



GRC façade Design Competition



Produce a design for a new exhibition façade panel located at the new EH Smith Birmingham showroom - forming a central feature

About EH Smith's Design Centre in Birmingham

EH Smith was formed in 1922. A key division of the company is its Architectural Solutions team, who have a remit to work alongside architects and construction professionals in the specification, procurement and supply of construction materials.

In 2020 the Architectural Solutions team opened its Design Centre in Clerkenwell in central London. The same team is taking premises at 312 – 314 Bradford Street in the Digbeth area of Birmingham (B5 6ET) to create a supplementary Midlands base.

The vision for this new facility is for it to become a centre for specification and architectural sales services in the Midlands and beyond, mirroring and working in operational tandem with the existing Design Centre in Clerkenwell.

As such it will showcase a large range of products from partner companies that EH Smith has sole or other sales rights over. Predominantly brick but also masonry support systems, facades and cladding materials. A wide range of heavy side construction materials will be exhibited as the needs and preferences of EH Smith dictate. It is anticipated that Bradford Street will act as a centre for events, exhibitions and temporary installations that are linked to the construction industry.

The building, which is owned by Bradford Street Properties, is late C19 in construction and most likely was designed as a weighbridge shop for the *Avery Weights and Measures Company* before their relocation to Soho Foundry in Handsworth in the 1890s.

It was extended in the 1950s to create ancillary office and meeting room space on the city centre facing side. Subsequently, it has been a 'metal bashing' workshop for various companies, most recently the *Birmingham Machine Tool Rebuilding Company*, which ceased trading in 2019.

It is roughly north-east/south-west in orientation. It is surrounded to the north-east and south-east by Birmingham's main coach station and by a small car park for the coach station's users. Both are owned by National Express.

The privately owned *Anchor Public House* occupies the rest of the south-east curtilage and forms an L shaped building at the junction of Rea Street and Bradford Street. The *Anchor Public House* is listed at Grade II. The Digbeth and Deritend Conservation Area is adjacent.

The building is at the centre of a major area of redevelopment. This involves the extension of the city centre to the south from the BullRing shopping centre to Rea Street and the immediate environs of 312 -314 Bradford Street. The area, known as 'Smithfield,' involves the repurposing of the now redundant Wholesale Markets site.

About Ibstock and Tellings GRC

With over 200 years of proud history, Ibstock enable the creation of homes, places and spaces for people to live and work better. We have worked with architects, builders, merchants and the wider construction supply chain to build the face of Britain.

WE ARE a leading manufacturer of clay and concrete building products and solutions—with eight growing product categories, all backed by our expert design and technical services.

In 2021 Ibstock launched a new "Futures" division adding brick slip and stone rainscreen facades to the portfolio and in 2022 acquired the established Telling GRC business, manufacturing flat, textured and brick faced GRC facades and which is now based at a larger manufacturing facility at Powerpark Wolverhampton.

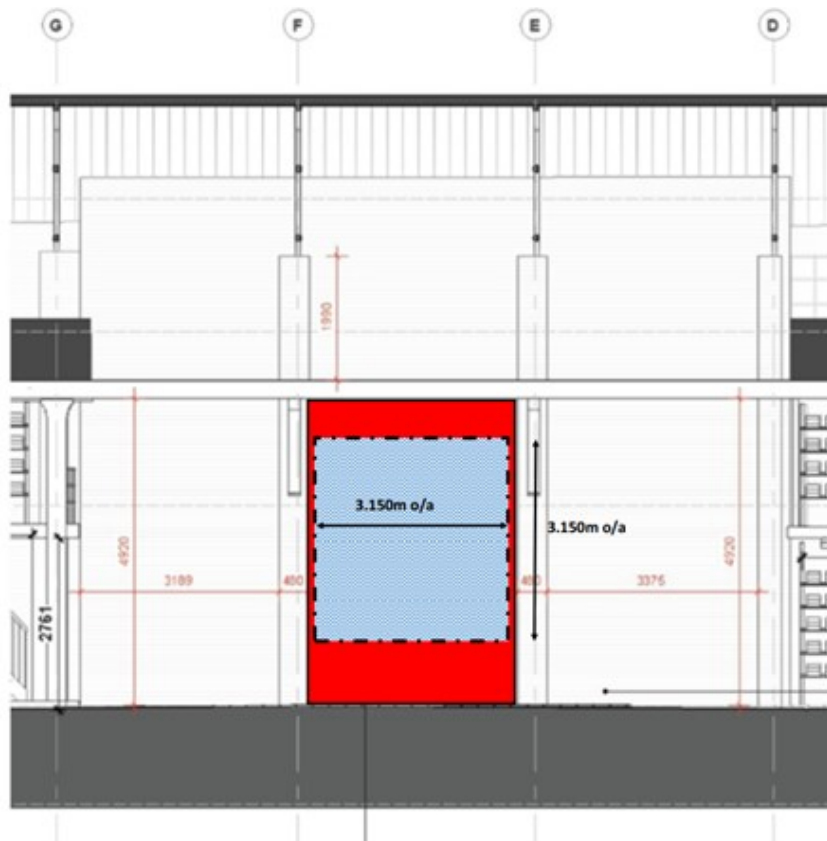
All GRC panels will be produced at the Powerpark facility and the competition winner will be able to view their panels in production.

