Drawings
The attached Drawings to be read as an integral part of this specification
THE PROJECT
Construction of new four bedroom dwelling.

STRUCTURAL ENGINEER
Structural Calculations have been provided by Ings Engineering Limited and are to be read in conjunction with these notes and drawings.

THERMAL CALCULATIONS (SAP)
Thermal Calculations have been carried out by Thermenergy Ltd and are to form part of the Building Regulations package. Any proposed alterations which may effect these calculations are to be reported to Thermenergy Ltd to ensure compliance is maintained.

GENERAL NOTE:
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. Any reference to any Approved Document relates to the relevant Approval Document of the Building Regulations. Works should be completed in compliance with BS8000.
Do not scale off drawings. All works to be measured on site before commencement. Any subsoil drainage or structural elements uncovered affecting the works should be brought to the attention of the Client and/or the Building Control Officer before continuing any work.

BOUNDARIES
All work is to remain within the boundaries of the property. The client will implement the Party Wall Act where necessary.

MORTAR
Mortar to be of mix proportions necessary to achieve adequate strength and durability to accord with NHBC standards.

FIRE PROTECTION
All beams, pads, trimmers and bearings to Structural Engineer's design.
Structural timber to be kept away from any live flue faces min. 50mm. Any new exposed steel work to be enclosed with 12.5mm plasterboard and skim coat plaster to give min ½ hour fire protection, or, 3 coats Albi Firecoating paint.
Whole property is to be fitted with a fire dectection and sprinkler system, supplied and fitted by specialist contractor.

FOUNDATIONS
New foundations to be in accordance with Structural Engineers calculations & details. The Foundations are to be taken down to an adequate load bearing strata and to suit the site conditions, to be agreed with Building Control Officer on site.

LINTELS
Lintels to be provided over all structural openings in pressed steel to BS5977, galvanised to BS7269. Cavity trays/damp proof protection must be provided over all external openings either separately or as combined part of lintels. Adequate end bearings of 150mm min must be provided and lintel to be firmly bedded in mortar. All window openings to have proprietary Cavity Beams by Catnic, or similar approved, and to be fully compliant with AD Part L and to Building Control Officers approval. In all cases manufacturers recommendations to providing adequate fire resistance should be strictly followed.

MASONRY/BLOCKWORK
Concrete blocks throughout to be solid and manufactured to BS6073 parts 1 and 2 and designated by manufacturer as suitable for their intended location and structural, acoustic and thermal requirements are met.

CAVITY TRAYS AND FLASHINGS
Lead flashings to min 150mm up-stand Code 4 to be provided where roofs abut brickwork with stepped flashings where pitched roofs abut wall at an angle.
Cavity tray must rise minimum 140mm across cavity, weep holes at max 450mm c/c with at least 2 holes per opening. Any valleys or gulleys to be lined with Code 5 lead.

Cavity closers above all external openings.

DPC
Horizontal DPCs to be minimum 150mm above adjacent ground level and stepped as necessary to suite site topography with min. 150mm laps. DPC to be either ASTOS or similar bituminous based felt dpc (to BS6398:1983) or 500 microns black polythene (2000g) to BS6515:1984. Proprietary dpc's/thermal cavity closers to be provided horizontally (cill) and vertically (jambs) to all openings in external cavity walls.

GROUND FLOOR to achieve 0.15 W/m2K
Ground floor construction to be 75mm sand/cement screed, on underfloor heating, on 120mm Celotex XR4000 insulation laid in strict accordance with the manufactures specifications and instructions, on 1200 gauge polythene DPM, on Specialist Contractors suspended block and beam floor construction. A 300mm clear ventilated void is to be maintained below the suspended floor. Continuous cross ventilation of the floor void is to be provided by air bricks, at 1m centres, fitted within each side wall of the new external cavity wall construction.
DPM is to be lapped up inner face of external wall construction onto the horizontal DPC's.
20mm Celotex T-Break TB3000 insulation to be inserted around perimeter of new floor construction against inner face of external wall construction to an overall depth of 70mm.

