



Europäisches
Patentamt
European
Patent Office
Office européen
des brevets

New EPO Site The Hague

Press dossier



Imprint:

Published and edited by:
European Patent Office,
Munich, Germany, © EPO 2018

Credits

Photography (cover, page 4 , page 6 and page 9)
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Illustrations on page 7 and 11
Ateliers Jean Nouvel – Dam & Partners Architecten – TBI Consortium New Main

Introduction

The European Patent Office (EPO) inaugurated its new premises in Rijswijk, near The Hague, in the presence of His Majesty King Willem-Alexander of the Netherlands on 27 June 2018.

Financed entirely from the Office's own resources, the new premises represent the EPO's largest single investment in its 40-year history in the Netherlands. With a budget of some EUR 205 million, this new architectural landmark was designed by renowned architects Ateliers Jean Nouvel of Paris and Dam & Partners Architecten of Amsterdam – and Diederik Dam describes it as the slimmest and tallest glass and steel construction of its kind in Europe.

The EPO has deep historical roots in Rijswijk, and is now one of the EPO's most important sites both in terms of staffing and operations. The new building replaces the tower that hosted the offices of EPO staff in Rijswijk for the last 40 years, and before that, the EPO's forerunner organisation, the Institut International des Brevets (IIB).

The decision to construct a new building was a result of a firm resolution to provide EPO staff with a state-of-the-art workplace – one that would be sustainable, symbolise the EPO's commitment to supporting innovation in Europe, and underline its close ties with the Netherlands, and The Hague region in particular.

The new building enables the EPO to utilise greater synergies between its operational units in Rijswijk by bringing them together on one site. EPO staff will start working in the new building from this autumn, and the old tower will be taken out of service and dismantled from October. With landscaping work to take place thereafter, the overall renewal of the site is expected to be completed in 2020.



Design

The new EPO premises in Rijswijk were designed by renowned architects Ateliers Jean Nouvel of Paris and Dam & Partners Architecten of Amsterdam and comprise two buildings, referred to as the New Main and the New Hinge:

The New Main is the largest steel structure ever constructed in the Netherlands with a design that draws upon the natural landscape of Holland, with its semi-reflective glass surface that mirrors the sky, land and water. The New Main is pure and serene and, in the right weather, the top floors even seem to merge with the sky. The slender shape of the 27-storey building allows the light to pass through, inducing a sense of transparency as it appears to float effortlessly. Due to its double-glazed coated façade, the 960 exterior glass elements become its defining characteristic.

After several decades of use, the present main building had begun to show signs of wear due to ageing and Holland's windy, often rainy climate. The New Main building was created to replace it, providing an opportunity to design a modern, comfortable workplace for some 2 000 EPO employees.

Behind the prominent high-rise is the four-storey New Hinge. It houses an extension of the seating area of the restaurant, eight meeting rooms for oral proceedings, a new fitness area and meeting rooms, and have a jungle-like atrium. Glass, steel, plants and various colours have been used to create a remarkable design.

Floating in the air

The Hague, Rotterdam—these are great ports where great ships align themselves with seaside horizons.

Great international ships always loaded with mysteries...

The EPO site in The Hague, at Patentlaan 2 in Rijswijk, represents the characteristic polder, with the horizontality of a sea turned to stone. And the biggest structures, too, line up like boats on the water. The location calls for a proposal that reveals its real nature, the eternal issue of the specific magic of a place. The poetics of location arising from the vastness of this strictly horizontal stretch of land that makes the horizons look distant, and rolls out an endless sky. You want to be in the air, to float in the empty space, in the dense air, the sea spray, the misty rain, under the white clouds or in the blue of a sky that has no ceiling...

Our proposal is to introduce, into this earthbound port world, a flagship of noble scale and proportion whose materiality is unsettling and whose geometric abstraction, total.

This building is calm and serene, nothing can touch it, it's part of the sky. It takes on the colour of the sky through the slightly iridescent clear glass of its façades the stainless steel of the horizontal lines that give it rhythm.

