

Survey Report

Class Q Planning report – Structural Assessment

The Black Barn, Deadman's Hill, Sandon

For: **Victoria Carter**

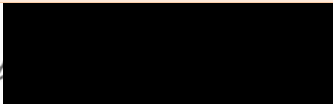
Document reference: GD – VC – 11-1557

Date: 16-12-2024

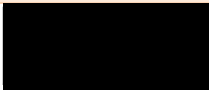
Quality Assurance – Approval Status

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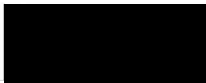
PREPARED BY

Name & qualifications	Guy Dolby BSc (Hons), CEng., MIStructE
Signature	
Job title	Consultant

CHECKED BY

Name & qualifications	John Bowstead BEng (Hons), CEng. MIStructE
Signature	
Job title	Technical Director

APPROVED BY

Name & qualifications	John Bowstead BEng (Hons), CEng. MIStructE
Signature	
Job title	Technical Director

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Document History

Revision	Purpose/description	Prepared	Checked	Approved	Date
C1	Client / Architect Issue	GND	JB	JB	17.02.2025

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INTRODUCTION

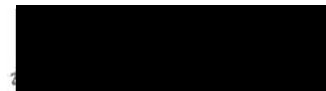
- 1.01 This report has been prepared following receipt of instructions from Mrs. Victoria Carter on behalf of Saker Estates Limited.
- 1.02 Our brief was to undertake an inspection of The Black Barn in Sandon, with a view to commenting on the viability of the structure in relation to conversion to residential use within the scope of a Class Q prior notification under the Town and Country Planning (General Permitted Development) (England) Order 2015 as amended.
- 1.03 Drawings of the existing layout and proposed conversion have been prepared by Bidwells. The proposals illustrate how the building can be successfully converted to residential use and have been used to inform this report. These drawings are appended to this report for reference.
- 1.04 The building is an agricultural barn currently used for general storage and is approximately 9.4m x 9.5m on plan. The building is not large enough to suit current farming practice so is largely redundant as far as being useful for agricultural use. The building is split into two sections at differing floor levels to suit the overall slope of the site. The main barn sits beneath a corrugated metal duo-pitched roof to the front of the site and has a width of approximately 5m. The remainder of the floor area at the lower level is enclosed by a mono-pitch metal clad roof.
- 1.05 Both sections of the building are structured with a low-level plinth wall, one brick thick, projecting above ground level by about 900mm relative to the floor level of the main barn. This supports timber framed walls extending to the underside of the roofs. These are clad externally with timber weather boarding and are traditionally diagonally braced within the plane of the timber framing. The main barn is accessed from the front of the site via a full height double leaf barn door. A similar barn door is present in the rear wall of the lower lean-to section of the building.
- 1.06 The roof cladding is supported from a timber ridge purlin and timber slope purlins located approximately mid-way up the slope to each side of the ridge. Purlins are supported from the gable timber frames and a pair of primary timber trusses positioned either side of the barn door. The cladding over the lean-to barn is supported from the external wall and internal dividing wall between the two separate areas. The span of the cladding is reduced by a central timber purlin across this space, which in turn is supported by timber cross beams, located either side of the rear barn door opening. These beams slope to follow the mono-pitched roof.
- 1.07 The ground floor of the main barn is formed with concrete. This floor to the lean-to barn is earth.
- 1.08 This report deals with a general visual examination of the property and its conclusions are based upon that examination.
- 1.09 We have not inspected the woodwork or other parts of the structure which are covered, unexposed or inaccessible and we are therefore unable to report that such parts of the property are free from defect.
- 1.10 No consideration has been given to the occurrence of dampness, infestation or rot, the condition of services to and from the property, or other matters that would normally fall within the competence of a Building Surveyor.

Findings of Inspection

- 1.11 The external plinth walls of the barn are of brickwork construction, being generally 215mm thick, and bedded in a lime-based mortar. It is evident from initial inspection that walls have suffered some damage around the corner intersections. Measures have been taken to strengthen and tie the corners together by bolting L-shaped steel plates to the brickwork. The damage appears to have been largely caused by the growth of trees close to the perimeter of the barn, the roots, and trunks of which have caused physical damage. Some of the top growth has been removed but the roots and base of the trees remain.
- 1.12 The pointing to the plinth walls is generally weathered but the walls are in line and vertical which is indicative of there being very little foundation movement over the years. No trial pits have been excavated to date but by reference to geological mapping, it is likely that the building is founded on solid chalk.
- 1.13 The internal timber structure of the barn is in quite good condition and has been repaired and maintained over the years. The weather boarding has been replaced at some point in the past with the addition of a membrane material between the timber framing and boarding having been provided. The building is currently weather tight and suitable for upgrading of insulation etc. to meet current building regulation requirements for residential use.
- 1.14 The roof cladding appears to be in reasonably good condition and is obviously a replacement to the original roof coverings. The is currently weather tight.
- 1.15 The roof structure and timber frame walls are of good enough condition to effectively support the self-weight loads and those arising from wind and snow.
- 1.16 In summary the structural condition and robustness of the barn is sufficient to facilitate conversion to residential use.

CONCLUSIONS

- 1.17 It is concluded that this building is eminently suitable for conversion to residential use but will require some attention to resolve a few issues as outlined below.
- 1.18 Localised repointing and repair of plinth walls is likely to be required. The introduction of stainless-steel corner straps to provide corner ties would be beneficial. The existing wall plates to the external walls should also be provided with stainless steel vertical restraint straps to adequately tie these to the supporting brickwork.
- 1.19 The connections between the purlins and the supporting timber stud walls and trusses have not been examined in any detail but it is likely that some additional fixings will be required to ensure these elements of the structure are properly tied to current Building Regulation standards.
- 1.20 The condition of the timber elements appears to be good but should be inspected and treated with preservatives as appropriate on the advice of expert contractors in this field before being permanently concealed by the new internal walls and ceilings.
- 1.21 Grounds floors will require adjustment to levels to facilitate internal layouts and provision of a first floor. Such work will need to be compliant with current Building Regulations.
- 1.22 Conversion to residential use will require an amended internal layout, including a first floor. It would make sense for the structure and support for these elements to be independent of the original building where possible but could also be designed to enhance the existing structure if beneficial overall.



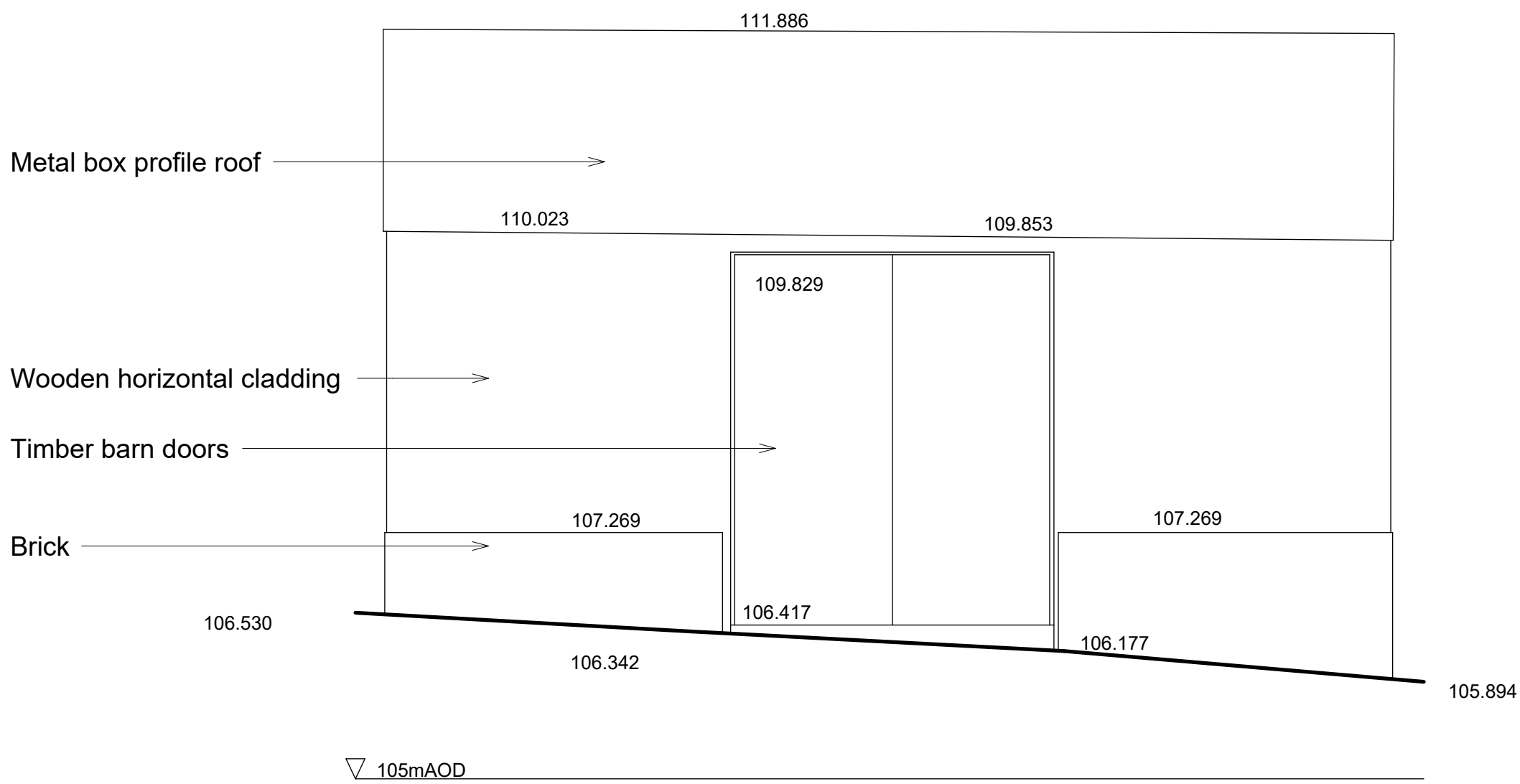
Guy Dolby BSc(Hons) CEng MStructE
for
PETER DANN LIMITED

