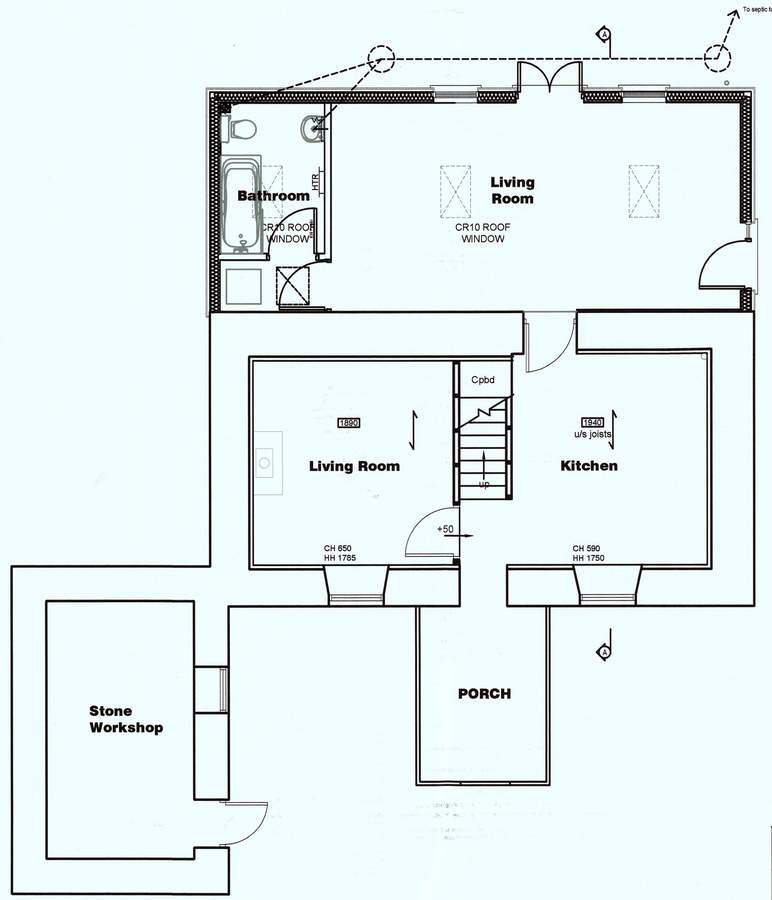
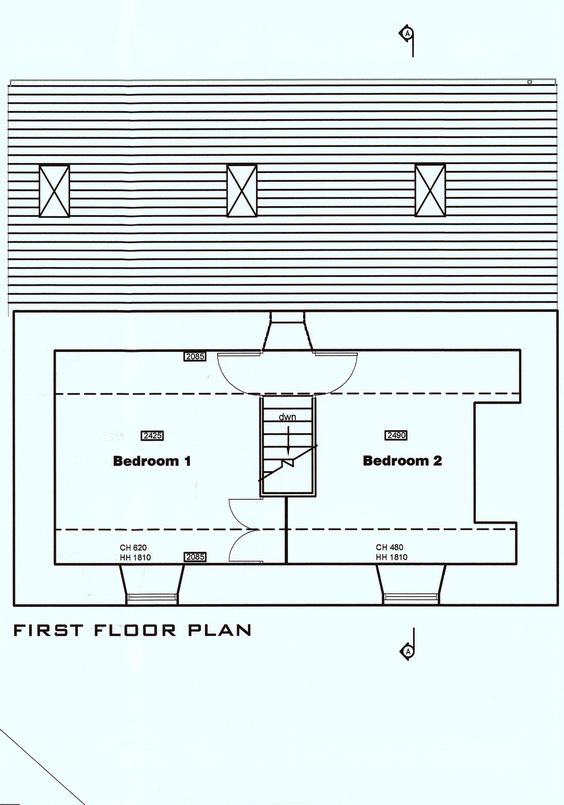
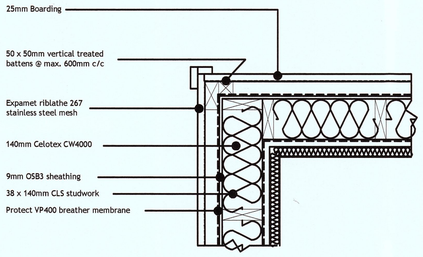
P-17-042



