



Ref: 1039-c2307281
Document: Barn Conversion – Manor Farm, Swindon Village, Cheltenham
Rev -: 0
Date: 28th July 2023

ITEM	DESCRIPTION
1	<p><u>INTRODUCTION</u></p> <p>1.1 Description of Works</p> <ul style="list-style-type: none">• The works are for the change of use of a dilapidated barn in the ground of Manor Farm, Swindon Village, Cheltenham.• The building is not statutorily or locally listed, nor is it a SAM.• The building is in current use for storage. <p>1.2 Planning</p> <ul style="list-style-type: none">• The works have received planning consent by Cheltenham Borough Council, reference 22/02177/COU.• Condition 6 of the consent requires the following:<ul style="list-style-type: none">- 'A detailed schedule of repair works shall be submitted to and approved in writing by the Local Planning Authority. The proposed works shall not be carried out unless in accordance with the details so approved.' <p>1.3 Structural Survey</p> <ul style="list-style-type: none">• A Visual Structural Inspection was undertaken by Baynham Meikle Partnership, reported November 2020 (attached as Appendix A). This identified a number of issues including:<ul style="list-style-type: none">- Brickwork showing signs of distress and debonding requiring repointing or possible rebuilding;- Poor weather protection from a profiled metal roof has lead to significant weathering of timber elements in the roof and internal supporting wall, meaning they cannot be relied on;- Foundations are likely to be shallow and may require underpinning in places (these will be fully inspected following the approval of an Archaeological Watching Brief under Condition 23 of the consent). <p>1.4 Existing Condition (July 2023)</p> <ul style="list-style-type: none">• In order to prevent further damage to the timber structure the developer has removed the profiled metal roofing and installed a robust breather membrane underlay over the roof to provide weather protection until such time as a new roof covering is approved for installation.• Gable timber and metal cladding has been removed to allow for installation of a bat loft (installed in accordance with a Natural England licence) and to allow for inspection of the gable structure.• Temporary timber bracing has been added to the structure until such time as the cladding and roofing materials are reinstalled.• Drawings in Appendix B show the current building. <p>1.5 Building Regulations</p> <ul style="list-style-type: none">• Cheltenham Building Control have been appointed as the BCB for the project.• It has been agreed that full NHBC standards for the conversion will not be relevant.• It has been agreed that with regards Parts L and O of the regulations that full compliance with the Approved Documents will not be expected.
	<p><u>SUMMARY OF PRINCIPAL STRUCTURAL WORKS</u></p> <p>2.1 Southern Gable Wall</p> <ul style="list-style-type: none">• Dilapidated and heavily modified timber frame is to be removed to be replaced with a new



	<p>solid masonry gable wall.</p> <ul style="list-style-type: none">• The existing masonry plinth will be retained (subject to further review following removal of the gable wall timber frame).• Foundations are subject to further investigation but may require underpinning. <p>2.2 Internal Structural Timber Frame Wall</p> <ul style="list-style-type: none">• The existing internal structural wall has deteriorated and cannot be relied on structurally.• The wall will be retained in position and a new structural timber stud built behind to support the roof in this location.• The retained timber-framed wall will be tied to the new structural wall for stability.• A new opening will be formed in the retained wall. <p>2.3 Northern Gable Wall</p> <ul style="list-style-type: none">• The existing northern gable wall consists of brickwork up to wall plate and a timber truss above.• The timber truss has been exposed and found to be unstable. As part of the bat loft works, this has been stabilised with a ply carcass.• The truss will be retained in place and a new ply / OSB sheathing added externally, with breather membrane underlay.• The gable will be reclad with battens and timber cladding. <p>2.4 Timber Structure (North of Internal Structural Timber Frame Wall)</p> <ul style="list-style-type: none">• The existing primary east/west beams (c. 2m to U/S) are to be retained in position, but supplemented with a steel section to ensure reliability.• Secondary north/ south beams which span over these are to be removed. The roof purlins are to be supported off new timber trusses in the roof void, to be installed on the new east / west steels. <p>2.5 Roof Structure</p> <ul style="list-style-type: none">• Rafters are generally in fair condition, appearing to be c20th machined rafters. A full structural analysis of their capacity is to be carried out and if required, they will be left in place and supplemented with additional rafters as required. <p>2.6 Wall Plate</p> <ul style="list-style-type: none">• The existing wall plate is generally in a fair condition.• Where the wall plate spans the opening to the south of the east elevation it is unsupported. A new steel is to be introduced to support the wall plate in this location. <p>2.7 Floor</p> <ul style="list-style-type: none">• The northern portion of the building has a sloped concrete floor, assumed ground-bearing and uninsulated.• The existing concrete floor is to be broken out and a new insulated RC concrete slab installed, level throughout the building and to tie in with threshold levels at the existing door on the east elevation. <p>2.8 Services</p> <ul style="list-style-type: none">• The building currently has no incoming utilities or drainage.• New incoming electrical, water and telecoms services are to be ducted under the new slab to terminate in the building.• New drainage connections are to be installed connecting to the drainage system to be installed as part of application 20/00749/FUL currently under construction, the design of which has anticipated the additional capacity required.
3	<p><u>EXTERNAL FINISHES</u></p> <p>3.1 Brickwork</p> <ul style="list-style-type: none">• Existing retained brickwork will be cleaned to remove any vegetation, inspected and



