CCF
Part of the Travis Perkins Group

Year by year, the requirements for thermal and acoustic insulation become more demanding. But that doesn't mean your job as installer or specifier has to be any tougher. With the right materials and the right advice, every building method and building location can be adequately insulated against heat loss and sound transmission.

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Introduction

CCF offer a complete service to the specialist interiors industry involved in ceilings, drywall, screeding, insulation, partitioning and fire protection.

We hold massive stocks of one of the best core product range in the industry, at prices which are always competitive. and because of our large stock holdings we're never out of stock, you can rely on CCF to deliver on time, in full, every time.

Our entire product range is backed by specialist staff who are committed to giving you the best possible service and putting you first. Above all we're dedicated to delivering on our commitments and keeping promises at all times.

- **A core product range that can be supplied from stock**
- **Deliveries on time and in full**
- **Staff who understand and always put you first**
- **Service you can trust and advice you can rely on**
- **Competitive pricing**

Ceilings
A comprehensive range of mineral, metal and plaster tiles, grid systems and accessories from major manufacturers.

Drywall
A complete range of dry lining products available nationally from the UK's leading distributor.

Screeding
Nationwide distribution of a broad but specialist product range coupled with in-house technical expertise is now available to all CCF customers.

Insulation
A range of specialist insulation branches with huge stocks and fast, reliable delivery.

Partitioning
A versatile range providing attractive, economical solutions with acoustic and fire performance where required.

Fire Protection
Fire protection and fire barrier products from leading manufacturers and a range of metal products, fixings and access panels.

Insulation

Year by year, the requirements for thermal and acoustic insulation become more demanding. But that doesn't mean your job as installer or specifier has to be any tougher. With the right materials and the right advice, every building method and building location can be adequately insulated against heat loss and sound transmission.

All you need is the right distributor -
One who understands the regulations, who knows the materials and the manufacturers, and who can deliver the goods on time and at a price that fits within your budget. We stock a wide range of materials from all the major manufacturers - and we talk to them on a daily basis.

Within this guide you will find guidance on how to comply with both Part E and Part L building regulations. The Applications guide sections starting on page 13 illustrate simply the best methods of fit for each type of insulation requirement, be it:

- Flat roofs
- Pitched roofs
- Floors
- Walls

CCF are able to provide bespoke solutions for all your insulation requirements. In addition to this CCF offer a wide range of accessories including:

- Pitched roof fixings
- Insulation hangers
- Breathable membranes
- Foil tapes
- Specialist sheet materials

Environmental Statement

THE TRAVIS PERKINS GROUP is fully committed to protecting the environment and we are continually looking for new ways to improve the environmental performance of all our trading activities. At CCF we are committed to improving our environment and one of the best ways to conserve energy is to insulate.

Our aim is to prevent pollution, reduce carbon emissions, cut down on waste and increase the amount of certified, well managed timber we buy. Our enviromental management system is acreditted to the International Standard (ISO 14,001) and we maintain certified chain of custody for both the Forest Stewardship Council (FSC) and the programme for the Endorsement of capital Forest Certification (PEFC) timber purchases, so that our customers can feel confident about the timber they buy from us.

A correctly insulated home can significantly reduce household bills and has the potential to reduce in CO_2 emissions in accordance with the government's commitment to the Kyoto Protocol. In addition to providing a warmer and cosier home some products have the added benefit of acoustic properties and can provide substantial reductions in noise transmission.

CCF stock materials from all the major manufacturers and are committed to supplying the most environmentally friendly solutions wherever possible. The following are examples of some of the materials we supply:

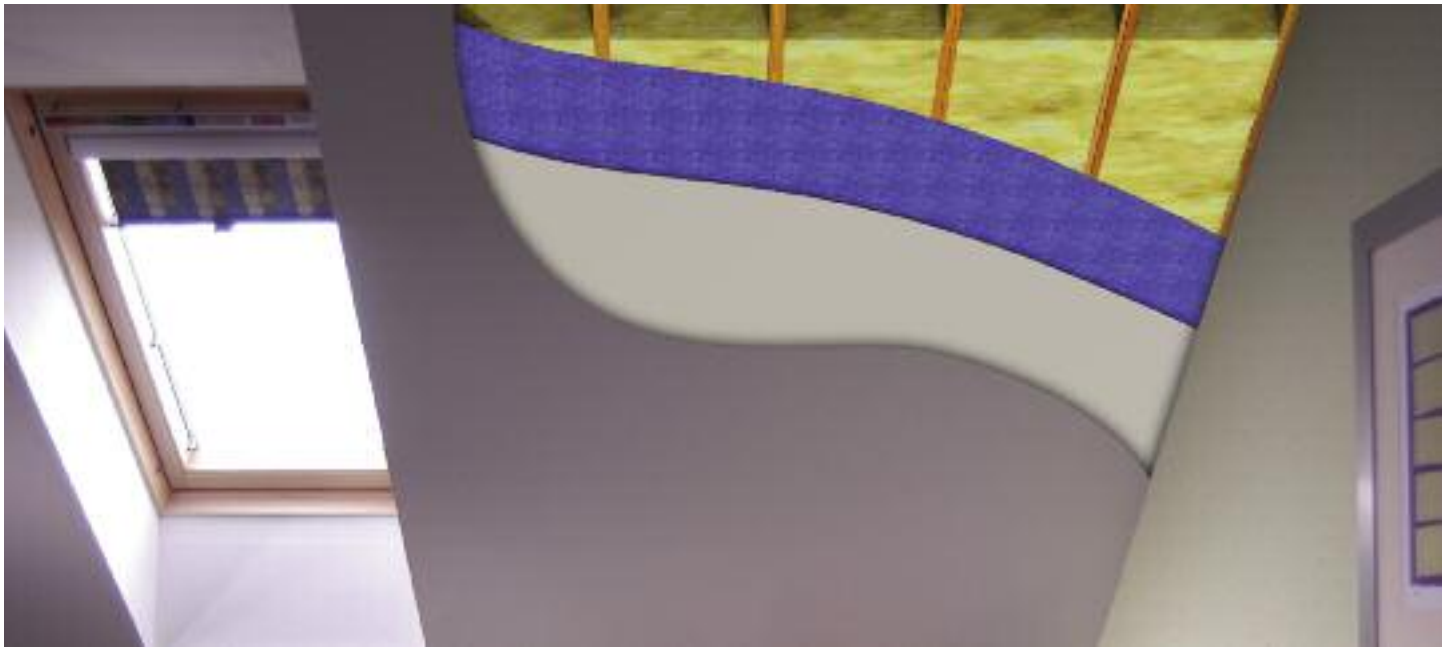
- Glass Fibre & Rock Fibre from Knauf and Isover (made largely from recycled glass, bottles and silica sand).
- Sheep's Wool from Second Nature UK (a naturally sustainable and self renewing resource).
- Wood Fibre and Flax from Natural Building Technologies (sustainable, with the added benefit of locking in CO_2 during its production).
- Rock fibre from Rockwool and Knauf (manufactured from naturally occurring volcanic Diabase rock, common in most regions).
- PIR from Celotex and Kingspan (extremely efficient requiring less material per project reducing transport emissions).
- A new generation of insulants made fromrecycled materials such as textiles (old jeans and rags), wood pulp (newspapers and paper) and plastic (old drinks bottles).

