All in the mix

Just around the corner of Hazza Bin Zayed Stadium (completed in 2014), BAM International is making good progress with the second phase of the mixed-use development in Al Ain, Abu Dhabi. The scope of the project for BAM International comprises a food and beverage souk, a commercial building, a multi-storey car park, six five-storey buildings with 550 apartments, a 173-bed hotel with its own car park and the associated infrastructure. An additional residential building is scheduled for completion by mid-June 2017.

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Handover CUBRIC
BAM Construct UK has completed construction of the £44 million Cardiff University Brain Research Imaging Centre (CUBRIC) in Wales. Housing state-of-the-art neuro-imaging equipment, it will play a pivotal role in better understanding neurological conditions including dementia, schizophrenia and multiple sclerosis (MS). The 5,600 m² development was completed in a tight 64-week programme and was awarded in BAM Construct UK’s regional health and safety awards for 245,000 incident-free man hours. The building features photovoltaics (PVs), a sedum roof and rainwater harvesting and is on track to achieve a BREEAM Excellent rating. When fully operational, it will be one of Europe’s leading research institutions.

Supreme Court
Joint venture ‘Poort van Den Haag’ (Kaan Architects, BAM and ISS Netherlands) has completed the 15,000 m² Dutch Supreme Court in The Hague. The building contains two court rooms with public facilities, office accommodation for 350 people and an underground car park. The large glass facade with aluminium T-sections is a striking feature and gives the building a transparent character. The range of services to be provided during the thirty year operation phase comprises building services, cleaning, catering, security, ICT infrastructure and waste management.

CEO Rob van Wingerden:
‘Turning around our performance’

‘I am pleased with the major advances we made in 2015 to successfully implement the Back in Shape programme. With our 21,500 people working together, we delivered on demanding targets. Our results for the year show we are turning around our performance, and there is more potential to be unlocked. 2016 will be a year of reinforcement. Our top priority will be implementing our strategy for 2016 - 2020 ‘Building the present, creating the future’. In 2016 we expect further financial improvement. Well done everyone and keep up your excellent efforts.’
BAM Infra Rail has developed an expandable barrier so that work can be done safely alongside railway tracks. By using the Happy Railing Scissor Fence (HRS) a safe workplace is created and the adjacent track can remain in service, so that as many trains as possible can continue to run.

Henrie van de Wetering, workplace safety officer at BAM Infra Rail, explains: ‘The HRS is the answer for places where it’s not possible to use a permanent barrier because of the restricted space between tracks. The fence can be used during maintenance work on multi-track sections for which the maintenance schedule stipulates that the side track will remain operational. The biggest advantage, though, is to be had during unplanned work, like during winter measures and when repairing points failures.’ The HRS will be extensively tested in a railway yard until the end of this year.

Together to Rung 4. From left: Hans Verhoeven, Arno Barnas, Dirk van Ham, Judith Witvoet and Faisel Baboe.
Tunnel under the Kö

The new Kö tunnel has officially been opened in the centre of Düsseldorf, Germany. Wayss & Freytag built the 870 metre long connection. Each day, thirty thousand cars will pass under the famous shopping street, popularly known as Kö.

European School

BAM Danmark has won the design and build contract for the European school in Copenhagen. The client is project developer Carlsberg Byen P/S. The school will be built on a completely redeveloped site owned by the Danish brewer Carlsberg. The project has a contract value of more than €40 million.

Typically Dutch

(From left:) Hans Blom, Jeroen Al and Dennis Blommers, all carpenters, strike a pose for the camera while at work in the Zuidpoldermolen in Edam (province of North Holland). BAM’s building restoration specialist, Schakel & Schrale, are revamping the windmill’s interior. The windmill dates back to the middle of the seventeenth century.
BAM tops transparency benchmark

The benchmark is used to chart the quality of corporate reporting for the 500 largest companies in the Netherlands.

Concrete-3D-print

BAM Deutschland is research partner of the Technical University (TU) Dresden and is engaging actively in the development of concrete-3D-printing in co-operation with other practice partners in industry and together with the TU Dresden BAM Deutschland worked on this new construction technology.

Now their work is nominated for the prestigious ‘bauma Innovationspreis 2016’.

