Exit signage should be provided to every doorway, other than exits in ordinary use (main entrances). Signage should be in accordance with BS ISO 3864-1 and BS 5499-4. Futher advice on fire safety signs, including emergency escape signs, is given in the HSE publication Safety Signs and Signals: Guidance on Regulations.

Power circuits should be protected to limit damage to cables, they should be sufficiently robust, carefully selected and protected in areas where cables may be exposed to damage. Cable support should be class A1 rated and offer at least the same integrity as the cable. They should maintain circuit integrity and hold cables in place when exposed to fire. During a fire a protected circuit should be installed to operate equipment, being separate from any circuit provided for another purpose, in accordance with BS EN 50200.

Requirement B2:

To inhibit the spread of fire within the building, the internal linings shall adequately resist the spread of flames over their surfaces. They should have, if ignited, a rate of heat release or a rate of fire growth, which is reasonable in the circumstances.

Section 6:

The surface linings of walls and ceilings should meet the classifications in Table 6.1

For surface spread of flame and classification of linings please refer to HSSP Floor Plans.

The need for cavity barriers in concealed floor or roof spaces can be reduced by installing a fire resisting ceiling (minimum EI 30) below the cavity, complying with ADB2 Diagram 9.3.

Requirement B3:

The building shall be designed and constructed so that, in the event of a fire, it's stability will be maintained for a reasonable period.

A wall common to two or more buildings shall be designed and constructed so that it adequately resists the spread of fire between those buildings.

Where reasonably necessary, to inhibit the spread of fire within the building, measures shall be taken where appropriate, to sub-divide the building with fire resisting construction.

The building shall be designed and constructed so that the unseen spread of fire and smoke within concealed spaces in its structure and fabric is inhibited.

Section 7:

All penetrations or openings through a compartment wall or fire element must be suitably fire stopped in accordance with ADB2 Appendix B Table B3.

Section 8:

All compartment walls are to be taken to the underside of the roof and suitably fire stopped in accordance with ADB2 Section 8 Diagram 8.1a, table 8.1. Compartment walls and floors should form a complete barrier to fire between compartments they separate, have appropriate fire resistance compliant with Appendix B, Tables B3 and B4. Where timber beams, joists, purlins and rafters are built into or carried through masonry compartment walls, they should be addequately fire stopped.

The roof, 1500mm either side of the compartment, should have a covering classified as BROOF(t4), on a substrate or deck of a material rated class A2-s3, d2 or better, as set out in Diagram 8.2a.

Section 9:

Cavities in the construction of a building provide a ready route for the spread of smoke and flame, which can present a greater danger as any spread is concealed. For the purpose of this document, a cavity is considered to be any concealed space. To reduce the potential for fire spread, cavity barriers should be provided in accordance with ADB2 Section 9 Diagram 9.1.

Ceilings should meet the minimum fire resistance of EI30 in accordance with ADB2 Diagram 9.3.

Openings should be limited to the following instances:

a. Fire doorsets with a minimum rating of E 30, fitted in accordance with Appendix C.

b. The passage of pipes that follow the provisions in Section 10, table 10.1, diagram 10.1.

c. The passage of cables or conduits containing one or more cables.

d. Openings fitted with a suitably mounted and appropriate fire damper.

e. Ducts that are either of the following.

i. Fire resisting (minimum E 30).

ii. Fitted with a suitably mounted and appropriate fire damper where they pass through the cavity barrier.

Section 10:

The performance of a fire-separating element should not be impaired. Every joint, imperfect fit and opening for services should be sealed. Fire-stopping delays the spread of fire and, generally, the spread of smoke as well, should comply with ADB2 Section 10, table 10.1, diagram 10.1. Where uPVC pipes are to be used, these should also comply with BS4514 or BS5255.

