

CORNISH CONCRETE PRODUCTS

STRUCTURAL PRECAST >



- / GROUND AND EDGE BEAMS
- / RETAINING WALLS
- / CROSSWALL CONSTRUCTION
- / CONCRETE FRAMES
- / STAIRCASES AND FLOORS
- / SEATING AND TERRACING
- / LOADING BAYS
- / LIFT SHAFTS

PROJECT: Crossways
PLACE: Dartford

Cornish Concrete Products is one of the UK's leading suppliers of structural precast components and building systems for the construction industry.

These components can be used in a wide and varied range of applications and either as part of or as the whole structure itself.

They are commonly used in:

- / Residential development
- / Industrial development
- / Warehousing & distribution
- / Schools & colleges
- / Sports complexes including stadia and gymnasia
- / Retail development
- / Cinemas and auditoria
- / Hotels, prisons and student accommodation



All structural components are manufactured with ecocrete environmentally friendly concrete which contains a minimum of 80% secondary product.



Ground and Edge Beams

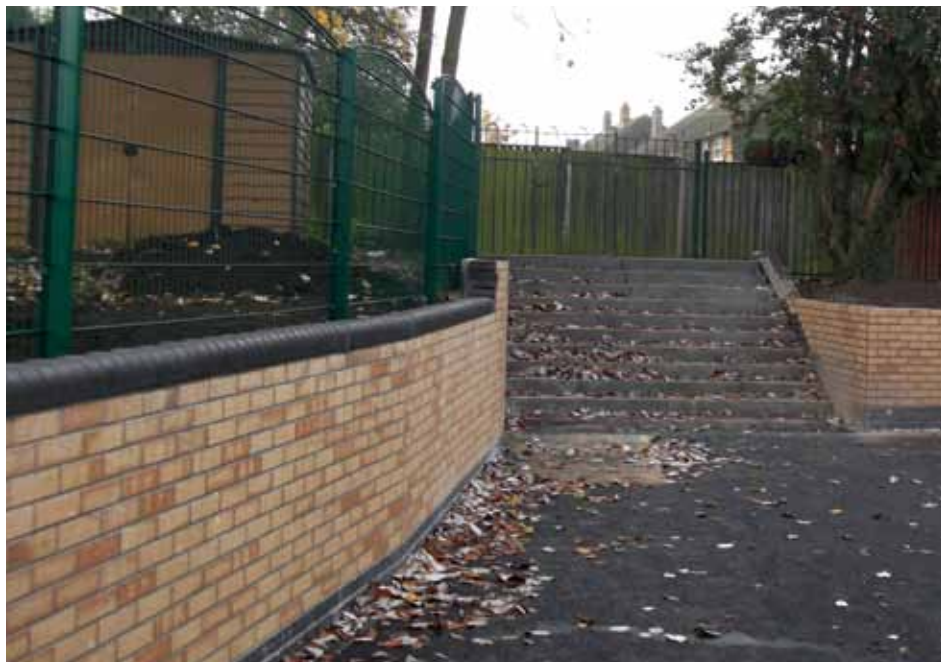
Precast ground beams can significantly improve construction programme times by reducing the impact of poor or difficult ground conditions and providing a suspended foundation for the structure. They can be fabricated to the customer's specification or designed by CCP's in-house team.

There are a number of further benefits from using CCP's ground and edge beams in construction projects:

- / Manufactured in factory controlled conditions
- / Improved programme times
- / Can be produced with a fairfaced finish for visual surfaces
- / Simple and fast installation
- / Removes the uncertainty of poor weather

V PROJECT: Industrial Units
PLACE: Park Royal, London





Retaining Walls

Precast retaining walls can be designed and manufactured by CCP to meet the client's requirements. They offer a quick, high quality, flexible and cost effective solution.

They are fabricated in CCP's variable formwork system which allows for simple changes to profiles with minimal additional expense.

Retaining walls are also provided using CCP's Double Wall system. These act as reinforced permanent concrete formwork ready to receive an insitu infill. They provide a high quality precast finish to an insitu concrete solution without the need for onsite formwork and with the speed that only off-site solutions provide.

PRODUCT: Brickfaced Retaining Walls
PLACE: Highway School, Orpington

Further benefits include:

- / Just in time deliveries
- / Quieter site operations
- / No production delays due to inclement weather
- / Manufactured in factory controlled conditions
- / Can be finished with either brick or natural stonework, thereby removing the need for an additional follow-on trade



CCP Crosswall Construction is a modern, fast and effective method of construction utilising precast concrete components.

Crosswall Construction is fabricated in CCP's state of the art manufacturing facility and is designed on a bespoke basis for each and every project.

Crosswall Construction has the ability to connect walls and floors together and thus avoid the need for a steel or concrete frame. Load bearing walls transmit vertical loads and act as shear walls to prevent lateral movement.

