green2k design

Architectural Designers & Chartered Surveyors

PROJECT SPECIFICATION

Conversion of existing loft space along with associated internal and external alterations

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INTRODUCTION

This document has been prepared to support our application to obtain Building Regulation approval for the conversion of existing loft space and associated internal and external alterations at Pilsley Sports Pavillion, [redacted] Rupert Street, Lower Pilsley, Pilsley, S45 8DB.

When tendering for this project contractors are advised to read this project specification in conjunction with the accompanying drawings and third-party documentation. Contractors are advised to visit the site, examine the plans and make due allowance within their prices for all work necessary to ensure a complete and suitable finish (no extras will be considered due to a lack of information) including the removal of debris from site upon completion.

1.0 Statutory Consents / Legal Matters

This specification is for building regulation full plans approval purposes only and is not a bill of quantities or a schedule of works. All dimensions and details are to be verified by the appointed contractor prior to the commencement of any works on site.

Both planning permission (where required) and building regulation consent must have been granted before work commences on site, unless the local authority / building control provider has confirmed otherwise. In either case advice can be sought from Green 2k Design Limited (G2k). Please ensure that all relevant planning / building regulation conditions have been discharged prior to commencing work on site.

Any changes in dimensions must be reported to the agent, G2k and the chosen building control provider.

Prior to commencing work, client to check that there are no restrictive covenants or legal restrictions on any work at this property. Also please ensure that there are no services e.g. gas, electric, public sewers, water mains etc. passing under, over, through or close to the site that requires special permission to work around. Green 2k Design accepts no responsibility for any of the above. Any of the above could add significant cost to your project, please inform us if any are present.

If the proposed works are close to a public sewer the contractor is to obtain agreement from the statutory water authority before the works start and also satisfy themselves that any buried private or public services will not affect the proposal or the drainage asset. The statutory water authority's requirements must be adhered to wherever relevant.

Information offered regarding the position of any services are given for your assistance and guidance only. Where the works approach the position of services it will be necessary to use locating apparatus or hand excavated trial holes to locate them.

Boundaries, dimensions and levels are to be checked on site by the chosen contractor; any anomalies / discrepancies are to be reported to G2k and direction or approval is to be sought before the implementation of the detail.

We will not consider land ownership or legal matters such as easements of light or air unless specifically requested to do so. When setting out proposed work, contractor to ensure that above and below ground structures are contained solely within applicant's land ownership – If in doubt ask.

All works undertaken to be in accordance with structural engineer's details, calculations and methodology. Drawing to be read in conjunction with engineer's drawings, engineer's details to take precedence where they supersede those of G2k.

Your attention is drawn to the Party Wall etc. Act 1996, where building work is near or on a party wall, it is the homeowner's responsibility to serve notice under the act to affected neighbours. Please advise us if this is something you would like further guidance on, you can find further information on the Part Wall etc. Act 1996 on the Government website: - https://www.gov.uk/guidance/party-wall-etc-act-1996-guidance.

2.0 Materials and Workmanship

The contractor is to carry out the works using materials and workmanship in accordance with this project specification. Variation of the specified materials shall not be permitted unless prior approval has been granted by the building control provider / G2k. All work is to be constructed to the complete satisfaction of the building control provider / client.

Materials: all materials will comply with:

The Building Regulations Approved Document 7 (Materials & Workmanship).

NHBC Standards.

And in order of preference:

British and European standards, BBA certificates or CE markings.

Materials used as external finishes shall be to the approval of the local authority planning department where required under a planning condition.

All softwood is to be pressure preservative impregnated 'vac-vac' or equal approved, with brush applied treatment of all site cut ends in accordance with the manufacturer's instructions.

All screws and fixings etc. to be non-ferrous.

All materials and fittings incorporated in the works shall be handled, stored and fixed strictly in accordance with the manufacturer's instructions.

Workmanship: all workmanship will comply with:

The Building Regulations Approved Document 7 (Materials & Workmanship).

NHBC Standards.

And

British Standard Codes of Practice.

