



HOUSEDECK 

Cutting costs with fast foundations



ABBAY PYNFORD

HOUSEDECK

Housedeck is our patented piled raft foundation and ground floor system for residential structures, that offers cost and programme certainty throughout the private and commercial sectors. Housedeck is also safer and more environmentally friendly than other methods.

Benefits



Cost certainty - By reducing the programme, prelims and eradicating the elements stated to the right, we can offer cost certainty for your project.



Faster - Housedeck is up to 70% faster than traditional methods and offers improved program certainty.



Safer - Housedeck has many features that enhance a safer environment on site, and comes with warranty provider approval: NHBC, Premier Guarantee and LABC.



Less environmental impact - Housedeck uses less concrete, requires less spoil removal, and significantly reduced vehicle and plant movement. Reducing the carbon footprint of your site.

Housedeck does not require the following elements:

- ▶ Piling mats (in 95% of projects)
- ▶ Excavations for ground beams
- ▶ Ground beam construction
- ▶ Pre-cast floor
- ▶ Sub-structure brickwork blinding within footprint
- ▶ Resources to manage the above





A Housedeck foundation is suitable for all types of construction ranging from traditional brick and block to modern construction techniques such as timber frame, sealed panels, or modular. The system works extremely well coupled with off-site construction techniques, as it delivers a finished slab with reduced tolerances on levels and dimensions versus traditional methods, and a slab completion rate of around 250m² per week, complimenting the faster construction programmes.

Housedeck can be built on bored, driven, helical or displacement piles, vibro stone columns and 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 ground gasses.

Housedeck primarily cuts costs by removing the need for piling mats and ground beams. This reduces the cost of excavation, spoil removal and piling mat and beam construction. Due to the use of a uniformly thick raft slab Housedeck also requires a reduced drainage depth and significantly less underbuild. 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. Housedeck also allows you to commence construction on adjacent slabs.

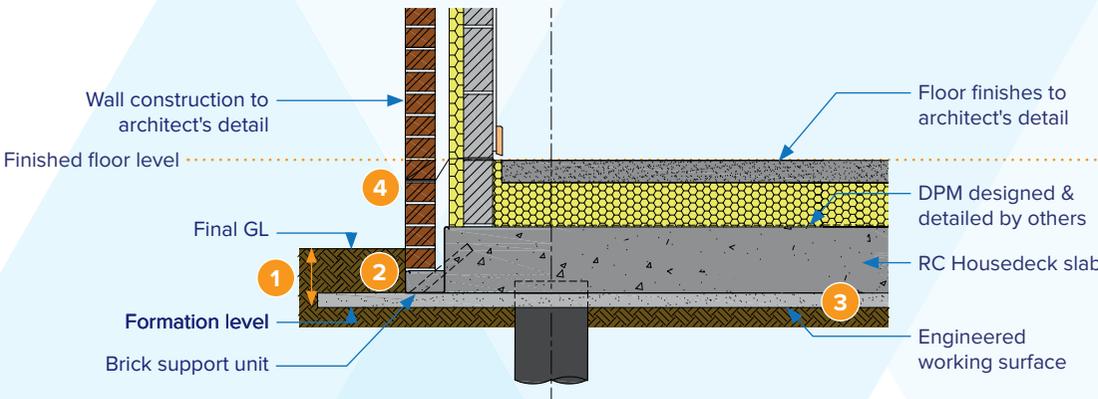
In removing these traditional processes we can make your site safer. Housedeck also requires minimal manual handling; minimal trip hazards; no open excavations; no overhead cranes and reduced plant movement.

Housedeck is also more environmentally friendly than traditional methods. We achieve this by using less concrete and greatly reduced excavation, saving a huge amount of spoil from landfill each year. By typically using less concrete and minimal excavations we have less vehicle and plant movement, significantly reducing our CO₂ emissions.

Housedeck is BBA certified and warranty provider approved: NHBC, Premier Guarantee and LABC. All engineered solutions are fully underwritten.

