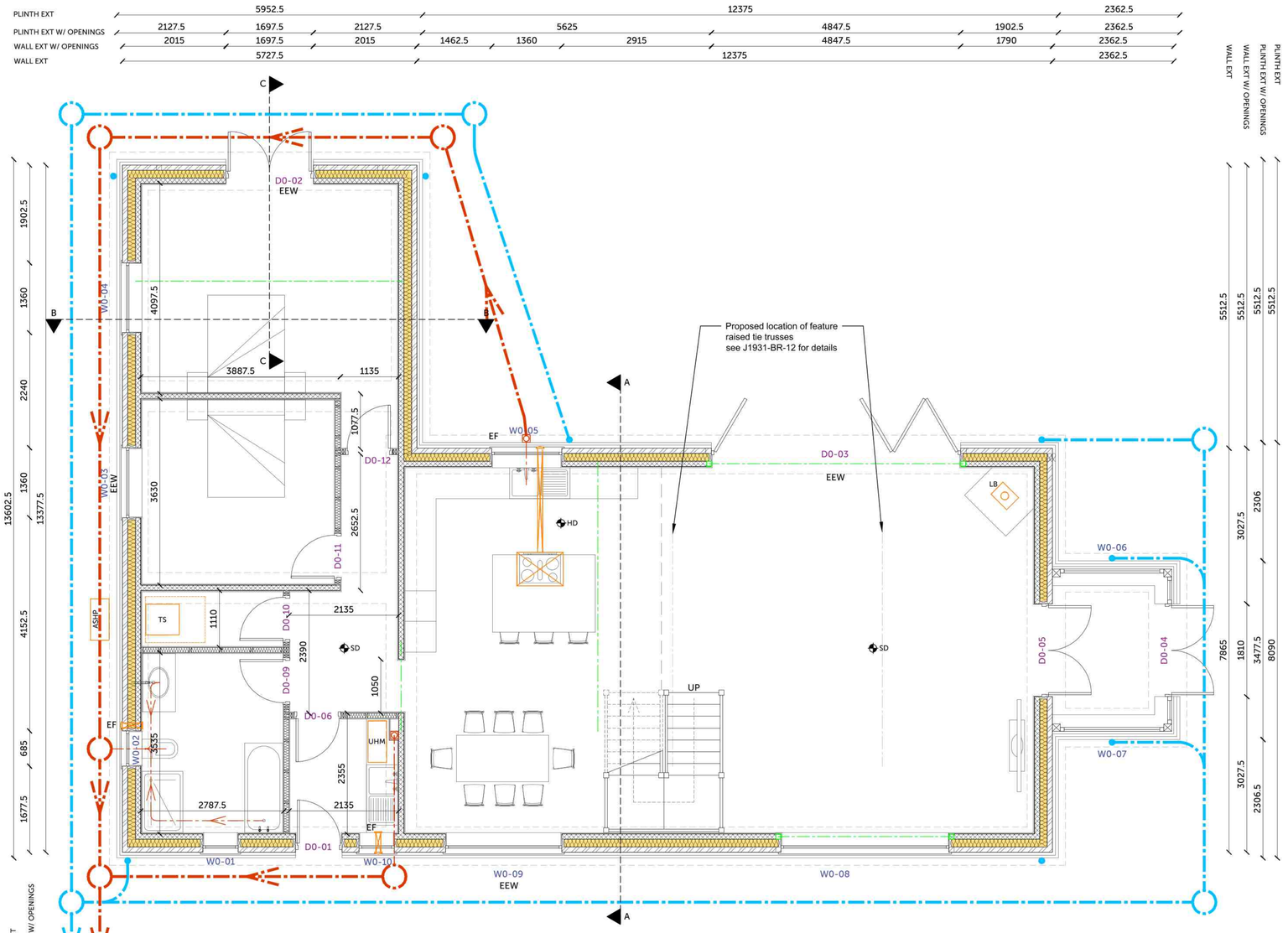


FW DRAINAGE STRATEGY
FW drainage to be taken and treated by Klargester BioDisc BA package treatment plant. Effluent discharged into existing watercourse subject to consent from IDB.
MAX 0.75 m^3/Day.
Drainage system designed by others.

