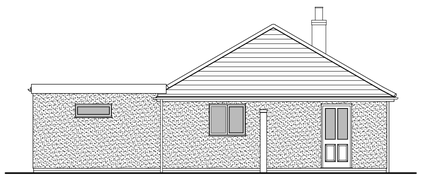
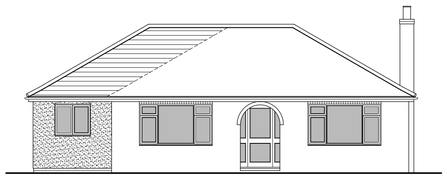


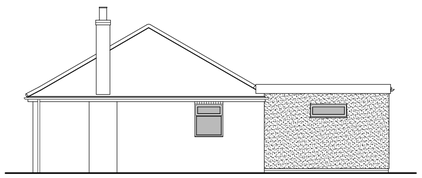
EAST ELEVATION - PROPOSED



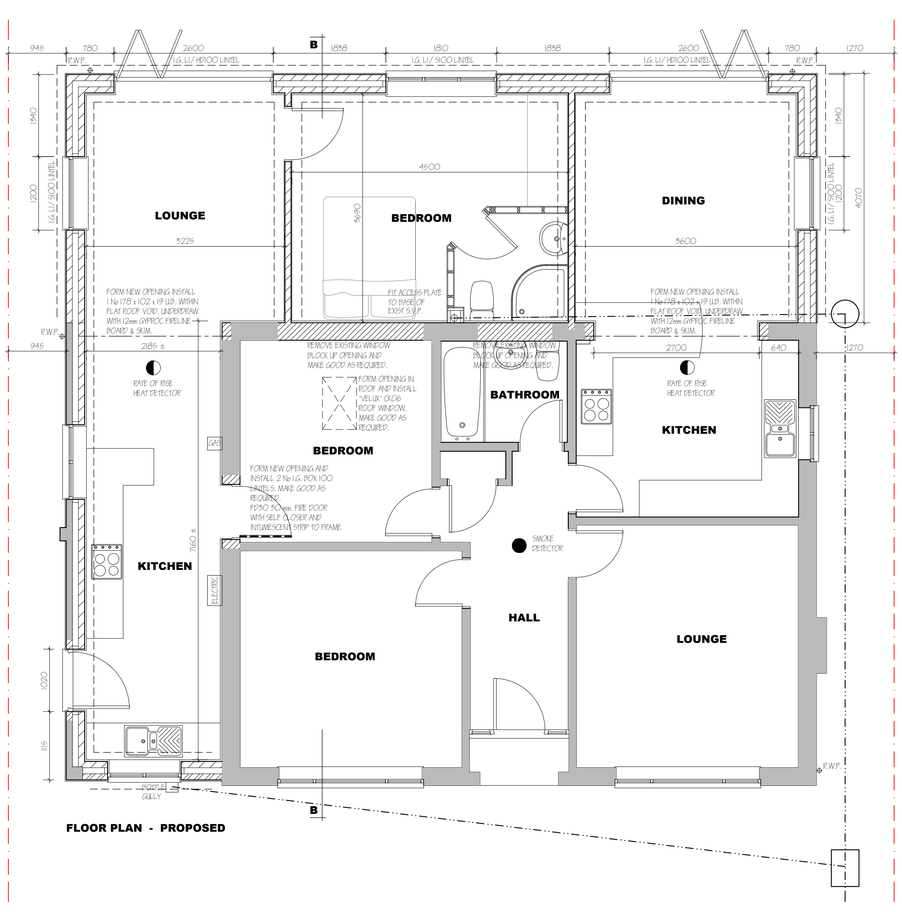
NORTH ELEVATION - PROPOSED



WEST ELEVATION - PROPOSED



SOUTH ELEVATION - PROPOSED



FLOOR PLAN - PROPOSED

PITCHED ROOF CONSTRUCTION.
Concrete interlocking tiles to BS EN 490-2011. Laid in accordance with B.S 5534:2014 on 25 x 38 softwood treated battens on tyvek® supro BBA certificate: 08/4948 or similar over rafter unsupported breather membrane fitted in full accordance with manufacturers instructions in all cases to be lapped by 150mm vertically and 300mm horizontally, Tiles to be laid with min. head lap of 75mm and to be fixed in accordance with reagard to wind speed, roof pitch and exposure catagory as detailed in B. S 6399. Pt 2. Twinaplate specialist made prefabricated roof trusses to comply with B.S. 5268 part 3 1988. TRUSS CALC'S TO BE SUBMITTED TO L / A. MIN. 28 DAYS PRIOR TO ERECTION. Trusses to be at 600c/ c to a pitch to match Existing. 38 x 100 ridge node binder 38 x 100 ceiling binders: All trusses to be strapped to wall plate by 30 x 2.5 galvanised metal straps acting as anchor and lateral restraint straps at max. 1.5m c/ c. Note: provide solid bridaing beneath straps: 50 x 100 wall plate bedded on sand and cement: 25 x 175 fascia boards: 6mm ext. grade plywood soffit. complete with 10mm wide continuous air gap and fly proof screen: All structural timber to be min.SC5 grade. stamped 'DRY' or 'KD' to indicate moisture content of 20% or less all in accordance with BS. 4978. Where span of trussed rafter exceeds 9.0m provide additional bracing within the plane of the webb in accordance with Truss Plate Assoc. tech. bulletin sheet 4.

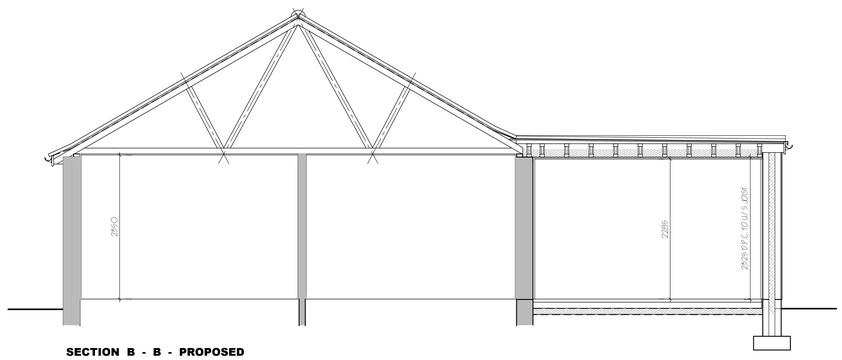
FLAT ROOF CONSTRUCTION.
'Polyroof' IB9 on 20mm plywood decking. softwood firring pieces to fall min. 1:100. 219mm deep Gang-nail 'Eco'-Joists or similar at. 400 centres with 50 x 2.5 m.s. lateral restraint and wall plate straps at max. 1.5 m c/ c : 125mm' Knaspan Kooltherm 107' insulation board laid between joists with min 50mm air gap over and 92.5mm ' Knaspan Kooltherm 118' board under joists.
