Balfour Beatty
Update
The international news magazine for Balfour Beatty ■ September 2003

Digging deep, flying high

The T5 challenge: pages 4&5

Record orders as growth goes on

Half year results: pages 2&3

Another period of growth

Record orders of £6.4bn, financial close for the two London Underground PPP concessions and the conversions of four other PPP/PFI concessions to contracts have been the highlights of the Balfour Beatty year to date.

Chairman Sir David John told his audience when announcing the half-year results: "It is pleasing to be able to report another period of growth in Balfour Beatty's profits and earnings. Once again, operating cash flow was highly satisfactory with a very strong working capital performance."

Balfour Beatty has now secured the start of work on the two Metronet concessions, which will see the company play a critical role in the modernisation of London Underground's services. New concessions for Rotherham Schools, the M77 motorway in Scotland, Blackburn Hospital, Sunderland street lighting, as well as the two London Underground PPP projects have been converted to contract from preferred bidder status since the end of 2002.

Update put some questions to Chief Executive Mike Welton following the announcement of the results.

Balfour Beatty Update is published by Balfour Beatty plc, 130 Wilton Road, London SW1V 1LQ, for Balfour Beatty people worldwide

Editorial Team:
Tim Sharp, Lynn Harvey and Marjorie Hooper +44(0) 20 7216 6800

Written, designed and produced by Surrey House Corporate Publishing +44(0) 1372 460111

Printed by Yale Press

Highlights

- Further progress in profits and earnings
- Strong cash performance
- Record order book of £6.4bn
- Metronet's London Underground PPP concessions brought to financial close
- Major project wins in roads, rail, PFI and building
- Principal market prospects encouraging

Financial Highlights

	2003 first half	*2002 first half*	
Turnover	£1,751m	£1,685m	+4%
Pre-tax profits*	£51m	£48m	+6%
Earnings per share	8.1p	6.3p	+29%
Dividends per ordinary share	2.60p	2.35p	+11%
Net cash	£104m	£41m	+153%
Order book	£6.4bn	£4.8bn	+33%

**before amortisation of £9m (2002: £8m) which reconciles with profit before tax and after goodwill amortisation of £42m (2002: £40m). Basic earnings per share were up by 37% at 5.9p (2002: 4.3p).*

Were you satisfied with the results for the first half-year?

I was very pleased to be able to report another period of growth in our profits and earnings when our results were announced to the City on August 13. Once again, our cash flow was also highly satisfactory.

Our order book had risen, by the end of June, to £6.4bn, up 33 per cent on the same time last year. A good deal of this arose from the fact that since the end of 2002 we have been successful in converting our preferred bidder status on six PPP/PFI projects, including the two Metronet London Underground PPP concessions, to contract. These projects involve aggregate construction and services contracts to Balfour Beatty companies worth well over £1.5bn.

However, beyond PPP/PFI, we have also been very successful in securing major new contracts for road construction, widening and maintenance, won substantial works for Heathrow Terminal 5 and been appointed preferred bidder by Network Rail for large-scale projects in rail power systems and rail renewals.

What were the highlights of the period?

I think, without doubt, that that would be reaching financial close on the Metronet deals. This has involved a massive amount of hard work on behalf of a very large number of people in our organisation. The benefits both to London's travelling public, in terms of long-term, predictable investment in the Underground system, and of investment returns and downstream construction work for us are very significant – a real milestone for the Underground system and the company.

in profits and earnings

> ‘Most of the Group’s markets have been strong in the first half and continue to be so… we are in an excellent position to benefit from such market characteristics.’
>
> *– Mike Welton*

You reported that net cash stood at £104m – does this make it likely we will see further acquisitions in the second half as a result?
We are currently reviewing our strategy. Our cash position certainly gives us a level of flexibility to respond positively if businesses that we want become available.

Why was there an increase in pension charges?
At the last valuation of the fund by our actuary, there was a small surplus of assets over liabilities. The company and the trustees are determined to maintain a prudent and responsible approach to the pension fund and the decision to increase contributions was to ensure that the fund stays healthy in the future.

Profits in Building went backwards and were flat in Rail and Engineering – why was this?
In Building, Andover Controls’ profits, although still satisfactory, were down on last year as the US market remained depressed following the impact of the war in Iraq. In the case of Rail and Engineering, the underlying results were better but these businesses between them had to absorb £4m of the additional pension charges. If you ignore the increased pension charges, the underlying performance was an 11 per cent increase in operating profits.

What is your reaction to the Hatfield prosecutions and Network Rail taking the Wessex contract back?
We were surprised and disappointed that manslaughter charges and charges under the Health and Safety at Work Act were brought against Balfour Beatty Rail Infrastructure Services and some of its former employees in July this year. We said at the time that we see no justification for this action. We will firmly defend the company against the allegations and provide the fullest support to our ex-employees in respect of the charges against them.

The early transfer of the Wessex maintenance contract to Network Rail follows their decision to take the contract back in-house when it was due to expire in 2004. We have had a team working on the arrangements for some time and, in full mutual agreement, we handed the contract over early. In so doing, we reduced the uncertainty level of the people involved – almost 1,000 of them – and reached an agreement on all commercial and financial matters, satisfactory to both parties.

Do you believe that we can keep our profit performance moving forward?
Yes. Most of the Group’s markets have been strong in the first half and continue to be so, although the US market has been weaker than last year. In particular, public sector expenditure on major UK building and transport infrastructure has continued to grow and PPP/PFI continues to provide a good selection of opportunities in our areas of expertise.

Given that recent surveys show us to be a clear UK leader in roads, rail and civil engineering in general, we are in an excellent position to benefit from such market characteristics.

In our markets outside the UK, we see continuing major infrastructure investment programmes in the US, Italy, the Middle East and Hong Kong with some growth now also anticipated in German rail expenditure.

What expectations do you have of the full-year?
In Building and in Rail, we anticipate that trading for the year will be broadly in line with that of last year, while in Engineering and in Investments we believe we will make significant progress. We are confident that the 2003 result will see us continuing to make progress.

The T5 challenge

Why the Heathrow team is thinking *inside* the box

Sometime in Spring 2005, Balfour Beatty Construction's Project Director, Nigel Hellier will be presented with a huge "box" in which he could site six football pitches. Instead, Nigel and his Balfour Beatty project team will build in the "box" a railway station and passenger interchange that will be crucial to the future of BAA.

The "box" – a cut and cover rail box excavated to an agreed 278m long by 90m wide design – will eventually house the new Terminal 5 rail station and passenger interchange which is expected to handle around 30 million passengers every year.

BAA formally awarded the £87m production leadership and fit out contract this summer to Balfour Beatty Construction which has been developing the station design for the past 18 months. This follows the original rail system award to Balfour Beatty Rail Projects in early 2001.

Three of the T5 rail station and passenger interchange's five levels will be underground. The passenger interchange, with its two central steel and glazed lift cores, will provide the focal point of the new terminal and the key access for passengers transferring between the airport, rail station, bus and coach station, as well as the multi-storey car park.

The main terminal building is planned with two satellite buildings and associated aircraft stands. A new 87 metre-high airport control tower is also being built as part of the T5 programme.

Natural light and openness are main design criteria for the interchange, along with the use of state of the art construction materials such as ETFE panels, similar to the type used at the Eden Project in Cornwall. The curved roof, rising majestically 9.5 metres above the ground, will be supported by inverted tied bow-string trusses.

Memorable travel-link

When completed in Spring 2008, T5 will take up just under one quarter of the 1,200 hectares currently occupied by Heathrow – the world's busiest airport – with its four other terminals. Lying to the west of the Heathrow site, T5 will have its own spur road off the M25 to ensure the impact of airport traffic on local roads is minimised.

"Our work will be under a world spotlight with regard to the passenger experience, but I am confident the interchange will function well and provide a pleasant, memorable travel-link for everyone's journey," said Nigel.

As the Balfour Beatty Construction's T5 Station Team Leader, Nigel is working closely with BBRPs Project Director, Bob Webb, who is Production Leader for the rail systems project, and Steve O'Sullivan, T5 Project Director for Balfour Kilpatrick. Bob and Steve are involved with the £95m BAA contract to extend the Heathrow Express and London Underground Piccadilly Line services to link to the T5 passenger interchange.

Teamwork, open-book transparency and cross-company integration are a feature of BAA's massive £3.7bn T5 development.

"All the different T5 contractors, designers, suppliers are encouraged to identify with the whole project and become part of the team that will successfully deliver T5. This single team approach helps greatly when we are dealing with key stakeholders and interface management connected with the project," said Bob Webb.

Bringing in the passengers

Balfour Beatty Rail Projects has already upgraded a Network Rail branch line to bring in materials for T5 construction but now Bob and Steve's task is to bring in the passengers to the new T5 station itself.

Balfour Beatty Rail Projects and Balfour Kilpatrick will begin the fit-out of the 10km of new underground railway from existing lines at the Heathrow central terminal stations in Autumn 2004. The new lines will be either bored or cut and cover tunnels and will link to the new platforms within the T5 rail station.

