



Health and safety by design

Designers should take worker and building occupant health and safety into consideration at the beginning of the design process for any building.

YOUR BUILDING DESIGNS can affect the health and safety of workers constructing, maintaining and demolishing buildings. This is recognised in the Health and Safety at Work Act, which was introduced in 2015.

The Act sets out the principles, duties and rights in relation to work health and safety. Although it focuses on the design of workplaces rather than domestic dwellings, it is important legislation to keep in mind when designing any type of building.

What is health and safety by design?

Health and safety by design is the process of using design to manage health and safety risks throughout the life cycle of structures, plant, substances or other products. In the context of designing a building, this means considering the health and safety risks throughout the construction, lifetime use, maintenance, and demolition and disposal of a building.

Designers can influence safety

Designers are in a prime position to make buildings - and working on buildings - healthy



and safe from the start of the design process. Their decisions will influence how a building can be constructed, the experience of people who use the building and how easy it will be to dispose of the building.

Making changes at the concept and design phase to improve safety is not only more effective, it can also reduce construction and maintenance costs.

Consider the whole life cycle

For each phase of a building's life, there will be different hazards for people to consider. It helps to break down the different phases and ask yourself how your design will affect health and safety and whether there are any improvements you can reasonably make.

Can builders construct your design safely?

Worksites already contain health and safety hazards, and site-specific or design-specific details can introduce new or unexpected hazards.

Consider talking to the building contractor, if possible, about how they plan to construct the building and any hazards they anticipate. You may spot things in your design you didn't see before and have the opportunity to make improvements.

Will the home be safe and healthy to live in?

The Building Code has many features that

improve the health and safety of buildings for occupants, such as insulation requirements and barriers on balconies. However, the minimum standards of the Building Code are just that - minimum standards. Are there further improvements you could make?

Can the building be safely maintained?

For example, are there lightbulbs or other features that require a ladder to access, introducing the hazard of falling from height? Is there another way you could design features to reduce hazards?

Can the building be safely demolished?

For example, we have stopped using asbestos due to unacceptable health risks to workers, when asbestos is cut, removed or destroyed.

More guidance is available

WorkSafe has developed a good-practice guideline - *Health and Safety by Design*. It includes information on how the Act applies to designers and guidance on the principles and considerations of designing with health and safety in mind.

The case studies provided mainly focus on infrastructure. However, the key principles are transferable to any type of design and can add value to your practice.

Health and Safety by Design can be downloaded from worksafe.govt.nz. ◀

Quiz

1. Why is it important for designers to consider health and safety?
 - a. It is in the LBP rules.
 - b. Their design decisions will impact the health and safety of other workers and building inhabitants.
 - c. It isn't important - it is up to builders to keep themselves safe.
2. Why might you benefit from discussing the design with a building contractor?
 - a. There is no benefit - they do not have design expertise.
 - b. You can tell them how to build the design.
 - c. You might get a new perspective on the design and come up with improvements.
3. If you design to the Building Code, your building will be safe and you don't need to worry about health and safety. True or false?
 - a. True. If you design to the Building Code, the building will be safe.
 - b. False. The Building Code is a good start, but it won't catch every hazard.

Answers: 1. b 2. c 3. b