25mm wide continuous air gap with fly screen.
'U' value of 0.18 W/ m2K.

CEILINGS / INSULATION.
Roof Level: Flat ceilings lay 400mm total thickness of Knauf Earthwool Loft Roll 40 glass mineral wool insulation. 100mm between joists & 300mm (2 layers 150mm) over Joists 15mm Gyproc wallboard with skim finish.
'U' value of 0.10 W/ m2 K.
Ensure 50mm air gap over all insulation. All joints to be taped and filled. Provide access trap to roof space: opening to be lined with 25 x 25 planted stops: Access panel to be 12mm ply with layer of 12.7mm Fireline board fixed to face. 100mm ,ladder to top surface. Provide slide bolt fastening & draught seal all round

WALLING.
300mm cavity walling to consist of 'face brickwork to B.S. 3921:1974 for clay bricks and B.S. 187:1978 for calcium silicate bricks: 100mm cavity: Build into cavity 100mm Isover Hi Cav 32 (Thermal Conductivity 0.052W/ mK) or similar cavity wall batt insulation in accord. with makers instructions and aairement cert.' No.90/ 2465. 100mm Tarmac Toplite Gt1.
2.9 N/ mm2 (Thermal Conductivity 0.11W/ mK) or similar solid insulation blocks.
'U' value 0.25 W/ m2K .
In lower cavity to 450mm above F.F.L. build in 100mm "Jabfill HP" insulation board (Thermal Conductivity 0.52W/ mK)
'U' value 0.26 W/ m2K
Cavity walls tied together using stainless steel vertical twist ties set 750 horizontally and 450 vertically all to
B.S. EN 845 wall ties positioned at 300 vertical centres at all unbanded closures of cavity: Close cavities with "Thermabate" preformed closer and provide bitumen felt DPC to C.P. 121: All work to be carried out in accordance with BS Code of Practice 121 Pt 1. 1973. Internal walls of 100mm Tarmac Toplite Standard solid insulation blocks.
Movement joints to be installed in blockwork in accordance with B.S. 5628 pt. 3 1985.
Internal walls to receive 15mm Render & Set with skim finish.