Appendix A

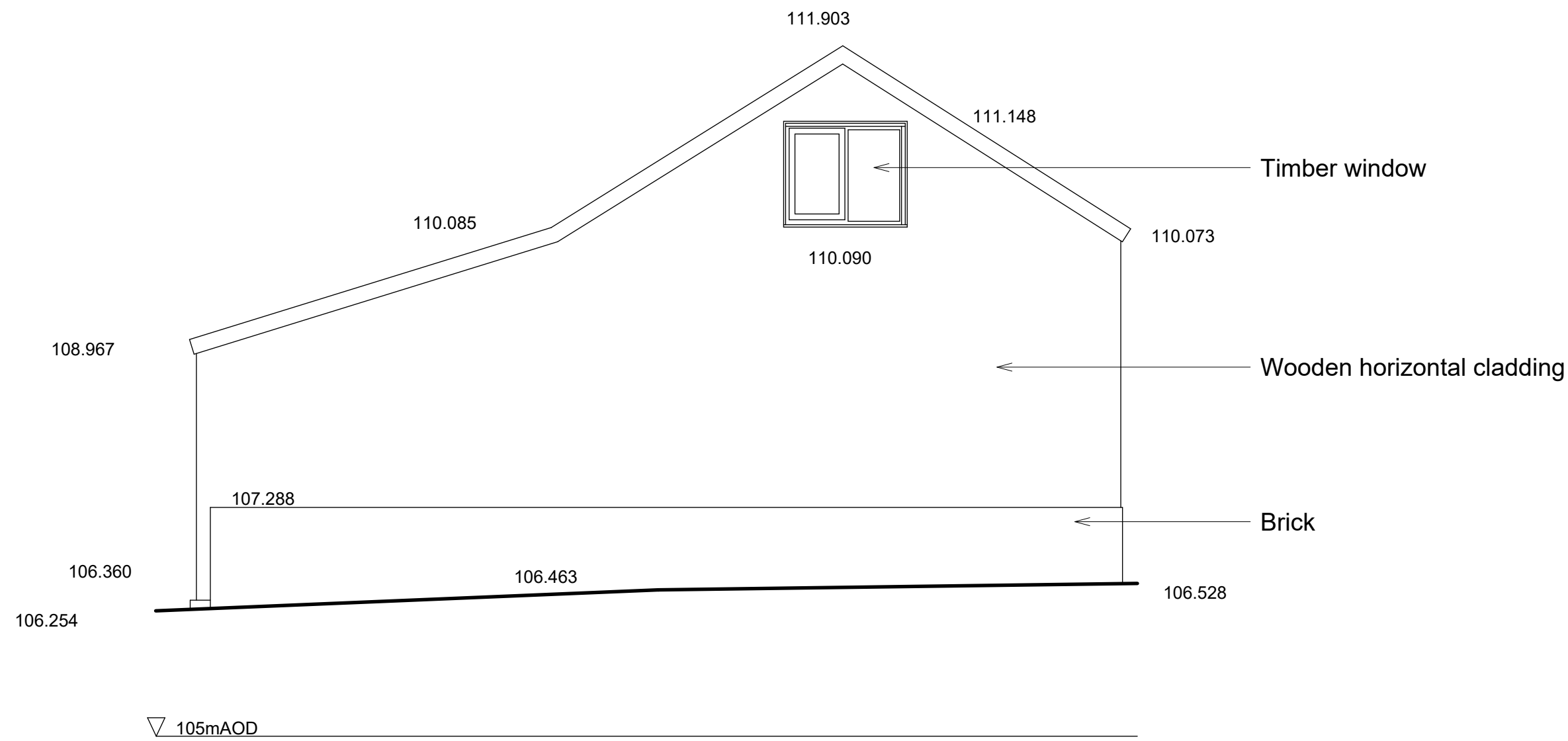
Architects' drawings prepared by Bidwells:

Existing Elevations
Existing Plans and Sections
Existing Site Block Plan
Location Plan

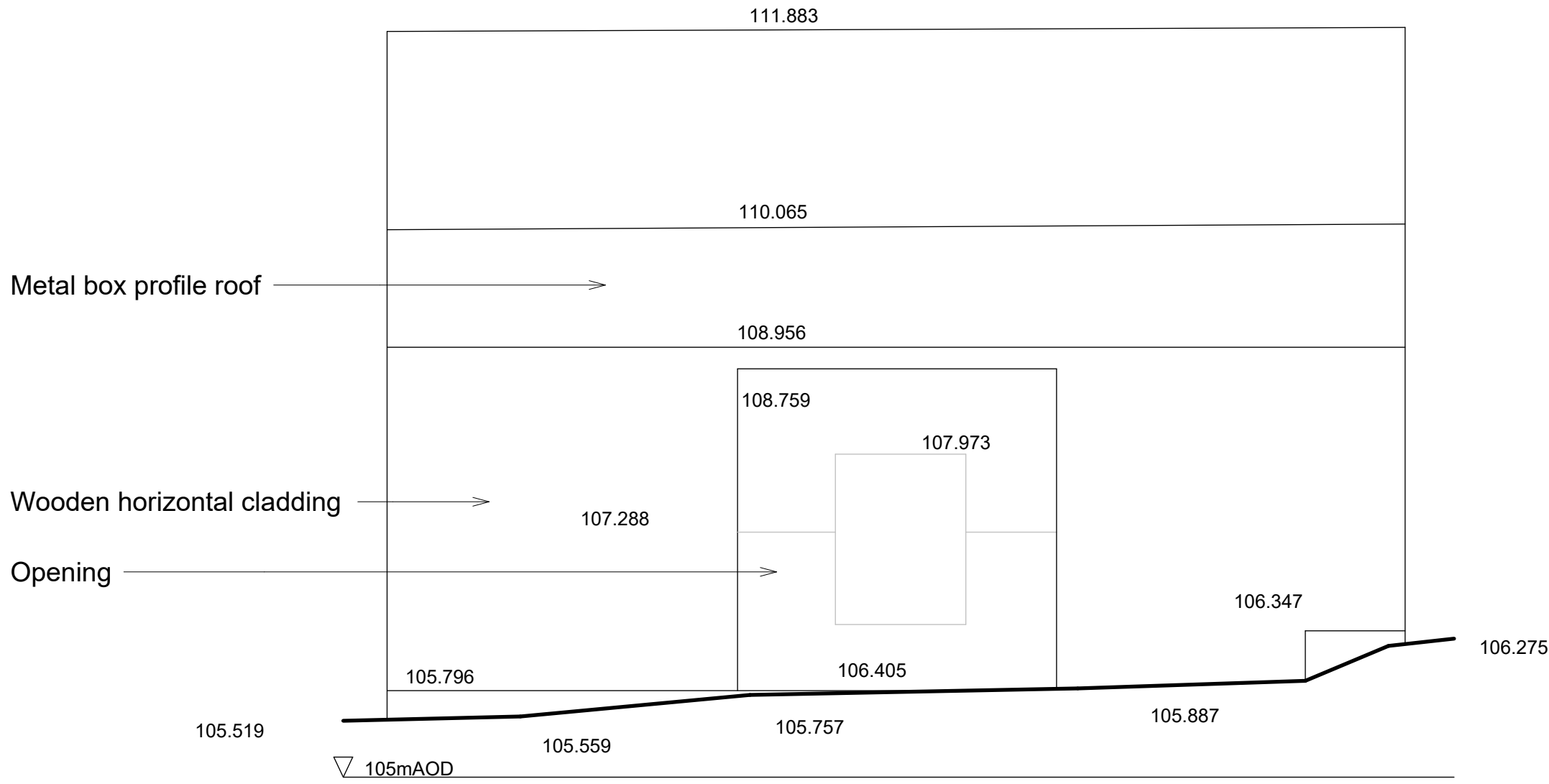
Proposed Elevations
Proposed Plans and Sections
Proposed Site Block Plan



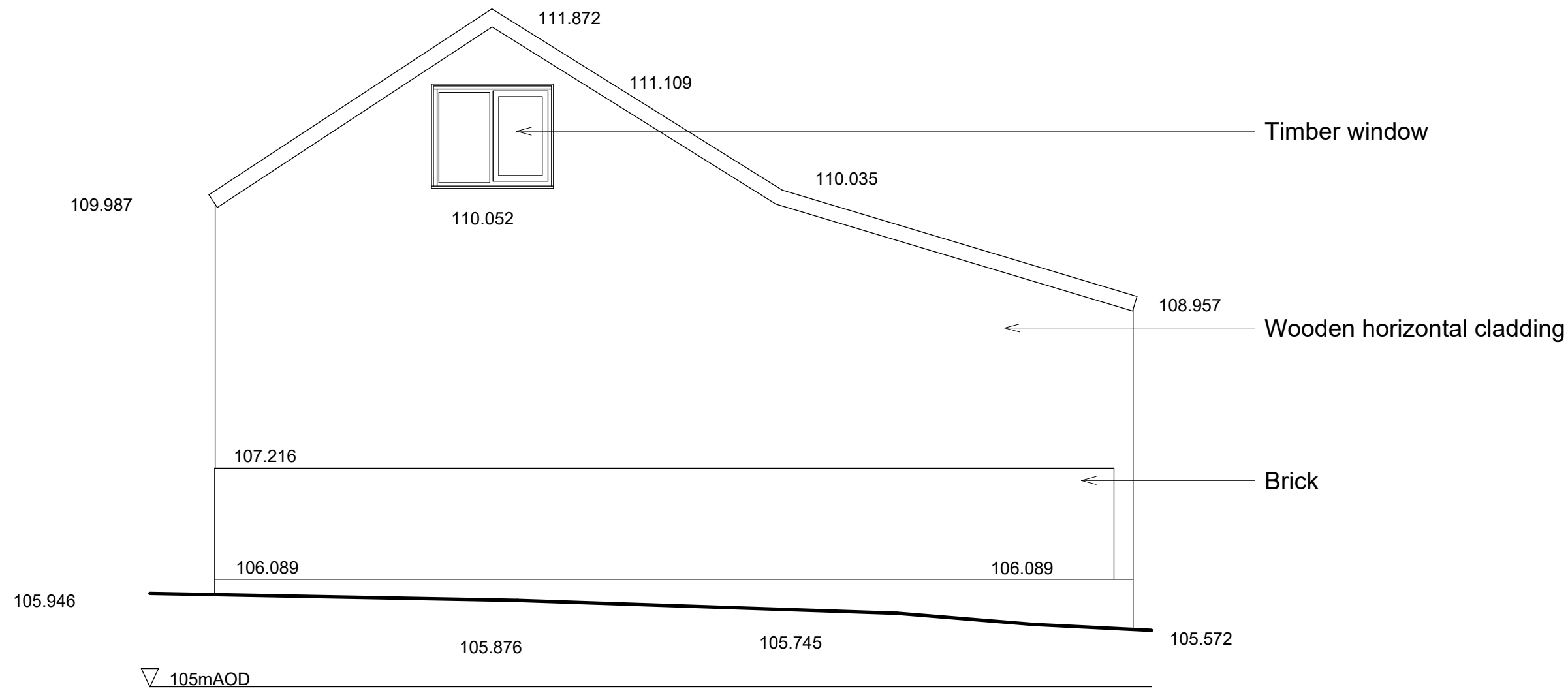
East elevation



South elevation



West elevation



North elevation



rev.	date	description	Issued by	chk'd
			GM	

NOTES
All dimensions to be checked on site.
All drawings to be read in conjunction with other contract documentation.
Any discrepancies to be reported to the Contract Administrator before any work commences.
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project: Barn at Deadman's Hill, Sandon, Hertfordshire SG9 0RJ

