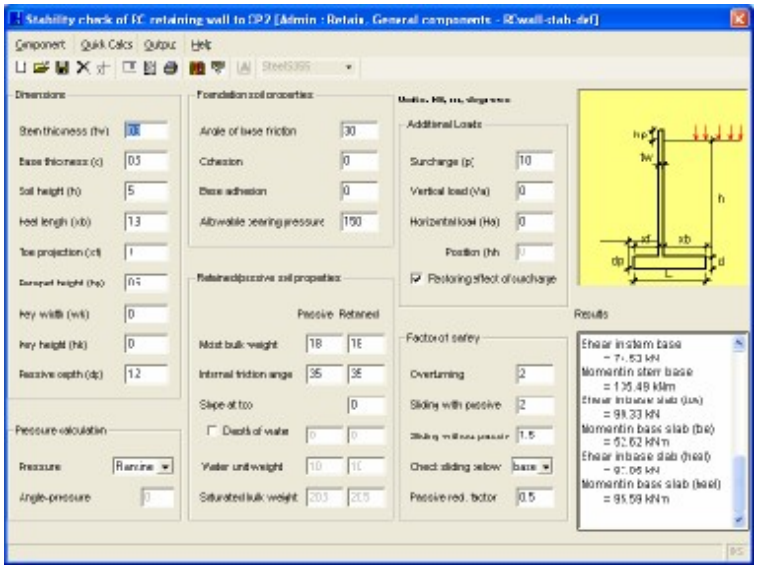
# Smart Engineer - Retaining Wall Templates

Welcome to the SMART Engineer Retaining Wall templates. These are a suite of four templates to enable stability and strength checking of Reinforced Concrete and Stepped Masonry retaining walls.

They offer the following benefits.

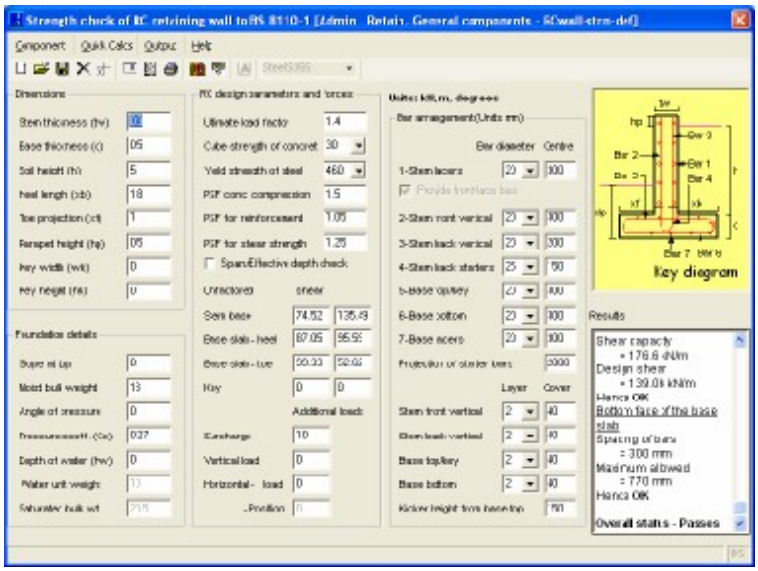
## Reinforced Concrete Cantilever Retaining Wall

### Stability check to CP2




- Optional key at toe
- Pressure calculation according to Rankine's or Coulomb's method
- Optional sloping soil surface
- Optional depth of water on active and/or passive faces
- Optional surcharge, horizontal and vertical loads
- Output shows, factors of safety against overturning and sliding, bearing pressures and un-factored moments and shears in stem, toe and heel

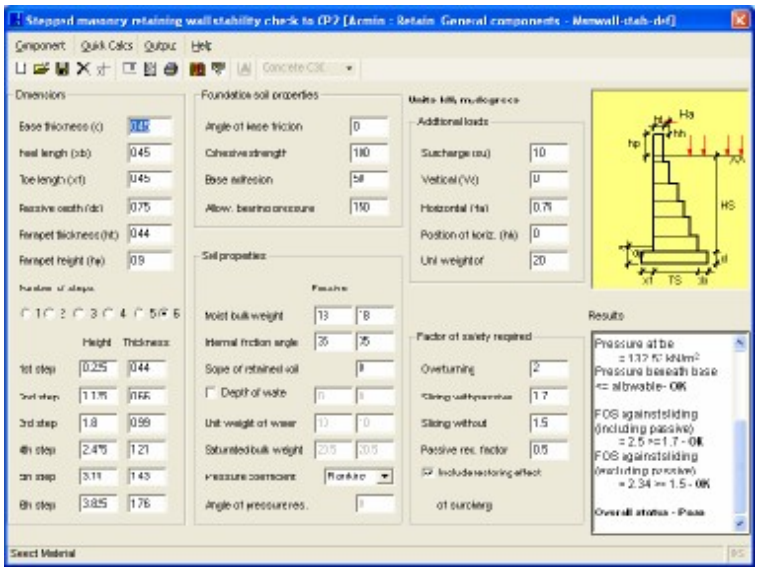
### Strength check to BS8110-1




- Check for adequacy of specified reinforcement in stem, bases and optional key
- Check on curtailment of starter bars
- Optional span/effective depth check.

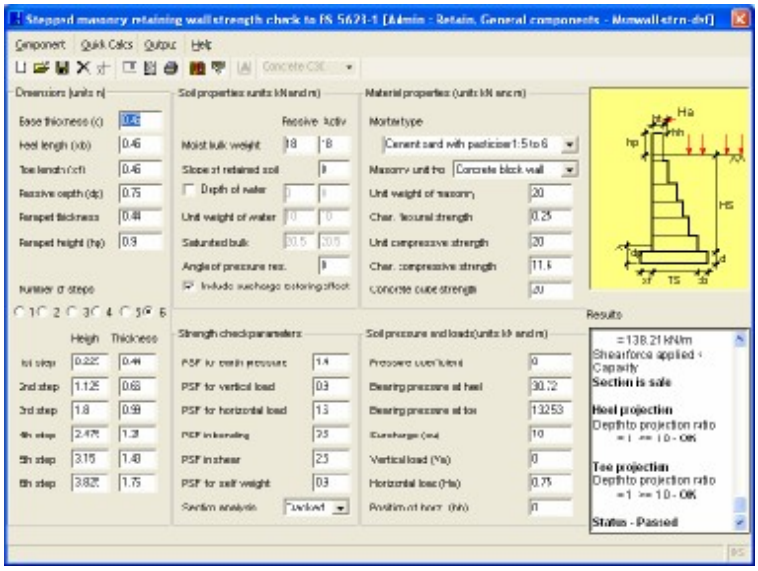
## Stepped Masonry Retaining Wall

### Stability check to CP2



- Allows up to six steps in masonry wall
- Pressure calculation according to Rankine's or Coulomb's method
- Optional sloping soil surface
- Optional depth of water on active and/or passive faces
- Optional surcharge, horizontal and vertical loads
- Output shows factors of safety against overturning, and sliding and bearing pressures.

### Strength check to BS5628-1



- Includes database of BS5628-1 mortar and masonry unit types
- Optional checks on cracked or un-cracked section at each step

## General

- All templates offer summary and detailed results output
- All templates allow control over grade/strength of concrete steel or masonry unit
- All templates include Help commentary