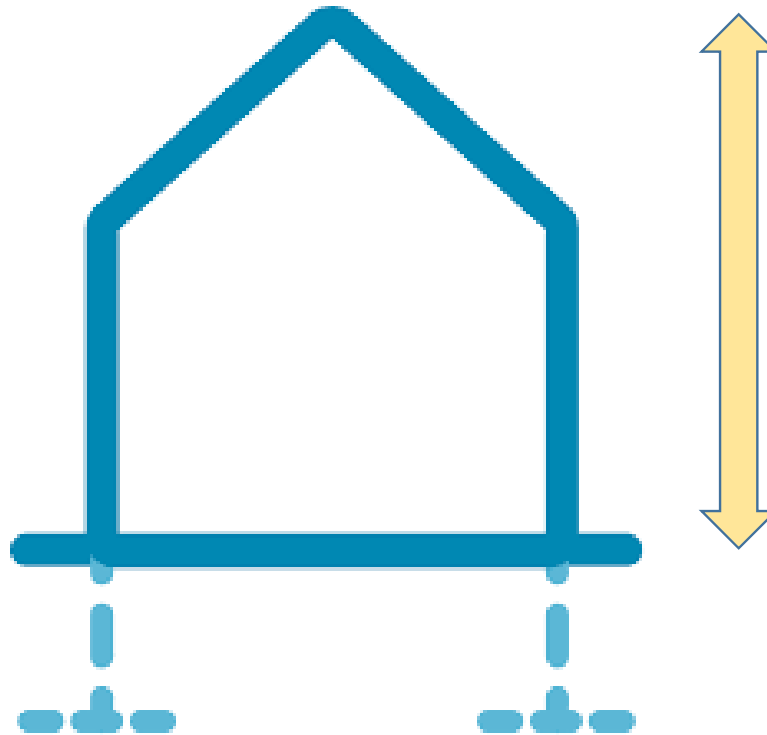
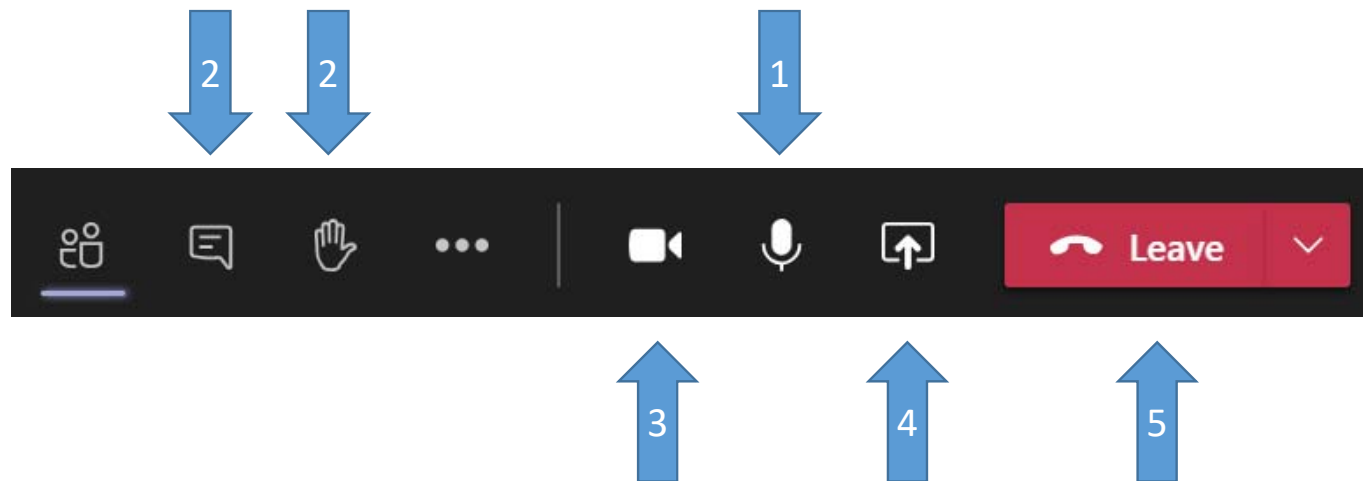


Superstructure 2: Fundamentals of Construction Technology



MS TEAMS HOUSEKEEPING

1. Mute your Microphone
2. Use Chat to Ask Questions or Put your hand Up
3. If you have a poor connection switch off Camera
4. I may ask you to share your screen.
5. When the lecture ends please hang up



Activity

Teams

Assignments

Calendar

Files

...

FO

FUNDAMENTALS OF CONSTRUCT...

General

GROUND WORKS 2

GROUND WORKS 3

Groundworks 1

GROUNDWORKS 5

SUB-STRUCTURE and GROUNDWORK INTROD...

Superstructure wk1

1 hidden channel

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+ New

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+ Add cloud storage

🔗 Open in SharePoint

☰ All Documents

General

Name	Modified	Modified By
Class Materials		Alan Nantel
ACBA4001 Assignment 1 - brief.docx	October 14	Oliver James Macki...
ACBA4001 Assignment 1.docx	October 13	Luke Screen (2014...
Assignment 1.docx	6 days ago	Steffan David Danc...
Borehole Log to print for 20th October.docx	October 15	Alan Nantel
Construction Management Industrial Place...	October 20	Alan Nantel
CPD Presentation.pptx	5 days ago	Alan Nantel
EXAMPLE-Site-Investigation-Report.pdf	October 27	Alan Nantel
FOUNDATIONS1.pptx	5 days ago	Alan Nantel

Moodle - Reading List

Fundamentals of Construction Technology (ACBA4001)

Home > My modules > ACBA4001

ExLibris
Leganto Online Resources List

Fundamentals of Construction Technology (ACBA4001) EDIT ...

PUBLISHED ACBA4001 (2019-20) 14 items in 2 sections

LISTS COLLECTION FIND LISTS REPORTS

LIST SENT NEW SECTION ADD ITEMS +

Essential reading (4)

Material which is an essential part of the course and students are expected to draw on as a core part of their learning. Must be available from the library and should be available online.

	BOOK Construction technology. 1, House construction ✓ Riley, Mike., Cotgrave, Alison., Third edition., Basingstoke, Hampshire :, Palgrave Macmillan, 2013., Total Pages vii, 382 pages, 8 pages of unnumbered plates : Essential Complete Check holdings 11
	BOOK Construction technology : industrial and commercial building. 2 ✓ Riley, Mike., Cotgrave, Alison., 3rd edition., Basingstoke :, Palgrave Macmillan, 2014., Total Pages 427 p. : Essential Complete Check holdings 8
	BOOK Building construction handbook ✓ Chudley, R., Greeno, Roger., 8th ed. , Oxford :, Butterworth-Heinemann, 2010., Total Pages xi, 828 p. : Essential Complete Check holdings 6
	BOOK Architectural technology [electronic resource] ✓ Emmitt, Stephen., 2nd ed., Hoboken, N.J. :, Wiley-Blackwell, 2012., Total Pages 1 online resource (265 p.) Essential Complete Check availability > 2

Further reading (10)

ACBA 4001
FUNDAMENTALS OF CONSTRUCTION
TECHNOLOGY: LEVEL 4

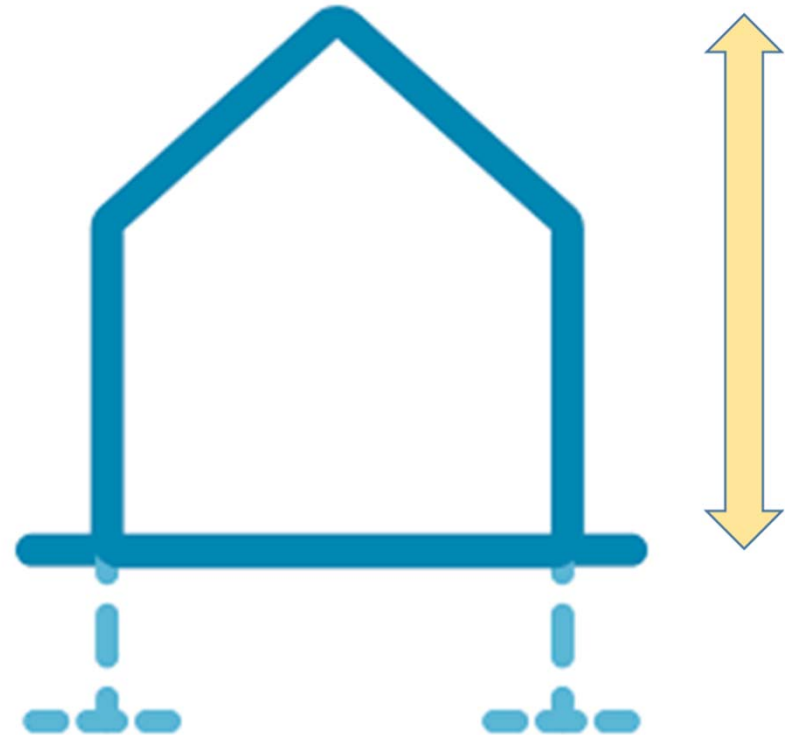
Week 2:

Introduction to Superstructure

External Walls

Openings

Building Regulations





Functions of Buildings

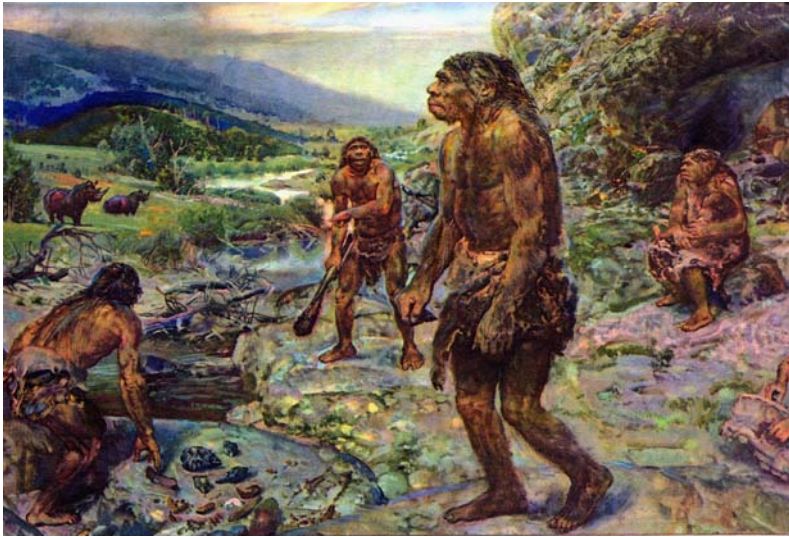
Why do we Build?

The use of buildings as protective structures or enclosures.

Since fire was first used by primitive people to provide light and heat, the use of energy to aid in environmental moderation has developed internal environments that reduce the effects and extremes in the external climate.



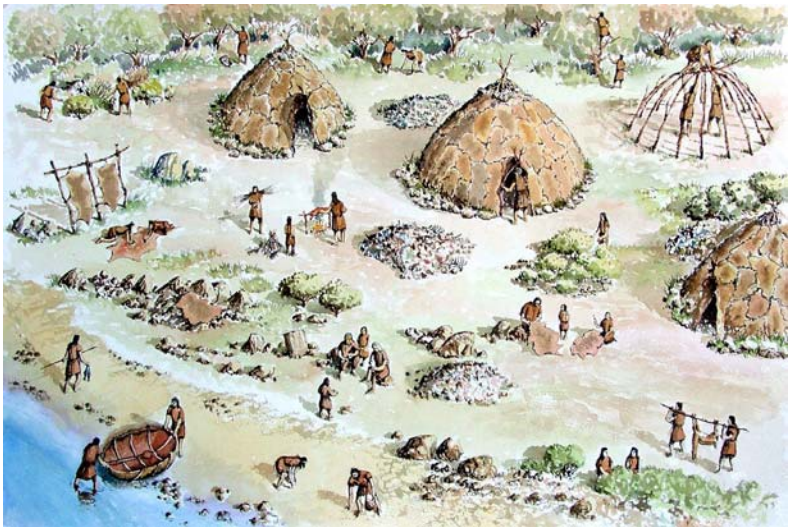
https://i.dailymail.co.uk/f/pix/2015/07/03/14/2A338A5800000578-3148511-image-a-21_1435930837225.jpg



http://4.bp.blogspot.com/-6CWvcEKKHBY/T6CVotA7KyI/AAAAAAAAAGTU/ySJec0U92LQ/s1600/the_neanderthal_encampment_by_zdenek_burian_1950.JPG



https://klse.i3investor.com/files/my/blog/img/bl1338_gonnersdorfsettlement.jpg



<https://i.pinimg.com/originals/41/ce/63/41ce63be5c59f90e1150a7ea6d97de51.jpg>

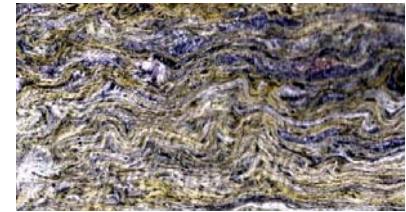


<https://museum.wales/stfagans/buildings/bryneryr/>

The use of buildings to house people, equipment and processes have resulted in the development of buildings that can control these internal environments with greater accuracy.

As well as protection and enclosure we can now consider:

- Thermal Insulation and temperature control
- Acoustic insulation
- Provision of Light (natural and artificial)
- Controls for humidity and ventilation
- Exclusion of contaminants.



Case study 1: Styles of buildings

Thermally light structures in Thailand

These dwellings are located in Thailand. The lightweight construction form is created by the use of locally available materials. The large openings allow air to pass through the building to cool the interior quickly. Thermally light structures of this type are common throughout the Far East. They utilise local materials that are readily available. However, with the advent of more modern construction forms and the incorporation of air conditioning systems they are now restricted to rural areas.

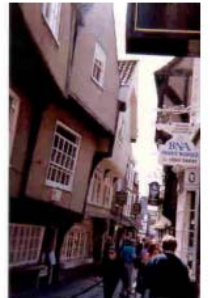


European vernacular buildings

These are examples of heavyweight construction forms found in England and France. The use of local stone and slate for the walls and roofing reflects regionally available materials, although the 'gothic' style of the building above is actually a copy of earlier styles. The building was constructed in the Victorian period. The windmill, in contrast, is typical of simple rural building styles.



A simple cottage dwelling located in the North of England is above. The use of slate for the roof and brick for the external walls is typical of many buildings of this age and type. In contrast, the buildings in the right-hand picture reflect an earlier form of building in which a structural timber frame is used rather than loadbearing external walls. Note that the upper floors project outwards over the street. This allows more floor area to be created within the dwelling while minimising the area of land utilised. This style was actually driven by economics rather than functionality. At the time of its construction taxes were based on the ground floor area of the building.



SAIN FFAGAN

<https://museum.wales/stfagans/thesite/>

Welsh Vernacular Building types

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< All teams

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FUNDAMENTALS OF CONSTRUC... ...

General

GROUND WORKS 2

GROUND WORKS 3

Groundworks 1

GROUNDWORKS 5

SUB-STRUCTURE and GROUNDWORK INTRODUCT...

Superstructure wk1

1 hidden channel

FO

Superstructure wk1

Posts

Files

Notes

Fill | Fundamentals of... ▾

+

💬 ↗ ↺ 🌐 ...

Meet ▾

Fundamentals of Construction Technology

Functions of Buildings

Hi Gavin, when you submit this form, the owner will be able to see your name and email address.

* Required

1. What do you consider to be the main differences between the terms 'Vernacular Building' and 'Modern House construction'? *

Enter your answer

2. How could these two styles vary in terms of the building performance? *

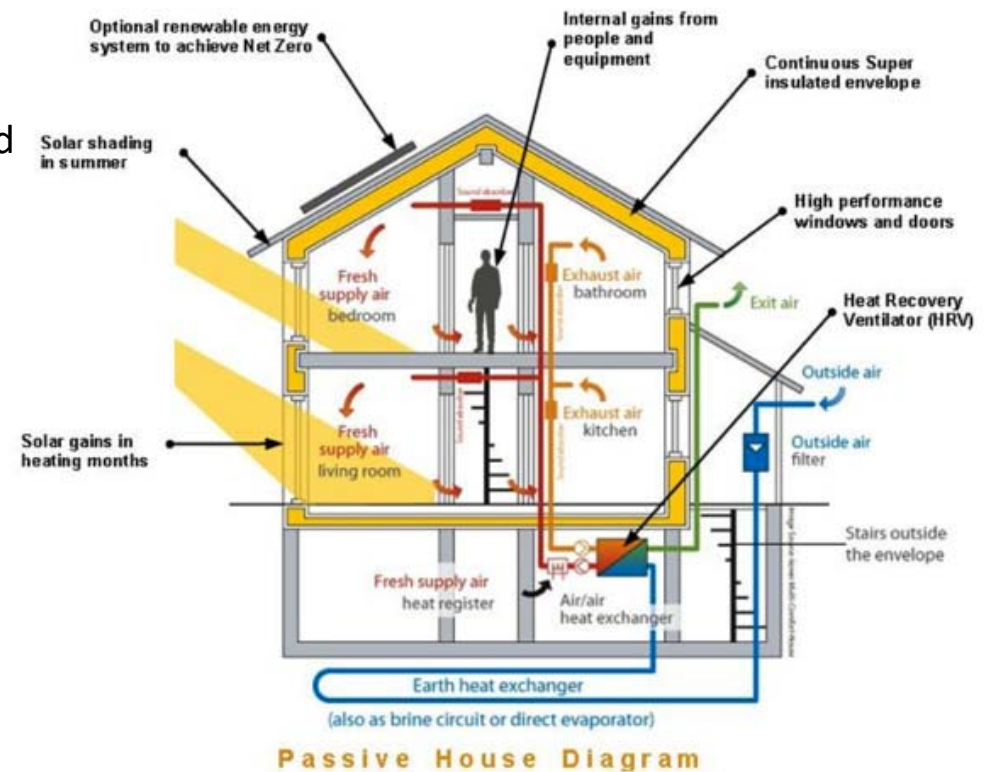
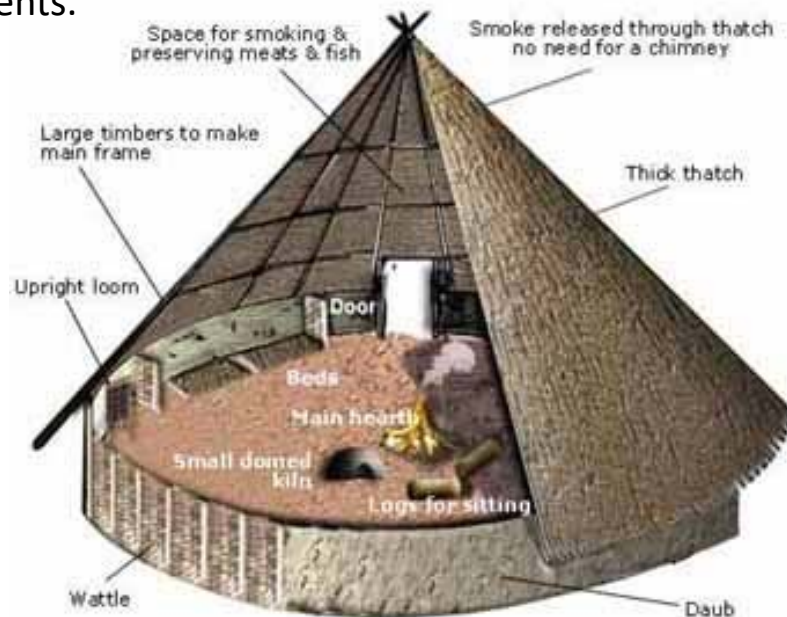
Enter your answer

3. Explain what you would consider to be a Thermally Light Building? *

Building Styles:

A vernacular building style is specific to a region and uses the local materials available in its construction to form the building fabric.

Modern House construction uses a wide variety of materials and techniques and is not specific to any particular region. Construction methods, materiality of the building envelope and performance of the building fabric can be modified to suit the requirements.



Thermally Light V's Thermally Heavy:

Thermally light buildings are physically light in weight and have a fabric which has little capacity to absorb heat. Such buildings respond quickly to changes in external temperatures.



By contrast thermally heavy often have a heavy dense fabric which reflects some heat and absorbs much of the rest. They insulate the interior by reacting slowly to variations in external temperature.



Performance Requirements of the Building Fabric

What are the key drivers in providing a building that is suitable for the need?

- Structurally Stable
- Durability
- Thermal insulation
- Protection from weather and exclusion of moisture
- Acoustic performance
- Flexibility to change to changing needs
- Aesthetics
- Buildability
- Sustainability



What is Superstructure?



