension through towards Iron Foundry (1960, JL Alexander)



### H15 NLHF Training and Research Centre

Not listed, on site of former Blacksmiths’ Extension

The reinstatement of this building has the opportunity of being greater in depth than the Round 1 proposal, to enable the provision of a larger and multifunctional space on site, primarily as a new training room and Britomart engine display (in the location of the previously demolished Britomart Shed).

There is an internal photo of the Smithy Extension looking from the Smithy in the Historic Building Assessment of the building. With careful consideration of use, this physical and visual internal architectural experience can be reinstated to connect the visitor through to the Smithy and the door to the Iron Foundry beyond. This helps to relate the space to historic processes and production on the site. The use of an insulated timber-frame construction and corrugated iron construction will reflect the historic building typology of the previous construction.

The proposal to carefully dismantle the existing rubble slate wall will allow this material to be reused on site, thus enabling it to continue to tell the story of the evolving buildings at Boston Lodge Works.

Refer to drawings 81\_H15\_0\_01 - 81\_H15\_3\_07.





### Landscaping and Drainage

A practical approach is proposed to ensure that the historical appearance of the Top Yard is balanced with its continuing function as a working site which requires vehicular access for deliveries and maintenance. It has been agreed that the most appropriate finish is a slate waste gravel surface similar to the appearance of the existing but with an improved sub-base to ensure adequate drainage and reduce the need to build the surface up over time. It is important that the material used is sourced locally - slate waste being the natural choice for the area.

An analysis of the archaeological finding for the site shows how the Top Yard surface has gradually been built up with deposits. The proposals aim to take this archaeological layering into account in order to protect the archaeology below, and also to seek to reduce the levels minimally to reduce water ingress and damp issues in the buildings which have lower floor levels. *Refer also to Integral's report.*

An improved path between Old Engine Shed and Top Yard is proposed as a self-binding slate waste gravel surfacing from the Boston Lodge halt (station), to the entrance point to the top yard. The timber gates to the Top Yard (part of Round 1) are to be omitted as they would hamper the day-to-day running of the site, and do not contribute significantly to the sense of enclosure of the Top Yard, which is achieved by H9 and H15.

*Refer to drawings 81\_DET\_01 and 81\_GA\_03.*



7. Conclusion

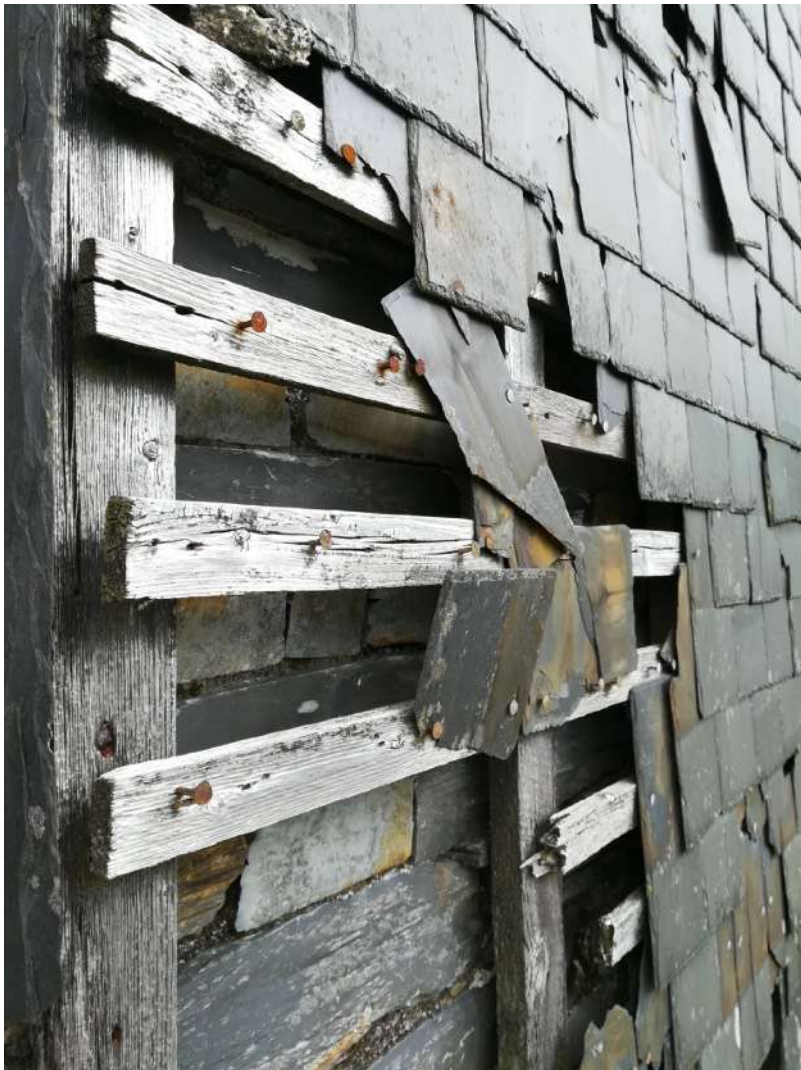
The design and fabric proposals for each of the buildings described in these proposals, and in the drawings that follow, have been carefully considered as both individual buildings and also as a part of an historically significant, but working, live and active site.

They have been shared and tested widely, and the reuse of materials examined closely by visiting the site multiple times, and also other material stores.

The proposals have also been shared with both CADW and the Conservation Officer and, after receiving a positive response, they have been submitted for Listed Building Consent.

In order to mitigate risk we have completed opening up works, test holes, lifted turntables and had additional surveys completed. The outcomes of this work fed into the whole team's response to the site and were fully tested in the emerging proposals. *These survey reports are in Appendix B.*

**As such, we as a team, propose this project as a comprehensive and carefully considered set of interventions for the existing site. They are minimal and modest in nature, but would bring great benefit to the staff, volunteers and visitors alike, while securing the building fabric and widely sharing its heritage.**



**Thank you**

Claire Fear &  
Vanessa Ruhlig

**Thread**





Ffestiniog & Welsh Highland Railways

**Interpretation and  
Boston Lodge Project  
OL-19-00516**

# **14.1 Appendix A**

Thread Drawings for the following:

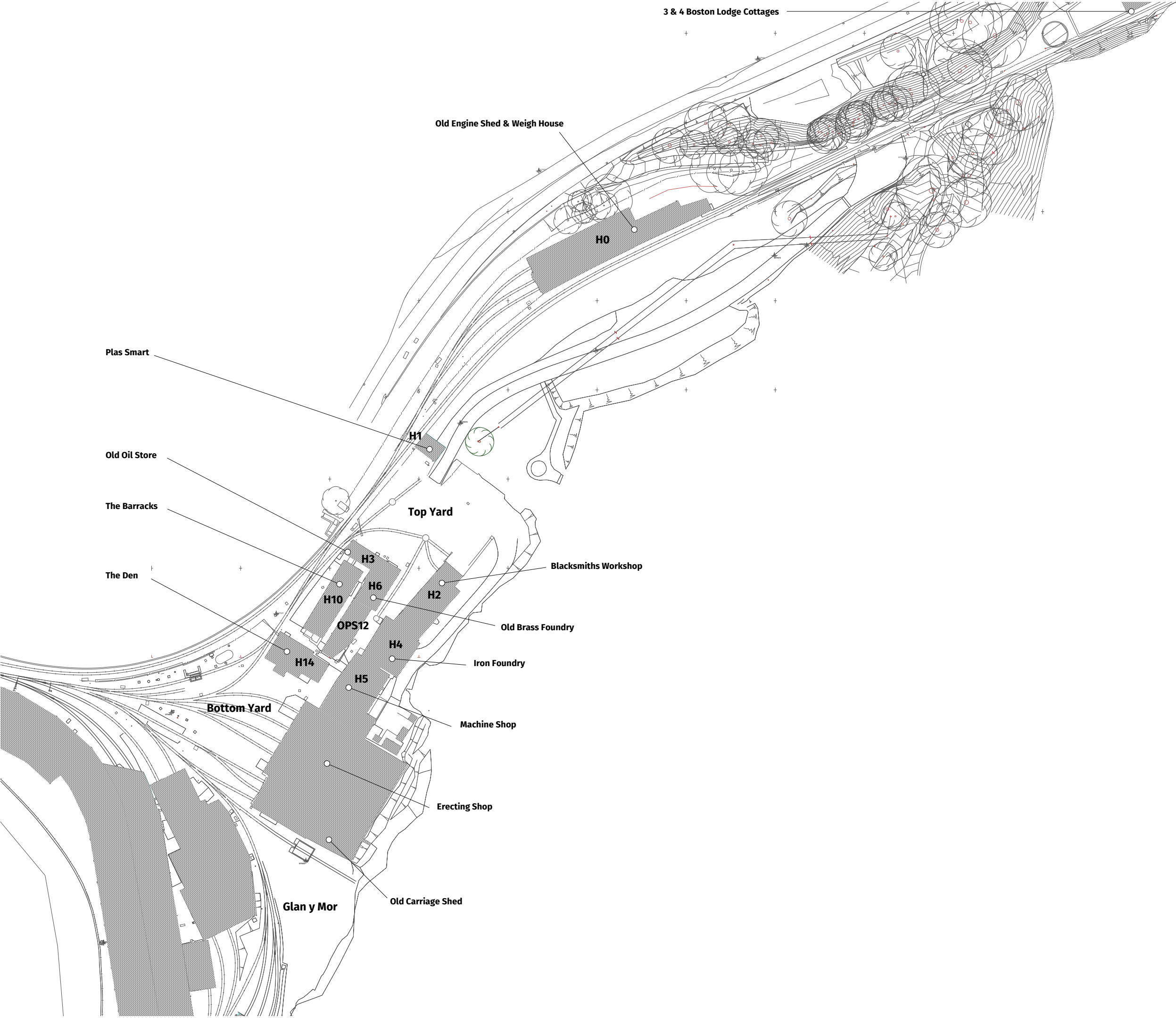
- Existing Site Plan
- Proposed Site Plan
- H0 - Old Engine Shed
- H1 - Plas Smart
- H2 - Blacksmiths Workshop
- H3 - Old Oil Store
- H4 - Iron Foundry
- H6 - Brass Foundry
- H9 - Waggon Repair Shed
- H10 - The Barracks
- H14 & OPS12 - Electricians Workshop & Stores
- H15 - NLHF Training & Research Centre
- Landscape Strategy




# Site

## Existing Site Plan









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1:500 @ A1 / 1:1000 @ A3

Thread

Client: FWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

EXISTING SITE PLAN

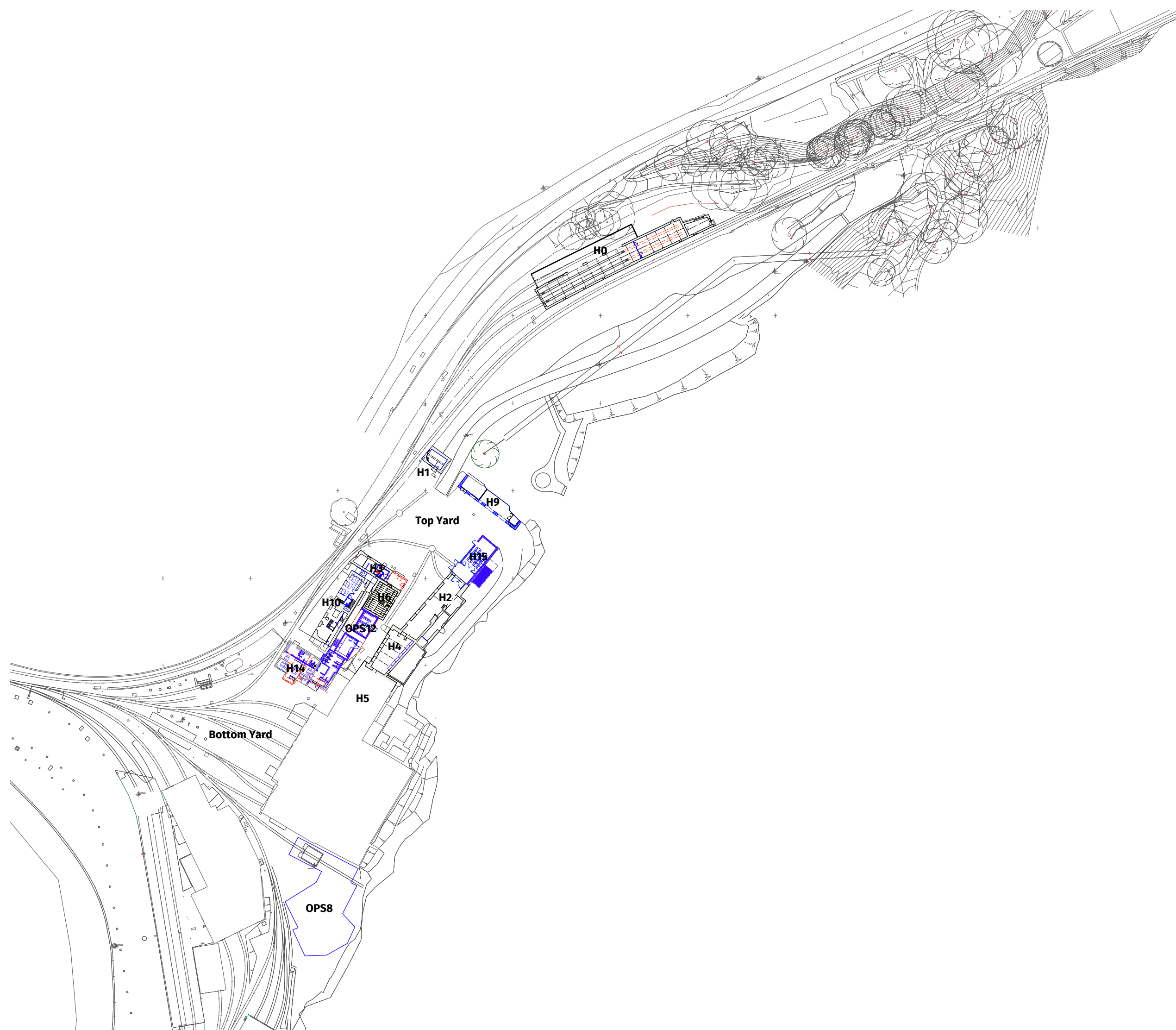
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Date:  
NOVEMBER 2020


81\_GA\_00

# Site

## Proposed Site Plan








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0 10 20 30 40 50m

1:500 @ A1 / 1:1000 @ A3

Thread

Client: FWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

PROPOSED SITE PLAN

Scale:  
1:500 @ A1 / 1:1000 @ A3

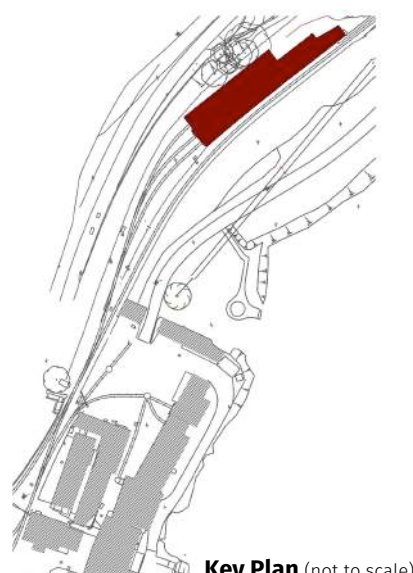
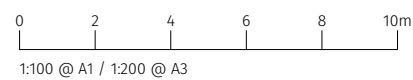
Date:  
MAY 2021

81\_GA\_04

# H0

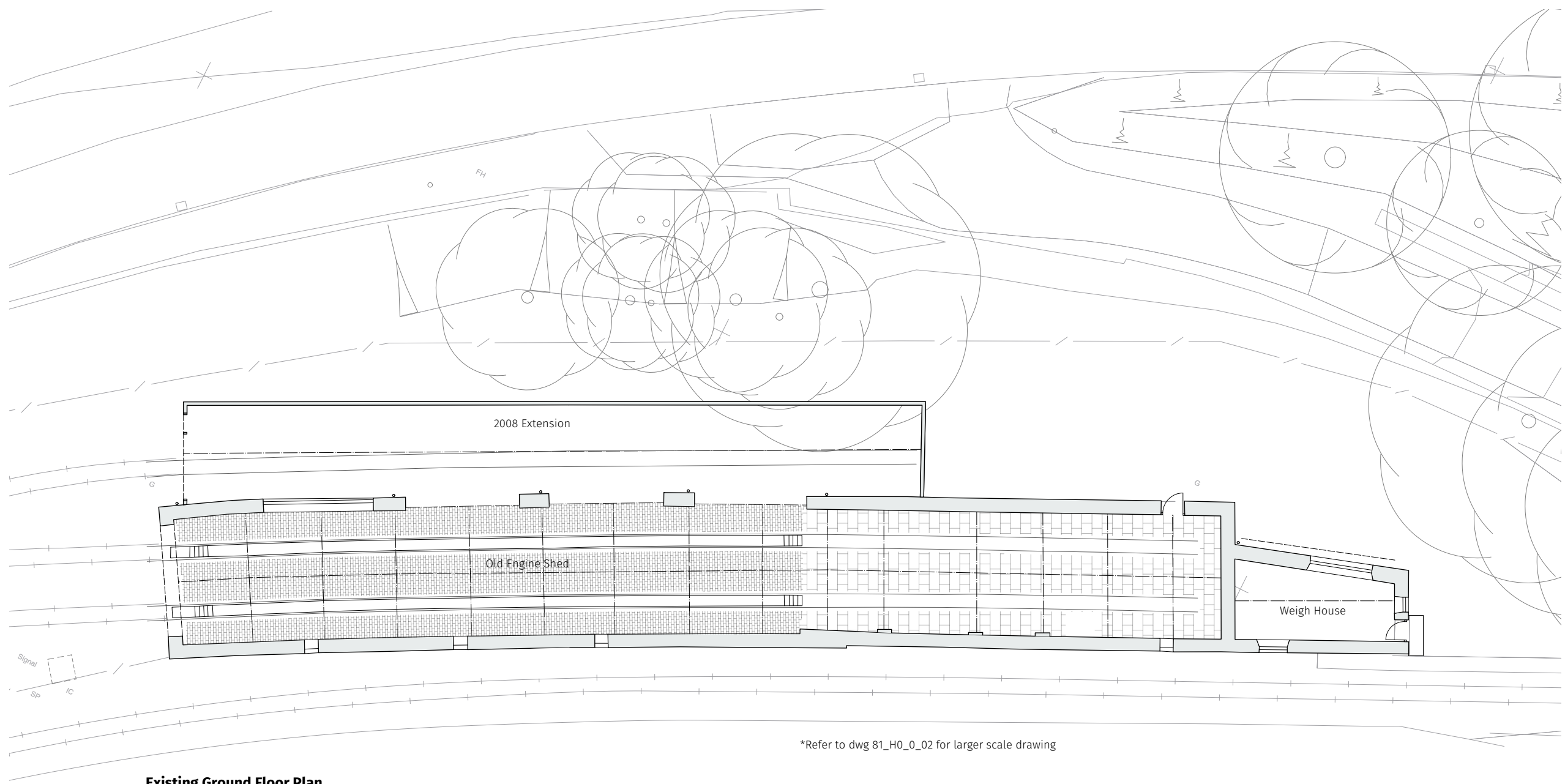
**Old Engine Shed**





Note:  
Scaled drawings of existing taken from  
Historic Building Assessment  
(Bancroft Heritage/Zeepvat)  
All dimensions to be confirmed on site.

REVISIONS



\*Refer to dwg 81\_H0\_0\_02 for larger scale drawing

Existing Ground Floor Plan  
Scale 1:100 @ A1 / 1:200 @ A3

Thread

Client: FWHR  
Project Architect: Claire Fear

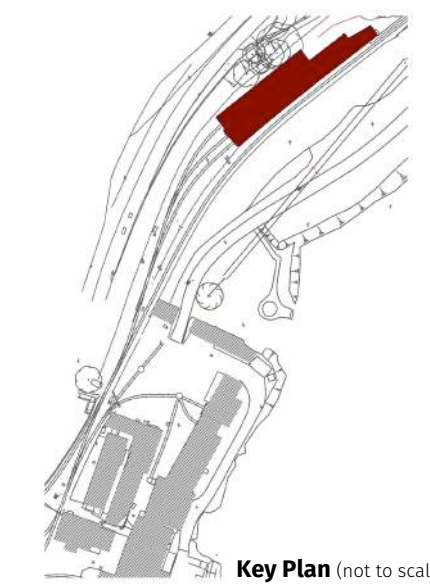
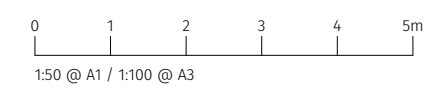
BOSTON LODGE WORKS

H0 OLD ENGINE SHED  
EXISTING SITE LOCATION  
PLAN

Scale:  
1:100@A1 / 1:200@A3

Date:  
MARCH 2021

81\_H0\_0\_01



*Note:*  
Scaled drawings of existing taken from  
Historic Building Assessment  
(Bancroft Heritage/Zeepvat)  
All dimensions to be confirmed on site.

**REVISIONS**



Client: FWHR  
Project Architect: Claire Fear

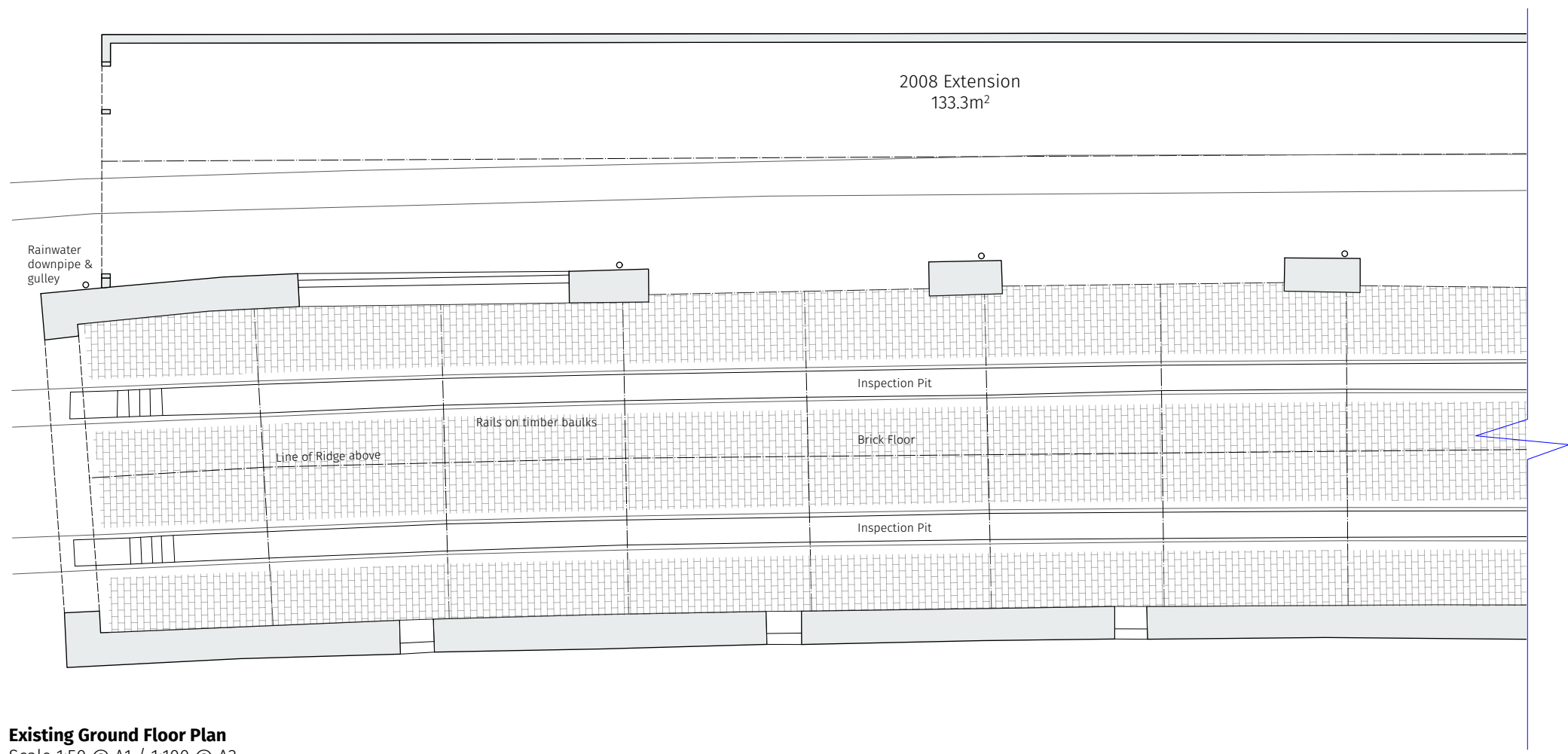
**BOSTON LODGE WORKS**

**H0 OLD ENGINE SHED  
EXISTING PLAN**

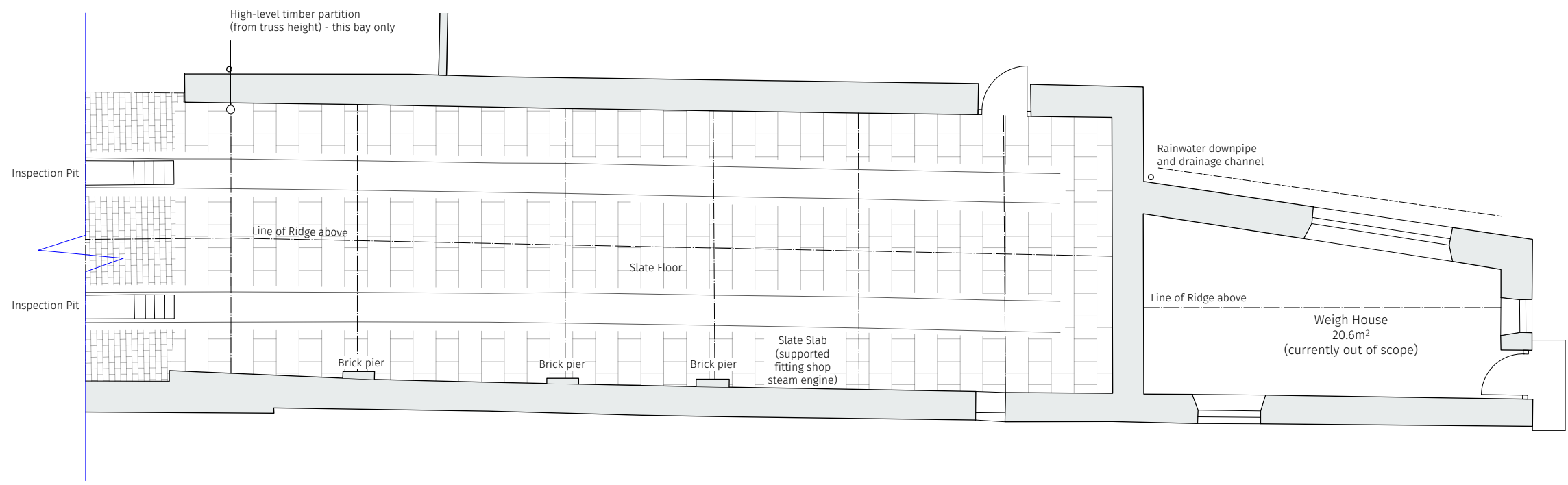
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**1:50@A1 / 1:100@A3**

Date:  
**MARCH 2021**

**81\_H0\_0\_02**

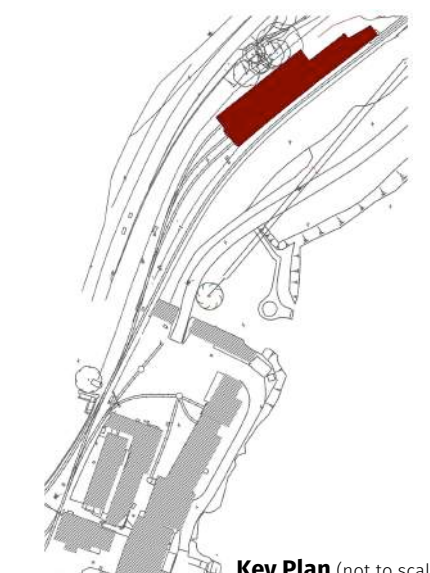
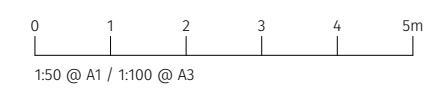


**Existing Ground Floor Plan**  
Scale 1:50 @ A1 / 1:100 @ A3

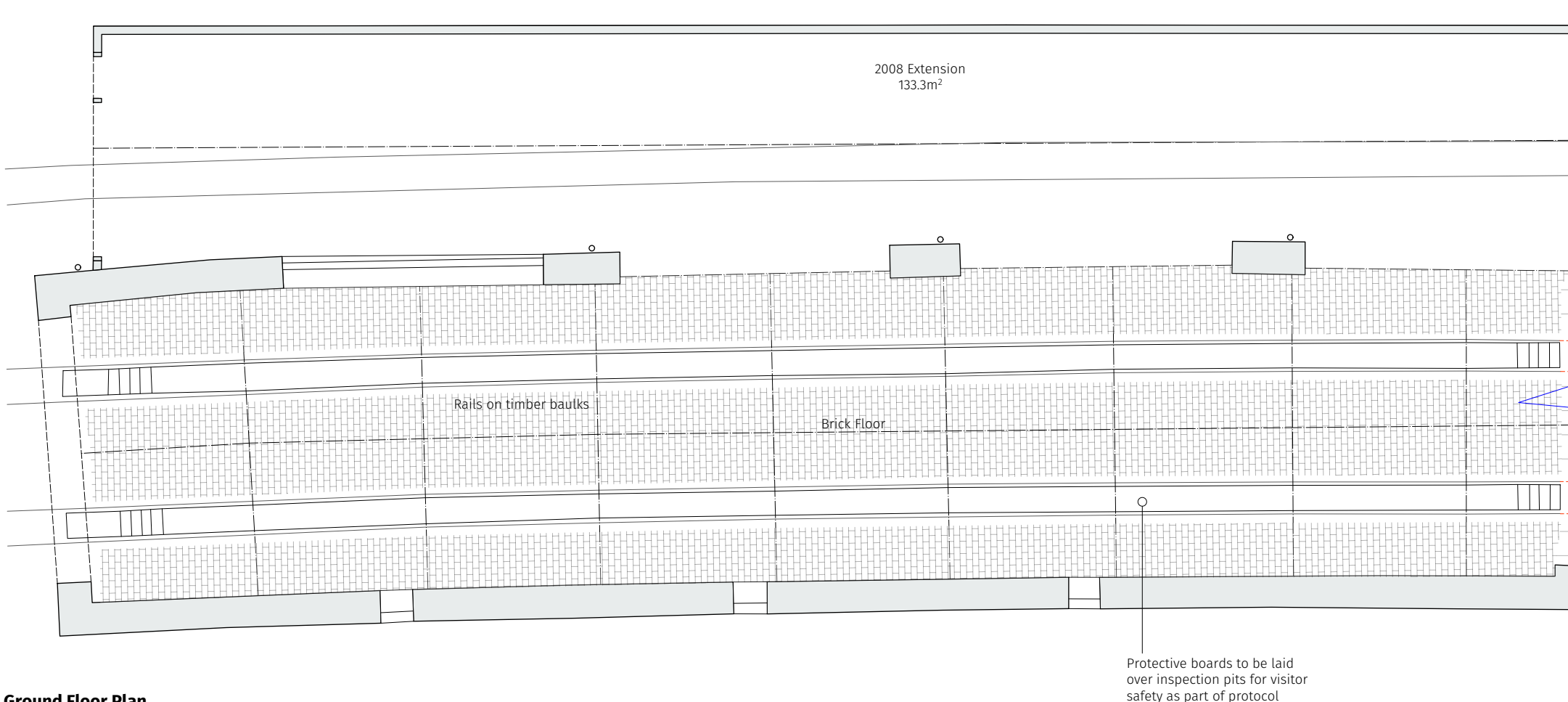


**Existing Ground Floor Plan - Weigh House**  
Scale 1:50 @ A1 / 1:100 @ A3



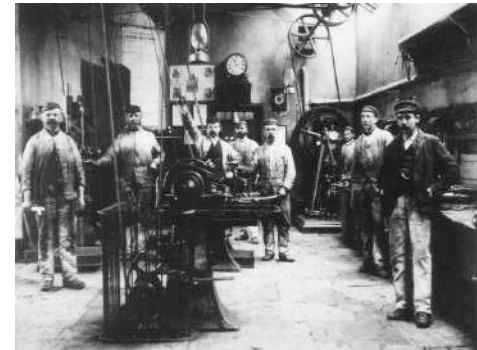


**Key Plan** (not to scale)



**Ground Floor Plan**  
Scale 1:50 @ A1 / 1:100 @ A3

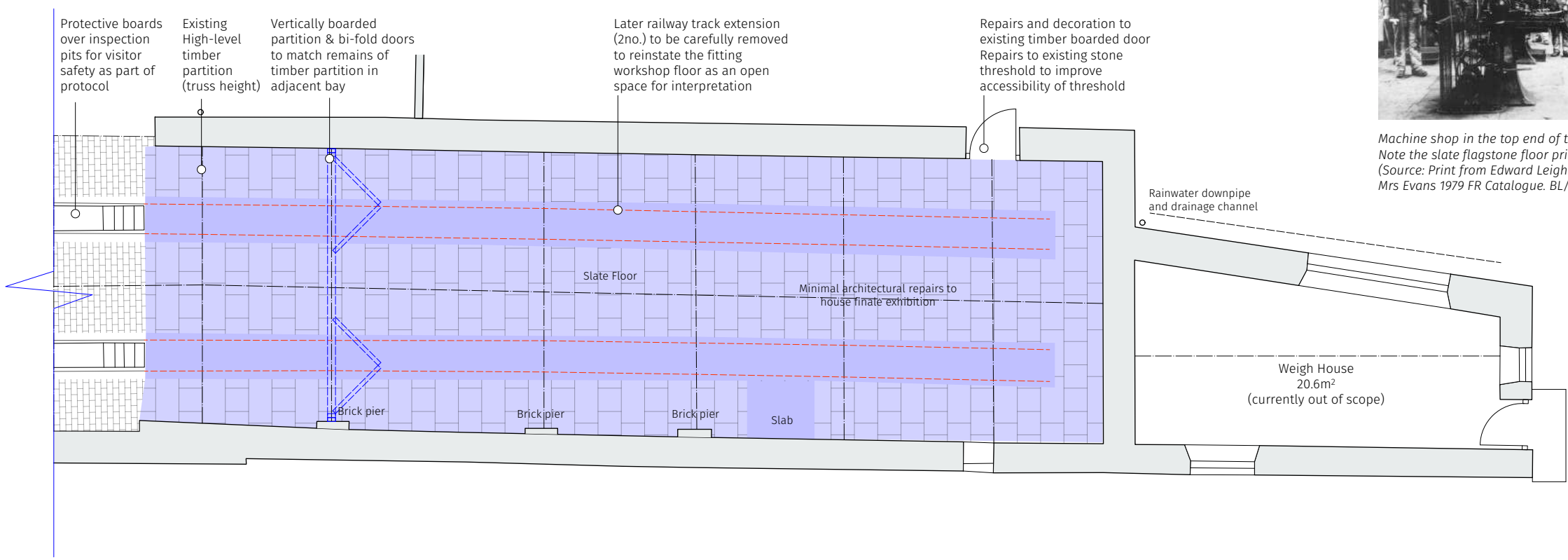
**Note:**  
Localised conservation repairs to masonry as per repairs schedule



Machine shop in the top end of the Engine Shed c.1890s  
Note the slate flagstone floor prior to track extension  
(Source: Print from Edward Leigh copy neg. Photo D Williams? From Mrs Evans 1979 FR Catalogue. BL/P04/A)

**Note:**  
Scaled drawings of existing taken from Historic Building Assessment (Bancroft Heritage/Zeepvat)  
All dimensions to be confirmed on site.

- REVISIONS**
- Rev A (6 April 2021) - new rooflights omitted; partition with bi-fold doors, shifted to next bay
  - Rev B (7 April 2021) - note on partition revised, direction of bi-fold doors adjusted.



**Ground Floor Plan - Interpretation Space and Weigh House**  
Scale 1:50 @ A1 / 1:100 @ A3

**Key:**

- Localised repairs to existing slate flagstones to enable safe and level access for visitors



Client: FWHR  
Project Architect: Claire Fear

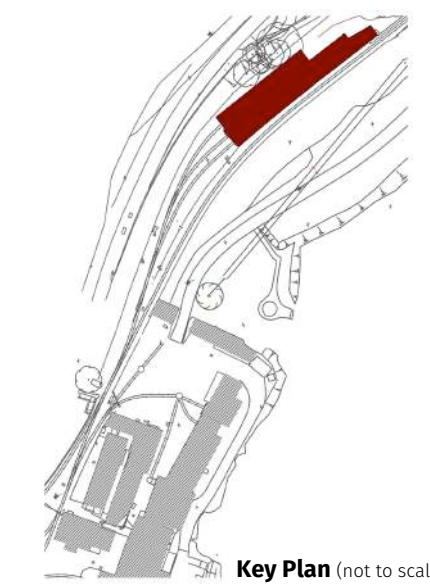
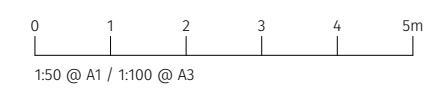
BOSTON LODGE WORKS

**H0 OLD ENGINE SHED  
PROPOSED PLAN**

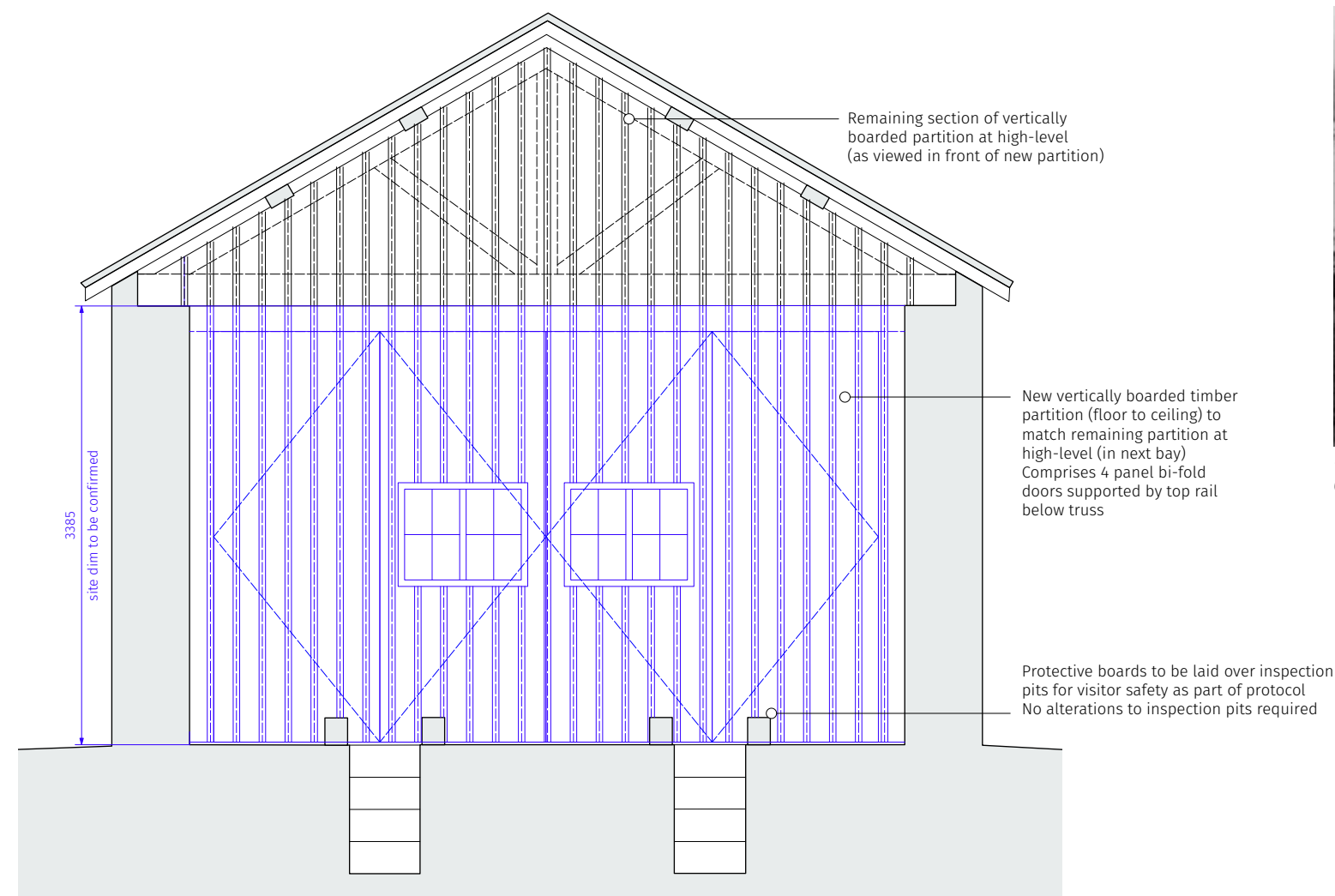
Scale:  
**1:50@A1 / 1:100@A3**  
Date:  
**MARCH 2021**

81\_H0\_3\_01 B

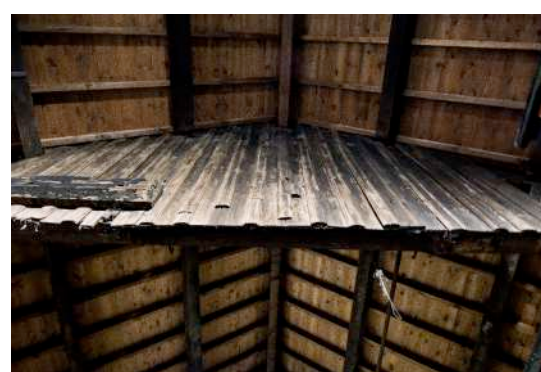




1956 photograph shows corrugated sheet roof with rooflights in every bay (Source: Fred Boughey, in Historic Building Assessment, Zeepvat)

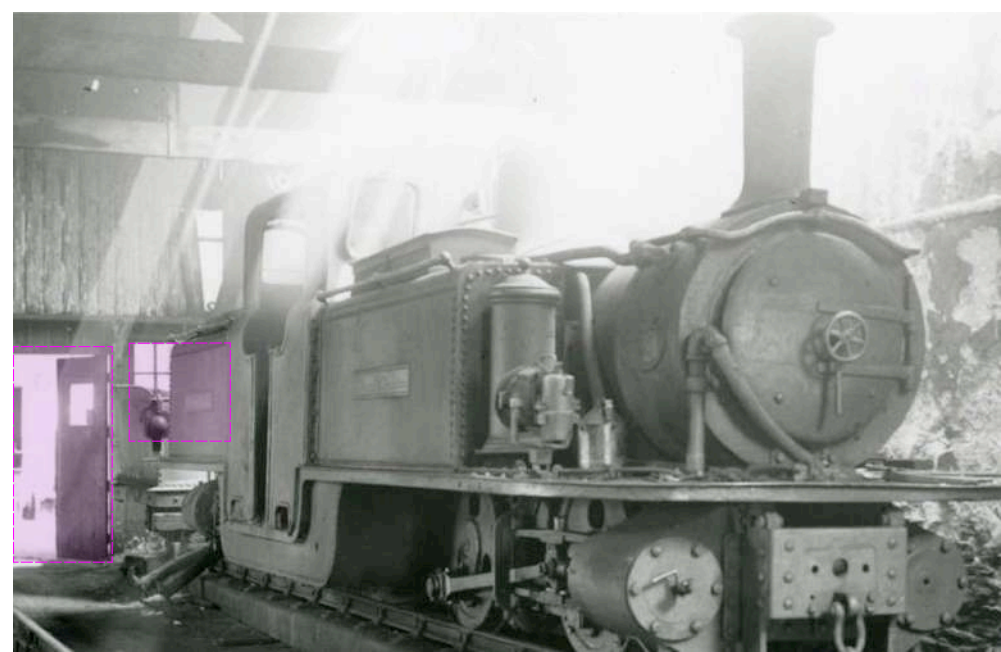


**Proposed Section**  
Scale 1:25 @ A1 / 1:50 @ A3

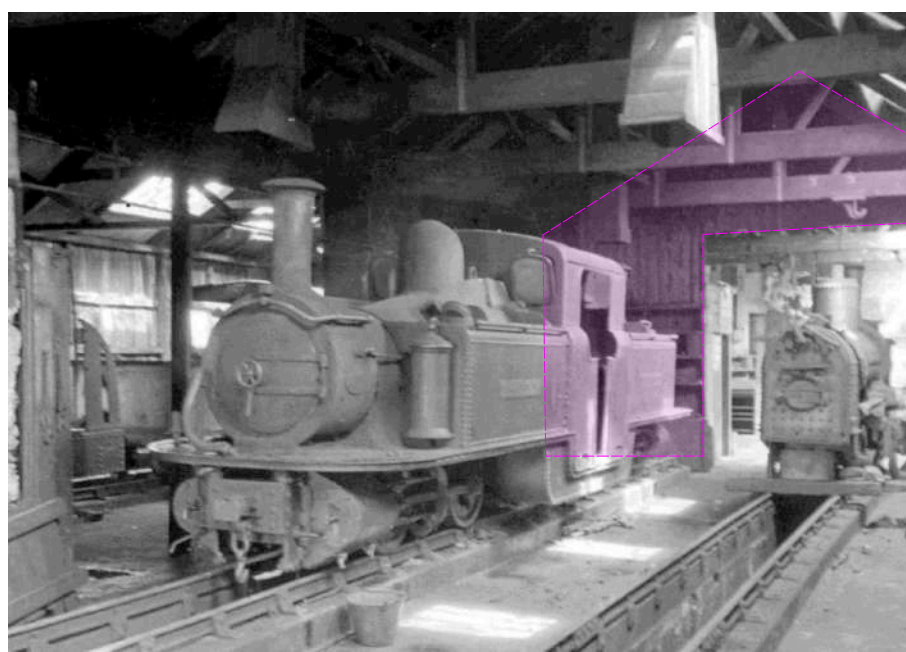


Note:  
Scaled drawings of existing taken from Historic Building Assessment (Bancroft Heritage/Zeepvat)  
All dimensions to be confirmed on site.

- REVISIONS**
- Rev A (6 April 2021) - new rooflights omitted, design of partition altered to allow for bi-fold doors
  - Rev B (7 April 2021) - windows added to bi-fold doors



1932 photograph showing the timber partition, door & window between the engine shed and the fitting workshop. Rooflights illuminate the interior. (Source: HC Casserley 8640, FJWHR online collection)



1946 image showing the timber partition between the engine shed and the fitting workshop (Johnson 2007 in Historic Building Assessment, Zeepvat)

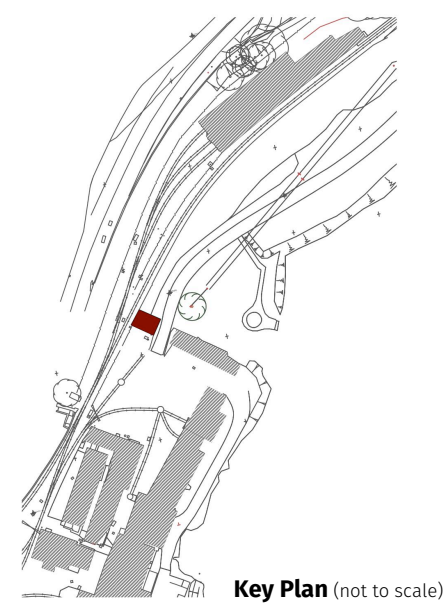
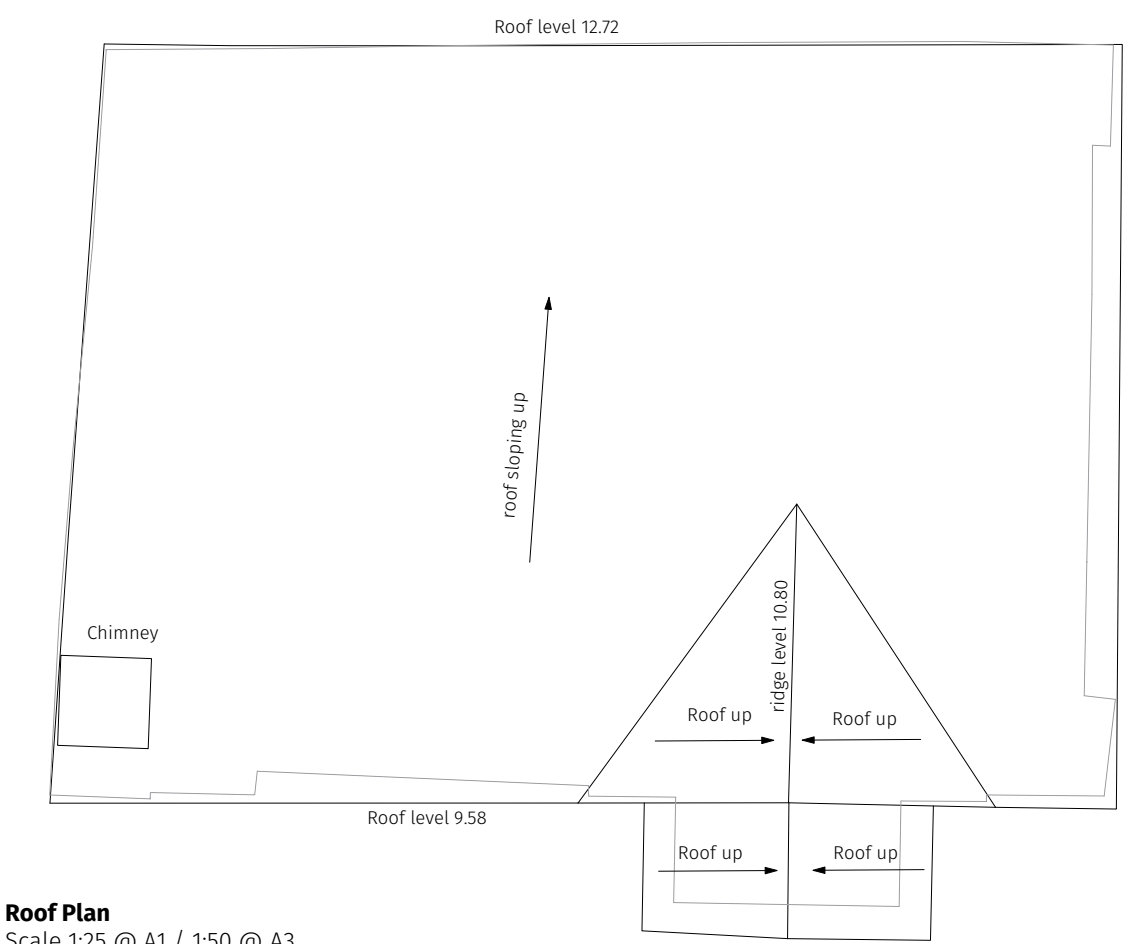
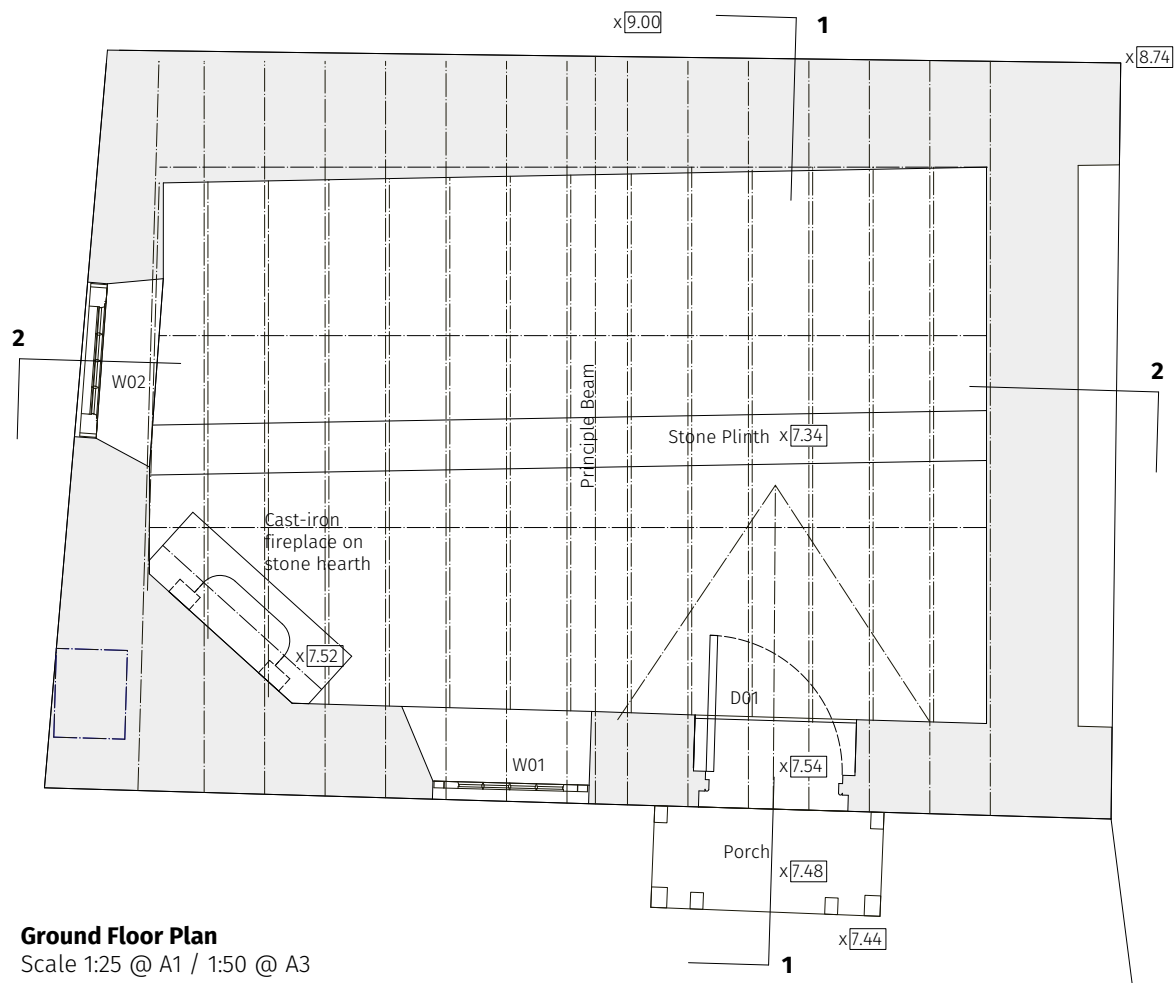


Timber screen detailing - photographs above show vertical boarding with beading (2020)



# H1

**Plas Smart**



REVISIONS

**Thread**

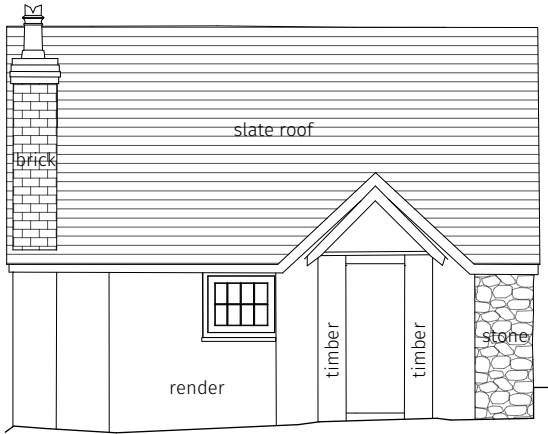
Client: FWHR  
Project Architect: Claire Fear  
BOSTON LODGE WORKS

**H1 PLAS SMART  
EXISTING GROUND FLOOR  
AND ROOF PLAN**

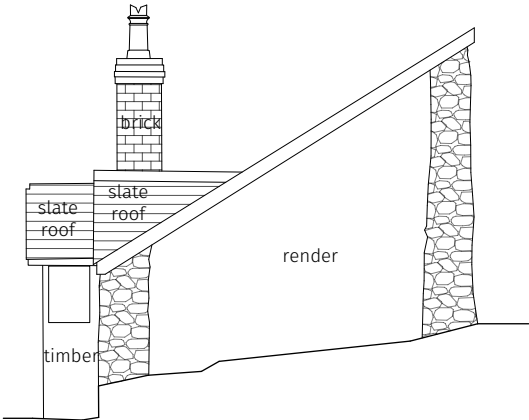
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1:25@A1 / 1:50@A3  
Date:  
MARCH 2021

81\_H1\_0\_01



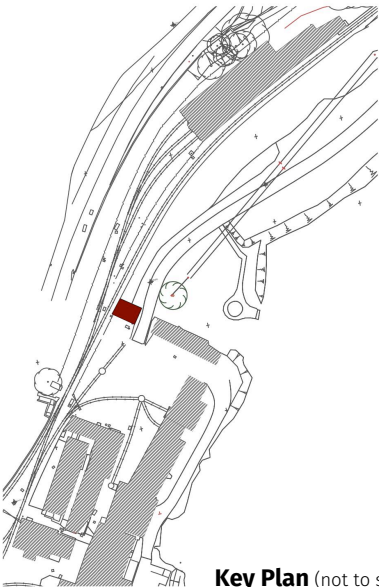


**West Elevation**  
Scale 1:50 @ A1 / 1:100 @ A3

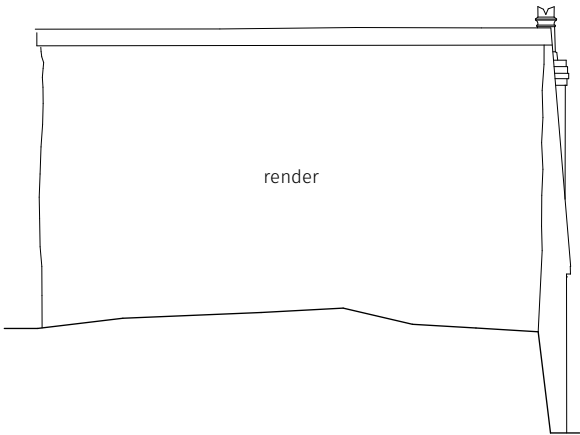


**South Elevation**  
Scale 1:50 @ A1 / 1:100 @ A3

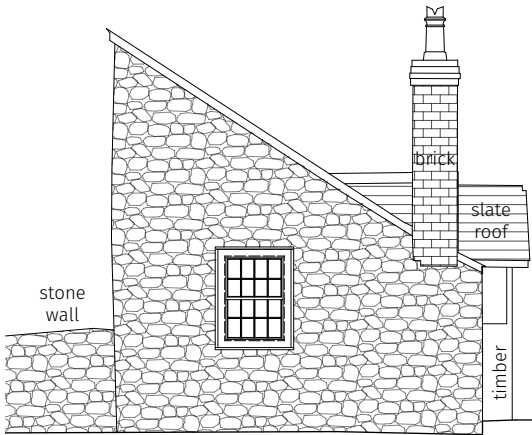
0 1 2 3 4 5m  
1:50 @ A1 / 1:100 @ A3



**Key Plan** (not to scale)



**East Elevation**  
Scale 1:50 @ A1 / 1:100 @ A3



**North Elevation**  
Scale 1:50 @ A1 / 1:100 @ A3

REVISIONS

**Thread**

Client: FWHR  
Project Architect: Claire Fear

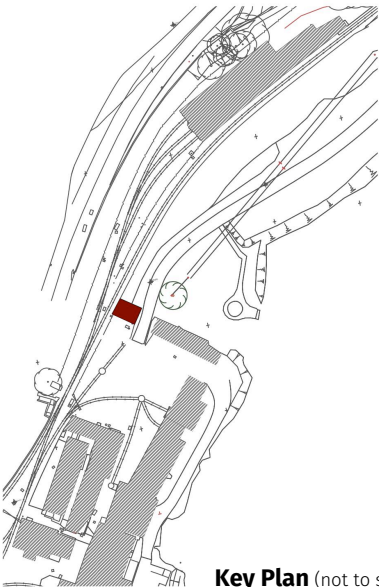
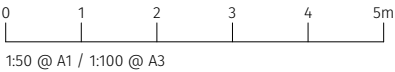
BOSTON LODGE WORKS

**H1 PLAS SMART  
EXISTING ELEVATIONS**

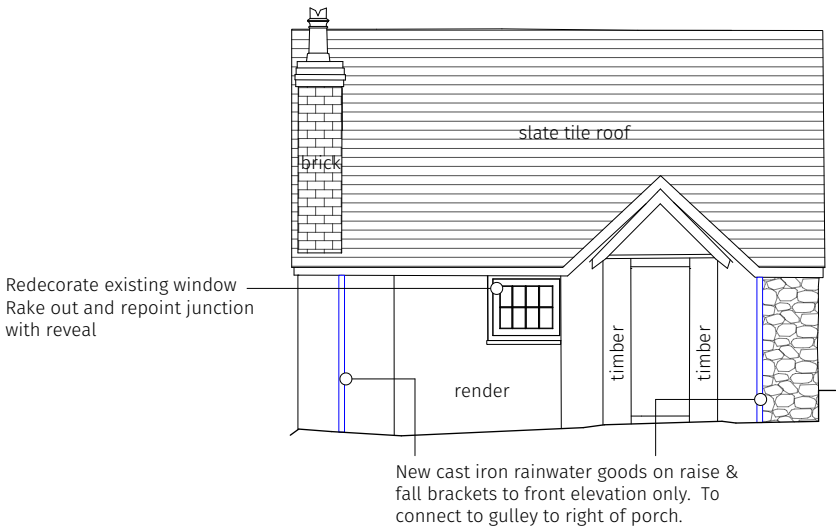
Scale:  
**1:50@A1 / 1:100@A3**

Date:  
**MARCH 2021**

81\_H1\_0\_02

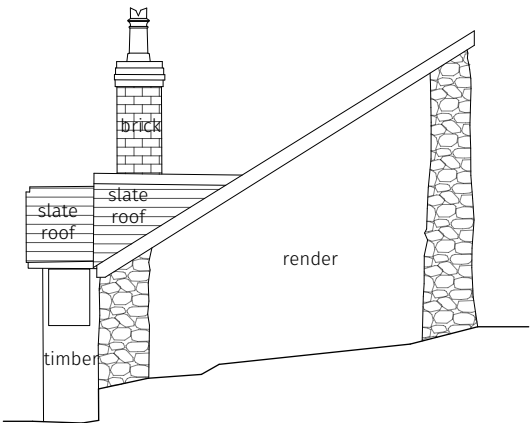


**Key Plan** (not to scale)



**West Elevation**

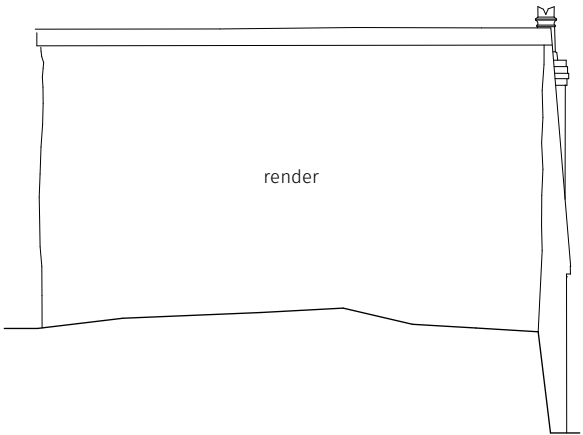
Scale 1:50 @ A1 / 1:100 @ A3



**South Elevation**

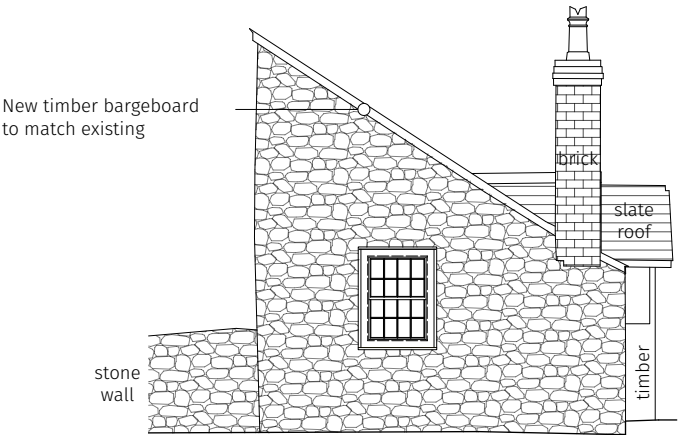
Scale 1:50 @ A1 / 1:100 @ A3

Note:  
All conservation repairs to existing fabric  
as per repairs schedule



**East Elevation**

Scale 1:50 @ A1 / 1:100 @ A3



**North Elevation**

Scale 1:50 @ A1 / 1:100 @ A3

**REVISIONS**

Rev A (12 May 2021) - Rainwater pipes added to west elevation, limewash notes omitted, sash window mechanism note omitted, lead valley note omitted