EXTERNAL WALL INSULATION to achieve min U-value of 0.19W/m²K
102.5mm Face brickwork outer leaf, 100mm cavity , 100m toplite Standard 3.6N block inner leaf. Cavity to be partially filled with 50mm Kingspan Kooltherm K108 cavity wall insulation or similar approved extending 150mm below dpc. Walls to be finished internally with 12.5mm plasterboard on dabs. Joints to be taped and skimmed.

DORMER WALLS to achieve min U-value of 0.32W/m²K
Timber cladding, on 18mm plywood, on 50x100mm timber stud framework (to Structural Engineers calculations and details), studs filled with 100mm Celotex GA4000, internal face finished with 12.5mm plasterboard with lightweight plaster skim coat.

PITCHED ROOF
Roof tiles in accordance with Local Authority Planning Approval installed to BS5534 and BS8000 on treated 38x25mm softwood battens (or size to roof manufacturers specification), on breather membrane, into rafters (sizes in accordance with Structural Engineers calculations and details)

PITCHED ROOF INSULATION (LOFT) to achieve min U-value of 0.10W/m²K
Roof to be insulated at ceiling level with 150mm mineral wool insulation laid between the joist and a further 300mm cross laid over the joists.
Ceilings to be finished internally with 12.5mm plasterboard, joints taped and skimmed.
Provide support with to Structural Engineer's design and calculations.

CEILING AT RAFTER INSULATION (skeilings) to achieve min U-value of 0.17W/m²K
100mm Celotex GA4075 insulation is to be 'friction fitted' between the rafters with the lower face of the insulation flush with the bottom of the rafter, leaving a 25mm Low E cavity over the insulation, a layer of 45+12.5mm Celotex PL4000 insulation is to be fixed to the underside of the rafter using suitable mechanical fixings. The joints between the boards are to be tightly butted, taped and jointed using appropriate tape and jointing material to create the vapour control barrier.

FLAT ROOF TERRACE to achieve min U-value of 0.16W/m²K
Provide pedestrian balcony tiles to clients choice and specification supported by a proprietary support grid by specialist off the flat roof structure below.
Flat roof to be timber roof construction fixed in accordance with BS Codes of Practice no CP 3 and CP 112.
New flat roof finish to be GRP(fibreglass) roofing system, on 18mm plywood, on 120mm Celotex XR4000 insulation, on 18mm plywood decking, on Timber joists to Structural Engineer calculations and details. Ceiling to be finished with 12.5mm plasterboard joints taped and skimmed.
Roof covering to be dressed up outside wall by at least 250 mm and lapped onto cavity tray.
-Installation of Celotex products to be in strict accordance with the manufacturers specifications and instructions.

FIRST FLOOR CONSTRUCTION OVER GARAGE
to achieve a U-Value of 0.25W/m²K
22mm Hardie Floor Structural Flooring, on Mitek Posi joists to Manufacturers design and Structural Engineers approval. 1000 gauge polythene vapour check is to be stapled to underside of floor joists. Underside of floor joists to be boarded out with 2 layers of 12.5mm Gyproc Fireline Board (joints staggered), or similar approved, all joints taped and skimmed. 200mm mineral wool insulation is to be fitted between all floor joists.
Always ensure joists doubled up under baths.

FIRST FLOOR CONSTRUCTION
22mm Hardie Floor Structural Flooring, on Mitek Posi joists to Manufacturers design and Structural Engineers approval. 100mm Rockwool flexi to be laid tight fitting between joists.
Ceiling to be finished using 12.5mm plasterboard, joints taped and skimmed.
Always ensure joists doubled up under baths.

INTERNAL WALL (non-loadbearing)
75x50mm timber studwork at min 400mm centres doubled up at openings and corners. 20mm Isowool insulation to be hung within the cavity. Both faces finished with 12.5mm plasterboard with lightweight plaster skim coat.
-or-
100mm lightweight blockwork both faces finished with 13mm plaster.

