

**COMPLETELY REVISED  
AND UPDATED JULY 2006**



# **LOFTS EXPLAINED**

**A GUIDE TO USING YOUR LOFT**

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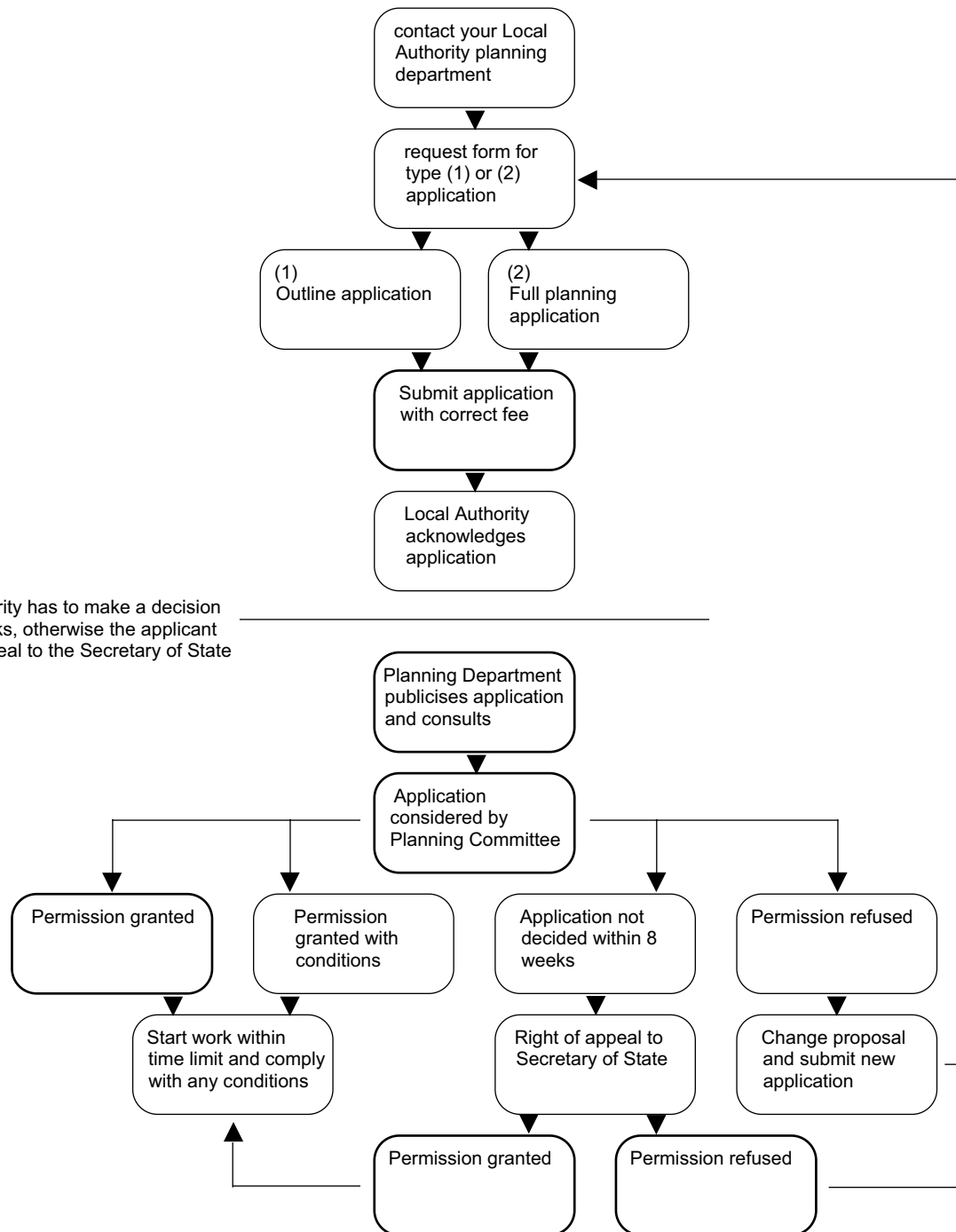
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1 ESTIMATING THE COST	8	• minimum width of stairs	15	Limited, and may not necessarily be the	
• doing the work yourself	8	• spiral stairs	15	interpretation of any Local Authority	
• employing a builder	8	• balustrades and handrails	15	Building Control Department, which under	
• sub-contracting	8	• headroom	15	its powers may decide that a particular	
• employing an architect	8	• fire regulations	15	method of construction is unsatisfactory if, in	
2 FIXED FEES	9			the opinion of the Building Control officer	
				concerned, it may be unsafe in construction	
				or use. Accordingly the information	
				contained in this document may only be	
				regarded as helpful guidance, and it is	
				important that it is read in conjunction with	
				the relevant Approved Document.	

## PLANNING & BUILDING REGULATIONS

### APPENDIX 2

#### FLOW CHART FOR AN APPLICATION FOR PLANNING PERMISSION

adapted from the diagram supplied by DCLG ([www.dclg.gov.uk](http://www.dclg.gov.uk))



The Local Authority has to make a decision within eight weeks, otherwise the applicant is entitled to appeal to the Secretary of State for a decision.

## LOCATION MAP1

### APPENDIX 1

LOCATION MAPS SHOWING ALL 23 LOFT SHOPS SITUATED AROUND LONDON, the SOUTH-EAST and the MIDLANDS.

- |                 |                             |
|-----------------|-----------------------------|
| 1 Bexleyheath   | 14 North Cheam              |
| 2 Birmingham    | 15 Northolt                 |
| 3 Chatham       | 16 Poole                    |
| 4 Croydon       | 17 Portsmouth               |
| 5 East Finchley | 18 Richmond                 |
| 6 Enfield       | 19 Slough                   |
| 7 Hanworth      | 20 Southend                 |
| 8 Hornchurch    | 21 West Norwood             |
| 9 Ilford        | 22 Willesdon                |
| 10 Leicester    | 23 Worthing                 |
| 11 Lewisham     |                             |
| 12 Luton        | ■ Head Office and warehouse |
| 13 Northampton  |                             |





**Figure 1**  
One of our Loft Shops



**Figure 2**

FSC trademark © 1996 Forest Stewardship Council.  
A.C.SW-COC-358

The FSC (Forest Stewardship Council) logo identifies products which contain wood from well managed forests independently certified in accordance with the rules of the Forest Stewardship Council A.C.

**The Loft Shop Trade Catalogue**  
**The Loft Shop Loft Ladder Fitting Service**  
**The Loft Shop Guide to Loft Conversion and the Building Regulations**

All the above publications are available from any Loft Shop, by mail from National Sales - telephone 0870 604 0404 or on our website, [www.loftshop.co.uk](http://www.loftshop.co.uk)  
see also *Bibliography* page 27



This symbol together with an asterisk in the text, indicates that suitable products are stocked (or can be ordered) by all Loft Shops.

This document provides essential information you will require as a guide in planning, designing, costing and building a loft conversion in your home.

## 1 THE LOFT SHOP

The Loft Shop Limited was formed in 1987 to supply products such as roof windows, loft ladders and staircases for use in lofts and loft conversions, and also to offer free advice and guidance on design, materials, planning consent, the Building Regulations and cost.

There are now 23 Loft Shops distributed around London, the home counties and the south of England. All Loft Shops carry an extensive stock of products and materials that may be required for lofts and loft conversions, and our staff will give free advice on the best materials to use and how these comply with the Building Regulations. (see *Map 1*, page 30)

### Environmental policy

The Loft Shop has a responsible attitude towards the environment and wherever possible it uses recycled materials. Most timber products are purchased from well managed, sustainable sources, a number of which are FSC certified. (see *Figure 2*)

## 2 PRODUCTS

All Loft Shops carry a wide range of products that you may need for your loft conversion. See also the Loft Shop Trade Catalogue.



LOFT LADDERS\* - folding, sliding and concertina

STAIRS\* - straight, with winders and spiral

ROOF WINDOWS\* - timber and PVC

ROOF DOMES\* - polycarbonate fixed or opening

ESCAPE WINDOWS (MOE)\* - timber

### Quality & safety

Most Loft Shop products are made to British Standard specification or have been tested to other equally exacting criteria or have stood the test of time.

### Made-to-measure products.

The Loft Shop offers a design and manufacturing service for products such as stairs and loft ladders.

Details are available from any Loft Shop or Head Office or on our website, [www.loftshop.co.uk](http://www.loftshop.co.uk)

For National Sales telephone 0870 604 0404 or Head Office 01903 738 500

### Fitting service



The Loft Shop Fitting Service offers fast and efficient installation of all the company's range of loft ladders\* and roof windows\*, by fully qualified and insured Loft Shop fitters.

Details are available at any Loft Shop or Head Office or on our website, [www.loftshop.co.uk](http://www.loftshop.co.uk)

The fitting service operates predominantly in the London area, but can also install products in areas around any of our Loft Shops. (see *Map 1*, page 30)

The Loft Shop also offers a survey of your loft space for the installation of a loft ladder\* or staircase\*, with no obligation to purchase.



\* except Spacemaker and Easiway

### 3 ORDERING

All the standard stock products are available with free next day delivery. In addition many items are *guaranteed* ex-stock. Products and materials can be ordered by telephone, fax or e-mail, or in person by visiting your local Loft Shop.

#### Replacement policy.

The Loft Shop operates a policy of guaranteed replacement of any faulty product. This guarantee does not affect your statutory rights.

### 4 ADVICE

The Loft Shop will give free advice on all aspects of loft conversion and the choice of materials and products which are on display in most of the Loft Shops listed. (*below right*)

The company provides an advisory service on planning, building control, access and construction, as well as extensive information in our range of publications. (*see Bibliography. page 27*)

### 5 LOFT SHOP PARTNERS

The Loft Shop now lists a number of partners who can carry out work of all kinds for Loft Shop customers. Access this on our website; [www.loftshop.co.uk](http://www.loftshop.co.uk) and choose - *Need Loft Work Done?*

### 6 LOFT LINK

The Loft Shop also has LOFT LINK, a database of reputable builders who specialise in loft conversion work. In the opinion of the Loft Shop all the companies are financially sound and have been selected for the quality and service they offer in installing Loft Shop products. Representatives from the Loft Shop have visited loft conversions by many of these companies to obtain first hand opinions of the work from their clients.

### 7 LOFT SHOPS

There are Loft Shops in towns distributed around London and the Home Counties, the south of England and the midlands. *see Map 1, page 30*

### 8 HEAD OFFICE and NATIONAL SALES

The Loft Shop Head Office and warehouse is located at Littlehampton in West Sussex. For National Sales *telephone*; 0870 604 0404 or *fax*; 0870 604 9075.

### 9 INTERNET SALES

Orders can be placed 24 hours a day on our website, [www.loftshop.co.uk](http://www.loftshop.co.uk)

All Loft Shop products with guaranteed next-day delivery are highlighted in our Trade Catalogue with the GND logo.

Telephone and fax ordering is available every day from 08.00 until 17.00. Orders received before 14.00 will be dispatched on overnight delivery to arrive on the next working day.

Internet sales are available 24/7 on [www.loftshop.co.uk](http://www.loftshop.co.uk). Orders placed before 14.00 (Monday to Friday) will be delivered FREE on the next working day.

LOFT SHOP PARTNERS is available on our website [www.loftshop.co.uk](http://www.loftshop.co.uk)

LOFT LINK database is available at all Loft Shops FREE of charge. (*see Map 1, page 30 for location*)

LOFT SHOPS are situated in the following towns in the midlands and the south of England.

(*see Map 1, page 30 for location*)

Bexleyheath, Birmingham, Chatham, Croydon, East Finchley, Enfield, Hanworth, Hornchurch, Ilford, Leicester, Lewisham, Luton, Northampton, North Cheam, Northolt, Poole, Portsmouth, Richmond, Slough, Southend, West Norwood, Willesdon and Worthing.