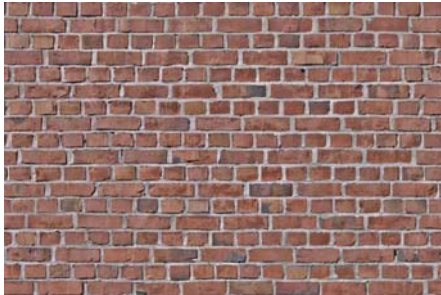
EXTERNAL WALLS



FUNCTIONAL REQUIREMENTS OF EXTERNAL WALLS

Weather protection
Fire resistance
Thermal resistance
Strength and stability
Durability
Buildability
Noise insulation

SOLID WALLS



Built with brick, stone or block

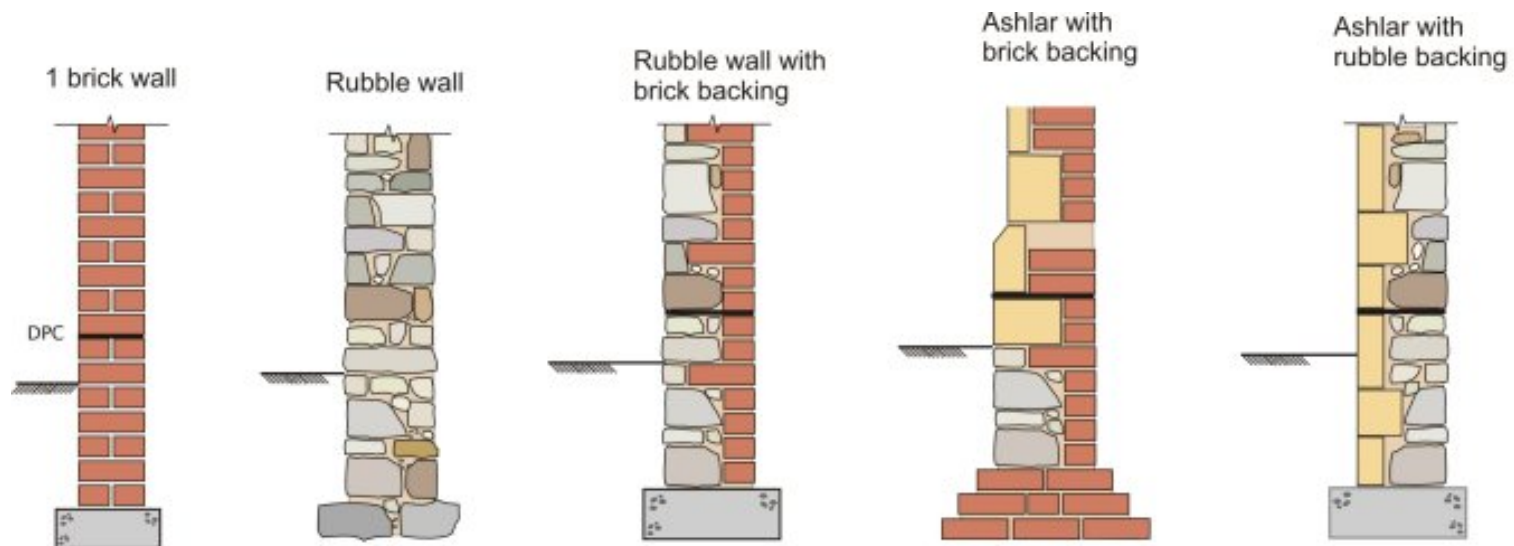


Load-bearing and non-load bearing

SOLID WALLS

Traditional construction. Pre 1919 solid walls

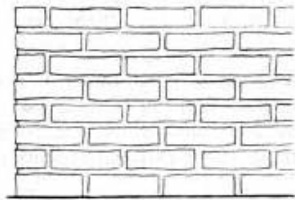
Combinations



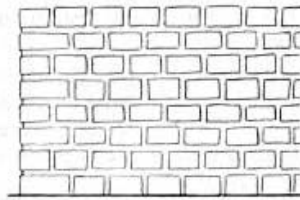
SOLID WALLS

Traditional construction. Pre 1919 solid walls

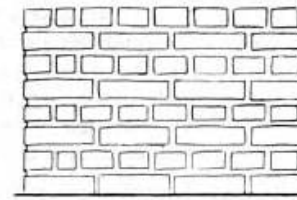
Brickwork. Bonds



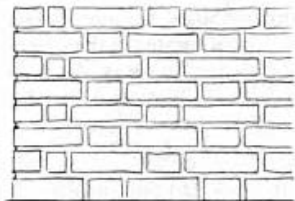
STRETCHING BOND.



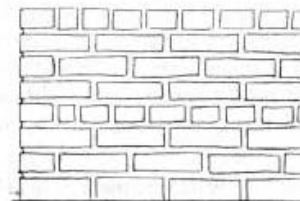
HEADING BOND.



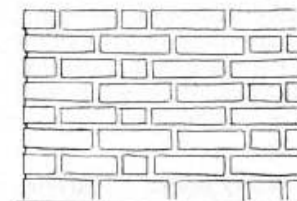
ENGLISH BOND.



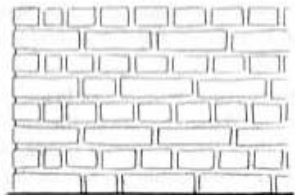
FLEMISH BOND.



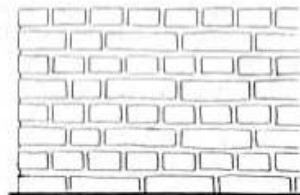
ENGLISH GARDEN
WALL BOND.



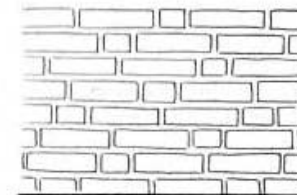
FLEMISH GARDEN
WALL BOND.



ENGLISH CROSS BOND.



DUTCH BOND.

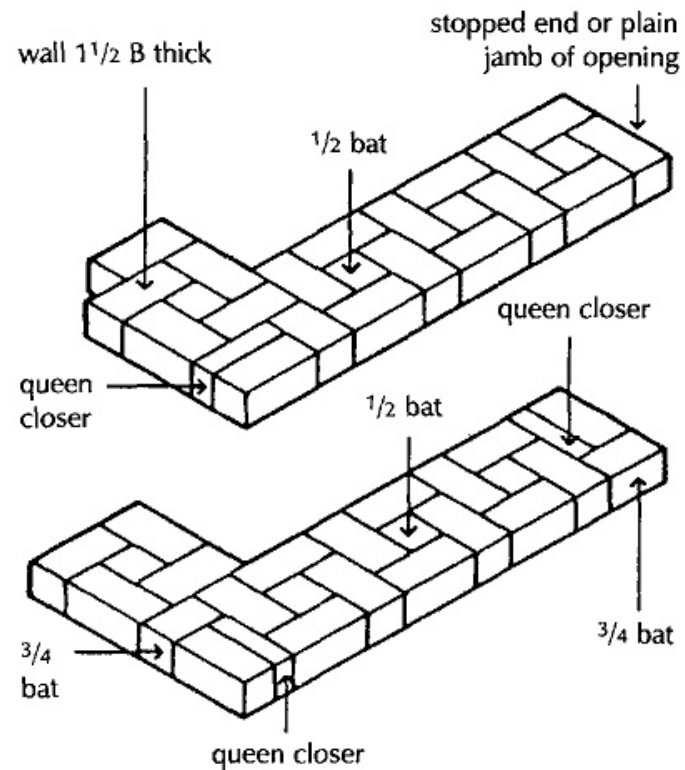
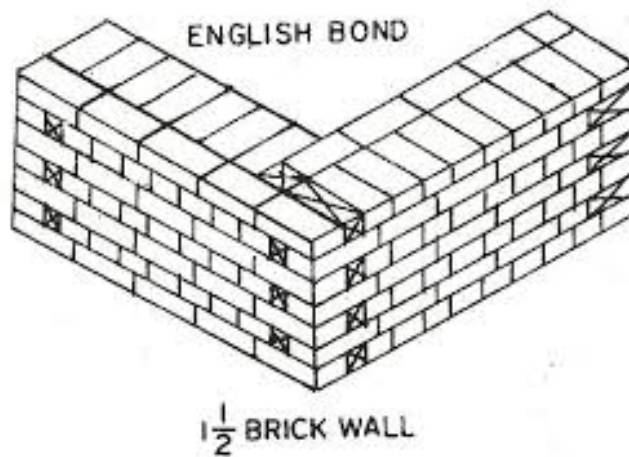


MONK BOND.

SOLID WALLS

Traditional construction. Pre 1919 solid walls

Brickwork. Bonds

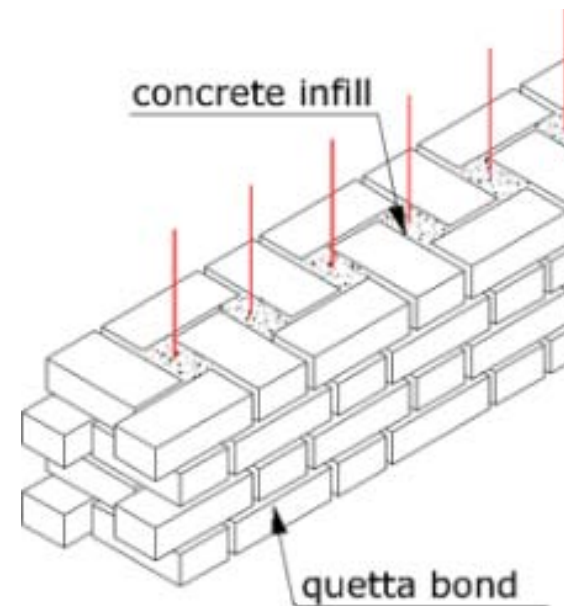
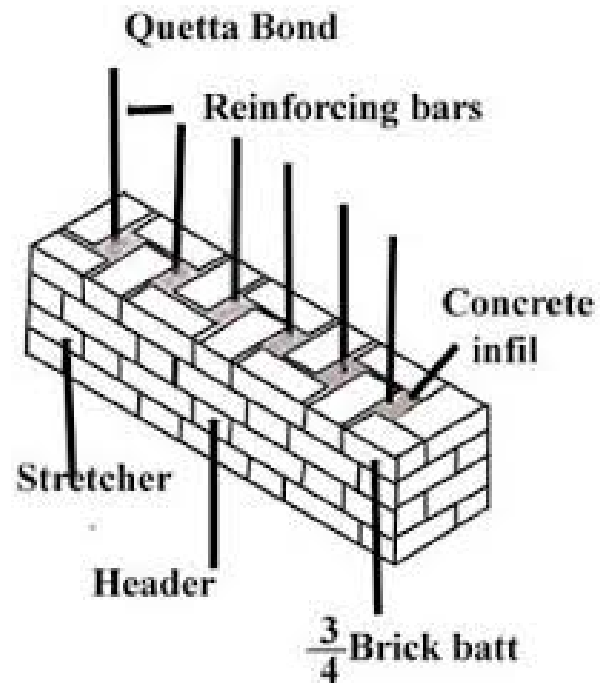


Double Flemish bond.

SOLID WALLS

Traditional construction. Pre 1919 solid walls

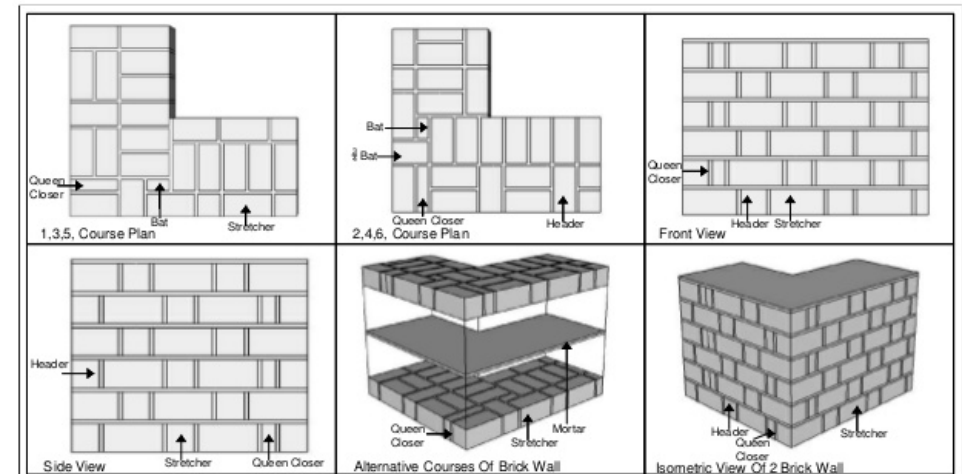
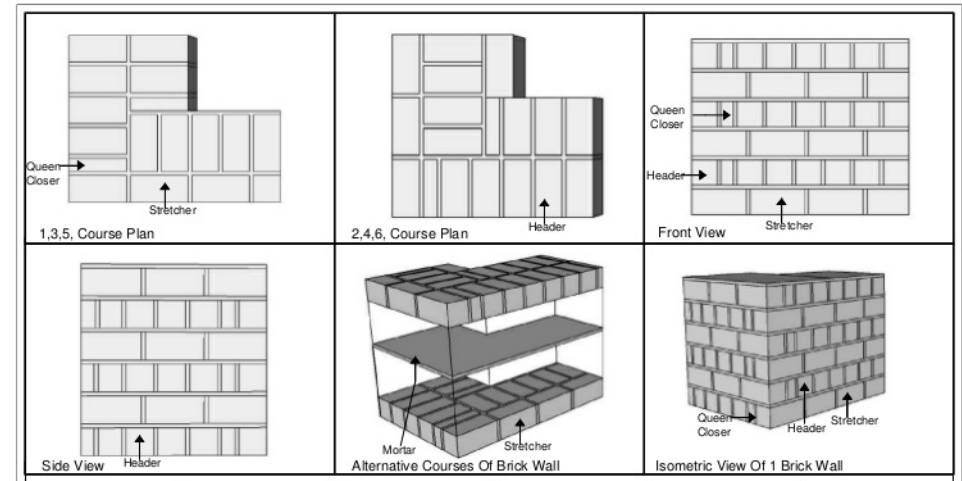
Brickwork. Bonds



EXERCISE

Design the bond for a two-brick solid Wall:

- English bond
- Flemish bond
- Heading bond

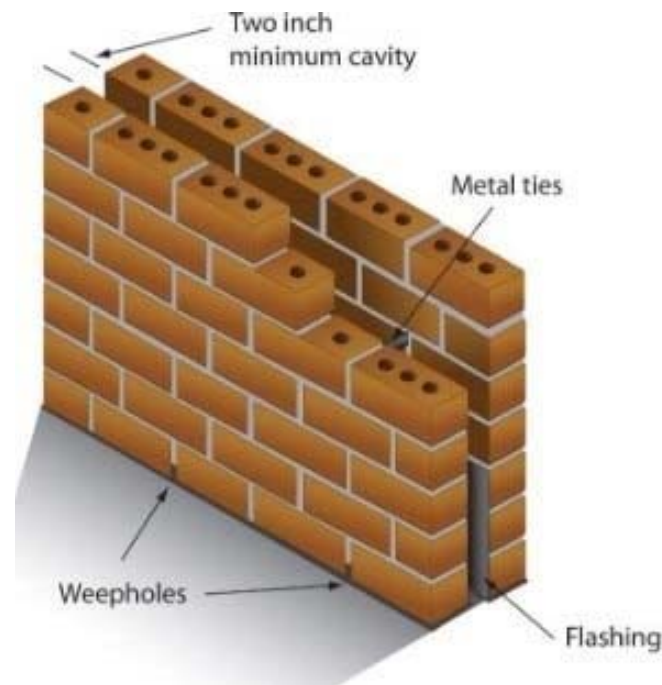


CAVITY WALLS

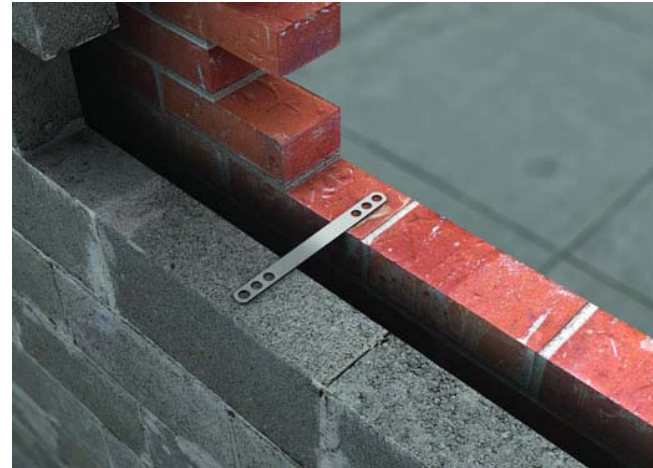
Type of double skin created by two walls and a cavity in between

Purpose:

- Weather protection
 - Thermal insulation
 - Noise attenuation
-
- Two walls joined by metal ties
 - Weepholes to release any moisture or humidity



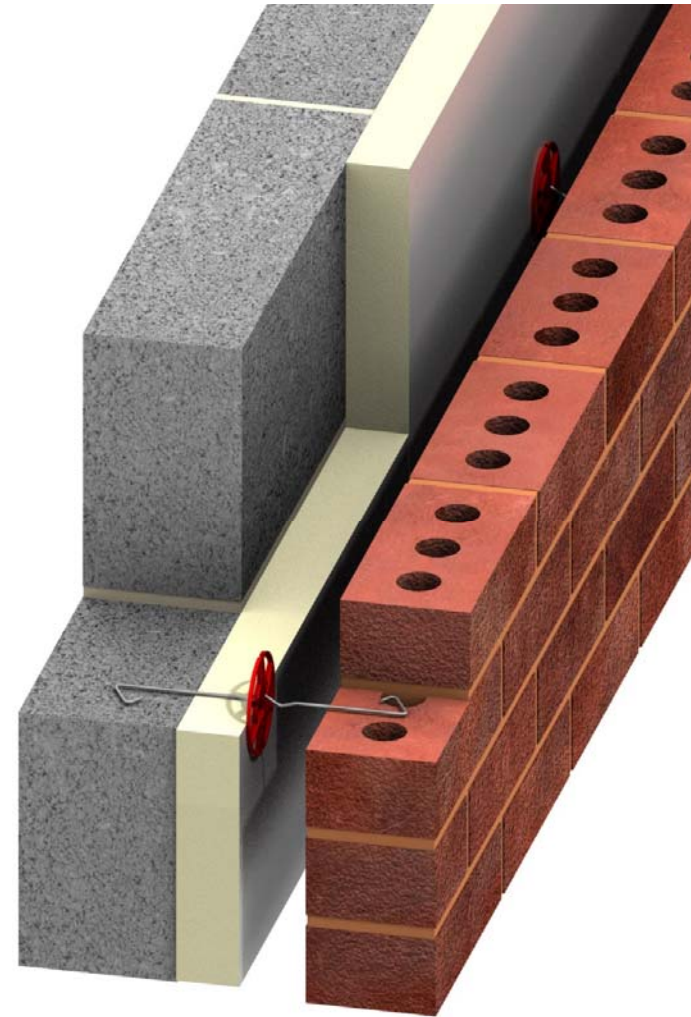
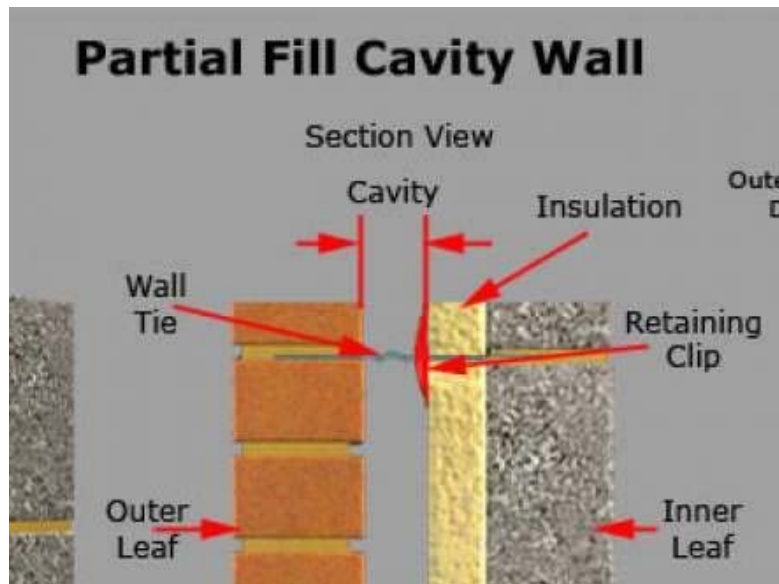
CAVITY WALLS



- Two walls joined by metal ties
- Weepholes to release any moisture or humidity

CAVITY WALLS

Insulation

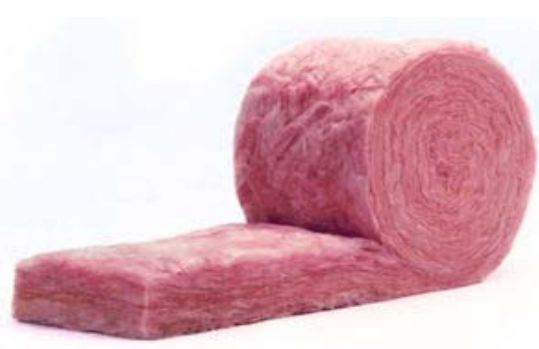


CAVITY WALLS

Insulation. Some types



Rock mineral wool



Glass mineral wool



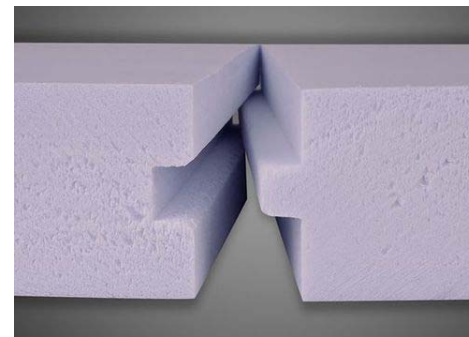
Expanded polystyrene



Phenolic foam



Polyurethane foam

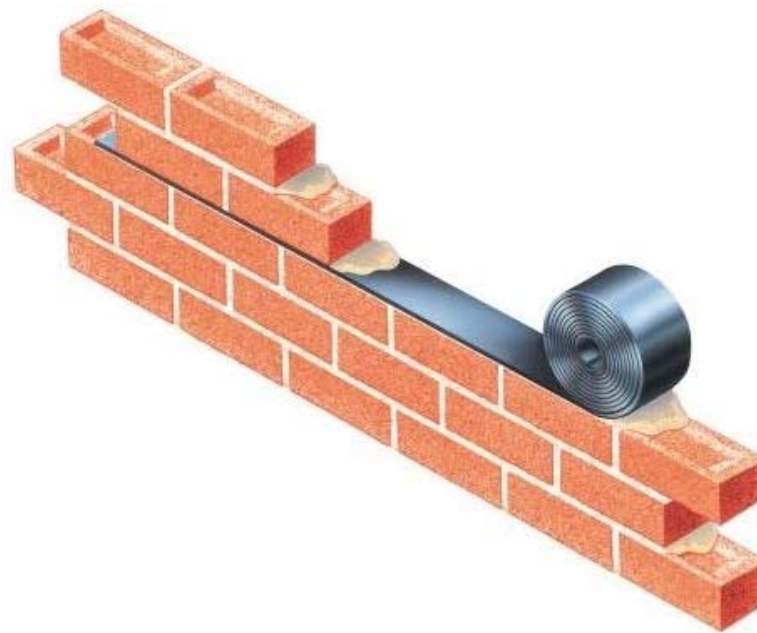


Extruded polystyrene

CAVITY WALLS

Damp Proof Course (DPC)

