



CREAGH
INNOVATION IN CONCRETE

rapidres®

Fastrack Build System

OFF-SITE BESPOKE CONCRETE BUILD SYSTEM



CREAGH
INNOVATION IN CONCRETE

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WHAT IS RAPIDRES®?

Rapidres is a fastrack offsite crosswall build system developed for residential projects, including apartments, student accommodation, hotels, social housing and custodial accommodation.

Creagh design, manufacture and install the complete structure.

Rapidres is ideally suited to multi-storey projects where the layout is replicated consistently across each floor. It is a high performance precast insulated sandwich panel built offsite for high quality factory internal finishes with a wide range of external finishes that can match that of virtually any other build type. These now include a versatile range of finishes including smooth, etched, patterned and even printed concrete and various brick finishes. Rapidres offers individuality and a maintenance free alternative to render systems.

Rapidres produces the robust quality of traditional style construction at the speed of a modular build for significant program savings and produces a fast weather tight build which allows for early access for follow on trades.



The total frame solution comprises of structural walls and solid or hollowcore flooring and construction speed is greater than alternative systems. Units are manufactured offsite ensuring

the desired quality is met and can be left for direct decoration if required. M&E can be incorporated into the production process for all types of services.



RAPIDRES BENEFITS

- Decreased preliminary costs due to reduced programme times
- Creates a fast weather tight build with early access for follow on trades
- Reduced site co-ordination as many follow-on wet trades are eliminated
- Robust bespoke modular structure
- Excellent fire protection conforming to new legislation: BS EN 13501-1:2018
- Versatile range of finishes including brick, smooth, patterned and even printed concrete
- Maintenance free alternative to render systems
- Excellent acoustic performance; acoustic separation is minimised due to floor and wall density
- Windows and patio doors can be preinstalled at our factory
- Bathroom pods can be hoisted into position prior to the next floor being installed
- High spec precast prefinished balcony units can be designed and installed
- Internal walls are prefinished, ready for direct decoration
- Cast in M&E conduits and backboxes
- Excellent U Values
- Inherent thermal mass
- Increases passive ratings and lowers the overall carbon footprint of the building
- Improved Health & Safety
- Reduced heating and maintenance costs
- Certified to: ISO9001, ISO14001, ISO18001 & BES6001
- CE Marked

Creagh Concrete has been a pioneer of precast for over 40 years. We are one of the UK's largest producers of concrete products for a diverse range of market sectors. Creagh is leading the market with innovation in concrete, providing new solutions across the construction industry.



Creagh Concrete also manufacture:

Precast & Prestressed Flooring Systems | Precast Stairs & Lift Cores | Agriculture Products
Premix Concrete, Blocks & Aggregates |



*applies to sandwich panel
element of Rapidres®

MANUFACTURING PROCESS

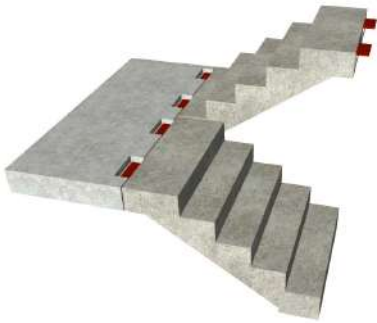
Our manufacturing facilities are based in Northern Ireland, Scotland and England ensuring we produce our quality products close to our customers. Every concrete piece is designed with our unrivalled engineering expertise and coupled with our innovative production methods to deliver concrete solutions with outstanding quality and reliability.

Every facility manufacturing our products operates to the same best-in-class quality standards with common processes and management. All have ISO 9001 and ISO 14001 certification of our manufacturing and environmental standards. This means that our products and services are safe, reliable and offer world-class quality.



COMPONENTS

Rapidres combines cross wall structural panels with exterior sandwich panels featuring high quality interior and exterior finishes.



