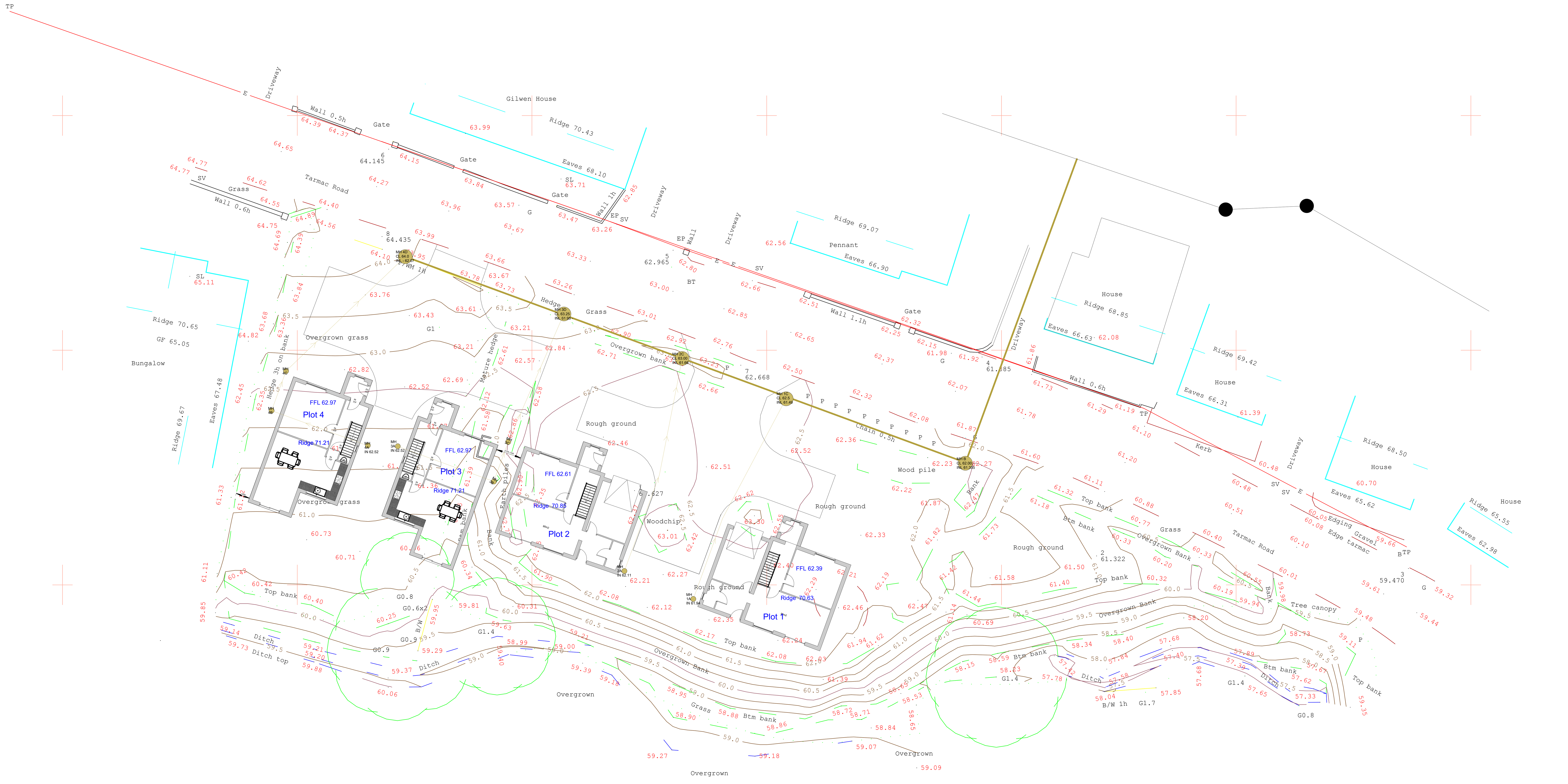
Block Plan
Scale~ 1:200



General ~

The contractor is to ensure that proposed Works will be executed in accordance with any relevant. Conditions appended to the Local Planning Authority's Decision Notice; the current Building Regulations and N.H.B.C. Standards; the requirements of the Fire Officer; the Institute of Electrical Engineers handbook (current edition); the requirements of the local Water Authority. Materials and workmanship should, where applicable, comply with the current British Standards Institute specifications and Codes of Practice. Where such guidance does not exist, materials and workmanship should conform to established good practice and Regulation 7 of Building Regulations.

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This specification is to be read in conjunction with all other drawings, clients standard specification, Structural Engineers and Mechanical & Electrical Engineers design. Any reference to an Approved Document in this Specification relates to the relevant Approved Document of the Building Regulations.

No.	Date	Issue Notes
BR VER 1	11 OCT 2016	All measurements must be checked on site. If there are any deviations the designer should be notified and written conformation sought. The plans are the property of M. Baggott Chartered Surveyors and Architectural Service and written permission must be sought before passing any plans onto third parties. Party Wall agreements should be put in place before any works commence on site.

MARK BAGGOTT CHARTERED SURVEYORS AND ARCHITECTURAL PRACTICE

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Consultant
Mark Baggott

Project Title
Full Planning application for single housing development, 1 dwelling 115m2.

Sheet Title
Proposed erection of detached dwelling on Plot (3) opposite Gilwen House, Waungilwen, Felindre. Carms. SA44 5YG

Project Manager: N/A	Project ID: PLOT 3 GILWEN HOUSE
Drawn By: MB	Scale: AS SHOWN
Reviewed By:	Sheet No.: 3 of 3 PAPER A1
Date: 11/09/2016	
CAD File Name: PLOT OPP GILWEN TERRACE	

Station coordinates

Rev.	By	Date	Description of update

Survey Details

1. OS grid & datum from GPS.
2. North arrow indicates approximate North.
3. Scale factor 1.00000
4. Contour interval 0.50m

ABBREVIATIONS

AV - Air valve
B - Bollard
BB - Belisha beacon
BH - Bore hole
BM - Site bench mark
BT - British telecom
B/W - Barbed wire fence
CAM - Camera
CB - Phone box
CDP - Cable draw pit
CL - Cover level
Conc - Concrete
C/B - Closed board fence
C/I - Corrugated fence
DP - Down pipe
DK - Drop kerb
EIC - Electric cover
EL - Eaves level
EP - Electricity pole
ER - Earthing rod
FL - Floor level
FH - Fire hydrant
FP - Flag pole
G - Gulley
G1.2 - Tree girth (m)
GV - Gas valve
IC - Inspection cover
IL - Invert Level
I/R - Iron Railings
JB - Junction box
KO - Kerb outlet
LB - Letter box
LP - Lamp post
Mkr - Utility marker
MP - Mile post
OSBM - Ordnance Survey bench mark
O/B - Open board fence
P - Post
PS - Paving
P/R - Post/rail fence
P/W - Post/wire fence
RE - Rodding eye
RL - Ridge Level
RS - Road Sign
SAP - Sapling
SC - Stop Cock
SE - Service entry pt.
SL - Step Level
SOF - Soffit level
SP - Sign Post
SV - Stop Valve
TAC - Tactile Paving
TH - Trial Hole
T.O.W - Top of Wall
TP - Telegraph Pole
TS - Traffic signal
TSC - Traffic signal cover
TV - Cable television
UTL - Unable To Lift
VP - Vent Pipe
WL - Water Level
WM - Water Meter
△ - Survey Station
- Pipe Diameter(m)

LINE TYPES

Building
Kerbs, Walls
Fences
Iron railings
Top of banks
Bottom of banks
Hedges
Overhead Wires
Change of surface

Sheet Layout

One Sheet Only

Scale:	1:200 at A1	CLS Job No.	16-646
Drawing No.	16-646/200A1/1.1	Surveyor:	Adrian Catling
Date:	July 2016	Checked:	Adrian Catling

CLIENT
Mark Baggott.

