



Constructing Excellence
Demonstration
Project Programme

Annual Report 2007

Foreword



Denis Walker
Director, Construction Sector Unit,
Department for Business Enterprise
and Regulatory Reform



Bob White
Chairman,
Constructing Excellence.

"Your Demonstration Projects are going from strength to strength and I was greatly pleased to see that the outcome of the review has been so quickly implemented.

In an industry which suffers from fragmentation and an inability to capture and effectively share knowledge from one project to another Demonstrations are a highly valuable tool in ensuring that your next project fully realises the benefits from previous projects."

Constructing Excellence is delighted to present the Annual Report for the Demonstration Project Programme for 2006-07. This report provides details on activity in the last year as well as information on the Programme going forward. It is drawn from the work delivered across the country to capture learning from projects and share that knowledge with industry to ensure that innovation and best practice reach as wide as possible an audience. This is absolutely in line with Constructing Excellence's mission of improving industry performance to produce a demonstrably better built environment. Indeed, the Demonstrations have been at the cornerstone of our efforts at Constructing Excellence to achieve this since we were first established after the Egan Report nine years ago.

In the last year, following a period of review and consolidation, the Constructing Excellence Demonstration Programme has again proven itself to be an invaluable mechanism for transferring knowledge within construction. With focused programmes of work now underway, we are able to ensure that the knowledge that is captured from Demonstration Projects is fully relevant to industry. We are also starting to see a number of useful outputs from the Programme including case studies and best practice reports which are designed to help people implement change on their own projects or within their own organisations. We have recently begun to measure the impact that these and other means of best practice dissemination are having on industry and will look to report this in future years.

The Demonstration Programme

The last year has been an exciting and challenging one for the Demonstration Project Programme. The Programme, which had historically received core funding from BERR (The Department for Business Enterprise and Regulatory Reform) has, this year, had to find alternate funding to remain sustainable. This has been achieved by engaging with new clients for the Demonstration Programme and leveraging support from the Constructing Excellence membership forums.



Jon De Souza
Demonstration
Programme Director,
Constructing Excellence.

We are delighted with the progress made by the Demonstration Programme in 2006-07. This year has seen the recruitment of 45 new projects from across the construction sector and the publication of 31 new case studies. The activity in the last year follows a root and branch review of the Demonstration Programme which commenced in late 2005. Following the review, new processes were put into place for delivery of the Programme which have borne fruit both in engaging with participants and making the Programme something that businesses are now competing to get involved in.

These improved processes have seen a great deal of valuable knowledge captured from industry which is available to Constructing Excellence members and the wider industry to help drive performance improvement. In addition, as the new processes do not require a great deal of paperwork we are able to maximise the value in our work with Demonstrations and make the Programme more attractive to potential participants. Within this document, the first Annual Report for the Demonstration Programme since 2004, we describe some of the activity that has taken place in the last year and provide details on where the Programme is headed in the future.

What is the Demonstration Programme?

Demonstration Projects are active construction projects seeking to innovate or apply an element of best practice leading to a step change in performance improvement. Demonstration Projects tend to come from the innovators or first chunk of 'early adopters' in the 'Innovation Adoption Life Cycle'.

Constructing Excellence works with these leading-edge projects to capture the learning from them and uses that learning to influence change in the industry. Experience tells us that nothing can compare to using lessons from real projects when trying to make the case for change in construction.