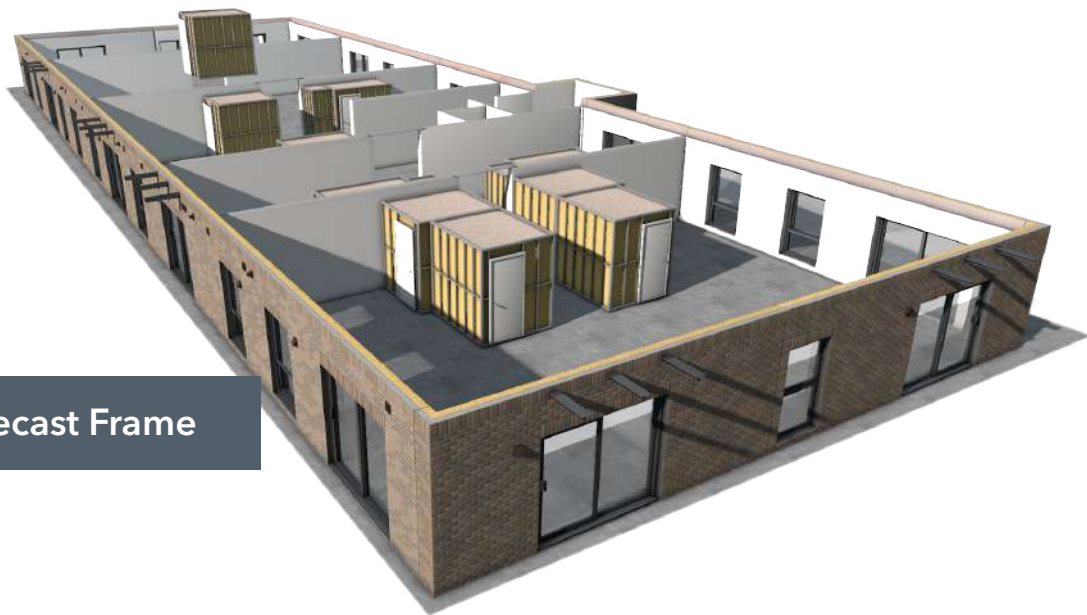
Precast Stairs and Landings



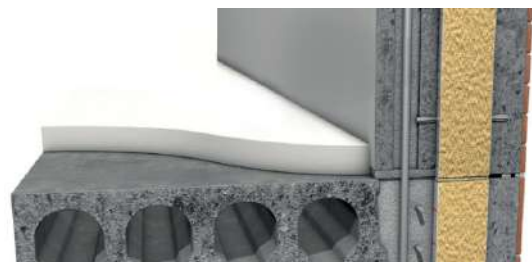
Stair Cores and Lift Shafts



Hollowcore Upper Floors

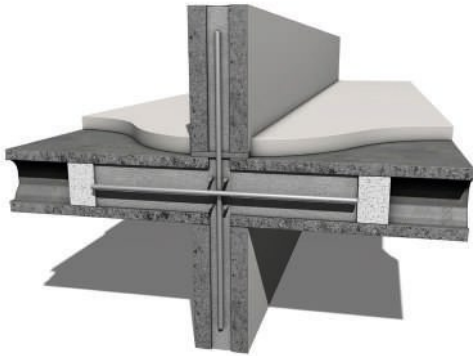


Full Precast Frame



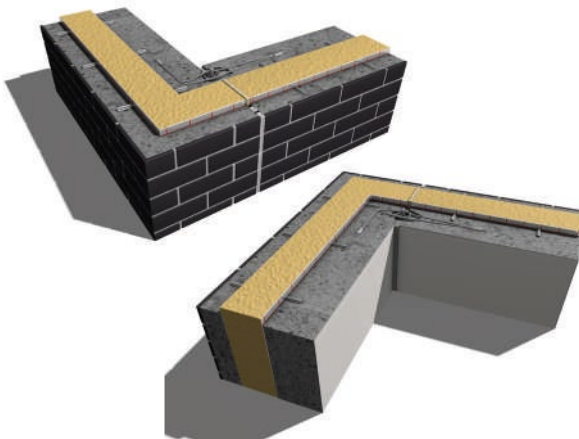
Hollowcore Ground Floor

CROSSWALL



Crosswalls are a generic method of building construction using a series of division or party walls which transfer the floor loads through the building to foundation or transfer slab level. Creagh can provide electrics and also a mist-coated finish.

