

LABC's guidance on solid roofs to conservatories or porches attached to dwellings

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LABC

Delivering building control
through local authorities

Introduction

Many conservatories are now reaching the end of their natural life or are costing substantially more to heat than previously. Homeowners are looking for a cost effective way of retaining existing floor space whilst improving the energy efficiency of the structure. To meet this need homeowners are choosing to replace obsolete translucent roofs with solid ones.

This guidance has been produced to advise and inform suppliers, builders, architects and design consultants on the Building Regulations that will apply to the replacement of a translucent roof to a conservatory or porch with a solid roof.

The preferred option for many homeowners is a lightweight composite solid roof. Some roofs have a LABC Registered Detail that provides an approved design, quality control and accredited installation. Other options may simply underdraw or overclad existing polycarbonate roofs. Or replace the existing roof with a traditional tiled roof that may not have taken into account the adequacy of the existing structure to carry increased loading.

Definition of a conservatory

The Building Regulations in 2010 removed guidance on the definition of a conservatory. Conservatories and porches now share a common description with Regulation 9(1), 21(4) stating to meet the exemption status in Schedule 2 Class 7;

- They must be at ground level and have a floor area less than 30m².
- They must be thermally separated from the dwelling by walls, windows or doors which meet the energy efficiency requirements, and
- The dwelling's heating system must not be extended into the conservatory or porch.

A Department of Communities and Local Government (DCLG) circular letter on 28 September 2010 stated that "Building Control Bodies will want to note that the definition of conservatory in terms of percentage translucent material as set out in previous editions of the Approved Documents no longer applies".

To address the lack of a suitable definition for a conservatory we produced a Best Practice Guidance Note MG0010411 - [Application of Part L to Conservatories attached to existing dwellings](#). This defined a conservatory and/or the type of structure that could meet the exemption criteria. We based this on what is generally considered to be key features of a typical conservatory; a lightweight structure comprising of predominantly glazed walls and roof that is thermally separated from the dwelling it is attached to.

The Best Practice Guidance Note Application of Part L to Conservatories attached to existing dwellings has also been accepted by the Building Control Alliance (BCA) and Association of Corporate Approved Inspectors (ACAI).

The view of DCLG

While preparing this guidance we have taken into account the [DCLG circular letter 'Conservatories and Porches' issued on 30 July 2013](#). The letter confirms that to benefit from exemption a conservatory or porch;

- Must have a significant proportion of the roof and walls glazed (no % given)
- It must be at ground level
- It must not exceed 30m²
- Comply with relevant sections of Part K
- Be thermally separated from the dwelling
- The buildings heating system must not be extended into the conservatory or porch

The circular letter also stated if the amount of glazing to the walls or roof was significantly reduced the conservatory or porch could no longer be regarded as an exempt conservatory or porch. **The circular letter did not offer guidance as to what constitutes a conservatory but did state it should have a significant proportion of the roof and walls glazed.**

Importantly, the circular letter highlights:

"Where the relevant building control body decides that the extension is no longer an exempt conservatory or porch, regulations 4(1) and 4(3) of the Building Regulations would apply. This would mean that the work itself would need to comply with the applicable requirements of Schedule 1 (regulation 4(1)). It would also mean that the conservatory or porch must be no more unsatisfactory in relation to the requirements in Schedule 1 than before the work was carried out (regulation 4(3))".

Our view

The recent DCLG letter indicated a conservatory must have a significant proportion of the roof and walls glazed to be considered exempt. This further validates the definition of a conservatory as set out by us in our Best Practice Guidance Note MG0010411.

When work is carried out that significantly reduces the proportion of glazing, or level of translucence to the roof, the conservatory or porch can no longer be considered exempt - and we highlight this in [Viewpoint](#), our guide for homeowners looking to switch to a solid conservatory roof.

The extension can no longer be considered of a kind described in Schedule 2 Class 7 and therefore has to comply with the applicable requirements of Regulation 4(1).

In which case the following regulations will apply:

- Regulation 3(c) applies as the work is a material alteration, but not a material change of use. To better understand the intent it is suggested the work is classed as a structural alteration to the roof, and as stated in the DCLG letter it is for the “work itself” i.e. the roof to comply with the regulations.
- Regulations 4(1) confirms building work shall be carried out so that it complies with the applicable parts of Schedule 1.
- Regulation 4(3) informs that after building work has been completed the work shall comply with the applicable requirements of Schedule 1 or where it did not previously comply it shall be no more unsatisfactory than before.
- Regulation 23 deals with requirements for the renovation or replacement of thermal elements
 - (1) Where the renovation of an individual thermal element—
 - (a) Constitutes a major renovation; or
 - (b) Amounts to the renovation of more than 50% of the element’s surface area;

the renovation must be carried out so as to ensure that the whole of the element complies with paragraph L1(a)(i) of Schedule 1, in so far as that is technically, functionally and economically feasible.