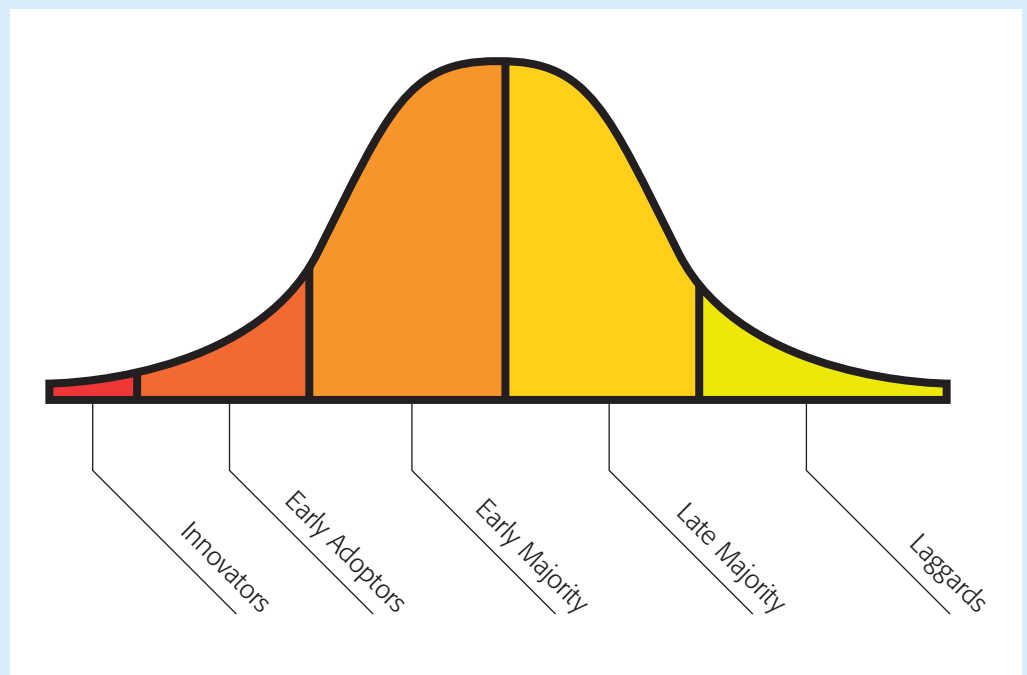
Demonstrations are chosen on a themed basis, with key themes chosen by each client for Demonstration Projects. The themes and clients are described later in this publication. The decision as to whether a project becomes a Demonstration is taken by a working group made up of representation from industry, thus ensuring that projects accepted onto the programme are suitable and relevant.



Rotherhithe Estate



Manchester University



Key Performance Indicators

One necessary part of the Demonstration Programme is the collection of Key Performance Indicators from participants. Without the collection of KPIs it is impossible to sell the business case for change. Each year since the advent of the programme in 1998 there has been a notable difference in performance between the Demonstrations and the rest of the industry.

The most recent data, collected from projects in March 2007, shows that across the board Demonstrations have outperformed the rest of the construction industry. The most marked differences appear in some of the 'softer' issues such as employee satisfaction, qualifications and skills and environmental impact.

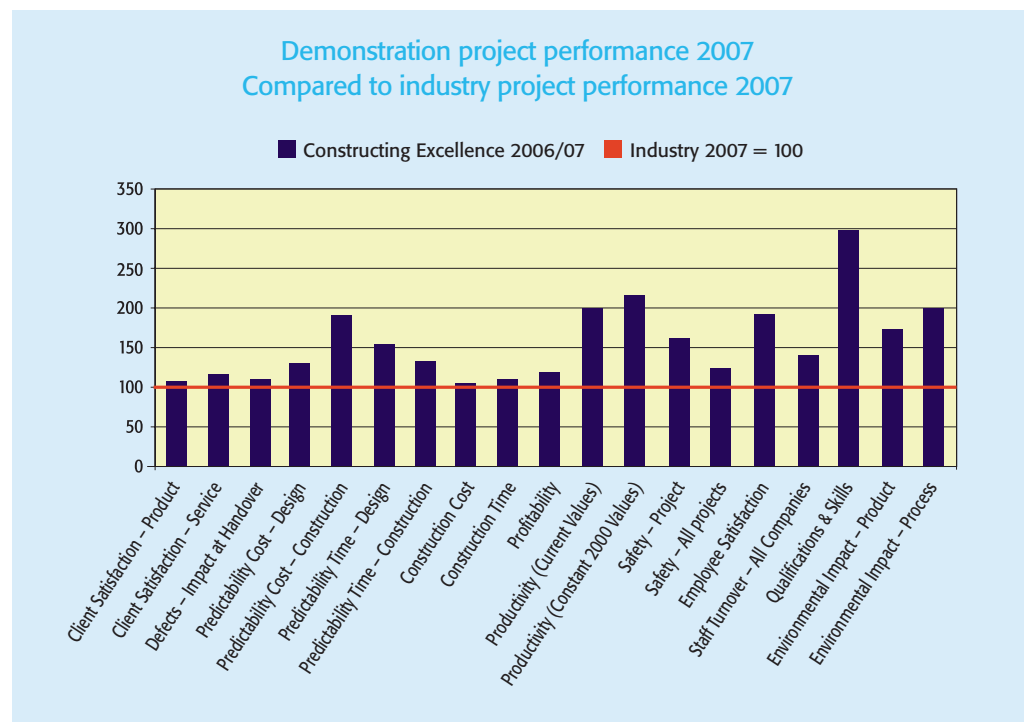
Research has told us that Demonstration Projects tend to reinvest in things like ensuring the best possible level of health and safety management, providing good quality facilities for site workers, offering training and apprenticeships and investing in environmental sustainability.