GROUND FLOOR CONSTRUCTION.
Strip all vegetable soil and lay floor as follows: 50mm sand and cement screed, on 100mm concrete over site: Concrete mix C20 in non aggressive soils and FND2 mix in sulphate bearing soils to B.S. 5328: pt1 1991 on 500g polythene D.P.M. on 120mm ' Knaspan Kooltherm K105" insulation board on 1200g polythene D.P.M. lapped continuous with D.P.C. by min. 100mm on 150 blinded and consolidated hardcore.
Garage floor to be as above except sand cement / screed and insulation:
'U' value 0.15 W/ m2K

FOUNDATIONS.
Under external walls as shown provide 225 x 6000 strip concrete foundations and under 100 walls provide 225 x 450 all C20 mix to B.S. 5328: pt1 1991. All foundations taken down to bear on load bearing strata min. depth of 450mm below ground level to top of foundations: should shrinkable soil conditions be faund on site then foundations shall be taken down to a minimum depth of 1000mm below ground level. In all cases foundations are to be designed in accord with N.H.B.C. Foundation Practice Guidance Notes where localised trees and shrubs are present.



SECTION B - B - PROPOSED

SUB STRUCTURE WALLING.
100mm dense concrete blocks to B.S. 6073 pt.1 1981: DPC to external wall positioned in accordance with CP 102 min. 150 above finished ground level: Weak mix concrete infill to base of cavity no closer than 225 to DPC. All brickwork below DPC to be F.L. quality.

FLUE CONSTRUCTION
INTELS.
All lintels to be as manufactured by Messrs. I.G. Limited
I.G. Hi-Therm or similar and to be installed in accordance with makers' instructions, all to have min. end bearing of 150mm and at external positions to have cavity tray D.P.C. to CP. 121: Internal lintels to be I.G. 100 Box type. Lintels in aarcade to be underlined with 12.7 fire line board or receive 12mm render and skim. Provide Perp-end weep holes and stop ends to cavity tray

FOUL DRAINAGE
Foul drainage pipes to be 110mm dia. UPVC, to B.S. 4660:1989 flexibly jointed and laid to makers' instructions to a fall of 1:80 bed and surround with 100mm pea gravel: Where pipes pass under floors encase in 150mm pea gravel: Where pipes pass under drives surround in 150mm concrete with flexel joints to correspond with joints in pipe work. Provide 65 x 100 pre-stressed concrete lintel bridging where pipes pass through walls, provide compressible filler around pipe, opening marked both sides of wall with ridged sheet material: Soil and vent pipes to be 110mm dia. PVC to B.S. 4514: 1985 and to extend 900mm above window head terminating with PVC balloon. Waste pipes to be generally 40mm dia. If over 3.0m long run increase to 50mm dia. All PVC to B.S. 5955: 1979 complete with roddling eyes at every change of direction: Bath, basins and sink to have 75 deep seal traps: Shower to be raised on 150mm plinth with access plate to anti-syphon trap and 50mm waste. All redundant drains to be grubbed out or filled with lean-mix concrete. Condensation drainage from boiler flues to discharge via min. 22mm diameter pipe work through a 75mm condensation trap. Alternatively an additional trap should be provided externally to provide the required seal, an air gap should be provided between the boiler and the trap.

SURFACE WATER DRAINAGE.
112mm dia. half round rainwater gutters to 68mm dia. rainwater pipes: 110mm dia. underground pipes flexibly joined to a fall of 1:80 pipes bedded and surrounded in pea gravel and discharge to 1.2m dia. soak away min. 5.0m to edge from dwelling. All footpaths and drives to slope away from building.

GLAZING.
Double glaze property throughout with p.v.c.u windows BFRC rating in BAND C or better.
All windows and doors to have min. 'U' value of 1.4 W/ m2K or better. i.e. 'Saint-Gobain Glass UK Ltd PLANITHERM TOTAL +' with 16mm air gap.
All excluding aarcade.
All glazing between F.F.L. and 800mm high and between F.F.L. and 1500mm high in doors and side lights to be safety glass to B.S. 6206. All windows/ doors to be draught sealed.

