



The Single Bore Multiple Anchor (SBMA) System

The SBMA system involves the installation of a multiple of unit anchors in a single borehole. The unit anchors are located at staggered depths in the borehole and transfer the load from each unit in a controlled manner to a discreet length of the borehole. The system ensures a uniform mode of load transfer to the ground over the entire fixed length and a gross increase in efficiency in the mobilisation of ground strength.

The SBMA allows the utilisation of an almost unlimited fixed length over which the load may be transferred. Research into the SBMA system indicates an increase in the ultimate load capacity in excess of 200% over the loads achieved using conventional anchors.

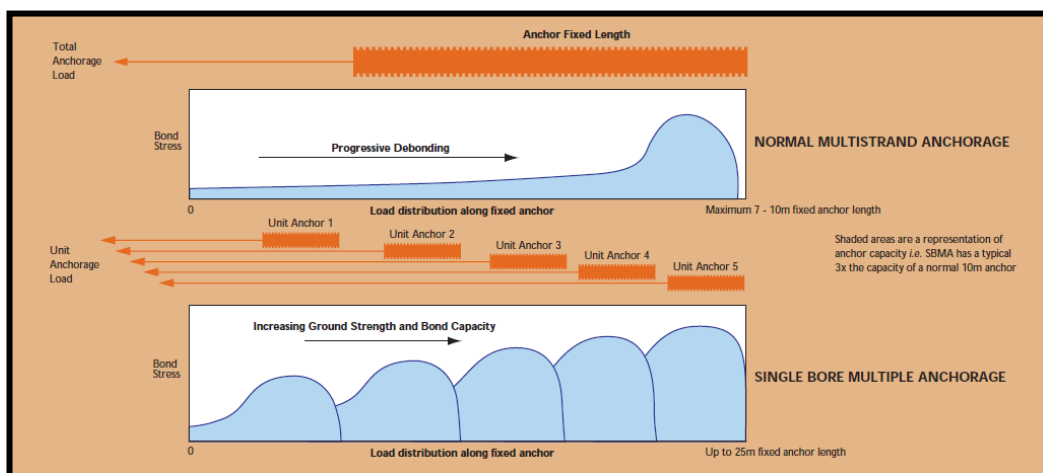
Why should they be used?

The SBMA system is an anchoring technique developed to insure/provide a more robust anchoring solution into varied soil / weak rock conditions where experience has shown conventional ground anchor systems fail to provide adequate load transfer.

Where can SBMA systems be implemented?

SBMA's can be used in most ground conditions, particularly advantageous in ground environments that do not favour conventional ground anchoring techniques. SBMA's can be provided to generate increased load capacities in clays, mixed cohesive soils, granular soils and weak rock.

The SBMA has the capability to transfer loads throughout various strata encountered in individual locations. Utilising SBMA technology, load carrying capacity can safely be achieved in varying geological strata encountered within the same borehole (each unit anchor being individually designed).



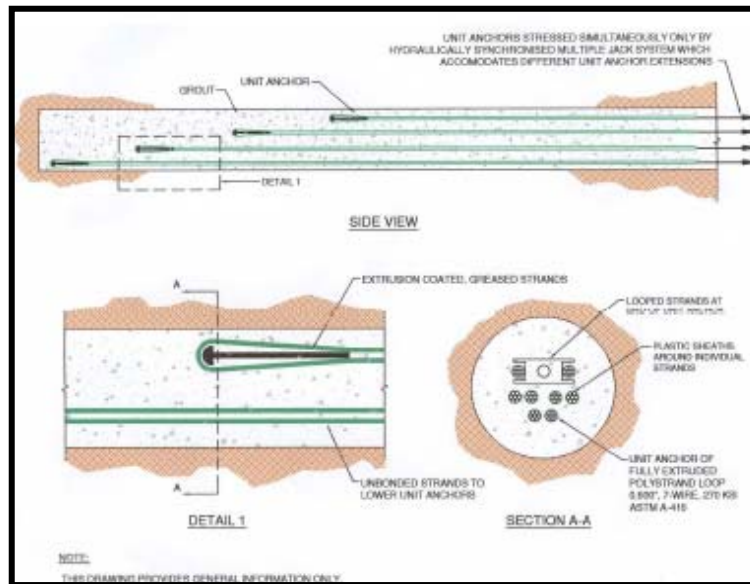
Comparison of load transfer and capacity of a Normal Anchor and Single Bore Multiple Anchor.





Fully Removable Anchors

Utilising technology developed from the SBMA system, the Fully Removable Anchor system permits complete removal of the strand from the borehole at the end of the designed service life. All that is left within the ground are small 'fist' sized saddles and plastic components together with the grout column; material which would pose no problem for a future adjacent construction activity.



Use of the removable ground anchors are being driven in Europe and the Middle East by stricter construction constraints requiring full removal of temporary anchors from adjacent properties. This could result from current or future construction works or where adjacent land is not owned by the client. Removable ground anchors removes the legacy left by temporary ground anchors techniques.