Heathrow Express and London Underground operate different traction power systems, so the team will be installing separate 25kV overhead power in Heathrow Express and 650V third and fourth rail conductor supplies in the Piccadilly line along with all lighting and auxiliary power, compressed air (Piccadilly Line), drainage, ventilation, and emergency services.

One other key innovation on T5 is the use of pre-assembled and modularised units. "BAA wants to achieve 60 plus per cent modularisation at T5, and certainly in E&M (Electrical and Mechanical) terms it looks set to be the largest modularisation project of its kind in Europe. Achieving the targets is a big challenge, but it helps remove building risks from the site, and helps improve safety, construction standards and scheduling," said Steve O'Sullivan.

Main picture: artist's impression of how Terminal Five will look when completed. Above: Terry Ellesmere (left) and Mark Saunders part of the project team on site.

Project Directors 'under a world spotlight'

Nigel Hellier of Balfour Beatty Construction.

Steve O'Sullivan of Balfour Kilpatrick.

Bob Webb of Balfour Beatty Rail Projects.

The M25 challenge

'If we do it right here, we can do it right anywhere'

PETER ANDERSON and his team are planning to give the British travelling public a massive Christmas present in 2005. That's the completion date the Balfour Beatty Civil Engineering team have set themselves for widening the M25 between its M3 and M4 junctions – regarded as the busiest section of motorway in Europe.

"It is an enormous challenge for the team we have assembled, but we have worked together successfully both on the original M25 construction and subsequent widening projects. With this award by The Highways Agency we have reinforced our position as the contractor of choice when it comes to motorway widening," said Peter Anderson, Project Director for Balfour Beatty Major Projects, Highways Division.

With 200,000 vehicles travelling between Junctions 12 and 15 every day this M25 stretch is the jugular vein of transport UK. Keeping traffic flowing will be vital and effective and efficient working will be essential. "If we can do it right here, we can do it anywhere," says Peter Anderson.

Traffic flow

Despite having to add a road-lane to the entire M25 stretch of 11kms, cope with 23 existing bridges and underpasses, erect 10 kms of environmental fencing, upgrade all the lighting and motorway communications gantries, and complete earthworks and landscaping schemes, the Balfour Beatty team is promising that the existing number of lanes will be maintained during the day throughout the project. Routing management will be used along with free vehicle recovery to maintain traffic flow.

Work on the £148m project starts in January, with the first phase involving the construction of a 1km spur road to the new Terminal 5 at Heathrow.

Volcanoes, and bridges

Balfour Beatty is working on several projects in the Far East, including one in China which is being hailed as one of the new engineering wonders of the world: the construction of the world's largest suspension towers – taller than the Eiffel Tower – to carry power lines over the Yangtze River. In the Philippines engineers are defying typhoons and active volcanoes to build more than 250 road bridges, many of them in remote parts of the country, while in Hong Kong an area of fish ponds is being transformed into a rail terminus.

Active volcanoes, 200mph typhoons, rain that can turn rivulets into raging torrents within minutes, and political instability are among challenges facing Balfour Beatty Power Networks on its latest £25 million project in the Philippines.

The project, which began in December 2001, will run for three years and will see a consortium of Balfour Beatty and Cleveland Bridge put 256 road bridges into place replacing existing old and damaged crossings in isolated areas of the country and, once complete, they will give local people much better access to markets, schools and hospitals.

One of the key specifications by the Philippines' Department of Public Works and Highways was that the bridges should be maintenance-free for the next 30 years. They also have to be simple to erect, with the work carried out by local contractors under British engineering supervision.

Longest spans

Under the contract, Cleveland Bridge will fabricate and supply all the bridges up to 30 metres in length, with Callender-Hamilton Bridge business (part of the Transmission Division of Balfour Beatty Power Networks) tackling all the bridges over that length. The longest single spans are 96 metres, while elsewhere three separate spans are being used together to form a 162-metre crossing.

Grahame Coles is the Project Manager in-terri-

'The world's largest roller coaster ride'

Ask Gerry Cullen what it's like to be involved in the construction of the tallest transmission line towers in the world and he compares it to being on the world's largest roller coaster ride. "There have been several lows but these are easily outweighed by the many highs," he says.

Not that there's a roller coaster ride that comes anywhere near the height of the two towers the Balfour Beatty Power Networks and Cleveland Bridge UK joint venture are manufacturing for the East China (Jiansu) Power Transmission Project. When assembled, each will measure 346.5m to its earthwire peaks – taller than the Eiffel Tower in Paris which is 324m high including its antenna. The 68m by 68m base footprints of the Chinese towers each covers the area of a football pitch.

The towers are part of the 500kV transmission line project. This will run from Yan Cheng Power Station in the northern province of Shanxi to Dou Shan Substation in Jiangsu Province in the south of China. Erected 2.3km apart, the towers will support the line where it crosses the Yangtze river at Jiangyin.

The nature of the towers and the stringent requirements imposed by the client (East China Electric Power Group Corp) has made this a very demanding project. Says Gerry: "Unlike traditional towers, the lower legs are made up of 1200mm x 1200mm lattice box structures, with 65mm-thick plated cruciforms forming the corner portions of the box. This reduces in stages to 800mm x 800mm at 120m level. Above 206m, the legs are a cruciform construction made out of angles."

This artist's impression shows how the completed project will look. Inset: work in progress. Left: The Eiffel Tower outline shows approximately the Paris landmark's size in relation to one of the massive Chinese towers.

To manufacture the towers, the joint venture had to produce more than 7,500 drawings. As far as materials are concerned, each tower includes 4,300t of steel and 210t of bolts.

typhoons, torrents, built to last

A typical Philippines' bridge that is being replaced.

tory. He reports to Tony Fogg as the Operations Manager, Special Projects, while Eric Hudson is the Balfour Beatty co-ordinator for the UK supply element of the contract.

Tony says that one of the biggest challenges facing bridge works in the Philippines is the weather. "Typhoons are very common in this part of the world and have speeds of up to 200mph. These play havoc with the existing bridges and the Philippines government has been losing an average of around 11,000 metres of bridge every year. The level and intensity of rainfall can create severe flooding at very short notice."

Added to this are factors such as active volcanoes, which have previously buried one of the bridges under ash, supply problems – with all materials having to be transported by land to the relevant bridge site – and a measure of political instability in the country, which has recently seen an attempted coup against the government of President Gloria Arroyo.

All the Callendar-Hamilton bridges are built in the UK by Painter Bros in Hereford, as part of the Department for International Development-sponsored project.

Baroness Symons, the UK Minister for Trade and Investment, said: "I am pleased that the Balfour Beatty and Cleveland Bridge consortium has been successful in winning this contract. The project will not only have a positive impact on remote communities in the Philippines but will also benefit the British economy."

"This is a supply only contract for the design of the main connections and the supply, manufacture and galvanising of the steel work for the towers," says Gerry. "However, we will have a presence on site until the erection of the towers is completed in early 2004."

Balfour Beatty-Cleveland JV carried out the trial assembly of the tower structure.

Crossing the ponds

When Balfour Beatty was awarded the £106m Lok Ma Chau railway terminus contract in October last year, the site was occupied mainly by fishponds. Over the next four years, it will be transformed into a three-level cross-border facility capable of accommodating up to 246,000 passengers a day.

Located alongside the Shenzhen River, Lok Ma Chau is part of an extension to the existing Kowloon-Canton Railway Corporation (KCRC) East Rail line. It is being built to relieve congestion on the passenger crossing between the New Territories and Shenzhen. A two-level footbridge will connect the terminus to the new Huanggang station across the river.

Balfour Beatty's work involves construction of a reinforced concrete station, the immigration and customs halls, building services and architectural finishes.

One of the first tasks was the construction of a temporary jetty in the Sham Chun River to enable fill material to be imported to site. From the jetty, material is transported by conveyor system over a security fence and Border Road, then placed by either hydraulic pumping or earthmoving equipment.

More than 220,000m^3 of fill material has been placed. It has also completed 90 of 279 bored piles ahead of schedule, installed 20 out of 40 instrumentation clusters and constructed an emergency vehicle access road.

The latter was an option exercised at the end of April. It consists of widening a section of road through the existing Lok Ma Chau village and a new section of road.

August saw the start of the sub-structure works in the station area and the beginning of a seven-month period during which the fill material is left to settle.

The next key dates after that are the hand over of the border road to the link bridge contractor by end of September and the hand over of part of station and reed bed area to viaduct constructor by the end of the year.

Tiles on the dome of St. Sophia's have to be individually cut to size.

A key concern was the deteriorating concrete.

A Turkish delight on a Scottish skyline

What links Chinese horse-hair, a basilica in Turkey and anthrax risks in Scotland 170 years ago? The answer is the restoration skills of Balvac.

As Balfour Beatty's world-renowned structural repair experts, Balvac undertake some strange and challenging commissions but few will top the £1.1m project to restore St. Sophia's Church in Galston, Scotland, for the Diocese of Galloway.