INTERNAL WALL (loadbearing)
Min 3.6N/mm2 or 7.3N/mm2 blockwork as indicated on Structural Engineers drawings, both faces finished with 13mm plaster.

WINDOWS
All first-floor habitable rooms to have at least one window to be suitable for use as means of escape and should have an unobstructed openable area of at least 0.33m² with a minimum height and width of not less than 450mm. TO ACHIEVE THE MINIMUM AREA REQUIRED IT IS ADVISED THAT THE OPENING BE A MINIMUM OF 750MM X 450MM.

The bottom of the openable window should not be more than 1100mm and not less than 800mm above the finished floor level.

STAIRS
Stairs to be formed as shown on drawings. Stairs to have risers at max 220mm and going at min 220mm. Winders at 150mm min and 225 min average measured on centre line. Stair construction glued, screwed and wedged, underdrawn with 12.5 plaster and skim coat. Stairs not to exceed 42deg. Pitch. Treads minimum 16mm nosing. Vertical balusters (style to be advised by Client) to be at max 100mm c/c with cap and hand rail and set vertically above pitchline/or floor level at min. 900mm. Head room on stairway never to be less than 2000 at all times.

EXTERNAL GUARDING
FIRST FLOOR ROOF TERRACE
Balustrade to be 1100mm high capable of resisting horizontal force of 0.7kN/m and installed strictly in accordance with manufacturers instructions and weather sealed at all joints with building fabric. Design to be such that it cannot be easily climbed by small children. Manufacturers recommendations for use to be strictly followed. Handrail to comply with AD part K for Guarding Design. Details to be submitted to Building Control for approval.

FIRE SAFETY
Door from Utility to Garage to be a Fire Door FD30s;
Half hour fire resisting and fitted with self-closing devices. Frames around doors fitted with minimum 25 x 38mm glued and screwed stops and intumescent strips and smoke seals.

SMOKE DETECTION
Smoke detectors to be an D2 Category LD3 system as described in BS5839-6 and to be located no closer than 300mm from light fittings. Detectors should be permanently wired to a separately fused circuit at the distribution board, with all wiring in accordance with current IEE regulations. Detectors to incorporate battery backup.
Position as necessary in-
1 Heat Detector in Kitchen Area
1 Smoke Detector in Ground Floor Hallway
1 Smoke Detector in First Floor Landing

GLAZING to achieve min U-value of 1.4W/m²K
All doors and windows externally to be PVC-u or timber. Window style to be in accordance with Planning Approval, manufacturer and detail to be advised by client. Windows to be glazed with hermetically sealed double glazed units to BS5713 and kitemarked certified. All windows and glazing to comply to BS6262, 6206 and Building Regulations Approved Document N1. All opening lights and doors to be fitted with effective draught-strips. Frames to be fitted with patent controllable ventilator to allow secure draught free background ventilation of min 8000mm2 to each habitable room and 4000mm2 to Kitchen, Utility room, Bathrooms and WCs.
Windows to open (where allowable) to give 1:20th room floor area rapid ventilation.

-Joints between frame and studding to be sealed with proprietary silicone sealant.
-Frames must overlap insulated closers by min. 25mm
-Glazing below 850mm from floor level to be safety glass and approved by Building Control.

ELECTRICAL
Electrical requirements and layout to be advised by client. All installations must comply with IEE Regulations and all relevant Codes of Practice. New wall mounted 13amp sockets to be installed between 450-1200mm from finished floor level.
All Electrical work must be carried out to BS7671:2001 (chapter 13) and AD P of Building Regulations, by a Competent Person who is on an Approved Register and who is self-certifying their own work. A declaration of compliance with Building Regulations to be submitted to Building Control within 30 days of completion of installation.