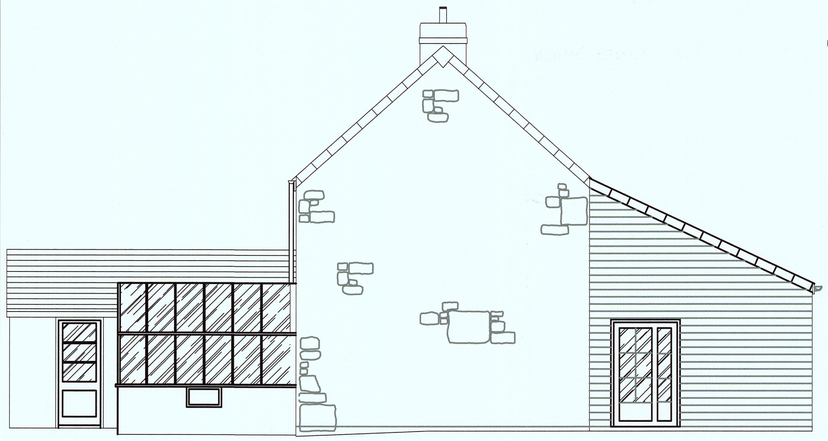
GROUND FLOOR PLAN



FIRST FLOOR PLAN

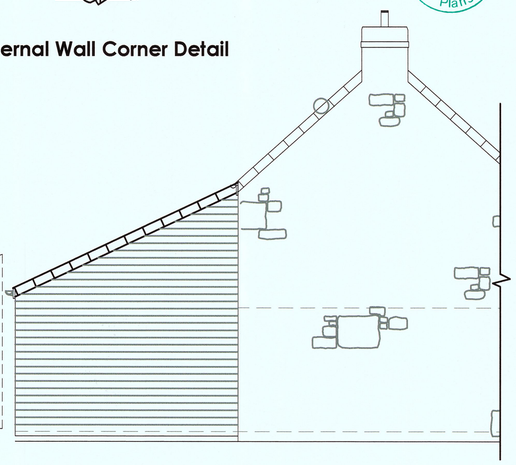


External Wall Corner Detail



SOUTH EAST ELEVATION

NORTH EAST ELEVATION



NORTH WEST ELEVATION

Excavation

Generally: All excavations shall be carried out in accordance with BS 5931:1981 and BS 8004:1986

Foundations

Foundations to generally be 600 x 225mm deep concrete strip to external walls. Refer to Structural Engineers details and specification for size, depth, and foundation type. All shall be determined with Local Authority on site. Foundations to be in accordance with BS 8110 - Structural use of concrete, BS 5328 - Specification of concrete mixes, and BS 6399 - Loading of buildings.

Walls below DPC

Walls shall be an outer leaf of 100 x 300 x 440mm trench blockwork (min. 7N/mm) with 140 x 215 x 440mm dense blocks to perimeter of external walls (min. 7N/mm).
All to BS 5950 - Structural use of masonry.

DPC

To be Hyload Polymer (or stm.) and to be set to a minimum of 150mm above adjacent ground level and lapped a minimum of 100mm. DPC must project 5mm beyond external face of external masonry.

Radon protection

1200g Polyethylene (no recycled content) Gas-Proof membrane laid under ground bearing slab. Gas-Proof membrane installed strictly in accordance with 'construction of new buildings on gas-contaminated land' by Building Research Establishment. Membrane shall be laid across any cavity wall construction and all services thro' membrane shall be sealed.

Provide radon sumps in positions shown on plan. Construct sump with paving slab on 3 courses of hit and miss brickwork on 100mm thick concrete base alternatively use preformed polypropylene sumps. 100mm dia. pvc pipe to outside and to be ventilated well away from any openings. See 'drainage' for protection of pipe where it passes through wall. Cover external end of pipe with a ventilated cap to prevent ingress of rain and vermin.

External walls

Timber Clad:

140mm CLS studwork walls to timber frame manufacturers design and details. Studwork to be filled with 140mm Celotex CW4000 insulation.

DPC to be fully lapped with DPM.

To external face of stud wall supply and fix 60mm NBT PAVIATHERM-PLUS (Finishing 300mm above external ground floor level).
Below 300mm supply and fix 40mm XPS plinth board with NBT 2 coat render system (fully meshed HA 50 onto plinth board).
Provide NBT Airtightness tapes and compriband in accordance with manufacturers recommendations.
Supply and fix 50 x 50mm tanalised vertical battens at 400mm centres, providing insect mesh to the top and base.
Supply and fix 150 x25mm tanalised timber weather board cladding, secret nailed. Allow for treating with 2 no coats preservative.