Porth Relief Project



Cambridge City Services in operation



Why become a Demonstration?

Participants in Demonstration Projects identify two key benefits in engaging in the Programme. The first are the PR and marketing type activities that Constructing Excellence carries out for the Demonstration Programme designed to raise the profile of the Demonstration Projects.



Macclesfield Bus Interchange

This includes:

- Working with Constructing Excellence's PR agency to get stories on Demonstration Projects featured in the press
- Use of a logo denoting the project as a Demonstration
- Pages featuring the project on the Constructing Excellence website
- Articles in Constructing Excellence publications and e-newsletters
- Opportunities to showcase the project at Constructing Excellence events
- One or more case studies produced on the project

The second key benefit identified is that of having an opportunity to participate in a learning and sharing network of forward-thinking organisations. Many Demonstrations find this knowledge sharing network particularly useful and enables them to pick up good ideas from fellow Demonstration participants, thus benefiting their own organisations and projects.

Knowledge Management System

<http://demos.constructingexcellence.org.uk>

March 2007 saw the launch of the new Demonstration Project Knowledge Base System. This system was developed following feedback from industry and Demonstration participants that stated that it was difficult to access the knowledge from current and previous Demonstration Projects.

The new system is designed to make access to information on the Demonstration Projects much more straightforward, providing a more simple facility for finding projects that have particular properties.

A new search function will allow users to find projects from particular sectors in the industry or that have demonstrated excellence in certain areas of best practice. A powerful new 'free search' tool will search all material held on Demonstration Projects for any word or phrase of the user's choice.

Further functionality will allow Demonstration participants to learn and share with one another online.

It is intended that the new system will allow much better transfer of knowledge not only between Demonstration Projects and industry but also between individual Demonstration participants.

Over time, we will develop the Knowledge Base to best serve the Constructing Excellence membership, our stakeholders and the wider industry.

How to get involved



Norwich Bus Station



Redlands Primary School

To help you here is an idea of what we are looking for;

- Is it special? We want to know if you are doing something that is common to the industry or are you doing something that is new. It needn't be technologically cutting edge, but it needs to be different. It could be how you manage a specific process or a wide ranging programme.
- Does it have real benefit? We want both qualitative and quantitative data. You needn't submit all your information, but we need to know that you have changed or achieved something, and the best way to show this is through some measurable information. Did you do it cheaper, better, or with increased satisfaction to your clients? These are only examples, but the important thing to remember is data will show us how effective your Demonstration was.
- Is it honest? We are not looking for marketing information. We want real stories which give an honest picture which will show all of the issues that you have to overcome to deliver.

If you would like to put forward a Demonstration for consideration please either download the application form from the Constructing Excellence website or contact the team mentioned to the right by emailing demos@constructingexcellence.org.uk.



The Oxford Castle Malmesion Hotel

In the following pages we provide details on the Demonstration themes active in 2006-07.

The Team

Head Office Team

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East of England

Alan Mossman

South West

Doug Forbes

Scotland

George Heaney

Northern Ireland

Debbie Watkins

West Midlands and Yorkshire and Humber

Client Driven Health and Safety

Projects in this theme area have demonstrated the benefits that can be achieved by applying innovative approaches to ensuring high standards in health and safety on construction projects. On each of these projects health and safety has been considered a significant driver for success by the client.

This theme has been chosen by the Construction Clients' Group (CCG) and activity has been driven by the CCG's Health and Safety Working Group. The importance of health and safety in construction is well recognised with still too many fatalities occurring on UK projects; 59 in the year ending March 2006. With the update to the CDM Regulations in April 2007, featuring additional responsibilities for clients, this Demonstration theme has proved very timely. The CCG Health and Safety Working Group felt it was important to not simply concentrate efforts on projects with good health and safety performance but to work with those where client drivers and activities could be shown to have had a positive impact; to capture

what has been done and see where this could be replicated. It is hoped that the knowledge captured from such projects will assist other clients in achieving a high level of performance. What has been apparent from working with these Demonstrations, has been the positive impact that clients can have on the health and safety performance of projects. Within the Demonstrations in this area there was not a single reportable accident. This has been achieved by early consideration of health and safety issues, including during procurement; involving all relevant stakeholders in design discussions and measuring and monitoring performance and using the results to drive improvements.

Case Study

52 Grosvenor Gardens



The 52 Grosvenor Gardens project saw the refurbishment of an architecturally important site in central London, the building being one of the first steel frame structures on the UK, constructed in 1927. The contract sum was £586,000 but the project was brought in £112,000 under budget.