Land opposite Pennant, Waungilwen, Velindre, Carmarthenshire.

Topographic Survey

Catling's Land Surveys
A Passion for Mapping.
47 Heol Las, Ynysmeudwy, Pontardawe, Swansea, SA8 4PR
Tel / Mobile 07790 588323
email: adrian@catlingslandsurveys.co.uk

Plot 3 - Plot 4 will be 'handed'

Drainage ~

All new drainage or alterations to existing drainage to be carried out in accordance with Approved Document H and Structural engineers design.

Include for the installation of new SVP's. No's of SVP's to be vented above roof level to be confirmed. Include Promat UniCollar fire collars around SVP's which penetrate floors to maintain fire protection.

SVP's going up though the building to be 110mm diameter PVC-U soil and vent pipes to B.S. 5572 to discharge either via vents above roof levels, or Durgo valves. Provisions to be made for access to SVP at each floor level. SVP's to be installed at head of run and terminate 900mm above any opening within 3m

Soil and vent pipe to be encased in 15mm Soundbloc board fixed to studwork - as recommended by board manufacturer. Junction of ducting and ceiling to be thoroughly sealed. Include 25mm Isover acoustic insulation wrapped around soil and vent pipe in the duct.

An access point to be formed in ductwork at pipe junction points, with boarding fixed to framework via cups and screws. Access point/rodding eyes to be provided to ALL waste pipes where they change direction. New sanitary ware to be connected into existing SVP's where possible.

Ventilated discharge stacks may be terminated inside a building when fitted with air admittance valves complying with prEN 12380. Where these valves are used they should not adversely affect the amount of ventilation necessary for the below ground system which is normally provided by open stacks of the sanitary pipe-work. Air admittance valves should be located in areas which have adequate ventilation, should be accessible for maintenance and should be removable to give access for clearance of blockages. Air admittance valves should not be used outside buildings or in dust laden atmospheres. Where there is no open ventilation on a drainage system or through connected drains, alternative arrangements to relieve positive pressures should be considered.

All underground drainage works to be carried out to Structural Engineers details.
New manholes will be required (to be confirmed on site) to provide connections for new SVP's.

All private drains to be in upvc or vitrified clay with flexible joints and fittings conforming to B.S.EN295 or B.S.4660.

Where any drains pass through external walls, include concrete lintels to support wall above in accordance with Structural Engineers details.

Where house drainage connections are made via Y-junctions, access to the run must be provided by rod able gullies or SVP access points.

All work carried out to manufacturer's specification, and to the Local Authority approval. All drainage to be laid to relevant Codes of Practice, British Standards and Good Working Practice. Sewers serving more than one property should be kept as far as is practicable (preferably min. 5m) away from any building where a future extension is likely.

Percolation test to be undertaken prior to works commencing on site to help determine location and sixe of required drainage field.`

Foundations ~

Concrete strip foundations, size and depth to be determined on site upon inspection of ground conditions and agreed with Building Control Officer. Concrete mix to be 30N/mm at 28 days and to conform BS EN 206-1 and BS 8500-2. All foundations to be a minimum of 1000mm below ground level. All constructed in accordance with 2004 Building Regulations A1/2 and BS 8004:1986 Code of Practice for Foundations.

Base of foundations supporting internal walls to be min 600mm below ground level. Sulphate resistant cement to be used if required;

Typical sizes;
100mm wall 450x225
215mm wall 600x300
300mm wall 750x300

Please note that should any adverse soil conditions be found or any major tree roots in excavations, the Building Control Officer is to be contacted and the advice of a structural engineer should be sought.

Percolation test for soakaways ~

Excavate a hole approx., 1m sq by 2m deep or at least 1.5m below the proposed invert level of the soakaway pipe in order to establish that the water table level will not rise to within 1m of it. If this proves satisfactory proceed as follows;

In position of soakaways excavate at least 2 holes 300mm square to a depth 300mm below proposed invert level of soakaway pipe;initially fill holes with water and allow to soak away, refill the holes with at least 300mm of water and time in seconds the time taken
for the water to drain away - the time taken for water to seep away is divided by the depth in mm to give Vp;Test should be carried out at least 3 times and the average value used - the test should not be carried out during abnormal weather conditions such as heavy rain or frost. Once the Vp has been obtained the following formula can be used to determine extent of soakaways required ~
At = p x Vp x 0.25
At = arae of soakaways in square metres
p = number of persons served by the tank;
Vp = percolation value.
The drainage field is to be constructed using solid plastic perforated pipes laid no steeper than 1 in 200 and placed on a 300mm layer of 50mm clean stone filled at least 50mm above the pipe. Depth of soakaway pipe should be a min., of 500mm below surface. A geotextile membrane is then placed on the drainage stone to prevent entry of silt & the trench refilled with soil. A min., of 2m of undisturbed ground is to be maintained between parallel trenches. An inspection chamber is to be provided between the septic tank and the soakaways.
The drainage field is to be positioned so that it is
i) at least 10m from any watercourse or permeable drain;
ii) at least 50m from the point of abstraction of any groundwater supply & not in any Zone 1 groundwater protection zone;
iii) at least 15m from any building; sufficiently far enough away from any other drainage fields so that the overall soakage capacity of the ground is not exceeded.

D.P.C ~

Horizontal D.P.C's to be minimum 150mm above adjacent ground level and to be 500 microns black polythene (2000g) to B.S.6515: 1984. D.P.C. to be stepped up as necessary to maintain 150mm clearance above entrance ramp or level platform adjacent to principal entrance door.

Plasterboard Types and Fixings ~

All internal block work to be dry-lined to B.S.1230, 6214 and 8212 generally with 12.5mm Gyproc Wallboard on Gyproc bonding compound adhesive dabs. All perimeters of plasterboard on external walls, including around service entries, to be sealed with continuous band (i.e. not individual dabs) of adhesive. Plasterboard to walls and ceilings throughout may be either finished with plaster skim coat or prepared for direct decoration with the decorative face and tapered-edges facing the room and with the joints taped and filled all as per manufactures recommendations.

Note

Lining to all block work or stud partitions forming shower enclosures and also at the head of and alongside baths to be 12.5mm Gyproc Moisture Resistant Plasterboard.

