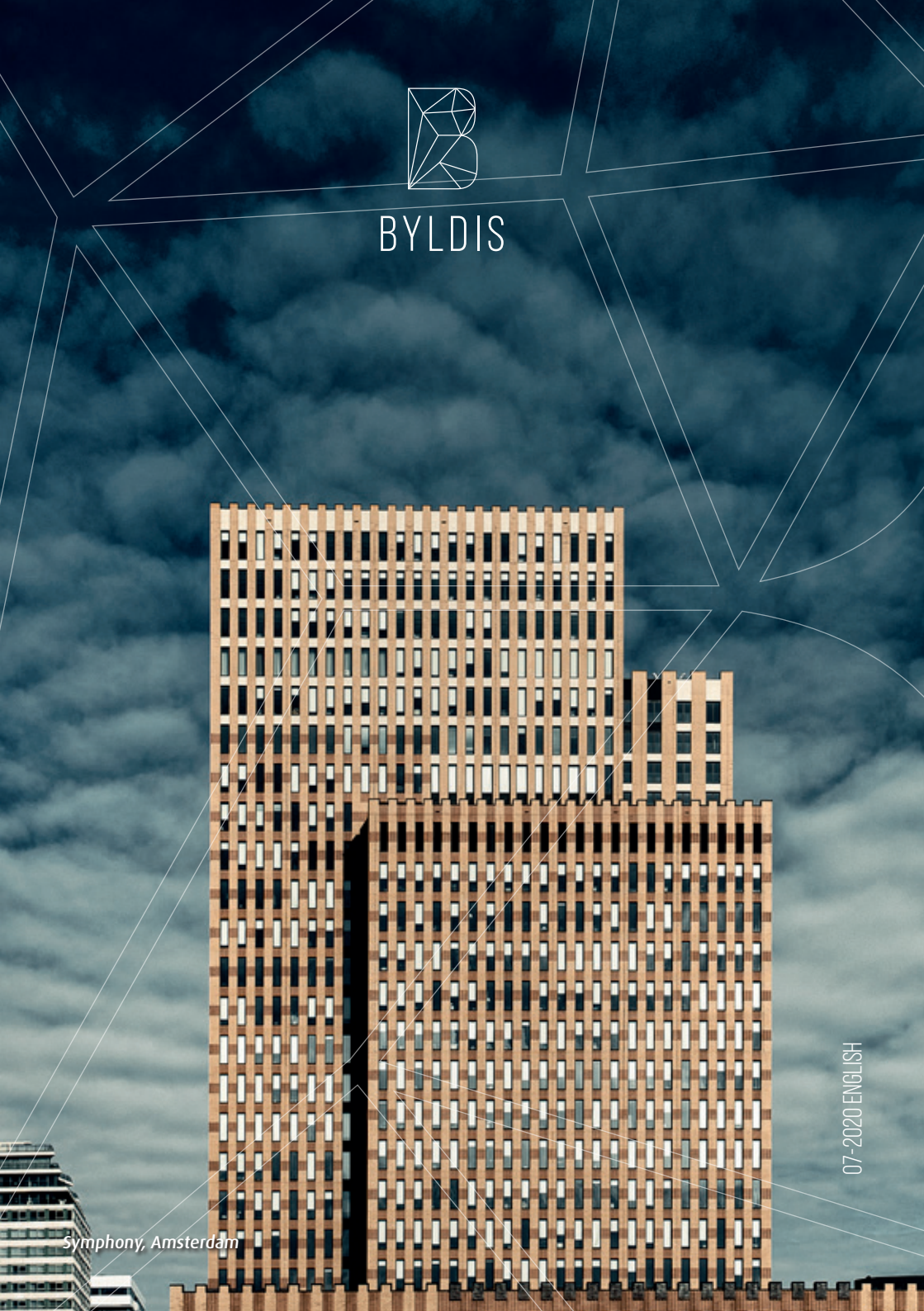
BYLDIS



Symphony, Amsterdam

07-2020 ENGLISH

London City Island, London

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WE ARE **BYLDIS**

Byldis is changing the construction world as a market leader in Modern Methods of Construction (MMC). Byldis offer an off-site alternative to traditional construction methods within the European midrise and highrise construction segment. This is the result of over 50 years of experience in engineering, precast concrete and facade technology. Together with more than 400 professional colleagues, we work extremely hard on innovative and sustainable construction solutions. From the initial request and design through manufacture and assembly in one of our factories, to installation at the construction site. We aim to half the construction programme of traditional construction! We are keen to get involved at an early stage of your project, so that you get the most out of our work and our solutions.

