BAM Construction has completed the exterior of the striking V&A Museum of Design Dundee in Scotland. The final stage of the exterior construction programme involved removing a temporary cofferdam which had enabled the front of the building to be built over the River Tay. Work continues on the interior. The museum will open in 2018. Philip Long, Director of V&A Dundee, said: ‘Everyone working on the design and construction should be incredibly proud of what they have achieved.’
Lively discussions during Worldwide BAM Safety Day

From the Danish town of Søborg to Sint-Truiden in Belgium, and from Costa Rica to Indonesia; BAM sites and offices across the globe took part in Worldwide BAM Safety Day 2017 on 10 October. All highlighted the day’s theme, ‘The Value of Safety’, often together with subcontractors and in some cases even clients. The basic tool of the day – a board game or quiz – elicited plenty of discussions on the elements ‘hearts, minds and money’ and in a playful way called attention to the five main safety risks.

In addition to this, teams collaborated on drawings of safety solutions and innovations, a collection of which is available on www.bamsafety.com.

The many pictures and enthusiastic reactions that were received are proof of the high level of safety awareness in BAM offices as well as on sites. As many have said: ‘The day has given us a handle on how to increase safety at work even further!’

If you have any more to say in response to this year’s Safety Day, we welcome your comments at safety@bam.com.

Official opening for Scotland’s newest station

The new Forres station has been opened. The station is part of the Scottish Government-funded Aberdeen-Inverness Improvement Project, which is transforming rail travel between the two cities by increasing services and cutting journey times. During a ten-day closure of the line, Network Rail and BAM Nuttall worked around-the-clock to deliver five kilometres of new track in Forres, the new Forres station and link road, two kilometres of new track in Elgin, extended platforms at Elgin and upgrading of Elgin level crossing to a full-barrier.
Appointment

James Wimpenny has been appointed as Chief Executive of BAM Construct UK with effect from 1 January 2018.

He will succeed Graham Cash who will retire from the end of the year. The Executive Board would like to thank Graham Cash for more than 31 years of loyal service.

Wimpenny, now Executive Director of BAM Construct UK, has 32 years' service with the company. With effect from 1 January 2018, the board of BAM Construct UK will comprise of James Wimpenny, Chief Executive; Douglas Keillor, Executive Director; Neil McGruer, Finance Director; and Andrea Singh, Director of Human Resources.
Bo Svendsen, Managing Director BAM Danmark:

‘Backed by Group expertise’

Less than four years after its establishment in early 2014, BAM Danmark has already made its mark in the Danish construction industry. After a few initial contracts from the Technical University of Denmark, the subsidiary of BAM Bouwen Techniek was awarded its first major design and build contract in 2015. Since then, the company has also entered the PPP market together with BAM PPP.


‘We have grown from a humble startup to a respected player in the Danish market with the appearance of being one of the top five contractors’, says Bo Svendsen. Like a true startup, BAM Danmark more or less started as a one-man company at Svendsen’s kitchen table. Today the company employs forty people, from staff positions to project managers, planners and site agents, and operates from stylishly modern offices in the northern part of Copenhagen.

Growing the business
Bo Svendsen and Esper Christophersen, who is in charge of operations, have a long track record in the Danish construction sector. ‘We are now working on the growth of our business’, says Svendsen. ‘While growth is not a target in itself – our main objective is a good result – the market is such that we expect to double our turnover by 2020. Invitations to tender will be going out for quite a few projects, including several hospitals. At the same time, the Danish government is planning to redistribute government agencies across the country, which will also result in new construction projects. In the longer term we aim to enter the renovation market, but we’re taking this one step at a time.’ ‘We have the advantage of being able to rely on the backing of BAM, with the knowledge and expertise of BAM Bouwen Techniek and other BAM operating companies as well as the financial stability of the BAM Group’, says Christophersen. ‘We are pleased that we can benefit from the expertise of BAM Advies & Engineering, who have seconded one of their own to our office. This also opens up the door to BIM technology and 3D modelling. All of this knowledge and expertise, combined with highly trained and committed employees puts us in a strong position to pursue the best projects and complete them successfully.’

