

Structural Appraisal

Project: Barn at barrack Fold Farm off Knowsley Road Ainsworth Bury Farm,

Prepared by: Foxx Limited, Consulting Civil and Structural Engineers
66 -70 Park Hill Street, Bolton BL1 4 AR.

Date: 28th April 2023

Scope

The scope of our instructions was to visit the above premises and carry out a visual inspection to determine its general structural condition and in particular its suitability for and the implications of its conversion for habitable use. We have had sight of the proposed layouts and these have been taken into account in our assessment.

Our inspection was carried out on the 10th February 2023.

At the time of the inspection the property had been was substantially empty in all three areas.

Description

The premises consists of three specific areas. A stone two storey building to the left and forward of the main central barn, a central two storey stone barn and a single storey brick barn to the right-hand side.

Left hand barn

The barn is approximately 10mx5m on plan and constructed of solid stone masonry walls with a pitched slate covered roof. The barn is attached to the main central barn on its right-hand gable. The date of construction is difficult to assess but probably dated from the early 19th century. The style and manner of construction is typical of agricultural buildings of that era. The walls are showing notable undulations as is seen in the majority of buildings of this style and date. The movement appears historical and no evidence of recent movement was found. The barn roof structure has been replaced in the recent past and is of timber rafter construction. The structure appeared to be performing satisfactorily with no evidence or deterioration in the members.

The roof covering slate which appeared in fair and reasonable condition.

In addition to the replacement roof structure there is a replacement (or added) first floor of timber board and joist. This is of relatively modern construction and is in satisfactory condition. This structure may be providing restraint to the external walls.

The general structural condition was judged to be "fair and reasonable" commensurate with the style and age of the building.

The Central Barn

The barn is approximately 30m x 6m on plan and constructed in solid masonry walls in part stone and part brick. The roof is a pitched slate covered timber rafter and purlin roof. Intermediate support to the purlins is by timber trusses. The barn has a timber first floor. The barn is of modern construction being rebuilt following a collapse due to an extreme weather event. This area is generally free from any notable structural defect. The rebuilding work does appear to have been carried out in a satisfactory and workmanlike manner. The general structural condition was judged to be good.

Right Hand Barn

This area is approximately 10mx 11m on plan and is of red clay facing brick walls with a pitched slate covered roof. It is single storey with animal stalls and sloping ground floor. The roof structure is timber rafter and purlins with intermediate support provided by trusses. The building is a later addition perhaps dating from the early 20th century, and again, is typical of agricultural buildings of that era. The general condition of the walls was judged to be fair with areas showing signs of modest historical movement but no evidence of any significant recent movement was found. The bricks in part were notably weathered but not to such a degree as to materially affect the structural integrity of the building. There was a small area of dislodged brickwork at the base of the pier on the front right-hand corner. The mortar jointing was generally highly weathered throughout but most notably on the right-hand gable wall.

Internally the structure was performing adequately with no concerns over the overall stability. The stalls and sloping floor would be unsuitable for inclusion in the scheme and would need to be removed but this would not affect the structure overall.

Summary

The barn may be considered as three areas as they are three separate structures.

In respect to the left-hand barn area, this has suffered from historic structural movement particularly evident in the bulging of the gable and front walls. Whilst this is of a notable scale in some areas, it does appear to be of an historical nature and no evidence of structural movement was noted. The first floor and roof structures are relatively new and are in satisfactory condition. The area is considered suitable for conversion without the need (structurally) of any significant rebuilding, however the undulations in the walls may affect its marketability to some degree and it may be prudent to enter discussions with the local planning authority as to the extent of rebuilding they would consider acceptable in order to improve its saleability.

In respect to the main barn, (central area) this has been rebuilt in the recent past to a proper and workmanlike standard and requires no structural alteration or repair. The ground floor may be retained and overlaid or broken out and replaced with a suitable insulated floor incorporating a dampproof membrane. The solid external walls require only an insulated cavity wall lining in either studwork or block. This area is perfectly suitable for conversion to habitable use without recourse to any rebuilding or structural repair. The walls would need to be lined to give weather protection and allow insulation installation. The ground floor would require to be replaced.