In conjunction with access to solar panels, wind turbines, ground source heat pumps and other energy saving products, CCF are able to offer a wealth of experience to solve both thermal and acoustic problems in a sustainable and environmentally friendly way.

FSC
TT-COC-1671 ©1996
Forest Stewardship Council A.C.

PEFC
PEFC/16-37-008

New regulations on Part L for England and Wales came into force on 1st April 2006, replacing the previous 2002 regulations. The Approved Document L1 is now split into two - L1A relating to new housing construction and L1B, to work on existing buildings (extensions, alterations and conversions).



L1A - WORK ON NEW CONSTRUCTIONS

The main change from the previous L1 is that the Elemental and Target U-value methods of compliance no longer exist. It is now necessary to comply with an overall energy performance target for a building in terms of CO_2 emissions per m^2 per year. The target includes energy use for heating, hot water, ventilation and lighting.

The approved way of checking and demonstrating compliance is to use the 2005 edition of the Standard Assessment Procedure (SAP 2005), a calculation procedure that takes all the necessary factors into account.

In order to comply with L1A, the emission rate from your building, using your proposed U-values, should be no more than the emission rate of your building were it to be designed to be 20% more efficient than the Part L standards that applied in 2002. In addition, the Approved Document sets out "longstop average" U-values for each element that should not be exceeded.

With more stringent requirements in force, it is necessary to insulate your building to the highest reasonable standard. For this purpose, we propose a set of "realistic compliance" U-values, which can be achieved using reliable insulation products and construction methods.

The table below summarises the U-value requirements for new constructions. Insulation solutions are provided on the following pages for all the U-values shown.

NEW HOUSING

	LONGSTOP AVERAGE U-VALUES FROM L1A	RECOMMENDED REALISTIC COMPLIANCE U-VALUES
EXTERNAL WALLS	0.35	0.27
FLOORS	0.25	0.20
ROOFS	0.25	0.18 (Warm pitched Roof) 0.13 (Cold pitched Roof)

L1B - WORK ON EXISTING CONSTRUCTIONS

Approved Document L1B keeps an elemental approach to compliance with the regulations, with the guidance set out in relation to three classes of building work:

- Extensions to existing dwellings, including conservatories
- Dwellings created as a result of a material change of use
- Thermal upgrading as part of material alterations.

The U-value requirements differ according to whether the work is upgrading existing thermal elements of the building. Existing elements being upgraded may be:

- Replaced
- Renovated or Retained

New thermal elements relate mainly to extensions, but they can also occur when a building has a change of use.

Replacement thermal elements are replacements for existing elements in an existing building.

Renovated thermal elements are those that either have a new layer added to the construction, or an existing layer is to have more than 25% of its surface area replaced. Examples include:

- Addition of a new insulating / weatherproofing layer
- Replacement of felt on a flat roof
- Removal of lath and plaster ceilings and replacement with plasterboard

Retained thermal elements are those elements that become part of the thermal envelope when they were not before. One example is in a loft conversion where a party wall within a loft space becomes an element enclosing a new heated space.

CE Marking is the visible sign that insulation providers meet the Construction Products Directive for their insulation, effective from 1st March 2003. This new standard replaces any other standards such as ISO and British Standards. The main changes concern the thermal and fire performance of insulation products. In general the assessment procedure has been made more severe, therefore products have to be increased in thickness or density.

The tables below summarise the U-value requirements for both new housing construction and for work on existing housing. Insulation solutions are provided on the following pages for all the U-values shown.

EXISTING HOUSING

	U-VALUES FOR NEW THERMAL ELEMENTS	U-VALUES FOR UPGRADING THERMAL ELEMENTS U-VALUES
EXTERNAL WALLS	0.30	0.35
FLOORS	0.22	0.25
WARM PITCHED ROOFS	0.20	0.20
COLD PITCHED ROOFS	0.16	0.16
FLAT ROOFS	0.20	0.25

What is Part E?

Approved Document E of the Building Regulations (England and Wales) refers to the "Resistance to the Passage of Sound" in and between all types of dwellings, including hotels, hostels, halls of residence and residential homes. It's aim is to protect the residents of a dwelling from noise in other areas of the building or an attached building. These new regulations have been implemented as a result of householder surveys highlighting a common cause of tension between neighbours being noise pollution. Part E Building Regulations came into force from 1st July 2003.

Section 5 (Scotland)

The majority of the measures adopted in Section 5 (Scotland) mirror those stated in Part E Building Regulations (England and Wales). Variations in the legislation are:

1. Minimum values of airborne sound transmission for walls and floors vary.

2. Maximum values of impact sound transmission for floors vary.

3. Low frequency sound values (Ctr frequency correction factor) do not apply in Scotland.

4. Robust Details do not apply in Scotland. However, the Technical Standards in Scotland state that specific constructions must be adhered to where Pre-Completion Testing is not carried out.

5. Section 5 Technical Standards require adequate levels of insulation to prevent sound transmission from adjoining buildings and between parts of the same building.

THE ELEMENTS OF NOISE CONTROL

When approaching a noise control problem, the difference between sound absorption and sound insulation should be appreciated.

Sound Absorption

Sound Absorption refers to the attenuation of reverberant noise within the same room or area as the noise source. This normally involves lining all or part of the room surfaces with a material, which absorbs sound.

Sound Insulation

Sound Insulation, otherwise known as sound reduction, is the prevention of noise being transmitted from one part of a building to another, for example by erecting a partition or wall. When considering sound insulation in existing buildings, there are three methods of sound transmission which need to be considered:

- Airborne sound
- Impact sound
- Flanking sound

Airborne Sound

Airborne sound sources produce noise by vibrating the air immediately around them. Typical sources include the human voice, musical instruments, home entertainment systems and noisy dogs.

Impact Sound

Impact sound sources produce noise by direct physical excitation of part of a building. Examples include slamming doors, stamping on the floor and vibrating washing machines.