	<p>repointed using a lime mortar mix (eg St Astier Lime Putty Mortar BM3 with site specific aggregate mix to match existing colour).</p> <ul style="list-style-type: none">• New brickwork is to match as closely as possible the existing in colour, size and bond, with a suitable lime mortar mix (eg St Astier NHL 2 lime mortar).• Where brickwork is found to be damaged this is to be replaced to match. <p>3.2 Roof</p> <ul style="list-style-type: none">• New SW timber battens have been installed to secure the underlay in place.• New natural slates are to be installed, details to be agreed as part of Condition 4 of the approval.• 10 no. PV panels are to be installed on the roof, in line with the slates.• Vent pipes and extracts will terminate with in line slate vents in the roof covering. <p>3.3 Cladding</p> <ul style="list-style-type: none">• North and south gables will be clad with new horizontal feather-edged timber cladding, details to be approved under Condition 4.
4	<p><u>INTERNAL WALLS AND CEILINGS</u></p> <p>4.1 Internal Face of External Walls</p> <ul style="list-style-type: none">• All external walls in the thermal envelope, new and existing, will be insulated internally using a breathable wood fibre insulation.• The installation will consist of a levelling render applied to the exposed masonry, wood fibre boards fixed through using plastic anchors, a plaster bonding coat with mesh and finished lime render and breathable paint finish. <p>4.2 Ceilings</p> <ul style="list-style-type: none">• In the southern part of the building, where ceilings are to be installed at rafter level, the roof is to be insulated with wood fibre insulation installed between and under rafters, finished with a lime render and breathable paint, to match the walls.• Where ceilings are to be installed between the east/ west beams (to the north of the internal structural wall), these are to be plasterboard ceilings fixed to new ceiling joists, with mineral wool insulation installed above the ceiling.• This flat ceiling will be below the line of the bat loft above and its installation will not disturb this. <p>4.3 Internal Walls</p> <ul style="list-style-type: none">• New internal walls will be timber studs, with plasterboard finishes and mineral wall insulation as required to meet Building Regulations, skimmed and painted.• New internal doors will be oak-faced vertical boarded farmhouse doors.
5	<p><u>EXTERNAL DOORS AND WINDOWS</u></p> <p>5.1 Generally</p> <ul style="list-style-type: none">• Timber-framed double-glazed doors and windows, details to be approved under Condition 5.
6	<p><u>HEATING ELECTRICAL INSTALLATIONS</u></p> <p>6.1 Lighting, Small Power and Fire Detection</p> <ul style="list-style-type: none">• Lighting will consist of a mixture of ceiling-mounted pendants, recessed lights and wall sconces as required served from a new ring main in the ceiling;• Small power installation will use a ring main in the ceiling with sockets served by runs hidden within the insulation zone of the external wall.• A mains wired fire detection will be installed in accordance with the requirements of AD-B.



	<p>6.2 Heating and Hot Water</p> <ul style="list-style-type: none">• Heating and hot water will be provided by an Air Source Heat Pump, with the external condenser unit located within the southern garden.
7	<p><u>DRAINAGE AND VENTILATION</u></p> <p>7.1 Drainage</p> <ul style="list-style-type: none">• New drainage stacks are to be installed to suit the approved layout, draining back to the sitewide drainage installation approved under 20/00749/FUL. <p>7.2 Ventilation</p> <ul style="list-style-type: none">• Kitchens and bathrooms will require extract ventilation to meet Part F of the Building Regulations.• These will discharge to slate vents or if a viable route is not possible, then to cast iron air bricks on the western elevation.
8	<p><u>TIMBER CONSERVATION</u></p> <p>8.1 Timber Repairs, Renovation and Conservation</p> <ul style="list-style-type: none">• All existing timbers exposed during the works are to be inspected for signs of decay, and will be notified to the architect and structural engineer for remedial works to be agreed where required.• Site dimensions are to be taken before starting fabrication and any discrepancies with the drawings are to be reported to the architect to obtain instructions. Where dimensions are given on drawings, these are finished sizes, and the max. permitted deviation for sawn surfaces is:<ul style="list-style-type: none">- For thicknesses < 100mm: -1 to +3mm- For thicknesses > 100mm: -2 to +4mm <p>8.2 Fungus and Beetle Eradication</p> <ul style="list-style-type: none">• Following stripping out works, should fungal and beetle attack of existing timbers previously hidden from view be suspected this is to be reported to the architect, and subject to agreement, a survey and report should be commissioned from a suitable qualified building conservation scientist, to establish and report on the nature and extent of fungal / beetle attack, and to ascertain the sources and extent of any dampness.