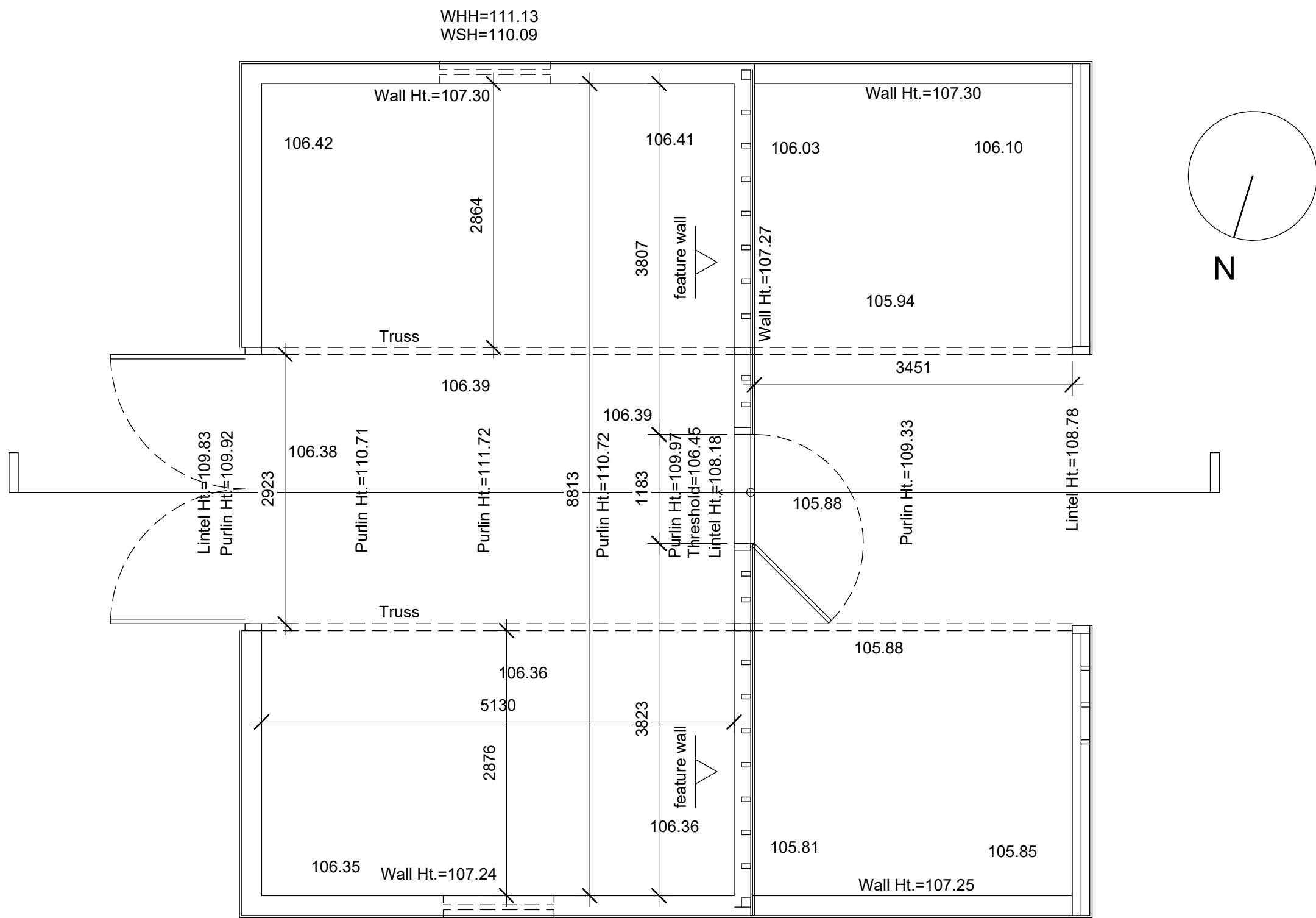
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project no.	dwg no.	rev.	status.	
JB94501	DR-A-1002		Planning	

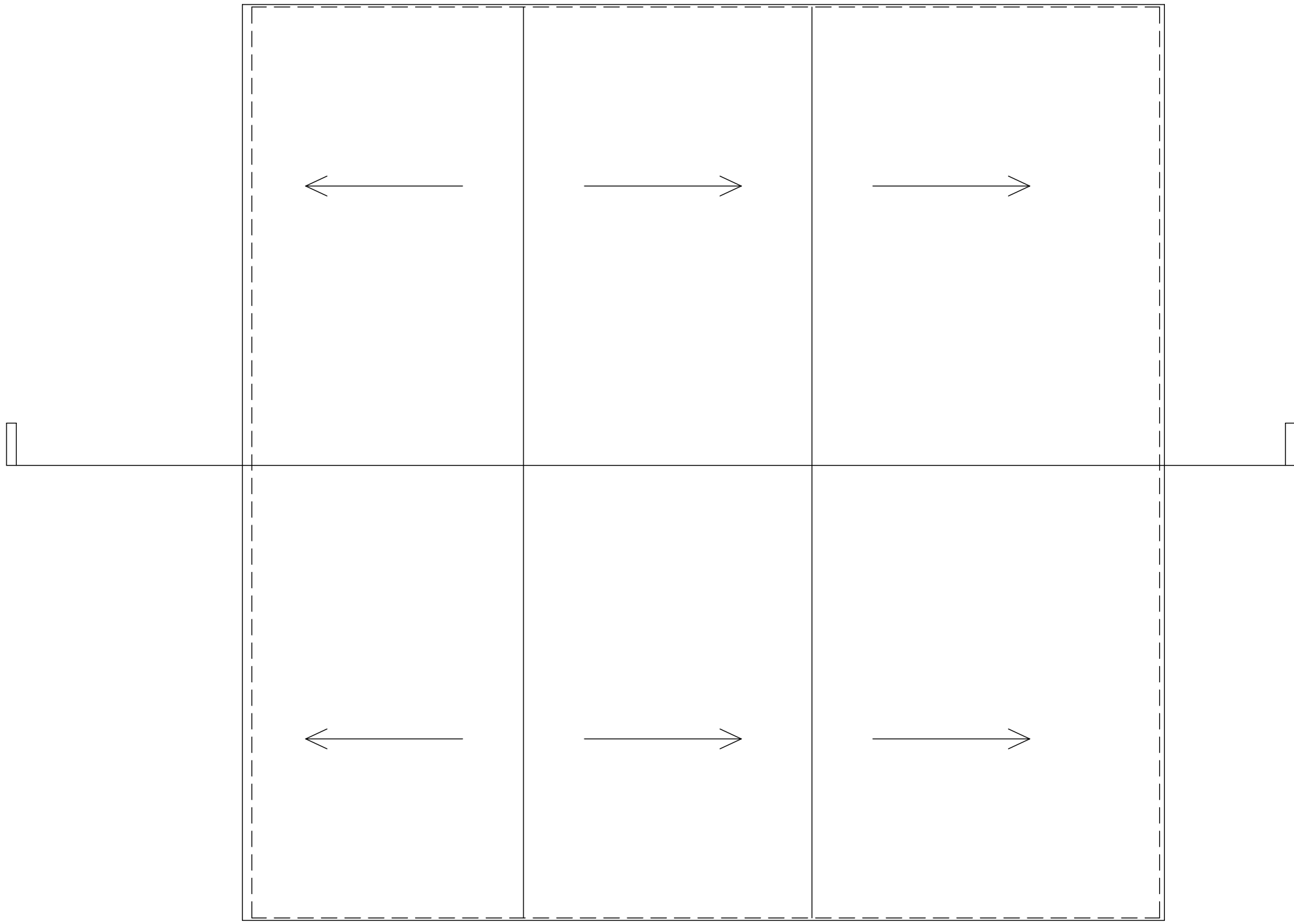
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Internal feature wall



