StruEngineers

STRUCTURAL ENGINEERING DESIGN AND DETAILING SERVICES

2021

www.struengineers.com

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WHO WE ARE

About StruEngineers

Our 40-strong team of engineers and software experts are ready to support your project through structural consultancy and value engineering services.

With knowledge of European, British, American and Indian codes and standards, plus support from international colleagues, we're able to assist a diverse range of clients around the world.

We can bring considerable expertise to bear on your precast or reinforced concrete project, from design and manufacture to planning and project management, and full BIM implementation.

What makes us different is our approach and in-house software development resources. We'll work with you to find the best solution for each and every project.

You can have full confidence we'll deliver on our promise – to provide quality, error-free drawings when you need them. This is backed up by our stringent quality management procedures.

OUR MISSION

Our mission is to combine structural engineering expertise with world leading engineering software. This means we can support you to optimise and improve your processes, from concept to reality.

OUR APPROACH

We are committed to providing you with high-quality, accurate drawings, delivered on time, and to the required standards. We prioritise communication and full visibility in all projects, from design through to site.

WHAT WE DO

About StruEngineers

We bring considerable expertise to precast or reinforced concrete projects, from design and manufacture to planning and project management, and full BIM implementation.

We quickly mobilise the resources needed to meet the engineering, modelling and drawing requirements of our clients' projects.

Our expertise allows us to support clients at every stage of a precast or reinforced concrete project with specialised services to match.

This covers everything from feasibility and design, right through to production, fabrication and erection, documentation, and project management.

We are committed to providing clients with high-quality, accurate drawings, delivered on time, and to the required standards.

We prioritise communication and full visibility in all projects, from design through to site.

Because we use in house software, we are also a testing and development hub, and a valuable knowledge base for customers.

GLOBAL FOOTPRINT

International Locations

INDIA

StruEngineers (India) Pvt. Ltd.
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Near City Pride Kothrud,
Pune – 411038,
Maharashtra, India

UK

StruSoft UK
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Barton Turn
Burton on Trent
Staffordshire, DE13 8EB

SWEDEN

StruEngineers AB
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217 74, Malmö

PHILIPPINES

StruSoft AB (Philippines) PTE Limited,
Unit 702 The Linden Suites,
#37 San Miguel Ave. Ortigas Center,
Bgy. San Antonio, Pasig City. 1605

COMPANIES

We've Worked With

We've worked with some great companies.

CORESLAB STRUCTURES

HEYNE TILLETT STEEL STRUCTURAL ENGINEERS

PRE-CON When performance counts.

Kronetorp Park

RSK

WBD GROUP

TESTIMONIALS

What Our Clients Say

"The StruEngineers team provided drawings in a timely manner, with great accuracy and including all requested revisions."

RSK
Gayton Road, Harrow

"StruEngineers has always been our first choice for RC detailing because of the efficiency and quality of the work they produce."

Ahmed Kolia
Symmetrys

"The StruEngineers team did an outstanding job, with an analytical approach and paying great attention to detail."

Architectural Consultants
Finchley Road, London

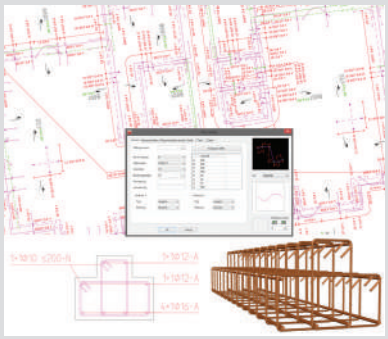
From Design to Construction

REINFORCED CONCRETE DETAILING

We provide the engineering support you need to optimise your RC concrete projects. Take advantage of our team's experience, which includes a range of national and international standards.

From your initial design concept and structural analysis right through to shop drawings and fabrication, we'll provide you with value engineering services and technical support.

Supported by the powerful software platforms and development teams of our parent company, StruSoft, we're able to respond and adapt to your requirements quickly.



Reinforced Concrete Drawing and Detailing Services

We can support you with RC engineering services:

RC drawings – for various elements, including floor slabs, columns.

Bar bending schedules – shop drawings, processes and software integration, automation.

GA/Erection drawings – for residential, commercial, industrial and public sector projects.

2D/3D BIM IFC – full BIM workflow, documentation and project management.

RC Design, Production and Project Management

We can work alongside your in-house systems and processes or work with you to develop new ones.

IMPACT – 3D BIM software for precast design, production and project management.

