Piled Raft Foundations

Voided or Ground Bearing Slab

We offer piled raft foundation and an innovative ground floorme thod for business related structures. Our methods offers costan d programme assurance also is safer and more environmentally friendly than the methods used before.

Advantages

- Lower Costs
- No piling mat in 90% of cases
- No Pre-Cast floor
- No substructure brickwork
- Managing costs for above

This method requires less concrete, less spoil removal, and remarkably reduced vehicle and plant movement. Eventually reducing the carbon footprint in your working areas.

Delivering the project more than 75% faster than all the building methods used before

Our method of working has many factors that increase the safety on building site and has approval by warranty providers such: NHBC, LABC and Premiere Guarantee.

CONSTRUCTION MUZZY LTD

info@constructionmuzzy.co.uk

Our methods are suited to almost all commercial and projects and replaces the need for traditional strip foundations and pile and beam. It can cater for the required loads and building techniques of low to mid-rise structures. It is suitable for all types of construction, such as timber frame, sealed panels or modular. Adding hold down bolts and starter bars can also bei ncorporated within the slab design.

This method can be built on bored, driven, helical or displacement piles, vibro stone columnsa nd other forms of improved ground. We offer either a ground bearing slab, or a suspended clear voided system to cater for heave risk or potential gas presence. Pile positions are designed to support either RC frame columns or steel.

Primarily cuts costs by removing the need for piling mats and ground beams. Thisr educes the cost of excavation, spoil removala nd piling mat and beam construction. Due tot he use of a uniformly thick raft slab our method also requires a reduced drainage depth and significantly less under build. Ground treatment solutions are also available which could negate the need for piling. By removing these process you can save time on site and the associated management costs.

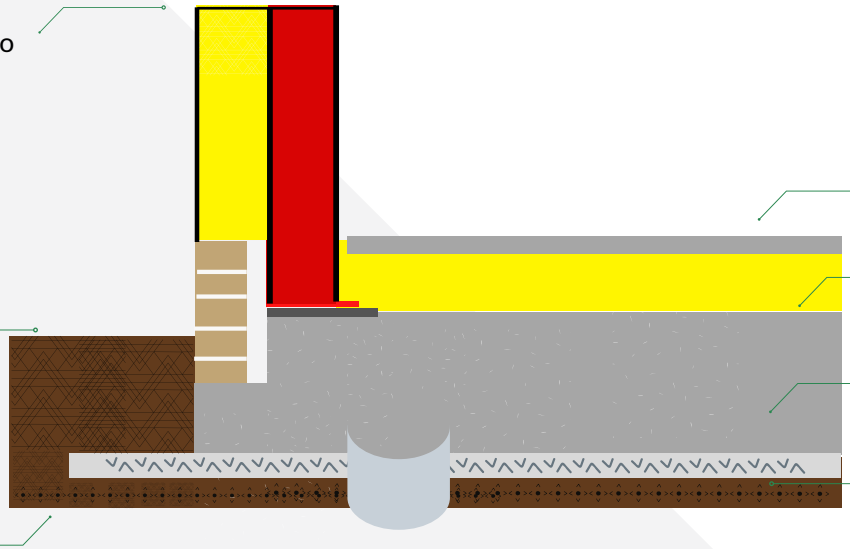
By doing away with these elements we can cut time on site by up to 70% and reduce mobilisation time. This also allows you to commence construction on adjacent slabs.

In removing these traditional processes we can make your site safer. Our working process requires minimal manual handling; minimal trip hazards;no open excavations; no overhead cranes and reduced plant movement.

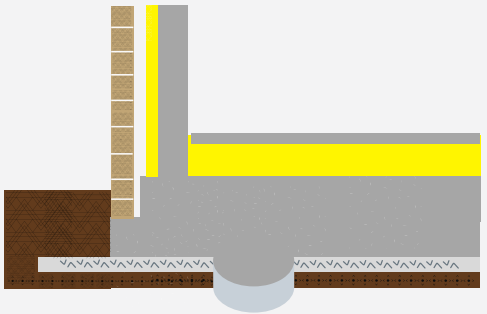
Our method is also more environmentally friendly than traditional methods. We achieve this by using less concrete and greatly reduced excavation, saving a huge amount ofs poil from landfill. By typically using less concrete and minimal excavations we have less vehicle and plant movement, significantly reducing our C02 emissions.

