

MODUFLOOR[®]

When concrete isn't the right answer

Factory Engineered • Lightweight • Thermally Compliant • Building Control Ready

- A smarter way to build foundations.
- Factory-engineered structural foundation platform designed specifically for ground screw construction.
- Manufactured in partnership with Engineered Composites Ltd.

MODUFLOOR is not an alternative floor.

It's an alternative foundation.



**ENGINEERED
COMPOSITES**
STRENGTHENING INDUSTRY

modufloor.co.uk

Making alternative foundations as simple to specify as concrete.

Construction has standardised almost every structural component of a building. Roof windows, lintels, insulation, wall systems and structural members are all selected from proven, engineered products. Yet foundations are still frequently designed from first principles for every individual project.

ModuFloor changes that.

By combining structural GRP, ground screw technology, thermal performance and a standardised engineering approach, ModuFloor transforms foundations into a repeatable, engineered system that architects, builders and Building Control can specify with confidence.

If we can't pour concrete,
we specify ModuFloor.

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When concrete simply isn't the right solution.

Traditional concrete foundations are not always practical. Across residential, education, commercial and modular projects, the same constraints keep appearing — and every one of them points to a different approach.



Restricted access

Tight sites and constrained approaches where concrete plant can't reach.



Protected trees

Root protection areas that rule out mass excavation and heavy foundations.



Existing services & sewers

Underground constraints that make deep - dig foundations impractical or risky.



Poor ground conditions

Made ground, fill and variable strata where a screw-verified approach is safer.



Tight urban sites

Limited storage, no room for spoil, and neighbours to consider.



Speed of construction

Programmes that can't wait for excavation, pour and cure cycles.



Carbon reduction targets

Embodied-carbon limits that penalise mass concrete foundations.



Temporary & relocatable

Buildings that must be lifted, moved or removed with the site reinstated.

**These challenges require a different approach
— a foundation engineered for the way modern projects are actually built.**



02 • THE SOLUTION

MODUFLOOR[®]

Not just another floor. A complete engineered foundation platform.

ModuFloor is a fully engineered structural GRP foundation platform, designed specifically to work with ground screw foundations. It replaces the traditional concrete foundation and floor base with a factory-built, precision-engineered platform, ready for modern methods of construction once the ground screw installation has been verified.

GRP	Structural, durable, lightweight base
SCREW	Ground screw foundations — no concrete, no cure
THERMAL	High-performance insulation built into the build-up
COMPLIANT	Engineered to meet Building Regulations requirements

One system engineered to combine four disciplines into one.

Ground screws, structural GRP, thermal performance and Building Regulations compliance have traditionally been solved separately — by different specialists, on different drawings. ModuFloor brings them together into a single, coordinated foundation system.



Ground Screws

The foundation

Installed in hours, load-bearing immediately, removable at end of life.



Structural GRP

The platform

A factory-engineered base that doesn't rot, rust, corrode or absorb water.



High-performance insulation

The thermal answer

U-values, condensation risk and build-up all resolved by design.



Building Regulations

The evidence

Structural, thermal and installation documentation packaged from day one.

Four problems. Four specialists. One engineered system.

Four principles that define ModuFloor.

This is more than a GRP floor. ModuFloor changes where the engineering sits — and that shift rests on four pillars.



01

Alternative Foundations

When concrete isn't the right answer. ModuFloor replaces the concrete sub-structure where access, ground, trees, carbon or programme make a traditional foundation the wrong choice.



02

Engineered Platform

A factory-engineered structural GRP foundation platform, designed specifically for ground screw construction and delivered to precise manufacturing tolerances.



03

Proven Loads

The platform is already structurally engineered. Every support position carries a published design load — so rather than re-engineering the platform for each project, the foundation is verified against those loads.



04

Simplified Compliance

Because the structural system is standardised, the same core engineering package can support each Building Control submission, with site-specific foundation verification provided against the published design loads.

Not just where it can be used — where it's better than concrete.

Every application below shares the same story: a project where pouring concrete is slow, disruptive, impractical or simply the wrong environmental choice. That's exactly where ModuFloor comes into its own.

- | | | | |
|--------------------|--------------------------|------------------------|-----------------------------|
| ✓ Rear extensions | ✓ Garden rooms | ✓ Annexes | ✓ Modular buildings |
| ✓ Holiday lodges | ✓ Classrooms | ✓ Commercial kiosks | ✓ Temporary buildings |
| ✓ Remote locations | ✓ Difficult access sites | ✓ Protected tree sites | ✓ Service-constrained sites |

The material engineered for long-term performance.

Glass Reinforced Plastic is the reason ModuFloor can sit on ground screws and simply perform. Where steel corrodes and timber rots, GRP is engineered to endure — which is precisely what a foundation platform demands.



Doesn't rot, rust or corrode

Highly resistant to the decay, oxidation and chemical attack that can limit timber and steel.



Highly moisture resistant

Dimensionally stable in damp and exposed conditions, without the swelling and rot associated with timber.