St. Sophia's was built just east of Kilmarnock in 1860 by the 3rd Marquess of Bute, inspired by his visit to the magnificent St. Sophia in Istanbul, once a Christian basilica, then a mosque and now a museum. The Marquess decided to build a scaled-down replica in Scotland. The architectural features complete with 15-metre wide domed roof were faithfully recreated by Scottish builders and the building now has historic listed status.

The need for repair was forcefully brought home when a chunk of concrete fell from the roof onto the altar during Mass narrowly missing the priest. The church was closed for safety reasons and five years elapsed before restoration funding was raised by a combination of National Lottery support, Scottish Heritage and a charitable collection by the congregation. During which time the fabric of the church had deteriorated more.

Chinese horse-hair? Anthrax? Well, when Balvac began to remove the defective lime-based plaster they discovered it had been strengthened with the addition of horse-hair.

Historical restoration accuracy and health and safety regulations demanded that Balvac test the plaster against the risk of anthrax spores that may have lain dormant for 170 years, while considering a replacement plaster which satisfied authenticity.

"We couldn't get enough Scottish horse-hair, or European horse-hair for that matter and have resorted to importing the stuff from China. We have also done a lot of research and testing with the Scottish Lime Centre and produced a lime mortar that cures in four to five weeks. The original lime took 22 weeks to cure, but with the whole project scheduled to take only 40 we had to find an alternative," he said. Gerry is being ably assisted in this project by Site Manager Peter Woods and Senior Contract Engineer Martin Doyle who are relishing overcoming the difficulties.

Plaster has not been the only challenge. Thousands of tiles on the 30-metre high domed roof are being replaced – each of them is different and the new tiles have to be individually cut to size.

Faithful copies

All the tiles, bricks and sandstone exteriors of the historic church have to be "indented". This means faithfully copied in style and texture to match the originals. Specialist manufacturers and suppliers are being used.

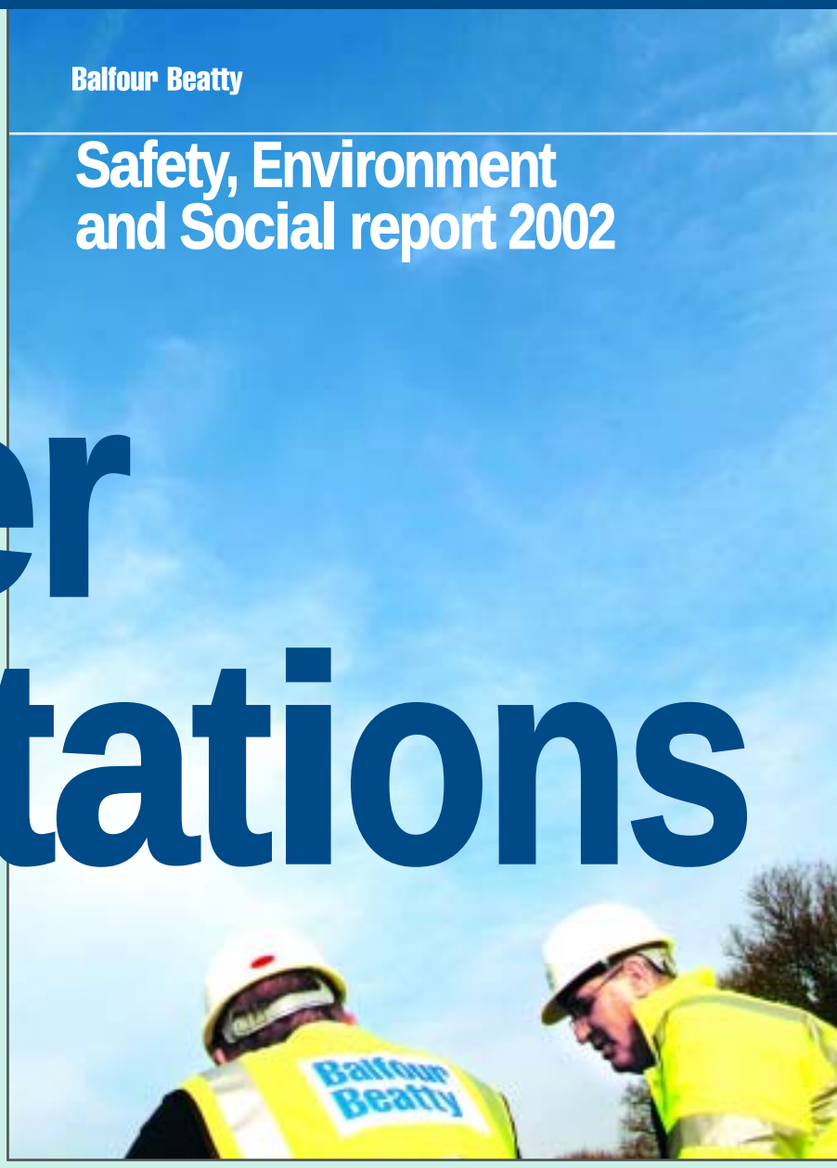
Deteriorating concrete, which forms the main structure of the Catholic church, is a key concern. Balvac is using two main repair techniques. Zinc anodes are being attached to existing wrought iron reinforcement in the concrete, so that the zinc corrodes preferentially. This cathodic protection system will help inhibit future corrosion.

"It is certainly one of the most complex jobs I have ever done. It's a tremendous challenge and makes a change from hanging under M6 road-bridges carrying out concrete repairs," said Gerry Cluney.

To overcome the condensation problem a new central heating system is being installed with an automatic humidity control programme to open high-level windows to release excess heat.

Ornate metal drainage and guttering has also been internally coated with plastic resin to help preserve it, and the whole church will be redecorated before it is handed back to its congregation this winter for a rededication service on the first Sunday in Advent.

Balfour Beatty recently published the comprehensive report shown right – the second of its kind. On the following pages *Update* looks at the background to the document and summarises key messages



Greater expectations

Keeping pace with changing demands of society and the Company's stakeholders

Not so long ago, many companies felt it was sufficient simply to include in their annual report and accounts a few carefully chosen words affirming their commitment to safety, health and the environment. Today, this minimalist approach no longer cuts the mustard. Society's expectations about corporate behaviour, and about how it should be reported, have become much more demanding.

"The bar has been raised," says Sally Brearley, Director of Safety, Health and Environment at Balfour Beatty. "Platitudes are no longer enough, if they ever were. Nowadays stakeholders want chapter and verse. They want data. They want transparency. In short, they want greater corporate accountability and better reporting. So, to ensure that Balfour Beatty keeps pace with society's changing expectations, we have been putting a lot of effort into developing a better understanding of the complex social, environmental and economic impact that we have as a business. And not just into understanding it but into measuring and reporting it too."

This measurement theme is one which runs strongly through Balfour Beatty's latest *Safety, Environment and Social Report*. For, as Sally Brearley points out, there's no point in setting numerical targets unless you have a means of measuring how successful you were in meeting them. And, going further, she maintains that it is then incumbent on the Company to present the resulting data openly and honestly – warts and all.

"For example, there's no hiding the fact that our overall safety performance in 2002 fell short of target," she admits. "There were six fatalities across the Group, one more than in 2001. Frankly, anything other than zero is unacceptable and we need to be up-front about acknowledging that we failed in that area. If we are candid about reporting any shortcomings, people will respect that honesty and be more likely to give us credit for the many excellent stories we have to tell."

Another prominent theme in the new report is the Company's commitment to sustainable development. The construction industry plays a big part in shaping the national infrastructure and in the process it uses large amounts of energy and raw materials. This means it has a vital contribution to make in the quest for a sustainable future.

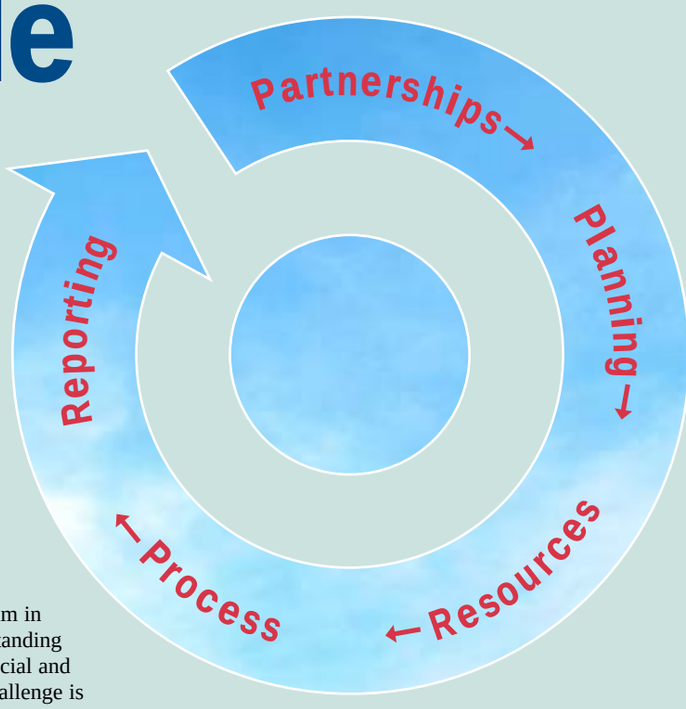
For Balfour Beatty, the key concepts here are partnership and innovation. By engaging with customers, end-users and local communities, a shared understanding of the needs and impact of schemes can be created, alongside a view of what is technically possible and affordable.