Typical details

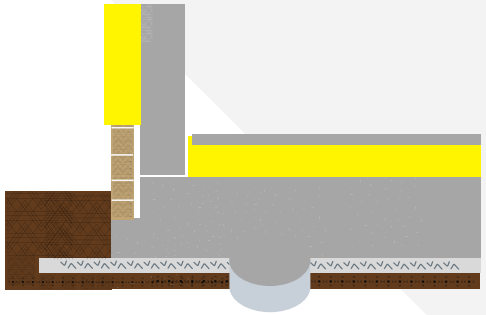
Typical non voided piled raft



Non voided.
Steel superstructure
Typically for schools & hospitals.



Non voided.
Masonry superstructure
Typically for care homes and apartment blocks

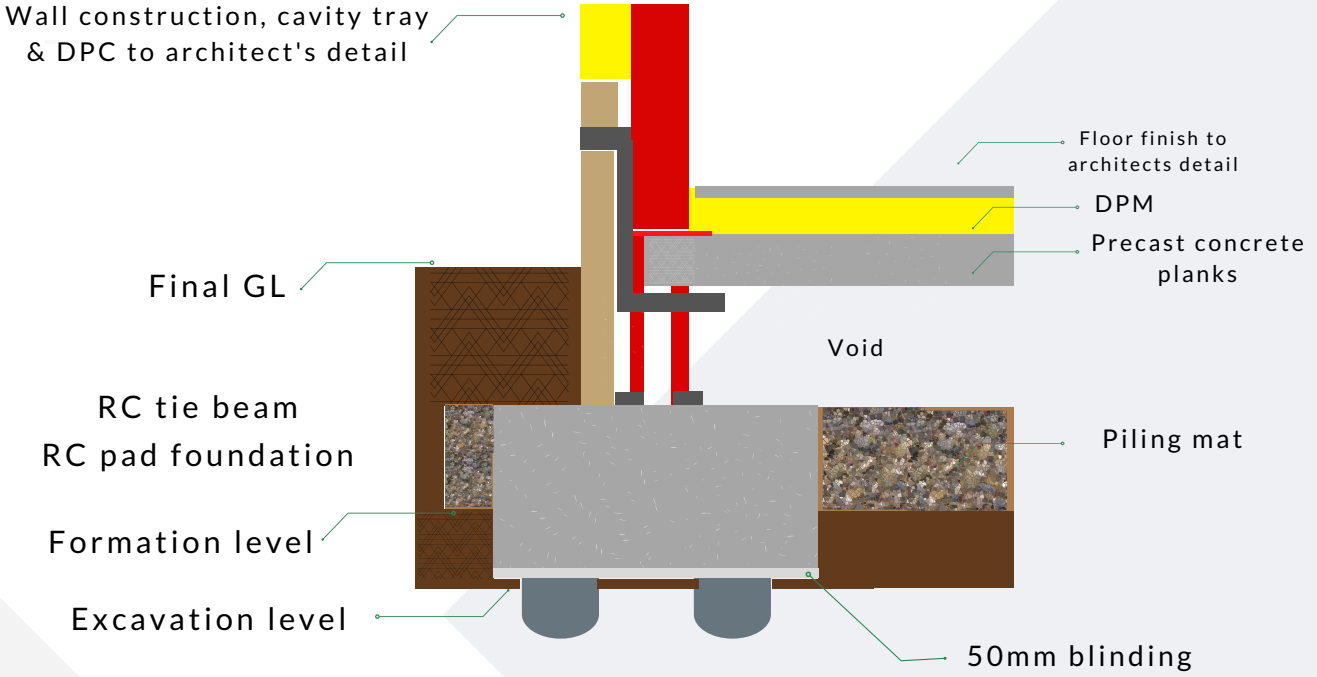


Non voided.
Reinforced concrete superstructure
Typically for schools and hospitals.