The project was notable due to the approach of the client, Grosvenor Estates, to health and safety. Grosvenor Estates as a client are absolutely committed to driving health and safety performance on their projects and achieve this by instilling their approach to health and safety into their supply chain. Grosvenor Estates incorporate clauses for health and safety into their contract documents and consider contractors' approach to health and safety during procurement. At 52 Grosvenor Gardens the client employed a health and safety professional who was engaged at a very early stage to drive the process. This health and safety consultant worked intensively with the project team and for the client team, the Clerk of Works carried out visits to site twice a week and the Project Manager once a week to monitor activity.



The 52 Grosvenor Gardens project also considered occupational health issues with bicycle rails set aside for site staff and a large quantity of water stations and suntan lotion dispensers available for use. The Grosvenor Estates approach has paid dividends with no reportable accidents on the project.

Corporate Social Responsibility

This theme area was active in 2006-07 for Constructing Excellence's Infrastructure Forum, prior to its official launch. The projects in this theme area have utilised a definition of corporate social responsibility of 'a company's obligation to be accountable to all of its stakeholders in all its operations and activities with the aim of achieving sustainable development not only in the economical dimension but also in the social and environmental dimensions'.

Therefore, projects recruited for this theme are using innovative approaches to ensuring the best possible performance in terms of environmental and social issues. This theme area has obvious parallels with the theme of sustainability, details of which appear later in this document.

The projects recruited to the Demonstration Programme have been drawn from various parts of the infrastructure sector, including roads, rail, airports and coastal defence projects.

It was noted that the KPI performance of these Demonstrations in areas related to CSR, such as environmental impact and staff satisfaction was far higher than the rest of the industry, as might have been expected. In addition, performance in other areas was also markedly improved. For instance, productivity on Infrastructure CSR Demonstrations was twice as high as the industry average.

Case Study

AmeyMouchel Innovation Process and Respect for People work



This Demonstration looks at the impact that the innovation process has had on the AmeyMouchel Highway Maintenance Programme for the Highways Agency. The process, known as Watchman, seeks to capture ideas from employees at all levels in the organisation in order to improve performance. Staff who put forward successful ideas receive an award, with a £100 prize for the best idea in each of three categories.

A six-stage process underpins the collection and implementation of new ideas, and a two-way governance structure has been introduced to monitor the process. The process is facilitated through a network of Innovation Sponsors, plus a dedicated Innovation and Continuous Improvement Manager to provide consistency. Ideas submitted via a Watchman Form are passed to the Innovations Group, and are considered in terms of safety, environment and alleviating congestion. By May 2006, 99 innovations had been raised, with 66 taken forward and 43 implemented, an excellent result considering that 180 employees work on the programme. In relation to their work around the 'Respect for People' agenda, AmeyMouchel have adopted the 'Respect for People' initiatives as a step towards fulfilling a key objective, being to attract and retain the best people. Some benefits of this include improved employee satisfaction & stronger cultural enrolment into the AmeyMouchel 'vision'.

Cross-Authority Collaboration

It is an increasing facet of both public sector and housing work that procurement is being delivered on a collaborative basis with clients coming together to purchase construction and related services. This approach is providing real benefits when utilised in the local authority sector and, as such, cross-authority collaboration was chosen as a theme for Demonstration Projects by the Local Government Task Force.

The theme of cross-authority collaboration encompasses ways in which local authorities and their agencies, such as Arms Length Management Organisations in housing delivery, are collaborating in the procurement and delivery of construction. This need not be construction in itself but could also include design, professional services or the procurement of materials.

Client collaboration has been a feature of the Demonstration Programme since its outset. In the early days of the Demonstrations this normally took the form of collaborating

through benchmarking, with authorities comparing their performance measurement scores and implementing improvements as a result. The manner of collaboration has moved on since then, with current Demonstrations much more likely to feature more in-depth types of co-operation.

Where there is collaboration between local authorities there is a tendency to drive this integrated mindset down the supply chain. Projects in this theme area scored particularly well on KPIs for customer satisfaction and defects.

Case Study

North East Collaborative Employment Integrator



The North East Collaborative Employment Integrator Demonstration is a regional pilot project in the North East, initiated by the National Employment Panel. It is a regional partnership, currently promoting construction training across as many as 10 local authorities and up to 30 construction projects involving social housing.