FEM Design – structural analysis for precast concrete structures.

PRE-Stress – reinforcement calculations and fire design.

WIN-Statik - engineering design tasks according to national standards.

Revit – building information modelling.

AutoCAD & BricsCAD – drafting, 2D and 3D drawings.

BIMContact – cloud-based document and project management.

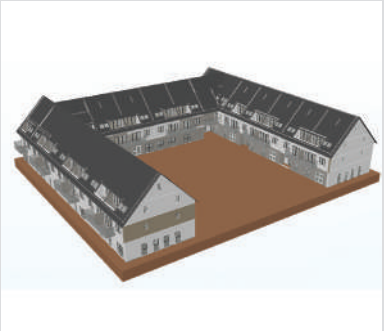
From Design to Construction

PRECAST CONCRETE DESIGN & DETAILING

We provide the engineering support you need to optimise your precast projects. Take advantage of our combined expertise, built on experience of many different precast markets around the world.

From your initial design concept right through to production and construction, we'll provide you with value engineering services and technical support.

Supported by the powerful software platforms and development teams of our parent company, StruSoft, we're able to respond and adapt to your requirements quickly.



Precast Concrete Drawing and Detailing Services

We can support you with precast engineering services:

Element drawings – double tees, hollowcore slabs, sandwich walls, twin walls, solid walls, beams, columns and more.

Element calculations – prestress and reinforcement, connection details, company standard and codes.

Element production – shop drawings, processes and software integration, automation.

GA/Erection drawings – for residential, commercial, industrial and public sector projects.

Structural calculations – gravity and lateral analysis.

2D/3D BIM IFC – full BIM workflow, documentation and project management.

Precast Concrete Design, Production and Project Management

We can work alongside your in-house systems and processes or work with you to develop new ones.

IMPACT – 3D BIM software for precast design, production and project management.

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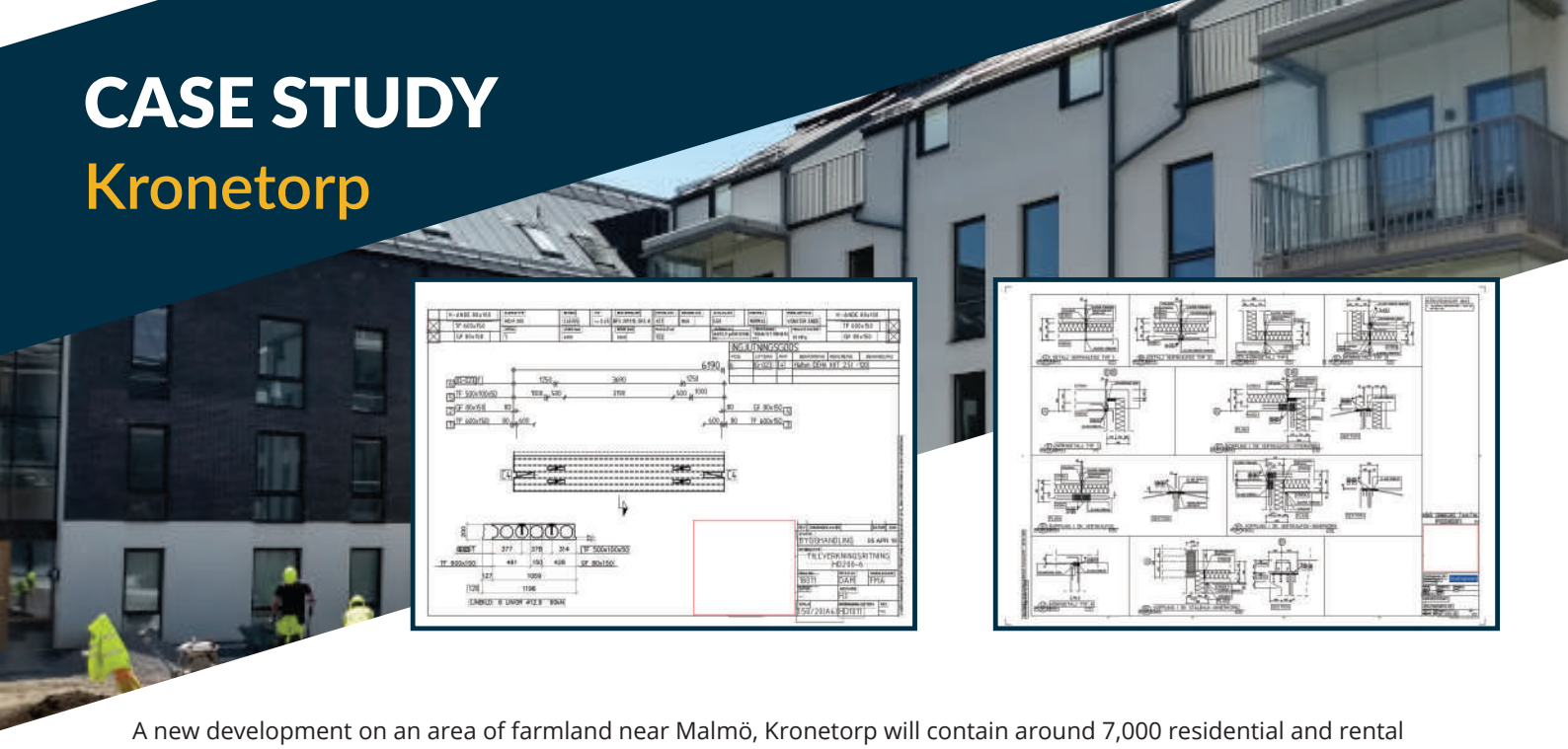
CASE STUDY
Kronetorp



