premier guarantee®

CHECKLIST

9 STEPS TO ENSURE VIBRO PILING SUCCESS

Please note: Foundation construction must comply with Building Regulation Requirements A1 Loading & A2 Ground movement.

1. DESIGN	The design of the foundations must be undertaken by an Engineer who is independent of the Specialist Vibro Contractor.	✓
2. SITE INVESTIGATION	A suitable site investigation should be commissioned, and all ground hazards identified.	✓
3. ENGINEER ASSESSMENT	The Engineer should assess the ground and be satisfied it is suitable for treatment. The following items should be taken into account • The type of soil, its strength, particle size, plasticity etc. • The variability of the soil across the site and with depth. • The presence of made ground or fill, (voided, degradable, unconsolidated). • The presence of any soluble soils or contaminative substances or gases. • Presence of a water table, and whether it fluctuates (tidal?). • The influence of any vegetation. • The existence of previous buildings, with associated underground obstructions, services or drains. • Partial treatment of made ground. • Stone columns acting as vertical drains or seepage paths for ground gases. • Changes in the profile of the natural ground, i.e., edge of a quarry. • Changes in the water table affecting adjacent buildings. • Regrading and/or disturbance of the ground by excavations after treatment. • Use of soak aways or surface water sewers. • Limitations on the building configuration, i.e. vulnerability of long blocks. • Proximity of new drainage and service trenches. • Building design to take account of predicted ground movements (spacing of movement joints, bed joint reinforcement, and type of masonry mortar).	✓
4. CONFIRMATION OF METHODS	Both the Engineer and Specialist Vibro Contractor shall confirm in writing that the site is suitable for the proposed ground improvement system.	✓
5. CONSTRUCTION	The stone fill used for forming columns must be suitable for vibratory ground improvement and compatible with the ground conditions. Stone fill should be clean, hard and inert. Natural gravel or crushed rock gravel of nominal single size, within a range 20 -75mm, will normally be acceptable.	✓
6. SITE INSPECTION	The Engineer should visit the site and provide competent supervision throughout the ground treatment process. He should give consideration to a) the location, depth and alignment of the stone columns, and b) unforeseen circumstances.	✓
7. INSITU TESTING	The Engineer shall require the Specialist Vibro Contractor to verify that the ground treatment is satisfactory. This should take into account suitable insitu testing. The testing needs to be compatible with the nature of the ground, quality of the site investigation, depth of treatment and foundation design. On completion of the treatment, the Engineer should satisfy himself that the treated ground has achieved the anticipated improvement in bearing capacity and settlement required by the design. Following this, he should provide written confirmation to both the Developer/Builder and Warranty provider.	✓
8. DISTURBANCE	The Developer/Builder and Engineer should ensure that the treated ground is not disturbed by subsequent excavations, i.e. sewer trenches.	✓
9. COMPLETION	On completion of works the improved areas should be subjected to insitu testing.	✓

See Chapter 5.1.5 of the Premier Guarantee Technical Manual for further information.