CORNER DETAILS



BALCONIES

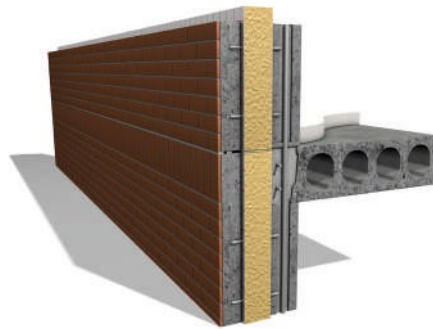
Creagh balconies are designed in-house and manufactured, delivered and installed to the highest standards. When designing the precast concrete floors for a project, the design of the balconies will also be taken into consideration by our design team.



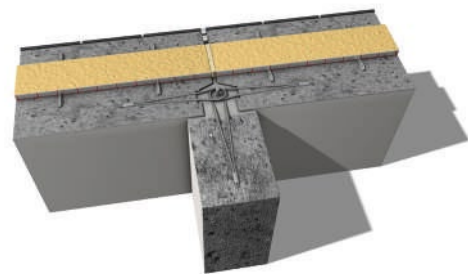
BATHROOM POD

Creagh can also install bathroom pods onto each floor level during the course of the frame build. These are delivered to site and lifted into position for each floor level.

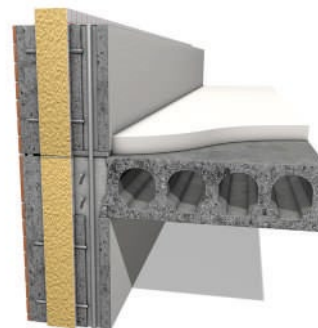
EXTERNAL WALL DETAILS



INTERNAL WALL JUNCTION



FLOOR/WALL JUNCTION



WINDOWS & PATIO DOORS

Windows and patio doors can be preinstalled into panels at our factory. These are delivered to site providing further programme savings.



QUALITY FINISHES

Rapidres panels offer a wide choice of high quality interior and exterior finishes.

FINISHES AVAILABLE:

Range of coloured mixes including:

- Smooth
- Etched
- Patterned
- Brick



MIST COATING

All internal walls are mist coated and finished offsite ready for direct decoration, removing requirement for boarding of walls.



ACID ETCHED

Acid etching panels provides more exposure to the aggregates within the concrete mix to produce a unique finish to each piece.

All panels leaving Creagh Concrete's yard go through a quality checking process. This ensures the panels are to the standard required on-site.

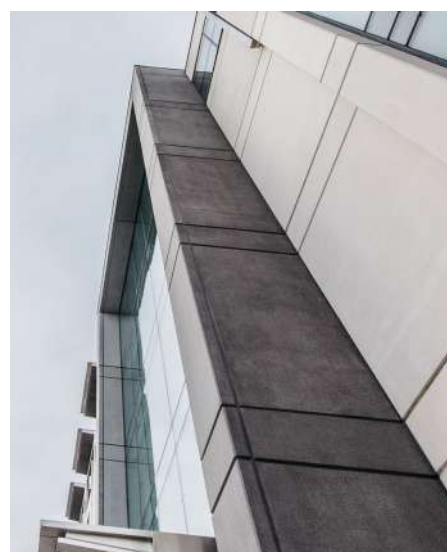


PROFILED

Rapidres gives specifiers the opportunity to explore their creative side with exterior brick clad finishes that are manufactured in a controlled factory environment.

ARCHITECTURAL CONCRETE COLOURS

The Creagh Architectural Concrete range uses a variety of colour, texture and decorative finishes, created for architects, designers, house developers and contractors alike, illustrating how you can achieve powerful and dynamic aesthetics on a façade.



The range allows architects to widen their scope and unleash their creative flair when designing prestigious buildings that require a superior finish.

Creagh offer 12 standard colours within the Architectural Concrete range. Special colours are available from a customisable pallet, upon request. It is recommended products are verified against a sample (3 production sized units manufactured over 3 days) before ordering. A bespoke colour matching facility is also available.