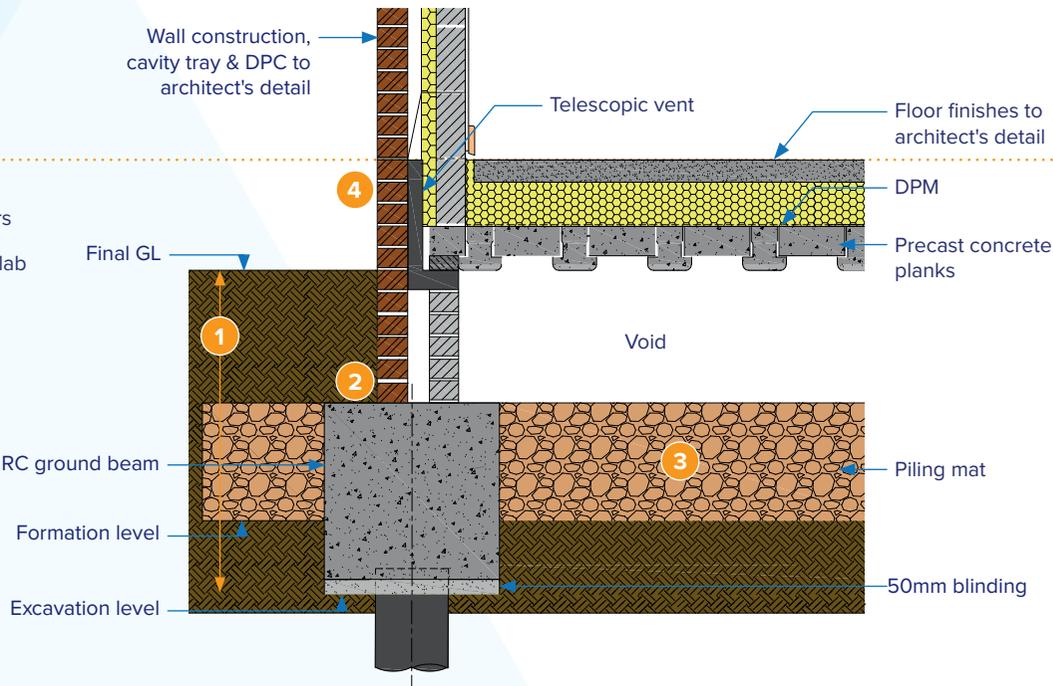
Housedeck comparison_

Typical Housedeck non voided piled raft



Traditional pile and beam

Piled, in situ RC beam foundation with precast concrete plank floor

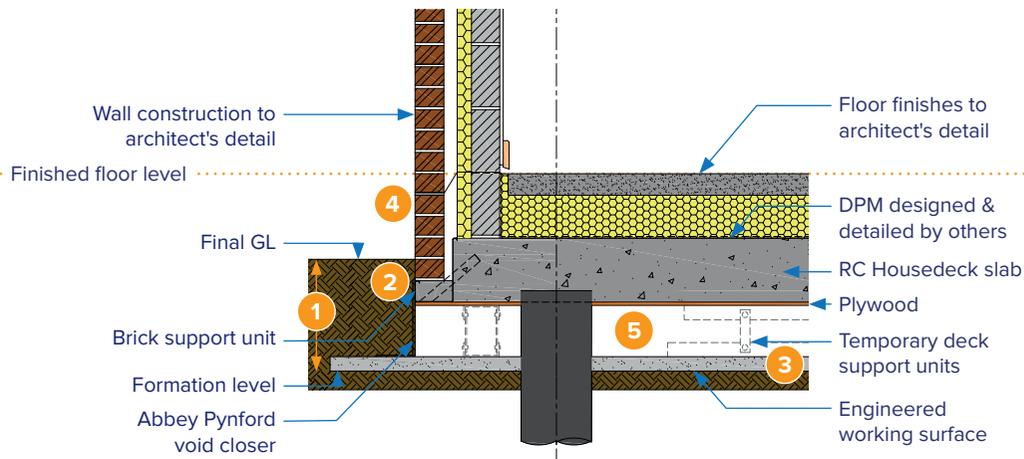


Benefits of Housedeck:

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

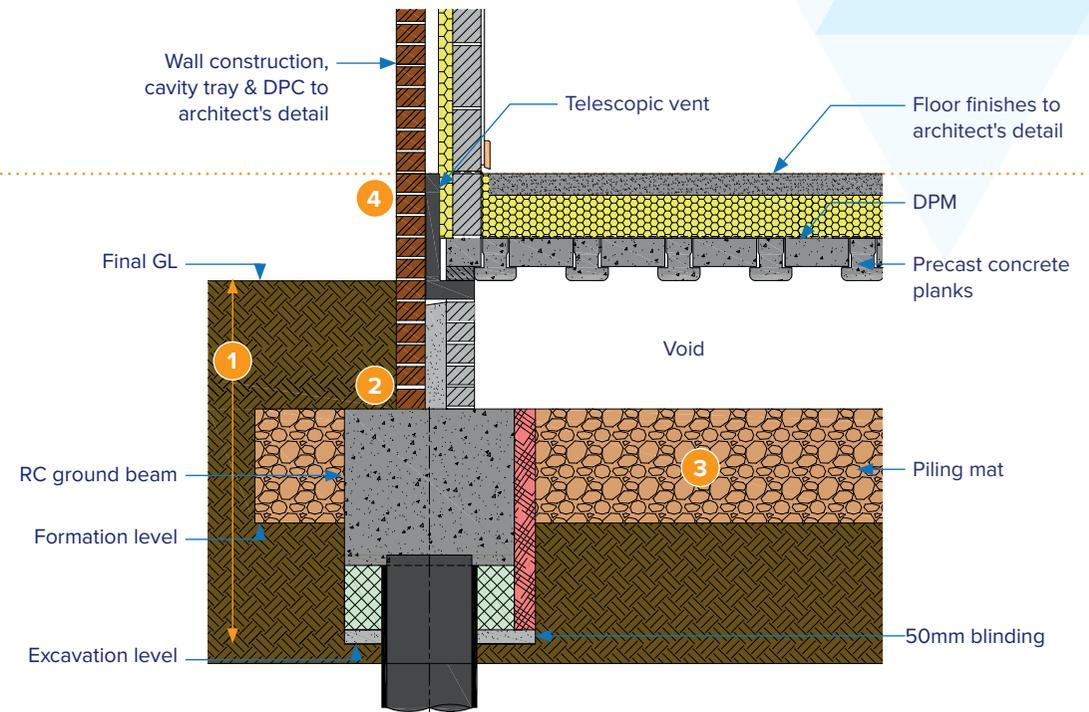
Housedeck comparison for heave susceptible soils_

Typical Housedeck voided piled raft



Traditional pile and beam

Piled, in situ RC beam foundation with precast concrete plank floor for heave susceptible soils



Benefits of Housedeck:

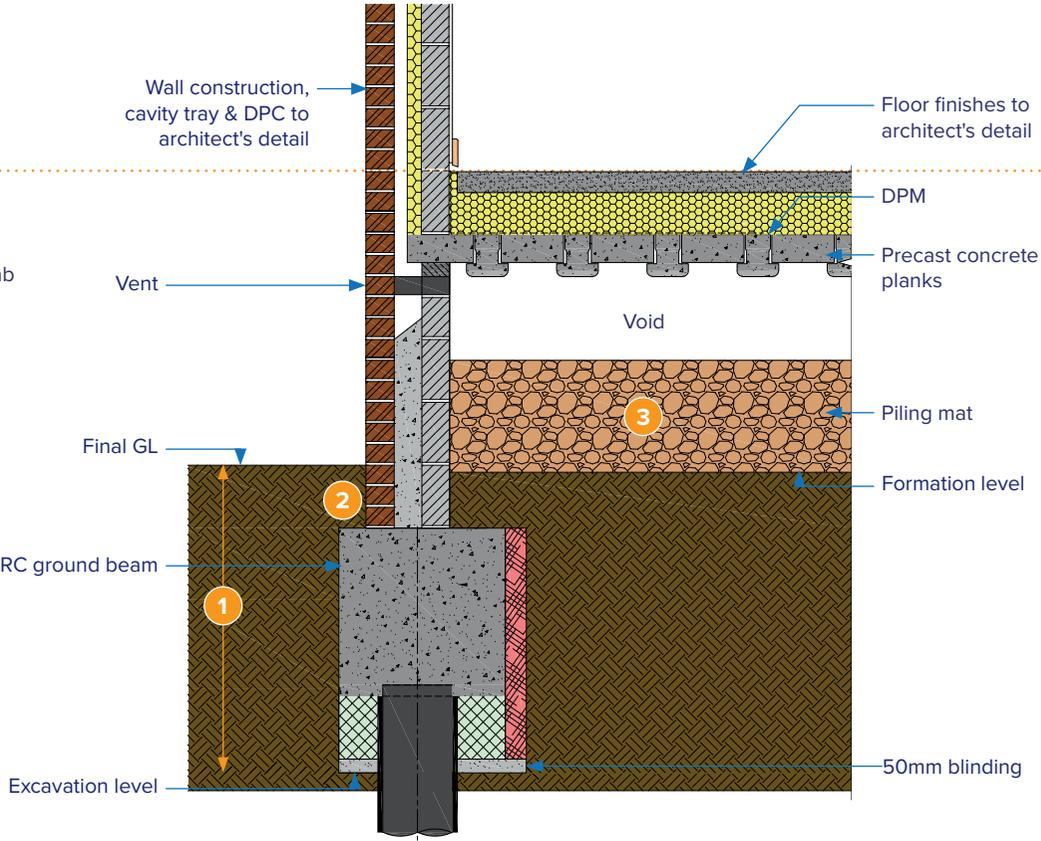
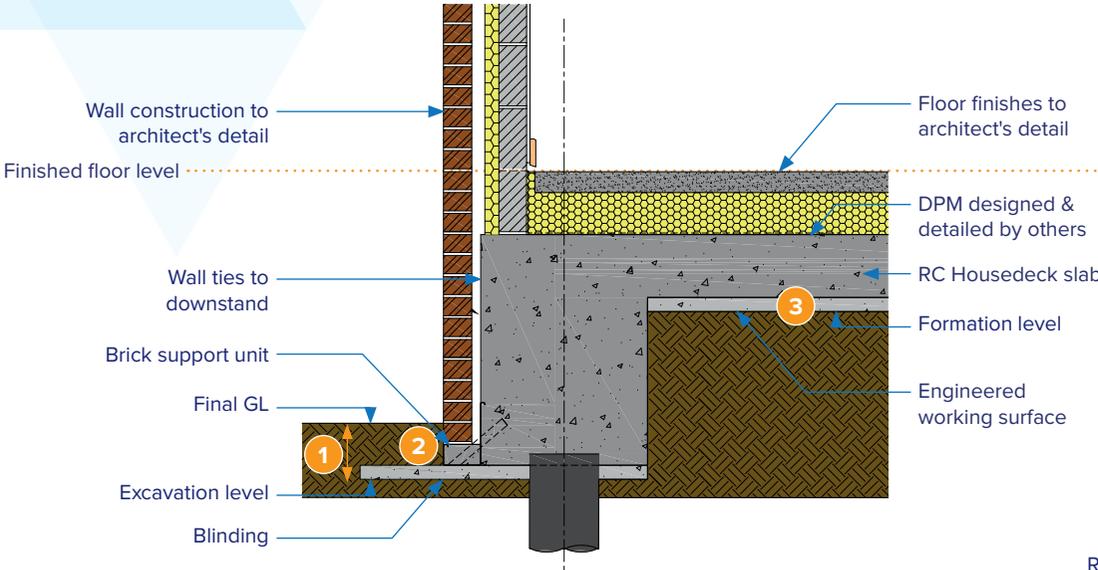
- 1 Significant reduction in excavation.
- 2 Significant reduction in under build.
- 3 Engineered working surface in place of piling mat.
- 4 No venting required.
- 5 Clear void to mitigate heave risk.