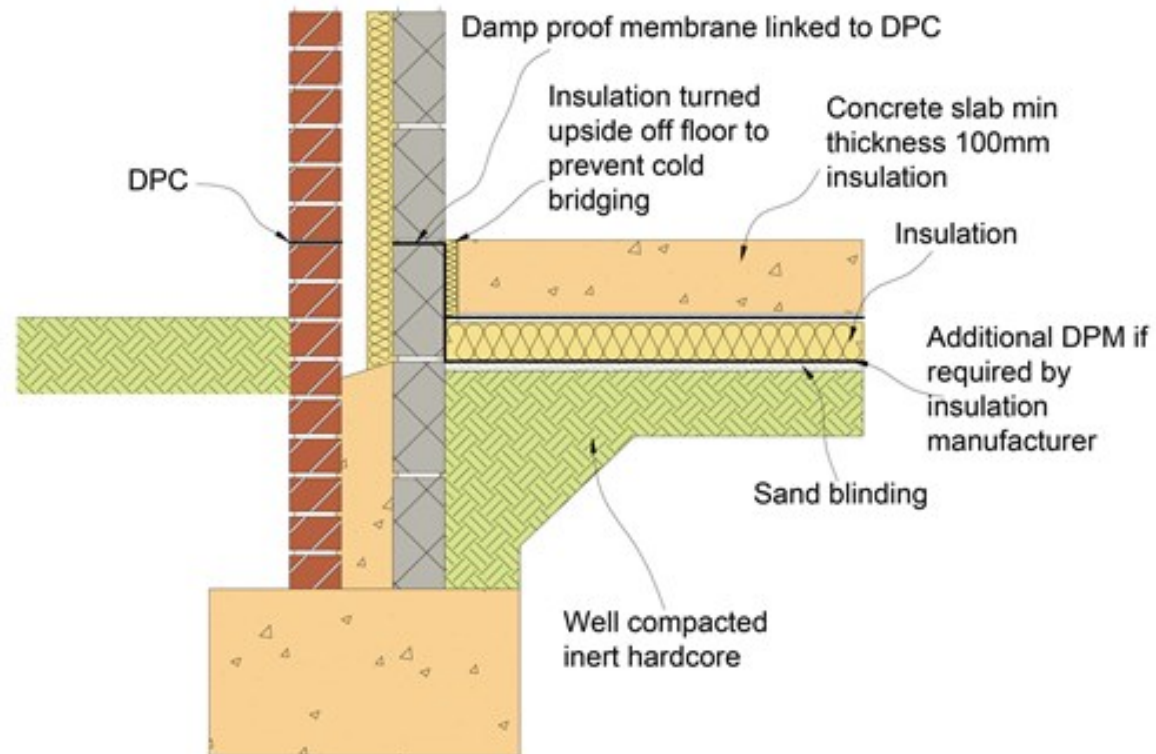
Prevents groundwater from being absorbed by capillarity action in walls



CAVITY WALLS

Damp Proof Membrane

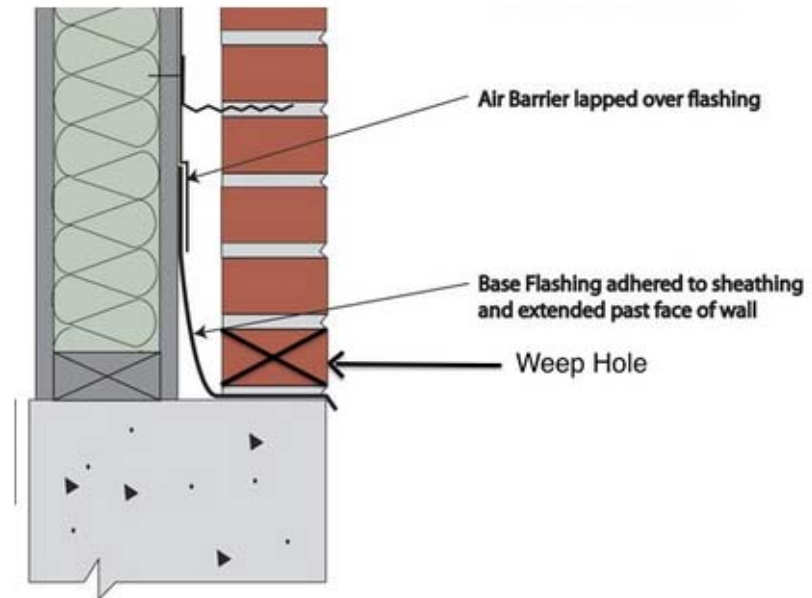
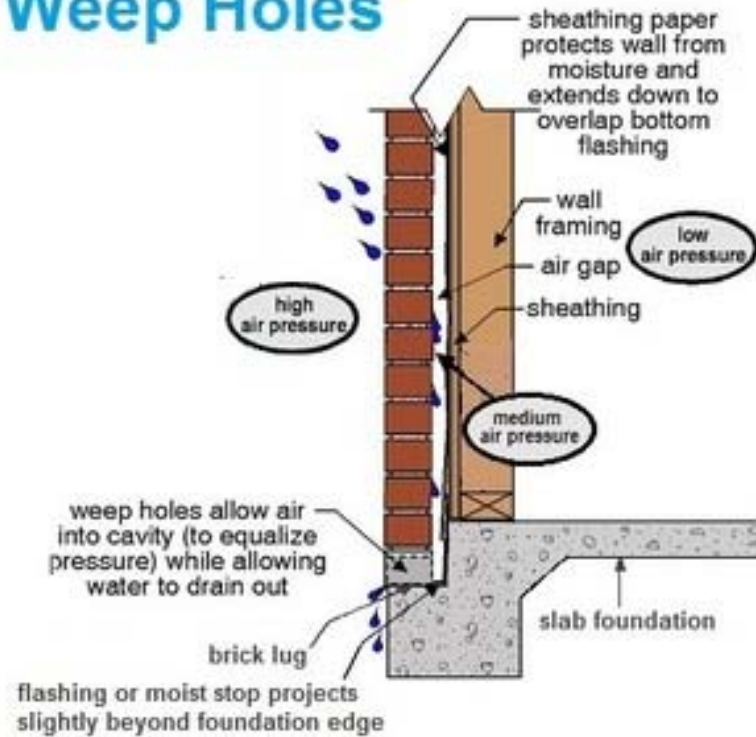
Application in floors



CAVITY WALLS

Cavity drainage

Weep Holes



CAVITY WALLS

Cavity drainage



VAPOUR CONTROL BARRIER

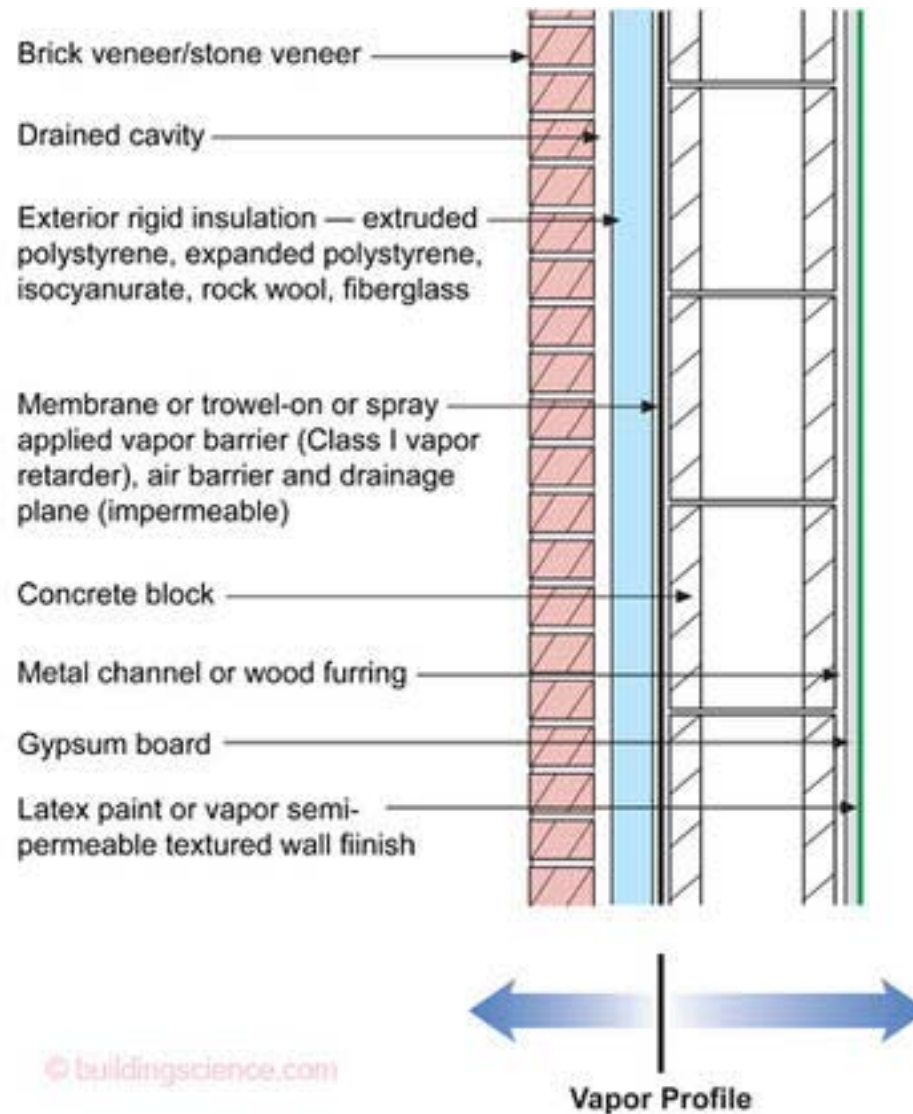
Block the warm moisture in a room to enter the wall and affect insulation and other elements inside (structure frame, other layers, etc.)

Not needed in warm climates

If in the wrong position, it can cause more harm than benefit

Always in the warm side (between insulation and drywall)

Depending on the type of construction, we can consider a waterproof, breathable layer



EXERCISE

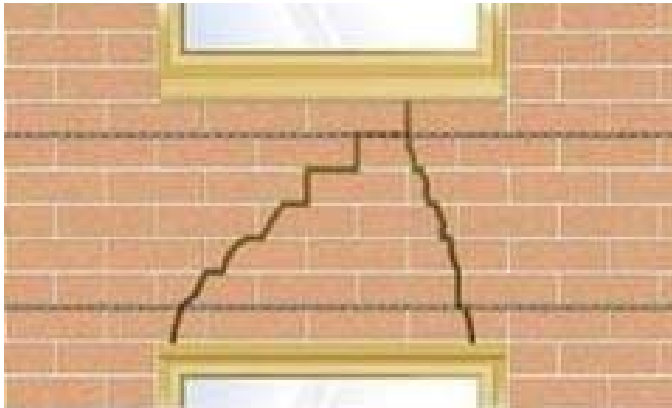
Draw a cross section for a typical external cavity Wall in Swansea.
Include all elements that are necessary for the correct
performance.

OPENINGS

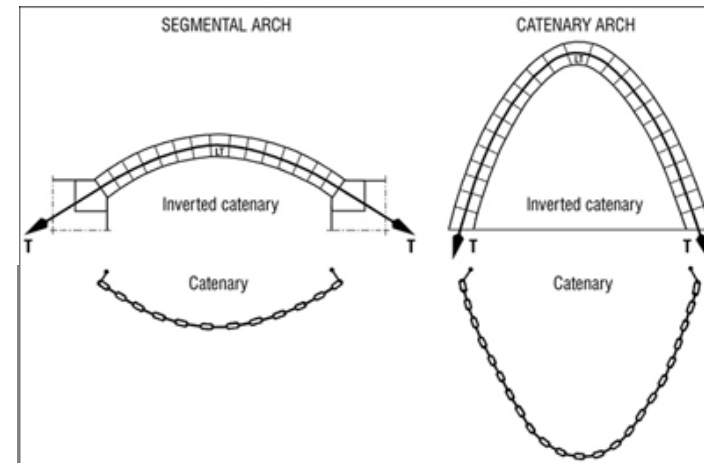
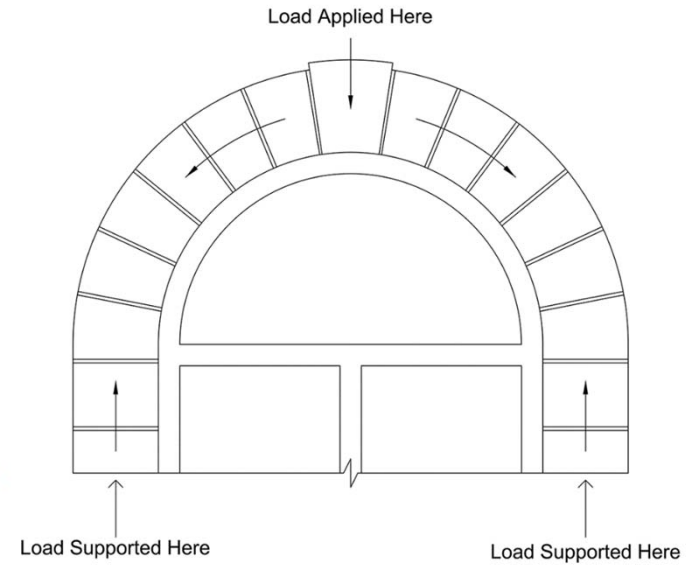
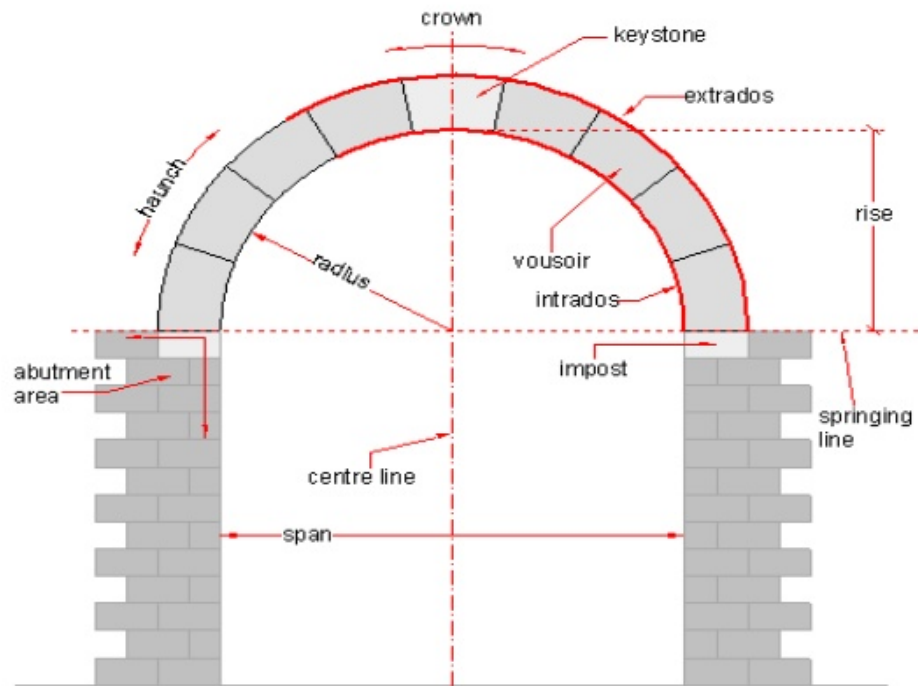