Brief and guidelines for design with Glass Reinforced Concrete (GRC) Façade Competition

Overview

Ibstock and EH Smith are calling for designers to submit great designs to showcase their talents with glass reinforced concrete (GRC) façade panels. The winning design will be judged by the RIBA, Associated Architects, EH Smith and Ibstock and displayed in the new showroom of EH Smith in Digbeth.

One of the existing walls within the new showroom area will be re-clad using various façade systems and the main central bay will receive the Ibstock Tellings GRC competition winning design as the main display—refer to the area highlighted in the sketch layout below.



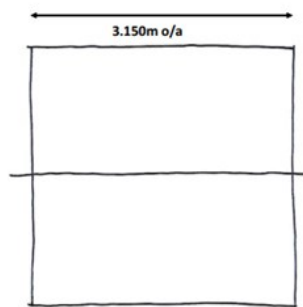
Centre-bay area marked to show proposed zone for GRC façade panel display (marked blue cross hatched within red zone)

Elevation A - Approx. bay dimensions for large scale terracotta (or other) samples

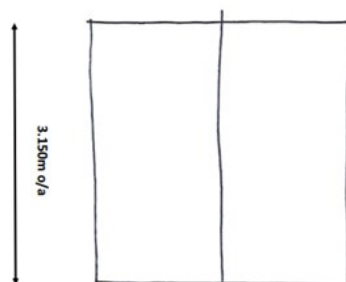


Technical Considerations

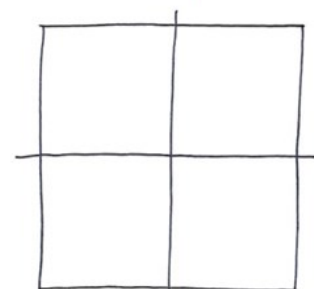
- The overall display area available for the Digbeth showroom GRC façade is 3.15 x 3.15m, however the maximum single panel size for manufacture is 3.15m x 1.575m (either landscape or portrait orientation) – please refer to sketches below
- GRC is a spanning material and has excellent flexural strength, the competition design can be split into either of the three options A, B or C shown below to complete the overall area. Individual panels can if required also accommodate “false joints” to visually split the panel
- Main panel to panel joints to be 10mm wide and any false joints required within a panel can also be made at 10mm wide
- A maximum panel relief (depth) of up to 150mm is possible
- Maximum panel return ends to RH and LH edges is limited to 440mm
- Reckli formliners can be used to create textured effects within a panel, up to a maximum size of 5m² within the complete design.
- If a Reckli formliner is required, then the selected form liner must allow the GRC to be manually compacted to a maximum relief of 40mm and minimum width of 30mm. (refer to example on the next sheet)
- There is no limit on the use of facing brickwork and/or plain faced GRC within the overall panel sizes shown and a combination of both or just a single material may be chosen
- If using Brick, the face size will be 215x65mm and please select from the Ibstock Brick Range (<https://www.ibstock.co.uk/products/bricks>) - any “T2” tolerance product can be used
- This project is for a façade, not a sculpture, therefore the winning panel will not be free standing
- Bracketry layout to secure the panels to the showroom display wall will be designed by Ibstock to suit your final design



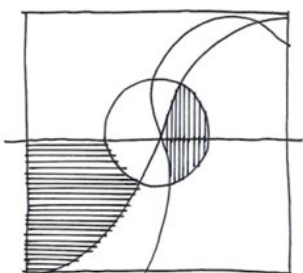
OPTION A: Overall panel area split into 2no landscape format panels



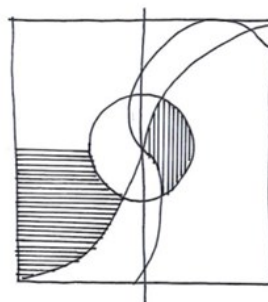
OPTION B: Overall panel area split into 2no portrait format panels



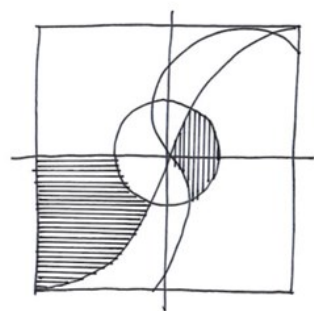
OPTION C: Overall panel area split into 4no square format panels