Housedeck comparison with underbuild_

Typical Housedeck piled raft with downstand

Traditional pile and beam

Piled, in situ RC beam foundation with precast concrete plant floor

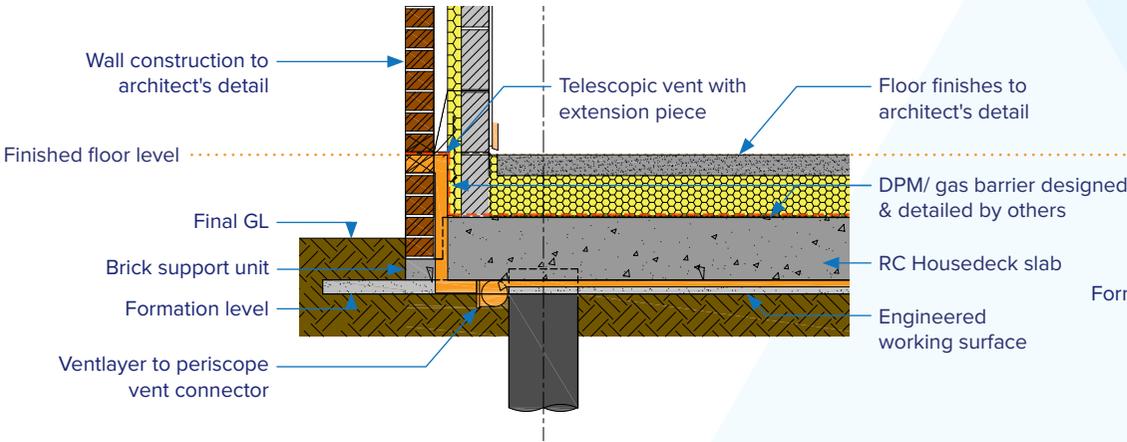


Benefits of Housedeck:

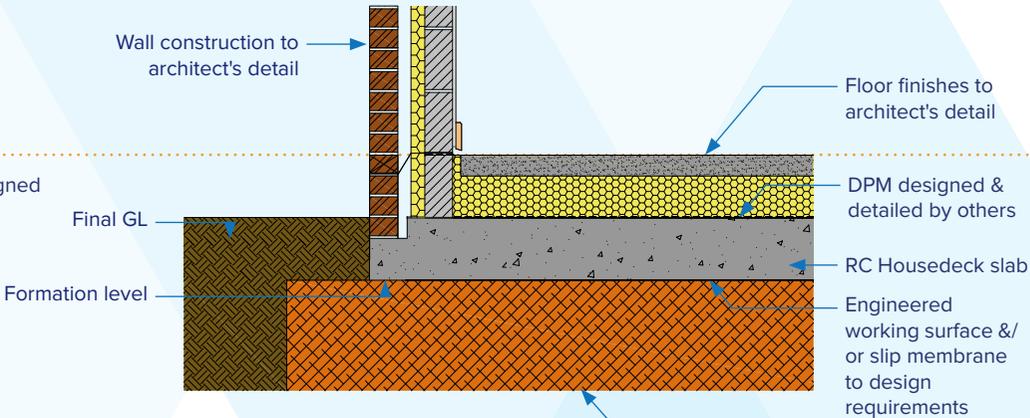
- 1 Significant reduction in excavation.
- 2 Significant reduction in under build.
- 3 Engineered working surface in place of piling mat.

Housedeck for gas venting & improved ground_

Typical Housedeck piled raft for gas venting system



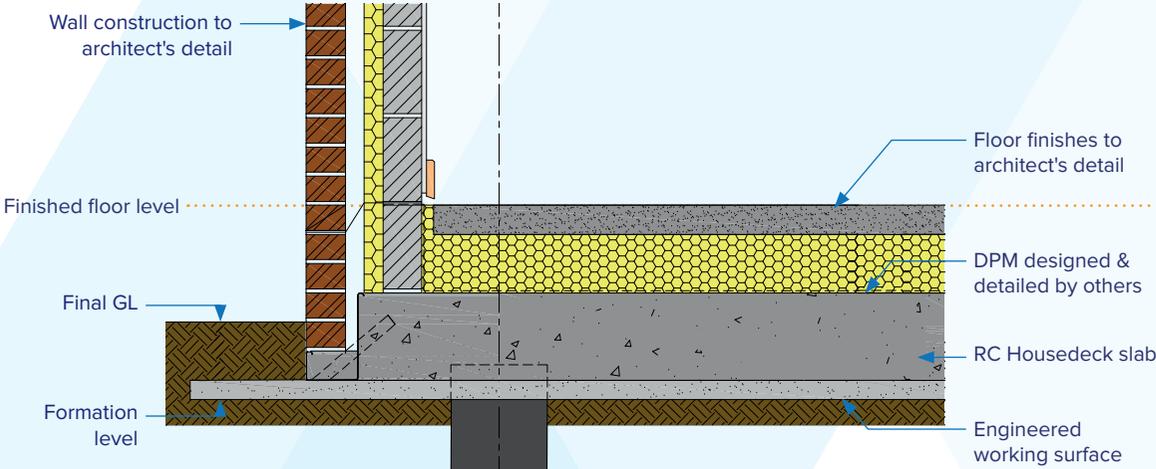
Typical Housedeck ground bearing raft on improved ground