The aim of the project is to maximise the engagement and recruitment of local unemployed jobseekers in major capital projects, housing refurbishment and related activities across the region. The project operates in conjunction with Job Centre Plus, the Learning and Skills Council, ConstructionSkills and the local authorities throughout the North East of England. It has also partnered with both the Building Tyne & Wear and Building Futures projects to leverage training support.



It is hoped that this pilot will see over 400 people brought into the construction sector which will go some way to meeting the projected labour shortages for the industry in the North East. One of the longer term aims of the pilot project is that it will serve as a model to be replicated in other parts of the country, and to date two key learning points have been identified:

- Engaging with local authorities from the outset is absolutely vital
- Work with existing organisations wherever possible.

'Don't reinvent the wheel!'

Delivery on Time and on Budget

This theme area, chosen by BERR, (formerly the Department of Trade and Industry), looked to work with those projects where special and innovative measures were being taken to ensure delivery on time and budget.

These included novel approaches to value and risk management, the use of lean construction, process engineering, knowledge management and application of Modern Methods of Construction (MMC) or IT techniques. In all cases, the projects recruited implemented collaborative working, with contractor involvement in design.

Of course, as the Demonstration Programme works with active projects, there was no certainty that the projects recruited in this theme area would be delivered on time and budget. However, we are glad to say that on all projects where special efforts were made to ensure delivery on time and budget, this was achieved.

Demonstrations recruited in this theme area showed improvements in all four predictability measures (cost of construction; cost of design; time taken on construction; time taken on design). The largest improvement this year came in predictability of cost of construction where almost an additional 20% of Demonstration Projects have been on target or better.

Case Study Pisa Project



The Pisa Project introduces Lean Management Techniques into the Riverside Regeneration Department. The focus of the project is a fully integrated development process that eliminates waste (with the aim of reducing cycle times, duplication and non-value adding activities). The project includes a pilot, and an analysis of the current condition, that will then be developed into a future vision, with an implementation plan for realising the improvements. The project is intended to involve the entire development project from inception to final completion and will be undertaken in two distinct phases – firstly, inception to start on site, and secondly, start on site to final completion.



This project will deliver demonstrable benefits to Riverside, including lead-time saving, cost reduction and quality improvement. A key deliverable of the project is the delivery of quality housing, on time and within budget with zero defects. Furthermore, it will improve the service level provided to Riverside's residents, enabling the supply of higher quality properties and services in the most efficient, effective and responsive manner possible. It will also demonstrate the effectiveness of Lean and could be used as a catalyst for a more extensive rollout of lean techniques and philosophies.

Design and Customer Satisfaction

Projects in this theme area are demonstrating ways in which design can be carried out to ensure high levels of customer or end-user satisfaction. This may include designing for security, providing open space and end user involvement in the design process.

Projects will have determined and understood customer expectations in regards of their experience of their own individual residences, their setting (i.e. the wider development) and their context (the community).

The Demonstrations in this theme have helped to inform the work of a Housing Forum members' working group, chaired by Barry Munday of PRP Architects, which is looking to discover where there are mismatches between supply and demand policies. The projects in this area have tended to score particularly well in client satisfaction as compared to the rest of the industry.

There was also a tendency for them to go beyond the industry norm in offering training opportunities, often to disadvantaged local people. As such, the qualifications and skills KPIs on these projects were also excellent.

Projects that were engaged in this area worked to ensure that their housing supply was 'fit for purpose' by liaising with end-users and local communities and making sure that the homes would be somewhere that residents would actually want to live.

Case Study Silwood Estate Regeneration



The refurbishment of the Silwood Estate in South London is being managed as a partnership between London and Quadrant (Tower Homes) and Presentation Housing Associations. The two partners have contracted with Higgins plc and its supply chain to carry out the work in phases to create a mixed-tenure community and to construct community facilities such as a community centre and nursery. Training has been embedded in all phases of the contract, and Higgins, working with sub-contractors, identified skills gaps and carried out recruitment. They work closely with residents on the estate, ensuring they recruit from a diverse background. Training is delivered by local colleges and training agencies, and close support is also offered on-site by Higgins and sub-contractors. The trainees start without qualification and through largely work-based training and support they gain NVQ Level 3.



A major achievement of the project has been the creation of a strong community ethos on-site, with good relationships between workers, managers and the wider community. The project team worked hard to keep local people informed about the progress of the work, with a newsletter sent to residents on a regular basis. This newsletter was also used to promote local activities and street parties, organised in part by the project team. The buy-in from the community following this activity, has had a huge impact on life on the estate.

