

Elite Blocks - Stockbay Walls Inspection Guidance

November 2017

ELITE PRECAST

1. *Introduction:-*

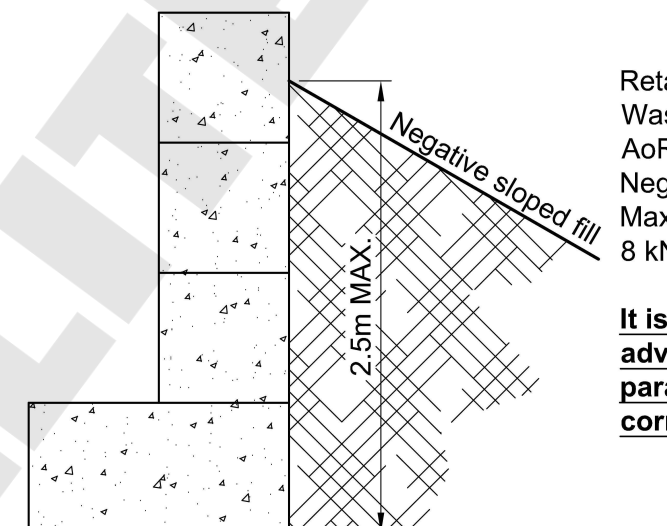
To ensure the structural integrity of the block walls are maintained we recommend that they are inspected regularly to monitor their condition and to assess any damage that may have occurred. A correctly designed, installed and maintained block retaining wall will not exhibit any structural instability during its lifetime; however, overloading, excessive impacts or incorrect installation may result in partial collapse of the walls.

2. *Inspections Generally:-*

It is recommended that inspections be carried out on a monthly basis, however if an excessive impact has occurred then this should be reported immediately and an assessment made. A suitably experienced Structural Engineer should be consulted if there is any doubt as to the walls structural integrity. Inspections should be carried out when the immediate area is safe, i.e. during non working hours or when vehicle movement has been stopped in the area of the inspection.

3. *Retained Material Assessment:-*

The wall should have been designed to retain a specific material with a maximum density, at a maximum retained height and slope. It should be checked that these parameters are not being exceeded.



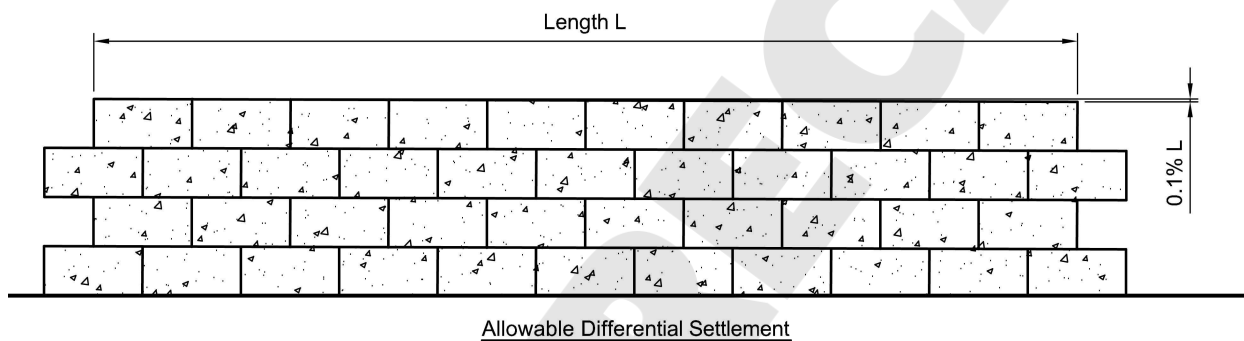
Retained Material:-
Waste to 2.5m High.
AoR = 35 degrees
Negative Slope
Maximum Density
8 kN/m³ (800 kgs/m³)

It is up to the client to advise if these parameters are not correct.

Design Criteria - Example

4. *Allowable Foundation Settlement:-*

Due to the nature of the block retaining wall a greater level of differential settlement can be tolerated than that of general buildings for example. The recommended allowable differential settlement of the walls along their length would be approximately 0.1% of the length of wall in question.



5. *Foundation Movement:-*

If the wall is insufficiently supported due to bad ground conditions then partial or total collapse of the wall could occur. It is important that settlement or deformation of the foundation or slab beneath the wall is immediately addressed and a suitably experienced Structural Engineers advice should be sought. If the wall is supported on a concrete yard slab then this should be inspected for signs of cracking that may indicate possible movement and ground instability, any cracking should also be investigated by a suitably experienced Structural Engineer.

6. *Block Joints:-*

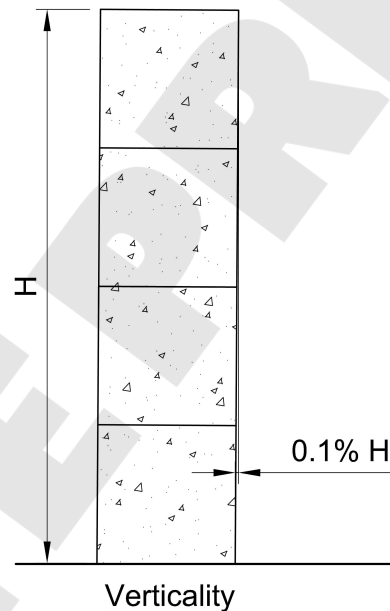
Check that the joints have not noticeably pulled apart, the joint gaps should be within the region of 0-10mm. It should be noticed that material may wedge itself between the joint gaps and act as a wedge, slowly driving the blocks apart with time. Block joints should be regularly inspected and cleaned out if necessary to prevent this from occurring.

7. *Block Condition:-*

Check blocks have not been impacted to such an extent that the face of the blocks are crumbling away. If the damage extends to more than 30mm deep across more than 50% of the block area, the block should be considered damaged and replaced as soon as practical.

8. *Verticality:-*

The verticality of the wall should be checked, if the wall is out of vertical by more than 0.1% of its height then it should be considered unsafe and measures should be implemented to re-build and straighten the wall. Investigations should be carried out to identify the possible causes of the lean, whether it be excessive impacts, overloading, or instability of the foundation.



9. *Signage:-*

Ensure that the correct signage regarding allowable retained material, maximum height etc. is in place.