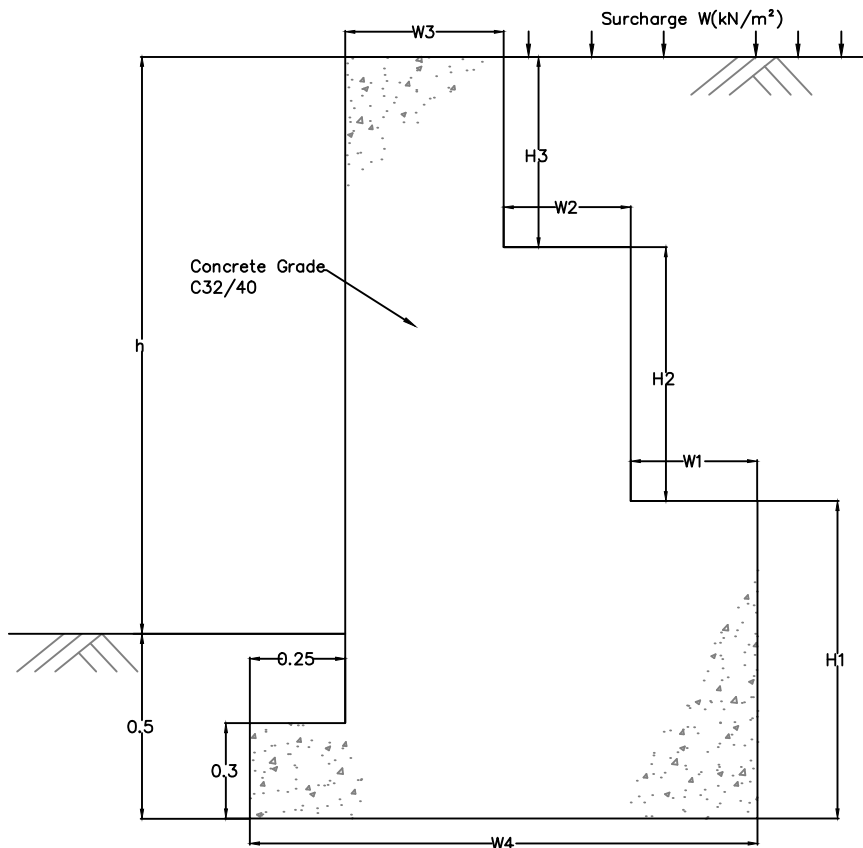


| Rev. | Amendments | Date | Made By | Chk'd By |
|------|------------|------|---------|----------|
| | | | | |
| | | | | |



Wall designed to EC7.

Assumptions made for this design :

- Angle of friction on base = 35 degrees
- No fence or parapet is fixed to the wall
- Water table is below formation level
- Bearing capacity of the ground below the foundation is 150kN/m².

The ground below the foundation should be checked that the angle of friction is at least 35 degrees and the bearing capacity is at least 150kN/m².

The dimensions shown in the table are only applicable to walls at locations that meet the above criteria. If these criteria are not met then the walls should be designed to suit the prevailing factors.

All mass concrete retaining walls must also include:

- A back of wall drainage system;
- Weepholes;
- Joints at appropriate spacings;
- Finishes to highway specification standards.

| Retained Height h (m) | Surcharge W(KN/m ²) | W1 (m) | W2 (m) | W3 (m) | W4 (m) | H1 (m) | H2 (m) | H3 (m) |
|-----------------------|---------------------------------|--------|--------|--------|--------|--------|--------|--------|
| 1.80 | 12 | 0.40 | 0.45 | 0.50 | 1.60 | 0.90 | 0.80 | 0.60 |
| | 5 | 0.30 | 0.30 | 0.50 | 1.35 | 0.90 | 0.80 | 0.60 |
| | 0 | 0.20 | 0.25 | 0.40 | 1.10 | 0.90 | 0.80 | 0.80 |
| 2.10 | 12 | 0.50 | 0.50 | 0.50 | 1.75 | 1.20 | 0.80 | 0.60 |
| | 5 | 0.35 | 0.40 | 0.50 | 1.50 | 1.20 | 0.80 | 0.60 |
| | 0 | 0.25 | 0.30 | 0.50 | 1.20 | 1.20 | 0.80 | 0.60 |
| 2.40 | 12 | 0.60 | 0.60 | 0.50 | 1.95 | 0.50 | 0.50 | 0.50 |
| | 5 | 0.45 | 0.45 | 0.50 | 1.65 | 0.50 | 0.50 | 0.50 |
| | 0 | 0.35 | 0.35 | 0.50 | 1.45 | 0.50 | 0.50 | 0.50 |
| 2.70 | 12 | 0.65 | 0.70 | 0.50 | 2.10 | 1.40 | 1.10 | 0.70 |
| | 5 | 0.55 | 0.55 | 0.50 | 1.85 | 1.40 | 1.10 | 0.70 |
| | 0 | 0.45 | 0.45 | 0.50 | 1.65 | 1.40 | 1.10 | 0.70 |
| 3.00 | 12 | 0.70 | 0.80 | 0.50 | 2.25 | 1.60 | 1.20 | 0.70 |
| | 5 | 0.60 | 0.65 | 0.50 | 2.00 | 1.60 | 1.20 | 0.70 |
| | 0 | 0.50 | 0.50 | 0.50 | 1.75 | 1.60 | 1.20 | 0.70 |

Typical sizes for various wall heights.

TYPICAL MASS CONCRETE RETAINING WALL (Height 1.8m – 3.0m)

COMMON STANDARDS FOR WALES
HIGHWAY DESIGN GUIDE

| | |
|----------|---------|
| Drawn | MT |
| Checked | SZ |
| Date | Feb '20 |
| Scale | N.T.S. |
| Drg. No. | 603 |
| Rev. | |