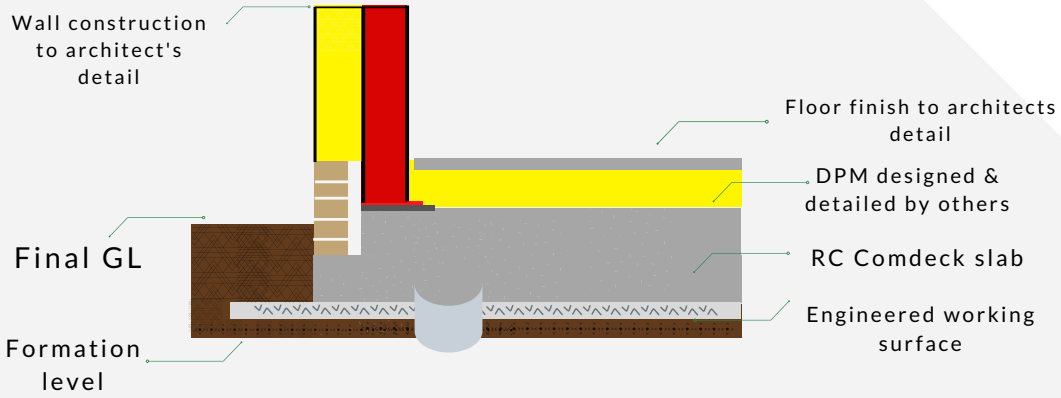
Comparison

Traditional pile and beam

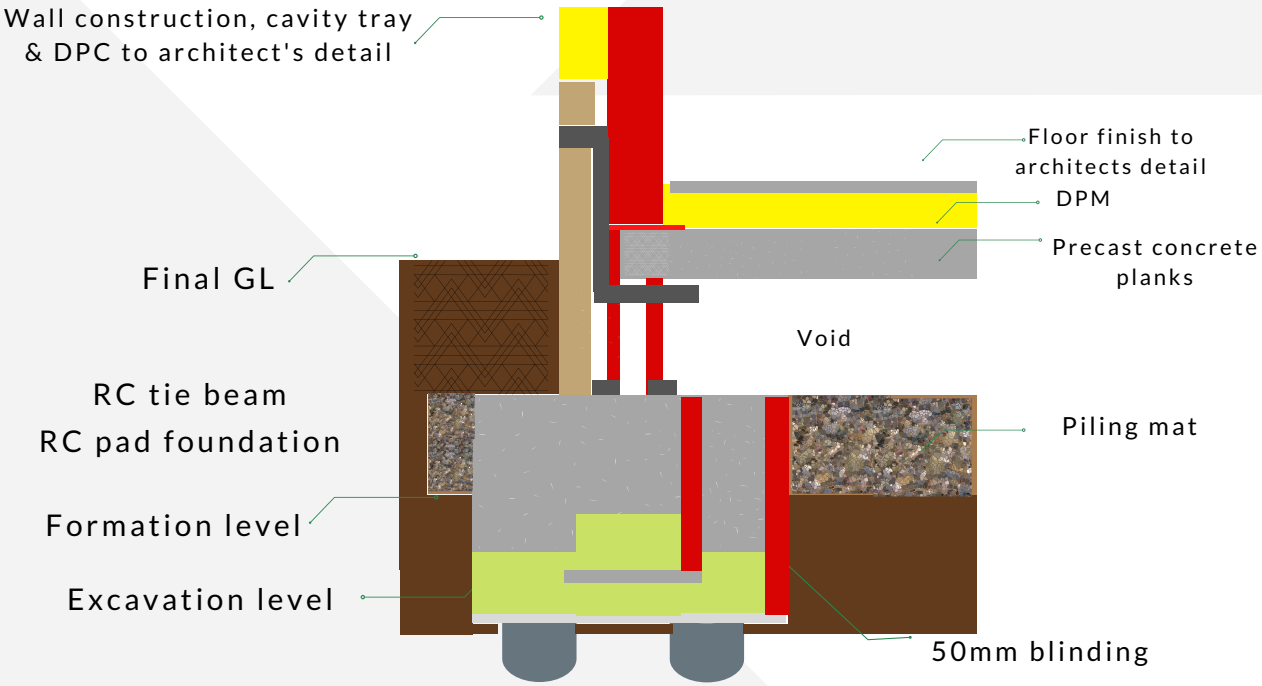
Piled, in situ RC pads & beams foundation with precast concrete plank floor