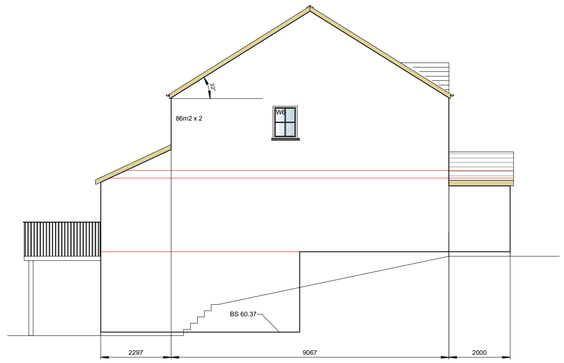
Heating and hot water ~

Heating and hot water to be supplied by electric boiler (specification to be confirmed) All heating schemes are to be designed based on an external temperature of -3oC. Heating and hot water control system to include programmer, cylinder thermostat, room thermostat and either a 3-port or twin 2-port zone values. All heating systems to be controlled via individual time and temperature controls on each heating zone. Room thermostat must be located to Mechanical & Electrical contractors design. Thermal conductivity of pipe-work insulation not to exceed 0.045 W/mK. Primary pipe-work to be insulated in accordance with Approved Document L1A – generally in unheated areas and for the first metre run of pipe-work from the domestic hot water cylinder. Where necessary, pipes and hot water storage vessels are to be thermally insulated to comply with Approved Document L1a & L1b.

Hot water supply to any fixed bath shall be designed and installed to incorporate measures to ensure that the temperature of the water delivered to that bath does not exceed 48 degrees C, this may be achieved by use of an in-line blending valve or other appropraite temperature control device with a maximum temperature stop and suitable arrangement of pipework.'

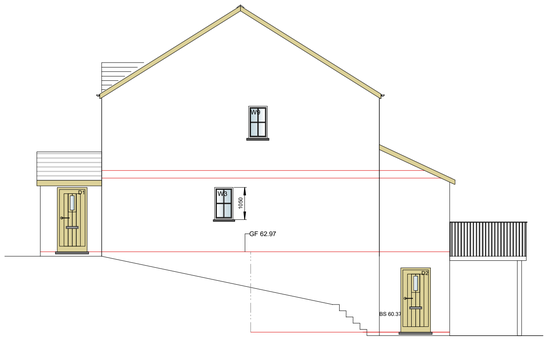
Northeast elevation

Southeast elevation



Southwest elevation

Northwest elevation



Masonry in General

Clay bricks throughout to be manufactured in accordance with BS EN 771-1 with minimum water absorption 7-12%
Mortar shall be of the mix proportions necessary to achieve adequate strength and durability in accordance with LA standards. Concrete blocks throughout to be solid, manufactured in accordance with BS-EN 771-3/771-4 and designated by the manufacturer as suitable for their intended location.
Internal Plumbing ~

38mm dia. PVC wastes to sinks with 75mm deep seal traps;
32mm dia. PVC wastes to basins with 75mm deep seal traps;
12mm dia. PVC overflow pipes to be installed where necessary;
100mm dia. W/C wastes - connected to 100mm dia. Soil and vent pipes;

Kitchen sink and dishwasher wastes are to be run in 50mm diameter pipe-work - with air admittable values incorporated to alleviate the draw on the waste traps.

Sanitary goods ~

All sanitary ware to be by Armitage shanks or similar approved.

All waste fittings to have 75mm deep seal traps and separate connections to SVP's and to be installed in accordance with B.S.5572. Baths and showers on joisted floors to have flexible joint to wall.

Wastes to wash-hand basins to be 32mm diameter for runs not exceeding 1.7m and 40mm diameter for runs up to 3m.

Bath and showers to have 40mm diameter trap for runs up to 3m length.
Washing machine and (where applicable)
Dishwasher spaces to be plumbed in All exposed pipe work to be boxed in.

Shower trays ~

Provide 150 high timber upstand base for shower trays. 75x38 framing @ 300c/c with 16mm WBP plywood platform base. Stud walls around showers to be lined in 16mm flooring grade WBP plywood for tiling.

Tiler to install provide proprietory tanking kit to all showers.
Timber ~

All external timber to be pressure-impregnated with preservative prior to delivery to site in accordance BS.5268: Part 2. Any timber used structurally for floors, walls or roof to be specified by Structural Engineer.

Smoke alarms ~

All new dwelllings should be provided with a fire detection and fire alarm system in accordance with the relevant recommendations of BS 5839-6:2004 code of pratice for the design, installation and maintenance of fire detection and fire alarm systems in dwellings to at least a Grade D category LD3 standard

The smoke and heat alarms should be mains-operated and conform to BS 5446-1:2000 or BS 5446-2:2003 respectively : fire detection and fire alarm devices for dwellings, Part 1 specification for smoke alarms, or part 2 specifications for heat alarms. They should have a standby power supply such as a battery (either rechargeable or non-rechargeable) or capacitor. Where more than one alarm is fitted, they should be interconnected, in accordance with manufacturer's instructions. Smoke alarms fixed to ceilings should be located minimum 300mm from any wall or electrical fitting.

Units designed for wall mounting should be fixed 150-300mm below ceiling. Smoke alarms should not be fixed over staircase for ease of maintenance.

Fire alarm specialists to be appointed to provide advice on a suitable interlinked fire alarm system between the office uses and residential uses.

Disabled requirements ~

Means of approach to a dwelling ~

Provide level approach to entrance door with a minimum width of approach of 900mm on a firm and even surface with any cross-falls which do not exceed 1:40;

Circulation routes ~

Circulation routes on Ground Floor to be at least 900 wide or may be
reduced to 750 at a local permanent obstruction or projection provided that the obstruction or projection is not greater than 2m in length or opposite a door to a room.

Height of switches, sockets and outlets ~

Wall mounted socket outlets and switches (other than isolators) shall
be located not more than 1200mm and not less than 450mm above the floor level;

Location of WC ~

WC shall be located so as to have a clear space of minimum 900 deep x 750 wide centred on the WC for a disabled person to access it. This space to be clear of any door swing.

Energy performance certificate ~

Provide an energy performance certificate for each dwelling as built and a notice stating the energy rating shall be fixed in the dwelling. Locate a copy of the notice on the inside of the electrical cupboard door.
General ~

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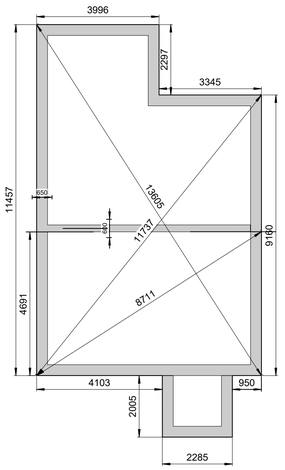
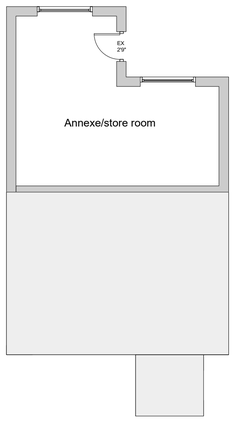
Foundation plan
Scale ~ 1:100