In short; we design, manufacture and install:
- Full off-site building solutions
- Precast concrete cladding
- Aluminium facades

Dutch born and bred

We are Dutch born and bred but operate across Europe, predominantly in the UK, Holland, Belgium, the Nordics and Germany. Our head office, engineering, precast concrete factories and facade facility are near Eindhoven in The Netherlands. We design, manufacture and install various types of precast concrete buildings with our off-site solution from the more regular towers of 50m to 120m tall, up to the so called 'specials'; buildings beyond the magical border of 200m tall, with a special natural stone outer leaf or with a complex silhouette. From hotels and prisons, from apartment buildings and offices to hospitals and government buildings.

We have been working in the UK since 2006 and have delivered circa 4500 residential apartments in London making up some of the largest off-site built developments in Europe!

We are a Dutch company with a strong DNA. The Byldis DNA can best be described using our core values:
- Collaboration,
- Entrepreneurship,
- Professionalism (reliability),
- Leadership.

Building a changing world

We used to be part of the Hurks group, but our ground-breaking vision demanded more. Since 2018 we have been Byldis, implementing our lofty ambitions and fine tuning our offering. And with success!

We are a market leader in integral assembly solutions for the mid and high-rise sector in Northwest Europe. We do this as a proud company, full of innovators and change-makers. Engineers and facade builders. Structural designers focused on the smallest details. Professionals with over 50-years' experience in engineering, precast concrete and facade technology.

Our vision

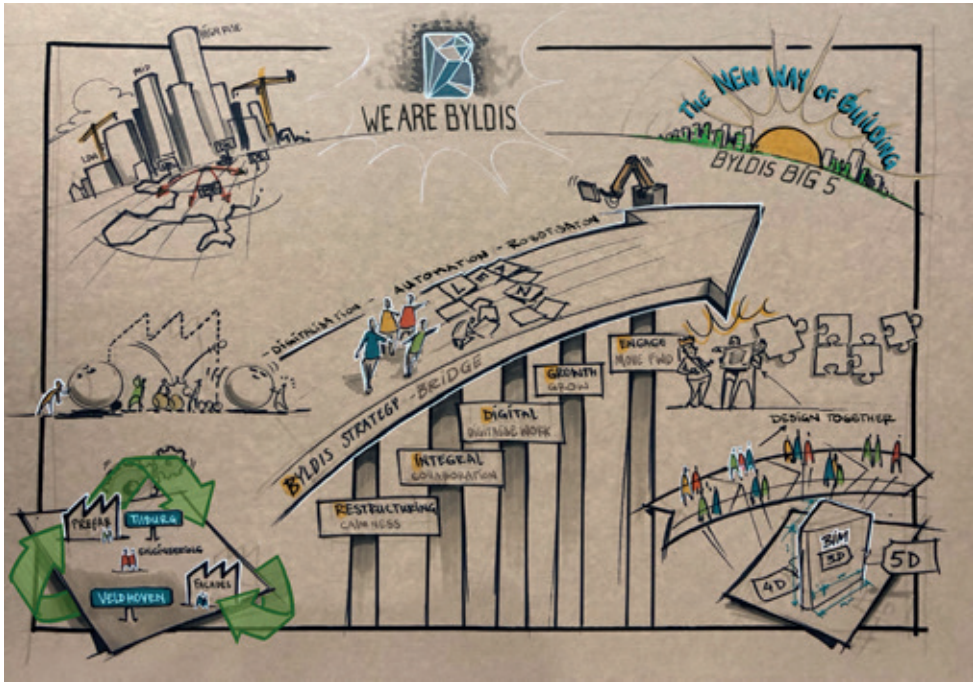
The world is changing, the market is changing. Our environment is rapidly urbanising while in large cities there is a shortage of living space and workspace. Research commissioned by the National Housing Federation (NHF) and Crisis from Heriot-Watt University identified a need for 340,000 homes each year in England to 2031*. This increasing demand with limited space drives the need for greater density and taller buildings. The only way is up! Construction is facing a number of challenges including more constrained construction sites, ever tightening Building Regs and a shortage of labour. By using off-site solutions you take the majority of the construction work away from the site and into quality controlled factories. We aim to work with Developers and Main Contractors to develop an alternative to the on-site.