High strength-to-weight

Structural performance at a fraction of the mass — can be up to 80% lighter than steel.



Extremely durable

Engineered for a long design life in demanding, exposed environments.



Low maintenance

No painting, no galvanising, no ongoing treatment across its service life.



Factory-manufactured accuracy

Pultruded to consistent, repeatable tolerances for predictable factory-manufactured accuracy.



Long service life

Expected service life in excess of 60 years.



Recyclable at end of life

Recoverable where facilities exist — supporting circular construction goals.

Foundations without the concrete.

Ground screws replace mass concrete with a fast, verifiable, reversible foundation — typically installed in hours and capable of carrying load immediately once installation has been verified. They are the perfect partner for an engineered structural platform.



No concrete

No wagons, no pour, no cure — the wet trade is designed out.



Minimal excavation

A fraction of the dig, with far less disturbance.



Little spoil

Almost nothing to cart away — a saving on tight sites.



Install in hours

Foundations completed in a single visit.



Immediate load bearing

Ready to build on as soon as they're verified.



Removable

Extractable at end of life, ground reinstated.



Reduced site impact

Less excavation, spoil and concrete-related site activity.



Restricted access ready

Compact plant where concrete can't go.



Installation testing

Foundation capacity verified against the published design loads.



Predictable engineering

Design loads confirmed by verification.

Three technologies. One complete platform.



A complete modern foundation platform

Individually, each technology is well understood. Engineered to work together within one coordinated system, they replace concrete with something faster, lighter, thermally efficient and fully documented — ready for the wall build once the foundation installation has been verified.

The engineering is already done. You verify the foundation.

This is one of ModuFloor's biggest commercial advantages — and a genuine shift in how a foundation platform gets to Building Control.

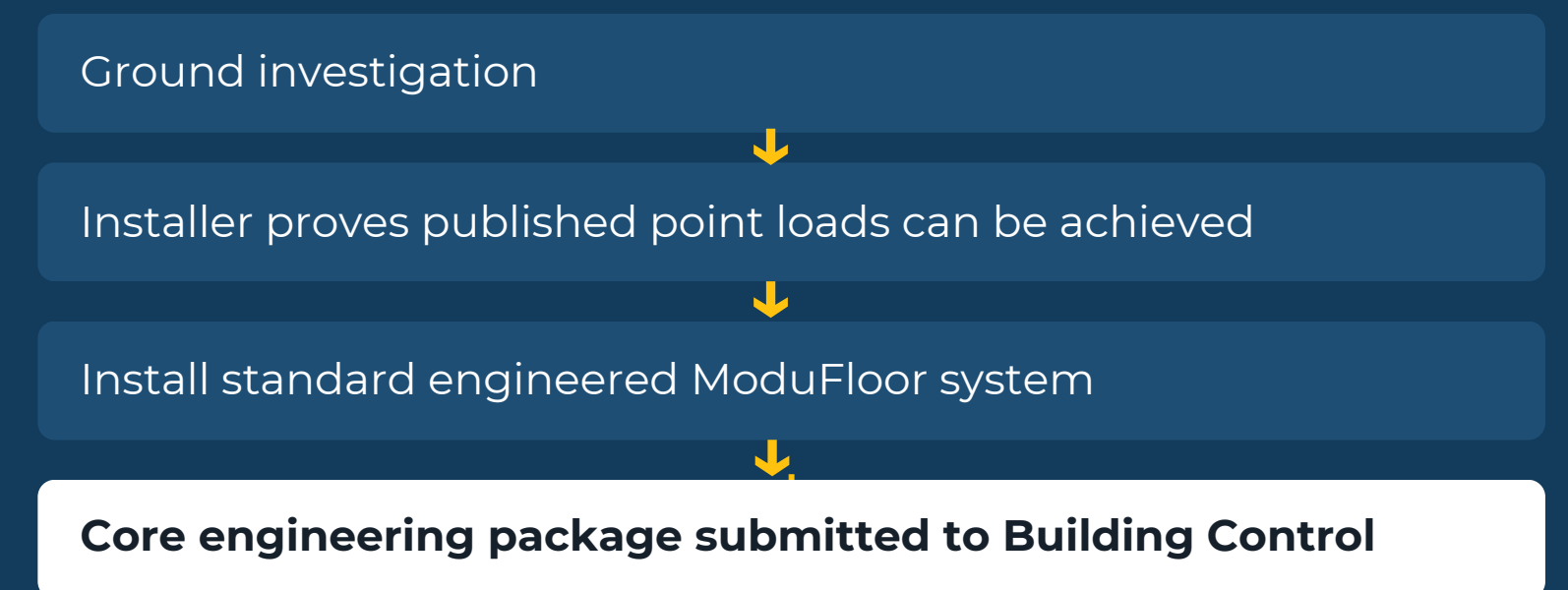
TRADITIONAL APPROACH

Engineer the floor to suit the foundations.



MODUFLOOR APPROACH

The platform is already engineered. Verify the foundations achieve the published loads.



Each support location carries a published design point load.

