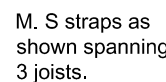
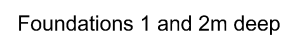


Foundation to be 1m deep in light grey area.



M. S straps as shown spanning 3 joists.



Roof
Single membrane flat roof system and trim. 150mm Kingspan on vapour barrier on 19mm exterior grade plywood on 12.5 foil backed plasterboard. U-value to archive 0.15W/m2K.



- Ground to be prepared for new works by removing all unsuitable material, vegetable matter, and tree or shrub roots to a suitable depth to prevent future growth.
- Incorporate random **protective measures** where random risk is identified, in accordance with BS 8485:2015 + A1:2020.
- Conduct **contaminated land risk assessments** following latest CL181 guidance.
- Seal up gaps, off, disconnect, and remove existing redundant services as necessary, following utility providers' and health & safety requirements.
- Reasonable precautions must be taken to avoid danger to health and safety caused by contaminants and ground gases (e.g., landfill gases, radon, vapours) on or in the ground covered, or to be covered by the building, following C184 C758 guidance where applicable.

- Existing structure including foundations, beams, walls, and lintels carrying new and altered loads are to be exposed and checked for adequacy prior to commencement of work and as required by the Project Structural Engineer or Building Control Surveyor, per BS EN 1990 (Eurocode 0) and associated Eurocodes.

- Supply and install new structural elements such as new beams, two storey floor structure, bearings, and partitions in accordance with the Structural Engineer's calculations and details per Eurocode standards.
- New steel beams to be encased in **60 minutes fire resisting construction** (upgraded from 30 minutes) using suitable materials such as intumescent coatings or fireboard encasement, complying with Part B 2022 guidance.
- Openings and Wall Returns: An opening or recess greater than 0.1m² shall be at least 665mm from the supported wall (measured externally).

- 600mm x 750mm trench in road surface at grade S12 or better.
- All foundations to be a minimum of 100mm or otherwise specified below ground level or deeper to suit site conditions, frost protection, and local ground conditions, agreed on site with Building Control Surveyor.
- Constructed in accordance with **Building Regulations 2010 A1/2**, BS 8004:1986 *Code of Practice for Foundations*, and updated geotechnical design standards per BS EN 1997-1 (Eurocode 7).
- Foundations to be constructed below the invert level of any adjacent drains.
- Use sulphate resistant cement compliant with BS EN 197-1 if required by soil conditions.
- Notify Building Control Surveyor and consult structural engineer if adverse soil conditions or nearby trees are found.

- Construct ground floors with 75mm reinforced screed over 1200 gauge DPM on 100mm TB3000 Celotex insulation, on 1200 gauge DPM over 150mm hardcore.
- Meet the minimum U-value of 0.15 W/m²K for floors as required by **Part L 2021**.
- Use high-quality, environmental-friendly insulation materials compliant with BREEAM or equivalent sustainability standards.
- All DPM joints to be fully sealed as per manufacturer instructions to ensure airtightness.

- Walls Below Ground
 - New walls below ground level to be Class A blockwork or semi-structural brickwork in 1:4 masonry cement or approved equivalent
 - Single skin Class A blockwork
- Cavity Wall
 - Provide horizontal polymer strip (Hyolod) DPC to solid block wall at minimum 150mm above external ground level
 - New DPC to be made continuous with existing DPCs and floor DPM
 - Vertical DPC installed at all cavity closures (reveals, abutments).
 - Internal wall finish: 12.5mm standard plasterboard dry lining on plaster dabs, with lightweight plasterboard finish.
- Attaching New Wall to Existing Wall
 - Use proprietary stainless steel profiles to tie the new walls to existing construction, maintaining airtightness and weather resistance.

- Minimise thermal bridging at junctions and around openings. Provide continuous insulation and seal all gaps to meet airtightness target of $\leq 5 \text{ m}^3/\text{h}/\text{m}^2$ @ 50Pa.
- Ensure extension constructed to minimise unwanted air leakage through fabric.