Basement plan
Scale ~ 1:100



Annexe room ~

x 6 down lights
x 4 double
sockets;
TV and internet points
2 way switch

Electrical plan;

Kitchen/diner;

x6 downlighters to kitchen area;
x2 pendants to dining area;
Extractor fan;
Electric point for cooker;
x 4 double sockets along kitchen works top;
x2 double sockets under units;
x4 double sockets to dining area;
TV and satellite points;

Lounge ~

x4 double sockets;
TV and Satellite points;
x2 pendants;

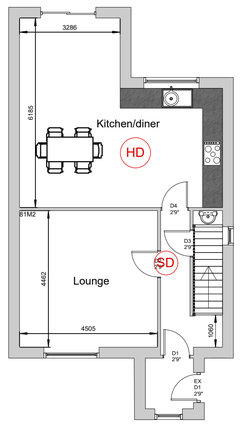
Hall;
x 2 double sockets;
x 2 pendant lights;

WC ~

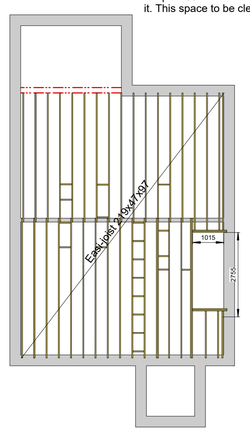
x1 pendant;
x1 extractor fan

Allow for x4 PIR external lighting around dwelling

Ground floor plan
Scale ~ 1:100



Joist plan
Scale ~ 1:100



Glazing ~

All windows to be new UPVC or aluminum framed units to match existing. Windows to achieve a U-value of 1.3W/m²K. Windows to have trickle vents built into the frames to provide background ventilation.
All windows to be fully draught-proofed/sealed.
Where safety glass is used it should be marked as such. Obscure glazing to Bathrooms and En-suites.

In accordance with Approved Document Part N1
1998 all glazing below 1500mm above finished floor level in both doors and sidelights within 300mm of door jamb and all other areas of glazing
below 800mm above finished floor level must be either:

toughened or laminated and break safety to B.S.6206
or b. robust 1.e 8mm annealed glass in panes not exceeding 1.1m in both height and width.
Or c. 6mm annealed glass in small panes i.e. maximum width 250mm and area 0.5m².
Cavity trays and Flashings ~

Flashing generally to be in milled lead sheet to BS EN 12588. Code 4 lead flashing (stepped where necessary) to be provided where roofs abut /block work. Cavity tray to be linked to flashings in all cases and stepped in the case of a stepped flashing. Cavity trays where required must raise minimum 140mm across cavity. Include flashings up to door thresholds

Ventilation~

All ventilation (purge, extract and background) to be carried out in accordance with Part F of Building Regulations
Purge ventilation ~

All Habitable rooms to have an opening window to provide a clear opening area of at least 1/20th of the room area. Ventilation to be achieved with operable window typical at 1.75m above floor level.
Background ventilation ~

Tickle vents to be included in window frames to provide either 5000mm² or 2500mm².
WC's to have extract fans giving min. ventilation of 15 litres per second. 10mm Gap to doors to provide for background ventilation. With 15minute overrun on extract fan.
Adequate replacement air to be available to all rooms via 10mm gap under doors.
Extract ventilation ~

Greenwood Airvac or similar approved intermittent extract fans to be installed in all wet rooms) with the following rates –
Kitchens 60l/s
Bathrooms 15l/s
WC 6l/s
Fans and ducts must be installed in compliance with the 'Good Practice Guide' in Approved Document F1 Appendix E.

Where Wet rooms do not have opening windows, extract fan to have 15minute overrun. Mechanical extract fans are to have the complete housing perimeter sealed.

First floor construction ~

Joist sizes and spacing shall be as indicated on drawings. Timber to be regularised. Provide 38mm solid strutting (at least 2/3 of joist depth) as below;

Span < 2.5m - no strutting required
Span 2.5-4.5 - one row strutting mid-span
Span > 4.5m - two rows strutting equal spacing

Joists to be doubled up where stud walls bear on and in the same direction. Bearing of joists should be 90mm on blockwork walls. Joists on party walls should be suspended using proprietary galvanised hangers. The ends of trimmed joists to be supported using proprietary 'timber to timber' joists hangers.

Gable walls to be tied at first floor, first floor ceiling and roof level with 30x5 mild steel straps or other approved in compliance with BS EN 845-1 at max.1800mm c/cs built into wall and extending back over min. 3 structural members.

Straps should be supported on noggings fixed between the joists. Nogging to be ½ depth of the joists. Provide packing between the wall and the first joists. Lay 100mm Rockwool mineral fibre quilt insulation min 10kg/m³ or equivalent between floor joists. Ceiling to be 12.5mm plasterboard with skim plaster set and finish. In areas such as kitchens, utility rooms and bathrooms, flooring to be moisture resistant grade in accordance with BS7331:1990.

Flooring to be 22mm t&g flooring grade plywood. Flooring to be continuous into eaves.

Insulation of ducks and pipes ~

All pipework in unheated spaces shall be thermally insulated -

a) With insulating material which has a thermal conductivity of not more than 0.045W/mK and a thickness equal to the outside diameter of the pipe or 40dia , whichever is the lesser or,
b) in accordance with the relevant recommendations of BS 5422: 1980.
Decoration ~

Ceilings to be taped, caulked and sealed prior to being skimmed.

Walls to be finished in emulsion - consisting 1 mist coat and 2 full coats.

Internally: Window boards, linings, stops, architraves and skirting etc. to be well pre-primed. Rub
down, fill and sand off, apply one oil based undercoat and two white coat gloss. Doors - prime
edges; apply one u/coat and two gloss coats to all surfaces.

Schedule of Finishes		
Item	Type	Colour
Ridge tiles	Dry Vented clay	Blue/black
Roof slates	Synthetic slate	Blue/black
Facia & soffits	UPVC	Brown
Gutters	UPVC	White
Down-pipes	UPVC	White
Walls	Smooth texture cement render	Textured cement tbc
Front and back door	UPVC	Blue/Red
Windows	UPVC	White
Window cills	Synthetic slate	Blue/black

~ Ledger ~

- HD — Mains powered with battery back up Heat detector
- SD — Mains powered with battery back up smoke alarm
- EF 15ltr — Extractor 15 litres per second
- EF 30ltr — Extractor 30 litres per second
- CO — Provide Carbon monoxide alarm in lounge arae located approx., 1-3m horizontally from the said appliance. Mains powered BS EN 50921 Type A CO alarms to be fitted with a sensor failure warning service.
- MOE — Indicates room (s) at first floor level that must have a means of escape window to which has a cill height between 8-1100mm from finished floor level, and have a clear unobstructed opening of at least 0.33m2 and be at least 450mm wide or 450mm high, which complies fully with Approved Document B of the Building Regulations.

BR	11	
VER 1	OCT 2016	All measurements must be checked on site. If there are any deviations the designer should be notified and written conformation sought.

The plans are the property of M. Baggott Chartered Surveyors and Architectural Service and written permission must be sought before passing any plans onto third parties.