In respect to the right hand barn The general structural condition is judged a fair and whilst there has been some structural movement this is of a relative modest scale and is not of a scale as to materially jeopardize the structural integrity of the building the main feature is the weathering of the exterior, again this is not of a scale as to materially affect the structural integrity of the building the appropriate action would be to replace any individual bricks where they are highly spalled and deep rake and repoint the external walls throughout. The proposals call for an extension of the right-hand gable and the demolishing of the existing wall which is probably the worst affected wall.

The rainwater goods (gutters downspouts) would need to be replaced throughout.

Opinion

We have been involved in this site over a number of years and with the exception of the rebuilding of the central barn there has been no significant deterioration of the buildings.

The extent of the structural alterations to the buildings are of a very modest scale and do not materially affect the overall structural integrity of the buildings. A marked up drawing of the existing elevations attached highlights those areas.

We are of opinion that the buildings can be converted to habitable use without recourse to any significant rebuilding and the formation of openings required by the proposed conversion scheme are of a scale that will not adversely affect the structural integrity of the buildings

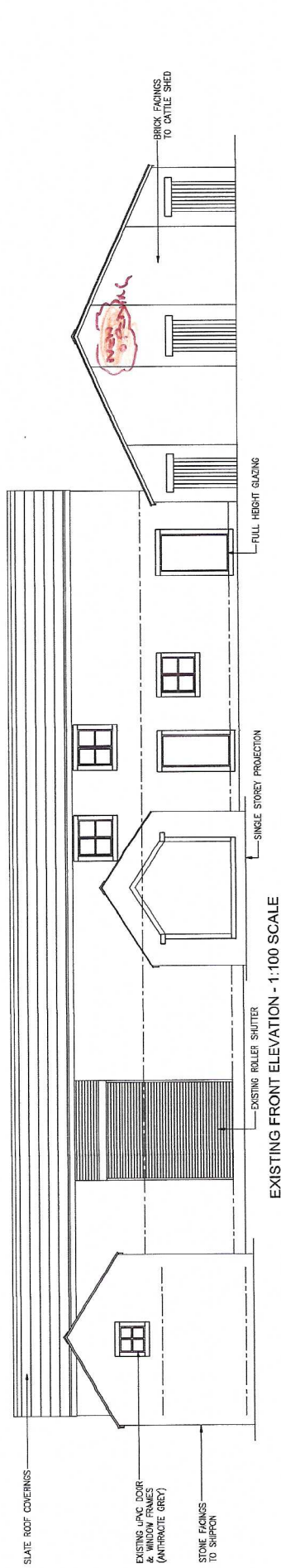
We have not exposed any parts of the structure that are buried or inaccessible.



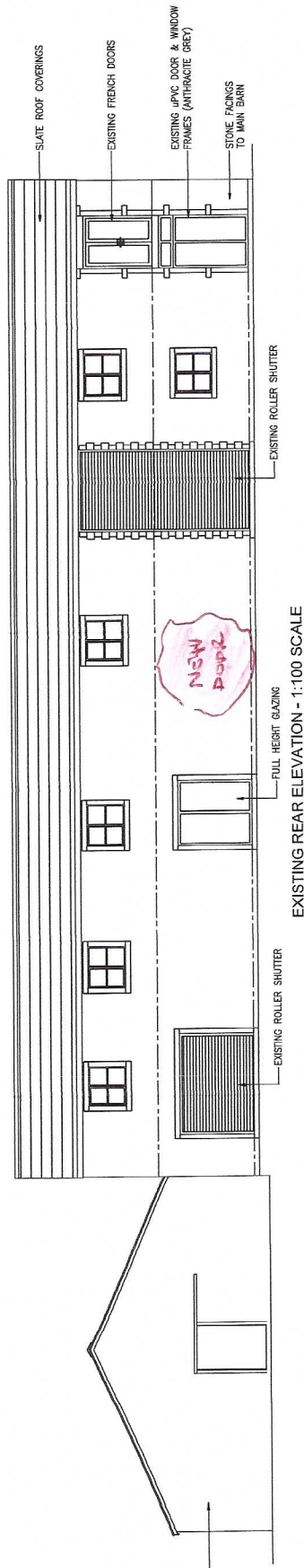
Nigel Toole BSc.,P.G.Dip.Geot.,C.Eng.,M.I.C.E.,M.I.Struct.E.