#### Head Office

The Loft Shop Limited, Eldon Way, Littlehampton,  
West Sussex BN17 7HE  
*telephone*; 01903 738500  
*fax*; 01903 738501  
*website*; [www.loftshop.co.uk](http://www.loftshop.co.uk)

ACCESS ( <i>into loft</i> )	14	LIGHT & VENTILATION	17	QUALITY & SAFETY (of Loft Shop products)	3
ADDING VALUE TO YOUR HOME	7	LOANS	10	REPLACEMENT POLICY (for products)	4
ADVICE ( <i>by the Loft Shop</i> )	4	LOCAL AUTHORITY ( <i>contact</i> )	11	ROOF CONSTRUCTION	
APPEALS ( <i>against planning refusal</i> )	12	LOFT		- clear height in loft space	6
APPLICATION		- access and safety	5	- clear width in loft space	6
- for Planning Consent	12	- ladder	5	- measuring existing roof space	6
- for Building Regulations	13	LOFT LINK	4	- pitch of roof	6
APPROVED DOCUMENTS	13	LOFT SHOP PARTNERS	4	ROOF DOMES - see Products	3
ARCHITECT ( <i>fees</i> )	9	LOFT SHOP		ROOF WINDOWS	17
BALUSTRADE & HANDRAIL	15	- advice	3	SERVICES	19
BATHROOMS ( <i>in loft conversions</i> )	20	- environmental policy	3	- electrical	19
BATS		- fitting service	3	- plumbing and drainage	20
- protected species	6	- Head office & National Sales	4	SHOWERS ( <i>in loft conversion</i> )	21
- publications - see Bibliography	27	- location map of Loft Shops (see Appendix 1)	30	SMOKE DETECTORS	19
BUILDING ACT 1984 - <i>Approved Documents</i>	13	- loft link	4	SPECIFICATION CHECK LIST	10
BUILDING CONSENT		- loft shop partners	4	SPIRAL STAIRS	15
- application	13	- made-to-measure products	3	STAIRS	
- fees	9	- National Sales (telephone/fax)	4	- 'rise' and 'going'	14
BUILDING INSPECTOR	9	- ordering	4	- fire regulations	15
BUILDING REGULATIONS		- products	3	- handrails	15
- <i>Approved Documents</i>	13	- publications (see Bibliography)	27	- headroom	15
- applying for consent	13	- quality and safety	3	- minimum width	15
- contacting Local Authority	11	- website	3	- spiral	15
BUILDING TERMS ( <i>See Section F</i> )	22	MADE-TO-MEASURE PRODUCTS	3	STATUTORY TIME LIMIT	
CEILING JOISTS	15	MEANS OF ESCAPE IN CASE OF FIRE	18	- for Building Regulations consent	13
CENTRAL HEATING	21	MINIMUM WIDTH OF STAIRS	15	- for Planning consent	12
CHECK LIST (for specification)	10	NATURAL LIGHT & VENTILATION	17	STRUCTURAL ENGINEER	
CONSERVATION AREA ( <i>note</i> )	12	NEIGHBOURS		- fees	9
CONTACTING LOCAL AUTHORITY	11	- consulting with	11	SUB-CONTRACTING	8
CONSTRUCTION WORK	14	- being overlooked	11	SURVEYING YOUR ROOF SPACE	
CONSULTING YOUR NEIGHBOURS	11	ORDERING PRODUCTS	4	- access	5
CONVERTING YOUR LOFT	5	PARTITIONS	17	- measuring	6
COST ( <i>of work</i> )		PARTY WALL	11	TENDERS & QUOTATIONS	9
- doing it yourself	8	PITCH OF ROOF	6	TREADS & RISERS (see also STAIRS)	14
- employing a builder	8	PLANNING APPLICATIONS		TRUSSED RAFTERS	5
- sub-contracting	8	- appeals against decision	12	USES FOR YOUR LOFT CONVERSION	7
- employing an architect	8	- contacting your local authority	11	VENTILATION	17
- loans	10	- fees	9	WALLS, PARTITIONS & DOORS	17
COVENANTS	11	- statutory time limit for consent	12	WASTE DISPOSAL	
DO's and DO NOT's	21	- flow chart (see Appendix 2)	31	- from bathroom	20
DOORS	17	- covenants	11	- from kitchen	20
DORMER WINDOWS	17	- party walls	11	WATER SUPPLY	20
DRY ROT	6	PLANNING RESTRICTIONS	12	WET ROT	6
ENVIRONMENTAL POLICY ( <i>by Loft Shop</i> )	3	- in conservation area ( <i>note</i> )	12	WINDOWS	
EMPLOYING AN ARCHITECT	8	PLANNING THE WORK	14	- dormer	17
EMPLOYING A BUILDER	8	PLUMBING & DRAINAGE		- means of escape (MOE)	17
ESCAPE ROUTE ( <i>in case of fire</i> )	18	- bathroom	20	- roof window	17
ESCAPE WINDOW (MOE)	18	- central heating	21	WOODWORM	6
ESTIMATING THE COST	8	- kitchen	20		
EXISTING ROOF SPACE	5	- shower	21		
FEES (fixed)		- water supply	20		
- Building Consent	9	- waste disposal	20		
- Planning	9	PRODUCTS			
FEES (variable)		- supplied by the Loft Shop	3		
- architect	9	- fitting service	3		
- structural engineer	9	- loft ladders	3		
FIRE REGULATIONS	18	- Loft Shop publications	27		
FIRE RESISTING DOORS	19	- made-to-measure	3		
FITTING SERVICE ( <i>by the Loft Shop</i> )	3	- ordering	4		
FLOOR JOISTS		- quality & safety	3		
- existing ceiling joists	15	- roof domes	3		
- size calculation ( <i>note</i> )	15	- roof windows	3		
- steel	16	- spiral stairs	15		
HABITABLE ROOMS ( <i>in loft conversions</i> )	19	- stairs	3		
HANDRAIL	15	- escape windows (MOE)	18		
HEADROOM	15	PROTECTED ESCAPE ROUTE	18		
INSULATION ( <i>in roof</i> )	17	PROTECTED STAIRS	14		
INTERNET ORDERS	4	PUBLICATIONS			
LADDERS	15	- general (see Bibliography)	27		
		- by the Loft Shop (see Bibliography)	27		

*Publications.*

**Focus on Bats**

available from English Nature, Enquiries Service,  
Dept. ENU, Northminster House, Peterborough PE1 1UA  
*telephone*; 0173 345 5000  
*www.english-nature.org.uk*  
also available from Twoten Communications  
PO Box 1995, Wetherby, West Yorkshire, LS23 7XX  
*telephone*; 0870 121 4177

**Bats in Buildings- a guide for professionals**

**Regulations concerning Trees and Bats**

**Bats, Development and Planning**

All the above three publications are available from The  
Bat Conservation Trust, 15 Cloisters House,  
8 Battersea Park Road, London SW8 4BG.  
*telephone*; 0207 627 2629 *or fax*; 0207 627 2628  
*www.bats.org.uk*

**The Building Regulations Approved Documents**

available from The Stationery Office (TSO) Publications  
Centre, Mail Order, PO Box 29, Norwich NR3 1GN  
*telephone*; 0870 600 5522 *or fax*; 0870 600 5533  
website, **www.tsoshop.co.uk**  
also at any HMSO Bookshop. (Belfast, Birmingham,  
Edinburgh, London and Manchester)

**Building Regulations – explanatory booklet**

**The Party Wall etc. Act 1996: explanatory booklet**

**Planning: a guide for householders**

**The Planning System: General Principles**

All the above four publications are available from –  
ODPM Free literature, PO Box. No.236,  
Wetherby, LS23 7NB  
*telephone*; 0870 122 6236 *or fax*; 0870 122 6237  
e-mail; *odpm@twoten.press.net* \*  
website, **www.odpm.gov.uk\***

**The Loft Shop Guide to Loft Conversion and the  
Building Regulations**

available from The Loft Shop Limited, Eldon Way,  
Littlehampton, West Sussex BN17 7HE  
*telephone*; 0870 604 6404 *or fax*; 0870 603 9075

**The Loft Shop Trade Catalogue**

available from The Loft Shop Limited, Eldon Way,  
Littlehampton, West Sussex BN17 7HE  
*telephone*; 0870 604 6404 *or fax*; 0870 603 9075

**The Loft Shop Loft Ladder Fitting Service**

available from The Loft Shop Limited, Eldon Way,  
Littlehampton, West Sussex BN17 7HE  
*telephone*; 0870 604 6404 *or fax*; 0870 603 9075

**A Client's Guide to Engaging an Architect (2004)**  
(including conditions of engagement and fees)

**Engaging an architect:** Guidance for Clients on Health  
and Safety

**Engaging an architect:** Guidance for Clients to Quality  
based selection

**Engaging an architect:** Guidance for Clients on Party  
Wall Procedures.

All the above four publications are available from –  
RIBA Publications, 66 Portland Place,  
London W1N 4AD  
*telephone*; 0207 580 0553  
*www.architecture.com*

also from the Royal Society of Architects in Wales *at the  
address on page 27*

*abbreviations*

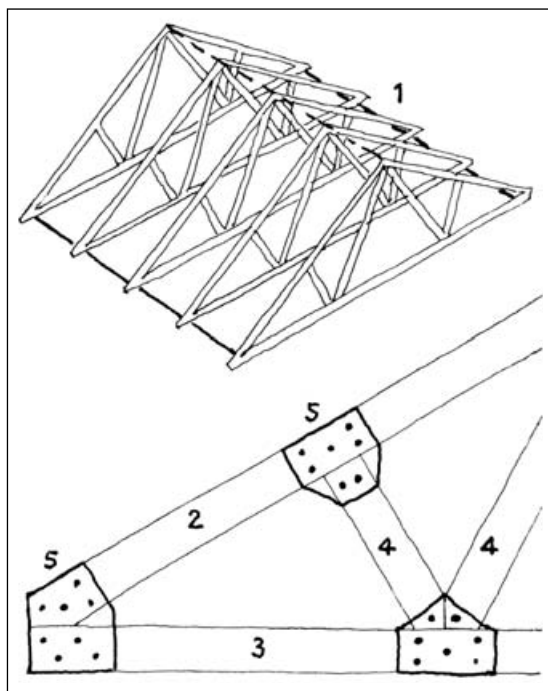
ODPM\* - Office of the Deputy Prime Minister.  
DCLG\* - Department for Communities and Local  
Government, the new name for the ODPM

NOTE

It may be some months before the new department's  
name is corrected on their website and other points of  
contact, and so the previous name (ODPM) may need to  
be used.

HMSO - Her Majesty's Stationery Office.





**Figure 3**

Trussed after construction

1 - typical roof construction using trussed rafters

2 - rafter

3 - ceiling joist

4 - strut

5 - galvanised steel tie plate

#### **WARNING**

Always use a well-secured ladder for access into your loft space. Do NOT use a step ladder as this can be unstable, particularly when not restrained.

You also may require an extension lead with a safety lamp, unless your loft is already wired for electricity.

#### **TIP**

Take two or three 25mm thick planks at least 1.3m long to span across the existing ceiling joists to walk on.

The information in the following sections, has been assembled to guide you through the various stages involved in the conversion of your loft space into habitable space, and to draw your attention to certain practical constraints and statutory regulations (e.g. The Building Regulations and The Town and Country Planning Act), which may affect both the design and the method of construction employed.

**Part B** (of this document) explains the preliminary work required and some uses for your loft conversion.

**Part C** explains the financial aspects

**Part D** explains Planning & Building Regulations *and*

**Part E** explains the details of construction

## **1 THE EXISTING ROOF SPACE**

The majority of houses have some space under the roof (usually referred to as the *loft* or *attic*) which usually contains little else than the cold water storage cistern and a chimney stack. This space can be as much as 30% of the total floor area in your home and in almost all cases is wasted space which can be converted into habitable space. The exception to this is when the roof construction (typically post-1960) uses trussed rafters.

see *Figure 3*.

For extra storage space, a simple loft improvement requires only a suitably sized opening in the ceiling and some type of ladder as a means of access.



The ladder\* can be either a folding, sliding or concertina type.

A habitable room (or rooms) in the loft space, will almost certainly involve strengthening the existing ceiling joists, insulating and lining the underside of the rafters, providing windows for natural light and ventilation, a permanent ladder or staircase for access into the newly converted space and means of escape in case of fire.

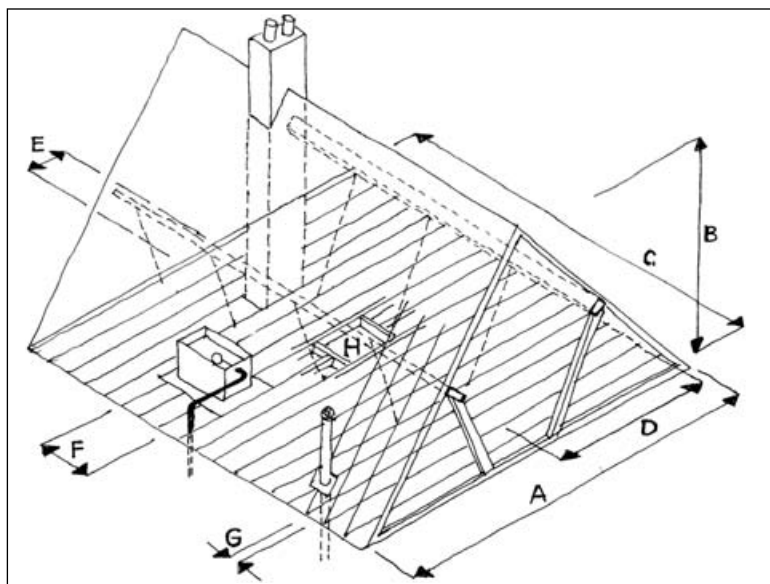
## **2 SURVEY & DRAWINGS**

Before you plan your loft conversion, it is advisable to see what already exists in the roof space and take a few measurements so that the necessary drawings can be produced.

Take a torch and measuring tape and climb into the roof space. Check the overall width and length of your loft and the clear distance between the purlins and the other structural roof members. (see *Figure 4*)

If there is approximately 3m between the main purlins on each side of the roof, then it may be possible to utilise the space for a loft conversion. A dimension of less than 3m is not entirely prohibitive, but may provide only enough space for a new stair and an extra bathroom or small office. If your house was built after 1964 (approx), the roof may be constructed using trussed rafters as shown in *Figure 3*. These are factory assembled triangles which result in a lower pitch (typically 35°) with more struts. Converting a loft constructed with these trusses is a more complicated process as it may require timbers to be removed and/or rearranged. However new methods of converting such lofts are becoming available.



**Figure 4 (left)**

Measuring up your existing roof space.

- A - clear width between wall plates
- B - clear height from floor to underside of ridge board
- C - clear length of roof space
- D - position of existing access hatch
- E - position and size of chimney stack
- F - position and size of cold water tank
- G - position of soil vent pipe

Make an accurate drawing of the roof space with the dimensions shown in *Figure 4 above*. Mark the position of all load-bearing walls (usually visible between the ceiling joists) the size and position of the cold water storage tank, overflow pipe, the size and position of the chimney stack and any other obstructions, such as a soil pipe or any heating pipes.