Party Wall agreements should be put in place before any works commence on site.

No.	Date	Issue Notes

MARK BAGGOTT CHARTERED SURVEYORS AND ARCHITECTURAL PRACTICE

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Consultant
Mark Baggott

Project Title
Plot 3 and 4

Sheet Title
Proposed erection of detached dwelling on Plot (3) opposite Gilwen House, Waungilwen, Felindre. Carms. SA44 5YG

Project Manager	Project ID
N/A	PLOT 3 GILWEN HOUSE
Drawn By: MB	Scale: AS SHOWN
Reviewed By	Sheet No.
Date: 11/09/2016	1 of 3
CAD File Name: PLOT OPP GILWEN TERRACE	PAPER A1

Timber staircase ~

Dimensions to be checked and measured on site prior to fabrication of stairs. Timber stairs to comply with BS585 and with Part K of the Building Regulations
Rise - 13 equal risers totaling 2625mm.
Going - 12 equal goings of 225mm each.
Unobstructed width of flight - 800 as indicated on the drawings.

Tapered treads to have going in centre of tread at least the same as the going on the straight. Min 50mm going of tapered treads measured at narrow end. Doors which swing across a landing at the bottom of a flight should leave a clear space of at least 400mm across the full width of the flight

Stairs to have a clear headroom measured vertically from the pitch line of the flight of at least 2.0m.

Balustrade ~

Balustrade to be designed with no opening large enough to allow a sphere of 100mm to pass through and should not be climbable by children. Height of the balustrade to be 900mm measured above pitch line. Provide handrail to top of balustrade. Height of balustrade to landings to be 1100mm above finished floor level. Maximum pitch of stair to be 42 degrees.

Provide traditional style balustrade with 69x69 hardwood turned revel posts and moulded handrails and 32x32 softwood moulded balusters. Handrail finished in clear varnish and softwood gloss painted.

Acoustics ~

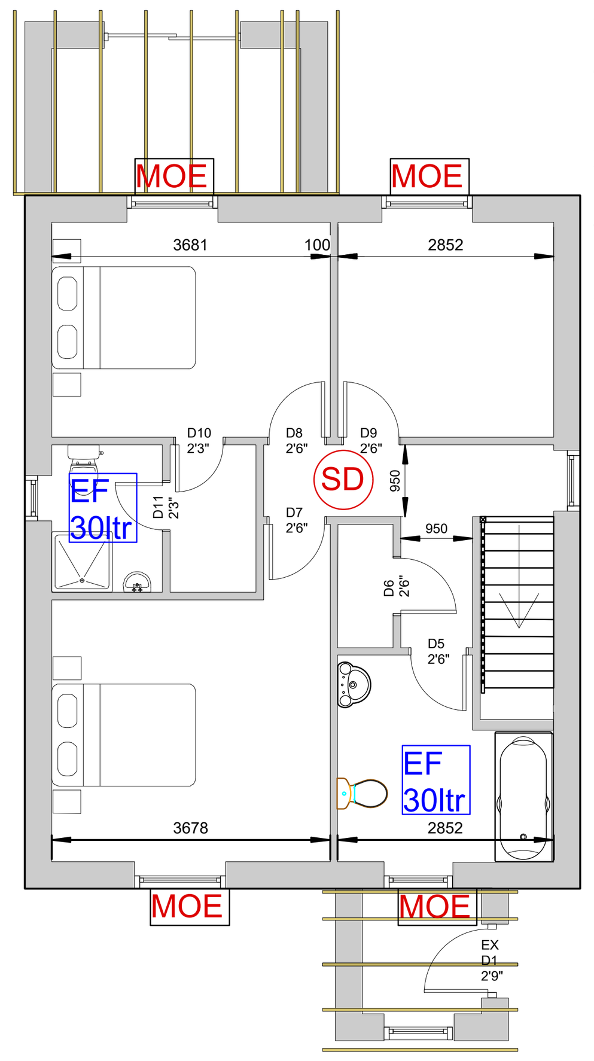
All separating walls and floors to be carried out in accordance with Part E of Building Regulations.
Walls and floors between dwellings to achieve the following standards –

New party walls and new upgrades to separating floors have to achieve a minimum of 43db airborne sound.

Floors to achieve a maximum 64db for impact sound.

Internal partitions to achieve 40 db.

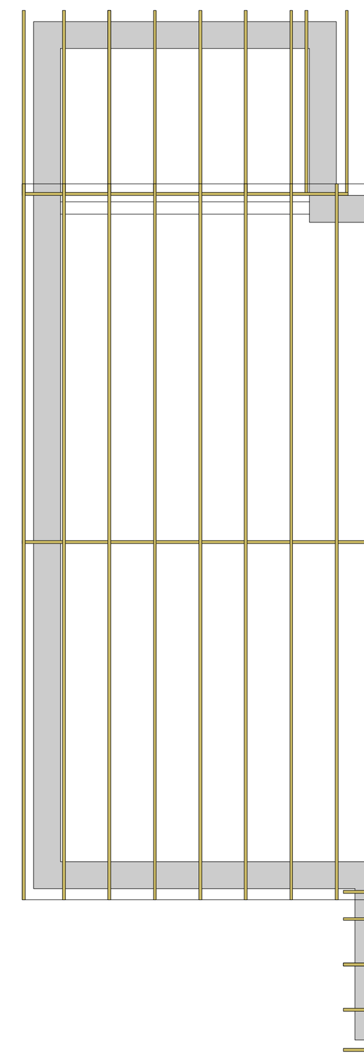
Proposed first floor, truss and roof plan
Scale ~ 1: 100

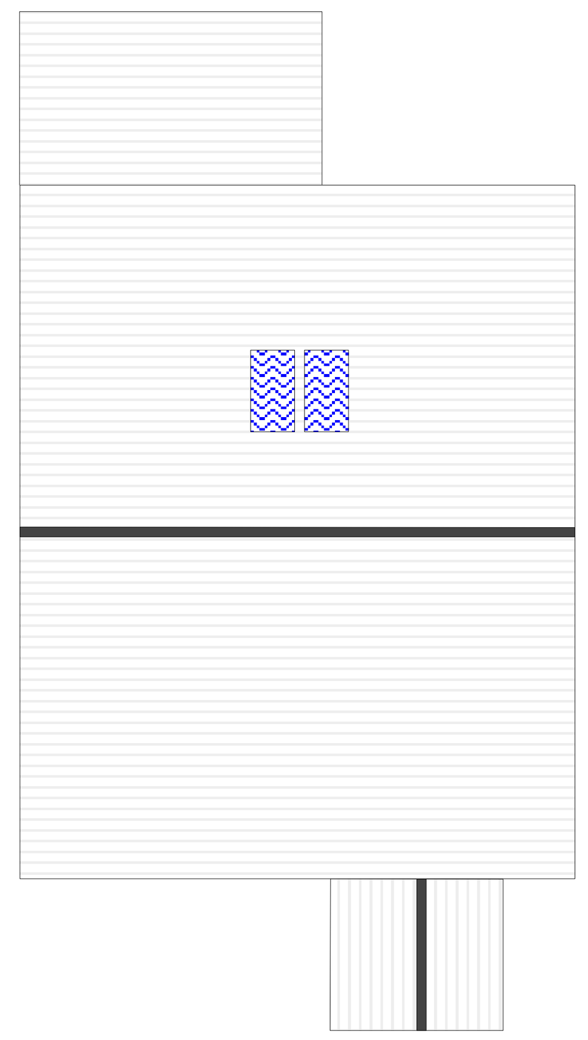


Electrical Plan ~

Bedrooms;

x4 double sockets in each room;
TV and satellite points in each room;
x1 pendant in each room;
two way light switches in each room;
x4 down lights for each bathroom;
Extractors in both bathrooms;
electric points for light above sink;
x2 pendant in hall area;





UKradon - Radon Risk Reports

Radon Risk Report for addresses in England and Wales
Issued by the Health Protection Agency and the British Geological Survey using Address Point®. Fee paid £3.00 + VAT. Email receipt issued by Secure Trading Ltd.