Typical non voided piled raft

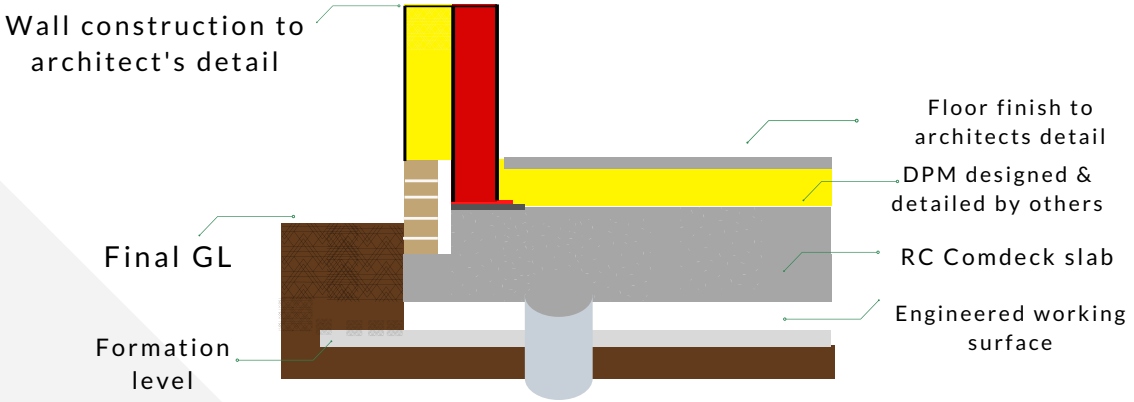


Non voided.
Steel superstructure
Typically for schools & hospitals.



Benefits

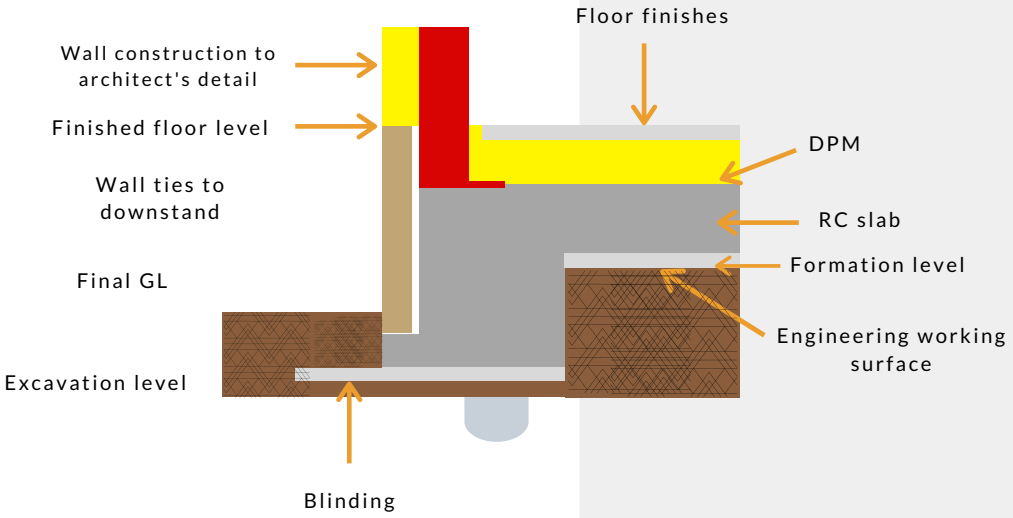
1. Significant reduction in excavation
2. Significant reduction in under building
3. Engineered working surface in place of piling mat
4. No venting required



Non voided.
Steel superstructure
Typically for schools & hospitals.