**Thread**

Client: FWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

**H1 PLAS SMART  
PROPOSED ELEVATIONS**

Scale:  
**1:50@A1 / 1:100@A3**

Date:  
**MARCH 2021**

81\_H1\_3\_02A

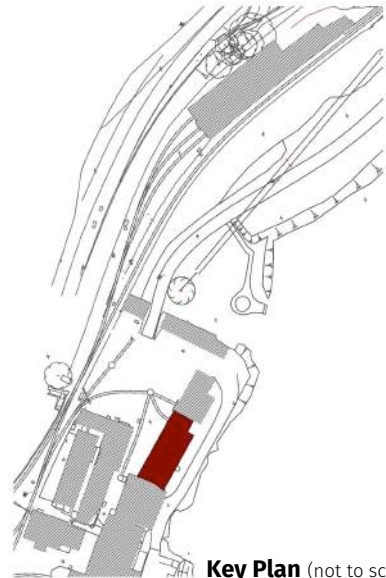
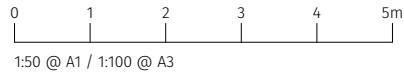


# H2

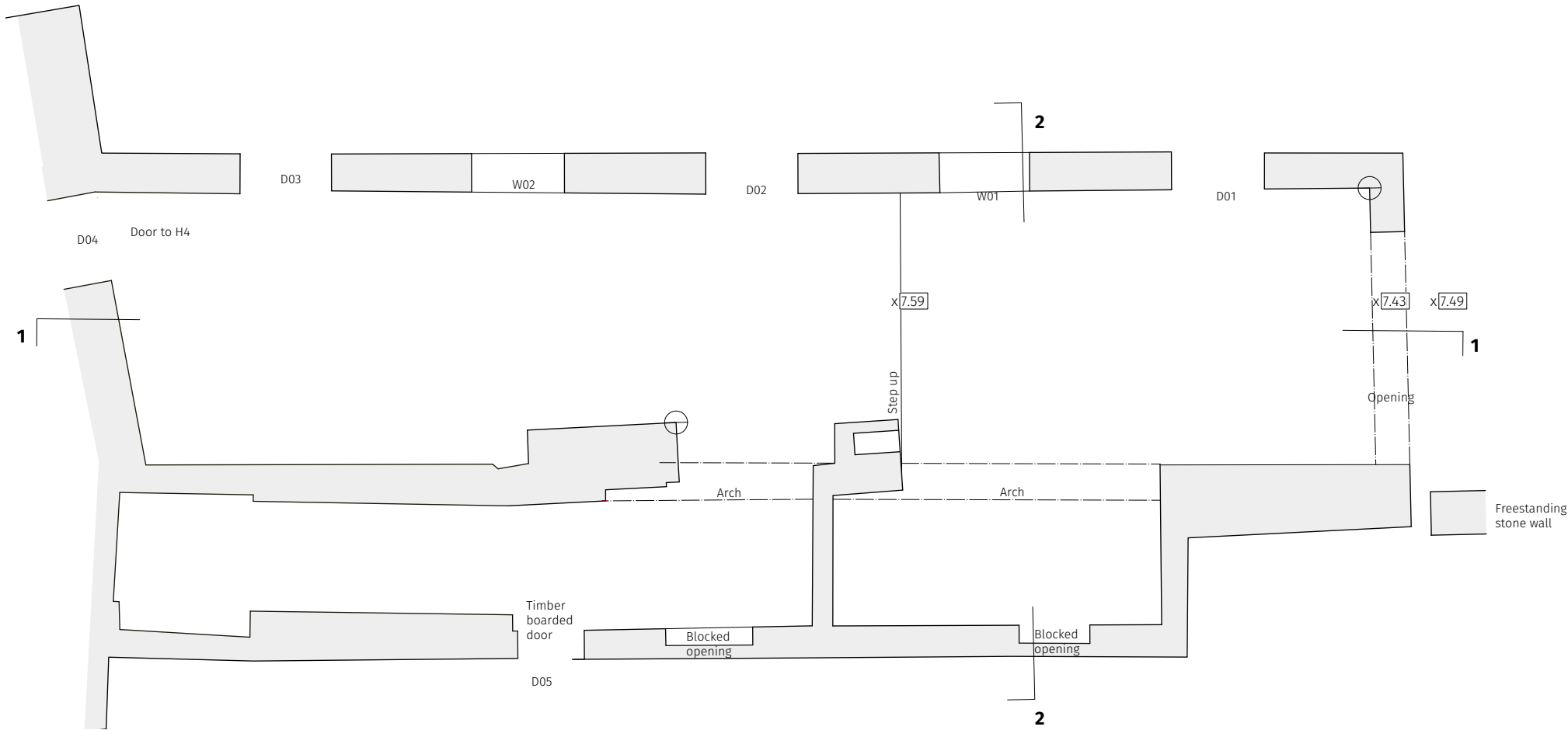
## Blacksmiths Workshop



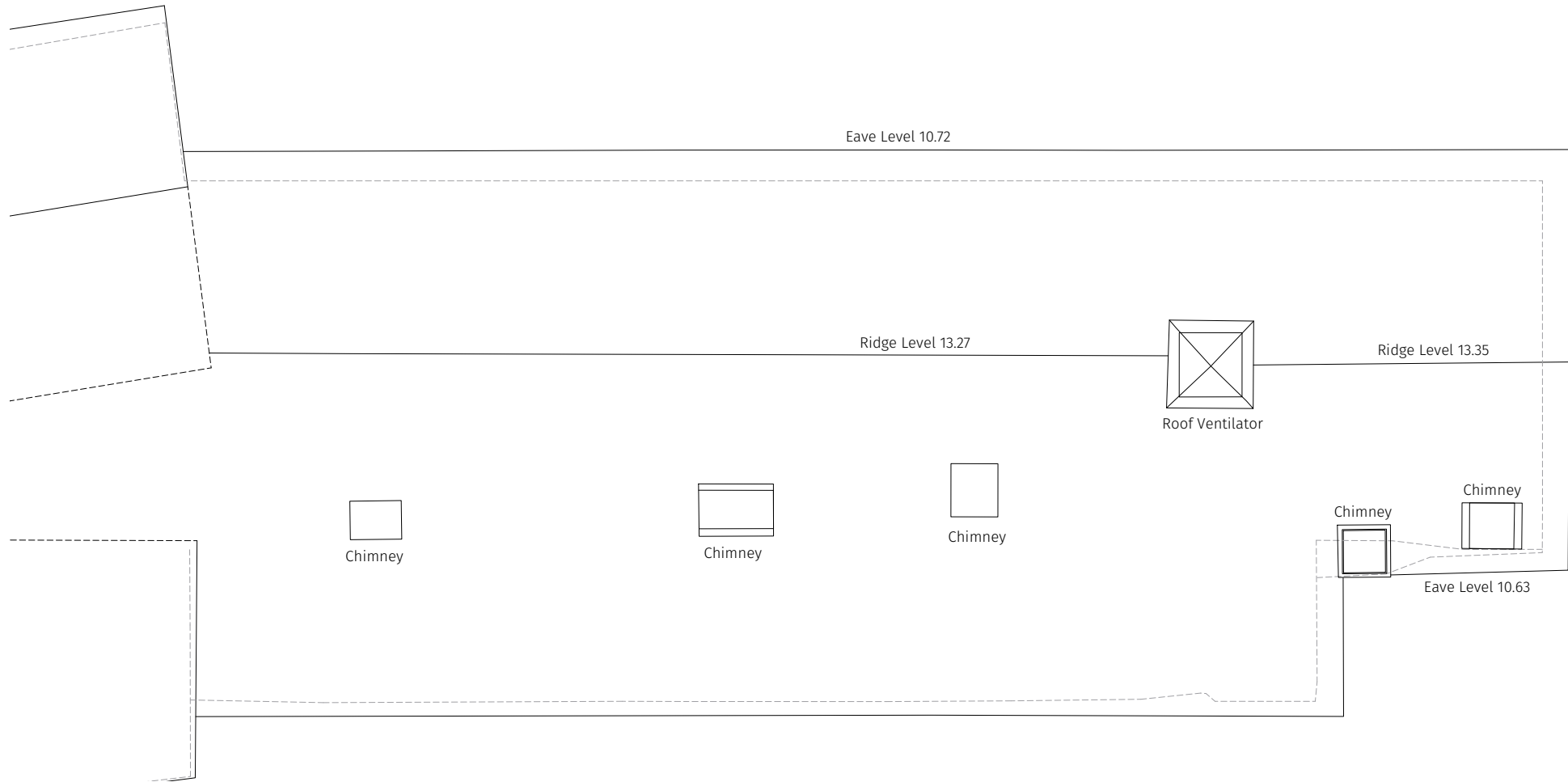
**Thread** trading as Architectural Thread.  
Registered in England and Wales, Number 06000773  
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VAT No. 131 4588 17  
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© Architectural Thread Ltd



**Key Plan** (not to scale)



**Ground Floor Plan**  
Scale 1:50 @ A1 / 1:100 @ A3



**Roof Plan**  
Scale 1:50 @ A1 / 1:100 @ A3

**REVISIONS**

**Thread**

Client: FWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

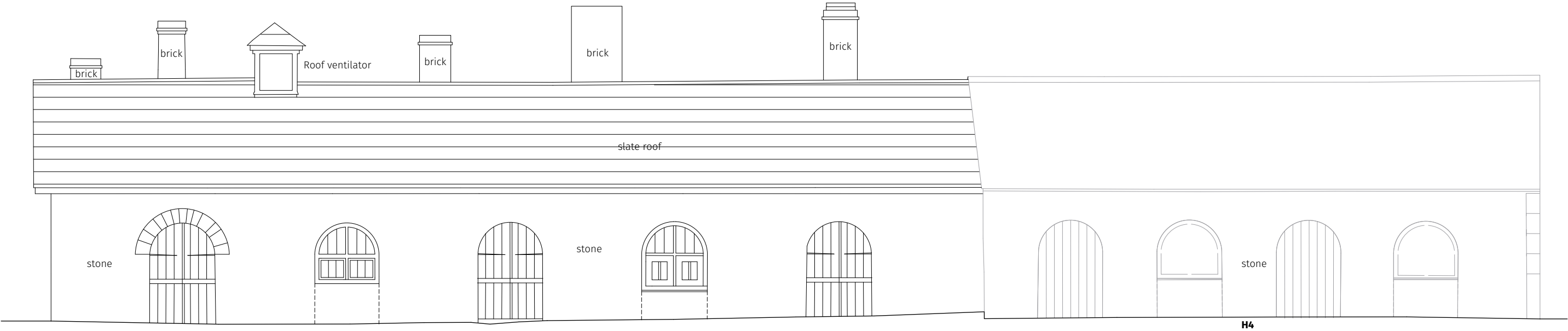
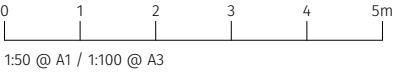
**H2 BLACKSMITHS  
WORKSHOP EXISTING  
GROUND & ROOF PLAN**

Scale:  
**1:50@A1 / 1:100@A3**

Date:  
**MARCH 2021**

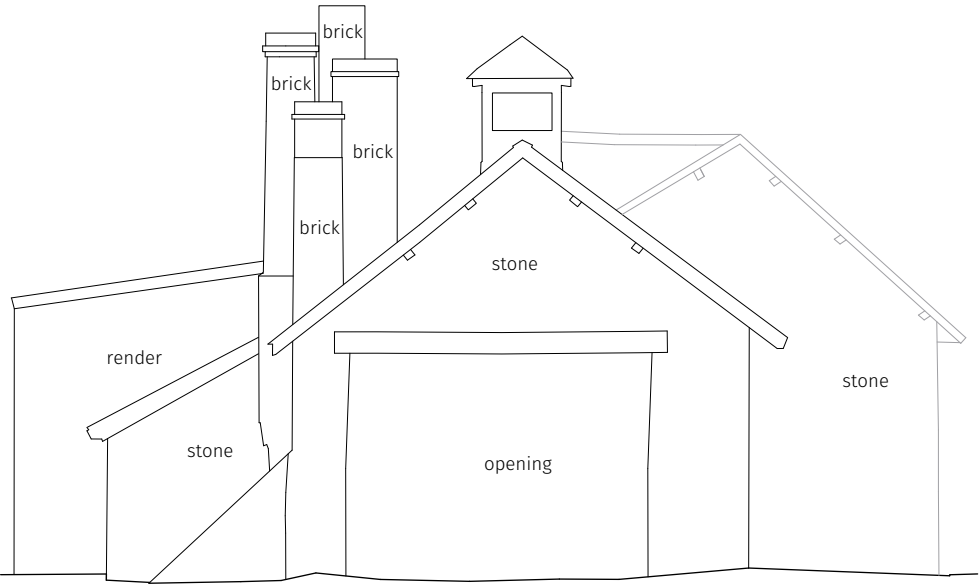
81\_H2\_0\_01





**North Elevation**  
Scale 1:50 @ A1 / 1:100 @ A3

REVISIONS



**East Elevation**  
Scale 1:50 @ A1 / 1:100 @ A3

**Thread**

Client: FWHR  
Project Architect: Claire Fear

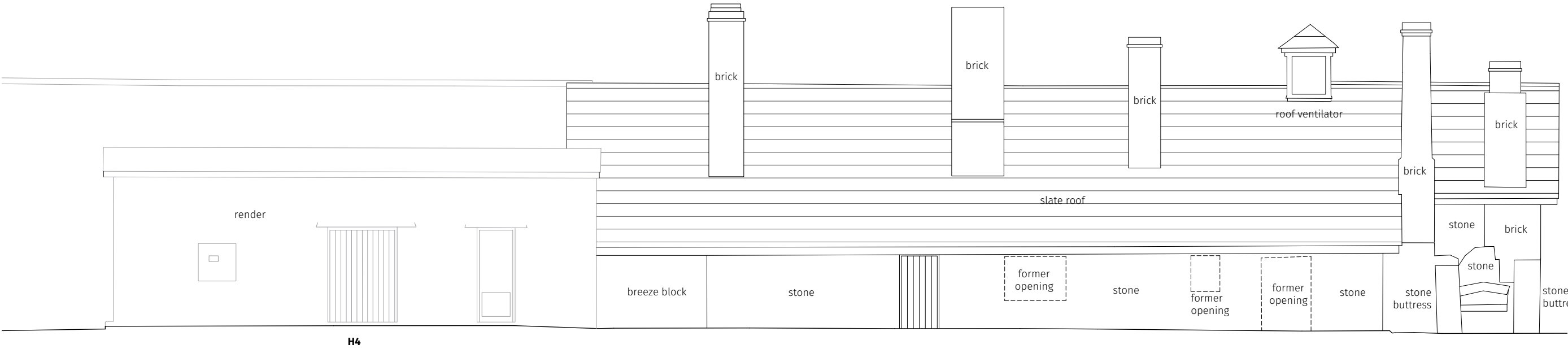
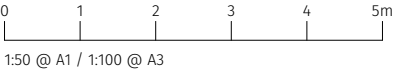
BOSTON LODGE WORKS

**H2 BLACKSMITHS  
WORKSHOP EXISTING  
NORTH & EAST ELEVATIONS**

Scale:  
**1:50@A1 / 1:100@A3**

Date:  
**MARCH 2021**

81\_H2\_0\_02



**South Elevation**  
Scale 1:50 @ A1 / 1:100 @ A3

REVISIONS

**Thread**

Client: FWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

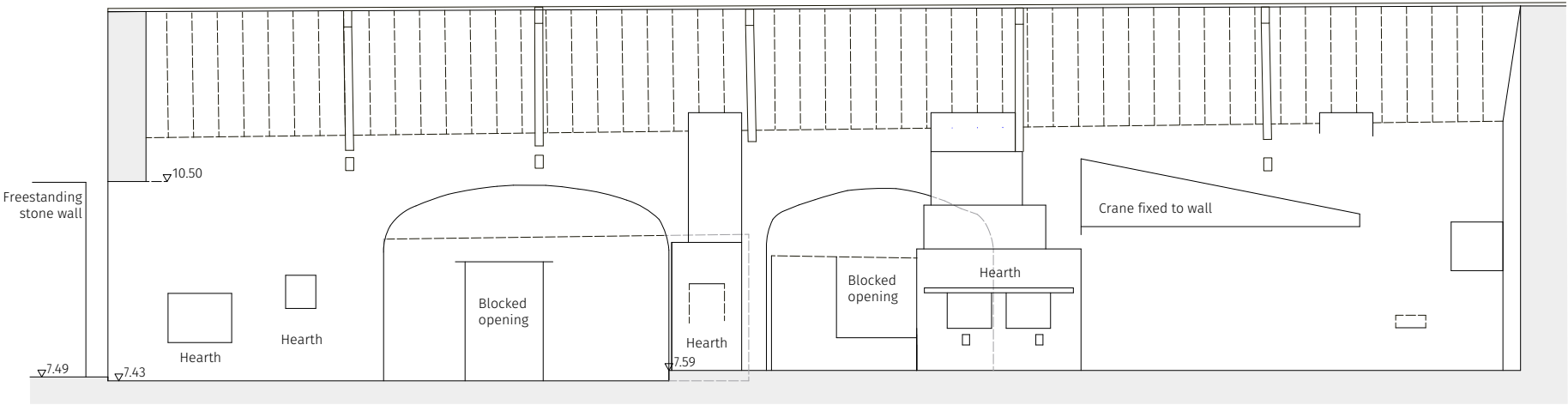
**H2 BLACKSMITHS  
WORKSHOP EXISTING  
SOUTH ELEVATION**

Scale:  
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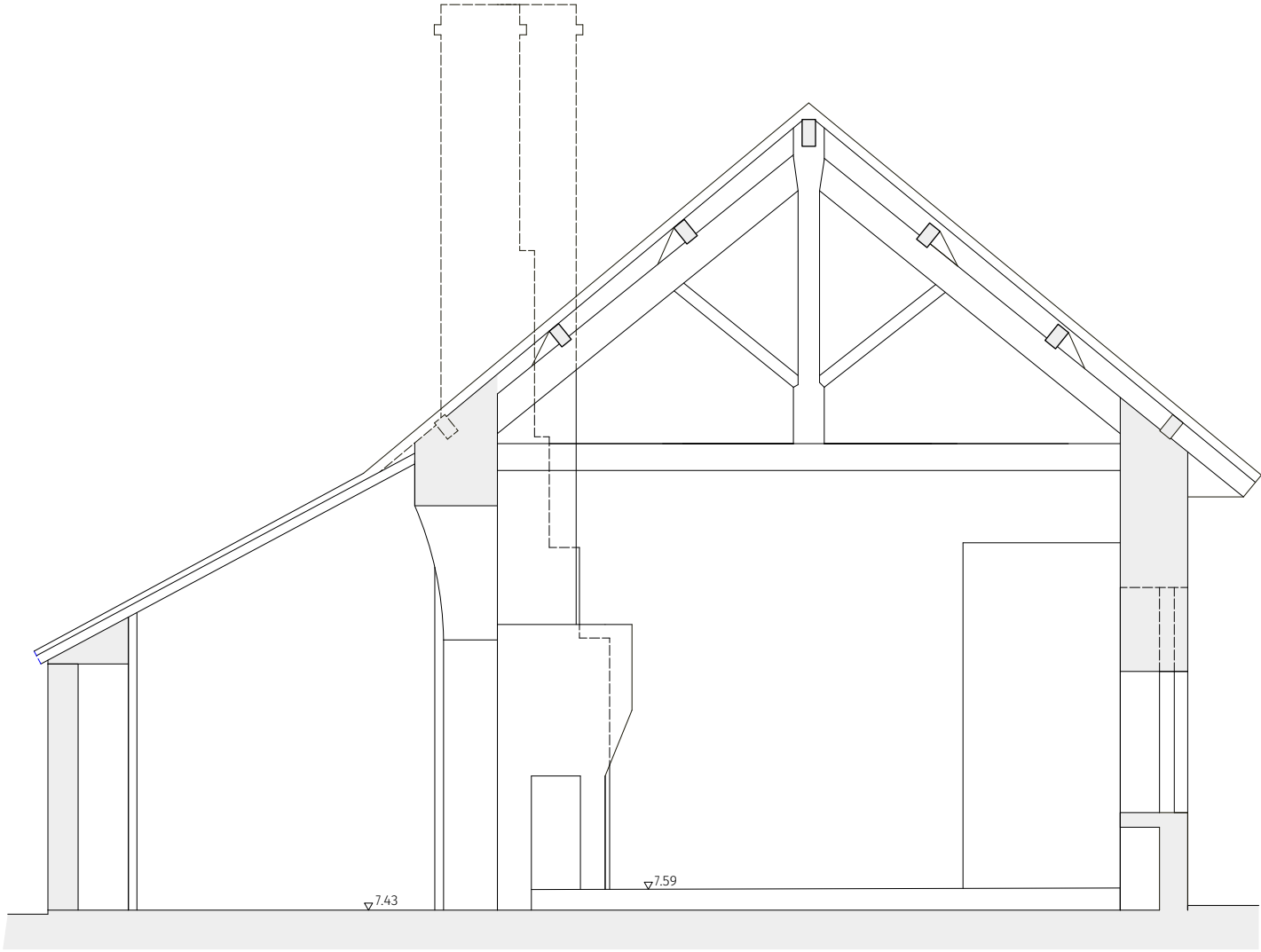
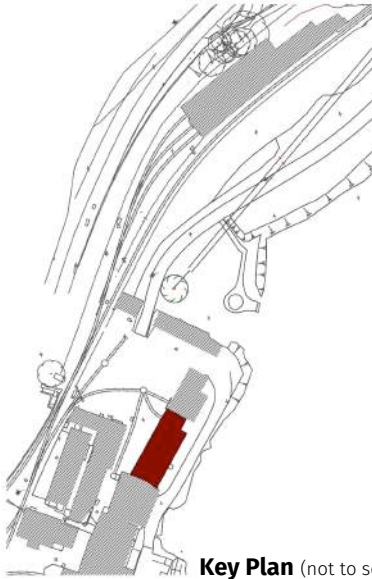
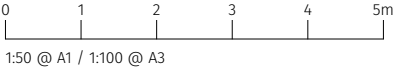
Date:  
**MARCH 2021**

**81\_H2\_0\_03**

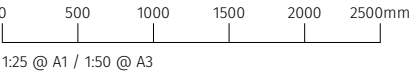




**Section 1**  
Scale 1:50 @ A1 / 1:100 @ A3



**Section 2**  
Scale 1:25 @ A1 / 1:50 @ A3



REVISIONS

**Thread**

Client: FWHR  
Project Architect: Claire Fear

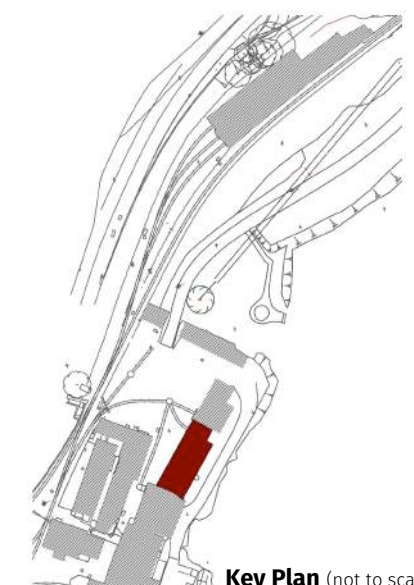
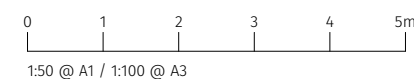
BOSTON LODGE WORKS

**H2 BLACKSMITHS  
WORKSHOP  
EXISTING SECTIONS**

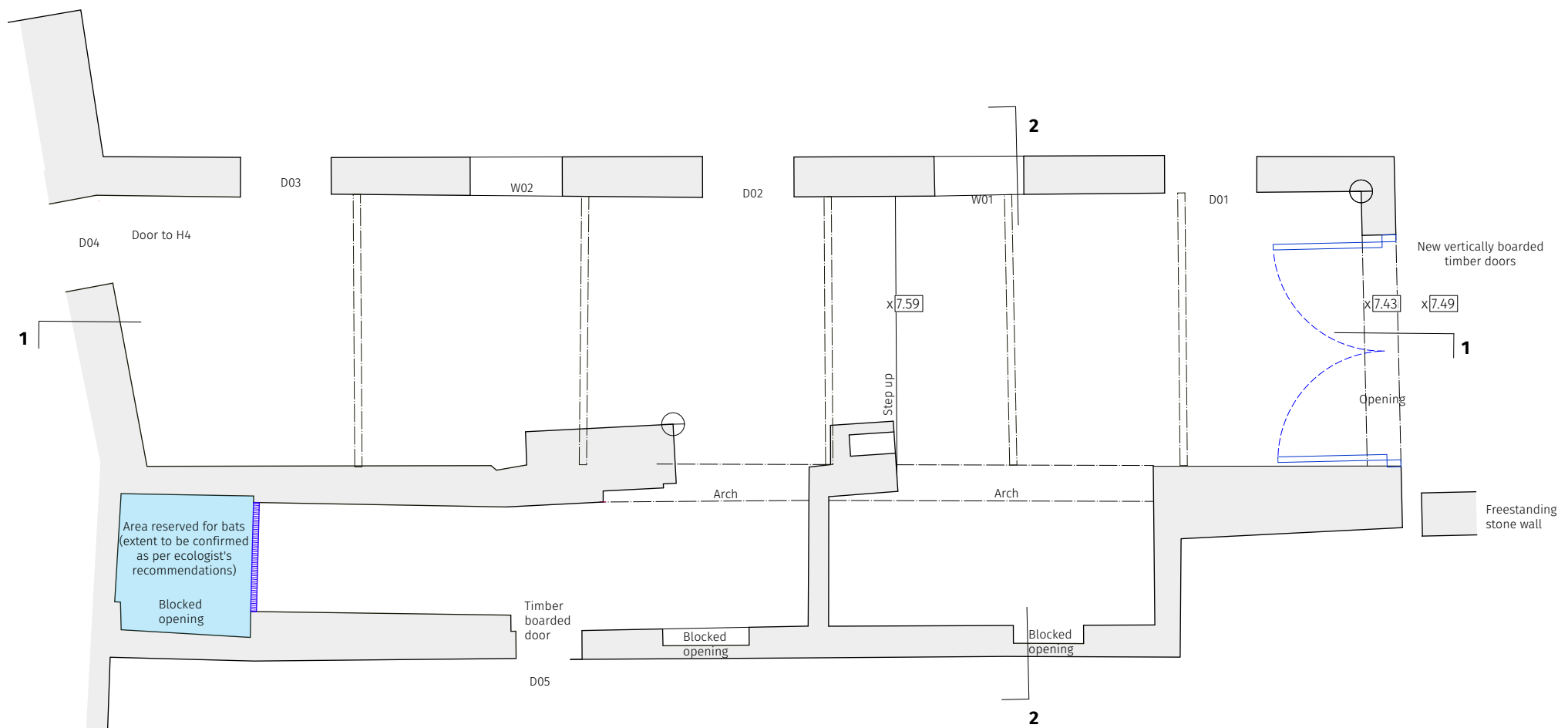
Scale:  
**As shown**

Date:  
**MARCH 2021**

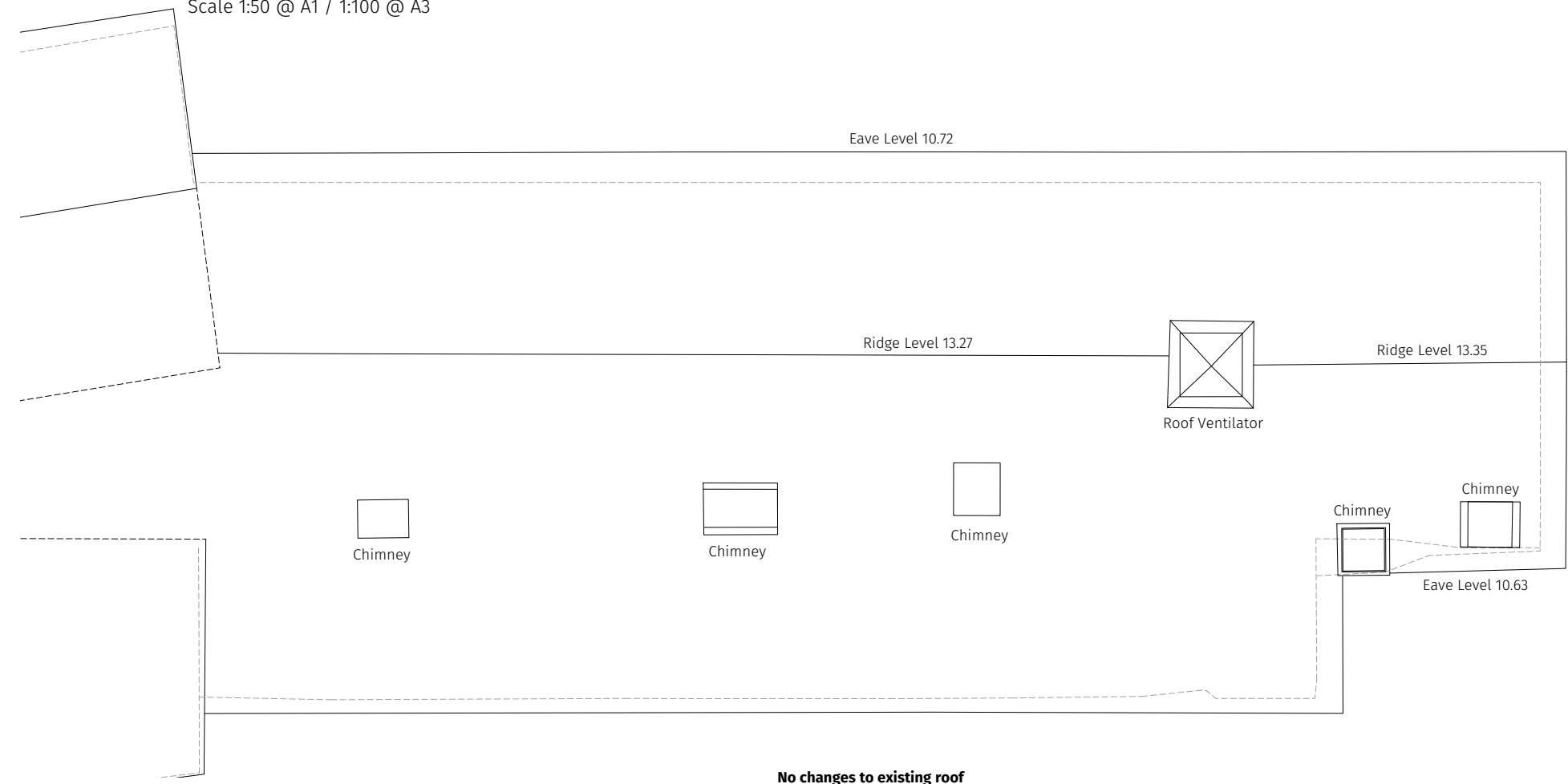
**81\_H2\_0\_04**



**Key Plan** (not to scale)



**Ground Floor Plan**  
Scale 1:50 @ A1 / 1:100 @ A3



**Roof Plan**  
Scale 1:50 @ A1 / 1:100 @ A3

REVISIONS



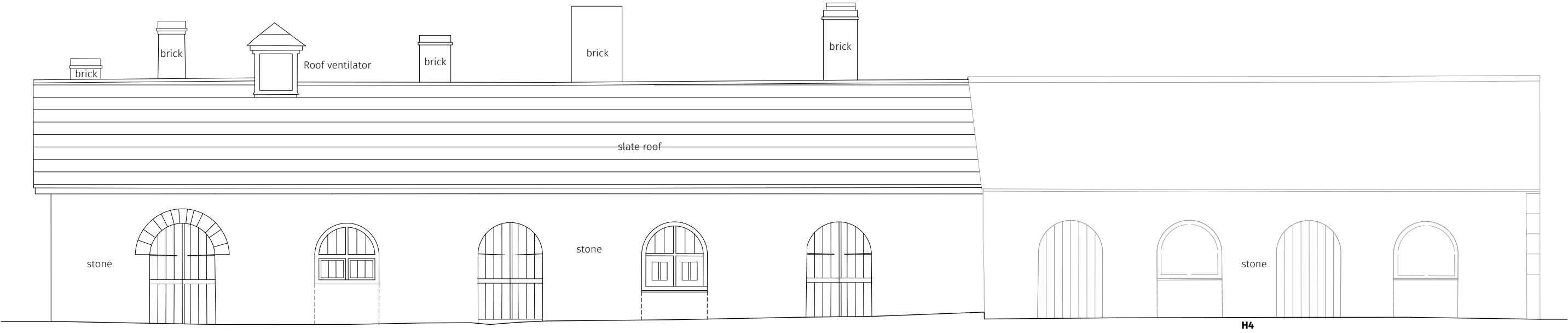
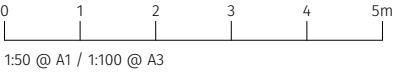
Client: FWHR  
Project Architect: Claire Fear  
**BOSTON LODGE WORKS**

**H2 BLACKSMITHS  
WORKSHOP PROPOSED  
GROUND & ROOF PLAN**

Scale:  
**1:50@A1 / 1:100@A3**  
Date:  
**MARCH 2021**

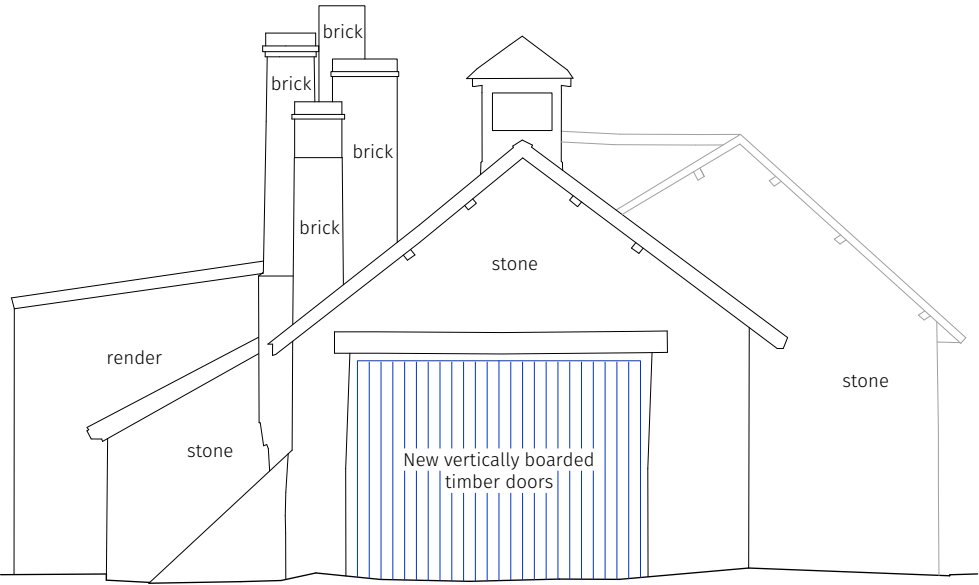
**81\_H2\_3\_01**





**North Elevation**  
Scale 1:50 @ A1 / 1:100 @ A3

No changes to existing North elevation



**East Elevation**  
Scale 1:50 @ A1 / 1:100 @ A3

REVISIONS

**Thread**

Client: FWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

**H2 BLACKSMITHS  
WORKSHOP PROPOSED  
NORTH & EAST ELEVATIONS**

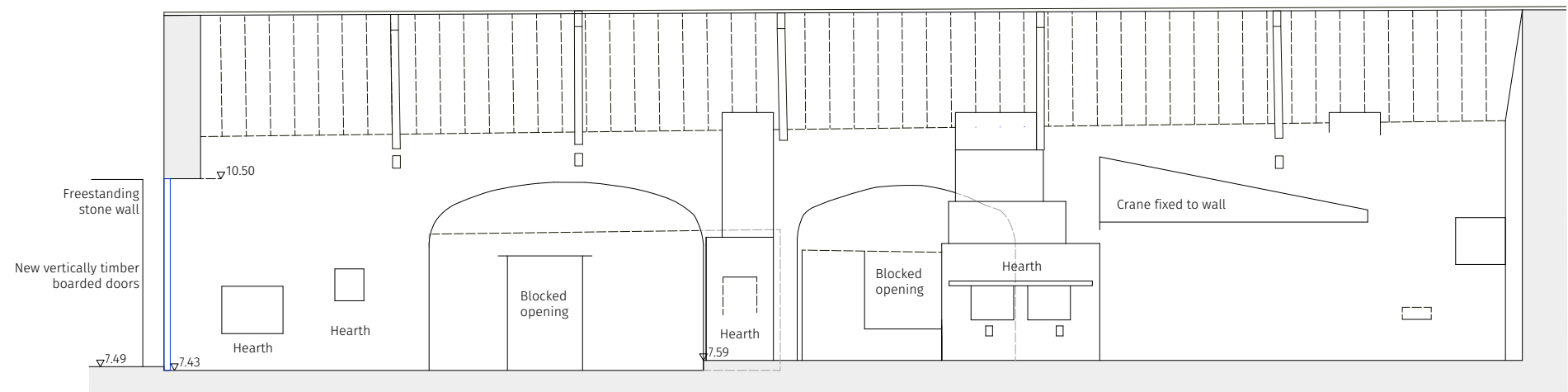
Scale:  
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Date:  
**MARCH 2021**

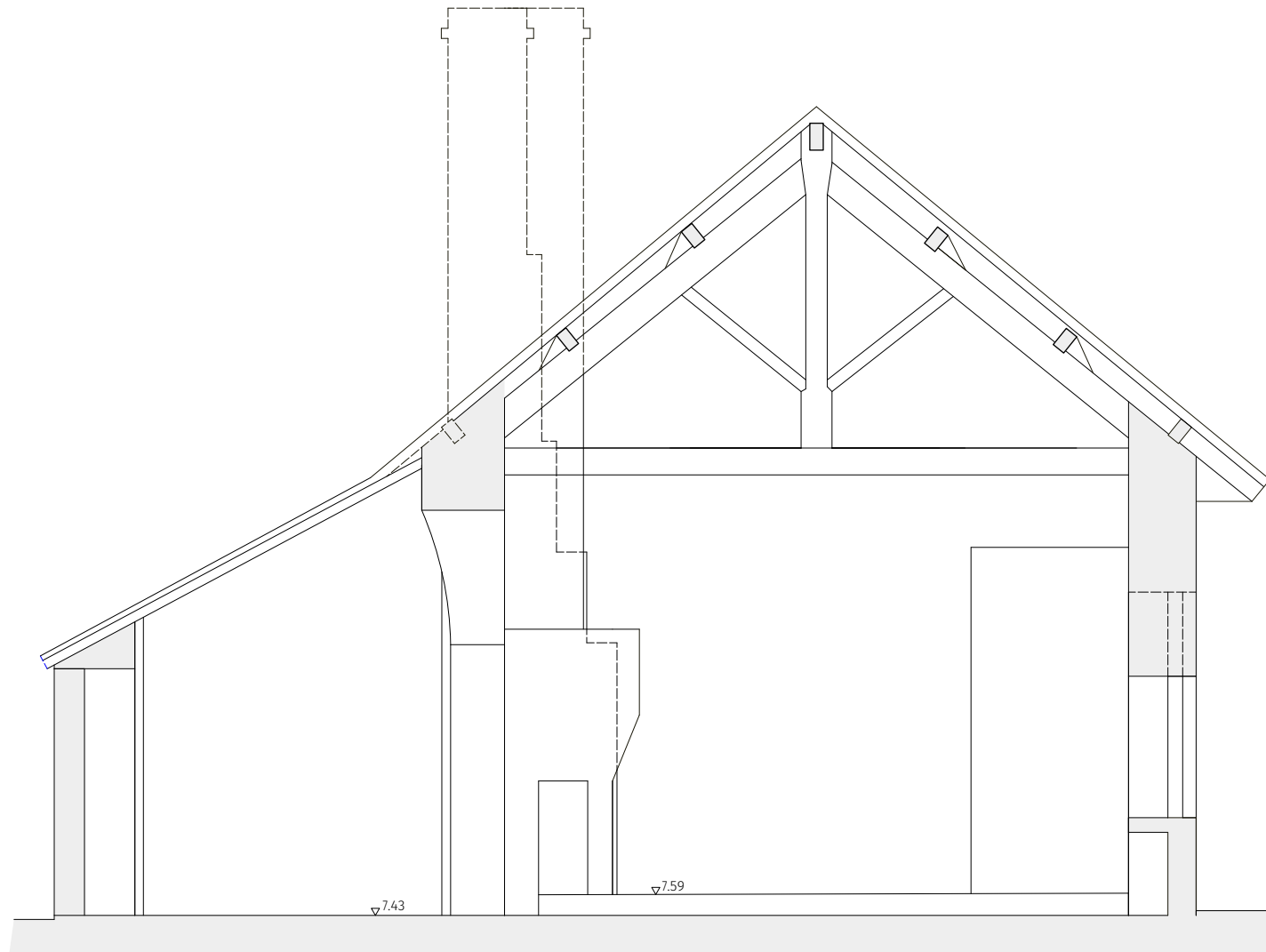
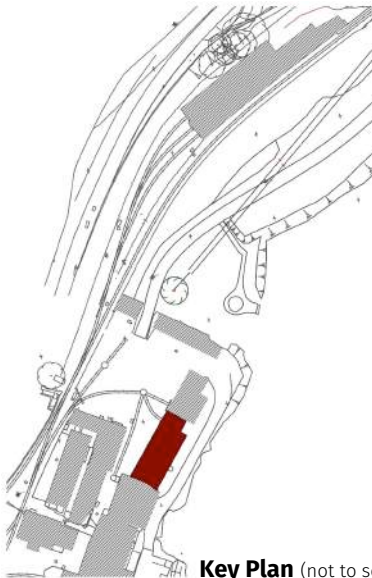
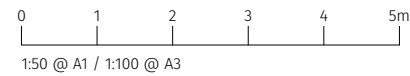
81\_H2\_3\_02

81\_H2\_3\_03



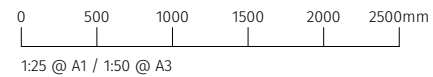


**Section 1**  
Scale 1:50 @ A1 / 1:100 @ A3



**Section 2**  
Scale 1:25 @ A1 / 1:50 @ A3

No changes to existing section



REVISIONS

**Thread**

Client: FWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

**H2 BLACKSMITHS  
WORKSHOP  
PROPOSED SECTIONS**

Scale:  
As shown

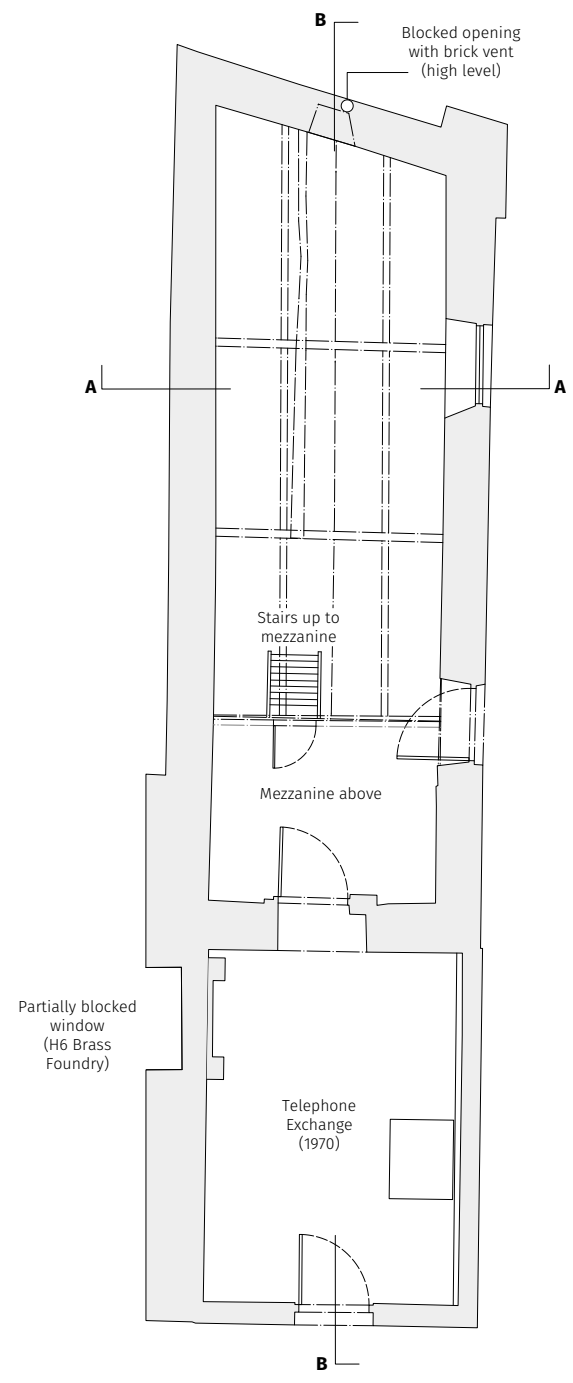
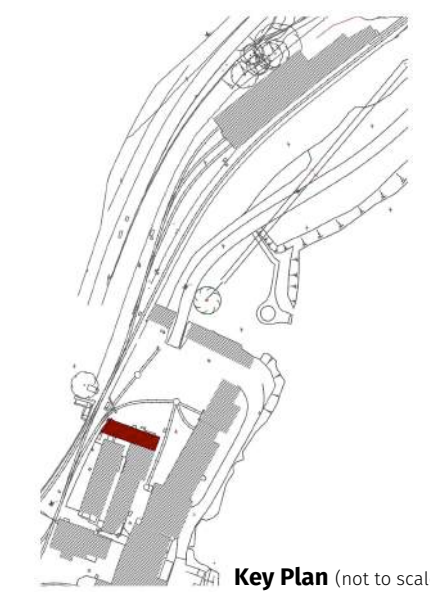
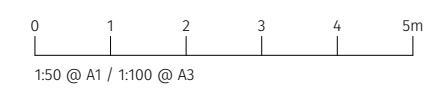
Date:  
**MARCH 2021**

81\_H2\_3\_04

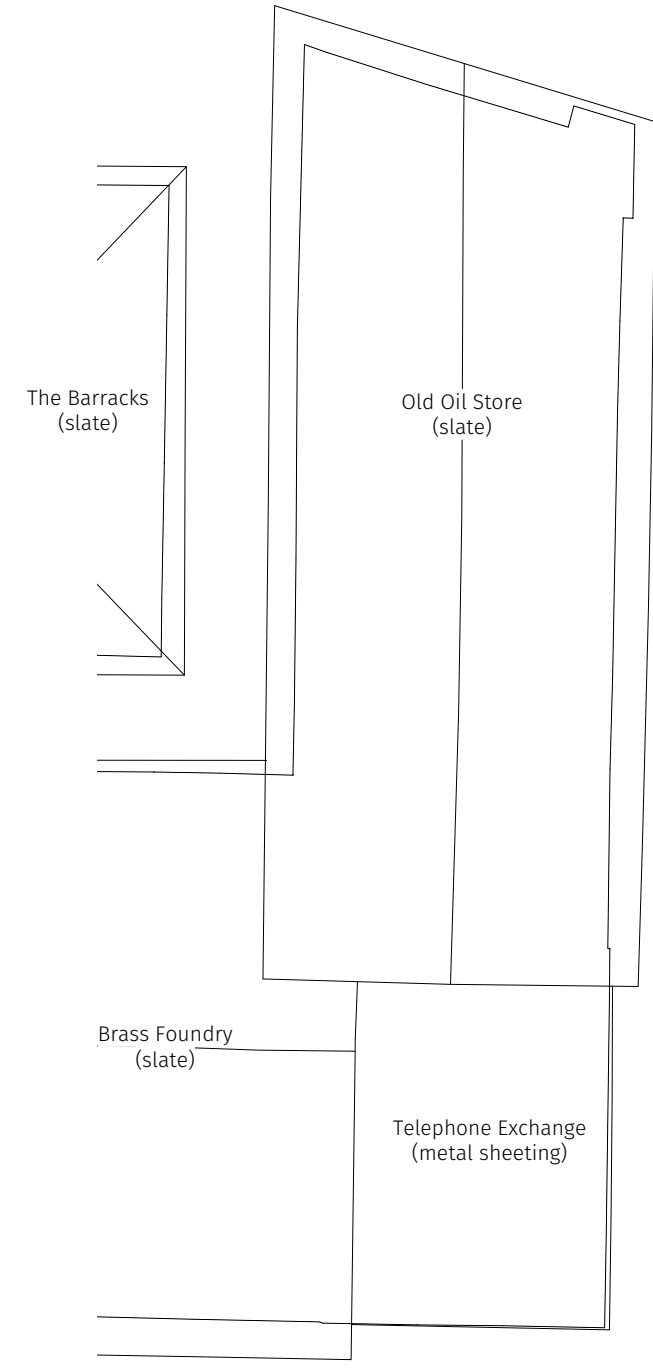
# H3

**Old Oil Store**





**Existing Ground Floor Plan**  
Scale 1:50 @ A1 / 1:100 @ A3



**Existing Roof Plan**  
Scale 1:50 @ A1 / 1:100 @ A3

REVISIONS

**Thread**

Client: FWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

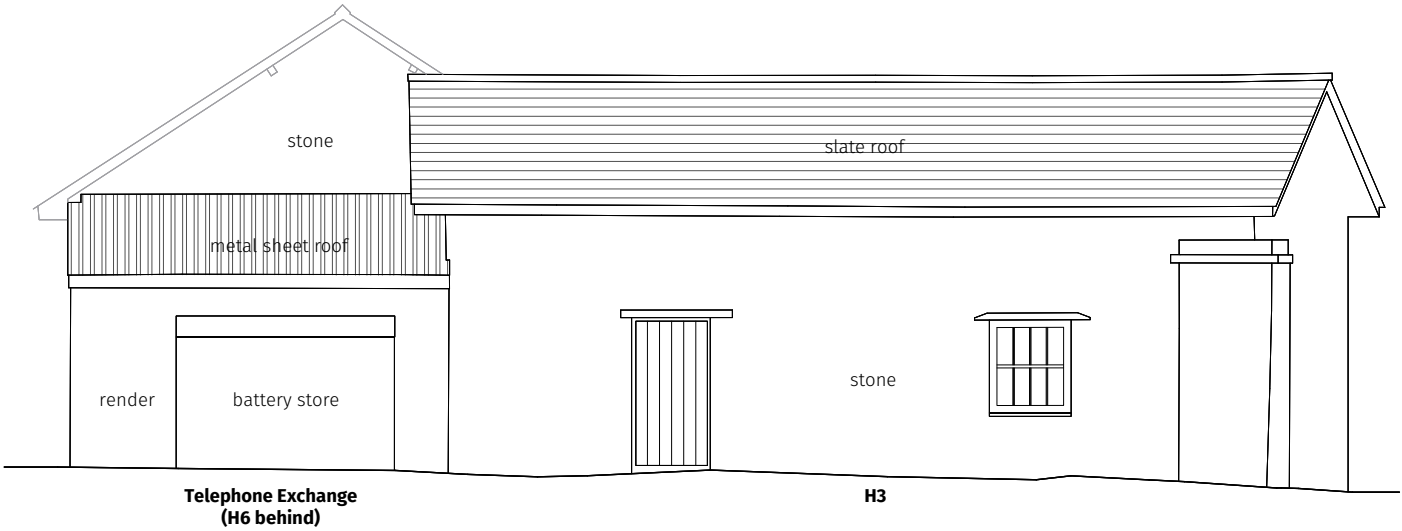
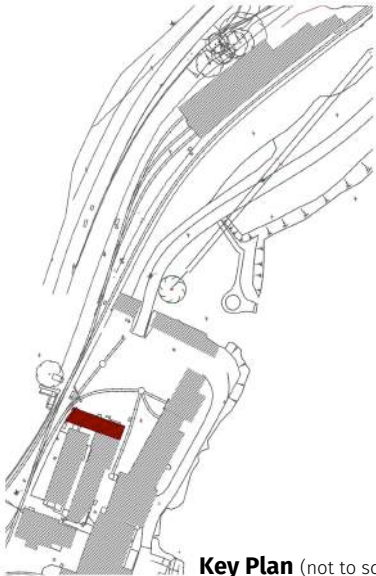
**H3 OLD OIL STORE  
EXISTING GROUND FLOOR  
AND ROOF PLAN**

Scale:  
**1:50@A1 / 1:100@A3**

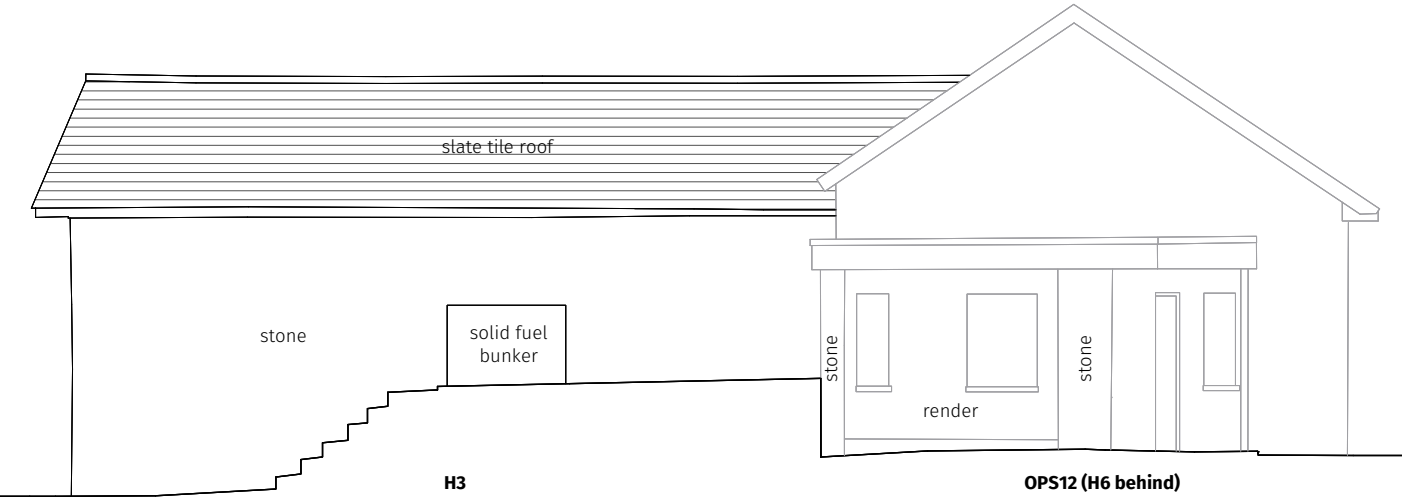
Date:  
**MARCH 2021**

**81\_H3\_0\_01**

0 1 2 3 4 5m  
1:50 @ A1 / 1:100 @ A3



**East Elevation**  
Scale 1:50 @ A1 / 1:100 @ A3



**West Elevation**  
Scale 1:50 @ A1 / 1:100 @ A3

REVISIONS

**Thread**

Client: FWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

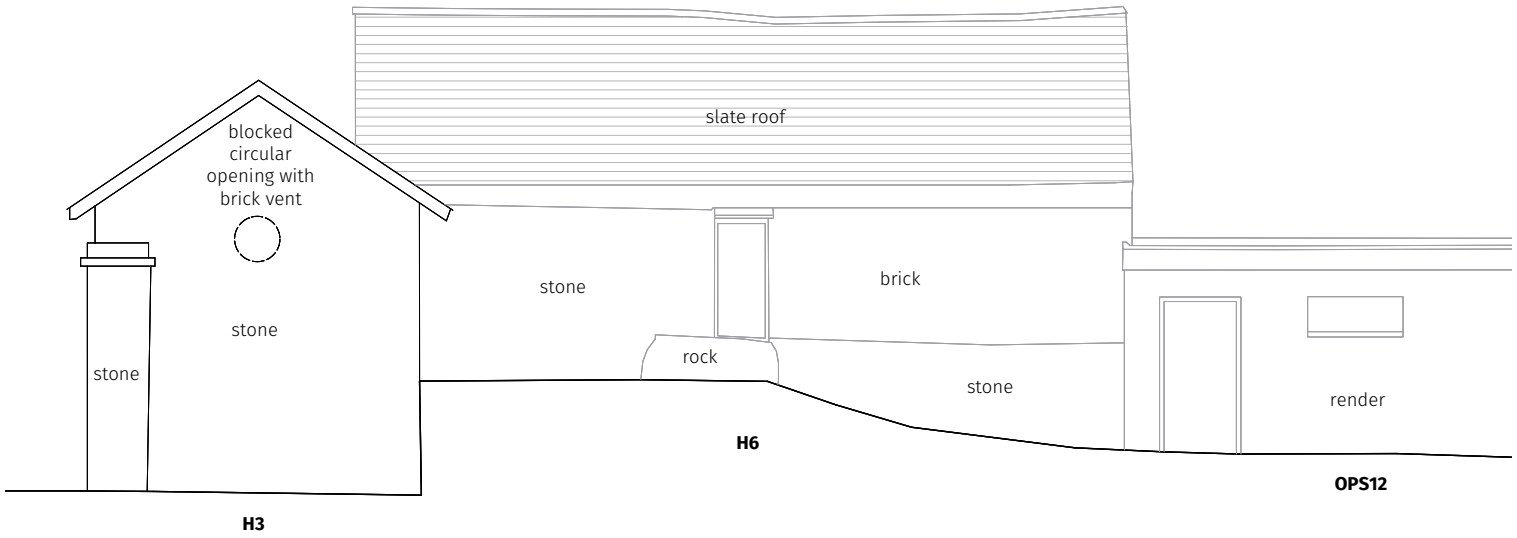
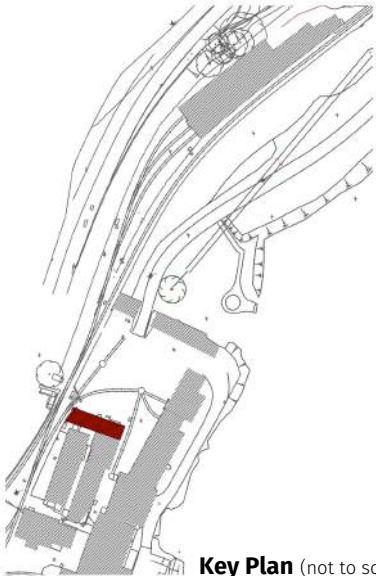
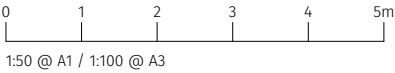
**H3 OLD OIL STORE  
EXISTING EAST & WEST  
ELEVATIONS**

Scale:  
**1:50@A1 / 1:100@A3**

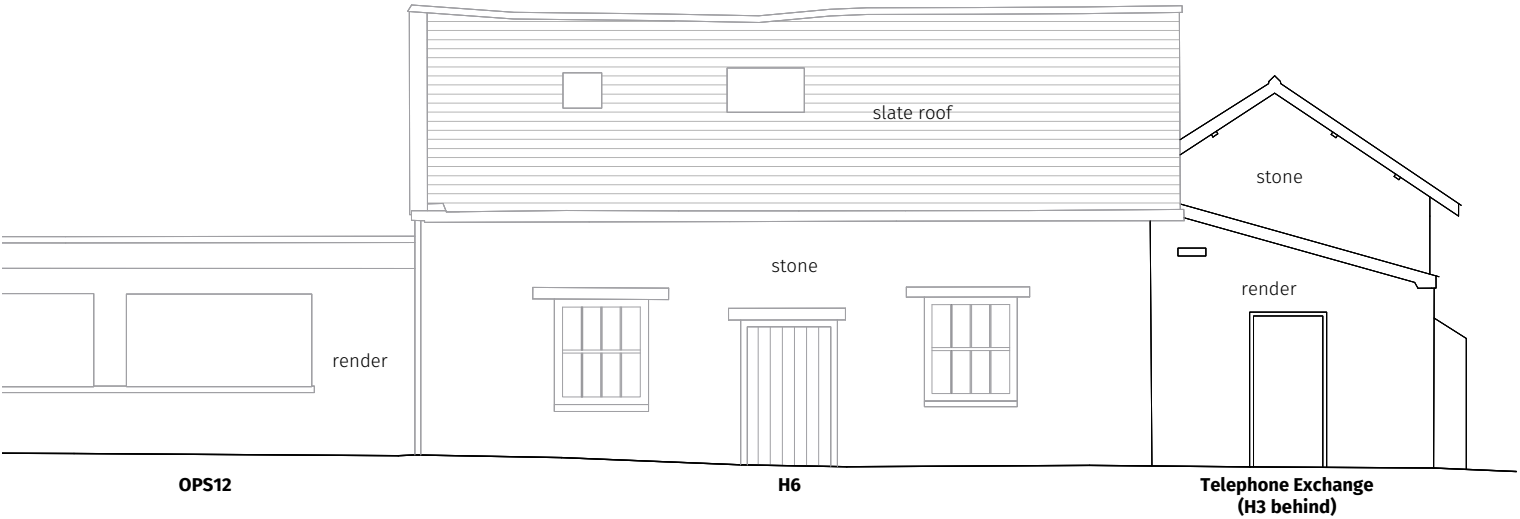
Date:  
**MARCH 2021**

81\_H3\_0\_02





**North Elevation**  
Scale 1:50 @ A1 / 1:100 @ A3



**South Elevation**  
Scale 1:50 @ A1 / 1:100 @ A3

**REVISIONS**

**Thread**

Client: FWHR  
Project Architect: Claire Fear

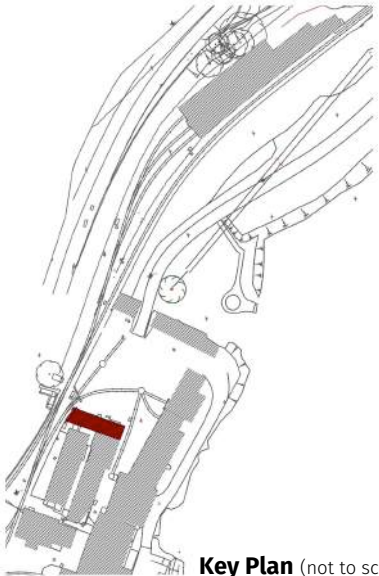
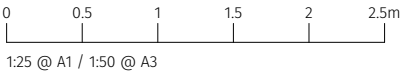
BOSTON LODGE WORKS

**H3 OLD OIL STORE  
EXISTING NORTH &  
SOUTH ELEVATIONS**

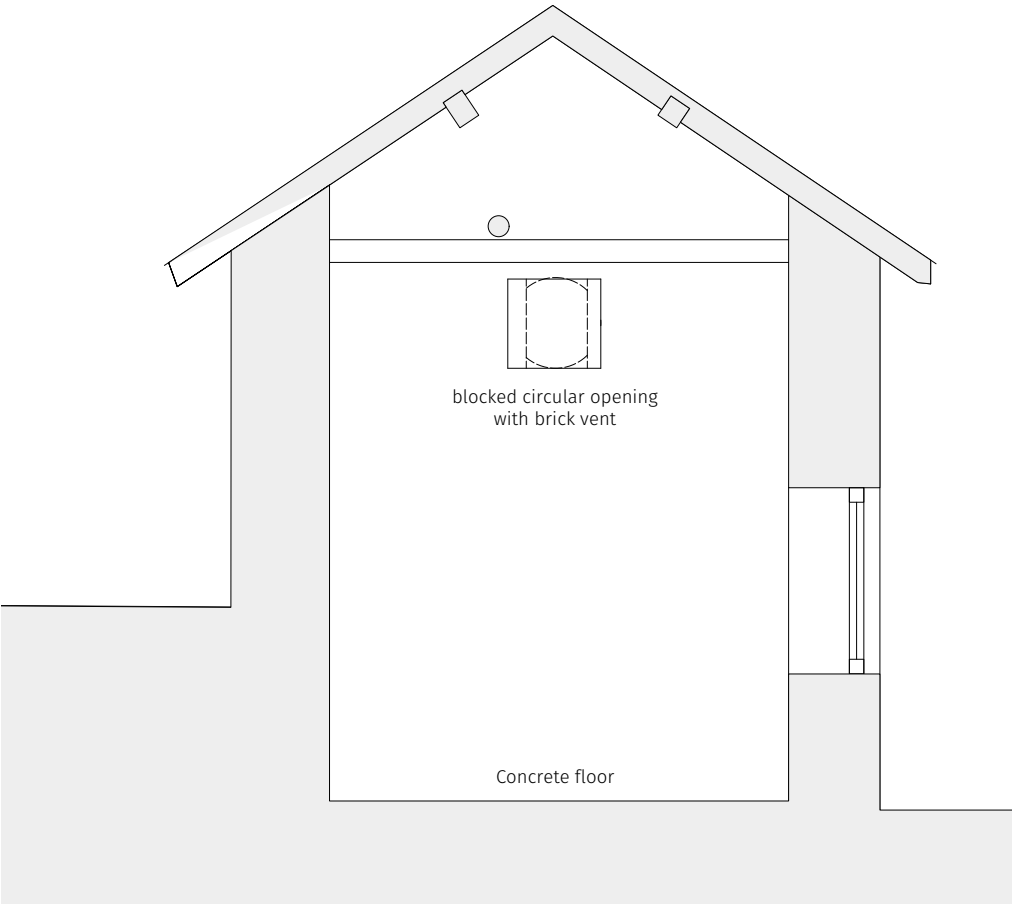
Scale:  
**1:50@A1 / 1:100@A3**

Date:  
**MARCH 2021**

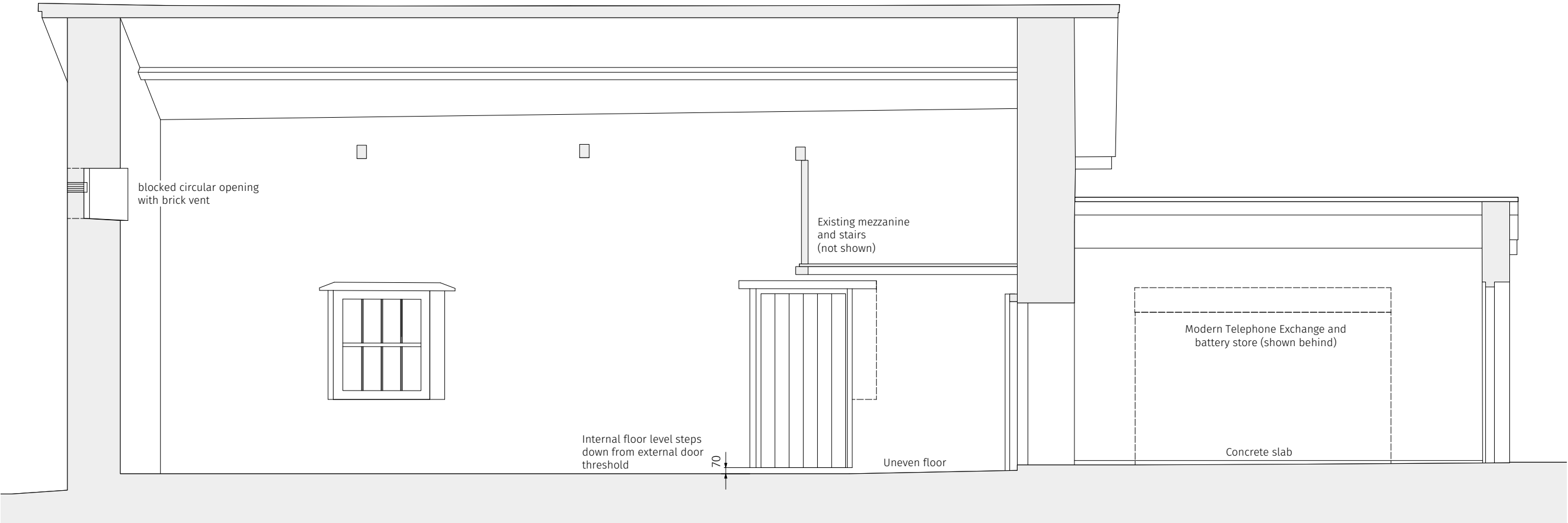
**81\_H3\_0\_03**



**Key Plan** (not to scale)



**Section AA**  
Scale 1:25 @ A1 / 1:50 @ A3



**Section BB**  
Scale 1:25 @ A1 / 1:50 @ A3

**REVISIONS**

**Thread**

Client: FWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

**H3 OLD OIL STORE  
EXISTING SECTIONS**

Scale:  
1:25@A1 / 1:50@A3

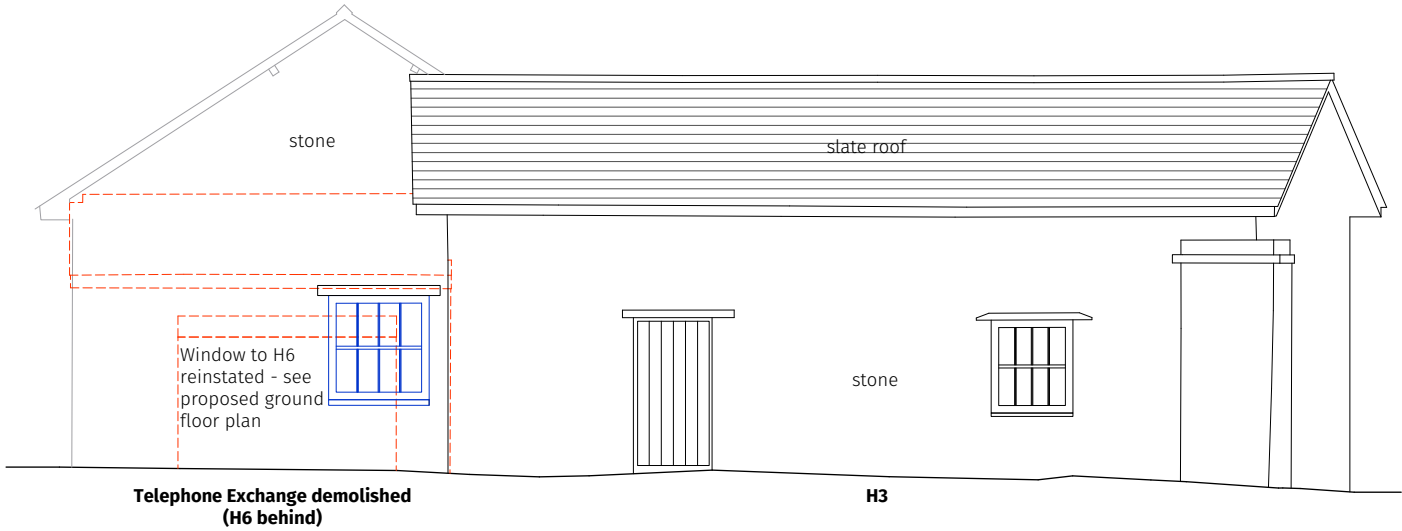
Date:  
**MARCH 2021**

81\_H3\_0\_04



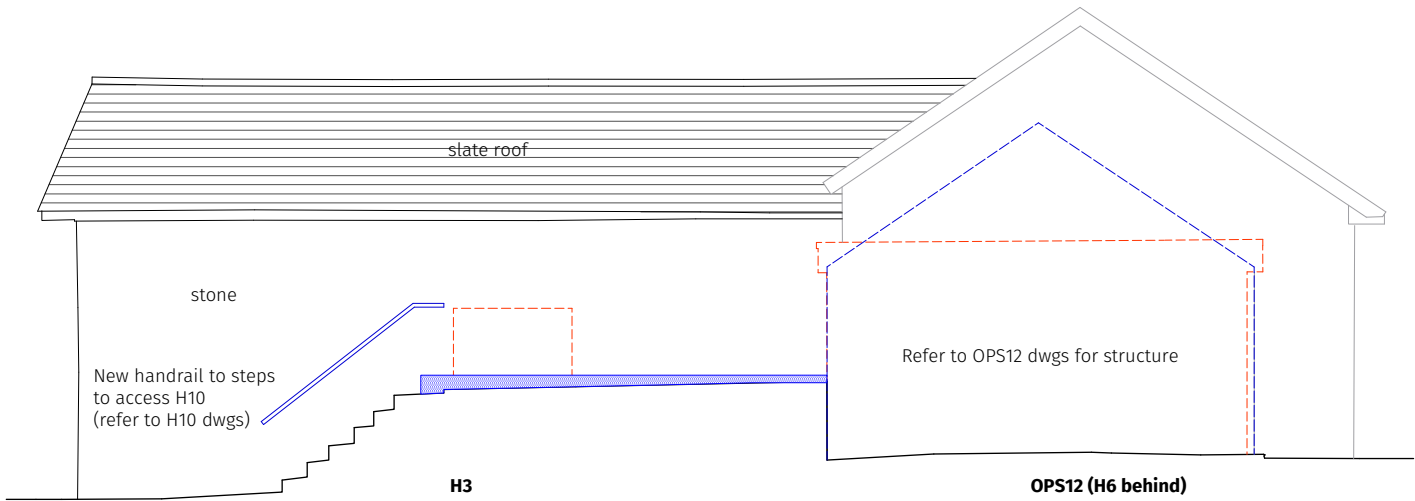


0 1 2 3 4 5m  
1:50 @ A1 / 1:100 @ A3



**East Elevation**  
Scale 1:50 @ A1 / 1:100 @ A3

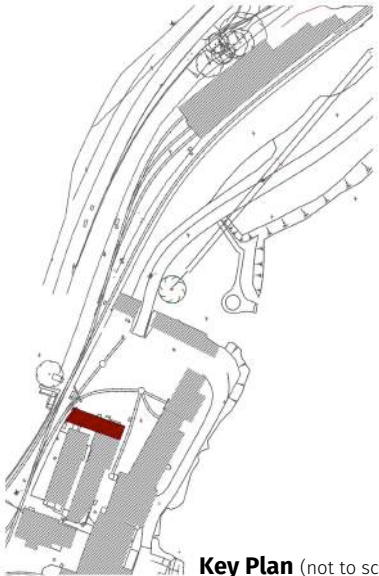
**Note:**  
Conservation repairs to roof and masonry as per repairs schedule



**West Elevation**  
Scale 1:50 @ A1 / 1:100 @ A3



1950s Photograph showing window to H6 (Brass Foundry) on the left and door into H3 (Old Oil Store) prior to the construction of the telephone exchange (Norman Pearce, in Historic Building Assessment by Bob Zeepvat, 2015).



