



Richard Ogden,
Chairman

For Buildoffsite, the New Year has got off to a very busy start and I suspect that is how things will continue.

It is great news that the economy continues to improve although unfortunately the construction industry has been underperforming the rest of UK PLC. That said, an improving performance across the rest of the economy inevitably means that at some point additional investment in buildings and infrastructure will drive growth within our industry. At a time when the recovery is still fragile the challenge that construction clients and the supply side need to take on is how the industry can deliver much better value for the investment that is available. The challenge is a simple one – at the core what we are talking about is the identification and elimination of waste. Waste in all its forms – product, process, productivity, materials, cost in use, capital and a particular hobby-horse – the destructive effect of waste on lost opportunity. I really hope that economic recovery is not taken as an excuse by both clients and suppliers as reason enough to conclude that everything is just fine and that we are safe to continue with traditional methods and traditional low levels of project productivity and value.

The other issue that has dominated the news is, of course, the appalling weather and the flooding that has been so destructive across much of the country. It is patently obvious that as a nation we have taken our eye off the ball when it comes to protecting our assets and communities. Certainly there will



be political consequences and no doubt a few heads will roll. However, that will provide no comfort for those individuals and business affected. Inevitably and unfortunately long after the horse has bolted there will need to be a massive programme of spending to put the required infrastructure in place. This needs to be done quickly and I am sure that the offsite industry can play a major role in the rapid delivery of quality cost effective solutions. More generally I can't help but think that traditional construction sites must have had a really tough time during the bad weather. An argument surely for the widespread take up of rapid assembly techniques on site based on quality offsite solutions.

This focus on infrastructure brings me on to the most significant event for Buildoffsite so far this year. On 22 January at the Institution of Civil Engineers Buildoffsite, in collaboration with our good friends at Mott MacDonald, delivered a major conference that looked at innovative developments in infrastructure and explored the increasing role of offsite solutions.

The title for our event was *A survival guide for the global construction market*. Yes, I appreciate that this may sound a bit grandiose, but I believe that it reflects current commercial realities and priorities. The messages that we promoted were simple – the UK construction industry is not and cannot be isolated from what is going on in the rest of the world. If the UK industry is to survive (and thrive) it cannot

afford to stand still. We need to improve the way in which we work and most certainly we need to improve the quality and value of what we produce. This means that the skills that we can bring to bear must also be enhanced. I look back only as far as the 1970s and 1980s to see what happened to large lumps of UK manufacturing that failed to invest and failed to innovate ahead of the competition. I don't want to be viewed as a Cassandra but frankly there is no good reason to believe that the construction industry is through some special chemistry immune from either substantially increased competition from the developing world in overseas markets or indeed immune in our home market. Globalisation is a hard edged business reality that we choose to ignore at our commercial peril.

During the course of a few hours our conference received some compelling updates on innovative action on offsite solutions from water and power utilities and an update on the iconic Cheese grater project at 122 Leadenhall Street. Our event also took stock of examples of innovative construction taking place in the UK and across the rest of the world, as well as an overview of how the Swiss are driving innovation in their railway construction. Finally we were taken on a brief journey into the future with presentations that considered the potential impact of Big Data on the functionality and utilisation of built assets and a presentation on the opportunities that developments in material technologies and in engineering might open up.

This was a broadly based programme but it reflected our ambition to have regard to some of the current stock of ground-breaking projects and programmes that are making increased use of offsite solutions, to look at what is happening internationally because that is where the competition will come from and also a look to the future to consider the fresh opportunities and challenges that may not be that far away. The simple message embedded here is that innovation is and will continue to take place and if the UK construction industry is to thrive we need to be in the vanguard of change.

The Conference was very well attended and I believe well regarded by those present. I am particularly grateful to Derek Fryer and Mark Enzer of Mott MacDonald and their team who worked with Buildoffsite to plan and deliver the event. I am also grateful to our host Geoff French, the President of the Institution and to Keith Howells, the Chairman of Mott MacDonald for their excellent contributions.

One aspect of globalisation that is starting to impact positively on Buildoffsite is the steady increase in Members from around the world. Currently we have Members from Mexico, New Zealand, Australia, Russia and India. This international interest is matched by the enthusiasm to progress 'Chapters' of Buildoffsite around the world which I believe will in turn help open up opportunities for international trade throughout the Buildoffsite Community. Buildoffsite Australasia will launch in the spring and following a recent trip to India I believe that during 2014 we shall also see the launch of Buildoffsite India. My visit brought home to me the sheer scale of the infrastructure challenge that India faces and a widespread determination that the intelligent use of offsite construction will play a major part in meeting that challenge. It was great to meet with so many enthusiastic people who want to be part of a new industry – an offsite industry. In discussing their plans for establishing Buildoffsite India the term "a coalition of the willing" was used – I think this sums things up perfectly.