Flanking Sound

Flanking sound transmission usually refers to sound that travels through 'flanking' structural elements, such as the external wall that flanks a separating wall between two dwellings.

Flanking sound can also include sound that travels along unintended air paths, such as unsealed gaps in the structure and around service penetrations.

EXPLANATION OF TERMS. SYMBOLS AND MEASUREMENTS

dB (decibel)	Unit of measure in acoustics that indicates the loudness of sound
Rw	Weighted sound reduction index. Laboratory measure of airborne sound transmission
DnT,w + Ctr	Site measure of airborne sound with low frequency correction applied (higher figure = better performance)
L'nw	Laboratory measure of the impact sound level (lower figure = better performance)
L'nT,w	Site measure of the impact sound level (lower figure = better performance)

Performance Standards

This page sets out the performance standards for England, Wales and Scotland.

PERFORMANCE STANDARDS - NEW HOUSES (INCLUDING EXTENSIONS)

	ENGLAND & WALES	SCOTLAND
DETACHED		
INTERNAL WALLS AND FLOORS	40dB R_w min	None
SEMI-DETACHED / TERRACED		
SEPARATING WALLS - AIRBORNE	45dB $D_{nT,w} + C_{tr}$ min	Mean: 53dB $D_{nT,w}$ min Individual: 49dB $D_{nT,w}$ min
INTERNAL WALLS AND FLOORS	40dB R_w min	None

PERFORMANCE STANDARDS - FLATS AND APARTMENTS

		ENGLAND & WALES	SCOTLAND
NEW BUILD			
SEPARATING WALLS - AIRBORNE		45dB $D_{nT,w} + C_{tr}$ min	Mean: 53dB $D_{nT,w}$ min Individual: 49dB $D_{nT,w}$ min
SEPARATING FLOORS - AIRBORNE		45dB $D_{nT,w} + C_{tr}$ min	Mean: 52dB $D_{nT,w}$ min Individual: 48dB $D_{nT,w}$ min
SEPARATING FLOORS IMPACT		62dB $L'_{nT,w}$ max	Mean: 61dB $L'_{nT,w}$ max Individual: 65dB $L'_{nT,w}$ max
INTERNAL WALLS AND FLOORS		40dB R_w min	None
CONVERSIONS			
SEPARATING WALLS -	AIRBORNE	43dB $D_{nT,w} + C_{tr}$ min	As new build
SEPARATING FLOORS -	AIRBORNE	43dB $D_{nT,w} + C_{tr}$ min	As new build
	AIRBORNE	64dB $L'_{nT,w} + C_{tr}$ max	As new build
INTERNAL WALLS AND FLOORS		40dB R_w min	None

Sound Transmission - Part E

PRE-COMPLETION TESTING

For the first time, buildings are to be tested prior to completion in order to confirm they meet or exceed Part E standards.

The Regulations require that one in ten of each construction type require testing. All tests are at the Building Inspector's discretion. Failure in the test results will require the sound insulation to be improved and the construction type re-tested.

Only exceptions are constructions, which conform to a Robust Detail document (RD). These are constructions that perform consistently well and do not require on-site testing.

ROBUST DETAIL

A Robust Detail, for Part E of the Building Regulations, is a separating wall or floor construction, which has been assessed and approved by Robust Details Limited. In order to be approved, each Robust Detail must:

- Be capable of consistently exceeding the performance standards given in Approved Document E to the Building Regulations for England and Wales
- Be practical to construct on-site
- Be reasonably tolerant to workmanship

If you build Robust Details, you won't have to carry out Pre - Completion Testing. Each Robust Detail has its own site work checklist. These are designed to help builders to ensure that building work is carried out exactly in accordance with the Robust Detail specifications. Building control bodies, new home warranty providers and others can also use them.

Approved Document E (ADE)

Ways to comply

Robust Details (RD's)

RD Approval Constructions
New build houses and apartments only

Pre-Completion Testing (PCT)

Guidance & Proprietary Systems
All houses, apartments and all buildings with rooms for residential purposes. New build or conversion.

Flat Roofs

Flat roofs have always provided installers with a challenge. But no longer. Nowadays, there are numerous combinations of materials that will keep the heat in and the moisture out - and still allow the structure to breathe.

Here at CCF we stock a full range of insulation materials as well as membranes for controlling water and vapour for all types of flat roof. If you're working on a timber, metal or concrete deck, with or without a cavity, we can help you choose the materials that will give you a trouble-free finish.

FLAT ROOFING - PRODUCT APPLICATION MATRIX

MANUFACTURER & PRODUCT	FELTED	SINGLE PLY	MASTIC ASPHALT	ROOF DECK	PROTECTED MEMBRANE
Polyfoam Roofboard		✓			
Krimpact Flat Roof Slab	✓	✓	✓		
Hardrock	✓	✓	✓		
Duorock	✓	✓	✓		
TD3000				✓	
EL3	✓	✓	✓		
EP3000				✓	
Kooltherm K1		✓			
Kooltherm K2		✓			
Kooltherm K5	✓				
Kooltherm K11	✓				
TR20	✓				
TR21	✓		✓		
TR22	✓		✓		
TR31				✓	
TR26		✓			
TR27		✓			
Styrozone					✓
Purlcrete					✓
Bitu-Therm	✓				
Glass-Therm		✓			
Multi-Therm	✓		✓		
Eco-Deck				✓	
Jabtherm 3B	✓				
Jabtherm HP	✓				
Jabtherm Torch	✓				
Jabroll	✓				
Jabdec				✓	
Jabroof Board 100		✓			
Jabroof Board 150		✓			
Jabtherm 3B Plus			✓		
X4L					✓

Flat Roofs

The following typical construction methods can be used to comply with current building regulations. For further information and specific examples please see the CCF PART E and PART L guides.

FLATS AND APARTMENTS

REGULATIONS	NEW CONSTRUCTIONS	EXISTING CONSTRUCTIONS / NEW THERMAL ELEMENTS	EXISTING CONSTRUCTIONS / UPGRADING THERMAL ELEMENTS
Acoustic Regulations Part E	N/A	N/A	N/A

REGULATIONS	NEW CONSTRUCTIONS	EXISTING CONSTRUCTIONS / NEW THERMAL ELEMENTS	EXISTING CONSTRUCTIONS / UPGRADING THERMAL ELEMENTS
Thermal Regulations Part L	0.25 U-value (Longstop average U-values from L1A) 0.18 U-value 0.15 U-value	0.20 U-value	0.25 U-value

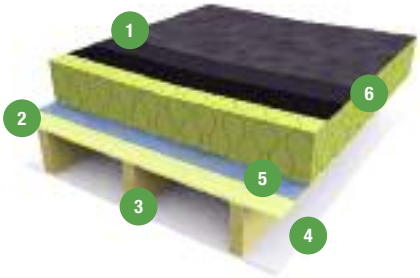
DON'T FORGET...