SW DRAINAGE STRATEGY
SW drainage proposed to discharge into existing watercourse, subject to IDB consent.
SW drainage system designed by others.

CDM REGULATIONS 2015
The client must abide by the Construction Design and Management Regulations 2015. The Client must appoint a Contractor, if more than one Contractor is to be involved, the Client will need to appoint (in writing) a Principal Designer (to plan, manage and coordinate the planning and design work), and a Principal Contractor (to plan, manage and coordinate the construction and ensure there are arrangements in place for managing and organising the project).

Domestic Clients
The Domestic Client is to appoint a Principal Designer and a Principal Contractor when there is more than one Contractor, if not your duties will automatically be transferred to the Contractor or Principal Contractor.

The Designer can take on the duties, provided there is a written agreement between you and the Designer to do so.

The Health and Safety Executive is to be notified as soon as possible before construction work starts if the works:

(a) Last longer than 30 working days and has more than 20 workers working simultaneously at any point in the project.
Or:
(b) Exceeds 500 person days.

HEALTH AND SAFETY
The contractor is reminded of their liability to ensure due care, attention and consideration is given in regard to safe practice in compliance with the Health and Safety at Work Act 1974.

MATERIALS AND WORKMANSHIP
All works are to be carried out in a workmanlike manner. All materials and workmanship must comply with Regulation 7 of the Building Regulations, all relevant British Standards, European Standards, Agreement Certificates, Product Certification of Schemes (Kite Marks) etc. Products conforming to a European technical standard or harmonised European product should have a CE marking.

DEMOLITION
Measures to be put in place during and after the demolition to ensure the protection of the public, public amenities and adjoining properties.
Such measures to include:
The shoring of adjoining buildings.
The control of dust and noise generation.
The weatherproofing of any parts of adjoining buildings which are left exposed by the demolition.
The repairing and making good any damage to any adjacent building effected by the demolition.
The removal of material or rubbish resulting from the clearance and demolition of the site.
The disconnection, sealing or removal of any drain or sewer, as required.
The making good of any disturbed ground.
Any arrangements necessary for the disconnection off all services (e.g. gas, water, electricity).

Consultation with the Health and Safety Executive, and Fire Authority should be sought if burning structures or materials on site.
If the demolition is more than 50m^3 in volume a formal notice of demolition is to be given to building control at least six weeks before any demolition work starts, in accordance with The Building Act 1984: Sections 80-83.
Consultation to be undertaken with the occupiers of adjacent buildings where applicable and a Party Wall agreement put in place. A planning application to demolish to be made where required.
All demolition work to comply with the Construction (Design and Management) Regulations 1994 and a Health and Safety plan is to be provided by the principal contractor.

SITE INVESTIGATION
A survey of the site is to be carried out by a suitably qualified person including, an initial ground investigation, a desk study and a walk over survey. A copy of all reports and surveys to be sent to building control for approval before works commence on site.
Any asbestos, contaminated soil or lead paint found on the site is to be removed by a specialist. Asbestos is to be dealt with in accordance with the Control of Asbestos Regulations 2006.

SITE PREPARATION
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. Seal up, cap off, disconnect and remove existing redundant services as necessary. Reasonable precautions must also be taken to avoid danger to health and safety caused by contaminants and ground gases, e.g. landfill gases, radon, vapours etc, on or in the ground covered, or to be covered by the building.

BEAMS
Supply and install new structural elements such as new beams, roof structure, floor structure, bearings, and padstones in accordance with the Structural Engineer's calculations and details. New steel beams to be encased in 12.5mm Gyproc FireLine board with staggered joints, Gyproc FireCase or painted in Nullifire S or similar intumescent paint to provide 1/2 hour fire resistance, as agreed with Building Control. All fire protection to be installed as detailed by specialist manufacturer.