Fair Payments

Payments down the supply chain have been an issue within construction for a number of years with delays in payments to contractors and suppliers a regular occurrence. However, there has been a move recently to incorporate fairer payment practices with this drive most noticeable within the public sector.

The 2012 Construction Commitments document states that work should be delivered incorporating fair payment methods and the Office of Government Commerce has set up a working group on fair payments as part of the Public Sector Construction Clients' Forum.

What has been noted is that, in all cases, projects adopting fair payment practices have been procured and are being delivered in a collaborative way. It simply is not possible for a project to attempt to adopt fair payments when it is not guaranteed in a culture of integration.

Fair Payments, as a Demonstration theme, has been adopted by the Local Government Task Force. Projects in this theme area are demonstrating the inclusion of fair payment practises, which could include payment periods within 30 days, no unfair holding of retentions and, where practicable and cost effective, project bank accounts.

Case Study Cadishead Way



Cadishead Way is a New Build Road, commissioned by Salford City Council. The project is the first major civil engineering contract fully committed to partnering for Salford City Council and included early contractor involvement to develop the design, buildability and cost of the scheme. They used a small in-house team who developed and designed the scheme as far as possible, through a 'preferred contractor' stage, and were able to adopt early contractor involvement and avail of the knowledge to develop the scheme to construction. There have been extensive meetings between the team to develop "Value Engineering" ideas, which have been contributed by both parties to provide a better product in terms of the overall project. Salford have a strong commitment to ensure that all parties benefit mutually from any "Value Engineering" savings on the project. Ideas include:

- Innovative approach to embankment excavation to avoid major temporary works
- Redesign of retaining wall to minimise construction and financial risk
- Rationalising of testing programme to save on time and cost

In addition, the value engineering process, use of experts in technology of materials, and a proactive, flexible approach means there have been substantial reductions in the volumes of materials required, leading to significant environmental benefits.

Impact of MMC on Resource Efficiency

During February and March 2007 Constructing Excellence carried out a piece of work for Envirowise to study the impact that Modern Methods of Construction (MMC) can have on resource efficiency. For the purpose of this project MMC was defined as off-site and prefabricated solutions while the aspects of resource efficiency on which the project concentrated were site waste; commercial vehicle movements; energy use and water use.

As part of the overall project, Constructing Excellence delivered a number of Demonstration Projects where there was a clear relationship between the use of off-site or prefabricated solutions and one or more of the aspects of resource efficiency listed previously.

From working with the Demonstration Projects in this theme, a number of relationships between MMC and resource efficiency were determined. The clearest contingent relationship was found to be between MMC and site waste, with there being very little waste produced when off-site and prefabricated solutions are used.

Two projects carried out evaluations of transport movements to determine whether more or less were required as a result of using MMC type solutions. Both projects found that there were reductions in vehicle movements in adopting MMC. The impacts on energy and water use were far more difficult to determine.

All of the projects in this area were notable for the early involvement of the MMC provider which enabled the scheme to be designed with these solutions in mind.

Case Study

Cleveleys Coastal Defence project



The key driver behind the Cleveleys Coastal Defence Project was to improve flood protection to 8700 properties in the Cleveleys area, and to upgrade the promenade. The client recognised that early contract involvement and integrated working were essential in delivering a successful scheme. Partners were incentivised by a pain/gain share arrangement and they used an open-book, live cost monitoring system which could be reviewed at any time. The success of the partnership was built on trust, understanding and shared objectives, and used a number of techniques such as teambuilding exercises, a project intranet and co-location of project staff. Sustainability and environmental performance were key considerations on the project. Precast units kept waste to a minimum, and an on-site crusher was used to process all demolition arisings for re-use within the works. All waste was segregated and, where not possible to reuse it on site, sent off-site for recycling. The team attempted to source as much in the way of local materials and suppliers as possible and vehicle movements were monitored where this was not feasible.

Thanks to successful partnering, the scheme will be completed by end-2007, 72 weeks ahead of schedule. Furthermore, the team have utilised the knowledge and experience gained during the construction process to implement a company wide environmental initiative, incorporating the benefits of sustainable construction & reinforcing the existing Environmental policy and practices.

Improving Existing Stock

The remit of the Housing Forum Demonstration Programme looking at Improving Existing Stock has been to investigate barriers which still exist to improved performance and increased quality outputs, as well as to examine the lessons that can be learned from recent exemplars.