PICK UP A COPY OF OUR PART E AND PART L GUIDES AT YOUR LOCAL BRANCH

TRADITIONAL WARM FLAT ROOF

Usually roofing felt, traditional construction and lightweight. Can be used with a variety of waterproof coverings.

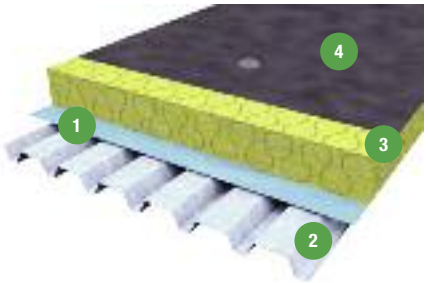
1.	Waterproofing
2.	Roof Deck
3.	Roof Joist
4.	Dry Lining / Ceiling
5.	Vapour Barrier / Underlay
6.	Insulation



INDUSTRIAL ROOF

Speedy installation and lightweight. Often single ply but can be used with a variety of coverings.

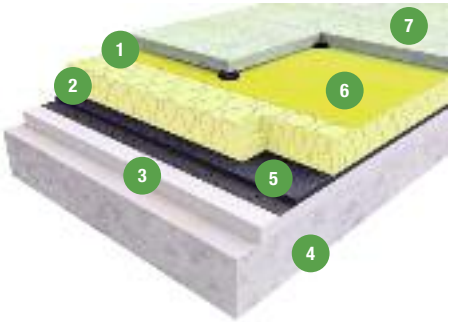
1.	Vapour Barrier / Underlay
2.	Insulation
3.	Metal Roof Deck
4.	Waterproofing

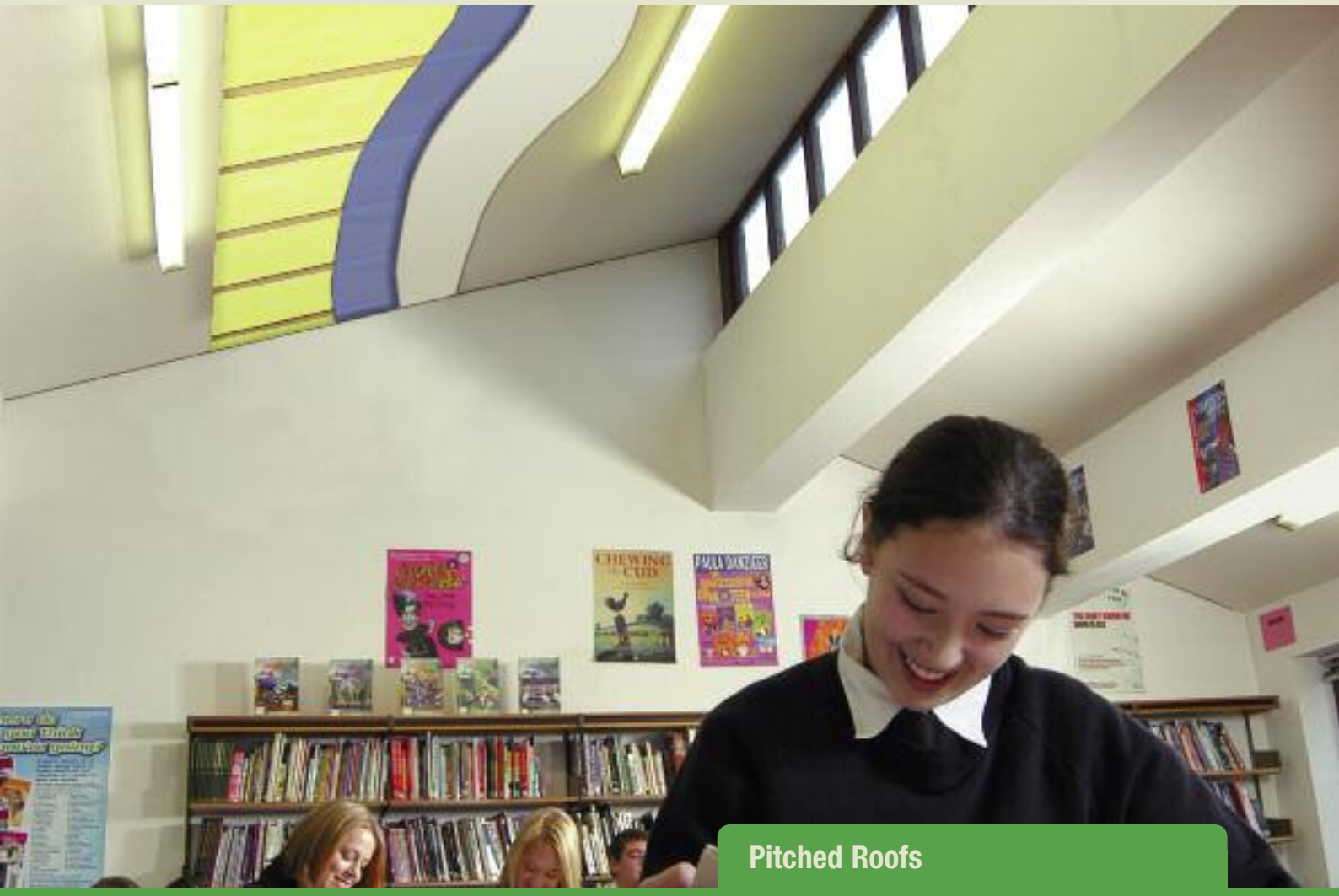


UPSIDE DOWN ROOF

Application for roof terrace, patios and ballasted roof. Provides a protective layer to the membrane with a longer life expectancy.

1.	Paving Support
2.	Insulation
3.	Screed
4.	Concrete Roof Deck
5.	Waterproofing
6.	Fleece
7.	Paving Slabs





Pitched Roofs

CCF stock a complete range of insulation materials for pitched roofs. We also offer ancillary equipment such as vents and pipe insulation.

Different materials suit different scenarios from re-roofing and loft conversions, to new builds. Some materials go between the rafters, some below, and some go between and below the rafters. Some require a ventilation gap; some don't. Whatever your needs, we can talk you through the options that will keep your project regulations compliant.