EXTRACTION
KITCHEN
Provide mechanical extract fan adjacent to kitchen hob capable of extracting 30litres/second - OR elsewhere in Kitchen capable of extracting 60 litres/second with 15 minute overrun.
EN-SUITES
Provide mechanical extraction to bathroom capable of extraction at a rate of 15litres/second with 15 minute overrun. Door to be undercut by 10mm.
CLOAKROOM
Provide mechanical extraction to bathroom capable of extraction at a rate of 15litres/second with 15 minute overrun. Door to be undercut by 10mm.
UTILITY

Provide mechanical extractor to BS EN 60335-2-80, BEAB-approved. Mechanical ventilation to have an extraction rate of 30 l/s (108m³/hr). Extractor to terminate through external wall via termination cowl. Extractor to be operated by light switch with 15-minute overrun. Door to be undercut by 10mm.

All extraction to be vented externally with weathered flyscreened terminal.

HEATING
New heating and hot water system to be designed and fitted a by Gas Safety Registered Heating Engineer and be commissioned and tested by Gas Safety Registered Engineer. New Condensing Boiler to have a seasonal efficiency of 89.2% or higher. Entire ground floor to be fitted with underfloor heating. Cloakroom and all En-suites to be fitted with towel radiators. All new radiators to be fitted with thermostatically controlled valves. Time and temparature zone controls to be provided.

PART M - ACCESS TO & USE OF BUILDING
The main entrance will have a level threshold and an entrance door with a minimum clear width of 800mm, including an internal leading edge of 300mm.
All doors will also be 800mm clear opening. WC facilities are provided at the ground floor level.
All light switches, plug sockets and electrical switches to be set between 450mm and 1200mm above finished floor level and comply with Part M of the current Building Regulations.
Ensure consumer units and all controlling services are set at low level to provide easy access for wheelchair users.

LIGHTING
All internal Light fittings are to be low-energy (lamp luminous efficacy>45 lumens/circuit watt, total output > 400 lamp lumens)

RAINWATER GOODS
All PVC-u deepflow rainwater goods to be in accordance with Approved Document H and must be provided for all roofs greater than 6m2 in area discharging to min. 68mm dia. downpipes at locations on plans and connected directly to existing rainwater fittings where possible.
All existing guttering and downpipes to be undisturbed. Guttering to new extension to match existing throughout.

SOAKAWAYS
Provide new soakaways on site for rainwater drainage. New soakaways to be minimum 5M from building. Soakaway to be formed using geocellular soakaway system, providing a minimum 1m3 for every 20m2 of roof.

WASTES
All plumbing to comply with BS 5572 (Sanitary Pipework). All drainage to be to Code of Practice 301. Exact layout of existing pipework to be checked on site before any work commences. New whb's to have 32mm dia. pvc waste.
New WC's to have 100mm dia. pvc waste. New shower to have 40mm dia. pvc waste. New sinks to have 40mm dia. waste. New washing machine to have 40mm dia. pvc waste. All appliances to be fitted with 75mm deep seal traps.
All appliances waste pipes to be fitted with rodding eyes at each change in direction. All wastes to be laid to a minimum 1 in 40 fall. Any wastes exceeding a run of 1700mm to be fitted with anti-syphonic valves. All appliances to be fitted with 'tun-dish' overflows. All appliances are to discharge into existing foul drain system.
New soil vent pipes to be 100mm dia. uPVC and terminate through pitched roof. New stubstack to be 100mm dia. uPVC . New soil vent pipe s to be fitted with rodding eyes at base. New soil vent pipes to connect into existing mains foul drain system via new underground drainage. See Aquatech Drainage Ltds drawings for details of external drainage layout.
Where pipes pass through walls provide masking to both sides of wall with rigid sheet material to prevent entry of fill or vermin (minimum 50mm space to be allowed all around the pipe).
Where drainage passes through or under walls minimum of 75mm) deep precast concrete lintels (or similar approved) are to be provided.
New underground rigid piping to be encased in concrete to a minimum 100mm thick all around and having a compressible board fitted at each socket joint face for movement.