- Flat roof construction using EPDM flat roof membrane and trim, 25mm OSB boarding, 150mm Kingspan insulation on 19mm exterior grade plywood on rafters.
- Fixings: straps secured with 100mm spit hit screws and solid nogginns.
- Internal finish: 12.5mm foil-backed plasterboard and skim.
- Roof must meet a minimum U-value of $0.13 \text{ W/m}^2\text{K}$ at rafter or ceiling level per Part L 2021.
- Include vapour control and airtightness membranes with taped joints.
- Roofing materials to comply with BS 8217:2017 for flat roofing.

- All electrical work to meet **Part P** electrical safety requirements.
- Design, installation, inspection, and testing by competent person registered under a competent person self-certification scheme.
- Work to comply with **BS 7671:2018 + A2:2022 (IET Wiring Regulations)**.
- Provide appropriate **BS7671** Electrical Installation Certificate, copy to be issued to Building Inspector.

- Install low energy lighting with a minimum of 80% LED or equivalent energy-efficient light fittings throughout.
- At least three energy efficient fittings per four fittings in main dwelling spaces to comply with Part L energy requirements.
- Lighting controls such as presence detectors or daylight dimmers encouraged.

- No connection to hot water services from existing, providing new TRV or radiator.
- Heating system to be designed, installed, tested, and certified by GASA registered specialist.
- Boilers to have a minimum ErP efficiency class A or better, (SEDBUK >92%.
- System fitted with thermostatic radiator valves, zone controls, and boiler control interlocks.
- Installation compliant with Approved Document L1B and SAP 10.2 methodology.
- No combustible materials within 50mm of boiler flue.

- All glazing in critical locations to be toughened or laminated safety glass to BS EN 12600:2002 and Approved Document N (2022).
- Includes glazing within 1500mm above floor in doors and side panels within 300mm of door opening, and within 800mm above floor in windows.

- Energy Rating Band B or better.
- Double glazing with 16mm argon gap and soft low-E glass standard.
- Door and window openings limited to 25% of the extension floor area plus the area of any existing openings covered by the extension.

Door U-Values

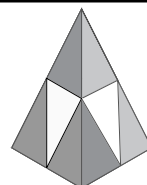
- New and replacement doors to achieve U-value of 1.6 W/m²K or better.
- Glass to be toughened or laminated safety glass to BS 6206 and Approved Document N.

- Background ventilation via controllable trickle vents to BS EN 13114-3 within window frames: minimum 5000mm² for habitable rooms and 2500mm² for kitchens, bathrooms, WCs, and utility rooms.
- Purge ventilation through openable windows/rooftops with openable areas exceeding 1/20th of floor area if opening >30°, or 1/10th if opening <30°.
- Internal doors to kitchens, bathrooms, WCs, and utility rooms to have a 10mm undercut for air circulation.
- Ventilation system designed in accordance with the **Domestic Ventilation Compliance Guide (2023)**.

Underground Drainage
Underground drainage to consist of 100mm diameter UPVC proprietary pipe work to give a 1:40 fall. Surround pipes in 400mm pea shingle (900mm under drives). Shallow pipes to be covered with 100mm reinforced concrete slab over compressible material. Provide rodding access at all changes of direction and junctions. All below ground drainage to comply with BS7158 and BS801.

- Rainwater gutters: new 110mm UPVC half-round gutters connected to 80mm UPVC downpipes.
- Inspection chambers/manholes to be provided at all changes of level, direction, connections and every 45m in straight runs.
- Inspection chambers to have bolt down double flange.
- Rainwater discharged to street or storm water system or new soakaway at least 5.0m away from buildings.
- Drainage pipes surrounded by 150mm granular fill.
- Soakaway minimum 1 cubic metre capacity or sized to Local Authority approval, with suitable rain fall and geotextile surround to prevent migration of fines.
- Porosity test carried out if required to determine soakaway design, or alternative outfall test.
- Drainage designed to meet BS EN 12056-3:2000 and BRE Digest 365 (2016) standards.

- All windows to be measured and designed on site by specialist suppliers.
- All woodwork to be agreed with client prior to supply and installation.

client	
Mr and Mrs Parker.	
SITE ADDRESS	Goldborough House Kennels and Cattery, 3 Broadtown, Swindon SN4 7QX
PROJECT Proposed Kennel Outbuildings	
	
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Scales	1:500 1:100 1:50
Date	10th August 2006