When you decide to take a closer look at the EPO, you are surprised—partly by the simplicity and tension of the volumes and lines, and partly by the discovery that the structure emerges from a body of water in which it is mirrored. The entrance materializes as a great stainless steel canopy sloping down into the water. On either side of this access, the flags of 38 EPO members float very high up, over the water, and are reflected at different heights in the glass along the entire

length of the façade. The signs of the dignity of a great international institution are thereby made clear and its distinctiveness guaranteed. This distinctiveness is underscored inside by the nature of the reception areas. The entrance sequence is unique: it all begins with dipping down under the water and with the caustic effects of sunlight traveling through the water. The lobby, on the other hand, is largely flooded with natural light up to six meters in height and over the whole of its perimeter, while waiting areas and a bar are located at water level. The office world is imagined as open plan, linear and orthogonal in relation to the sky. The long perspectives of the central corridor open onto empty space, the horizon. The office itself is designed to sit in mid-air, with external extensions: linear lichen gardens, finely perforated panels to reframe and limit the effective solar gain. These symbolic spaces, directly linked to each unit, are a visual extension that accentuates the horizon.

The next stage will endeavour to show that this building's DNA is clearly present in the internal spaces and their fittings. What we are seeking here are feelings of privilege and pleasure. The privilege of being able to appropriate the sky and the horizon as the primary materials of the architecture. The pleasure of working in a clear, open, exact world that can also be protected, closed, friendly... All this, located within this rectangle of sky whose sole ambition is to make us aware of variations in the atmosphere.

Jean Nouvel

Building Features

New Main

The New Main building occupies 85 000 square metres and has working spaces for 1 950 staff. One of the EPO's requirements was that the designers create an open, transparent building with a mix of both standard offices and shared spaces to ensure that conditions provided new ways of co-operation and space management.

The New Main building has several unique features representing elements that appear in nature, including a roof garden accessible for all staff which is partly covered with solar panels and protected by windbreakers. The entrance is adorned with a canopy, and 300 varieties of lush plants extend across the length and height of the building. In total, 198 planter boxes have been installed in the wide cavity between the two façades facing the highway. Rough, dark and compact plants at ground level will give way to airier, lighter and finer ones higher up. As such, plants at ground level and below include varieties with big, dark leaves and ferns growing against rough stone walls.

There are shared workspaces at the far ends and also in the middle sections of every office floor; these are equipped with individual desks and movable partitions for five to seven staff. Every office floor will have two centrally located kitchenettes.