To inside face of stud walling fix Tyvec Airguard membrane, 25mm treated timber battens (creating service void) and Celotex PL4025 37.5mm insulation/ pre-bonded insulation board with skim finish.

Insect mesh to be installed as shown at plinth & eaves level where ventilated.

Internal Partitions

Internal walls are constructed of 38 x 89mm v/v head and soleplates with studs generally at 600 centres with 12.5mm Gyproc Sound Bloc plaster board providing a minimum mass of 15kg/m² each side and 90mm mineral wool insulation batts between studs to reduce sound transmission.

Ground floor

25mm moisture resistant T&G chipboard flooring (joints glued & allowing 10mm expansion to perimeters) on 120mm non compressible insulation such as Celotex CW4120 & 25mm Celotex T break edging board, laid on 100mm ground bearing slab (28N/mm² @ 28 days) with BRC reinforcement on 1200 gauge visqueen polythene damp proof membrane to be lapped under wall DPC's on 25mm sand blinding on 150mm consolidated crushed stone hardcore. Construction shall achieve **0.14W/m²k U-value.**

Roof

Roof covering to be natural slates on 25 x 50mm treated timber battens on Protect VP 400 breathable roofing felt.

Rafters to timber manufacturers design & details.

Warm roof to be with min. 150mm Celotex CW4000 insulation between rafters. Ceiling to be 25mm Celotex PL4025 insulation/ pre-bonded plasterboard with skim finish.

Cold roof to be 300mm quilt insulation between and above ceiling joists with 12.5mm foil backed ceiling plasterboard.

Tapes membranes and Glidevale Ventilators are strictly to manufacturer's recommendations.

Insect mesh to be installed at eaves level as shown.

Fascia, barge and soffit board shall be painted timber. Proprietary slate vents with underlay seals shall be used for SVP and other ventilation extract thro' roof.
Cross ventilation of roof achieved with proprietary fascia and ridge vent tiles providing the equivalent of not less than a 25mm continuous eaves gap.

Ventilation

Kitchens and bathrooms to be ventilated by mechanical extract fan operated intermittently and to be provided with 4,000sq.mm for bathrooms and 5,000sq.mm for kitchens permanently open background ventilation. Units to be connected to a un-switched fused spur. (speiair or equivalent)

Minimum extract fan ventilation rates in litres per second as follows:

Bathrooms/shower rooms - 15L/sec or PSV

Provide a 10mm air gap under the doors.
Provide a 6 litres/second extract fan to the Ground Floor WC.

Background Ventilation

Provide controllable trickle vents to window & doors with an area of 8000mm² to joinery 900mm and wider and 4000mm² to joinery less than 900mm²

Floor Area	=	91m²
Equivalent ventilation area required	=	6500mm²
Equivalent ventilation area achieved	=	6800mm²

Purge Ventilation

Location	Floor Area (m²)	1/20th (m²)	Openable area(m²)
Dining/kitchen	23	1.15	2.3 (excluding roof lights)

Glazing

All to be 12mm Silmlite Double Glazed Units (4, 4, 4) with Pilkington Low-E Argon Gas fill. Windows to be fitted with handles locks and trickle vents.
Windows to achieve a max. U-value of 1.80.
Doors to achieve a max. U-value of 1.70.
Velux roof lights to achieve a U-value 1.60 or better.

To be in accordance with building regulations Part N critical location where safety glass required is at doors (1500mm above floor, extending to 300mm either side) and within 800mm of floor general.

As the first floor windows are below 800mm, they will have toughened glass to BS6206 Class 'C' and be fitted with finger operated 'Weeks' Sash Stops on either side of the frames to enable child proof restriction, stopping the windows at an openable position of no more than 100mm.

When the manufacturer installs the trickle ventilation to the windows, the ventilators must comply with Approved Document F 2010 Edition, Part A of Table 5.2a, page 23. The manufacturer must then provide a statement which shows that these ventilators comply with and satisfy AD F 2010 for the proposed habitable and non-habitable rooms of the property. This then would be submitted to Building Control. Titon provide a calculation service to ensure that the correct ventilation area is provided to each window.