When you are in the loft space is a good opportunity to check the following items;

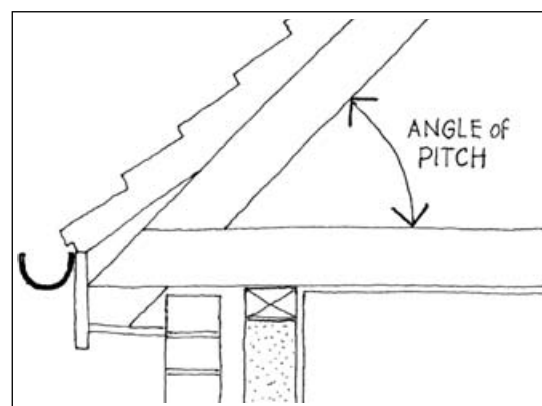
- dry rot, wet rot and woodworm. The treatment of these will need expert advice.
- is there any insulation between the rafters and ceiling joists?
- is the roof felted or boarded?
- is there any sign of Bats?

Before planning your new loft, it is very important to plan *exactly* where any new stair can be located. Its position in relation to the existing stair and available headroom may be critical. When you have completed your sketch plan with all the dimensions, take it to your local Loft Shop for free advice on how you can now proceed.

### 3 BATS

Bats and their roosts are fully protected by the *Wildlife and Countryside Act 1981*, and the *Conservation (Natural Habitats etc.) Regulations 1994* and by law you must advise one of the Statutory Nature Conservation Organisations (SNCO's) in whichever part of the UK you live, for advice on their protection before you start any work.

If there is any indication that bats are living in your roof they may not be disturbed or removed without notifying the relevant organisation. The usual evidence of roosting is their droppings. (see *Figure 6* and *Bibliography* page 27)

**Figure 5**

The pitch or slope of your roof

#### TIP

You can measure the pitch of your roof with an Angle Guide available from most DIY stores.

For a *minimum* clear height of 1.9m, the roof span must be at least 4.5m (with a pitch of 40°). Obviously a greater pitch will give a greater clear height.

The clear distance between purlins will be half the roof span minus 300mm (approx), so a 6.0m span will give a clear dimension of 2.7m, between purlins, *irrespective of the roof pitch*.

The Loft Shop can supply the names of companies who specialise in the treatment of wet rot, dry rot and woodworm. See LOFT LINK.

#### NOTE.

Some remedial treatments for rot and wood-worm can be a major hazard to bats which are a protected species. For advice please contact one of the SCNO's listed in the Bibliography. (see page 27)

**Acts of Parliament and other legislation**

- 1 - The Building Act 1984 - The Building Regulations
- 2 - The Town & Country Planning Act 1962
- 3 - The Wildlife and Countryside Act 1981 (*Bats*)
- 4 - EC Council Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora 1992 (*Bats*)
- 5 - Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention) 1991 (*Bats*)
- 6 - Planning Policy Guidance; Nature Conservation (PPG9.1994) (*Bats*)

**SNCO Organisations.****English Nature (EN)**

Enquiries Service  
Northminster House, Peterborough PE1 1UA  
*telephone*; 0173 345 5000  
*www.english-nature.org.uk*

**Countryside Council for Wales (CCW)**

Plas Penrhos, Ffordd Penrhos, Bangor,  
Gwynedd LL57 2LQ  
*telephone*; 0124 838 5500  
*www.ccw.gov.uk*

**Scottish Natural Heritage (SNH)**

12 Hope Terrace, Edinburgh EH9 2AS  
*telephone*; 0131 447 4784  
*www.snh.org.uk*

**Department of the Environment and Heritage**

Environment Service, Commonwealth House,  
35 Castle Place, Belfast N.1 BT1 1GH  
*telephone*; 0289 025 1477  
*www.ehsni.gov.uk*

*other Organisations***The Bat Conservation Trust**

15 Cloisters House, 8 Battersea Park Road,  
London SW8 4BG  
*telephone*; 020 762 72629 *or fax*; 020 762 72628  
*www.bats.org.uk*

**Institute of Structural Engineers (ISE)**

11 Upper Belgrave Street, London SW1X 8BH  
*telephone*; 020 723 54535  
*www.istructe.com*

**Royal Institute of British Architects (RIBA)**

66 Portland Place, London W1N 4AD  
*telephone*; 020 758 05533  
*www.architecture.com*

**Royal Incorporation of Architects in Scotland (RIAS)**

15 Rutland Square, Edinburgh EH1 2BE  
*telephone*; 0131 229 7205  
*www.rias.org.uk*

**Association of Consulting Architects (ACA)**

98 Hayes Road, Bromley, Kent BR2 9AB  
*telephone*; 020 832 514 02  
*www.acarchitects.co.uk*

**Royal Society of Architects in Wales (RSAW)**

Bute Building, King Edward VII Avenue,  
Cathays Park, Cardiff CF1 3NU  
*telephone*; 0292 987 4753  
*www.architecture-wales.com*

**Royal Institution of Chartered Surveyors (RICS)**

12 Great George Street, London SW1P 3AD  
*telephone*; 020 722 27000  
*www.rics.org*

**Architects and Surveyors Institute**

(incorporated in the CIOB from 2003)

**Chartered Institute of Building (CIOB)**

Englesmere, King's Rise, Ascot, Berkshire SL5 7TB  
*telephone*; 0134 463 0700  
*www.ciob.org.uk*

**Association of Building Engineers (ABE)**

Lutyens House, Billing Brook Road, Weston Favell,  
Northampton NN3 8NW  
*telephone*; 01604 404121  
*www.abe.org.uk*

**SUSPENDED CEILING**

A non-structural element fixed below the soffit of the structural floor, and which lowers the height of the room and may contribute to fire resistance. (see *CEILING*) (see also *Approved Document B*)

**TANK**

A closed cistern similar to a hot water cylinder but rectangular. Often mistakenly termed a cistern. (see *CISTERN*)

**TAPERED TREAD**

A stair tread that is wider at its outer edge and used in spiral stairs.

**TCPA**

*The Town & Country Planning Act, 1962*, a statutory Act of Parliament which controls the planned development of both rural and urban areas in the UK.

**TEMPLATE**

An exact pattern used as a master for cutting repetitive and awkward shapes such as alternating treads. (see *ALTERNATING TREAD*)

**TENDER or QUOTATION**

A firm price given for work by a builder or trade company. Not to be confused with an estimate. (see *ESTIMATE*)

**THERMAL CONDUCTIVITY**

A measure of the rate at which heat passes through any material or structure and expressed in watts per metre thickness per degree of temperature difference ( $\lambda = \text{W/m/K}$ ) (see also *Approved Document L*)

**THERMAL TRANSMITTANCE**

(see 'U' VALUE)

**TIE**

A structural member designed to resist tension stresses and used in roof trusses. (see *STRUT*)

**TILE**

A durable weatherproof material used for roofing and normally made from burnt clay, or concrete with integral nibs on the lower side which hook over the tile/slate battens. (see *SLATE*)

**TRANSOM**

Any horizontal member fixed across an opening such as a window frame.

**TRAP**

The bend in a waste or soil pipe which forms a water-seal to prevent foul gases escaping into the building. Traps are designated 'P', 'S' or 'U' according to their shape.

**TRAP DOOR**

An access door into a loft space usually hinged and fixed into a frame.

**TREAD**

The horizontal member in a stair that separates and connects the risers. (see *RISER*)

**TRIMMER**

A structural member normally of timber which spans between two other structural members to form an opening, eg. for a stair or ladder.

**TRUSSED RAFTER**

A method of roof construction (post 1960) using pre-fabricated triangular frames made with small section timbers fixed together with metal plates. The frames are placed at regular intervals (normally 600mm) along the supporting walls of the building and replace the traditional purlin and rafter construction.

**'U' VALUE**

The 'U' value or thermal transmittance is a measure of the rate at which heat passes through one metre<sup>2</sup> of any material or structure, when the air temperature on either side differs by one degree. The value is expressed in watts per metre square temperature difference. ( $U = \text{W/m}^2/\text{K}$ ) (see also *Approved Document L*)

**VALLEY**

The junction between the two inner slopes of a pitched roof which form the valley gutter.

**VENTILATION OPENING**

Any means of ventilation which opens directly to the external air, such as a window, door, airbrick, or louvred ventilator.

**WALL PLATE**

A load bearing timber member laid on top of a structural wall onto which the floor, ceiling and rafters members are fixed.

**WASTE PIPE**

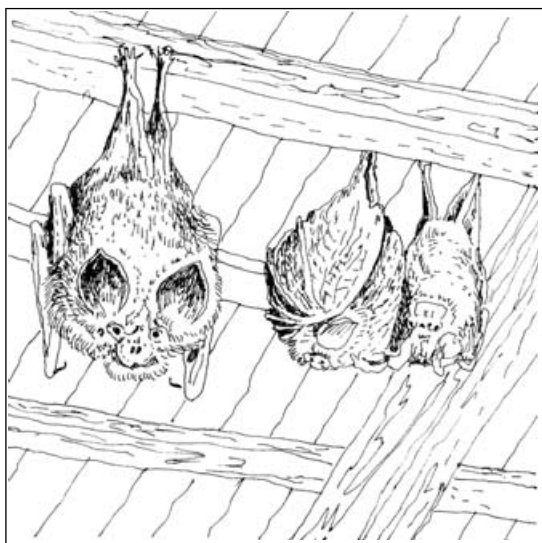
A pipe which carries waste water from a basin, bath or sink and either discharges over an external gully or into a soil stack. (see *SOIL PIPE*, *SOIL VENT STACK*)

**WET ROT**

A fungal growth which survives on wet conditions and attacks timber. The growth will usually cease when the building dries out. (see *DRY ROT*)

**WINDER**

A tapered tread which allows a change of direction in a stair and used where space is restricted.



**Figure 6**  
Bats

#### Statutory Nature Conservation Organisation

The SNCO's are English Nature, Country Council for Wales, Scottish Natural Heritage and Department of the Environment (Belfast).  
(see Bibliography page 27)

#### WARNING

ALWAYS contact your local SNCO for advice before attempting to catch bats, as they may be carrying a rare form of bat rabies for which there is, at present, no cure.

## 4 USES FOR YOUR LOFT CONVERSION

There are many different uses for a loft conversion, and the following are some which you may wish to consider. None of these are classed as habitable rooms.

- a basic loft space for the storage of suitcases, trunks, box files etc.*only*.
- a bathroom or shower cubicle

The following are all classed as *habitable* rooms.

- a studio for painting, sculpture, pottery etc.
- a photographic studio and dark room
- an office or computer room.
- a games room or play room eg. for a model train layout.
- a kitchen
- an extra bedroom (with or without en-suite bathroom)
- an extra lounge or a recreation room for music, TV etc. or in a large property - two bedrooms, a living room, kitchen and bathroom.

The last option will require planning permission, as it is likely to exceed the limit of two habitable rooms and an area in excess of 50m<sup>2</sup> for any loft conversion under the Building Regulations.

## 5 ADDING VALUE TO YOUR HOME

Extensions, conversions and other additions to your home will usually add some value, but this depends very much on the type of property, location and supply and demand.

In principle the addition of an extra bedroom or expenditure on a new kitchen or bathroom, will add value to your home.

Remember also that building an extension may be restricted by planning legislation, whereas in general the conversion of loft space will not.

A loft conversion is also much easier to build and less expensive than a completely new addition. To get the best possible value from your loft conversion, and to avoid it looking like an 'add-on', pay careful attention to the architectural details, finishes and colour scheme.

One of the most important element in the house is the staircase, and wherever possible any new stair should be built as a continuation of the existing in both position and design details, even though it may have to be separated from the existing stair to comply with fire regulations.

A recent survey by a major Building Society has shown that a loft conversion is the most cost effective way of adding value to your house. Go to [www.loftshop.co.uk](http://www.loftshop.co.uk)

## 1 ESTIMATING THE COST

The cost of a successful loft conversion can vary from a few thousand pounds to several thousand, depending on the size of your home, the structural work involved and the quality of the fittings and finishes you use.

It is advisable to establish the approximate cost as soon as the basic drawings and a layout of the proposed rooms have been made. There are four ways of carrying out the work on your new loft conversion.

### a) Doing the work yourself.

This is the cheapest option, but certain jobs require an extensive knowledge of building construction and expertise well beyond the normal DIY experience.

### b) Employing a builder.

A more expensive option is to employ a builder, preferably one experienced in loft conversion work, to design and build the whole project. The Loft Shop will advise you on the choice of suitable companies. *see LOFT SHOP PARTNERS and LOFT LINK*

### c) Sub-contracting.

You can sub-contract some or all of the work to various specialist trades – ie. general builder, carpenter, plumber, electrician etc. This has the benefit of allowing you to employ the best specialist for each part of the building work. The disadvantage is that you may find yourself in dispute when work is not done correctly. One trade may attempt to blame another. For example – the plasterer may argue that the poor plastering is due to the bad construction of the partition by another specialist.

### d) Employing an architect.

You may wish to go for the most expensive option by employing an architect who will prepare the design, estimate the cost, select a suitable builder and supervise the building work. The fees for this can be between £1500 and £3000, in addition to the cost of the work, but it will be money well spent if you are short of time or experience to manage the project yourself.

The cost of a loft conversion can vary from around £16,000 for a simple one room conversion, to around £40,000 for a two bedroom with bathroom conversion with high quality fittings and finishes.