Finally, as I think you know, during 2014 Buildoffsite is going to work hard at driving the offsite agenda within the UK house-building sector. We believe that the time is right to make the case for the rapid take up of offsite solutions in a market where there is a substantial need for more homes to be built quickly and to a very high quality. The increased use of offsite construction along with BOPAS certification is likely to be highly attractive to the increasingly important private rented sector. To engage effectively in this market we need to recruit additional housing businesses into membership. This requires sustained

contacts and communications and I am delighted that Brian Horton has joined Buildoffsite on a part time basis to major on making those all-important contacts with the housing sector. A note on Brian and his role is contained later in this newsletter.

News

Endorsement for offsite housing from the HCA



The Homes and Communities Agency (HCA) in its recently published prospectus for the Affordable Homes programme sets out a clear endorsement of the role of offsite construction methods in delivering new housing. The programme sets out the criteria for grant funding to build new affordable homes outside of London during the period 2015–2018.

The prospectus outlines that bidders will be expected to demonstrate value for money and drive down costs through innovative construction techniques such as offsite manufacture, system building and use of new technology and smarter use of procurement.

Referring to the *Offsite Housing Review* published in February last year and written by Professor Nick Whitehouse and Professor John Miles – both Members of the Buildoffsite Executive Group. The prospectus states:



"The Review concluded that offsite construction offers a route to delivering homes built to higher sustainability standards, as well as other potential advantages including build quality and

speed of delivery, both of which are of key importance for affordable housing. The HCA welcomes providers looking to realise the benefits of offsite manufacture."

Offsite manufacture is described in the Annex to the prospectus:

"Offsite manufacture aims to add value through factory manufacture and assembly. The objective is to deliver to the construction site elements that are to an advanced state of completion thus reducing site activity. Potential benefits might include:

- *reduction of construction time can be achieved as buildings, or elements thereof, are manufactured concurrently with site preparation*
- *the amount of site disruption is decreased as less work is performed on site*
- *as most of the work is performed in the factory, manufacturing efficiencies can be gained and materials purchased in larger quantities*
- *it can avoid issues of skills shortages such as brick and block laying*
- *it can lead to improvements in on site health and safety, and*
- *it can provide improved energy performance."*

The deadline for the submission of bids to the HCA is 30 April 2014, and bidders will be expected to meet the HCA's Governance and Viability Standard if they wish to receive grant funding and also provide assurances that the properties will be delivered on time and on budget. Other organisations such as local authorities and private house builders are also entitled to apply for grant funding in limited circumstances and all bidders who intend to become the landlord of completed properties must be Registered Providers.

The reference to the need for properties to be delivered on time and on budget also plays to the advantage of using offsite solutions that allow for parallel working, the simplification of the critical path, just in time delivery, assured levels of right first time quality and fast build on site.

For more information go to:

https://www.homesandcommunities.co.uk/sites/default/files/our-work/ahp_2015-18.pdf

Buildoffsite appoints housing specialist

Buildoffsite has appointed housing specialist Brian Horton to help develop and promote Buildoffsite to the housing sector. In particular, Brian is working with us to:



Brian Horton

- create a positive view of offsite solutions in the private and social sectors and among developers, the emerging investment market, mortgage lenders and buildings insurers
- present Buildoffsite to the wider housing market and establish our credentials in leading, supporting and driving the sector through 'one voice one vision'
- recruit additional Members from within the wider housing community.

Brian has 25 years' professional experience in the Housing sector and since 2009 has worked as Strategic Housing Advisor at Kent County Council (KCC) working with the 14 local authorities in Kent to develop and implement the Kent & Medway Housing Strategy.

Prior to joining KCC, Brian worked with AmicusHorizon Housing as Chief Executive of Swale Housing Association. Brian is a Board Member at West Kent Housing, Co-opted Member Kent Housing

Group Executive Board, member of AmicusHorizon's East Kent Area Panel and member of the Kent Housing Group Executive Board.

Buildoffsite Review 2014–2015

The Buildoffsite Review will be published shortly, with copies distributed to all Members.



The Review is in three parts. Firstly, it provides an overview of the main components of our work programme, and those activities that are being taken forward in support of Members' interests and the increased use of offsite solutions in all sectors of the construction industry. There is a lot going on and the crafting of the Review provides an opportunity for us to pull the main streams of activity together in one document.

