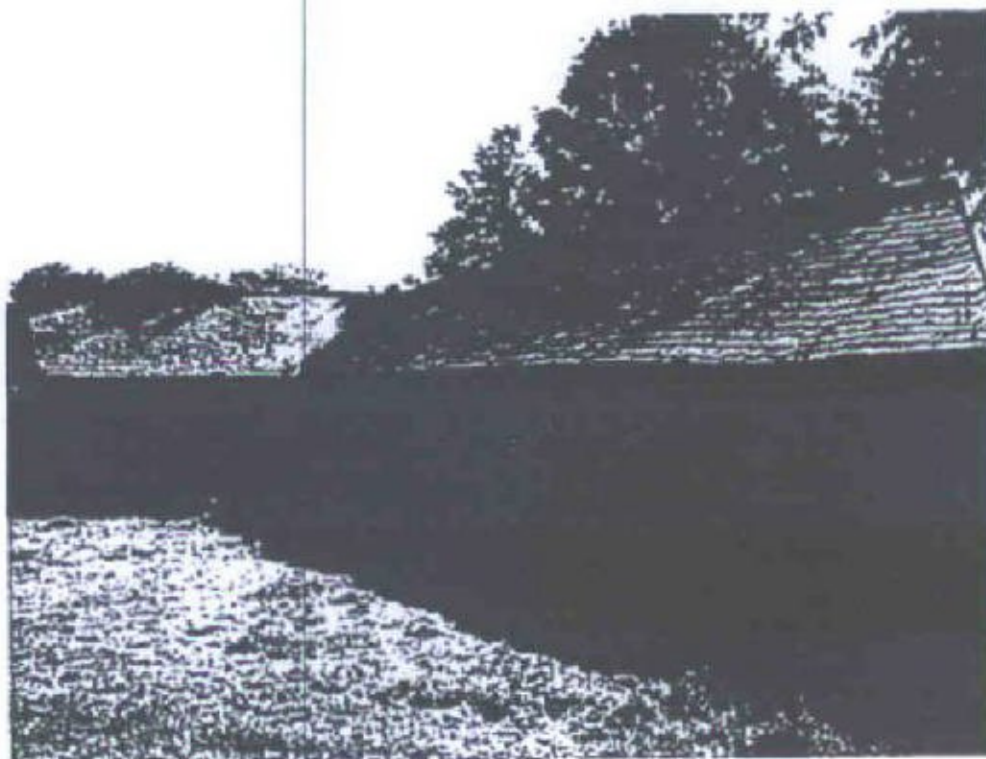


Trewin Design Partnership

10/07982

Building Survey of: Barn at Great Tregastick,
Widegates,
Looe,
PL13 1PZ



For: Mrs S Rowe
Prepared by:- DAVID TITHECOTT DIP SURV MRICS MBEEng
CHARTERED SURVEYOR
Date: Wednesday 6th October 2010
Weather: Dry and Sunny



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1.0 THE BRIEF

Further to your instructions and as required by the Local Planning Authority, we have had the opportunity to inspect the barn at Great Tregastick, Whitegates, Looe, Cornwall, in order to advise you on its general structural condition, state of repair and suitability for conversion in to residential accommodation.

The barn was inspected on Wednesday 6th October, with the weather being dry and sunny. The inspection was carried out in accordance with our standard Terms and Conditions of Engagement for Building Surveys, which are contained within Appendix B of this report.

2.0 GENERAL DESCRIPTION

The property comprises of a single storey linear building, with solid stone walls, a timber pitch roof with a natural slate covering, and stone cobbled and earth floor. The building is detached and L shaped in plan with generally an east to west facing aspect.

Pedestrian access is given to the barn, although there is gated field access just to the north of the property. The barn sits within good size grounds which extend both eastwards and southwards with the land gently sloping from north to south. Ground levels rise towards the northern end of the property and along the western side to the rear where external ground levels are slightly higher than that of internal floor levels.

The building was found to be vacant and redundant from agricultural use. It is largely of its traditional form and whilst vacant and in need of some repairs we are pleased to report that the property is seen to be in reasonably sound structural condition and should easily be capable of being converted without any major structural alterations or repairs to the existing building.

