

## Safety in Design

The WHS regulations came into force in January 2012 and are supported by codes of Practice with the [Code of Practice, Safe Design of Structures](#) coming into force in May 2012.

*Rossway Safety Systems* can assist designers in this process, by in the first instance identifying the safety issues, specifically relating to roofwork. Once these risks are identified we can advise on how to eliminate or reduce them by specifying safer products and installation techniques.

[Click here to contact Rossway Safety Systems for a Seminar presentation.](#)



Rossway Safety Systems will provide safety Seminars to various organisations on a generic or project specific basis.

### **Duties of the Designer**

There are many parties who undertake the role of a “Designer” as identified in [Code of Practice, safe design of structures](#) for instance a cost consultant may take the role of designer where he may select a product on financial grounds, but in this regard he must consider the safety implication. Inevitably the financial implications of any design decision are an important factor and the code does not state that decisions are to be made irrespective of cost, but it does state that there is a duty to specify systems and products that are “reasonably practical” to eliminate or minimise risk. So if a product or system is

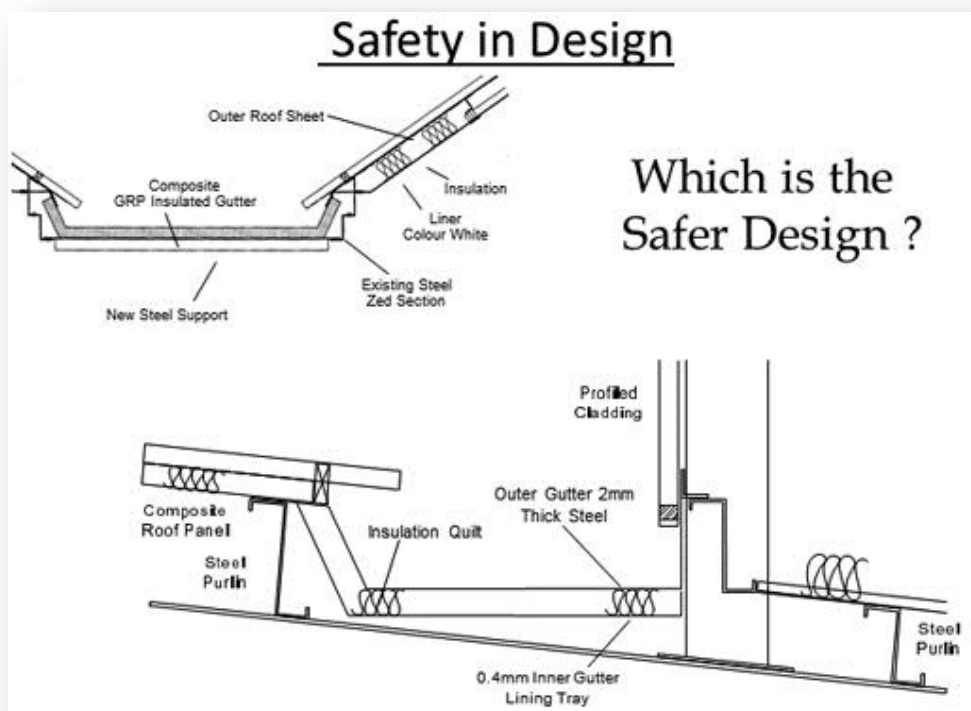


## Designers duties to other designers in the design process

The design process in any construction project is complex and involves input from many parties. Where more than one person has a duty for the same matter, each person retains responsibility for their duty and must discharge it to the extent to which that person has capacity to influence the matter.

So if a client were to propose a specification for, say a roof installation, which involved installing components that involved high risk and there was an alternative specification, that was “reasonably practicable” to adopt, then members of the design team would be under an obligation to highlight this with a view to ensuring the safer design solution were adopted.

## What is safe Design?



There are some products that are inherently safer to install than others. For instance for roof products that have components that are fragile, whereby a person could fall through them during the installation process, should not be selected if alternative products that are not fragile could be selected. Furthermore there are many roof systems that “non fragile” when completed, however they may contain products that are fragile during the installation process and the roof system only becomes non fragile when the complete system is installed, therefore the danger is present during the installation process.

For this reason products that can be provided as composite prefabricated components, for instance composite roof panels would usually be considered lower risk than on site multi layer roof constructions.

When specifying roof systems due regard needs to be taken of the specific installation circumstances, particularly regarding material distribution, for instance prefabrication may be considered the preferable solution but site layout and logistics may not be able to accommodate the cranes/ lifting equipment.

### **Checklist for Designers when specifying Roof Constructions**



Designers should consider the checklist below and ensure that these are incorporated into the project specification so that all parties in the design process and those involved in the construction process are aware of their duties and obligations.

- The effect of weather conditions on the installation process. In wind conditions, flexible sheet material may present hazards that more rigid materials may not. Certain criteria has been established whereby all laying and handling of lightweight material such as glass fibre, insulation boards, profiled sheet metal etc. should cease when wind speed reaches 17 mph (gusting to 26 mph or over) (source Roofing and Cladding in Windy conditions National Federation of Roofing Contractors UK)
- Where rain affects the safety of installation then designers must specify whether materials can be installed in those conditions.
- Where temperature drops to below freezing then designers should specify that work ceases if a hazard is introduced.
- Due consideration to be given to the product loading which may influence the sequence of construction installation.



- If a product specification requires less temporary works (access equipment / scaffolding etc.) than another, then the specification requiring less temporary works should be considered preferable.
- The fragility of the products specified should be considered and fragile components should be avoided. It must be made clear when the specified product is non fragile as this may be at a certain stage in the construction process.