3.0 Construction (Design and Management) Regulations 2015 (CDM)

Clients must be aware of their duties under CDM where projects are notifiable if the construction phase will be longer than 30 working days and have more than 20 workers working simultaneously or will involve more than 500 person days of construction work.

Under CDM 2015 it is the client's responsibility to appoint a principal designer and principal contractor under separate appointment. It is the principal contractor's responsibility to notify the HSE of work commencing on site by submitting the F10. For further details and your responsibilities under CDM regulations 2015 please visit www.hse.gov.uk/construction/cdm/2015/index.htm.

Designer's identification and assessment of risks which can reasonably be foreseen are noted. The general building operations involved are deemed to be hazardous with low risk attached except where noted for specific operations.

Deep excavations: foundations & drainage: high risk - risk of ground collapse, risk of falling in. support excavation sides, maintain edge protection, and provide hazard markings.

Falls from height: high risk - make sure ladders are in good condition, at a 1:4 angle and tied or footed. Prevent people and materials from falling from roofs, gable ends, working platforms and open edges using guard rails, mid rails and toe boards. Make sure fragile roof surfaces are covered, or secure working platforms with guard rails are used on or below the roof.

Collapse of structures: medium risk - support structures (such as walls, beams, chimney breasts and roofs) with props; ensure props are installed by a competent person.

Exposure to building dusts: medium risk - prevent dust by using wet cutting and vacuum extraction on tools; use a vacuum cleaner rather than sweeping; use a suitable, well fitted mask.

Exposure to asbestos: medium risk - do not start work if it is suspected that asbestos may be present until a demolition / refurbishment survey has been carried out by a competent professional.

Electricity: medium risk - turn the electricity supply and other services off before drilling into walls. do not use excavators or power tools near suspected buried services.

Protect members of the public, the client and others: medium risk - secure the site; net scaffolds and use rubbish chutes.

Precast concrete beams & steel beams: medium risk - handling and placing. avoid manual handling so far as is reasonably possible.

Roof trusses & associated construction: high risk - handling & fixing. avoid manual handling so far as is reasonably practicable.

Gables (brickwork above wallplate level): high risk - stability of work in progress. ensure both skins of cavity wall are built together to reduce hazard of 'blowdown' in the event of high winds. high risk of falling from height. provide safe scaffold access to work areas.

Gutters, rwp's, svp's & flashings: high risk - falling from heights. recommend fixing from scaffold, except where construction constraints require the use of ladders.

Sarking membrane, battens, roof tiles / fittings, verge pointing & chimney flashings to high & low level roofs: high risk - falling from heights. edge protection to be maintained.

Rafters, ceiling joists, fascias, barge boards & soffits to high & low level roofs: high risk - falling from heights. edge protection to be maintained.

Glazing: high risk - falling from heights when handling & fixing. recommended installation from scaffold, except where construction constraints require the use of ladders.

Mastic pointing: high risk - recommended installation from scaffold, except where construction constraints require the use of ladders.

External decoration: high risk - recommended working from scaffold, except where construction constraints require the use of ladders. Maintain edge protection if working off flat roofs.

SUB-STRUCTURE

4.0 Site Preparation

The chosen contractor is to allow for the cut and fill exercise to facilitate the new formation levels and include for the exporting of unsuitable or surplus materials to a tip off site.

Contractor is to ensure that the development site is secure for the duration of the works, heras fencing to be provided where necessary and depending on the location of the proposed works and status of the build. All to be agreed with the client.

The access to the site area is to be kept fully secure at all times.

5.0 Foundations

The foundations are to be constructed to the complete satisfaction of the building control surveyor. The structure and foundations shall be designed and constructed in such a manner that all loads are safely transmitted to the substrata. The foundation design shown / specified is indicative only, further investigation is required upon commencement of work on site to establish the existing foundation/ sub strata.

The foundations shall generally be formed by excavating a trench 600mm wide x 900mm deep below finished ground level, positioned centrally below walls, if non cohesive subsoil strata is encountered, foundation depth may be reduced. All foundation trenches to be trimmed up and bottomed out prior to placing concrete. Foundation trench shall be filled with GEN3 Grade Trench Fill concrete to a height of 700mm, to a level finish.