For the purpose of this report sufficient access was gained both internally and externally around the building to adequately report upon the general condition and state of repair of the main structural elements with regards the proposals for its conversion as indicated on the architect's plans (Drawing No's 6286)

3.0 LOCATION

The property is a detached barn lying in good sized grounds just south east, and in close proximity to the main farmhouse.

The Environment Agencies flood maps, show the property is not within an area that is prone to flooding from either tidal or fluvial watercourses.

We are not aware of any previous use of the property, apart from that of general agriculture in the housing of cattle and feed stuffs that would pose any undue concerns over the risks of any potential contaminants that maybe present, and likewise to that of the grounds surrounding the property.

We are unaware of any mining activity within the area or any other risks to subsidence although further enquiries may need to be made with the Local Authority to verify this.

The Health Protection Agency identifies the area in which the property is situated is one in which remedial action is recommended against the levels of radon gas that maybe present and may enter the property upon its conversion. That is not to say that in this particular case the levels are excessive but we would suggest suitable remedial measures be incorporated into the building upon its conversion in accordance with current Building Regulations guidance.



4.0 STRUCTURAL CONDITION AND STATE OF REPAIR

4.1 THE ROOF

The main roof is of traditional pitched timber construction comprising of king post timber trusses set at approximately 2.4m spacings. These support timber purlins and rafters in the normal manner. The roof is hipped at its northern end and also at its south western corner. The roof has a natural slate covering with rolled angled clay ridge tiles, which are generally in tact, although there are a few slipped and loose slates noted; and in many areas metal tangles are visible holding previously loose and slipped slates in place. In more recent times there is evidence that some repairs have been carried out where roof slopes intersect on the southern side. A temporary valley flashing has been formed together with an area of new slating in addressing a previously failed area. Cement fillet flashings are provided at hip ends and also some sections of the ridge as a short term measure in preventing immediate moisture ingress to these parts, although this is not considered a satisfactory long term solution and we are of the opinion that the roof will require complete recovering upon conversion of the property.

Internally the slates are seen to be fixed directly to timber battens in the normal manner and no roofing underfelt is provided. There are some gaps visible within the slates which give a direct path for moisture ingress to occur, posing a risk to decay of the roof timbers which in some areas is seen to be present.

Towards the southern end moisture ingress over a long period of time appears to have caused failure of the main truss which supports the hip and valley over this part. Some remedial repairs have been undertaken in reforming this part by the bolting of new timbers to the existing truss which appears to be effective as a temporary solution. The roof timbers themselves are what to be expected on this type and age of property, although the rafters and purlins are slightly undersized and some deflection is noted within the roof slopes particularly on the south western corner where timbers have deflected and weaknesses are present.

With the exception of the aforementioned areas, the main roof trusses are considered to be in reasonable condition with the exception of wood beetle infestation being noted generally throughout. This does not appear extensive and it is likely that the main trusses could be retained, subject to some remedial treatment against wood beetle infestation and repairs/replacement of any decayed sections. However we do not consider the existing timber rafters and purlins to be capable of retention due to their slender section and defects present and would advise that the main roof of the property will require reforming upon conversion.

This should be done using suitably sized treated timbers in meeting with modern day Building Regulations requirements. A check should be made on the existing roof trusses to accept the new roof covering, insulation and any internal ceilings should it be preferable for these to be retained. In reforming of the roof a new natural slate covering should be considered, incorporating a secondary under felt and provision should be made for a suitable lead valley flashing to be formed where roof slopes intersect on the southern end and for adequate weathering of the hips and ridge. At roof perimeters timber fascias, barge boards and soffits will need to be considered.

4.2 RAINWATER SYSTEM

There is evidence of half round cast iron guttering serving the property although in many parts this is failed and missing and will require a complete overhaul upon conversion of the property. The down pipes serving the main roof slopes are also seen to be of cast iron and are currently cut short and discharge onto the face of the external walls. This has caused some washing of the stone pointing in localised areas and also dampness to occur. Upon conversion of the property it is important that adequate rainwater goods be provided to the roof surfaces so that they adequately convey their context from the roof slopes away from the building.

