Adding a different dimension to bridges, retaining walls and other concrete structures

As a construction material, concrete delivers a unique combination of benefits. First and foremost, it offers exceptional durability and strength, either on its own or in combination with other reinforcement materials. Low maintenance and inherently fire resistant, it also delivers a range of sustainability benefits including energy-efficient production.

It can be used to create any shape or form, from the purely utilitarian to landscape-defining bridges and towering skyscrapers.

Alongside these practical advantages is a quality that sets concrete apart from any other material: the ease with which virtually any surface finish can be applied through the simple use of textured formliners.

This brochure offers an introduction to the possibilities open to you, with examples of how the inspired use of textured formliners and FRANK architectural products can transform an otherwise plain concrete finish into something that has a positive impact on the architectural landscape.
Design finishes to complement the local environment

While eminently practical, plain concrete structures can have an adverse impact on their surroundings, giving the impression of cold, un-involving utilitarianism. This can be overcome through the use of textured profile formliners, helping these structures to promote a more positive response.

The breadth of choice available means designs and forms can be applied that enable such structures to blend in with the local environment and complement existing structures and natural features.

At Max Frank we offer a comprehensive range of architectural concrete solutions, enabling the application of finishes to meet every requirement: practical, aesthetic, economic or a combination of all three.

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Insitex formwork liners provide a low cost means of applying appealing textured finishes to a wide variety of concrete structures, often replacing plasters, tiles, stone tooling and brick or masonry cladding.

Applications range from bridge abutments, retaining walls and culverts to pedestrian ramps, walkways and underpasses. They can also be used to add visual interest to railway structures, reservoirs and industrial building interiors and exteriors.

Wide range of finishes, plus bespoke designs
The Insitex formliner range provides a diverse choice of designs, covering a range of texture repeats and profile depths. Designs include geometric and vertical textures, and finishes designed to replicate brickwork, natural stone and timber (see design range on pages 9-11).

While liners are generally designed for vertical use – vertical joints are incorporated in the textures – certain textures also lend themselves to horizontal application, and all can be finished with fair-faced copings and surrounds. Bespoke designs can be created for special applications and signature designs.
**Lightweight and easy to use**

Insitex panels are supplied in standard 600mm widths and heights up to 7m, are light to handle and fix and are easily trimmed. Manufactured in the UK from PVC, Insitex formliners are readily available.

In normal use they are simply panel-pinned to the timber formwork at their overlapped edge joints, then sealed with adhesive taping; no site gluing or other form destruction is involved.

When coated with release agent (see page 8), Insitex can be easily stripped without delaying concrete operation.

**Improve construction speed and reduce man-hours**

The ease with which Insitex formwork liners can be fixed and removed can be a key factor in helping to drive down costs, improve construction speed and reduce man-hours.

In addition, its use protects underlying forms for re-use and enables early stripping and rapid formwork turn-rounds. And labour intensive tasks such as post-strip tooling and hammering are eliminated.
Quick turnaround
As a UK-manufactured product, Insitex formwork liners are readily available and can be produced with quick turn-around for custom designs.

Re-use opportunities for additional savings
With careful handling, fixing and removal, Insitex formliners can be used up to five times for insitu applications, depending on the application, height, shape and texture.

Suitable for precast panels and in situ construction
While the inherent lightness and ease of fixing/stripping of Insitex formwork liners make them ideal for on-site use, they are equally well suited to off-site production of precast panels, an increasingly important area in today’s construction industry.

Delivers a touch-smooth quality
Insitex touch-smooth surfaces and textural designs provide enhanced self-cleaning performance compared with coarse, granular or abrasive surfaces which can trap airborne pollution.

The use of textured surfaces, particularly those with a rugged feel or deep profile, can also deter vandalism by making graffiti more difficult to apply.
System solution with Trennfit release agent

As manufacturers of the Trennfit range of concrete release agents, we are able to provide a complete system solution for Insitex formwork liners.

Trennfit release agents are suitable for all types of formwork: plywood, coated plywood, plastic and steel. They deliver a substantial reduction in adhesion between concrete and formwork (up to 95% for steel forms) for outstanding release action and leave no residues on the concrete surface.

The use of Trennfit can also deliver a reduction in labour costs by minimising formwork preparation and cleaning requirements, while also extending the service-life of the formwork.
A variety of finishes to suit your needs

Insitex formwork liners are currently available in 29 different finishes, grouped into four groups: Vertical ribbed, Abstract, Timber, Masonry and brick. Examples of these profiles, along with diagrams of each, are shown over the following pages.