**Key Plan** (not to scale)

REVISIONS
Rev A (11 May 2021) - Window note updated

**Thread**

Client: FWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

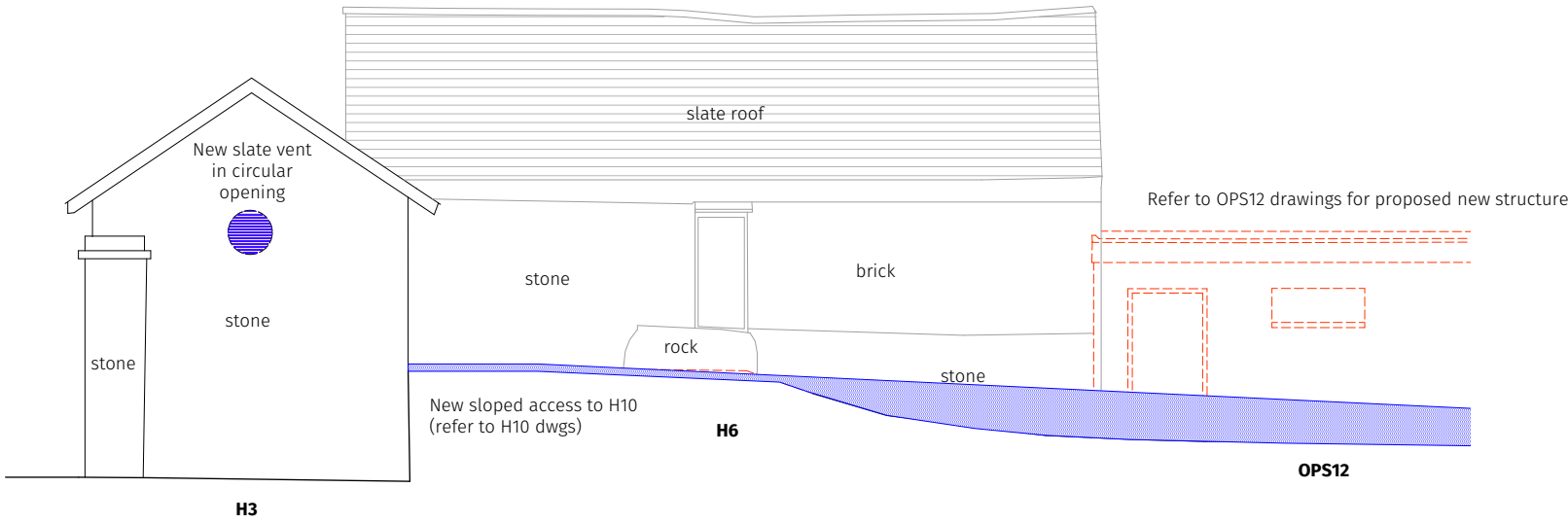
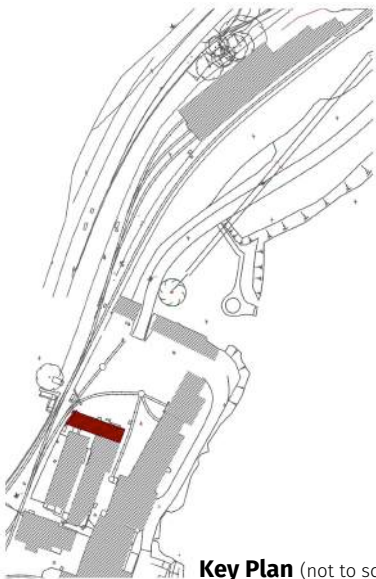
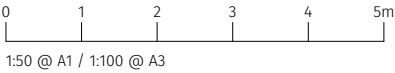
**H3 OLD OIL STORE  
PROPOSED EAST & WEST  
ELEVATIONS**

Scale:  
**1:50@A1 / 1:100@A3**

Date:  
**MARCH 2021**

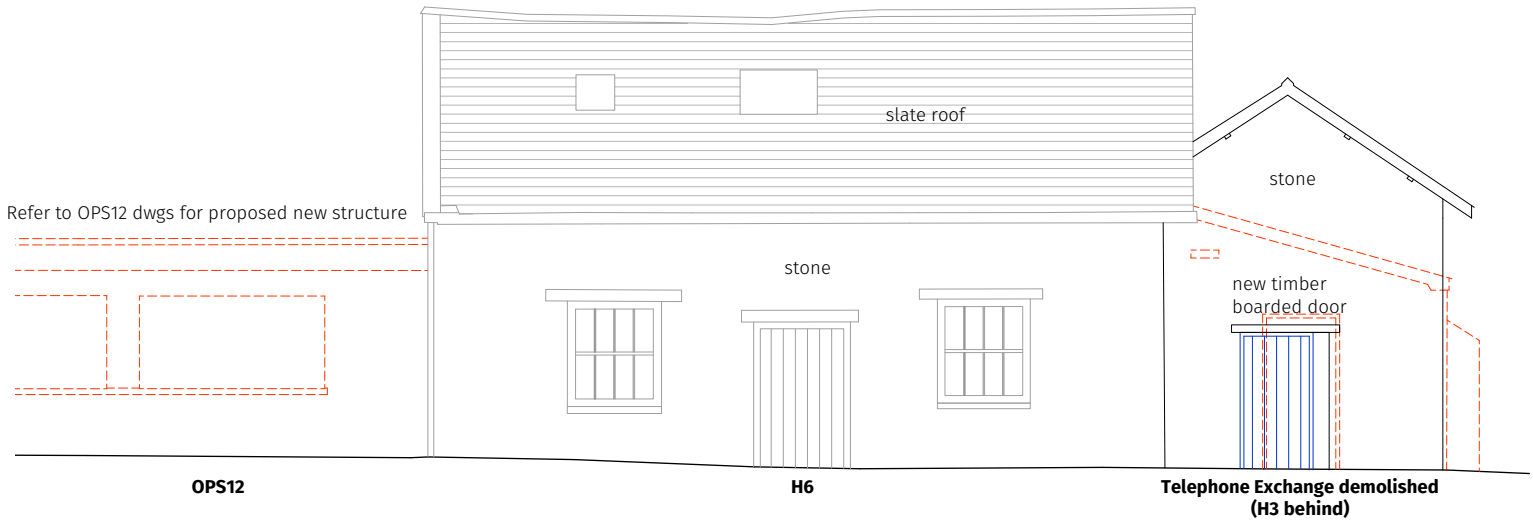
81\_H3\_3\_02A





**North Elevation**  
Scale 1:50 @ A1 / 1:100 @ A3

**Note:**  
Conservation repairs to roof and masonry as per repairs schedule



**South Elevation**  
Scale 1:50 @ A1 / 1:100 @ A3

REVISIONS

**Thread**

Client: FWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

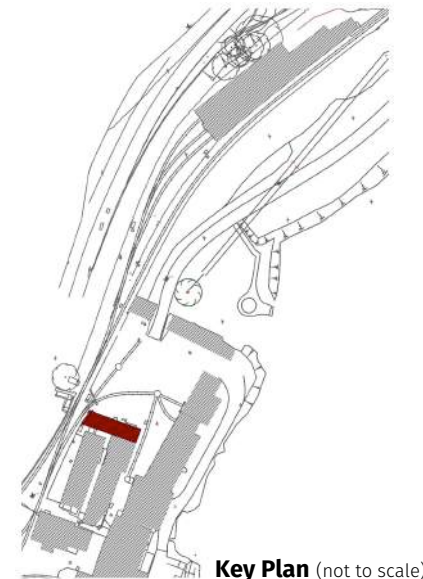
**H3 OLD OIL STORE  
PROPOSED NORTH &  
SOUTH ELEVATIONS**

Scale:  
1:50@A1 / 1:100@A3

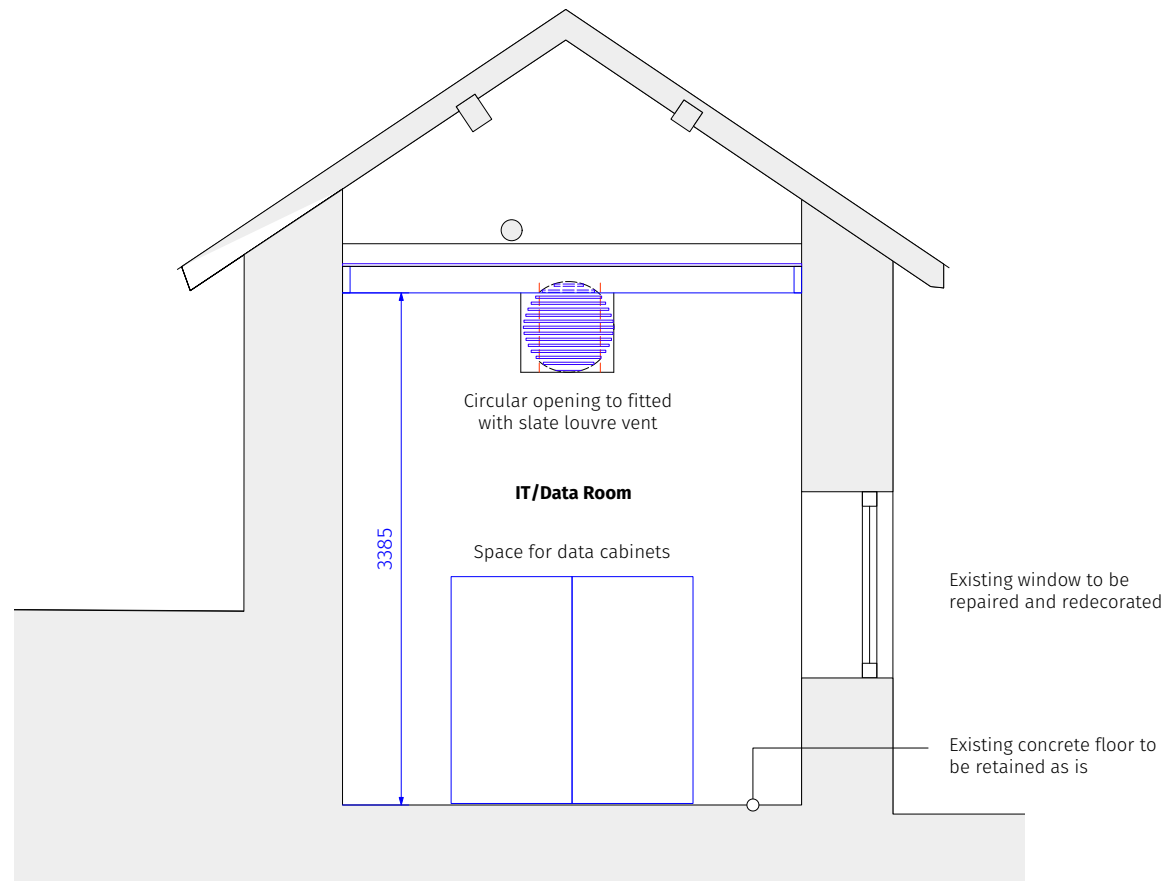
Date:  
**MARCH 2021**

81\_H3\_3\_03

0 0.5 1 1.5 2 2.5m  
1:25 @ A1 / 1:50 @ A3



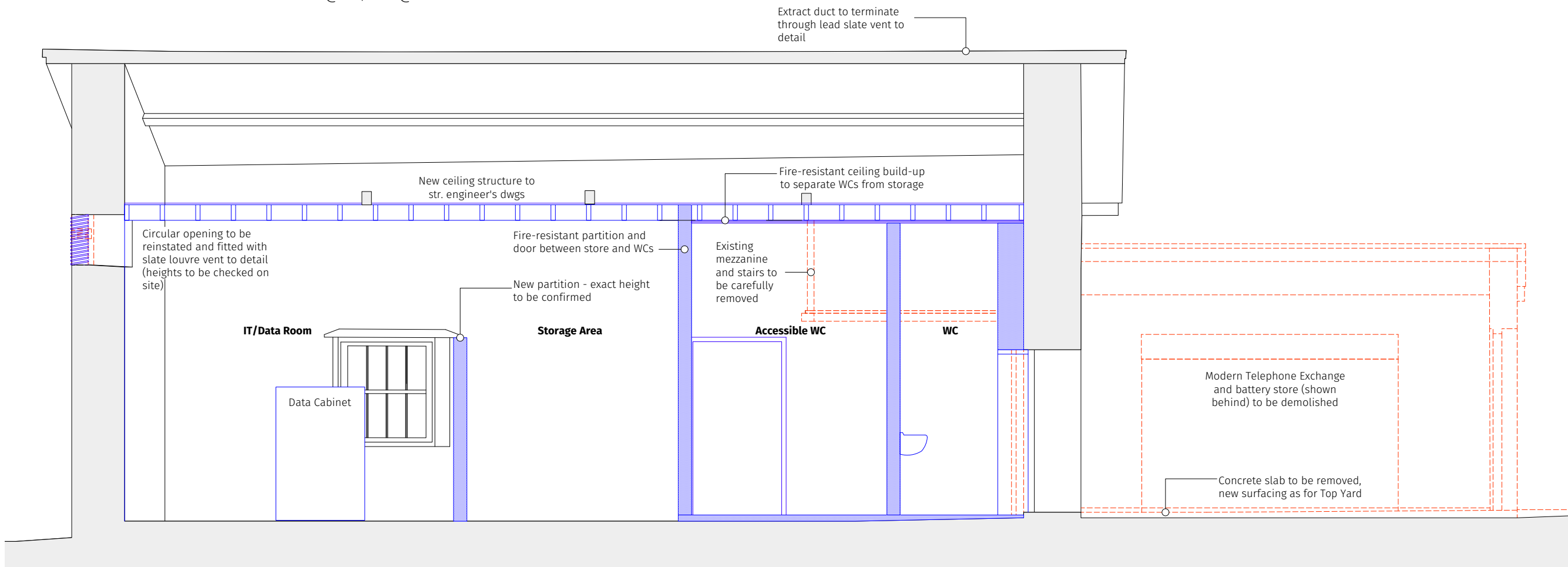
**Key Plan** (not to scale)



**Section AA**  
Scale 1:25 @ A1 / 1:50 @ A3



*Existing opening is currently blocked and fitted with brick vent -  
to be reinstated with slate louvre*



**Section BB**  
Scale 1:25 @ A1 / 1:50 @ A3

REVISIONS

**Thread**

Client: FWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

**H3 OLD OIL STORE  
PROPOSED SECTIONS**

Scale:  
1:25@A1 / 1:50@A3

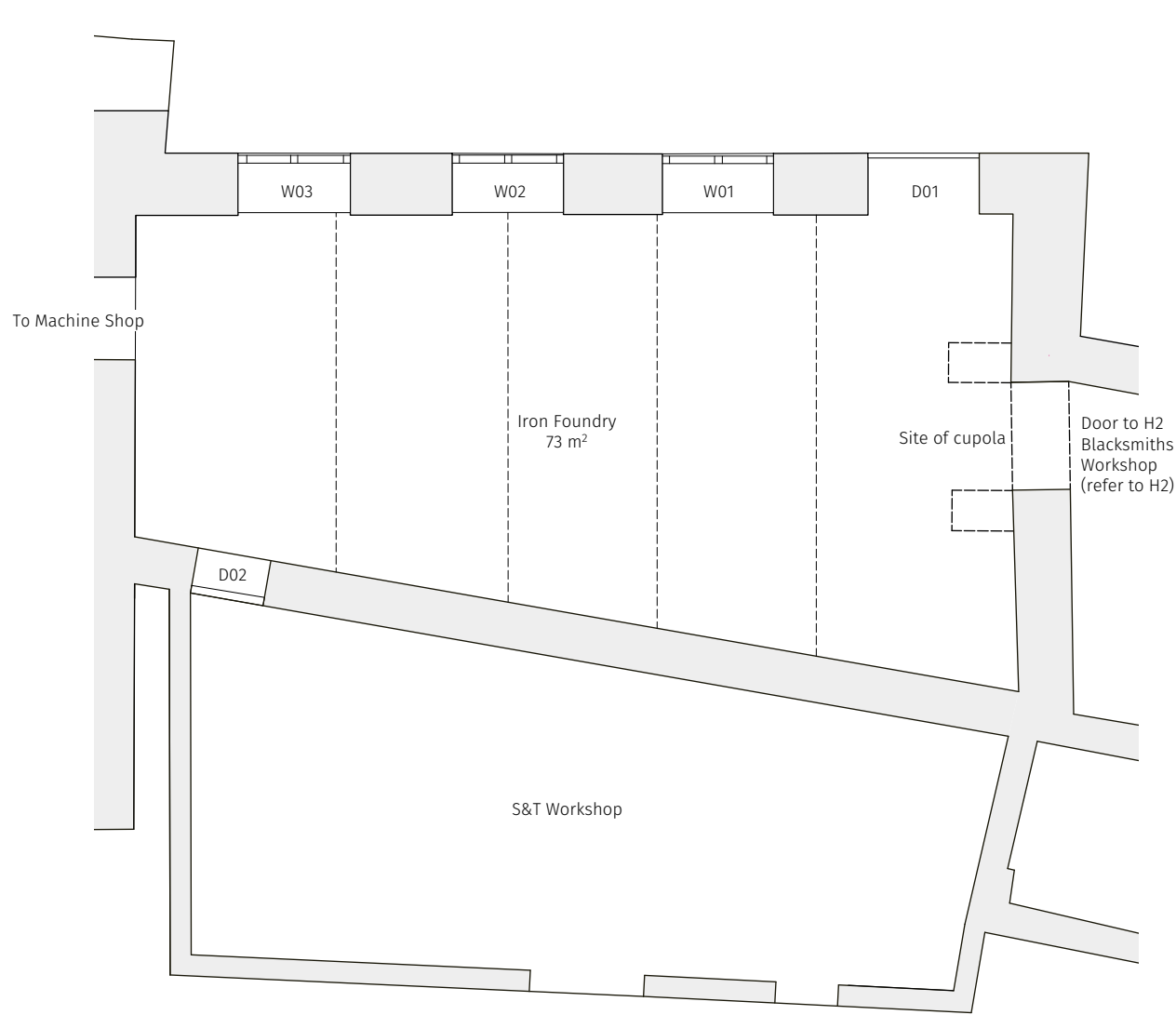
Date:  
**MARCH 2021**

81\_H3\_3\_04

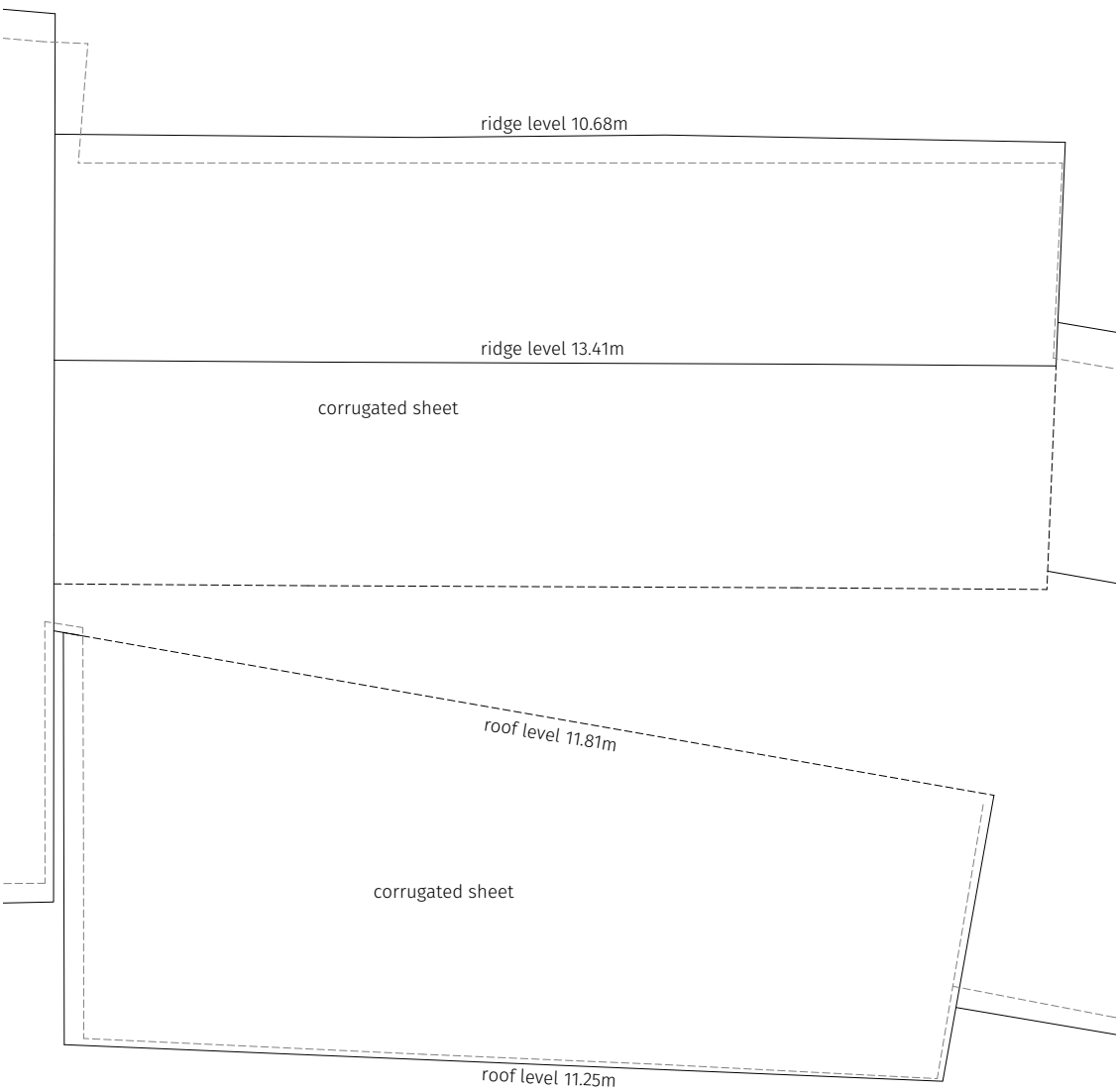


# H4

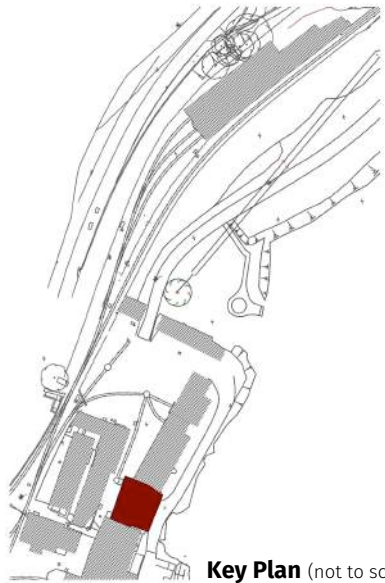
**Iron Foundry**



Existing Ground Floor Plan  
Scale 1:50 @ A1 / 1:100 @ A3



Existing Roof Plan  
Scale 1:50 @ A1 / 1:100 @ A3



Key Plan (not to scale)

Note:  
Scaled drawings of existing taken from  
Historic Building Assessment  
(Bancroft Heritage/Zeepvat)  
All dimensions to be confirmed on site.

REVISIONS

Thread

Client: FWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

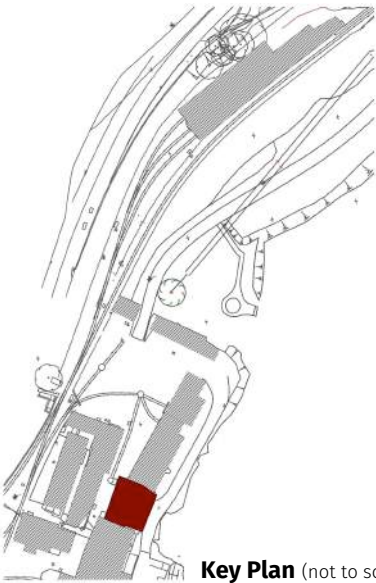
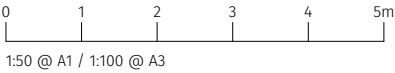
H4 IRON FOUNDRY  
EXISTING GROUND FLOOR  
& ROOF PLAN

Scale:  
1:50@A1 / 1:100@A3

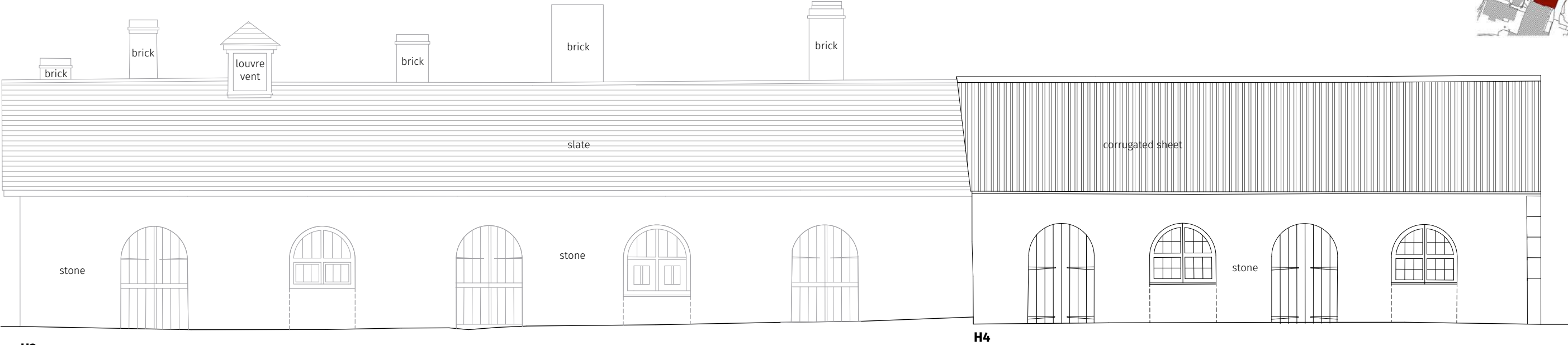
Date:  
MARCH 2021

81\_H4\_0\_01





**Key Plan** (not to scale)



**H2**

**H4**

**Existing North Elevation**  
Scale 1:50 @ A1 / 1:100 @ A3

REVISIONS

**Thread**

Client: FWHR  
Project Architect: Claire Fear

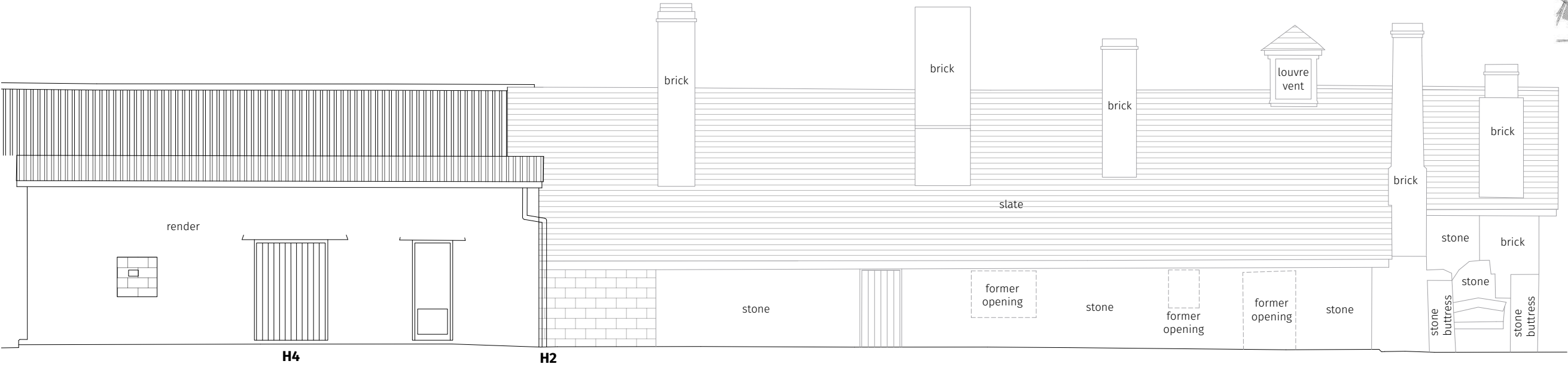
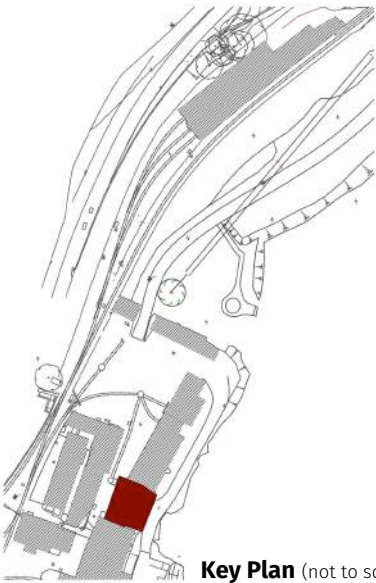
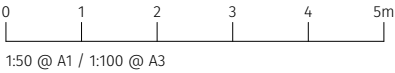
BOSTON LODGE WORKS

**H4 IRON FOUNDRY  
EXISTING  
NORTH ELEVATION**

Scale:  
**1:50@A1 / 1:100@A3**

Date:  
**MARCH 2021**

**81\_H4\_0\_02**



**Existing South Elevation**  
Scale 1:50 @ A1 / 1:100 @ A3

REVISIONS

**Thread**

Client: FWHR  
Project Architect: Claire Fear

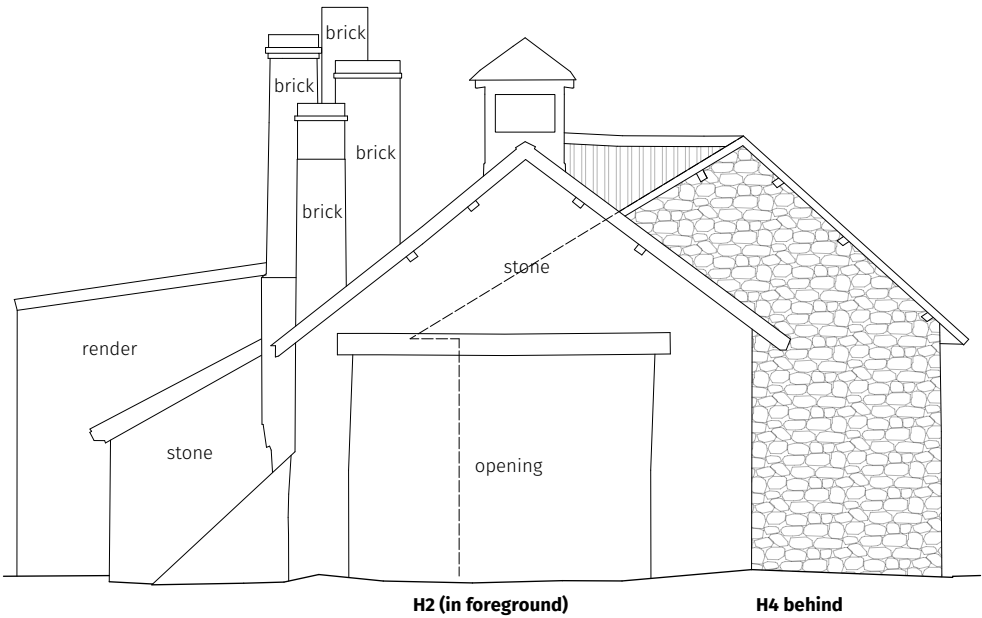
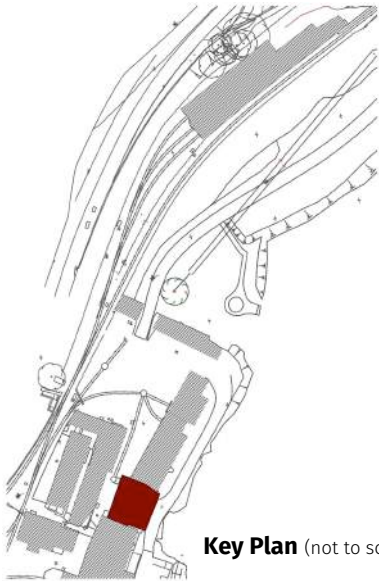
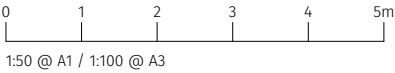
BOSTON LODGE WORKS

**H4 IRON FOUNDRY  
EXISTING  
SOUTH ELEVATION**

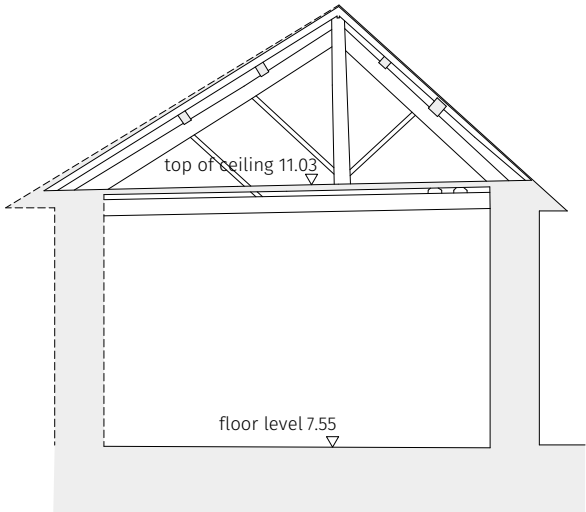
Scale:  
**1:50@A1 / 1:100@A3**  
Date:  
**MARCH 2021**

81\_H4\_0\_03





**Existing East Elevation**  
Scale 1:50 @ A1 / 1:100 @ A3



**Existing Section**  
Scale 1:50 @ A1 / 1:100 @ A3

REVISIONS

**Thread**

Client: FWHR  
Project Architect: Claire Fear

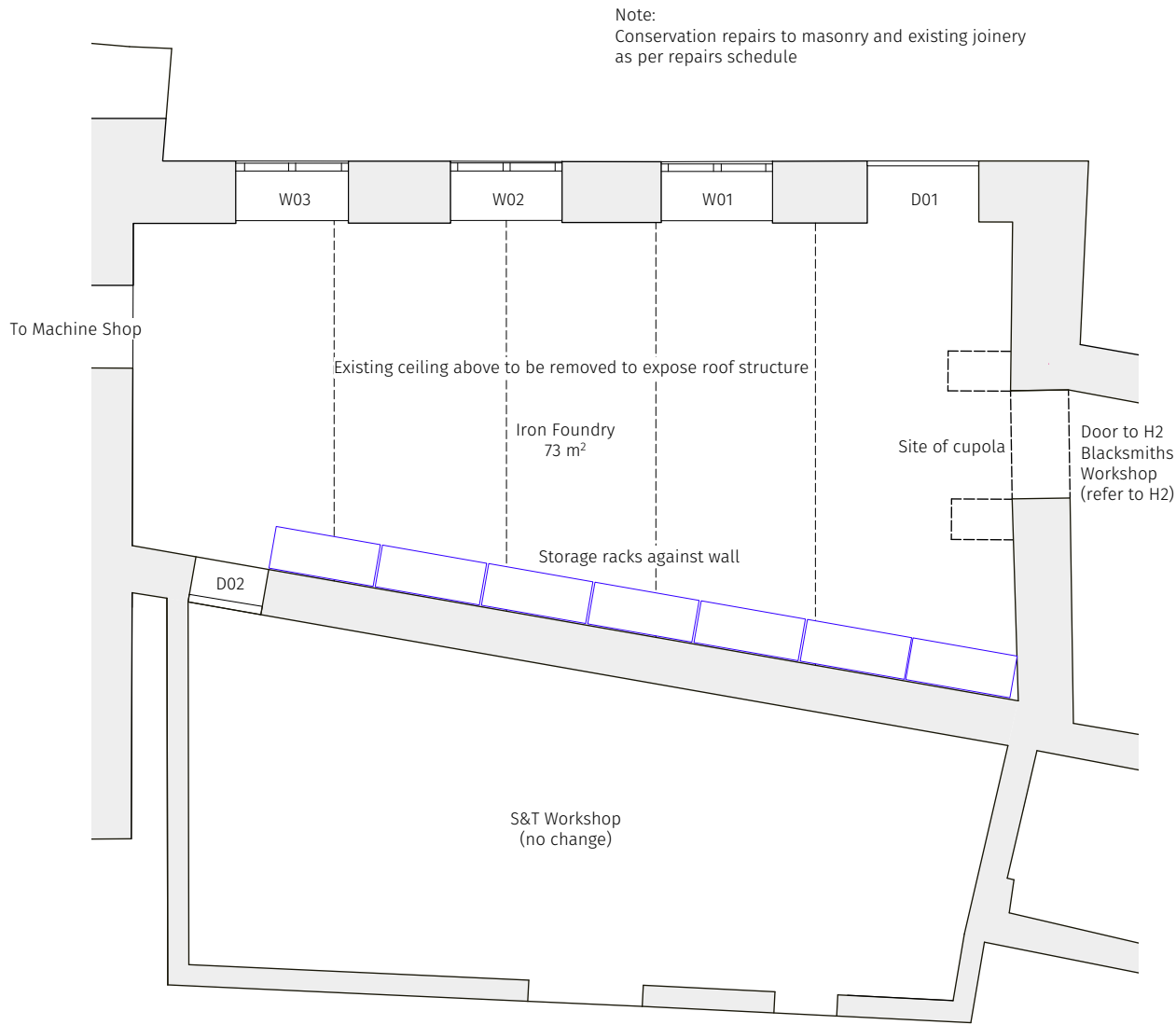
BOSTON LODGE WORKS

**H4 IRON FOUNDRY  
EXISTING EAST ELEVATION  
AND SECTION**

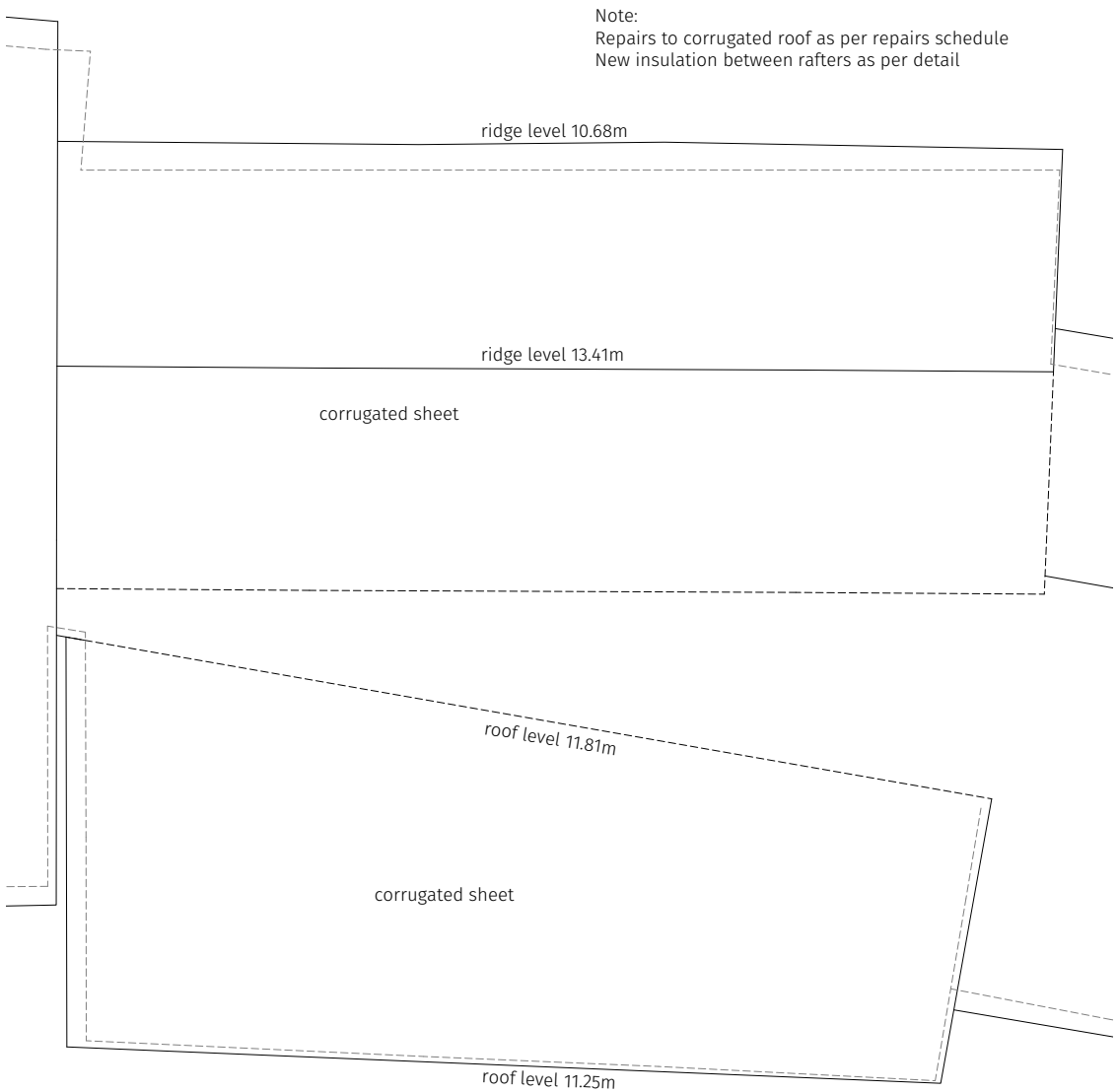
Scale:  
**1:50@A1 / 1:100@A3**

Date:  
**MARCH 2021**

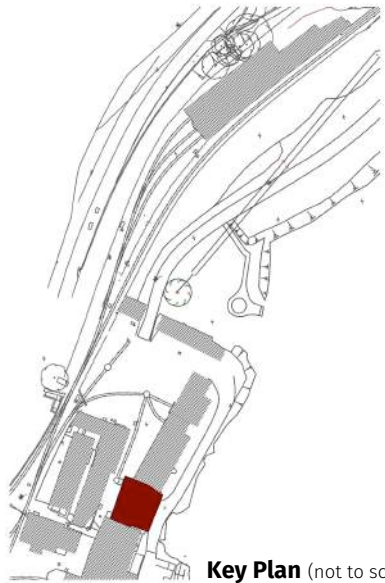
81\_H4\_0\_04



Proposed Ground Floor Plan  
Scale 1:50 @ A1 / 1:100 @ A3



Proposed Roof Plan  
Scale 1:50 @ A1 / 1:100 @ A3



Note:  
Scaled drawings of existing taken from  
Historic Building Assessment  
(Bancroft Heritage/Zeepvat)  
All dimensions to be confirmed on site.

REVISIONS

**Thread**

Client: FWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

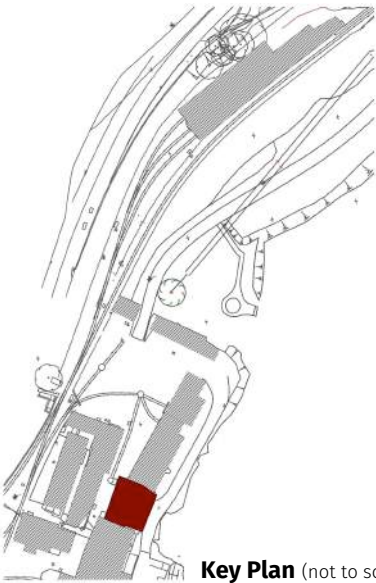
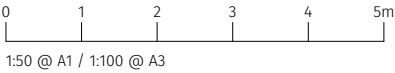
## H4 IRON FOUNDRY PROPOSED GROUND FLOOR AND ROOF PLAN

Scale:  
1:50@A1 / 1:100@A3

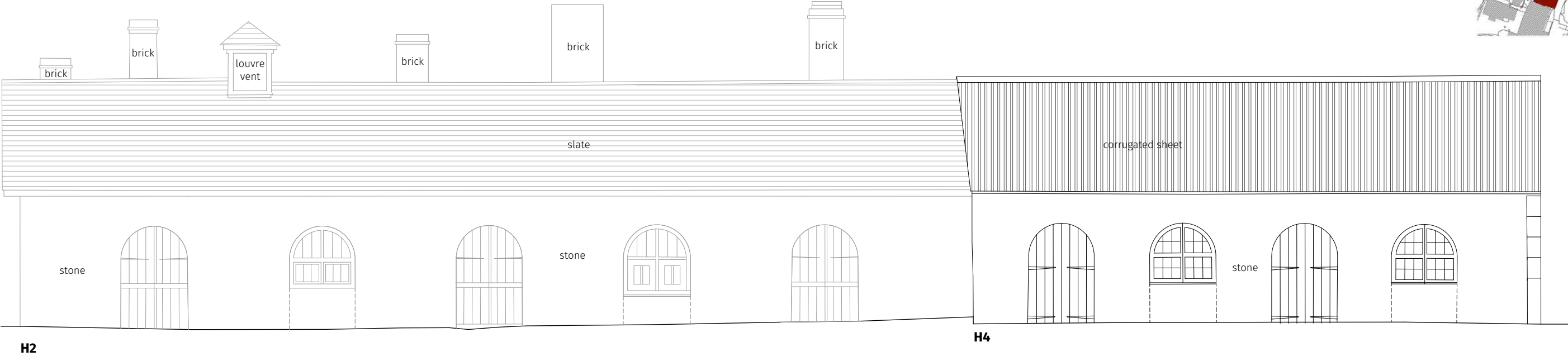
Date:  
MARCH 2021

81\_H4\_3\_01





**Key Plan** (not to scale)



**H2**

**H4**

REVISIONS

**Proposed North Elevation**  
Scale 1:50 @ A1 / 1:100 @ A3

**Thread**

Client: FWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

**H4 IRON FOUNDRY  
PROPOSED  
NORTH ELEVATION**

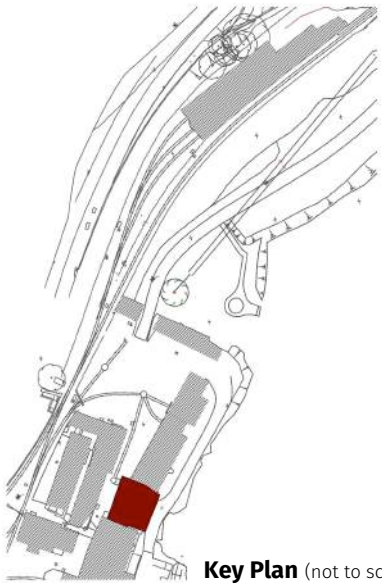
Scale:  
**1:50@A1 / 1:100@A3**

Date:  
**MARCH 2021**

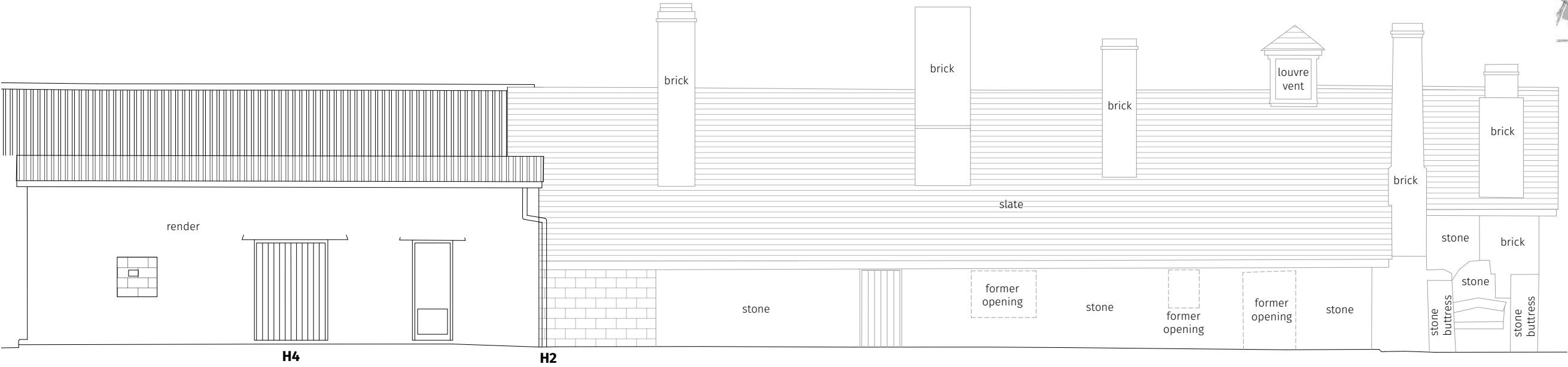
81\_H4\_3\_02



1:50 @ A1 / 1:100 @ A3



Key Plan (not to scale)



**Proposed South Elevation**

Scale 1:50 @ A1 / 1:100 @ A3

REVISIONS



Client: FWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

**H4 IRON FOUNDRY  
PROPOSED  
SOUTH ELEVATION**

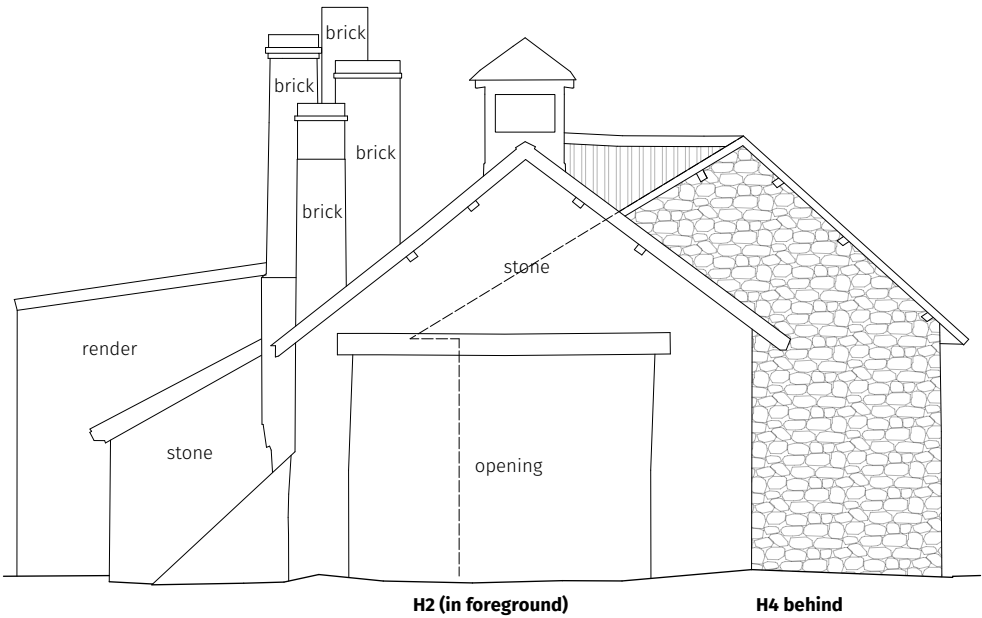
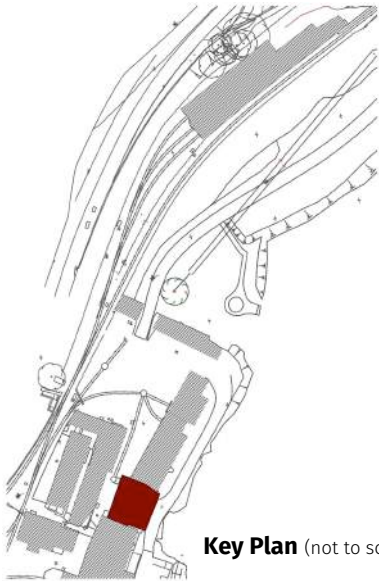
Scale:  
1:50@A1 / 1:100@A3