VENTILATION.
All windows to have opening lights that open to
30 degrees or more and to provide the equivalent of 1/ 20th the floor area of each room. Should opening lights be to less than 30 degrees provide the equivalent of 1/ 10th the floor area of each room. Background ventilation to windows to provide a minimum total of 60,000 mm. sq. permanent free air ventilation per dwelling. Based upon a minimum of 5,000 mm. sq per habitable room and 2,500 mm. sq per kitchen, utility room, bathroom, en-suite, wet room and cloak room.
The following rooms to have in addition to the above wall mounted mechanical extractor fan (Specific Fan Power (SFP) to be no worse than 0.5W.L/ s) Recommended extract rates:
Kitchen min. 60 litres per second.
Utility rooms min. 30 litres per second.
Bathroom/ En-suite min. 15 litres per second, which may be operated intermittently and to have a 15 minute over-run.
W.C. min. 6 litres per second with 15 minute over-run.
Electrical Engineer to provide L/ A. Building Control with a suitable Commissioning Certificate upon completion.
Flow rate test results to be deposited with L A Building Control no more that 5 days after final test.

SPACE HEATING.
Extend and upgrade existing gas fired system as required
The heating system should be controlled by time and temperature zone controls with compatible delayed start thermostat. Time and temperature control is defined as either A. Separate plumbing circuits, either with their own programmer, or separate channels in the same programmer Or B. Programmable TRV's or communicating TRV's that are able to provide time and temperature function.
Hot water system to be thermostatically controlled with timer switch.
Hot Water Storage - 2901 HWSC declared loss, no greater than 1.67kWh/ 24hrs.
All hot water pipe work to be insulated to B.S. 5422:2001.
Heating flow rate temperature is to be between 36 - 45 Deg. C
Heating Engineer to provide L/ A. Building Control with a suitable Commissioning Certificate in accordance with that published as part of the Benchmark Code of Practice upon completion. And to confirm that the system has been designed and installed to the guidance of the BRE Trust report 1999
All un-vented hot water systems and packages to be fitted with a minimum of two independent safety devices, these shall be in addition to any thermostats provided on the system.
The system or package shall be indelibly marked with the following details, which shall remain visible after installation.
a. The Manufacturers name and contact details.
b. The Model reference details.
c. The rated storage capacity of the storage water heater.
d. The operating pressure of the system and the operating pressure of the expansion valve.
e. Relevant operating data on each of the safety devices fitted.
f. The maximum primary circuit pressure and flow temperature of indirect hot water storage system units or packages.

SMOKE / HEAT DETECTORS.
Provide ceiling mounted mains operated self-contained Smoke Alarms to BS 5839-1:2013 in positions shown on plan.
Provide ceiling mounted mains operated self-contained Rate of Rise Alarms to BS 54-9 Type 'R' in positions shown on plan.
Detectors should be sited a maximum 5.0m from any Bedroom door and 7.0m from any other door. And be sited a minimum of 300mm from any wall or light fitting.
Where more than one detector is to be provided, they will be interconnected. All permanently wired to a separate fused circuit at distribution board.

ELECTRICAL INSTALLATIONS.
All electrical work to meet the requirements of Approved Document Part P (Electrical Safety) and must be designed, installed, inspected and tested by a person competent to do so.
All electrical switches, socket outlets, telephone and T.V. points to habitable rooms to be positioned at appropriate heights between 450mm & 1200mm from F.F.L.
Electrical consumer units to be positioned so that switches are mounted between 1350mm & 1450mm above F.F.L.
Prior to completion of the works the Local Authority must be satisfied that either: -
An electrical installation certificate issued under a competent person's scheme has been issued.
OR
An appropriate installation certificate has been issued for the work and that it has been signed by a person competent to do so.

LIGHTING.
To all habitable rooms provide energy efficient light fittings capable only of taking lamps having a luminous efficacy greater than 45 lumens per circuit watt and a total output greater than 400 lamp lumens.
External lighting is to be fitted with Dawn-Dusk or movement sensors and capable only of taking lamps having a luminous efficacy greater than 45 lumens per circuit.
All lighting to be in accordance with the Domestic Building Services Compliance Guide.