Green Bridge of Wales, Pembrokeshire

LINTEL FAILURE

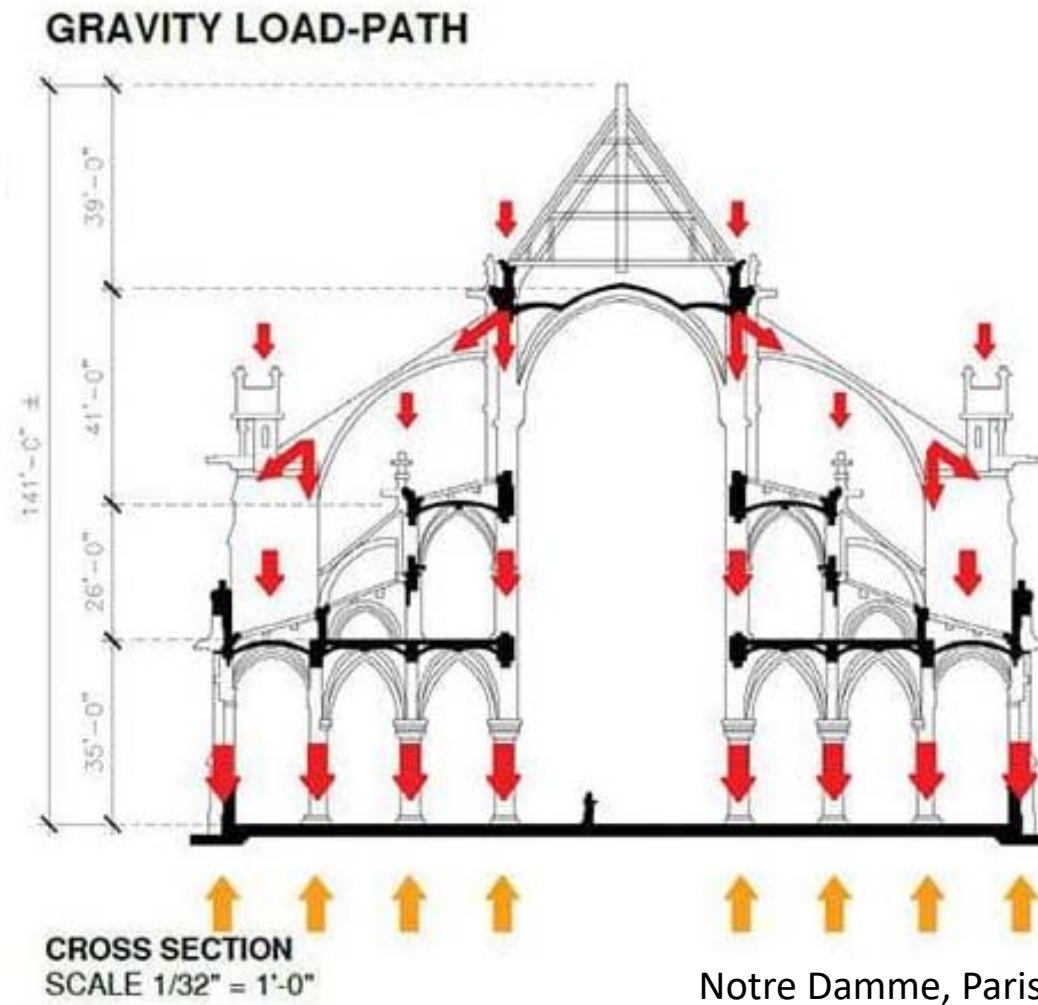


ARCH LOAD TRANSFER

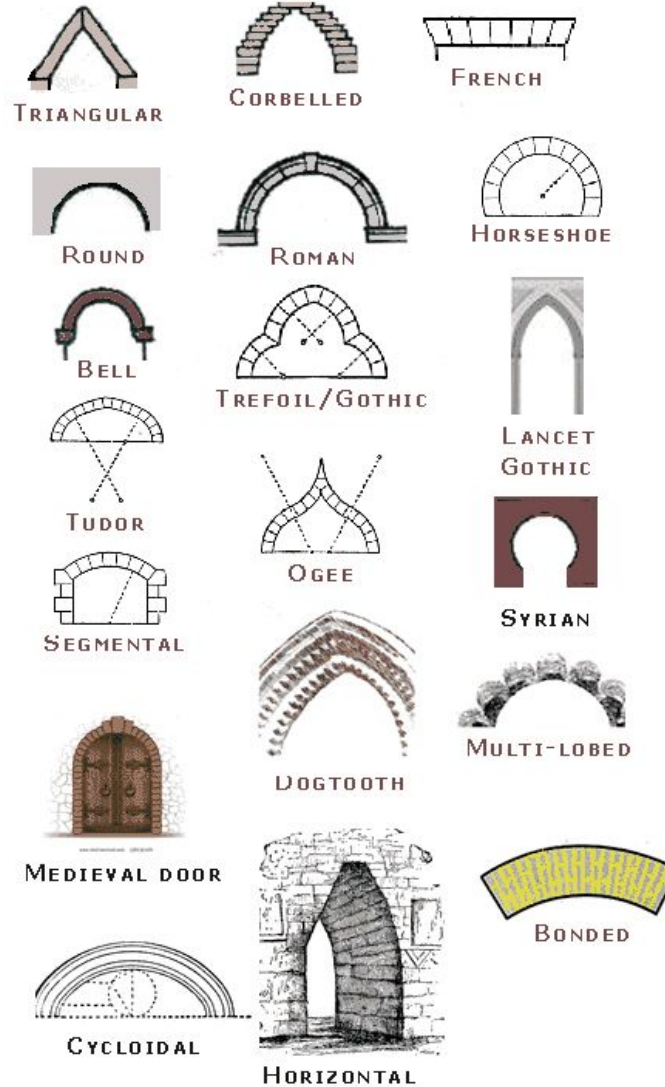


<https://www.youtube.com/watch?v=JIL6ZHChhQE>

ARCH LOAD TRANSFER



ARCH TYPES



FACE BRICK ARCH TYPES



QUEEN ANNE



NEW CONCEPT



ELLIPTICAL



JACK ARCH



BONDED ROMAN



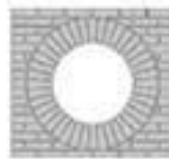
BONDED RADIAL



BONDED JACK ARCH



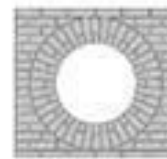
ROMAN



CIRCULAR

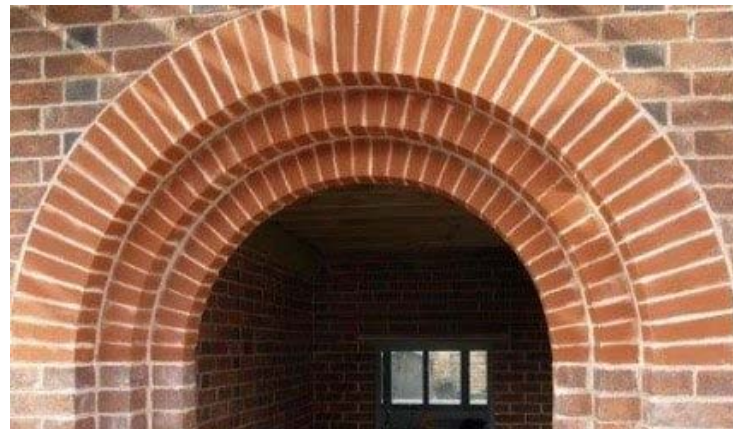


JACK PACK



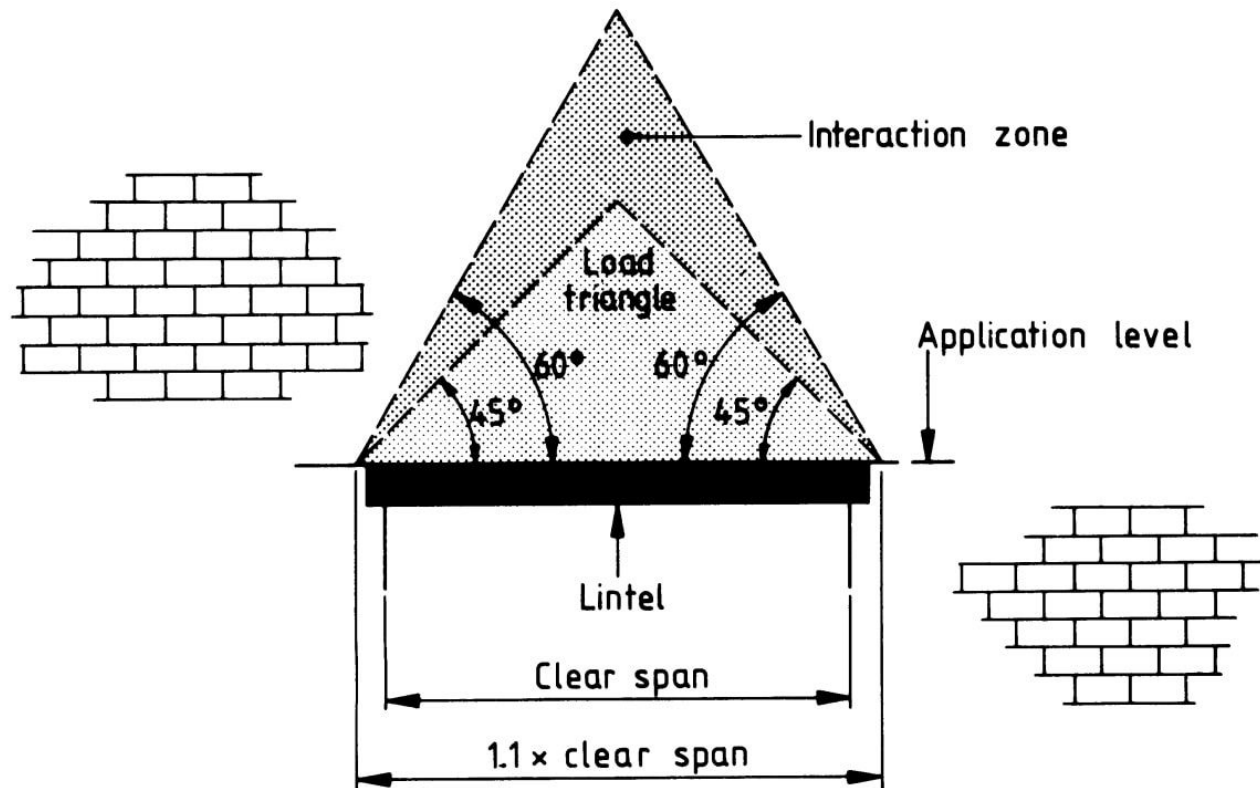
BONDED CIRCULAR

FACE BRICK ARCHES



LINTELS

Construction of element that can support flexural efforts



LINTELS

Timber elements

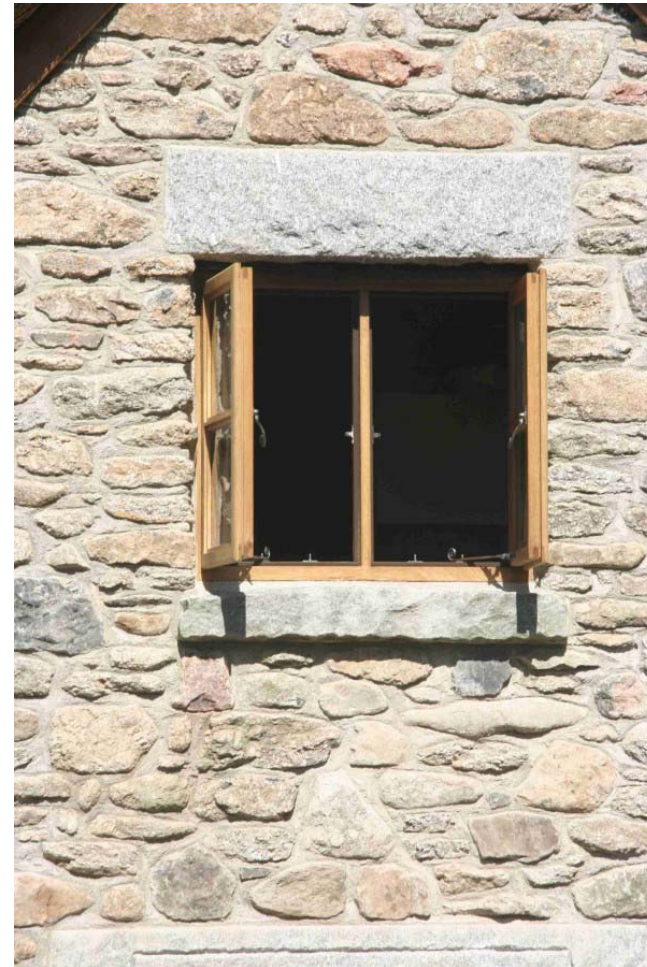
- They will cover the whole span and will be supported at the jambs
- Maintenance is essential
- It is more flexible than masonry and can bend without breaking
- Bending is an indicative of wrong performance but does not mean immediate failure



LINTELS

Stone elements

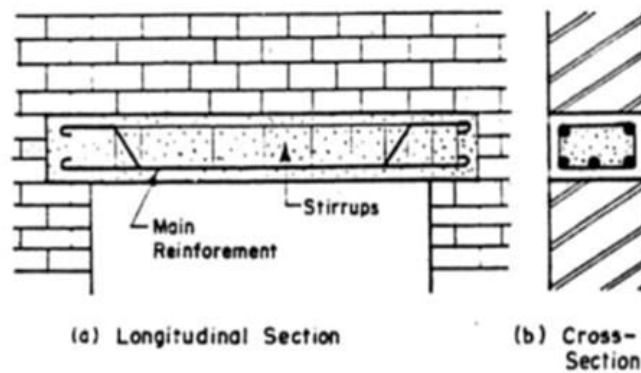
- Similar construction
- Much heavier
- No special maintenance
- Stone has little flexural strength, improved with thickness
- Fragile. Easy to break
- Ruined when broken



LINTELS

Cast in-situ elements

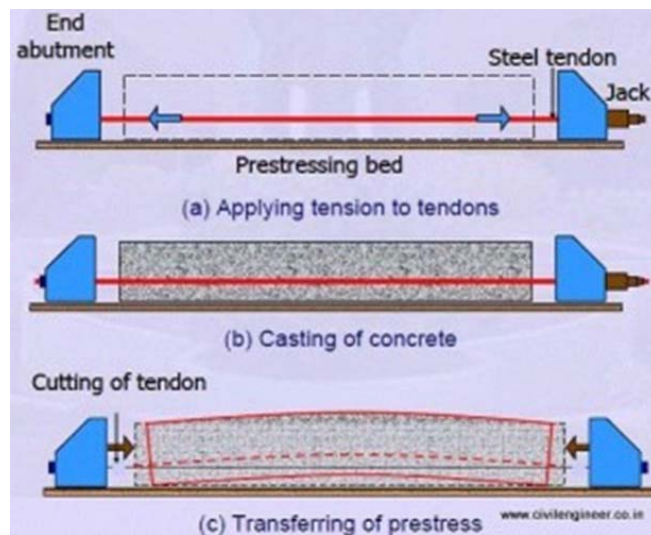
- They are made at the same time of the wall construction and form part of it
- Usually made of reinforced concrete to absorb flexural efforts properly
- More difficulty in construction
 - Framework/mould
 - Reinforcement
 - Pouring concrete
- Replacement and repair are more difficult



LINTELS

Precast/pre-stressed elements

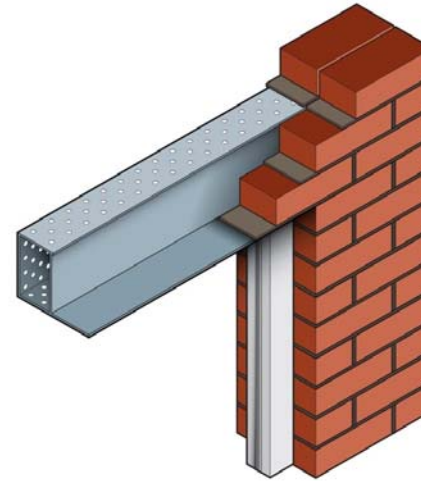
- Made off-site
- Reinforcement can be pre-stressed to absorb flexural stress better
- Health and Safety?



LINTELS

Metal elements

- Fast and cheap solution
- Light weight
- Problems with thermal bridging. It should be correctly installed and insulated



LINTELS

Metal elements

Box lintel with
perforated base
plate



**Be careful!!!
Thermal bridge**

LINTELS

Metal elements

- Cavity walls
- Concrete lintel to inner leaf
- Steel stepped lintel to outer leaf
- Cavity tray
- Insulation



LINTELS

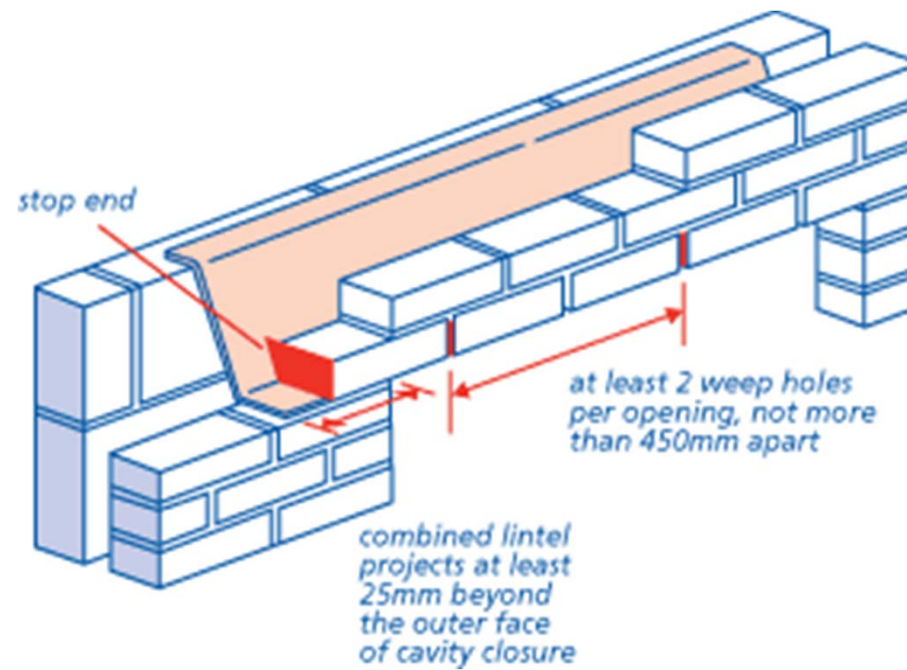
Metal elements



- Standard steel cavity lintel
- Cavity tray
- Insulation
- Size dependant upon masonry and cavity dimensions

LINTELS

Metal elements



LINTELS

Specifications

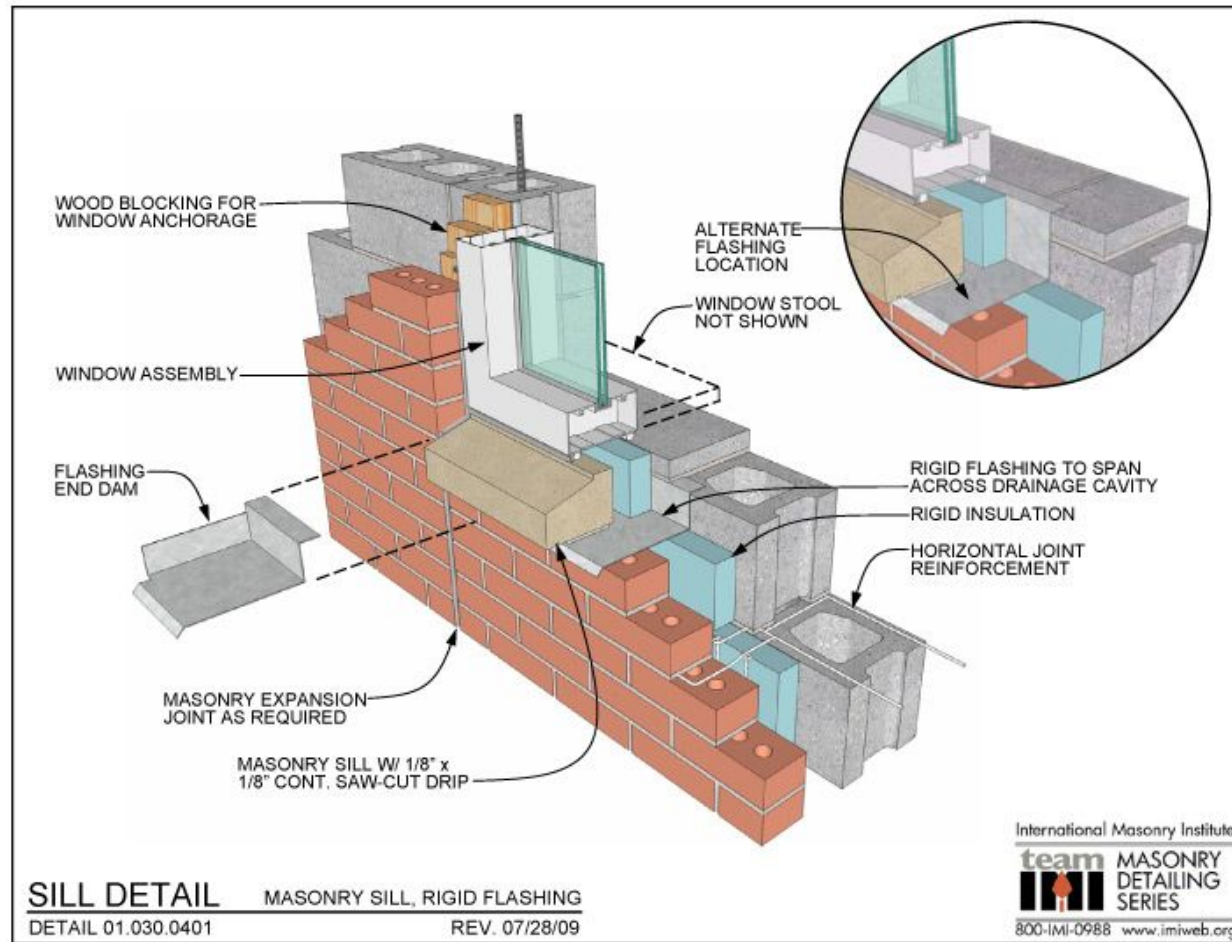
- Lintels should be installed with a minimum end bearing of 150mm, bedded on mortar and levelled along its length and across its width.
- The masonry above the lintel should be built in accordance with BS EN 1996-2:2006.
- Raise the inner and outer leaves simultaneously to avoid excessive eccentricity of loading, with a maximum height difference of 225mm (Masonry should be laid on a mortar bed and all perpendicular joints should be filled.)
- Allow the mortar to cure before applying floor or roof loads (Temporary propping beneath a steel lintel is practised to facilitate speed of construction).
- A damp proof course (DPC) or cavity tray should be installed over all openings in external cavity walls.
- When installing concrete floor units or other heavy components above a lintel care should be taken to avoid shock loading and floor units should not be dragged into position. Masonry immediately above the lintel should be allowed to cure.
- Point loads should not be applied directly onto lintel flanges. Lintels should have a minimum of masonry 150mm high between the flange and the application level of any form of loading.

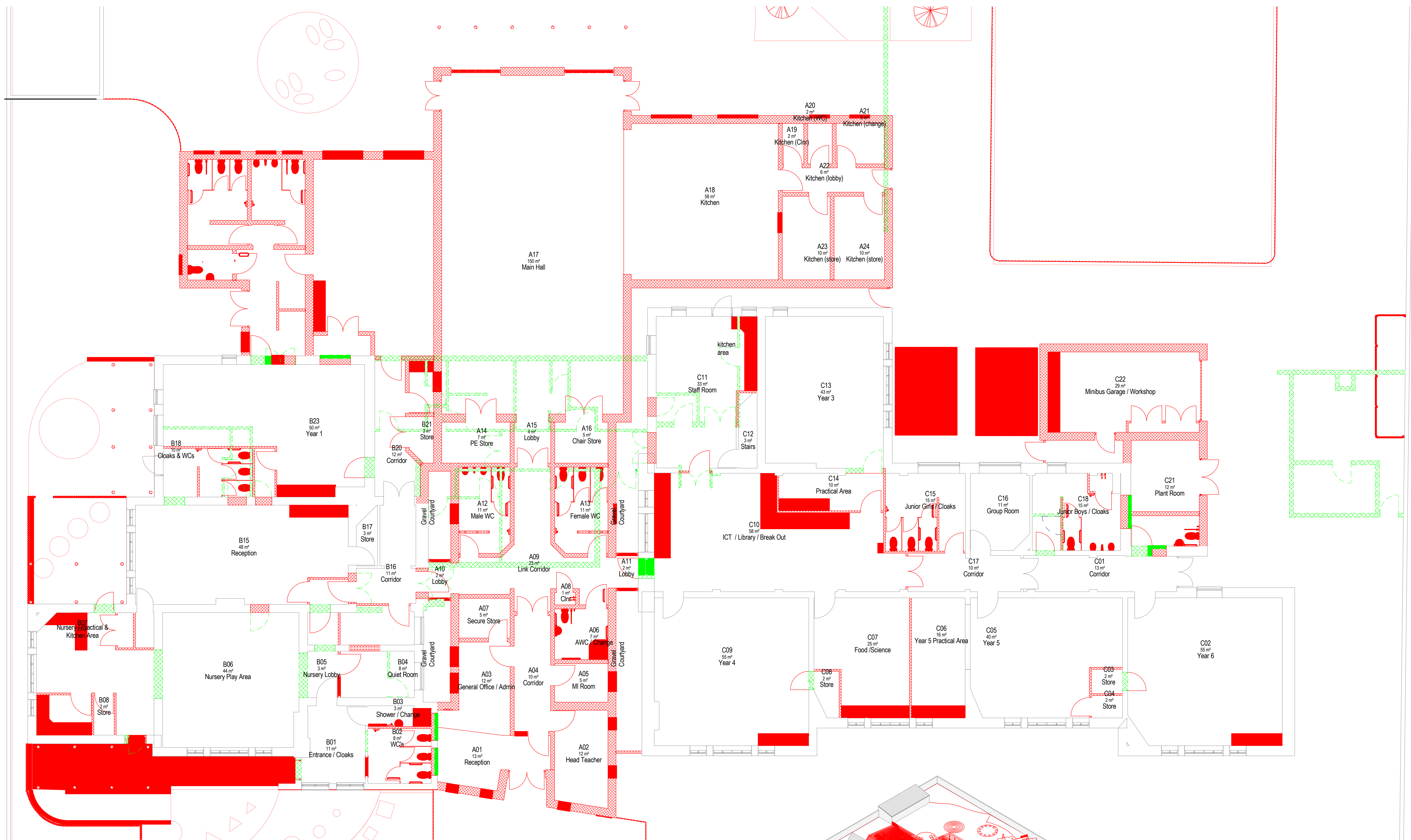
LINTELS

How would to solve a window sill?

What about the jambs?