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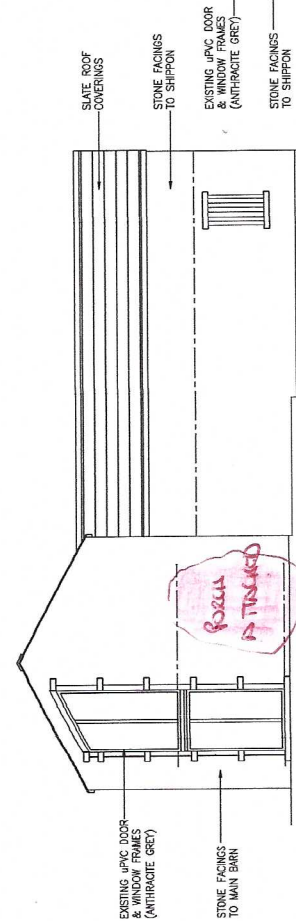
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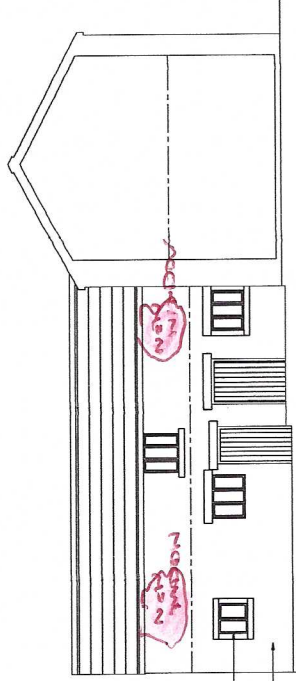
EXISTING FRONT ELEVATION - 1:100 SCALE



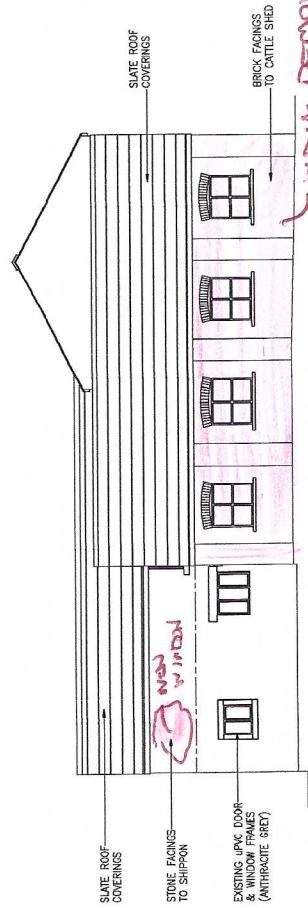
EXISTING REAR ELEVATION - 1:100 SCALE



EXISTING SIDE/WEST ELEVATION - 1:100 SCALE



EXISTING FRONT/EAST ELEVATION TO SHIPPON - 1:100 SCALE



EXISTING SIDE/EAST ELEVATION - 1:100 SCALE

Amendments

Project

Title

CONVERSION & ADAPTATION OF BUILDINGS AT BARRACK FOLD FARM TO DWELLINGS AT BARRACK FOLD FARM, OFF KNOWSLEY ROAD, AINSWORTH~

Client

MR C. D. DUDLEY

Dwg. No.