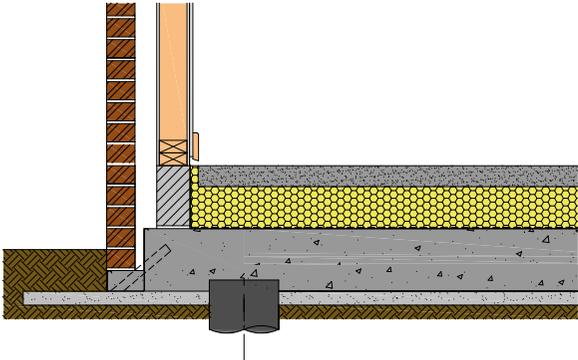
- Ground improvement
 - Vibro stone columns
 - Dynamic compaction
 - Soil stabilisation
 - Soil mixing
 - Engineered fill
 - Rigid inclusions
 - And more to suit site specific ground conditions

Typical Housedeck details_

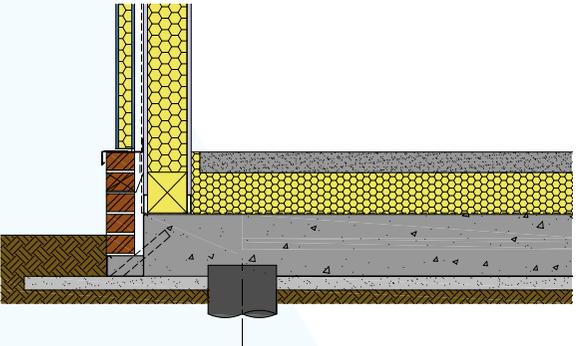
Typical Housedeck non voided piled raft



**Non voided.
Brick & Block superstructure**

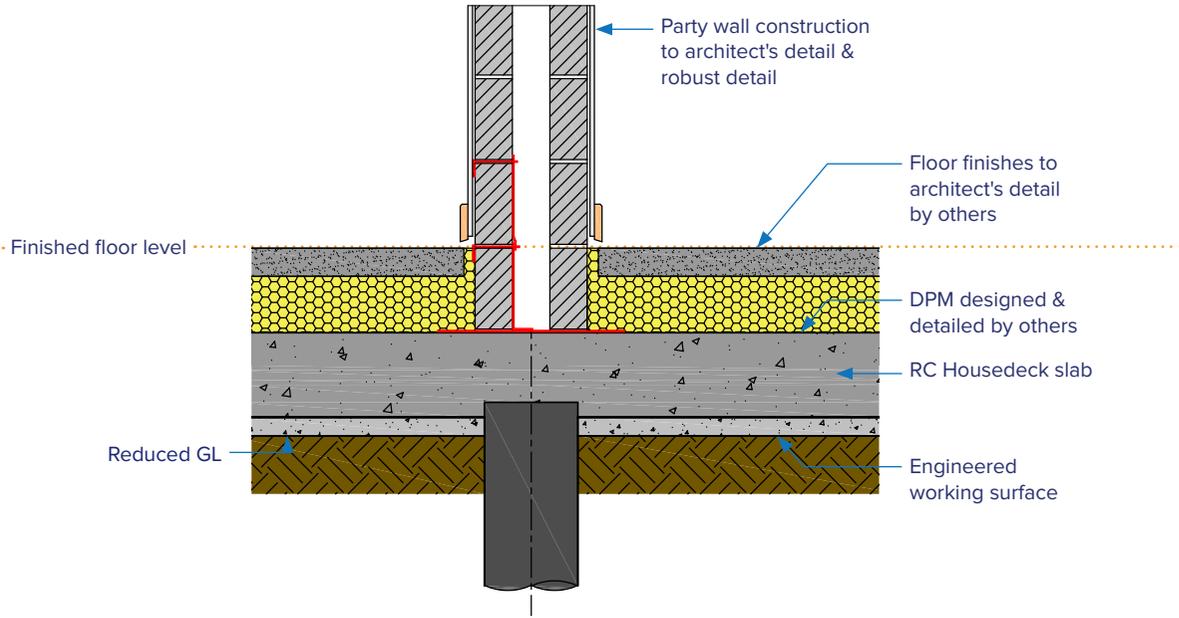


**Non voided.
Timber superstructure**

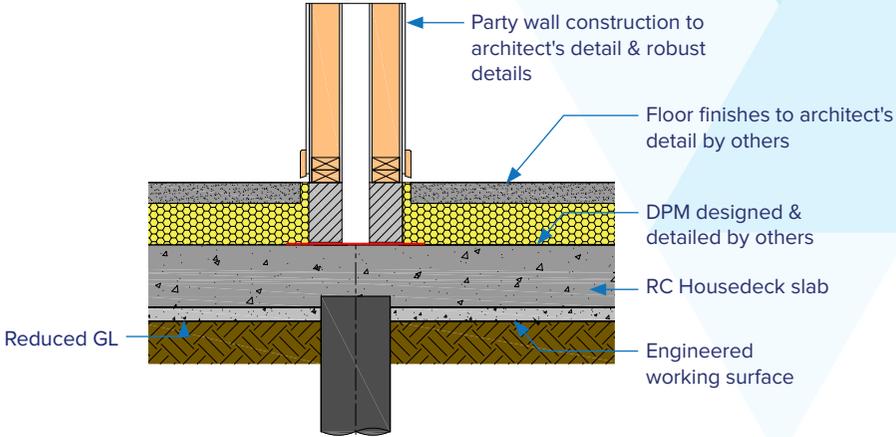


**Non voided.
Modular superstructure**