There is no evidence of any below ground storm water drainage system and we would strongly advise that one be provided and connect to an outfall away from the building. No existing provision is made

for the disposal of surface water away from the building, which is not uncommon for buildings of this type. A suitable below ground drainage system should be provided connecting to an outfall set at a suitable distance away from the building. Sufficient the land is available to accommodate such a system which, subject to percolation tests the installation of a standard soakaway should suffice.

4.3 MAIN WALLS

The main walls of the building comprise of a natural slate stone and are of solid construction in the region of 450mm thickness. The walls were examined both internally and externally for signs of any significant movement or cracking and we are pleased to report that the main walls have good vertical and horizontal alignment and are considered to be structurally sound. In a few isolated areas around window and door openings particularly on the eastern gable end localised repairs will be necessary, together with some small sections over window and door openings where existing timber lintels require replacement.

The walls are seen to have reasonably good horizontal and vertical alignment and there are no significant signs of any structural movements or cracking that would require extensive repairs or rebuilding works to be undertaken. Timber lintels are provided over window and door openings within the main walls which are seen to be in varying condition. Whilst some are reasonably sound others show signs of wood beetle infestation and decay. Over the larger openings the lintels have deflected under the weight of the roof and it is our advice that these should be replaced with either suitably sized precast concrete or treated timber lintels upon conversion of the property.

The stone work and pointing was found to be in reasonable condition, although in several areas, especially at lower levels, the stone pointing is friable and in some localized areas has washed out due to defective rainwater goods. We would advise for all loose and friable pointing to be fully raked up upon conversion of the property and the walls repointed with a traditional lime base mortar matching that of the existing to provide long term resistance against weather and moisture ingress.

Internally the wall faces were seen to be visually sound although upon conversion of the property these will need to be prepared and any surface contaminants removed to receive new surface coatings and remedial damp proofing works. Also it is likely that the internal walls will require lining to improve their thermal performance in meeting with current Building Regulation requirements.

There is no damp proof course provided within the main walls of the barn and because of this moisture content is high within several areas. External ground levels to the rear (western side) and north end are approximately 400mm above that of internal floor levels, which upon conversion such areas will require a vertical tanking membrane to be applied to the face of the walls to give an impervious membrane in preventing the ingress of moisture internally; or external ground levels be suitably reduced in level to mitigate against the risk of the damp penetration through ground moisture. This would not require any structural work to be carried out to the main walls although the existing surfaces should be adequately prepared. We would recommend an internal tanking system such as Newton Lath or similar to be provided to the main walls in order to provide a protective barrier against damp penetration but also allow the walls to breath and deal with moisture in a traditional manner.

4.04 THE FLOORS

The ground floors of the barn are of stone cobble and earth construction. The main floor slopes eastwards towards a trough and is approximately 200mm out of level. No damp proof course is provided beneath the floor and because of this moisture levels are high in most parts. Upon conversion of the property the existing floors will need to be grubbed up, removed and replaced with a new concrete floor incorporating a damp proof membrane and insulation to meet with current Building Regulation standards. In doing so it would also be wise to accommodate some precautionary measures against Radon gas beneath the floor slab in line with current Building Regulations guidance.

Care should be exercised as it is likely that the general reduction of floor levels could undermine the base of the rear wall and some localised underpinning may be necessary. We would advise that

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further investigation should be given to this prior to commencement to establish levels so that if underpinning is necessary an appropriate method can be implemented in preserving the structural integrity of the main walls.

5.00 SERVICES

We are informed that mains water and electricity are readily available to the farmhouse and these services can be extended to serve the barn, although further enquiries should be made to the utility suppliers to confirm this.

There is no current drainage provision for the barn and both new storm and foul water drainage systems will need to be accommodated. The latter will need to be a private drainage system such as a septic tank or mini treatment plant. There appears to be more than adequate amount of land available for the installation of such a system, although porosity tests will need to be undertaken to confirm upon on the suitability of the sub-soil and amount of irrigation drainage that will need to be laid. Naturally, such tests will need to be carried out to meet with Building Regulations approval, and it would be wise to confirm this should an alternative system need to be considered. Likewise as mentioned in section 4.2 above, a suitable below ground storm water drainage system should also be provided within the grounds connecting to a soakaway of natural watercourse at a suitable distance away from the building.