The Demonstrations recruited for this theme feature innovative ways in which refurbishment and maintenance can be carried out for the benefit of end users. These issues link directly to the Housing Forum's Customer Driven Strategy for all of housing development and construction, which focuses on the regeneration of communities through improvements to the existing housing stock, be that public, social or private. This includes a focus on the future sustainability of both communities and properties through the long term management and maintenance of the whole housing stock.

One important aspect of this work is the retrofit of existing stock and environmental technologies in order to limit carbon emissions.

Projects in this area performed particularly well on the defects and productivity Key Performance Indicators.

Case Study

Sheffield Decent Homes Investment Programme



The Sheffield Decent Homes Investment Programme seeks to set new standards of performance through integrated team working, delivering a high standard of design quality and innovation, optimum whole life costs, efficient delivery and installation. Faced with the challenge of refurbishing 55,000 homes over a six year period with a £1 billion budget, Sheffield Homes sought to establish an integrated supply team which brings together all of the expertise needed to both deliver best value for its tenants whilst maintaining and further improving a demanding respect for people agenda.



The Programme aims to provide 500 placements and 60% of these must be filled by people from the most disadvantaged communities. To date, roughly 200 placements have been made available and an additional 300 local employment opportunities. The programme has used the basic principles of project management and planning. 5000 properties are being improved in each three year cycle and it has taken forward planning over the three year period to ensure the trainees are developing the appropriate skills. The expected benefits of this programme are a younger, more qualified workforce, addressing inequalities on council estates, reducing anti-social behaviour and, it's hoped, these people will become role-models in their community.

Increasing Innovation in the Supply of New Homes

This theme, chosen by the Housing Forum, encompasses innovative methods in housing production, such as the use of Modern Methods of Construction, information technology, process improvement or new tools, materials or other products.

The work to recruit and capture knowledge from the Demonstrations in this theme area has fit with a Housing Forum members' working group chaired by David Birkbeck of Imperial College London.

Projects in this area performed particularly well on KPIs for defects, productivity, environmental impact and predictability of cost.

A number of Demonstrations that fit in this area were delivered for Envirowise, looking specifically at the impacts on resource efficiency that can be achieved through the use of MMC (please see page 14).

Case Study SmartLIFE

SmartLIFE was set up by Cambridgeshire County Council because it was apparent that there was a local skills gap potentially holding back the supply of affordable and sustainable housing. The team are still employed by the Council but funded by the SmartLIFE project (a package of EU and other government/agency funding). They are backed by a dynamic national and international partnership devoted to changing the future of sustainable development.



The key drivers influencing SmartLIFE training were the current growth agendas and the role that MMC (Modern Methods of Construction) could play in the future sustainable construction process. SmartLIFE recognised the need to increase knowledge and training in MMC to maintain the local industry's skill requirement by taking a multi-skilling approach to MMC training. They have engaged and worked successfully with local contractors, having identified that it is crucial for them to play a direct role in the trainees' programme. Further to this, SmartLIFE utilised their partnerships with Cambridge Regional College, BRE and Willmott Dixon throughout the project to successfully engage local labour.



The SmartLIFE partnership has given new insight into working through shared problems. Project targets have been delivered and there is an ability to address certain issues because of the information available via the partnership. Looking ahead, SmartLIFE will be looking at continuing to design and deliver different levels of MMC training to industry and students, focusing on the needs of the local and national construction industry. The project will widen the courses available, all with a continued focus on sustainability. It will also continue to deliver outreach to the local schools enabling a younger generation to have an understanding of sustainable construction. SmartLIFE also want to develop a wide range of activities that will focus on the central message of training and sustainable construction.



Integration and Collaborative Working

Projects in this theme area are demonstrating the benefits of collaborative working and the use of integrated teams and supply chains. A number of these Demonstrations feature collaboration being opened up to those supply chain organisations that do not normally benefit from the new types of working such as product suppliers and some sub-contractors.

The importance of this area is noted by the fact that the Department for Business, Enterprise and Regulatory Reform, Building and Estates Forum and Local Government Task Force all chose this as one of their key themes for 2006-07. For 2007-08 Demonstrations will also be delivered on this theme for the Infrastructure Forum and Constructing Excellence at a Group level. In addition, the Housing Forum has made it a prerequisite that any project recruited in any of their theme areas must be using collaborative techniques.

Integration and collaborative working has been one of the staples of the Demonstration Programme since it was established in 1998.

Such Demonstrations are also an excellent means by which to determine the extent to which the industry has progressed in the nine years in which the Programme has been in operation. In the early days of the Demonstration Programme, the projects recruited were excellent examples of single project partnering. Over time, Demonstrations of integrated and collaborative working have changed focus moving from simply being one-off partnered projects to multi-project partnering and onto framework agreements, integrated teams and supply chains and procurement consortia.

