## **Building Regulation Notes:**

## Materials & Workmanship:

To be in accordance with Regulation 7, building work must be carried out in a workmanlike manner using adequate and proper materials which are appropriate for the circumstances used, adequately mixed or prepared and applied/ fixed / used so as adequately to perform the functions for which they're designed.

harmonised European product standard or conform to a European Technical Assessment should normally have CE marking.

When using materials, the following can be used as a means to determine the materials suitability:

- CE marking under the Construction Products Regulation CE marking under other EU directives and regulations
- Other national and international technical specifications i.e. ISO Independent Certification Schemes

Ridge vent

Proposed new brickwork walls

(CM) Carbon Monoxide Detector

Protection from airbourne sound

the structural engineer

Wall mounted extract fan

Ceiling mounted extract fan

(SD) Smoke Detector

(HD) Heat Detector

= = 30 mins FR

ШWМ

см🖾

RV

Proposed new blockwork walls

Legend:

AB Fonterra 374 rectangular air brick with cavity sleeve and internal metal grille. 10,250mm<sup>2</sup> EA.

Proposed steel beams to be detailed and specified

Blockwork specification locally to be confirmed by

by the structural engineer. Including padstones.

## PME Primary means of escape

- SME Secondary means of escape
- Proposed new foundations to be fully detailed and designed by the structural engineer.

## Classification of Linings

Colour Red

Small rooms of maximum internal floor area		
	D-s3-d2	
maximum floor are of 40m <sup>2</sup>		
Other rooms (including garages)		
	C-s3-d2	
Other Circulation Spaces within a dwelling		
Other circulation spaces (including common	r	
areas of blocks of flats)	B-s3-d2	

# The Construction Products Regulation requires that construction products that are covered by a

- British & European Standards
- Tests and calculations

## Past Experience

- In determining the adequacy of workmanship, the following is applicable: CE marking - A material with CE marking is likely to have workmanship specified in the relevant European Technical Assessment.
- British Standards or other appropriate technical specifications

## Independent Certification Schemes

## Management Systems

Past Experience Testing

# Building Work:

To be in accordance with Regulation 3 and 4 of the Building Regulations. Building work should be carried out in such a way that, when work is complete the work and building comply with the building regulations.

## Energy Efficiency Requirements:

To be in accordance with Part 6 of the Building Regulations. If a building is extended or renovated, the energy efficiency of the existing building or part of it may need to be upgraded.

## Notification of Work:

Building work is to be notified to the local authority building control body unless the works are self-certified by a registered competent person or third party or the work is exempt from the need to notify by regulation 12(6A) of, or schedule 4 to, the Building Regulations.

## Responsibility for Compliance:

People who are responsible for the building work must ensure that the work complies with all applicable requirements of the Building Regulations. The building owner may also be responsible and should the work not comply with the Building Regulations, the building owner may be served with an enforcement notice.

## Approved Document A:

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

A1: Loading: The building shall be constructed so that the combined dead, imposed and wind loads are sustained and transmitted by it to the ground safely and without causing such deflection and deformation of any part of the building, or such movement of the ground as will impair the stability of any part of another building.

A2: Ground Movement: The building shall be constructed so that ground movement caused by swelling, shrinkage or freezing of the subsoil or land slip or subsidence (other than subsidence arising from shrinkage), in so far as the risk can be reasonably foreseen, will not impair the stability of any part of the building.

## Section 2A: Basic Requirements for Stability:

The overall size and proportion of the building is limited in accordance with the specific guidance for each form of construction

The layout of the internal and external walls form a robust structure and is constructed with restriction on the maximum size of cells measured in accordance with the specific guidance for each form of construction.

The internal and external walls are adequately connected either by masonry bonding or mechanical connections

The roof and floors are of construction and interconnection with walls, that they provide local support and act as horizontal diaphragms capable of transferring the loads to the buttressing elements of the building.