#### LOFT SHOP PARTNERS

The Loft Shop now lists a number of partners who can carry out work of all types for Loft Shop customers. Access this list on our website, [www.loftshop.co.uk](http://www.loftshop.co.uk) and click on 'Need Loft Work Done?'

LOFT LINK is a database of builders who specialise in loft work and who use Loft Shop products.

When you employ a professional architect, engineer or builder, the Loft Shop recommends that you select those who are members of recognised professional Institutes or Trade Associations' (*see Bibliography page 27*)

**A Client's Guide to Engaging an Architect (2000)**  
(including guidance on fees ) (*see Bibliography page 27*)

**RAIL**

The horizontal member fitted between the two vertical stiles in a framed and panelled door.

**RAMP**

A sloping surface connecting two other surfaces at different levels.

**RAPID VENTILATION**

A permanent method of ventilation, such as a window, that provides a natural flow of air. *(see also Approved Document F)*

**RCD**

A 'residual circuit device' fitted to an electrical supply for safety and breaks the circuit in micro-seconds to prevent electrocution. An RCD will protect all the circuits fitted with MCB's in a consumer unit. *(see MCB)*

**RIDGE**

The apex of a pitched roof at the junction of two slopes.

**RIDGE BOARD**

The horizontal timber member which spans the length of the roof and supports the ends of the rafters.

**RING MAIN or RING CIRCUIT**

The method in the UK of connecting electrical socket outlets (normally 13amp) in a continuous loop connected to a master fuse in the consumer unit. *(see CONSUMER UNIT)*

**RISE**

The vertical distance between two consecutive treads in a stair. *(see GOING)* *(see also Approved Document K)*

**RISER**

The vertical member which separates and connects the treads in a stair. *(see TREAD)*

**RISING BUTT HINGE**

A special type of hinge which operates as a self-closing mechanism when a door is open.

**RISING MAIN**

The supply of mains water to a building which usually terminates in the roof in a cold water storage tank. *(see COLD WATER STORAGE CISTERN)*

**ROOF DOME\***

A clear plastic dome (normally made from polycarbonate) with or without a kerb and sometimes openable.

**ROOFLIGHT**

A dome light, lantern light, skylight, ridge light, glazed barrel vault or other element intended to admit daylight through a roof. *(see ROOF DOME, ROOF WINDOW\*)*

**ROOF TRUSS**

A framed assembly of structural members consisting of ceiling joists, rafters, struts and ties. Not to be confused with trussed rafters. *(see TRUSSED RAFTER)*

**ROOF WINDOW\***

An opening window fitted into the roof slope and parallel with it. Also available as an alternative means of escape MOE\* window. *(see MOE WINDOW)* *(see also Approved Document B)*

**SARKING**

A felting sheet laid over the rafters to provide a weatherproof barrier under the tile/slate battens.

**SASH**

The opening part of a casement or sash window into which the glazing is fixed.

**SAWN TIMBER**

Timber in its rough state prior to being machined. Sawn sizes are *nominal*, whereas machined sizes are *actual* and referred to as **PAR**. *(see FINISHED SIZE, PAR TIMBER)*

**SILL**

A horizontal member made of timber, brick, stone or concrete onto which a door or window frame is fixed.

**SKREW NAILING**

A method of nailing at an angle when constructing stud partitions.

**SKIRTING**

A narrow timber member fixed around the base of internal walls to protect the wall finish from being kicked or damaged. In a kitchen or bathroom the skirting can also be of tiles.

**SKYLIGHT**

A window inserted in a flat or pitched roof to provide natural light to the room below. *(see ROOF WINDOW)*

**SLATE**

A fine-grained rock capable of being easily split into very thin layers and used for roofing and flooring tiles. *(see TILE)*

**SOFFIT**

The underside of an overhanging part of a building, typically between the fascia board and the external wall and below the roof.

**SOIL PIPE**

A pipe designed to carry away effluent from bathrooms and kitchens on one or more floors of a building. *(see SOIL VENT STACK)*

**SOIL VENT STACK**

A pipe designed to carry away effluent from one or more floors of a building, which terminates above the eaves level of the roof and provides ventilation to the foul water drain into which it discharges. *(see SOIL PIPE)*

**SPAN**

The clear distance between two supports or bearings measured along the length of a structural member

**SPIRAL STAIR\***

A staircase with tapered treads assembled around a central column. Also referred to as a helical stair.

**STAIR or STAIRCASE**

A structure made from a series of steps held between and fixed to two side members (strings) to provide access between two different levels. *(see RISER, TREAD, STRING)* *(see also Approved Document K)*

**STRING or STRINGBOARD**

The two structural side members of a stair into which the treads and risers are fixed. *(see TREAD, RISER)*

**STAY**

A metal bar designed to hold a window sash in the open or closed position.

**STILE**

The two vertical side members which make up a framed and panelled door.

**STRUT**

A structural member designed to resist compression stresses and used in a roof to support the purlins. *(see TIE)*

**STUD**

A vertical timber used in the construction of stud partitions.

**STUD PARTITION**

A series of vertical studs and horizontal noggings nailed together to form a framed partition and usually covered with plaster-board on both sides. *(see DRYWALL, STUD, NOGGING)*

**JAMB**

The side members of a frame or lining around a door or window.

**JOIST**

A structural member of timber or steel and spanning between supports and designed to carry loads.

**JOIST CENTRES**

The distance between joists (in a floor or ceiling) measured from centre to centre of each one.

**JOIST HANGER**

A metal bracket designed to support the ends of timber joists where they cannot be built into the supporting wall or other structural element.

**JUNCTION BOX**

An enclosed box in which electric cables are joined together.

**LADDER**

An arrangement of treads supported by side members and used as a means of access from one level to another. eg. a Loft Shop Loft Ladder.\*

**LANDING**

A level platform at the top of a flight of stairs or at a change of direction in a stair.

**LATH & PLASTER**

The traditional method (now obsolete) of covering walls and ceilings, in use until the 1950's (approx) when it was replaced by plasterboard sheeting.  
(see *DRYWALL*, *PLASTERBOARD*)

**LINTEL**

A timber, steel or concrete structural member used to span an opening and support a load. eg. over a window or door.

**LIVE LOAD**

(see *IMPOSED LOAD*)

**LOADBEARING**

Any structural part of a building designed to carry imposed loads. eg. a brick or concrete wall, steel or concrete pillar or timber, steel or concrete floor.

**LOFT or ATTIC**

The space below the rafters in a roof and above the ceiling, which may be of use as habitable space.

**LOFT SHOP**

The Loft Shop Limited is a company founded in 1987 to promote the use of loft space and to provide expertise and products for the conversion of dead space into habitable space.

**LOOSE FILL INSULATION**

Insulation, such as mica pellets, used for heat insulation around hot water cylinders and between ceiling joists.

**MCB**

(Miniature circuit breaker) A fuse device that operates in micro-seconds to break the electrical circuit and prevent electrocution.  
(see *RCD*)

**MEANS OF ESCAPE**

A protected route used in the event of fire to provide egress for persons to a place of safety.

**MINIATURE CIRCUIT BREAKER**

(see *MCB*)

**MOE WINDOW\***

A special 'means of escape' roof window which complies with the dimensions set out in the Building Regulations  
(see *Approved Document B*)

**NATIONAL PARK**

(see *CONSERVATION AREA*)

**NEWEL CAP**

The square or round block on the top of a newel post, sometimes fitted with a decorative finial.

**NEWEL POST**

A post supporting the strings and balustrade of a stair.

**NOGGING**

A short horizontal member fitted between the studs in a framed partition.  
(see *STUD PARTITION*)

**NOSING**

The front edge of a stair tread, often rounded.

**OPEN RISER**

A stair in which all the vertical risers are omitted.

**OVERFLOW PIPE**

An open-ended pipe designed to discharge water from a tank or cistern when it overflows. eg. a toilet cistern.

**PACKING**

Any material used to fill a gap between two adjacent surfaces.

**PAR TIMBER**

PAR (planed all round) timber which has been machined on all four faces to precise dimensions. eg.. 50mm x 100mm sawn timber will reduce to 45mm x 95mm (approx) after machining

**PARTITION**

(see *STUD PARTITION*)

**PARTY WALL**

A wall built on the boundary between two buildings (as in semi-detached houses) which is common to both and subject to legislation in the Building Regulations and *The Party Wall etc. Act 1996*

**PITCH**

The degree of slope of a structural member or roof especially when expressed as the ratio of height to span. (i.e, a 30° pitch.)

**PITCHED ROOF**

A roof with a slope greater than 15° to the horizontal.

**PLANNING PERMISSION**

The approval required from a Local Authority for permission to do work on any building under the *Town & Country Planning Act 1962*.

**PLASTERBOARD**

A sheet material consisting of compressed gypsum plaster between two sheets of tough building paper.

**POLYCARBONATE**

A transparent unbreakable thermoplastic resin used for Loft Shop domed roof lights.

**PROTECTED STAIRWAY**

A stair that discharges to a final exit and place of safety, and is adequately enclosed by fire-resisting construction.  
(see *FINAL EXIT*)

**PSV**

'Passive stack ventilation' is a system of ventilation that uses ducts from the ceilings of rooms to terminals in the roof and operates by a combination of the natural movement of warm air, and the effect of wind over the external surface of the roof.  
(see also *Approved Document F*)

**PURLIN**

The horizontal timber or steel beam which provides support for the rafters in a roof.

**RAFTER**

One of several parallel sloping timber or steel members which form the roof of a building.



Fees are correct at January 2006

## 2 FIXED FEES

The fixed fees comprise;

- a) the application to your Local Authority for Planning Consent will cost **£144** (VAT is not applicable) and
- b) the application to your Local Authority for Building Control approval. This fee varies from authority to authority, but allow a sum of **£600** (approx.) for a scheme based on 'cost-of-work' and including visits by the Building Inspector.

## 3 VARIABLE FEES

These are principally;

### a) the architect

These fees are on a sliding scale related to the cost of the work. The RIBA does not operate a fixed fee scale, but recommends that this is agreed between the client and their architect. However as a rough guide the fee scale varies from 14% up to 19%, based on the cost of the work. So for a building cost of £16,000 the fees would be between £2,240 and £3,040 depending on the amount of work required.

### b) the structural engineer

These fees are also unregulated, and the Institute of Structural Engineers recommends that fees are agreed between the client and their engineer. As a rough guide, work on an hourly rate of between £70-80 outside the big cities, £100-120 in large towns and £150-180 in London. (all fees plus VAT)

### TIP

ALWAYS ask for a written **Quotation** as 'Estimates' are not accurate and can be used by unscrupulous builders to submit a 'low' price and then claim 'extras' which are usually those items that the builder omitted to include originally.

### WARNING

Avoid companies that deal in cash only and who demand large 'up-front' cash payments before they start work.

### TIP

Always ask to see examples of other loft conversion work by each builder you are asking to submit a tender. If they are genuine companies they will be only too pleased to show their work to you.

## 4 TENDERS/QUOTATIONS

It is always advisable to obtain several quotations or 'tenders' for any building work. If you are getting these yourself, it is very important to ensure that all the builders are pricing on the *same specification*. The Loft Shop recommends that you prepare drawings showing as much detail as you are able. The drawings should be accompanied by what is known as the 'specification of works'. Normally this would be prepared by your architect, but if you are doing the work yourself, then make sure that you cover all the work required as accurately as possible.

## 5 SPECIFICATION CHECK LIST

Here is a brief check list for you to use.

- access to your home and protection against damage and/or loss during the contract. Check that your builder is insured and what is covered by your own household policy.
- set a date when the work can commence
- agree a time for the work to be completed
- set out the scope of the work – eg. the floor area of the new loft, installation of a new stair\* or loft ladder\*, all new floor joists (timber or steel), insulation in the floor and roof, building new partitions, supply and hanging doors, fitting roof windows\*, type of floor finish (whether boarding or chipboard panels).
- make clear that all the work *must comply* with the relevant Building Regulations.
- is decoration included in the quotation or are you doing this yourself?
- list all the items that you are purchasing e.g. stair\*, loft ladder\*, roof window\*, etc.
- and finally, clearing up, removal of all building rubbish and leaving your home clean and tidy.



## 6 LOANS

Depending on the scope of your proposed loft conversion, the finance for minor work may come from your own savings or a small loan. For the more expensive projects, you may need to get your home re-mortgaged by your existing lender or perhaps approach another bank or building society for finance repayable over a fixed period

**DORMER WINDOW**

A structure projecting above the roof slope to let in light and provide ventilation to a loft conversion and also to provide additional headroom. (see *ROOF WINDOW*)

**DRY ROT**

A fungal growth that attacks and destroys timber by absorbing its moisture. It also has the ability to spread rapidly and, if untreated, can cause serious damage to the building structure. Dry rot is usually caused by poor ventilation. (see *WET ROT*)

**DRYWALL**

A term from the USA/Canada, to describe the construction of stud partitioning covered with plasterboard. (see *STUD PARTITION, PLASTERBOARD*)

**EAVES**

The lowest part of a roof around its periphery, which projects beyond the face of the wall below.

**ESCAPE ROUTE**

Any route forming part of the means of escape from any point in a building to the final exit. (see *FINAL EXIT*)

**ESCAPEWAY\***

A special Loft Shop window that opens as a casement and meets the requirements of the Building Regulations. (see also *Approved Document B*)

**ESTIMATE**

A price given by a builder or trade company which is approximate. Not to be confused with a Quotation. (see *TENDER or QUOTATION*)

**EXPANSION PIPE**

An open ended pipe designed to discharge over-heated water from a hot water cylinder and which usually terminates over an expansion tank. (see *OVERFLOW PIPE*)

**EXPANSION TANK or HEADER TANK**

A small open-topped cistern (tank) containing water with which to top up a central heating system.