Address searched: Pleasant View, Velindre, Llandysul, SA44 5YG
Numerical grid reference for this address:
234670 East
239166 North
Date of report: 14/05/2010

Guidance for existing properties
Is this property in a radon Affected Area? - YES
The answer to the standard enquiry on house purchase known as CON29 Standard Enquiry of Local Authority; 3.13 Radon Gas: Location of the Property in a Radon Affected Area is:

Yes, this property is in a Radon Affected Area as defined by the Health Protection Agency.
The estimated probability of the property being above the Action Level for radon is:1-3%
The result covers a 75 metre zone around the grid references above to allow for uncertainties in locations.

This report informs you of the estimated probability that this particular property is above the Action Level for radon. This does not necessarily mean there is a radon problem in the property; the only way to find out whether it is above or below the Action Level is to carry out a radon measurement in an existing property.

Radon Affected Areas are designated by the Health Protection Agency. HPA advises that radon gas should be measured in all properties within Radon Affected Areas.

If you are buying a currently occupied property in a Radon Affected Area, you should ask the present owner whether radon levels have been measured in the property. If they have, ask whether the results were above the Radon Action Level and if so, whether remedial measures were installed, radon levels were re-tested, and the results of re-testing confirmed the effectiveness of the measures.

Further information is available from HPA or www.ukradon.org.

Guidance for new buildings and extensions to existing properties
What is the requirement under Building Regulations for radon protection in new buildings and extensions at the property location? - None
If you are buying a new property in a Radon Affected Area, you should ask the builder whether radon protective measures were incorporated in the construction of the property.

See the Radon and Building Regulations for more details.

Report design 22 January 2010. V 2010.03

elmhurst energy

Building Regulation Compliance Page 1 of 2

Property Reference: PLOT 3 OPP GILWEN TERRACE **Issued on Date:** 15.Dec.2016
Survey Reference: PLOT 3 OPP GILWEN TERRACE **Prop Type Ref:**
Property: PLOT 3 OPP GILWEN TERRACE, 1, WAUNGILWEN, VELINDRE, CARMS, CARMARTHENSHIRE, SA44 5YG

SAP Rating: 78 C **CO2 Emissions (t/year):** 3.16 **DER:** 20.86 Pass **TER:** 23.47 **Percentage DER<TER:** 11.10 %
Environmental: 80 C **General Requirements Compliance:** Pass **FEE:** 65.35 Pass **TFEE:** N/A **Percentage DFEE<TFEE:** N/A

CfSH Results Version: **ENE1 Credits:** N/A **ENE2 Credits:** N/A **ENE7 Credits:** N/A **CfSH Level:** N/A

Surveyor: MARK BAGGOTT, Tel: 01559371550 Surveyor ID: 6389-0001
Address: WAUNGILWEN, VELINDRE, VELINDRE, CARMARTHENSHIRE, SA44 5YF
Client:

Software Version: Elmhurst Energy Systems SAP2012 Calculator (Design System) version 3.07r06
SAP version: SAP 2012, Regs Region: Wales (Part L1A 2014), Calculation Type: New Build (As Designed)

SUMMARY FOR INPUT DATA FOR New Build (As Designed)

1a TER and DER			
Fuel for main heating:	Electricity		
Fuel factor:	1.55 (electricity)		
Target Carbon Dioxide Emission Rate (TER)	23.47 kg/m²		
Dwelling Carbon Dioxide Emission Rate (DER)	20.86 kg/m²		OK
2 Fabric U-values			
Element	Average	Highest	
External wall	0.20 (max. 0.21)	0.20 (max. 0.70)	OK
Floor	0.16 (max. 0.18)	0.16 (max. 0.70)	OK
Roof	0.13 (max. 0.15)	0.13 (max. 0.35)	OK
Openings	1.44 (max. 1.60)	1.60 (max. 3.30)	OK
2a Thermal bridging			
Thermal bridging calculated from linear thermal transmittances for each junction			
3 Air permeability			
Air permeability at 50 pascals:	15.00 (assumed)		
4 Heating efficiency			
Main heating system:	Heat pump with radiators or underfloor - Electric Worcester Greenstore System 7 kW		
Secondary heating system:	None		
5 Cylinder insulation			
Hot water storage	Nominal store loss: 1.90 kWh/day		
	Permitted by DBSCG 2.26		OK
Primary pipework insulated:	Yes		OK
6 Controls			
Space heating controls:	Time and temperature zone control		OK
Hot water controls:	Cylinderstat		OK
	Independent timer for DHW		OK
7 Low energy lights			
Percentage of fixed lights with low-energy fittings:	100%		
Minimum	75%		OK
8 Mechanical ventilation			
Not applicable			
9 Summertime temperature			
Overheating risk (Wales):	Not significant		OK
Based On:			
Overshading:	Very little		
Windows facing North East:	4.63 m², No overhang		
Windows facing South East:	1.47 m², No overhang		
Windows facing South West:	12.26 m², No overhang		
Windows facing North West:	0.64 m², No overhang		

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Building Regulation Compliance Page 2 of 2

Air change rate:	8.00 ach
Blinds/curtains:	None
10 Key features	
None	

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Internal stud partitions ~

89mm x 38mm softwood treated timbers studs at 400mm c/cs with 50 x 100mm head and sole plates and solid intermediate horizontal noggins at 1/3 height or 450mm. Provide min 10kg/m³ density acoustic soundproof quilt tightly packed (eg. 100mm Rockwool or Isowool mineral fibre sound insulation) in all voids the full depth of the stud. Partitions built off doubled up joists where partitions run parallel or provide noggins where at right angles, or built off DPC on thickened concrete slab if solid ground floor.Walls faced throughout with 12.5mm plaster board with skim plaster finish. Taped and jointed complete with beads and stops.

Roof trusses ~

Details of all trussed rafters, as designed by the manufacturer, to be forwarded to Building Control for approval, prior to erection on site - in addition, provide an overall roof plan showing the truss layout and all necessary bracing and wall attachment details to show that the roof and walling will act as a composite structure to meet the requirements of the building regulations A1.