6.00 LIMITATIONS

The barn was vacant and access was freely available both internally and externally for the purposes of inspection. It was not possible to examine all the ground floors or every section of wall surface fully, nor was it possible to inspect every piece of timber and it cannot be guaranteed that any insect or fungal attack is not present somewhere in the property, but where necessary comments have been made based upon the structure visible and any other indications where defects could be present.

Our inspections of the exterior of the building were carried out from ground level, with the aid of a pair of binoculars.

No legal documents were available at the time of the survey.

No examination has been made of any foundations to the building because to do so would require extensive excavation. We cannot confirm the stability of the walls from their support but have drawn what conclusions we can from the surface evidence available at the time of inspection. In the absence of any visible signs of structural failure and evidence of any past repair work ever being carried out we can see no necessity to carry out a detailed examination of the foundations.

No tests have been undertaken of the existing service installations and our report is based on a visual inspection only.

We have assumed that the property is erected on suitable land that has not been designated as contaminated. No investigation of surrounding ground has been undertaken.

We have not specifically inspected this property for the presence of asbestos or any other deleterious materials. Where we have reason to believe during the normal course of our inspection an asbestos based product may have been used, whilst present we have drawn this to your attention. Asbestos based products do require specialist removal and you are advised to ensure that should any asbestos be identified specialist arrangements be made for its removal.

The report reflects the condition of various parts of the property on the day of inspection. It must be expected that defects can arise between the date of inspection and works commencing on the proposed conversion, or further opening up of the structure.

7.00 CONCLUSIONS/RECOMMENDATIONS

As can be seen from the foregoing report, we are pleased to advise you that the barn is demonstrably sound and suitable for conversion into residential accommodation without any major structural repairs or rebuilding of the main structure necessary.

The main walls are considered to be structurally sound with only minor repairs and repointing required. Naturally we would advise that such repairs be undertaken using traditional materials and techniques, which are sympathetic to this type of structure. The main walls should utilise lime mortars and renders. Also the main walls will require some remedial works to adequately resist dampness and where external ground levels to the rear are higher than internal floor levels, which if these are to remain, internal tanking of the main walls will be necessary. Existing timber lintels over openings within the main walls should be replaced with good sound treated timber or pre-cast concrete lintels.

The existing roof structure will need to be reformed using sound treated timbers of appropriate section to accommodate the proposals together with new roof coverings which should be of a natural slate incorporating an under felt. New floors and remedial damp proofing works will be required, both of which would not go beyond that normally expected for the conversion of a property of this type. However, care should be taken when reducing internal ground floor levels to accommodate the new ground floor, so as not to undermine the base of the main walls that may necessitate some remedial underpinning works.

Contained within Appendix A of this report is a set of annotated plans detailing the areas of repair works that are considered necessary and should be read in conjunction with this report.

We trust this report gives you the necessary information in providing you with a balanced view on the suitability of the barn for conversion into residential use, and should you require any further clarification on any particular point, or wish to discuss matters further, then please do not hesitate to contact me.

On the basis of our findings we would consider the alternative use of this building to be sustainable from the point of view in respect of the conversion of its retention.