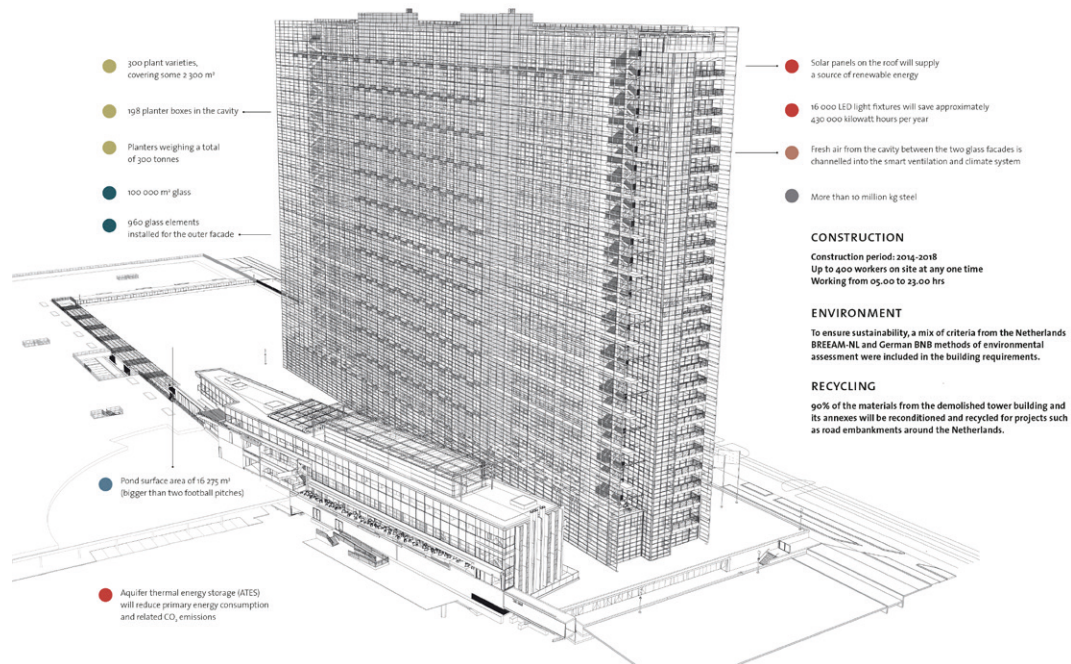
New Hinge

This smaller New Hinge building houses an extension of the seating area of the existing restaurant, eight meeting rooms for oral proceedings, a new fitness area and meeting rooms, and has an immersive, jungle-like atrium. A commercial area with space for several shops is available in the corridor connecting the Hinge to the New Main building.

Once the old main building has been removed, the new complex will have a new promenade and entrance on the side garden. In addition, visitors can walk "underwater" beneath the glass roof of the gallery that links the New Main to the New Hinge.



Material Elements



Steel

The EPO's New Main building was constructed using 10 000 tonnes of steel, making it the largest steel construction of its kind and quality to be built in the Netherlands. The consortium opted for steel because it allows for relatively rapid and low-noise construction. In the Netherlands, concrete is still the material of choice for large office buildings, but steel is lighter in weight and offers advantages over concrete when it comes to the risk of subsidence, and also offers greater flexibility in space planning. The six custom-made frames required for the tall, slender building – approximately 107 metres high, 150 metres long and 24.7 metres wide from façade to façade – each weigh 52 tonnes and must absorb the full power of horizontal wind forces and direct them into the ground.

Glass

Architect Jean Nouvel's vision was for the building to reflect the sky and surrounding water, which is why glass is the most prominent feature of New Main. Nouvel and his co-designers Dam & Partners opted for a striking curtain wall system which allows for a modern finish with clean lines and a unique look. In fact, the construction has two façades. An inner and an outer skin form a cavity which is not only attractive but also serves as a climate buffer between the inside and outside of the building.

By deflecting wind and rain away from the exterior of the building, the glass curtain fulfils the EPO's requirements for sustainable energy management. The long façades on either side of the building change their appearance along with the weather and the light, from transparent to opaque and everything in between. Passers-by in the street see a panorama unfold. Measuring 100 000 square metres, the total area of glass is equal in size to some 12 football pitches.

Water

New Main is situated below sea level, so careful water management is essential, and sustainable systems are required to manage and recycle rainwater, wastewater and groundwater. As more than a quarter of the Netherlands' surface is below sea level, its relationship with water is dynamic, and water is foremost in the Dutch mind at all times. New Main's designers played with this perception and the engineers have worked with water management in very smart ways. Once the old tower building has been demolished, New Main and New Hinge will be surrounded by a vast pond with a surface area of 16 275 square metres. The pond positioned above the Level 0 will create the impression that the building rises up from the water. Staff and visitors will literally walk "underwater" to enter the building.

Sustainability

As part of its original design brief for New Main, the EPO stipulated that the energy performance requirements for the new building should be 20% more efficient than those set by the Netherlands as part of its commitment to meeting EU legislation.

Therefore, the new EPO office buildings combine modern architecture with responsible urban planning in order to minimise environmental impact. Each building characteristic has been thoughtfully considered from a design aspect as well as an ecological one. The aim is for the building to be regenerative in the areas of air, light, and temperature to minimise energy costs.

Internationally recognised eco standards

The project was built under criteria set by BREEAM-NL (Netherlands) and BNB (Germany), internationally high standards for ecological responsibility, energy efficiency, and sustainability.