PITCHED ROOFING - PRODUCT APPLICATION MATRIX

MANUFACTURER & PRODUCT	TRADITIONAL COLD	INTER RAFTER	OVER RAFTER	CLADDING & INDUSTRIAL	ACOUSTIC PROPERTIES
Crown Loft Roll	✓			✓	✓
Crown Rafter Roll 32		✓			✓
Crown Factoryclad				✓	✓
Crown Frametherm slab		✓			✓
Rocksilk Flexible slab		✓		✓	✓
Rocksilk Pitched roof slab		✓	✓		✓
Polyfoam Sarking Board		✓	✓	✓	
Polyfoam Roof Board		✓	✓	✓	
Polyfoam Raftersqueeze		✓			
Polyfoam Supadeck	✓				
Spacesaver	✓	✓			✓
Frame Batt		✓			✓
Frame Roll		✓			✓
Acoustic Slabs		✓			✓
General Purpose	✓	✓			✓
Rollbatt	✓				✓
RW Slab		✓			✓
Flexi Slab		✓			✓
Rockfall Underlay		✓			✓
Rockfall Overlay			✓		✓
Cladding Roll				✓	✓
TB3000		✓	✓	✓	
GA3000		✓	✓	✓	
XR3000		✓	✓	✓	
TP10		✓	✓	✓	
K7		✓	✓	✓	
Pitched-Roof		✓	✓	✓	
Jabroof Panel		✓		✓	
Jablite Slimfix			✓	✓	

Pitched Roofs

The following typical construction methods can be used to comply with current building regulations. For further information and specific examples please see the CCF PART E and PART L guides.

FLATS AND APARTMENTS

REGULATIONS	NEW CONSTRUCTIONS	EXISTING CONSTRUCTIONS / NEW THERMAL ELEMENTS	EXISTING CONSTRUCTIONS / UPGRADING THERMAL ELEMENTS
Acoustic Regulations Part E	N/A	N/A	N/A

REGULATIONS	NEW CONSTRUCTIONS	EXISTING CONSTRUCTIONS / NEW THERMAL ELEMENTS	EXISTING CONSTRUCTIONS / UPGRADING THERMAL ELEMENTS
Thermal Regulations Part L	0.25 U-value (Longstop average U-values from L1A) 0.18 U-value (Warm pitched roof) 0.15 U-value (Cold pitched roof)	0.20 U-value (Warm pitched roof) 0.16 U-value (Cold pitched roof)	0.20 U-value (Warm pitched roof) 0.16 U-value (Cold pitched roof)

DON'T FORGET...

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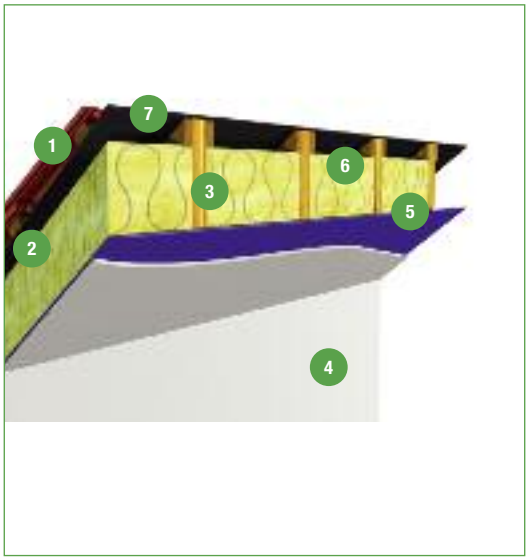
INTER RAFTER

Room in the roof application. Maximises usage of roof space and living area within a residential dwelling.

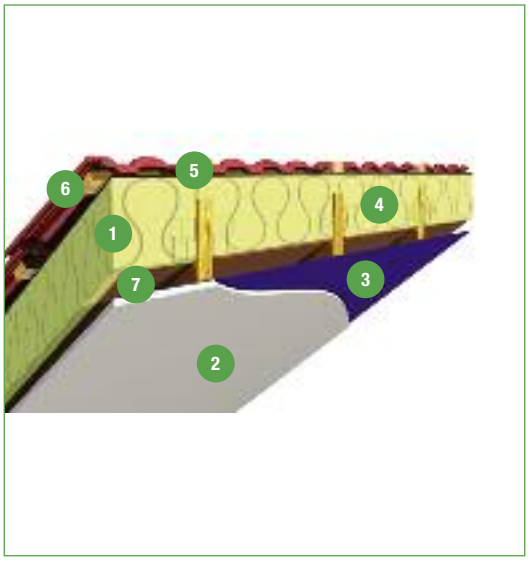
1.	Roof Covering
2.	Roof Batten
3.	Rafter
4.	Plasterboard
5.	Vapour Control Layer
6.	Insulation
7.	Breathable Membrane



OVER AND INTER RAFTER

Over rafter insulation can negate the need for a thermal laminate board internally.

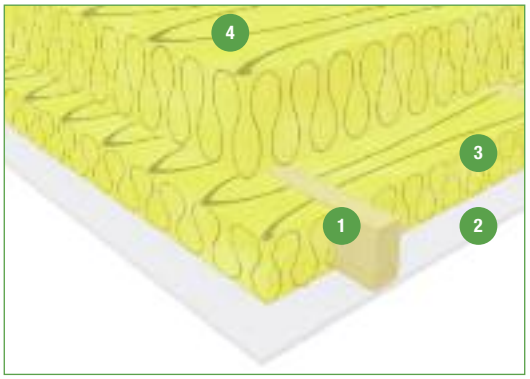
1.	Inter Rafter Insulation
2.	Plasterboard
3.	Vapour Control Layer
4.	Overlay Insulation
5.	Counter Batten
6.	Roof Covering
7.	Over Rafter Insulation



COLD ROOF

Ceiling Level Insulation. Traditional application method and very cost effective.

1.	Ceiling
2.	Plasterboard Ceiling
3.	Insulation laid between Joists
4.	Insulation laid over Joists at Right Angle



Floors

Ground floor thermal insulation systems fall into four main types: above the concrete slab, below the concrete slab, over suspended concrete beams, and over suspended timber beams.

Within a building, the internal concrete or timber floors that separate one dwelling from another are governed by the acoustic requirements of Part E.

Depending on the circumstances, perimeter insulation may also help, or you may have to install a damp-proof membrane. We have the materials and the expertise to help with all these scenarios.