Fire Safety

To comply with the requirements of the Fire Precautions Act, adequate routes are established throughout the building to enable escape to be undertaken from the building in safety and without assistance.
Routes to be protected where necessary by mains supported smoke alarms to be provided and installed throughout to BS 5839 Part1: 1988. Self contained, mains operated, permanently wired, separately fused, smoke detection alarms and heat detector to be provided where indicated on the plans. Wiring to conform to IEE Wiring Regulations and alarms may operate via low voltage mains transformer.
Alarms to be fitted in accordance with manufacturer's instructions and positioned so as to enable easy routine maintenance, testing and cleaning to be carried out. Alarms shall be interconnected.
Smoke detectors to have emergency battery power with low battery level audible indicators

Penetrations of fire resistant structure by services shall be kept to a minimum number and size and where necessary, to be sleeved or stopped with intumescent seals.

Access and facilities for disabled people

Approach to dwelling
Access into the dwelling
Circulation within the Entrance storey
Accessible switches & socket outlets
WC Provision
Goings to be not less than 280mm

Level Approach will not exceed a gradient of 1:20 and be not less than 900mm wide. A ramped approach may be used if the plot gradient exceeds 1:20 but not 1:15. Specific ramp conditions will conform to those set out in AD Part M Section 6 para. 6.14 to 6.15. A stepped approach will conform to AD Part M Section 6 para. 6.16 to 6.17
Where the approach to the entrance consists of a level or ramp approach an accessible threshold at the entrance should be provided with a maximum up stand of 15mm.
Switches and socket outlets should be provided at heights from the finished floor level of between 450mm & 1200mm
The accessible WC to be minimum. 900mm width, door to open outwards and a minimum clear space in front of the WC pan to be 750mm

Continuity of insulation and airtightness

The building fabric is to be constructed so that there are no reasonably avoidable thermal bridges in the insulation layers caused by gaps within the various elements, at the joints between elements and at the edges of elements such as those around window and door openings and reasonable provision is to be made to reduce unwanted air leakage through the new envelope parts. An air pressure test in accordance with ATTMA publication 'Measuring Air Permeability of Building Envelopes' shall be carried out by a person who is registered by the British Institute of Non-destructive Testing and a certificate to that effect be submitted to the local Building Control. On completion of the works the builder is to provide written confirmation that all details specified have been adhered to.

Leadwork

Code 4 lead flashings and aprons
All to be in accordance with 'Lead Sheet in Building published by Lead Development Association. Lead to be used at junction with existing and new roof slope at point of angle change.

Roof Lights

Supplied by the Rooflight company and stainless steel rating for coastal use. Installed with flashing kits in accordance with manufacturers recommendations.

Standard detailing & quality control

Unless the drawings show a particular detail with a BBA approved product, the details adopted throughout the construction shall be Robust Details or other Accredited Construction Details, as required under Section 2 of Part L of the Building Regulations. In the design of the building an air permeability of 50pa 4.60m³/(hr.m²) has been assumed. To ensure that this value is achieved or bettered the builder will demonstrate that an appropriate system of site inspection is in place and provide a report, signed by a suitably qualified person.

Building operation information

On completion of the work, the builder shall provide the owner of the building with a set of operating and maintenance instructions about the building, the fixed building services and their maintenance requirements so that the building can be operated economically and use no more fuel and power than is reasonable.
Lighting and Power to all have seperate meters to enable the occupier to assign annual energy consumption to the end-use categories.

Lighting

Lighting throughout the whole building to have 100% low energy light bulbs installed.

Heating

Primary Heating & Water Heating:

Electric panels heaters with individual thermostat and programmer controls. Hot water cylinder-single immersion. Megaflow indirect 210 litre with 80mm factory installed insulation. Hot water cylinder to have independent time controls, cylinder thermostat, insulated pipework and to be within the heated space of the dwelling.

Electrical installation

The electrical installation work, inspection and testing during and at the end of installation, before it is taken into service, to verify that it is safe, is to be undertaken by a competent person who is registered with an electrical self-certification scheme authorised by the Secretary of State and shall be in accordance with BS7671: 2008 and all relevant Building Regulations.
On completion of the work, inspection and testing, the person ordering the work is to receive a signed Building Regulations self-certification certificate together with copies of the the necessary forms, completed and signed by the competent person, as laid out in chapter 74 of BS7671: 2008. The person ordering the work is also to receive a duly completed Electrical Installation Certificate made out and signed by the competent person who carried out the design, construction, inspection and testing work.
The competent person carrying out the electrical installation work shall also submit a copy of all certificates to the relevant Building Control body together with a declaration that compliance with the Building Regulations has been achieved. All switched fused spurs controlling below counter level or obscured sockets to be labeled.