Trussed rafters at 600c/cs with the design and manufacture to be by a specialist sub-contractor who is a member of the Trussed Rafter Association (TRA).

Design and manufacture shall meet the requirements of the following standards;

Structural use of timber;
BS 5268-2:2002 - Code of practice for permissible stress design, materials and workmanship.
BS 5268-3:1998 - Code of practice for trussed rafter roofs. Loading for buildings;
BS 6399-1:1996 - Code of practice for dead and imposed loads. AMD 13669 2002.
BS 6399-2:1997 - Code of practice for wind loads. AMD 13392 2002, AMD 14009 2002.
BS 6399-3:1998 - Code of practice for imposed roof loads. AMD 6033 1988, AMD 9187 1996, AMD 9452 1997.

All timber to be pressure impregnated by an approved process.

100x50mm wall-plate to be strapped at 900c/cs with galvanised mild steel straps.
Roof bracing to be in accordance with TRADA Technical Data Sheet 5 and to BS 5268.
Adequate blocking pieces shall be provided between rafters at wall restraint ties to transmit compression forces.

General ~

The contractor is to ensure that proposed Works will be executed in accordance with any relevant. Conditions appended to the Local Planning Authority's Decision Notice; the current Building Regulations and N.H.B.C. Standards; the requirements of the Fire Officer; the Institute of Electrical Engineers handbook (current edition); the requirements of the local Water Authority. Materials and workmanship should, where applicable, comply with the current British Standards Institute specifications and Codes of Practice. Where such guidance does not exist, materials and workmanship should conform to established good practice and Regulation 7 of Building Regulations.

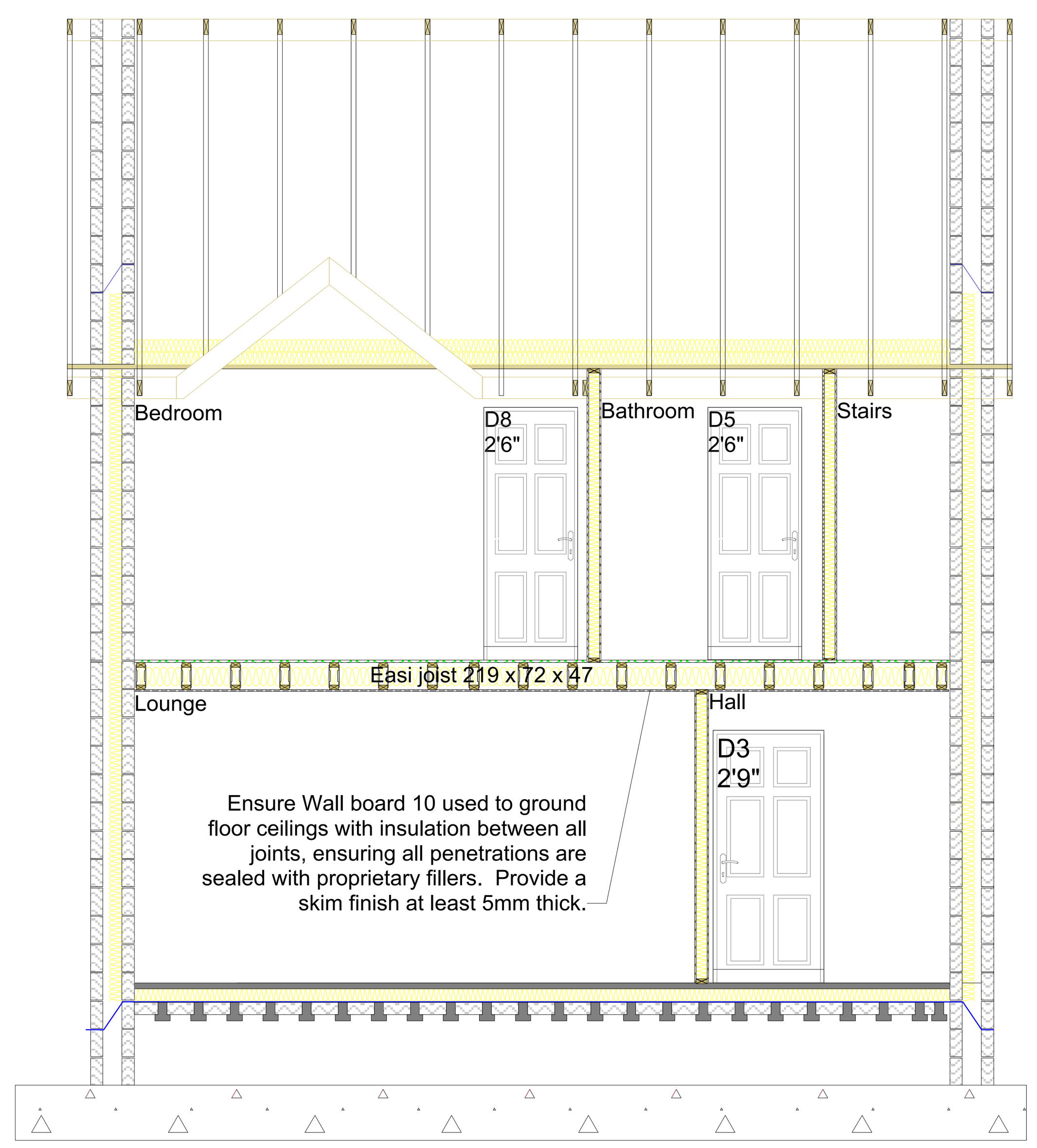
All Materials and components must be suitable for their intended purpose and location and must be manufactured and installed in accordance with all Relevant, Current British Standards and codes of practice, Building Control requirement and manufacturer's specification.

The location of existing services should be established prior to the commencement of any works - if discovered to be at variance with that shown on the Engineering drawings, the Architect and Engineer must be notified immediately.

The contractor is to check all dimensions, both internal and external, prior to the commencement of any works and the ordering of materials - any errors must be reported to the design team. Where proprietary materials, fixtures or fittings are used, they must be placed / fitted strictly in accordance with the manufacturers written instructions and published details pertaining to circumstance in which they are to be used.

This specification is to be read in conjunction with all other drawings, clients standard specification, Structural Engineers and Mechanical & Electrical Engineers design. Any reference to an Approved Document in this Specification relates to the relevant Approved Document of the Building Regulations.

Section Plan
Scale ~ 1:50



Ensure Wall board 10 used to ground floor ceilings with insulation between all joints, ensuring all penetrations are sealed with proprietary fillers. Provide a skim finish at least 5mm thick.