Duct work for mechanical ventilation and air conditioning systems should not help to transfer fire and smoke through the building. Terminals of exhaust points should be sited away from final exits, cladding or roofing materials achieving class B-s3, d2 or worse and openings into the building. Ductwork should comply with ADB2 section 10, diagram 10.2 or diagram 10.3.

Non- domestic kitchens and plant rooms should have separate and independent extraction systems, extracted air should not be recirculated in accordance with ADB2 Section 10.

Fire dampers and fire and smoke dampers should be sited within the thickness of the fire separating element, securely fixed and sited so that in a fire, expansion would not push the fire damper through the structure. Fire dampers and fire and smoke dampers should conform to BS EN 15650 and have a minimum E classification of 60 minutes.

Smoke detection should be sited as to prevent the spread of smoke as early as practicable by activating the fire and smoke dampers through automatic release mechanisms, conforming to BS EN 54-7 and BS5839-3.

Requirement B4:

The external walls of the building shall adequately resist the spread of fire over the walls and from one building to another, having regard to the height, use and position of the building.

The roof of the building shall adequately resist the spread of fire over the roof and from one building to another, having regard to the use and position of the building.

Section 12:

The external walls of the building should have the appropriate fire resistance given in ADB2 Appendix A, Table B1 unless they form an unprotected area.

Section 13:

Please refer to the site plan for the position of relevant boundaries and percentage of unprotected areas.

To be in accordance with ADB2 Section 13 Diagram 13.2, Diagram 13.3 and Diagram 13.5.

Permitted unprotected areas shall comply with Table 13.1 of ADB2 Section 13.

Section 14:

Roof coverings to National Class AA, AB or AC, to comply with ADB2 Table 14.1 and Appendix B Table B3.

Requirement B5:

The building shall be designed and constructed so as to provide reasonable facilities to assist firefighters in the protection of life.

Reasonable provision shall be made within the site of the building to enable fire appliances to gin access to the building.

Section 15:

Access to buildings for pump applicances should be within 45m of every point of the footprint as per ADB2 Section 15, Diagram 15.1 and Table 15.1.

Regulation 38:

Where a building is being extended, the person carrying out the works shall give fire safety information to the responsible person not later than the date of completion of the work, or the date of occupation of the building or extension, whichever is the earlier.

Section 19:

Information should be provided to Building Control setting out the following; escape routes, location of fire separating elements, fire doorsets, self closing devises and relevant hardware, locations of fire and smoke detectors, alarm call points, control boxes, alarm sounders, fire safety signage, emergency lighting, fire extinuishers. Details should also include assumptions relating to the management of the building in the design of fire safety arrangements and the provision of the evacuation of disabled people. As set out in ADB2 Section 19 Paragraph 19.3, 19.4.

Appendix C: Fire Doors

All doors on the escape route should be readily operable from the side approached by people making the escape.

The fire resistance of the doors should be in accordance with ADB2 Appendix C Table C1.

All elements of structure are to be in accordance with ADB2 Apendix B26, Table B3 or as shown on HSSP floor plans.

Approved Document C - Site:

Please refer to the approved documents for definitions and a full list of codes, standards and references for all building types referred to.

Requirement C1:

The ground to be covered by the building shall be reasonably free from any material that might damage the building or affect its stability, including vegetable matter, topsoil and pre-existing foundations.

Reasonable precautions shall be taken to avoid danger to health and safety caused by contaminants on or in the ground covered, or to be covered by the building and land associate with the building.

adequate subsoil drainage shall be provided if it is neded to avoid the passage of ground moisture to the interior of the building or damage to the building.

Requirement C2:

The walls, floors and roof or the building shall adequately protect the building and people who use the building from the harmful effects caused by ground moisture, rain, condensation and water spillages.

Section 1: Clearance or Treatment of Unsuitable Material.

A site investigation is required to be undertaken and should contain the following sections:

Planning Stage

Desk Study

Site Reconnaissance or Walkover Survey

Main Investigation and Reporting

This should be undertaken by a suitable qualified person in accordance with ADC, BS EN 1997-2:2007: Eurocode 7, BS5930:1999 and BS8103-1:2011.