Sills

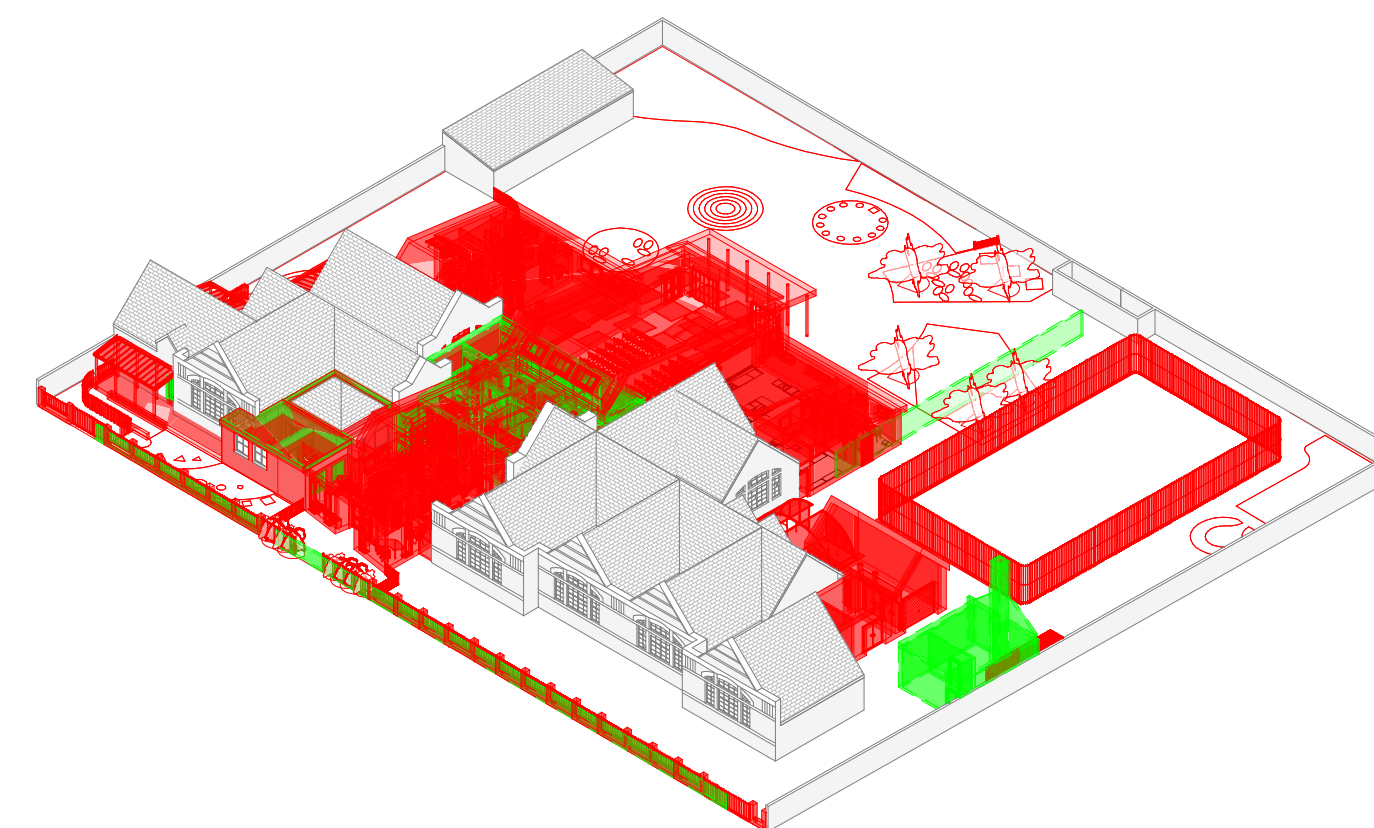




1 : 100

amendments (note :- all amendments to be signed)

Green: Demolition Works



C

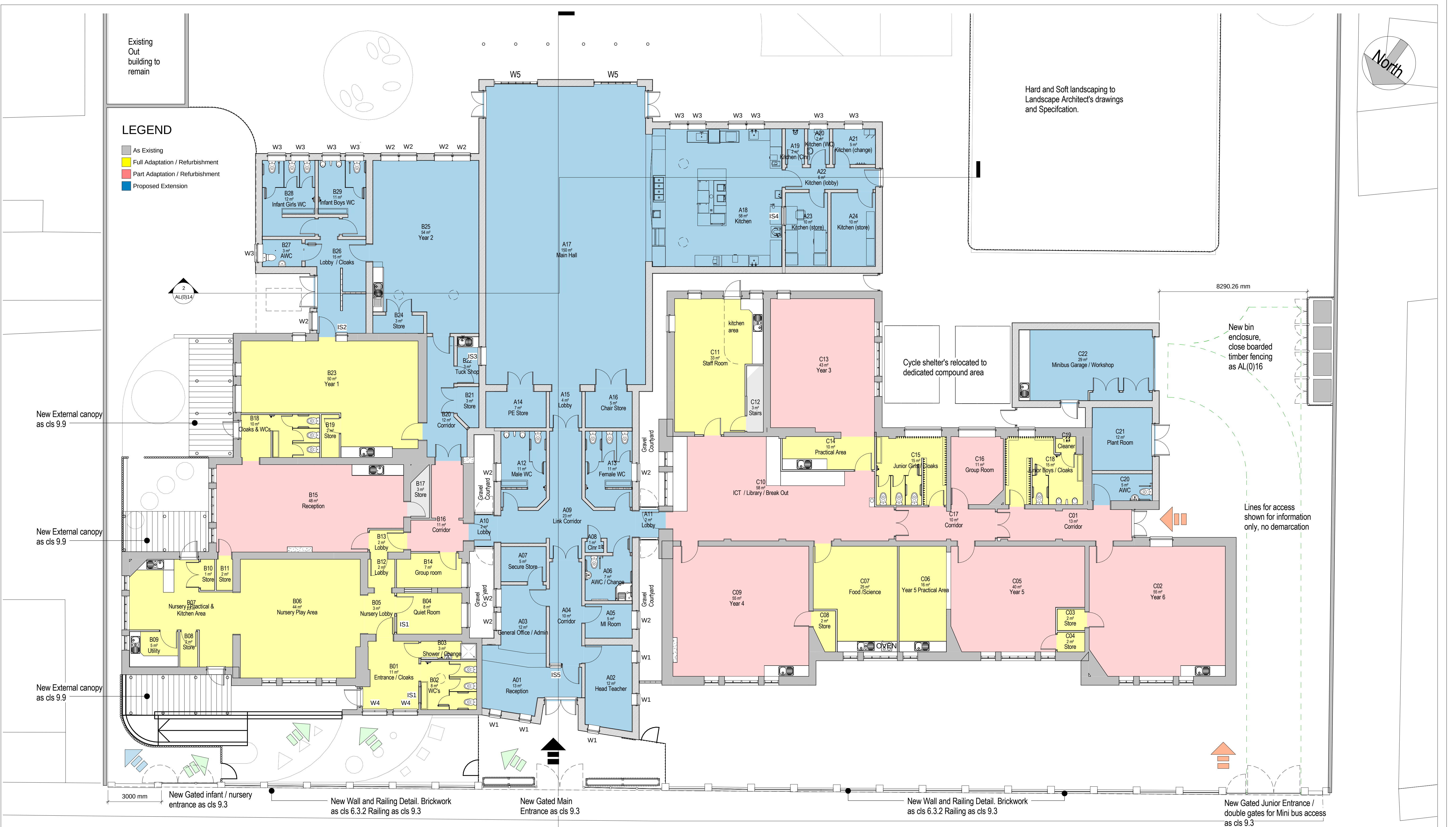
**FOR TENDER
PURPOSES**



PROJECT	MGJ	DRAWN BY	YUDESIGN + CONSTRUCTION/LIVE PROJECTS(7399)					
			Millbank Primary School - Extension & Refurbishment/ARCHITECTS(Drawings)/Detail Design/Milbank					
DATE	GMT	PROJ.	Primary School Detail Design/drawing number					
SCALE	1 : 100 @A1	EDUC 7399	AA(0)01					
NOTE	SEPT13							
do not scale drawing except for planning application purposes			END					

**Bessmer Close, Leckwith, Cardiff CF11 8XA
Telephone 029 2788 8235 Fax. 029 2078 8199**

Bessemer Close, Leckwith, Cardiff CF11 8XA
Telephone 029 2078 8235 Fax. 029 2078 8199



Proposed Ground Floor Plan
1:100

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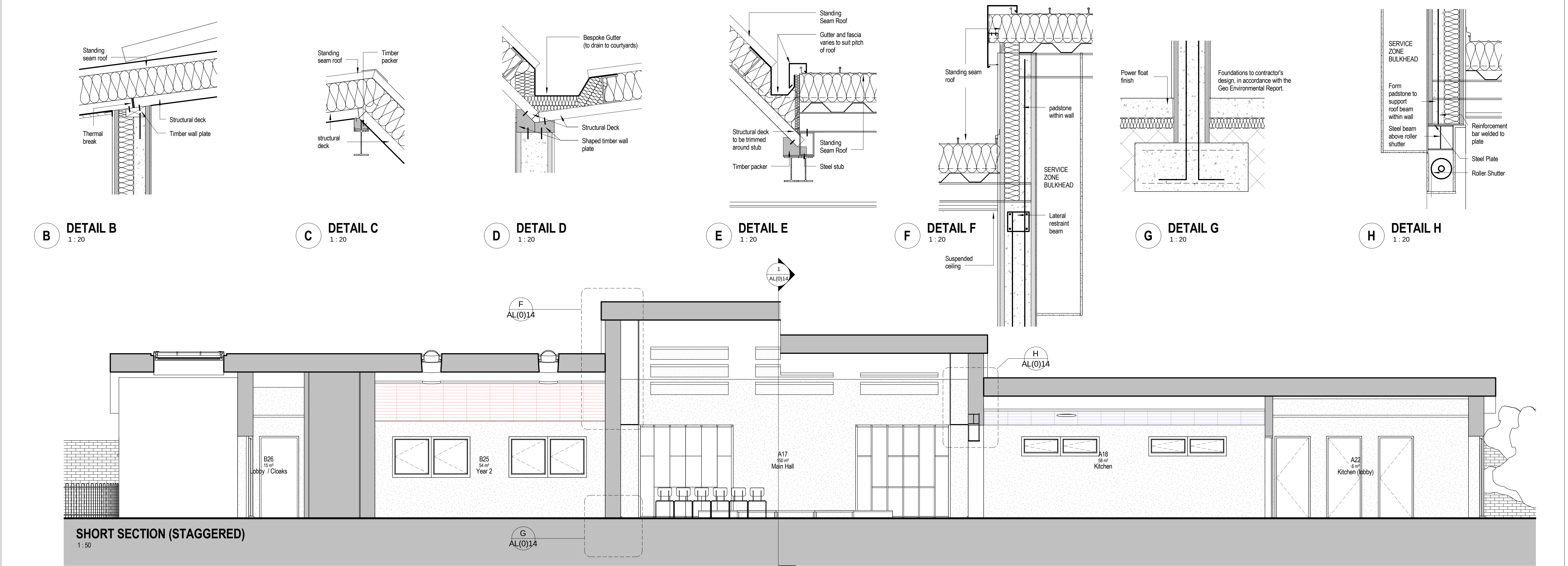
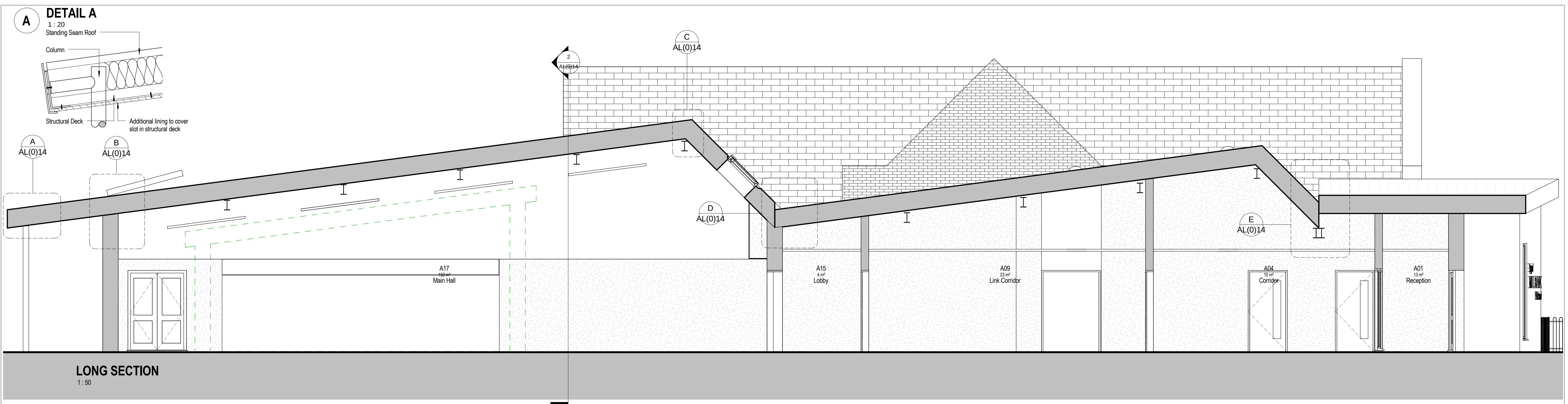
amendments (note :- all amendments to be signed)

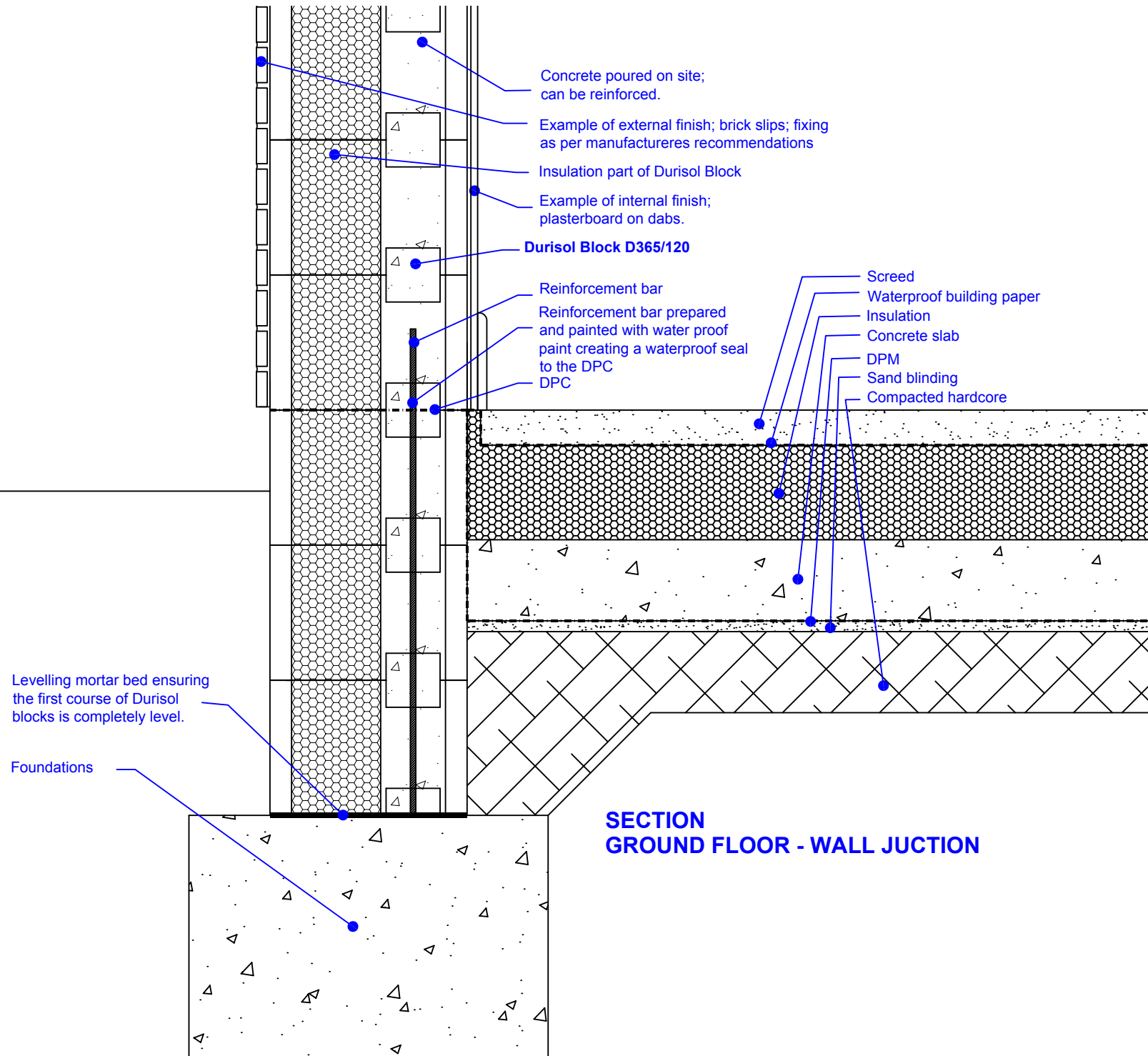
FOR TENDER PURPOSES

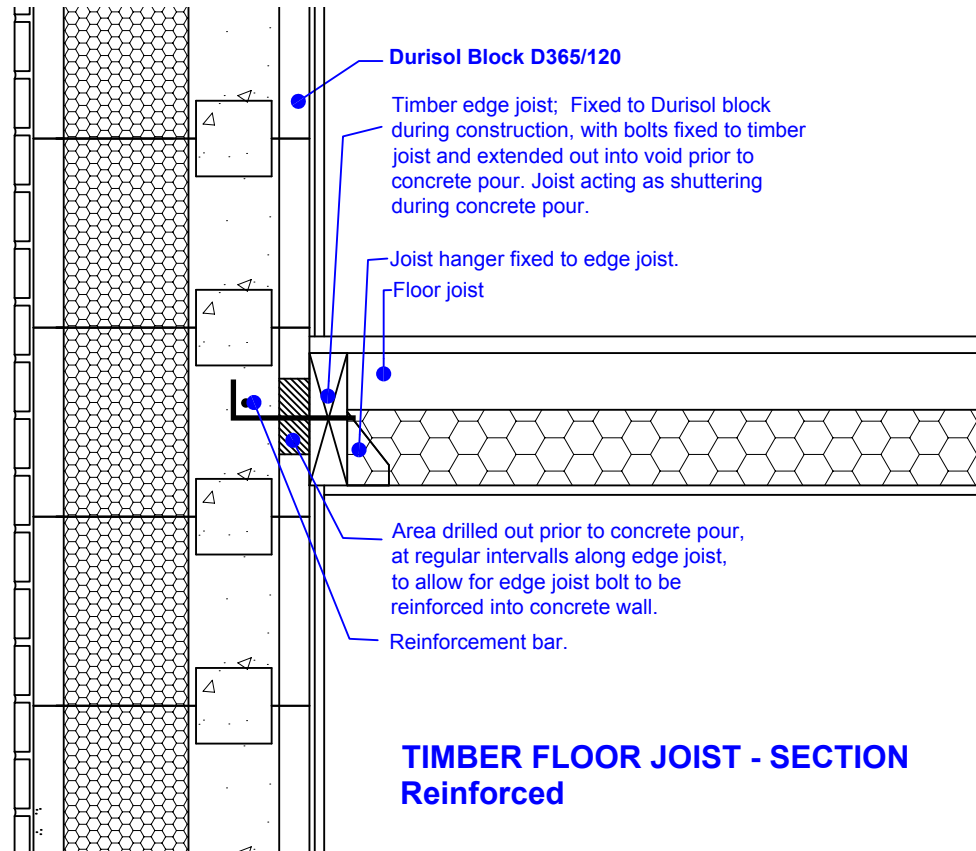
CYNGOR SIR DINAS A SIR CAERDYDD
CITY DEVELOPMENT
DATBLYGU'R DDINAS
PROJECTS, DESIGN AND DEVELOPMENT
PROJECTAU, DYLUNIO A DATBLYGU
BUILDINGS DESIGN AND
CONSTRUCTION MANAGEMENT
RHEOLI ADEILADU A DYLUNIO ADEILADAU
Neil Hanratty
CHIEF OFFICER CITY DEVELOPMENT
PRIF SWYDDOG DATBLYGU'R DDINAS

THE COUNTY COUNCIL OF THE CITY & COUNTY OF CARDIFF
Title
**Millbank Primary School –
Extension and Refurbishment**
Drawn
GMT
Scale
1:100 @A1
Date
SEPT13
Do not scale drawing
except for planning
applications purposes

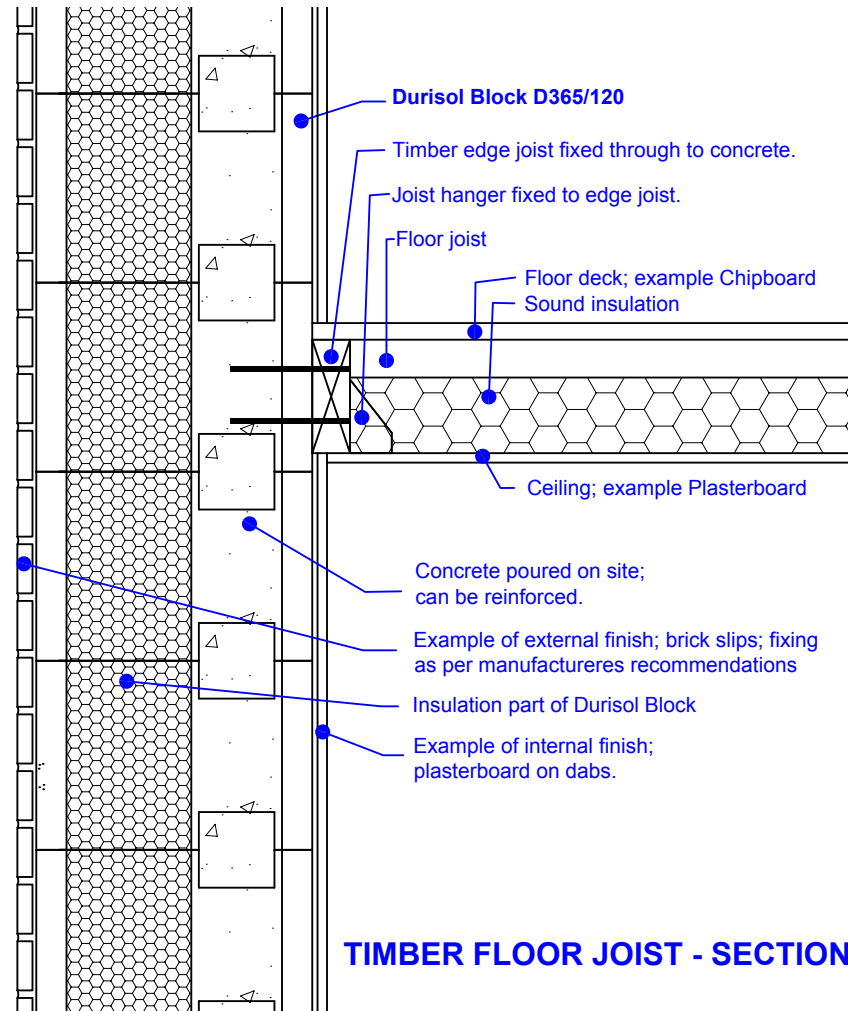
EDUC 7399
AL(0)11
Bessemer Close, Leckwith, Cardiff CF11 8XA
Telephone 029 2078 8235 Fax. 029 2078 8199