Alternatively, the foundations shall generally be formed by excavating a trench 600mm wide x 900mm deep below finished ground level, positioned centrally below walls, if non cohesive subsoil strata is encountered, foundation depth may be reduced. All foundations to be trimmed up and bottomed out prior to placing concrete. Foundation trench shall be filled with GEN3 Grade Trench Fill concrete to a height of 225mm, to a level finish.

Where tree(s) / hedge(s) are present, once type of substrata and species of tree(s) / hedge(s) has been established, foundations are to be taken down below influence of root activity in accordance with nhbc guidance tables. Where tree(s) / hedge(s) are to be removed, where foundations are in excess of 1500mm deep, clay master or similar to be placed to inner face of foundation, positioned 500mm up from bottom of trench.

All foundations to be excavated and cast to the complete satisfaction of the building control officer on site.

6.0 Below Ground Drainage

Before starting work, check invert levels and positions of existing drains and manholes and confirm findings to the owner / agent. Adequately protect any existing drains, contractor to differentiate between foul and surface water drainage runs prior to connecting proposed drainage.

7.0 Walls Below DPC

Blockwork below dpc level to have min. compressive strength of 7.3 N/mm^2. All bricks and blocks below ground to be laid in 1:3, sand:cement mortar mix.

Stainless steel cavity wall ties are to be 225mm Ancon Staifix HRT4 housing wall ties, to be set at 450mm vertical and 900mm staggered horizontal c/s. Below external ground level the cavity shall be filled with lean mix concrete up to 225mm below the lowest dpc.

8.0 Damp Proof Course

2000 gauge dpc with min. 100mm laps and fully sealed using double sided jointing tape, laid in 1:3, sand:cement mortar with bucket handle pointing. Dpc positioned a min. 150mm above adjacent ground level. Where splash course is compromised, contractor to contact G2k for basic tanking detail.

Note to Contractor – Refer to accompanying drawing for gas prevention measures.

9.0 Ground Floor Construction

U-value: Limiting fabric parameter for new thermal elements as per Building Regulations Part L1B Oct. 2010 (2018 Amendments) – 0.18 W/m^{2}K.

100mm thick GEN3 Grade concrete floor slab laid on; 500 gauge polythene de-bonding membrane, placed below concrete and vertically around the perimeter on; min. 150mm Kingspan Kooltherm K103 Floorboard on; radon gas membrane with min. 150mm laps fully sealed using double sided jointing tape on; 25mm thick compacted sand blinding on; min. 150mm (max 600mm) compacted thickness MOT type 1 granular sub-base well compacted and

consolidated with all voids filled. 25mm Kingspan Kooltherm K103 Floorboard and floor membrane to be provided at perimeter of floor construction.

Floor membrane to be lapped under internal wall DPC and fully sealed using double sided jointing tape making sure there are no air gaps and the floor membrane is not stretched or displaced. All drains to be installed prior to pouring screed / slab, any services or drains which penetrate the floor membrane are to be fully sealed using pre-formed units and double sided jointing tape ensuring there are no air gaps.

Note to Contractor – Please ensure existing floor ventilation is not compromised by proposed works. All existing floor ventilation to be ducted through proposed floor construction using 100mm Upvc ducts, connected to telescopic vents / air bricks.

9.1 Basic Radon Protection

The property is located in a radon affected area, therefore, a specialist radon gas membrane is to be provided and fixed in accordance with the basic radon detail outlined within the accompanying drawings – If in doubt - ask.

SUPER-STRUCTURE

All items and details which are to match or line up are to be site measured prior to setting out or manufacture. All work is to be carried out in a good workmanlike manner, consistent with good building practice.

10.0 External Walls

U-value: Limiting fabric parameter for new thermal elements as per Building Regulations Part L1B Oct. 2010 (2018 Amendments) – 0.26W/m^2K.