Renewable energy

Vast arrays of photovoltaic solar panels on the roof sky garden provide a source of renewable electric energy to the main power supply to be distributed throughout the building. In addition, rainwater will be collected and used to supplement the conventional water supply for flushing toilets and watering plants and flowers.

Lush plant gardens

A double glass façade houses hanging gardens, containing 300 varieties of plants along the entire vertical interior. The architects consider these living plants to be part of the architectural components of the building.

Aquifer thermal energy storage system

The building has an aquifer thermal energy storage system (ATES) which will reduce primary energy consumption and related CO₂ emissions.

Energy-saving use of natural light

The building has been designed to make maximum use of natural light. Moreover, approximately 16 000 LED light fixtures will save approximately 430 000 kilowatt hours every year.

Recycled materials reduce waste

In total, 90% per cent of the materials from the existing tower building and its annexes will be conditioned and recycled for projects like road embankments in the Netherlands.

Natural climate control

Each office is supplied with 100% fresh air. Each panel in the climate ceiling is fitted with a pipe circuit through which warm or chilled water can flow. The energy for heating or cooling this water is gained via the ATES system heat exchange with groundwater wells.



Forged through international cooperation

With the inauguration of the new premises of the EPO that took place on 27 June 2018 just four years after construction began, we celebrated two buildings opening their doors: New Main and New Hinge.

Their designs were forged through a truly international co-operation, and now it is time for the equally international community of the EPO's staff to take over.

The day of the inauguration was also the time to look ahead to the next phases. Our work is not yet complete. We look ahead to the dismantling of the existing tower. And finally, to the creation of the surrounding landscape and mirror pond of New Main and New Hinge.

Then we will see the buildings as imagined by us in Paris and in Amsterdam. The abstract and precise volumes of steel and glass transfiguring into an architecture of delight and amazement when both buildings meet their twin images reflected in the water.

The glass façades will take their reflections of the sky, atmosphere, the vibrant colours of the member states' flags, the reflections of each other, to their mirror twins, and back. It is this image, ever changing, ever in flux, which in turn reflects the diversity of the context of the EPO community.

Diederik Dam

Facts and Figures

Overview

Construction start date	2014
Construction completion	2018
Budget	EUR 205 million
Environmental building requirements	Netherlands BREEAM-NL German BNB

Scale

Gross floor area	85 000m ²
Building dimensions	156 metres long x 107 metres high x 24.7 metres wide from façade to façade