**Lincoln**
- Design group: Vertical ribbed
- Reference: 402
- Profile depth: 20mm

**Lancaster**
- Design group: Vertical ribbed
- Reference: 504
- Profile depth: 37mm

**Lothian**
- Design group: Vertical ribbed
- Reference: 608
- Profile depth: 12mm

**Windsor**
- Design group: Vertical ribbed
- Reference: 711
- Profile depth: 20mm

**Melrose**
- Design group: Vertical ribbed
- Reference: 401
- Profile depth: 37mm

**Ely**
- Design group: Vertical ribbed
- Reference: 403
- Profile depth: 25mm

**Durham**
- Design group: Vertical ribbed
- Reference: 505
- Profile depth: 25mm

**Grampian**
- Design group: Vertical ribbed
- Reference: 609
- Profile depth: 5mm

**Warwick**
- Design group: Vertical ribbed
- Reference: 712
- Profile depth: 10mm
Wicklow
Design group: Masonry and brick
Reference: 1124
Profile depth: 20mm

York
Design group: Masonry and brick
Reference: 607
Profile depth: 25mm

Newark
Design group: Masonry and brick
Reference: 710
Profile depth: 20mm

Bedford
Design group: Masonry and brick
Reference: 917
Profile depth: 10mm

Enfield
Design group: Masonry and brick
Reference: 1129
Profile depth: 20mm

Alston
Design group: Masonry and brick
Reference: 1128
Profile depth: 25mm

Kielder
Design group: Timber
Reference: 1122
Profile depth: 7mm

Sherwood
Design group: Timber
Reference: 1123
Profile depth: 5mm

Truro
Design group: Abstract
Reference: 918
Profile depth: 15mm

Stirling
Design group: Abstract
Reference: 1020
Profile depth: 10mm
Add impact and aesthetic appeal to architectural concrete
The application of form and texture to a concrete surface can transform the appearance of a structure.

It can create definition, add character and visual interest, make a powerful corporate statement or help a structure to blend more comfortably into the surrounding environment.

It is a solution offering almost unlimited possibilities in terms of enhancing walls, bridgeworks, buildings and other vertical, curved and sloping wall installations – and the NOEplast formliner system delivers an outstanding combination of design choice, practicality and value for money.

Cost-effective, multi-use formliner system
NOEplast is a durable, multi-use formliner system designed for the easy application of textured decorative finishes for both precast and in-situ concrete structures.

The strength and flexibility of the polyurethane (PU) material enables formliners to be used repeatedly, with at least 80 uses possible. This exceptional durability makes the NOEplast formwork liner system an extremely cost effective solution for multi-use work.
Outstanding texture definition
The use of a flexible elastomeric material gives outstanding texture definition, enabling the application of textures with extremely fine detail on structures ranging from large expanses of flat wall to curved and radiused structural elements.

This can enable the creation of soft, natural-looking timber grains, realistic rough textured stone, formal, masonry and brick, and abstract designs that can create subtle light and shadow effects.

More than 100 standard designs
The NOEplast range encompasses more than 100 textures including timber boards, natural wood effects, rough stonework, regular brick, granite walls, and textured plastered finishes. The range also includes bush-hammered designs, abstract artistic designs, regular repeat patterns and special anti-slip textures.

Such a broad choice of designs, with a huge range of options in terms of texture repeats and depth of profile, enables solutions to be provided for all kinds of concrete structures.
Replicate stone, brick, timber and more

The quality and fine detail achievable through the use of NOEplast forminers enables the accurate reproduction of many other construction materials, creating the impression of a finish other than plain concrete.

This includes a number of different timber cladding options, a wide range of natural stone walls and various brickwork styles.

Ideal for non-slip pedestrian applications

NOEplast formwork liners can also be used to create non-slip concrete for a variety of pedestrian applications.

As well as shopping malls, streets and pedestrian areas, non-slip concrete surfaces can also be used in communal areas in blocks of flats, on stairs and foot bridges and on walkways around office buildings.

Corporate mouldings using NOEplast liquid

The use of NOEplast liquid enables you to take the versatility of this system one step further by creating your own corporate castings.

Logos, branding, badges and corporate statements; all can be created and replicated in the finest detail, quickly and easily, with NOEplast liquid.
A wall or culvert at a reservoir could be formed to look like natural stone; a pedestrian walkway could be designed with feature walls that add interest and deter graffiti; a bridge column could be given a more classic feel with the addition of vertical ribs.

In short, NOEplast formwork liners can be used to enhance the built environment and improve the experience of those who live and work around these structures.

Design finishes to match existing profiles
The versatility of NOEplast means the design possibilities extend far beyond the 100+ standard designs available.

If you have an existing profile to match – or indeed a special texture or treatment you’d like to bring to a project – then custom NOEplast formliners can be produced to your individual requirements. The design opportunities available through NOEplast are literally endless.
Deliver a surface suitable for aggressive environments
The use of Zemdrain controlled permeability formwork liners delivers a concrete finish significantly better than that achievable using oiled plywood, steel or plastic faced formwork, increasing the potential surface life of all concrete structures.

This makes it ideal for use on structures where environmental factors such as frost, abrasion and acid attack can otherwise result in rapid degradation, threatening the integrity of the structure to such an extent that surface replacement or refurbishment becomes necessary.

Typical applications include seawalls, reservoirs, wastewater treatment plants, sewage works and associated structures such as bridges and piers.