The 190mm thick brickwork wall with support piers to the rear of the garden is to be in accordance with ADA. The brickwork is to match the one used for the dwellings. The foundations for the wall to be in accordance with ADA and NHBC standards, BS EN 1996-1 and BRE Good Building Guide 14, fully detailed, designed and specified by the structural engineer, taking into account the soil type and close proximity to existing mature trees.

Traditional cut roofs may require additional diagonal bracing in accordance with BS EN 1995-1-1:2004, BSI PD 6693-1:2002 and BS 8103-3:2009.

## Section 2B: Sizes of certain timber members in floors and roofs for dwellings. Areas at risk from Longhorn Beetle.

All new timber members are to be in accordance with Part A and sized based on TRADA Span Tables For Solid Timber Members and / or BS EN 1995-1-1:2004, BS8103-3:2009 and BSI document PD6693-1:2012

Roof timbers are to be fully detailed and designed by the structural engineer or specialist roof timber manufacturer.



## Section 2C: Thickness of walls in certain small buildings

## All new walls are to be in accordance with ADA section 2C, BS EN 1996-2:2006 and BSI PD 6697:2010.

All new external walls and internal loadbearing walls must be in accordance with ADA Section 2C, diagram 1 and table 3. All external cavity walls consist of 102.5mm brickwork outer leaf (or blockwork and suitable cladding material as described in the specification notes), 100mm blockwork inner leaf and 125mm cavity. The external wall, including finishes has an overall thickness of 352.5mm minimum. Internal blockwork walls have an overall thickness of 150mm.

## The design loads of all elements are in accordance with the imposed loads given in Table 4.

Masonry units must conform to BS EN 771-1, concrete blocks to BS EN 771-3 or BS EN 771-4.

Cavity wall ties to comply with BS EN 845-1 and ADA Table 5, austenitic stainless steel. Cavity walls ties to be general purpose wall ties suitable for fully filled cavity situations, fitted at 750 centres horizontally and 450 centres vertically, centres to reduce to 300 vertically within 225 from all openings with un-bonded jambs. The number of wall ties per square meter is not less than 2.5. ties/m<sup>2</sup>. Minimum tie length of 250mm with a minimum bedding depth of 50mm.

## The compressive strength of masonry units are to be in accordance with ADA Diagram 9 or the values given in Table 6 or 7

The mortar above ground should have a designation according to BS EN 1996-1-1:2005 with its national annex or strength class M4 according to BS EN 998-2:2010 or 1:1:5 to 6 CEM I, lime and fine aggregate measured by volume of dry materials or of equivalent or greater strength and durability to the specification above.

The maximum span of floors are in accordance with ADA 2C23 and Diagram 10. The combined dead and imposed load on the wall does not exceed 70kN/m at the base of the wall. Lintels spanning under 1200mm have a minimum bearing of 100mm. lintels spanning in excess of 1200mm have a minimum bearing of 150mm.

Vertical lateral restraint to walls and buttressing in accordance with ADA2C25, 26 AND 27.

Lateral support to be provided at roof level in accordance with ADA Section 2C Table 9 and Diagram 15 and 16 and BS EN 841-1. Galvanised steel straps at 2m maximum centers across 2no rafters where parallel to the external walls with solid timber packing between rafters at strap positions.

Gable walls to be strapped to the roof with tension straps in accordance with ADA2C35 & 36 and Diagram 16. Vertical strapping to be included at eaves level in accordance with the structural engineers details.

Small single storey non-residential buildings fully in accordance with ADA2C38 and Diagrams 17, 18 and 19 where applicable. The roof is braced at rafter level, horizontally at eaves and at the base of the gable in accordance with BS EN 1995-1:2004, BSI PD 6693-1:2012 or BS 8103-3:2009.

#### Section 2E: Foundations of plain concrete.

The concrete mix for all buried concrete in contact with the ground to be in accordance with BRE Special Digest 1:2005. Ground suitability and the composition of the existing foundations is to be assessed on site by the contractor and / or the structural engineer and / or the approved inspector.