SALLY BREARLEY: 'Stakeholders want greater corporate accountability.'

SUSTAINABLE DEVELOPMENT, ENVIRONMENT AND SOCIETY: SEE CENTRE PAGES

Closing the circle

Balfour Beatty's approach to sustainable development



The term sustainable development has been defined in many ways but essentially it refers to development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs. Or, put another way, it means living on nature's income rather than on its capital.

Balfour Beatty has developed an approach to sustainable development that integrates the concept into its projects. Known as the 3P2R sustainability model, the approach has five elements which flow through the life-cycle of the project.

Working group formed

The year 2002 saw the formation of a working group, chaired by Sally Brearley, to co-ordinate and promote sustainable development throughout the Company.

Other actions included running workshops to explore the implications of sustainable development in the business, participating in several external initiatives designed to widen understanding of what sustainability means and investigating the sources of and uses for minerals, and exploring timber sourcing.

"We learned a lot during the course of last year and are extending our reach in 2003," she says. "We firmly believe that building sustainability into all our activities will be critical to the Company's future success."

Sound progress

Writing in the new report, Chief Executive Mike Welton says that the Group made sound progress in 2002.

"We have now created a real momentum in the organisation towards a greater understanding and more effective management of our social and environmental impacts," he says. "The challenge is to maintain this momentum and to spread it more widely and deeply within the Group, for instance outside the UK, into the supply chain and in partnerships with more and more of our customers.

"I am pleased with what we have achieved so far and, in particular, with how our people are increasingly successful in living by Balfour Beatty's principles. However, we still have a long way to go and much to do."

Our aim: to respond to the needs of our

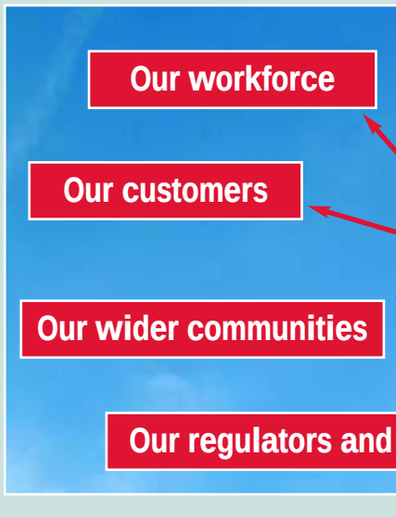
Balfour Beatty's aim is to be accessible and responsive to the needs and views of all its many stakeholders and to fulfil its responsibilities to them.

"By improving our partnerships and relationships with all stakeholders we aim to promote sustainable solutions that benefit communities and reflect fully our social and environmental responsibilities as well as our commercial and economic objectives," the report says.

"Major contractors have an important role to play through their substantial and varied supply chains in promoting sustainability and ensuring that appropriate standards in environmental and safety management and product supply are spread through the industry," says the report.

Since Balfour Beatty purchases well over £2 billion worth of materials and labour every year it is plain that the scope for it to contribute to progress in these areas is very considerable.

We take the time to explain to local communities what we are doing.



Supply chain model

The problem is that the supply chain in the construction sector has been traditionally characterised by a very large number of small-scale, local purchases made from many suppliers. Indeed, in 1997 the Company had almost 30,000 suppliers in the UK, and a substantial proportion of the transactions were worth less than £100. Since then the Group has been working steadily towards a more sophisticated supply-chain model, with a much reduced supplier base.

The report says that by working with a smaller group of preferred suppliers and placing greater emphasis on performance monitoring, relationship management and supplier audits makes it easier to ensure that their policies, practices and value systems align as closely as possible with Balfour Beatty's. "In general, our aim is to purchase as much as possible from suppliers that operate to ISO 14001 or an equivalent formally accredited environmental management system," says the report.

But the Company's efforts are not just confined to suppliers. Creating co-operative and mutually supportive long-term relationships with customers is another key element in Balfour Beatty's approach to its social responsibilities. The importance of this becomes clear when one considers that just over one-quarter of the Group's sales came from just five major long-term-relationship customers.

Engaging successfully with employees is no less vital. The contracting industry is very much a "people" business – Balfour Beatty employed an average of 27,260 people in 2002. While direct day-to-day engagement with the workforce remains the responsibility of line management in the operating companies, Balfour Beatty recognises and deals with a wide range of bodies representative of employee interests.

Equal opportunity

The Company is committed to the principle of equal opportunity for all and is determined to ensure that no employee or job applicant is discriminated against and that progress is determined solely on merit.

Likewise, Balfour Beatty has published its policy on Human Rights and in 2002 the Company initiated a review of the implementation of that policy

Measuring our success

Quantity and quality of data puts Company ahead of the rest of the industry in the UK

Coverage of Balfour Beatty's UK environmental performance in the new report is much more detailed than in the report published a year ago. This is because, for the first time, a wealth of hard, quantitative data was available when compiling the document.

"We spent an enormous amount of time devising a comprehensive suite of environmental 'metrics' that allow us to evaluate and manage our environmental performance more effectively," says Sally Brearley. The metrics include fuel and water usage, waste (recycling and disposal to landfill), land contamination, use of damaging substances, noise and vibration, and emissions of ozone-depleting substances.

"I believe that the amount of quantitative data in our report puts us ahead of the rest of the industry in the UK," she adds. "Not only that, the quality of the data is high. It has given us a valuable pointer to where the emphasis in our UK environmental management strategy should lie."

Balfour Beatty's overall goal, says the report, is to prevent harm to the environment arising from its activities. In pursuit of this goal, the Company is adopting two main approaches. The first is to establish and maintain environmental management systems certified to ISO 14001. Already, three-quarters of the operating companies in the UK are certified and most of the remainder are on schedule to achieve ISO 14001 status by the end of 2003.

Certification is also held by operating companies in Hong Kong, Sweden and Austria.

The second thread of the strategy is, as noted above, to measure and report on the Company's performance and then to use the resulting information to help shape its future environmental management priorities. (See table.)

UK performance against objectives

ISO 14001 certification	GOOD PROGRESS (76% of operating companies now certified)
Participate in reaching a common understanding of 'sustainable construction'	ACHIEVED
Enhancing stakeholder engagement processes	GOOD PROGRESS (NGO dialogue; Community engagement)
Zero environmental incidents	NOT ACHIEVED (one significant incident)
Development of environmental performance indicators	ACHIEVED
Develop data collection systems for quantifying environmental impact	ACHIEVED
Measuring progress towards sustainable development in the design process	ONGOING
Embed environmental management in Balfour Beatty's activities	GOOD PROGRESS

stakeholders

in several areas overseas. Independent external consultants have been engaged to carry out research and interviews and the results of their study are awaited.

Balfour Beatty takes very seriously its responsibilities to the wider communities in which it operates. The Company's projects often involve the construction of new infrastructure and so entail a heightened corporate profile in a particular geographical location and social environment.

"We fully recognise the effect this can have on local communities and individuals," says the report. "Our experience, however, is that where we take time and effort to explain to local communities what we are doing, when it is happening, and the benefits that will appear once our job is done, then they are interested and understanding."

Managing supply chain

As noted earlier, developing a coherent Group approach to sustainable development represented an important part of the year's activities. Here, a key aspect is managing the supply-chain.

"In order to carry forward our sustainability ambitions we need to develop our approach to assessing supplier environmental risks," says Sally Brearley. "We need to gather better information about our suppliers and to understand more clearly their expectations. This will be one of our tasks during 2003 and 2004."

For the past three years, the independent consultants, csr network, have benchmarked the environmental progress made by Balfour Beatty's UK operating companies. Each year, a marked increase in the average score has been observed. In 2002, 11 of the 16 UK operating companies were rated by csr as being in the "Good Practice" zone, with four of them attaining "Leading Edge" status.

In parallel with this independent benchmarking, Group operating companies undergo regular environmental audits. Last year, 722 internal and 119 external audits were carried out.

In 2002, the Company also participated, for the second time, in Business in the Environment's survey of Corporate Environmental Engagement, achieving an increase in its score from 45% to 60%.

An analysis of the 2002 data reveals that the Company's most significant environmental impact occurs in three main areas: energy usage (especially fuel for the vehicle fleet and plant and for office-heating), waste, and incidents of minor spillages. In an appendix to the report a large number of bar-charts set out the detailed numbers on a wide range of consumption, waste and other topics.

On energy usage, the Company's aim is to reduce progressively its contribution to global warming by looking for ways to cut its consumption, choosing appropriate and efficient energy sources, and also to work with customers and suppliers to create and manage an energy-efficient infrastructure.

On water, too, Balfour Beatty is working to cut its consumption and to prevent any pollution of water occurring as a result of its activities. There was one significant incident of water pollution in 2002 and good progress was made on developing data collection systems to measure the volume of water consumed and analyse the purposes for which it was used.