CASE STUDY

CHATHAM WATERS KENT

PROJECT OVERVIEW

Client:
Russells Construction

Location:
Kent



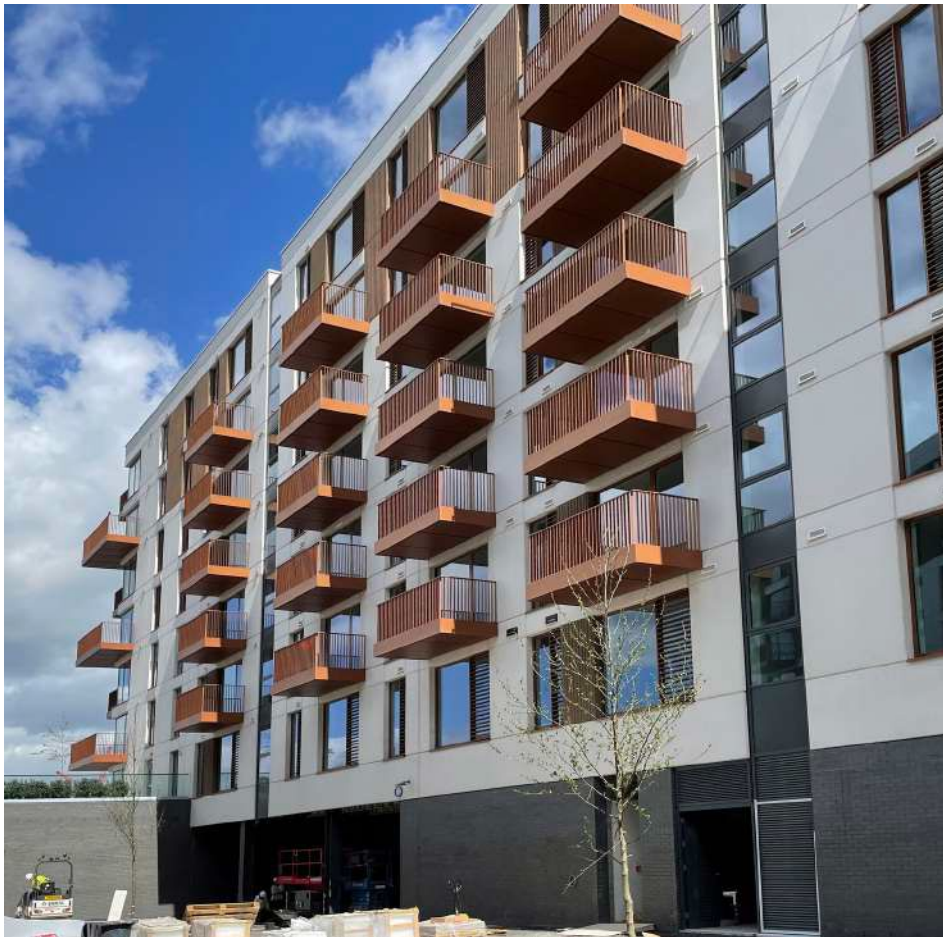
193 one, two and three bedroom apartments over two interconnected blocks



SPECTACULAR APARTMENTS SET IN THE HEART OF A TRULY UNIQUE AND DESIRABLE PLACE TO LIVE

A two block, 7 storey premium residential development, located in Kent along a stunning waterfront setting has started to take shape. The project comprises 193 one, two- and three-bedroom apartments over two interconnected blocks - one six storey and one seven storey. The apartments are for private market rental and will include retail units at the ground floor level, with a stunning waterfront boulevard and alfresco dining areas, set to give a "Mediterranean feel" to the waterfront vista. The scheme also features an attractive roof top garden, complete with luxurious dining and BBQ areas, all offering unequalled views across the water

The project, located in one of Kent's most highly sought-after postcodes was designed by Manchester architects AHR. The building was constructed using Creagh's 'Rapidres[®]' offsite bespoke concrete fast track build system. Rapidres crosswall technology delivers robust traditional style construction with the speed of a modular build for significant programme savings. The total frame solution comprises of structural walls and hollowcore flooring and construction speed is greater than alternative systems. The façade is a striking white etched pre-cast concrete with bronze panels and punched balconies overlooking the dockyard beyond.