The structural design of the ModuFloor platform remains standardised, while the ground screw foundation is verified for the specific site against those loads. Like a steel beam or precast lintel, ModuFloor is a standardised structural platform — not a new structural floor design for every project.

Technical specification.

ModuFloor is engineered and documented across every dimension a designer, developer or Building Control officer needs to assess. Values are confirmed per project against the published design package.

U-values	Engineered to meet current Building Regulations thermal targets
England compliance	Approved Documents A & L methodology
Wales compliance	Welsh Building Regulations — Parts A & L methodology
Scotland compliance	Scottish Building Standards — Sections 1 & 6
Service life	Expected GRP service life in excess of 60 years
Structural loading	Published design point loads at each support
Weight	Ultra-lightweight — a fraction of concrete’s mass
Fire classification	Specified to project fire-performance requirements
Span capability	Engineered spans between screw supports
Floor build-up	Coordinated structural + thermal + finish layers
Insulation type	High-performance rigid insulation integrated
Overall depth	Optimised platform depth for level thresholds
Manufacturing tolerances	Factory-controlled, repeatable accuracy



Full engineering pack

Structural calculations, thermal and condensation-risk analysis, U-value calculations and defined system build-up supplied with every specification.

60+yr supported GRP service-life data*

1day typical install on prepared screws

3 nations’ compliance addressed

Six steps from survey to wall-ready deck.

No wet trades. No cure. Often no crane. A predictable, repeatable sequence designed for rapid installation.

1

Survey

Site assessment and platform layout to suit the building footprint and access.

2

Ground investigation

Ground conditions established to inform the ground screw design.

3

Ground screw installation

Screws installed in hours with compact plant — minimal spoil.

4

Foundation verification

Installation verified against the published design point loads.

5

ModuFloor installation

Factory-built engineered platform fixed to the ground screws.

6

Ready for walls

A level, insulated structural deck — ready for wall construction immediately.

Fifteen reasons at a glance.



One-day installation



Lightweight



No wet trades



Reduced excavation



Thermal performance



Less site waste



Walk-through houses



Crane not usually
required



Factory built



Precision engineered



Building Control ready



Structural calcs supplied



Ground screw compatible



60+ year GRP service life



Minimal site disruption

Everything a developer needs to say yes — and everything Building Control needs to feel confident — in one system.

Confidence before they even ask.

ModuFloor has been engineered with Building Regulations compliance in mind. Its standardised structural design provides a consistent core engineering package, supported by site-specific foundation verification against the published design loads.

Standardised engineering. Site-specific foundation verification.



Structural calculations

Full structural design of the GRP platform, available on request.



Ground screw test methodology

A recognised route to verify foundation load capacity on site.



Thermal calculations

U-values and condensation-risk analysis complete.



System build-up

A defined, compliant floor build-up ready to specify.



Installation methodology

A documented, repeatable installation sequence.



Compliance documentation

Consistent core evidence pack for Building Control.



Engineer support

Direct technical support from the engineering team.



Building Control support

We help answer questions before they're asked.

A lower-impact approach to foundations.

Sustainability isn't a claim bolted on at the end. It's the direct consequence of removing concrete, excavation and spoil from the foundation.



No concrete wagons

Deliveries and pours designed out of the programme.



No mass excavation

A fraction of the dig — ground left largely intact.



Less spoil

Minimal material carted off site.



Less waste

Factory manufacture reduces offcut and rework.



Reduced concrete use

Removes mass concrete from the foundation platform.



End-of-life recovery

GRP recoverable at end of life where facilities exist.



Faster installation

Rapid installation can reduce site time and vehicle movements.



Reduced site disturbance

Gentler on trees, neighbours and habitats.

The complete engineering package.

Every ModuFloor specification is backed by a full technical dossier — the drawings, data and verification that let a designer specify with confidence and Building Control assess the system.

✓ Drawings

✓ Sections

✓ Connection details

✓ Typical layouts

✓ Standard system details

✓ Ground screw spacing

✓ Design loads

✓ Material specifications

✓ GRP properties

✓ Lifespan data

✓ Material warranty

✓ Testing information

Not a product. A construction methodology.

ModuFloor is designed to become a recognised construction platform — a complete, repeatable system rather than a one-off engineered floor solution.

One complete system

- ◆ Engineered GRP structural platform
- ◆ Ground screw foundation integration
- ◆ Published structural design loads
- ◆ Thermal performance built in
- ◆ Building Control documentation
- ◆ Installation methodology
- ◆ Installer network
- ◆ Manufacturer support

PRODUCT ROADMAP — FUTURE DEVELOPMENT

V1.0

Single storey — Launch

The launch platform — engineered GRP deck on ground screws.

V2.0

Masonry-ready

Upated platform for masonry wall construction.

V3.0

Double storey

Extended structural capacity for two-storey applications.

V4.0

Block-and-beam variant

A ModuFloor answer alongside traditional block-and-beam.

MODUFLOOR®

Standardising modern foundations
through engineered modular
construction.

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Manufactured in partnership with Engineered Composites Ltd.