BAM values
With a construction market that is picking up steam comes the added risk of an overheating labour market. Christophersen: ‘People are easily tempted to hop from job to job. On the foundation of the BAM values we are forging a robust company culture that lets us build a reputation as a preferred employer in the construction industry. An important factor in this is the fact that candidates realise they are joining a Europe-wide construction group.’

Road infrastructure contract in Dubai
BAM International has been awarded a design and construct contract to build road infrastructure worth 14.5 million euro for global trade enabler DP World at their flagship Jebel Ali Port and Free Zone in Dubai, United Arab Emirates. The 2.75 kilometres of dual carriageway will connect the port’s latest Container Terminal 4 to the city’s existing road network to further develop Jebel Ali’s multi-modal logistics corridor. The project also entails the construction of two bridges, associated drainage, lighting, signage and precast barriers.

Wharf to build in Canada
BAM International together with J&M Construction (Canada) and Manson Construction (USA) has been awarded the contract to build the new Rio Tinto Aluminium BC Works wharf on behalf of LNG Canada. This wharf will replace the existing Rio Tinto Terminal B, that needs to be relocated due to the planned LNG export terminal in Kitimat, British Columbia. The project value amounts to 95 million euro (50% for BAM). The wharf (320 x 60 metres) will include a berth for barges. Construction will commence depending on the final confirmation by LNG Canada.
From brewery to building site

Brewing activities have made way for building activities on the Carlsberg industrial in the city centre of Copenhagen. While some of the brewery’s characteristic buildings are being kept intact, most of the thirty-hectare area is rapidly changing into a lively city district. One of the companies contributing to the transformation is BAM Danmark.

At this point, the concrete structure of the European School may look out of place among Carlsberg’s monumental industrial buildings, but that will soon be over once the new build shows its true colours and its brick façades merge seamlessly into its historic environment. ‘Carlsberg’s buildings are known for their richly varied brickwork. Even the large chimney that is still standing is covered in an intricate tapestry of patterns. The same style will be continued in the façades of our projects’, says Esper Christophersen, Director Projects.

Now named Carlsberg City, the vast industrial estate is being redeveloped according to a master plan of Danish architects Entasis. The plan comprises several thousand homes, shops, cultural facilities, sports accommodation, offices, a university campus and a new S-train station – all designed to respect the district’s industrial heritage.

Design and build
The developers of the district, Carlsberg Byen P/S, contracted BAM Danmark to realise two new buildings: Europaskolen Kopenhagen and Harild Hus. There is a direct connection between the two design and build contracts, as the underground parking of the European School (which it will share with local residents) also provides a foundation for the Harild Hus office building. The architectural design of both buildings was in the hands of Vilhelm Lauritzen Arkitekter, in collaboration with NORD Architects for Harild Hus.

Optimisation
The complexity of the European School project requires a contractor that is skilled and fully committed, says Ann-Marie Lewis, Head of Design & Development at BAM Danmark. ‘The programme of requirements includes many different functions on a total floor area of 25,000 m². Two of our competitors pulled out of the bidding process prematurely and two others were disqualified. As we were then the only remaining party, the tender procedure was nullified and a new procedure was opened. We used the time between the two procedures to further optimise our designs, especially that of the façades. In the second round another two contractors pulled out prematurely. All in all, the tender stage up until contract award has lasted a whole year. It has definitely been worth it, though. This design and build contract is of great significance to BAM Danmark. It will be a boost for our reputation.’

Safe water supply in Sierra Leone
In consortium with IMC Worldwide and Atkins, BAM Nuttall and BAM International have been awarded the design and construction contract to rehabilitate the water supply in Sierra Leone’s capital city, Freetown. The consortium will also target reducing the amount of leakage on the distribution network from 40 per cent to 25 per cent. Water supply in Sierra Leone is characterised by limited access to safe drinking water. BAM’s part of the project will amount to approximately 25 million euro.