Lean speeds up hospital

The first lean hospital in Europe is going up in Zaandam, on the outskirts of Amsterdam. Through clever development and design, the construction time will be shortened by a year – partly thanks to a lean approach. Needless to say all those involved in the project are working together in a 3D model. That said, the ‘BIM-ing’ process was preceded by an exercise in cardboard.

‘We used cardboard walls to divide areas in a warehouse so that we could simulate various scenarios for all kinds of hospital functions. This led to improvements in the design, particularly for the A&E department’, explains Bernd Schönherr, project director at BAM Bouw en Techniek.

‘We are also using prefabrication as much as possible – both in the masonry and finishing phase – to accelerate the construction process.’

BAM Accommodatie Asset Management will be responsible for managing the building from September 2016 onwards when construction is completed.

The project team.
**Emergency works on Leeds Flood Alleviation Scheme**

On 26 December 2015 the city of Leeds was hit by a significant flood event, with waters in the River Aire reaching levels 1.2 metre above the previously recorded high. At peak flooding, BAM Nuttall employees interrupted Christmas festivities to assess the impact to part-constructed flood alleviation works.

Andy Judson, project manager: ‘Our works, to install a new movable weir remained intact throughout. The by-wash channel at Knostrop lock, adjacent to our works had failed, however, the canal bank had breached and several boats were washed away. The following day we mobilised our emergency response team with materials and plant, to place a rock berm across the breach. Rock and broken concrete from the old weir were placed in the fast flowing waters. By 31 December the volume of river waters entering the canal system was reduced to an acceptable level. On 4 January our piling team installed a sheet-piled wall across the breach to provide a more substantial solution, allowing Leeds City Council, EA and Canal & Rivers Trust to develop a permanent repair.

Supply chain partners who assisted with the repairs included Aggregate Industries for stone, Thorne demolition and Sweetings for excavators and transport. Our staff also retrieved the boats that had slipped their moorings.’

**BAM FM secures Hiscox**

BAM FM in the UK has signed a five-year deal with insurance giant Hiscox to maintain its ten offices across the UK and Ireland. BAM FM will deliver a mixture of hard, soft and integrated services to ten Hiscox properties across London and the southeast, Dublin, Birmingham, Leeds, Manchester and Glasgow. In a joint project with BAM Construction, BAM FM will also maintain the newly built Customer Experience Centre in York.

FM account manager, Michelle Hendey, says: ‘This contract showcases our ability to deliver FM services on a national scale, which will help us to sell our services to other large corporations.’
From the Board

‘Increase profit by being more selective about tenders’

‘In 2015, BAM worked hard on improving profits. Our aim is to be predictably profitable. It all starts with choosing the right projects. We made good progress last year in improving our project tenders by introducing the stage gate process. The Tender Desk, headed by Sebald van Royen, supports our operating companies when it comes to improving the quality of our tenders.

The main objective of the stage gate measures – originating from 'projects in control', a back-in-shape programme – is to improve BAM’s profitability. The stage gate process helps us reduce the likelihood of having disappointing results by being more critical and selective when it comes to assessing which projects we should – and which we should not – tender for. Using peer reviews, we can take advantage of the knowledge and experience that colleagues in the Group have. A fresh perspective from colleagues working at other BAM companies helps us to increase our chances, and to avoid unacceptable risks.

The new digital tender or CRM platform is an important tool. It helps us to analyse the information in one, uniform way so that the right choices can be made. For instance, which risks are acceptable and which aren’t? We are well on our way with this new approach, and we can see that the quality of our tenders is improving. The result? Better margins. It’s not simply a matter of flicking a switch when it comes to tightening up our procedures and changing our culture. Our motto is: ‘Better every day’, and for this the effort and the enthusiasm of all those involved is indispensable!’

Erik Bax,
Chief operational officer

Bridging the need for a new terminal in Dubai

The final stages are in sight for BAM International on the Jebel Ali Terminal 4 project in Dubai, as a first handover is planned for the coming month of April. This involves some major parts of the project: not just the first stretch of quay wall area, but also the bridge and causeway that provide access to the new terminal.