The second part provides a set of case studies provided by the Members on a wide range of building and civil engineering projects which have benefitted from the extensive use of offsite solutions. In each case, we have identified the particular benefits that have been delivered. These case studies demonstrate the solid business and project reasons why clients and constructors should seriously consider what offsite solutions might offer in terms of reduced construction time and cost, and enhanced right first time quality, alongside a raft of sustainability benefits.

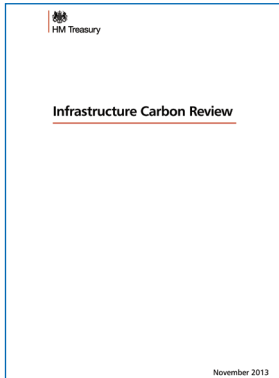
The third part is the Member Directory, which lists the current Membership, and their contact details and commercial interests.

The review provides a great reference point for Buildoffsite activities and for our growing Membership. We hope that Members will find it a useful tool in promoting the range of offsite solutions to their current and future customers, and to commercial collaborators.

For more information go to:

www.buildoffsite.com/downloads_publications.htm

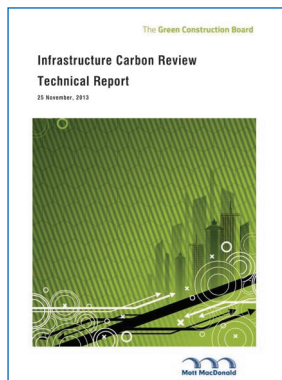
Infrastructure Carbon Review published



The Infrastructure Carbon Review (ICR) has established the project and commercial case for positive action to reduce carbon. The increased use of offsite construction methods can make a significant

contribution to this ambition.

The Review was undertaken by the Infrastructure Working Group on behalf of the Green Construction Board. Conceived as a sister document to the Infrastructure Cost Review, it was published by HM Treasury in November 2013. The Review is supported by a separate Technical Report. Mark Enzer of Buildoffsite Member Mott Macdonald was lead author.



The goal of the ICR is to release the value of lower carbon solutions across UK infrastructure, and to be a catalyst for change as the industry begins to address the low-carbon aspirations set out in the Government's Construction Industry Strategy.

The ICR is aimed at leaders working throughout the industry's value chain, because these are the people who can create the imperative and environment for change.

Launch and reception

The Infrastructure Carbon Review was launched on 25 November at the Treasury, where a statement of endorsement was signed by Commercial Secretary to the Treasury Lord Deighton, Business and Energy Minister Michael Fallon and Anglian Water Director and Infrastructure Working Group Chair Chris Newsome. The statement was also signed by the majority of the industry organisations present.

As part of the launch, 25 industry leaders from throughout the value chain – including clients, consultants, contractors and industry associations – not only signed the statement of endorsement, but they also made commitments detailing how their organisations will take practical action on the report's recommendations. These 25 organisations will report their progress in spring 2014. The senior industry figures present showed real commitment to taking this agenda forward.

Key message

The overall message of the Infrastructure Carbon Review is very simple:

"Reduce carbon, reduce cost"

The ICR makes it clear that reducing carbon in the construction, operation and maintenance of infrastructure makes good business sense, irrespective of one's position on climate change. This result is partly because carbon can be seen as a proxy for resource and energy efficiency, but it is also because pursuing a lower carbon agenda is shown to stimulate innovation and drive better solutions.

It was found that leading clients and their supply chains have already achieved reductions in capital carbon of up to 39 per cent and 34 per cent in operational carbon. These carbon reductions have been achieved in association with average capital expenditure reductions of 22 per cent.

Key recommendations

The Review offers recommendations for individual organisations and their supply chains, but it also makes broader recommendations to effect wider change.

The ICR presents the ‘carbon maturity matrix’, which enables individual organisations to locate their current position on the carbon journey and to define what their next steps should be. The maturity matrix incorporates 16 key enablers for implementing carbon reduction under the following headings:

- **effective leadership:** provide highest level sponsorship of carbon reduction and set out a vision of how your organisation should address it; provide clear and consistent policy
- **communication and culture:** make carbon reduction part of your organisation’s DNA. Articulate carbon reduction as a core organisational value; change behaviours, share best practice and develop carbon skills
- **metrics and governance:** make your carbon visible and set targets to reduce it against a clear baseline. Report transparently on progress; build carbon into decision making
- **innovation and standards:** unleash new thinking by challenging your supply chain to reduce carbon. Define outcomes and allow creative freedom in meeting them. Enable standards and specifications to be challenged
- **commercial solutions:** embed carbon reduction into your procurement process. Make carbon reduction a prerequisite for winning work. Integrate your supply chain and align it with your carbon objectives. Share carbon-related risk and reward equitably and incentivise outperformance of your targets. Create the environment in which innovation can thrive.