WATER
Provision is to be made for wholesome water to be drawn off wherever drinking water is drawn off. Also, to any wash basin, bidet, fixed bath or shower in any room containing a sanitary convenience.
Water of suitable quality is to be provided to all sanitary fittings with flushing devices. Pressure, flow rate and reliability to be sufficient for operating all sanitary appliances.
Potable water is to be supplied by any statutory water undertaker or licensed water supplier.
Potential consumption of wholesome water is to be limited to be not more than 125 litres per person per day. Water efficiency calculations are to be submitted to L/ A Building Control not later than 5 days after work is completed.
Recommendations:

Bath	150 litre	max capacity
Showers	Flow Rate	10 litre/ minute
Taps	Flow Rate	5 litres/ minute
W.C.	Dual Flush	Full 6litre Half 3 litre
Washing Machine	9.1 litre/ kg	Dry Load
Dish Washer	0.9 litre/ place setting	

Hot water supply to any fixed bath to be regulated to ensure maximum temperature of delivered water will not exceed 48 deg.C. by the use of an in-line blending valve or other appropriate device.

PART Q.
All easily accessible door sets (Inc. Garage & Communal Entrance) that provide access to a Dwelling or Building containing a Dwelling should be secure door sets to the following standards:
Manufactured and Designed to meet the security requirements of British Standard Publication PAS 24:2012 or
Manufactured and Designed in accordance with Approved Document Q Appendix B.
Ground Floor, Basement and other easily accessible windows (Inc. Rooflights) should be secure windows in accordance with Approved Document Q para. 2.1 and 2.5. Windows should be made to a design that has been shown by test to meet the security requirements of British Standard Publication
PAS 24:2012

LIMITATIONS.
This drawing is limited in the amount of information contained and does not purport to contain a full specification of the works. It is solely for the purpose of obtaining Planning/Building Regulation approval.
The drawing must not be used for any other purpose than above.
All dimensions shall be taken from site from actual work. Under no circumstances shall measurements be scaled from this drawing for construction or ordering purposes.
All given dimensions shall be checked by the Builder/Contractor and will be his responsibility from commencement of site works.
The works will not be supervised or inspected on site by C.A.D. or any representative thereof. It is the client or their appointed agents responsibility to control workmanship, substitution of materials, adherence to specification, variations to contract etc. Also to ascertain sub-soil suitability prior to the construction of any foundations.

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STANDARDS.
All materials to be new unless otherwise stated and all components and materials etc. to be used fitted and installed etc. in strict accordance with manufacturers instruction and relevant Code of Practice.
Materials shall conform to appropriate British Standard Specification or BBA Certificate or European Code equivalent.

HEALTH & SAFETY.
The Employer/Client shall ensure that the selected contractor is conversant with and adopts all measures necessary to achieve compliance with Health & Safety legislation for Building Sites and Work Places.
The Employer /Client is advised that should the works need to comply with the Construction Design and Management Regulations on independent Planning Supervisor will be required.

SCOPE OF THE WORKS.
The works shall comprise of all that is shown on the drawing and details. Work that may not be specifically shown but may be reasonably inferred as necessary to carry out the works shall be deemed to be included.

LABC CONSTRUCTION DETAILS
Available at: -
www.labc.co.uk/ registration-schemes/ constructiondetails

E1MCFF4	-	Lintel
E3MCFF4	-	Cill
E4MCFF4	-	Jamb
E5MCFF9	-	Beam & Block Floor
E5MCFF22	-	Floor Slab. Ins. Under
E6MCFF4	-	Intermediate Floor
E10MCFF4	-	Eave - Flat Ceiling
E11MCFF4	-	Eave - Sloped Ceiling
E12MCFF4	-	Gable - Pitched Roof
E16MCFF4	-	Corner - Full Fill
E17MCFF4	-	Inverted Corner - Full Fill
E18MCFF7	-	Party Wall - Ext. Wall Junction
P1PCFF2	-	Party Wall - Floor Junction
P4PMCFF2	-	Party Wall - Roof Junction

ROOM DIMENSIONS ARE INTERNAL OF WALL FINISHES

revision	date	init.	revision details.

COOPER ARCHITECTURAL DESIGN
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Client.
D GREGORY

Project.
PROPOSED EXTENSION & ALTERATIONS
76 LANGWITH GARDENS
HOLBEACH
LINCS
PE12 7JL

Drawing.
PROPOSED
FLOOR PLAN - SECTION - ELEVATIONS

Scale	1:50 1:100 @ A1	Drawing No.	2110-02
Date.	DEC. '21	Drawn.	J.C.