‘At this point, there is activity on all fronts’, says project manager Stan Aarts (pictured). ‘We are producing 1,800 m³ of concrete every day as we’re placing wall blocks and beams on the quay, and at the same time we’re driving piles, finishing road works and installing coping beam furniture.’

There are more milestones down the road for the project team, and plenty of challenges. But Aarts and his crew are confident that they are up for the task.

Beach clean up

Despite long working days at the Al-Dabbiya oil field in Abu Dhabi, BAM site personnel was still able to make time for a clean-up of their local beach. Unlike their other CSR initiatives, this one was about not leaving behind something more. Thanks to their joint effort, the beach was spic-and-span in no time and the team could get back to realising their civil marine works.
Synergy

BAM scores with sustainable tunnel

In 2020, The Hague will have the most sustainable tunnel in the Netherlands. Solar panels will provide some of the power needed and particulate matter will be caught at the tunnel mouths, which carefully blend in with the surroundings. And, who knows, maybe the interior of the Victory Boogie Woogie Tunnel, named after the famous painting, may get a Mondriaan-style twist.

BAM Infra and Wayss & Freytag Ingenieurbau were awarded the contract for the Rotterdamsebaan – a new link road between the A4/A13 and The Hague’s Centre Ring Road with a contract value of €300 million – mainly because of their high MEAT score (most economically advantageous tender). ‘We found the right balance between technology, disturbance limitation and sustainability’, says Martijn Smitt, director of BAM Infra Multidisciplinary Projects. The boring of the first tunnel tube is expected to start just before Christmas 2017. Smitt: ‘In 2016, it’s going to be mainly about the design process; we’re really going to take our time on this.’

The Rotterdamsebaan is about four kilometres long, of which 1,800 metres is underground, and consists of two double carriageways. The bored tunnel has two tubes, each with an internal diameter of ten metres.

Northern Line in Antwerp begins

This year, TramContractors will start work on the Northern Line in Antwerp, Belgium. The TramContractors Joint Venture, comprising BAM PPP, PGGM, BAM Contractors, BAM Track, BAM Maintenance and Cofely Fabricom, secured the contract for the design, building, financing and maintenance (DBFM) of the new €200 million tramline at the end of last year. ‘You don’t reel in a DBFM contract because you’re the best, you get it because you’re the right choice. It’s all about keeping a balance between innovation and reliability, between quality and costs, and between the short and the long term’, says Dieter Van Hassel, director of business development at BAM PPP Belgium. ‘You can only win if partners manage to arrive at an integrated tender, based on transparency and trust.’

The Northern Line, which will be laid in phases, connects the various districts to the north of the city with the centre.
Innovation

First step in 3D printing

The 3D printed bench made of sandstone in the shape of the Landscape House is finished. The object was recently unveiled in front of a BAM office in Amsterdam. ‘This bench represents the first step on the road to the 3D printing of the Landscape House itself’, explains Chris Jonker, developer at BAM Bouw en Techniek. ‘The bench was made in Italy. We want to find out how the material stands up to wind and weather.

The next step is to print a curve of the Landscape House that will include glass and steel. This model will be on a scale of one to two. The 3D printer will be brought from Italy to the Netherlands for this.’ Architect Janjaap Ruijssenaars designed the Landscape House as a building with no beginning or end. It will house temporary museum exhibitions at a yet to be determined location in Amsterdam.

Wonderful Harbour House

In the Port of Antwerp, Interbuild – BAM’s non-residential building company in Belgium – is making steady progress with the construction of the Harbour House. British architect, Zaha Hadid, designed a building for the new offices of the Port Authority that rises above the former – fully renovated – fire brigade barracks. Completion is expected in mid-2016.
‘New BIM standard is a pro not a con’

BAM Construct UK is one of the first British building companies to meet the new BIM standard. This directive (PAS 1192-2:2013) includes regulations for the information management of building projects in which building information modelling is applied. The standard regulates how parties must work together when using BIM. As an example, it regulates how and where information, like digital files, are stored and exchanged.

From 2016 onwards, companies must meet the new standard for all construction projects undertaken for the British government.

Colin Pryor, business systems and quality manager, is very delighted to have received verification to PAS 1192-2 by British Standard Institution: ‘This verification will provide assurance to those within our supply chain that we are capable of delivering projects using BIM.’