The Infrastructure Carbon Review and accompanying Technical Report are free to download from: www.cic.org.uk/publications

Brock Carmichael attend Prime Minister’s visit to China

Brock Carmichael Architects
member of the **octagon** partnership
liverpool | london | hong kong | beijing | chengdu

During December 2013, Prime Minister David Cameron paid a three day official visit to China and the accompanying high-level trade delegation included Liverpool firm Brock Carmichael Architects.



Michael Cosser

Michael Cosser, Partner, Brock Carmichael Architects, said: “Liverpool is twinned with Shanghai and to visit the city with a business delegation led by David Cameron was very special. Brock Carmichael Architects will promote the International Festival for Business taking place in Liverpool in June and July 2014, and inward investment opportunities such as Liverpool Waters.”

“In December, we announced that Brock Carmichael Architects had been invited by The Chinese University of Hong Kong (CUHK) to be a course advisor and guest lecturer for their new Master of Social Science in Housing Studies programme, starting in September 2014. The course is targeted at providing training for the Chinese government’s housing officials. It is being launched by the Centre of Housing Innovations and sponsored by China’s Ministry of Construction. Housing directly impacts family life and raises social issues. Developing sustainable housing is a key issue for the Government in China and other rapidly urbanising economies. The scale of China’s urbanisation is equivalent to building a new city the size of Plymouth every week for the next 18 years! By 2020, China will account for 55 per cent of global construction value. We anticipate an increasing emphasis on the social infrastructure sector. Projects such as education, housing, community



and healthcare will become an important growth area. Brock Carmichael Architects' expertise in these areas will be of real value to the Chinese."

Alfred Yeung, Brock Carmichael Architects' resident Partner in the Hong Kong office and Adjunct Associate Professor of the Chinese University of Hong Kong, has been arranging annual exchange workshops for postgraduate studies for the School of Architecture at the University of Liverpool since 2010. This announcement completes a two-way exchange of knowledge between the two nations and universities.

Having entered the Chinese market after supporting the City of Liverpool at the Shanghai World Expo in 2010, Brock Carmichael has had a local presence in Hong Kong ever since. It collaborates with Oval Partnership, an architectural practice in London with whom they have established a Joint Venture brand called the Octagon Partnership. Both practices can share locations, skills and knowledge and bid for larger projects, promoting and delivering sustainable development from offices in London, Liverpool, Hong Kong, Beijing and Chengdu.

He added; "Our joint venture partner Oval Partnership has been responsible for the master-planning of the Daci Temple Project (Taikoo Li)." The Daci Temple Cultural and Commercial Complex in Chengdu is the second joint-venture development by Sino-Ocean Land and Swire Properties. The mixed-use complex comprises Sino-Ocean Taikoo Li Chengdu – an open-plan, lane-driven mall covering approximately 1,140,000 sq ft (approximately 100,000

sqm), The Temple House – a 100-room urban hotel and 42 serviced apartments managed by Swire Hotels and the Pinnacle One tower with premium office accommodation for multinational and local companies. This is scheduled for completion during 2014.

In 2010 Brock Carmichael Architects, with the Oval Partnership, were placed second in an international design competition for a cultural resort at Shilin Stone Forest in Yunnan Province, Shilin.

In 2012 Brock Carmichael and Oval working under the Octagon JV won an international design competition for Ocean One, a 52 acre waterfront development in Tianjin. Brock Carmichael led the design for this development comprising new marina, villas and apartments.



Brock Carmichael also assisted Oval in the design of key mixed use and residential towers forming part of the 1million sqm Wuli regeneration project in Kunming and the Hong Kong University Auditorium project. Brock Carmichael's local presence and project management skills have been needed for the refurbishment of the YWCA Kowloon Centre Rehabilitation Project. Technical skills have also been employed for sound attenuation and barrier works for the Hong Kong Mass Transit Railway (MTR) railway ancillary facilities.

