TERRADRIVE
PRODUCT PORTFOLIO

PRECAST HOUSE FOUNDATIONS

PRECAST CONCRETE PILING

LOW VIBRATION PILING

RESTRICTED ACCESS PILING

STEEL BEARING PILES

1800 PILING
FREEFONE 74546 4

Enterprise House, O'Brien Rd., Carlow, Co. Carlow
t +353 (0)59 9164419 f +353 (0)59 9164420 e mail@terradrive.ie w www.terradrive.ie

TERRADRIVE
PILING AND FOUNDATIONS LTD.

Risks Associated with Piling

1800 PILING
FREEFONE 74546 4

Enterprise House, O'Brien Rd., Carlow, Co. Carlow
t +353 (0)59 9164419 f +353 (0)59 9164420 e mail@terradrive.ie w www.terradrive.ie

Risk is a constant companion on site. This is a brief guide to some of the risks associated with piling operations.

While piling practices and equipment have improved greatly over the past number of years, risk is a constant companion on the construction site.

Having established that a project requires a piled foundation, it is crucial to assess the potential risks involved.

The following is a quick and simple guide to some of the risks associated with piling operations.

This is not intended as a complete guide (every site has its own particular risks) but as an overview for identifying the main risks to enable control measures to be put in place in order to eliminate (or greatly reduce) the risk.

Site Location

The location and nature of the site, particularly in relation to its surrounding area, are the first elements to take into consideration when choosing a Piling method.

The type and condition of adjacent structures, the prevailing ground conditions and the nature of the project (retail, housing or other) can have a major bearing on which Piling techniques can be used. For example, Impact Driven piles are unlikely to be suitable for use in close proximity to hospitals due to the noise disturbance, and Cast In-Site bored piles are not suitable where the soil strengths are so weak that they cannot support the pile during construction.

The size and nature of the site will also have a bearing on how the work is organised – it may be a confined working space which will require Mini Piling.

Site Access

One aspect of a Piling contract which can often be overlooked is access to the site. Access to the site is a primary consideration. Specifically, any restrictions in width, height and weight in accessing the site and any overhead or underground services (electricity, water, gas and telecoms). All of these factors determine the Piling Technique and the size of Piling plant and equipment required to carry out the contract.

Working Area

Potential risks to assess on the working area include:

Unstable Working Platform –
A correctly designed working platform should be installed prior to works commencing. Ideally, the working platform should be designed by a competent geotechnical engineer and a certificate provided following satisfactory installation of the platform. Many geotextile manufacturers will provide this service free of charge.

Overhead Power Cables –
Ideally should be removed or diverted. In the event where cables need to be present on site, a Safe System of Work, with exclusion zones clearly defined (e.g. Goal posts), must be employed.

Underground Services –
Where services are present on site, a Safe System of Work must be operated, with services located and clearly marked and if required protected. Ideally this will be drafted following consultation with the relevant service providers.

Adjacent Structures/Buildings –
An initial dilapidation survey may be required for adjacent structures and, if required, structural and environmental monitoring should be put in place prior to works starting.

Confined working areas / Other Contractors –
Safe Systems of Work and close site coordination between all parties working on site. It is important, where possible, to isolate piling from other site activities. Ideally a 20m exclusion zone should be in place around the piling rig. Weekly meetings and forward planning will avoid clashes.

Ground Contamination –
the nature and extent should be established so that the appropriate measures can be introduced, i.e. Specialist PPE, Welfare/washing facilities, removal of spoil by specialist contractors.

Risk from disease –
Adequate and appropriate welfare should be established at the start and good house keeping should be in place. If required pest control should be put in place.

Working beside waterways –
Barriers should be in place to avoid any risk to the public and the site crew. The correct life saving equipment should also be supplied.

Working beside the Public (including Roadways) –
Barriers and traffic control must be in place to avoid any risk to the public and the site crew.

Site Security –
The site must be secure at all times to prevent unauthorised access to the site. This is particularly important in protecting young children.

Risks vary according to each site. It is crucial to assess them, in order to implement appropriate measures to maximize the safety of all.

1800 PILING
FREEFONE 74546 4

Enterprise House, O'Brien Rd., Carlow, Co. Carlow
t +353 (0)59 9164419 f +353 (0)59 9164420 e mail@terradrive.ie w www.terradrive.ie