LINTELS
- For uniformly distributed loads and standard 2 storey domestic loadings only
Lintel widths are to be equal to wall thickness. All lintels over 750mm sized internal door openings to be 65mm deep pre-stressed concrete plank lintels. 150mm deep lintels are to be used for 900mm sized internal door openings. Lintels to have a minimum bearing of 150mm on each end. Any existing lintels carrying additional loads are to be exposed for inspection at commencement of work on site. All pre-stressed concrete lintels to be designed and manufactured in accordance with BS EN 1992-1-1, with a concrete strength of 50 or 40 N/mm^2 and incorporating steel strands to BS 5896 to support loadings assessed to BS 5977 Part 1.
For other structural openings provide proprietary insulated steel lintels suitable for spans and loadings in compliance with Approved Document A and lintel manufacturer's standard tables. Stop ends, DPC trays and weep holes to be provided above all externally located lintels.
Independent lintels to have an insulated cavity closure between the inner and outer lintel.

STRIP FOUNDATION
Provide concrete strip foundation (constructed to Structural Engineer's specification) concrete mix to conform to BS EN 206:2013 and BS 8500-2.
All foundations to be a minimum of 1000mm below ground level, exact depth to be agreed on site with Building Control Officer to suit site conditions. All constructed in accordance with 2010 Building Regulations A1/2 and BS 8004:2015 Code of Practice for Foundations. Ensure foundations are constructed below invert level of any adjacent drains. Base of foundations supporting internal walls to be min 600mm below ground level. Sulphate resistant cement to be used if required. 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.

SOLID FLOOR INSULATION OVER SLAB
To meet min U value required of 0.13 W/m^2K
P/A Ratio 0.394
Solid ground floor to consist of 150mm consolidated well-rammed hardcore, blinded with 50mm sand blinding. Provide 150mm ST2 or Gen2 ground bearing slab concrete mix to conform to BS 8500-2 over a 1200 gauge polythene DPM. DPM to be lapped in with DPC in walls. Floor to be insulated over slab and DPM with min 150mm Xtratherm XT/UF insulation. 25mm insulation to continue around floor perimeters to avoid thermal bridging. A VCL should be laid over the insulation boards and turned up 100mm at room perimeters behind the skirting, all joints to be lapped by 150mm and sealed. Finish with 65mm sand/cement finishing screed with light mesh reinforcement.
Where drain runs pass under new floor, provide A142 mesh 1.0m wide and min 50mm concrete cover over length of drain.

WALLS BELOW GROUND
All new walls below ground to be constructed using blockwork compliant with BS EN 771 and suitable for below ground level or semi engineering brickwork. Walls to be built using 1:4 masonry mortar mix or equal approved specification to BS EN 1996-1-1. Cavities below ground level to be filled with lean mix concrete min 225mm below damp proof course. Or provide lean mix backfill at base of cavity wall (150mm below damp course) laid to fall to weepholes. 215mm thick outer leaf below plinth wall.

FULL FILL CAVITY WALL W/ BRICK PLINTH
To achieve minimum U Value of 0.18 W/m^2K
New cavity wall comprising of 103mm suitable facing brick outer leaf. 150mm full fill cavity with 150mm Dritherm 32 insulation as manufacturer's details. Inner leaf constructed using 100mm Plasmoor Agilite Ultima (0.31) Internal finish to be 12.5mm plasterboard on dabs. Walls to be built with 1:1:6 cement mortar. Where shown on elevations, outer leaf built with stretch, herringbone or header brickwork. Construct brick plinth around perimeter of building as shown on elevations. Brick plinth to consist of Ibstock PL.3 plinth stretcher and I.PL.15 wide bed plinth stretcher. Suitable plinth special return bricks used at all corners. Plinth top +03.900 AOD. At cill of openings, finish with PL.2.1 plinth headers.

DPC
Provide horizontal strip polymer (hyload) damp proof course to both internal and external skins, DPC to be placed a minimum 150mm above external ground level. New DPC to be made continuous with existing DPC's and with floor DPM. Vertical DPC to be installed at all reveals where cavity is closed.

WALL TIES
All walls constructed using stainless steel vertical twist type retaining wall ties built in at 750mm ctrs horizontally, 450mm vertically and 225mm ctrs at reveals and corners in staggered rows. Wall ties to be suitable for cavity width and in accordance with BS EN 84.
Wall ties for cavities over 150mm to be suitable for cavity width, and installed as manufacturer's details.