The Rapidres system was delivered over 690 loads, going through Liverpool port and installed with 2 crawler cranes over approx. 30 weeks.

| The Numbers | |
|------------------------|----------------------|
| Grey Solid Panels | 2,971T |
| Acid Etch Panels | 3,120T |
| Acid Etch Solid Panels | 202T |
| Hollowcore Flooring | 14,508m ² |
| Stairs | 151T |
| Ground Beams | 289T |



CASE STUDY | ARENA CENTRAL BIRMINGHAM

OFFSITE REACHES NEW HEIGHTS IN BIRMINGHAM

A two-block 22 storey residential building on the site of an old subterranean car park in Birmingham, proved to be a milestone for Creagh and a testament to the true power of offsite manufacture.

The two blocks house 324 apartments built by Galliford Try and is part of a £40m build-to-rent scheme for client Dandara Living. Comprising two blocks of 17 and 22 storeys linked by bridges at each level, the development features studio, one-bed and two-bed apartments with balconies across all elevations. The towers are the tallest structure completed by using the Rapidres fastrack build system.

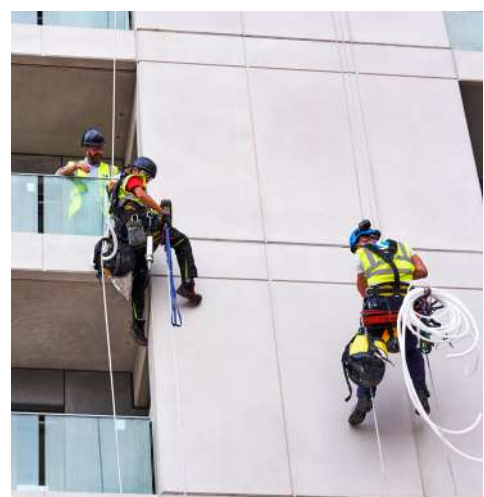
The decision to use precast concrete systems for the building's structural frame, cladding and balcony units was taken at an early stage on the project. The brief demanded a robust finish on the building, which would limit the amount of ongoing maintenance required.

Precast concrete is the ideal material of choice for frame construction and cladding. With this in mind, the project team looked at various different options for the structure and its subcontractors, before settling on the Creagh team to deliver and install the frame panels, cladding sections, balconies and hollowcore floor slabs.

Galliford Try project manager Aidan Smith said; "We knew we wanted the robustness that precast concrete offers and spent a lot of time researching our subcontractors. Creagh has the capability and experience to deliver both the hollowcore floor slab and the architectural precast concrete that we wanted. The screed that we place on top of the floor slab is there just to iron out any changes in level. It gives us a little wriggle room."

The speed and efficiency of construction displayed with this project creates a real sense of momentum. Creagh CEO Seamus McKeague concluded; "We are seeing strong interest in our rapid build concrete systems because developers now understand the true value of slashing programme times.

"Investors not only benefit from revenue gained by the early occupation of units but, also from the mobility of their capital resource. Quite simply, shorter build times mean developers can complete more projects with the same pot of finance."







FIRE TESTING

When testing our sandwich panels Creagh enlisted market leaders in the field of fire science, Efectis. They covered all safety aspects like; testing, modeling, certification, education and inspection.

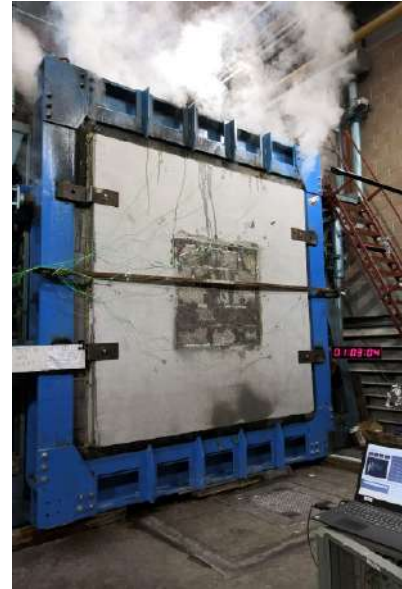
Efectis performed a fire resistance test regarding a pre-cast concrete wall panel, according to the general requirements of the standard BS 476-20: 1987 and to the specific requirements of the standard BS 476-21: 1987.



The wall panel was exposed to temperatures in excess of 1000°C for over an hour.



Off-site construction allows for a factory controlled environment where panels produced achieve the highest possible standards.



After testing the panel required only some light remedial work to restore it.



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