Floor plan
Footprint = 86.7m²
Gross internal area = 79.4m²



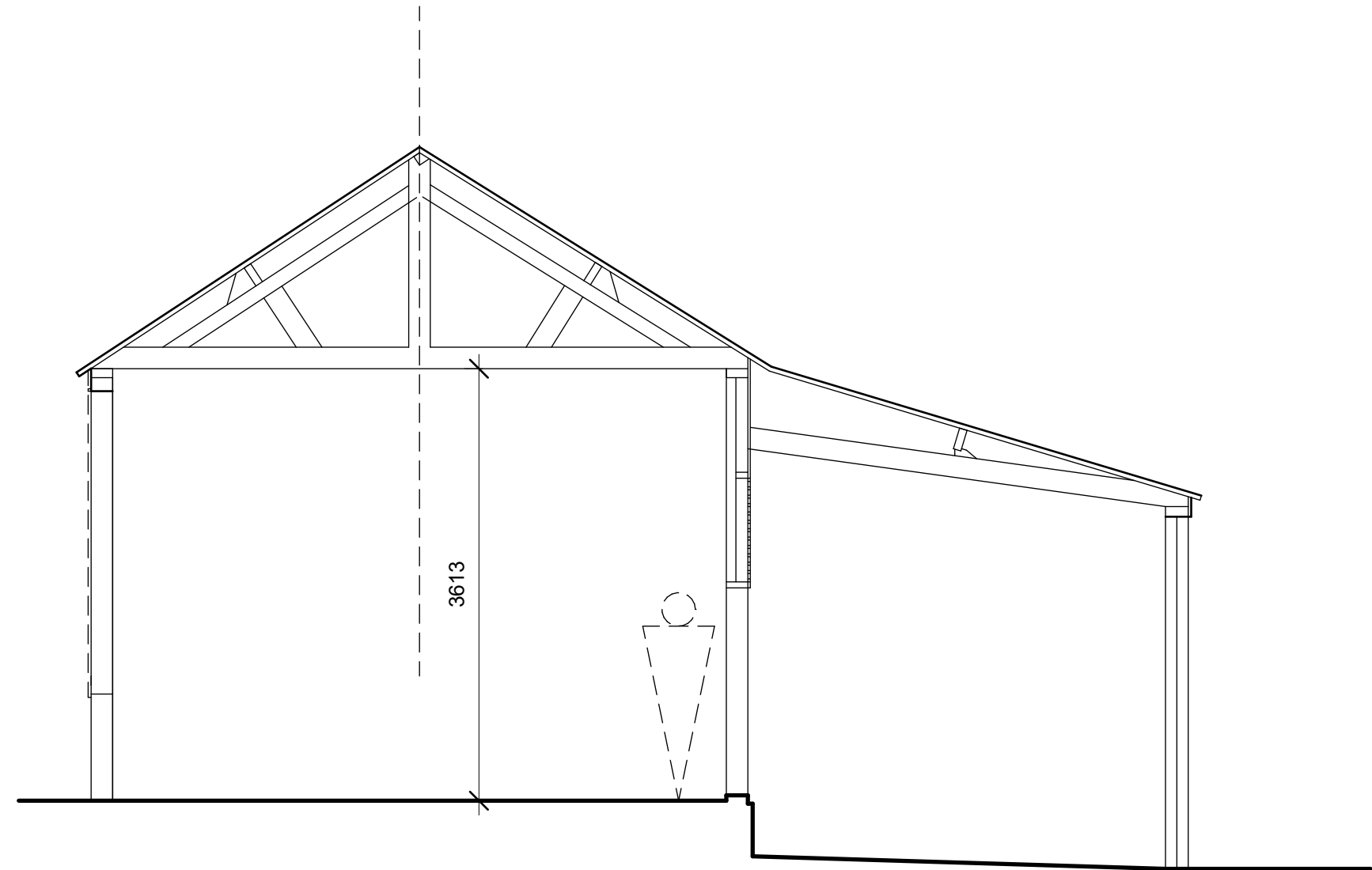
Roof plan



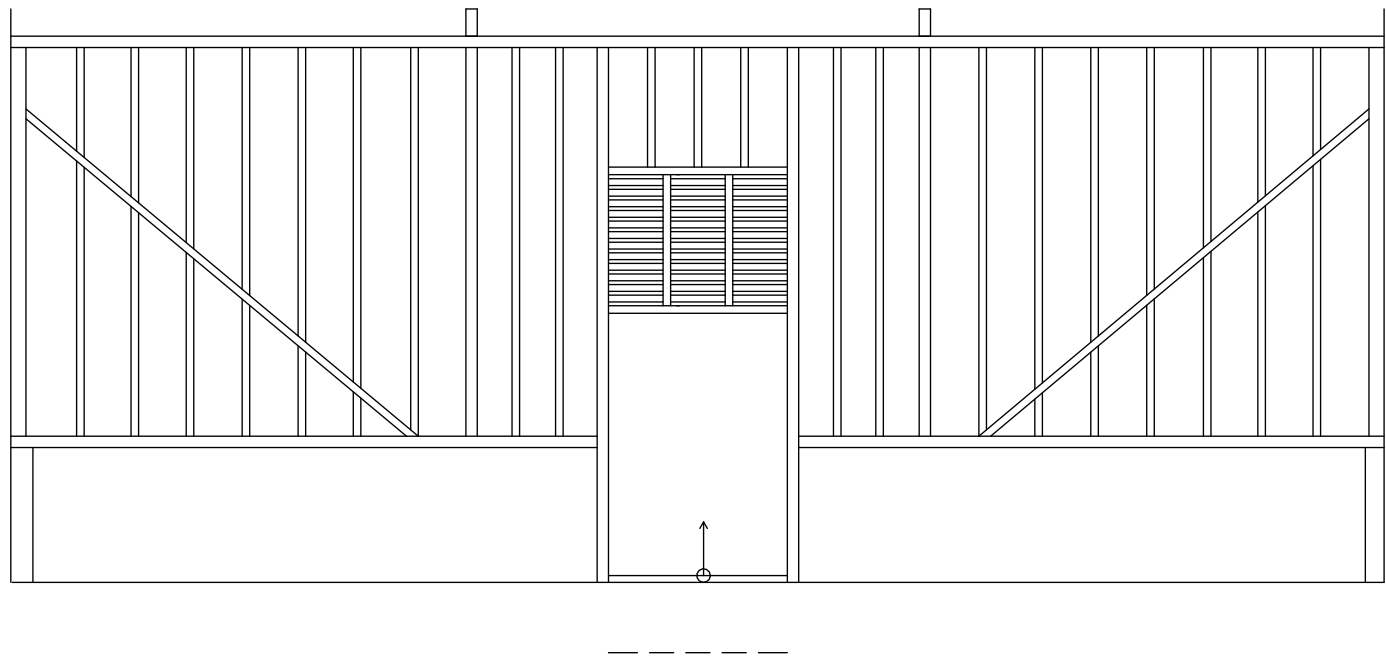
Roof truss



Internal feature wall



Section



Internal feature wall

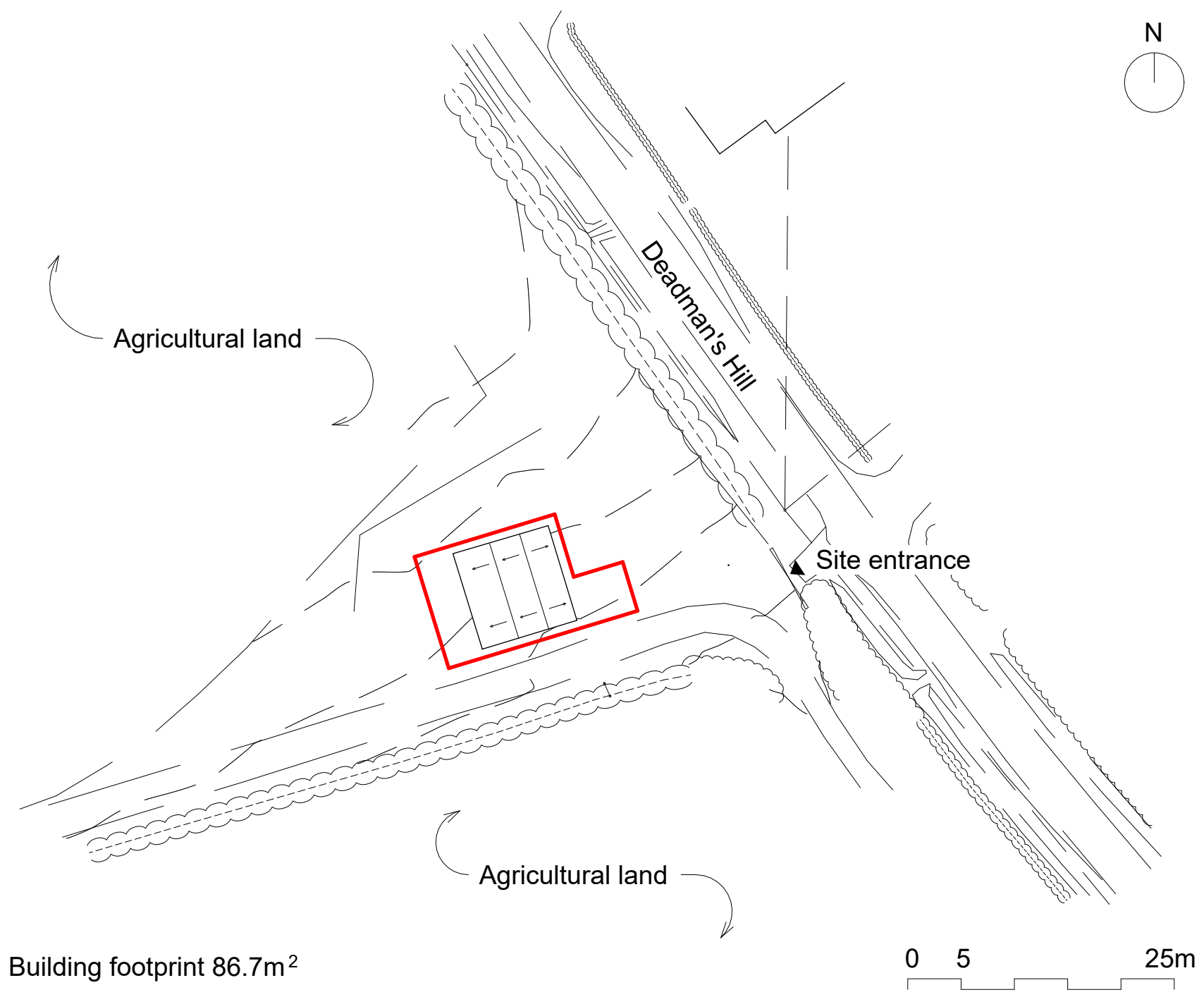


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client: Victoria Carter
project: Barn at Deadman's Hill, Sandon, Hertfordshire SG9 0RJ
dwg title: Existing plans and sections
discipline: ARCHITECTURE
project no. JB94501
dwg no. DR-A-1001
drawn TH
chk'd --
date: 11/29/24
status: Planning