The new way of building

Due to these developments, there is an increased need for large-scale building projects and this requires a more predictable form of construction. A new generation of contractors and developers are looking for a more cooperative model as partners. New technologies enable entirely new building methods.

We expect that this transition will accelerate in the coming years. We call the result of this transition 'The new way of building'.

** https://commonslibrary.parliament.uk/research-briefings/cbp-7671*



The Brown Paper - Byldis strategy.

THE BIG FIVE OF BYLDIS

Our total prefab concept
Our total prefab concept consists of an integrated system for the structure and facade. Utilising complete precast elements made of concrete and aluminium, created using a streamlined process.

It starts early
It starts early, in the first phase of a development project. A thorough technical and financial analysis ensures we do not lose time and money in the design phase of your project. And we thereby guarantee a perfect realisation within your project planning.

Prefabrication?
The manufacturer takes place in one of our three factories, where we work to achieve maximum quality under controlled conditions. Complete components, such as aluminium cladding, doors, windows and curtain walling are also assembled in the factory and subsequently installed into a complete precast product, super-fast and on time at the construction site.

1 **Total control**
We are a multi faceted business that maximises the use of in-house skills together with specialist subcontractors to provide a total solution including:

- Engineering
- Production of moulds + reinforcement
- Production of precast elements
- Production of and installation of aluminium facades in the elements
- Transport
- Installation on the construction site

We are not dependant on external parties that disrupt and slow down the development and production processes. Working with one party also means just one point of contact and you are ensured of the highest of quality. Because we guarantee that our elements are wind and watertight, made to measure, delivered on time and assembled on time.

2 **Up to 50% faster than traditional construction**
We build fast. First digitally, then in our factories and finally on site. This makes us significantly faster than traditional construction methods. This time saving pays off. Not only in the costs, but also in a shorter delivery time and therefore also a higher and faster Return On Investment. And all this with gains in quality.

3 **Safer construction with a small team**
The high level of preassembly of our precast elements in the factory by a well-trained team means that we only need a small team on the construction site to assemble the precast facade elements. A considerable safety benefit of our system is that the building goes up with out the need for scaffold, therefore educing the associated risks of falls and drops from height. Our system is meticulously planned, constructed to pre-agreed RAMS by trained staff for maximum predictability and safety. Because of this we have an exemplary site safety record.

4 **1001 design possibilities**
We offer maximum design freedom for architects, structural engineers and clients. If you include us in the early stages of the design process, there will be plenty of space to experiment with material, shape, colour and structure.

5 **Sustainable**
We focus on minimising our ecological footprint as a business and the embodied CO_2 in our products. To do this we minimise our energy consumption across the business. We reduce waste and recycle at every stage of the process, have invested in energy saving measures and constantly strive to minimise our use of raw materials and impact on our planet. We plan every detail of our product from day one so we don't over purchase or over manufacture product. Each delivery is planned for full loads, we produce almost zero waste on site and do not use packaging on our product. A feature of Byldis is that we use up to 50% cement replacement products in our brick faced panels.

Read more in the Byldis Sustainability report

EXPERTISE

Of course, you can never build a building in a day but we strive for the most efficient result. Building with Byldis? That means building together. Together and at the right price. We advise, engineer and realise. This is how we build. A method we are proud of.

PREFAB TOTAL CONCEPT

Our total concept is an off-site manufactured solution replacing the on-site built shell and core in which engineering, production and assembly fit seamlessly together. This is what we're proud of. But what good is that to you? Simple! This integrated approach significantly reduces construction time; allowing the building to go up, up to 50% faster when compared to traditional construction methods and is a scaffold free solution. We produce demonstrable savings in time and in price with an increase in quality. Our expertise means that we make the right decisions in the preliminary phase that pay dividends on the construction site.