Date:  
MARCH 2021

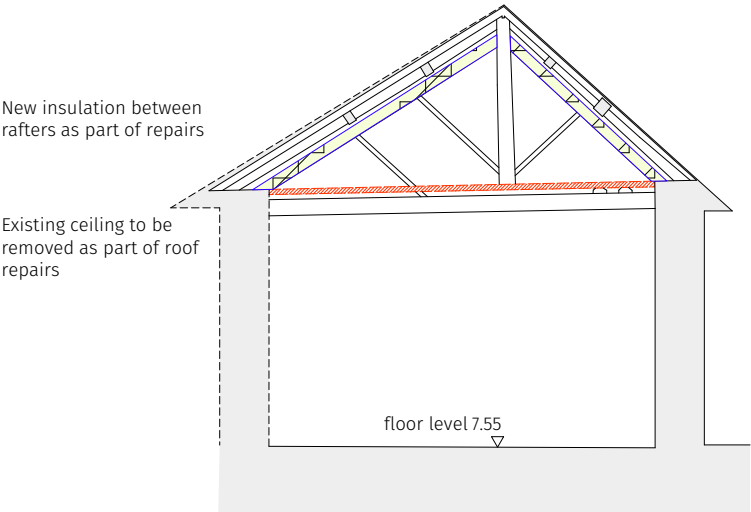
81\_H4\_3\_03



0 1 2 3 4 5m  
1:50 @ A1 / 1:100 @ A3



**Proposed East Elevation**  
Scale 1:50 @ A1 / 1:100 @ A3



**Proposed Section**  
Scale 1:50 @ A1 / 1:100 @ A3

REVISIONS

**Thread**

Client: FWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

**H4 IRON FOUNDRY  
PROPOSED EAST ELEVATION  
AND SECTION**

Scale:  
**1:50@A1 / 1:100@A3**

Date:  
**MARCH 2021**

81\_H4\_3\_04

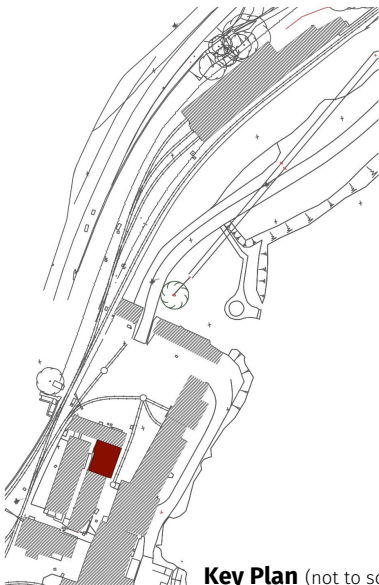
# H6

**Brass Foundry**



0 500 1000 1500 2000 2500mm

1:25 @ A1 / 1:50 @ A3



**Key Plan** (not to scale)

REVISIONS

**Thread**

Client: FWHR  
Project Architect: Claire Fear

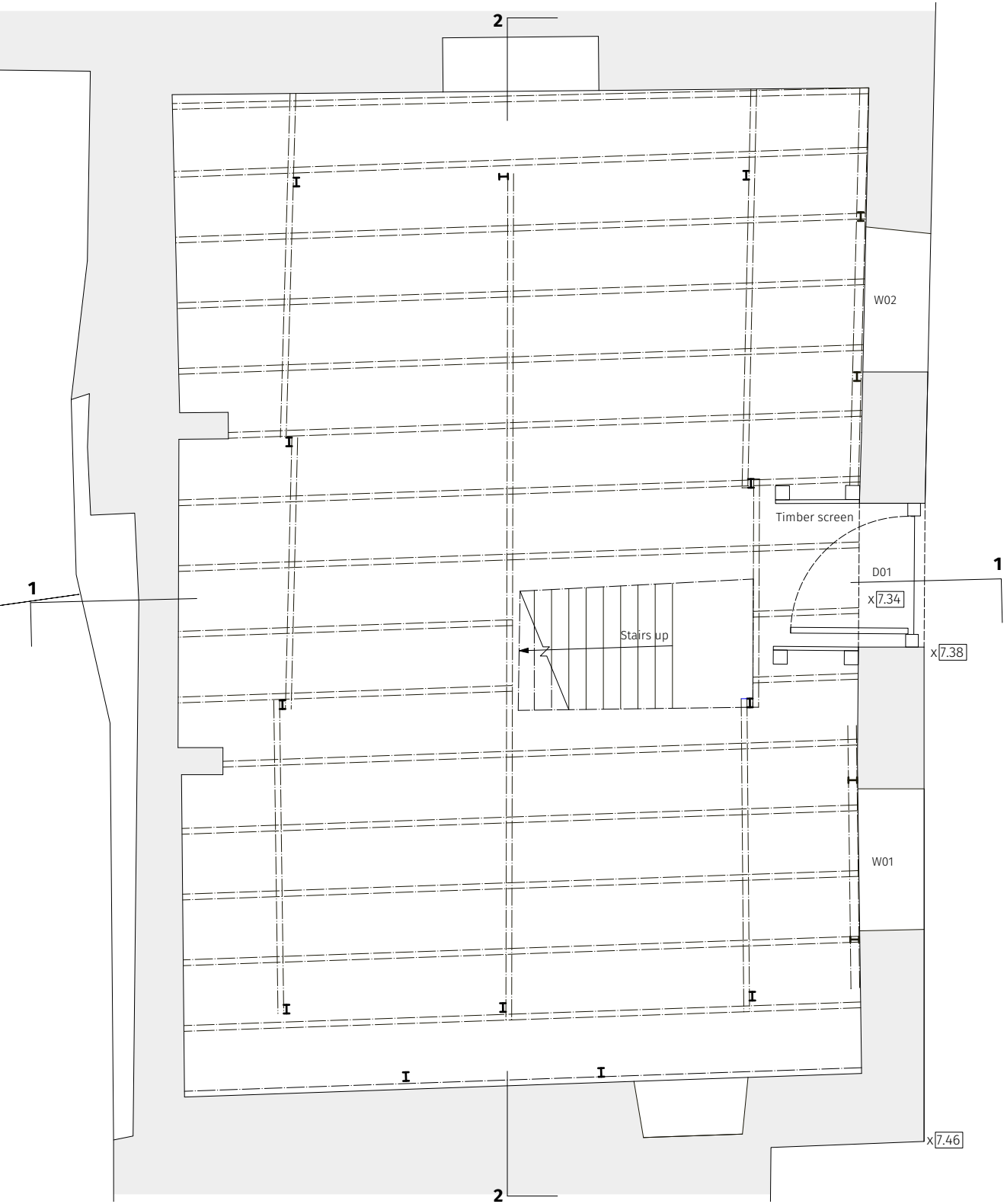
BOSTON LODGE WORKS

**H6 BRASS FOUNDRY  
EXISTING FLOOR PLANS**

Scale:  
1:25@A1 / 1:50@A3

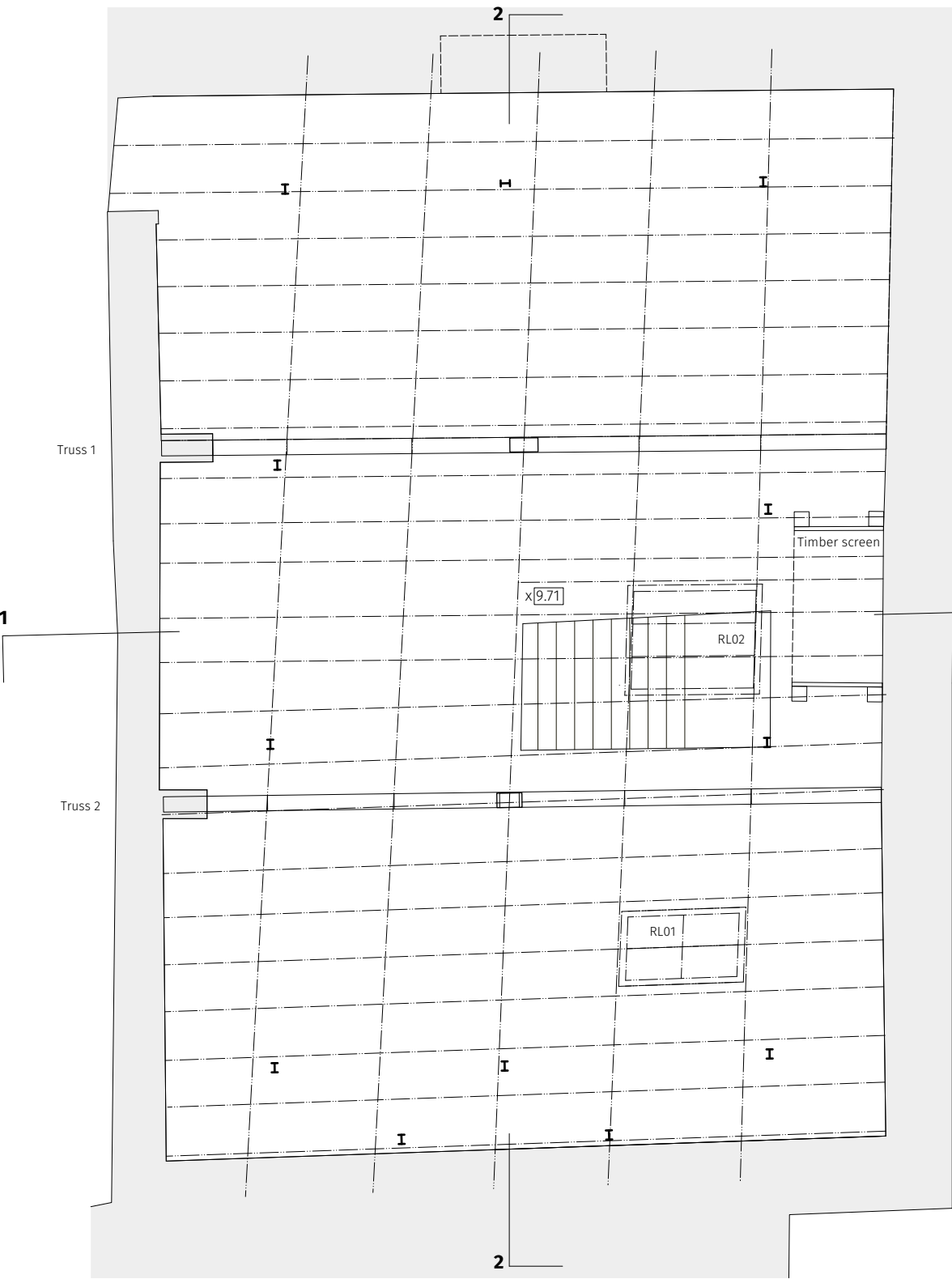
Date:  
**OCTOBER 2020**

81\_H6\_0\_01



**Ground Floor Plan**

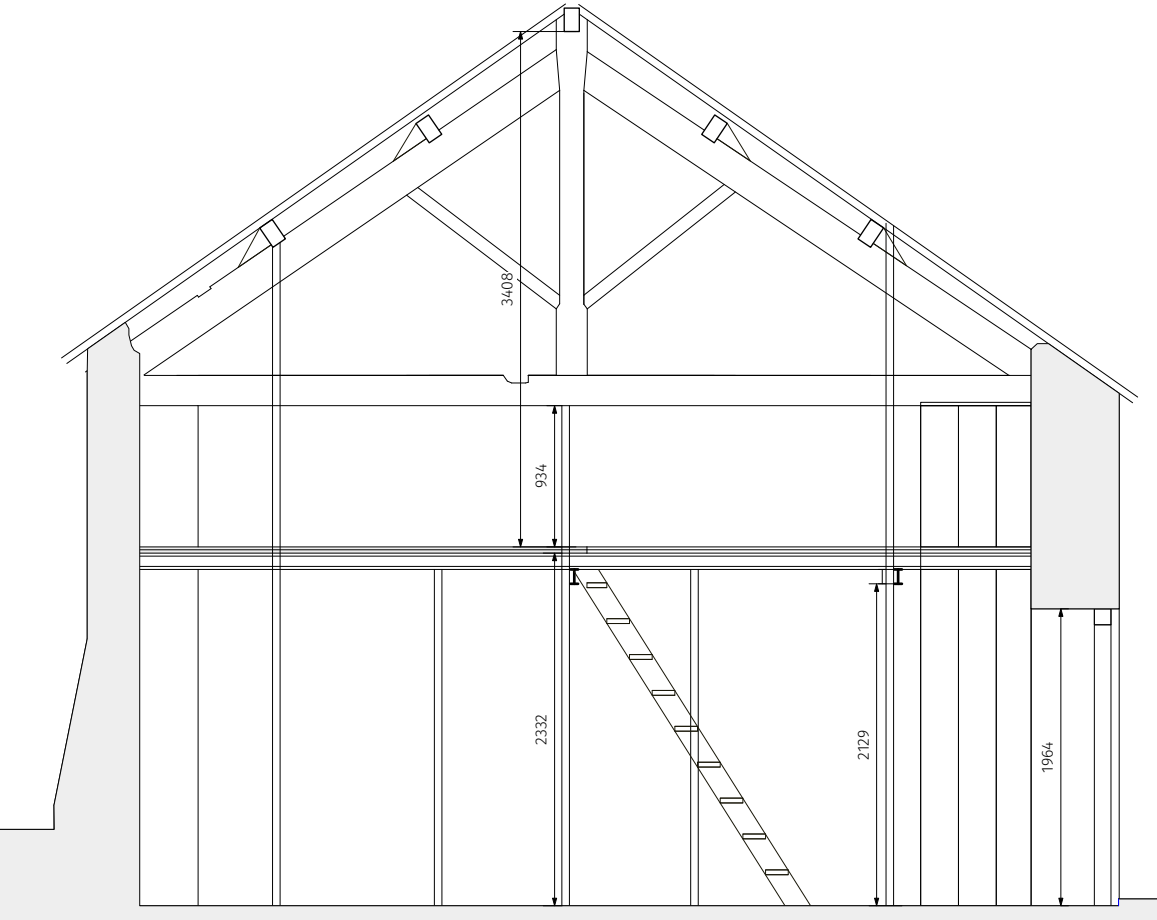
Scale 1:25 @ A1 / 1:50 @ A3



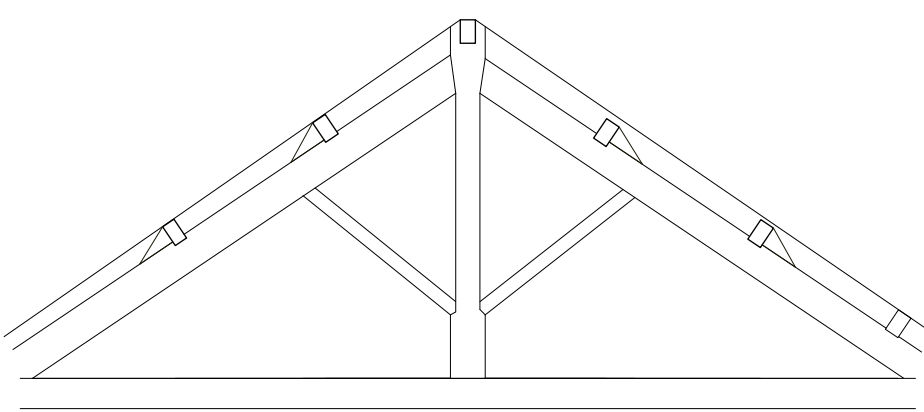
**Mezzanine Floor Plan**

Scale 1:25 @ A1 / 1:50 @ A3

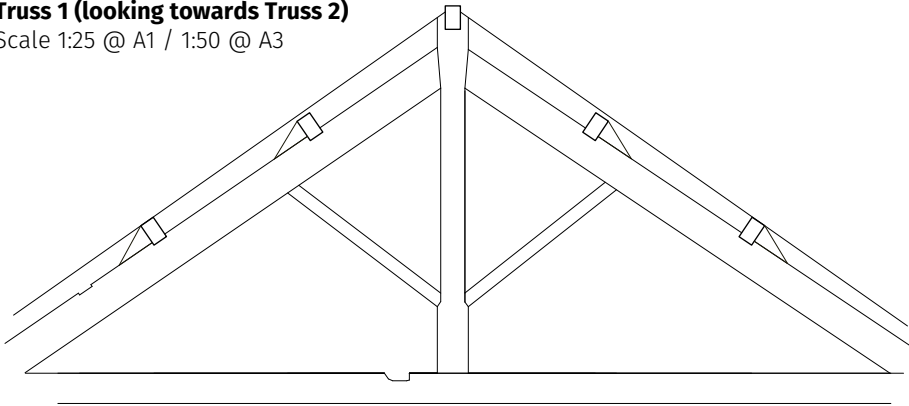




**Section 1**  
Scale 1:25 @ A1 / 1:50 @ A3



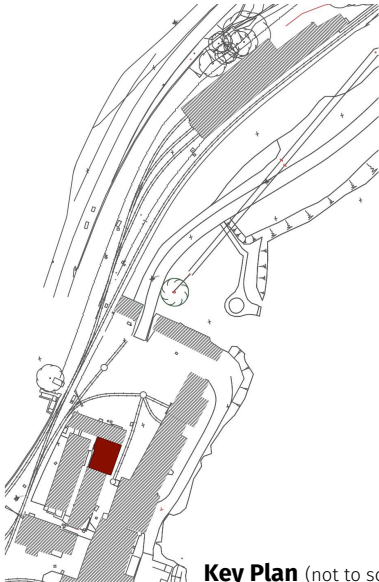
**Truss 1 (looking towards Truss 2)**  
Scale 1:25 @ A1 / 1:50 @ A3



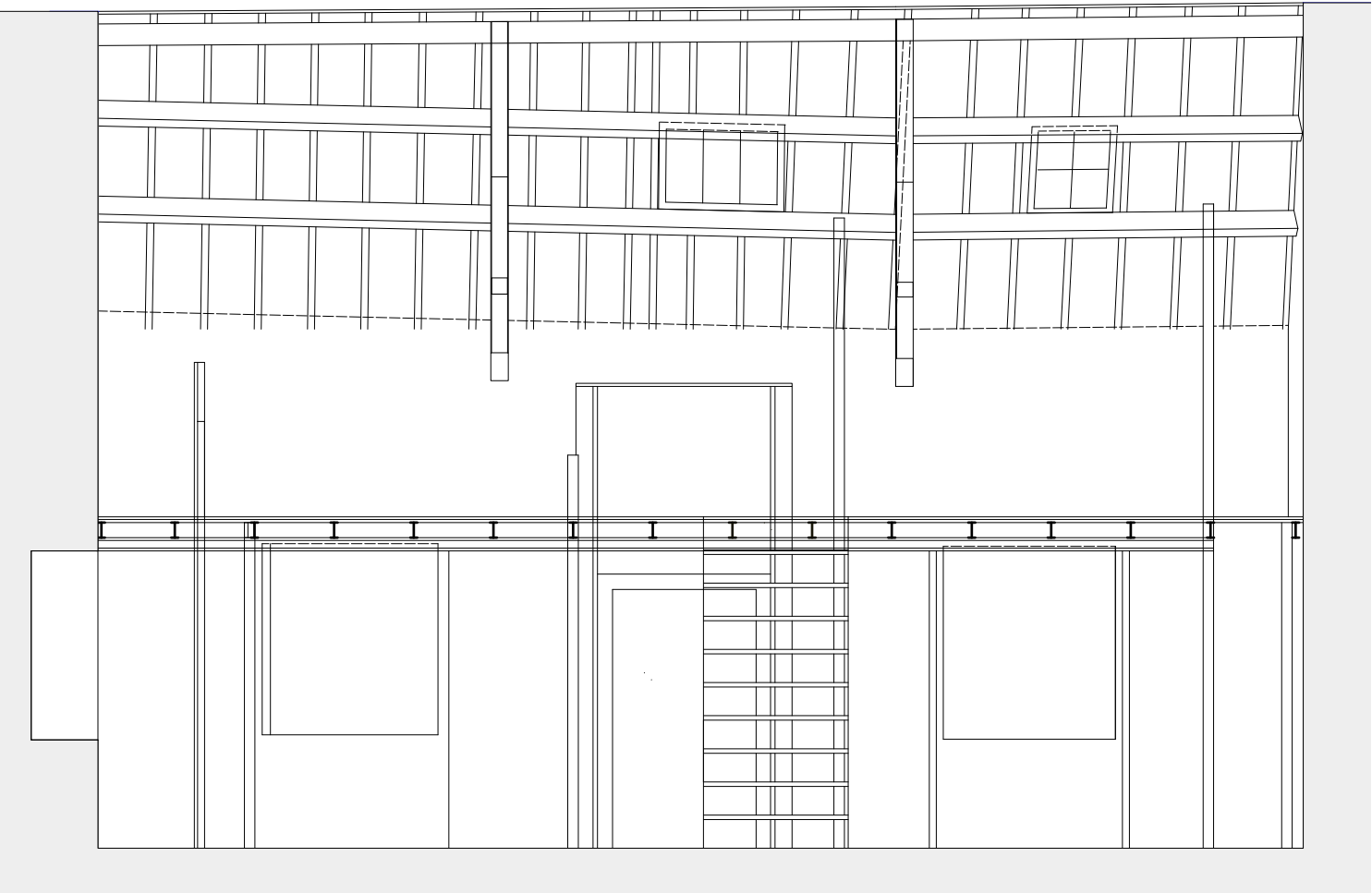
**Truss 2 (looking towards Truss 1)**  
Scale 1:25 @ A1 / 1:50 @ A3

 **Thread** trading as Architectural Thread.  
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0 500 1000 1500 2000 2500mm  
1:25 @ A1 / 1:50 @ A3



**Key Plan** (not to scale)



**Section 2**  
Scale 1:25 @ A1 / 1:50 @ A3

REVISIONS

**Thread**

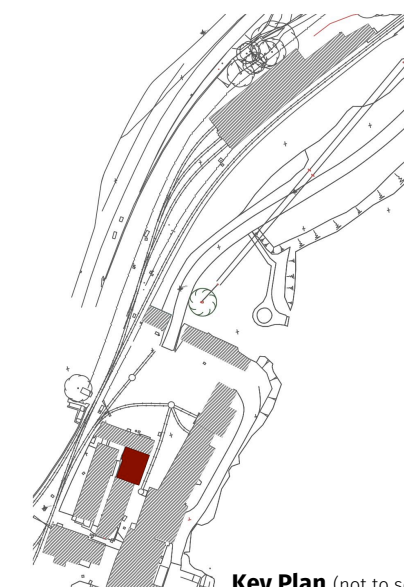
Client: FWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

**H6 BRASS FOUNDRY  
EXISTING SECTIONS**

Scale:  
1:25@A1 / 1:50@A3  
Date:  
**MARCH 2021**

81\_H6\_0\_02

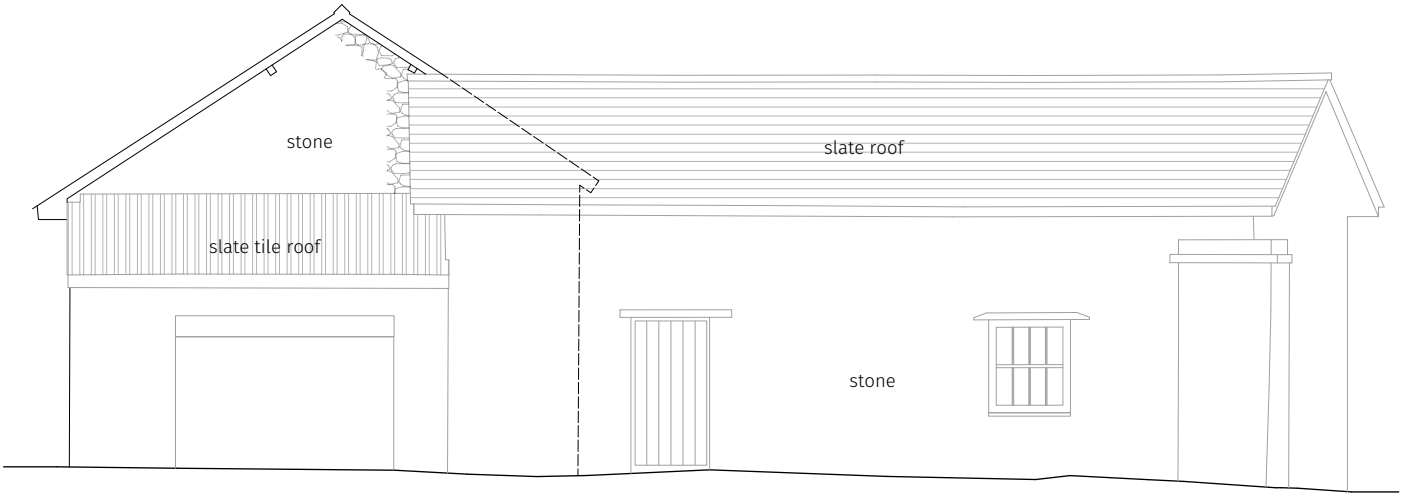
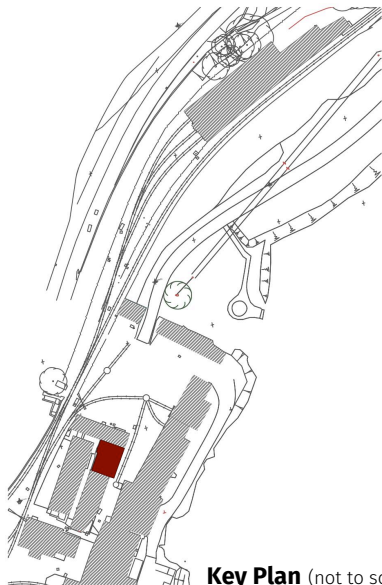
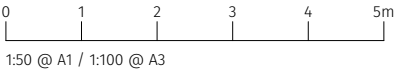


Scale 1:50 @ A1 / 1:100 @ A3

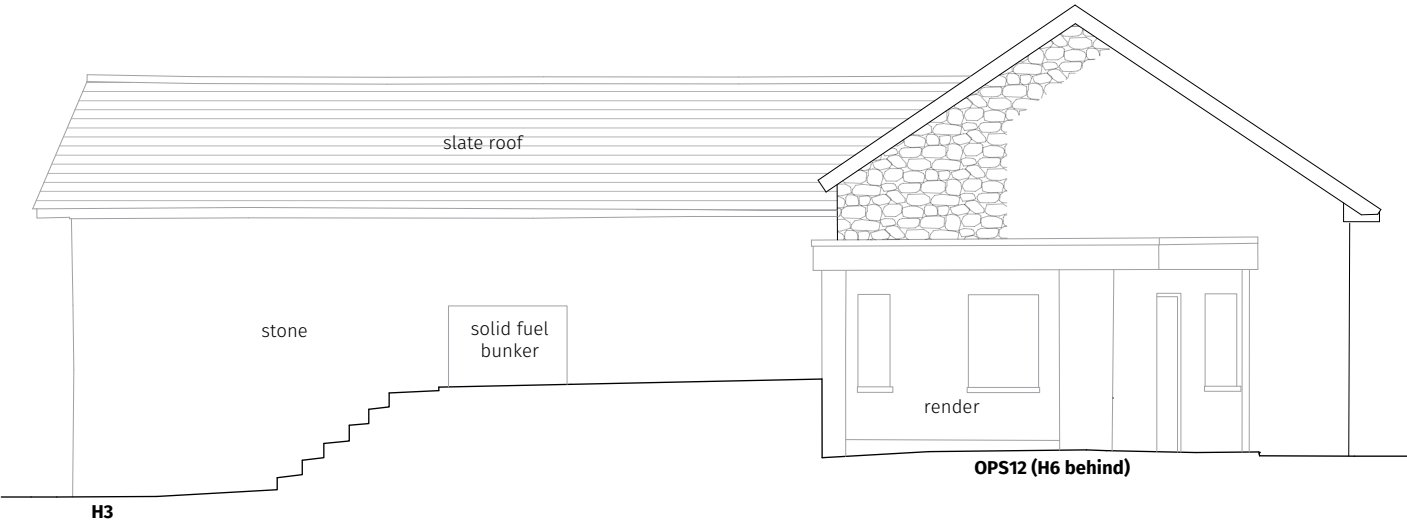


Scale 1:50 @ A1 / 1:100 @ A3





**East Elevation**  
Scale 1:50 @ A1 / 1:100 @ A3



**West Elevation**  
Scale 1:50 @ A1 / 1:100 @ A3

REVISIONS

**Thread**

Client: FWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

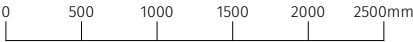
**H6 BRASS FOUNDRY  
EXISTING EAST &  
WEST ELEVATIONS**

Scale:  
**1:50@A1 / 1:100@A3**

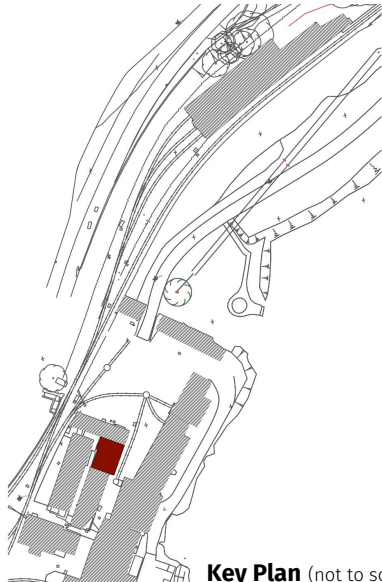
Date:  
**MARCH 2021**

81\_H6\_0\_04





1:25 @ A1 / 1:50 @ A3



**Key Plan** (not to scale)

REVISIONS

**Thread**

Client: FWHR  
Project Architect: Claire Fear

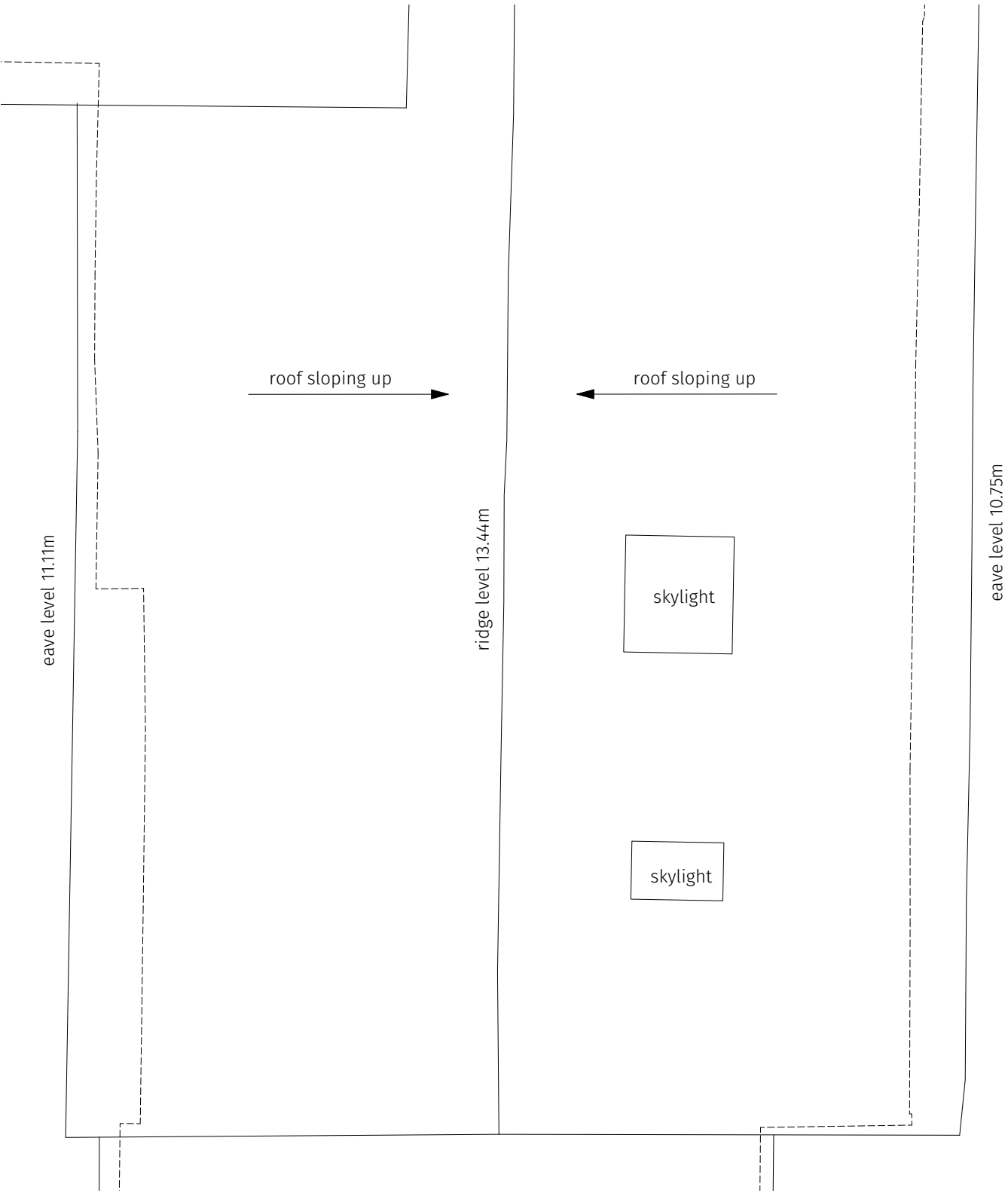
BOSTON LODGE WORKS

**H6 BRASS FOUNDRY  
EXISTING ROOF PLAN**

Scale:  
**1:25@A1 / 1:50@A3**

Date:  
**MARCH 2021**

81\_H6\_0\_05



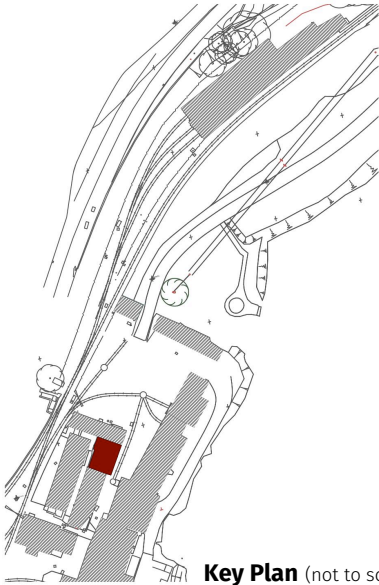
**Roof Plan**

Scale 1:25 @ A1 / 1:50 @ A3



0 500 1000 1500 2000 2500mm

1:25 @ A1 / 1:50 @ A3



**Key Plan** (not to scale)

REVISIONS

**Thread**

Client: FWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

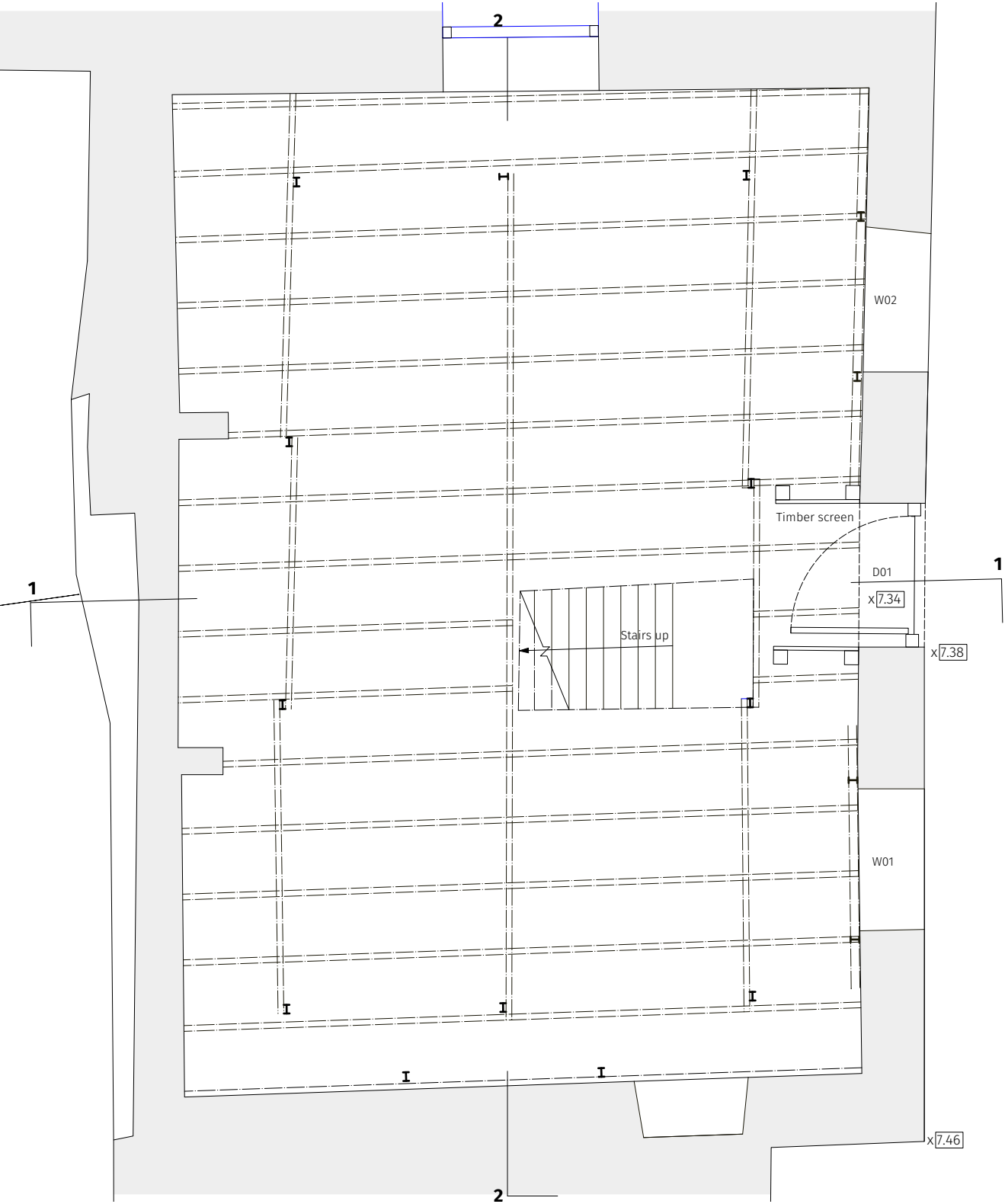
**H6 BRASS FOUNDRY  
PROPOSED FLOOR PLANS**

Scale:  
1:25@A1 / 1:50@A3

Date:  
**MARCH 2021**

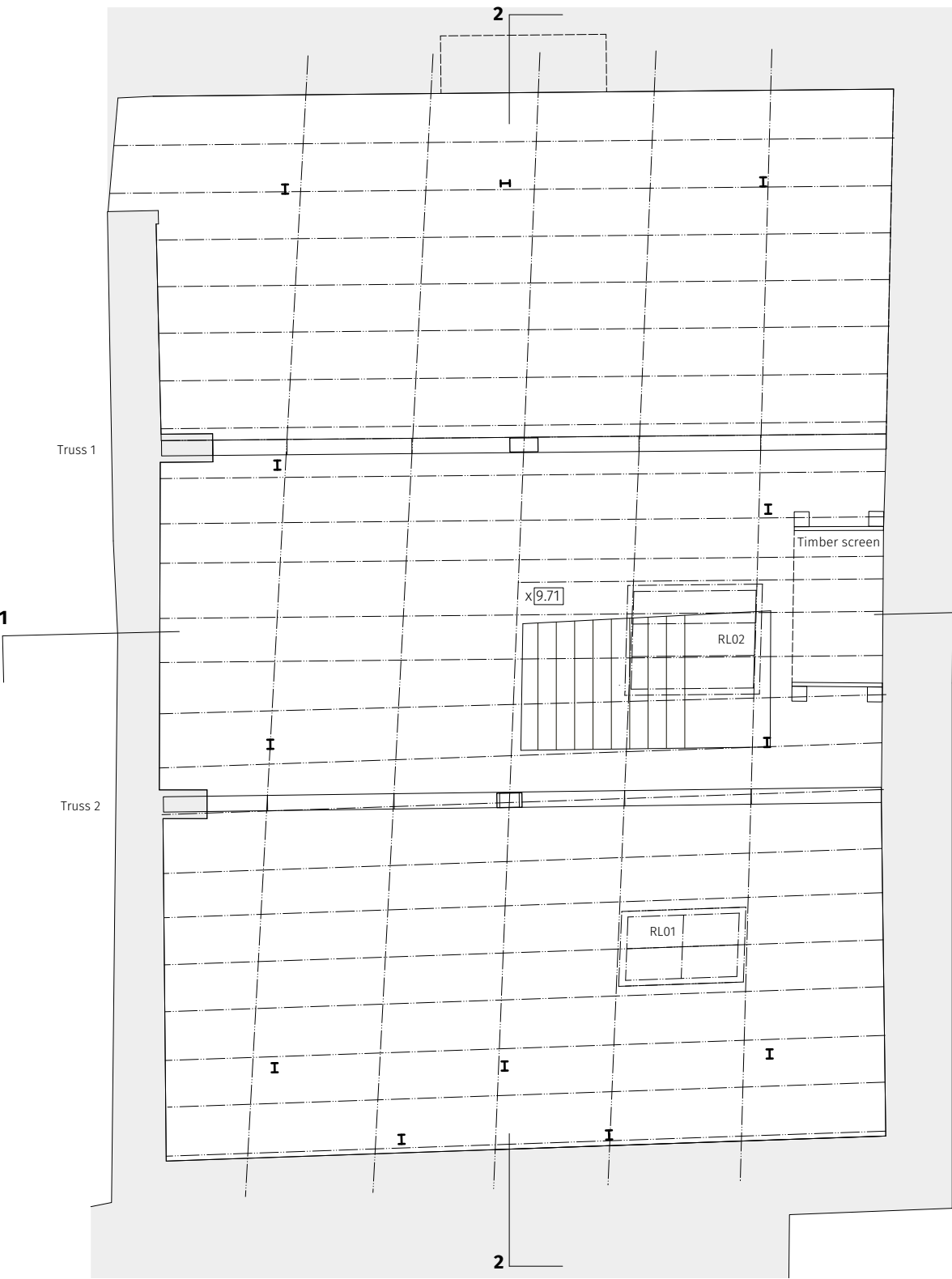
81\_H6\_3\_01

Window to be reinstated - refer to H3



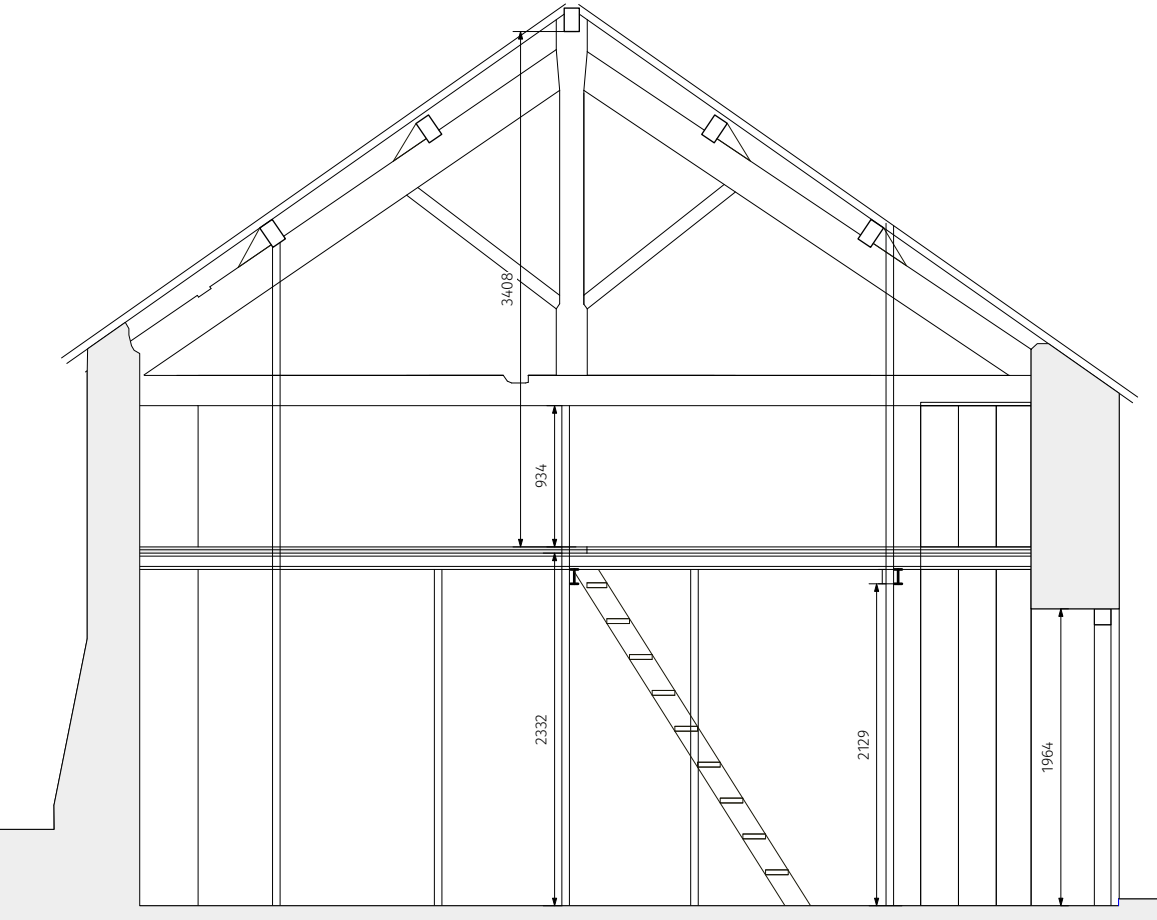
**Ground Floor Plan**

Scale 1:25 @ A1 / 1:50 @ A3

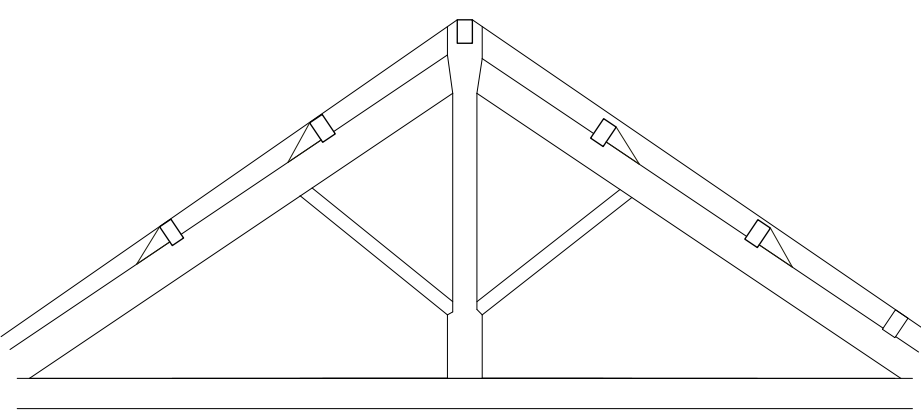


**Mezzanine Floor Plan**

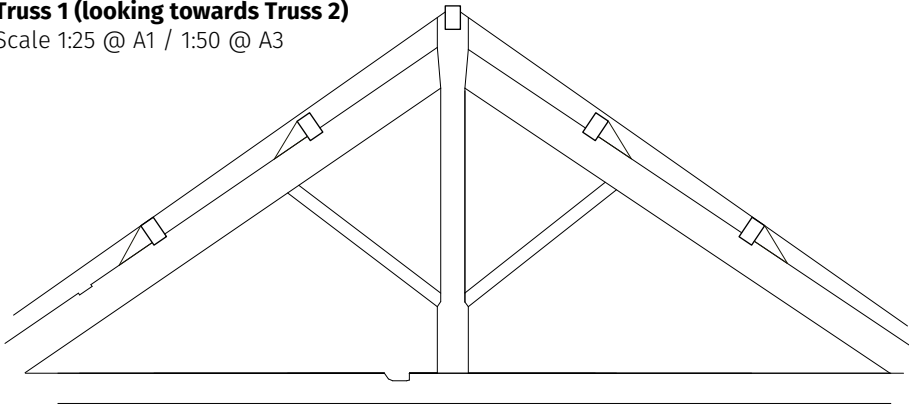
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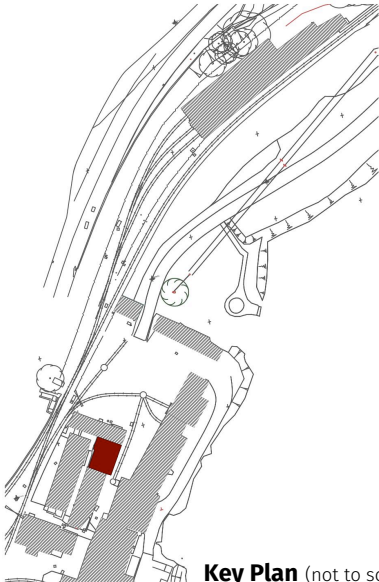
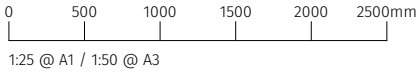
**Section 1**  
Scale 1:25 @ A1 / 1:50 @ A3



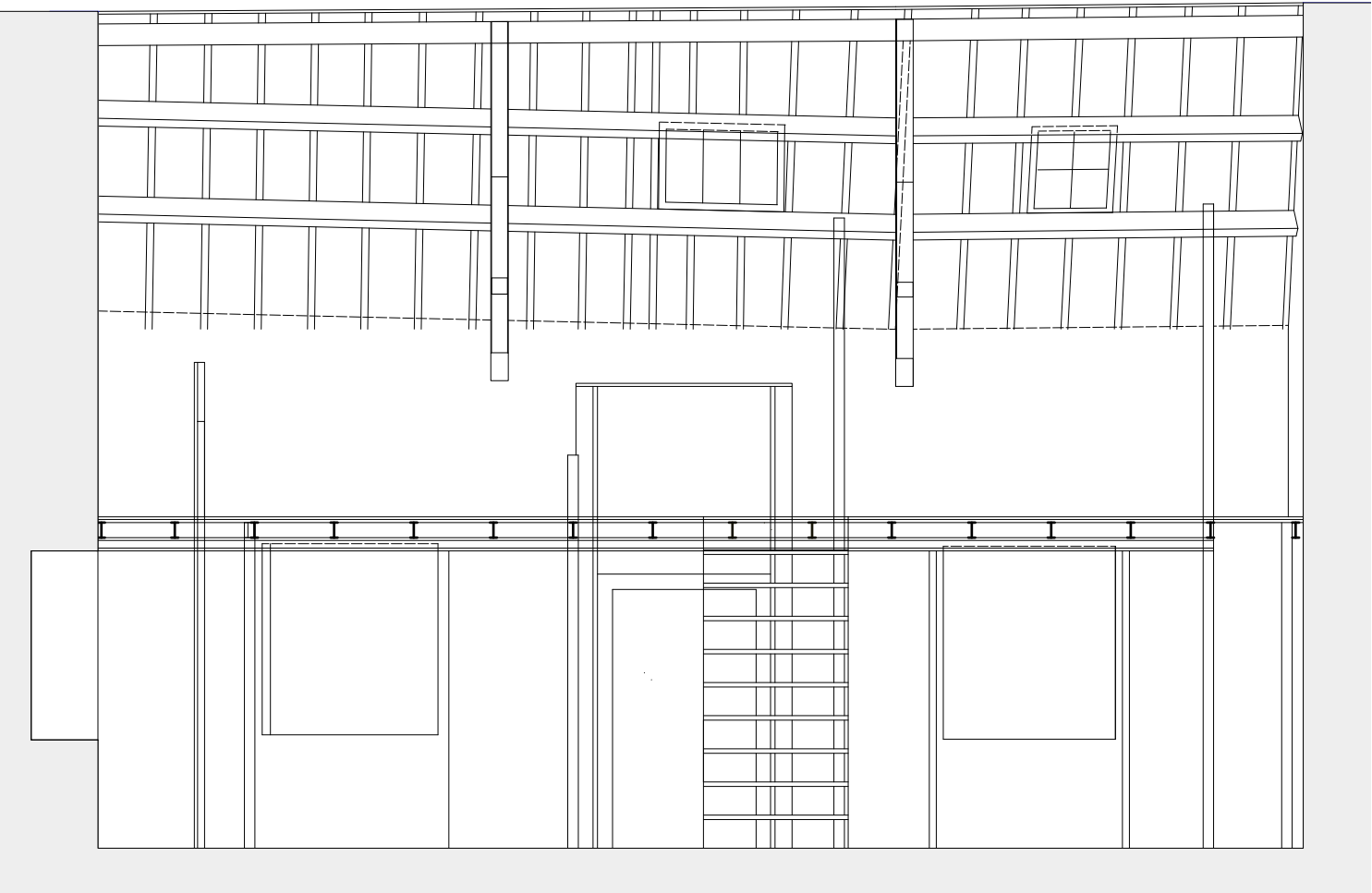
**Truss 1 (looking towards Truss 2)**  
Scale 1:25 @ A1 / 1:50 @ A3



**Truss 2 (looking towards Truss 1)**  
Scale 1:25 @ A1 / 1:50 @ A3



**Key Plan** (not to scale)



**Section 2**  
Scale 1:25 @ A1 / 1:50 @ A3

REVISIONS

**Thread**

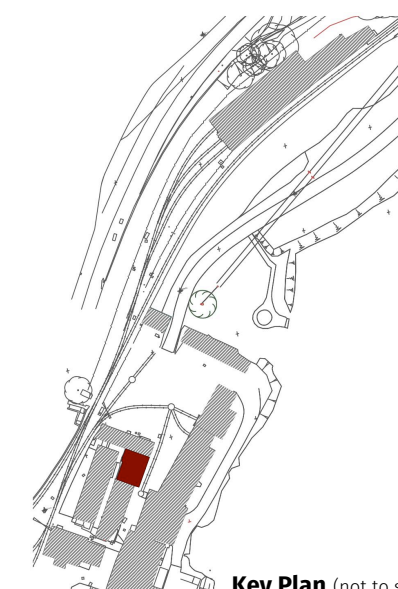
Client: FWHR  
Project Architect: Claire Fear  
  
BOSTON LODGE WORKS

**H6 BRASS FOUNDRY  
PROPOSED SECTIONS**

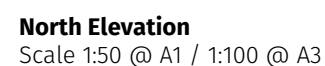
Scale:  
**1:25@A1 / 1:50@A3**  
  
Date:  
**MARCH 2021**

81\_H6\_3\_02





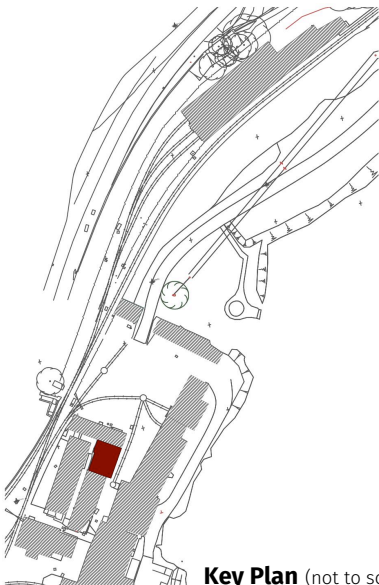
**South Elevation**  
Scale 1:50 @ A1 / 1:100 @ A3



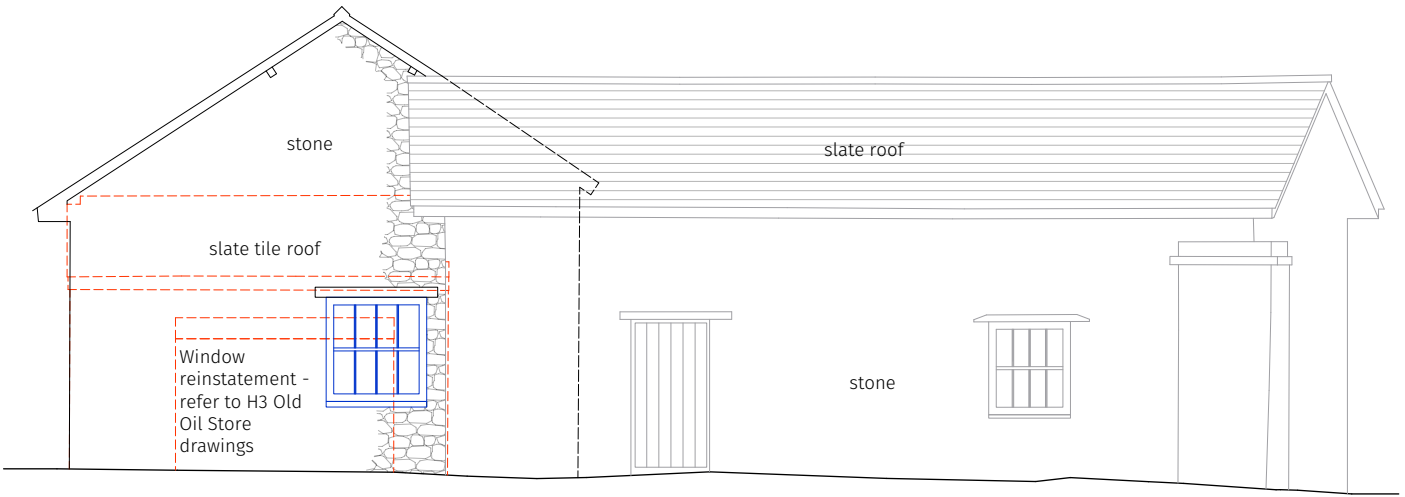
## 81\_H6\_3\_03



1:50 @ A1 / 1:100 @ A3

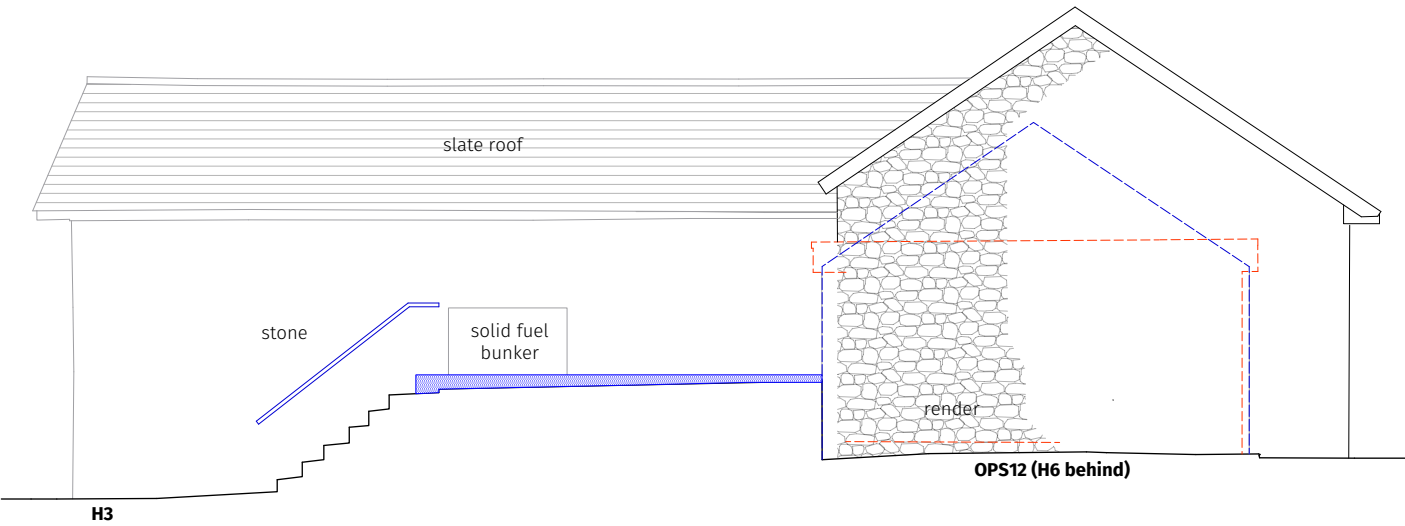


**Key Plan** (not to scale)



**East Elevation**

Scale 1:50 @ A1 / 1:100 @ A3



**West Elevation**

Scale 1:50 @ A1 / 1:100 @ A3

**REVISIONS**

Rev A (11 May 2021) - Window note updated

**Thread**

Client: FWHR  
Project Architect: Claire Fear

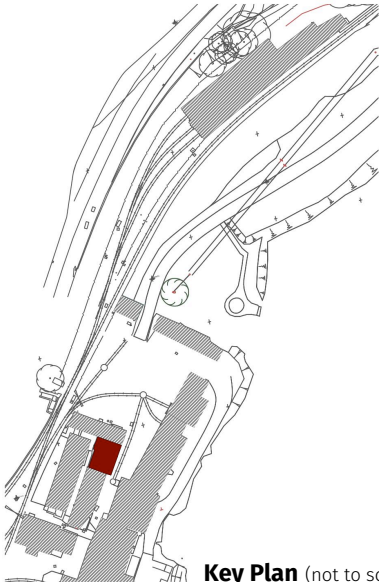
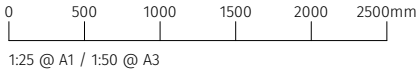
BOSTON LODGE WORKS

**H6 BRASS FOUNDRY  
PROPOSED EAST &  
WEST ELEVATIONS**

Scale:  
1:50@A1 / 1:100@A3

Date:  
**MARCH 2021**

81\_H6\_3\_04A



Key Plan (not to scale)

REVISIONS

Thread

Client: FWHR  
Project Architect: Claire Fear

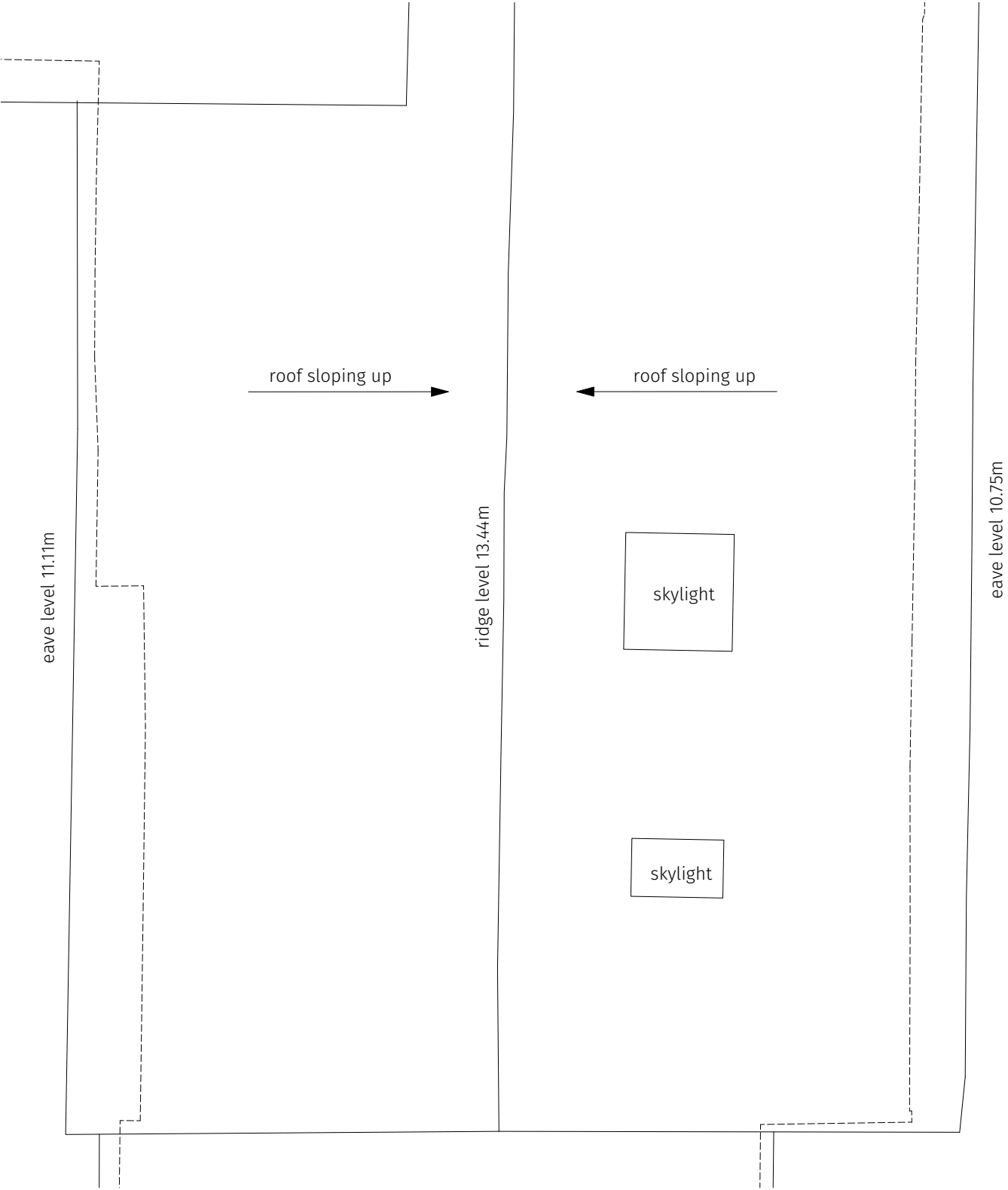
BOSTON LODGE WORKS

H6 BRASS FOUNDRY  
PROPOSED ROOF PLAN

Scale:  
1:25@A1 / 1:50@A3  
Date:  
MARCH 2021

81\_H6\_3\_05

Refer to repairs schedule for  
proposed works to roof.