Vegetable matter i.e. turf and roots, should be removed from the ground to be covered y the building at least to a depth to prevent later growth. The effects of roots close the proposed building should be assessed in accordance with NHBC and BRE Digests 298, 240 and 241. Building services i.e. below ground drainage, should be robust and flexible to accommodate to presence of any tree roots.

If the site contains fill or made ground, consideration should be given to its compressibility and its potential for collapse. Please refer to BRE Digest 427 and BRE Report BR 424.

Section 2: Resistance to Contaminants

A site investigation is required to determine whether or not contaminants are present.

The ground conditions have been assumed to be clay based upon ADC diagram 1. All DPC's must provide a barrier to potential radon gases, Monarflex RMB400 or similar and approved.

The guidelines set out in ADC must be followed in terms of dealing with site contaminants, should any be found.

Damp Proof Course at 150mm minimum above finished ground level lapped with damp proof membrane, stepped DPC inside cavity, all lapped and taped fully in accordance with manufacturers details. Provide a damp proof course to all vertical and horizontal cavity closures. Weepholes are to be provided at 900mm centers with any necessary cavity tray, in accordance with ADC Section 5, diagram 8 and 9.

Section 3: Subsoil Drainage

The proposed development is not expected to alter the ground water table conditions therefore localised flooding is not expected. The site falls within flood zone 1 using the flood map for planning, therefore there is a very low probability of flooding. A flood risk assessment is not required.

During excavation works care must be taken to prevent the potential transport of water bourne contaminants, should any be present.

Section 4: Floors

The ground supported floor must prevent the passage of moisture from the ground and formation of condensation. The floor should be built on well compacted hardcore no greater than 600mm deep of clean broken brick or similar inert material, free from materials including water-soluble sulphates in quantities which could damage the concrete (BRE Digest 276); and concrete at least 100mm thick (but thicker if the structural design requires) to mix ST2 in BS 8500 or, if there is embedded reinforcement, to mix ST4 in BS 8500; and damp-proof membrane above or below the concrete, and continuous with the damp-proof courses in walls, piers and the like. If the ground could contain water soluble sulphates, or there is any risk that sulphate or other deleterious matter could contaminate the hardcore, the membrane should be placed at the base of the concrete slab.

A suitable DPM must be provided which should be a minimum of 300µm thick (1200 guage), joints to be sealed and laid onto a bed of material that will not damage the sheet.

Floors should be constructed to resist surface condensation and mould growth. The thermal transmittance should not exceed 0.7W/m²K at any point and all junctions are designed to accredited construction details or the guidance in BRE IP17/01.

Section 5: Walls

All internal and external walls must prevent the passage of moisture from the ground and formation of condensation. A suitable damp proof course should be installed which is continuous with the damp proof membrane, at least 150mm from the ground level and the cavity taken at least 225mm below the lowest level of the damp proof course. Weep holes should be provided every 900mm. Please refer to ADC Section 5: Diagram 8 & 9.

All external walls should also provide protection from precipitation in accordance with ADC Section 5: 5.12 - 5.18.

The building exposure zone is class 1 (ADC Section 5: Diagram 12) therefore a 125mm full fill cavity is acceptable (See ADC Section 5: Table 4). Mortar joints within the brickwork are to be recessed.

Insulated cavity closers (where utilised) and suitable sealant around all openings are specified to prevent the ingress of moisture through joints.

Where level threshold access is provided, the external landing is laid to fall away from the door at between 1 in 40 and 1 in 60 with the cill having maximum slope of 15°.

To resist damage from interstitial condensation, all external walls are to be in accordance with BS5250:2002 and BS EN ISO 13788:2002. The thermal transmittance should not exceed 0.7W/m²K at any point and all junctions are designed to accredited construction details or the guidance in BRE IP17/01.