SOLID, SUSPENDED & INTERMEDIATE FLOORS - PRODUCT APPLICATION MATRIX

MANUFACTURER & PRODUCT	SOLID CONCRETE	BEAM & BLOCK	SUSPENDED TIMBER	INDUSTRIAL & COMMERCIAL	ACOUSTIC PROPERTIES
Rocksilk Universal Slab			✓	✓	✓
Rocksilk Flexible Slab			✓		✓
Rocksilk Floor Slab	✓	✓	✓	✓	✓
Polyfoam Floorboard	✓	✓		✓	
Crown Loft roll			✓		✓
Crown Acoustic Joist roll			✓		✓
Crown Acoustic Floor roll	✓	✓	✓	✓	✓
Crown Universal Slab	✓	✓	✓	✓	✓
Rocksilk Soffit Liner board	✓	✓		✓	✓
RD Acoustic Slab	✓	✓	✓	✓	✓
Sound Deadening Slab	✓	✓	✓	✓	✓
Sound Deadening Floor Roll	✓	✓	✓	✓	✓
Isover Spacesaver			✓	✓	✓
Rollbatt			✓	✓	✓
RW Slab			✓	✓	✓
Rockfloor	✓	✓	✓	✓	✓
Slimfloor	✓	✓	✓	✓	✓
TB3000	✓	✓	✓	✓	
GA3000	✓	✓	✓	✓	
XR3000	✓	✓	✓	✓	
FF3000	✓	✓	✓	✓	
TF70	✓	✓	✓	✓	
Kooltherm K3	✓	✓	✓	✓	
TF73	✓	✓	✓	✓	
Floor-Therm	✓	✓	✓	✓	
Jabfloor 70	✓	✓	✓	✓	
Jablo Flooring	✓	✓	✓	✓	
Jabfloor 100	✓	✓	✓	✓	
X2i	✓	✓	✓	✓	
X3i	✓	✓	✓	✓	✓
Yelofon HD10+	✓	✓	✓	✓	✓
Yelofon Combi Pack	✓	✓	✓	✓	✓
Yelofon Batten	✓	✓	✓	✓	✓
Yelfon Chip	✓	✓	✓	✓	✓
Deckfon Chip	✓	✓	✓	✓	✓
Fibrefon	✓	✓	✓	✓	✓
Tranquilt	✓	✓		✓	✓
Impact 18	✓	✓		✓	✓
Acoustic Cradle	✓	✓		✓	✓
Deck 18			✓	✓	✓
Tri Deck			✓	✓	✓
Strucure Deck			✓	✓	✓
Acoustic Batten			✓	✓	✓

Floors

The following typical construction methods can be used to comply with current building regulations. For further information and specific examples please see the CCF PART E and PART L guides.

NEW HOUSES (including extensions)

REGULATIONS	DETACHED	SEMI DETACHED / TERRACED
Acoustic Regulations Part E	ENGLAND & WALES Internal Floors 40dB Rw min SCOTLAND Internal Floors N/A	ENGLAND & WALES Internal Floors 40dB Rw min SCOTLAND Internal Floors N/A

FLATS AND APARTMENTS

REGULATIONS	NEW CONSTRUCTIONS	EXISTING CONSTRUCTIONS / NEW THERMAL ELEMENTS	EXISTING CONSTRUCTIONS / UPGRADING THERMAL ELEMENTS
Acoustic Regulations Part E	ENGLAND & WALES Separating Floors - Airborne 45dB DnT,w + Ctr min Separating Floors - Impact 62dB L'nT,w max SCOTLAND Separating floors - Airborne Mean: 52dB DnT,w min Individual: 48dB DnT,w min Separating floors - Impact Mean: 61dB L'nT,w max Individual: 65dB L'nT,w max	ENGLAND & WALES Separating Floors - Airborne 43dB DnT,w + Ctr min SCOTLAND Separating Floors - Airborne As new build	ENGLAND & WALES Separating Floors - Airborne 43dB DnT,w + Ctr min SCOTLAND Separating Floors - Airborne As new build

REGULATIONS	NEW CONSTRUCTIONS	EXISTING CONSTRUCTIONS / NEW THERMAL ELEMENTS	EXISTING CONSTRUCTIONS / UPGRADING THERMAL ELEMENTS
Thermal Regulations Part L	0.25 U-value (Longstop average U-values from L1A) 0.20 U-value (Recommended realistic compliance U-values)	0.22 U-value	0.25 U-value

SOLID FLOOR ABOVE SLAB

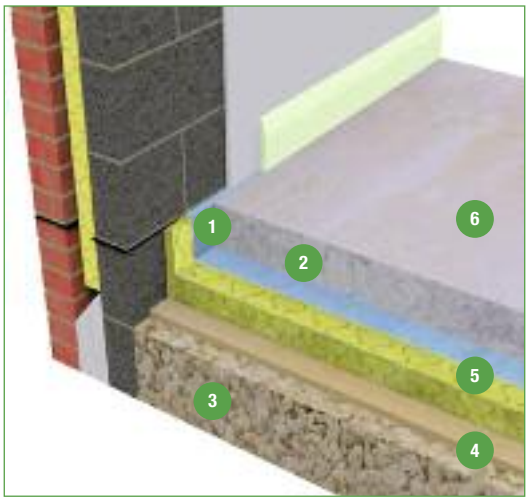
Most common application. Suitable for use with underfloor heating systems.

1.	Perimeter Insulation
2.	Blinding Layer
3.	Oversite / Hardcore
4.	Damp - Proof Membrane
5.	Floor Slab
6.	Insulation
7.	Separating Layer

INSULATION BELOW SLAB

Often specified for commercial applications.

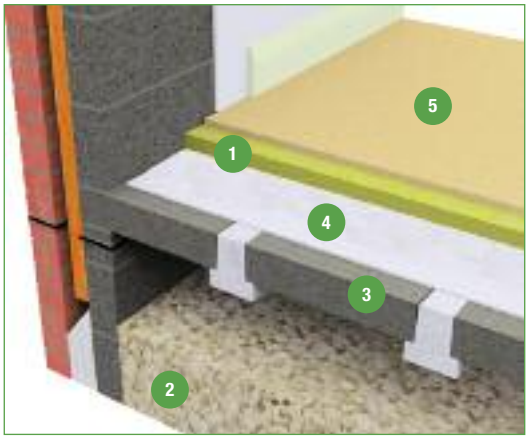
1.	Perimeter Insulation (Optional)
2.	Damp - Proof Membrane
3.	Oversite / Hardcore
4.	Blinding Layer
5.	Insulation
6.	Floor Slab



SUSPENDED BEAM AND BLOCK FLOOR

Commonly used in new build and residential dwellings.