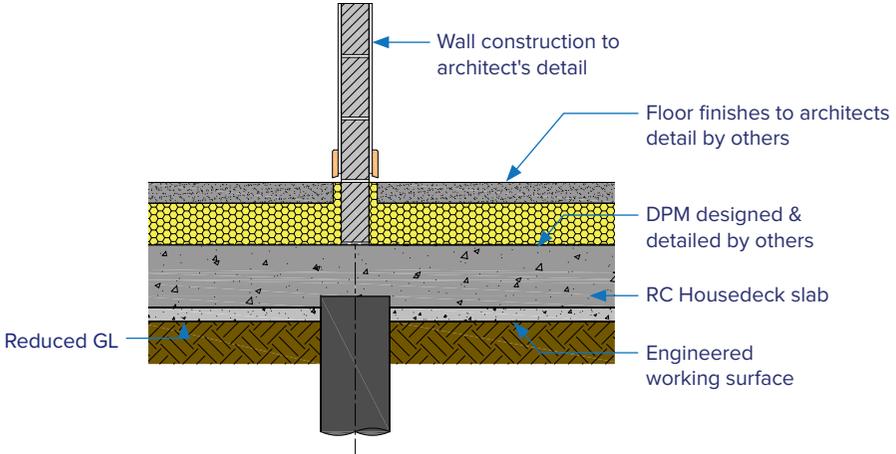
Housedeck indicative internal wall details_



Housedeck party wall detail
Block construction
 Robust details are part E compliant.



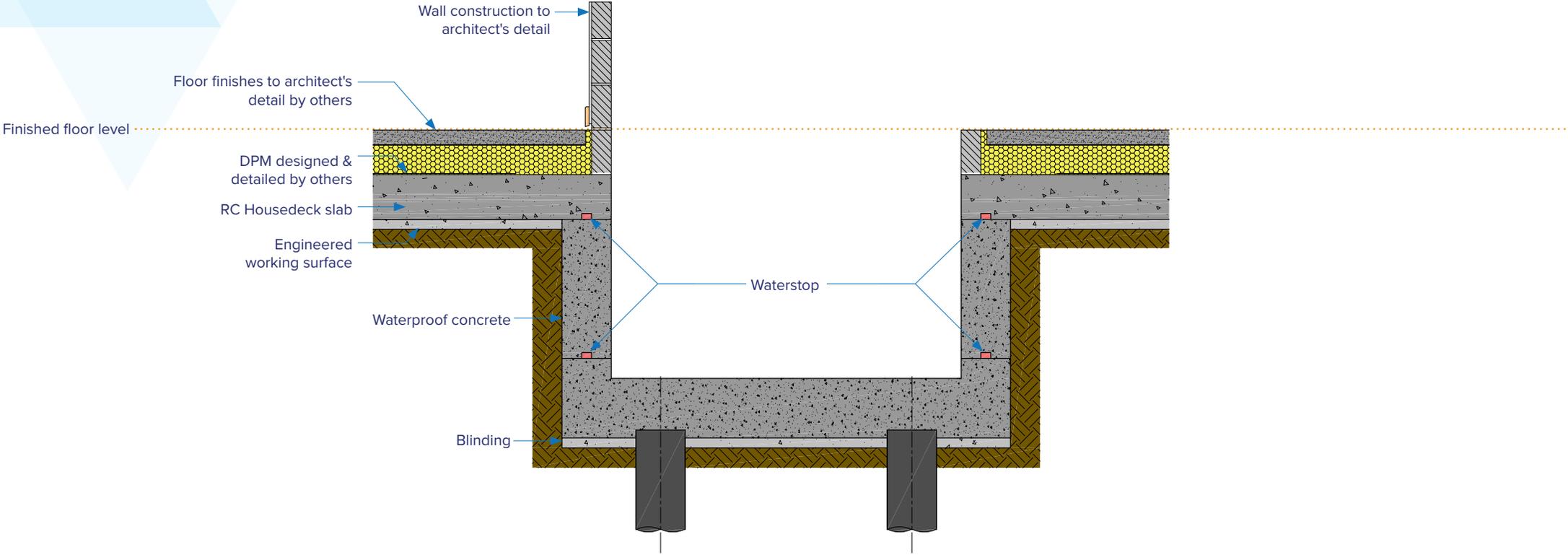
Housedeck party wall detail
Timber construction
 Robust details are part E compliant.



Internal load bearing wall detail

Housedeck lift pit detail_

Typical Housedeck non voided lift pit



TREESAFE

Treesafe is our patented foundation system that allows construction close to or within a tree Root Protection Area (RPA).