Section 6: Roofs

The proposed pitched roof should have overlapping dry joints, impervious or weather resisting and backed by a material which will direct precipitation which may enter to the roof outer face. Each roof tile should be fixed in an appropriate manner in accordance with BS8000-6:1990.

The proposed flat roof should have sealed joints and be impervious to moisture. Each section should be fixed in an appropriate manner in accordance with BS8000-6:1990.

To resist damage from interstitial condensation, all roof finishes are to be in accordance with BS5250:2002 and BS EN ISO 13788:2002. To avoid excessive moisture transfer to roof spaces, all penetrations must be suitably filled and sealed.

Approved Document E - Acoustics:

Please refer to the approved documents for definitions and a full list of codes, standards and references for all building types referred to.

Requirement E1: The dwelling shall be designed and constructed in such a way that they provide reasonable resistance to sound from other parts of the same building.

Requirement E2: The dwelling shall be designed and constructed in such a way that internal walls between a bedroom or a room containing a water closet, other rooms and internal floors.

NOTE: Requirement E2 doeas not apply to internal walls containing a door, an internal wall separating an ensuite from n associated bedroom or existing walls and floors in a building which is subject to a material change of use.

Section 0: Performance:

Internal walls and internal floors are to be protected from Airborne Sound and achieve a minimum of 40 RwdB (refer to ADE Section 0: Table 0.2, Diagram 0.2 and Diagram 0.3. Walls which contain doors are excluded from this requirement.

Section 1: Pre-completion Testing:

Sound testing should be undertaken in accordance with ADE Section 1 for dwellings. These will consist of two airborne tests as follows:

A test of insulation against airborne sound between one pair of rooms (where possible suitable for use as living rooms) on opposite sides of the separating floor.

A test of insulation against airborne sound between another pair of rooms (where possible suitable for use as bedrooms) on opposite sides of the separating floor.

They should be undertaken and recorded in accordance with the requirements of ADE Section 1:1.29 to 1.41.

If sound testing is not desirable then the areas applicable could be constructed to Robust Details Ltd, subject to the contractor being registered.

Section 5: Internal Walls & Floors for New Buildings

Internal wall types D is applicable to ground floor internal walls, please refer to ADE Section 5: 5.20 and Diagram 5.4.

Internal wall types A or B are applicable to first floor internal walls, please refer to ADE Section 5: 5.17, 5.18, Diagram 5.1 and 5.2,

Internal floor type C or D is applicable to the first floor, please refer to ADE Section 5: 5.23 and Diagram 5.7.

All doors and openings to have good perimeter sealing. Doors to have a minimum mass per unit area of 25kg/m² or, if using a door-set, a sound reduction index of 29dBRw.

All gaps around internal should be adequately filled to avoid air paths between rooms.

Please refer to specification for wall and floor build-ups.

Approved Document F - Ventilation:

Please refer to the approved documents for definitions and a full list of codes, standards and references for all building types referred to.

Requirement F1:

There shall be adequate means of ventilation provided for people in the building.

Fixed systems for mechanical ventilation and any associated controls must be commissioned by testing and adjusting as necessary to secure that the objective referred to above.

The person carrying out the work once completed, must give sufficient information to the building owner within five days, related to the ventilation system and it's maintenance.

The person carrying out the works must serve notice to the building control body that the fixed services have been commissioned in accordance with the procedure approved by the Secretary of State. This must be received by the building control body no later than 30 days after the completion of the works.

Section 4:

To minimise noise disturbance for the occupants, quieter ventilation products must be specified and approved by the designer. The noise level in habitable rooms i.e. bedrooms, should not exceed 30dB LAeqT as set out in BS8233:1999. For less sensitive rooms, this should not exceed 35dB LAeqT as set out in BS8233:1999.

Any ducts passing through fire / compartment walls must be suitably fire stopped in accordance with approved document B.