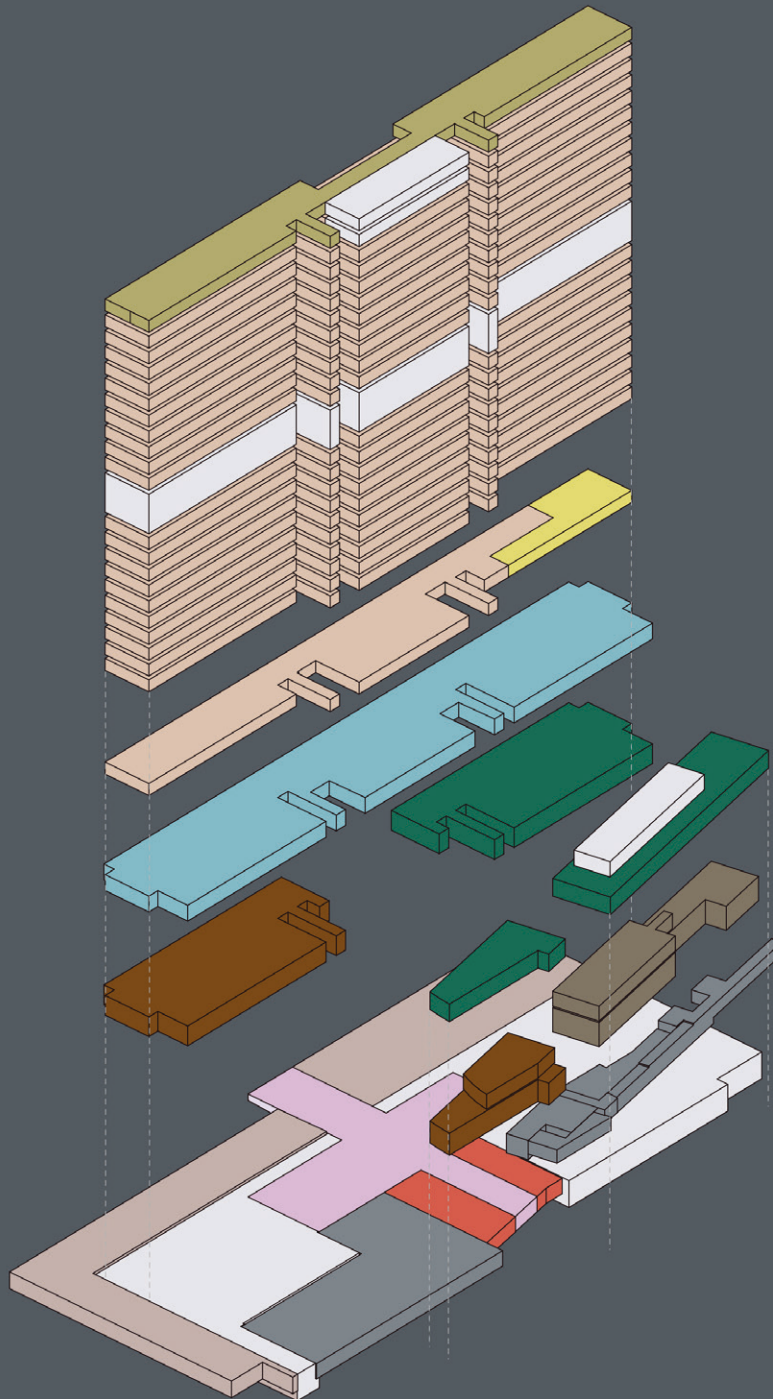
Material elements

Foundation 'piles'	1 200
Glass	100 000 m ²
Steel	10 000 tonnes
Water	16 275 m ² pond surrounding the new building
Photovoltaic solar panels	825 m ² surface area
Plants	300 plant varieties covering some 2 300 m ²
Planter boxes	198 (8.50 metres x 1.60 metres) weighing 300 tonnes

Capacity

Workspaces	1 950
Typical office floor contains	80 individual offices per floor 1 meeting room 1 video conference room 2 kitchenettes 2 libraries 2 areas for teamwork

Floor plan



- Sky garden
- Offices
- Technical facilities
- Health services
- Training centre
- Meeting rooms
- Coffee corner / restaurant
- Social area
- Printing and mailrooms
- Lobby
- Shops / bank
- Car park

Project Team

Client	European Patent Office (EPO)	
Location	Patentlaan 2, 2288 EE RIJSWIJK, The Netherlands	
Consortium	Constructor Architect Structure Building services Climate, fire safety & acoustics Landscape	TBI Consortium New Main, consisting of J.P. van Eesteren and Croonwolter&dros Ateliers Jean Nouvel, Paris Dam & Partners Architecten, Amsterdam Zonneveld Ingenieurs, Rotterdam Croonwolter&dros, Rotterdam Deerns, Rijswijk Peutz, Zoetermeer Copijn, Utrecht
Contract type	Design and execution competition, full design services, interior design	
Architect	Jean Nouvel, Ateliers Jean Nouvel Diederik Dam, Dam & Partners Architecten	
Project leaders	Competition: Jean-François Winninger, Haakon Brouwer Development and execution: Bernard Duprat, Merlijn Pennings	
Architects / engineers	Karam Antwan, Marie-Hélène Baldran, Maurice van den Berg, Paolo Carignano, Henk Heijink, Astrid Hopfner, Medard Jordan, Alexander Lefebvre, Mark Linenberger, Kirsi Marjamaki, Jose Millan, Serena Minacci, Glenn Mostaard, Daniele Pasin, Julien Pasteau, Andre Procopio, Mathias Raasch, Marc Stoop, Martin Tegaldo, Caterina Vetrugno, Bram Waumans	
Computer generated images	Benjamin Alcover, Mathieu van Ek, Kyra Frankort, Peter Hoste, Michael Kafassis, Mizuho Kishi, Sébastien Rageul	
Graphic design	Martin Gasc, Eugénie Robert, Vatsana Takham, Elise Taponier	
3D modelling	Michael Gloudeman, Arjan Noya, Paul Schillemans	
Interior design	Edwin van Heijningen, Ernesto Mistretta, Nicolas Perrichi, Léo Chapuis	
Landscape	Laura Giuliani, Sanne Horn, Wim Wijsman	
Models	Romain Caillon, Rui Pereira, Ursula Tyszkiewicz	
Artistic interventions	Sculpture in the pond, Jean Nouvel	