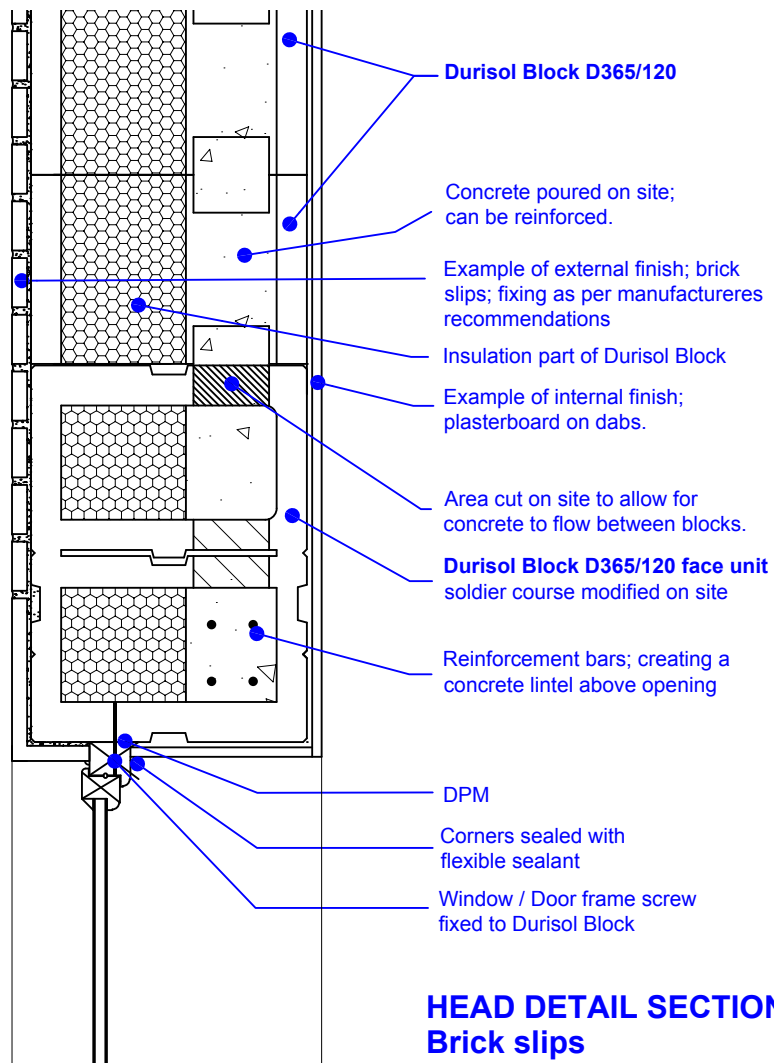


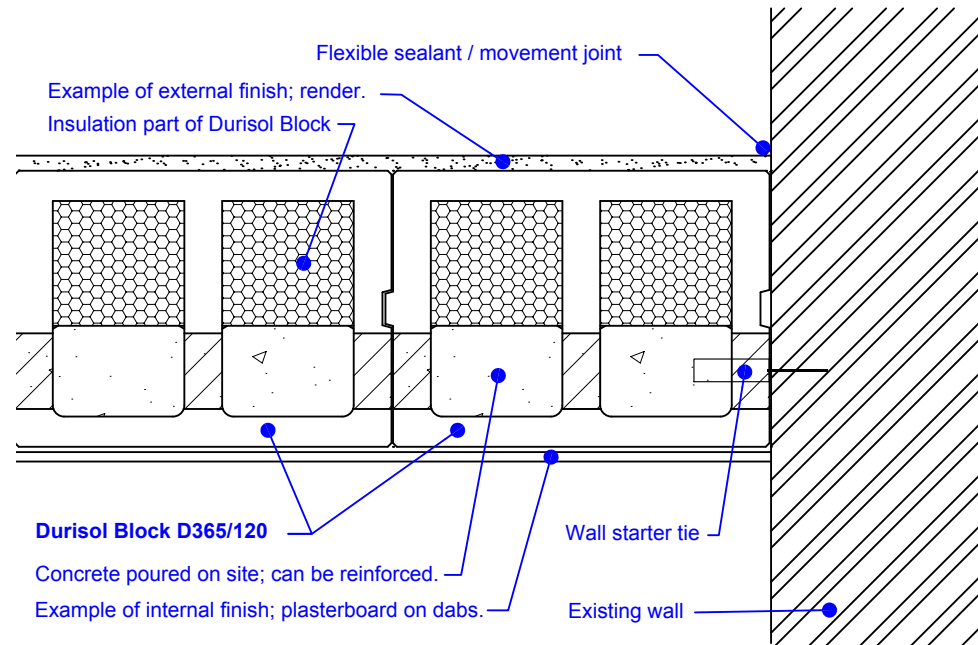




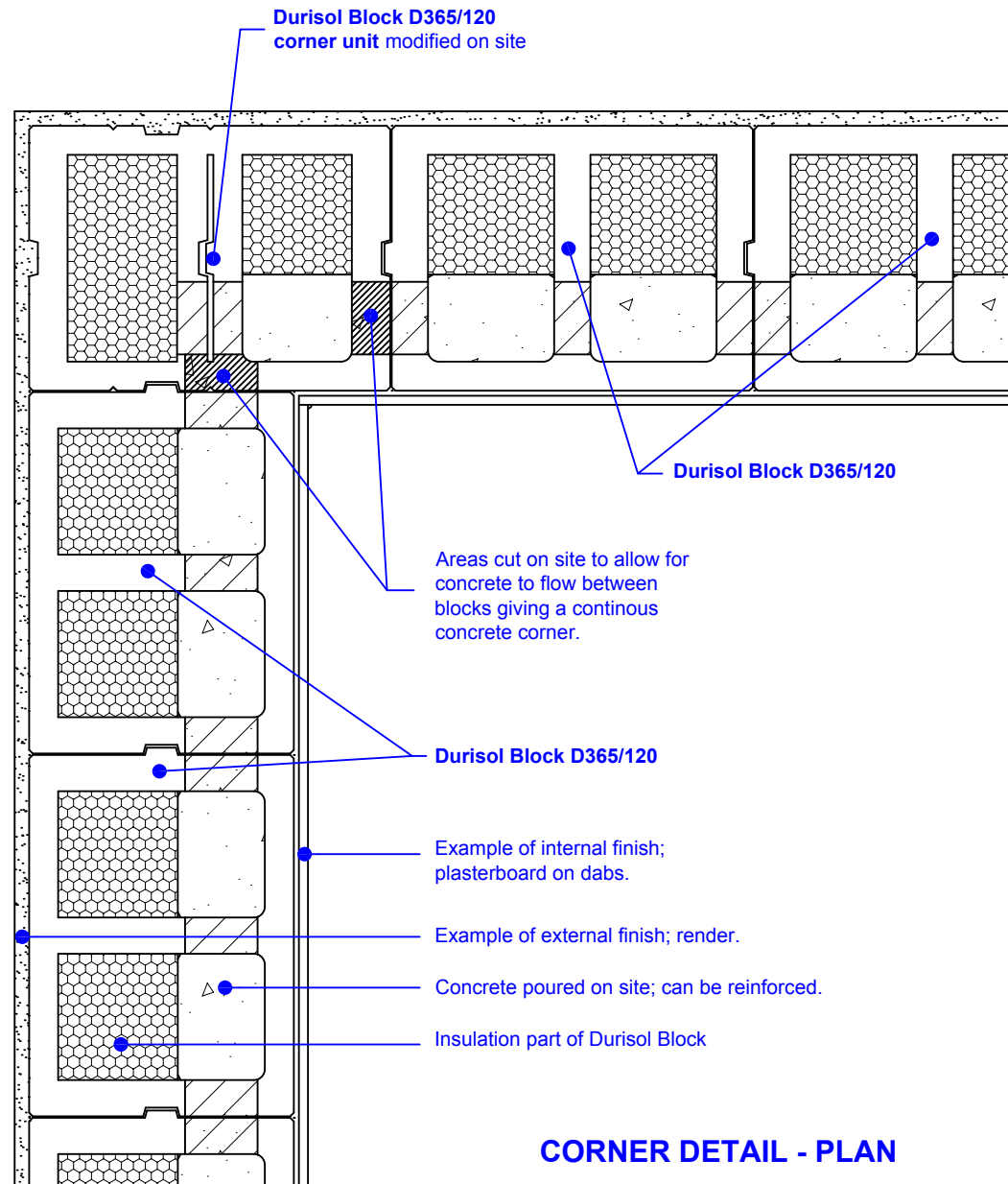
TIMBER FLOOR JOIST - SECTION Reinforced

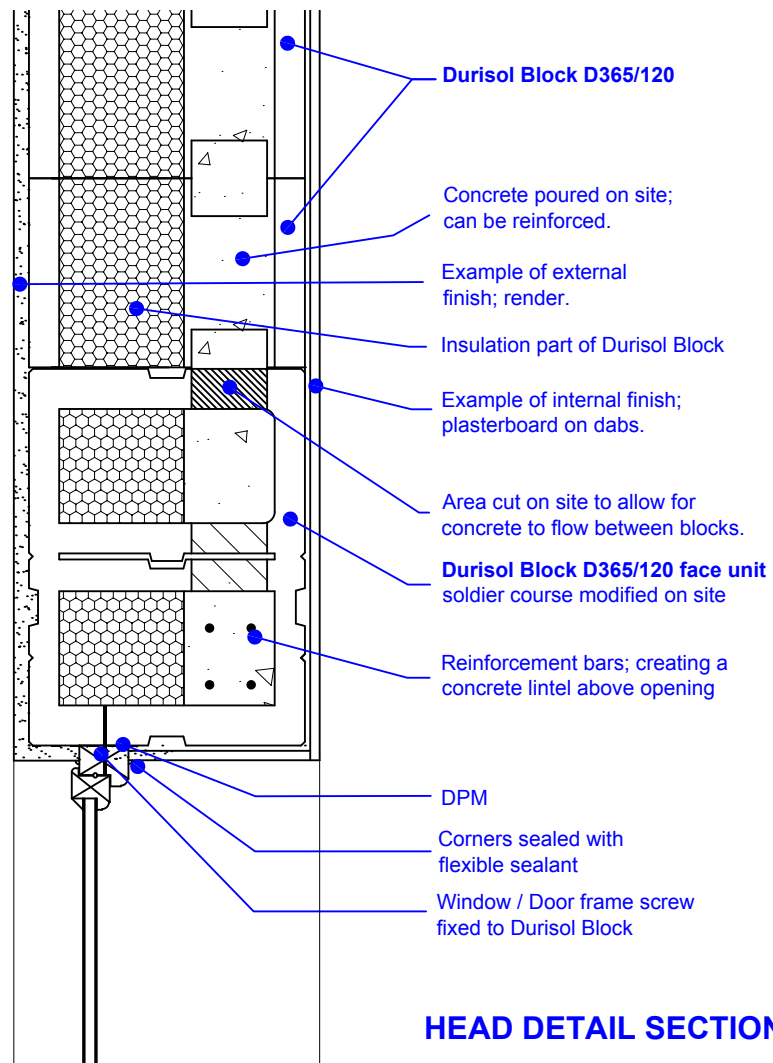


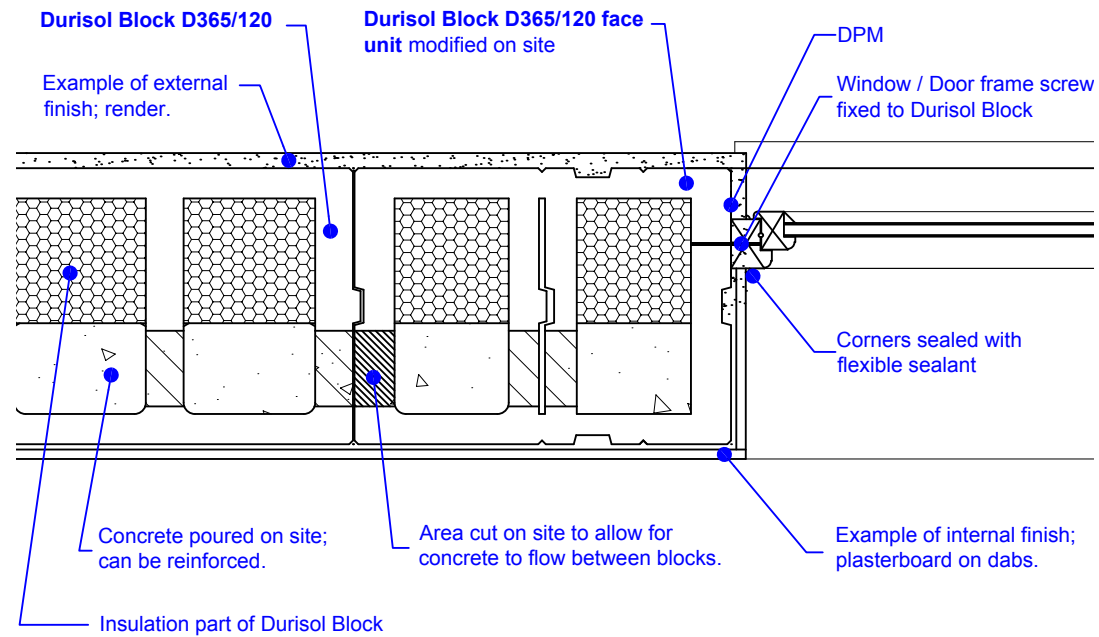




DURISOL BLOCK - EXISTING WALL JUNCTION PLAN







JAMB DETAIL PLAN







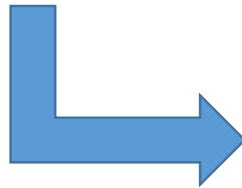
The Building Regulations

Access your individual products

► The Construction Information Service - CIS

The most comprehensive source of technical standards legislation and technical guidance for construction industry professionals.

[view product](#)



The screenshot displays the CIS website interface. The top navigation bar includes links for Announcements, Technical resources, Browse documents, Articles and news, Quick links, and Sign out of CIS. A search bar is present with the text 'Building regulations'. Below the search bar, a results section shows 'Results for Building regulations' with '1- 25 of 9837 documents'. The first result is 'Building Regulations 2010: Approved Documents A Structure (2004 edition incorporating 2010 amendments) (Superseded)' by the Department for Communities and Local Government, 2010. The second result is 'Building Regulations 2010: Approved Documents A Structure (2004 edition incorporating 2010 amendments) (For use in Wales)' by the Welsh Government, 2010. The third result is 'Building Regulations 2010: Approved Documents M Volume 2 Access to and use of buildings Volume 2: Buildings other than dwellings (2015 edition) (For use in England)' by NBS, 2015. The right-hand side of the interface shows a detailed view of the selected document, 'Building Regulations 2010: Approved Documents A Structure (2004 edition incorporating 2010 amendments) (For use in Wales)', with options to 'Jump to: Document History Technical Resources'. Below this, there is a 'Document Status' section showing 'Current', a 'Supplement' section showing 'Core Supplement', and a 'Series' section showing 'Building Regulations 2010: Approved Documents'.

https://whel-primo.hosted.exlibrisgroup.com/primo-explore/dbfulldisplay?docid=44UWTSD_ALMA61194958940002421&context=L&vid=44WHELP_UWTSD_VU1&lang=en_US&adaptor=Local%20Search%20Engine&tab=jsearch_slot&query=contains,dbcATEGORY,&sortby=title&databases=category,institute%20of%20science%20and%20art%20E2%94%80Architecture,%20built%20and%20natural%20environment

Complying with the Building Regulations on Domestic developments

Part A: Structure

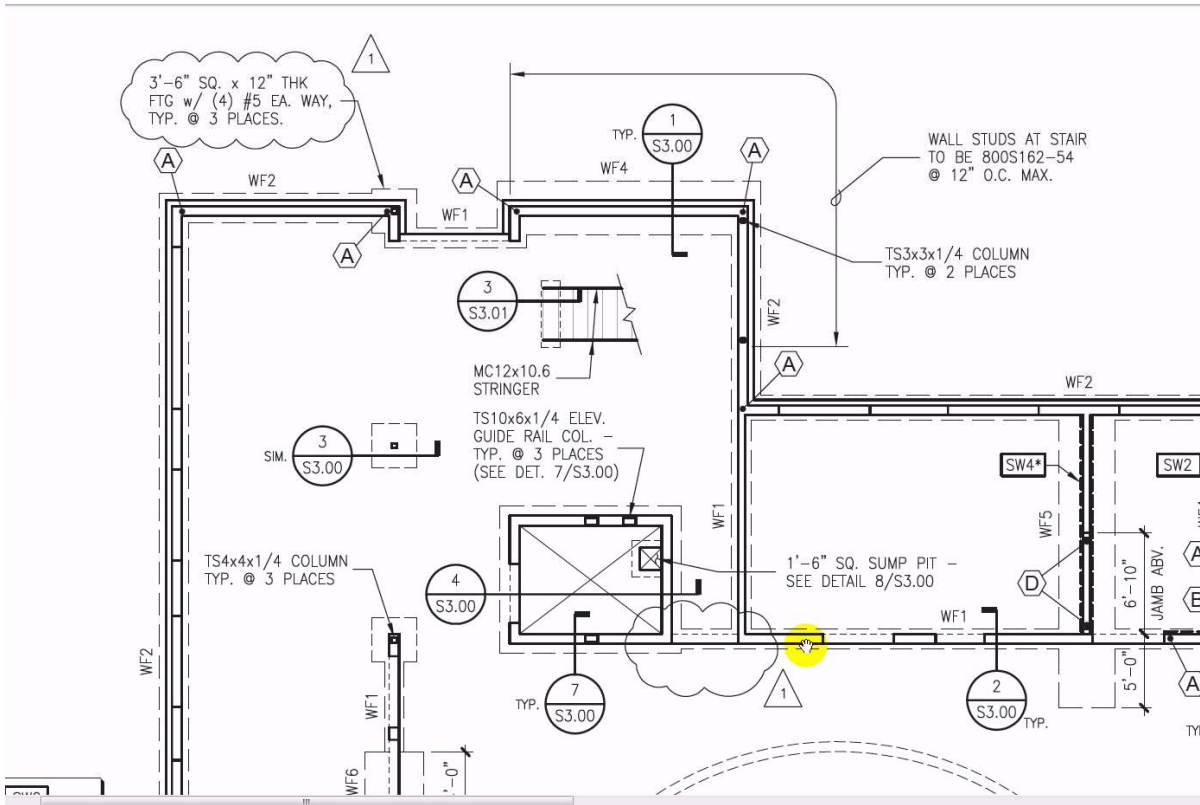


Part A: Structure

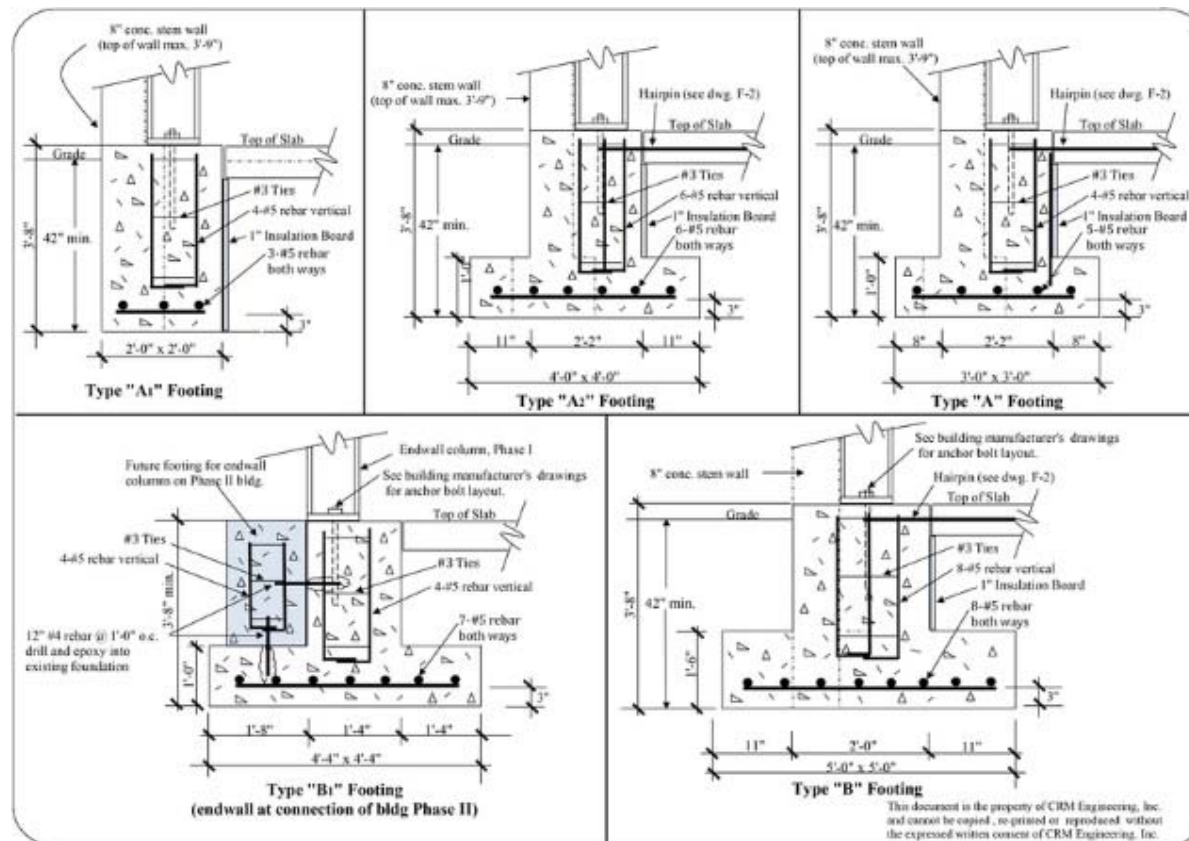
Requirements:

- Foundation design – Ground stability report. Mining Report.
- Frame design – Steel/Timber etc
- Joist layout – Joist type, Joist size, spans, Direction of span.
- Wall construction.
- Lintel schedule – Doors, Windows, Openings.

