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## **BAM Group (UK) achieves international CEMARS carbon standard**

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*"Being CEMARS certified demonstrates the robustness of our data and BAM's commitment to reducing greenhouse gas emissions. The certification is a key step to helping us reduce our emissions."* Jesse Putzel, Climate Change Manager, BAM Construct UK Ltd

BAM Group (UK) Limited is part of the European Construction Enterprise, Royal BAM Group, based in the Netherlands, and comprises; BAM Construct UK Limited (operating in the buildings sector) and BAM Nuttall Limited (operating in the civil engineering sector). Together, the two companies employ about 5,400 people throughout the UK and operate between 100-200 projects each year.

BAM is committed to minimising its impact on the environment and to improving its environmental performance year-on-year. Sustainability is at the heart of BAM's business strategy and is intrinsic to how solutions are delivered to clients. Delivering low carbon, sustainable solutions helps to reduce costs, meet Government targets and mitigate the damaging effects of climate change.

### **The Challenge**

Although the construction sector is only thought to contribute 2 percent to UK emissions, it is estimated that the sector has the ability to influence 47 percent of the UK national greenhouse gas (GHG) inventory<sup>1</sup>. A key industry body, the Strategic Forum for Construction, in conjunction with the wider industry and Government, has set a target to reduce carbon emissions from the construction process and associated transport by 15 percent by 2012, compared to 2008 levels. To demonstrate a commitment to reducing its impact on climate change, BAM has set an objective to exceed this target and to reduce operational greenhouse gas emissions (scope 1 and 2) across the business by 25 percent by 2015, against a 2008 baseline.

### **The Results**

BAM Group (UK) Limited including BAM Construct UK Limited and BAM Nuttall Limited has been awarded CEMARS certification demonstrating a commitment to measuring, managing and reducing GHG emissions in compliance with ISO 14064-1<sup>2</sup>. BAM has been working to reduce carbon since 2008 and as a result has achieved a reduction in emissions intensity (rolling average) across scope 1, 2 and 3 of 21 percent (12 percent for scope 1 and 2). Reductions to date have resulted from a focus on the following activities:

- Gas oil – more efficient plant and equipment, plant 'switch off campaigns' and changing project profiles. For example, the introduction of dual generators has saved up to 60,000 litres of fuel on some projects.

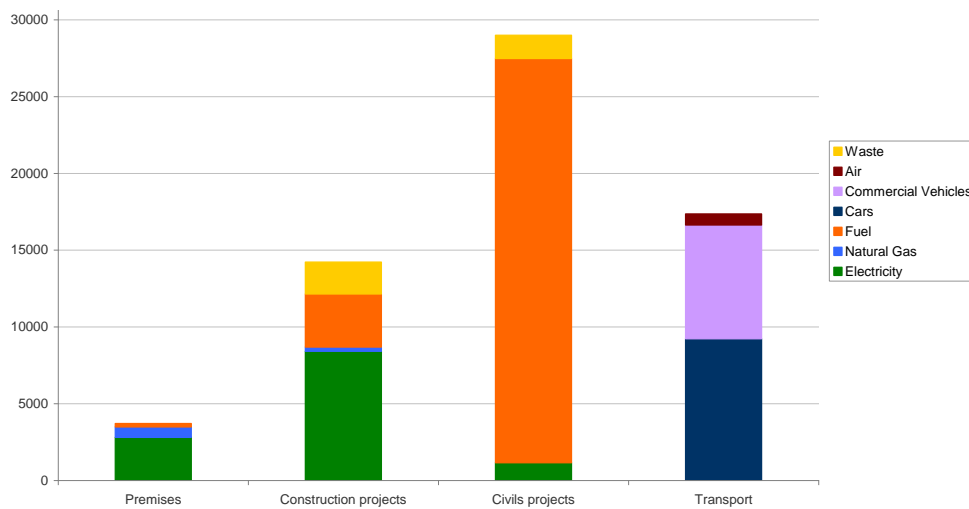
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<sup>1</sup> Source: [Department for Business Innovation & Skills: Estimating the amount of CO2 emissions that the construction industry can influence; Autumn 2010](#)

<sup>2</sup> ISO 14064-1: the international standard for the quantification and reporting of greenhouse gas emissions.

- Energy efficiency – introduction of remote metering, better management and control systems and raising awareness amongst staff. New, more energy efficient accommodation for constructions sites and efficient lighting has reduced demand on projects.
- Energy use in premises - better management and improvements to buildings and controls. For example, by moving to new premises, BAM Construct UK’s central services has reduced energy consumption by approximately 680,000 kWh in 2010.

GHG emissions (tonnes CO<sub>2</sub>e) by key business activity and source



## The Focus Going Forward

In order to meet the 25 percent reduction target, a ‘carbon reduction’ working group has been established to share best practice between BAM Construct and BAM Nuttall. This group will also develop specific carbon emission reduction projects and evaluate carbon reduction and associated cost benefits of the programmes which have been implemented.