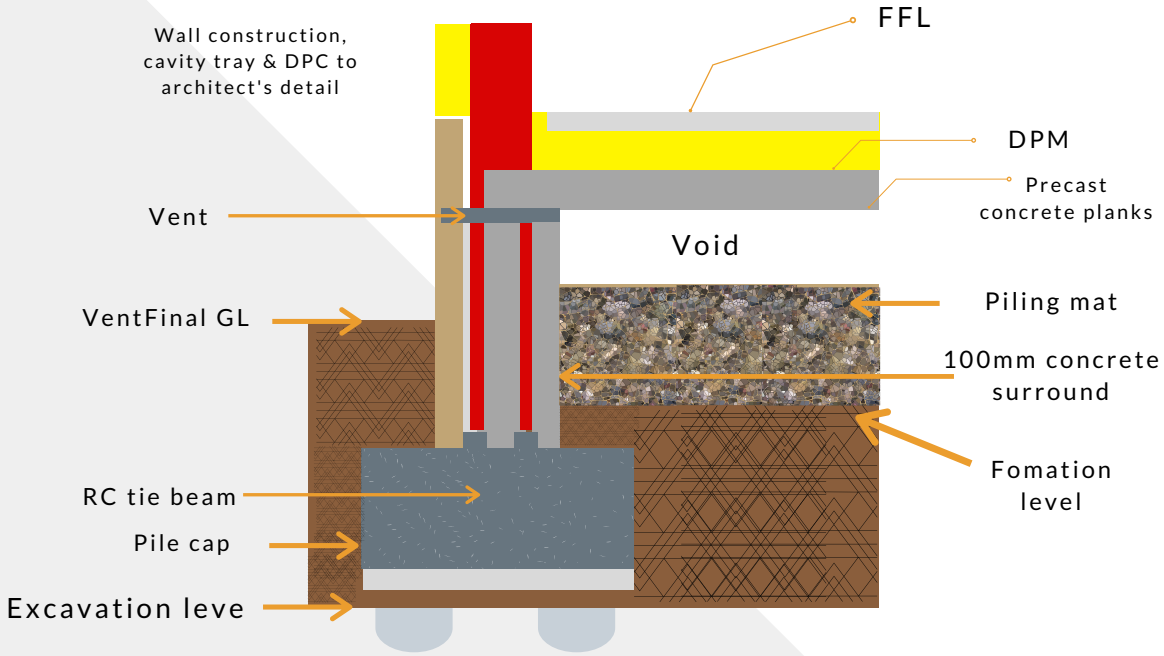
Comparison with underbuild

Typical piled raft with downstand



Traditional pile and beam

Piled, in situ RC pads & beams foundation with precast concrete plant floor



Benefits

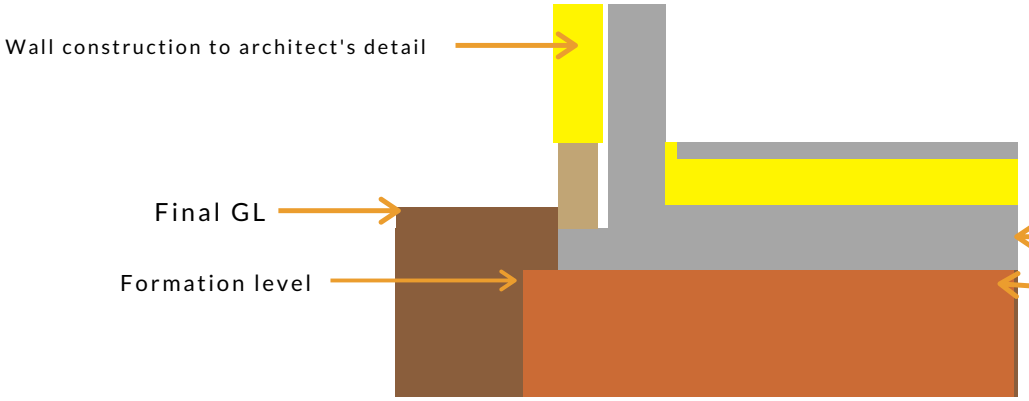
Significant reduction in excavation.

Significant reduction in under build.

Engineered working surface in place of piling mat.