BAM Clough supports project in Australia
BAM Clough joint venture (BAM International and Clough Limited) has been awarded a contract to provide technical support and constructability input during front-end engineering design works for the Ship Lift and Marine Industries Project in Darwin, Northern Territory in Australia. The proposed project will include a ship lift facility for lifting vessels from the water for dry docking and maintenance works, and a common user area, being a hardstand area, available for ship repair and maintenance works.
On the banks of the river Spree in Berlin, BAM Deutschland has finished another fascinating project. The final works on the Futurium were taken care of in early September and so the festive hand-over of keys could take place. The building was commissioned by the Federal Institution for Real Estate as a turnkey construction in public private partnership. The Futurium is the second of three projects that BAM is realising for this client. As private partner and general contractor of the project, BAM Deutschland fulfilled the contract on time and within budget.

The Futurium was designed as a building where the public can learn about the future. Exhibitions will show diverse views on this topic and visitors will get the chance to present their own views, learn about different aspects that are connected with the theme ‘future’ and do their own research. In laboratories, discussions and experiments the visitors will have the opportunity to experience the topic in many different ways – free of charge. The Futurium will also be a public attraction due to its breathtaking views of the river Spree and the Federal Chancellery from the first floor. The concept of the Futurium offers various attractions where everyone can find something that awakens his interest. And it also offers a place to relax in the café on the ground floor. The building structure of the Futurium is unique and forms an exciting contrast to its environment. Depending on the incidence of light the façade may light up like a multi-faceted jewel or mirror the sky over Berlin – either way, a spectacular view.

The grand opening of the Futurium is planned for the spring of 2019. The rooms will be furnished and prepared for the visitors and thereby create an atmosphere that addresses the visitors’ creativity. Several weekend events are planned in advance of the opening, in which special experiments will be performed and various topics will be discussed.

Klinikum Frankfurt Höchst wins bSI Construction Award 2017

BuildingSMART is the worldwide authority driving the transformation of the construction industry through creation and adoption of open, international BIM standards. Annually BuildingSMART recognises exemplary projects using effective and innovative solutions to overcome interoperability challenges. The Neubau Klinikum Frankfurt Höchst in Germany is the first passive house clinic project in Europe and was awarded with the buildingSMART International Construction Award 2017. BAM Deutschland’s project was completely designed, built and will be operated with open BIM technologies. According to the jury “this project is clearly the winner.”

From left: Samir Alzeer (Office BIM Manager, BAM Deutschland), Richard Petrie (Chief Executive buildingSMART) and Timo Diebold (BIM Coordinator, BAM Deutschland).
One project, two milestones

A time for celebration at BAM International’s Museum of the Future project in Dubai as the team achieved a full million man-hours without lost-time incidents. At the same time, the team achieved its milestone of milestones in terms of the construction process: the pouring of the ring-shaped beam that forms the connection between the substructure and the spectacularly designed superstructure, which will house the exhibition spaces. The concrete ring contains nearly four hundred tonnes of rebar, which was positioned with the use of a 3D model. Filling the formwork with the specially designed low-viscous self-compacting concrete mix involved three pumps working non-stop over a period of fifteen hours.

A treasure trove of learning

It’s a real treasure chamber: the library in the new academic centre that the Aga Khan Development Network (AKDN) is currently building in King’s Cross, London, is where students will be able to access a vast collection of ancient religious books and documents. ‘The room is built to withstand the high temperatures associated with fire for at least four hours’, said Tony Goddard, Project Manager at BAM Construct UK.

The academic centre is the second AKDN project in the 25-hectare redevelopment zone at the heart of King’s Cross. ‘In 2016, we completed AKDN’s student accommodation building with 198 rooms’, says Goddard. The academic centre will also house the head office of the Aga Khan Foundation, which was established over sixty years ago by Aga Khan IV, the spiritual leader of the Shia Imami Ismaili Muslims. ‘The building will be nine storeys high and partially crowned with a glass superstructure. This will contain AKDN’s offices and have direct access to the roof garden. These spaces with magnificent views over the city will be finished to an especially high standard.’

Tony Goddard: ‘We developed our 4D planning in collaboration with our subcontractors for the basement, the steel structure, and the glazing of the atrium, ‘crown’ and façade. 4D planning is fast becoming the standard across the British construction sector. Being able to apply the technology together with our subcontractors has the huge benefit of preventing clashes.’ This fifty million euro academic centre is due for completion in April 2018.