Cosser continued: "Developing sustainable urban areas is a key issue for the government in China and other rapidly urbanising economies. Although China's growth is slowing its quality and impact on the world economy will continue to rise. China is urbanising at 10 times the speed



of the UK and at 100 times the scale and there has been more investment from China into the UK in the last 18 months than in the previous 30 years. Brock Carmichael Architects will be able to continue to promote exports, knowledge transfer and inward investment. There is the International Festival for Business, the new Barclays supported Liverpool Chamber of Commerce international trade lounge and we will continue to recommend opportunities for inward investment such as HS2, Airport City in Manchester and Liverpool Waters.”



Brock Carmichael Architects celebrates 40 years in business in 2014. As the firm enters its fifth decade, with an international business strategy, it plans to mark the occasion with celebrations in Liverpool and Hong Kong.

For more information, contact:

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Accio Group creates temporary store for Sainsbury's



The Accio Group has created a 1100sqm temporary 'demountable' food store for Sainsbury's Nine Elms site in London, built in modular component form in Cambridgeshire using offsite construction techniques. Working in partnership with the Store Development Team at Sainsbury's Supermarkets Ltd, Accio embraced visionary store design solutions and innovative offsite processes to create a fully assembled store in just 13 days. The offsite design and build programme involved the preconfigured assembly of 30 steel frame 3D volumetric modules, taken through to an agreed interior specification with all cabling, air conditioning cassettes and interior finishes signed off by the client.



Accio's fully demountable store structure comprised individual 'units' that were transported to London in carefully routed night-time convoys. Each unit was placed directly onto a unique Leg Foundation System, with the leg plates sitting directly on the existing car park surface. No foundation digging was required and the units were set to precise heights to level off the effect of the sloping car park. This process alone saved an estimated four weeks of groundwork time and heavy machinery disruption, meaning less site



traffic, less impact on residents and the fastest route to creating a fully trading store, when compared to conventional build.

The existing Sainsbury's Nine Elms store is being demolished to make way for a substantial new mixed-use development, comprising retail and residential build and a new tube station for Battersea Park which will have an entry point within the prestigious new complex. To maximise sustainability, the Nine Elms demountable store has been configured in such a way that it can be reused for further convenience stores due for installation in 2015. By future-proofing the project at the outset, Accio have demonstrated how demountable retail structures can be both temporary and reusable.

Accio Group's Managing Director Stephen Casey said: "This is a significant project, requiring detailed design planning, robust project management and a close working relationship with all contract partners, stakeholders and the client. The scale and complexity of this undertaking reinforces our reputation as the leading provider of demountable, modular built retail structures



in the UK. We are delighted to be able to demonstrate our skills and expertise with our long term client Sainsbury's, where we have been a trusted, named supplier since 2009." Richard Rust, Head of Programme, Construction & Delivery at Sainsbury's, said: "We're delighted with the new temporary store, as it will allow our customers to continue to shop at Sainsbury's throughout the construction period for our new superstore."

For more information on the Accio Group contact Stephen Casey, Managing Director, on:

Tel: **01487 773905**

Website: **www.acciogroup.com**

NG Bailey's first order for water sampling kiosks



NG Bailey

NG Bailey has received its first order for offsite manufactured water sampling kiosks from Anglian Water. Traditionally, the individual design and onsite construction of water sampling kiosks – the facility from which water companies take samples of reservoir water for pollutant testing – has been costly and time-consuming.

Anglian Water asked NG Bailey to develop an offsite solution using technologies and materials that would reduce its embodied and operational carbon footprint. In response, NG Bailey developed solar-powered sampling booths, which are fully pre-fabricated at the company's offsite facility in Bradford – making the construction process quicker, easier and cheaper, offering tangible benefits to customers. The kiosks can be delivered and operational in just one day. NG Bailey worked with Anglian Water to create an initial prototype of the product and delivered it to site, so it could be tested by the people who carry out the regulatory water sample testing. Feedback was then gathered and the design modified to



create a standard product for Anglian Water that met its exact needs.

The company has also developed a unique foundation solution that negates the need for a standard concrete foundation. Instead the base can be

installed directly into an excavation, then backfilled. Once the base is in place, the booth can be quickly bolted on top of it.

Paul Jackson, Sector Director for Water at NG Bailey, said: "Our water sampling kiosks are revolutionary and I am thrilled that we have received our first order; our commitment to innovate standard products that meet the needs



of the water industry has paid off. The construction of a prototype allowed the Anglian employees who actually carry out the water sampling process to comment and suggest really useful improvements. Our ability to combine solar technology with modern battery technology and standard control systems has provided an off-the-shelf product, available to all clients. This is the first of a number of cost-saving products that we will be working on over the coming months and we are now working to roll out these solutions to other water companies." Chris Peel, asset standards project manager at Anglian Water, added: "We're very pleased with the new sampling kiosk, which has significantly reduced the onsite construction time.