**EXTRACT VENTILATION**

Any means of extracting stale air from a bathroom or kitchen. (see *PSV*) (see also *Approved Document F*)

**FASCIA**

A vertical board or trim fixed along the eaves to cover the ends of the rafters and on which to fix the gutter. (see *GUTTER, RAFTER*)

**FELTING**

Felt sheet soaked in bitumen and used over the rafters to line the roof before the tile/slate battens are fixed.

**FINAL EXIT**

The termination of any escape route from a building giving access to a passageway, street or open space and sited so that persons are not in any danger from fire or smoke.

**FINISHED SIZE**

The actual size of a timber member after it has been machined. e.g. *50mm x 100mm* nominal timber will machine to *45mm x 95mm* actual size. (see *PAR TIMBER, SAWN TIMBER*)

**FIRE RATING**

(see *FIRE RESISTANCE*)

**FIRECHECK DOOR**

A door designed to withstand the passage of fire for a given period of time. eg. an FD20 door will resist fire for 20 minutes.

**FIRE RESISTANCE**

The ability of any component of construction to satisfy, for a stated period of time, some or all of the criteria specified in the relevant part of BS.476.

**FLASHING**

Any weatherproof material, usually galvanised steel or lead, used to cover the gaps between two adjoining materials, for example on a roof or chimney stack or around openings such as doors and windows.

**FLIGHT**

The series of consecutive treads and risers which make up a stair. (see *TREAD, RISER*)

**FLUSH FIT**

Any element of construction or finish with at least one face that does not project beyond the face of any adjacent element(s).

**FORCED VENTILATION**

(see *EXTRACT VENTILATION*)

**FUSEBOARD**

(see *CONSUMER UNIT*)

**GABLE**

The triangular upper portion of a wall below the ends of the roof slopes.)

**GOING**

The horizontal distance between the risers of two consecutive stair treads. (see also *Approved Document K*) (see *TREAD, RISER*)

**GUARD RAIL**

A safety rail fitted around an opening in a floor (eg. a loft access hatch) or where there is a change of level.

**HABITABLE ROOM**

A room used, or intended to be used, for dwelling purposes, including a kitchen but not a bathroom.

**HANDRAIL**

The member fitted along the top of a stair balustrade to provide support for any person using the stair.

**HATCH\***

An opening in a ceiling to provide access into a loft space and usually fitted with a hatch door.

**HEAD**

The top member of a stud partition or the frame of a lining around a door or window. (see *STUD PARTITION*)

**HEAD OF WATER**

The vertical distance between the water in a storage tank or cistern and any appliance it feeds. eg. a shower which will require sufficient 'head' of water for it to operate correctly.

**HEADROOM**

The clear height in a room or doorway to allow a person to stand without bending.

**HELICAL STAIR\***

(see *SPIRAL STAIR*)

**HIP**

The junction between the two outer slopes of a pitched roof. (see *RIDGE, VALLEY*)

**HIT-&-MISS VENTILATOR**

A special ventilator grille built into an external wall to provide background ventilation and which can be opened and closed. (see *RAPID VENTILATION*)

**I-BEAM**

A structural member with a central spine and two flanges in the shape of a letter 'I'. (see *CHANNEL*)

**IMPOSED LOAD**

The load produced by the intended occupancy or use, including the weight of all movable partitions, furniture, persons, distributed, concentrated, impact and snow loads, but *excluding* wind loads. (see *DEAD LOAD*)

Definitions are taken from *The Oxford Dictionary*, *Collins English Dictionary*, *the Building Regulations Approved Documents* and *Loft Shop publications*. **The asterix \* indicate a Loft Shop product.**

#### AIRBRICK

A special brick with holes, built into an external wall to provide background ventilation.

(see *BACKGROUND VENTILATION*)

#### ALTERNATIVE ESCAPE ROUTES

Escape routes sufficiently separated by either direction and space, or by fire-resisting construction, to ensure that one is still available should the other be affected by fire.

#### ALTERNATING TREAD

A special paddle shaped tread with the wide portion alternating from one side of the stair to the other. Designed to save space and used in both straight flights and spiral (circular) stairs. (see *SPIRAL STAIR*)

#### APPROVED DOCUMENTS

A series of technical documents explaining the practical details in *The Building Regulations* and how they should be interpreted.

#### ARCHITRAVE

A plain or moulded section around a door or window opening.

#### ATTIC

The empty space in a roof. (see *LOFT* or *ATTIC*)

#### BACKGROUND VENTILATION

Permanent ventilation consisting of airbricks, grilles and hit-&-miss ventilators, required in all habitable rooms under the Building Regulations. (see *AIRBRICK*) (see also *Approved Document F*)

#### BALUSTER

One of several vertical members used to infill a balustrade.

#### BALUSTRADE

A protective barrier on a staircase formed by a series of balusters capped by a handrail. The height of balustrades and spacing of balusters are given in *Approved Document K*. (see *BALUSTER*, *HANDRAIL*)

#### BATTEN

A small sawn timber section fixed across the rafters on a roof to provide support for tiles or slates.

(see *COUNTER BATTEN*)

#### BEAM

A long timber, steel or concrete member designed to carry loads over a span between supports. (see *SPAN*, *DEAD LOAD*, *IMPOSED LOAD*)

#### BINDER

A timber joist spanning across the ceiling joists to strengthen them.

#### BLANKET INSULATION

Insulating material loosely compressed into a flexible slab or blanket. eg. glass fibre or mineral wool.

#### BOARDED ROOF

A roof structure in which the rafters are covered externally with boarding before the roofing felt and tile/slate battens are fixed.

#### BOX FRAME

A simple square frame made from four members (usually timber) joined together at to each other. e.g. around an opening for a loft access hatch\* or a roof window\*.

#### BUILDING ACT 1984

The statutory Act of Parliament that controls the safe construction, extension and alteration to all building in England, Wales and Ireland.

#### BUILDING CONTROL BODY

A term used to include the local Authority Building Control department and its Approved Building Inspectors. (see *BUILDING INSPECTOR*)

#### BUILDING INSPECTOR

An official of the Local Authority Building Control department, who inspects building work to ensure it complies with Building Regulations.

#### BUILDING REGULATIONS

The detailed rules of construction as specified in the Act and explained in the Approved Documents. (except in *Scotland* and *Northern Ireland* which have different legislation)

#### CEILING

The soffit of any floor (above the ground floor) in a building which is exposed overhead and may be integral with the floor structure, or suspended below it. (see *SUSPENDED CEILING*)

#### CHANNEL

A 'U' shaped section, usually of steel, used as a structural support. (see *I-BEAM*)

#### CILL

(see *SILL*)

#### CLEARANCE

The space between two adjacent surfaces, close together but not touching. eg., a door or window and its frame.

#### COLD WATER STORAGE CISTERN

An open-topped tank to store water from a rising main and fitted with a ball-valve and overflow pipe. (see *TANK*)

#### COLLAR

(see *TIE*)

#### CONCERTINA LOFT LADDER\*

A special ladder designed to collapse down when not required and so save space.

#### CONDENSATION

Water droplets deposited from warm, damp air when it comes into contact with any cold surface.

#### CONDUIT

A rigid tube or duct to carry and protect electrical, telephone and computer wiring.

#### CONSERVATION AREA

Any area of natural beauty and resources which requires protection, preservation and sustained management. eg. The National Parks, The Broads etc.

#### CONSUMER UNIT

The assembly of separate fuses with an isolation switch in a protected enclosure, connected to the incoming electricity supply. (also known as a *FUSEBOARD*)

#### COUNTER BATTEN

A small sawn timber section fixed over a boarded and felted roof in the opposite direction to and providing support for the tile/slate battens and allowing natural ventilation (see *BATTEN*)

#### DCLG

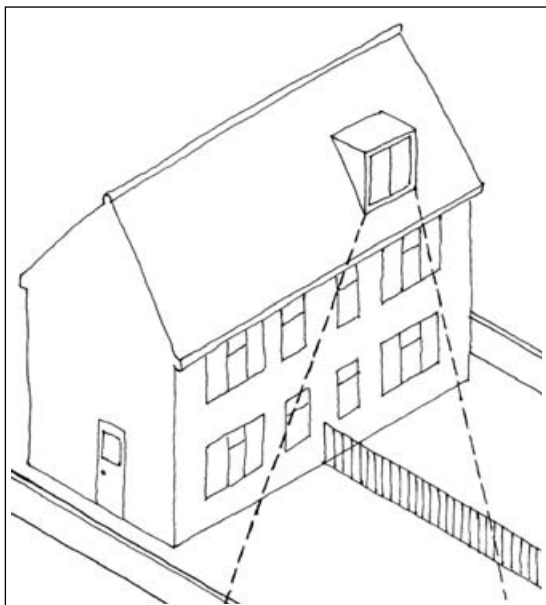
The Department for Communities and Local Government (which now supercedes the ODPM - Office of the Deputy Prime Minister)

#### DEAD LOAD

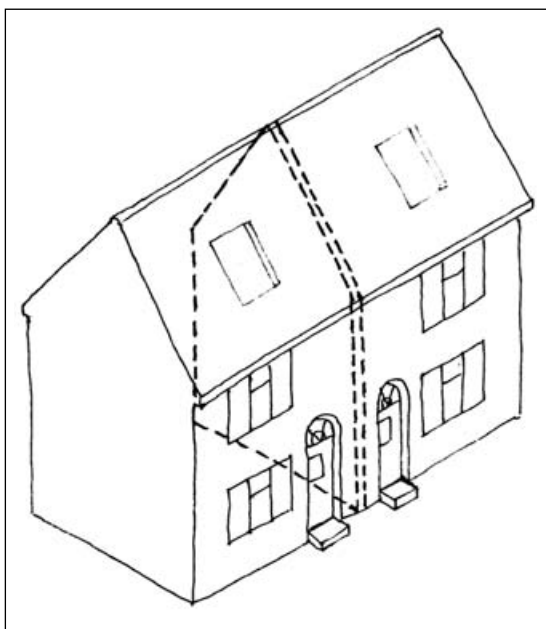
The load due to the weight of all walls, permanent partitions, floors, beams, roofs and finishes including services and all other permanent elements of construction. (see *IMPOSED LOAD*)

#### DOOR LINING

An alternative to a door frame in a stud partition, which uses a section of 25mm (nominal) timber to the full thickness of the partition, including its two sheets of plaster-board.



**Figure 7**  
Overlooking your neighbour's property



**Figure 8**  
The party wall between a pair of semi-detached houses.  
(see *Bibliography*, page 27)

In principle you have the right in law to cut, raise, underpin, demolish and re-build a party wall, subject to giving your neighbour due notice. A party wall notice must be served on the adjoining owner at least two months before any work commences.

**The Party Wall etc. Act 1996; explanatory booklet** is available from DCLG Free literature. (see *Bibliography* page 27)

## 1 CONSULTING YOUR NEIGHBOURS

When you have drawn up some initial ideas and before you finalise your plans or submit an application to your Local Authority, it may be advisable to discuss your plans with your neighbours in case the work may affect them. For example if any extension to your roof overshadows a neighbour's window, and if that window has been in existence for more than twenty years, they may be able to claim right of light. Also if your loft conversion now gives you a view into a neighbour's property and garden, which you did not have previously, this may also give them cause to complain.

see *Figure 7*

Remember that your neighbours are likely to be as concerned about any work which might affect them, as you would be about any work they did that might affect you..

When your plans are submitted to your Local Authority, they will notify local residents and publish your application in the local press to give people the opportunity to raise any objections. So even if your conversion is lawful and has planning permission, it is unwise to risk upsetting any neighbours over a matter that perhaps could be easily settled by discussion.

## 2 PARTY WALL LEGISLATION

Any work in the loft that affects the party wall between your home and your neighbour's, should be discussed before work is started. Your local Loft Shop will give you advice on current legislation for party walls. (see *Figure 8*)

## 3 COVENANTS

Covenants are restrictions placed on your property by a previous owner or a landlord, if you are renting or you have a lease. A covenant may also be related to historic rights. In all cases you should consult a lawyer before proceeding as a covenant may affect what work you may be able to do in your home.

If you need any other person's permission for the proposed conversion, be sure to get this before you finalise any plans or apply for planning permission.

Your Local Authority will *not advise you on any of these matters*.

## 4 CONTACTING YOUR LOCAL AUTHORITY

When making plans to convert your loft into habitable space, the Loft Shop recommends that you make early contact with your Local Authority Planning and Building Control departments, to get their views on the viability of your project and also whether there are any special construction problems which may need to be solved. Hasty decisions regarding both design and construction will be time consuming and costly if you are required to make changes at a later date. The Loft Shop strongly advises this approach as it can save you considerable time and money if later you find that your proposed conversion is unacceptable.

## 5 PLANNING RESTRICTIONS

The Town & Country Planning Act places certain restrictions on loft conversions when any of the following changes are made.

- 1) the shape, size or height of the *existing roof* is altered.
- 2) a dormer window\* is installed. (see Figure 9)
- 3) there may be planning restrictions imposed if you live in a listed building or a Conservation Area.

Before finalising your design we advise you to contact your Local Authority Planning department to get their advice.

## 6 APPLYING FOR PLANNING APPROVAL

- 1) The Planning Department will require several copies of all your drawings plus an application fee. (see Fees, page 9)
- 2) Your application will be acknowledged and placed on the Planning Register. This register can be examined by any member of the public who may wish to lodge an objection. Planning applications are usually published in the local press. (see Appendix 2, page 31)

## 7 APPROVAL PROCEDURE

*Statutory Time Limit.*

You are now entitled in law to receive a decision from the Planning Department within *eight* weeks. If this cannot be done they will write to you and ask for an extension of time.

