

Domestic basement construction projects:

What you need to know as a busy builder

These are the essential health and safety tips you should follow, even if you don't directly employ the people working on your site.

Constructing a basement underneath a domestic property is specialised high-risk work that can catastrophically affect the stability of existing buildings.

The project architect and engineer must provide detailed plans of the finished basement.

The builder must use these plans, together with knowledge of the ground conditions on site, to make sure the construction work is planned and undertaken safely. This includes identifying any temporary works such as trench supports or propping arrangements that are required to ensure the stability of any excavation or existing buildings.

Temporary works are the responsibility of the builder and should be planned by a competent person, normally known as the temporary works engineer.

Before work starts

- Appoint a competent temporary works engineer to design the propping, shuttering and other support needed to prevent collapse of any excavation or building.
- Devise a construction sequence that includes when and how you will install any temporary works required.
- Identify how you will provide and maintain safe access for plant and personnel, removal of excavated material and ground water.
- Decide if the work area is a confined space – provide forced ventilation if necessary.
- Identify where underground services are and how you will protect them.

When work starts

- Install the required temporary works and maintain them according to the temporary works engineer's instructions.
- Support all sides of every excavation to prevent ground or building movement and collapse.

- Provide suitable fixed access into the basement and access shafts/trenches – ie tied ladders as a minimum.
- Provide sturdy barriers to stop people, plant or materials falling into excavations.
- Do not leave workers to make important decisions on their own – experienced supervisors and the temporary works engineer should make key decisions.

This is just a summary – you can find out what else you need to know about health and safety by visiting www.hse.gov.uk/construction/index.htm.

What happens when health and safety is ignored

Case 1

This excavation for an underpin in a basement undermined the wall, which then collapsed on the worker, crushing him to death.

The designer and contractors were prosecuted, fined a total of £95 000 and ordered to pay costs totalling £60 000.



Case 2

A large central mass of soil was left unsupported in this basement conversion. It collapsed on a worker, killing him.

The contractor was prosecuted, fined £100 000 and ordered to pay costs of £61 590.



(Dummy used to show scale of unsupported soil.)

Further information

For information about health and safety, or to report inconsistencies or inaccuracies in this guidance, visit www.hse.gov.uk/. You can view HSE guidance online and order priced publications from the website. HSE priced publications are also available from bookshops.

This leaflet contains notes on good practice which are not compulsory but which you may find helpful in considering what you need to do.

This leaflet is available at: www.hse.gov.uk/pubns/cis66.pdf.

© Crown copyright If you wish to reuse this information visit www.hse.gov.uk/copyright.htm for details.
First published 03/12.

The Working Well Together campaign aims to improve health and safety in the construction industry, particularly in small and micro businesses. For more information visit www.wwt.uk.com