The inclusion of solar technology will also reduce the operational costs and carbon in the future."

For more information contact Paul Jackson, Sales Director, on:

Tel: **07980 996979**

Email: **paul.jackson@ngbailey.co.uk**

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Case studies

Premier Interlink complete innovative construction scheme



The scheme consists of a new Primary School Campus for 4 to 11 year olds, developed as a second site for Roundhay School

to extend their overall age range from 18 years down to 4. This former school site on Wetherby Road lies within the Green Belt and also falls within the Roundhay Conservation Area. A key feature of the site is the difference in levels across the site, which slopes up from Wetherby Road.

The new building provides 14 classrooms, one large hall, one small hall, a learning resource centre, design and technology space, group rooms, office and staff areas, storage, toilets and kitchen and plant areas.



The school is planned over two storeys with an approximate 7.5 m to the eaves and 9 m to the ridge. The double height volume is repeated in the main hall space.

The 106 steel-framed modules used for the project were manufactured and fitted out off-site at Premier Interlink's modern manufacturing facilities in East Yorkshire.



The modules were then delivered by road, craned into position and assembled on the pre-prepared site for final fitting out. This modular method of construction has provided the highest quality, energy efficient educational facilities in the fastest possible time with minimal site disruption for the pupils, staff and visitors.

The end result altered the age range of the school, making Roundhay School one of Leeds City Council's first two form entry schools, providing education for a child from the start to the end of their school career.

- floor area: 1453 m²
- project value: £5.95m
- factory programme: 10 weeks, site programme: 37 weeks, overall programme: 57 weeks
- completed: July 2013.

For more information:

Tel: **0800 316 0888**

Email: **sales@waco.co.uk**

Website: **www.waco.co.uk/**

**Student accommodation,
University of Essex, Colchester,
Stewart Milne Timber Systems**



In November 2012, Stewart Milne Timber Systems began work on a new £65m

student accommodation project for the University of Essex at its Colchester campus.

Designed to BREEAM Excellent standard by Lewis Hickey Architects, the site comprises of 228 bedrooms across 19 four-storey townhouses.

Stewart Milne Timber Systems was selected for the timber frame contract, which is part of a wider project known as 'The Meadows', part of the University's Knowledge Gateway site.



Keen for high-quality, simple and fast to build, energy efficient and cost effective student accommodation, the university placed an emphasis on using innovative building materials and systems.

Timber was a natural fit for this as the lowest carbon embodied commercially available build system around. Timber can reduce the embodied carbon dioxide of a building by up to six times compared to other materials.

By adopting a fabric first approach over the course of the build programme, Stewart Milne Timber Systems supplied and erected Sigma® II pre-insulated closed panel build system which achieved a U-Value of just 0.23 W/m²K, representing a low level of heat loss and maximising energy efficiency. Additionally, the project achieved Y-Values between 0.05 and 0.06 as well as an air tightness of three.

For student accommodation projects, speed of build is an important factor, and it was crucial to the university that



the accommodation was built in time for students arriving for the new academic year. Stewart Milne Timber Systems delivered 19 four-storey units in only 11 weeks, significantly quicker than projects delivered with concrete or steel frame systems.

The timber frame was erected using a mobile crane, with prefabricated bathroom pods pre-assembled floor cassettes simultaneously loaded into place which helped maximise productivity and kept waste to a minimum. In addition, Stewart Milne Timber Systems manufactured, supplied and fitted fire retardant, class O treated stair flights as the building was erected.

With tight budgets a perennial feature of the higher education landscape, it's important to be able to demonstrate that you can deliver excellent energy efficiency and sustainability credentials without impacting on the cost of projects. Stewart Milne Timber Systems' work with the University of Essex demonstrates well that by adopting the Sigma® II Build System, and by taking a fabric first approach, it's possible to have one without impacting on the other.

New members

Costain



The Costain Group has a focused strategy of targeting billions of pounds of infrastructure investment and meeting customers'

needs. The management team has repositioned the Company as a Tier One engineering solutions provider aligned with blue chip customers.

Services include consultancy, construction and care to give breadth and scale to the business.



Colin Reynell

Costain has a blue chip customer base and 90 per cent of the revenue represents repeat business and innovation is at the heart of the business and enables us to provide the solutions demanded by our customers.

Our growth strategy includes making strategic acquisitions.

Costain cares about all stakeholders and responsibility is at the core of the business.