302.5mm overall width cavity wall to consist of outer leaf of 102.5mm thick facing brickwork to approved sample; 100mm overall width cavity comprising 100mm fullfill Knauf Dritherm 32 cavity wall insulation; with inner leaf of 100mm Plasmor Fibolite 3.6 N/mm^2 block. All bricks and blocks to be laid in 1:6, sand:cement mortar mix with bucket handle pointing / pointing to be agreed with client.

Stainless steel cavity wall ties are to be 225mm Ancon Staifix HRT4 housing wall ties, to be set at 450mm vertical and 900mm staggered horizontal c/s, horizontal c/s to be reduced around openings and set at 225mm from reveal.

All jambs and cills to cavities to be closed with proprietary PVC-U insulated cavity closer with integral DPC and fixed in accordance with the manufacturer's instructions.

Walls are to be finished internally with 12.5mm British Gypsum wallboard; with all joints staggered and all edges supported; sealed with polysulphide sealant at all perimeters, junctions and openings; set on dabs; finished with scrim and british gypsum 'thistle boardfinish' plaster skim.

Note to Contractor - For internal face of bathrooms use 12.5mm British Gypsum 'Gyproc Moisture Resistant Board'.

Vertical chases in walls to be no deeper than 0.33 of the wall / leaf thickness. Horizontal chases to be no deeper than 0.17 of the wall / leaf thickness.

11.0 Internal Walls

11.1 Stud Partition Walls

Internal stud partition walls to be constructed using regularised S.W. studs, 89 x 38mm S.W. sole plates, head plates, noggins and vertical studs at max. 450mm c/s. Face both sides with 12.5mm British Gypsum wallboard; with all joints staggered and all edges supported; sealed with polysulphide sealant at all perimeters, junctions and openings; finished with scrim and British Gypsum 'thistle boardfinish' plaster skim. 90mm general purpose acoustic insulation to be placed within cavity between studs tightly packed to ensure no air gaps.

Note to Contractor - For internal face of bathrooms use 12.5mm British Gypsum 'Gyproc Moisture Resistant Board'.

11.2 Dwarf Walls (in loft space forming thermal envelope)

Internal dwarf walls to be constructed using existing trusses with 90mm Kingspan Kooltherm K107 Pitched Roof Board insulation to be placed within cavity between studs tightly packed to ensure no air gaps. Inner face of stud walls to receive 52.5mm Kooltherm K118 insulated dry-lining board with all joints staggered and all edges supported; sealed with polysulphide sealant

at all perimeters, junctions and openings; finished with scrim and British Gypsum 'thistle boardfinish' plaster skim.

12.0 Internal Doors, Architraves, Skirtings & Window Boards

New internal doors, ironmongery; architraves; skirting boards and window boards are all to the client's requirements and specification, whilst being inclusive of the following.

FD30 Fire doors to primary means of escape. All doors should adhere to the fire safety requirements as indicated in the technical drawings as well as those defined by the building regulations.

All new hinges to be medium duty / medium frequency 100mm sherardized butt hinges with sherardized counter sunk wood screws, strictly 3 hinges per door leaf.

To ensure air transfer between rooms, there should be an undercut to all internal doors with a min. area of 7600 mm² above the floor finish (equivalent to 10mm for standard 760mm wide door).

13.0 Stairs

Stairs to be min. 800mm wide between handrails, stairs to comprise equal risers, and equal goings. Style and finish of stair to the client's requirements / preference.

Max. riser 170mm, min. going 250mm, treads should overlap by a min. of 16mm, head room above flight to be minimum 2000mm clear, measured perpendicular from pitch line to ceiling above. Newel posts to be positioned vertically, handrails fixed a minimum of 900mm vertically above line of stair nosing and landing floor. Balusters / spindles to be vertical with no gap greater than 100mm and with no horizontal members. Top of handrail not to exceed 1100mm vertically, where a flight is of 3 or more steps a handrail must be provided.

Full manufacturers details to be formally submitted to Building Control prior to being manufactured. Once structural elements are in place; the total rise & going to be site measured by stair supplier prior to production.

14.0 Ceilings

Proposed ceilings to be under drawn with 1 layer 15mm British Gypsum wallboard; with all joints staggered and all edges supported; sealed with polysulphide sealant at all perimeters,

junctions and openings; finished with scrim and British Gypsum 'thistle boardfinish' plaster skim.