Yours sincerely

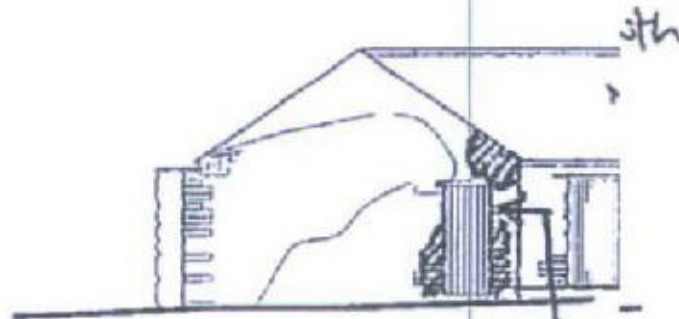


DAVID TITHECOTT DIP SURV MRICS MBEng
CHARTERED SURVEYOR



APPENDIX A –

PLANS - 6286-01-001
6286-01-002



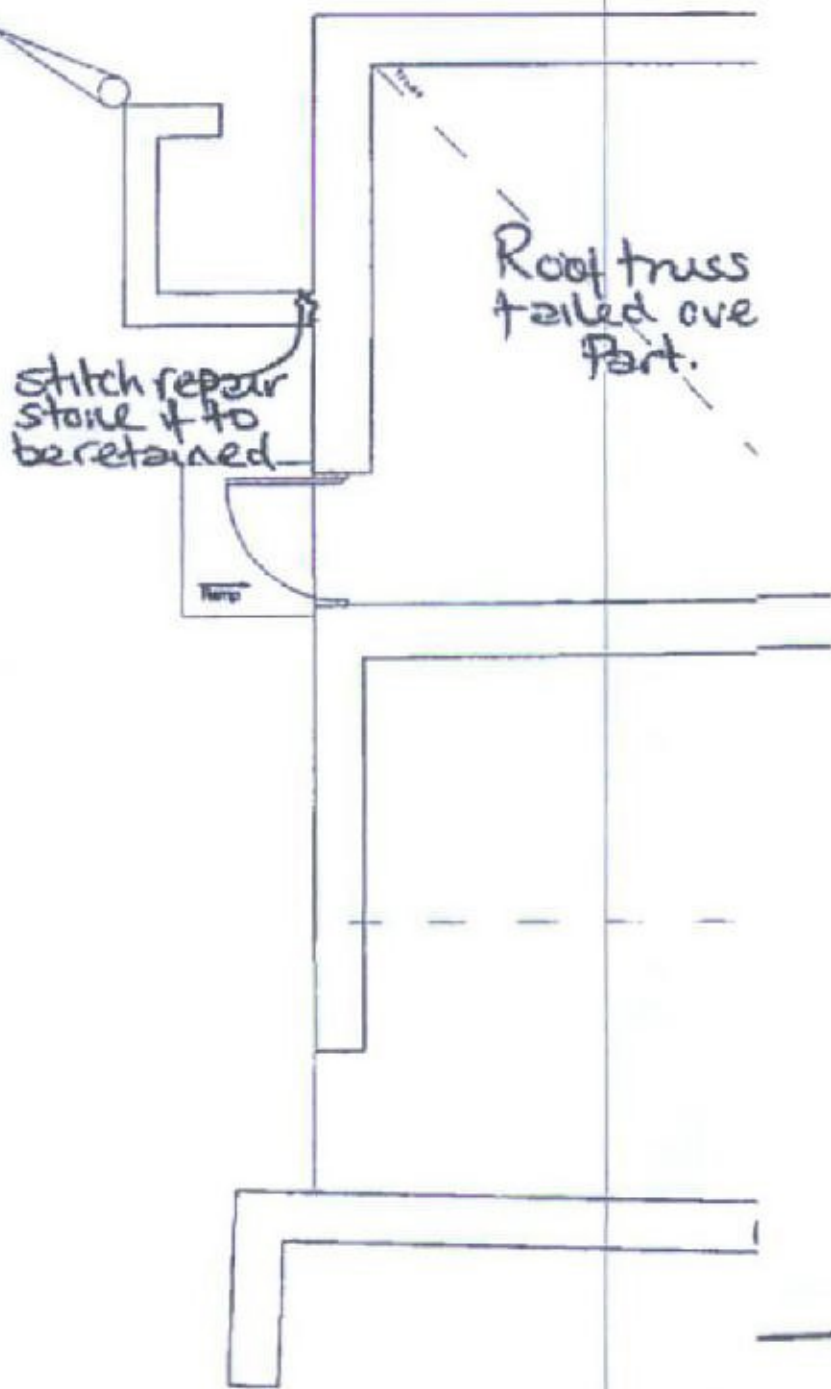
North East elevation 1:100 at A1

REP
of
ST



South West elevation 1:100 at A1

R_g
ground
level



17 NOV 2010

drawing title
Survey plans

job title
Survey of Barn at Great Trugastick Farm, Widgates,
Looe Cornwall

client
Mrs S Rowe

revisions number	description	date	stage	Survey
			drawn	G.W.S
			scale	As shown
			date	06.10.09
			drawing number	6286-01-001