WATER SERVICES
A supply of wholesome water (mains supply or equivalent complying with Section 67 of the Water Industry Act 1991) must be provided to the following areas:
- any place where drinking water is drawn off
- wash hand basins, bidets, baths, showers and sinks
- sanitary conveniences (however, alternative supplies to sanitary conveniences are acceptable (eg. harvested rainwater).

Heated wholesome (includes softened water) must be supplied to the following locations:
- wash hand basins, baths, showers and sinks, and in areas where food is prepared.

Hot water storage sysstems should be designed and installed in accordance with BS:6700:2600+A1 2009. Indirectly heated unvented (closed) storage water heater should comply with BS EN 12897:2006

The hot water storage and supply system installed is to be commissioned in accordance with the procedures set out in the Domestic Heating Compliance Guide. Commissioning documentation to be submitted to Building Control on completion.

Baths to be fitted with thermostatic mixing valves limiting the temperature of the supplied hot water to 48°C to provent scalding accidents.

WOOD BURNING STOVE
The hearth is to be designed to be suitable for a recessed appliance, with the minimum dimensions being 225mm projection from the front of the appliance, and a minimum of 150mm projection to the sides of the appliance, in accordance with A.D J paragraphs 2.22 - 2.27 and Diagrams 24 and 25. The dimensional requirements of the hearth must also take account of Diagram 26, regarding the dimensions of the hearth surrounding the solid fuel appliance, which depend on whether an open or closed type is chosen.
-Care must be taken to ensure that the hearth is a minimum of 150mm from the internal walls, in accordance with A.D J, paragraph 2.31.
-In accordance with Part J copies of installation checklist and in-situ notice plate are to be provided to the satisfaction of Building Control.
-Underfloor vent to serve wood burning stove. Size of underfloor vent to be determined by appliance rating. All in accordance with Table 2.1 of Approved Document J. Appliance rating not yet known - this item to be subject to a condition in the Building Regulations approval
-Provide Carbon monoxide alarm in Living Room to comply with approved document J2A.

THE SITE / EXISTING BUILDINGS

Existing Buildings on/adjacent to the Site
As Block Plan

Existing Mains/Services
Positions of existing mains services must be checked on site prior to commencement of work.

Existing Trees
Any trees which may affect foundations within 35m of new buildings to be checked with Building Control Officer for affect on foundation depth.

Risks to Health and Safety
The nature and condition of the site/building cannot be fully and certainly ascertained before it is opened up. The structure must be maintained in a safe and secure manner by shoring and supporting as necessary where hazards are identified during the work.

Demolitions
Provide all temporary and permanent supports to demolitions as necessary.

British Standards
Where applicable the materials are to comply with the relevant British Standards and the work carried out in strict accordance with the relevant codes of practice issued by the British Standards Institute.

Local Authority
The work is to be carried out in strict accordance with and to the approval of the Local Authority administered by the Building Control Officer. No work is to be carried out prior to receipt of Planning Permission from the Local Authority.

Building Regulations
All work is to be carried out in strict accordance with relevant parts of the Building Regulations Act 1984 and the Building Regulations 1985 and all subsequent revisions to the Approved Document 2000.

It is the Contractor's responsibility to prepare structural calculations to roof, lintels and beams to all openings as required by the Building Control Officer

Blocking Up
Block up all openings, where shown, in construction to match existing. Where infilling masonry, ensure new work is well toothed to existing. Ensure all blocking up is finished flush with existing surfaces.