Wall make- up to achieve a U value of 0.21W/m2k ~

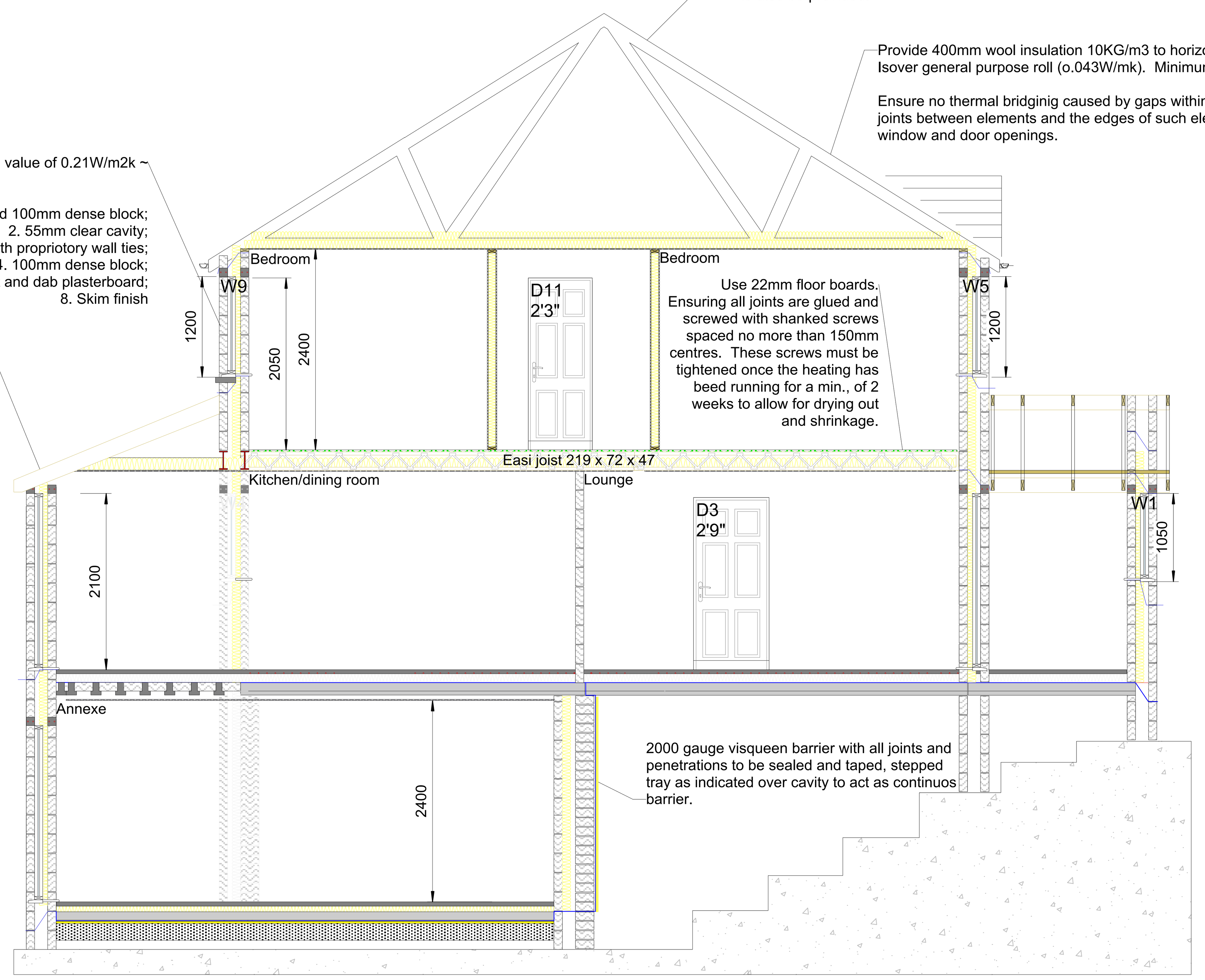
1. Rendered 100mm dense block;
2. 55mm clear cavity;
3. 80mm insulation fixed to inner-leaf with propriotory wall ties;
4. 100mm dense block;
7. 12.5mm dot and dab plasterboard;
8. Skim finish

Pre stressed 150 x 100 stressline concrete lintels to be provided with weep holes and stepped DPC over window heads. Provide vertical DPC to window alowing a 5mm projection and fix DPC over to tie into window, ensure DPC installed under cill. Provide mastic joint to cover vertical DPC lapping window frame.

Trusses to be designed by truss manufacturer, bracing schedule to also be provided.

Provide 400mm wool insulation 10KG/m3 to horizontal part of ceiling, typically Isover general purpose roll (o.043W/mk). Minimum U Value 0.16 w/m2k.

Ensure no thermal bridginig caused by gaps within the various elements, at the joints between elements and the edges of such elements such as around the window and door openings.



Use 22mm floor boards. Ensuring all joints are glued and screwed with shanked screws spaced no more than 150mm centres. These screws must be tightened once the heating has beed running for a min., of 2 weeks to allow for drying out and shrinkage.

2000 gauge visqueen barrier with all joints and penetrations to be sealed and taped, stepped tray as indicated over cavity to act as continuos barrier.

Lintels/ Beams ~

Proprietary lintels/ steel beams to be provided over all structural openings including meter boxes in accordance with drawings and schedules. Lintel references are generally those of I.G. Lintels Ltd. And denote pressed-steel type lintels designed in accordance with B.S.5977-2, galvanised to B.S.729.
Any alternatives must be approved and satisfy all of the above requirements.
Where I.G. references are not given, lintels to be as detailed in Structural Engineer's calculations. Cavity trays/ damp proof protection must be provided over all external opening either separately or as a combined part of lintel.

Minimum 2 No. weep holes per opening to be provided spaced at maximum 450 ctrs. All lintels/beams must bear on full (NOT CUT) blocks and must be firmly bedded in mortar. End bearings to be 150mm minimum (any reduction must be to satisfaction of Structural Engineer). Pad stones to be provided where necessary as per Structural Engineer's requirements.

Manufacturer's recommendations for providing adequate fire resistance should be followed. Cold bridge paths should be avoided and adequate insulation measures incorporated, depending upon lintel profile, in accordance with manufacturer's specification.Steel beams to be zinc-coated and painted with bitumen.

~ Floor make-up P/A - 0.62~

1. Bison beams;
2. Slurry mix brushed into beams;
3. 1200 gauge Radon Barrier;
4. 100mm Celotex Insulation with 25mm Celotex Edge board;
5. Seperatiing layer;
6. 50mm concrete screed encapsulating underfloor heating pipes.

U value 0.16 W/m2/k

No.	Date	Issue Notes
BR VER 1	11 OCT 2016	All measurements must be checked on site. If there are any deviations the designer should be notified and written conformation sought. The plans are the property of M. Baggott Chartered Surveyors and Architectural Service and written permission must be sought before passing any plans onto third parties. Party Wall agreements should be put in place before any works commence on site.

MARK BAGGOTT CHARTERED SURVEYORS AND ARCHITECTURAL PRACTICE

Design Firm
Mark Baggott Chartered Surveyors & Architectural Practice
p. 01559371550
m. 07717292879
e. mark@baggottmark.co.uk

Consultant
Mark Baggott

Project Title
Plots 3 & 4

Sheet Title
Proposed erection of detached dwelling on Plot (3) opposite Gilwen House, Waungilwen, Felindre. Carms. SA44 5YG

Project Manager: N/A	Project ID: PLOT 3 GILWEN HOUSE
Drawn By: MB	Scale: AS SHOWN
Reviewed By:	Sheet No.: 2 of 3
Date: 11/09/2016	PAPER A1
CAD File Name: PLOT OPP GILWEN TERRACE	