Getting it right from the start

To maximise the benefits of off-site construction on your project then early involvement is a good place to start. This will give you the greatest benefit from our total concept. Choosing off-site construction for your building requires making different choices in the design process. This ultimately results in an accelerated realisation but more design work needs to be done at earlier stages.

If we are involved at an early stage, you will receive a thorough analysis from us – technical and financial. This eliminates double work and wasted time in the design phase and ensures the best possible preparation, so that we can complete the construction quickly and professionally within the agreed time.

Curious about how our total concept can speed up your project?

Get in touch with one of our Business Development Managers:

BYLDIS

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Domus Nostra, The Hague

ENGINEERING IT ALL STARTS WITH DESIGN

You don't just build great buildings. They demand their own unique solution and each construction solution, in turn, requires intelligent development for which we utilise advanced 3D models. We utilise 3D modelling from concept to handover of our buildings and our engineers produce millimetre perfect models to drive this process . We are a leader in engineering thanks to all the expertise and experience we have in the fields of construction, facade technology and building physics, of course supported by the most up to date software packages.

New or existing design?

There can be no building without engineering. It is a very important phase. We prefer to start the engineering process with a blank piece of paper, or an empty screen, together with the designers, so that the best ideas can take shape. This is the most efficient way of working. But, if you have an existing design and want to switch to precast, we are also happy to help. A team of structural engineers and modellers are ready for you! After this design engineering phase, we get to work on the detailed engineering. We do this using advanced 3D models. We create digital versions of the precast concrete elements, frames, windows, doors and entire facades.

Curious to know what the optimal design is for your project? Contact us.

City office Leyweg, The Hague

PRECAST CONCRETE PREDICTABLE CONSTRUCTION

Precast concrete offers unlimited possibilities. Concrete is what we do. The material fits perfectly in a society in which rapid and reliable construction is a necessity. Our precast concrete facades, walls, floors, cores, stairs and landings are manufactured in quality controlled factories to exacting standards. Our logistics runs just in time deliveries through local holding points to ensure seamless deliveries to site. Once on site Byldis utilise their own cranes and crews to install the shell and core of the building including the bricks, insulation and windows at a rate of 1-2 weeks a floor. The panels are installed by a small crew of circa. 12 people working without scaffolding leading to a safer site and minimal impact on the local environment.

Prefab is fabulous

Off-site manufactured precast concrete is the perfect solution for many of the existing problems in construction. It is a future-proof construction method for our increasingly busy inner cities. Lack of space on site or a tight schedule for all parties involved become problems of the past!

Precast concrete sometimes has an image that needs polishing up. Because concrete is no longer just dull grey concrete blocks but a material that can offer you unlimited design options! From brickwork to decorative concrete and natural stone or a special finish. We make both single skin precast cladding and insulated precast sandwich panels. Do you need an integrated solution with frames, windows and glazing? Then we can build you a building that is wind and watertight at the earliest opportunity so that the fit out can commence months earlier than in traditional construction.

With our skills in producing high quality concrete products we also design, manufacture and install single skin precast cladding elements of all kinds and in various sizes.

Our precast sandwich elements are comprised of three layers:

- Inner surface, the reinforced concrete structure;
- Insulation layer, designed to meet project requirements;
- Outer leaf with a bespoke architectural finish.

Our sandwich elements are fitted with our frames and glazing in our factories for a total in-house solution. Once installed, the sandwich panel facade is wind and watertight. Our design is coordinated with the interfacing trades so that we can cast into our panels the facilities for ventilation, heating/cooling as well as balconies and terraces. To help provide a total solution we can procure and or install balconies in our package.

Curious to know what the Return on Investment could be for your project? Contact us.

The Reigers, Rotterdam

ALUMINIUM FACADES HIGH PERFORMANCE AND FLEXIBILITY

We deliver complete facade solutions, and preferably complex ones, because we believe a building should be a little exciting, though we will look at all projects. We engineer, produce and assemble aluminium windows, cladding and curtain walling at our premises to be installed into our precast concrete facade elements or on site if the situation so demands.

It's the outside that counts

The facade last? Not if we have anything to do with it. By involving us in the construction process at an early stage, we will be able to propose the very best technical solution and define the character of the building. We work with a wide supply chain to provide the right solution to the challenge of the building be it a onerous acoustic specification or fine architectural detailing. We love a challenge! Our people engineer, produce and assemble everything that a facade needs.