22/1283/103 - EXISTING ELEVATIONS - UNITS 1-4

Date

19.10.2022

Plot Scale

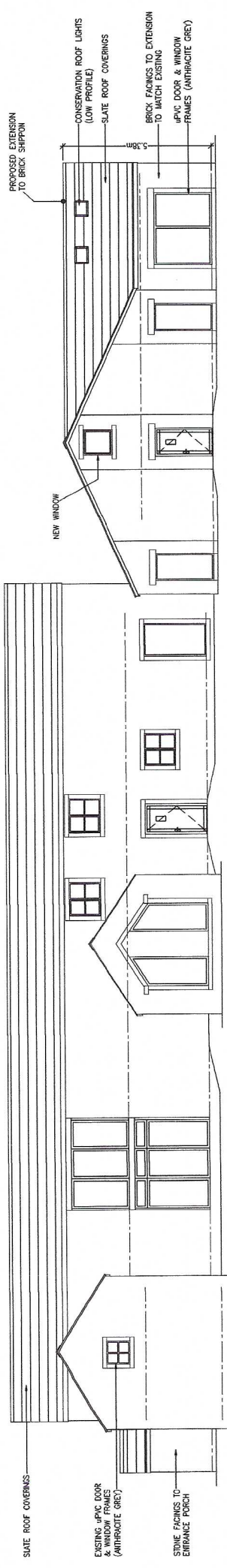
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Drawn by