Here - for construction purposes do not scale the drawing. All dimensions to be checked by the contractor before construction proceeds. copyright reserved

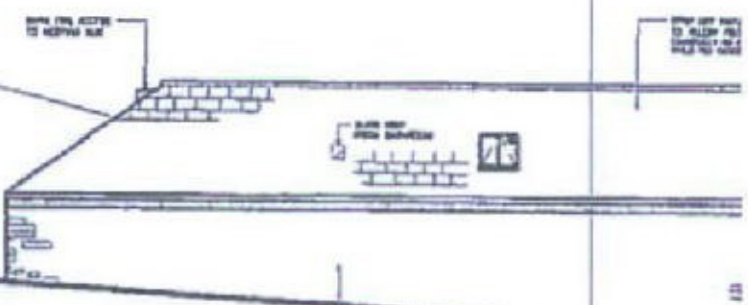


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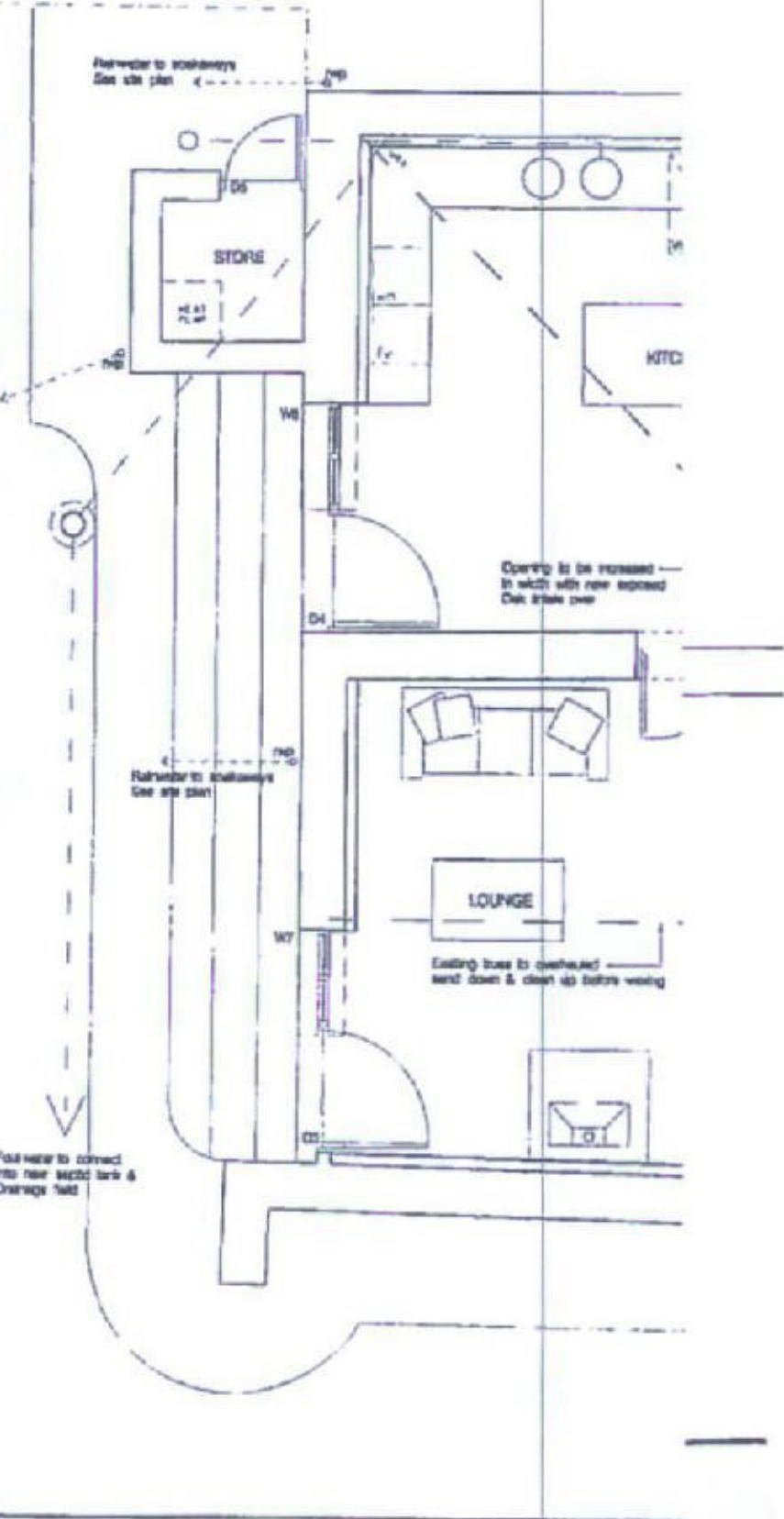
NO.1 STANHOPE SQUARE HOLSWORTHY DEVON EX22 6UR. 01409 253013