CAVITIES
Provide cavity trays over openings and where roofs abut walls. All cavities to be closed at eaves and around openings using Thermabate or similar non combustible insulated cavity closers. Provide vertical DPCs around openings and abutments. All cavity trays must have 150mm upstands and suitable cavity weep holes (min 2) at max 900mm centres.

CAVITY BARRIERS
30 minute fire resistant cavity barriers to be provided around openings, at tops of walls, gable end walls, vertically at junctions with separating walls and horizontally at separating floors. Cavity trays to be provided over barrier where required. Trays and cavity barriers to be installed according to manufacturer's details.

MOVEMENT JOINTS
Movement joints to be provided at the following maximum spacing:
Clay brickwork – 12m.
Calcium silicate brick - 7.5-9m.
Lightweight concrete block - density not exceeding 1,500kg/m^3 - 6m.
Dense concrete block - density exceeding 1,500kg/m^3 - 7.5-9m.
Any masonry in a parapet wall (length to height ratio greater than 3:1) - half the above spacings and 1.5m from corners.
Movement joint widths for clay bricks to be not less than 1.3mm/m i.e. 12m = 16mm and for other masonry not less than 10mm.
Additional movement joints may be required where the aspect ratio of the wall (length:height) is more than 3:1.
Considerations to be given to BS EN 1996-1-2:2005 Eurocode 6. Design of masonry structure.

UNVENTED PITCHED ROOF
Pitch 40°
To achieve U-value 0.11 W/m^2K
Timber roof structures to be designed by an Engineer in accordance with NHBC Technical Requirement R5 Structural Design. Calculations to be based on BS EN 1995-1-1:2004 Eurocode 5: Design of timber structures. Suitable natural slate tiles on 25 x 38mm tanalised sw treated battens on breathable felt to relevant BBA Certificate. Supported on C24 Rafters to Structural Engineer's specification. Joists supported on 100 x 50mm treated sw wall plates. Allow min 25mm air space above insulating between rafters to allow for drape of breathable felt. Insulation to be 125mm Xtratherm XT/UF between rafters and 100 +12.5mm XT-TL-MF insulated plasterboard under. Taped and sealed to form vapour barrier. Finish 3mm skim coat of finishing plaster.
Restraint strapping - Ceiling joists tied to rafters (if raised collar roof consult Structural Engineer). 100mm x 50mm wall plate strapped down to walls. Ceiling joists and rafters to be strapped to walls and gable walls, straps built into cavity, across at least 3 timbers with noggins. All straps to be 1200 x 30 x 5mm galvanized straps or other approved to BSEN 845-1 at 2m centres.

LEAD WORK AND FLASHINGS
All lead flashings, any valleys or soakers to be Code 5 lead and laid according to Lead Development Association. Flashings to be provided to all jambs and below window openings with welded upstands. Joints to be lapped min 150mm and lead to be dressed 200mm under tiles, etc. All work to be undertaken in accordance with the Lead Development Association recommendations.

WARM FLAT ROOF W/ BALCONY SELF LEVELLING PEDISTAL SYSTEM
To achieve U value 0.11 W/m^2K
External finish to be RYNO TerraSmart Composite deck self-levelling pedestal system (installed to manufacturers details) on top of SIKA Sarnafil single ply membrane. Please see attached manufacturers specification REF# 0396237. Insulate with 25mm protective Sikatherm PIR GT overlay insulation above two layers (40 + 50mm) Sikatherm OPTIM-R vacuum insulated panels, joints staggered. (Care to be taken to not puncture OPTIM-R panels, if punctured discard and replace with new). 3mm rubber crumb protective layer above VCL layer. Fixed to 22mm external grade plywood decking or similar approved on sw firings to minimum 1 in 40 fall. Structure to be C24 joists designed by Structural Engineer (See calculations for details. Underside of joists to have 12.5mm foil backed plasterboard and skim. Roofing system to be installed to all manufacturers details and SIKA specification. For more details please see SIKA spec.
Provide restraint to flat roof by fixing of 30 x 5 x 1000mm ms galvanised lateral restraint straps at maximum 2000mm centres fixed to 100 x 50mm wall plates and anchored to wall.