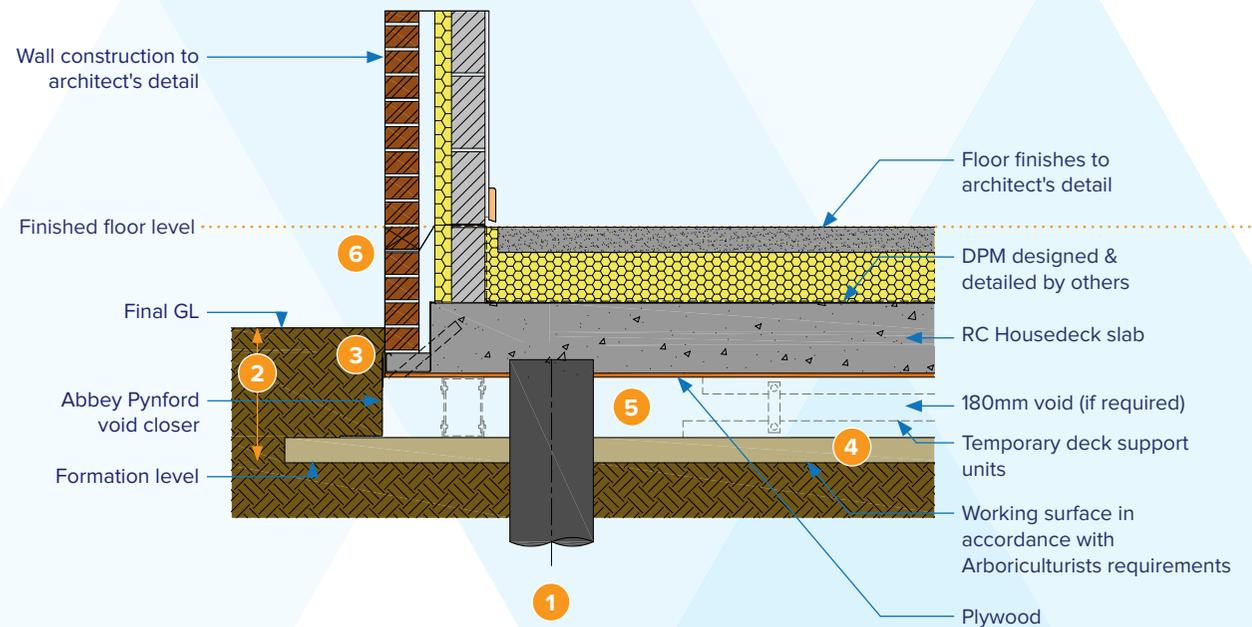
Treesafe prevents damage to tree roots in a number of ways, such as using hand augering techniques to identify any roots that may conflict with the proposed pile locations. We use a bespoke working surface to support our custom lightweight piling rigs and take precautions to prevent concrete leaching into the protected ground. This system is approved by Arboriculturists.

By preventing damage in RPA, Treesafe provides an opportunity to increase the footprint of your site.

Treesafe is a version of our Housedeck system, which is BBA certified and warranty provider approved: NHBC, Premier Guarantee and LABC. All engineered solutions are fully underwritten.

Benefits of Treesafe:

- 1 Allows construction of buildings within RPA.
- 2 Significant reduction in excavation.
- 3 Significant reduction in under build.
- 4 Open core deck system in place of piling mat.
- 5 Clear void to mitigate heave risk.
- 6 No venting required.



FLOODSAFE

Floodsafe is our patented foundation system that allows construction of residential or commercial structures within areas with a high risk of flooding.

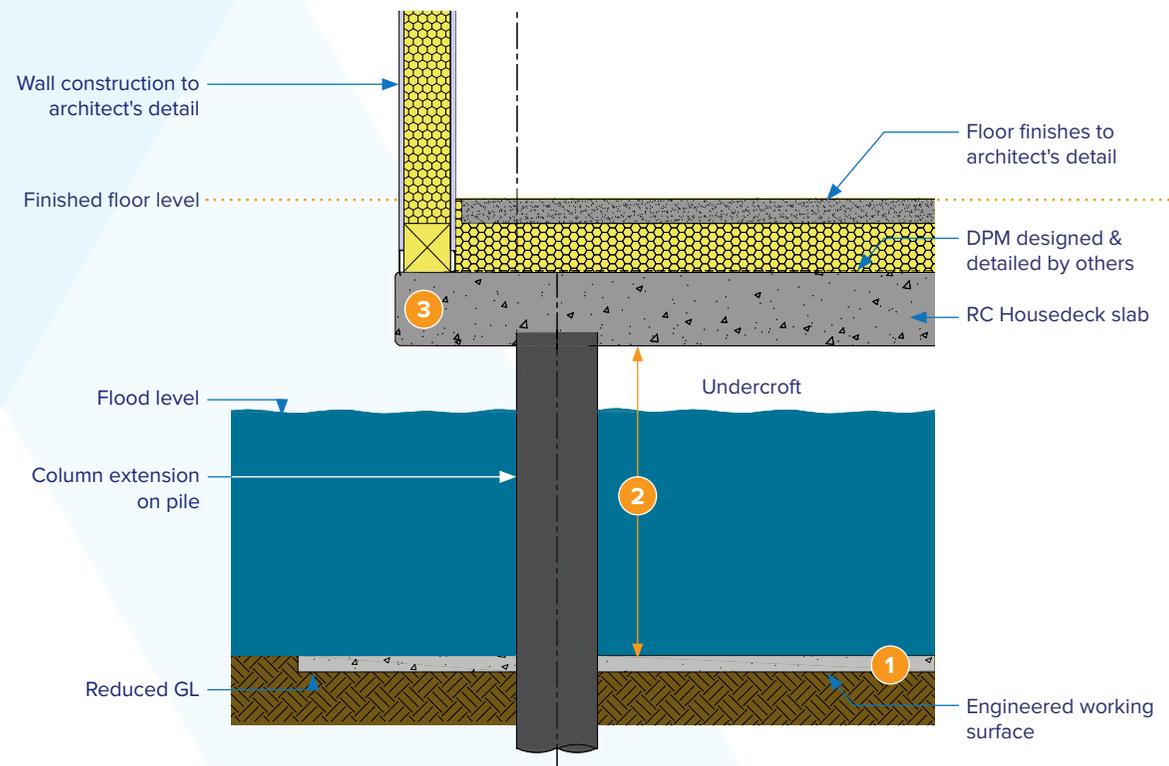
The Floodsafe system creates a clear void beneath your structure to ensure that the potential flood waters stay below the slab level and out of your property.