Sanitation, Hot Water Safety & Water Efficiency

All appliances shall be properly supplied and connected to discharge to the drainage system in accordance with the Building Regulations 1991,and complying with Building Regulations Approved Document G4 (Sanitary conveniences and washing facilities) and Approved Document H3.

The hot water system and thermal storage vessel shall incorporate precautions to prevent water temperature exceeding 100°C.

Baths shall be installed with temperature control valves that do not exceed 48°.
Prior to occupation of the dwelling, a satisfactory water efficiency calculation will be undertaken. The potential consumption of wholesome water by persons occupying a dwelling to which this regulation applies must not exceed 125 litres per person per day.

Sanitary Facilities

All appliances shall be properly supplied and connected to discharge to the drainage system in accordance with the Building Regulations 1991,and complying with Building Regulations Approved Document G1 (Sanitary conveniences and washing facilities) and Approved Document H3.

Sanitary Pipework

All Internal UPVC plumbing shall be in accordance with
BS EN 752.
40mm diameter waste pipes to urinal bowls and sinks; 32mm to WHBs, all connected to:
Internal foul stack drainage shall be 110mm upvc pipe work, discharging via large radius (200mm min.) bends prior to connection to sewer pipes.

Vertical soil & vent pipe(s) to be taken to atmosphere via roof terminals with suitable vented capping.

Generally, all branch pipes, connections, length and location to follow recommended practice and to be in accordance with requirements of Approved Document H1. Size of branch pipes shall be same diameter as appliance traps, Bends to be kept to a minimum with as large a radius as possible. All junctions on branch pipes shall be swept with a min. radius of 25mm or at 45 degrees. All pipework to be adequately ventilated where required.

All appliances shall have minimum 75mm deep seal/ traps; 90mm to WCs, Rodding eyes to be installed at all changes in direction and provided with access valves at specified locations.

All Internal plumbing and waste pipe work in habitable rooms to be enclosed in insulated casing.

Below ground

New drains to be 110mm dia. PVC pipes laid to fall not less than 1 in 40 and surrounded in 150mm of pea gravel and trench back filled with pre-selected excavated material. New sewer to be connected into existing Klargester bioditic septic tank and drainage field.

Where pipes run with less than 250mm cover or within vehicle access, pipes are to be surrounded in 150mm pea gravel, covered with 1200 guage dpm, capped with 100mm of concrete with minimum 300mm endbearing and backfilled with pre selected excavated material.

Where pipes pass through walls Insert reinforced concrete lintels over and ensure a 50mm air gap around pipe and mask both sides with rigid sheet material.
New Inspection chambers to be polypropylene bases and risers. Covers and frames to be medium duty plastic except in roadways where they are to be heavy duty cast iron.
Diameter of Inspection chambers to be 460mm up to 1200mm deep and 1200mm with 600mm dia. covers greater than 1200mm deep.

Rainwater Goods

Rainwater to discharge from roof into aluminium primed and painted or cast iron primed and painted gutters and down pipes - Profile to match existing - Into new roddable back inlet gulleys to 110mm surface water drainage system laid to a fall not less than 1 in 80 bedded in pea stingle. New drains to be connected into 1no. new 1.5m³ rubble soak-a-ways 750mm below ground and lined top, sides, and base with 1000 gauge Terram (or stm. approved) geotextile membrane. Construction shall be confirmed with Local Authority Building Control on site with percolation test if required.
Installations to BS EN 752-4 or BRE Digest 765 and shall be a min. of 5m from new building.

All necessary fixing brackets, bends (swan-neck), junctions, and off-sets to provide adequate performance.

Air test to BS 6367: 1983 - Air Tightness.

Amended
31 MAY 2017
Plans

REVISION	AMENDMENT	INITIALS	DATE

PROJECT
Maypole Cottage

DRAWING TITLE
Initial Construction Drawings

DUCHY of CORNWALL
ST MARY'S ISLES OF SCILLY TR21 0LS
Telephone: (01720) 422508 E-mail: ndean@duchyofcornwall.org

SCALE	DRAWN BY	DRAWING NO.	REV
1:50	Nathan Dean	10/0746-02	
DATE 16.03.2016	CHECKED BY		