All proposed new foundations are to be in accordance with ADA Section 2E and fully detailed, designed and specified by the structural engineer.

Any foundations in chemically aggressive soil conditions to BS8500-1 and BRE Special Digest 1. In non-aggressive soils, concrete to be Portland cement to BS EN 197-1 and 2 and fine and coarse aggregate conforming to BS EN 12620. The mix to be either 50kg of Portland cement to not more than 200kg of fine aggregate and 400kg of course aggregate or grade ST2 or GEN I concrete to BS 8500-2

Foundations dimensions are as those specified in ADA2E2, 2E3, 2E4, Diagrams 21, 22, 23 and Table 10. As applicable.

#### Section 4: Roof Covering.

All new roof coverings to be in accordance with BS EN 1991-1-1:2002.

Proposed roof covering to be capable of safely withstanding the concentrated imposed loads specified in BS EN 1991-1-1:2002.

Should any concerns arise once works begin, details must be reported to HSSP Architects and Building Control immediately for assessment.

Roof truss design by truss manufacturer and / or structural engineer and full design details and calculations are to be provided to building control by the contractor for approval prior to works commencing on site.

## Section 5: Disproportionate Collapse.

The proposed new building falls within building consequence class 1. Subject to the residential element (Class 1) of the development being fully compliant with ADA, no additional measures are required with regard to disproportionate collapse

New steel lintels to be Catnic or similar and approved and fully specified by the contractor and fitted in accordance with the manufacturers details and design. Minimum bearings of 100mm to be achieved or as specified by the structural engineer.

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be read in conjunction with all relevant drawings and specifications. his drawing. Use figured dimensions only. All levels and dimensions to be screpancies are to be bought to the immediate attention of HSSP Architect to be accepted for alteration and/or deviation from this design without prior

on site, the engineer is to be contacted regarding the current awing. atisfaction of the NHBC or Local Authority not withstanding anything show ship and materials to be the best of their respective kind and at least equ Code of Practice. All relevant dimensions and levels to be ascertained or

## Approved Document B2: Buildings other than Dwellings

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

The building owner should be provided with the relevant information to safely use and maintain the systems employed.

The building purpose group is 5.

## Requirement B1:

The building shall be designed and constructed so that there are appropriate provisions for the early warning of fire, and appropriate means of escape in case of fire from the building to a place of safety outside the building capable of being safely and effectively used at all material times.

## Section 1:

The building will be provided with an automatic fire detection and alarm system in accordance with BS5839-1:2017 to at least a Grade D Category LD3 standard. The smoke and heat detectors should be mains operated to BS EN 14604:2005 or BS5446-2:2003 with a battery back-up. The design and installation should be in accordance with BS5839-6.

Electrical alarm call points should comply with BS5839-2 and be installed in accordance with BS5839-1.

A visual alarm system should be provided, a warning system for people with impaired hearing should comply with Clause 18 of BS 5839-1 (gives detailed guidance on the design and selection of fire alarm warnings for people with impaired hearing. In buildings or part of a building where people may be in relative isolation, a visual and audible fire alarm may be the most appropriate solution. In buildings where the population is managed, a vibrating personal paging system may be more appropriate.)

Fire alarm and detection systems are to be fully detailed and designed by specialist in accordance with ADB and the relevant British Standard documentation. HSSP drawings are indicative only for the purpose of Building Regulation Compliance.

Detectors/Alarm heads should be positioned in circulation spaces so that;

A) there is at least one smoke detector/alarm head per storey

B) Smoke detector/alarm heads are positioned in the circulation space between sleeping spaces and living accommodation

C) All doors to habitable spaces are within 7.5m of a detector/alarm head.

D) They are positioned more than 300mm from any walls or light fittings. (If this is not

possible in the case of light fittings, it must be proven that the light fitting will not adversely affect the operation of the detector).