Roof Plan  
Scale 1:25 @ A1 / 1:50 @ A3



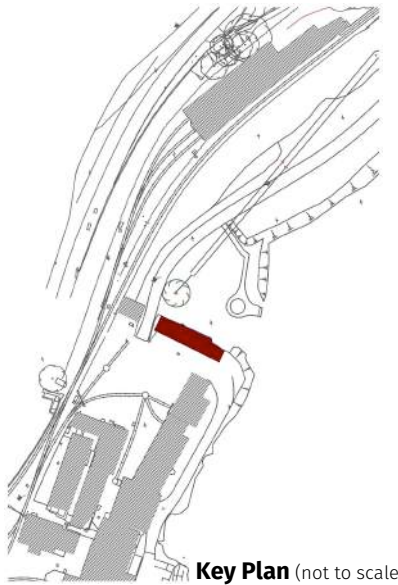
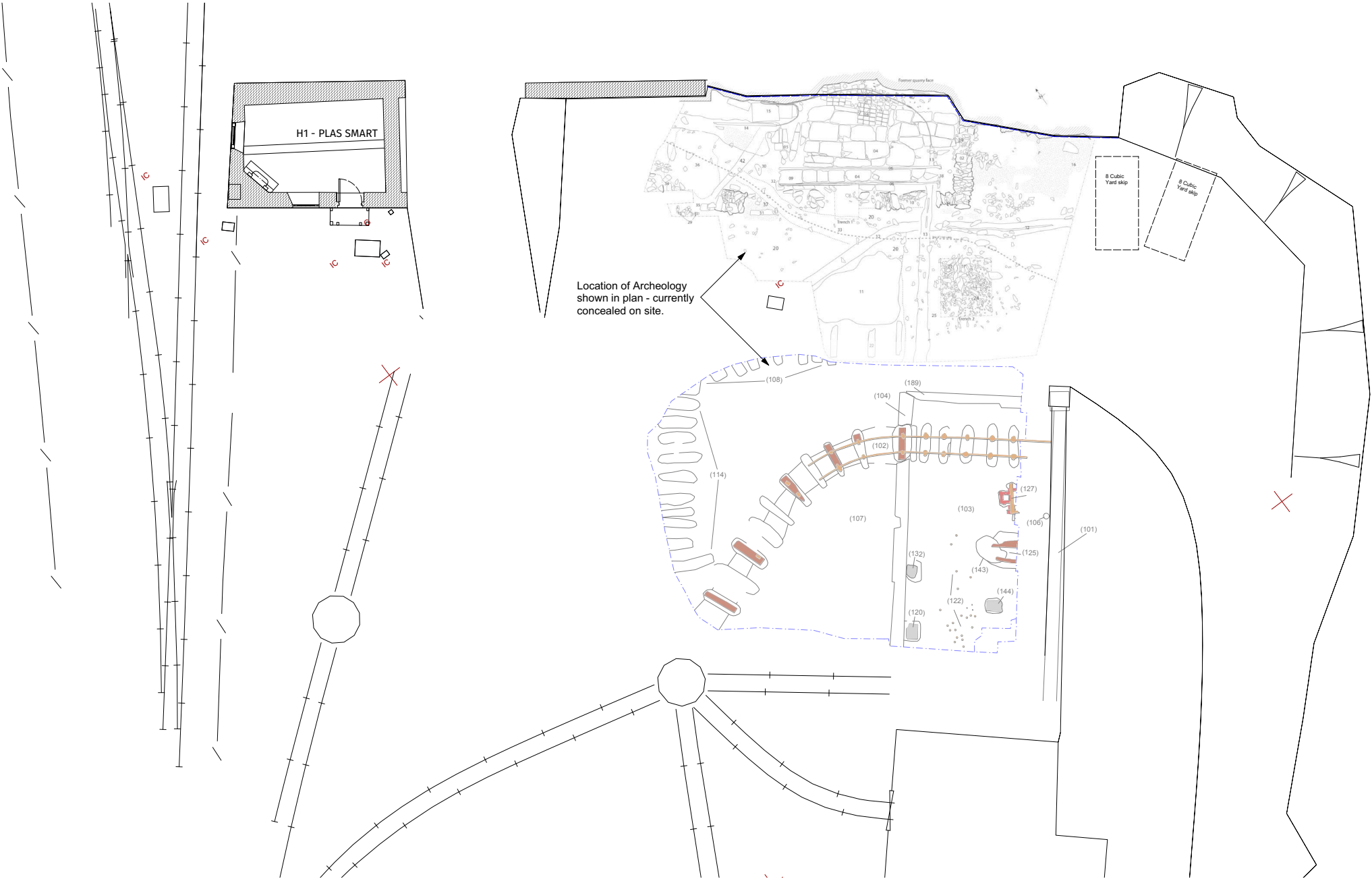
**H9**

**Waggon Repair Shed**

Site **N** 

0 2 4 6 8 10m

1:100 @ A1 / 1:200 @ A3



**Key Plan** (not to scale)

**Thread**

Client: FWHR  
Project Architect: Claire Fear

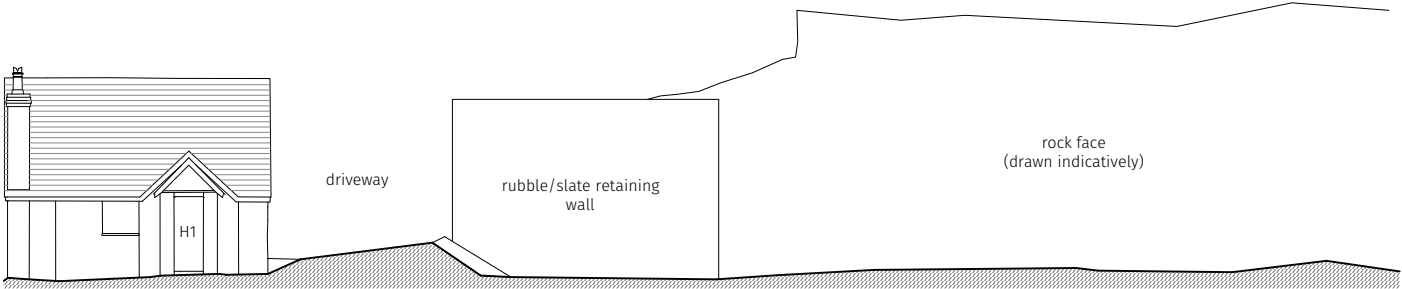
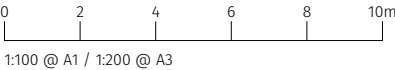
BOSTON LODGE WORKS

**H9  
WAGGON REPAIR SHED  
EXISTING PLAN**

Scale:  
1:100 @ A1 / 1:200 @ A3

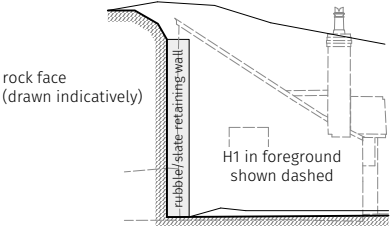
Date:  
OCTOBER 2020

81\_H9\_0\_01



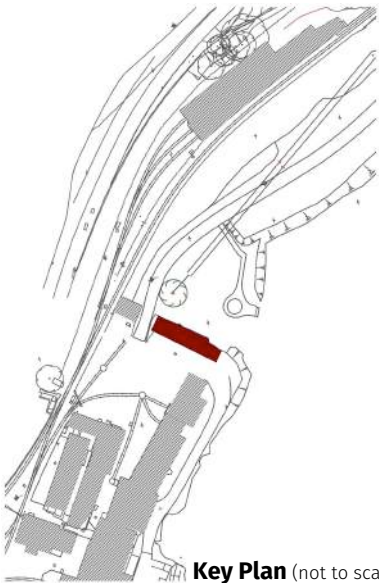
**Existing West Elevation**

Scale 1:100 @ A1 / 1:200 @ A3

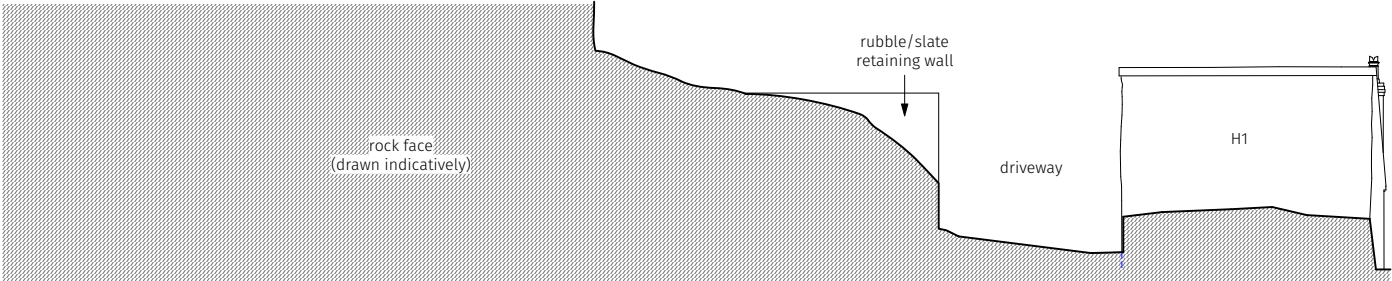


**Existing North Elevation**

Scale 1:100 @ A1 / 1:200 @ A3

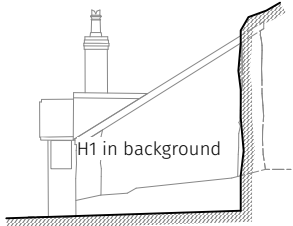


**Key Plan** (not to scale)



**Existing East Elevation**

Scale 1:100 @ A1 / 1:200 @ A3



**Existing South Elevation**

Scale 1:100 @ A1 / 1:200 @ A3

**Thread**

Client: FFWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

**H9  
WAGGON REPAIR SHED  
EXISTING ELEVATIONS**

Scale:  
**1:100 @ A1 / 1:200 @ A3**

Date:  
**MARCH 2021**

81\_H9\_0\_02



The Aesthetic of the Proposals has been informed by the following observations from this photo, and others as available. The key elements are highlighted here

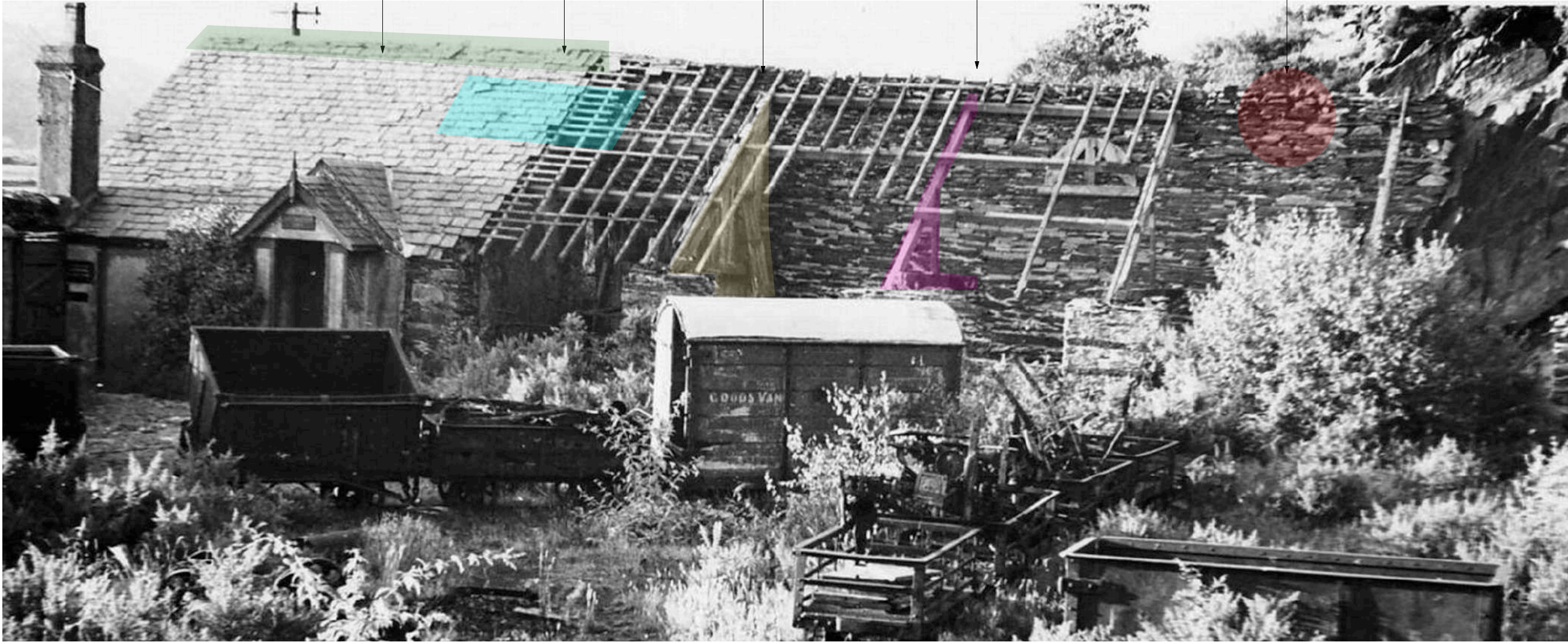
Oversailing verge to the rear with timber fascia

Welsh Slate roof and batten exposed to the underside

Vertical timber boarding to the internal partitions

Roof structure is supported by tie beams at the centre of the piers and tied back to the wall

Rubble slate walling (reclaimed from site)



Historic Photograph  
Top Yard from the West in July 1959 (Denis Corley)

Thread

Client: FWHR  
Project Architect: Claire Fear

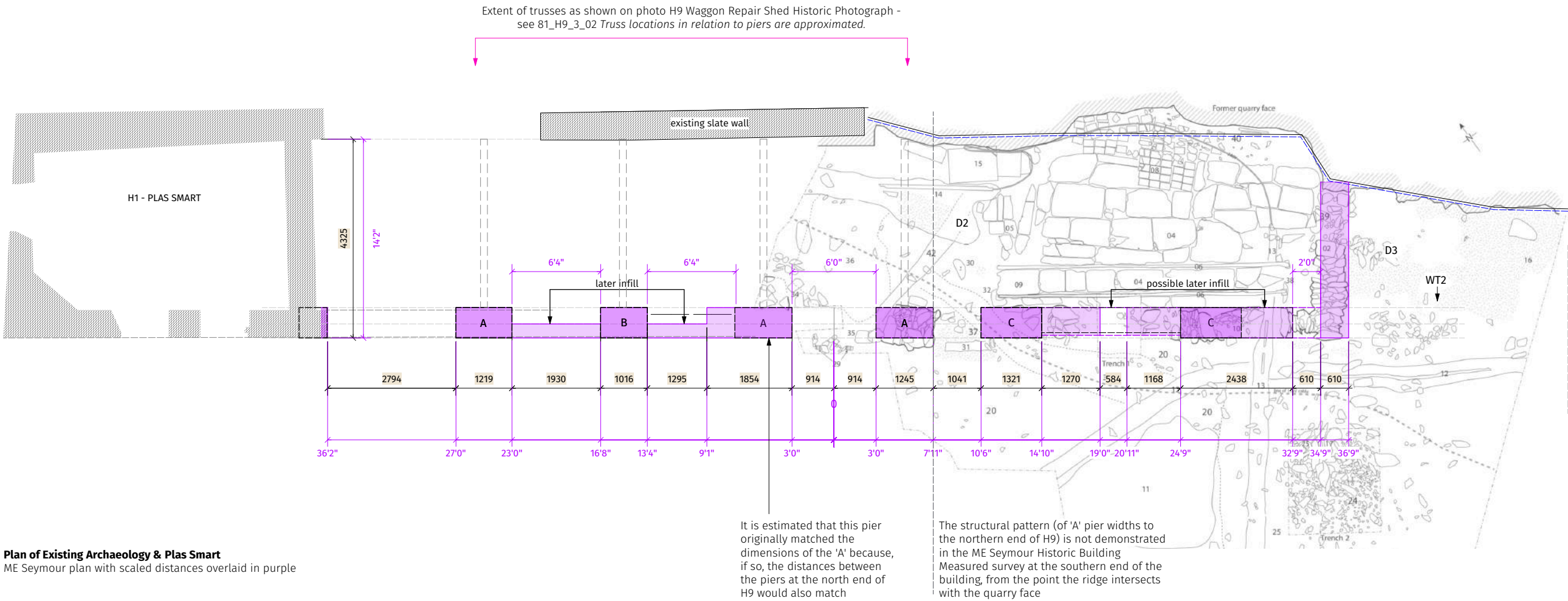
BOSTON LODGE WORKS

H9 WAGGON REPAIR SHED  
HISTORIC BUILDING  
FEATURES

Scale:  
Not to Scale  
Date:  
OCTOBER 2020

81\_H9\_3\_01





**Waggon Repair Shed / Store photo - 1950 from FR Archives**  
Photo of the Wagon Shed used to inform the setting out of the proposed building, alongside the Archeological reports and Historic Building Analysis.

Thread

Client: FWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

**H9 - WAGGON REPAIR SHED  
MES PLAN SETTING OUT  
OVER ARCHAEOLOGY PLAN**

Scale:  
**1:50 @ A1 / 1:100 @ A3**  
Date:  
**OCTOBER 2020**

81\_H9\_3\_02



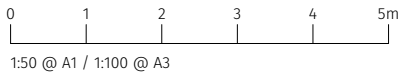
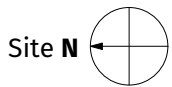
BOSTON LODGE WORKS

Scale:  
**1:50 @ A1 / 1:100 @ A3**

Date:  
**MARCH 2021**

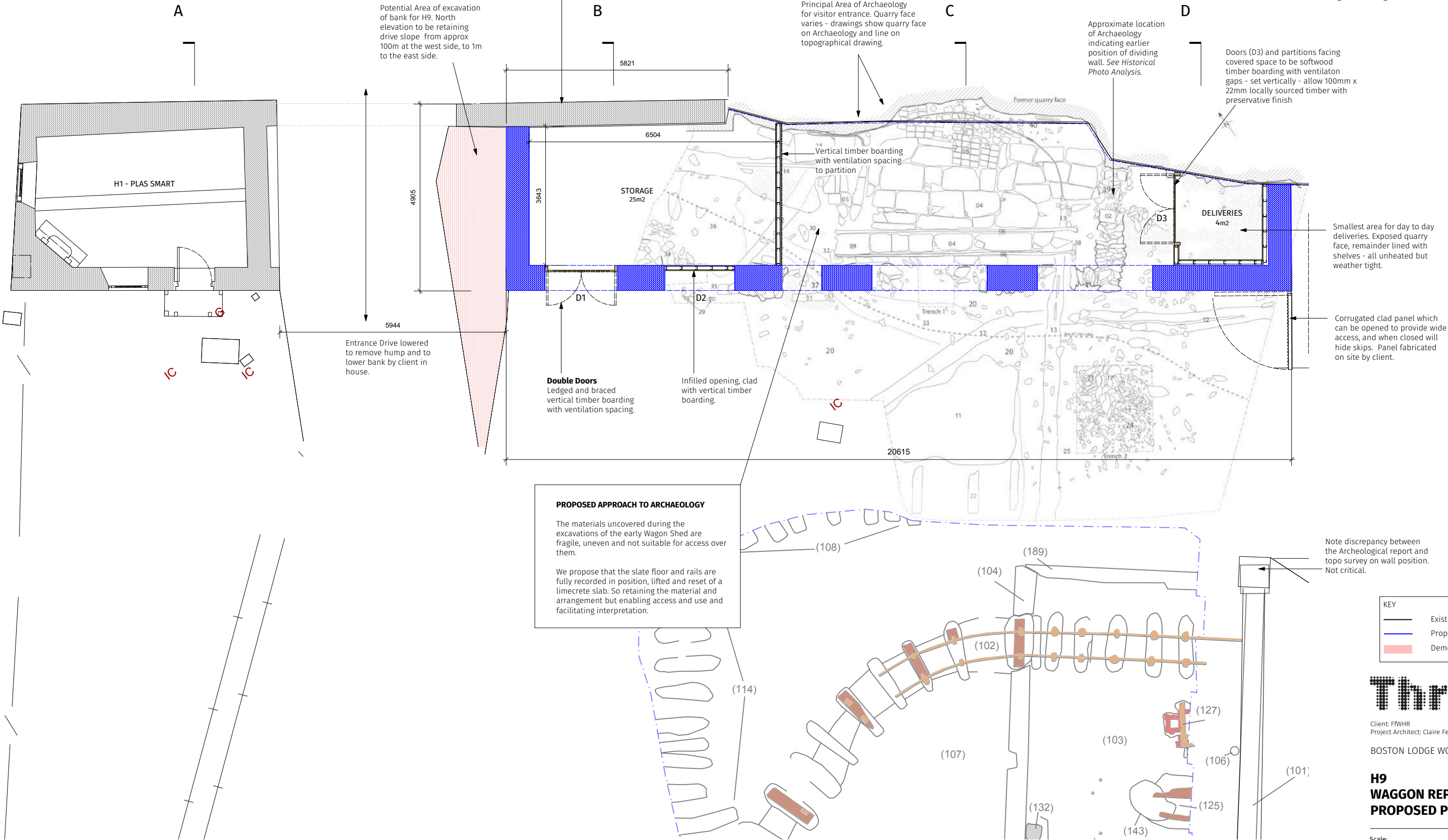
81\_H9\_3\_03





All walls in rubble slate walls - all material  
reclaimed from site to match existing east wall.

Allow to rebuild existing rubble slate wall to height  
and length shown on the plan. There is some area  
of existing wall - but integrity and stability to be  
checked so this allows for worse case scenario.



#### PROPOSED APPROACH TO ARCHAEOLOGY

The materials uncovered during the  
excavations of the early Wagon Shed are  
fragile, uneven and not suitable for access over  
them.

We propose that the slate floor and rails are  
fully recorded in position, lifted and reset of a  
limecrete slab. So retaining the material and  
arrangement but enabling access and use and  
facilitating interpretation.

KEY	
—	Existing
—	Proposed
—	Demolition

# Thread

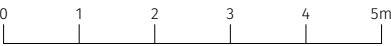
Client: FFWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

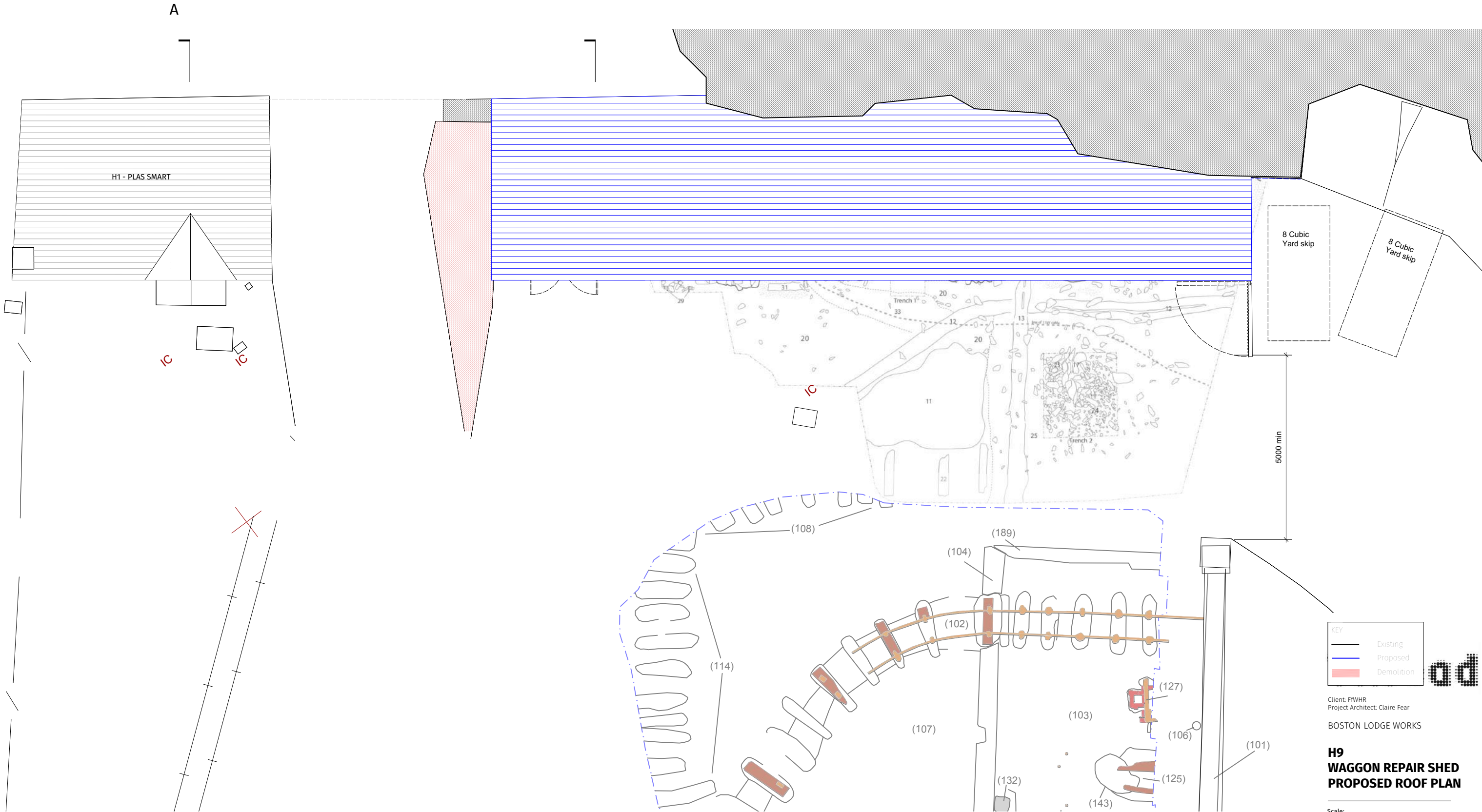
## H9 WAGGON REPAIR SHED PROPOSED PLAN

Scale:  
1:50 @ A1 / 1:100 @ A3  
Date:  
OCTOBER 2020

81\_H9\_3\_04



1:50 @ A1 / 1:100 @ A3



Client: FFWHR  
Project Architect: Claire Fear

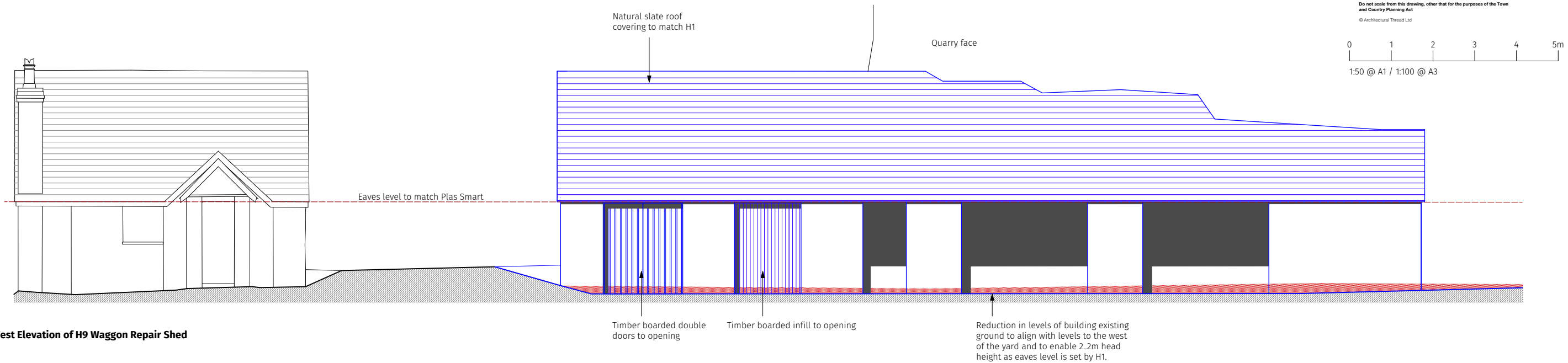
BOSTON LODGE WORKS

## H9 WAGGON REPAIR SHED PROPOSED ROOF PLAN

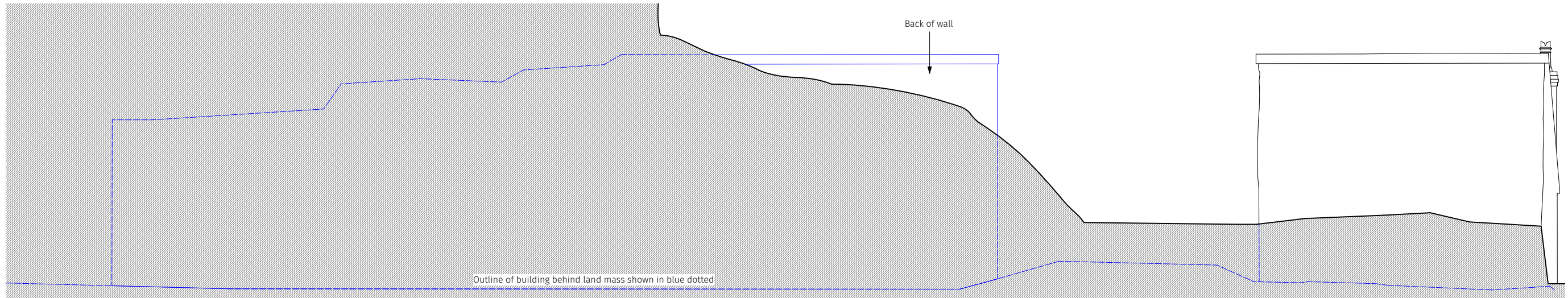
Scale:  
1:50 @ A1 / 1:100 @ A3

Date:  
OCTOBER 2020

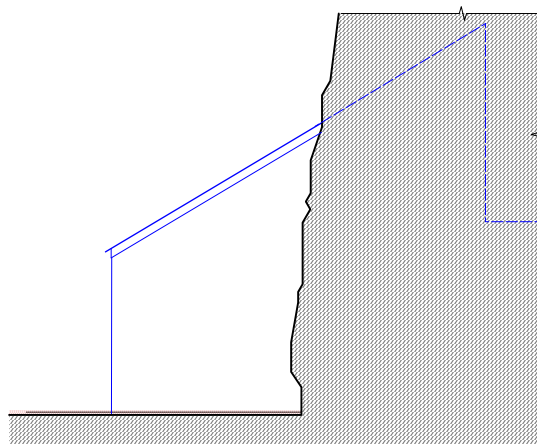
81\_H9\_3\_05



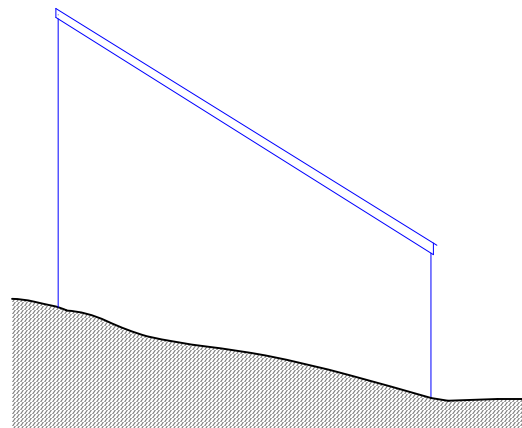
Proposed West Elevation of H9 Waggon Repair Shed



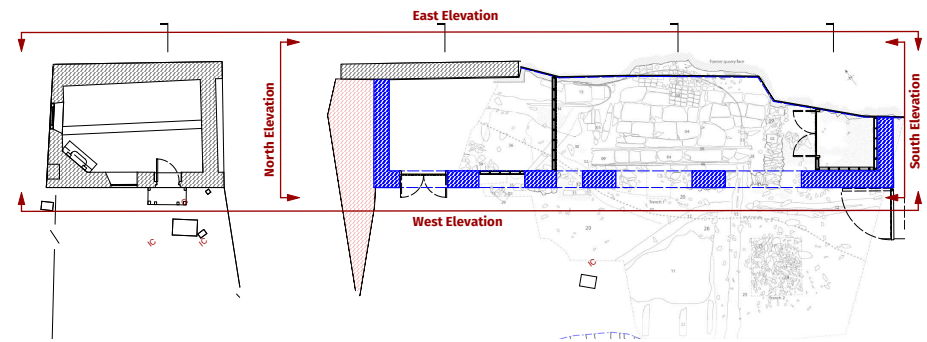
Proposed East Elevation of H9 Waggon Repair Shed



Proposed South Elevation of H9 Waggon Repair Shed



Proposed North Elevation of H9 Waggon Repair Shed



KEY	
	Existing
	Proposed
	Demolition

**Thread**

Client: FWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

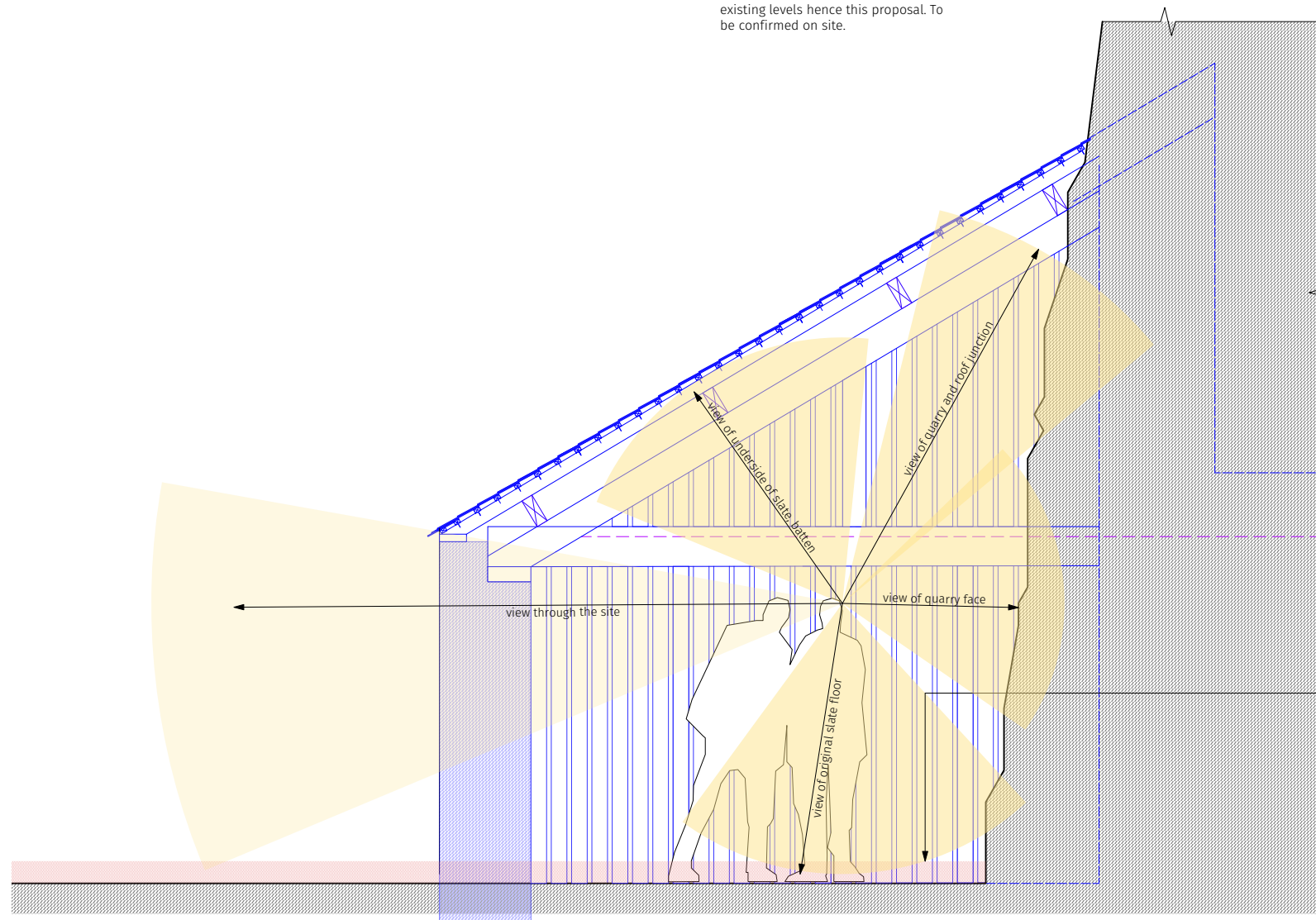
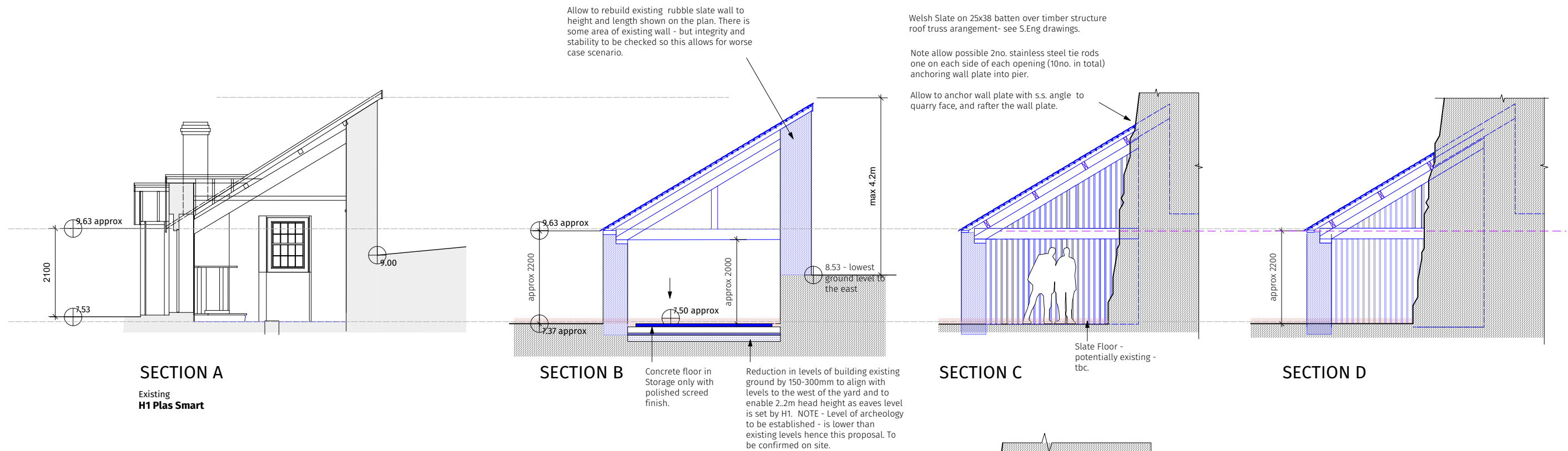
## H9 WAGGON REPAIR SHED PROPOSED ELEVATIONS

Scale:  
1:50 @ A1 / 1:100 @ A3

Date:  
MARCH 2021

81\_H9\_3\_06





### Visitor Experience

Central Bays open for visitor welcome but also robust enough for slate wagons and other items to be bought into the area.

*Extent of retention of archeology to be confirmed.*

Scale 1:20 @ A1

### REVISIONS

KEY	
	Existing
	Proposed
	Demolition

# Thread

Client: FFWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

## H9 WAGGON REPAIR SHED PROPOSED SECTIONS

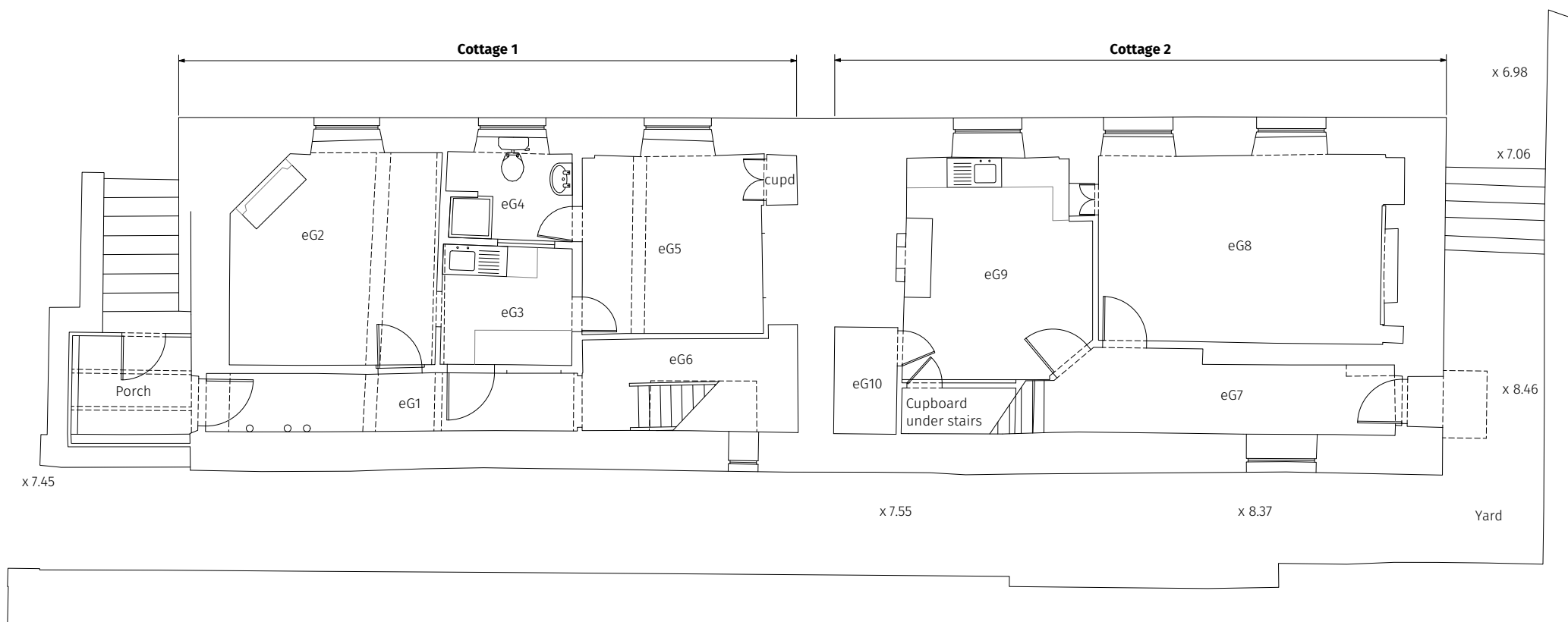
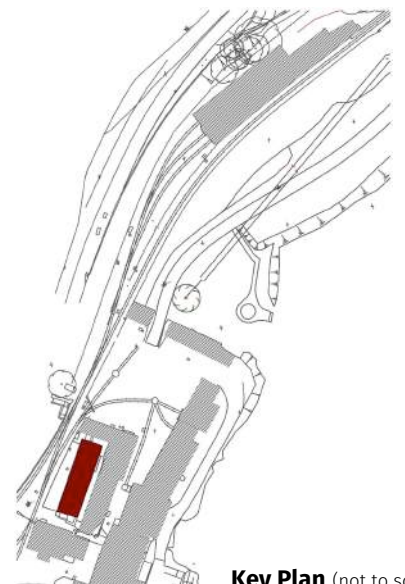
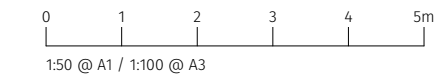
Scale:  
1:50 @ A1 / 1:100 @ A3 unless stated  
Date:  
OCTOBER 2020

81\_H9\_3\_07

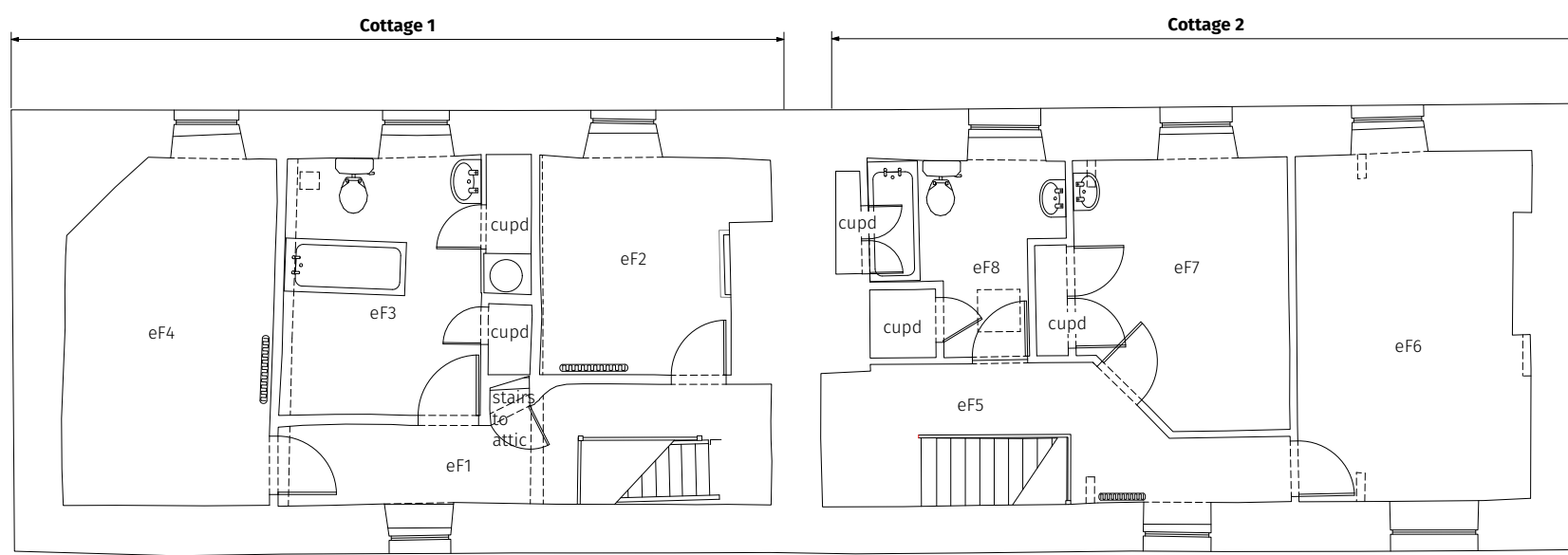
Scale 1:20 @ A1 / 1:40 @ A3

# H10

**The Barracks**



REVISIONS



**Thread**

Client: FWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

**H10 THE BARRACKS  
EXISTING FLOOR PLANS  
GROUND & FIRST**

Scale:  
1:50@A1 / 1:100@A3

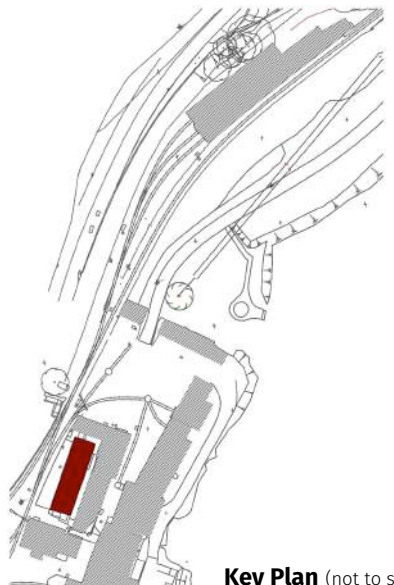
Date:  
FEBRUARY 2021

81\_H10\_0\_01

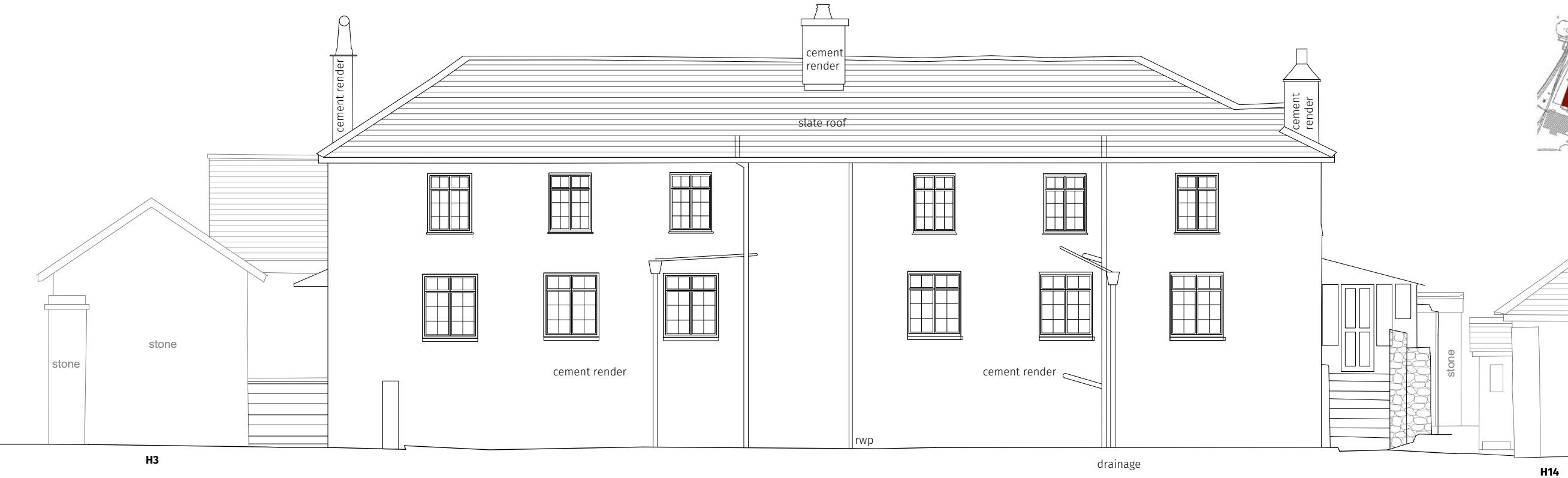


0 1 2 3 4 5m

1:50 @ A1 / 1:100 @ A3



**Key Plan** (not to scale)



**REVISIONS**

Rev A (6 April 2021) - cement render notes added

**North Elevation**

Scale 1:50 @ A1 / 1:100 @ A3

**Thread**

Client: FWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

**H10 THE BARRACKS  
EXISTING  
NORTH ELEVATION**

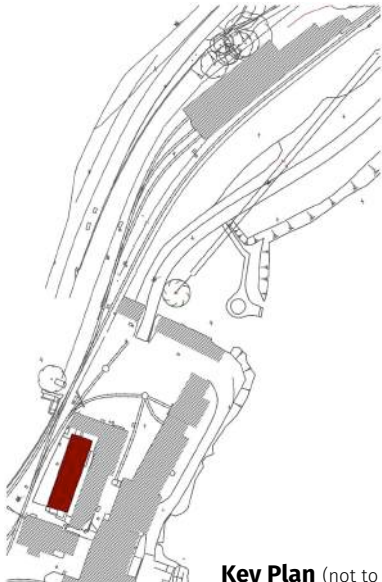
Scale:  
**1:50@A1 / 1:100@A3**

Date:  
**FEBRUARY 2021**

**81\_H10\_0\_02 A**



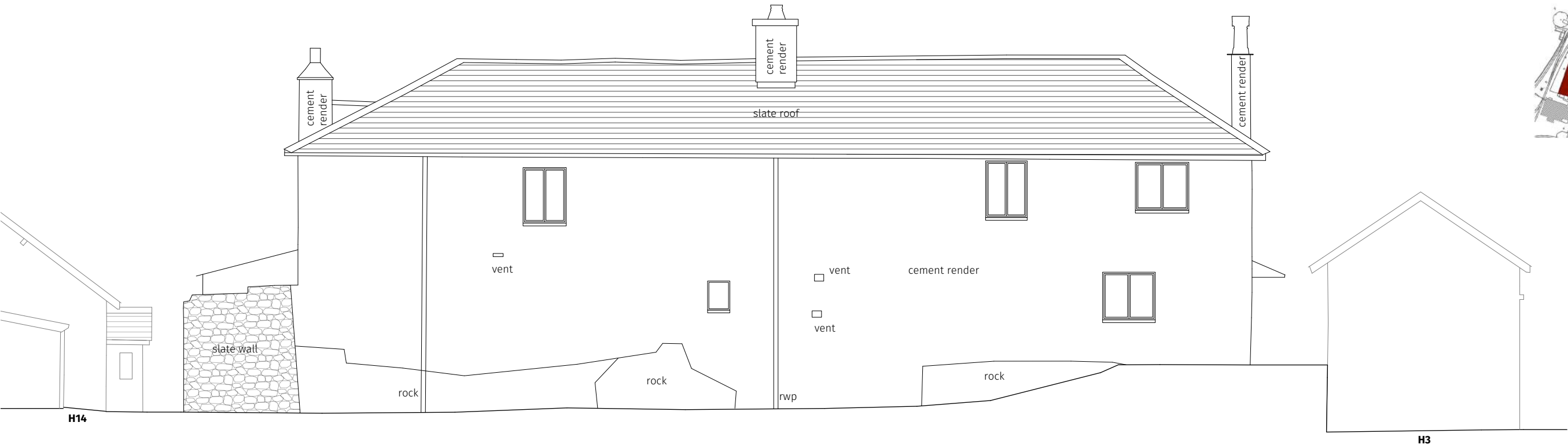
1:50 @ A1 / 1:100 @ A3



**Key Plan** (not to scale)

**REVISIONS**

Rev A (6 April 2021) - cement render notes added, rainwater pipe indicated



**South Elevation**

Scale 1:50 @ A1 / 1:100 @ A3

**Thread**

Client: FWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

**H10 THE BARRACKS  
EXISTING  
SOUTH ELEVATION**

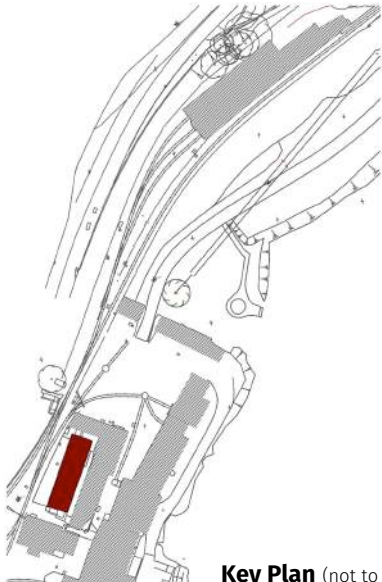
Scale:  
1:50@A1 / 1:100@A3

Date:  
FEBRUARY 2021

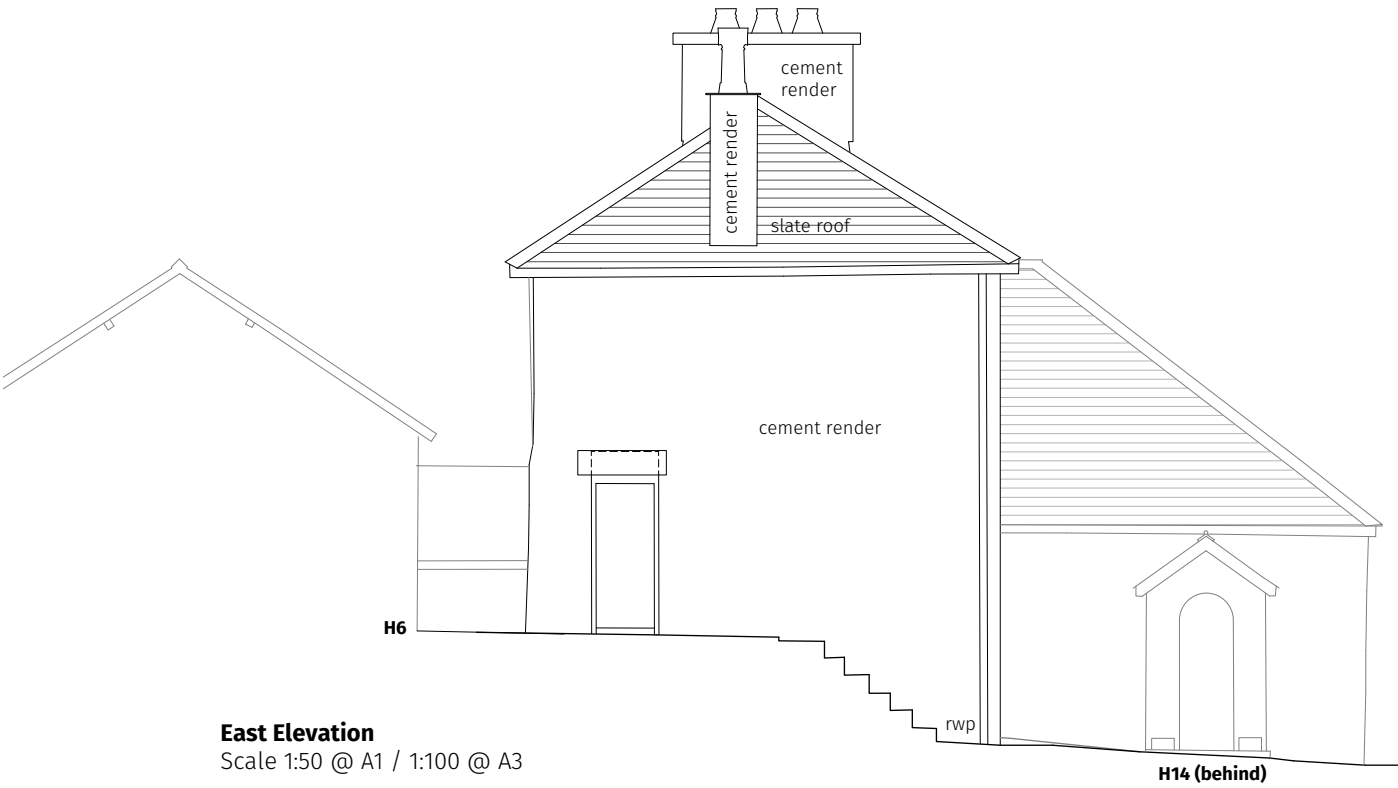
81\_H10\_0\_03 A

0 1 2 3 4 5m

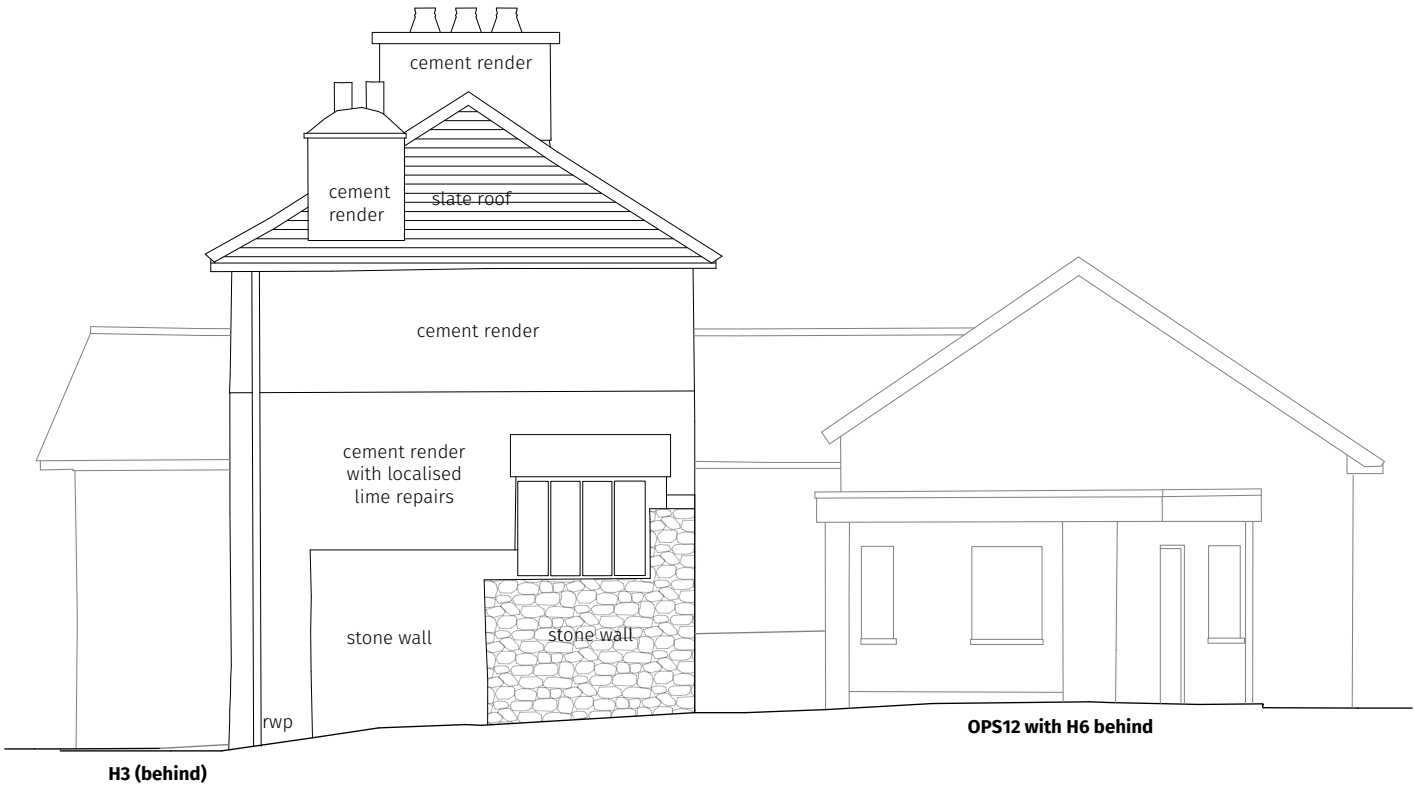
1:50 @ A1 / 1:100 @ A3



**Key Plan** (not to scale)



**East Elevation**  
Scale 1:50 @ A1 / 1:100 @ A3



**West Elevation**  
Scale 1:50 @ A1 / 1:100 @ A3

**REVISIONS**

Rev A (6 April 2021) - cement render notes added, rainwater pipe to West elevation indicated

**Thread**

Client: FWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

**H10 THE BARRACKS  
EXISTING EAST  
& WEST ELEVATIONS**

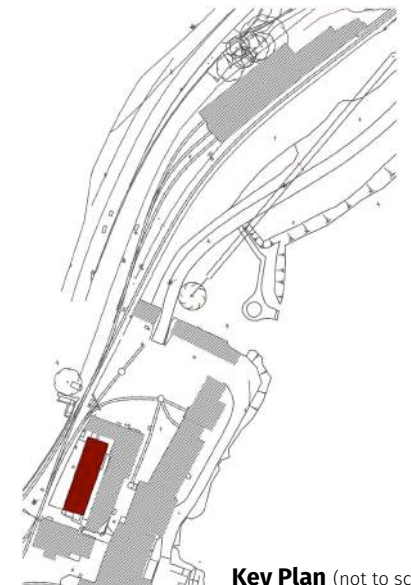
Scale:  
1:50@A1 / 1:100@A3

Date:  
FEBRUARY 2021

81\_H10\_0\_04 A







**Key Plan** (not to scale)

Reconstruct top step - to form level threshold (~10mm) for accessible entrance (from sloped access behind). Allow for repairs to existing stonework ensure safe and even surface. New stone to top step to match existing stonework.

Proposed new gate at top of landing to steps

**KEY:**

Desk Size shown 1500 x 750mm  
Dashed line shows space for ease of chair movement and desk access

**REVISIONS**

Rev A (4 March 21) - Room numbers, areas, wall hatch

**Thread**

Client: FWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

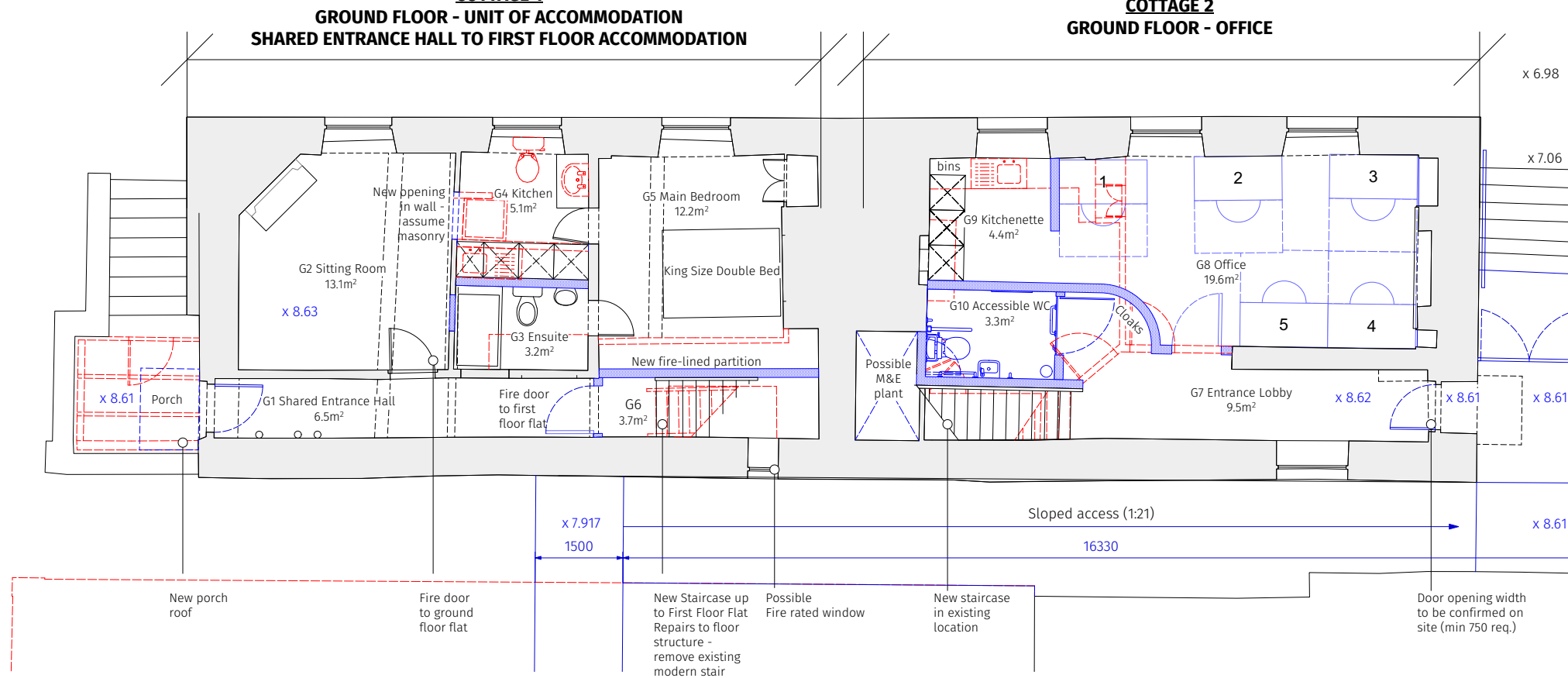
**H10 THE BARRACKS  
PROPOSED FLOOR PLANS  
GROUND & FIRST**

Scale:  
**1:50@A1 / 1:100@A3**  
Date:  
**FEBRUARY 2021**

**81\_H10\_3\_01 A**

**COTTAGE 1  
GROUND FLOOR - UNIT OF ACCOMMODATION  
SHARED ENTRANCE HALL TO FIRST FLOOR ACCOMMODATION**

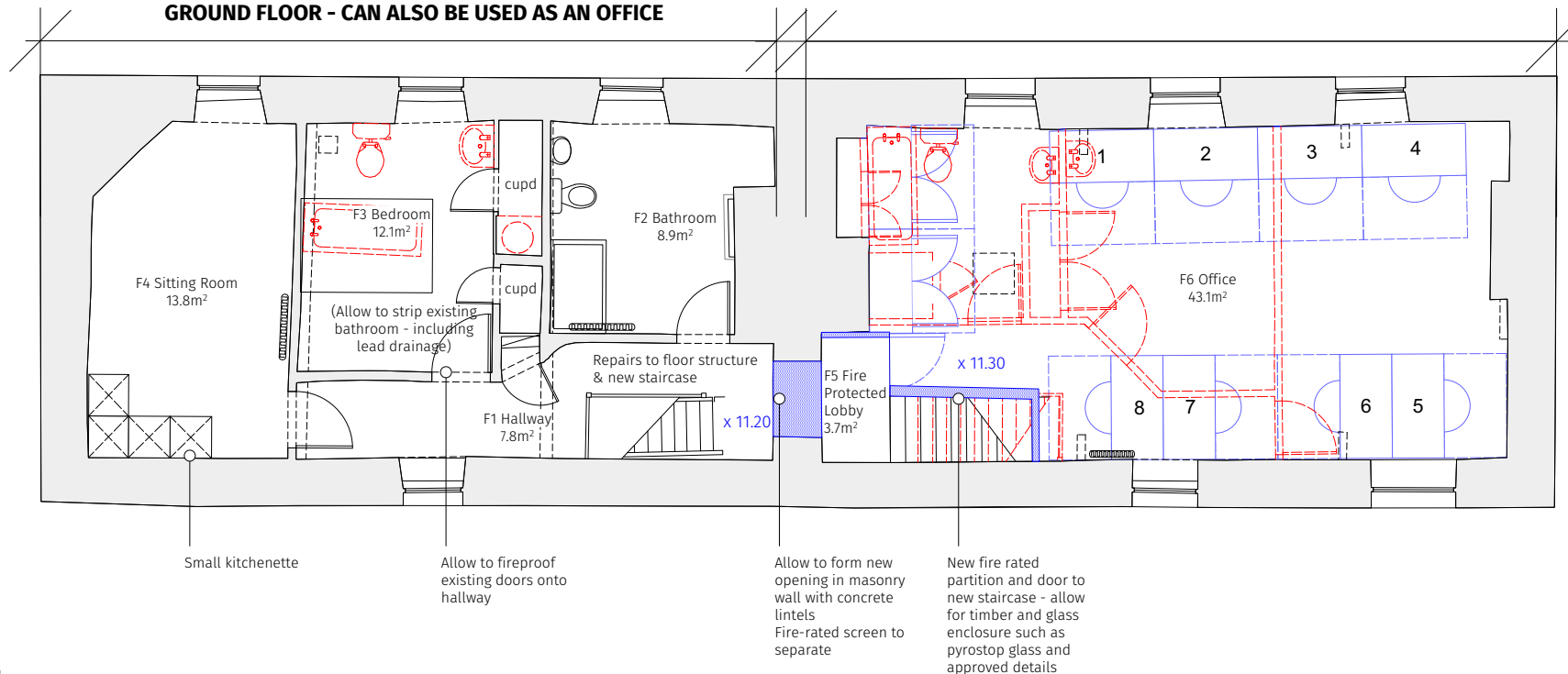
**COTTAGE 2  
GROUND FLOOR - OFFICE**



**Ground Floor Plan**  
Scale 1:50 @ A1 / 1:100 @ A3

**COTTAGE 1  
FIRST FLOOR - UNIT OF ACCOMMODATION - ACCESSED FROM  
GROUND FLOOR - CAN ALSO BE USED AS AN OFFICE**

**COTTAGE 2  
FIRST FLOOR - OFFICE**



**First Floor Plan**  
Scale 1:50 @ A1 / 1:100 @ A3

**Rainwater Calculations:**

Flow Rate = effective design area x rainfall intensity (for N. Wales)  
= 80.1m<sup>2</sup> x 0.016  
= 1.28 l/s  
Flow rate capacity required per outlet for **2 downpipes** = 1.28/2 = **0.64 l/s**  
Flow rate capacity required for **1 central downpipe** (as existing) = 1.28/1 = **1.28 l/s**

Longer runs or turns in guttering reduce flow capacity by 15%  
Central downpipes have better flow rate than end downpipes  
Gutters at a fall have improved flow rate to level gutters.