A new development on an area of farmland near Malmö, Kronetorp will contain around 7,000 residential and rental apartments, as well as service houses, offices, bathhouses, and schools. Over approximately 15 years, developers Kronetorp Park AB will provide the feel of small, suburban town living, with proximity to the big city.

As well as investing in the land, the developers have also installed a small precast factory on-site. By manufacturing their own elements, they can control quality and supply for the project.

In additions to these benefits, there is also a positive environmental impact in reducing the carbon footprint of the project.

ENABLING A 3D BIM WORKFLOW WITH STRUENGINEERS

StruEngineers, on behalf of parent company, StruSoft, has already been involved in four project phases, with a fifth to come.

StruEngineers produced and supplied manufacturing drawings with reinforcement specifications, machine files, assembly drawings and reports. These drawings are used in IMPACT for production and project planning.

The entire schedule works through a 3D model, allowing a complete BIM workflow in the cloud. This means accurate control over production planning and eventual transport to the construction site.

“You can see the building in the model and follow along with all the way to plan the casting and assembly arrangement”.

Johan says. Every detail is important, such as how elements should be loaded to maximize transport efficiency, and how they should be produced to match the transportation times and erection schedule on-site.

REAL-TIME, ERROR-FREE DRAWING SUPPORT

While the production work is progressing, project revisions and updates are carried out simultaneously by StruEngineers. If something changes in the drawings, in the database or in the model, this is carried through immediately to the transport and production planning tools.