4D planning

BAM Construct UK is realising the design of Japanese architects Maki and Associates, who opted for a façade out of prefabricated concrete elements clad in natural stone.

A 4D animation shows how in March of this year the tower crane was moved from the construction pit to the roof of the building, where it now sits on one of the cores.
We know them before we need them

The new careers website www.bamcareers.com enables BAM to target talent locally and to maintain our position as an employer of choice in a scarce market.

BAM’s employees are fundamental to its success. BAM’s strategy – Building the present, creating the future – states our ambition to become one of Europe’s leading sustainable construction companies and to enhance peoples’ lives. In order to achieve this we want to become a preferred employer. BAM faces a tight labour market in the field of technology, due to recent economic growth, which means attracting talented people is increasingly difficult.

According to a survey conducted by Cobouw, the Dutch (online and offline) magazine for the construction industry, some of the main reasons to work for a company are its size, interesting projects and the brand image of the employer. BAM led in Cobouw’s 2016 employer ranking in the engineering branch, but it is no mean feat to maintain this position in the current market.

Bamcareers.com is our green-and-orange pride translated into attractive design and captivating content, but that’s not all. The digital infrastructure of the website allows us to align our branding activities and job advertising with the search behaviour of target audiences. And as 81 per cent of them are not actively looking for a new position, the need for cutting-edge ways to interest them becomes even more clear.

Bamcareers.com is fully compatible with mobile and tablet devices, and visitors are guided to the most relevant content based on their IP-address and keywords used in their search, to make them feel right ‘at home’. Furthermore, bringing the (formerly fractured) careers information for each of BAM’s OpCos together on one platform leads to one clear employer brand.

CEO Rob van Wingerden: ‘Attracting and retaining talented people is critical for BAM, it is essential that BAM remains a preferred employer. This website will be an important tool for mapping out our target groups and building in them the desire to work for BAM.’

Data dashboards easily allow the website’s contributors to optimise their content to target the best fitting talent. And, last but not least: every job opportunity within Royal BAM Group is accessible via one URL! Following in the digital footsteps of BAM’s mission to make it before we make it, the ambition of our recruiters is ‘to know them before we need them’. This website will be an important tool for mapping out our target groups and cultivating the desire in them to work for BAM.

Breakthrough in the Stuttgart tunnel

In the Stuttgart21 tunnelling project, Wayss & Freytag Ingenieurbau, in joint venture with Hochtief and Bemo, has reached an important milestone – quite literally a breakthrough. The joint venture is building two single-tube tunnels with a total length of 5,100 metres for the new high-speed rail connection between Stuttgart and Ulm. Having started boring from either side of their tunnel, the western tube teams were able to shake hands recently. The project also comprises the construction of lateral connections with a total length of eight hundred metres and a two-kilometre railway tunnel for the S-Bahn.

Johann Voithofer (left) and Franz Nocker, both of W&F Ingenieurbau, meet at the breakthrough point in the western tube.
BIM model for tech hotel

It’s the first Aloft hotel in Ireland, but for BAM Ireland’s Project Manager Kieran Ladden it’s the second one he’s building. How can that be possible? Ladden was previously involved with the second phase of BAM International’s Al Ain project in Abu Dhabi. ‘An Aloft hotel was part of that project.’

Back in his home country, Ladden is now leading the project in Blackpitts, an up-and-coming area on the south side of Dublin’s city centre. This is where Aloft (a Marriott International brand) will open a trendy hotel with 202 rooms, restaurant and bar in mid-2018. A two-storey basement will offer and host the service areas, plant and equipment.

Historic façades
‘Before we could start building the parking basement we had to divert a brick culvert that channels the river Poddle. We used prefab elements to build the new culvert. In the new building, we will retain the historic façades of The Tenter pub and the industrial building next door, dating back to 1880.’

BAM Ireland is executing the project with the help of a 3D BIM model. ‘The site agents are using their iPads with BIM 360 Field apps to ‘walk through’ the virtual building. The model is extremely detailed, down to the bedside lamps.’ Ladden expects to complete the hotel building this coming spring.