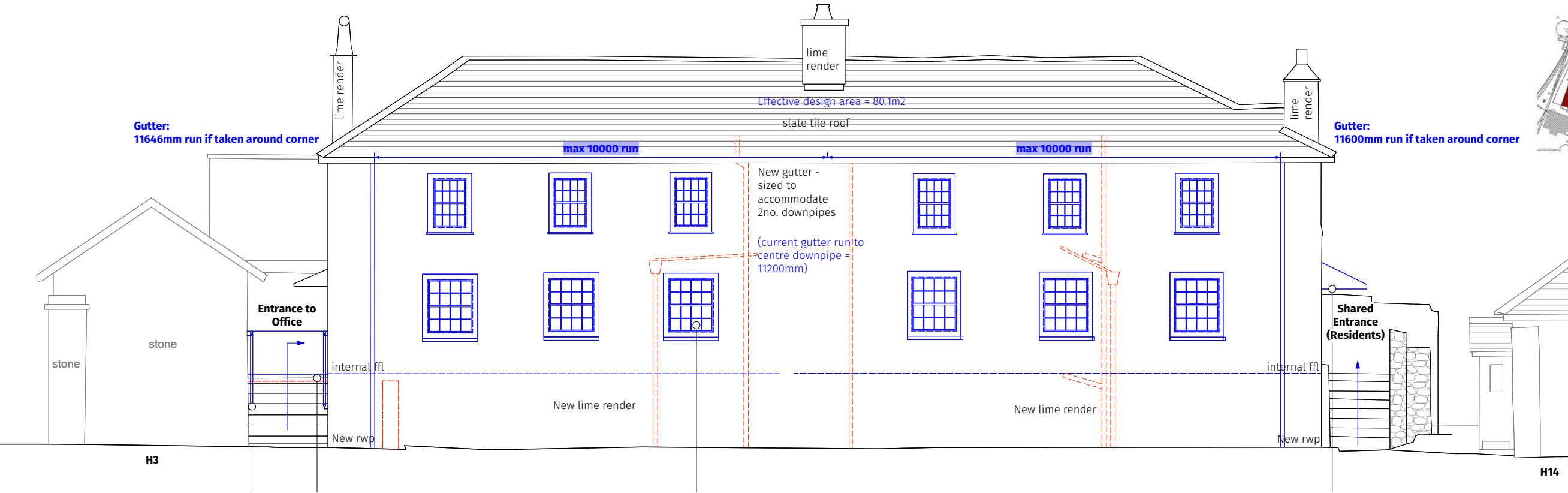
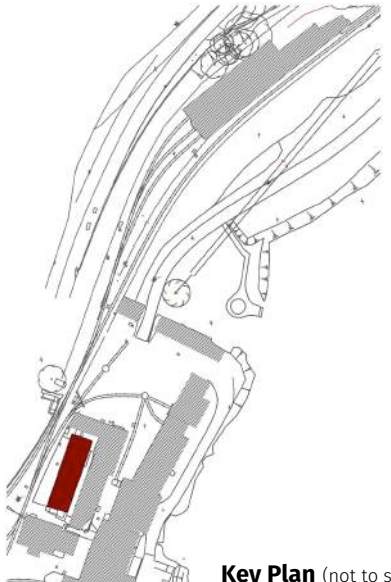
**Approved Doc H requirements:**

Min gutter diameter of 150mm and outlet diameter of 89mm for effective design areas of 65-103m<sup>2</sup>  
(for flow capacity of 1.37 - 2.16) BUT  
Gutter length to be max 50x gutter diameter or max 100x gutter diameter for 2 end downpipes

**Moulded Ogee profile Flow Capacity:**  
**150x100mm gutter & 100mm outlet (meets Doc H): 3.21; reduced flow capacity (~15%): 2.73**  
**150 gutter diameter x 100 = max gutter length of 15m (= OK ito length & Capacity)**

Recommended by manufacturers: Max 10m gutter length to downpipe

0 1 2 3 4 5m  
1:50 @ A1 / 1:100 @ A3



New 50mm diam. handrails to both sides of steps at 900-1100 above line of steps  
New gate as guard to top of steps

Reconstruct top step - to form level threshold (~10mm) for accessible entrance (from sloped access behind).  
Allow for repairs to existing stonework ensure safe and even surface.  
New stone to top step to match existing stonework.

12no. New traditional timber box-sash windows to replace modern casements  
Generally 8/8 configuration (in FSC certified hardwood).  
All windows to be double glazed with heritage/hand-drawn glass to outer pane.

**Note:**  
Conservation repairs to roof and masonry as per repairs schedule

Reconstruction of porch roof to Cottage No.1 with slates and flashing to match existing roof

**REVISIONS**

Rev A (6 April 2021) - New lime render throughout, rainwater goods & calculations included

Rev B (11 May 2021) - Half round gutter option omitted from notes

**North Elevation**  
Scale 1:50 @ A1 / 1:100 @ A3

**Thread**

Client: FWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

**H10 THE BARRACKS  
PROPOSED  
NORTH ELEVATION**

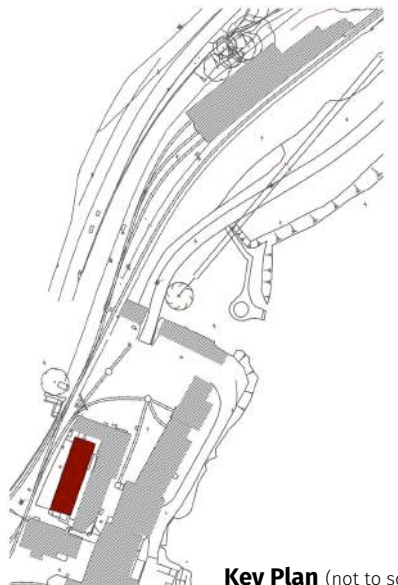
Scale:  
**1:50@A1 / 1:100@A3**  
Date:  
**FEBRUARY 2021**

81\_H10\_3\_02B



0 1 2 3 4 5m

1:50 @ A1 / 1:100 @ A3

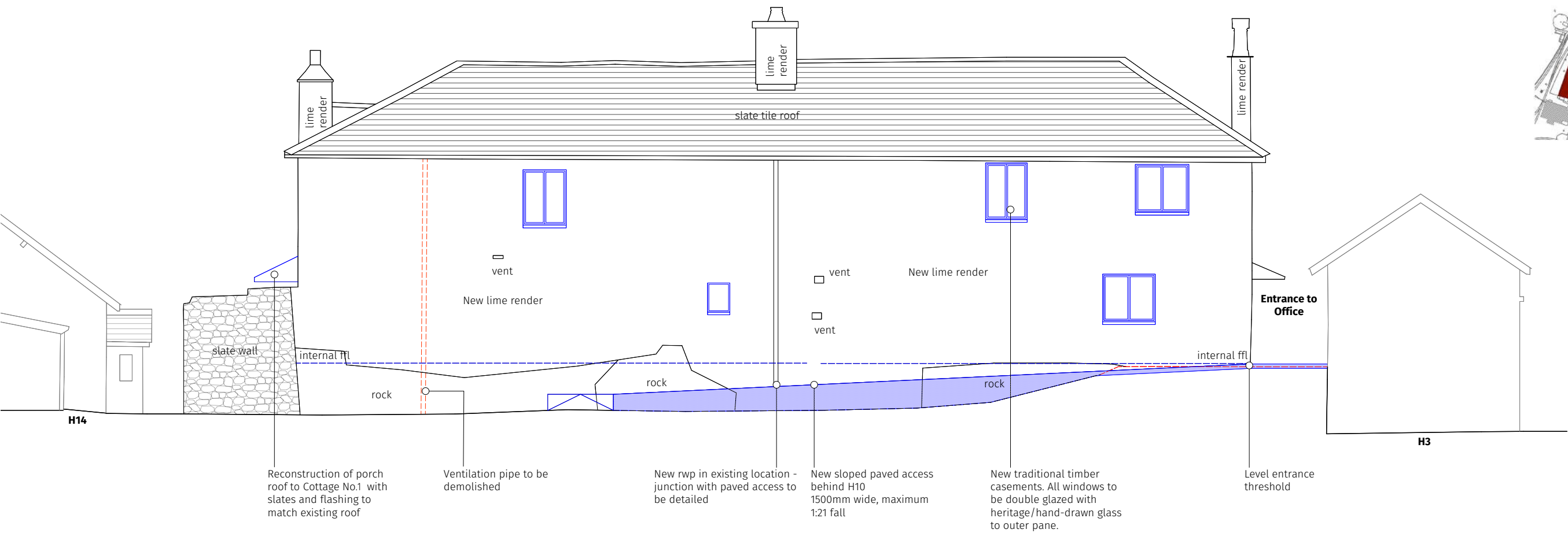


**Key Plan** (not to scale)

**REVISIONS**

Rev A (6 April 2021) - New lime render throughout, note to existing rwp

Rev B (11 May 2021) - Vent pipe changed to demolished



**South Elevation**

Scale 1:50 @ A1 / 1:100 @ A3

**Thread**

Client: FWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

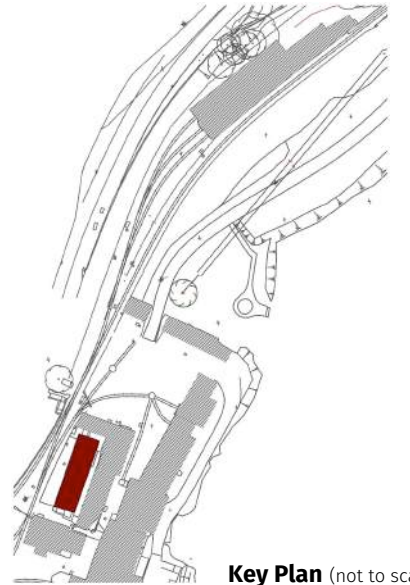
**H10 THE BARRACKS  
PROPOSED  
SOUTH ELEVATION**

Scale:  
1:50@A1 / 1:100@A3

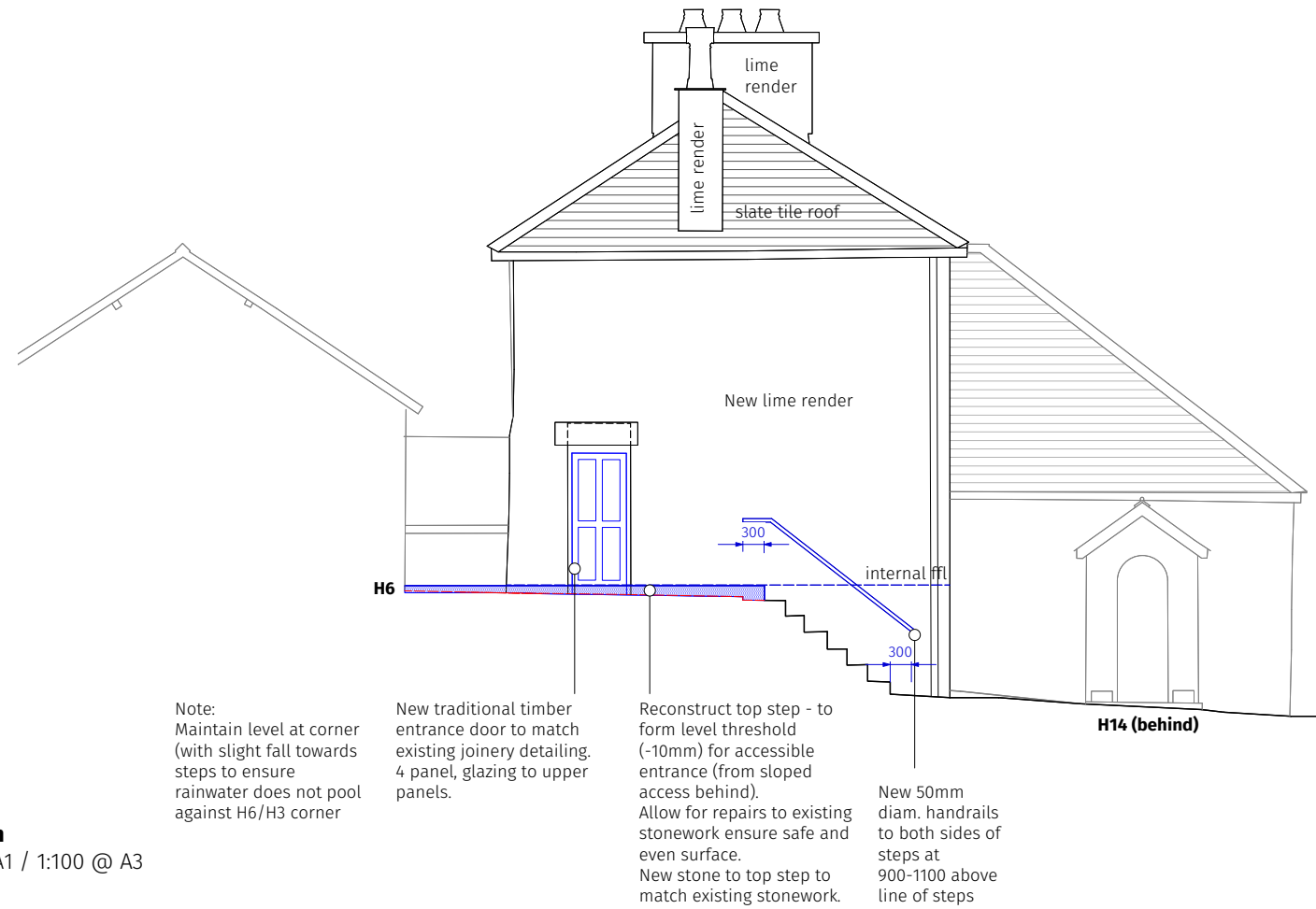
Date:  
FEBRUARY 2021

81\_H10\_3\_03B

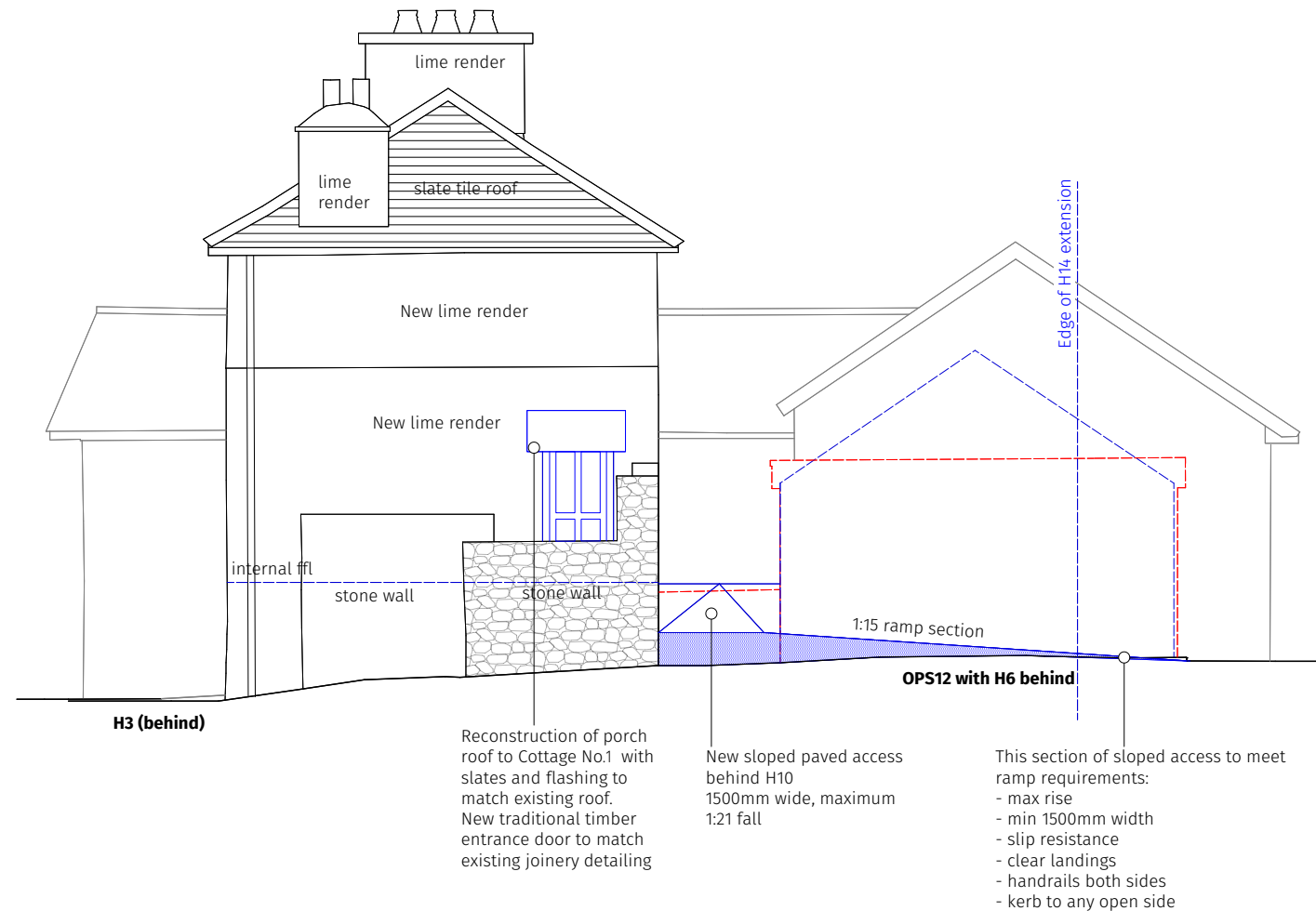
0 1 2 3 4 5m  
1:50 @ A1 / 1:100 @ A3



**Key Plan** (not to scale)



**East Elevation**  
Scale 1:50 @ A1 / 1:100 @ A3



**West Elevation**  
Scale 1:50 @ A1 / 1:100 @ A3

**REVISIONS**

Rev A (6 April 2021) - New lime render  
throughout

**Thread**

Client: FWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

**H10 THE BARRACKS  
PROPOSED EAST  
& WEST ELEVATIONS**

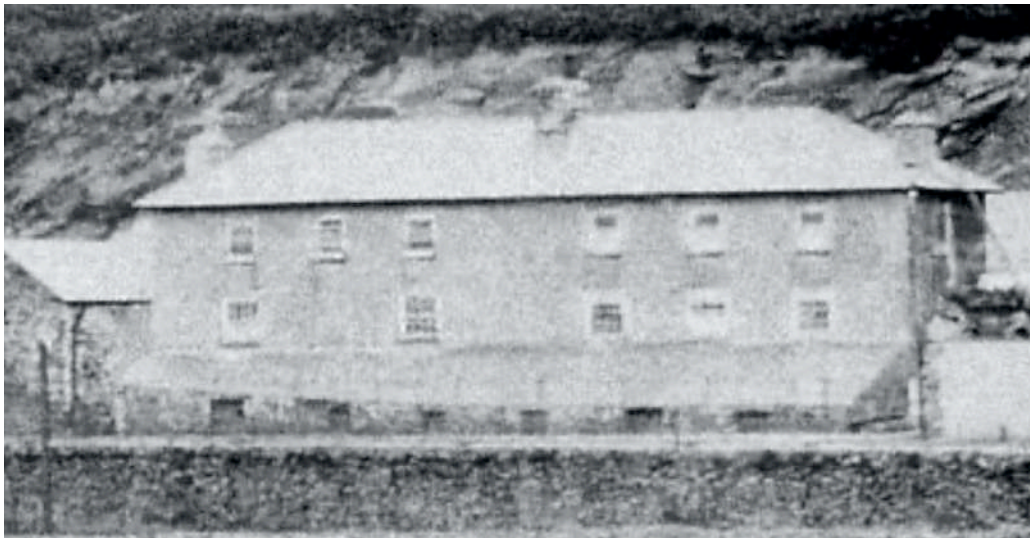
Scale:  
1:50@A1 / 1:100@A3

Date:  
FEBRUARY 2021

81\_H10\_3\_04 A





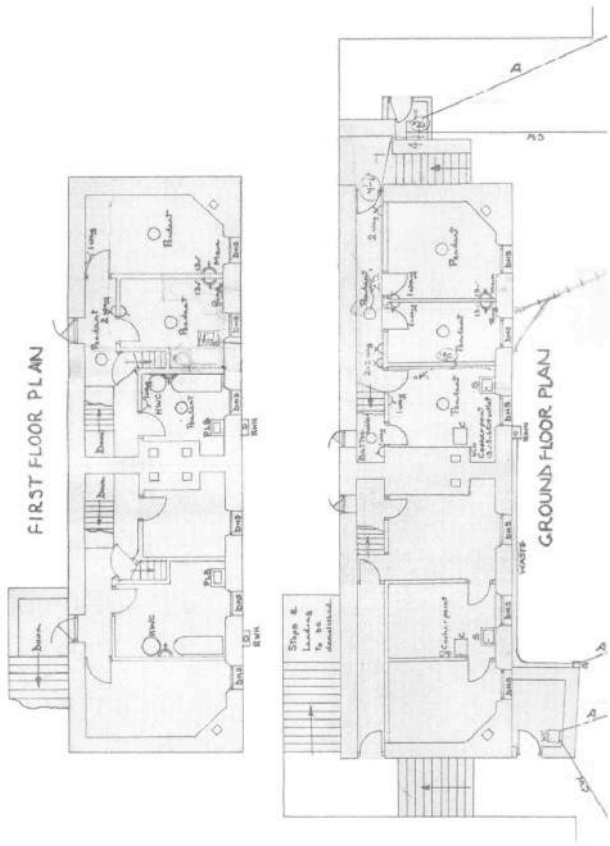


1887 photograph of The Barracks shows 5no. sash windows to Cottage 2 (left) and 6 no. sash windows to Cottage 1 (right) (after R.H. Bleasdale, excerpt taken from Historic Building Assessment by Bob Zeepvat, 2014)

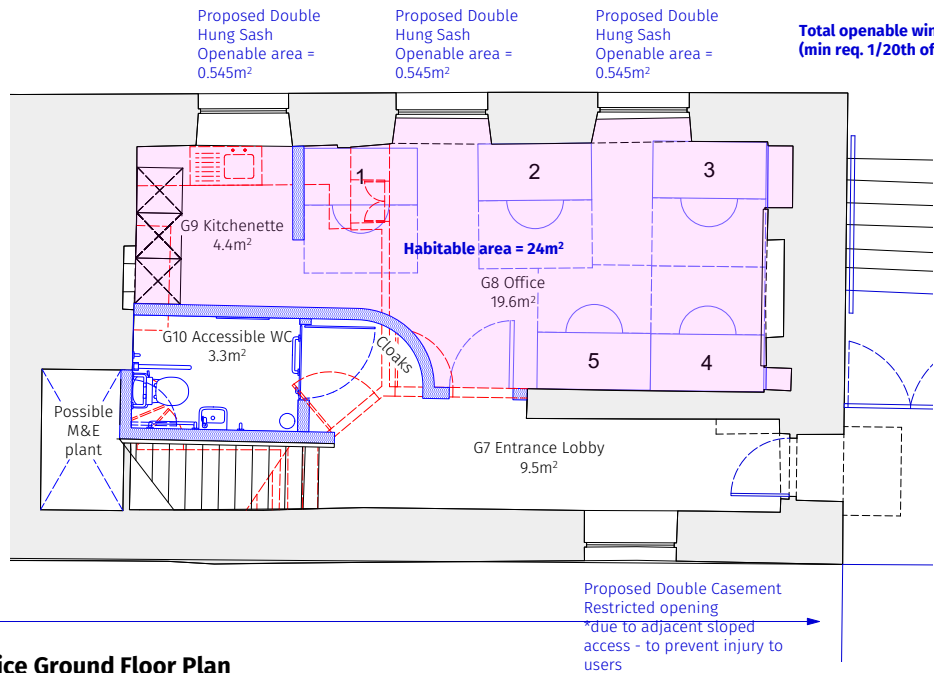


1956 photograph of The Barracks shows 8 over 8 pane sash windows to both cottages (P.B Whitehouse, excerpt taken from Historic Building Assessment by Bob Zeepvat, 2014)

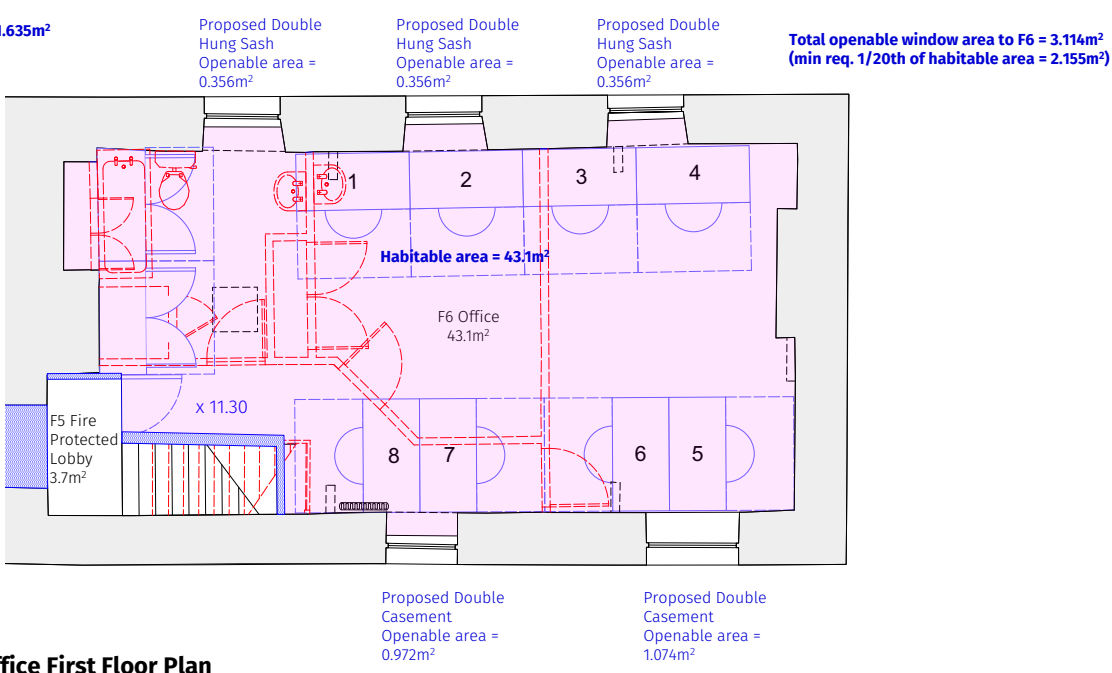
Ground floor 8 over 8 sashes  
First floor 6 over 6? sashes



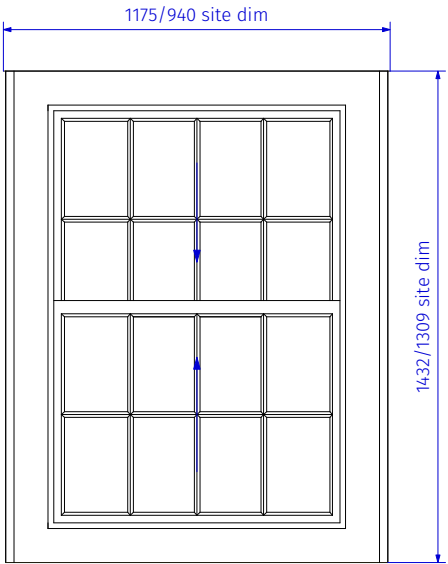
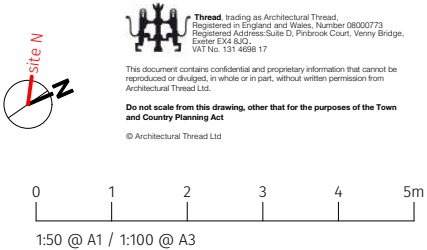
1955 plan shows DHS (double hung sash) windows to the front, side-hung casements to the rear (FR Archives, excerpt taken from Historic Building Assessment by Bob Zeepvat, 2014)



Office Ground Floor Plan  
Scale 1:50 @ A1 / 1:100 @ A3

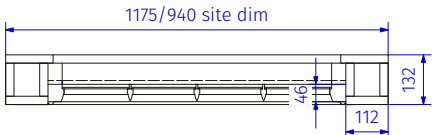


Office First Floor Plan  
Scale 1:50 @ A1 / 1:100 @ A3

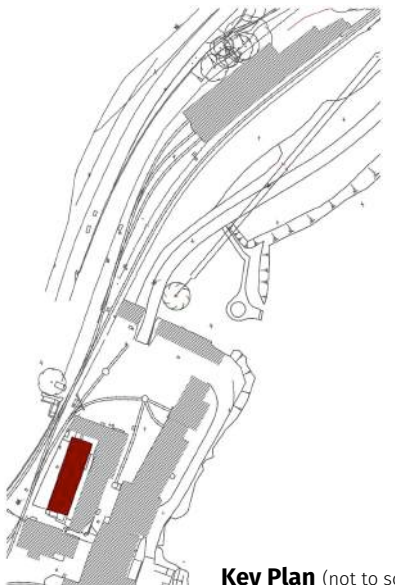


Typical 8/8 sash window internal elevation  
Scale 1:10 @ A1 / 1:20 @ A3

Note:  
Typical sash detail referenced from existing sash window in Plas Smart



Typical sash window plan  
Scale 1:10 @ A1 / 1:20 @ A3



Key Plan (not to scale)

REVISIONS

Thread

Client: FWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

H10 THE BARRACKS  
PROPOSED WINDOW  
JOINERY

Scale:  
As shown

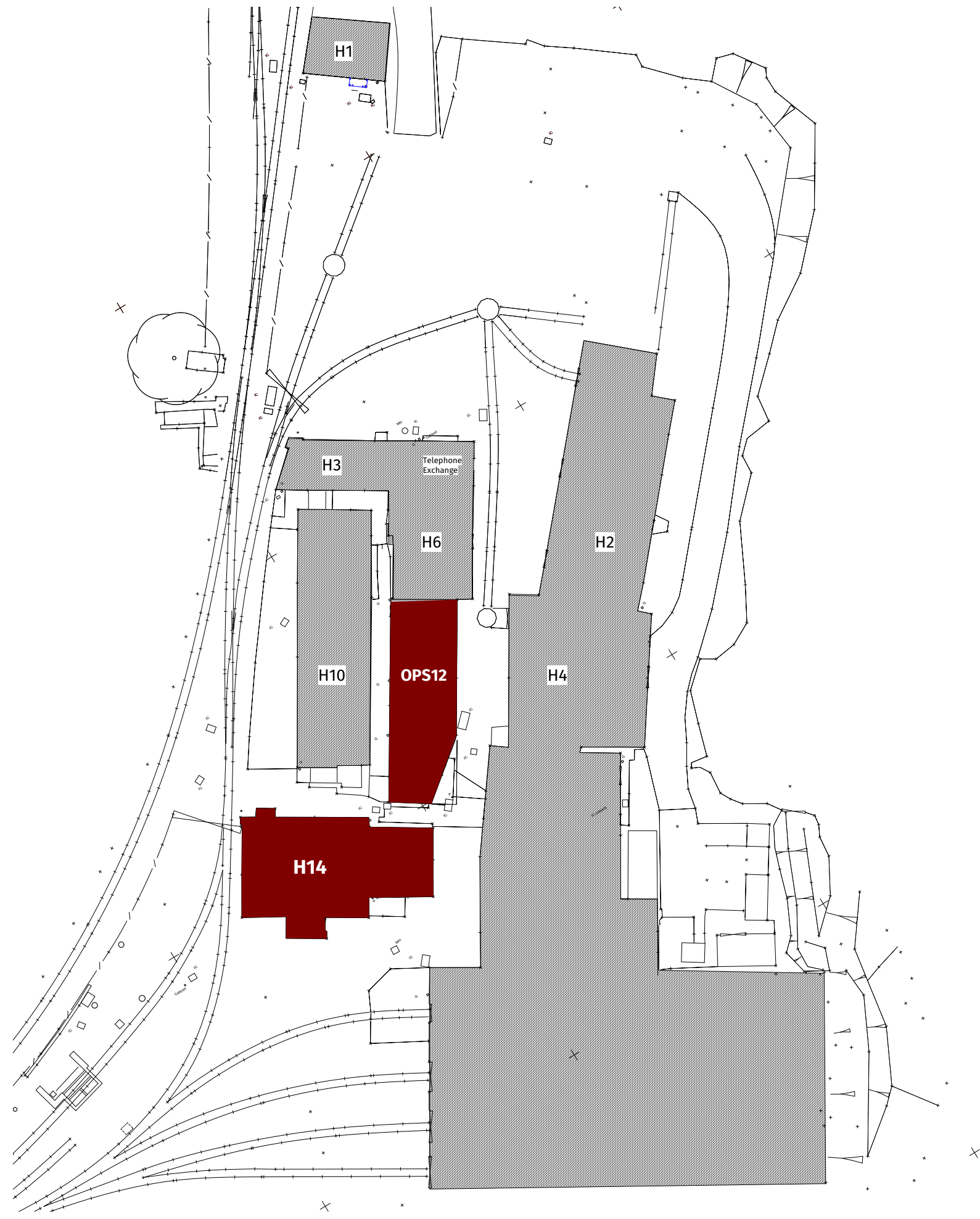
Date:  
FEBRUARY 2021

81\_H10\_3\_DET1

**H14 &**

**OPS12**

**Electricians Workshop  
& The Stores**



REVISIONS

Thread

Client: FMHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

**H14 & OPS12  
THE DEN & ELECTRICIANS  
WORKSHOP  
EXISTING SITE LOCATION  
PLAN**

Scale:  
**1:200 @ A1 / 1:400 @ A3**

Date:  
**March 2021**

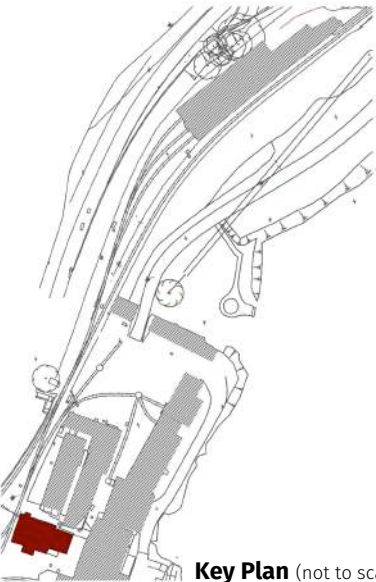
81\_H14\_0\_01

**Existing Site Location Plan**  
Scale 1:200 @ A1 / 1:400 @ A3

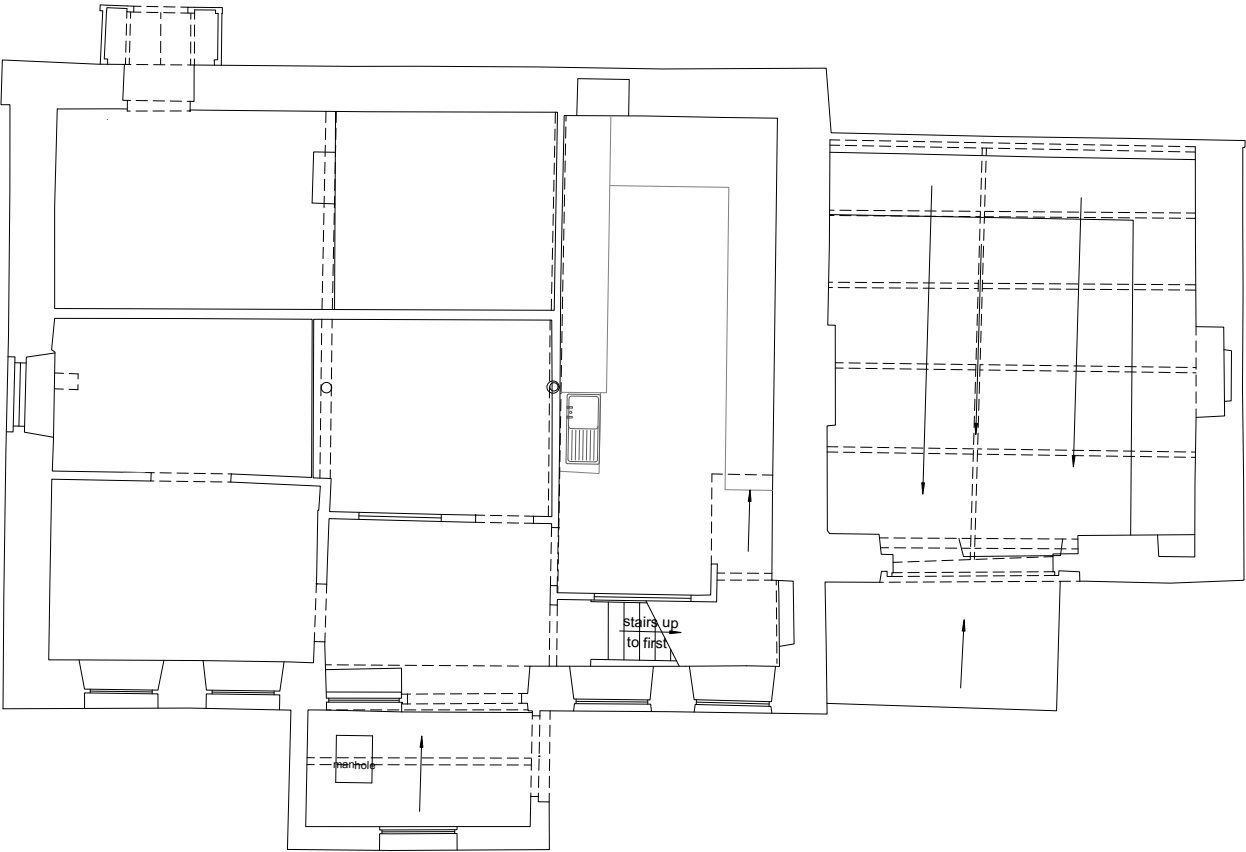




1:50 @ A1 / 1:100 @ A3



**Key Plan** (not to scale)



**Existing Ground Floor Plan**  
Scale 1:50 @ A1 / 1:100 @ A3

REVISIONS

**Thread**

Client: FMHR  
Project Architect: Claire Fear

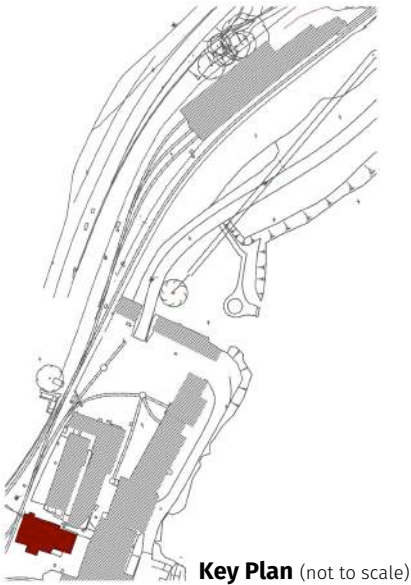
BOSTON LODGE WORKS

**H14  
THE DEN  
EXISTING GROUND  
FLOOR PLAN**

Scale:  
**1:50 @ A1 / 1:100 @ A3**

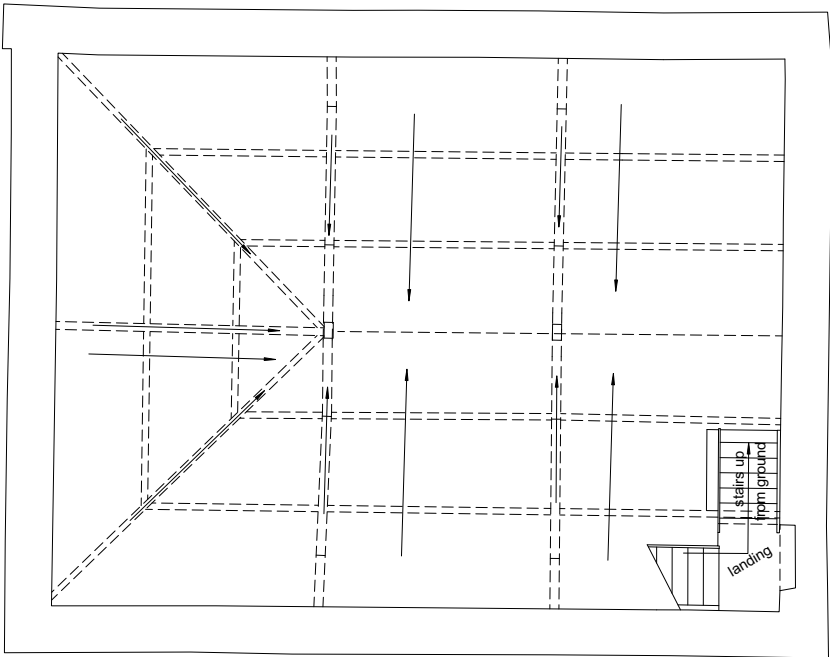
Date:  
**March 2021**

81\_H14\_0\_02



REVISIONS

**Existing First Floor Plan**  
Scale 1:50 @ A1 / 1:100 @ A3



Thread

Client: FMHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

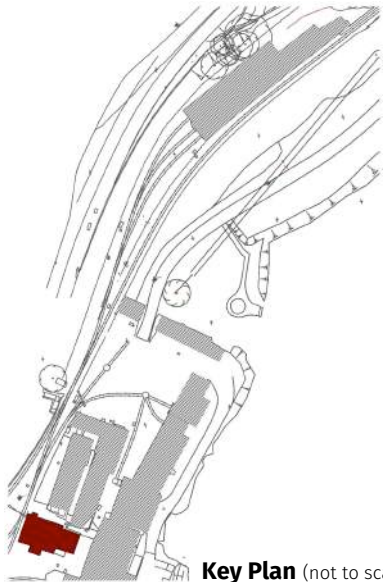
**H14**  
**THE DEN**  
**EXISTING FIRST**  
**FLOOR PLAN**

Scale:  
**1:50 @ A1 / 1:100 @ A3**  
Date:  
**March 2021**

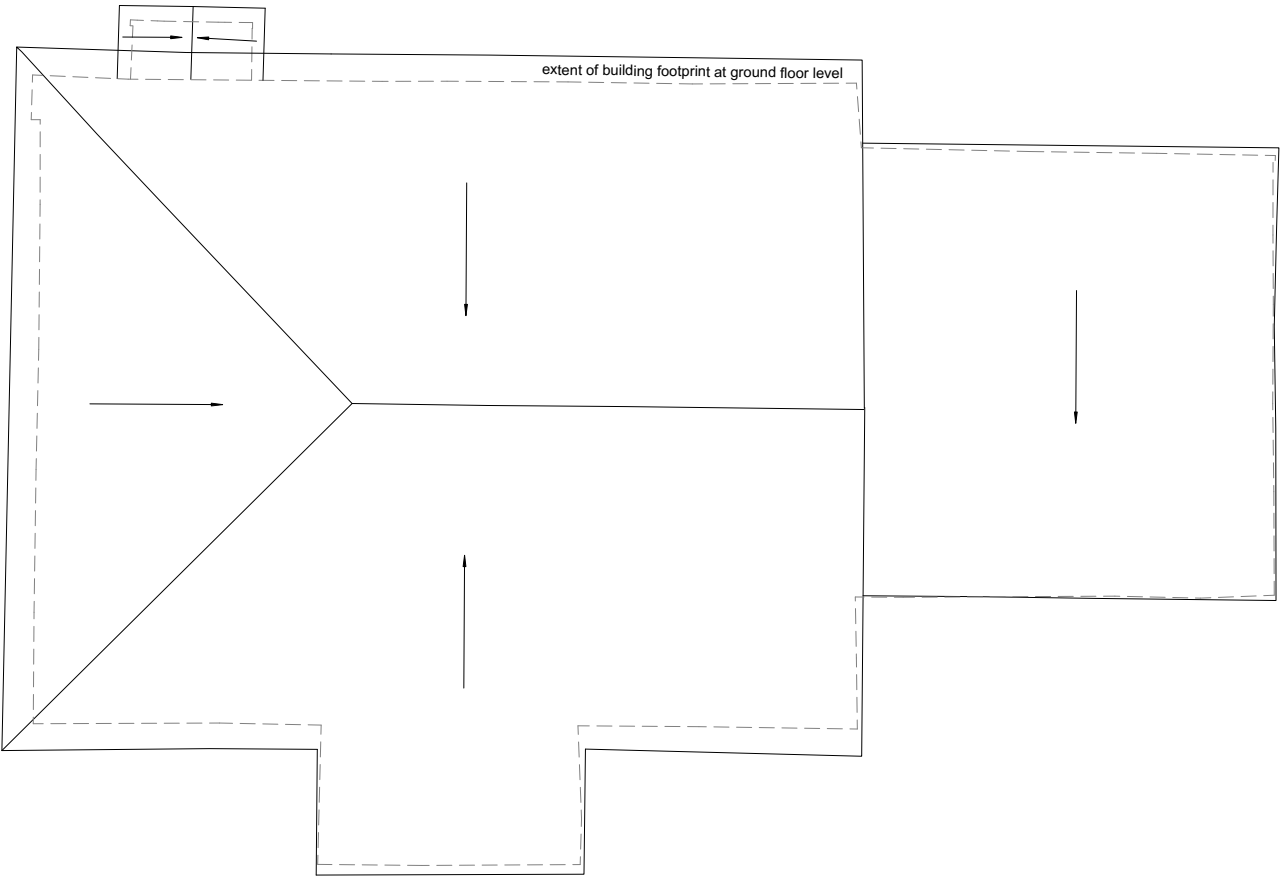
81\_H14\_0\_03



1:50 @ A1 / 1:100 @ A3



**Key Plan** (not to scale)



**Existing Roof Plan**

Scale 1:50 @ A1 / 1:100 @ A3

REVISIONS

**Thread**

Client: FMHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

**H14  
THE DEN  
EXISTING ROOF PLAN**

Scale:  
**1:50 @ A1 / 1:100 @ A3**

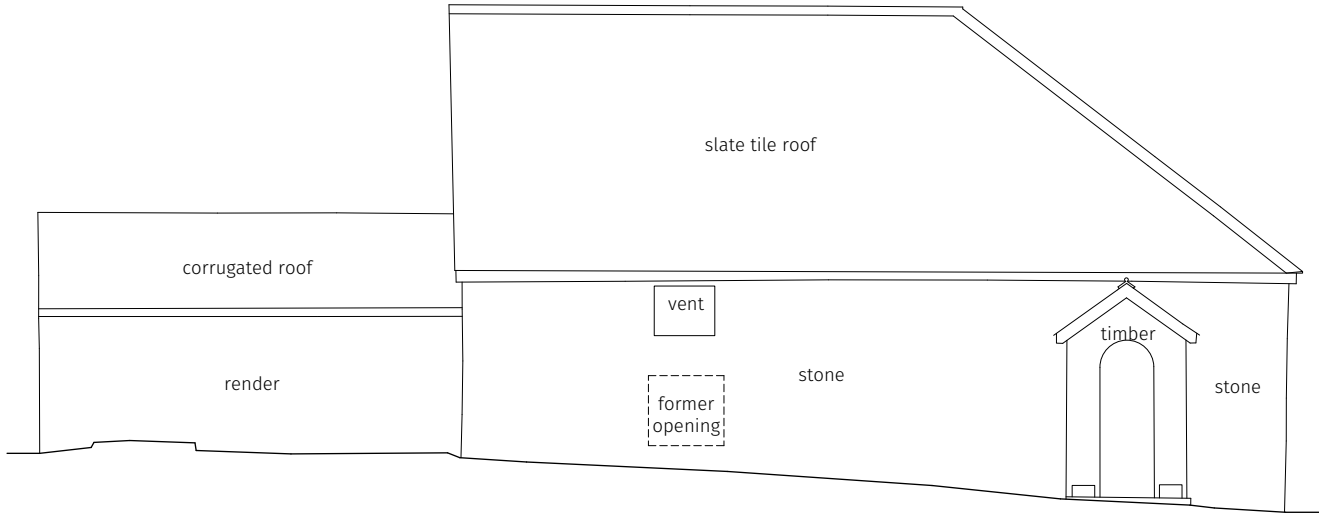
Date:  
**March 2021**

**81\_H14\_0\_04**

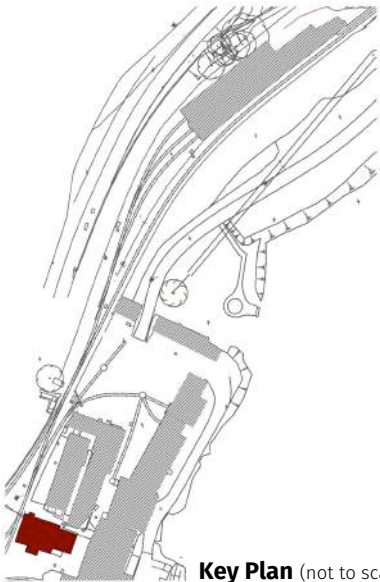




1:50 @ A1 / 1:100 @ A3

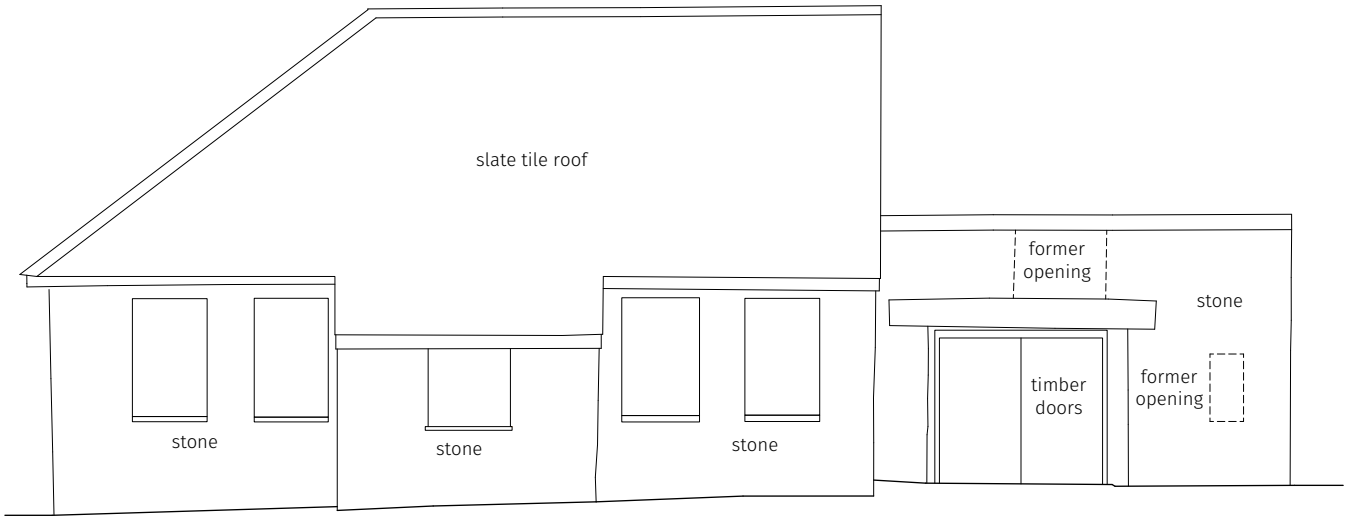


**Existing East Elevation**  
Scale 1:50 @ A1 / 1:100 @ A3



**Key Plan** (not to scale)

REVISIONS



**Existing West Elevation**  
Scale 1:50 @ A1 / 1:100 @ A3

**Thread**

Client: FMHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

**H14**  
**THE DEN**  
**EXISTING ELEVATIONS**  
**EAST & WEST**

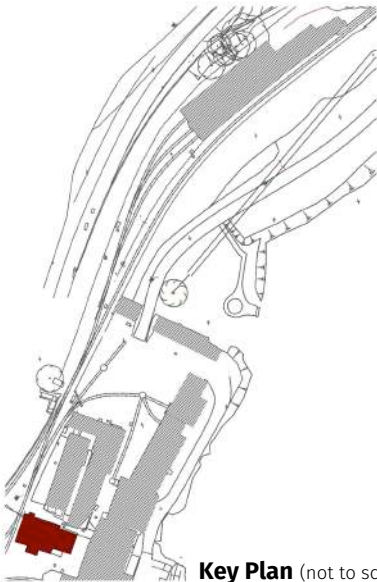
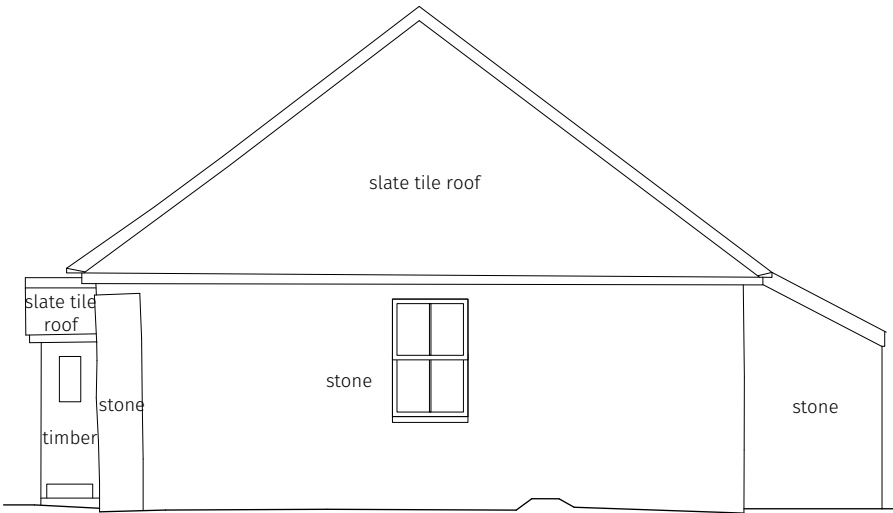
Scale:  
**1:50 @ A1 / 1:100 @ A3**

Date:  
**March 2021**

81\_H14\_0\_05



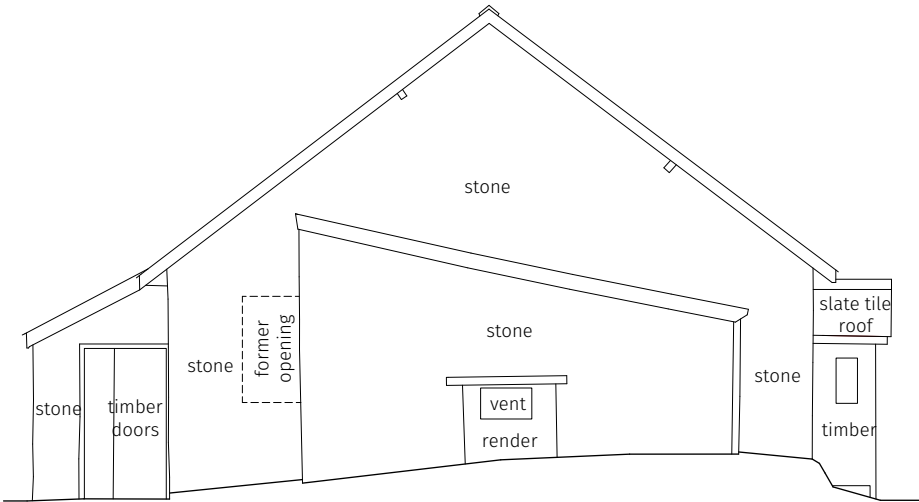
1:50 @ A1 / 1:100 @ A3



Key Plan (not to scale)

Existing North Elevation  
Scale 1:50 @ A1 / 1:100 @ A3

REVISIONS



Existing South Elevation  
Scale 1:50 @ A1 / 1:100 @ A3

**Thread**

Client: FMHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

**H14**  
**THE DEN**  
**EXISTING ELEVATIONS**  
**NORTH & SOUTH**

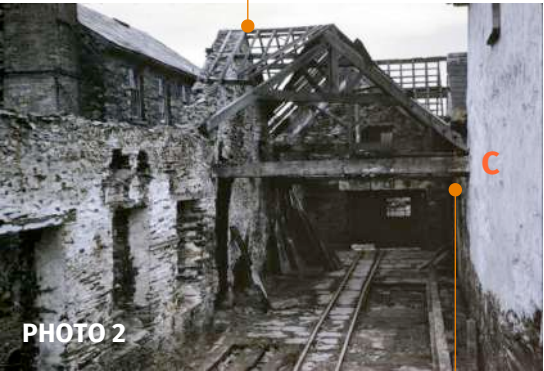
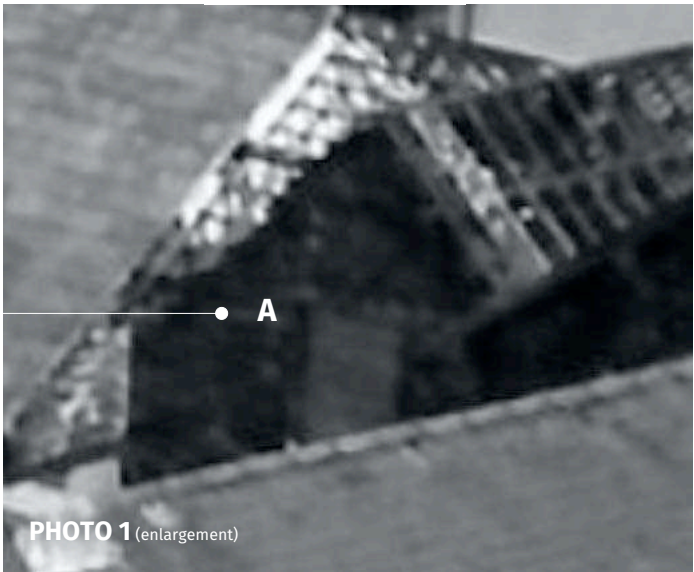
Scale:  
**1:50 @ A1 / 1:100 @ A3**  
Date:  
**March 2021**

81\_H14\_0\_06

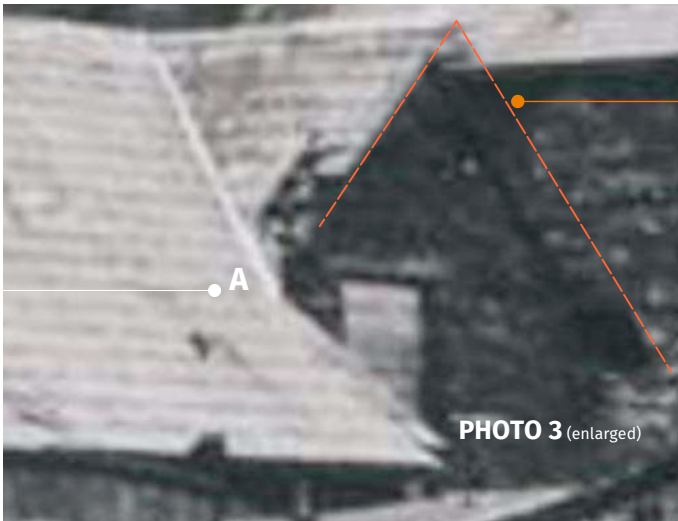


Valley board to west of southern gable

**B** Southern gable of Saw Mills



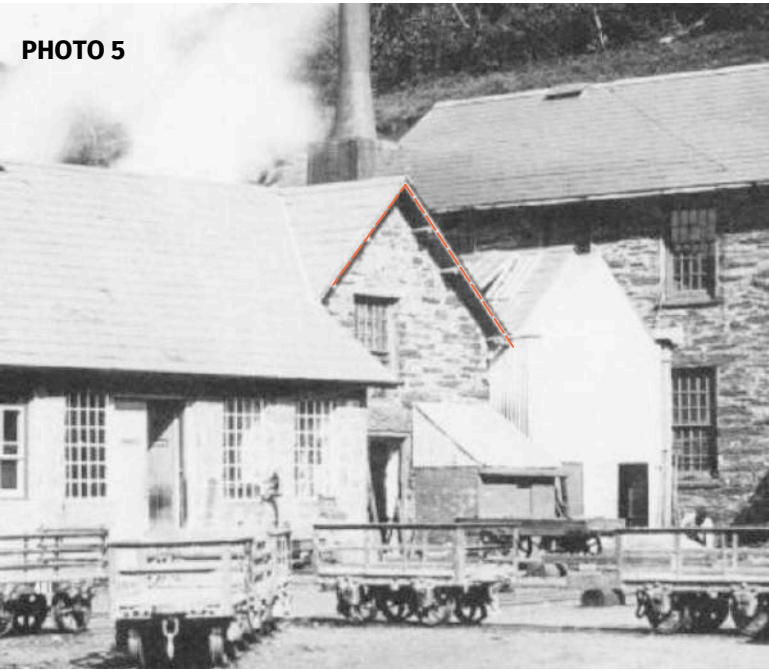
Saw Mills 'overlapping' to the south of the Barracks



**PHOTOS 3 AND 4** show:  
The Roof overhang has been lost on the south side of the gable, but not the north. So we have evidence of and overhanging eaves in this location. - making it appear as though the first floor opening is offset from the ridge.

The orange line is the line of the projecting gable set out from the visible structure remaining to the south, and the line of roof overhang that remains to the north side of the gable.

**PHOTO 5** - This same arrangement can also be seen in Photo 5 below.



This photo shows the west gable prior to demolition and removal of the roof and gable.

Key Points for the development of the reinstated gable and associated Roof Proposals

- A - The first floor loft opening and the relationship to the centre of the gable can be seen on dwg no 81\_H14\_3\_06
- B - The south side of the roof had a further gable - as also seen in photo 2 (above);
- C - The building projected behind the Barracks (see Photo 2); &
- D - The ridge of the Stores and the Saw Mill were level (all photos).

#### REVISIONS

A - Notes amended (March 2021)

# Thread

Client: FWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

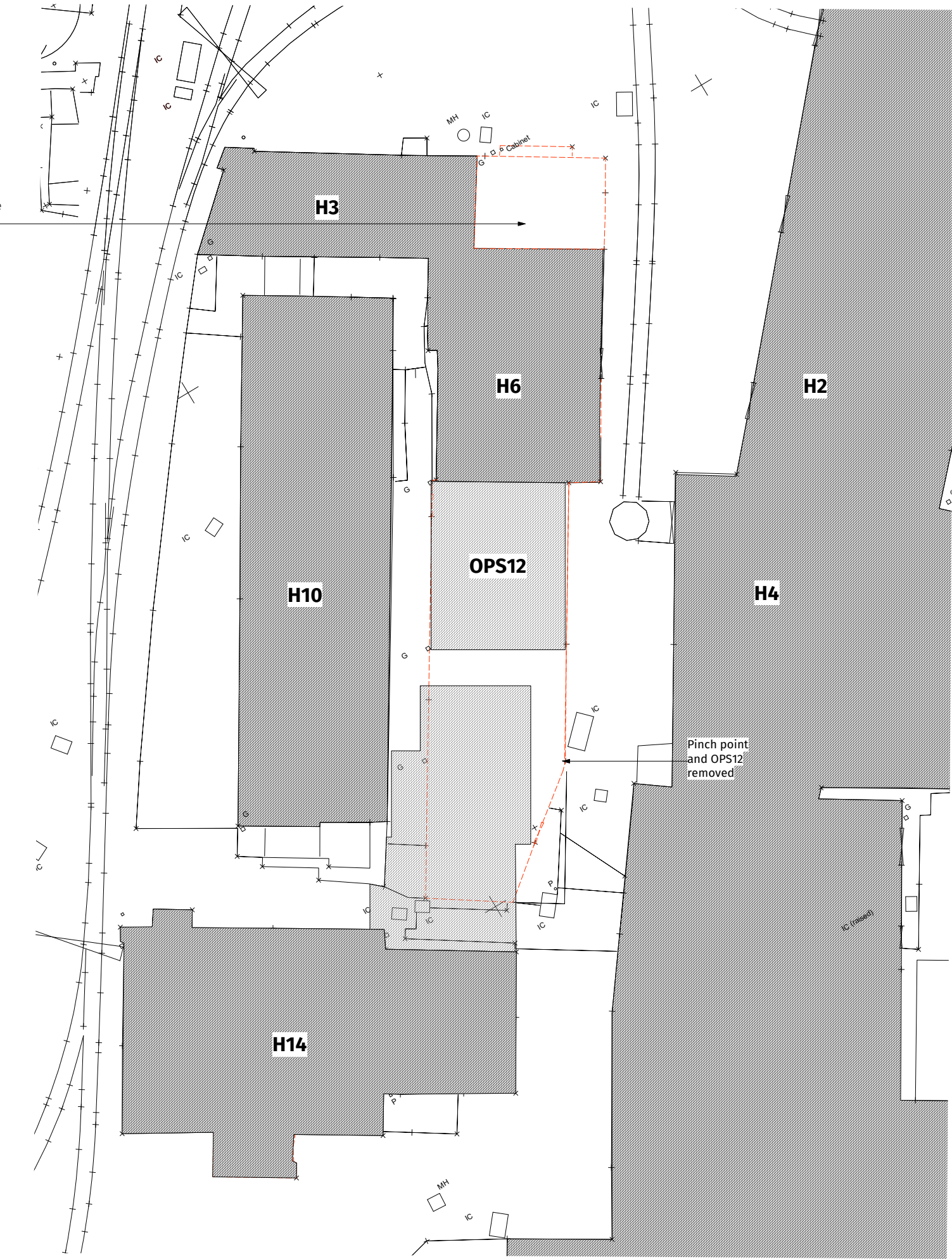
**H14**  
**THE DEN**  
**HISTORIC PHOTOGRAPHS**

Scale:  
**Not to scale**  
Date:  
**October 2020**

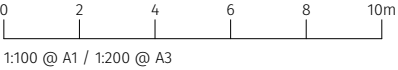
81\_H14\_01 A



Demolition of telephone exchange shown as relevant to provide context for H14 and OPS12 proposed South elevations. Refer to H3 drawing set for details of demolition.