For more information contact Colin Reynell, Programme Director, on:

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Elliott Group



An **ALGECO SCOTSMAN** Company

Elliott was established over 50 years ago and is the UK subsidiary of Algeco Scotsman, which operates in 37 countries with revenues in excess of €1.5 billion.

Elliott prides itself on delivering a flexible and highly bespoke service based upon an extremely robust and well-proven formula for a range of off-site and modular projects.

Elliott Off-Site Solutions are a specialist off site design and build contractor of high quality permanent buildings, operating throughout the UK, providing permanent, semi-permanent and temporary

accommodation solutions to a wide range of sectors including commercial, education, health, retail and nuclear. This incorporates new build, refurbishment, remodelling and fit-out work providing high standards of quality, health and safety and environmental performance.

The company's experience includes a diverse range of construction projects across all sectors of industry.

Elliott is able to provide turnkey or sub-contract packages that can include taking projects through the design and construction processes through to handover utilising a range of off-site and high quality modular building systems that encompass all forms of innovative engineering solutions.

Using this modern method of construction we are able to provide tangible benefits including:

- reduced overall build programme
- high quality
- flexible and bespoke design
- efficient and adaptable space use
- energy efficiency
- increased speed of construction
- sustainable materials use
- waste reduction
- achieving carbon reduction.

For more information contact Rob Francis on:

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Enemetric



Enemetric offers volumetric construction with the very latest in modular building and a modern method of construction (MMC) techniques.

From a client's conceptual design, through planning, feasibility and complete construction delivery and handover, Enemetric offer a 21st century approach to construction. It is our intention to continue to utilise the most advanced materials and processes to remain at the forefront of the industry. Our patented technology guarantees sustainable and efficient construction. Whatever the project, Enemetric can deliver the maximum benefits, in terms of safety, quality, value, build time and environmental savings.

We are passionate about all of our clients – whether individuals, businesses, social housing providers or local authorities we provide a long standing commitment to supplying the best possible service to our clients. Our clients span across the domestic and public sectors as well as all major groups of the commercial market.

Enemetric have an established reputation for excellent product commercialisation, with certification and research forming the backbone of its development strategy. Leading the way in product certification provides an absolute reassurance that your building will conform to recognised British and European standards.

Ferrovial

ferrovial

agroman

Ferrovial Agroman is the construction subsidiary of Ferrovial, the world's leading

investor in transport infrastructure.

The company manages major, complex, multi-disciplinary design and construction projects in international markets, in sectors including rail, highways, tunnels,



Ignacio Clapes

www.buildoffsite.com



ports and marine, airports and energy. The company's flagship projects in the UK and Ireland include the Crossrail C300/410 Western Running Tunnels and Station Caverns, Crossrail C435 Farringdon Station, Heathrow's new Terminal T2A and the M8, M73, M74 Motorway Improvement project in Scotland. In Ireland, the first trans-border motorway in the A1-N1 corridor, the M3 motorway Clonee Kells, the A8 Belfast to Larne dual carriageway and the DBFO2 in Northern Ireland.



Ferrovial offers a complete end to end project capability and innovative approach that is delivered through value engineering. The various company divisions can lead a complete project lifecycle, including design, construction, financing, operation, maintenance and eventual decommissioning of all types of major infrastructure assets. Ferrovial are able efficiently manage each of these stages on every project, ensuring the delivery of a fully optimised and best value solution for the client.



Ferrovial Agroman in figures:

- 4,600 km of conventional railways
- 350 km of high speed railway
- 470 km of tunnels
- 3,890 km of toll highways
- 15,100 km of roads
- 27,170 km of roads maintained and repaired
- 4,060 km of canals
- 6,170 km of water pipelines
- 3,800 km of gas/oil pipelines
- 29 hydroelectric power plants
- 32 km of docks and port infrastructure
- 40 airports
- 20 stadiums
- 138 hospitals
- 110 hotels
- 147 dams.

Modulex



Modulex Modular Buildings Plc is a global franchisor of steel modular buildings technology with a special focus on emerging markets. The company is led by a senior management team from the UK modular industry with more than 90 years of cumulative experience.

Specialising in volumetric, full fit out cold rolled steel frame technology, Modulex is capable of producing permanent buildings based on high quality, high speed, fixed cost and fixed time guarantees using the same materials used in traditional construction and at the same cost as traditional construction.



Suchit Punnose

We are setting up India's first steel modular buildings factory and currently seeking franchisees in other emerging markets.