Part A: Structure. General Arrangement



Part A: Structure. Foundations.



CRM Engineering, Inc.

509 E. Mitchell Street
Adel, Georgia 31620
Tele: 229-346-9053

Engineer's Seal

Customer

Project

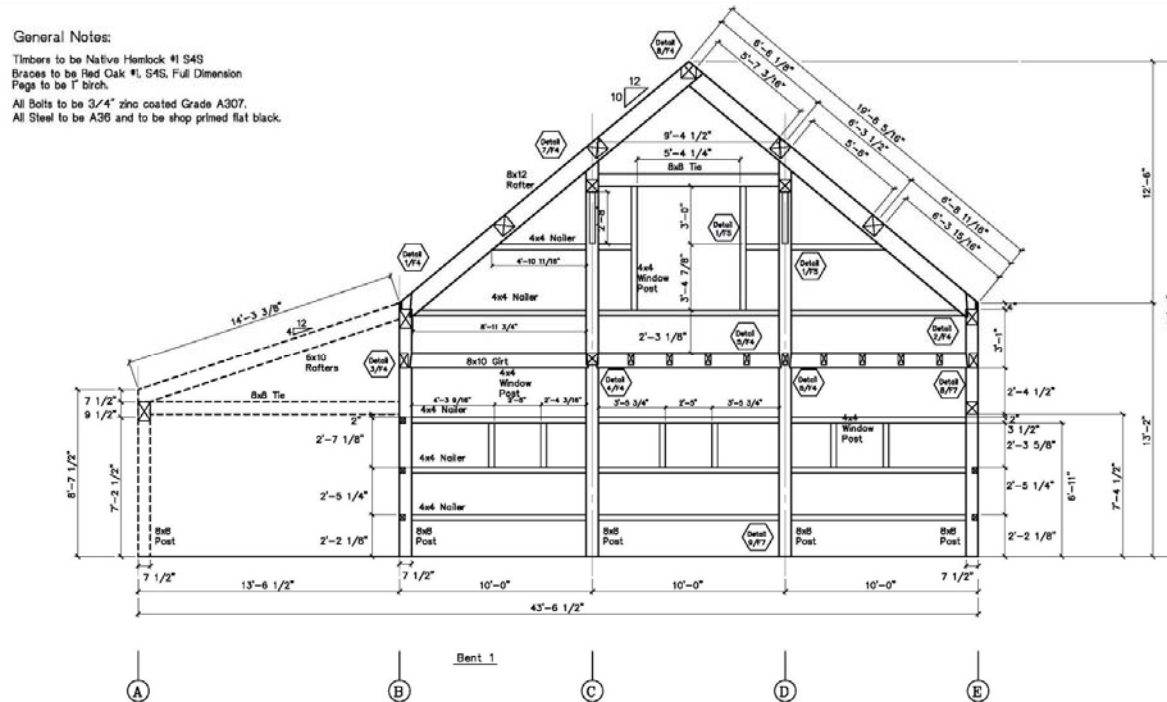
Rev	Date	Description

Date: 0/0/15
Scale: N/A

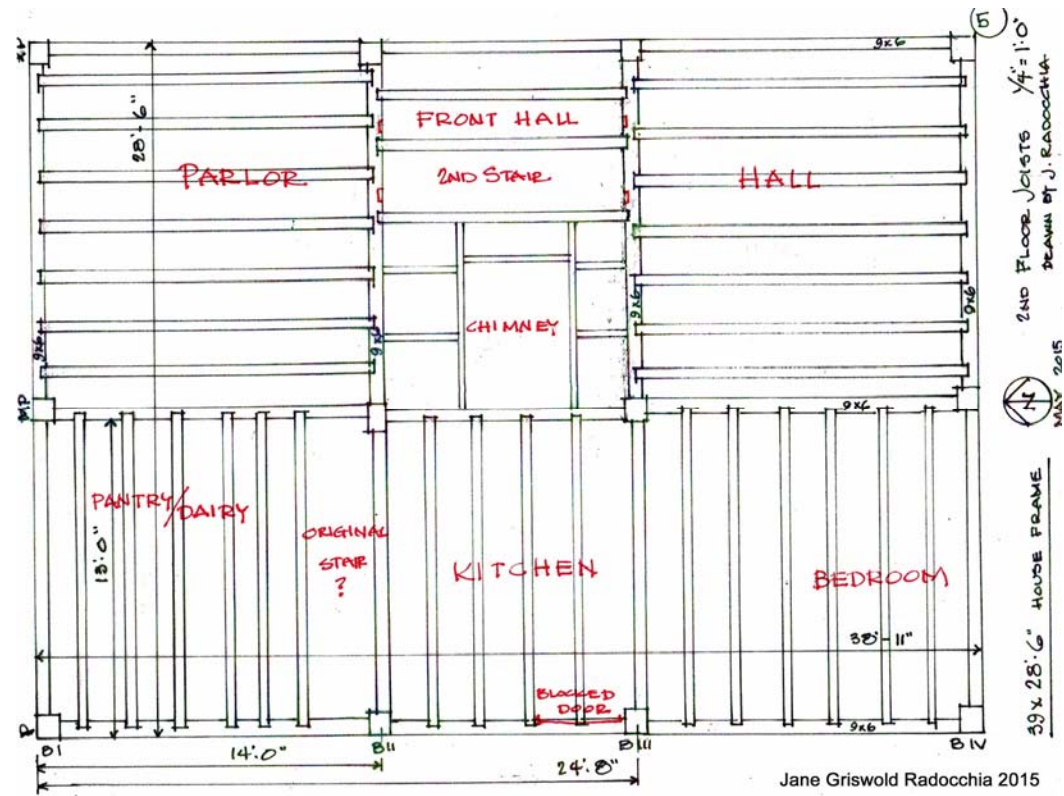
Project No. C-15-170

Sheet No.
F-3

Part A: Structure. Frame Design



Part A: Structure. Joist Layout



Part A: Structure. Schedules

BETTER BY
DESIGN

Lintel Comparison Chart


IG
STEEL LINTELS

		CAVITY WALL 100mm Inner Leaf				Wide Inner Leaf				Wide Outer Leaf				EAVES & TIMBER FRAME				SINGLE LEAF		SOLID WALL		Box Lintels			
		STANDARD DUTY	HEAVY DUTY	HEAVY DUTY	EXTRA HEAVY DUTY	STANDARD DUTY	HEAVY DUTY	HEAVY DUTY	STANDARD DUTY	STANDARD DUTY	HEAVY DUTY	HEAVY DUTY	STANDARD DUTY	STANDARD EAVES	WIDE INNER EAVES	TIMBER FRAME	CONCRETE INNER	SINGLE LEAF STANDARD	SINGLE LEAF HEAVY DUTY	INTERNAL WALL	SOLID WALL	STANDARD DUTY	HEAVY DUTY	HEAVY DUTY	
																									
	STEEL LINTELS	U/S 30	U/S 40	U/S 50	U/S 60	U/S 30 W/L	U/S 40 W/L	U/S 50 W/L	U/S 60 W/L 210	U/S 30 W/L	U/S 40 W/L	U/S 50 W/L	U/S 60 W/L	U/S 30	U/S 30 W/L	U/S 40	U/S 50	U/S 60	U/S 70	U/S 80	INT 44	LP	BOX 75	BOX 200	HD BOX 100
		U/S 75	U/S 85	U/S 95	U/S 105	U/S 30 W/L	U/S 40 W/L	U/S 50 W/L	U/S 60 W/L 210	U/S 30 W/L	U/S 40 W/L	U/S 50 W/L	U/S 60 W/L	U/S 75	U/S 75 W/L	U/S 85	U/S 95	U/S 105	U/S 115	U/S 125	INT 100	1.80M	BOX 100	BOX 200	HD BOX 140
		U/S 100	U/S 110	U/S 120	U/S 130	U/S 100 W/L	U/S 110 W/L	U/S 120 W/L	U/S 130 W/L 210	U/S 100 W/L	U/S 110 W/L	U/S 120 W/L	U/S 130 W/L	-	-	U/S 100	U/S 110	U/S 120	U/S 130	U/S 140	U/S 150	U/S 160	BOX 140	BOX 200	HD BOX 200
Keystone		S/N 30	H/N 30	C/S 40	S/N 30	S/N 30 W/L	H/N 30 W/L	C/S 40 W/L	S/N 30 210W/L	S/N 30 W/L	S/N 30 W/L	S/N 30 W/L	S/N 30 W/L	S/N 30	S/N 30	INT 75	S/N 75	BOX 75	BOX 200	HD BOX 100					
		S/N 75	H/N 75	C/S 85	S/N 75	S/N 75 W/L	H/N 75 W/L	C/S 85 W/L	S/N 75 210W/L	S/N 75 W/L	S/N 75 W/L	S/N 75 W/L	S/N 75 W/L			INT 100	S/N 100	BOX 100		HD BOX 140					
		S/N 100	H/N 100	C/S 110	S/N 100	S/N 100 W/L	H/N 100 W/L	C/S 110 W/L	S/N 100 210W/L	S/N 100 W/L	S/N 100 W/L	S/N 100 W/L	S/N 100 W/L					BOX 140		HD BOX 200					
Birtley									-																
		CR0	CR040	CR0	CR0	CR0130	CR013040	CR0130	-	CR0130100	CR0130	CR0130100	CR0130	LA	EV100	INT 100	CR100	INT 10040	SR100	SR10040					
		CR75	CR7540	CR75	CR75	CR75130	CR7513040	CR75130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Catnic									-																
		CR0	CR0130	CR0130	CR0130	CR0130	CR0130100	CR0130	-	CR0130100	CR0130	CR0130100	CR0130	LA	EV100	INT 100	CR100	INT 10040	SR100	SR10040					
		CR75	CR7540	CR75	CR75	CR75130	CR7513040	CR75130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Part B: Fire safety



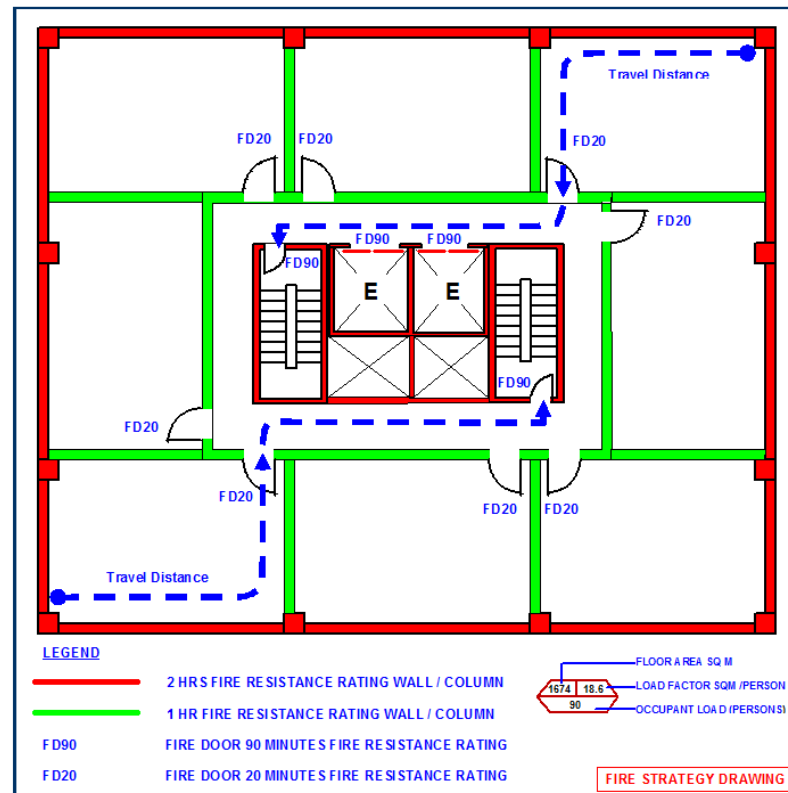
Part B: Fire safety

Requirements

- Escape Strategy
- Specification and location for Detection and early Warning
- Site layout for access of emergency vehicles

3 storey and above requires different considerations.

Part B: Fire safety

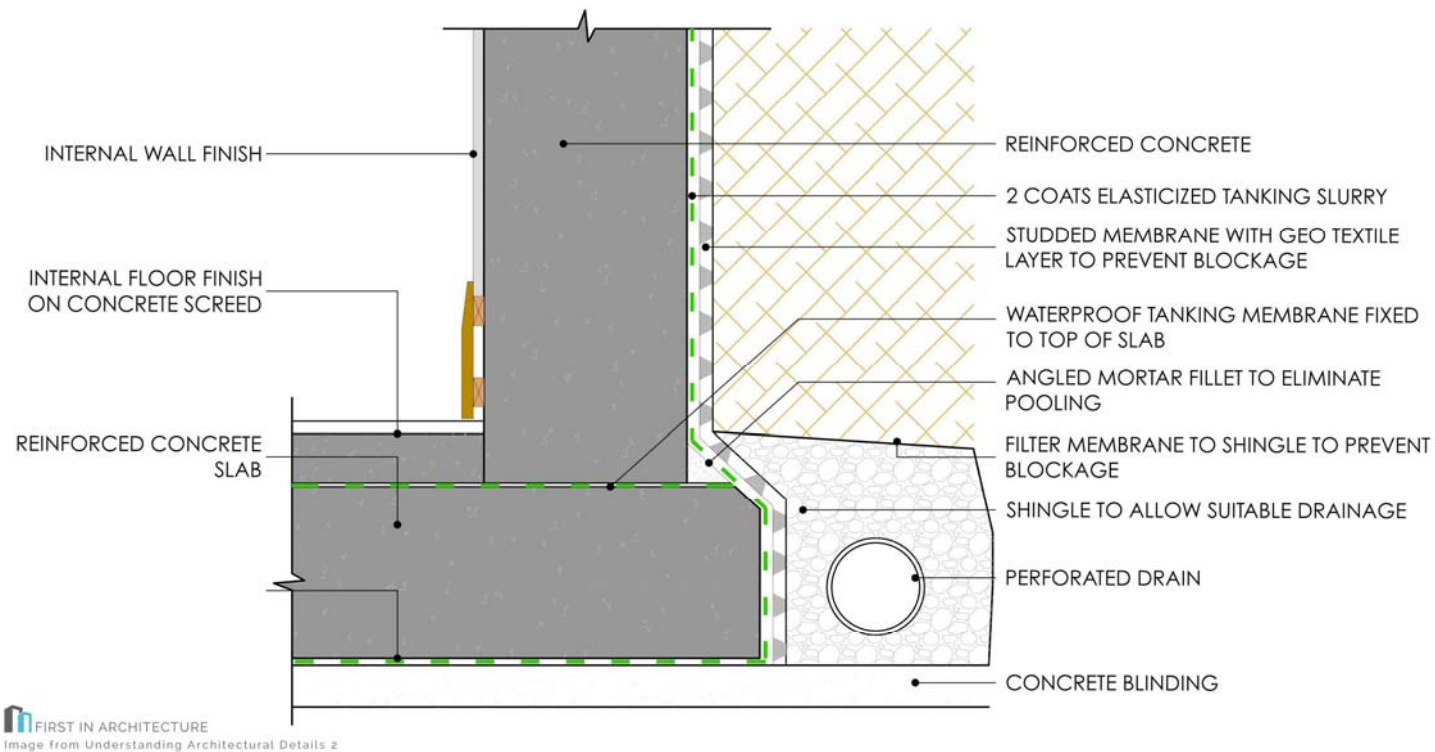


Part C. Site preparation and resistance to contaminants and moisture

Requirements

- Site investigation report – Ground saturation/contamination etc
- Details
- Specifications
- Consultant information

Part C. Site preparation and resistance to contaminants and moisture



Part C. Site preparation and resistance to contaminants and moisture



Part E. Resistance to the passage of sound



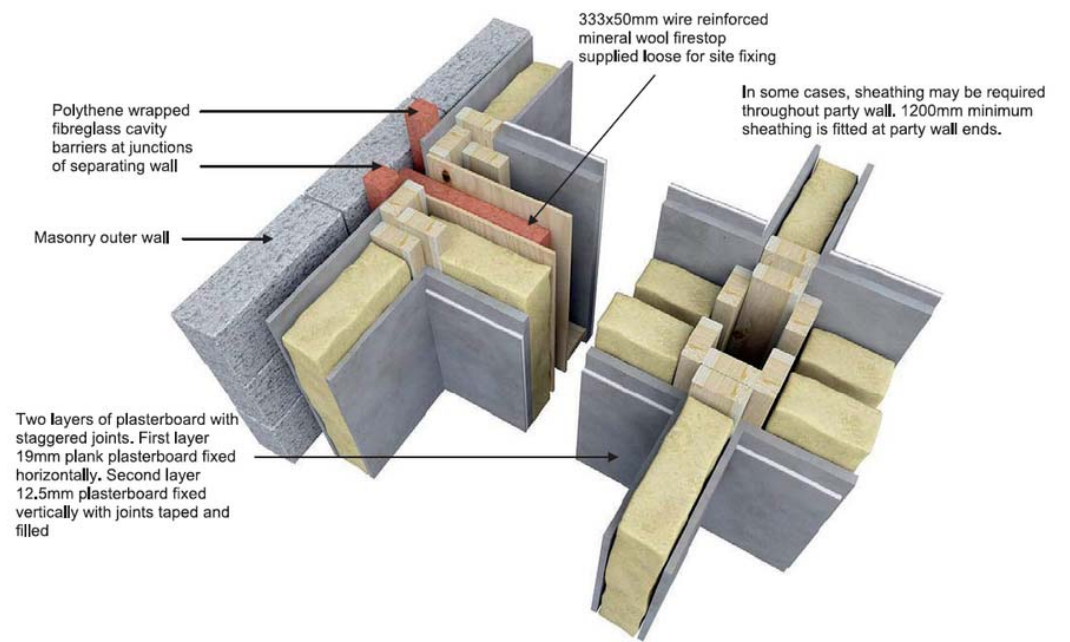
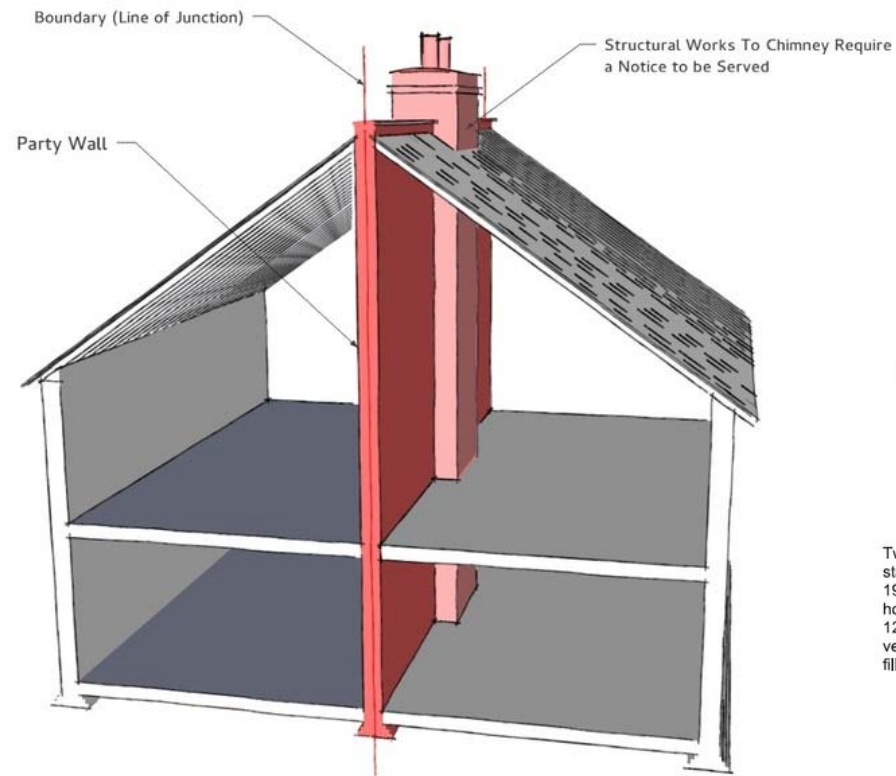
Part E. Resistance to the passage of sound

Requirements

Only applicable on domestic projects with a party wall or floor.