Architects

Project leadership

The new EPO office buildings in The Hague have been designed by two prominent figures of the architectural world: Ateliers Jean Nouvel of Paris and Dam & Partners Architecten of Amsterdam. The new buildings were constructed by a multitude of Dutch companies through a consortium comprising TBI, “New Main BV”, including J.P. van Eesteren B.V., Croonwolter&dros B.V. together with their subcontractors.

TBI consists of a group of companies that sustainably renew, organise and maintain the built environment. The group has a mixed portfolio of construction and engineering operations. Houses, offices, schools, hospitals, roads, tunnels, bridges, locks, factories and marine installations: TBI’s work can be seen throughout the Netherlands, from modest initiatives to major, high profile projects for public and private clients. The TBI companies operate close to the client and are leaders in their markets and segments. With an average workforce of 5 700 full-time equivalents, TBI achieved an operating revenue of EUR 1.7 billion in 2017.

Ateliers Jean Nouvel of Paris

Ateliers Jean Nouvel (AJN) is a world-renowned design firm with a multicultural team of 140 people from more than 20 countries. Founded in 1994, AJN combines the disciplines of architecture, urban planning, interior design, landscape design, graphic design, and product design into a single integrated practice. Jean Nouvel’s award-winning designs and reputation have attracted many prestigious commissions.

Jean Nouvel

Born in Fumel (France) 1945

Jean Nouvel ranked first in the entrance examination of the Ecole Nationale Supérieure des Beaux-Arts in Paris in 1966, where he earned his degree in 1972. Assistant to architect Claude Parent and inspired by urban planner and essayist Paul Virilio, he started his first architecture practice in 1970.

His strong stances and somewhat provocative opinions on contemporary architecture in the urban context together with his unfailing ability to inject originality into all the projects he undertakes have formed his international image.

Jean Nouvel’s work does not result from considerations of style or ideology, but from a quest to create a unique concept for a singular combination of people, place and time.

His works have gained worldwide recognition through numerous prestigious French and international rewards. In 1989, the Arab World Institute in Paris was awarded the Aga-Khan Prize because of its role as “a successful bridge between French and Arab cultures”. In 2000, Jean Nouvel received the Lion d’Or of the Venice Biennale. In 2001, he received three of the highest international awards: the Royal Gold Medal of the Royal Institute of British Architects (RIBA), the Praemium Imperiale of Japan’s Fine Arts Association and the Borromini Prize for the Culture and Conference Centre in Lucerne. In 2002, he was appointed Docteur Honoris Causa of the Royal College of Art in London.

Three years later, he received the annual prize from the Wolf Foundation in Israel “for providing a new model of contextualism and redefining the dialectic between the two salient characteristics of contemporary architecture: concreteness and ephemerality”. The Agbar Tower in Barcelona was awarded the International Highrise Award 2006 in Frankfurt, “as it makes an outstanding contribution to the current debate on high-rises”. Jean Nouvel was also the recipient of the prestigious Pritzker Prize in 2008. In France, he has received many prizes including the Gold Medal from the French Academy of Architecture, two “Équerres d’Argent” and the National Grand Prize for Architecture.