Increase durability and surface integrity with a cement-rich finish
Zemdrain is a formwork liner with a controlled pore size that allows excess water and air to escape from the concrete while retaining the majority of the cement and small fines.

As a result, the concrete surface area benefits from a low water/cement ratio and decreased porosity, with a concentration of the finest concrete particles giving a durable and hard-wearing cement-rich surface.
Proven economic benefits over whole service life
The increased surface hardness and substantially improved resistance to degradation provided by Zemdrain can deliver proven economic benefits and cost savings over the whole service life of a structure.

Appealing blemish-free surface also resists micro-biological growth
Where profiled formliners are not required, a smoother, virtually blowhole-free Zemdrain surface with low porosity is better able to resist the growth of micro-organisms such as lichen and mould which would otherwise impact on the aesthetic qualities of the structure.

The resulting low porosity surface also provides enhanced resistance to water-transported substances – such as chlorides – towards the reinforcement, and to air penetration that can drive processes such as carbonation.

Zemdrain® is a DuPont registered trademark
Tubbox® – create simple, fast, cost-effective concrete columns

Low cost column formers for different shapes
Tubbox column formers provide a simple, fast and economical method for producing columns in virtually any geometrical shape from round, square and rectangular to hexagonal, octagonal and irregular shapes. A range of standard diameters is available from 150 mm to 1200 mm, and formers can be supplied in heights up to 6m.

They are a cost effective alternative to traditional column forms, requiring no cleaning, and are rapidly opened up and removed using the built-in rip-cord. Once removed they can be recycled/disposed of as cardboard.

Choice of finishes: smooth, spiral, blowhole-free
The Tubbox range can be supplied in three versions: spiral, smooth and blowhole-free. Spiral delivers a concrete surface with a slight imprint of the spiral former while smooth delivers a smooth quality surface.

It is possible to achieve a surface virtually free of blowholes and other blemishes with the ‘Blowhole free’ option. This column former incorporates a Zemdrain controlled permeability formwork (CPF) liner to deliver the many benefits described on pages 18-19.

Lightweight single or multiple use
As well as the standard single use products, the range is also available in the form of Tubbox Multi Column reusable formers, providing a cost effective solution where high numbers of re-uses of the same column are required. This solution is also ideal for re-profiling, upgrading or strengthening existing columns.

These lightweight and easy-to-handle formers are available in diameters from 150 mm to 1200 mm, and in heights up to 6 m as standard. Larger diameters and oversize lengths greater than 6m are available upon request. The finish on multiple use formers is a single longitudinal seam along the column.

Bespoke solutions for profiled columns
Tubbox column formers can be manufactured to enable the production of profiled columns in virtually any shape. They can incorporate Insitex formliner profiles (see pages 4-11) and can be tailor-made to any shape, size, texture or other special requirement.
Precisely dimensioned formwork – ready for installation
Fratec formers provide the freedom to be really creative with concrete, delivering precisely dimensioned formwork solutions for a whole range of shapes including cornices, recesses, multi-sided objects and customised designs.

While some shapes are available as standard, many projects involve the development of formers for complex shapes requiring special planning.

Our technical department is therefore ready to work with you to turn your ideas into reality and ensure that the Fratec formwork you receive on site is ready for installation.

Works with Tubbox to create a complete system
Fratec can be combined with Tubbox column formers (see page 20) to create a complete column – including capital and base – in one concrete pour, eliminating the need for complicated timber formwork.

A wide range of standard capital and base shapes is available, while special designs can be produced to order.

Achieve complex shapes in a single concrete pour
Fratec formers can be used to produce slab and wall cornices in a single concrete pour, or to create recesses in walls or slabs for the installation of openings, domelights, round windows and built-in illuminators.

This versatile system can be used with coloured concretes and multiple pours to create intricately designed concrete surfaces and special shapes. And it enables the efficient production of profiles that would otherwise require complex formwork solutions.

From intricate architectural details to the most organic of shapes, if it can be designed, it can be produced with Fratec.
Create architectural features using fibre concrete spacers and sealing cones

Max Frank extruded fibre reinforced concrete spacers and sealing cones provide an innovative means of turning a practical challenge into a positive design feature.

We can manufacture spacers with a variety of cover sizes and with many different profiles in accordance with BS 7973. FRANK standard and premium spacers are designed to maximise the bond with the concrete and, where required, minimise the visible surface impact. The ability to choose the durability properties of your spacers, as well as the optimum profile, ensures the ideal solution for every project.

The application of shuttering using reusable tie bars inevitably results in conical recesses being left behind in the concrete. These can of course be sealed by conventional means but the use of specialist, fibre-reinforced concrete sealing cones opens up the possibility of adding a modern architectural design feature whilst at the same time as providing a quick, reliable and effective seal for these recessed holes, matching or contrasting with the existing concrete colour.
Our extensive range of form liners is being constantly updated. View the complete range and download PDF data-sheets at www.maxfrank.co.uk

If you have any other questions - sample requests, prices or just a chat about how we might be able to help with your next project - please contact our sales team on 01782 598041 or email info@maxfrank.co.uk