Most of the waste material produced in the Group comes from companies in the Civil and Specialist Engineering and Services divisions and takes the form of inert material that is removed from sites. Balfour Beatty is not a significant producer of hazardous waste.

The Company's aim is to reduce its waste generation, to explore all local recycling opportunities and to cut the amount of waste it sends directly to landfills.

Looking ahead, the report says that Balfour Beatty's priorities in terms of environmental management are to quantify further and understand better the Group's environmental impact, to encourage environmental engagement by its suppliers, and to investigate the causes of incidents, ensuring always that the lessons learned from them are shared throughout the Group. Enhancing the Company's dealings with the public will be yet another priority.

SAFETY & HEALTH: PAGE 12

The quest for target zero

‘In Balfour Beatty, the safety of our employees is of paramount importance’

Talking safety – role plays were part of the safety training procedure.

The report makes clear that Balfour Beatty’s approach to managing health and safety is formal, structured and risk based. Each operating company has well-established safety management systems and seeks continuous improvement in its practices and processes. Every endeavour is made to ensure that good practice is shared across the Group.

“In Balfour Beatty, the safety of our employees is of paramount importance,” insists Sally Brearley. To underscore this, the Company sets itself some very demanding targets. For 2002, those targets were to have zero fatalities and to achieve a 10 per cent reduction in the accident frequency rate (AFR: the number of major and three-day accidents per 100,000 hours worked) and in the number of major injuries and dangerous occurrences.

Regrettably, there were six fatalities in the Group in 2002. All the incidents were thoroughly investigated (and were also personally reviewed by the Chief Executive) and were backed up by special reviews of lifting operations, working at height, electrical isolation, working on the railways, and traffic management during roadworks.

Improvements in AFR

Improvements in the AFR were recorded in both the UK and the USA. Together these two countries account for 88% of the Group’s turnover. The USA’s performance was especially noteworthy – an AFR of 0.69 in 2001 was cut to 0.43 in 2002. Unfortunately this improvement was offset by a deterioration outside the UK and the US, with the AFR rising from 0.48 to 0.84.

Among the notable achievements in 2002 was the performance of the 10 operating companies which met the target of zero fatalities and a 10% reduction in their AFR. In the UK, the businesses recently acquired from the public sector maintained their improved safety performance; and the road maintenance operation achieved a 22% improvement in its AFR.

The report also makes clear the continuing importance of safety training. In the UK alone, 31,680 days training were provided for employees.

During the year, 9,682 internal safety audits and inspections were carried out in the Group. In addition, all operating companies in the UK are required to undergo a regular safety audit by independent outside organisations, and 234 such audits were carried out in 2002, with a further 81 taking place overseas. Commenting on this approach to auditing, RoSPA said: “Balfour Beatty is one of the few major employers who submit their safety management to such rigorous scrutiny through the QSA audit system, in order to ensure progressive improvement.”

Each operating company in the Group analyses its own accident records to pinpoint the key safety issues. However, three issues that impinge on many parts of the Group are road traffic safety, working at height and managing sub-contractors. A significant amount of work took place on all these during the year. Also, several cross-operating company working groups were active in areas such as accident investigation and workplace inspections.

How does Balfour Beatty’s safety performance compare with that of other companies? “In the UK we benchmark our safety performance against the published industry statistics from the Health and Safety Executive (HSE),” the report explains. “Our rate for all reported injuries, at 1,152 per 100,000 employees, compares favourably with HSE’s reported construction norm of 1,715, when adjusted for under-reporting.” In the USA, too, Balfour Beatty compares well with industry norms but in other overseas areas the report says no reliable comparative benchmarking data are available.

Looking to 2003, the target of zero fatalities remains firmly in place, as do achieving 10% cuts in the AFR and in the number of major injuries and dangerous occurrences. In addition, three safety objectives have been set: to implement a new incident recording database; to ensure that all employees on Balfour Beatty sites in the UK have a demonstrable competence/skill level in health and safety; to investigate extending the independent safety audits undertaken in the UK to operating companies overseas.

Occupational health

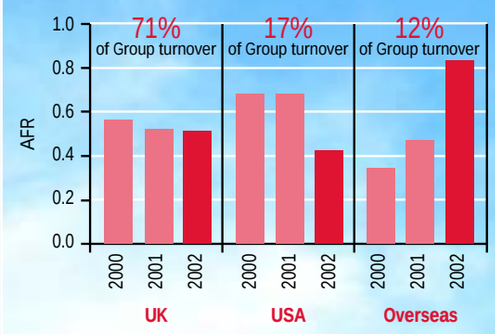
In the case of occupational ill-health there is usually no specific event which triggers a condition. Occupational health problems tend to arise from prolonged exposure to a condition or substance, or from the repeated undertaking of an activity. They are therefore much more difficult to monitor and manage effectively.

Sally Brearley readily acknowledges this difficulty. “In the past we have had no Group-wide view of the nature and scale of occupational health problems among our workforce,” she says. “But in 2002 we made a good start on tackling the issue.”

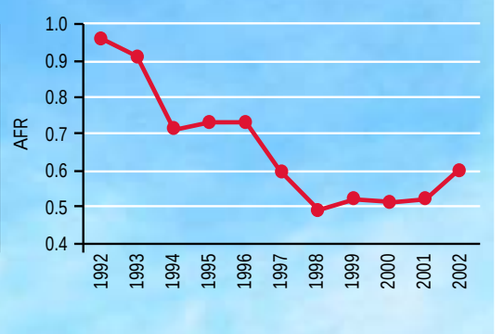
In the UK processes were put in place to record consistently the number of cases of work-related ill-health and their nature. In addition, a structured approach to managing occupational health was developed, based on identifying health hazards and adopting appropriate risk controls. A specialist organisation, Nationwide Occupational Health, has been engaged to provide a range of occupational health services in the UK and to help Balfour Beatty develop its occupational health strategy.

A number of specific occupational health issues were examined during the course of the year, notably hand arm vibration syndrome, manual handling, stress, asbestos, and alcohol and drug abuse. A key task for 2003 will be to refine further the process for accurately recording and reporting occupational ill-health in the UK.

Safety performance by region



Trends in Accident Frequency Rate



AFR = Accident Frequency Rate = Number of major and three-day accidents per 100,000 hours worked

Copies of the Safety, Environment and Social report 2002 can be obtained from Balfour Beatty Corporate Communications at Group Head Office (tel 020 72166800) or via the website www.balfourbeatty.com

Thinkers tailor, soldier, sailor…

Strategic planning and swift action for Army and Navy

Major building projects require a huge amount of thoughtful planning before the first ground is broken, especially when you are pitching for your first Prime Contracts with Her Majesty's Armed Forces.

Balfour Beatty Construction Ltd did just that – putting in considerable thinking time in terms of design, demolition, construction and refurbishment factors – before making its 'tailored' submission.

The result? The award of Prime Contractor status for two Defence Estates projects, together worth £67m, for the accommodation of soldiers and sailors on the south coast.

In fact, Balfour Beatty could be said to have adopted a single-minded approach since most of the work comprises new single living accommodation for 925 junior ratings.

Key to Balfour Beatty's strategic thinking is modular construction, which will reduce disruption to the operational bases at HMS Nelson in Portsmouth and the army artillery establishments at Marchwood, Southampton and Thorney Island, near Chichester.

Nick French, Construction Director, Balfour Beatty Construction, London & South, who is in control of both projects, explained: "At Marchwood we will be building new accommodation blocks using modular methods on the existing parade ground, while the current outdated accommodation continues to be used. Modular pre-construction means we will be on site for less time, and can hand over the new premises to the army to transfer their soldiers over a weekend. Then, we can start with the demolition of the former accommodation and creation of a new parade ground."

Nelson keeps an eye on things as work progresses on Project Emma, the campus style accommodation for Navy personnel.

Modular units

Balfour Beatty Construction, with its cluster partner Crown House Engineering, prepares the groundwork and services before the modular units arrive from Rollalong Building Solutions shrouded in protective wrapping. Brick-skins and roofs are built around the unwrapped units before fitting and commissioning work completes the upgraded accommodation built on three levels. Kitchen mess facilities for the 293 ratings, and an extension to officers' accommodation are also within the project, expected to complete in autumn 2004.

Similar modular systems are being used in Project Emma at HMS Nelson where ratings will enjoy what Nick French calls "a campus style accommodation solution." Instead of traditional Armed Forces dormitory and communal shower facilities, there will be separate bedrooms with ensuite. A core communal area and lounge will provide opportunities for socialising within the four four-storey developments.

Project Emma will also provide facilities management support for the Navy. A new complex housing a bookings, reception and house-keeping operation, run by Haden Building Management, will deal with both the accommodation needs of visiting recruits and long-term resident sailors.

Phase One of Project Emma is nearing completion on schedule, but was not without its frustrations. "Part of our task is to demolish three 12-storey high-rise blocks built in the 1960s, but because of the historic nature of the HMS Nelson site and the proximity of several listed buildings, we are having to undertake a technical deconstruction of each tower block, floor by floor, piece by piece. Although planned, this will take us several painstaking months, whereas some demolitions of course can be achieved almost at the flick of a switch," said Nick French. Project Emma is scheduled to complete at the end of 2004.