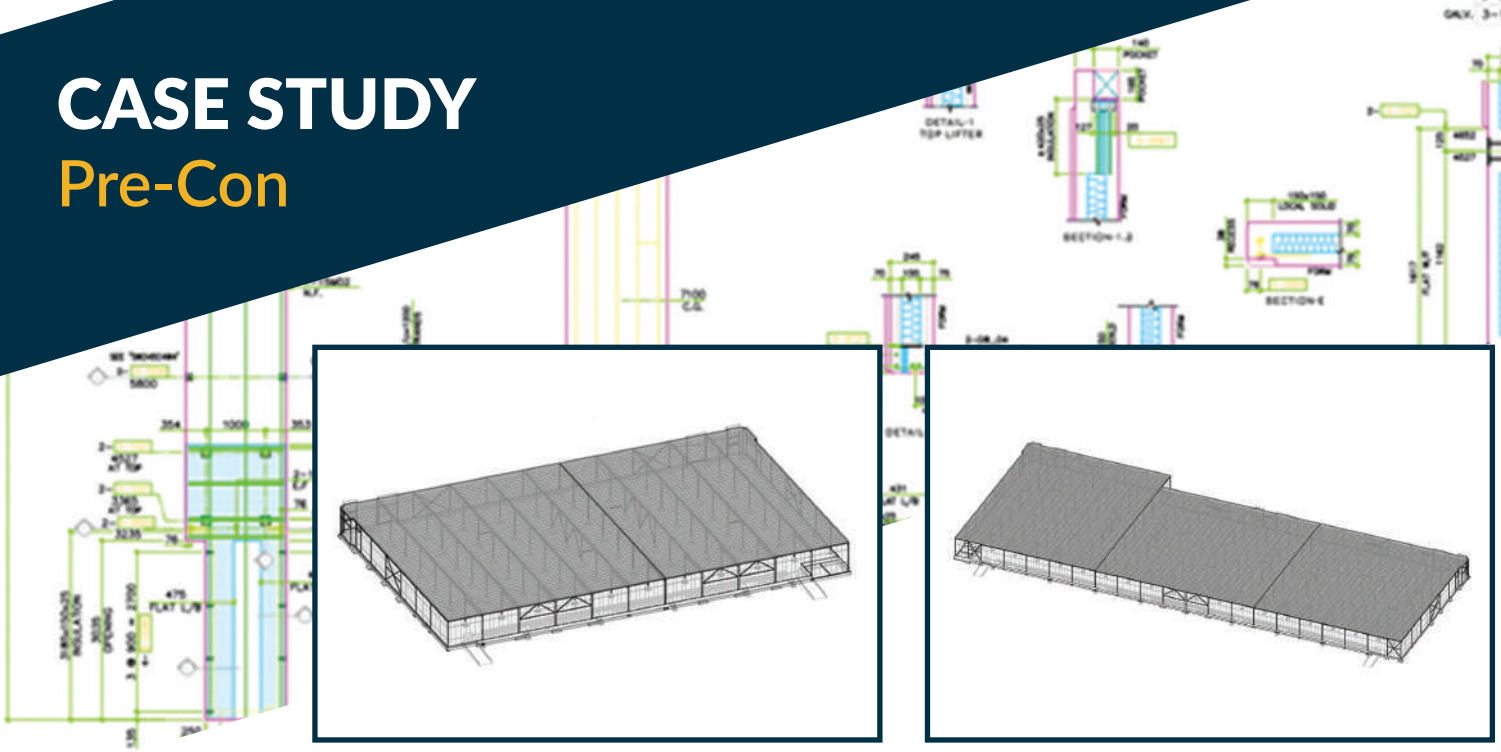
Therefore, everyone involved can follow the process in real-time via a continually updated model and BIM process. Johan confirms the advantages of this to planning and efficiency;

“IMPACT helps us to plan our casting tables effectively by using as much of the table surface as possible during each cast. We can always see what is being produced via the model, and this helps us to avoid errors and duplication.”

A preschool, due for completion in November 2019, is the 4th building constructed so far using IMPACT and assisted by the precast know-how of StruEngineers.

We are proud to help make this impressive, environmentally focused, and sustainable project reality.

CASE STUDY
Pre-Con



With their prefabricated Flexwall product and huge experience in the field, Pre-Con are leaders in the Canadian precast market.

Their projects often require great flexibility due to changing client requirements, and this poses significant challenges. Timely delivery of production drawings and construction documents is paramount, directly impacting the casting schedule of elements and erection on site.

ERECTION AND PRODUCTION DRAWINGS

As part of Pre-Con's latest co-operation with the StruEngineers team, we've provided erection and production drawings along with bar bending schedule, erection material lists and reports for a project with a total area of 170,000 sq. ft.

Working closely alongside their in-house team, we're able to react quickly to any changes or modifications required. Our ability to provide Pre-Con with a settled and exclusive support team, as well as know-how when it comes to their standards, has enabled us to keep pace with their project demands and schedules.

ON-DEMAND ENGINEERING RESOURCES

Working alongside StruEngineers' Indian brings its own benefits to the client. The time difference between India and Canada is advantageous, as Pre-Con can send instructions and our team can respond and get to work overnight. This means turnaround times are quick, and pressure on project schedules can be reduced.

An exclusive and dedicated team working on their projects means consistency in the quality of work provided, and our knowledge of international standards is a prerequisite for effective co-operation.

A single point of contact within StruEngineers, as well as our ability to offer BIMcontact, a cloud-based collaboration tool, means miscommunication can be avoided. All project related data is available, document revisions are clear, removing the need for confusing email trails and attachments.

With fluctuating project workflows, our ability to make engineering resources available on demand has contributed to the successful completion of Pre-Con projects, gives them the flexible support they need and frees them from costly overheads.

"Reflecting on 2020, we (the PreCon Engineering team), appreciate StruEngineers support and efforts to successfully complete our project together."

CASE STUDY
Frampton Arms

The StruEngineers team have been involved with an important regeneration project in London. Situated on the Frampton Park estate, on the site of a former pub, this project is part of Hackney Council's programme for regeneration. Due for completion in 2020, Frampton Arms will form part of one of London's largest housing schemes – building homes for social renting, shared ownership, and private sale.