- Specification's
- Details
- Specialist information
- Party Walls Agreement (on conversion projects)

Part E. Resistance to the passage of sound



Part F. Ventilation

Requirements

- Specification
- Room volume calculations
- Manufacturers details

Part F. Ventilation



Part H. Drainage and waste disposal

Surface Water

- To mains drainage
- Soak Away
- To open Watercourse
- Recycle
- Other

Foul Drainage

- To Mains Drainage
- To Septic Tank
- Other

Part H. Drainage and waste disposal

Requirements

- Site porosity tests
- Approval for connection to mains drainage
- Volume calculations for tank capacity
- Drainage drawings – Internal/External
- Specifications – consider the falls. Is a pump required

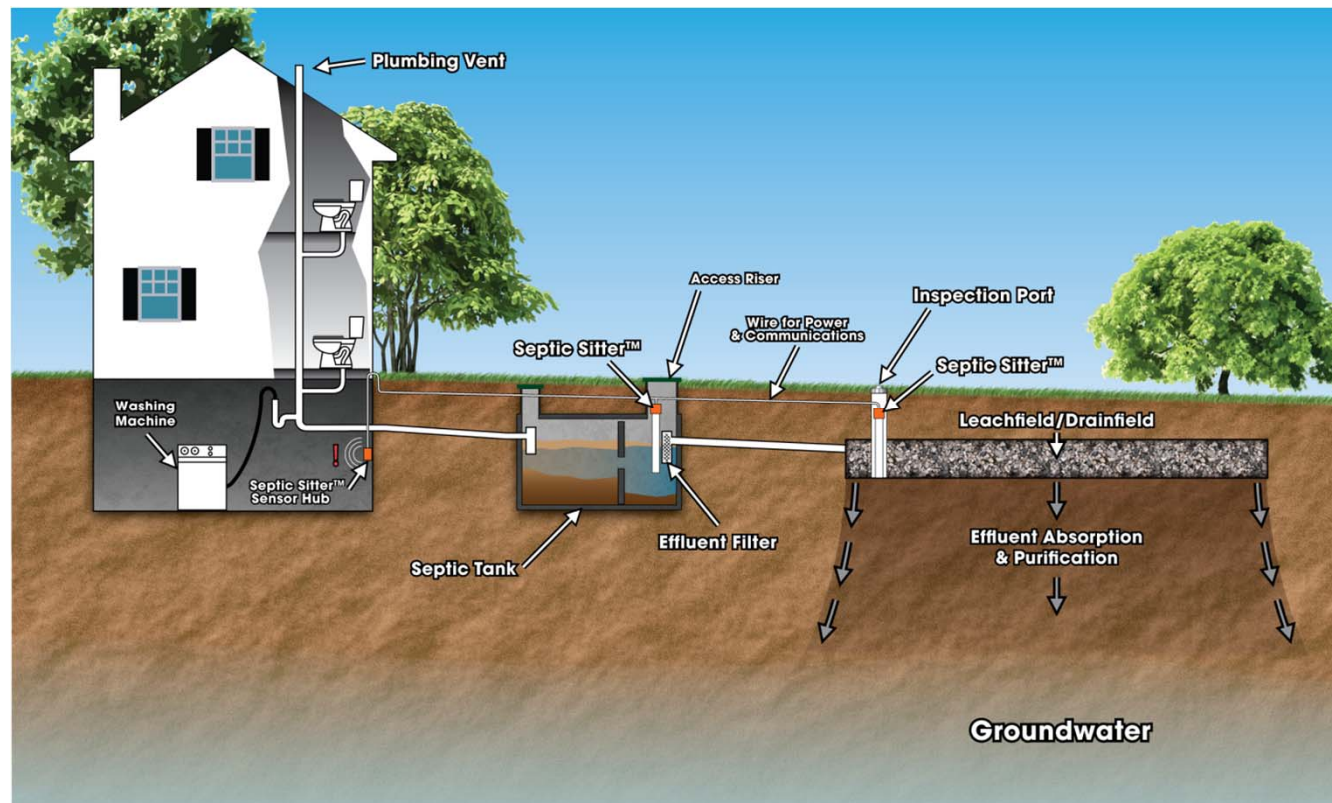
Part H. Drainage and waste disposal – Surface Water



Part H. Drainage and waste disposal – Porosity Testing



Part H. Drainage and waste disposal - Foul

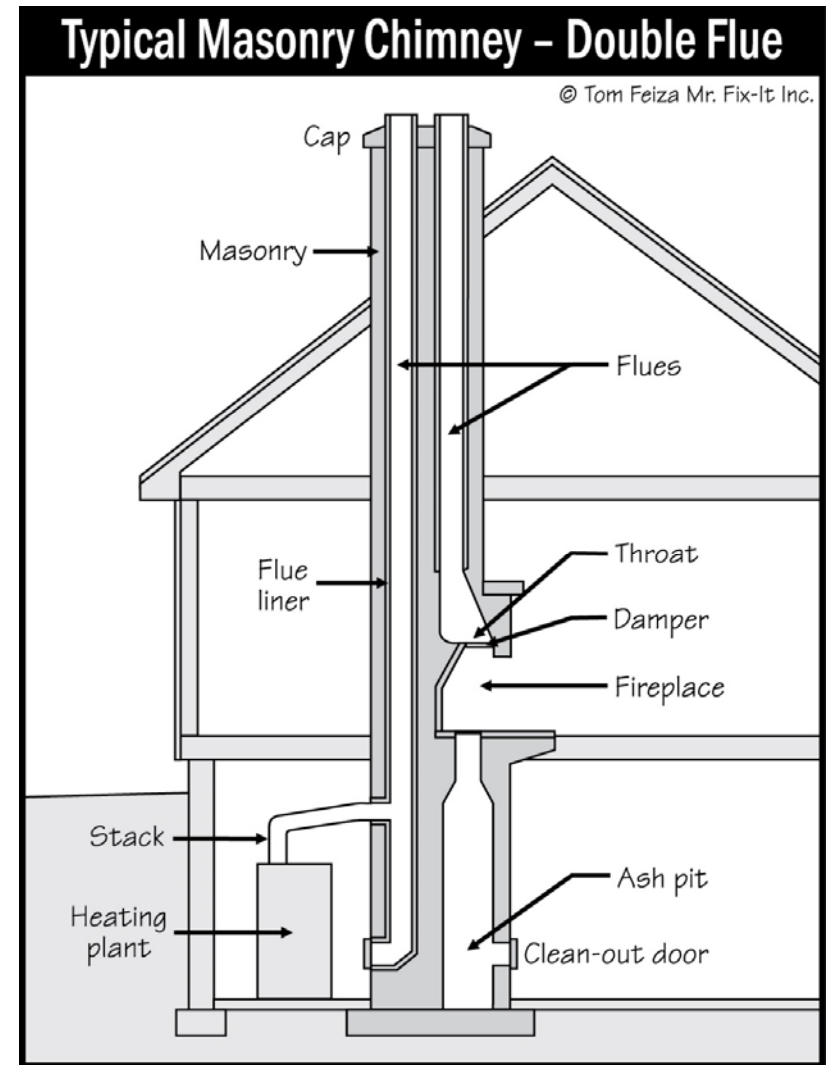


Part J. Combustion appliances and fuel storage systems

Requirements

- Room Volume Calculations
- Flue Designs
- Ventilation considerations
- Specifications

Part J. Combustion appliances and fuel storage systems



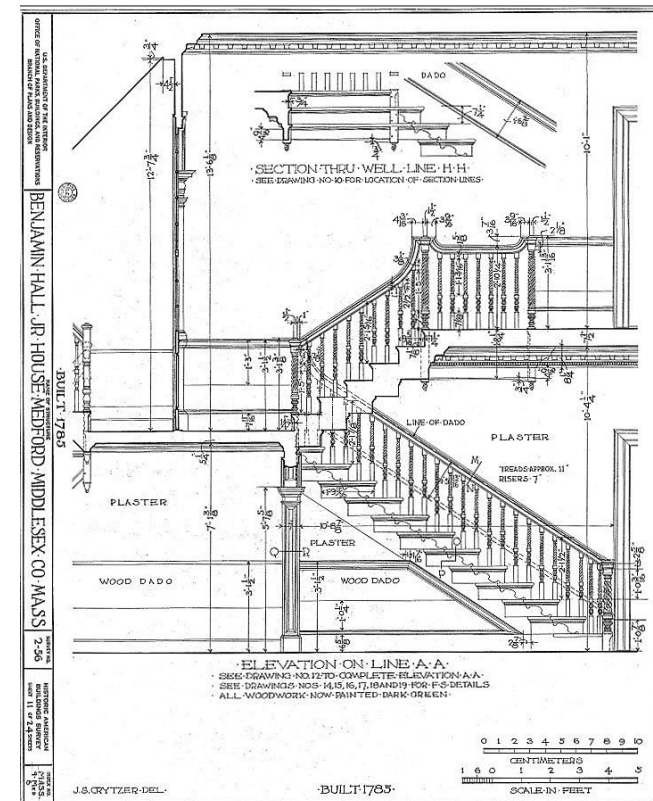
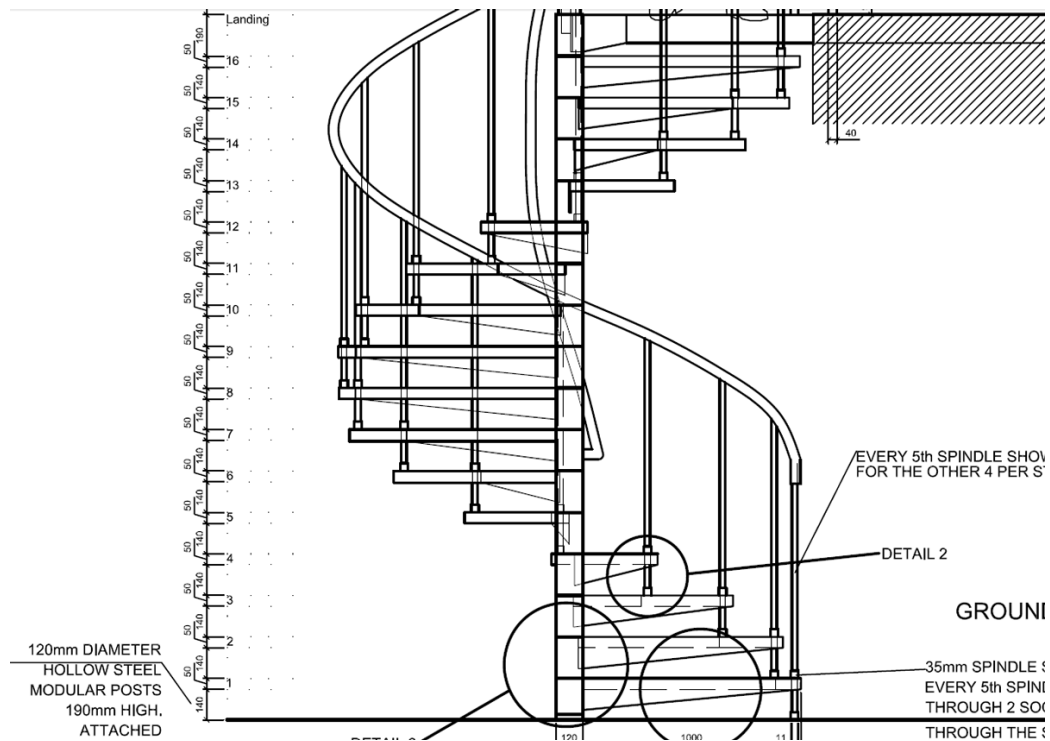
F002

Part K. Protection from falling, collision and impact

Requirements

- Staircase design with dimensions
- Balcony details
- Handrail details
- Balustrade details

Part K. Protection from falling, collision and impact



Part K. Protection from falling, collision and impact

☐ Quotation Purposes Only ☐ Initial Confirmation of Overall Layout & Sizes
Please Sign & Return the attached Stair Order Form

(c) User

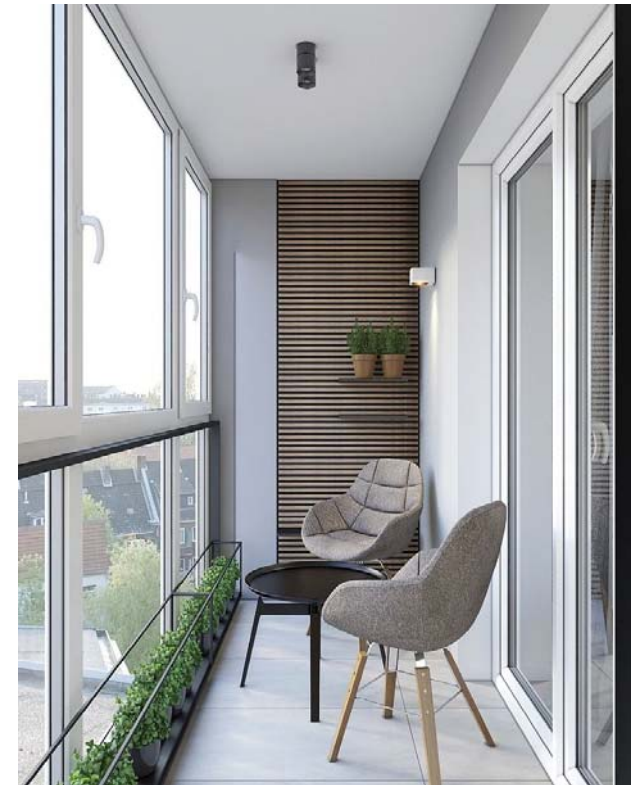
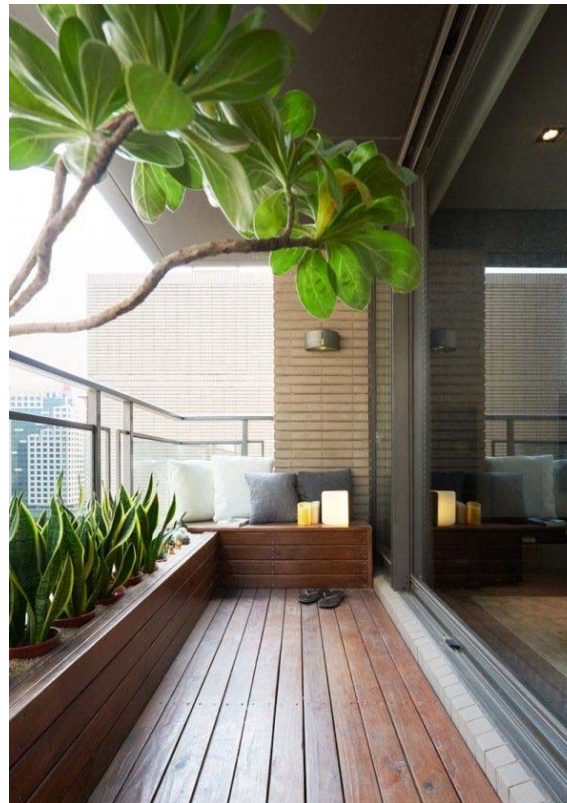
The diagram illustrates a stair layout with the following dimensions and features:

- Overall width: 1780
- Overall height: 2631
- Stair width: 860
- Stair depth: 920
- Stair riser numbers: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
- Stair width: 1595
- Stair depth: 1692

	Rise 200	Type SBH13N	Ref No	Web Page
	Go 223			
	Floor to Floor 2600	Date 29-09-2006	Customer	www.stairplan.com

Stairplan Ltd Unit C4, Stafford Park 4 Telford TF3 3BA Tel: 01952 216000 - Fax: 01952 216021

Part K. Protection from falling, collision and impact

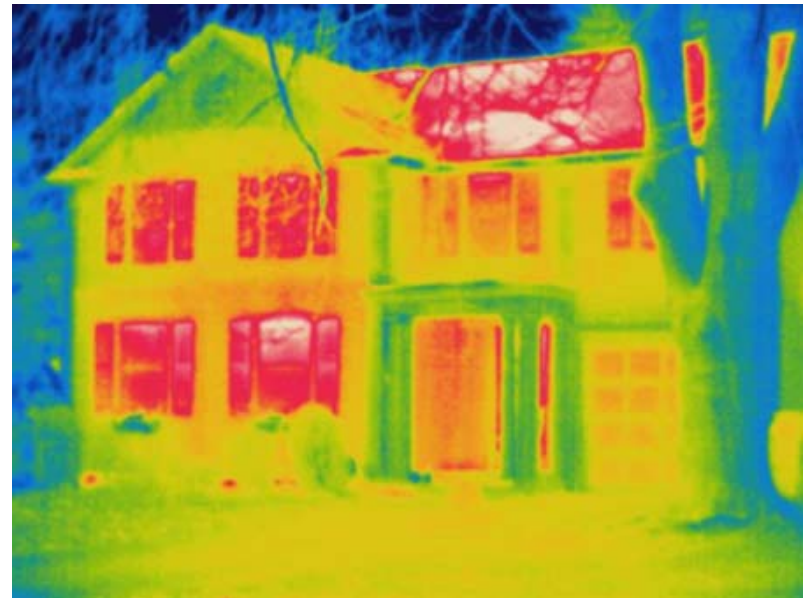
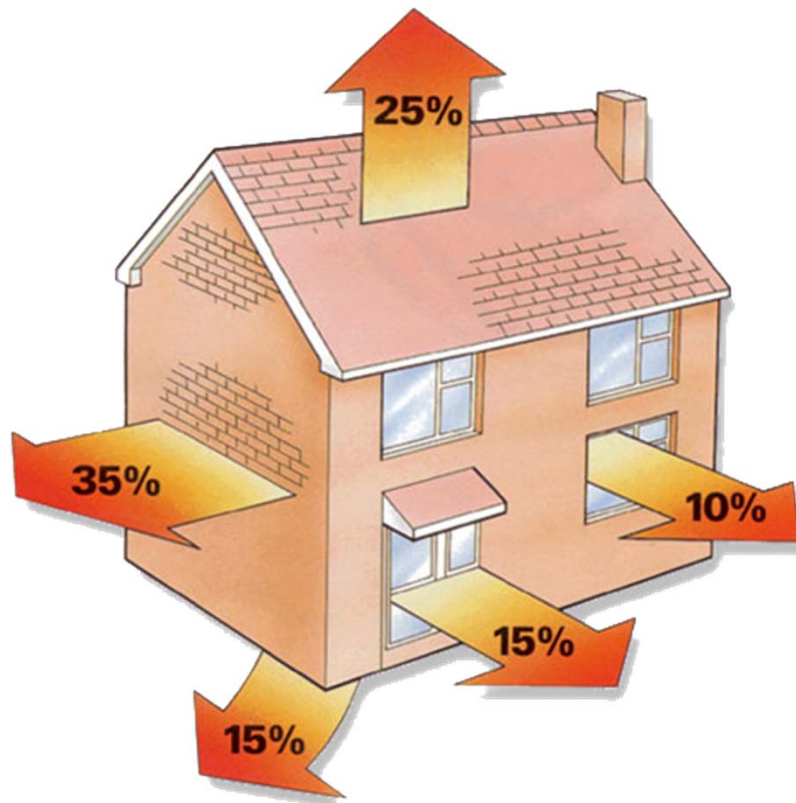


Part L. Conservation of fuel and power

Requirements

- Insulation specification. Floors/Walls/Roof etc
- U-Values – Heat Loss Calculations
- Air Tightness.

Part L. Conservation of fuel and power



Part M. Access to and use of buildings

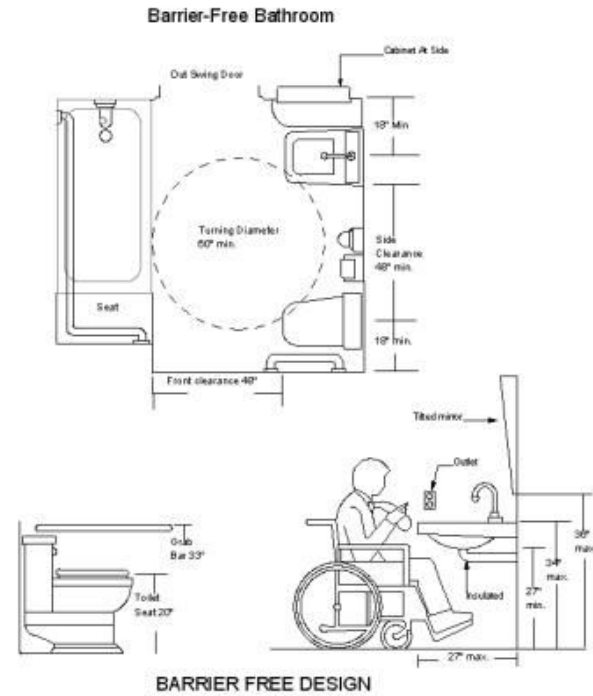
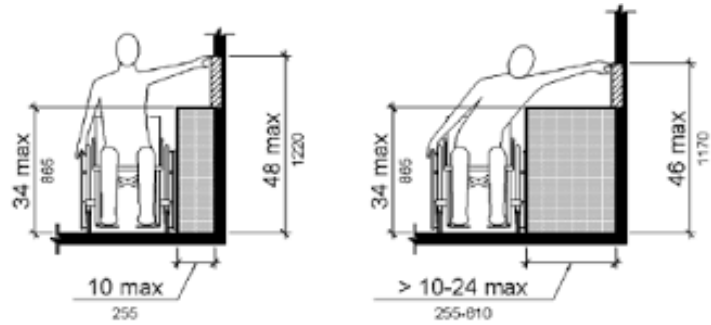
Requirements – Access for All

- Door Widths
- Ground Floor Facilities
- Point and switch access
- Staircase considerations
- External Landscaping
- Thresholds
- Colour Scheme
- Obstructions

Part M. Access to and use of buildings



Part M. Access to and use of buildings



Part M. Access to and use of buildings



Summary Week 2:

External Walls

Openings

Building Regulations