The mechanical systems must be commissioned in accordance with the Domestic Ventilation Compliance Guide.

All documents as listed in the Domestic Ventilation Compliance Guide should be given to the dwelling owner and building control body at handover.

Section 7:

When building work is carried out on an existing building, the work should comply with the applicable requirements of Schedule 1 to the Building Regulations, and the rest of the building should not be made less satisfactory in relation to the requirements than before the work was carried out (see regulations 3 and 4 of the Building Regulations). Further, when a building undergoes a material change of use, as defined in regulation 5 of the Building Regulations (see paragraph 3.17 above), Part F applies to the building or that part of the building which has been subject to the change of use, in accordance with regulation 6. Therefore, the guidance in other sections of this Approved Document may be applicable.

Where the original windows were fitted with trickle ventilators the replacement windows should include them and they should be sized. In all cases where trickle ventilators (or an equivalent means of ventilation) are to be fitted, the new ventilation opening should not be smaller than was originally provided, and it should be controllable. Where there was no ventilation opening, or where the size of the original ventilation opening is not known, the following minimum sizes should be adopted.

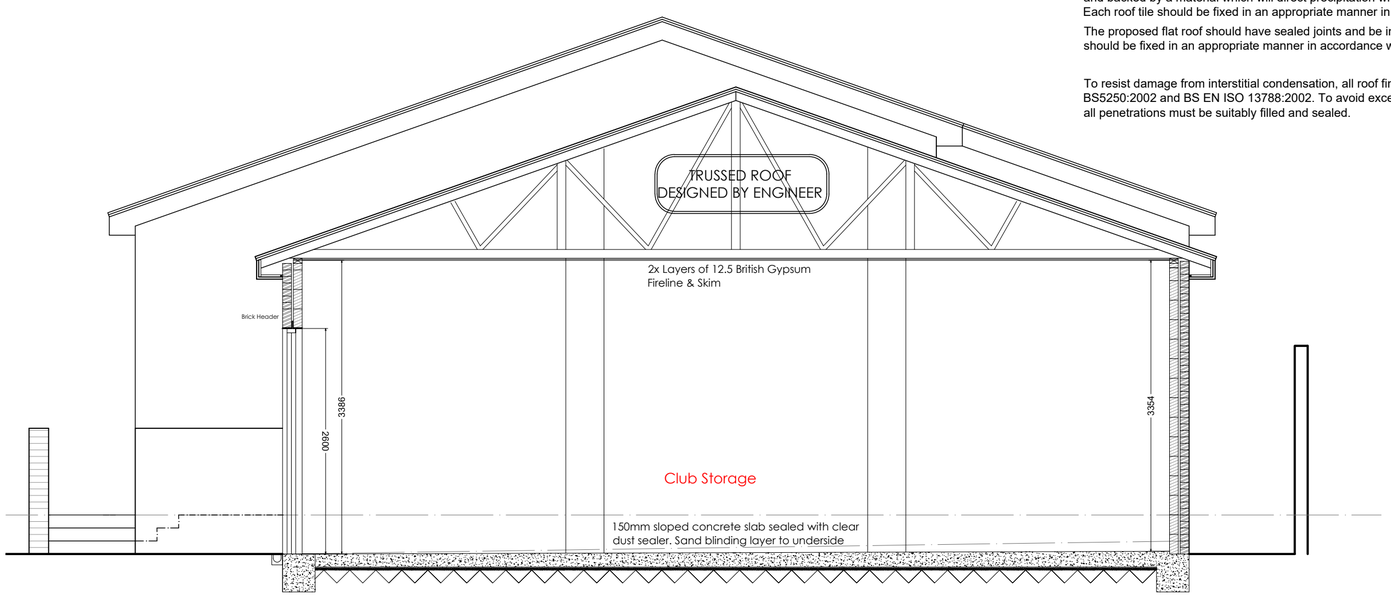
- occupiable rooms: for floor areas up to 10 m2 – 2500 mm2 equivalent area; greater than 10 m2 – at the rate of 250 mm2 equivalent area per m2 of floor area
- kitchens (domestic type) – 2500 mm2 equivalent area
- bathrooms and shower rooms – 2500 mm2 equivalent area per bath or shower
- sanitary accommodation (and/or washing facilities) – 2500 mm2equivalent area per WC