The overall strategy is to provide new homes that incorporate improvements to public spaces around them. At the Frampton Arms site this will include a shared courtyard for new and existing residents, alongside new play facilities.

The development will provide a new face for the estate, while maintaining the qualities of existing buildings.

RC DETAILING & BAR BENDING SCHEDULES

The proposed development involves the erection of three 5 storey buildings to create 20 self-contained dwellings; refuse and recycling facilities; cycle storage; and re-landscaping of the existing courtyard and parking area between Sherard House and Catesby House.

The structural frame for all three buildings comprises reinforced concrete framing with flat slab construction, and includes precast concrete balconies and columns.

StruEngineers were tasked by our clients, the structural consultancy WBD Group, with providing RC drawings and bar bending schedules to support the project.

These included reinforced concrete elements such as pile caps, core base, ground slabs and beams, columns, walls, and floor slabs (1st – 4th). A total of 30 drawings were provided for the Frampton Arms project.

CASE STUDY
Goschen Estate

Situated in South-East London, the Goschen estate project is a new social housing development involving the StruEngineers team. We've once again teamed up with long-term clients WBD, after several previously successful collaborations.

RC ELEMENT DETAILING

Located in the London Borough of Southwark, the development comprises 17 residential units across 2 blocks, one of 4 storeys and one of 5 storeys, and is part of a wider regeneration scheme.

As with previous projects for WBD, our team was initially able to provide a quick turnaround and accurate estimation for the RC element drawings required.

These included drawings for the building foundations, columns, floors and more. We provided 39 drawings in total, with each typically requiring between 16-20 hours work from our design and detailing team.

ONLINE PROJECT MANAGEMENT WITH BIMCONTACT

As part of the service, StruEngineers also provided WBD with BIMcontact free of charge. BIMcontact is a web-based document management solution and was used to manage all the drawing files for the project.

This was especially useful when you consider that a lot of the drawing work took place during the UK's COVID-19 lockdown. With a unique IFC-viewer, mobile accessibility, and cloud storage, BIMcontact lets everyone involved in the project access definitive files when they need to, and wherever they are.

In a future where increased remote working is a certainty, BIMcontact is the way forward. Miles Cristoforides, Senior Structural Engineer, from WBD Group said, "BIMcontact has a thumbs up from me. I found it intuitive and easy to use."

Files are all stored in one place with auto-synchronisation and complete control over file versions. You can customise permissions and view, review, and comment on drawings and 3D models from any device.

All these things mean you can do away with complicated and confusing email trails and uncertainty over file versions.

Most importantly in the case of the Goschen Estate project, it meant no unnecessary delays – staff working remotely could ensure the detailing workflow carried on throughout lockdown.

CASE STUDY

Emerald Headingley Stadium & Doncaster Racecourse

StruEngineers worked in partnership with clients TRP Consulting on the £45m redevelopment of the historic Emerald Headingley Stadium, in Leeds, UK.

REPLACING THE NORTH STAND

Home of Yorkshire County Cricket Club, Yorkshire Carnegie rugby union, and Leeds Rhinos rugby league team, the stadium has seen plenty of famous moment over the years – not least Ben Stokes' heroic innings for England to win the 3rd Ashes test versus Australia in 2019.

The final piece of a project that commenced in the summer of 2017 was completed with the inauguration of a new joint North/South Stand overlooking both the rugby pitch and cricket grounds.

The existing structure – more than 90- years old – was demolished, before the construction of its impressive replacement. The aim – to convert the ground into a sporting facility fit for the 21st century.

The new stands and hospitality areas create a unique and world-class sporting and entertainment venue for the region, with 4,200 seats for cricket and 3,800 facing the rugby pitch. The new South Stand for the rugby ground has a capacity of 7,700, with 2,200 seated.

RC DETAILING FOR STADIUM ELEMENTS

StruEngineers provided 26 drawings for the project, including RC detailing for stadium elements such as the foundation, ground beams, retaining wall and suspended slabs.

Interestingly, this isn't the only famous Yorkshire sporting venue StruEngineers have been involved with, having also completed a project at Doncaster Racecourse.

This £34m redevelopment includes the demolition of the existing Yorkshire Stand and the construction of a new grandstand, stable block, stable lads hostel, workshop and managers accommodation.

The grandstand is a 5 storey, steel-framed structure approximately 110m long with a large concourse and exhibition space at ground floor level.

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