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Building footprint 86.7m²

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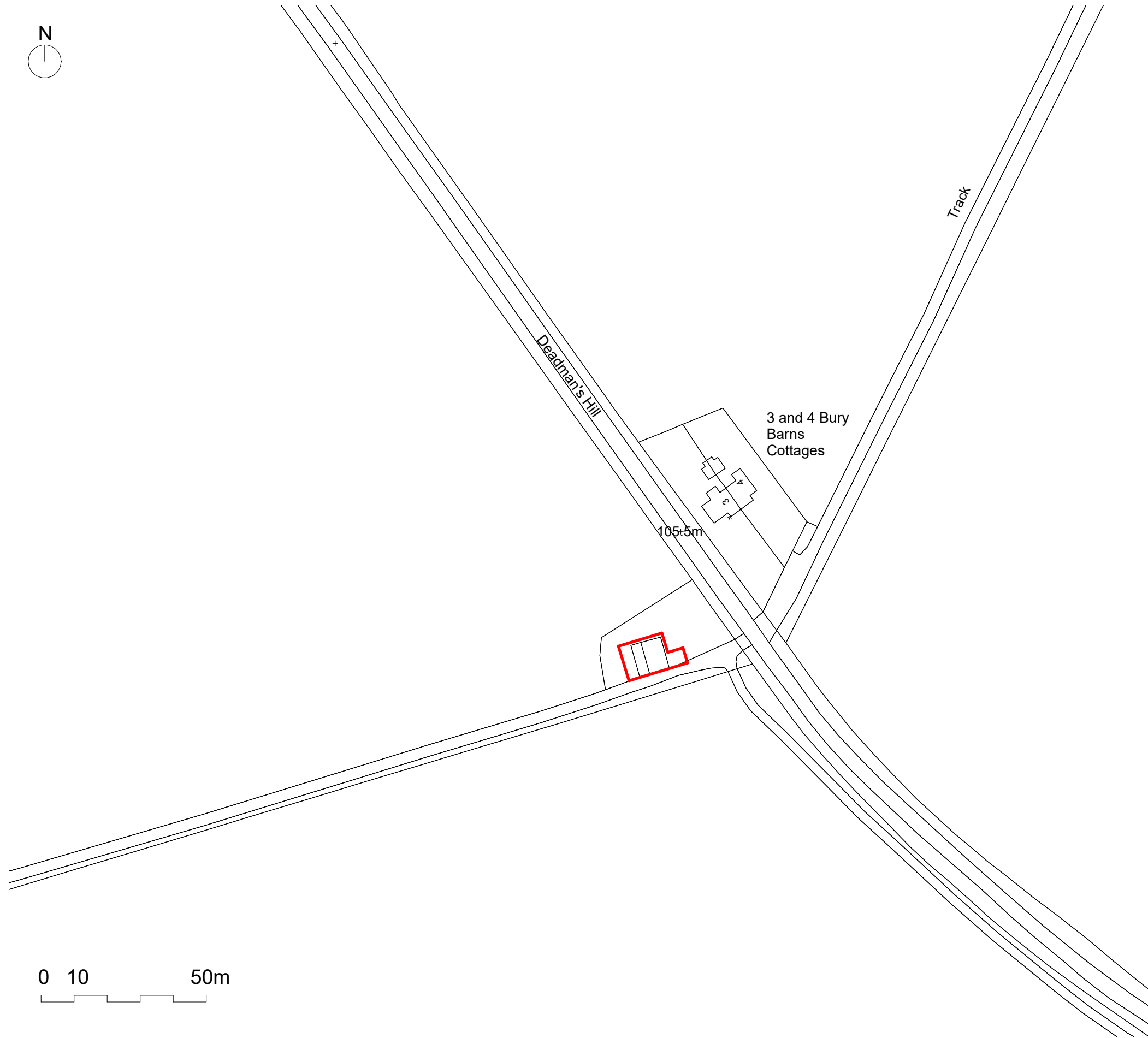
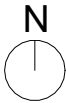
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project:		Barn at Deadman's Hill, Sandon, Hertfordshire SG9 0RJ			
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discipline:		ARCHITECTURE	drawn TH	chk'd GM	date: 01/17/25
project no.	dwg no.	rev.	status.		
JB94501	DR-A-1003		Planning		