Ceilings separating units are to provide a minimum 60 minute fire resistance. Contractor it to explore existing ceiling construction & upgrade as necessary. Any lighting is to be surface mounted & not recessed.

15.0 Lintels

Lintels to external walls shall be proprietary galvanized mild steel IG standard L1/S 100, with a min. 150mm bearing and integral insulation. Install pre-formed cavity tray units over lintels. Weep holes are to be formed above lintels at maximum 450mm centres by raking out perpends and installing proprietary weepvent's (colour to match the external facing material).

15.1 Roof Insulation

Pitched ceiling - 90mm Kingspan Koolterm K107 Pitched Roof Board to be placed within cavity between rafters, tightly packed to ensure no air gaps with 52.5mm Kingspan Kooltherm K118 insulated dry-lining board fixed to the underside of rafters. All joints are to be taped with aluminium foil tape. Maintain min. 50mm ventilation void above insulation and breathable felt.

15.2 Roof Ventilation

Where required, provide roof ventilation to breathable roof membrane as detailed in manufacturer's guidance. Where the roof insulation intersects the wall insulation at the eaves a min. of 50mm continuous air space is to be maintained above the insulation by fixing rafter ventilator units between the rafters. Contractor to ensure that gutter / brackets do not restrict air flow.

16.0 Windows, External Doors & Rooflights

16.1 Windows

Window U-value: Limiting fabric parameter for new thermal elements as per Building Regulations Part L1B Oct. 2010 (2018 Amendments) – 1.6 W/m^2K.

New proprietary upvc windows, styled as indicated on the drawings to be fixed strictly in accordance with the manufacturer's instructions. Openable windows to be fitted with easy-clean hinges and ironmongery to approved sample. Ironmongery to ground floor windows to

be fitted with locks (Note that no locks shall be fitted to windows noted M.O.E. - Means Of Escape). Frames are to be sealed externally to all perimeters with 1 part polysulphide sealant.

Windows should provide 1/20th of floor area as rapid ventilation via opening windows, to all habitable rooms, with some part of the ventilation opening at high level (typically 1.75m above floor level).

16.2 External Doors

External door U-value: Limiting fabric parameter for new thermal elements as per Building Regulations Part L1B Oct. 2010 (2018 Amendments) – 1.8 W/m^{2}K.

New proprietary metal or upvc doors, styled as indicated on the drawings to be fixed strictly in accordance with the manufacturer's instructions. External doors to be hung in fully weather-stripped frame with proprietary threshold strips.

16.3 Roof Lights

Roof light U-value: Limiting fabric parameter for new thermal elements as per Building Regulations Part L1B Oct. 2010 (2018 Amendments) – 2.2 W/m^{2}K.

For roof pitches between 15 and 90°, new roof lights to be fixed in strict accordance with the manufacturer's instructions. The top frame of the window should be 1.85 – 2.2m above internal finished floor level.

16.4 Safety Glazing

Toughened or laminated glass to BS 952-1:1995 shall be installed into all critical locations to resist breakage in accordance with BS 6206: 1981. This includes:

All internal and external glazed doors from ground level to a min. height of 1500mm,

Any glazed side panels within 300mm of the door from ground level to a min. height of 1500mm,

Any internal and external glazed partitions from ground level to a min. height of 800mm.

16.5 Certificates

External windows and doors shall only be installed by a registered FENSA installer. A certificate shall be forwarded to building control within 30 days of completion of the installation work.

SERVICES

17.0 Background & Mechanical Ventilation

Background ventilation shall be provided by way of proprietary trickle vents providing an equivalent ventilator area of 5000mm² to all habitable rooms and 2500mm² to all wet rooms.

Mechanical extract ventilation is to be provided to the kitchen providing an extract rate of 30 litres / sec adjacent the hob or 60 litres / sec where located remote from hob and 6 litres / sec to the wc. Mechanical vents should have min. 15 mins. overrun and may be operated intermittently. All rooms containing mechanical vents to have 10mm gap under door to allow for makeup air.