*Planning decision*

In due course the Planning Department will;

- a) give you full planning consent
- b) give consent with conditions or
- 3) refuse consent.

*Appeals*

If you feel that their decision is unreasonable, you can either re-apply (with an amended scheme) within 12 months of the refusal, without any further fee, or appeal to the Secretary of State within six months of the refusal. (see Appendix 2, page 31)

## 8 BUILDING REGULATIONS

There are eighteen booklets, called the *Approved Documents*, that explain the Building Regulations and how they are to be interpreted in practice. Of these, only nine contain regulations which are specifically relevant to loft conversions as follows, although others may also apply.

**Approved Document A** - Structure (see Figures 13,14)

**Approved Document B** - Fire safety (see Figures 10,11,19,20)

**Approved Document F** - Ventilation (see Figures 17,18)

**Approved Document G** - Hygiene

**Approved Document H** - Drainage and waste disposal

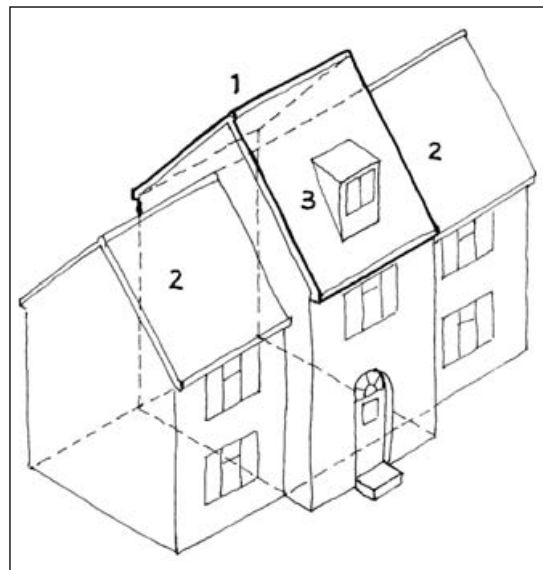
**Approved Document K**- part KI - Stairs, ladders and ramps

(see Figures 11,12)

**Approved Document L1B** - Conservation of fuel and power

**Approved Document N** - Glazing.

**Approved Document P** - Electrical safety



**Figure 9**

Planning restrictions

- 1 - change in maximum height of roof
- 2 - change in slope (pitch) of existing roof
- 3 - addition of a dormer window

### NOTE

If you live in a National Park, The Norfolk Broads or a Conservation Area, the planning regulations are more stringent and you may have to get planning consent (which may not be required elsewhere) for any alteration to your home.

If your house is a listed building this may affect the design and construction of your loft conversion as there are restrictions on what materials and architectural features which you are allowed to alter, add or remove.

**Planning; a guide for householders** is available from DCLG Free literature. see Bibliography page 27

### WARNING

Planning appeals can take several months and so it may be prudent to agree the time extension requested.

### TIP

Remember that an appeal is a *last resort* and should be given careful consideration before proceeding.

## SOME DO's AND DO NOT's

DO get advice from the local Loft Shop and discuss your proposed conversion before you make a final decision.

DO consult your neighbours before making your planning application

DO discuss your proposed conversion with your Local Authority before finalising your plans.

DO install your new stair before doing any work in the loft. This will provide easier and safer access. Cover the treads with cardboard to prevent damage. Using a temporary ladder can be dangerous.

DO NOT start any work until you have obtained Planning Permission (if required). You may be asked to remove all completed work if permission is refused.

DO NOT attempt any alterations to the roof structure unless you are experienced, as this can be *extremely dangerous*  
GET ADVICE FROM either THE LOFT SHOP or a structural engineer.

DO NOT attempt any electrical work as this is ILLEGAL. All electrical work must be carried out by a qualified electrician and the work certified.  
Electricity is invisible and it can be a killer so do NOT attempt to do any work yourself.

GET ADVICE FROM THE LOFT SHOP or a qualified electrician.  
LOFT LINK database is available at all Loft Shops FREE of charge.

LOFT SHOP PARTNERS is available on our website, [www.loftshop.co.uk](http://www.loftshop.co.uk) and choose - 'Need Loft Work Done?'

**Showers**

Remember that all showers require a minimum 'head of water' or water pressure to operate efficiently and so you may need to raise the existing cold water storage cistern to *at least 1.5 m* above the level of shower head. If this is difficult to achieve due to the height restriction in the roof, there are two options available;

- a) install an electric 'power shower' which operates independently of the water pressure *or*
- b) install a shower unit that operates directly off the mains water supply.

CHECK with your local Water Board that this is permissible.

**Central heating**

If you plan to extend the central heating system into your loft conversion, get advice from your local Loft Shop or a heating engineer who will check whether the existing hot water boiler is capable of supplying all the additional radiators. A separate system may be required.

This will depend on the length of new pipe runs and the number and size of all the new radiators. You also may have to reposition the header tank and extend some pipework. If this solution is not possible, consider installing electric heaters which will require an additional fused supply.

**b) Plumbing and waste drainage***Water supply and waste disposal*

Your initial survey will indicate which items may need to be removed or resited elsewhere in the loft space.

The cold water storage cistern should be moved behind a partition providing there is adequate space for inspection, changing the ball-valve or removal in the future. Purchase a good insulation jacket and fit this at the same time, but do NOT insulate beneath any cold water cistern, as the heat from the building below will help to keep the water temperature above freezing.

If you are planning a new kitchen, bathroom or shower in your loft conversion, then the cold water storage cistern may need to be raised to give sufficient head of water, otherwise you will need to install powered plumbing. (*see Showers, page 21*)

***The kitchen***

If your loft conversion includes a kitchen, you will need hot and cold water supplies and the means to dispose of waste water from the sink. Therefore it is advisable to site your kitchen as *close as possible* to both the existing soil-vent stack and any hot and cold water pipes on the floor below.

If a hot water supply is not readily available then consider installing one of the many instantaneous water-heaters. You will need a separate electrical supply point for this. Waste water from your kitchen sink must be plumbed into the existing soil vent stack, so check its position externally to see if an easy connection is possible. The Building Regulations imposes restrictions on the length of all waste pipes and the means of connecting them into soil vent stacks.

***The bathroom***

If your loft conversion includes a bathroom or shower unit, you will need hot and cold water supplies and the means to dispose of dirty water and the effluent from the wc.

ALWAYS site your bathroom/shower unit *as close as possible* to the existing soil vent stack and any hot and cold water pipes in the bathroom on the floor below.

If a hot water supply is not readily available then consider the installation of one of the many instantaneous water-heaters. You will need a separate electrical supply point for this *outside* the bathroom or shower unit.

Waste water from your shower and effluent from the wc. must be plumbed into the existing soil vent stack, so check its position externally to see if easy connection is possible.

The Building Regulations imposes restrictions on the length of all soil and waste pipes and the means of connecting them into soil vent stacks.



**The Building Regulations Approved Documents.**  
*Note:* items in **bold** are relevant to the work in your loft conversion

**Approved Document A: Structure (2004)**

**A1 - Loading**

A2 - Ground movement

A3 - Disproportionate collapse

**Approved Document B: Fire safety (2002)**

**B1 - Means of warning and escape.**

**B2 - Internal fire spread (linings)**

**B3 - Internal fire spread (structure)**

B4 - External fire spread

**B5 - Access and facilities for the fire service**

**Approved Document F: Ventilation (2006)**

**F1 - Means of ventilation**

**F2 - Condensation in roofs**

**Approved Document G: Hygiene (2000)**

**G1 - Sanitary conveniences and washing facilities**

**G2 - Bathrooms**

**G3 - Hot water storage**

**Approved Document H: Drainage and waste disposal (2002)**

**H1 - Foul water drainage**

H2 - Wastewater treatment systems and cesspools

H3 - Rainwater drainage

H4 - Building over sewers

H5 - Separate systems of drainage

H6 - Solid waste storage

**Approved Document K: Protection from falling, collision and impact (2000)**

**K1 - Stairs, ladders and ramps**

**K2 - Protection from falling**

K3 - Vehicle barriers and loading bays

K4 - Protection from collision with open windows, skylights and ventilators

K5 - Protection against impact from and trapping by doors

**Approved Document L: Conservation of fuel and power (2006)**

L1A - Conservation of fuel and power in new dwellings

L2A - Conservation of fuel and power in new buildings other than dwellings

**L1B - Conservation of fuel and power in existing dwellings**

L2B - Conservation of fuel and power in existing buildings other than dwellings

**Approved Document N: Glazing - safety in relation to impact, opening and cleaning (2000)**

**N1 - Glazing safety in relation to impact, opening and cleaning**

**Approved Document P: Electrical safety- dwellings (2006)**

**P1 - Design and installation of electrical installations**

**Building Regulations: explanatory booklet** is available from DCLG Free literature. (*see Bibliography page 27*)

Each of the *Approved Documents* gives detailed guidance, including drawings and tables to explain how the Building Regulations should be interpreted in practice. There are certain restrictions that apply to loft conversions particularly those related to means of escape in case of fire. These are;

1) if the proposed conversion has an area *greater than* 50m<sup>2</sup>

2) if the loft is converted into *more than two* habitable rooms.

If you do not have a Loft Shop near you, then your local library should have reference copies of the Building Regulations Approved Documents and the Town & Country Planning Act. Or you can purchase any documents via the ODPM\* website **www.odpm.gov.uk** (\**see Bibliography page 27*)

## 9 APPLYING FOR BUILDING REGULATIONS

### APPROVAL

1) The Building Control Department will require several copies of all your drawings plus an application fee.

(*see Fees, page 9*)

2) Your application will be acknowledged and placed on the Building Register. This register can be examined by any member of the public who may wish to lodge an objection. Building Control applications may be published in the local press.

(*see Appendix 2, page 31*)

## 10 APPROVAL PROCEDURE

### *Statutory Time Limit.*

You are now entitled in law to receive a decision from the Building Control Department within *five* weeks. However you may start the work after you have given notice to the department.

### *Building Control decision*

If you have not received approval within *five* weeks, and there are questions relating to the work which have not been settled, then a further three weeks is allowed for this. If after that time a decision has not been given then the work is *deemed to be approved*. (*see Appendix 2, page 31*)

The requirements contained in the Building Regulations are less strictly enforced than the Planning regulations, and *you can commence work* by giving notice to the Local Authority, providing you agree to make all the changes required by the Building Inspector, to comply with the regulations. A Building Inspector will visit you during the progress of the work to confirm that you, or your builder, is carrying out the work in accordance with the Building Regulations and the plans which you have submitted.

## 1 PLANNING THE WORK

Before you start work in your loft, you should discuss the project with your Local Authority Building Control department, who will advise you on any technical problems which you may encounter.

The *Building Regulations Approved Documents*, listed on page 13, give clear guidance on the ways in which the regulations can be met. All the work involved in your loft conversion is covered by the following 7 items. (see *Figure 10* below)

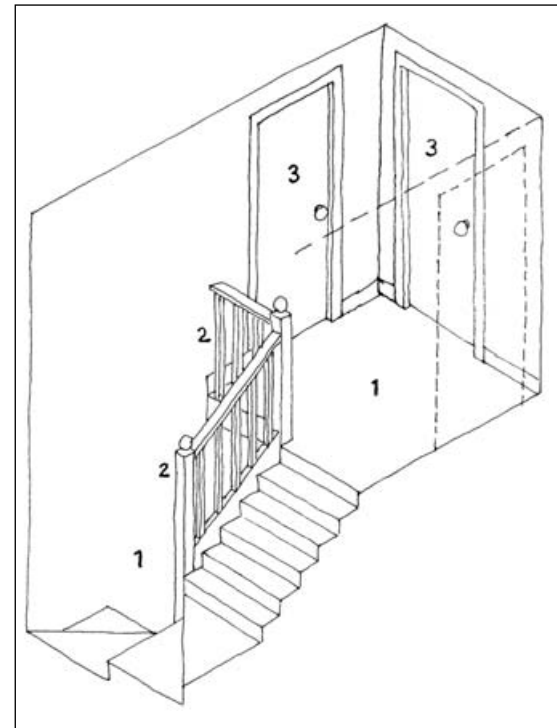
- 1) ACCESS INTO YOUR LOFT
- 2) THE NEW FLOOR
- 3) THE EXISTING ROOF STRUCTURE
- 4) THE NEW WALLS, PARTITIONS and DOORS
- 5) NATURAL LIGHT & VENTILATION
- 6) MEANS OF ESCAPE IN CASE OF FIRE
- 7) SERVICES e.g. water and power. (not shown in *Figure 10*)

## 2 ACCESS INTO YOUR LOFT

If you intend to convert your loft into extra habitable space, then the method of access must be considered and so a plan at the existing first floor (or ground floor in the case of a bungalow) will be needed.

There are two ways of providing access to a loft, either with a loft ladder\* or a staircase.\* See *Figure 11*

The Loft Shop can supply a loft hatch\* and folding ladder\* if your conversion is for additional storage space *only*.