North East elevation 1:100 at A1



South West elevation 1:100 at A1

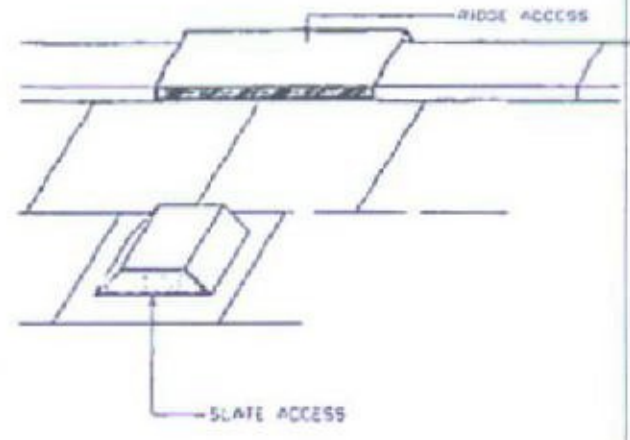


PROVISION FOR BATS

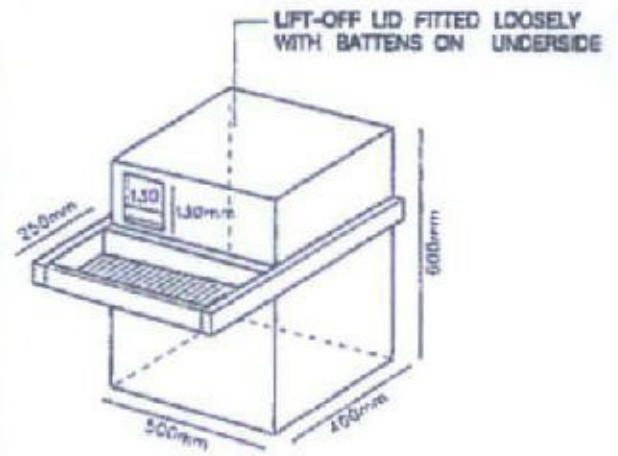
For most species of bat only small holes or slots are needed and this helps to prevent bats from nesting. A gap of 20mm wide by 50mm long is often adequate. The ideal position is between the soffit & the wall.

Unlike birds bats can land on a vertical wall and crawl up through a gap to their roost behind the soffit or in the roof. A rough surface is essential for the bats to grip on.

Building regulations specify that roofs be ventilated which is essentially achieved via the soffit. This in turn allows adequate access for bats to be installed at the same time. Other suitable locations for access are at gable ends, under lead flashings or any gaps between tiles & slates.



Typical Bat access to roof - not to scale



INDOOR NESTING BOX not to scale

BOX TO BE CONSTRUCTED USING 9mm CANADIAN OR SCANDINAVIAN SOFTWOOD PLY (CDX) AND BATTEN AS NECESSARY

Material notes

- Roof : Natural Slate
Cast iron FW Goods
Black painted flue
- Walls : Natural stone re-pointed
Lime based plaster
- Windows : Timber, Slate cills
Metal Conservation Style rooflights
- Doors : Timber casement

17 NOV 2010

drawing title
Proposed plans

job title
Proposed conversion of Barn at Great Trogastick Farm, Widgeates, Loos Cornwall

client
Mrs S Row

revisions	stage	Proposed
number description date initial	drawn	G.W.S
	scale	As shown
	date	08.10.09
	drawing number	6286-01-002
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APPENDIX B –

CONDITIONS OF ENGAGEMENT - STRUCTURAL/BUILDING SURVEY REPORTS

GENERAL

This document sets out the extent and limitations of our intentions and should be read and understood by the party for whom the report is being prepared.