World’s firsts for BAM Infra

Innovations abound in BAM Infra’s ring road project in the town of Gemert in the southern Netherlands. Not only did the operating company apply the slide-in method on a concrete roundabout, it also created – in collaboration with Eindhoven University of Technology – the world’s first 3D printed bicycle bridge.

The client, the Province of North Brabant, chose the operating company for its ability to plan a project with low CO₂ emissions, a high safety standard and minimum disruptions of existing traffic flows. Bart Welvaarts, Managing Director of BAM Infra Regionaal: ‘The BAM strategy is the perfect answer to these kinds of challenges. We have applied several innovative solutions such as 3D printing the bicycle bridge. 3D printing ensures a fully automated process without formwork and less material usage in general. Together with other measures this has reduce emissions on this project by 650 tonnes.’

The slide-in roundabout
Slide-in methods are tried and tested in bridge and tunnel construction, but no one ever slid in a roundabout. That is, until BAM Infra used the method in this project. Project Manager Rob Leenders: ‘Road closures or the prolonged hindrance of phased construction weren’t acceptable options. We built the entire roundabout in a spot next to the road and slid in its full 1,250 tonnes in only six hours. Including the removal of old road parts and creating a new connection, we were out of the way of traffic in under 48 hours.’

Student accommodation
Adjacent to Aloft Hotel Dublin, BAM Ireland is building a student housing complex with 296 units. The client for the student complex is Global Student Accommodation Group. The apartments will be ready to move into by mid-2018. GSA is responding to the enormous demand for student housing in Dublin.

The slide-in roundabout
Mammoet pulled the roundabout into place over a distance of 39 metres.
On your marks!

2018 will be the year of the tunnel boring machine (TBM) for the Rotterdamsebaan road project near The Hague. In and around the jacking pit everything is being put into place for the boring of the Victory Boogie Woogie Tunnel. From 2020 on, it will be a vital part of Rotterdamsebaan, the new main traffic artery towards The Hague’s city centre.

The TBM was transported in parts to the construction site from Germany. The aim is to have it ready for action before the Christmas holiday, including its eighty-metre train and also the site’s separation plant and storage area for the tunnel elements that will be prefabricated in Germany. ‘The actual boring will begin in January’, says Martin Potter, Project Manager for Combinatie Rotterdamsebaan (BAM Infra, Ways & Freytag Ingenieurbau and VolkerWessels).

‘Each of the tubes will take four to five months to complete. Allowing also for the intermediate disassembly and reassembly of the machine, we expect to finish boring by December 2018.’

Sustainable tunnel construction
Sustainability is a key word in the design and construction of the Rotterdamsebaan access road. Potter: ‘This includes reusing the TBM itself. We’ve used the same machine in the Sluiskil project and had it thoroughly refurbished by Herrenknecht in Germany. The cutting shield is new, though.’

‘The fuel that powers our on-site equipment is Shell GTL (Gas-to-Liquids)’, adds Environmental Manager Erik-Jan Mann. ‘This reduces emissions of fine particles and nitrogen. Sustainability aspects of the tunnel itself: solar panels on the roof of the service building, particle capture at the mouths of the tunnel and absorption of traffic noise in so-called diffractors, which are hollow and open concrete contraptions. Across the whole length of the road, surfaces are made from low-energy asphalt.’

The sunken part of the road (left) crosses several main traffic arteries.

Bridge push
A major milestone was reached on the new Lincoln eastern bypass, in the East Midlands of England, when a 600-tonne rail bridge deck was slid into place during a 72-hour rail line closure. As part of the work, BAM Nuttall disassembled and reassembled the rail tracks to allow a hydraulic skidding system to push the bridge into its final position. The project will form an integral part of the A15 Lincoln Eastern Bypass.
Graduation Group 1 – Olympus Leadership Programme

BAM’s success is determined by our projects and our project managers are key to their success. As part of the Olympus project BAM has developed a leadership programme for senior project managers. The Olympus Leadership Programme focuses on personal, team and project leadership and is the result of a close and intensive co-creation between BAM, the OpCos and NIMO Project Management Institute.