Take a look at the options:

- aluminium windows and doors
- stick curtain walling systems
- unitised curtain walling
- transformation of excisting buildings
- aluminium cladding
- balustrades and juliet balconies
- specific project solutions

Curious about how we can elevate the face of your building to a higher level? Contact us.

BYLDIS
FACADES

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CASE STUDY - **LONDON CITY ISLAND, LONDON**

Once upon a time, there was...
"This is a story like a tale in a book for boys," says Van Dijk smiling. Once upon a time, there was a business for prefab construction facade panels in Veldhoven that wanted to conquer the British market.

With a modest project portfolio, Van Dijk went on the road and within two years landed with an order to supply prefab panels for the first towers of the London City Island project. "The developers in London were facing time pressure and the traditional builders did not have sufficient capacity," states the CEO of Byldis. He was there at the right place at the right time. "The result of our building method is that these building are completed in a bit more that half the time needed in a traditional building process. We deliver complete constructive elements, such as outside facades, which therefore include frames, posts and windows." Everything was produced in Veldhoven and Tilburg and shipped to the British capital. Ultimately, that was the procedure for the ten buildings of the London City Island.

Byldis also builds at other locations in London such as Royal Wharf. "Yes, that is really impressive," says Van Dijk. "We have learned a lot from this project: we have fulfilled our promise and have not missed a single deadline."

At the time that the principal and architect launched the idea to build with glazed bricks, the development team of Byldis reunited with Building Centre Van Hoppe & Wienerberger. Van Dijk: "You cannot saw or glue glazed bricks and therefore, you have to change your approach. First, you have to draw the bricks before you start the construction. In the production process, you take measures so that the bricks cannot get damaged." The builder does not want to reveal what are these measures. He laughs: "There is a secret behind this and we like to keep it that way."

Interview with Jacco van Dijk, CEO of Byldis (Source: 'Eerst de bakstenen (English: First the bricks) | London City Island', Wienerberger, 30 November 2018)

London City Island, London

CASE STUDY - **THE TERRACED TOWER, ROTTERDAM**

Wind resistant and waterproof

The curtain wall of The Terraced Tower, including the sliding French windows/doors and frames/posts, is a story in itself. In addition to producing prefab concrete elements/facade elements, Byldis also has a factory that produces aluminium facade elements, frames/posts and facades: the Byldis Facades factory. Practical because this way Byldis can offer not only a total package (something that customers like), but it can also quickly make buildings wind resistant and waterproof. As a result, finishers and installers can start working at an early stage and then you succeed in building such a high-quality residential tower in half the regular building time. Very successful as sales method, we can concur in the meantime.

About the project

The Terraced Tower project is a unique masterpiece alongside the Maas shore in which the apartments are playfully incorporated. Its name says it all: this 100-metre high tower will include apartments with terraces and large balconies. A commercial row for catering and retail businesses is envisioned on the ground floor. This new and iconic building is a design of OZ Architect. Commissioned by BESIX NL, Byldis Facades is the proud facade builder of this project.

The Terraced Tower, Rotterdam

CASE STUDY - THE ZALMHAVEN, ROTTERDAM

World's tallest prefabricated building

The 215-meter high Zalmhaven will be constructed entirely of precast elements. Based on the aesthetic design by architect Van Dam & Partners, the construction design by BAM Advies & Engineering and commissioned by BAM Bouw en Techniek - Grote Projecten, Brabant-based Byldis will supply and install a rich variety of precast elements. From internal walls in 300-, 400- and 500-millimetre thickness to facade elements and lift walls of 300- and 400-millimetres and balconies of 320 millimetres. In total there are 770 complete facade elements, 1140 internal walls, 400 balconies and 250 stairways landings, that will be added from the 5th to the 54th floors at a rate of one floor a week.

Our surroundings are rapidly urbanizing. Particularly in the Randstad, where the demand for living space has never been greater. In the crowded area between Amsterdam, Rotterdam, The Hague and Utrecht hundreds of thousands of new homes must be built before 2030 in order to meet ever-increasing demands. The only solution for this is to go upwards. "But inner-city construction is no easy task", says Jacco van Dijk, CEO of Byldis. "Developers, contractors and other stakeholders are not only confronted with busy city centres, confined spaces, noise restrictions and time-consuming traffic and safety measures, but also with limited budgets and a shortage of skilled labour. Byldis – until recently known as Hurks building components and engineering – offers a solution for all this."