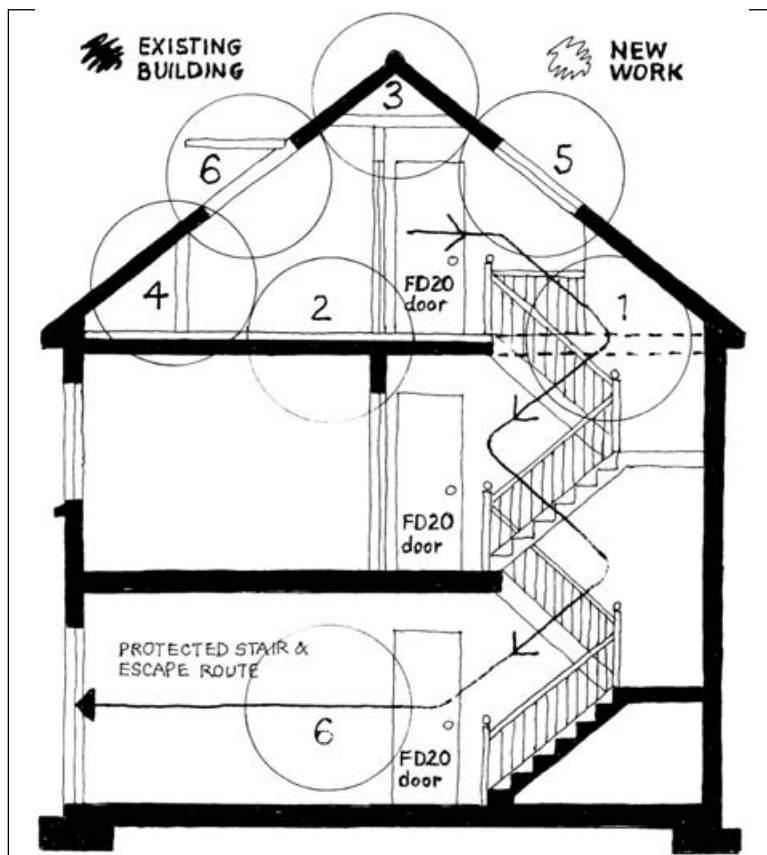
**Figure 11**

A new stair as access into your loft

1 - new stair and landing

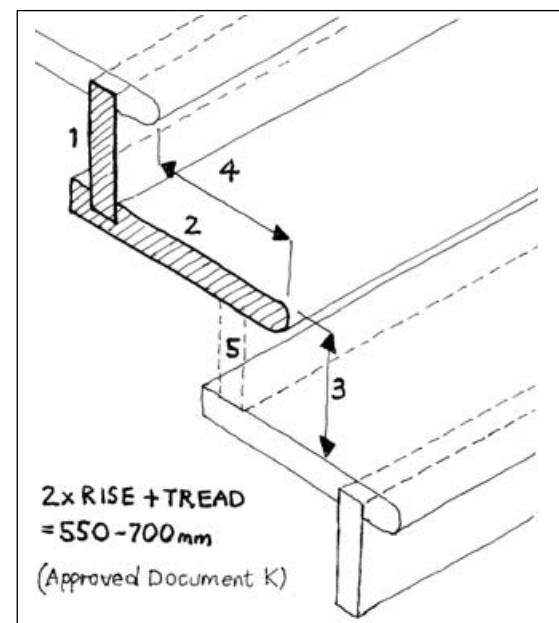
2 - new balustrade

3 - new FD20 doors in fire resisting enclosure



**Figure 10 (left)**

A diagrammatic three bedroom semi-detached house showing items 1 -6



**Figure 12**

Treads and risers

1 - riser

2 - tread

3 - 'rise'

4 - 'going'

5 - open riser

However if you are converting the loft space in a single storey building (a bungalow) you need to provide linked smoke alarms and an alternative means of escape in the loft, such as a roof window.

Any loft conversion over  $50m^2$  in area or with more than two habitable rooms, must have a separate staircase as an alternative means of escape from the loft. This may lead directly to the ground floor or onto an adjoining flat roof (provided the roof is part of the same property) with a fire resistance of *30 minutes* and which leads to a final exit. (see Figure 19, page 18)

A new stair in a loft conversion must be separated from other floors in the building, by a *30 minutes* fire resisting enclosure fitted with an FD20 door. This door may be situated at either the foot or the top of the stairs. All doors must be fitted with a self-closing device or rising butt hinges.

#### **Smoke detectors**

The Building Regulations require the installation of linked smoke detector/alarms on every floor of a building with a loft conversion.

## **8 SERVICES**

### **a) Electrical supply**

Although it may be possible to extend the existing house wiring, the Loft Shop recommends the installation of a completely separate supply. The use of multiple 'spur' circuits is not allowed under IEE regulations. The new wiring for your loft conversion should use a new supply cable run from the electricity company's incoming mains supply (at ground floor level) to a new consumer unit in the loft. This unit should be fitted with an RCD and MCB's. see Figure 21.

The consumer unit will provide the basic power and lighting circuits, for example:

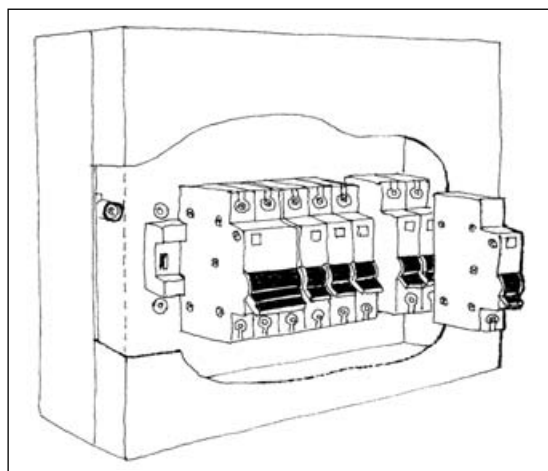
- 1 x 32amp fused ring main circuit
- 1 x 6amp fused circuit for lighting
- 1 x 6amp fused circuit for smoke alarms.

*The following extra circuits may be added if required*

- a supply for a cooker
- a supply for a shower unit.
- a supply for an extractor fan in a bathroom, shower or kitchen
- a supply for an instantaneous water-heater.

The positions of all socket outlets and lighting points should be planned in advance so that cables can be run in partitions before the plasterboard is fixed, and in the floor before it is boarded.

All socket outlets, tv aerials and telephone points, should be positioned *no lower* than 450mm from the floor, and all lighting switches should be positioned *no higher* than 1200mm from the floor. All electrical work should be carried out by a qualified electrician. The Loft Shop can recommend suitable contractors for this work. (see LOFT LINK page 4)

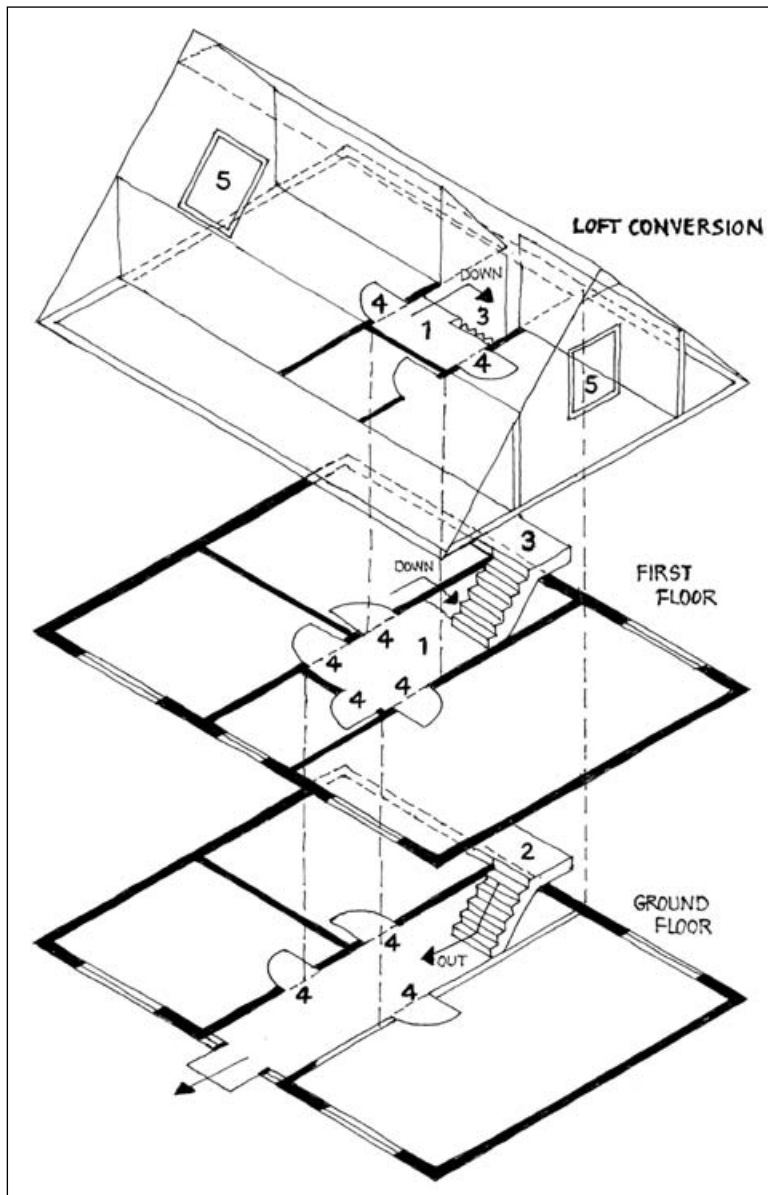


**Figure 21**  
Electricity supply consumer unit

#### **TIP**

A convenient method is to run new electrical cables in pvc trunking at skirting level.

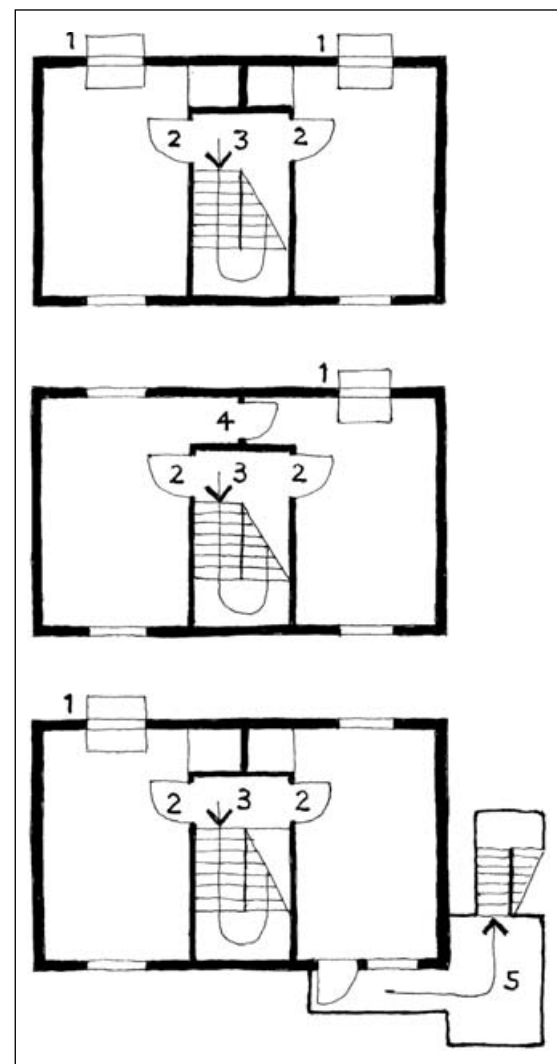
LOFT LINK database is available at all Loft Shops FREE of charge.



**Figure 19 (left)**

A typical two-bedroom loft conversion showing position of MOE windows and escape routes

- 1 - protected hall and landing
- 2 - existing stair
- 3 - new stair to loft conversion
- 4 - new FD20 fire doors
- 5 - MOE windows



**Figure 20**

A typical two-room loft conversion showing position of the MOE windows and escape routes

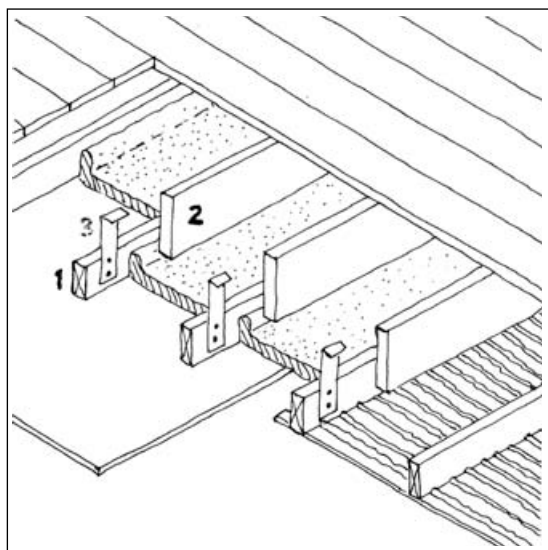
- 1 - protected landing and hall
- 2 - existing stair
- 3 - new stair to loft conversion
- 4 - new FD20 fire doors
- 5 - MOE window

## 7 MEANS OF ESCAPE IN CASE OF FIRE

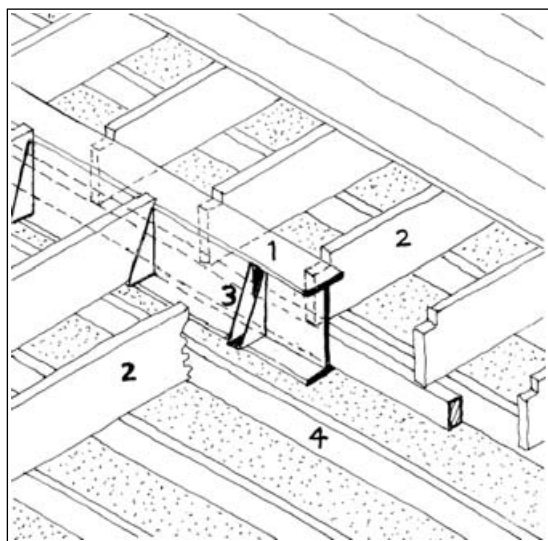
The Building Regulations require an alternative means of escape (other than the existing access staircase) in all new loft conversions which provide habitable accommodation.