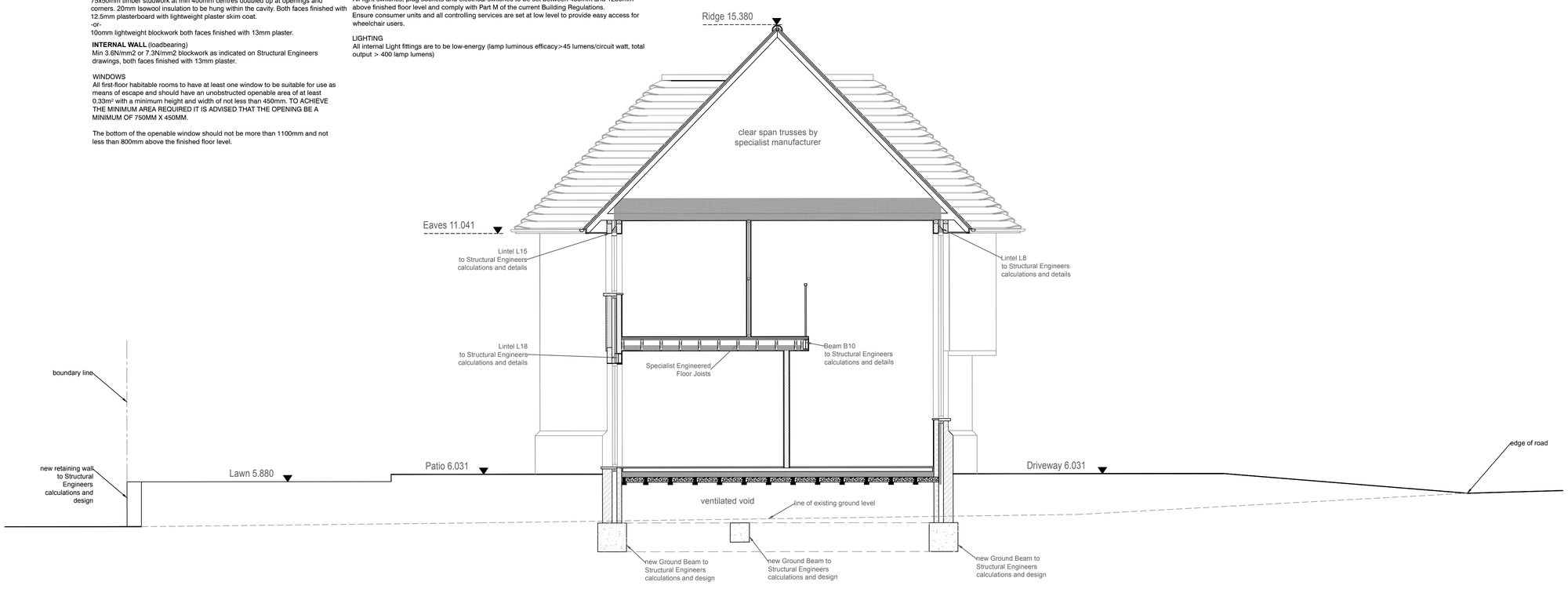
New Openings
Form new openings in walls where shown and where necessary provide adequate support over and suitable weathering etc. if required. Support to be to Structural Engineers calculations and details where necessary.

Existing Structures
All existing structure affected by the new work should be exposed and checked on site for adequacy where required by the Building Control Officer. New lintels to be by Catnic or IG or similar approved (or PCC) and fitted in strict accordance with manufacturers instructions and recommendations.

Internal Finishes
To be specified on site by Client.

Water for the Works
The mains water supply to the premises will be available to the Contractor for the purposes of the Works.

Power for the Works
The mains electrical supply comprises lighting and 240V ring main socket outlets. It is the Contractor's responsibility to ensure compliance with safety legislation and safe working practices in relation to the use of the Client's electrical supplies.



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The Contractor is to verify all dimensions, alignment, levels and datums prior to commencement of work.
Any discrepancies must be reported immediately to Inspired Design Studio Ltd for review.

Variations and modifications to the work shown on these drawings are not to be carried out without the prior approval from Inspired Design Studio Ltd

BUILDING REGULATIONS

Revisions

Rev	Description	By

All dimensions to be checked on site prior to commencement of work, except for planning purposes.

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Client: Mr & Mrs Jones

Project Address:
Rond Point
(Land at the 9th Tee)
Ham Manor Way
Angmering

Drawing Title:
Proposed Plans, Elevations and Street Scene Elevation

Drawing Number: 1202.05

Scale: As stated printed @ A1

Date: 04/02/2020

PLANNING APPROVAL