

The Architect's Column

Nick Belderbos, Chartered RIBA Architect and Director of Heswall based **architects-direct.com**, answers your questions and offers advice.

Let there be Light

Q. We would like to extend at the rear of our property, possibly as a two storey extension. The property currently benefits from good light throughout and we are concerned that this will result in loss of light in the centre of the property. How can we ensure that the light is maintained.

A. Natural light is top on the agenda for the majority of our clients and in most cases extensions will have an impact on light.

Rear or Front extensions become deeper in plan form. Although this assists with circulation by reducing the requirement for corridors it also has the potential to create a darker central core.

Side extensions will often result in a shallower building plan which allows more light into the habitable rooms. On the negative side this plan form results in poorer circulation and longer corridors which also have the potential to be dark.

Extending a property will always result in some compromise due to the constraints of the existing building. The aim is to review all the options and find solutions to ensure that the compromises are kept to a minimum.

A number of standard and bespoke products are available to improve the natural light within a property. These coupled with carefully considered design and layout will allow light to be brought back into a property in a number of different ways.

Roof Lanterns

These are usually fitted within flat roofs on single storey extensions to create an orangery style roof. They are available as traditional framed lanterns or contemporary frameless systems, to suit the style of your property or extension, and can be bespoke or 'off the shelf'. Located towards the existing property they allow light to flood back in to where it is most needed.



Traditional framed

Contemporary frameless

Rooflights

Generally fitted within pitched roofs these come in a number of different forms and sizes. A light airy feel can be achieved by allowing the ceiling to follow the roofline and installing rooflights. Rooflights that fit flush to the tiled finish can provide an elegant external appearance.



Frameless flush

Follow roofline internally

Sun Pipes

Where it is not possible to install a roof light or window, sun pipes allow natural light into potentially dark spaces. A dome fitted to the roof collects light which is reflected through a mirrored tube into the property. These are particularly effective for internal bathrooms, landings, corridors and storage spaces.

Sun pipes can be used to light rooms on the ground floor of a two storey property, providing there is suitable cupboard space within the first floor for the tubes to pass through.

Sun pipes can also be combined with ventilation to provide both natural light and ventilation.



Sun pipe fitted to roof

Combined sun pipe and vent

Window Shape and Orientation

Changing the window shape and orientation can have a dramatic impact on the light entering a property. A full height vertical window will allow light at floor level. This gives a greater sense of light than is achieved with a standard window cill and also adds more character to the external elevations. These can also be combined with a Juliette balcony at the first floor.

For rooms requiring increased privacy long horizontal windows at ceiling level for the full length can be utilised. These can be useful on side elevations.

Double Height and Gallery spaces

Design new properties or adapt existing buildings to create double height halls and gallery landings. This coupled with installation of roof windows will allow light to flood through all the floors of a property. This is particularly effective where a central hall has no other natural daylight.

Design Considerations

When designing the extent and type of glazing required to provide the necessary light to all parts of a property careful consideration must be given to:

- **Heat loss and Heat Gain** - Specialist solar and insulated glazing systems could be used.
- **Glare** - Internal and external blinds or specialist glass could be installed.
- **Maintenance and Cleaning** - To minimise the frequency of cleaning, self cleaning glass can be fitted to rooflights and lanterns.
- **Overlooking and Privacy** - Windows should be orientated, sized and positioned to avoid your property overlooking neighbours and vice versa. Where necessary sandblasted glass can allow light in while obscuring views in and out.

There may be Planning and Building Regulations issues that will require approval depending on the nature of the work.

Useful websites:

Rooflights and Roof Lanterns: www.therooflightcompany.co.uk
Contemporary and traditional lanterns: www.visionrooflights.co.uk
Rooflights: www.velux.co.uk
Glazing types: www.pilkington.com
Sun pipes: www.monodraught.com

For more advice visit the **blog** page of our website www.architects-direct.com, send your queries to nick@architects-direct.com or phone 0151 342 5455