This means of escape can be provided by a special roof window, termed an MOE window\*, which has minimum dimensions for the opening part. This requirement also applies to dormer windows, although they are considerably more complicated to construct and may be subject to Planning Regulations.

All Loft Shop MOE roof windows\* comply with the Building Regulations requirement for a minimum clear opening area of  $0.33m^2$ . The regulations regarding means of escape are very precise in the case of houses with one, two or more storeys plus a loft conversion. (see Figure 19)



**Figure 13**  
Strengthening the existing ceiling joists to provide a new load-bearing floor  
1 - existing ceiling joists  
2 - new floor joists  
3 - metal hangers



**Figure 14**  
Steel joists used to support floor joists, either notched or with metal joist hangers.  
1 - new steel joist  
2 - new timber floor joists  
3 - metal joist hangers  
4 - existing ceiling joists

#### NOTE

The size of the new floor joists can be calculated from the formula - span (in metres) multiplied by 50 will equal the depth of the new joist in mm.  
For example.

**A span of 3.6 metres will require a joist 180mm deep x 50mm wide (approximately)**



Ladders must comply with certain Building Regulations and an alternating tread stair should be used *only* where there is not enough space for a conventional staircase or when the loft is converted into *one* habitable room *only*. The ladder must be permanently fixed and have a handrail on both sides. There must also be a guard rail\* around the access opening in the new loft space. Folding and concertina type loft ladders are not permitted except when the loft space is used for storage purposes only *and there is no habitable space*.

The Building Regulations require a permanent stair for access to a loft conversion with more than one bedroom or other habitable room. Spiral stairs\* and alternating tread stairs\* can save space but you may prefer to continue the existing stair to give the new loft conversion a feeling of continuity with your existing home.

#### Treads and risers

The Building Regulations set out specific dimensions for all stair treads and risers. (see Figure 12, page 12)

#### Minimum width of stairs

The Building Regulations do not specify a minimum width for stairs, but the Loft Shop recommends a clear width of 800mm. for any private staircase. However if the stair gives access to one room only this can be reduced to 600mm.

#### Spiral stairs

Spiral stairs complying with the requirements of BS 5395;Part 2; 1984 will also meet the requirements of the Building Regulations. This standard identifies five different categories of spiral stair. Loft Shop spirals with a diameter of 1500mm or greater, will meet the requirements of Category A - (Small Private Stair). This type of stair is generally used by only a small number of people. In a domestic property it may be used as access to a small room, as long as that room is *not* a kitchen or a living room. In an office, factory or plant the stair may only be used only as access to one small room.

#### Balustrades and handrails

Balustrades must be provided in accordance with the Building Regulations. Also a handrail must be fitted on at least one side of all stairs less than 1.0m wide.

#### Headroom

The headroom on a stair should be 2.0m, but the Building Regulations will allow a height of 1.9m measured in the centre of the stair, and 1.8m at the outer edge.

#### Fire regulations

The new stair to any habitable rooms in the loft conversion, must be separated from the rest of the building by a 30-minutes fire resisting enclosure, as required by the Building Regulations.

## 3 THE NEW FLOOR

#### Existing ceiling joists.

Most ceiling joists are not strong enough to carry the imposed load required by new habitable space in a loft conversion and so it will be almost certain that the existing ceiling joists will need to be strengthened, or new joists inserted, to provide the new load-bearing floor.

Also any deflection of the existing ceiling joists may cause damage to the ceiling below. Most ceiling joists in traditional houses are usually  $100 \times 50\text{mm}$  in size and so will need to be strengthened. The size of new joists can be calculated using a simple a 'rule of thumb' formula. (see note). The existing ceiling joists should be fixed to the new joists with metal straps. (see Figure 13, page 15)

#### Steel joists

When the positioning of new timber floor joists is impossible because the span is too great or the reduction in headroom is too great, then steel joists will be needed between the load-bearing walls, to support the new timber joists and floor covering.

(see Figure 14, page 15)

If the existing (or a new) floor in the loft conversion, separates any habitable accommodation from that on the floor below, then the floor must be upgraded to 30 minutes fire resistance unless it already complies. In older properties, the existing ceiling may be made of lath and plaster or 9.5mm plasterboard sheeting, in which case the insertion of fire protection insulation should be done before any flooring is laid.

Figure 15  
Walls, partitions and doors

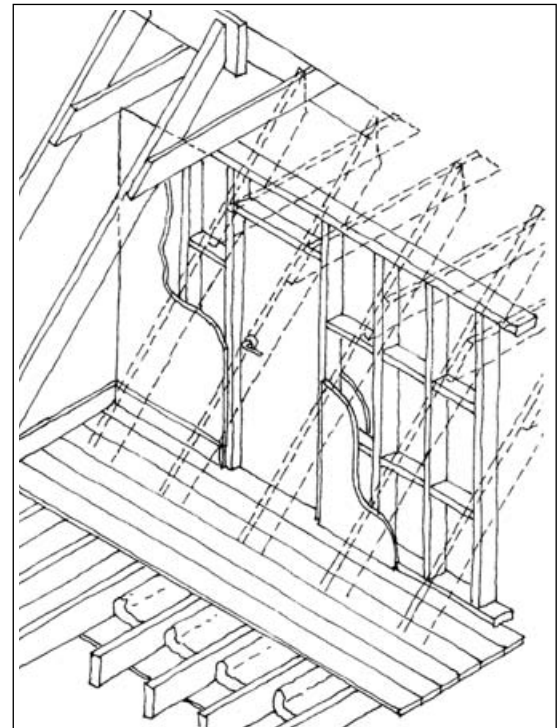
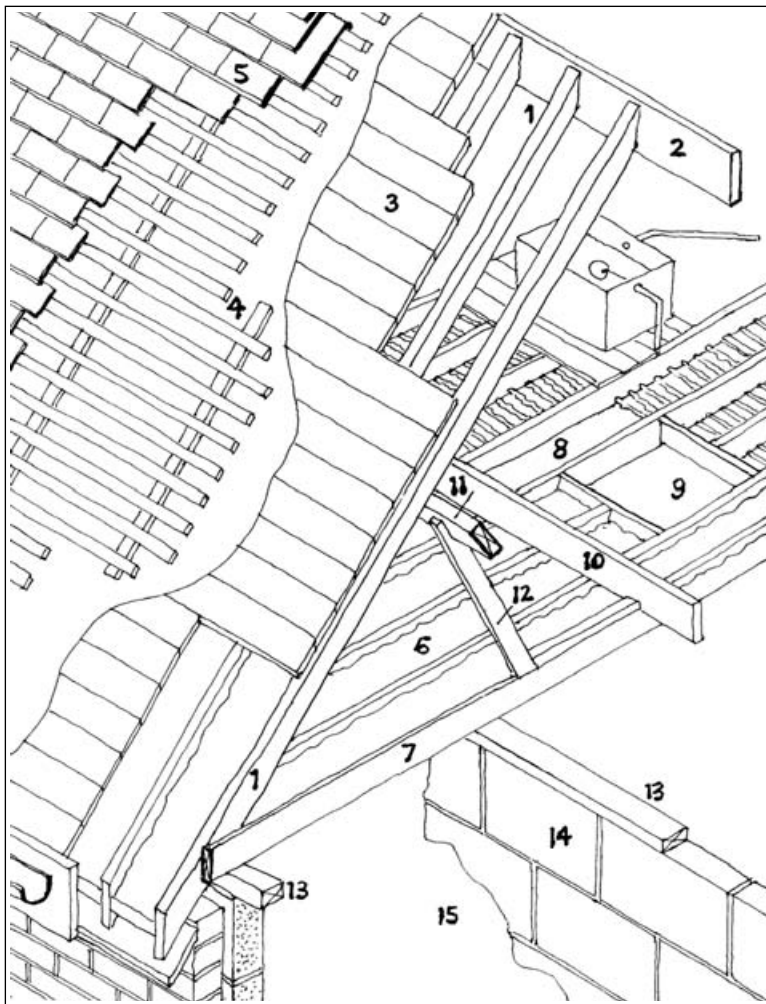


Figure 16(left)

The existing roof structure

- 1 - rafters
- 2 - ridge board
- 3 - boarding
- 4 - battens and counter-battens
- 5 - tiles or slates
- 6 - insulation
- 7 - ceiling joists
- 8 - plasterboard or lath-and-plaster ceiling
- 9 - existing or new access trap door
- 10 - binder
- 11 - purlin
- 12 - strut
- 13 - wall plate

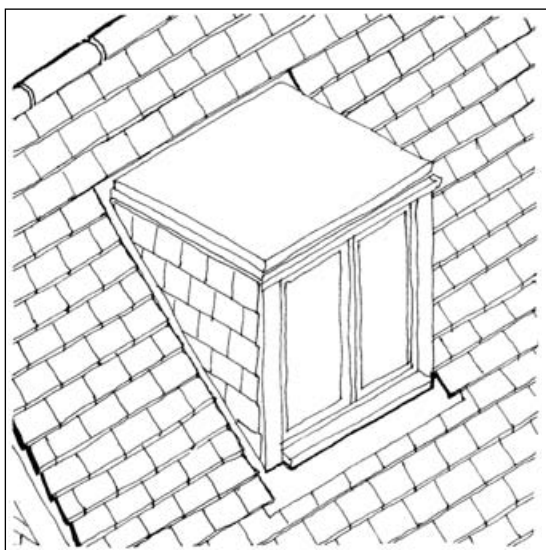


#### NOTE

There is no minimum height restriction for loft ceilings



**Figure 17**  
A Loft Shop roof window



**Figure 18**  
A dormer window

#### 4 THE EXISTING ROOF STRUCTURE

Certain timbers such as purlins and struts, may need to be moved or even removed, *without endangering the strength of the roof*, in order to provide a clear unobstructed space. It is essential to seek professional advice before attempting to cut or remove any roof timbers. (see Figures 3, page 5 and Figure 16, page 16)

#### Insulation

The Building Regulations require a certain level of insulation to prevent heat loss. This insulation, when installed, will also help to reduce the ingress of unwanted air into the loft, and allow it to circulate in the space below the tiles/slates and help to avoid condensation.

#### 5 THE NEW WALLS, PARTITIONS & DOORS

To comply with the Building Regulations, all new partition walls in the loft space, should be constructed with 100 mm x 50 mm studs covered on both sides with 12.5 mm thick (minimum) plasterboard sheets with a skim coat of plaster.

The underside of all the rafters forming the roof slope, must be clad with one layer of 12.5 mm (minimum) plasterboard with a skim coat of plaster. This lining will also provide a clean, smooth surface which can be decorated. The insertion of any required thermal insulation in the roof, should be done at this time.

(see Figure 15, page 16)

#### Doors

All new doors in the loft space can be standard flush or panelled doors *except* where they form part of a fire resisting partition or wall, in which case they must be FD20 doors. Use standard sizes whenever possible.

#### New ceiling

If there is sufficient clear headroom in the existing roof, a new ceiling can be constructed. This should be treated in exactly the same way as the roof lining described above.

#### 6 NATURAL LIGHT AND VENTILATION

All habitable rooms in your loft conversion, require natural light and ventilation, which can be achieved by inserting a roof window\* or constructing a dormer window capable of being opened. A dormer window may require planning approval, as it is subject to certain restrictions under the Planning Regulations. All natural ventilation must be provided in two ways.

1) permanent or rapid ventilation by an opening window which must have a clear area as laid down in the Building Regulations. (see Figures 17 and 18)

2) background ventilation by means of an airbrick, grille or hit-miss ventilator. All kitchens and bathrooms must have a mechanical extract system in addition to these ventilators.



All Loft Shop roof windows\* can be fully installed, including the roof tiling, slating and flashings, from inside the new loft space without the need for *any external access* onto the roof. Both the roof window\*, and the dormer window may also serve as alternative means of escape in case of fire, subject to the conditions given in *paragraph. 7* overleaf.

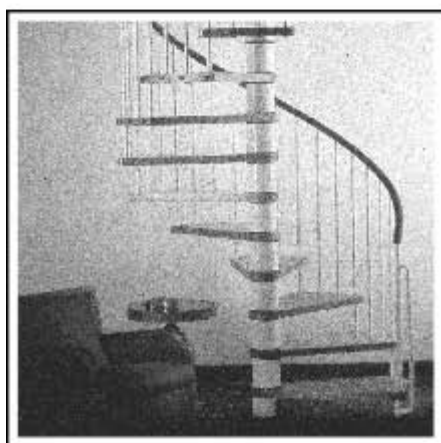




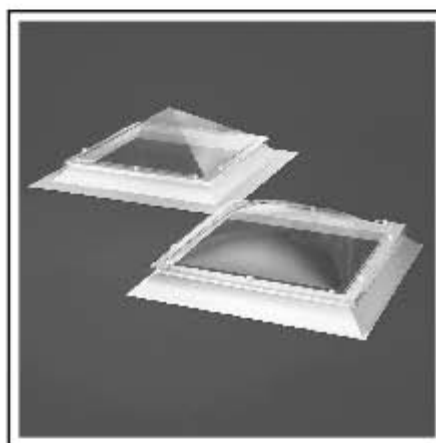
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