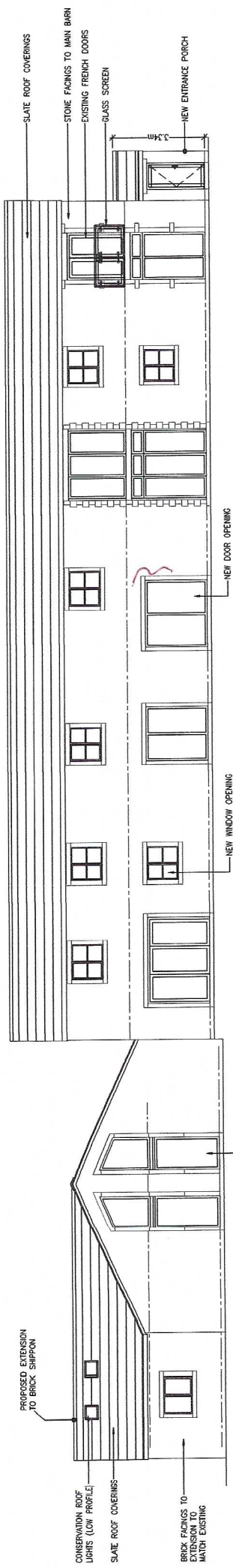
JPE

Status

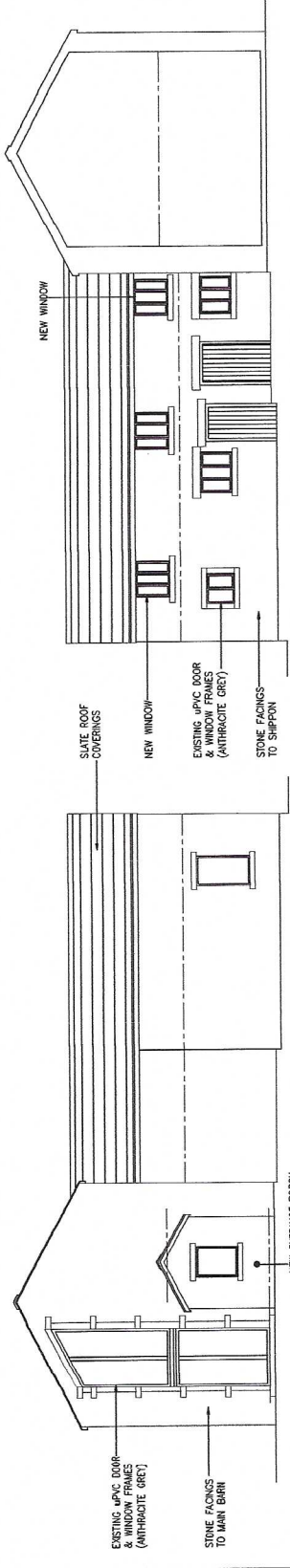
PRE-APP



PROPOSED FRONT/SOUTH ELEVATION - 1:100 SCALE

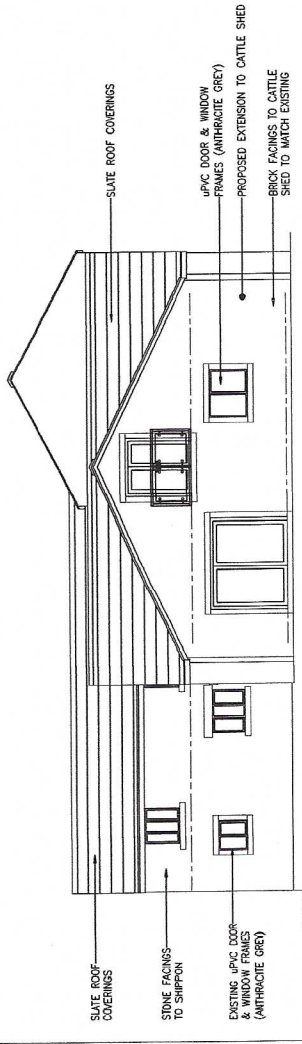


PROPOSED REAR/NORTH ELEVATION - 1:100 SCALE



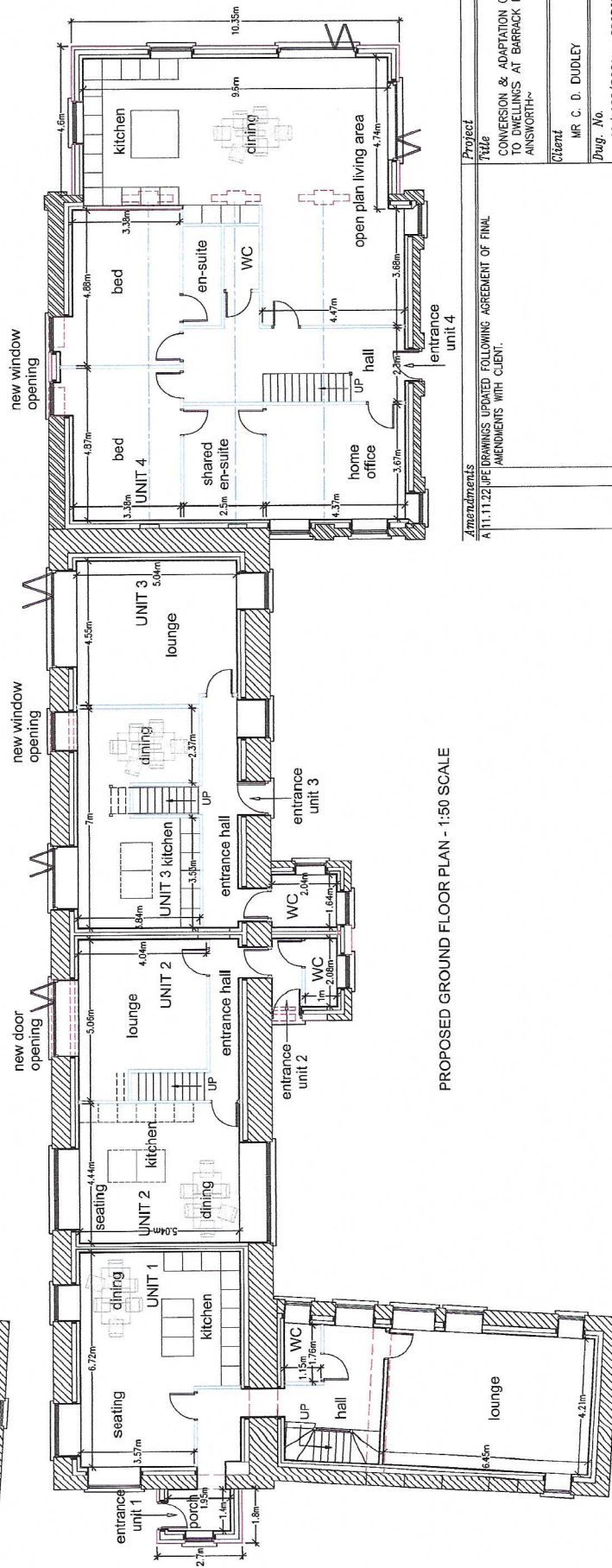
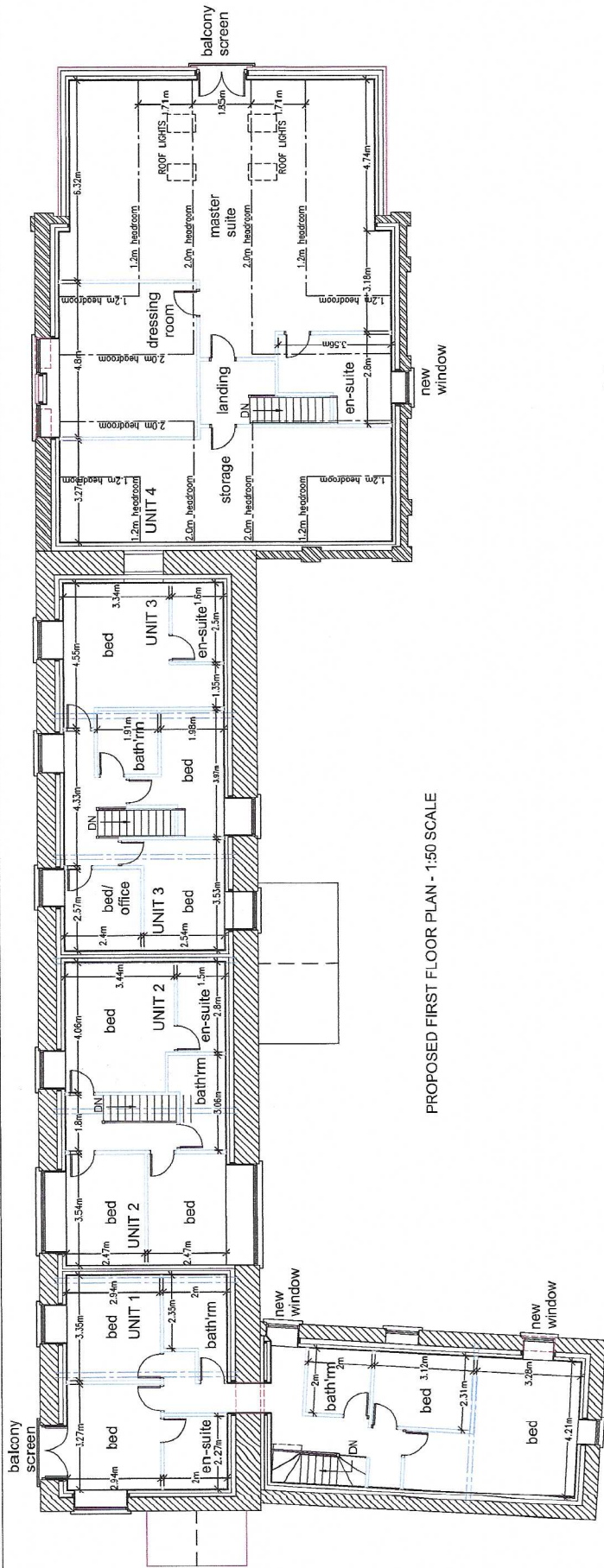
PROPOSED SIDE/WEST ELEVATION - 1:100 SCALE

PROPOSED FRONT/EAST ELEVATION TO SHIPON - 1:100 SCALE



PROPOSED SIDE/EAST ELEVATION - 1:100 SCALE

Project	Title			
	CONVERSION & ADAPTATION OF BUILDINGS AT BARRACK FOLD FARM, TO DWELLINGS AT BARRACK FOLD FARM, OFF KNOWSLEY ROAD, AINSWORTH~			
Client	MR C. D. DUDLEY			
	Drawn by			
Date	19.10.2022	Plot Scale	A2@1:100	Status
		JPE	PRE-APP	



Amendments
A11:11.22 JPE DRAWINGS UPDATED FOLLOWING AGREEMENT OF FINAL AMENDMENTS WITH CLIENT.

Project

CONVERSION & ADAPTATION OF BUILDINGS AT BARRACK FOLD FARM TO DWELLINGS AT BARRACK FOLD FARM, OFF KNOWSLEY ROAD, AINSWORTH~

Client
MR C. D. DUDLEY

Drawn No.

22/1283/202A - PROPOSED PLANS - UNITS 1-4

Date

19.10.2022

Plot Scale

A2@1:100

Drawn by

JPE

Status

PRE-APP