50% saving in construction time

Byldis has the ambition, as market leader in integral assembly solutions within the European high-rise sector, to continue changing the construction world. "We do this with over 50 years of experience in engineering, precast concrete and facade technology", according to Van Dijk. "Together with more than 400 skilled colleagues we work really hard on a daily basis to develop innovative construction concepts. From the initial request and design right up to prefabrication and assembly in one of our factories, followed by installation on the construction site. With our innovative precast construction concepts, we deliver projects within half the normal time, made to measure and of extremely high quality. Furthermore, safety on and around the construction site is significantly improved. Only a few members of staff are needed to assemble the elements on site. Less transport and hoisting are required and noise disruption for the surrounding neighbourhood is kept to a minimum. These benefits come into their own with the construction of the Zalmhaven."

Assembly from a hoisting platform

Originally, the Zalmhaven was going to be built using traditional methods, explains Van Dijk, with walls, floors, columns and beams all cast on site. "Due to the busy inner-city location, limited space on the construction site and tight schedule, however, the choice was made for precast concrete elements. In a construction team with the chief design engineer, architect and contractor, we turned the building design around using a precast system, whereby we focused not only on the engineering and constructive calculations, but also on the feasibility of the project. All precast concrete sections are divided into manageable, repeating elements that can be easily transported, hoisted and installed." For installation, a self-climbing hoisting platform is used, with two 40-ton overhead cranes. This method was previously used with great success for the Erasmus MC, in which BAM Grote Projecten (BAM Big Projects) and Byldis were also involved. "Our lorries deliver all the facade sections, columns, balconies, internal walls and stairways just-in-time at the bottom of the crane, after which the overhead crane hoists them up directly from the lorry. Once at the right level, the elements are supported so that they can be transferred to an assembly crane that lifts them into place. After casting the slab floors, the platform can be raised one storey higher, after which the hoisting and assembly cycle is repeated.

This makes it possible to work quickly and sheltered from the elements. In fact, the skyscraper is actually built entirely indoors.

Challenging corner elements

All outer facade elements are constructed using a supporting internal wall, a layer of insulation and a facade finish of natural stone, and are delivered on-site complete with profiles, doors and glass. "The constructive corners of the building are challenging, so we developed a special, three-dimensional corner mould", explains Van Dijk. "The Zalmhaven will be – as far as we know – the highest residential tower in the world that is built using a 'dry' precast concrete system. This brings its own specific challenges, because the higher a building is, the greater its instability and exposure to the wind. In order to properly absorb these forces, it is essential to ensure the correct implementation and connection of the supporting elements. The corner elements play a crucial role in this. The concrete for these elements is cast vertically in one go into a mould as high as one storey of the building, with fixed-form corners as a result."

As storage for a 215-meter-high residential tower is impossible, all concrete elements are produced according to assembly. Production of the first elements has already begun. Assembly will start in week 6-2020, and works will be completed 50 weeks later.

While Byldis Prefab is responsible for all the concrete elements of the Zalmhaven, Byldis Facades, specialist in aluminium facade systems is responsible for the production, supply and assembly of the aluminium fronts of the two low-rise towers and connecting plinth.

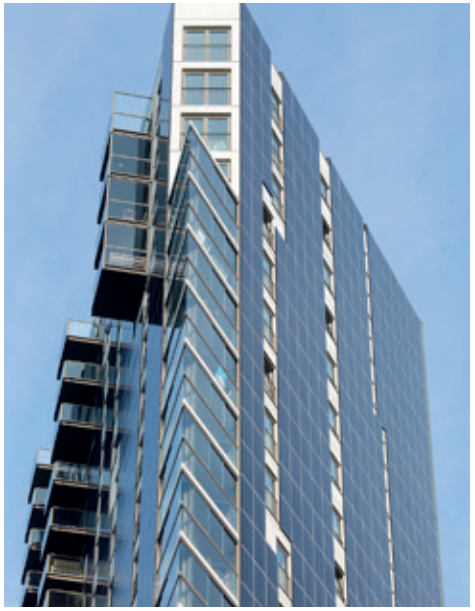
The Zalmhaven, Rotterdam

Interview with Jacco van Dijk, CEO Byldis
magazine Stedenbouw | December 2019 / January 2020