The first programme started in April 2017. On 21 September the first Olympus Group completed the extensive journey and celebrated their arrival at the (imaginary) summit of Mount Olympus. Trainer Susan Madsen of NIMO: ‘Being a facilitator on the Olympus Leadership Programme is a real privilege. In collaboration with BAM we’ve designed a truly unique and transformational programme. Through the many exercises and experiential learning project managers explore how to adjust their behaviour to get a better result when interacting with clients and team members on a project. But the benefits are even further reaching: the network within the group becomes so strong that the participants naturally begin to support and also learn from each other outside the programme. This will help to create one BAM.’

The final assignment consisted of mood board presentations for Rob van Wingerden with the BAM values as a starting point. Each subgroup had an interactive discussion and shared their action plan to act as a change ambassador in their OpCo. The programme ended with a graduation ceremony. The group has expressed the wish to stay in touch with their Olympus group members and to continue meeting each other as a group.

During 2018 the Olympus Leadership Programme will be rolled out to subsequent groups of project managers.

Robert Young retires

It is with a mixture of pleasure and regret that BAM PPP’s Management announces the retirement of Robert Young, Managing Director of BAM PPP UK and Ireland Business Unit, with effect from 22 December. Robert has worked for BAM for more than 27 years and has fulfilled many roles since joining the Group in 1990. BAM PPP will be saying goodbye to a well-respected colleague and friend who has made a significant contribution to the development of the UK and Ireland company.

Rob van Wingerden (right) hands over the Certificate of Completion to Chris Usher.

The first Olympus group.
To live by the river

On the headland between the fairway and a harbour basin off the river Scheldt (Belgium) Interbuild is now realising an apartment complex with 95 apartments of different types.

The complete lack of repetition in the design is testing the Interbuild team to the limit: in this first phase of the so-called Scheldt island development, POLO Architects has come up with a total of thirteen connected buildings, each with their own distinct façade style. ‘To add to the challenge, there are different soil levels across the site and the number of floors vary in the buildings. Our main challenge will be in the connections between all those different façades’, says Assistant Project Manager Britt Maes.

Prison bars for balustrades

BAM’s urban and real estate developer AM has bought the former Bijlmerbajes prison in Amsterdam from the Dutch Central Government Real Estate Agency. AM aims to redevelop the area together with AT Capital, Cairn and design partners OMA and LOLA Landscape. The prison grounds will become a largely pedestrian residential area with approximately 1,350 apartments for sale and rent, varying from affordable starter homes to luxury homes and assisted living facilities. Of the five existing prison towers only one will remain. It will become a ‘green tower’ hosting a vertical park and urban farming. The prison’s administrative building will be transformed into a ‘design cluster’, a cultural space of international standing. Amenities such as bars, restaurants and health care will also be available.

Sustainable

All buildings will be energy neutral with high-grade insulation and will generate their own energy with built-in solar panels and wind turbines. Some 98 per cent of materials from the prison will be reused to create the new residential area. For instance, façade elements from the prison towers will be used to create new student housing, prison bars will return in the form of balustrades and cell doors as edge panels for bridges.

New contracts

Largest speculative office development

BAM Properties, in partnership with Hermes Investment Management, the 30.1 billion pound manager, is developing what is currently Edinburgh’s largest speculative office development. Upon completion, Capital Square will be a 122,000 m², eight-floor, Grade A office development, with the highest environmental standards, including a BREEAM excellent rating. BAM Construction in Scotland has been appointed to build the scheme, which is scheduled for occupancy in early 2020.

First high-rise residential building

Galère and BAM Lux in joint venture with Cegelec have been awarded the contract for the structural works (excluding façade and finishing) of the INFINITY housing, office and retail scheme in Luxembourg. The contract of client IMMOBEL comprises a residential tower – which will be the first high-rise residential building in Luxembourg – and 150 luxury apartments on 25 floors. The residential part of the scheme is due to be completed mid-2020.

Elliptical shaped office towers

Interbuild has won the contract for two exclusive Möbius offices in Brussels’ northern district. Interbuild will deliver the two office towers for client IMMOBEL. The striking design is by Assar Architects. With 20 (Möbius I) and 23 (Möbius II) storeys, 80 and 97 metres high respectively, the towers provide nearly 62,000 m² of BREEAM Excellent office space. The contract value is 83 million euro.