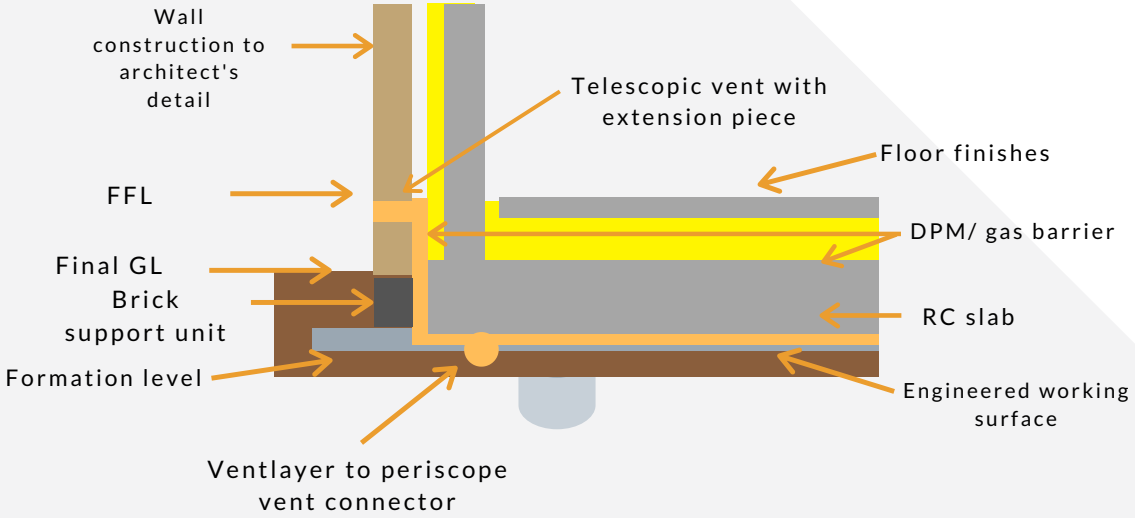
Gas venting & improved ground

Ground bearing raft on improved ground



- Vibro stone columns
- Dynamic compaction
- Soil stabilisation
- Soil mixing
- Engineered fill
- Rigid inclusions
- And more to suit site specific ground conditions

Typical piled raft for gas venting system



Construction process

Stages of typical slab build

1

Reduced Level Dig
We start by re-levelling or excavating to the formation level of the plot area, plus 1.5m around the perimeter, to allow for the engineered working surface.

2

Setting Out
The pile locations are then set out according to the design. To increase piling accuracy, we use pile formers to help guide the pile installation.

3

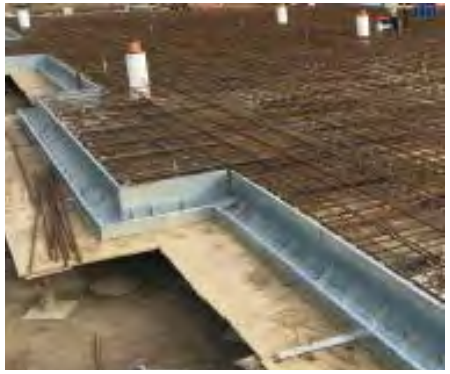
Working Surface
The engineered working surface is then installed to the plot size. This replaces the need for the piling mat.

Piling
Once the working surface is cured, the piles are installed. We offer various piling techniques to suit any project.

Drainage & Services
Next the drainage and services are installed.

Pile trimming
After the drainage and services have been installed the piles are trimmed to cut off level.

Voided
If voided, the decking will be built on Deck Support Units to create the void & removed once the slab in complete.



Edge Shuttering & Fix Reinforcement
Next the edge systems is installed, followed by the steel reinforcement to create the raft.

Concrete Pour
Once final levelling is complete the concrete is poured.

Finished Structural Slab
If voided, a void barrier or membrane will be attached once the slab is cured.The finished slab is ready for trades on average 5-7 days after the concrete pour.

About us:

Construction Muzzy Ltd (CML) has been in operation since 2005 and offers a range of construction services, tailor made to fit the organisation we are working with. Groundworks and Civil engineering is our focus. In addition, we have now gone that step further and are able to offer a complete bespoke package allowing CML to take the building to water tightness. We employ trades and labour that can fulfil 70% of the needed requirement when constructing the super structure and building envelope. The remaining 30% is subcontracted though our supply chain. To give our clients, the very best value no further fee is applied to any subcontracted labour.

- Piling
- Exavations
- Block Paving
- Asphalt
- Drainages

01992 807852

info@constructionmuzzy.co.uk

Trading Office
M25 Business Centre, 121 Brooker Road,
Waltham Abbey, EN9 1JH

CONSTRUCTION MUZZY LTD