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1 : 500



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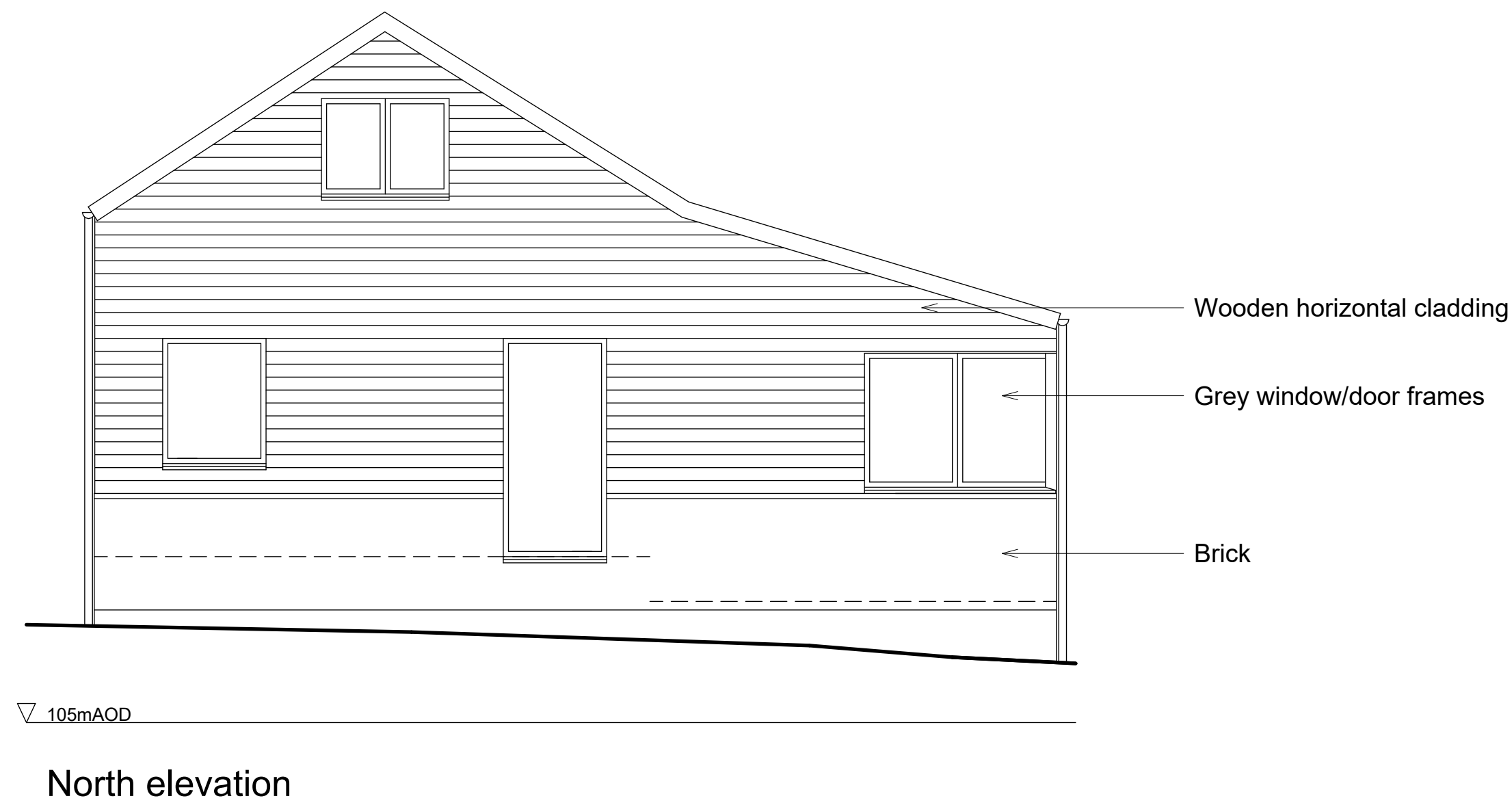
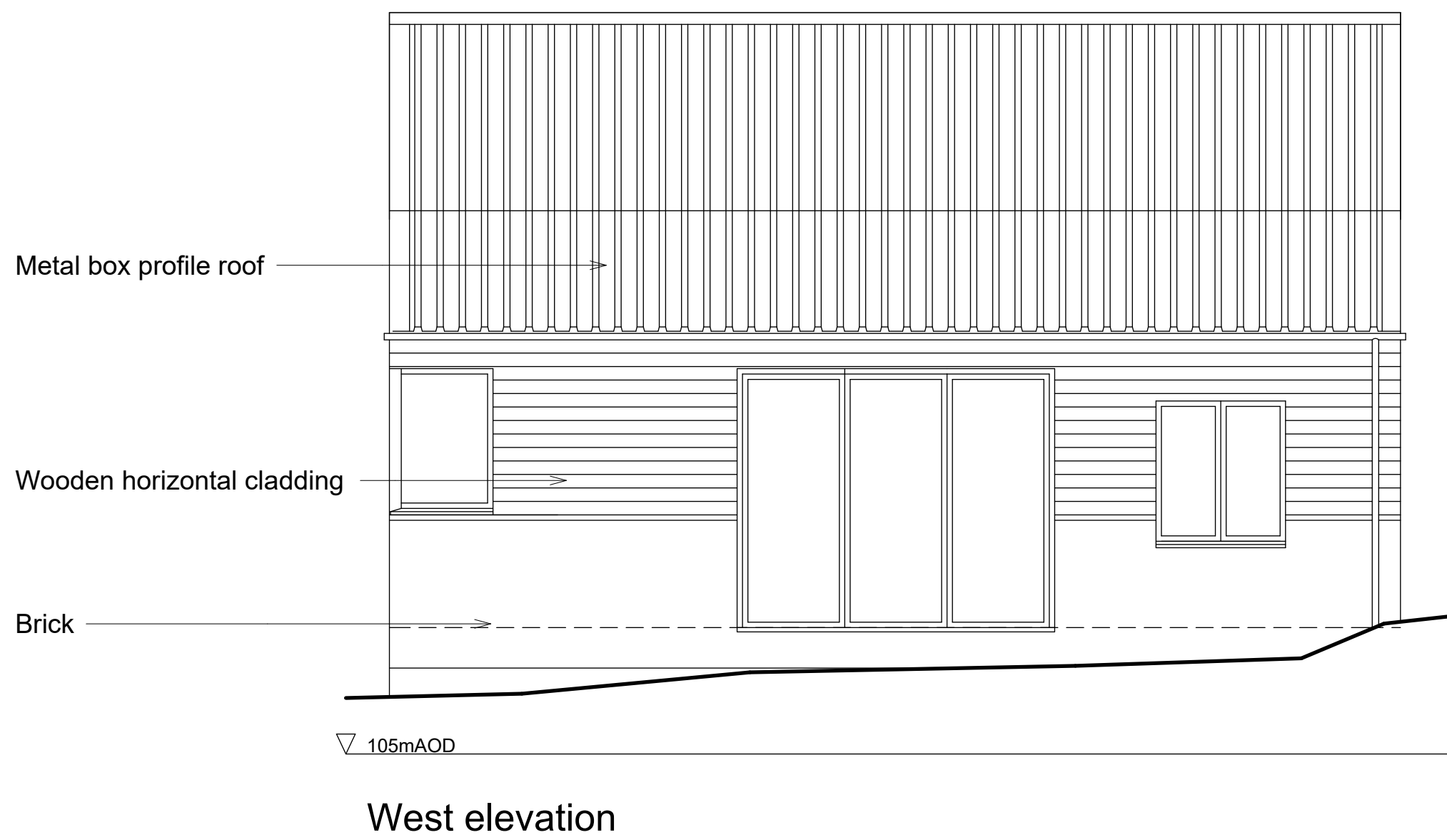
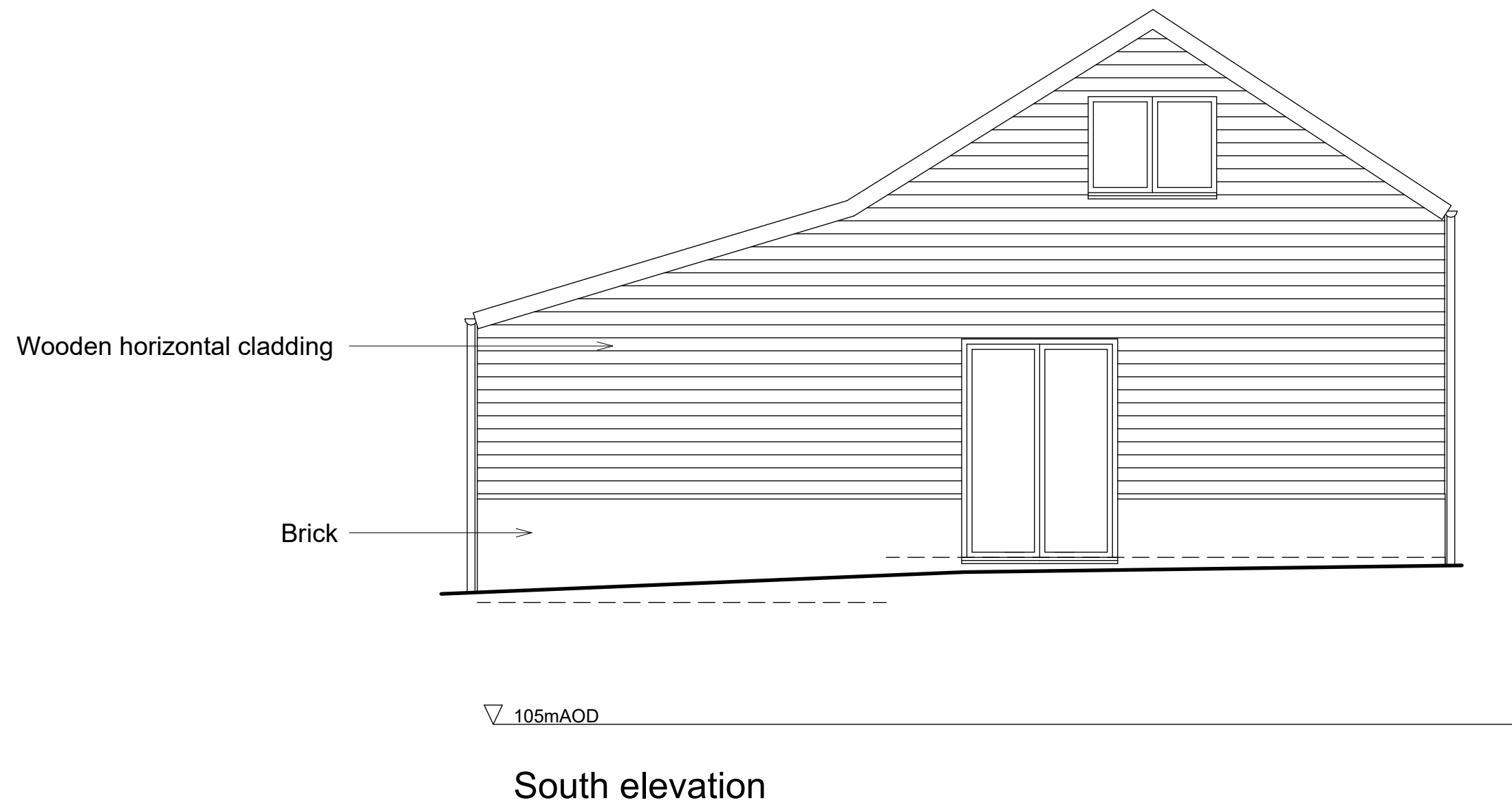
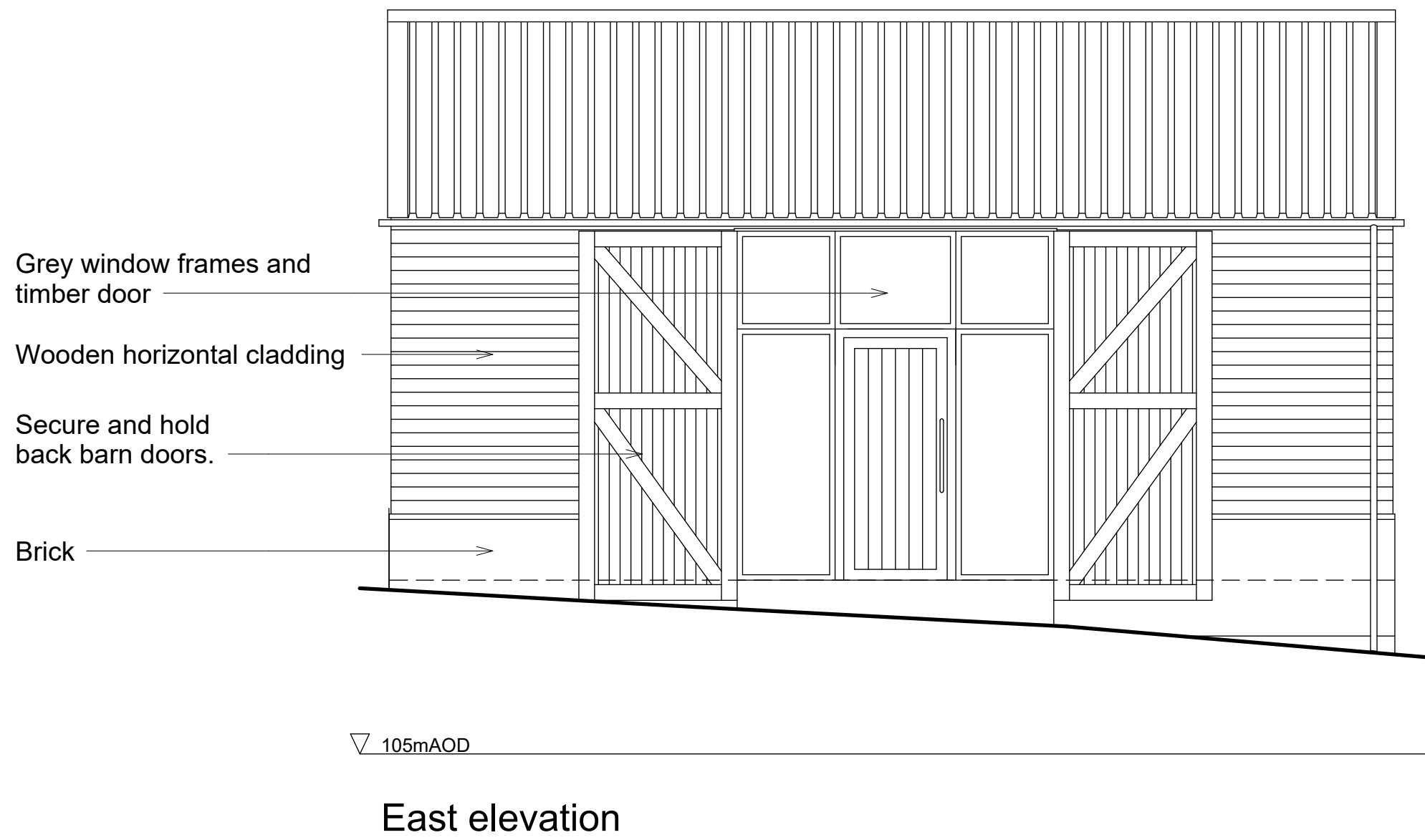
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client: Victoria Carter

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dwg title: Location plan

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rev.			date		description		Issued by	chk'd

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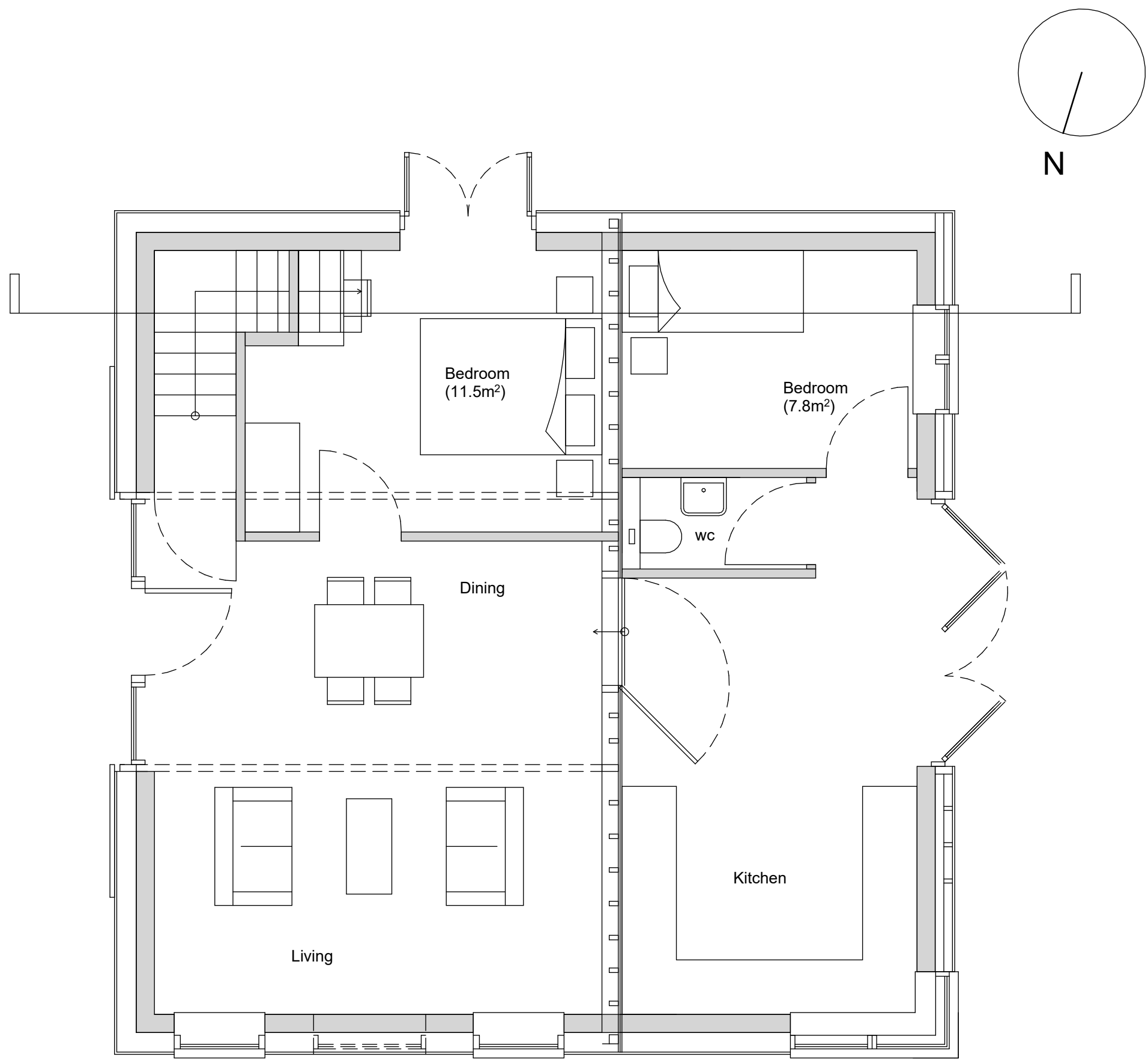
client: Victoria Carter
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dwg title: Proposed Elevations