Lateral support can also be achieved by transmitting loads via the floor slab back to lift shafts, stair cores or other structural walls. Because there is no frame, there are no structural downstands required to accommodate beams.

Construction Method

Panels are 'stitched' together on site at the joints by pouring a concrete grout into the reinforced joints of adjacent panels enabling continuity to be achieved. A small amount of internal decoration is

required. This method of construction allows buildings to be erected faster than a conventional frame. Floor slabs are connected and grouted into the wall panels

CCP Crosswall Construction further benefits:

- / Acoustic separation is minimised due to the density of the floors and walls
- / Inherent Thermal Mass
- / Greater security
- / Excellent air tightness
- / Reduced site co-ordination as many follow-on trades are eliminated
- / Reduced preliminary costs due to reduced programme times
- / Reduced heating and maintenance costs
- / Improved Health and Safety
- / No scaffold solution

CCP Crosswall Construction also comes with the option of Thermowall Insulated Sandwich Panels to the external facade.

PROJECT: Celestia

PLACE: Cardiff



Concrete Frames

CCP can provide a variety of options for concrete frame construction, all of which are interchangeable to best meet the requirements of a particular site.

- / Precast frame
- / Crosswall construction
- / Hybrid construction

Precast elements as part of an insitu hybrid frame such as shear walls, concrete decks (Demidec floors), columns and staircases is often seen as a best of both

worlds solution as it marries together the advantages of precast and insitu concrete. By utilising precast elements in an insitu frame construction, programme times are speeded up, thereby saving costs.

Concrete produces robust and adaptable buildings that are inherently fire resistant, vibration free and quiet. Exposure of the concrete frame will exploit concrete's inherent thermal properties in naturally ventilated, low energy buildings.

Staircases

CCP design, supply and install precast staircases custom made to suit client's requirements. Units are typically either supported off blockwork with separate landings and flights or supported from steelwork with integral quarter landings. In concrete cores, there are a variety of different support options available.

Staircase units come with a range of potential finishes but can be left fairfaced if required. Stair flights are cast upside down in variable steel moulds with landings being cast in CCP's state of the art carousel plant.

CCP also cast in visual contrast and non-slip strips and nosings as required. A fitted tread protection service can also be provided.

Advantages of precast staircases

- / Reduced site programme
- / High quality finish
- / Instant working access
- / Just in time deliveries
- / Quieter site operations

CCP have a long history of producing high quality architectural feature staircases in a variety of shapes and forms from helical and elliptical stairs to spiral staircases and open tread staircases with a central spine beam and cantilever treads.

V **PRODUCT:** Precast Staircases
PLACE: CCP Yard



Floors

CCP produce a variety of floors for use within the construction industry including "Demidec" concrete plate floors as well as other high quality flat plate soffit floors for use in both Crosswall Construction or where clients wish to take advantage of concrete's inherent thermal mass.

All Demidec and other flat soffit floors are manufactured in a state of the art carousel plant on precision engineered flat steel pallets. Shutters are held in place using magnets thereby ensuring that the quality of the pallets is not compromised as well as speeding up the production process.

Quicklay Hollow Core Floors

CCP produce in 150mm, 200mm and 250mm depths and are wet cast with solid ends and integral cast in lifting eyes.

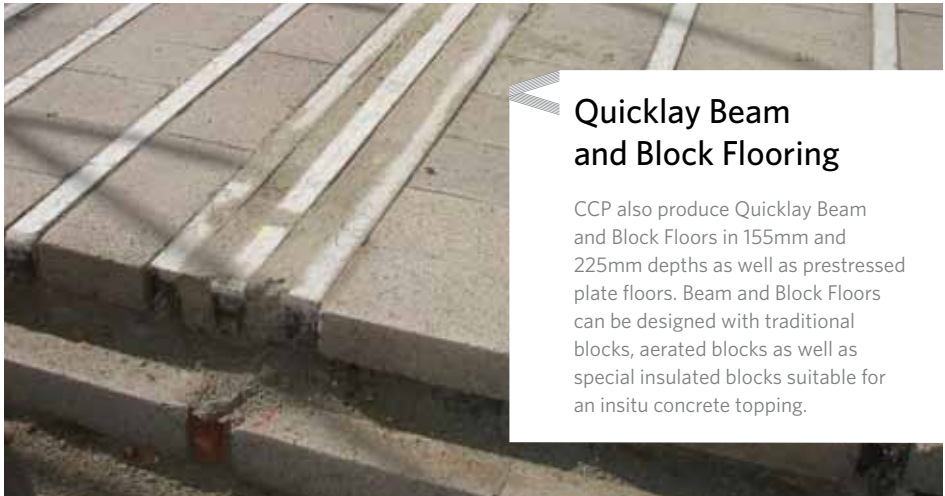
All prestressed floors can also be designed as a separating sound layer to comply with Building Regulations.