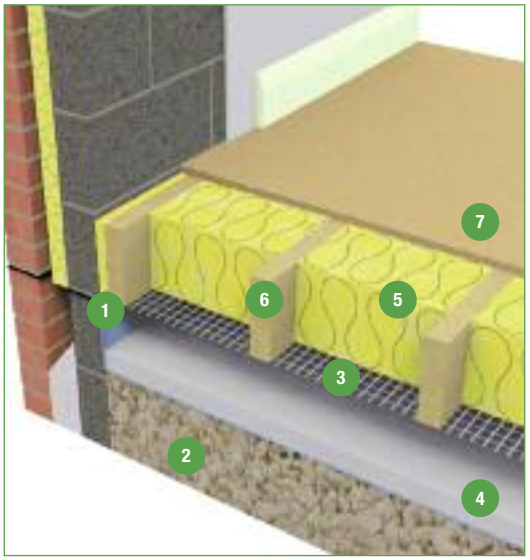
1.	Insulation
2.	Oversite
3.	Beam & Block Flooring System
4.	Separating Layer
5.	Floor Finish (Chipboard)



SUSPENDED FLOOR (GROUND FLOOR)

Generally domestic applications

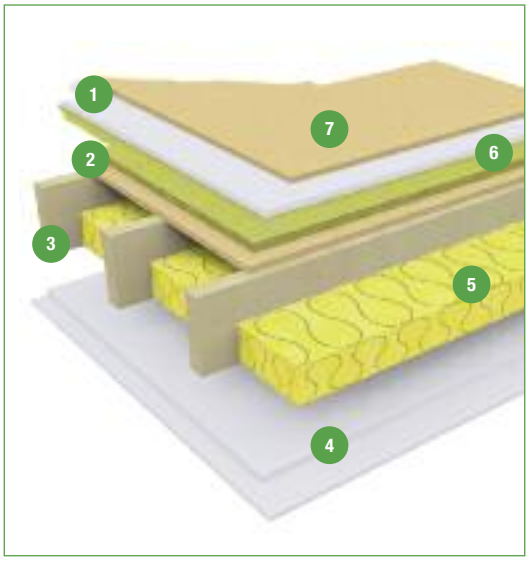
1.	DPM
2.	Oversite
3.	Insulation Support Netting
4.	Lean Mix Concrete
5.	Insulation (Usually Mineral Wool)
6.	Floor Joist
7.	Flooring Finish (Chipboard)



TIMBER FLOOR ACOUSTIC

Can be constructed to Robust Detail specifications and can be Part E compliant

1.	19mm Plasterboard Plank
2.	Supporting Layer
3.	Floor Joist
4.	2 Layers of Plasterboard
5.	Insulation (Usually Mineral Wool)
6.	Acoustic Insulation
7.	Floor Finish (Chipboard)



Walls

There are numerous options for insulating and plaster-boarding the inner face with a single material, while external insulation always requires an outer, waterproof layer of render. Depending on circumstances, cavity insulation can fill the gap or leave a residual cavity. And there are just as many ways to cut sound transmission to acceptable levels through internal walls.

EXTERNAL, INTERNAL & DRYLINED WALLS - PRODUCT APPLICATION MATRIX

MANUFACTURER & PRODUCT	FULL/PARTIAL CAVITY	TIMBER FRAME	STRUCTURAL WALL	THERMAL LAMINATE	ACOUSTIC PROPERTIES
Crown Dritherm	✓				✓
Crown Acoustic Partition Roll	✓	✓			✓
Crown Frametherm Roll		✓	✓		✓
Crown Frametherm Slab		✓	✓		✓
Crown Cavity Barriers	✓	✓	✓		✓
Acoustic Timber Roll RD 10	✓	✓	✓		✓
Crown Factoryclad			✓		✓
Polyfoam Linerboard		✓	✓	✓	
Rocksilk Dritherm	✓				✓
Rocksilk Rainscreen Slab			✓		✓
Loft Roll		✓			✓
Cavity Wall System	✓		✓		✓
Hi-therm	✓		✓		✓
Hi-Cav	✓		✓		✓
Frame Batt		✓			✓
Frame Roll		✓	✓		✓
Cavity Barrier	✓	✓	✓		✓
Steel Frame Batt	✓				✓
Acoustic Partition Roll		✓	✓		✓
Acoustic Slabs		✓			✓
Spacesaver		✓			✓
Fulfil Cavity	✓		✓		✓
Part Cavity	✓		✓		✓
RW Slab		✓	✓		✓
Flexi Slab		✓	✓		✓
Rollbatt		✓			✓
Partition Slab		✓			✓
Rainscreen slab			✓		✓
Rockliner				✓	✓
Cladding Roll			✓		✓
TB3000		✓	✓		
GA3000		✓	✓		
CW3000	✓		✓		
TW50	✓		✓		
TP10		✓	✓		
K8	✓		✓		
K7		✓	✓		
K15		✓	✓		
K17		✓	✓	✓	
K18		✓	✓	✓	
Cavity-Wall	✓				
Pitched-Roof		✓	✓		

EXTERNAL, INTERNAL & DRYLINED WALLS - PRODUCT APPLICATION MATRIX

MANUFACTURER & PRODUCT	FULL/PARTIAL CAVITY	TIMBER FRAME	STRUCTURAL WALL	THERMAL LAMINATE	ACOUSTIC PROPERTIES
Jabwall	✓		✓		
Jablo Cavity	✓		✓		
Jablok	✓		✓		
Jabfill	✓		✓		
X2WL	✓				
XCC Cavity Closer	✓				
Thermaline Basic		✓	✓	✓	
Thermaline Plus		✓	✓	✓	
Thermaline Super		✓	✓	✓	
Triline		✓	✓	✓	
Soundblock		✓	✓		✓
Thermal Laminate		✓	✓	✓	
Thermal Laminate Plus		✓	✓	✓	
Phenolic Laminate		✓	✓	✓	
Soundcheck		✓	✓		✓
Thermalcheck		✓	✓	✓	
Thermalcheck XP		✓	✓	✓	
Thermalcheck K		✓	✓	✓	
Db Check		✓	✓		✓

DON'T FORGET...

PICK UP A COPY OF OUR PART E AND PART L GUIDES AT YOUR LOCAL BRANCH

Walls

The following typical construction methods can be used to comply with current building regulations. For further information and specific examples please see the CCF PART E and PART L guides.