The smoke alarms should be connected to the mains supply either on a single independent circuit or a single regularly used local lighting circuit. There should be a means of isolating the power to the smoke alarms without isolating the lighting.

The electrical installation should be in accordance with approved document P.

The fire detection and alarm system should be properly maintained and an installation and commissioning certificate provided to the building control body and building owner. Occupiers should receive the relevant information concerning the operation and maintenance of the alarm system

## Section 4:

Small premises should meet all of the following general conditions.

i. It should be single occupancy.

ii. It should not comprise more than a basement storey, ground storey and first storey.

iii. No storey should have a floor area more than 280m2.

b. Any kitchen or other open cooking arrangements should be at the extremity of any dead end remote from the exits.

Escape routes should be sited so that the travel distance from any point of a storey to the nearest storey exit does not exceed the distance given in Table 4.1 (see Diagrams 4.1, 4.2 and 4.3). The siting of two or more exits or stairs should give effective alternative directions of travel from any point in a storey.

## Section 5:

Doors on escape routes should be readily openable to avoid undue delay to people escaping. Doors on escape routes (both within and from the building) should comply with paragraphs 5.7 to 5.15. Guidance on door closing and 'hold open' devices for fire doorsets is set out in Appendix C.

In general, doors on escape routes (whether or not the doors are fire doorsets) should be either of the following

a. Not fitted with a lock, latch or bolt fastenings.

b. Fitted only with simple fastenings that are all of the following.

i. Easy to operate; it should be apparent how to undo the fastening ii. Operable from the side approached by people escaping. iii. Operable without a key. iv. Operable without requiring people to manipulate more than one mechanism

Doors may be fitted with hardware to allow them to be locked when rooms are empty, if a secure door is operated by code or combination keypad, swipe or proximity card, biometric data, etc., a security mechanism override should be possible from the side approached by people escaping. Electrically powered locks should be interlinked with the fire detection and alarm system, security mechanism overrides for electrically powered locks should be a Type A call point as described in BS 7273-4. The call point should be positioned on the side approached by people escaping. If the door provides escape in either direction, a call point should be installed on both sides of the door.

The door of any doorway or exit should be hung to open in the direction of escape whenever reasonably practicable. It should always be hung to open in the direction of escape if either of the following conditions applies.

a. More than 60 people might be expected to use it during a fire.

b. There is a very high risk of fire with potential for rapid fire growth, such as with some industrial activities

All doors on escape routes should be hung to meet both of the following conditions. a. Open by a minimum of 90 degrees.

b. Open with a swing that complies with the following.

i. Is clear of any change of floor level, other than a threshold or single step on the line of the doorway

Doors should contain vision panels in both of the following situations.

a. Where doors on escape routes divide corridors.

b. Where doors are hung to swing both ways.

Approved Document M contains guidance about vision panels in doors across accessible corridors and Approved Document K contains guidance about the safety of glazing.

Escape route floor finishes should minimise their slipperiness when wet. Finishes include the treads of steps and surfaces of ramps and landings.

A ramp forming part of an escape route should meet the provisions in Approved Document M. Any sloping floor or tier should have a pitch of not more than 35 degrees to the horizontal.

Final exit widths should be at least the same as the minimum required width of the escape route it serves. People should be able to rapidly leave the area around the building. Direct access to a street, passageway, walkway or open space should be available. The route away from the building should comply with the following.

a. be well defined.

b. If necessary, have suitable guarding.

c. clearly visible and recognisable

d. adequate artificial lighting. If the mains electricity power supply fails, escape lighting should illuminate the routes listed in Table 5.1, conforming to BS5266-1.

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Reconfiguration and Refurbishment

The Pavilion

Necton Street, Syston

For Syston Town Council

## PROPOSED GROUND FLOOR PLAN

Scale.	Drawn.	Checked.	Date.
1:50	SG	NC	March '20
Drawing No.			Revision.
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