His colleague Mark Taylor, digital construction manager: ‘We now need to work towards defining our operational requirements for information management, aligning our other business processes, developing internal education modules and evaluating and developing the skills of our supply chain. Over the coming year we will need the support of the whole business.’

Colin Pryor after receiving the BIM certificate from BSI.

In Dundalk, on the east coast of Ireland, the new building for St Mary’s College is starting to take shape. As part of Schools Bundle 4 – a public-private sector collaboration project that BAM PPP secured – BAM Contractors Ltd is building four schools in Cork, Clare, Dundalk and Tipperary for a total of 3,000 pupils. The school in Dundalk will accommodate 900 pupils. All schools will be completed this summer. BAM will then manage and maintain the schools for a 25 year period.

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Four in a row
Hull City Council announced in December 2015 that BAM Construction will build a new, state-of-the-art music, events and conference centre in the city. BAM Construction won because it demonstrated that it offered the best value in terms of quality and price and because of experience in delivering projects such as the First Direct Arena in Leeds and One Angel Square in Manchester. The project team has already got down to work on the preconstruction activity. The City Council believes that the new arena will inject £13.5 million into Hull’s economy annually, delivering 30 full-time jobs with 100-150 temporary jobs on event days.

The centre will include a 3,500 capacity concert auditorium, with the flexibility to reduce to a 2,500 all-seated event and a 2,000 m² exhibition space, plus an 800 capacity conference auditorium.

Construction director Jason Pink, who is leading the project, says: ‘As we showed with Leeds Arena, BAM can leverage its world-leading expertise in stadiums, and its market-leading use of building information modelling. But in the end, it also comes down to our people and our attitude. We are delighted to be working with Hull on a project that is so important to the City.’

BAM to build another UK Arena
**Courts Bundle PPP Project**

The National Development Finance Agency (NDFA) and BAM PPP PGGM Infrastructure Coöperatie U.A have reached financial close on the Courts Bundle PPP Project in Ireland. The contract value is approximately €135 million. Construction activities will be carried out by BAM Building. Completion is expected in 2017. BAM FM Ireland will be responsible for facilities management during a 25 year concession period.

**Munich Motorway**

Wayss & Freytag Ingenieurbau – in joint venture – is to build a new 33 kilometre highway east of Munich. The project comprises the construction of four major bridges and overpasses. The missing link in the A94 will be completed in October 2019. The PPP-contract, in which BAM PPP is involved, also includes the maintenance and operation of another 77 kilometre long motorway section of the A94 over a 30 years project period. The total project value is around €1.1 billion.

**N25 New Ross Bypass**

The National Roads Authority and a BAM PPP PGGM Iridium consortium have reached financial close on the N25 New Ross Bypass PPP scheme in Ireland. The €230 million project involves the design, financing, operation and maintenance of approximately 13.6 kilometres of new dual carriageway (N25 and N30 routes) and 1.2 kilometre of new/upgraded single carriageway (New Ross N30) route and various structures.

**Tata Technologies in Warwick**

Tata Technologies has appointed BAM Construction to develop its £20 million European headquarters in Leamington Spa, Warwick. BAM already started work on site to create the 63,000 m² office building that will house around 600 staff focused on emerging vehicle technologies.

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**Student housing Zurich**

BAM Swiss is constructing three buildings to house 490 students on the Hönggerberg campus of the Swiss Federal Institute of Technology in Zurich. The buildings include studio apartments for individuals and residential communities with six to ten rooms. The complex has been designed according to the Swiss sustainability standard, Minergie-P-ECO, aiming for energy efficient and healthy living. The turnkey delivery of the project, with a contract value of €46 million, will take place in August 2016.

**Xblocs for Calais Port**

BAM Infraconsult, under its trade name Delta Marine Consultants, has signed a license agreement with Bouygues for the use of Xbloks on the expansion of the Calais Port, France. With these armour units of 4, 6, 10, 12 and 14 m³, the project comprises of the largest Xbloc sizes applied so far. The innovative blocks with a high hydraulic stability are needed to protect the new breakwater which will be built in a very exposed environment with extreme tidal currents and wave conditions. The largest blocks have a height of 3.5 metres and weigh 33 tons each.