**Proposed Site Location Plan**  
Scale 1:100 @ A1 / 1:200 @ A3



REVISIONS



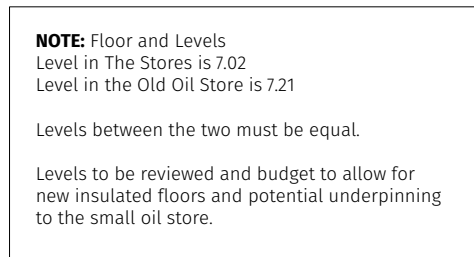
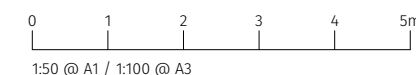
Client: FMHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

**H14 & OPS12  
THE DEN & ELECTRICIANS  
WORKSHOP  
PROPOSED SITE LOCATION  
PLAN**

Scale:  
**1:50 @ A1 / 1:100 @ A3**

Date:  
**March 2021**



Scale 1:50 @ A1 / 1:100 @ A3

Rev A (11 May 2021) - ceiling demolition omitted.

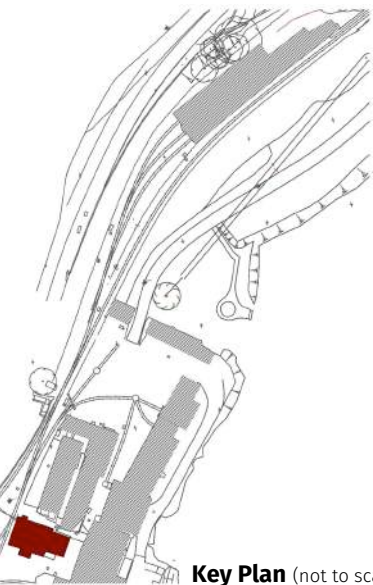
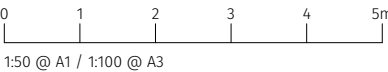
Client: FfWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

Scale:  
**1:50 @ A1 / 1:100 @ A3**

Date:  
**March 2021**

81\_H14\_3\_02A



Key Plan (not to scale)

#### REVISIONS

Rev A (13 April 2021) - Bathroom/changing facilities split into ladies/mens, structural opening shifted over

Rev B (11 May 2021) - 2 new windows to Den amended to timber

# Thread

Client: FMHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

## H14 THE DEN PROPOSED GROUND FLOOR PLAN

Scale:  
1:50 @ A1 / 1:100 @ A3

Date:  
March 2021

81\_H14\_3\_03B

NOTE  
Refer to dwg 81\_H14\_3\_02 for details of proposed  
demolition works

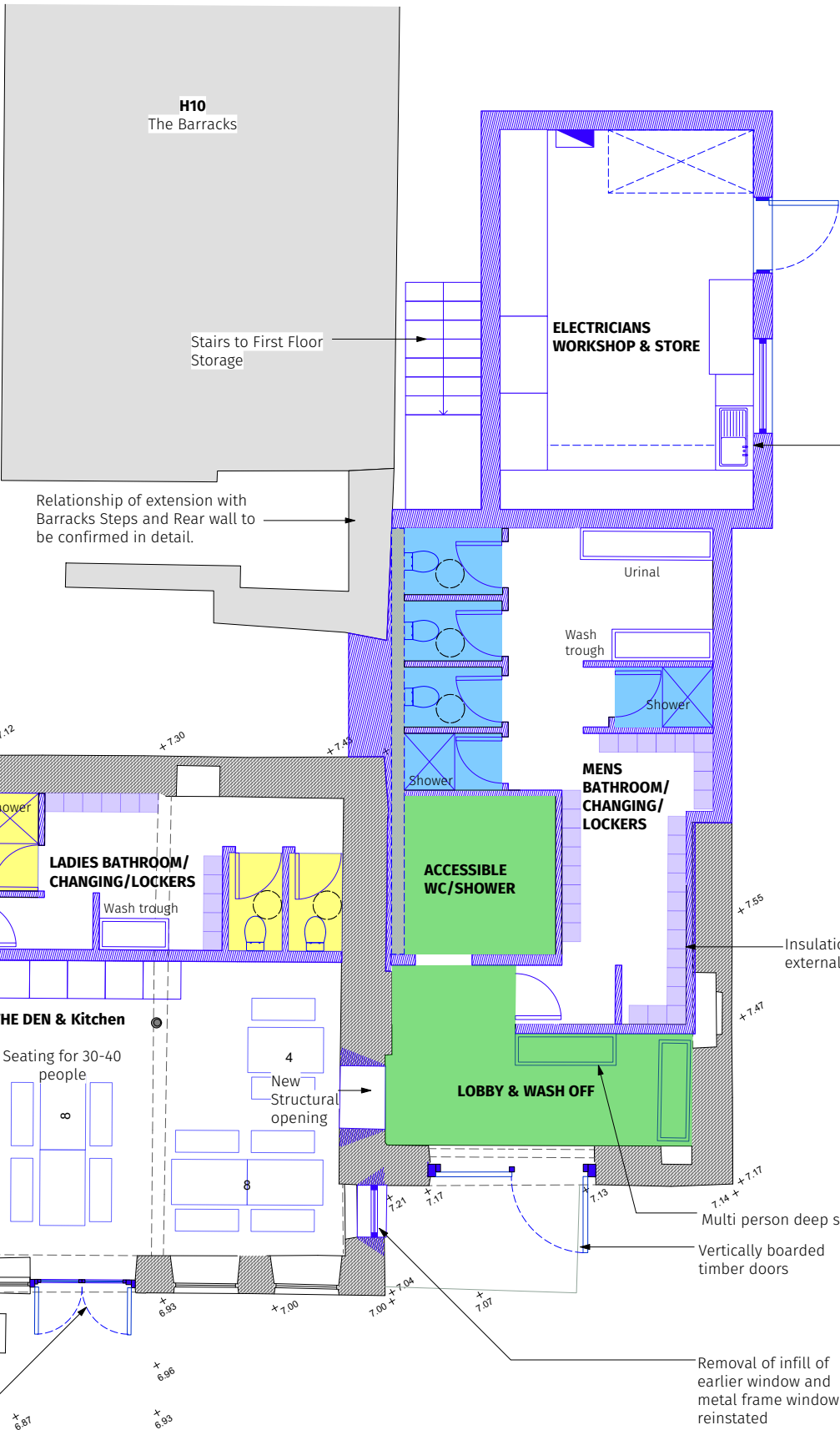
Wall between Lockers, seating  
and kitchen areas - due to open  
roof structure - to be a timber  
structure - approx 2.2m high.

New insulated floor throughout  
to detail

New timber framed sash  
windows to west elevation to  
match existing. See elevations

Vertically boarded  
timber doors with glass  
doors behind

### Proposed Ground Floor Plan Scale 1:50 @ A1 / 1:100 @ A3



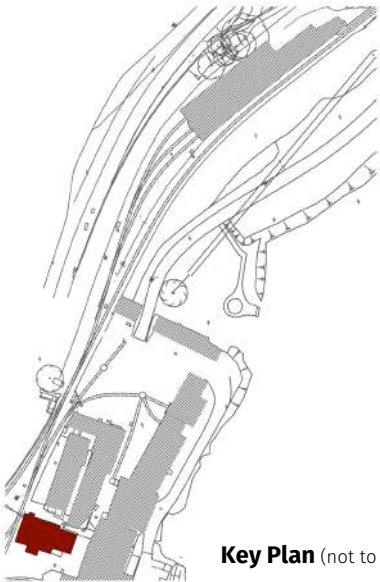
Line of reduced head  
height over workbench, due  
to step in floor above

Insulation to existing  
external wall

Multi person deep sink  
Vertically boarded  
timber doors

Removal of infill of  
earlier window and  
metal frame window  
reinstated





**Key Plan** (not to scale)

**REVISIONS**

- Rev A (22 March 2021) - Plant room for water heater included
- Rev B (11 May 2021) - Ceiling hatch & note added

**Thread**

Client: FMHR  
Project Architect: Claire Fear

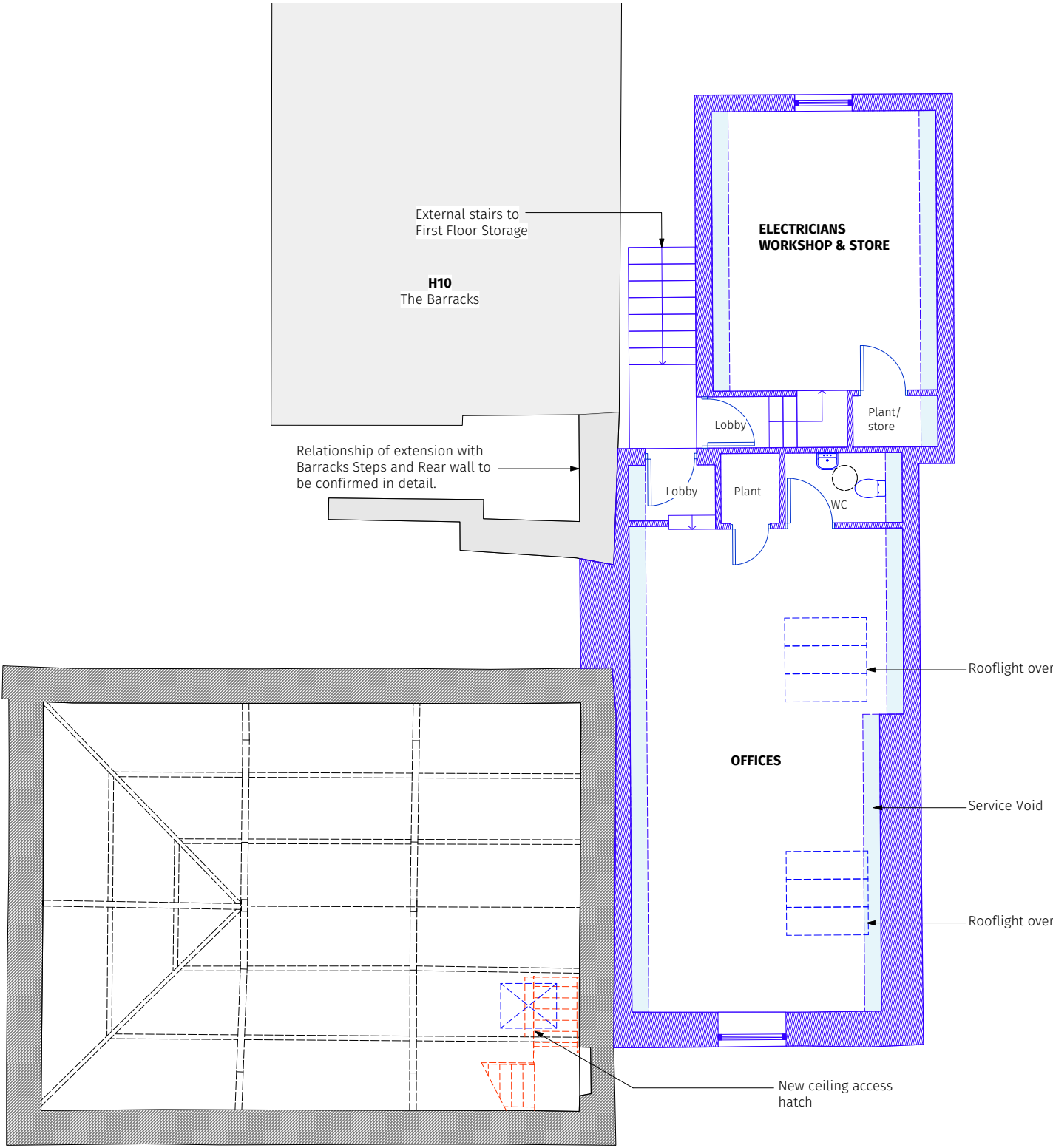
BOSTON LODGE WORKS

**H14  
THE DEN  
PROPOSED FIRST  
FLOOR PLAN**

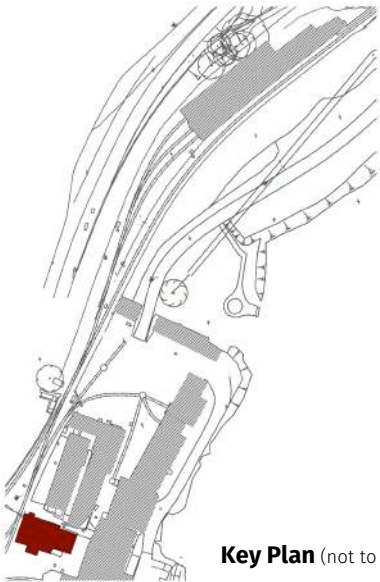
Scale:  
**1:50 @ A1 / 1:100 @ A3**

Date:  
**March 2021**

81\_H14\_3\_04 B



**Proposed First Floor Plan**  
Scale 1:50 @ A1 / 1:100 @ A3



**Key Plan** (not to scale)

REVISIONS

**Thread**

Client: FMHR  
Project Architect: Claire Fear

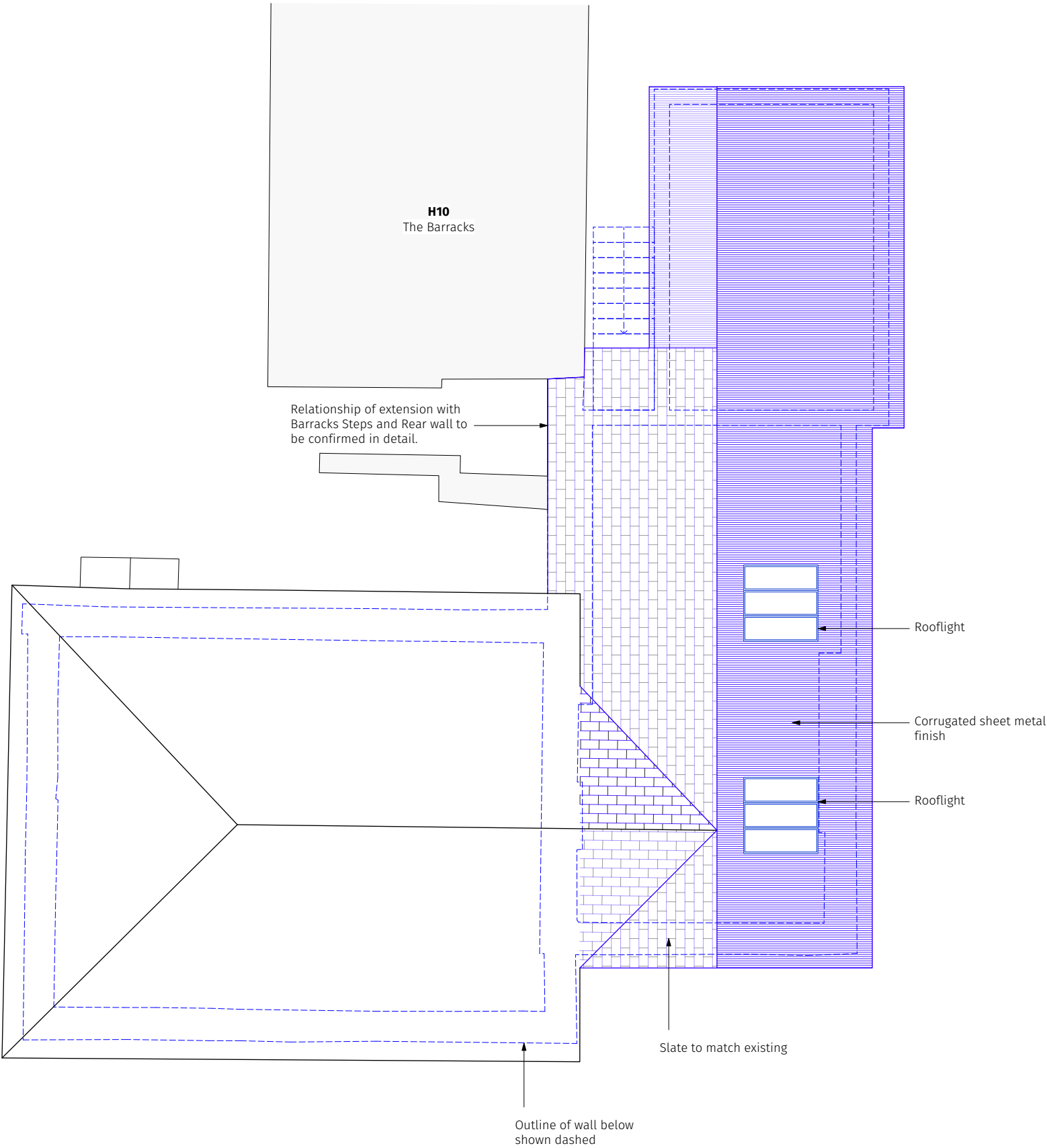
BOSTON LODGE WORKS

**H14  
THE DEN  
PROPOSED ROOF PLAN**

Scale:  
**1:50 @ A1 / 1:100 @ A3**

Date:  
**March 2021**

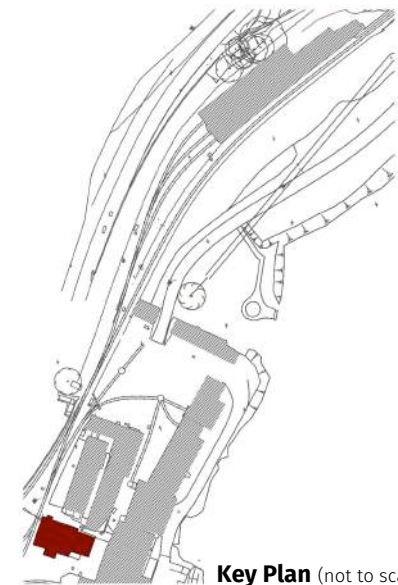
**81\_H14\_3\_05**



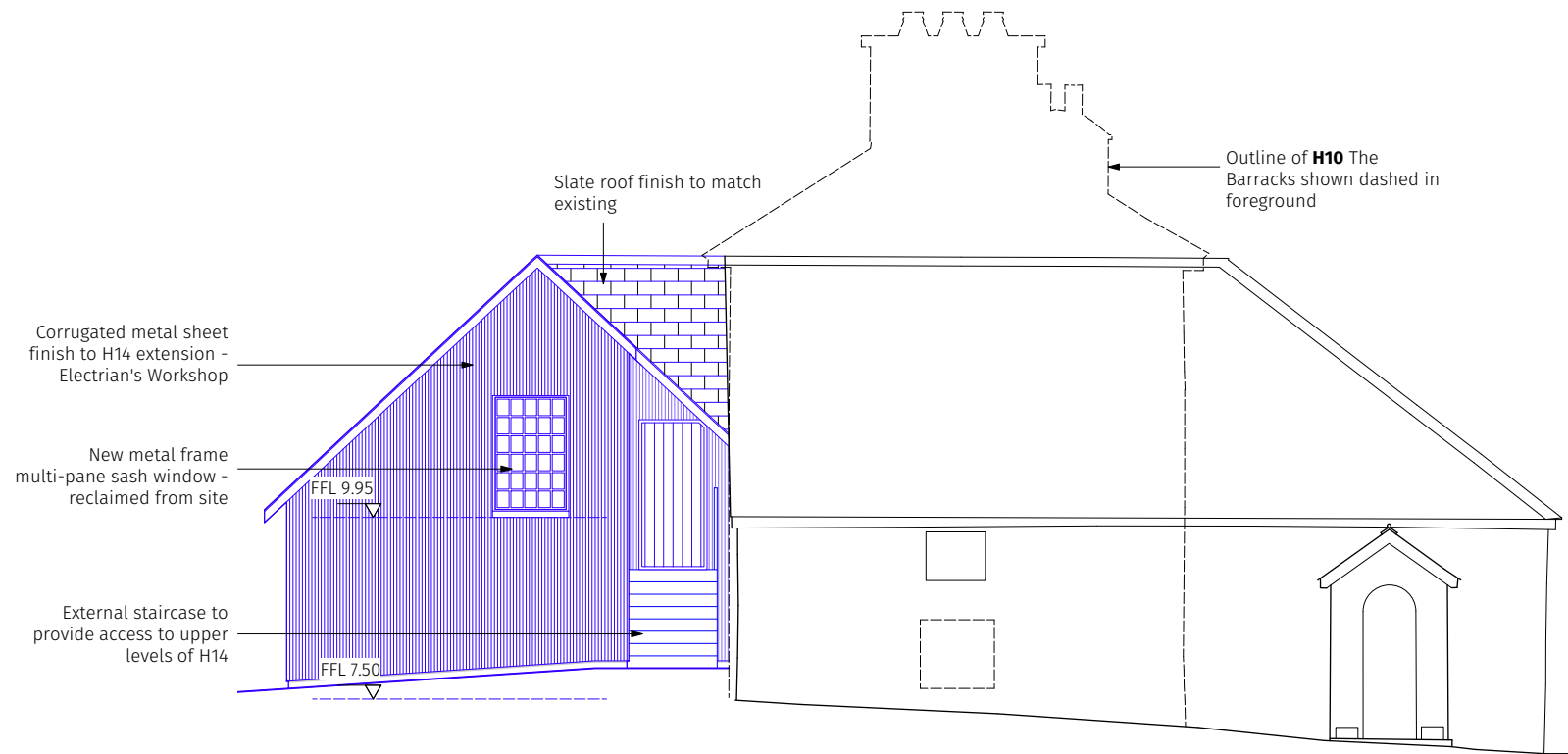
**Proposed Roof Plan**  
Scale 1:50 @ A1 / 1:100 @ A3



0 1 2 3 4 5m  
1:50 @ A1 / 1:100 @ A3

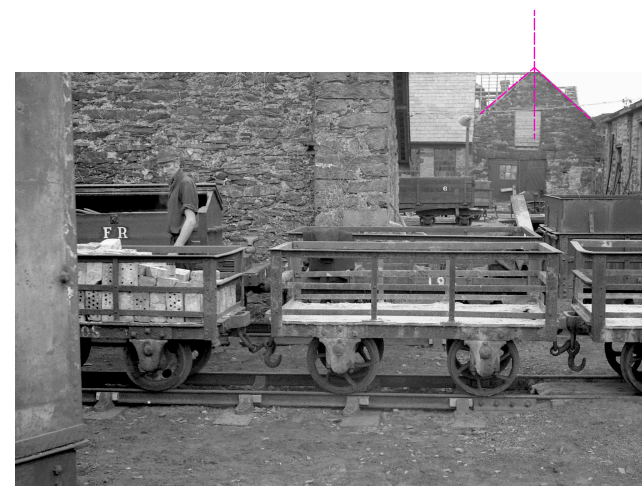


Key Plan (not to scale)



Proposed East Elevation

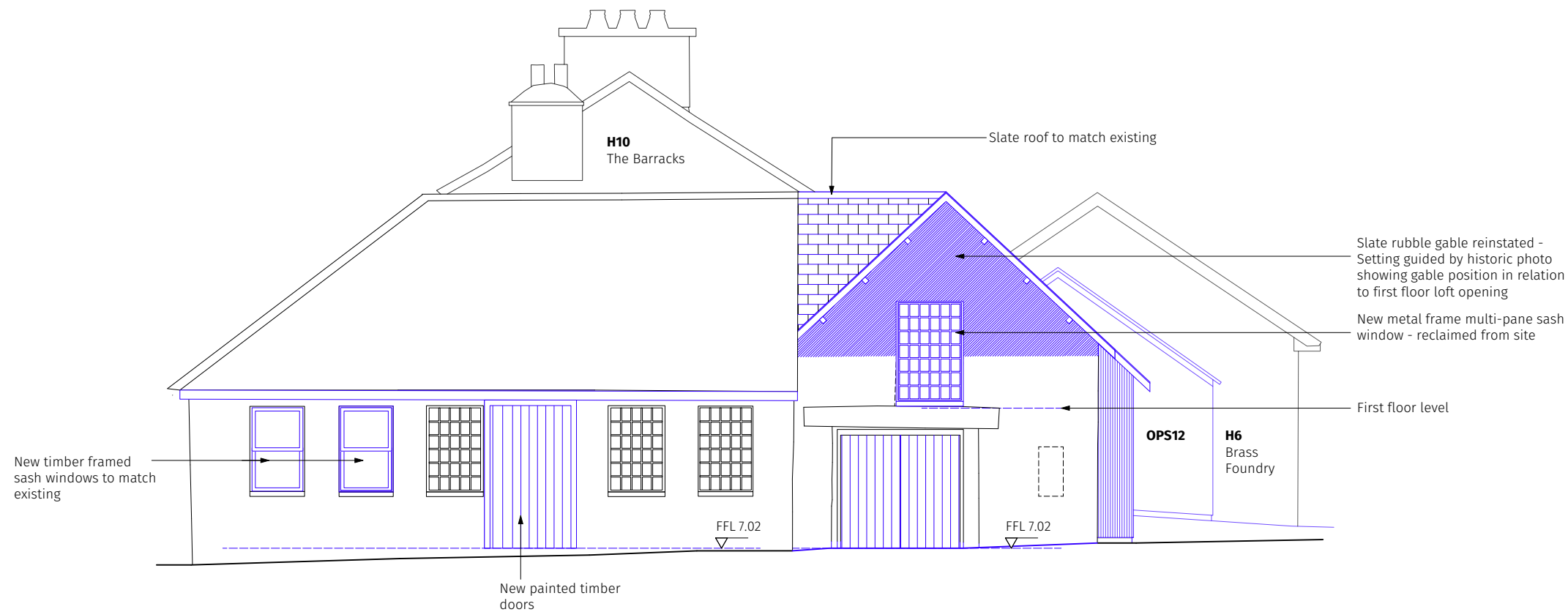
Scale 1:50 @ A1 / 1:100 @ A3



This photograph shows the West gable prior to demolition and removal of the roof and gable.

This photograph illustrates that the first floor opening is not centred on the ridge of the gable, and is instead offset. The setting out of the proposed gable is guided by this photograph.

Historic Photograph



Proposed West Elevation

Scale 1:50 @ A1 / 1:100 @ A3

#### REVISIONS

Rev A (11 May 2021) - Sash windows amended to timber, multi pane sash window to first floor amended to reclaimed metal, multi pane sash windows to ground floor changed to existing

# Thread

Client: FMHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

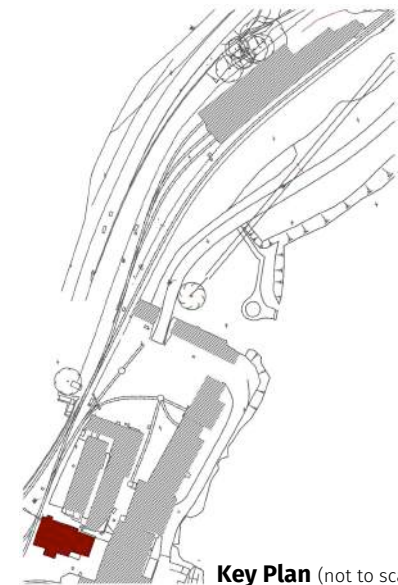
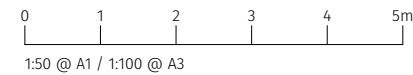
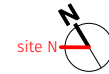
**H14**  
**THE DEN**  
**PROPOSED ELEVATIONS**  
**EAST & WEST**

Scale:  
1:50 @ A1 / 1:100 @ A3

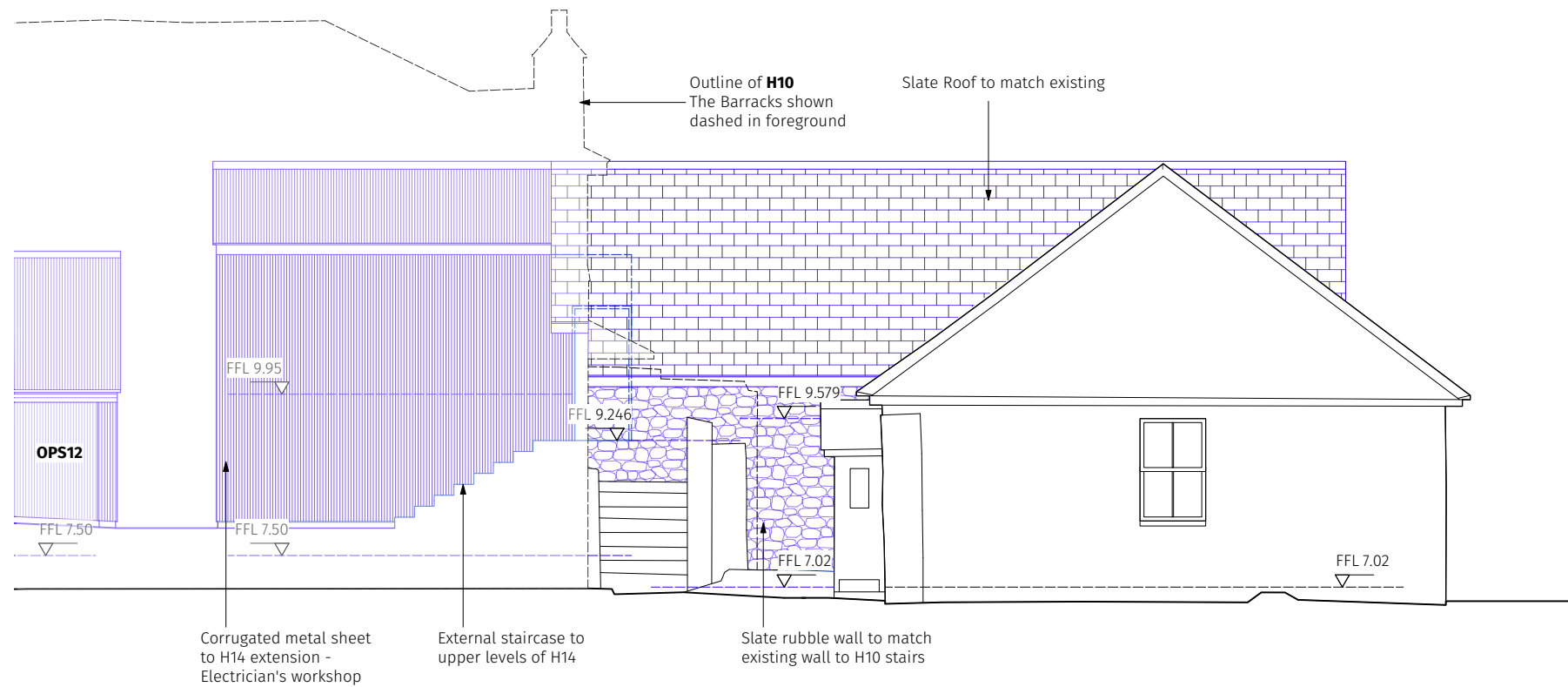
Date:  
March 2021

81\_H14\_3\_06A



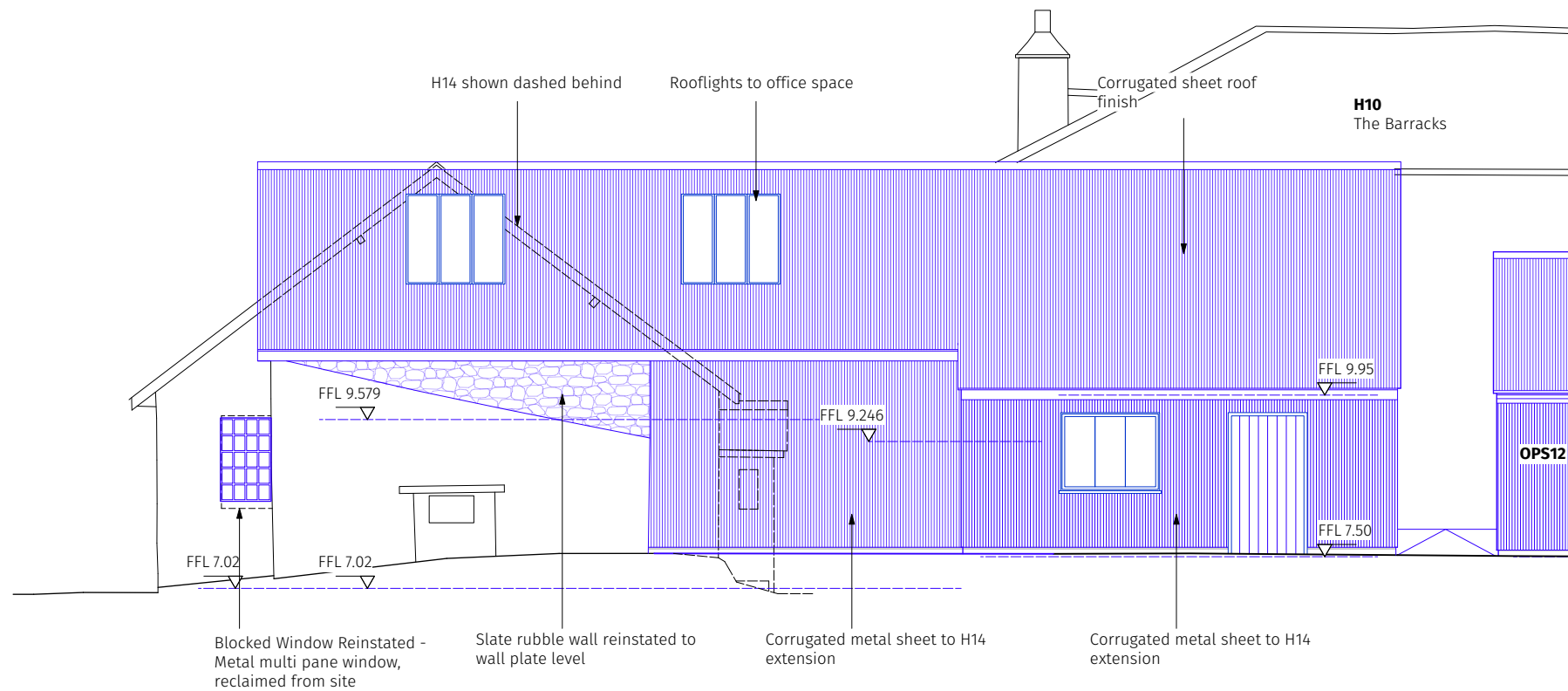


Key Plan (not to scale)



### Proposed North Elevation

Scale 1:50 @ A1 / 1:100 @ A3



### Proposed South Elevation

Scale 1:50 @ A1 / 1:100 @ A3

#### REVISIONS

Rev A (11 May 2021) - Reinstated window note  
amended

# Thread

Client: FMHR  
Project Architect: Claire Fear

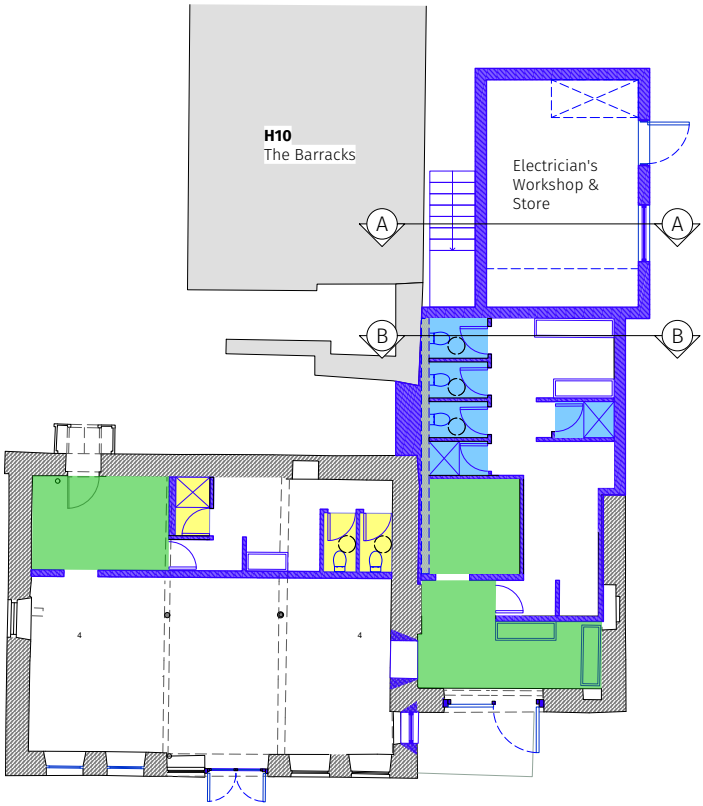
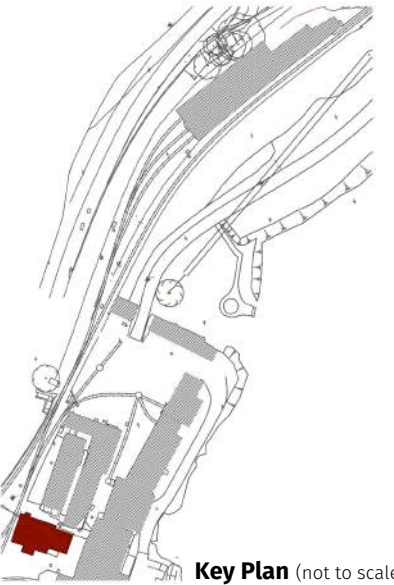
BOSTON LODGE WORKS

**H14**  
**THE DEN**  
**PROPOSED ELEVATIONS**  
**NORTH & SOUTH**

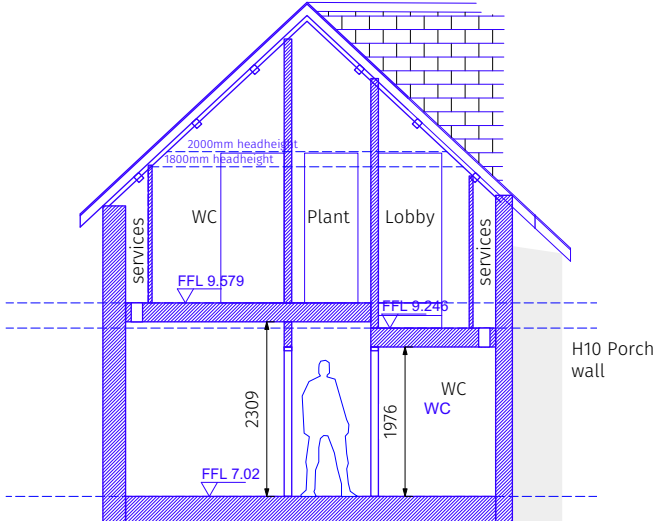
Scale:  
1:50 @ A1 / 1:100 @ A3

Date:  
March 2021

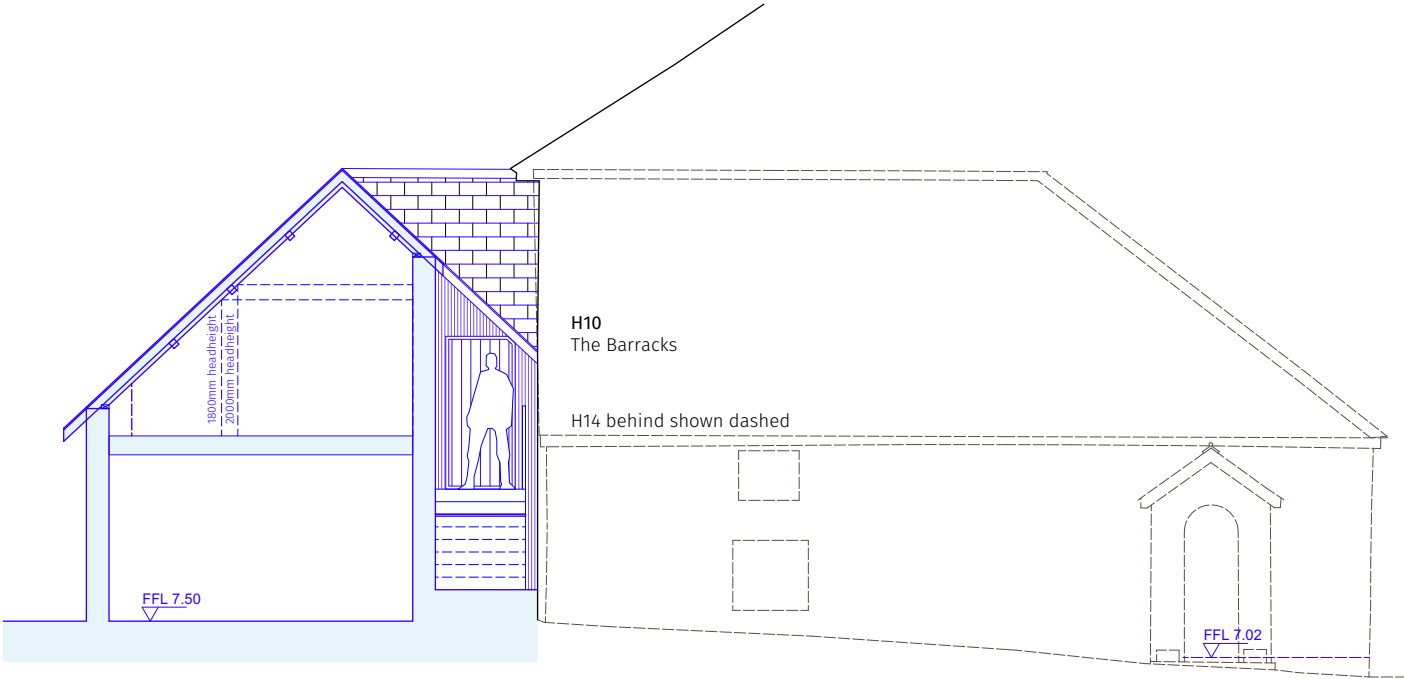
81\_H14\_3\_07A



**Proposed Ground Floor Plan**  
Scale 1:100 @ A1 / 1:200 @ A3



**Proposed Section B**  
Scale 1:50 @ A1 / 1:100 @ A3



**Proposed Section A**  
Scale 1:50 @ A1 / 1:100 @ A3

REVISIONS
Rev A (22 March 2021) - Section B added
Rev B(13 April 2021) - Layout updated

**Thread**

Client: FMHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

**H14  
THE DEN  
PROPOSED SECTION**

Scale:  
**1:50 @ A1 / 1:100 @ A3**  
Date:  
**March 2021**

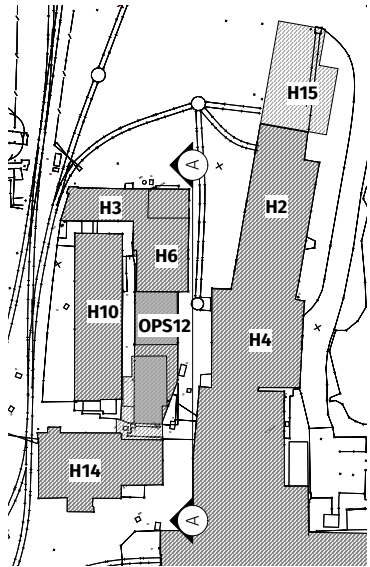
81\_H14\_3\_08 B



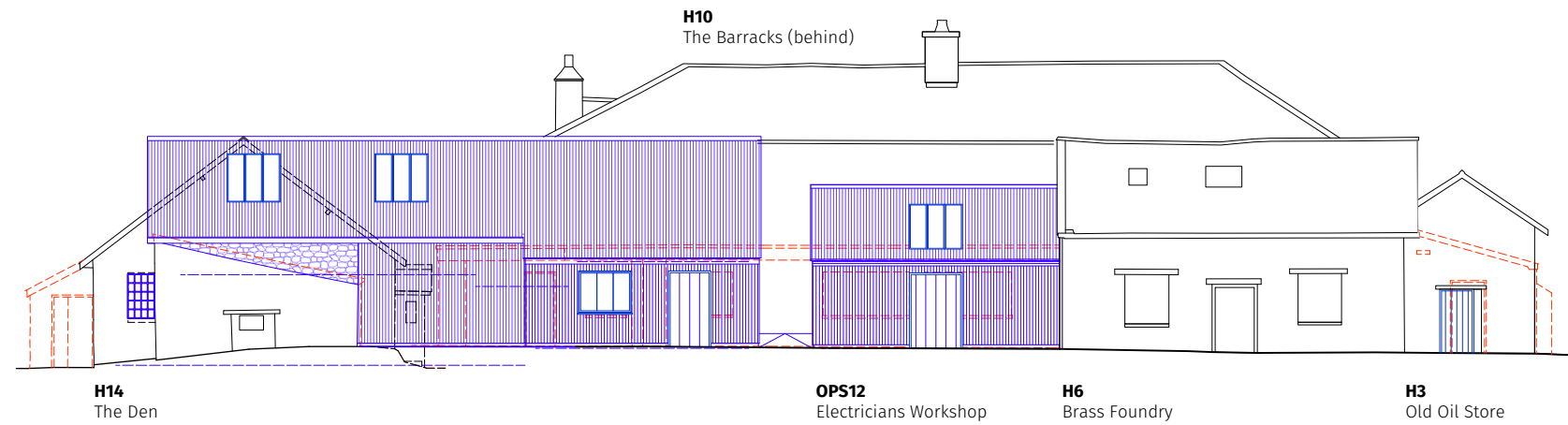
0 10 20 30 40 50m  
1:500 @ A1 / 1:1000 @ A3

0 2 4 6 8 10m  
1:100 @ A1 / 1:200 @ A3

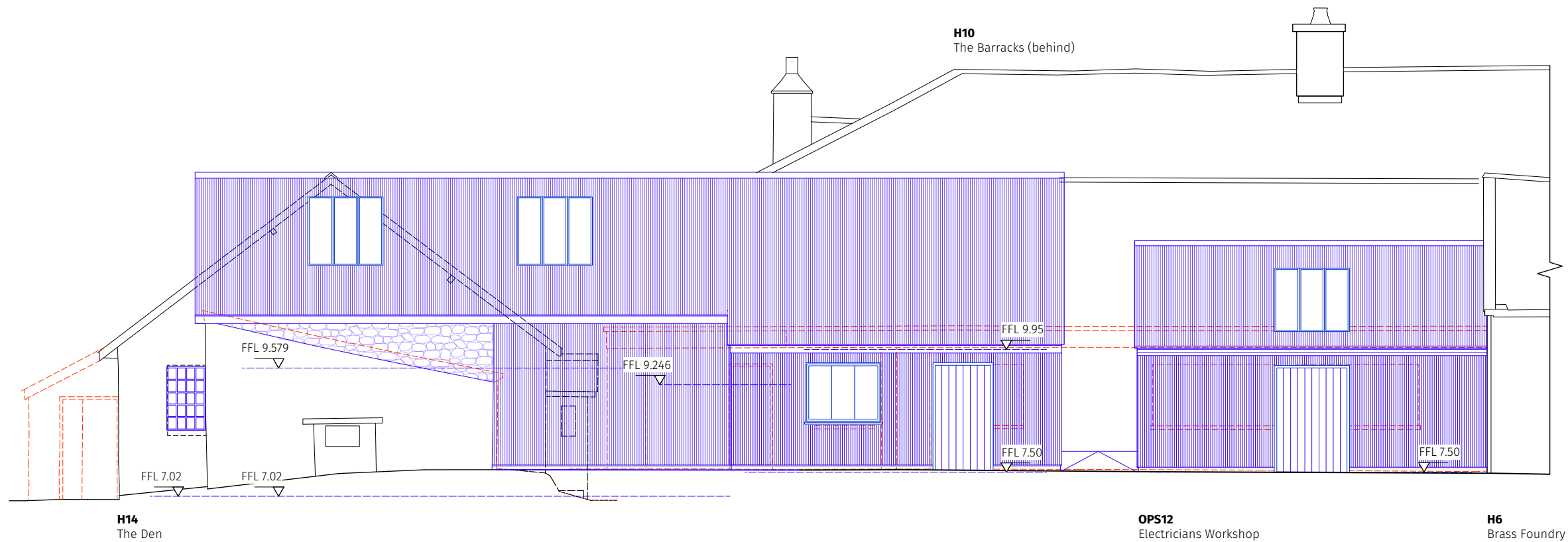
0 1 2 3 4 5m  
1:50 @ A1 / 1:100 @ A3



**Proposed Site Strategy Plan**  
Scale 1:500 @ A1 / 1:1000 @ A3



**Proposed Section A**  
Scale 1:100 @ A1 / 1:200 @ A3



**Proposed Section A (part section)**  
Scale 1:50 @ A1 / 1:100 @ A3

REVISIONS

**Thread**

Client: FMHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

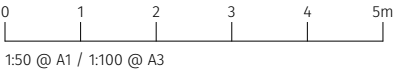
**H14 & OPS12  
THE DEN & ELECTRICIANS  
WORKSHOP  
PROPOSED SITE SECTION**

Scale:  
**As Labelled**

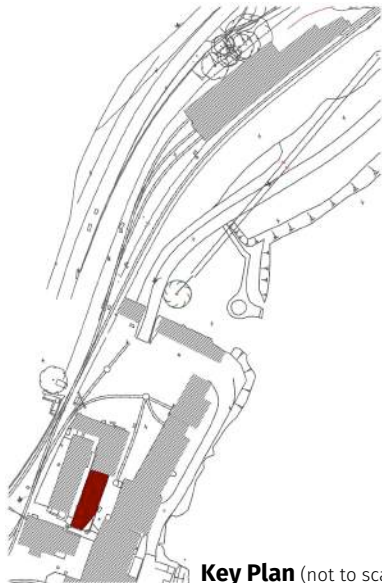
Date:  
**March 2021**

81\_H14\_3\_09





1:50 @ A1 / 1:100 @ A3



**Key Plan** (not to scale)

REVISIONS

**Thread**

Client: FMHR  
Project Architect: Claire Fear

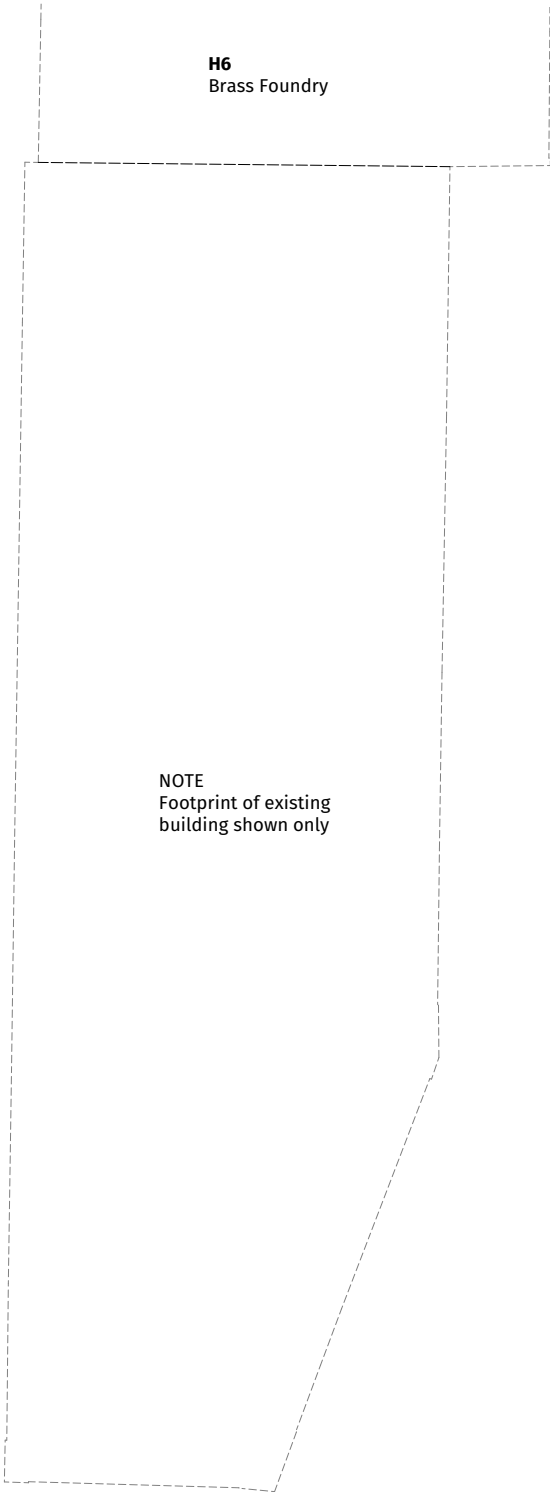
BOSTON LODGE WORKS

**OPS12  
ELECTRICIANS WORKSHOP  
EXISTING PLANS  
GROUND FLOOR & ROOF**

Scale:  
**1:50 @ A1 / 1:100 @ A3**

Date:  
**March 2021**

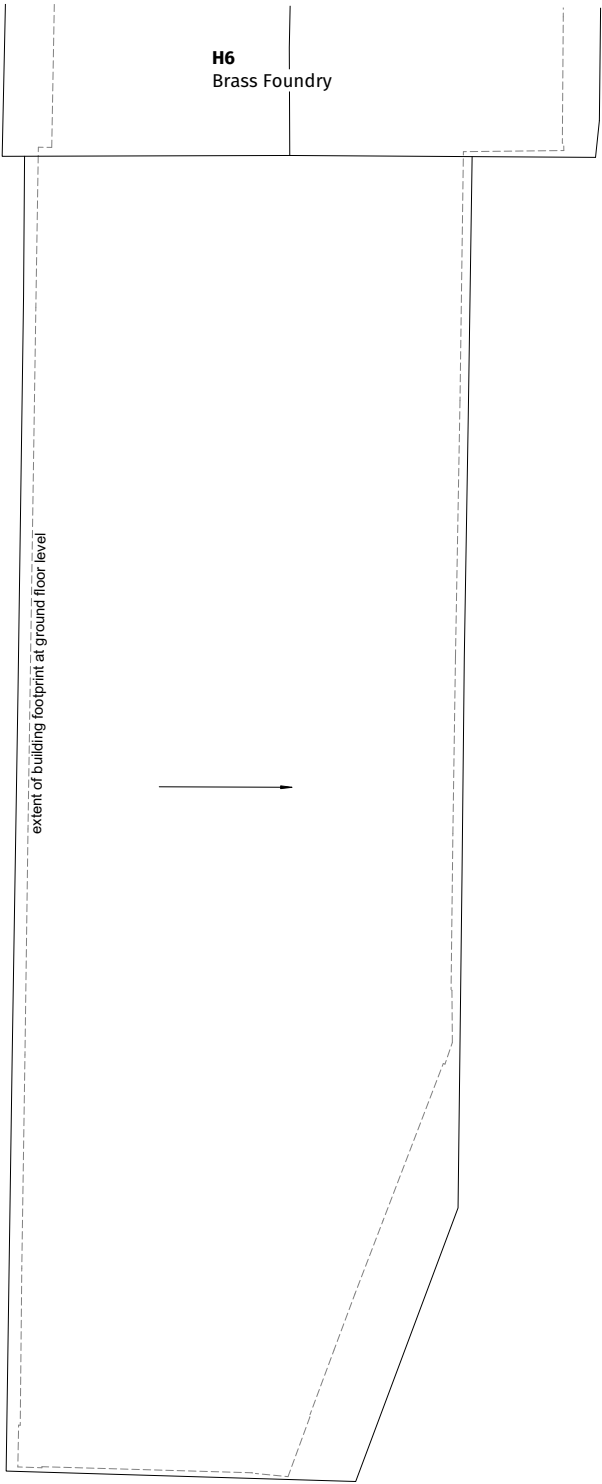
**81\_OPS12\_0\_01**



**H6  
Brass Foundry**

NOTE  
Footprint of existing  
building shown only

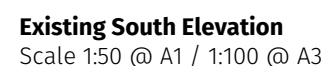
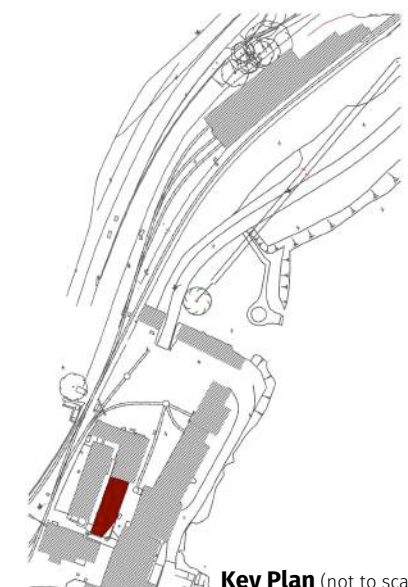
**Existing Ground Floor Plan**  
Scale 1:50 @ A1 / 1:100 @ A3



**H6  
Brass Foundry**

extent of building footprint at ground floor level

**Existing Roof Plan**  
Scale 1:50 @ A1 / 1:100 @ A3



## REVISIONS



Client: FfWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

**OPS12**  
**ELECTRICIANS WORKSHOP**  
**EXISTING ELEVATIONS**

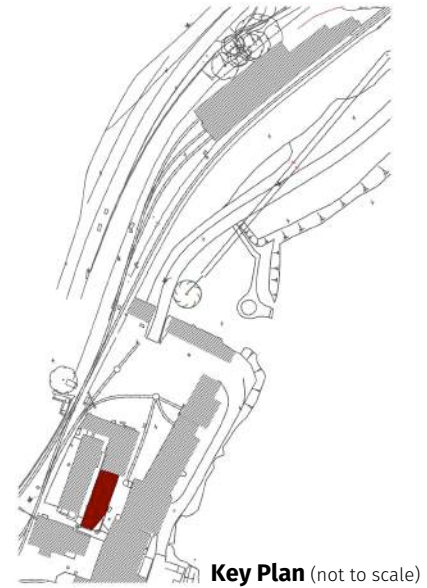
Scale:  
**1:50 @ A1 / 1:100 @ A3**

Date:  
**March 2021**

81\_OPS12\_0\_02



0 1 2 3 4 5m  
1:50 @ A1 / 1:100 @ A3



Key Plan (not to scale)

REVISIONS

Thread

Client: FMHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

**OPS12  
ELECTRICIANS WORKSHOP  
PROPOSED PLANS  
GROUND FLOOR & ROOF**

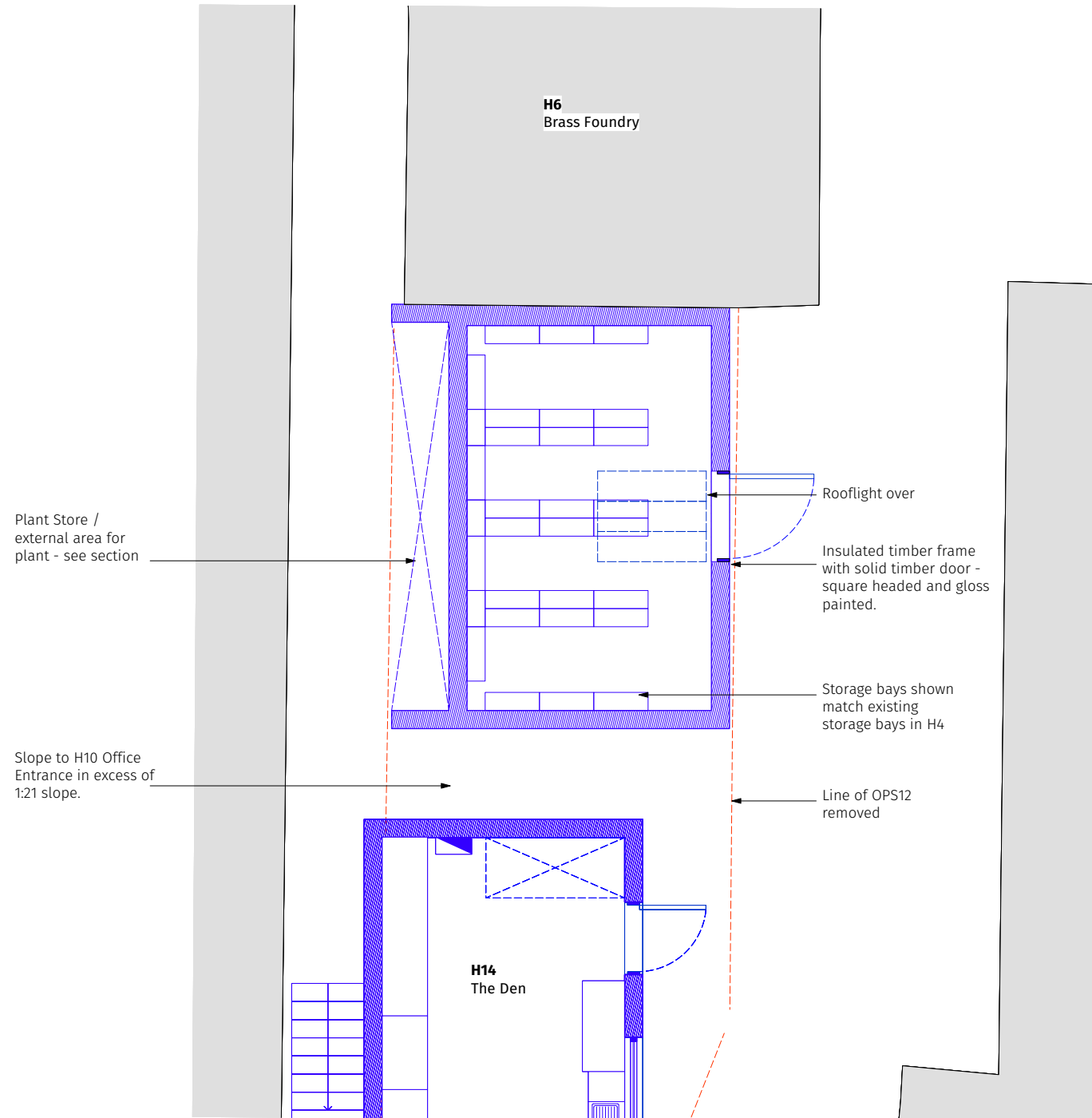
Scale:  
1:50 @ A1 / 1:100 @ A3

Date:  
March 2021

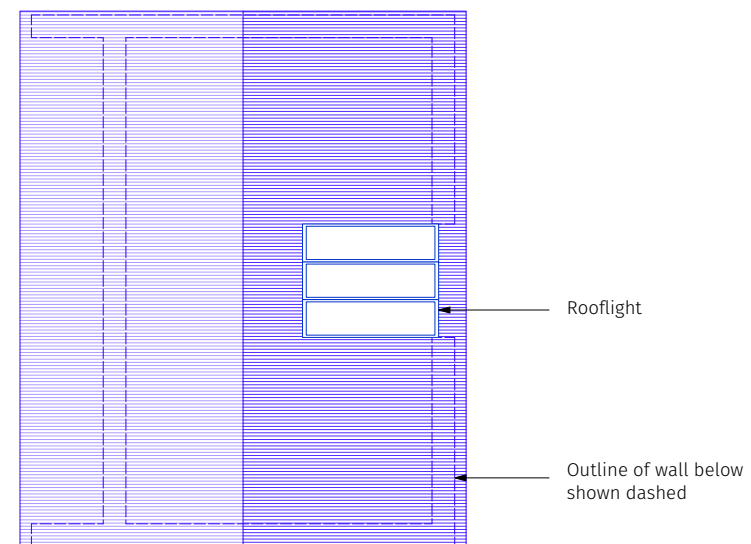
81\_OPS12\_3\_01



Both photos show the Brass Foundry (H6) as dominant to any adjacent building - with the saw mills in the distance drawings to eye.