Currently, Jean Nouvel is developing several cultural projects in China. In November 2017, Jean Nouvel delivered the Louvre Abu Dhabi Museum, a landmark museum in the Gulf region. The museum has received unanimous international acclaim and has already welcomed a large number of visitors since its opening last year.

Principal completed projects

Arab World Institute (Paris - 1987), Opera House (Lyon – 1993), Cartier Foundation (Paris – 1994), Galeries Lafayette (Berlin – 1996), Lucerne Culture and Congress Centre (Lucerne – 2000), Court House (Nantes - 2000), Dentsu Tower (Tokyo – 2002), Agbar Tower (Barcelona – 2005), extension of the Queen Sofia Arts Centre (Madrid – 2005), Quai Branly museum (Paris – 2006), Guthrie Theatre (Minneapolis – 2006), Richemont headquarters (Geneva – 2006), “40 Mercer” housing building (New-York – 2008), Symphonic House DR Concert Hall (Copenhagen – 2009), Ferrari’s factory (Maranello – 2009), “One New Change” (London – 2010), 100 11th avenue (New-York – 2010), Sofitel Vienna Stephansdom (Vienna – 2010), City hall (Montpellier – 2011), Renaissance Fira hotel (Barcelona – 2012), mixed use high-rise building “One Central Park” (Sydney – 2014), Imagine Institute (Paris – 2014), extension of the Police headquarters & Charleroi Danses (Charleroi – 2014), housing, offices and retails tower “The White Walls” (Nicosia – 2015), Philharmonie de Paris (Paris – 2015), Louvre Abu Dhabi (Abu Dhabi – 2017).

Dam & Partners Architecten of Amsterdam

Dam & Partners Architecten is a renowned Amsterdam-based architectural firm led by father-son duo Prof. Cees Dam and Diederik Dam. Founded in 1962, the company’s portfolio comprises a wide range of projects differing in both nature and scale: from complex urban developments, theatres, town halls and hotels to luxurious residential buildings and villas, interiors and furniture.

Applying an architectural vision that aims to “elicit delight and amazement”, the Amsterdam-based firm takes on projects that integrate flexibility and sustainability into elegant and timeless designs, always based on their respective contexts. Commitment, freedom and comfort lie at the heart of Dam & Partners Architecten’s work.

Diederik Cornelis Gregorius Dam

Born in Haarlem (NL) 1966

Diederik Dam was born in Haarlem, the Netherlands, where he attended grammar school with a focus on classical languages. After graduating from the Faculty of Architecture at the Delft University of Technology in 1993 he entered the architecture firm founded by his father Prof. Cees Dam.

Based in the Netherlands, the architectural firm executes work both at national and international level. Their work ranges from luxury apartments in Monaco, urban development plans in France and the US, to the Ministry of Economic Affairs, Agriculture and Innovation in The Hague, and the Ertskade extruded aluminium clad residential tower on the IJ-river in Amsterdam.

Further achievements include housing and commercial development in Amsterdam-Zuid’s Stadionplein square, the renovation of architect Duintjer’s ABN bank offices, and the Fred housing complex in Amsterdam. Also in the capital, work is commencing on the “Hourglass” office high-rise in the south axis business district next to NoMa House which was completed at the end of 2017.

In Rotterdam, Dam & Partners Architecten realised the Eneco headquarters sustainable office development as well as the tallest building in the Netherlands, the Maastoren office high-rise. The De Zalmhaven residential high-rise will commence end of 2018 and is set to surpass it in height.

Diederik has been a guest lecturer at various institutes, including the Delft University of Technology. Previously, he was on the boards of the Dutch Urban Land Institute and the Architectura et Amicitia society. He also appears regularly on BNR news radio to discuss the topic of densification and the future of urban habitats.

As he is fluent in French, working alongside Jean Nouvel on the high-rise offices of New Main for the EPO was second nature to him. A truly joint design and in fact the largest in terms of height and slimness in Europe, this steel and glass building opens in June 2018.

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