Care is being taken to recycle materials from the deconstruction. For example, an on-site crushing plant pulverises concrete segments for re-use. Such environmental and ecological concerns are equally considered at Thorney Island where there is the risk of sea-flooding and rare orchids grow in the SSSI area surrounding Chichester harbour and the army base.

At Thorney Island 48 junior ratings will be re-housed and a new gymnasium and medical centre extension built. Three existing artillery battery buildings will be upgraded and a new battery added within the project which starts this summer and finishes during autumn 2004.

Other project partners involved include: architect, Watkins Grey International; structural design, Roscoe Capita; services design, Capita Property Services.

Three into one

Electrifying success as European partnership builds up a world leader

The evidence is obvious and spectacular – narrow ribbons of glittering steel slinking through the countryside of Italy, Greece, Spain, Germany, festooned with overhead power supplies honed to the demands of trains travelling at speed. Incredibly complex webs of rails and turnouts and signals beneath a lacework of cables being spun at the throats of great railway stations like Euston and Leeds. Busy electric-powered mass transit systems curving amongst the gleaming tower blocks of Hong Kong, leaping above Guangzhou, burrowing beneath the crowded streets of Beijing, twisting through Victorian Sheffield and Edwardian Manchester, winding through ancient Istanbul.

Electrification in all its forms – global evidence of the work of Balfour Beatty Rail. But even as the high-speed trains begin to run, as the commuters glance out of train windows, as the trams hiss through city streets, they reveal just the tip of an engineering iceberg. The end results of a wealth of electrification skills now enhanced by the bringing together of Balfour Beatty engineering teams from the UK, Germany and Italy.

"We're taking three market leaders and creating a world leader," enthuses Andy Curzon, Balfour Beatty Rail Projects' Director of Engineering, as he describes Balfour Beatty's acquisition, during the last couple of years, of Daimler-Chrysler's Adtranz and ABB Dacom (ABB's rail electrification business), both now named Balfour Beatty Rail Power Systems (BBRPS).

Engineers sans frontières

Andy is coordinating the work of three sets of extremely capable railway electrification engineers, as, almost with an air of "engineers sans frontières", they forge commonalities, learn from each other, exchange best practice, understand each others' histories, products and ways of working.

He explains that co-operation between the three teams significantly broadens the scope of Balfour Beatty's electrification business, bringing added value to its clients worldwide by offering more choice from a larger range of products and technologies based on the industry's biggest design capability and the pooling of a huge amount of experience.

Each team's development has been influenced positively by long-term relationships with principal clients. For example, electrification engineers in Germany have gained valuable experience in meeting the needs of high-speed trains, an approach not adopted on the UK's tightly curved lines.

The German engineers have also tended to offer clients a choice from a standard range of products, whilst in the UK Balfour Beatty engineers have worked to create the best possible bespoke electrification solutions to meet client specifications. And whilst UK clients demand engineering drawings for every location before the job begins, in Germany elements of the design are carried out by engineers on site.

"In all three organisations there's a lot of pride in what we do," says Andy, stressing that it isn't a matter of saying one approach is better than another. "But we can now use the new mix of skills to ensure that the best design and construction processes, tools and materials are assessed and promoted to the benefit of clients. It's all about providing the client with what he wants.

"We're promoting and managing change within the organisations, which means that in the future we will be able to co-ordinate developments in catenary design, design tools, processes and practices, survey methods and use of information technology."

Heinz Tessun (BBRPS Germany) adds: "Starting from the experience obtained in our home market businesses we have all achieved successful export projects. Our task is now to pool all our experience in such a way so that on the one hand we can fulfil all our customers' requirements efficiently, while on the other hand we can create standard Balfour Beatty Rail overhead catenary systems, or 'platforms'.

Developing platforms

"The idea of developing platforms is to offer the customer effective Balfour Beatty designs for overhead power lines for different speeds, different voltages and constructed from different materials.

"This gives us advantages at the design phase of projects, dealing with the material logistics as well as in construction design. However having platforms does not mean that we are not willing or don't know how to create a tailor-made overhead catenary system in accordance with individual customer requirements. Both approaches are important."

Simone Pietro Fasciolo (BBRPS Italy) says: "Being part of a big group like Balfour Beatty means that we are now able to approach a rail project from all angles. One example: For 25 kV catenaries we can immediately put together four or five different solutions and, by combining them, we should be able to meet almost any customer specifications. And if what we have is not what the customer needs, the three companies can work together to design the required solution."

The combined teams approach each project

£2.5m a day investment will pay

Balfour Beatty has begun work on a massive programme of improvement for Metronet, one of the two private sector businesses that is regenerating the London Underground network.

Balfour Beatty is also a 20 per cent shareholder in Metronet, which is investing £2.5 million every working day for the next seven and a half years to renew the ageing infrastructure and give the capital a 21st Century transport system. In total, Metronet will invest some £17 billion on the project over the next 30 years.

The Metronet consortium, which also includes engineers Atkins, train maker Bombardier Transportation, energy company EDF Energy (formerly SEEBOARD) and Thames Water, finally assumed responsibility for two of the three London Underground Infraco businesses in April.

Balfour Beatty's involvement is through its Rail Projects Division under the leadership of Contracts Director Grant Gellatly.

It is taking responsibility for the track replacement, the framework agreement is expected to add up to £450 million of work and every effort will be made to minimise disruption to travellers, with considerable night and weekend working.

Under the PPP arrangements, Metronet has responsibility for two of the three infrastructure companies: Metronet Rail BCV, which is responsible for the Bakerloo, Central, Victoria and Waterloo & City lines, and Metronet Rail SSL, which looks after the Sub-Surface Lines. These are the Metropolitan, District, Circle, Hammersmith & City and East London lines.

Graham Sims is the Balfour Beatty Rail Programme Manager for MRBCV, while Anthony Newell-Hart is his opposite number at MRSSL.

goes global

Pride in what we do – left to right: Mike Coupe (BBRP), Simone Pietro Fasciolo (BBRPS), Andrew Curzon (BBRP), Heinz Tessun (BBRPS), Lou Marshall (BBRP), and Bob Grew (BBRP).

armed with expertise gained around the world. Balfour Beatty Rail Power Systems Germany brought with it principal customers in Germany, Sweden and Austria, as well as experience in Turkey, China, Malaysia and South America. Balfour Beatty Rail Power Systems Italy had been successful in Italy, Greece, the Netherlands and Portugal. Balfour Beatty Rail Projects, whilst UK based and presently working predominantly on UK schemes, also has an international pedigree, with previous projects in Hong Kong, China, USA and Turkey.

"Wherever they are, as a result of co-operation between the three groups, Balfour Beatty's clients are already benefiting from enhanced product ranges, increased versatility and additional expertise," says Andy Curzon.

"Each company has significant strengths and is a leader in its home markets. My vision is to create and maintain a permanent position as a worldwide market leader," he concludes.

off for the commuters of London

Meanwhile, Atkins, Balfour Beatty, EDF Energy and Thames Water have formed a dedicated contract management business called Trans4m to deliver the challenging programme of investment in stations and civil assets. Trans4m will manage the modernisation and refurbishment of over 130 stations and the maintenance of all civil assets, including 4,800 bridges, 1,600 structures, 130km of deep tube tunnels, 155km of earth structures, and 225km of track drainage and associated pumps.

Contracts Director Grant Gellatly.

BENEFITS AT A GLANCE – Over the course of the seven-and-a-half-year programme, the Metronet consortium will deliver improvements including:

- Faster, more reliable and more comfortable journeys
- Renewal of 185 kilometres of track and 166 points and crossings
- £17 billion of investment on trains, signalling, track, stations and civil works
- 47 new trains for the Victoria Line
- 190 new trains for the Sub Surface Lines – the Metropolitan, District, Circle, Hammersmith & City and East London lines.
- A new fleet of trains for the Bakerloo Line
- Seven extra trains and a 10 per cent improvement in Central Line service levels by 2005.

Haden's new structure comes on stream

It was always part of Mike Fellowes' business strategy to merge the strengths at Haden Building Management when the time was right. And that time came at the beginning of 2003. After three successive years of growth and hitting performance targets, a new structure came into effect.

"What we've done," says Mike, "is to move away from a geography based model, where we had three divisions – North, South and London – each of which was an individual business supplying our full range of services to customers in the respective parts of the country. That served us very well over the past three years in terms of the growth and company performance. But to move forward, we needed to better align the company with the opportunities and the markets we serve."

The new structure is made up of what Mike describes as "customer facing business streams". There are three of them, and each is nationally responsible for a different section of the market.

◆ **REGIONAL SERVICES** will focus on the mobile maintenance and technical engineering business. Mike explains: "This covers the smaller contracts – typically annual contracts of less than £100,000 a year – often for independent local customers seeking to buy services in an uncomplicated manner which we provide from regionally located service centres. We are now developing specific Haden maintenance regimes available to customers at varying service levels."