Note to Contractor – Where fan ducts are located within unheated voids, insulated ducts to be adopted by contractor to avoid risk of condensation forming.

18.0 Electric's

All electrical installation works are to be designed, installed and tested by a certified person under the 'Part P competent persons self-certification scheme' in accordance with the building regulations Part P. The works shall comply with BS 7671:2000.

All positions of electrical equipment to be agreed between the client & chosen contractor.

It is confirmed that reasonable provision should be made for providing energy efficient lighting. Where external lighting is provided reasonable provision shall be made for the effective control at times when daylight is sufficient.

18.1 Smoke detection

A mains operated, automatic smoke detection and alarm system shall be installed to conform to BS 5839 and the kitchen is to be fitted with a heat detector

Smoke / heat detectors are to be ceiling mounted and at least 300mm from walls and other electrical devices, ensure that smoke alarms within circulation areas are within 7.5m of the door to each habitable room.

Emergency lighting to be provided to be provided in accordance with the relevant requirements of BS:5266-1:2005, together with an installation and commissioning certificate in an industry recognised format.

The manufacturer's instructions, operations and maintenance procedures shall be forwarded to the client upon completion of the system.

19.0 Central Heating & Hot Water System

It is proposed that the existing heating system is extended where suitable. Thermostatic radiator valves to be fitted to all radiators where applicable.

Alternatively, gas appliance condensing boiler must only be fitted by Gas Safe registered heating engineers. Boiler should be fitted in strict accordance with the manufacturer's instructions. All room sealed appliances whether fan flued or balanced flued, should be located on an external wall.

Boiler to be sized and installed by a Gas Safe registered heating engineer in strict accordance with the manufacturer's instructions. The boiler should have a fuel factor rating of 1.00 using mains natural gas. The boiler should have the following standard controls: programmer, standard room thermostat, trvs, hot water and heating timed separately as well as the following advanced controls: delayed start room thermostat, time and temperature zone control and weather compensator.

Note to Contractor - expert advice should be sought regarding the boiler as G2k do not offer expertise in the sizing and specification of boilers.

19.1 Room sealed appliance

Hot water and central heating system provided by room sealed appliance. A sealed system, to be installed to all new areas comprising small bore system with radiators with individual thermostatic valves, room thermostats and programmer control. System zoned if required for efficient operation. Provide towel rails to bathrooms.

All hot and cold water is to be fed through polybutylene pipework with all capillary fittings, valves and controls, in floor voids, or 15mm copper externally or in exposed areas and fixed to walls with copper brackets. All hot water to be supplied direct from condensing boiler.

Pipes shall be sized to provide sufficient capacity for the appliance served. The plumber is to connect to all sinks, basins, baths, showers and cisterns as appropriate. Tank overflows should discharge clear of the building a minimum of 25mm.

Dense sectional foam insulation must be provided to all hot and cold water and heating pipework in unheated areas to BS 5422:2001. The primary feed and return pipes from the boiler shall also be insulated for at least the first 1.0m from the hot water cylinder.

29.2 Certificates

A completed 'Building Regulations self-certification certificate' and a 'heating and hot water installation certificate' will be forwarded to the building control surveyor within 30 days of completion of the heating and hot water systems work.

20.0 Above Ground Foul Water Drainage

20.1 Kitchen

Sink wastes to be connected to; 40 x 76mm seal, bottle trap connected to; 40mm waste pipe discharging to existing drainage system, contractor is to explore existing drainage locations prior to work commencing on site.

20.2 WC

Wc's connected to 110mm waste pipe connected to existing stub stack. Sink wastes to be connected to; 32 x 76mm seal, bottle trap connected to; 32mm waste pipe connected to existing stub stack. Bath wastes to be connected to; 40 x 76mm seal, bath trap connected to; 40mm waste pipe connected to existing stub stack.

21.0 Operation & Maintenance Manuals

The manufacturer's instructions, operations and maintenance procedures shall be obtained and collated in a manual, upon completion of all fixed building services, and passed on to any future occupier of the dwelling.