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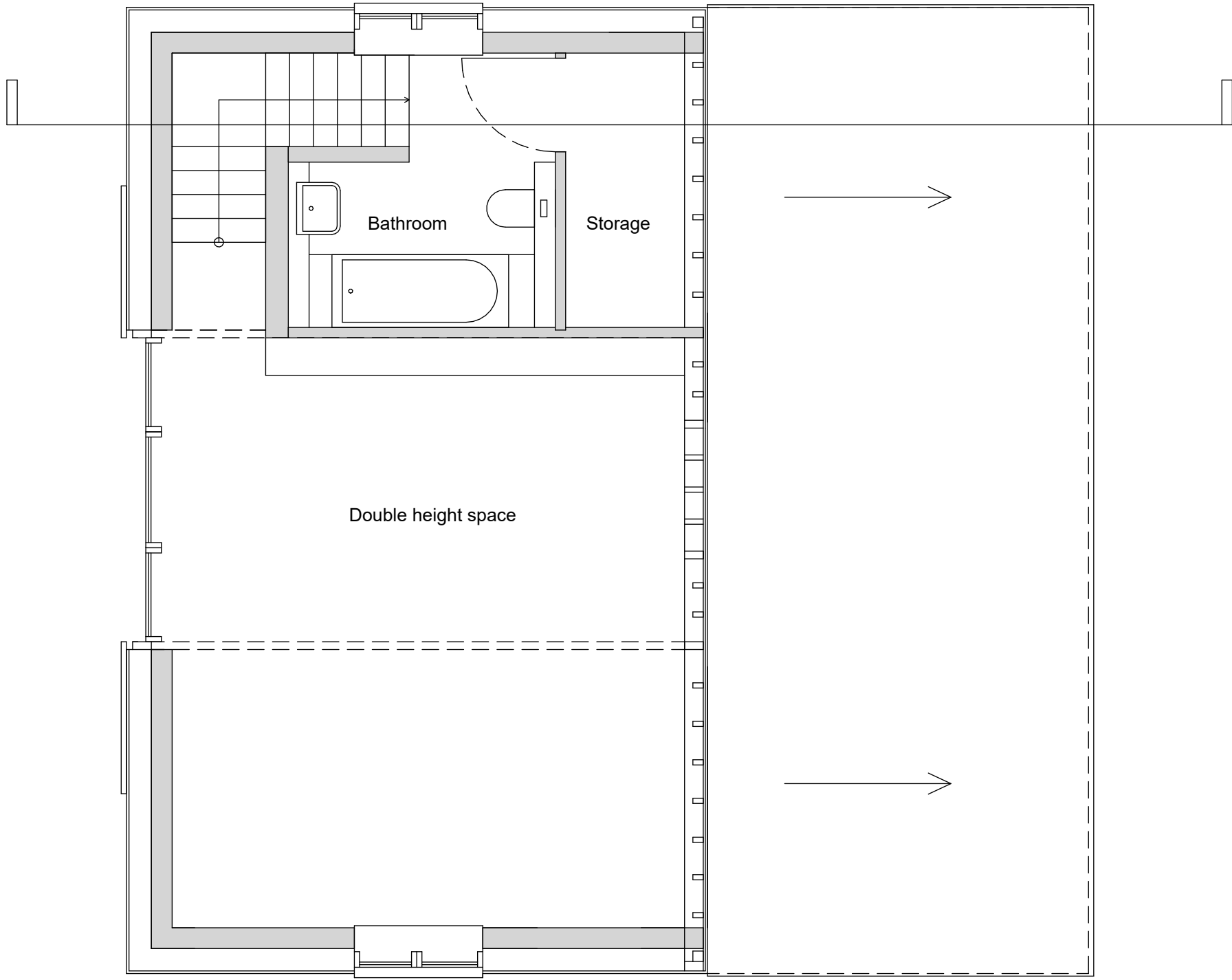
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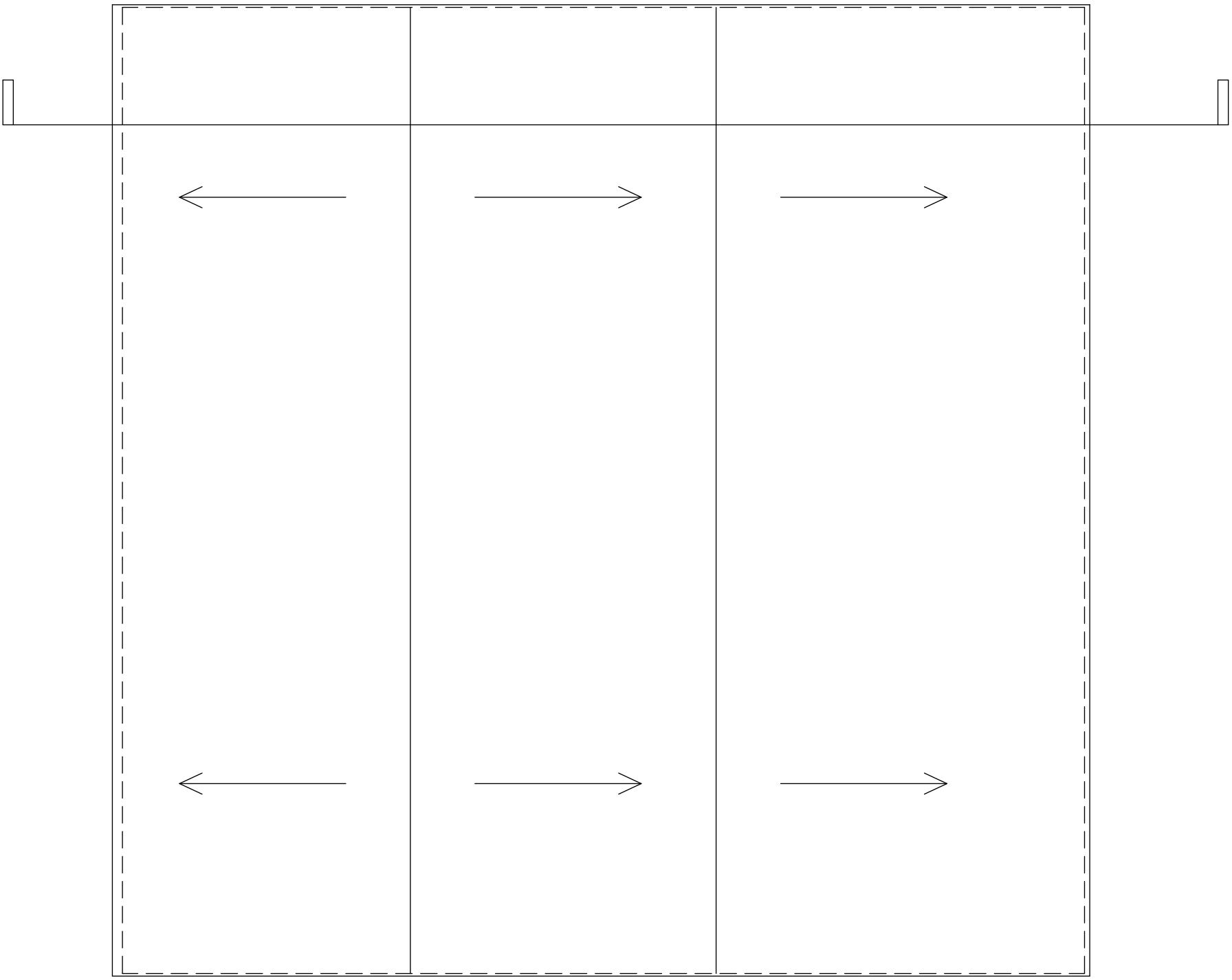
Ground floor plan