CASE **STUDY**

SELFRIDGES, **LONDON**

We don't just build enormous projects. We are also proud of our specials such as the new entrance of the luxurious Selfridges department store at Oxford Street in London! The official opening was in 2018. Our polished black concrete elements were used as cladding of the steel construction. We have also made the white marble, sand-blasted floor plates. The store was established in 1908 and the new entrance at Duke Street is located between two old buildings.



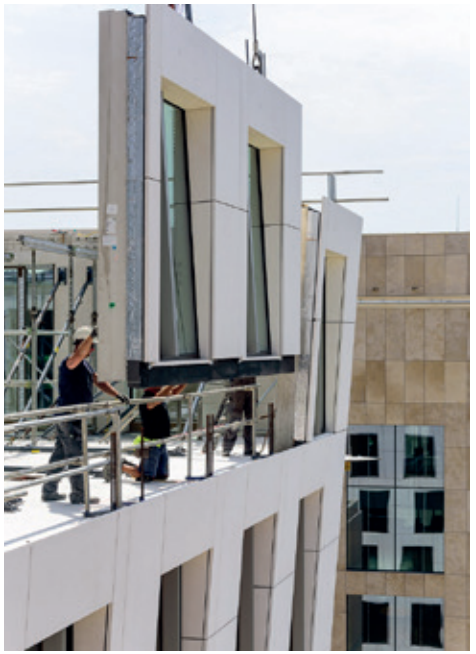
THE SPAKLER, **AMSTERDAM**

There is a first time for everything. Byldis has built the first energy-neutral residential tower in the Netherlands at a prominent location along the Amstel. Together with partners Lingotto and AFP International, we realised an energy performance coefficient of zero. This is the proof: energy-neutral living at a high level is possible!

HEIDELBERGCEMENT GROUP, **GERMANY**

Snow-white is the colour of the prefab element/facade elements, which we deliver for the new headquarters of one of the largest concrete companies in the world: HeidelbergCement Group. This is the first project in Germany carried out by Byldis! A prestigious project, unique in colour and location! An excellent chance for us to show our eastern neighbours what we can offer.

CASE **STUDY**



HOURGLASS, **AMSTERDAM**

The 80-metre high Hourglass building is prefabricated to a large extent. At the bottom, the buildings facades that were designed by Dam & Partners will incline slightly inwards and at the top slightly outwards, creating an hourglass silhouette. The building has 15,500 m2 of office space for Loyens & Loeff plus 115 hotel apartments and 700 m2 of catering/retail businesses.

CASE **STUDY**

GOODLUCK HOPE, **LONDON**

Goodluck Hope is a new neighbourhood consisting of 804 homes along the River Thames in London, on the historic Leamouth peninsula. The construction site at Goodluck Hope is limited in terms of space, which makes traditional construction methods more difficult and for which prefabrication by Byldis provides the perfect solution. We make the precast panels in our workshop, which shortens the building time by around 30%. This results in significant benefits for the customer as the project can be completed sooner.

MORE CASES **ONLINE**

On the website of Byldis you'll find our online portfolio. On the page 'Showcases' www.byldis.com/en/showcases you'll find more information about our projects and questions will be answered concerning: why was Byldis chosen, challenges & solutions, facts & figures.

Erasmus Medical Centre, Rotterdam

WOULD YOU LIKE TO WORK **AT BYLDIS?**

To be part of a dynamic company. A place where colleagues work together to achieve great results. A company that is characterised by professionalism, friendliness and a no-nonsense culture. A place where you can be yourself, among loyal colleagues with a passion for their work.

Byldis is the leading player in the precast construction world in Northwest Europe, with over 400 professional employees, a turnover of around 100 million euros and sales offices in the Netherlands and England.

Do you want to build a successful career? Check out our vacancies on our website at www.byldis.com/en/working-at-byldis

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BYLDIS

VOLG BYLDIS OP