Reduction projects will build on activities which have already begun and will focus on the following areas;

- GHG emissions of premises: energy awareness and retrofits.
- GHG emissions from transport: improve the efficiency of the ‘grey fleet’, decrease mileage, review commercial fleet to ensure it is efficient and that best-in-class models are introduced, and introduce vehicle tracking.
- Fuel use on construction and civil engineering projects: develop guidance on selection and efficient use of plant, establish energy supply strategy, intelligent monitoring of plant.
- Supply chain emissions: work with subcontractors and suppliers to identify GHG emissions associated with BAM operations.
- Data quality: improve electricity, gas oil, project based emissions, and mileage data through internal audit procedures, remote metering, and electronic expenses system.

In addition to working on its own direct emissions BAM has committed to:

- Supporting its clients, suppliers and subcontractors in cutting their carbon footprint.
- Raising awareness to help its employees reduce their personal carbon footprint.
- Sharing best practice within the sector.

## **Q & A with Jesse Putzel, Climate Change Manager, BAM Construct UK Ltd and David Winterton, Energy Manager, BAM Nuttall Ltd**

### *Why did BAM choose the CEMARS standard?*

*"After building our capabilities around measurement and management, we decided it was time to take our work to the next stage and we wanted a proven framework within which to do this. We were attracted to CEMARS for a number of reasons. It's robust and credible which is proven by the link with ISO 14064-1. The focus on a journey (over 5 years) and achieving continual improvement really appealed to us. We also liked the collaborative approach taken by those involved in managing and delivering CEMARS, so that the standard can be both robust but also flexible in the longer term to meet emerging standards and best practice."*

### *How has working through CEMARS helped BAM?*

*"While we were already doing many of the things required by CEMARS, entering into an 'official' process where our approach is scrutinized by a third party has helped us identify where we can improve even more. Working with CEMARS raises the profile of emissions management and reduction internally and puts pressure on us to deliver on our commitments. It also helps us to demonstrate to others that we are making progress and that we are dedicated to reducing emissions over the longer term."*

### *What are the key priorities for your energy policy and the carbon reduction agenda?*

*"We know there are still big improvements we can make to reduce our direct emissions by improving the efficiency of our operations. While we've put in place tools to help manage energy on our sites, we need to get people using these tools to better effect so that good energy management simply becomes part of what we do, rather than an add-on. We have only just begun to scratch the surface of how gas oil is being used across the company so having more detail on this impact area is a major priority for us going forward. Energy and emissions planning is also an area we want to develop going forward, so that we can set very specific targets for our construction projects to drive down emissions. Benchmarking, using the more detailed data we're collecting, will help us to do this. While our direct emissions may seem large, we know that our wider, indirect emissions are far more significant, so working with our clients and supply chains will be a priority, first to identify what our wider scope three emissions look like and then to develop collaborative solutions to address these."*

### *What savings have been recognised by BAM in line with the reduction of emissions?*

*"In our industry it's very difficult to pinpoint exact savings as we don't have set baselines to compare against. It's therefore always about assumed savings or avoidance of waste. Also, comparing one year to the next is problematic as different project profiles can drastically impact emissions and total costs of energy and fuel."*

*However, we are seeing savings. Since installing remote metering on construction sites we've seen many examples of projects saving between £10,000 – £50,000 just through better management of energy, such as eliminating out-of-hours use. The introduction of more efficient temporary accommodation saves around 30 - 50%, which can be up to £20,000 depending on the size of project. Introducing more efficient ways of producing power on site, through dual generators for instance, has saved projects in excess of £20,000 on their fuel bills. The improvements made to our fleets and in reducing the amount of travel we do also saves us money.*

*As we develop more detailed benchmarks we hope to be able to demonstrate the savings we're achieving more accurately."*

### *How will you reinvest the savings made to date in carbon reduction?*

*"As part of our ongoing carbon management and reduction program we want to develop the business case for further measures we can adopt. We've given our cross company carbon reduction working group a budget which it can use to develop business cases, test initiatives and then roll these out. This is a fund which can be replenished through savings we make."*

### *What advice do you have for other organisations working to measure their carbon footprint and make a reduction in emissions?*

*"Every organisation is different and so each needs to take the best approach that works for them. For those not currently doing much, I would recommend making a start as soon as possible. Its surprising the things you'll find just by gathering the right data from across the business and the simple improvements that can be made straight away. Getting the right systems in place is really important. This doesn't have to mean fancy web-based software, but the more accurate your data the better, and linking this data to end-users is also really important. For us, sector collaboration has been very useful as it can help to create a more even playing field. It is also great for cultivating new ideas. The carbon landscape is moving very fast and those that are able to stay ahead of the game are guaranteed to be in a good position for the future. If clients, customers or funders aren't asking about these issues yet, they will do, that's guaranteed."*



CEMARS (Certified Emissions Measurement And Reduction Scheme) recognises organisations for credible carbon measurement, management and reduction. An organisation must measure their carbon emissions across Scope 1, 2 and 3 as well as develop a detailed reduction plan with targets and key initiatives outlined. An organisation has five years from the base year to demonstrate either an absolute or relative reduction in carbon emissions. Organisations affected by the CRC Energy Efficiency Scheme can also use CEMARS to demonstrate carbon reductions achieved over the last three years for the Early Action Metric. CEMARS is the only standard in the UK accredited to ISO 14065, the recognised international standard for greenhouse gas validation and verification bodies.