The report will be confidential to you, your professional advisors and any other persons expressly stated in our report. We accept responsibility to you alone that the report will be prepared with the skill, care and diligence reasonably to be expected of a competent Chartered Surveyor. We accept no responsibility whatsoever to any person other than yourself, and any other such persons who rely upon the contents of the report do so at their own risk. Neither the whole nor any part of this report or any references to it may be copied or included in any published document, circular or statement without Trewin Design Partnerships prior written approval.

When making the following report the following assumptions will be made namely:--

- The property is not subject to any unusual or specifically onerous restrictions, encumbrances, outgoings and that good title can be shown.
- The property and its value would be unaffected by any matters which would be revealed by local searches and replies by usual enquiries or any statutory notices and that neither the property nor its condition or its use, nor its intended use, is or will be unlawful
- That any alterations or additions, in the form of material development already carried out to the property have, where required, been granted all relevant local authority approvals.
- That inspection of those parts which have not been inspected will not reveal material defects.

THE SURVEY

A detailed inspection of the property will be undertaken as far as access permits. We will advise upon the current condition and quality of the structure and fabric and report upon any defects found and remedial action considered necessary. Indication of where we feel short-lived materials exist and where future faults could occur will be given, where these can be reasonably foreseen.

Every effort will be made to inspect as much of the building as possible. We will not be inspecting framing, woodwork or other parts of the structure which are covered, unexposed or inaccessible and will therefore be unable to report that such part of the property is free from defect.

Our comments and recommendations within the report will be based upon a single inspection. No monitoring of cracks, damp areas or other faults will be possible. Without the benefit of an inspection of the property over time it may not be possible to come to categoric conclusions in some instances and we will indicate where further investigation and monitoring would be prudent.

No investigation of the subsoil or foundations will be undertaken, neither will any trial hole or bore holes be dug. It is not usually practical, within the limitations of the time available, to inspect the geological maps, ordnance survey maps or aerial photographs of the area around the property. If from examination of the building above ground level, there are indications of movement, failure of the foundations or other grounds to suspect subsidence, heave or landslip problems, we will make appropriate comment and advise you upon where we feel further specialist investigations would be prudent.



We will not carry out an Environmental Audit or any other Environmental investigation or soil survey on the property which if undertaken may draw attention to any contamination or the possibility of any such contamination. In undertaking our work, we will assume that no contamination from the site use or adjacent sites to the subject property exists.

We cannot advise whether high alumina cement concrete, calcium chloride additive or other deleterious material has been used in construction of any part of the buildings. No tests of asbestos materials will be undertaken but we will indicate in our report where it has been found and whether it is likely to be a health hazard.

All roof spaces and cellars will be inspected where access hatches are reasonably accessible and of an adequate size. Naturally, we cannot comment upon the form of construction or condition to those areas where no inspection is undertaken.

We are equipped with a portable ladder extending to a height of about three metres. Close inspection of areas beyond this height, for example, flat roofs to two storey buildings, dormer window roofs, chimney stacks, valleys, etc., can only be undertaken where reasonable access exists. If there is no access for a close inspection of a roof covering we will report on those parts of the roof that can be seen from ground level or an accessible location.

No inspection of chimney flues or linings will be made, neither will it be possible to determine the performance of flues or fires.

THE SERVICES

A visual inspection only will be undertaken to note the services available and as far as access permits. Unless agreed prior to our survey inspection, no specialist test will be undertaken to services.

VALUATIONS

We do not include advice on the value of the building either for sale or letting. Nor can we therefore advise on any diminution of the value due to any defects found. We can include general guidance on the likely level of the costs of any repair works necessary.

Fire insurance valuations can be given for a property if we are separately instructed to do so prior to undertaking the survey. This figure will be based upon current rebuilding costs and bears no relation to its market value. It is prudent to index link this figure. All properties should be fully insured for subsidence, settlement, landslip, flooding and heave.

LEGAL ADVICE

We always assume that the Client is receiving separate legal advice and that any comments we make regarding leases, boundaries, and any other matters, will be clarified with the Client's legal advisors.