Flat Soffit Floors

All are suitable for direct decoration. Planks can be cast in widths to suit the geometry of the construction and joints can be expressed if so desired.

Whilst CCP's flat soffit floors are supplied nationally along with all the other structural precast products listed, CCP's Quicklay prestressed floors are generally only supplied in the South West of England.



Quicklay Beam and Block Flooring

CCP also produce Quicklay Beam and Block Floors in 155mm and 225mm depths as well as prestressed plate floors. Beam and Block Floors can be designed with traditional blocks, aerated blocks as well as special insulated blocks suitable for an insitu concrete topping.



Loading Bays

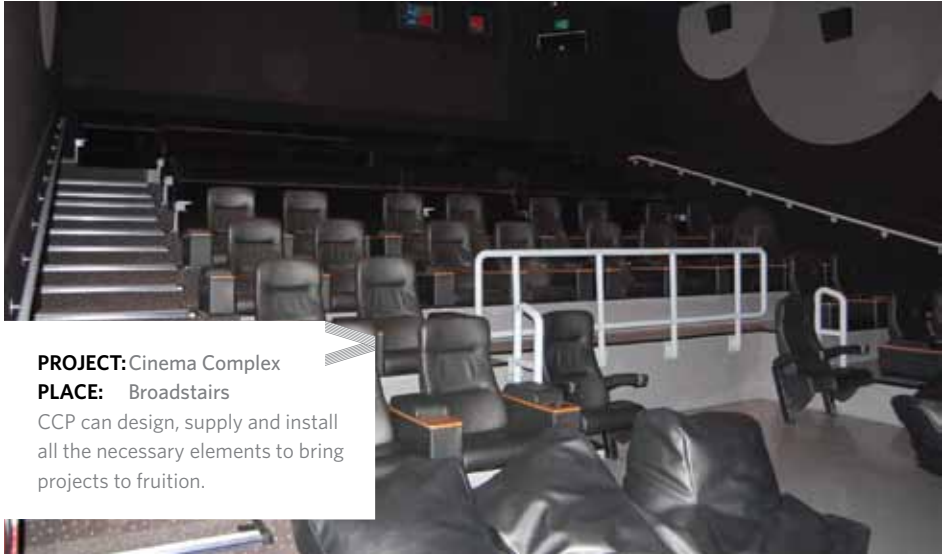
Precast Loading Bay surrounds are designed, manufactured and installed to meet client's requirements. CCP's loading bays combine high quality finish and accuracy with speed of erection and all the advantages that this brings to the contract programme.

Loading Bay Surrounds for Dock Levellers consist of: Front Elevation "Tee" Piece Walls, Rear and End Retaining Walls, Bridge Deck Slabs, Thermowall Insulated Wall Panels. Additionally, most projects will include ground beams, external stairs, yard retaining walls and precast lift shafts.

PROJECT: Distribution Centre
PLACE: Waltham Cross

Benefits:

- / No shuttering, pouring or curing concrete on site
- / Provides exact costings for building contractors
- / Suitable for fast track construction
- / Not reliant on weather conditions
- / Manufactured in factory controlled conditions



PROJECT: Cinema Complex

PLACE: Broadstairs

CCP can design, supply and install all the necessary elements to bring projects to fruition.

Seating and terracing

Auditoria and stadia are almost always cast in concrete due to the following considerations:

- / Loading
- / Deflection
- / Vibration resonance
- / Noise
- / Fire

In order to meet the stringent programme requirements in today's modern stadia, CCP precast seating, terracing, step and raking units can play a major part in achieving this objective through:

- / Speed of construction
- / Quality of finish
- / Reduced preliminary costs
- / Reduced Health and Safety Risks on site
- / Programme surety

Lift Shafts

CCP's Precast Lift Shafts are manufactured in adjustable steel moulds to tight tolerances. They are usually erected in a single day without the need for scaffolding or the requirement for the remaining structure to be in place.

Further Advantages:

- / Factory controlled conditions for manufacture
- / Dimensional accuracy
- / Simple and fast erection
- / Reduced Health and Safety Risks
- / Reduced co-ordination with other trades

Environment and Quality

CCP takes its environmental responsibilities very seriously and is accredited with the Environmental Management System ISO14001. The company is also a founder signatory of the British Precast Sustainability Charter, and one of the first companies in the UK to be accredited with BES6001, the Code for Responsible Sourcing, achieving a "Very Good" status across its entire product range.

Furthermore, by choosing a precast concrete solution, the proliferation of waste and the risk of contamination are greatly reduced. Customers can take advantage of

the material's inherent thermal mass which when used within the internal fabric of a building acts as a dampening mechanism for the external temperature and hence reduces energy demand from heating and cooling.

CCP is also accredited with the Quality Management System ISO9001.



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