- (2) Where the whole or any part of an individual thermal element is proposed to be replaced and the replacement—
 - (a) Constitutes a major renovation; or
 - (b) (in the case of part replacement) amounts to the replacement of more than 50% of the thermal element’s surface area;

the whole of the thermal element must be replaced so as to ensure that it complies with paragraph L1(a)(i) of Schedule 1, in so far as that is technically, functionally and economically feasible.

The regulations are clear that when you carry out building work to a roof, the roof must comply with the regulations (subject to the caveats of 50% surface area). In other words, the roof must comply with Part L.

What we would like to find on site

The existing roof will either be glazed or polycarbonate and usually have uPVC window and doors. If the roof is glazed,

it is likely the vertical frames will have been designed to carry the roof load. In the case of a polycarbonate roof, the vertical frames may only have sufficient reinforcement to carry that particular load. To assess the suitability of the supporting framework it may be necessary to verify the type and extent of reinforcement on site by either drilling pilot holes or testing with a magnet to test for the incorporation of a steel core.

If there is no reinforcement new window frames may be needed to support the weight of the roof, or additional reinforcement installed abutting the existing frames. The typical loading of an existing glazed conservatory roof (not polycarbonate) is less than 10kN/m. A light-weight composite solid roof is only likely to add an additional 0.5kN/m.

The existing foundations should have trial holes excavated to ensure they are adequate to support the new loading. In most cases a 150mm thick concrete strip foundation or reinforced concrete slab which bears onto original ground will be adequate. Foundations passing over drains, close to tree roots or on filled ground may require further consideration.

What you are likely to be asked for by LABC

We assume that the building will remain thermally separated from the house; the house heating system has not been extended into the building; and suitable isolating valves and controls are installed within the conservatory or porch.

Your local authority building control team is likely to ensure that the roof and supporting structure fully complies with the Building Regulations. They are also likely to view the remainder of the extension as being no worse than before with regard to compliance with the Building Regulations.

The Building Regulations that are likely to apply are:

- Approved Document A - Determination of adequacy of existing foundations by trial hole(s). If suitable vertical supports are not present then either new windows are required that comply with current Building Regulations, or additional structural posts installed.
- Approved Document C – Suitable weatherproofing of roof, abutments and rainwater goods
- Approved Document L - The new roof should comply with current Building Regulations as a new thermal element. The existing walls and floor should be considered as being no worse than before (Reg. 4(3)).

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Technical View

Guidance on creating a consistent approach to dealing with conservatory reroof work under an LABC Registered Detail

LABC has produced this document to assist local authorities in their consideration of applications to replace a translucent conservatory with any LABC Registered Detail for solid proprietary roof systems. It should be read in conjunction with the **current LABC's guidance on solid roofs to conservatories or porches attached to dwellings 1st August 2013**. The guidance has been ratified by the LABC national Technical Working Group and is intended for use by LABC members only. Where work is being carried out in addition to the reroofing other matters may require further consideration.

This addendum is necessary to ensure consistency in interpretation at submission and inspections stages from LA teams. Lack of consistency can cause difficulties for those companies operating on a regional or national basis and result in work lost to Approved Inspectors. This guidance note offers recommendations on how an application should be treated. This guidance is restricted to a structure less than 30m² at ground floor and thermally separated from the main residence with external quality doors.

The release of the **DCLG Circular on 29th July 2013 'Conservatories and Porches'** clarified that certain work to an existing conservatory may no longer benefit from exemption. In particular if it involved a significant reduction in the amount of glazing to the roof or walls. The circular stated: "Where the relevant building control body decides that the extension is no longer an exempt conservatory or porch, regulations 4(1) and 4(3) of the Building Regulations would apply. This would mean that the work itself would need to comply with the applicable requirements of Schedule 1 (regulation 4(1)). It would also mean that the conservatory or porch must be no more unsatisfactory in relation to the requirements in Schedule 1 than before the work was carried out (regulation 4(3))".

Building Regulation 4(1) states any work carried out must comply with the applicable requirements of schedule 1 and 4(3) so that any work must "be no worse than before the work was carried out". In this instance the building

work would be defined as work to the new roof and not the existing structure. Note that Regulation 5 'Material Change of Use' does not apply in any case where an existing exempt conservatory or porch is no longer exempt.