NEW HOUSES (including extensions)

REGULATIONS	DETACHED	SEMI DETACHED / TERRACED	
Acoustic Regulations Part E	ENGLAND & WALES Internal Walls 40dB Rw min SCOTLAND Internal Walls N/A	ENGLAND & WALES Separating Walls - Airborne 45dB DnT,w + Ctr min SCOTLAND Mean: 53dB DnT,w min Individual: 49dB DnT,w min	ENGLAND & WALES Internal Walls - Airborne 40dB Rw min SCOTLAND Internal Walls N/A

FLATS AND APARTMENTS

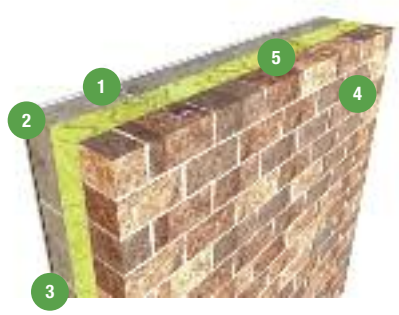
REGULATIONS	NEW CONSTRUCTIONS	EXISTING CONSTRUCTIONS / NEW THERMAL ELEMENTS	EXISTING CONSTRUCTIONS / UPGRADING THERMAL ELEMENTS
Acoustic Regulations Part E	ENGLAND & WALES Separating Walls - Airborne 45dB DnT,w + Ctr min SCOTLAND Separating Walls - Airborne Mean: 53dB DnT,w min Individual: 49dB DnT,w min	ENGLAND & WALES Separating Walls - Airborne 43dB DnT,w + Ctr min SCOTLAND Separating Walls - Airborne As new build	ENGLAND & WALES Separating Walls - Airborne 43dB DnT,w + Ctr min SCOTLAND Separating Walls - Airborne As new build

REGULATIONS	NEW CONSTRUCTIONS	EXISTING CONSTRUCTIONS / NEW THERMAL ELEMENTS	EXISTING CONSTRUCTIONS / UPGRADING THERMAL ELEMENTS
Thermal Regulations Part L	0.35 U-Value (Longstop average U-values from L1A) 0.27 U-value (Recommended realistic compliance U-values)	0.30 U-value	0.35 U-value

FULL FILL CAVITY WALL

No residual cavity not always suitable for exposed locations.

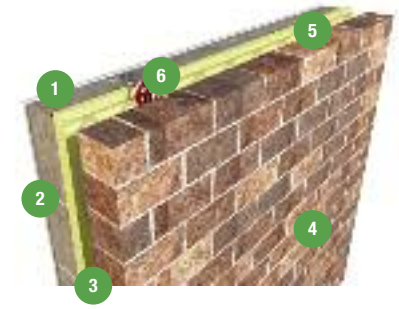
1.	Wall Tile
2.	Internal Finish (Plasterboard)
3.	Blockwork Internal Leaf
4.	Brick or Blockwork External Leaf
5.	Full fill Mineral Wool Cavity (occasionally Expanded Polystyrene)



PARTIAL FILL CAVITY WALL

Suitable for use in exposed locations residual cavity (minimum 25mm but usually 50mm)

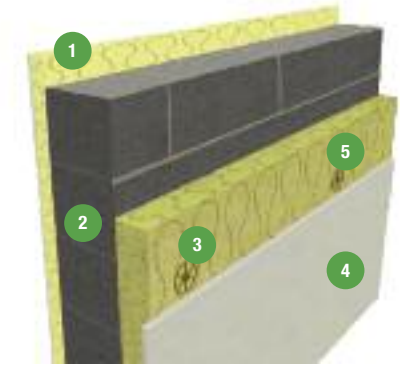
1.	Internal Finish (Plasterboard)
2.	Blockwork Internal Leaf
3.	Residual Clear Cavity
4.	Brick or Blockwork External Leaf
5.	Partial Fill Cavity Batt (Mineral Wool, PIE XPS or EPS)
6.	Wall Tile Retaining Clip



EXTERNAL AND INTERNAL INSULATION

Can be used with or without internal insulation for refurbishment projects

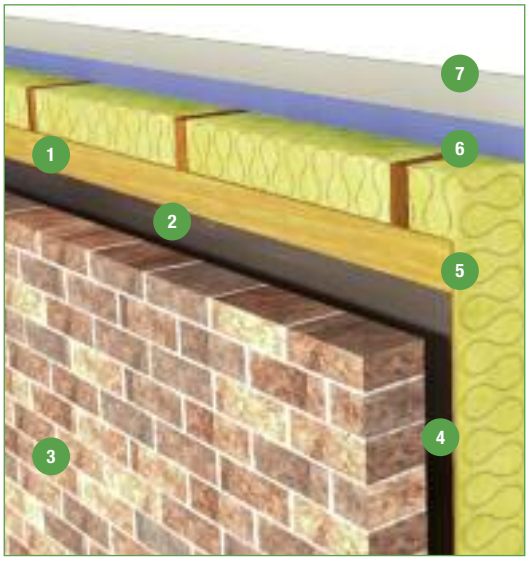
1.	Thermal Laminate Plasterboard
2.	Brick or Blockwork External Leaf
3.	Propriatory Insulation Fixings
4.	Render System
5.	External Insulation (Mineral Wool, XPS EPS or Phenolic Systems)



TIMBER FRAME

Usually Fast Track Construction. Suitable for all locations as clear cavity.

1.	Sheathing Board
2.	Breather Membrane
3.	Brick or Blockwork External Leaf
4.	Residual Cavity
5.	Timberframe Insulation (usually mineral wool)
6.	Vapour Control Layer
7.	Plasterboard / Internal Finish



Glossary

Cavity Wall
A wall consisting of two "skins" linked by wall ties usually insulated within the cavity

dB
A measure of sound strength

DPC
Damp - proof course

DPM
Damp - proof membrane (Visqueen)

EPS
Expanded polystyrene can be used as a floor, wall or roof insulant (Jabfloor, Springvale and Kaycel)

Flat roof
A roof with a pitch less than 10 degrees. Often waterproofed with traditional felt or single ply

Full fill
Usually mineral fibre insulation completely filling the space within the cavity wall

Mineral Wool
Glass or rock fibre formed into rolls or batts for use in floors, walls and roofs (Knauf, Rockwool and Isover)

Partial fill
Usually pir/pur cavity boards fixed to the inner "skin" within the cavity leaving a residual air gap

PIR
Polyisocyanurate an improved form of polyurethane with greater fire resistance (Celotex, Kingspan, Ecotherm and Xtratherm)

Pitched roof
Over 10 degree pitch waterproofed with slate, concrete or other materials

Polyurethane
A rigid foam usually formed between 2 facings for use as a wall/floor and roof insulant

R-value
A measure of a materials thermal resistance

Sound absorption
Sound converted into mechanical energy/and or heat

Thermal conductivity
A materials ability to transmit heat (Wm/K)

Thermal laminate
A plasterboard stuck to sheet insulant that is generally used to upgrade an existing structure

Upside down or green roof
A flat roof where the membrane is laid below the insulation and the roof is paved, gravelled or planted

U-value
A measure of the heat loss of a building componant or element (W/m^2K)

VCL
Vapour control layer

XPS
Extruded polystyrene, a denser form of polystyrene not affected by moisture (Polyfoam, Yelofoam and Styrozone)

Additional Notes

Additional Notes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