So, a design using panels based on **OPTION A:** format could look like this



So, a design using panels based on **OPTION B:** format could look like this



So, a design using panels based on **OPTION C:** format could look like this



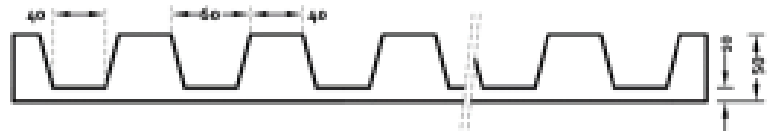
Examples of types of GRC finishes available to select



Plain faced GRC



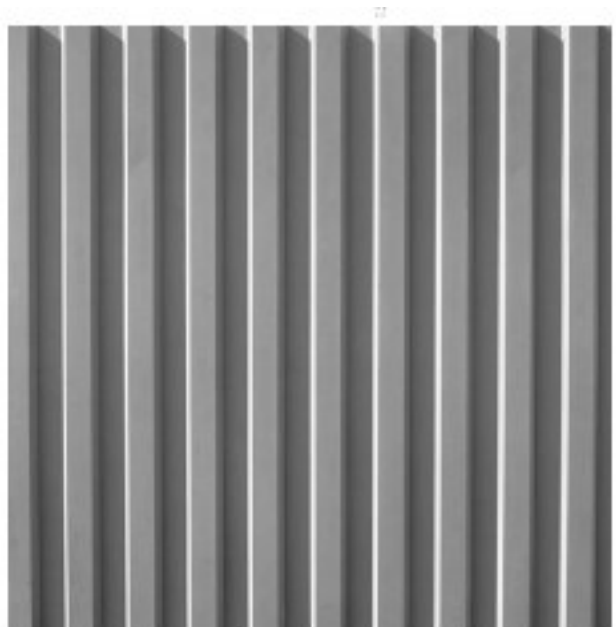
Textured faced GRC



Guide for using Reckli formliners within GRC moulds



Brick faced GRC



Options for textures and colours

Moulds

All GRC façade panels are produced in bespoke birch-ply moulds that are produced to allow either plain faced, 3D geometric, Reckli CNC produced textured formliners and/or clay facing bricks.

**3D Geometry
moulds**



As an example, using Reckli formliners to create intricate shapes, textures: - you could incorporate the following—refer to website link below:

<https://www.reckli.com/en/products/concrete-formliners/select>

RECKLI SELECT is a collection of versatile concrete textures from natural to imaginary designs to simulate stone, rock, brickwork, wood, plaster, oriental, and abstract and non-slip patterns as well as ribbed or wave textures and broken effects to any façade.

Textures

In addition the Tellings factory can use a light, medium or heavy style of grit blasting, which creates a series of rough textures, or alternatively we can instead polish the surface to create a sleek smooth finish.

There is also an option for increasing the aggregate size within the mix design up to a larger 8mm in diameter, which creates a larger “dot” on the surface of the finished product, but as this is a vibrated laying process this is only possible on one face (not on return faces).



Ibstock Tellings:
GRC sample swatches: rcf_002A—with (LH) light blast and (RH) Polished surface treatments



Colours

Pastel colours of concrete are created using white cement and natural aggregates. Other colours are achieved by adding natural oxide pigments to either grey or white OP cement.

Special colours and textures can be developed for approval.

Portland and Bath stone effects are commonly called upon for simulation.

All coloured GRC is treated with a hydrophobic sealer to reduce porosity and reduce airborne dirt retention

Brick face options

Brick faced GRC is an innovative solution to achieve the traditional and modern brick effects from your façade. Select from a variety of bonds including stretcher, flemish, stack, soldier and saw-tooth. Ibstock will be able to advise on the use and selection of bond types for your design.

Judging

The submissions should give particular reference to: -

The commercial needs of EH Smith for the display and showcase of our products and materials in a flexible and dynamic way.

The importance of creating a pleasant and attractive space for colleagues, customers and casual visitors.

The ability to adapt and update displays, units and decoration as tastes and needs dictate.

Assessment will be conducted at the discretion of EH Smith and Istock. Particular emphasis will be given to the overall concept, aesthetic harmony with 312-314 Bradford Street location, buildability and practicality.

Terms and Conditions

Design with GRC is organised by EH Smith and Istock. All information and material will be shared between the parties.

The following terms and conditions apply to all competition participants

Participants can comprise students, young professionals or other. You must disclose your party in the sign up form.

Entrants must be residents of the United Kingdom. Submissions from abroad will not be judged.

The final deadline for submissions is 25th October 2024. All competition entries will need to be submitted by the deadline. Material that will be received later, will not be included in the judging process.

If a team will publicly display the submitted work before the official announcement of the winners, the team will be disqualified.

All IP rights will remain with the applicants at all times. The organisations EH Smith and Istock hold the right to exploit and use the images for two years to promote the Design Competition itself.

Use of these images will always include the names of the designers/ applicants

Organisers have the right to disqualify any designs should they be inappropriate or do not accommodate manufacturing and installation constraints.