The local authority is recommended to limit its observations and check to:

- The roofs structural design
- How roof loads are transmitted through the existing structure
- Adequacy of foundations
- Resistance of the roof together with any junctions to the existing structure to moisture, ventilation and thermal performance.

It is considered that this work will not affect the existing structure of the conservatory providing the principles above are taken into account. Accordingly the existing conservatory should be no more unsatisfactory in relation to compliance than before the re-roofing work was carried out. As such the application would not require further work to the existing structure such as upgrading of thermal performance to the walls and floors, installation of cavity trays or removal of an existing heating system.

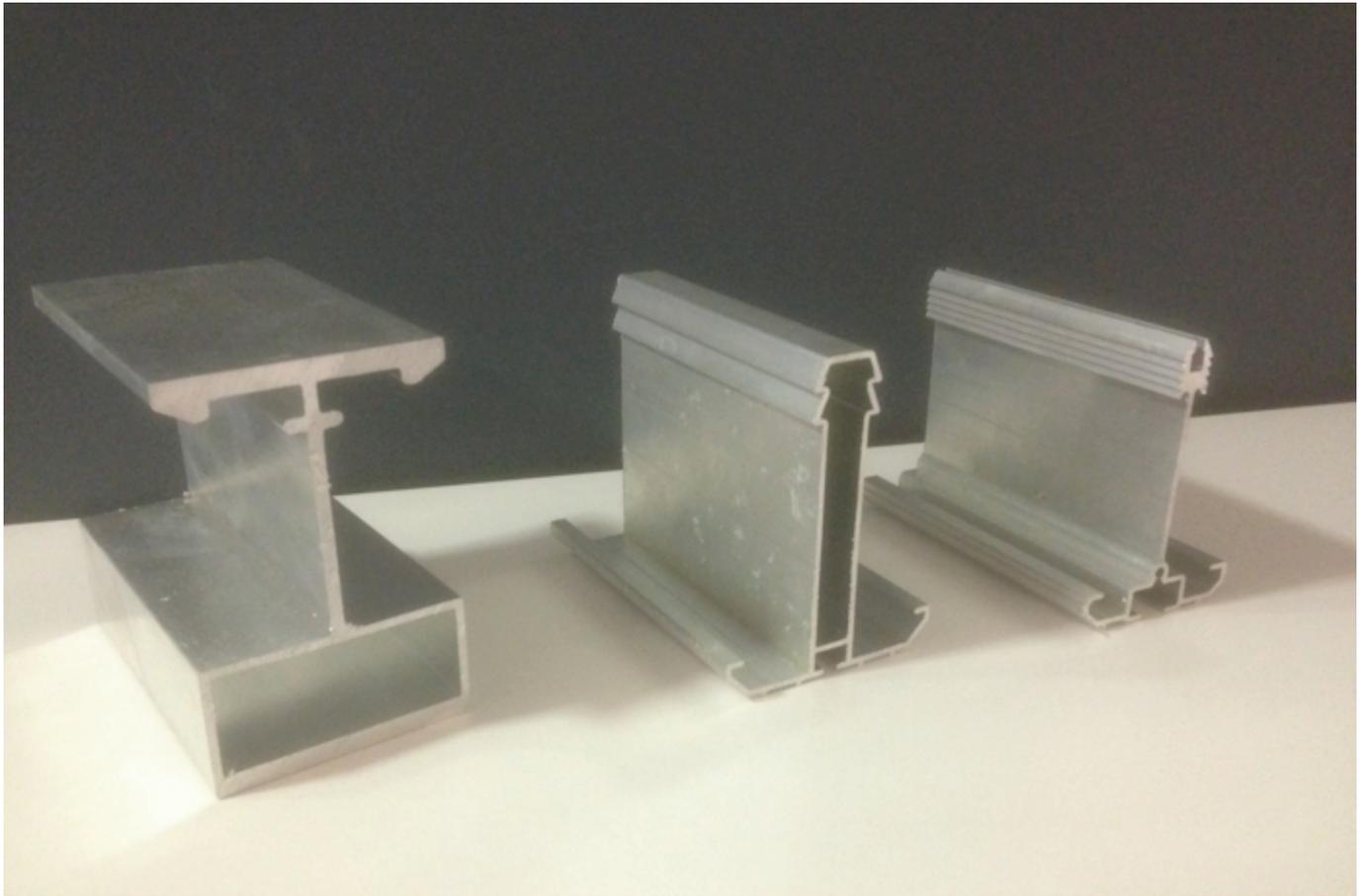
The table below highlights the relevant parts of the regulations that apply and where reliance can be placed on a Registered Detail to demonstrate compliance.