Roan Building Systems



Roan Building Systems is one of the UK and Ireland's leading modular building companies and manufacturers of portable cabins. Throughout our 30 year history, Roan Building Systems and RoanKabin have developed special planning and construction expertise in the education, health, construction, sports/leisure and general corporate sector.

We design and develop buildings from the simplest of ideas by liaising directly with a client or architect to meet their specific needs. Each turn-key solution is managed from planning permission, fire certification, design/engineering and off-site manufacture in our own modern manufacturing facilities. Buildings are then transported by us to site, where they are constructed by our suitably qualified site teams.

Our site in Leeds is home to our UK head office, featuring our own state of the art Modular Office Building, and is a mirror of our manufacturing facility in Ireland, which

is equipped with the latest production machinery including automatic press, gantry cranes, CAD facilities, and weld/fabrication shop. All our buildings are manufactured in this controlled environment to precise standards which are checked meticulously by our quality control officers.

For more information contact Martin Green, Director of UK Operations, on:

Tel: **01924 207840**

Email: **mgreen@roanbuildings.co.uk**

Website: **roanbuildings.co.uk**

World Building Systems (Russia)

Limited Liability Company World Building Systems is a part of a construction holding, which includes:



- engineering company (design, construction supervision and commissioning of the residential buildings)
- construction company (construction of residential buildings)
- reinforced concrete structure production plant
- concrete plant
- aluminum profile window production plant
- facility for mining and processing of the construction materials (aggregates)
- managing company running and servicing the erected buildings of the total area of one million sqm.

Currently the holding is already executing two social projects on residential construction in the volumes of 50,000sqm and 200,000sqm. Planned time of commissioning is 2014–2015. In 2013 we built two hotels and a school, which currently belong to the holding.

Russia is currently facing a very serious problem related to the need for social and

residential buildings, such as schools, kindergartens, hospitals and economy class residential buildings. As a result, the management of the holding has created a team of professionals and a new entity (World Building Systems) in order to examine the world experience and implement the most modern world technologies related to the rapid construction of buildings with low cost and high quality.

For the last two years WBS has been examining the modern experiences in construction of countries in Europe and Asia (Germany, Switzerland, Sweden, Finland, the UK, UAE, China etc). The analysis of the existing technologies of construction revealed the high demand and social importance of the production of factory made modular buildings, which include multi-storey residential houses (nine storeys and higher), as well as kindergartens, schools and hospitals. The interest of our company in the use of this technology and its adaptation to suit the needs of the Russian market is very high. Implementation of such technology will reduce the cost of construction and maintain quality control at each stage of the production cycle. It will also show a valuable new approach to construction (low price, high quality and high speed of construction).

For more information contact Mr. Rais Khannanov, Director, on:

Tel: +7 (843) 278-24-61

Email: okb_wbs@mail.ru

Events

BOPAS Breakfast briefing

buildoffsite
Property Assurance Scheme

The breakfast briefing at Lloyd's Register EMEA in Coventry on 20 March 2014 is now fully booked. The details for the May breakfast briefing are as follows:

Date: 21 May 2014

Time: 08.30am–10.00am

Venue: Lloyd's Register EMEA, Hiramford, Middlemarch Office Village, Siskin Drive, Coventry CV3 4FJ

The Buildoffsite Property Assurance Scheme (BOPAS) has been developed by Lloyd's Register, Building LifePlans and Buildoffsite, The Royal Institute of Chartered Surveyors and in conjunction with the Council of Mortgage Lenders and the Building Societies Association, to provide third party endorsement to innovative forms of construction to provide assurance to developers that such accredited innovative, or non-traditional construction systems, will readily attract mortgage finance.

BOPAS certification is available to manufacturers and will provide confirmation that new homes built using innovative forms of construction will be sufficiently durable to support loans over a period of not less than 60 years. The BOPAS certification is increasingly demanded by Lenders as a recognised means to manage financial and construction risk and is likely to be of particular interest to private purchasers requiring a mortgage, institutional investors in new public and private sector housing developments, and client groups including RSLs and LAs.

This event will provide an overview of BOPAS Certification and its role in supporting innovative forms of house building.

Programme

08.30	Welcome and introduction – Brian Horton, Buildoffsite
08.40	The BOPAS Scheme: Overview of the scheme, Terry Mundy, Lloyd's Register Durability assessment, Paul Wornell, BLP
09.15	Q&A and discussion
10.00	End

To register your interest in attending, please contact Anna Whiting, Buildoffsite, as soon as possible on email: anna.whiting@buildoffsite.com

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