◆ **KEY ACCOUNTS** are generally larger value, long term contracts – typically three to five years. These can be anything from technical services through to full facilities management for both public and private sectors. Many corporate clients provide potential for Haden to grow the overall contract value either regionally or nationally, which is why they have added the capability to recognise the client as a potential national customer with a single management team to handle the account.

An example is the contract for facilities management services at Intel's UK head office at Swindon where Haden has delivered FM services for seven years. The range of services includes engineering maintenance, CAD, cleaning, grounds, security, catering and operating an accounts payable team for Intel.

◆ **PROJECTS** is the third stream. "Projects will deal with the large scale, longer term and more complex contracts often involving joint ventures like Monterey which provides full FM services across BT's 8,500 UK properties, and Haden's growing portfolio of Private Finance Initiative (PFI) businesses, such as the new Royal Infirmary of Edinburgh, where we have recently launched our new catering brand, Saffrey," says Mike.

The contracts can last from seven to 35 years with values from around £4m and upwards. The projects often include the large scale transfer of staff and therefore may require union interface and industrial relations.

"Many of our project-based contracts also require us to provide a growing range of services and operate under strict contract performance mechanisms," he says.

Mike continues: "By realigning individuals and management structures in a more appropriate fashion we can better deal with individual markets and customer needs. Employees whose experience, competencies and capabilities are more suited to managing a team of engineers through a mobile service centre are now dealing with that kind of market. And those who know about large complex PFI type projects now work in one national team. It brings joined-up thinking and sharing of best practice to the streams."

It is not only customers who will benefit. "What this structure is able to do, and we are already seeing evidence of this, is put up a more logical career progression for employees," says Mike.

Mike is particularly keen to seize on the opportunities for joint business like Haden and Romec.

Personal development team

PART of the Haden restructure included the setting-up of the Organisational and Personal Development (OPD) team. Based in Bristol and headed by Carol Chapman (right), OPD is responsible for managing training and development activities for the entire company.

A key purpose for the team will be to help everyone in the company to understand the new roles and the ways of working that have been created by the restructure.

"In our line of work the workforce is the biggest asset," says Mike. "Including our JV companies we now control 10,000 employees nationally and we need to have a comprehensive structure to develop all our people through a wide range of initiatives including multiskilling and leadership skills."

Saffrey (far left) is a new brand in catering launched by Haden. Tesco recently benefited from a Haden-Romec partnership.

Maximum benefit from IT

AS PART of an IT investment strategy led by IT Director Gideon Kay (left), Haden has also created a Business Support Team to help ensure the company gets maximum benefit from its IT investment. The team comprises four Business Support Managers, with Peter Driver as the Head. One of their roles is to ensure that Haden is able to deliver the technical solutions for contract operations and those included in sales proposals. They will look at the effectiveness of technology used on existing contracts and advise where different solutions may be more appropriate. They will also help other parts of the business make the best use of their technology and systems.

Set up in November last year to run the Royal Mail Group's 3,000 buildings in the UK, Romec Ltd turned over more than £100m in the first six months of operation. Recently the company joined forces with Haden to help global cleaning company JohnsonDiversy install soap and detergent dispensers at 480 Tesco stores throughout the UK. The £500,000 contract was completed over eight weeks by a joint Haden/Romec team.

"We are able to offer something unique in terms of our national coverage and the sheer scale of the engineering workforce that we have," says Mike.

BBnet: Our world at your fingertips

Knowledge Manager Peter Steckelmacher (right) with Chief Information Officer Ajey Sharma.

To support Balfour Beatty's knowledge management initiative, a Group-wide intranet – called BBnet – will soon be coming to your screens.

"Knowledge management is very much about sharing, and for the first time, people will be able to share information electronically, right across the organisation – not just within their own operating company," explains Peter Steckelmacher, Knowledge Manager. "Our businesses have always been very strong individually, but not so good at sharing knowledge and ideas across the Group," he says.

"It's becoming increasingly important for us to be able to do that, because our industry is changing. We're bidding for more projects that involve a mix of skills from different operating companies, and that means people across the organisation are needing to work together a lot more."

Peter adds: "BBnet is designed to help them do precisely that. We realised that we needed to enable staff to communicate electronically, because it's not always possible for them to meet face to face when they need to discuss business issues.

"BBnet will help staff to share information, or to ask for advice from experienced colleagues. It's all about tapping the great pool of knowledge that we know is out there, so that we don't have to reinvent the wheel every time we start a new project."

Among the key features of BBnet are 'In Touch', a project database and a community area.

'In Touch' is a directory of people's skills, experience and interests, along with their contact details. Individuals will be able to keep their own profiles up to date, and colleagues can search the directory if they need help or advice on a particular project.

The project database will be built up gradually, as new projects are added. Staff will also be able to share 'best practice' and to benefit from the lessons learned on previous projects.

Latest developments

Last but not least, people will be able to use the community area to form their own communities of interest, where they can share documents, hold discussions and keep each other up to date with the latest developments. They will also be able to do all this without needing any special IT skills, so there are no barriers to starting up a community.

BBnet was piloted during August, and is currently being rolled out to all the Group's UK companies, with the overseas businesses to follow – but Peter is still open to suggestions for its future development.

"The content isn't set in stone," he explains. "We want BBnet to develop into a genuinely useful tool for all Balfour Beatty staff, and there will be a feedback section for people to relay their ideas."

Station set to finish ahead of timetable

The Balfour Beatty Zen Pacific joint venture looks set to complete Nam Cheong Station in Hong Kong by the end of September – one month ahead of the original schedule.

Pre-revenue operations (PRO) are now in progress, following the successful first round of statutory inspections of the station building by the Fire Services, Building Departments and Hong Kong Railway Inspectorate.

The PRO testing requires that the Kowloon-Canton Railway Corporation (KCRC) runs trains at the specified weekday and weekend schedules for three months prior to commercial operation.

The Mass Transit Railway Corporation (MTRC) is also running passenger trains through the station.

As this is a combined KCRC/MTRC station there are over 550 rooms for both Corporations' administrative staff and plant rooms and 320 have now been handed over. The phased handover to both KCRC and MTRC operational staff was completed in July.

The current focus of attention is to complete the Public Transport Interchange (PTI) works, which will provide access to the station for buses and taxis. It is part of the substantial network of roads and utilities construction associated with the project.

Consortium will turn up the power in Jakarta

A consortium comprising PT Balfour Beatty Sakti Indonesia, Siemens and Samsung has won a US$290m contract to extend the Muara Tawar power station in Indonesia. This will involve the addition of six 143 MW gas turbines to the site, which is located north of Jakarta.

Balfour Beatty Sakti Indonesia's scope of work, valued at US$32.5m., includes the design and construction of civil works, M&E works and a substation.

BBSI was one of the joint venture partners responsible for civil and M&E works when Muara Tawar was built during the 1990s.

The extension project has a schedule of just 14 months.

Left to right: Mr Eddie Widiono S – President Director, PT PLN (Persero), Mr Chung, Seung TL – Executive Vice President, Samsung Corporation, Mr Purnomo Yusgiantoro – Minister of Energy and Mineral Resources, Mr Murdaya Widyawimarta (Poo) – President Director, Balfour Beatty Sakti, Mr Gerhard Schroder – German Bundes Chancellor, Dr Heinrich von Pierer – Chief Executive Officer, Siemens Aktiengesellschaft.

Left to right: Ian Livingston (AA) John Secker (BB) Bruce Benjamin (AA) Eva Tsang (AA) Hans Bakker (AA) David Suff (BB).

Topping out in Hong Kong

More than 150 guests celebrated the topping out of the HK$420 (£38m) East Hall Project at Chek Lap Kok airport, Hong Kong.

Guests of honour Mr. Hans Bakker, Commercial Director of the Airport Authority, and Ms Eva Tsang, Manager of the Retail and Advertising Business Unit for the Airport Authority, praised the efforts of the Balfour Beatty team for bringing the project to this stage, on programme.

The building was handed over to the client on July 5.

Balfour Beatty has also completed the first phase of the reconfiguration works inside the existing Passenger Terminal Building. This includes the reprovisioning of landlord facilities in three existing kitchens, and retiling 1,500m^2 of existing restaurant seating area.

◆ Balfour Beatty Rail did a good deed for a Scout group in Kent that was relocating its Scout hut to an area of industrial wasteland. The company donated 40 wooden rail sleepers as a base for the mobile hut and helped the 1st Hythe Scout Group with the site clearance.

£50m London rail project

Network Rail has appointed a joint venture of Balfour Beatty Rail Projects and Seeboard Contracting Services as preferred contractor to upgrade the power supply to the rail network in the inner London area.

The seven-year framework agreement is expected to generate around £50m of work during 2003 and 2004.

It includes design and construction of new and upgraded sub-stations, the design and installation of high voltage switchgear and other equipment and the replacement of cabling systems.

How we took the water out of French whisky site

BALFOUR Beatty Construction has turned unfavourable ground conditions to an advantage on the £15m Glen Turner Distillery project in Scotland.