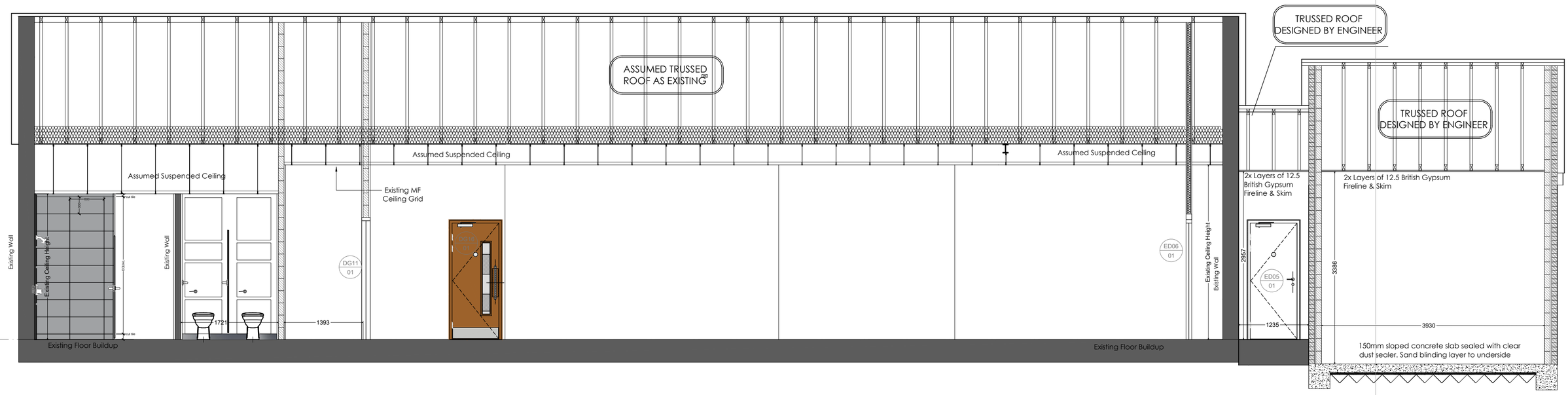
Intermittent extract is to be provided to the kitchen areas, bathrooms and other sanitary accommodation. Sufficient purge ventilation should be provided to all habitable rooms.

All internal doors should have an undercut for air transfer of 10mm above the finished floor level.

Using table 5.1a the new dwelling is to achieve the following minimum intermittent extract rates per room type:

Kitchen	60 l/s (30l/s adjacent to the hob)
Bathroom/Ensuite	15 l/s
WC	6 l/s





Notes
This drawing is to be read in conjunction with all relevant drawings and specifications.
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All work to be to the entire satisfaction of the NHBC or Local Authority not withstanding anything shown or indicated on these drawings. All workmanship and materials to be the best of their respective kind and at least equivalent of the appropriate British Standard Code of Practice. All relevant dimensions and levels to be ascertained or checked and verified on site before specific areas of work are commenced.
This drawing is to be read in conjunction with clients specification/employers requirements and structural engineers design.

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BUILDING REGULATIONS ISSUE

Rev.	Date.	Drawn.

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Project.
Reconfiguration and Refurbishment
The Pavilion
Necton Street, Syston
For Syston Town Council

Title.
PROPOSED SECTIONS

Scale.	Drawn.	Checked.	Date.
1:50	SG	NC	March '20

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7801-04-005	B1