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

INTERNAL LOADBEARING MASONRY PARTITIONS
Construct load bearing internal masonry partitions using dense concrete blocks built off concrete foundation. Concrete mix to conform to BS EN 206-1. Depth to Engineer's details and dependent on ground conditions, depth to be agreed with BCO. Wall to be tied at 225mm centres with proprietary steel profiles or block bonded to all internal and external walls. Walls faced throughout with 12.5mm plasterboard on dabs with skim plaster finish or 13mm lightweight plaster.

INTERMEDIATE FLOORS
Intermediate floor to be 25mm t&g flooring grade chipboard or floorboards laid on Mitek PS-9 Posi-joists. (see Engineer's calculation for sizes and details). Lay 100mm Rockwool mineral fibre quilt insulation min 10kg/m^3 or equivalent between floor joists. Ceiling to be 12.5 Gyproc Fireline plasterboard with skim plaster set and finish. Joist spans over 2.5m to be strutted at mid span using 38 x 38mm herringbone strutting or 38mm solid strutting (at least 2/3 of joist depth). In areas such as kitchens, utility rooms and bathrooms, flooring to be moisture resistant grade in accordance with BS EN 312. Identification marking must be laid upper most to allow easy identification. Provide lateral restraint where joists run parallel to walls, floors are to be strapped to walls with 1200mm x 30mm x 5mm galvanised mild steel straps or other approved in compliance with BS EN 845-1 at max 2.0m centres, straps to be taken across minimum 3 no. joists. Straps to be built into walls. Provide 38mm wide x ¾ depth solid noggins between joists at strap positions.

Ceiling of BED 2. Provide suspended plasterboard ceiling, British Gypsum GypCeiling MF C106046 (EN) Suspended ceiling system finished with one later of 12.5 Gyproc Fireline plasterboard, taped and sealed with skim plaster set and finish. Insulate at suspended ceiling level using 25mm Stone Mineral Wool (100kg/m3) as per C106046 spec.

STAIRS
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. Max rise 220mm, min going 220mm. Two risers plus one going should be between 550 and 700mm. 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. Pitch not to exceed 42 degrees. The width and length of every landing should be at least as great as the smallest width of the flight. 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. Min 2.0m headroom measured vertically above pitch line of stairs and landings. Handrail on staircase to be 900mm above the pitchline, handrail to be at least one side if stairs are less than 1m wide and on both sides if they are wider. Ensure a clear width between handrails of minimum 600mm. Balustrading designed to be unclimbable and should

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GENERAL NOTES
This drawing is to be read in conjunction with all relevant Engineers, Architect's and specialists' drawings. Do not scale from this or any other Origin Design Studio drawing. All dimensions to be checked on site prior to construction or fabrication. Changes to specification are to contractors risk. All changes should be brought to the attention of the client/Building Control for approval. Please report any errors immediately.

KEY

ASHP	Air Source Heat Pump
C	Consumer Unit
RWP	Rain Water Pipe
AAV	Soil Vent Pipe
HD	Heat Detector
SD	Smoke Detector
	Direction on Joist Span
EF	Extractor Fan
UHM	Underfloor Heating Manifold
	Proposed Demolition
EV	Electric Vehicle Charging Point
	Indicative structural elements (See Structural Engineer's information for details)
ASHP	Air source heat pump (spec TBC)
TS	Thermal water store (spec TBC)
EEW	Emergency Escape Window
SVP	Soil Vent Pipe
LB	Log Burner w/ metal flue

Rev.	Description	Date	Checked
A03	Issued to client & BC	15/08/2023	MJO WBH

Client
Mr & Mrs Wheeler

Project Title
New Dwelling

Site Details
Corner of Cheal Road/ Saltfleet Lane,
Gosberton Fen, Spalding
PE11 4BD

Title
Proposed Ground Floor Plan

Drawing Number
J1931-BR-10

Print Size
A1

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