Floodsafe can support a range of piling techniques, depending on the ground conditions. The piles are installed on an engineered working surface, and are encased above ground to form columns, upon which the raft is constructed, and the slab is poured.

Floodsafe is a version of our Housedeck system, which is BBA certified and warranty provider approved: NHBC, Premier Guarantee and LABC. All engineered solutions are fully underwritten.

Benefits of Floodsafe:

- 1 Engineered working surface in place of piling mat.
- 2 Column formed on top of pile to raise the slab above flood risk level.
- 3 Quick edge slab profile to provide high quality finish.



Construction process_

Stages of typical slab build



Reduced Level Dig

We start by re-levelling or excavating to the formation level of the plot area, plus 1m around the perimeter, to allow for the engineered working surface.



Setting Out

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



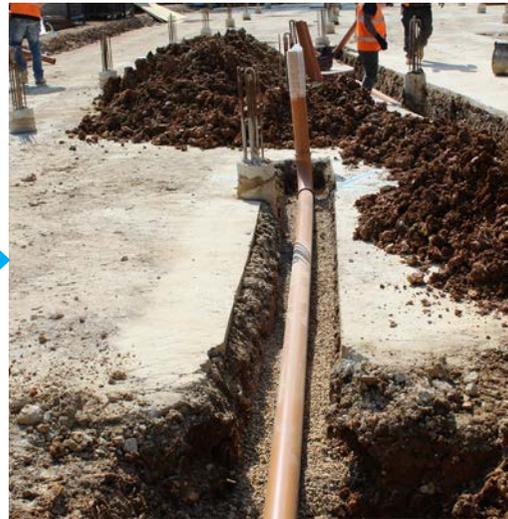
Working Surface

The engineered working surface is then installed to the plot size. This replaces the need for a traditional 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. This can be done by us or the client, project dependant.



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 our patented Deck Support Units to create the void & removed once the slab is complete.



Edge Shuttering & Fix Reinforcement

Next our patented edge systems are installed, followed by the steel reinforcement to create the Housedeck 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_

At Abbey Pynford we provide a more integrated approach to our services, offering a one stop shop to commercial contractors and private developers. Founded in 1988, Abbey Pynford Group has 30+ years of industry experience to support you through your project.

We offer a wide range of services ranging from our patented engineered foundation systems, various types of piling and underpinning.

We have our own in-house design team comprised of Structural and Geotechnical Engineers, providing underwritten design solutions across all our services.

We also have our own plant hire business providing specialist and bespoke equipment to the group and wider external market.

Our ethos is to provide a fully integrated service for our customers, providing support from conception through to construction. We always seek to provide the most cost-effective solution for your project, through innovation, product development, and a wealth of experience gained from 30+ years working in the industry.

Our services_

HOUSEDECK 

COMDECK 

TREESAFE 

FLOODSAFE 

PILING 

UNDERPINNING 



Health & Safety, Quality & Environmental Overview_



We have 30+ years industry experience to support your project.



Leading home construction warranty & insurance provider.



BBA approved quality management system.



Local Authority Building Contractor warranty.



Structural warranty for residential & commercial builds.



Certified workplace safety.



Certified H&S (18001), Quality (9001) & Environmental (14001) management system.



IMS Certified H&S, quality & environmental management systems.



H&S accreditation for SSIP.



Gold member.



Premier member.



Home Builders Federation members.



ASUC full members. Assured professional & technical competence.



Members of FPS - the industry body for foundation contractors.



Treesafe offers a tree friendly way to build in Root Protection Areas. Approved by Arboriculturists.



We send less waste to landfill by reducing dig and spoil removal with our foundation solutions.



Through our reduced vehicle and plant movement we produce significantly less CO₂ emissions.



We use less concrete with our foundation solutions than traditional techniques.



SSIP accredited principle & sub contractor.



Accredited contractor for H&S assessed scheme.



In-house design team and all designs and engineered solutions are fully underwritten.

Our commitment to you_

- ▶ You will receive the same **attention and quality of service** whether you are a small developer or corporate builder.
- ▶ We will provide you with a fully documented **proposal within two weeks** after receiving all required information.
- ▶ Our dedicated in-house design team, using the latest software finite element analysis, ensures that **each project is value engineered.**
- ▶ We will always **operate in the best practice**, complying with health, safety and environmental legislation.
- ▶ We promise to **serve in your best interests** and if we believe that one of our foundation systems is not the most appropriate scheme for your needs, we will advise you accordingly.

Our clients_

“ Everyone involved has been very easy to work with, whilst producing high quality work. This sort of approach makes the job much more enjoyable. ”

*Mike Laycock, General Manager,
C. J. Gowing & Sons*



“ Abbey Pynford’s system is the complete package offering a straightforward fully designed solution, saving us money and 6 weeks from our original programme. ”

Nick Jude, Construction Manager, Willmott Dixon



“ We have used Housedeck before and as usual this project ran very smoothly and was completed swiftly. Both the piling crew and the slab crew were excellent – nothing was too much trouble for them and the site was kept clean and tidy throughout. ”

*Tony Draper, Architect & Project Manager,
Carrington Fox*



“ Abbey Pynford worked fantastically well with us. Through solid communication and collaboration the construction has been a success. I would strongly recommend them for future projects. ”

*Sam Kemp, Project Manager,
Morgan Sindall Construction*





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