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HELICAL DISPLACEMENT INCLUSION (HDI)

Helical Displacement Inclusions (HDI's) transfer loads through weak strata to underlying firm soils. This is a ground improvement technique in which rigid grout or concrete inclusions act as a stiffening reinforcement in conjunction with a load transfer platform in a range of poor ground conditions.





DESCRIPTION

HDI's are stiff ground improvement elements comprising a rigid grout or concrete body working in conjunction with a load transfer platform installed immediately below the slab/shallow foundation elements. They provide a practical and cost-effective solution to sites that are underlain by low strength soils or where enhanced bearing capacity is required with associated settlement control.

The provide a development platform on which shallow foundations or ground bearing slabs can be constructed. HDI's can be used across various sectors including commercial, industrial and infrastructure projects.



APPLICATIONS



Industrial



Commercial



Infrastructure

ADVANTAGES



Quick installation



High settlement control



Minimum vibration



Cost effective



Minimal spoil

INSTALLATION

When HDI's are installed, a reinforcement element is introduced to the soil mass in the form of rigid concrete inclusions up to 750mm in diameter. A displacement auger penetrates the working platform and underlying soil to a predetermined design depth.

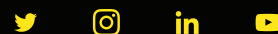
Working in conjunction with a load transfer platform the technique reinforces the soil by means of creating a composite foundation system in which the loads applied are distributed between the soil and the inclusion limiting the settlement as a result.

Concrete is then pumped in to support the bore. Everything is monitored and logged by our purpose-built rig.

TECHNIQUE CAPABILITIES

SPECIFICATION	FOUNDATION TYPE	FROM	TO
Standard inclusion size		250mm	750mm
Typical bearing capacity	Slab foundation	20kPa	150kPa
	Pad foundation	100kPa	250kPa
Practical depth		6m	25m

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