Unexpectedly wet ground conditions at the 15ha site in Livingston forced the company to reappraise the groundworks. The revised proposal involves adding lime to the soil to transform what was unsuitable material into a working platform.

As a result 141,000m^3 of material that was going to be taken to a landfill is now being used for the project. This has cut the requirement for imported quarried fill from 127,000m3 to zero. At the same time, the level of groundworks is being raised by 200mm over the entire site.

The lime is spread and rotovated into the soil to a depth of 450mm using purpose-built machines. It reacts with the soil to improve the bearing properties. The treated soil is compacted by heavy vibrating rollers and rigorously tested to ensure it meets the required bearing capacity.

The whisky blending, bottling and storage facility is being built on behalf of La Martiniquaise, France's fourth largest spirit company and owner of the Glen Turner brand. The project is scheduled for completion early next year.

UK road construction tops £900m

The award of new contracts in Scotland, Wales and England brings the value of Balfour Beatty's road construction projects in the UK to more than £900m.

Connect Ltd, a joint venture of Balfour Beatty Civil Engineering and WS Atkins, has started work on a £132m design, build, finance and operate (DBFO) road project in Scotland.

The M77/Glasgow Southern Orbital scheme covers approximately 25km of dual carriageway and motorway and will improve links between Lanarkshire, Ayrshire and Glasgow. The two-year scheme will see Connect upgrade 15km of the existing A77 to motorway standard by extending the M77 Ayr Road Route south to the dual carriageway at Kilmarnock.

The project, which is being financed by a fixed rate investment grade bond, also provides the new 9km Glasgow Southern Orbital dual carriageway local road between the new motorway and the A726 trunk road. Connect will hold the concession for 32 years.

Balfour Beatty already owns and operates three DBFO roads under the Government's privately financed infrastructure (PFI) initiative. The others are the A1-M1 link in Yorkshire, the A30/A35 in Devon and Dorset and the A50 between Derby and Stoke.

◆ The National Assembly of Wales has awarded Balfour Beatty Civil Engineering a £14.5m design and build contract to upgrade a section of the A494/A550 trunk road. It is one of the main transport links between North Wales and England, as well as being a busy holiday route throughout the summer.

The scope of the project, which began at the end of June, includes the widening of 2.4km of the road from dual two to dual three and four-lane highway, the construction of a collector distributor road running parallel to the main highway, and a link road to the A548 towards Chester.

At RAF Sealand an infamous humpback bridge will be completely removed and the trunk road lowered. A 'Bow String Arch' bridge – just for the use of pedestrians and cyclists – will be built in its place.

◆ In England the Highways Agency awarded Balfour Beatty Civil Engineering the £148 million contract to widen the M25 between Junction 12 (the M3 Interchange) and Junction 15 (the M4 Interchange). The contract also includes the construction of the Stage 2 Heathrow Terminal 5 Spur Road. (See *The M25 challenge* article on page 5.)

◆ Balfour Beatty's other recent road construction projects include the £486m Birmingham Northern Relief Road, the £75m A120 in Essex, the £34m Haddington to Dunbar Expressway near Edinburgh and the £23m A8 Baillieston to Newhouse Major Maintenance contract near Scotland.

Civil Engineering Division faces highways test

Balfour Beatty Civil Engineering Division will be taking a critically important exam this year – one it must past with flying colours.

Offices and projects are being visited by assessment teams from the UK Highways Agency as part of a new rating scheme.

The Agency's Capability Assessment Toolkit (CAT) has been developed to "improve the consistency, transparency and robustness of the selection of tenderers" for highway projects. For the first step of the process, the company has to score its current performance under the headings of direction and accountability, strategies and planning, people, partnering, processes and internal resources.

Visiting assessors from the Agency will then validate the information provided and decide a final CAT score.

The highest scoring companies, including designers who are undergoing a similar exercise, will be first choice in the selection of tenderers.

"It is essential we achieve as high a score as possible for our future business and that will depend in large part on our responses during the assessment process," says Marshall Scott, Managing Director of Civil Engineering Division.

◆ Meanwhile BBCEDB is giving a facelift to Liverpool, recently named as the European City of Culture 2008. The City Council has awarded the Civil Engineering Division a £3.5m contract to upgrade the Covent Garden and East Moorfields areas of the city centre.

This high profile scheme, which began in August, is the Division's first major project in Liverpool.

It includes the repaving of existing footways and carriageways, and the replacement and renewal of street furniture, street lighting and traffic signage. There will be new gulleys and connections added to the existing surface water drainage systems. Some demolition and construction work is also involved.

John takes on HR role

JOHN TOWNSLEY (above) has been appointed Vice President of Human Resources for Balfour Beatty North American Operations.

In this new role, John will provide strategic direction, guidance and support to the operating companies from the human resources and environmental, safety and health functions, and assist the organisation with new business opportunities.

John brings more than 17 years of professional human resources experience to Balfour Beatty. He has spent his career in increasingly senior HR positions with three top US companies, Emerson Electric, Danaher Corporation and most recently Cardinal Health.

Based in the Detroit offices, John reports directly to David M Wathen, President and CEO.

Utilities team win awards

BALFOUR BEATTY Utilities picked up two awards in Yorkshire Water's Investment in Yorkshire Awards 2003 for hard work on the Rehabilitation, Investigation, Design and Build Term Contract.

Andrew Maginley, Customer Service Manager received an individual "Commendation of Excellence in Customer Service". This was as a result of his outstanding contribution towards customer service delivery to Yorkshire Water and its customers.

The "Best Overall Safety Provider" award went to the Utilities team, which performed to the highest level of Health and Safety achievement across all activities for Yorkshire Water.

Teams work 24/7 to rebuild railway smashed on 9/11

Metroplex teams working round the clock have enabled part of the rail system linking New York City to New Jersey, crippled by the collapse of the Twin Towers two years ago, to re-open.

With up to 120 people working 24 hours a day, seven days a week, Metroplex completed the risky, high profile project on schedule, having been awarded the $17m contract last October.

When the World Trade Center collapsed on September 11 2001, Port Authority Trans-Hudson (PATH) trains were trapped below ground – but not before all passengers had been evacuated via Exchange Place station, off Wall Street.

The two one-mile PATH rail tunnels under the Hudson River began to fill with water at the rate of 3,000 gallons a minute, and, despite the use of massive water pumps, it was feared negative pressure would cause them to implode.

Two five-feet-thick concrete plugs were poured into the New Jersey side to save the entire PATH system, although these were later removed and the water pumped out.

Work never ceased at 'The Bathtub', above, and Exchange Place, below.

Tri-venture

A tri-venture of Yonkers/Tully/Pegno was awarded the $300m contract to restore the infrastructure and get passenger trains to and from New Jersey running again, and the project was broken down into three regions – Exchange Place, the Tubes (or tunnels) and the Bathtub.

After a year's work by the tri-venture removing debris, Metroplex moved in as track contractor in October 2002.

At Exchange Place, teams worked round the clock laying 4,000 feet of track with a third rail and coverboard and eight turnouts, or switches. Fare-paying passengers were able to use the service from Exchange to New Jersey again in June.

The two one-mile tunnels under the Hudson had been completely stripped down to the original rings and new duct banks set in place. Metroplex then completed laying the two miles of concrete direct fixation track in six weeks, and installed the third rail and coverboard on schedule.

The slurry wall installed around the World Trade Center site when it was built to prevent flooding from the Hudson, the Bathtub, was compromised by the fall of the towers, but complete collapse was prevented by re-tightening the tie-backs.

Metroplex built the loop tracks for the return trip to New Jersey, work that consisted of eight turnouts, 3,000 feet of ballasted track and 3,000 feet of direct fixation track within the temporary World Trade Centre station.

Because of the hard work and dedication of the Metroplex personnel involved, test trains have been running on the lines throughout the summer, and it is expected that complete passenger services will be restored in mid-November.

Sailing to success on triathlon bridge

A stunning light show and a place in the route of the Great Wales Triathlon marked the inauguration of Swansea's new Sail Bridge in June.

It is one of the two pedestrian bridges over the River Tawe as part of the £3.5m contract awarded to Balfour Beatty Civil Engineering by the Welsh Development Agency.

Measuring 142m long, the Sail Bridge features a curved deck, a 42m-high inclined mast and a series of support cables that resemble a yacht's rigging. Hoisting the 85 tonne mast in the middle of the river required two floating cranes, one of which came from Tunisia specifically for the job.

The second bridge, known as the Southern Bridge, is a fixed span structure measuring 80m long by 4.5m wide by 6m high.

Both bridges were designed by Flint & Neill Partnership and Wilkinson Eyre Architects and fabricated by Rowecord Engineering Ltd at their workshops in Newport and Swansea.

Brian May, Regional Construction Director for Civil Engineering Division, congratulated both Project Managers, Rhodri Ab-Ieuan and Stuart Miller and the rest of their team on their performance and the fantastic team effort that went in to getting the site and bridges ready in time for the Triathlon.