**Proposed Ground Floor Plan**  
Scale 1:50 @ A1 / 1:100 @ A3

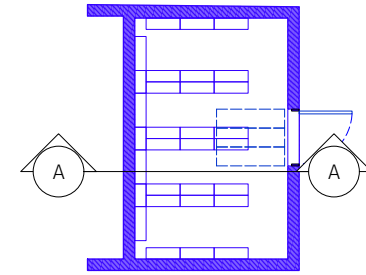


**Proposed Roof Plan**  
Scale 1:50 @ A1 / 1:100 @ A3

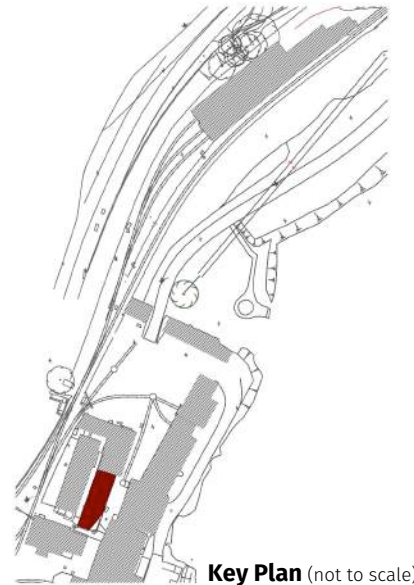




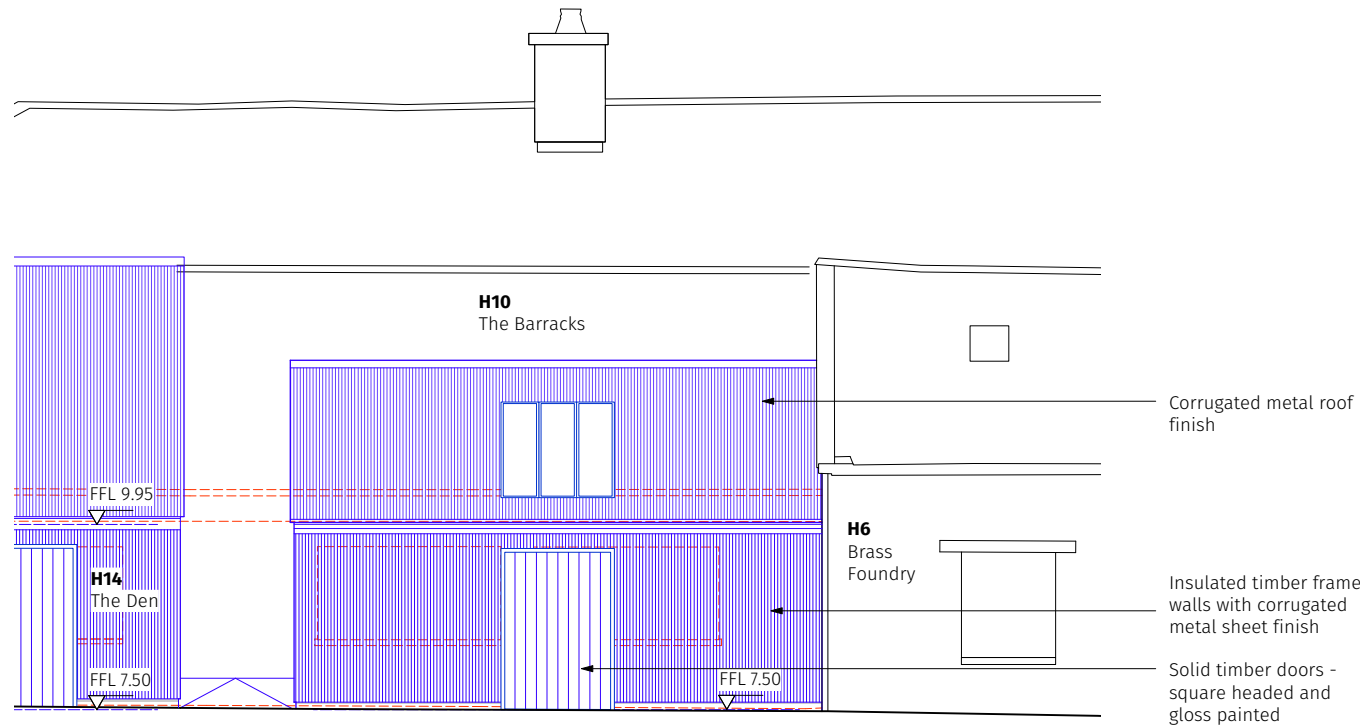
0 1 2 3 4 5m  
1:50 @ A1 / 1:100 @ A3



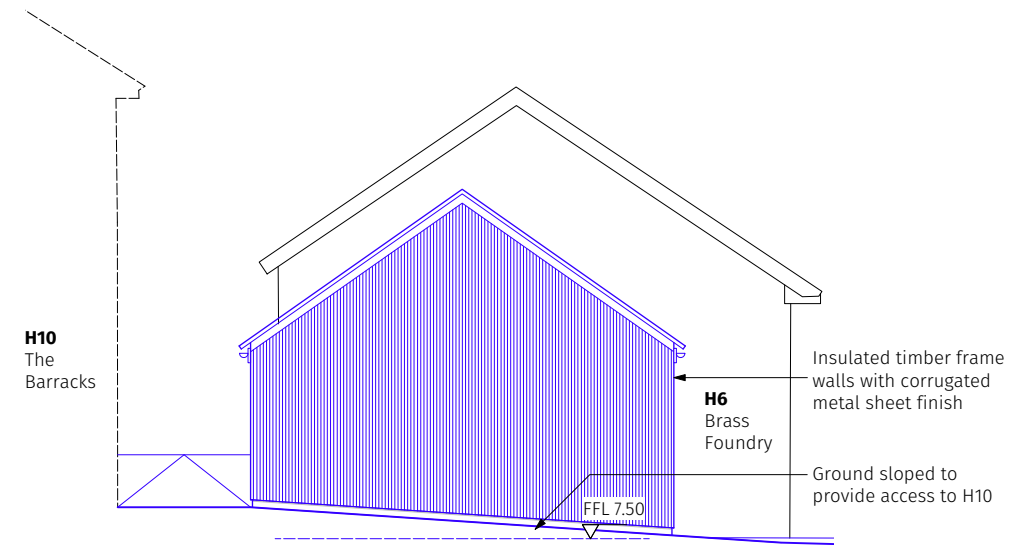
**Proposed Ground Floor Plan**  
Scale 1:100 @ A1 / 1:200 @ A3



**Key Plan** (not to scale)

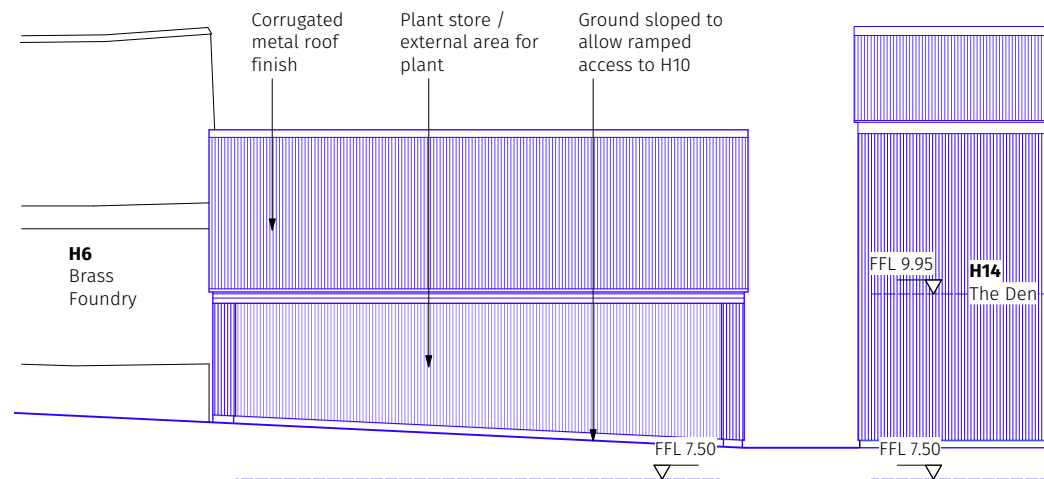


**Proposed South Elevation**  
Scale 1:50 @ A1 / 1:100 @ A3



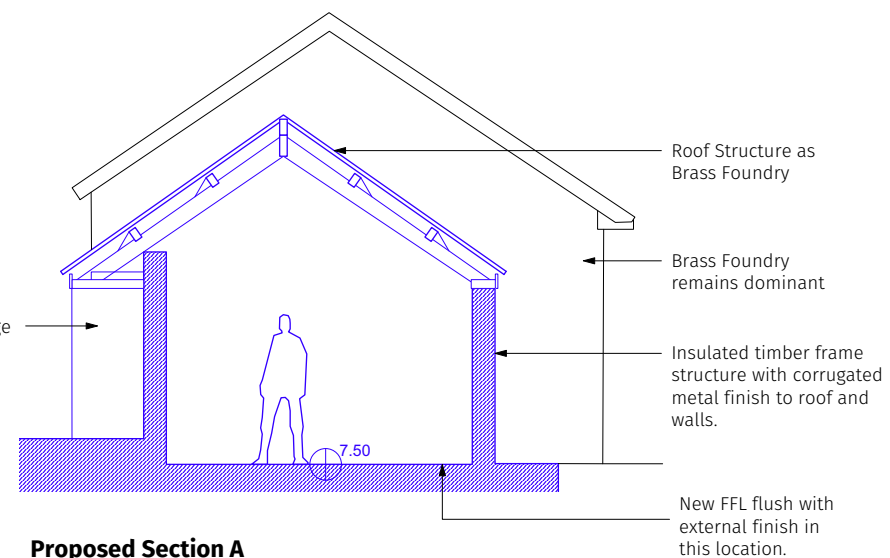
**Proposed West Elevation**  
Scale 1:50 @ A1 / 1:100 @ A3

REVISIONS



**Proposed North Elevation**  
Scale 1:50 @ A1 / 1:100 @ A3

Plant Store / external area  
for plant. Note it is set  
against a slope - will change  
in height along length.



**Proposed Section A**  
Scale 1:50 @ A1 / 1:100 @ A3

**Thread**

Client: FMHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

**OPS12  
ELECTRICIANS WORKSHOP  
PROPOSED ELEVATIONS  
& SECTION**

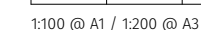
Scale:  
1:50 @ A1 / 1:100 @ A3

Date:  
**March 2021**

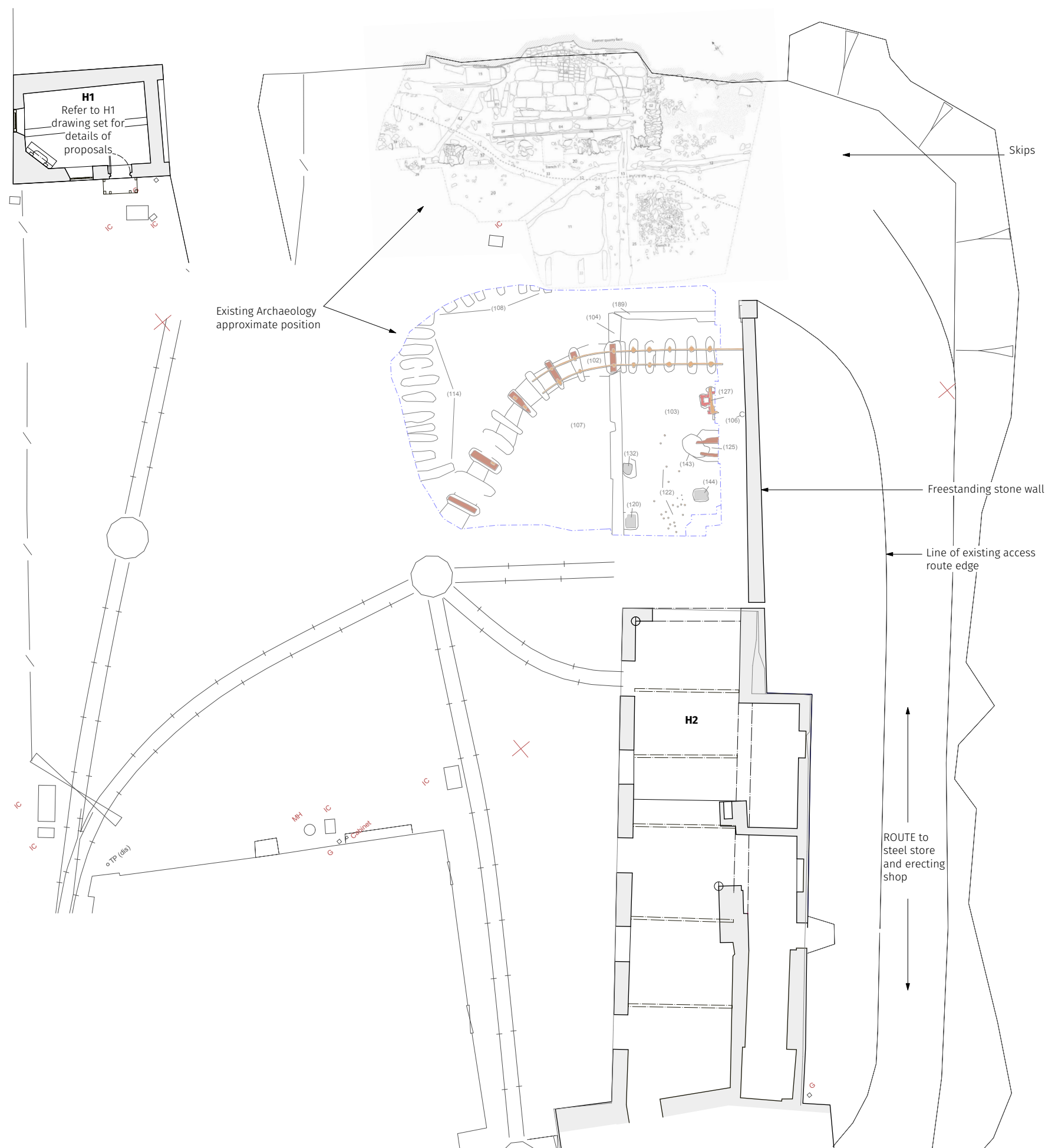
81\_OPS12\_3\_02

# H15

**NLHF Training &  
Research Centre**

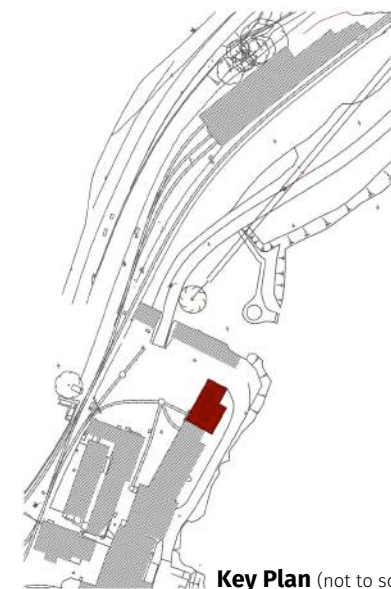
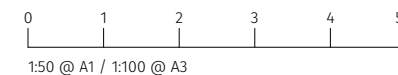


## 81\_H15\_0\_01



**Existing Site Plan**  
Scale 1:100 @ A1 / 1:200 @ A3





REVISIONS

**Thread**

Client: FMHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

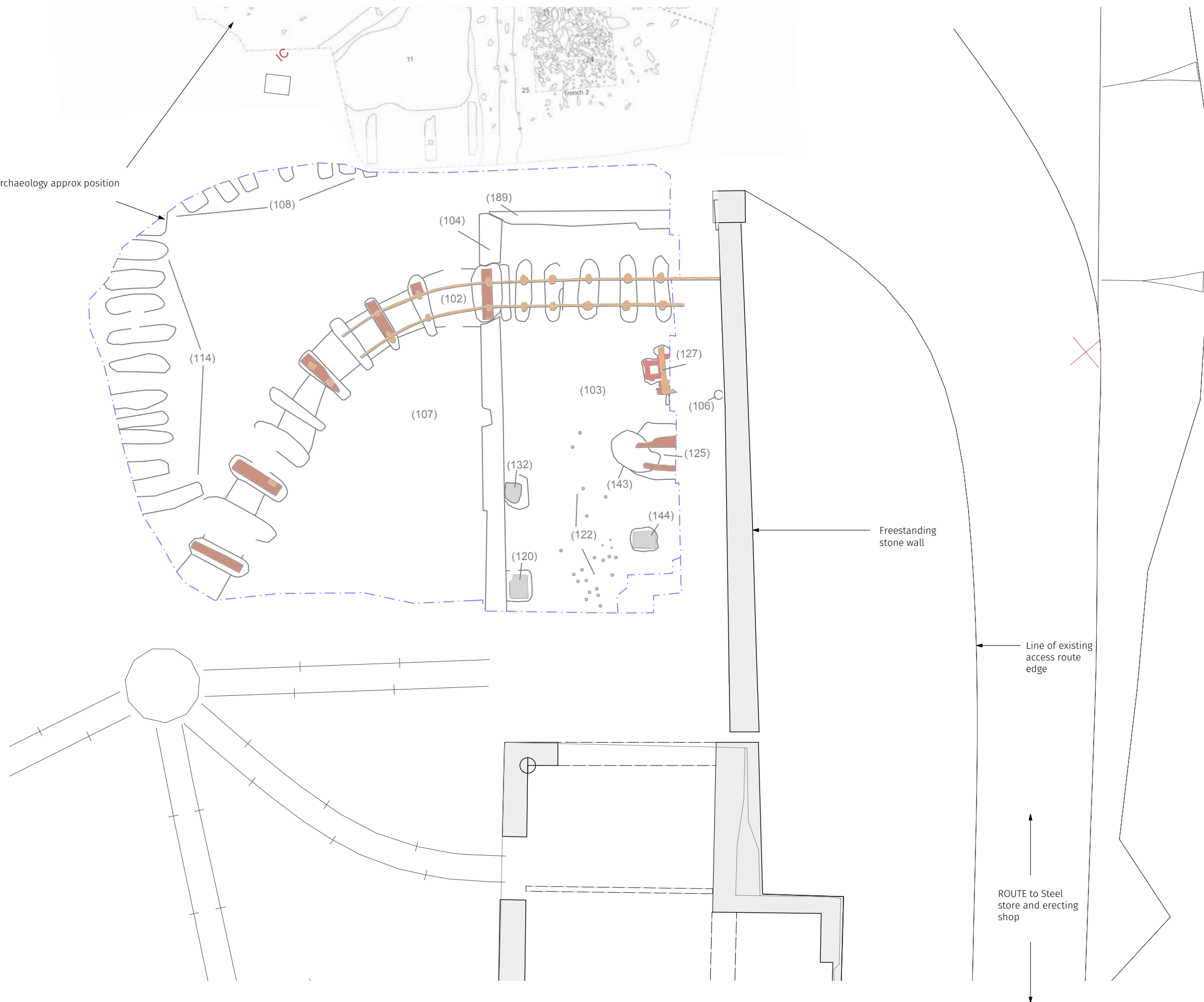
**H15  
NLHF TRAINING AND  
RESEARCH CENTRE  
EXISTING GROUND  
FLOOR PLAN**

Scale:  
1:50 @ A1 / 1:100 @ A3

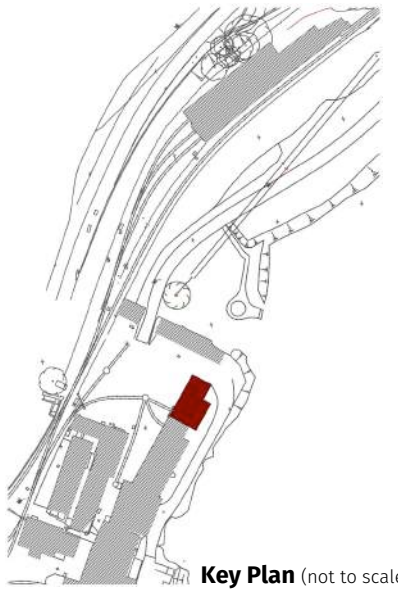
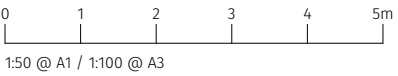
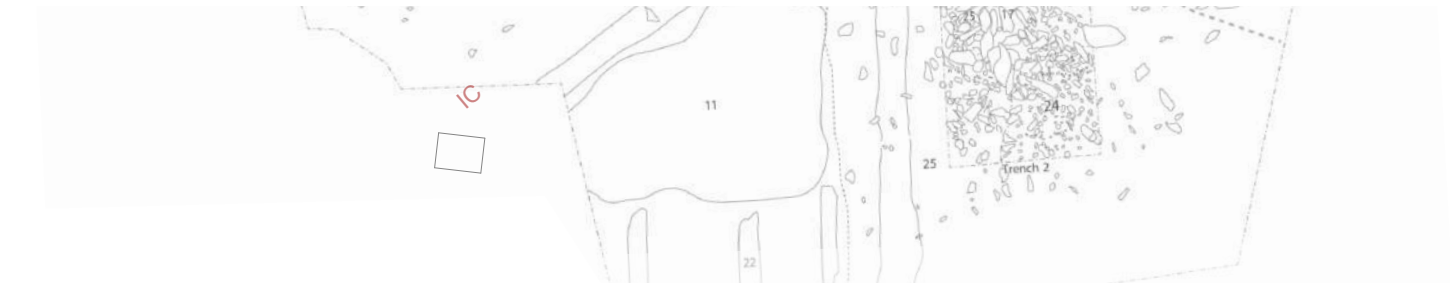
Date:  
March 2021

81\_H15\_0\_02

Existing Archaeology approx position



**Existing Ground Floor Plan**  
Scale 1:50 @ A1 / 1:100 @ A3



REVISIONS

**Thread**

Client: FMHR  
Project Architect: Claire Fear

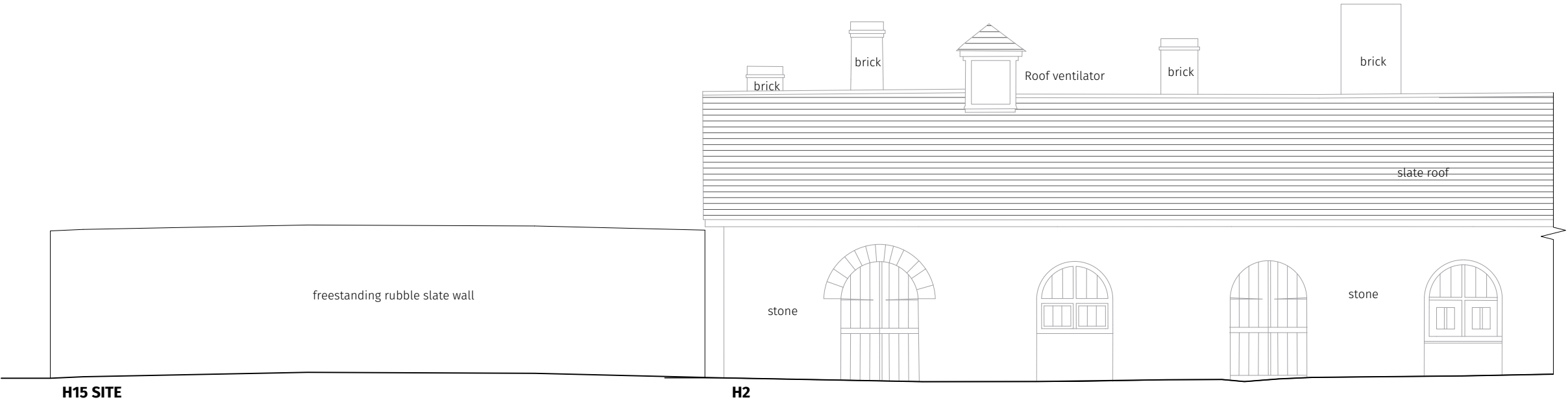
BOSTON LODGE WORKS

**H15  
NLHF TRAINING AND  
RESEARCH CENTRE  
EXISTING ROOF PLAN**

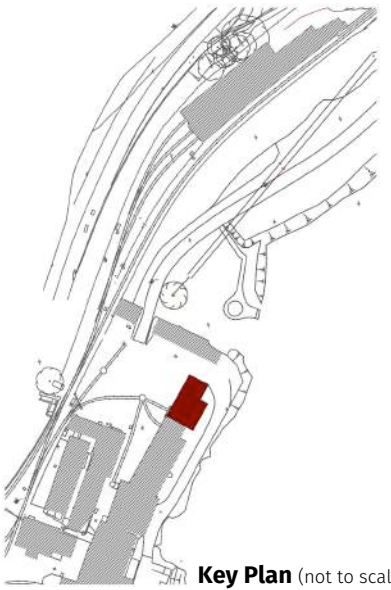
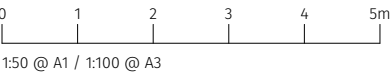
Scale:  
**1:50 @ A1 / 1:100 @ A3**  
Date:  
**March 2021**

81\_H15\_0\_03

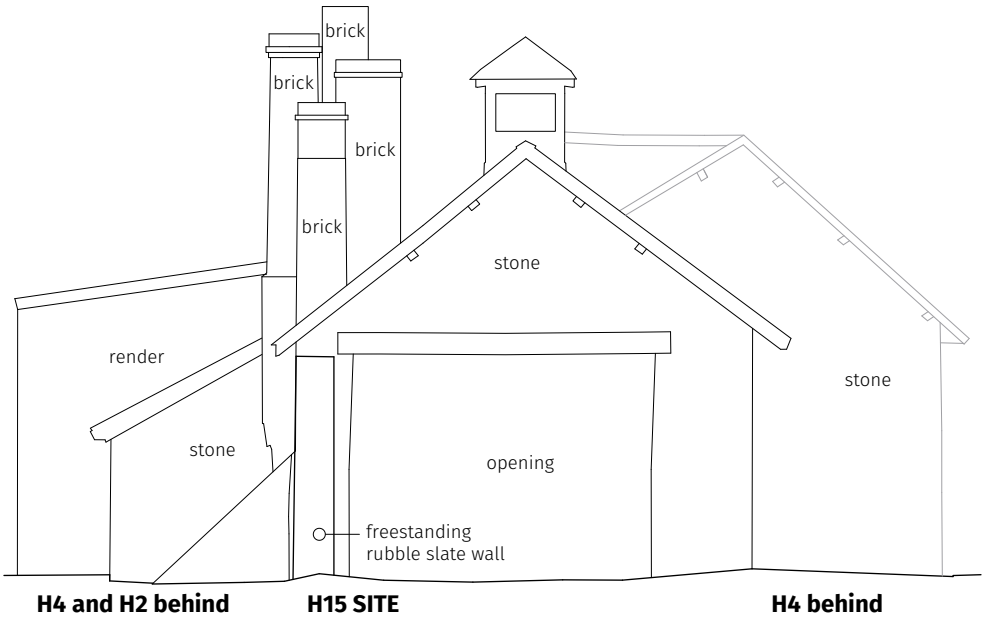
**Existing Roof Plan**  
Scale 1:50 @ A1 / 1:100 @ A3



**Existing North Elevation**  
Scale 1:50 @ A1 / 1:100 @ A3



REVISIONS



**Existing East Elevation**  
Scale 1:50 @ A1 / 1:100 @ A3



Client: FMHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

**H15  
NLHF TRAINING AND  
RESEARCH CENTRE  
EXISTING ELEVATIONS  
NORTH AND EAST**

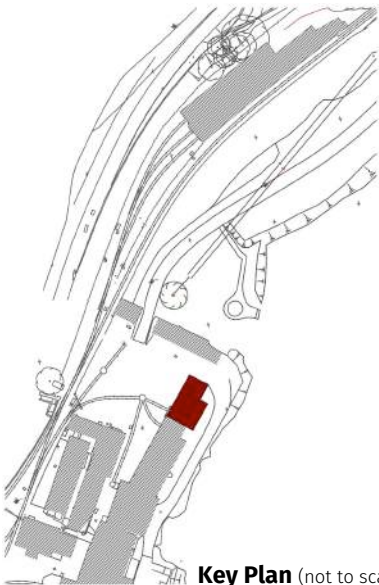
Scale:  
**1:50 @ A1 / 1:100 @ A3**

Date:  
**March 2021**

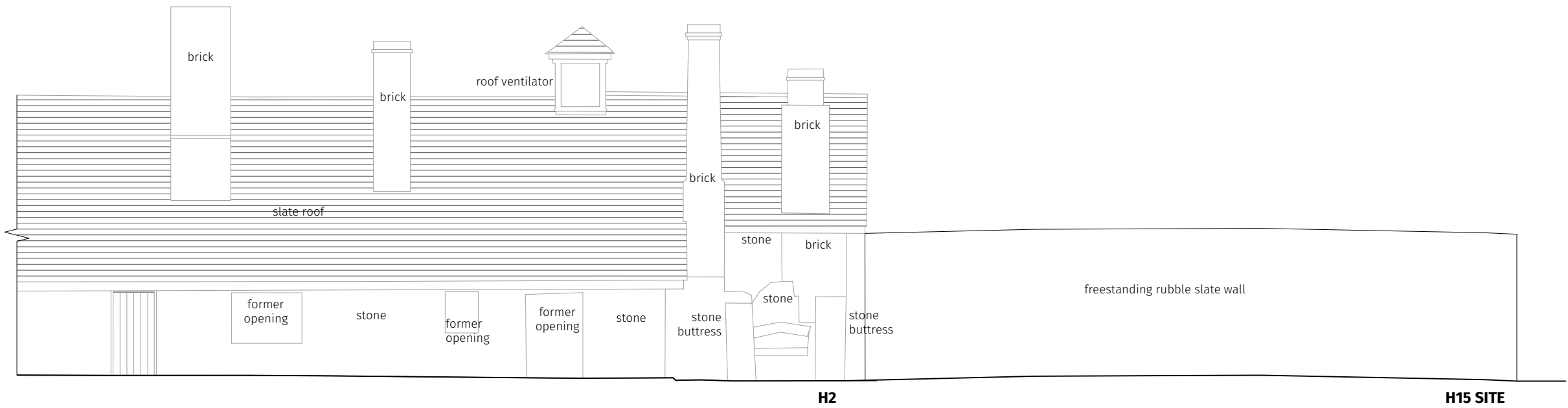


0 1 2 3 4 5m

1:50 @ A1 / 1:100 @ A3



**Key Plan** (not to scale)



**H2**

**H15 SITE**

**Existing South Elevation**  
Scale 1:50 @ A1 / 1:100 @ A3

REVISIONS

**Thread**

Client: FMHR  
Project Architect: Claire Fear

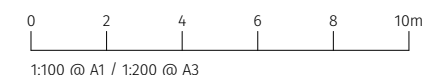
BOSTON LODGE WORKS

**H15  
NLHF TRAINING AND  
RESEARCH CENTRE  
EXISTING ELEVATIONS  
SOUTH**

Scale:  
**1:50 @ A1 / 1:100 @ A3**

Date:  
**March 2021**

81\_H15\_0\_05



Rev A (06 April 2021) - Annotations, pallet storage, rooflight, louvred wall updated

## H15 NLHF TRAINING AND RESEARCH CENTRE PROPOSED SITE PLAN

Scale:  
**1:100 @ A1 / 1:200 @ A3**

Date:  
**March 2021**

81\_H15\_3\_01 A

**H1**  
Refer to H1  
drawing set for  
details of  
proposals

**H9**  
Refer to H9 drawing set for details of proposals

min. 5000mm

- Skips

- Storage items avoiding corner to maximise turning circle of vehicles for steel store and erecting shop access

Line of existing edge - to be reworked to provide access to pallet storage

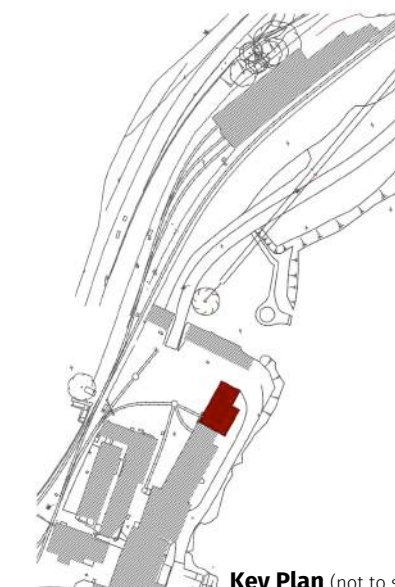
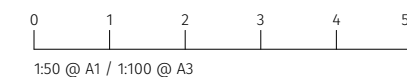
- Freestanding stone wall to be fully recorded and carefully dismantled - slate rubble to be reused

- Ground level to be lowered and drainage assessed to prevent flooding into H2. Note also location of cable that needs to be lowered to accommodate any change in level

ROUTE to  
Steel store  
and erecting  
shop to be  
maintained

## H2

**Proposed Site Plan**  
Scale 1:100 @ A1 / 1:200 @ A3



**Key Plan** (not to scale)

## REVISIONS

Rev A (25 March 2021) - Section moved to separate sheet  
Rev B (06 April 2021) - Annotations, pallet storage, rooflight, louvred wall updated

**Trade**

Client: FfWHR  
Project Architect: Claire Fear

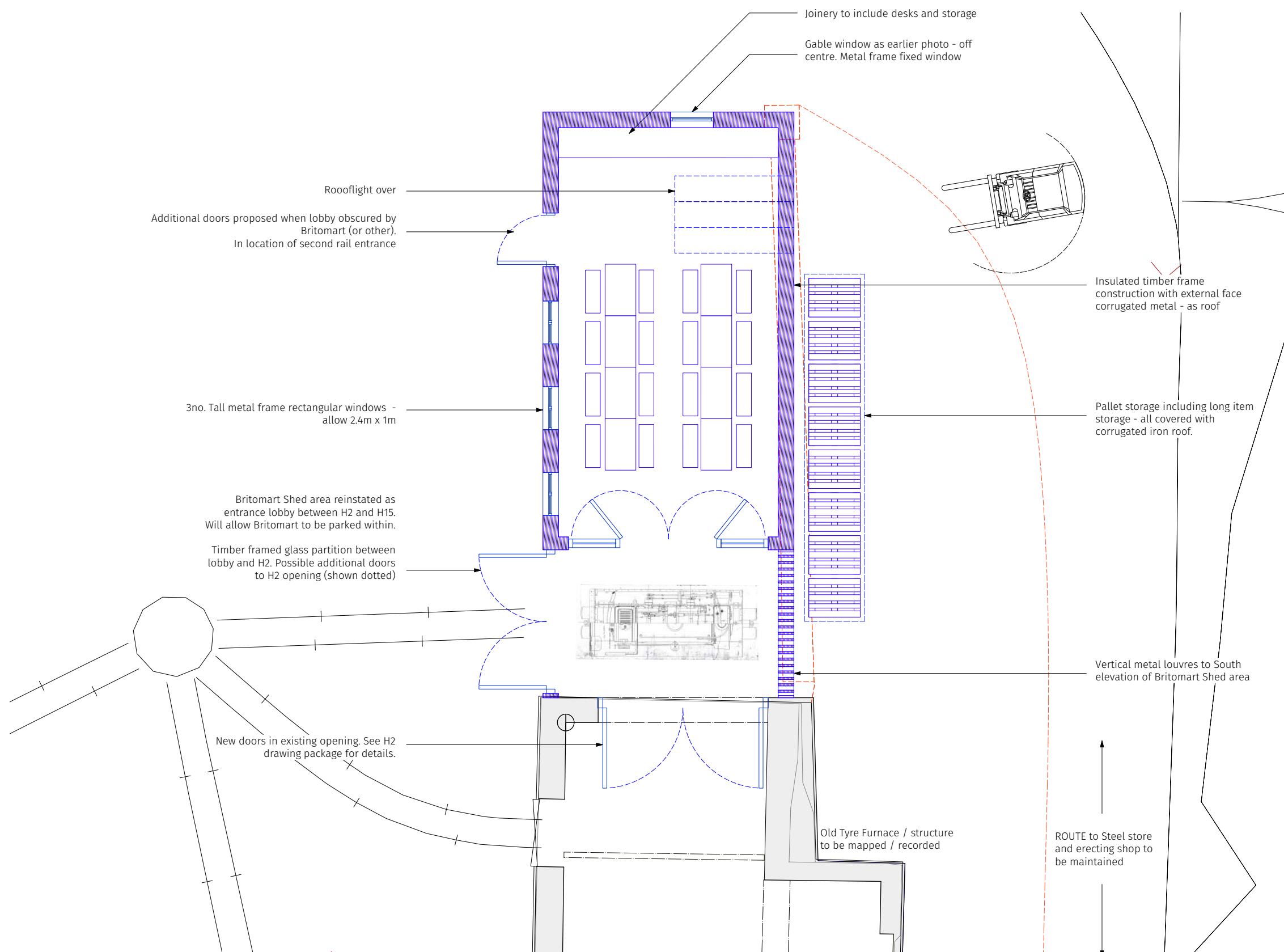
BOSTON LODGE WORKS

## H15 NLHF TRAINING AND RESEARCH CENTRE PROPOSED GROUND FLOOR PLAN

Scale:  
**1:50 @ A1 / 1:100 @ A3**

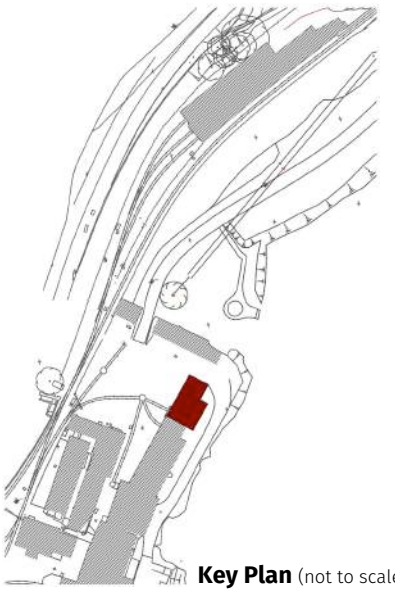
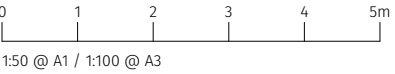
Date:  
**March 2021**

81\_H15\_3\_02 B



**Proposed Ground Floor Plan**  
Scale 1:50 @ A1 / 1:100 @ A3





REVISIONS
Rev A (06 April 2021) - Annotations, pallet storage, rooflight, ventilator updated

**Thread**

Client: FMHR  
Project Architect: Claire Fear

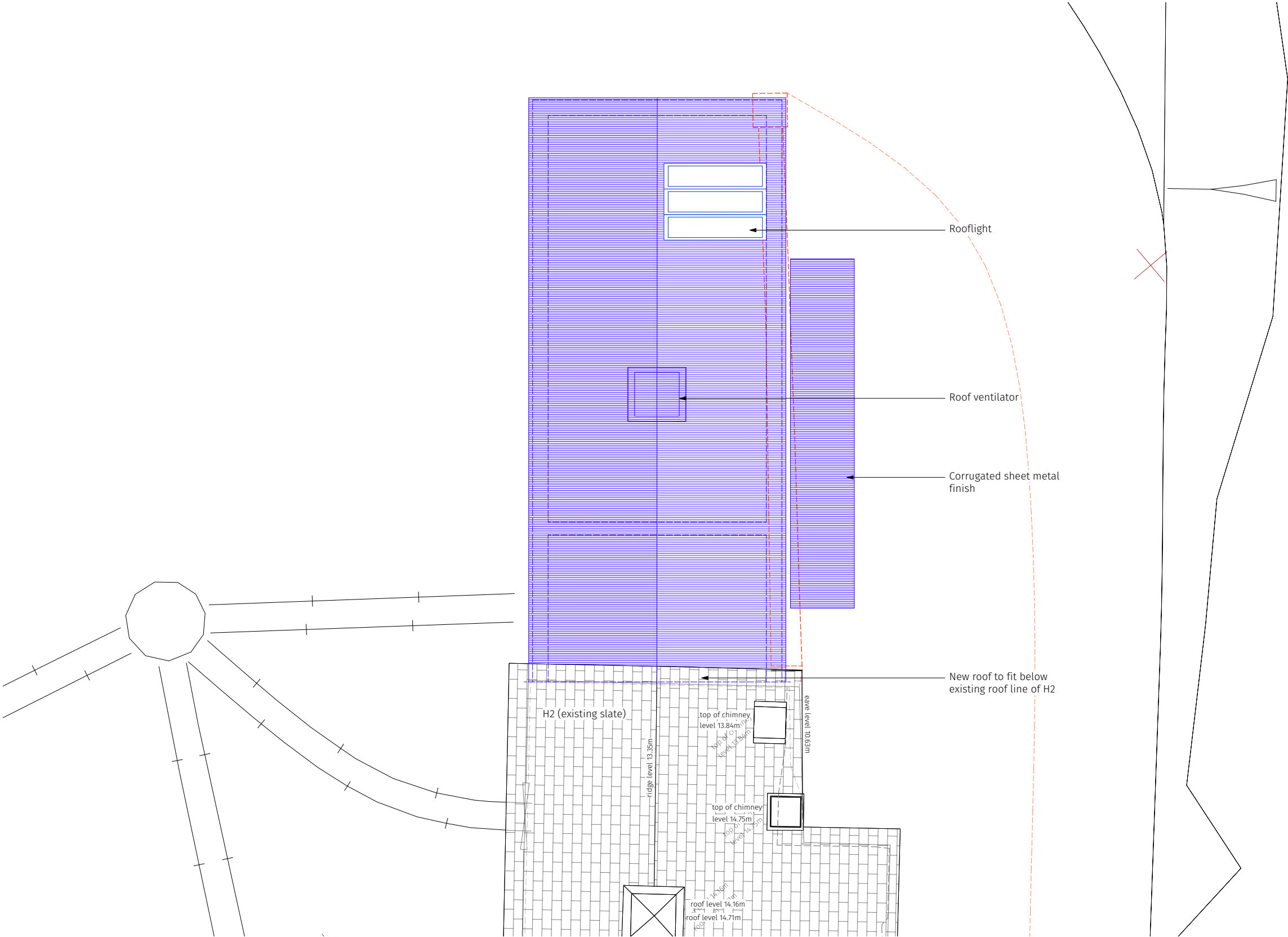
BOSTON LODGE WORKS

**H15  
NLHF TRAINING AND  
RESEARCH CENTRE  
PROPOSED ROOF PLAN**

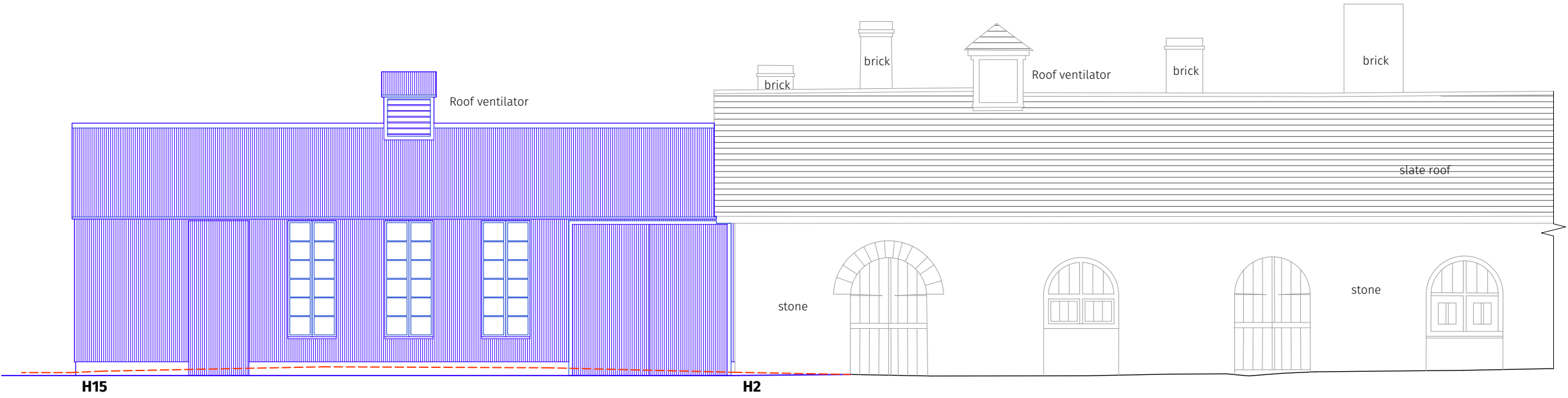
Scale:  
**1:50 @ A1 / 1:100 @ A3**

Date:  
**March 2021**

81\_H15\_3\_03 A

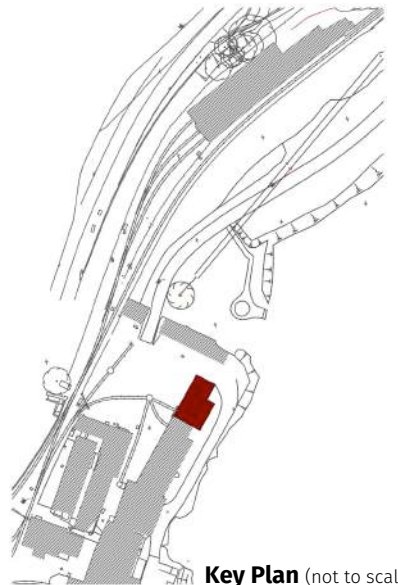


**Proposed Roof Plan**  
Scale 1:50 @ A1 / 1:100 @ A3



0 1 2 3 4 5m

1:50 @ A1 / 1:100 @ A3



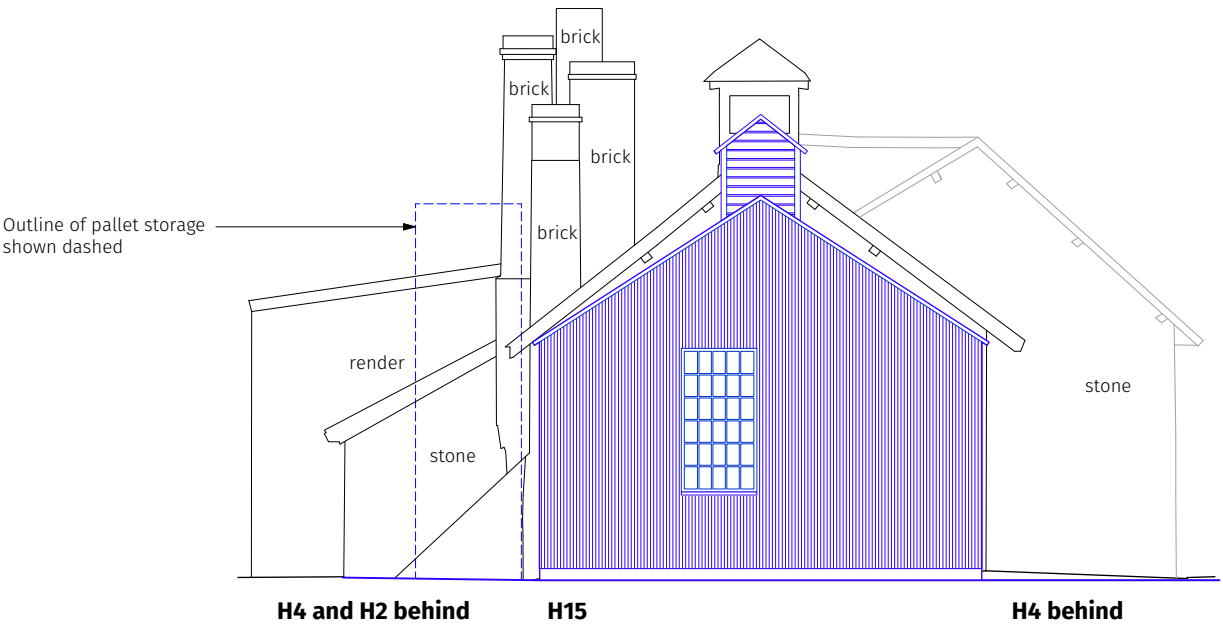
Key Plan (not to scale)

**Proposed North Elevation**

Scale 1:50 @ A1 / 1:100 @ A3

REVISIONS

Rev A (06 April 2021) - Annotations, ventilator, cill height updated



**Proposed East Elevation**

Scale 1:50 @ A1 / 1:100 @ A3

**Thread**

Client: FMHR  
Project Architect: Claire Fear

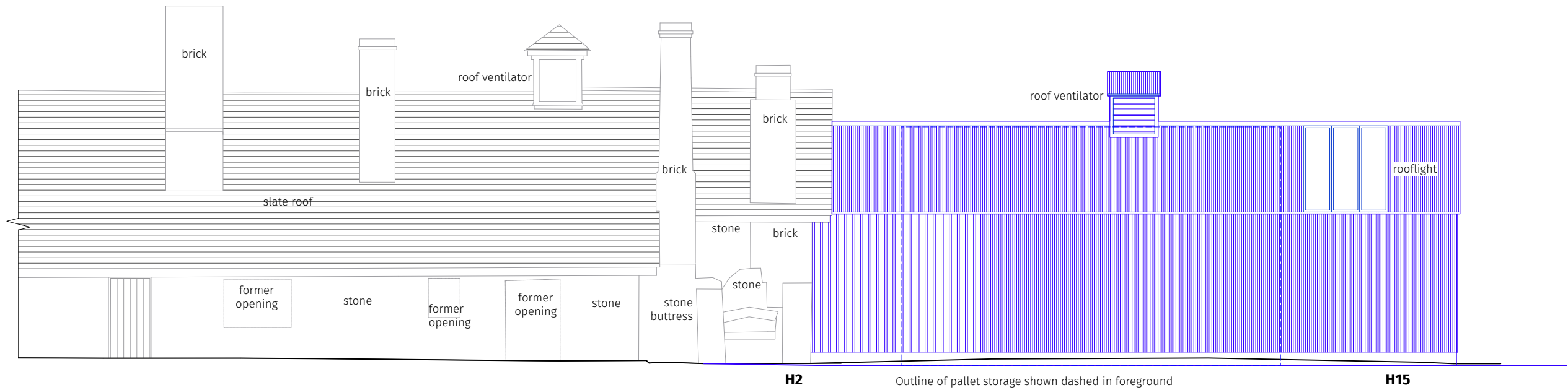
BOSTON LODGE WORKS

**H15  
NLHF TRAINING AND  
RESEARCH CENTRE  
PROPOSED ELEVATIONS  
NORTH AND EAST**

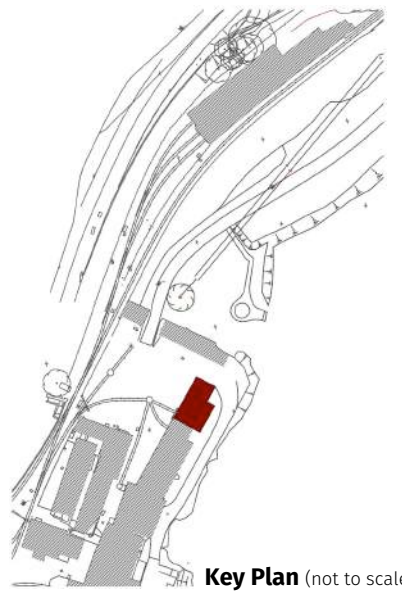
Scale:  
1:50 @ A1 / 1:100 @ A3

Date:  
March 2021

81\_H15\_3\_04 A



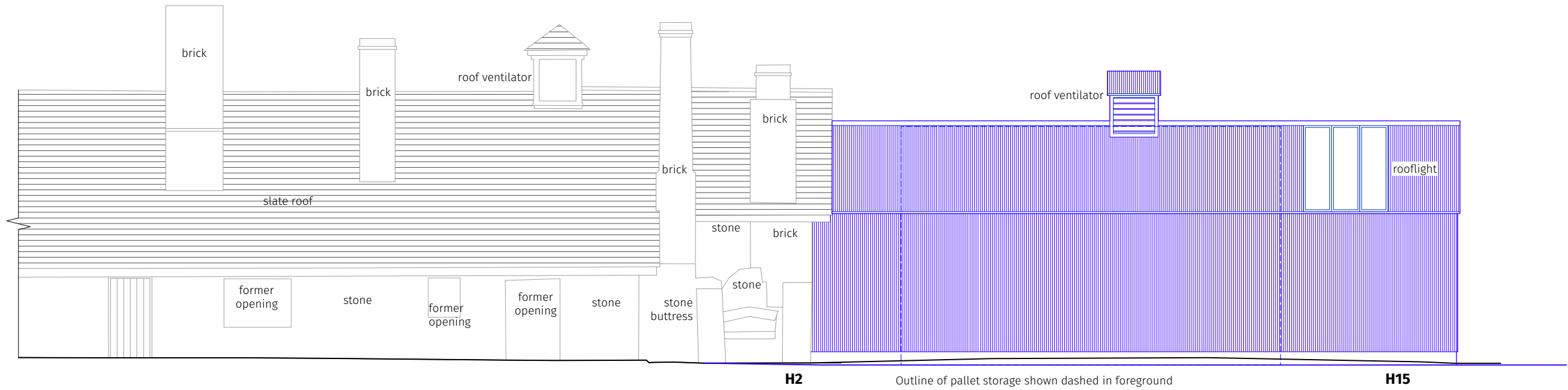
0 1 2 3 4 5m  
1:50 @ A1 / 1:100 @ A3



**Proposed South Elevation**  
**Option One - with louvres to Britomart Shed area**  
Scale 1:50 @ A1 / 1:100 @ A3

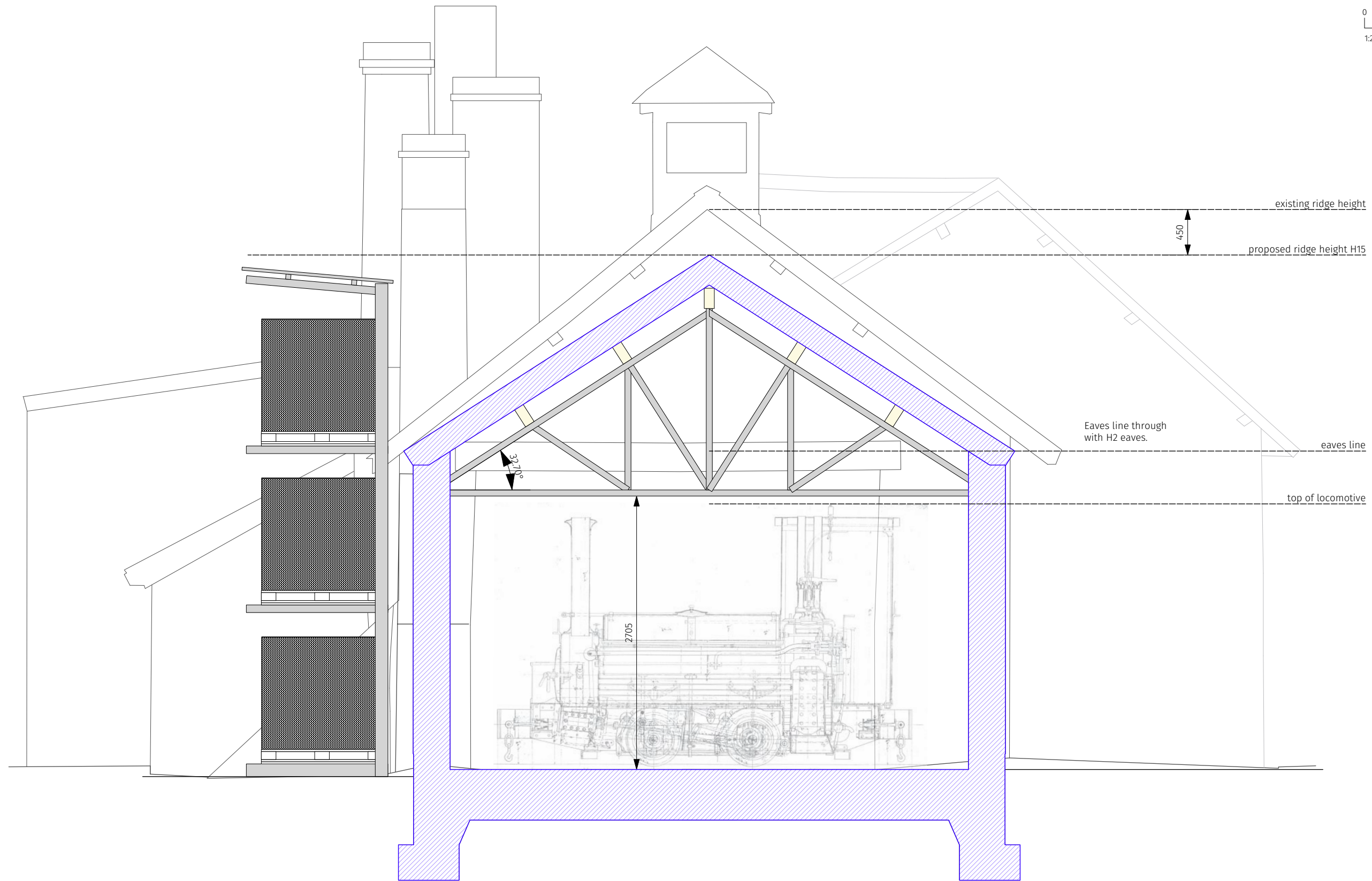
REVISIONS

Rev A (06 April 2021) - Annotations, rooflight, ventilator updated, louvred wall option



**Proposed South Elevation**  
**Option Two - with no louvres to Britomart Shed area**  
Scale 1:50 @ A1 / 1:100 @ A3





REVISIONS

Rev A (06 April 2021) - Pallet storage updated

**Thread**

Client: FMHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

**H15  
NLHF TRAINING AND  
RESEARCH CENTRE  
PROPOSED SECTION**

Scale:  
**1:20 @ A1 / 1:40 @ A3**

Date:  
**March 2021**

**81\_H15\_3\_06 A**

**Proposed Section**  
Scale 1:20 @ A1 / 1:40 @ A3



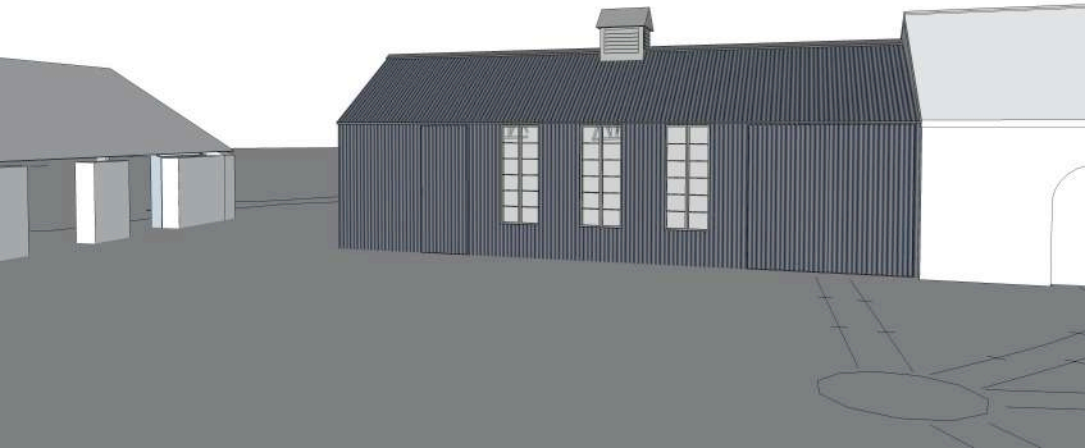
Photo looking east with offset window - See Plan for position.



Photo looking West deep into H2



External View of Blacksmiths Extension



REVISIONS
Rev A (06 April 2021) - Ventilator updated

**Thread**

Client: FMHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

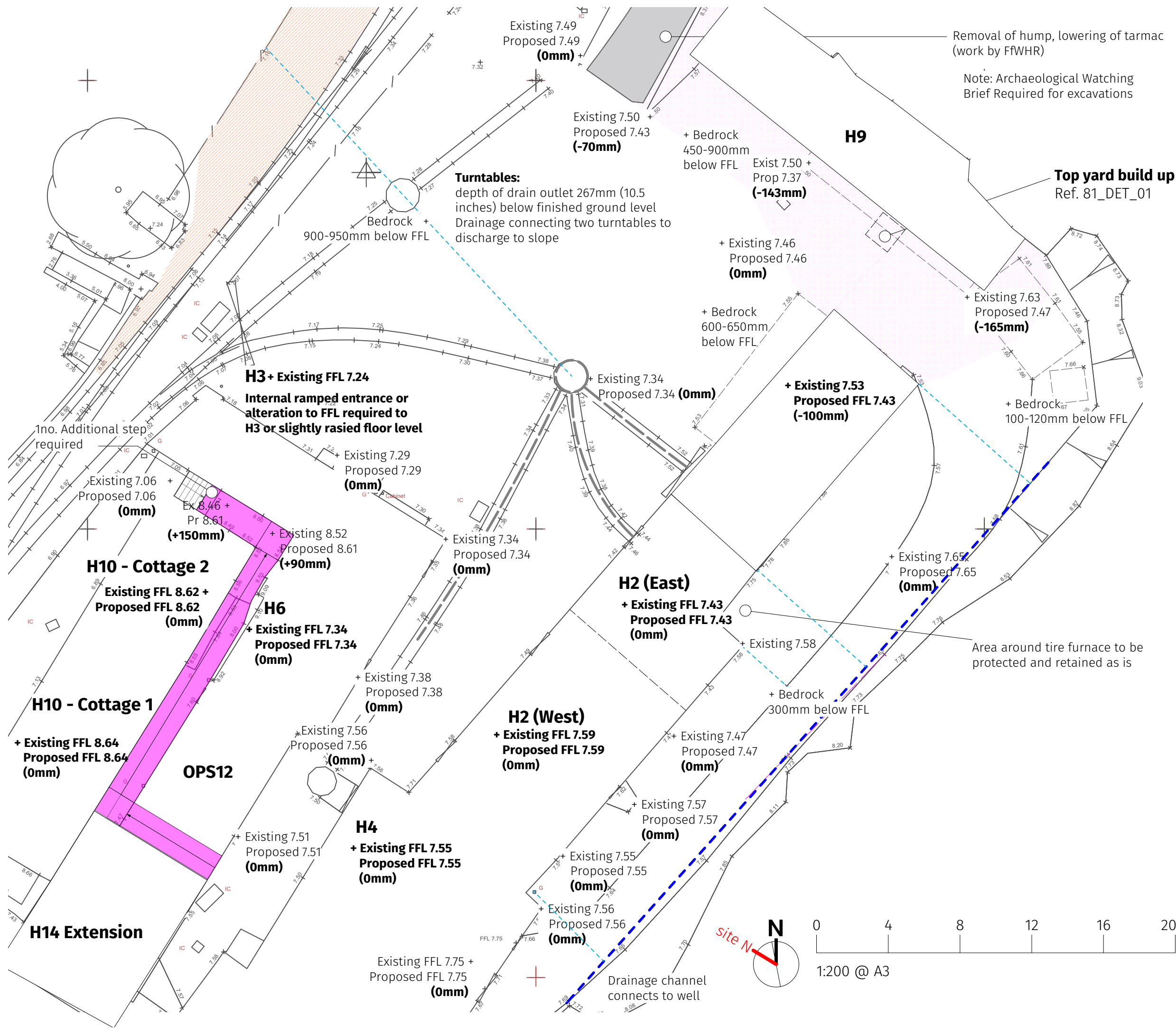
**H15  
NLHF TRAINING AND  
RESEARCH CENTRE  
PROPOSED VIEWS**

Scale:  
**Not to Scale**  
Date:  
**March 2021**

81\_H14\_3\_07 A

# Landscape Strategy





**Thread** trading as Architectural Thread,  
Registered in England and Wales, Number 08000773  
Registered Address: Suite D, Pinbrook Court, Venny Bridge,  
Exeter EX4 8JQ,  
VAT No. 151 4698 17

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- ### Key to landscaping/surfaces
- Existing tarmac not part of project proposal, surface by FfWHR
  - Existing hardcore/gravel (not part of project proposal, surface by FfWHR)
  - Proposed new self binding slate gravel surface - to improve accessible pedestrian route
  - Area of proposed new ground level and surface as shown
  - Proposed new sloped paving (tbc) for improved accessibility
  - Proposed site contours (indicative)
  - Section of rail road to be lifted & relayed (by FfWHR volunteers)
  - Drainage channel (existing, drawn indicatively)
  - Proposed rainwater drainage

Rev B (4 May 2021) - reduced change to levels; drainage notes added



Client: FfWHR  
Project Architect: Claire Fear

**BOSTON LODGE WORKS**

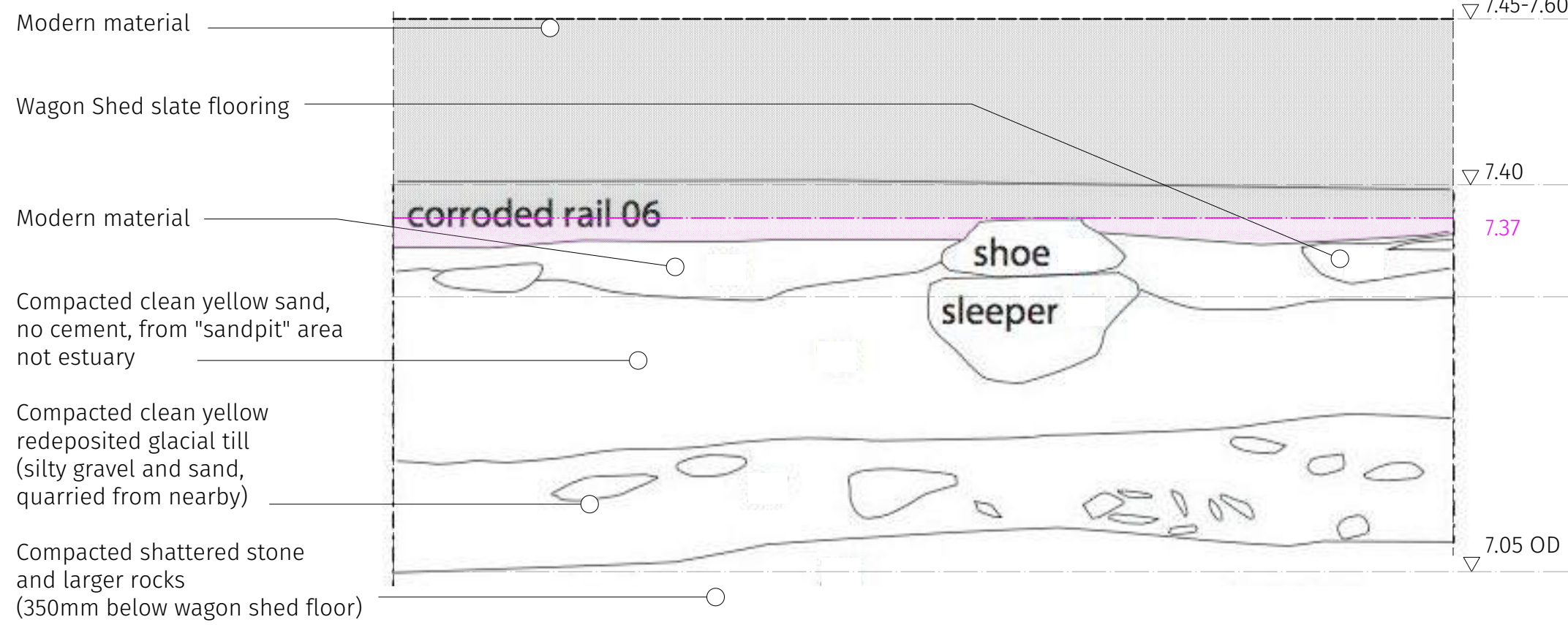
## LANDSCAPING STRATEGY TOP YARD

Scale:  
**1:200@A3**

Date:  
**NOVEMBER 2020**

**81\_GA\_03 B**

## Material



## Approx. Levels

## Archaeological Phasing

Range of Modern levelling & rough hardstanding

Phase 3 Wagon Shed

**Proposed new floor level (new Wagon Shed only)**

Phase 2 - Levelling of Top Yard pre-1842

Phase 1 - The Quarry Workings

## Top yard build-up

Scale 1:5 @ A3

(excerpt and notes derived from Gwynedd Archaeological Trust's report on archaeological excavations, Feb 2015)

REVISIONS

Rev A (4 May 2021) - proposed floor level changed



Client: FFWHR  
Project Architect: Claire Fear

BOSTON LODGE WORKS

## LANDSCAPING STRATEGY ARCHAEOLOGICAL BUILD-UP DETAIL

Scale:  
**1:5@A3**

Date:  
**NOVEMBER 2020**

81\_DET\_01 A