Footprint = 86.7m²
Ground gross internal area = 70.7m²

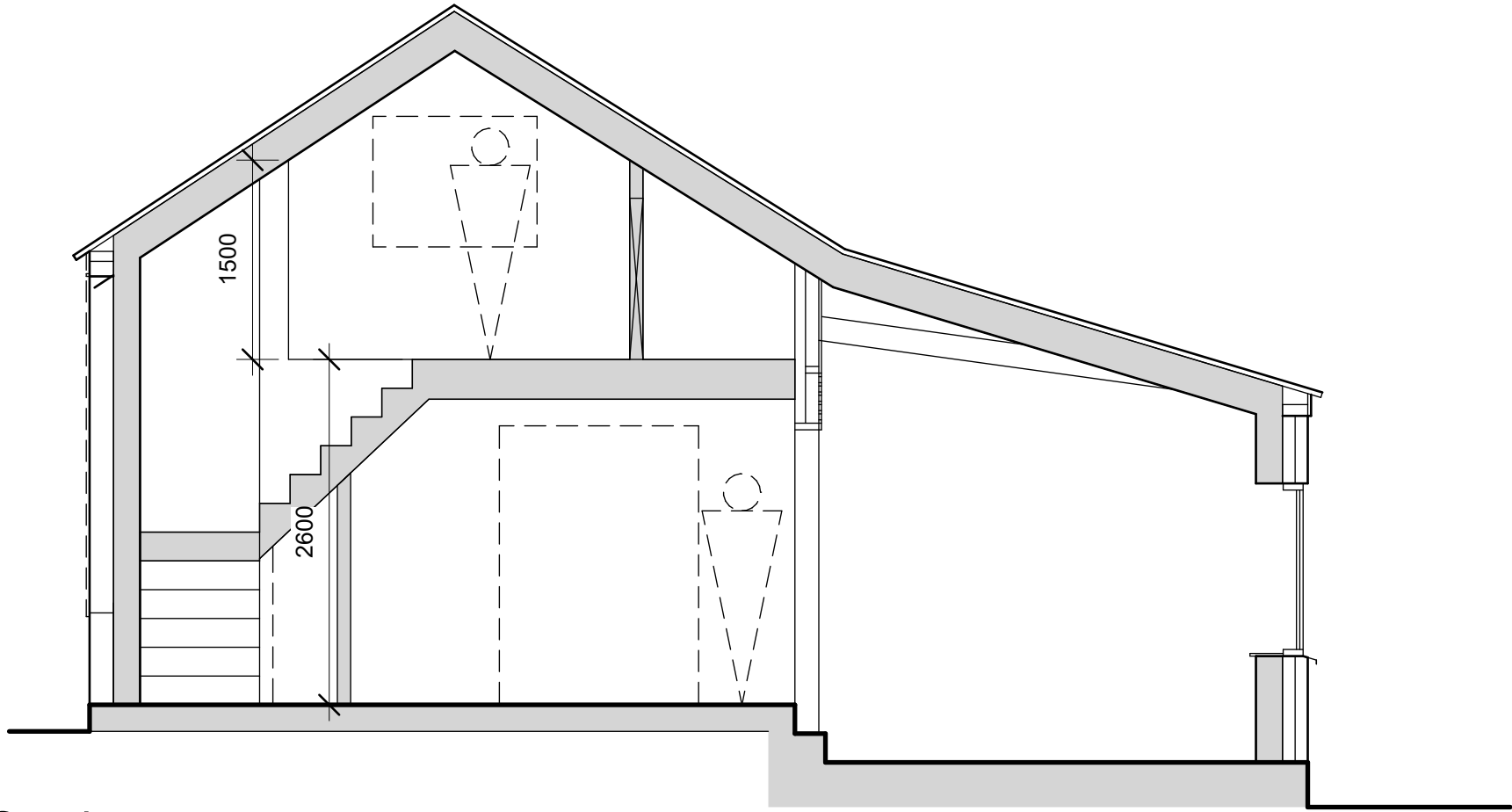


1st floor plan

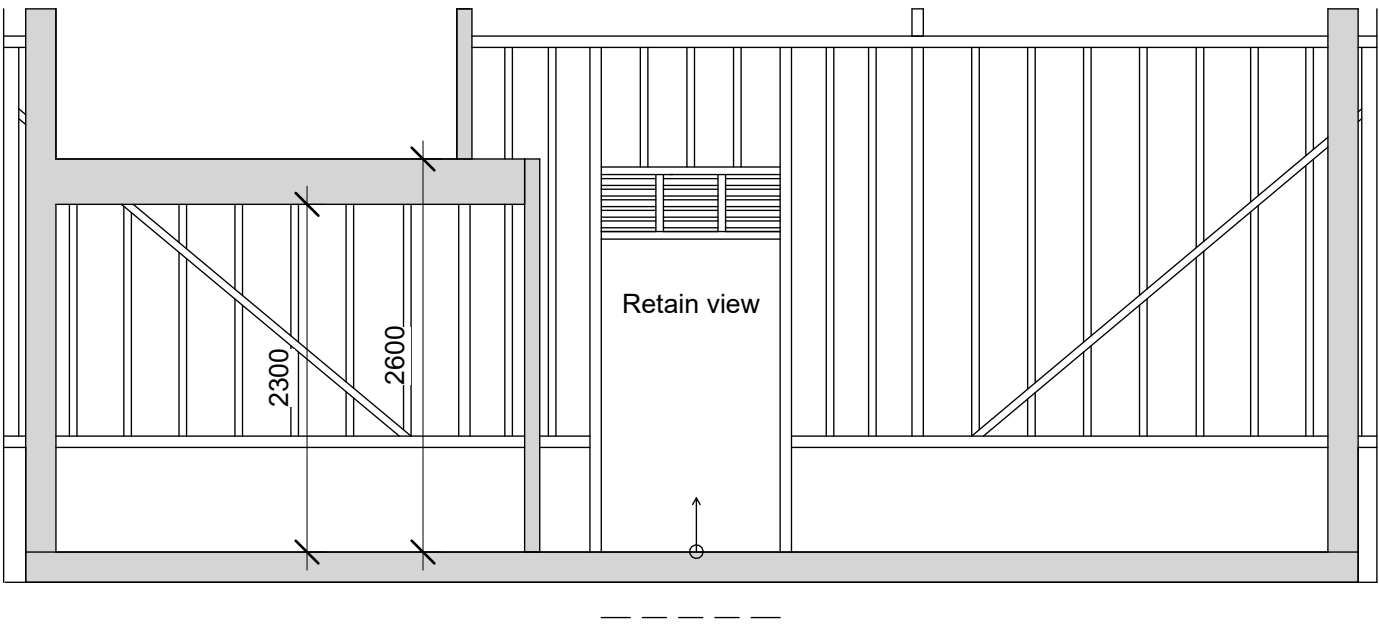
First gross internal area = 5.6m²
Total gross internal area = 76.3m²



Roof plan



Section



Internal feature wall

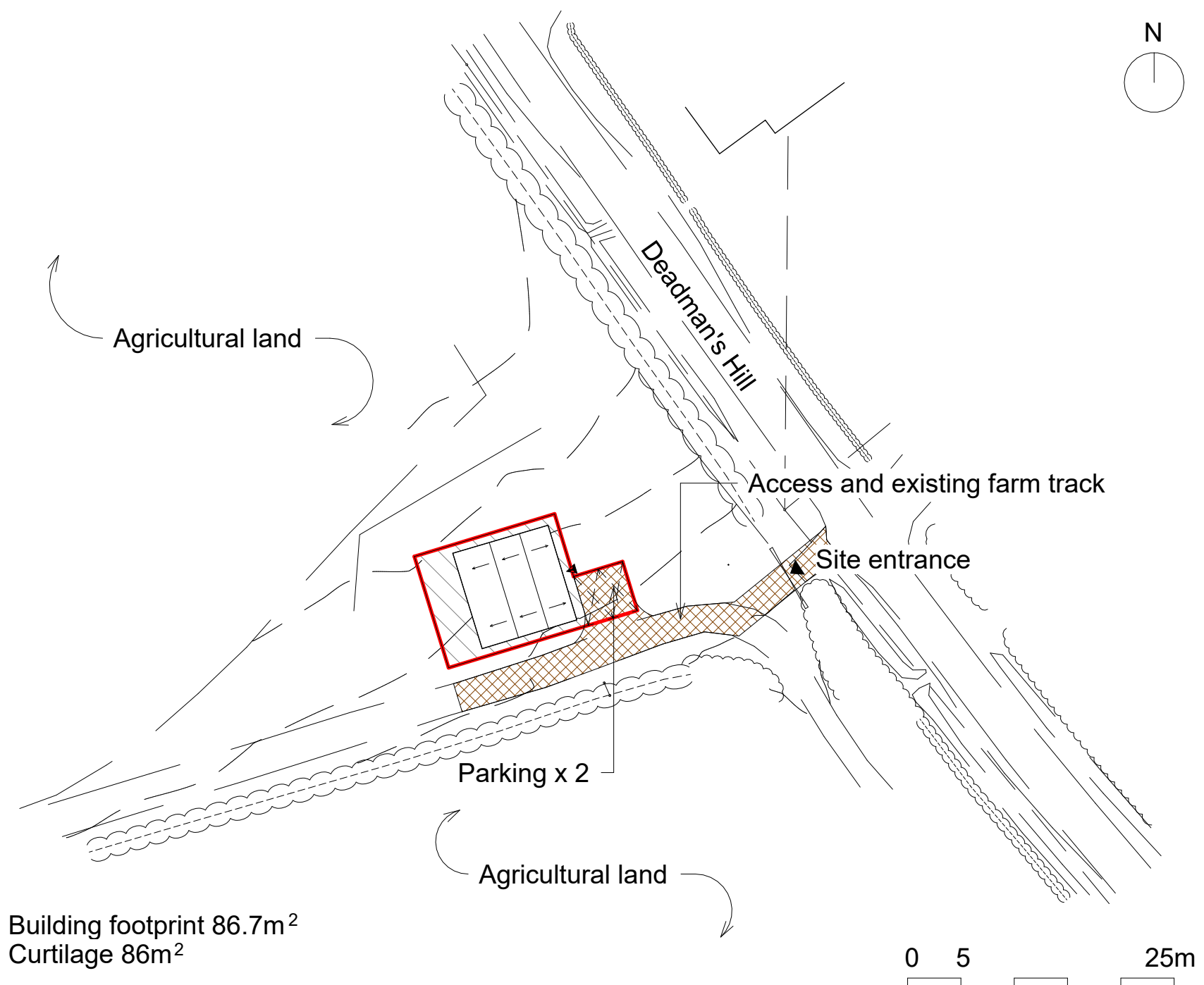


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dwg title:	Proposed plans and sections
discipline:	ARCHITECTURE
project no.	JB94501
dwg no.	DR-A-2001
drawn	TH
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date:	12/04/24
scale @ A1	1 : 50
rev.	
status.	Planning

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Building footprint 86.7m²
 Curtilage 86m²

1	25.12.11	Access alterations		GM
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client: Victoria Carter			
project: Barn at Deadman's Hill, Sandon, Hertfordshire SG9 0RJ			
dwg title: Proposed Site/block plan			
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