In addition the following points illustrate some practical solutions to assist in determining how to deal with this type of application

- There is no restriction on the amount of glazing to the walls from what is in place already
- The conservatory should remain thermally separated from the dwelling
- Carry out a visual examination of the existing conservatory to assess for signs of distress/failure in the structure. If none noted it is unlikely the minimal additional load (less than 10% over a typical translucent roof) will cause a failure of the structure to the conservatory. If the structure shows no sign of distress the existing foundations are likely to be adequate to carry the small additional loadings regardless of the depth the foundations have been placed at and no additional requirements should be imposed with regard to foundation depths.
- Assess whether or not the existing glazing/door supports contain steel inserts to spread roof to the floor slab.

App Doc	Element	Comment	Registered Detail Actions	Plan Check Actions	Site Actions	Site 'Yes'	Site 'No's'
A1	Increased Roof Load	Software will design new roof system	YES designed through RD	Seek structural design and verify	Confirm as deposited detail	Check fixings and connection to house	
A1	Load transfer vertically through frame	Presence confirmed design will verify adequacy for load	YES confirmation and design	Seek design verification from installer	Confirm presence of steel supports in vertical units	Check steel runs full length of mullions	Cannot require new windows if supports present
A1	Load transfer through foundations	Trial hole(s) exposed where possible and photographed. Single hole should evidence minimum 150mm thick concrete. Additional holes if in doubt. No cracking or movement should be evident to superstructure.	YES PA will verify adequacy through trial hole photos	Ensure trial hole required to determine adequacy	Confirm adequacy on site. Look for any signs of distress or movement to walls, vertical junctions, flashings etc	Suitable foundations needed *	Cannot prevent if sewer present or existing trees present. LA may wish to advise of potential problem though.
B1	Means of Escape	Not considered as roof only subject to Regulation control	NA	NA	NA		
B2 B3	Internal Fire spread	Linings	YES designed through RD	Check fire classes of products specified	Confirm as deposited detail		
B4	External Fire spread	Suggested by DCLG not necessary. Only applies to elements affected by the work.	YES Not considered a requirement	None	None		Cannot require Fire separation, removal of windows
C4	Resistance to Moisture	Weather resistance, Flashings around pipework	YES designed through RD	Check materials for pitch, flashings	Confirm adequacy	Check roof pitch suitability	Cannot require cavity tray retrospectively
D	Toxic substances	None used	YES designed through RD	Radon / Methane NA to existing structure	NA		Cannot require new barriers
E	Resistance to sound	None considered	NA	NA	NA		
F	Ventilation		YES designed through RD	Check existing provision and any requirement for roof void ventilation	Confirm adequacy	Verify on site	
G	Sanitation	Not considered	NA	NA	NA		
H3 H5	Drainage (SW)	Controlled discharge	YES designed through RD	YES designed through RD	Confirm as deposited detail	Check adequate discharge	Cannot control other existing drainage
J	Heat Producing Appliances	Protection to flues inc flashings	YES designed through RD	YES designed through RD	Confirm adequacy and protection on site	Ensure not within new space and fire collar if penetrates new roof	
K4 K5	Glazing	All glazing below 800mm, & below 1500mm in doors & adjacent panels within 300mm.	NA unless units changed	NA unless units changed	NA unless units changed		
L1B	Conservation of fuel	To roof only	YES designed to BS EN 10211 through RD.	Check designed to BS EN 10211 if steel profiles rather than BS EN ISO 6946	Confirm as deposited detail	Look for tightly fixed insulation and check screw fixings not thermal bridging	Does not apply to existing walls, floors, windows or doors
M	Access for All	None considered	NA	NA	NA		
P	Electrical safety	Lighting within roof	YES designed through RD	Seek ADP or BS 7671 certification from	Seek ADP or BS 7671 certification from	Ensure insulation and vapour barrier not	

Examples of typical roof profiles used for conservatories



The right and centre profiles are typically used for polycarbonate and glazed conservatory roofs. The left hand profile is used with a lightweight roofing system.

LABC is a membership organisation representing all local authority building control teams in England and Wales who work with industry and building professionals to ensure compliance with Building Regulations. We are a not-for-profit organisation dedicated to promoting public sector expertise.

There are 3,000 surveyors working in local authority building control providing a consistent national service that is delivered at a local level. To find your local authority building control team please use our postcode search by visiting our website: www.labc.co.uk

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