Case Study St. Paul's Square



Shepherd Construction is currently employed by English Cities Fund to construct three buildings at St Paul's Square, Liverpool with a contract value of £32 million. In preparation of the first stage tender in respect of one of the buildings, they found that the construction programme for this required 105 weeks and two tower cranes, which meant that the project would handover later than the client required and considerably over budget.



Through collaboration with their supply chain partner, a solution was proposed to use a relatively new product supplied by Corus, being Bi steel cores. Although more expensive than traditional construction, they offered a major saving on programme (84 weeks) and craneage (one), which brought the project back to within the client's budget and required completion date. Shepherd were subsequently invited to carry out the second stage of the tender, which was conducted open book with full transparency of all costs to the client. The project was ultimately procured very close to the clients' initial budget by full involvement of the Shepherd team and their supply chain partners. Value engineering was carried out in a controlled manner to reduce costs in several key areas without compromising on quality.



Sustainability

Projects in this theme area are demonstrating innovation or best practice in sustainability, be that social, economic or environmental sustainability. Issues that these projects could address include: the creation of sustainable communities; training and development; waste management; use of renewable energy; water recycling or carbon offsetting.

Along with integration and collaborative working, sustainability has seen the largest amount of Demonstration activity in 2006-07, with a large number of projects applying for Demonstration status in this area. During the last year Demonstrations have been recruited for both the Local Government Task Force and Department for Business, Enterprise and Regulatory Reform. There have also been related programmes of Demonstrations, such as those delivered for Envirowise on the impact of MMC on resource efficiency and the Demonstrations for the Housing Forum on sustainable training. In the next financial year Demonstrations of sustainability will also be sought for the Constructing Excellence Group members.

The last twelve months have seen a step change in the way in which the industry is addressing sustainability issues, most noticeably in the area of environmental sustainability. The Constructing Excellence Demonstration Programme has recruited projects that have led the industry in implementing techniques to improve sustainability performance. In the last year the main areas in which Demonstration activity has been concentrated have been on site waste management, techniques to provide renewable energy, such as biomass boilers, solar panels or wind turbines and reduced vehicle movements.

Case Study Bart's and London



St Barts in Smithfield and The Royal London in Whitechapel are two of the oldest and best known hospitals in the UK. The work being undertaken at both sites is Britain's largest hospital programme, with a total value of over £1 billion. Once complete, Barts will become a Cancer & Cardiac Centre of Excellence with the majority of care provided in a new state-of-the-art facility. Clinical services at The Royal London, including London's leading trauma centre and the capital's second biggest children's hospital will be brought together in a new landmark building.



Hospital refurbishment presents a number of unique challenges. Both Barts and The London Hospitals have to stay 100% operational throughout the lifetime of the project. Noise, dust and vibration must be kept to an absolute minimum due to the potential adverse effects on patient recovery time. Skanska identified this as a flagship project for many issues, including sustainability, at an early stage. Innovations such as a large acoustic screen to absorb sound and vibration and the appointment of Sustainability Champions throughout the project team have put this project on the cutting edge of sustainability issues. Other benefits to date include; 50,000 tonnes of waste diverted from landfill; 99.6% of demolition waste recycled and over 250,000 bricks sent for reuse.

Construction Legacy

The Construction Legacy - Housing project is a partnership between the Housing Forum and ConstructionSkills. It aims to encourage best practice in planning, funding, delivery and evaluation of training in housing and regeneration projects, with particular reference to the role of training in promoting sustainable communities.

Projects have committed to the taking on and training of apprentices and providing opportunities for people local to particular projects to access the construction industry. The trainees recruited can be either school leavers or the long-term unemployed and often target those groups that are under-represented in construction, such as women and people from black, Asian and minority ethnic backgrounds.

The project has recently entered its third phase, with a commitment to work with 25 Demonstration Projects. The Phase 2 Final Report was launched at the Housing Forum Conference on

18 April 2007, following Phase 1 which was launched at the same event in 2006. Phase 1 of the work concentrated mainly on repairs and maintenance work with subsequent phases also looking at new build and regeneration projects.

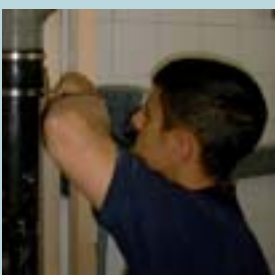
Projects in this area, as one would expect, have performed particularly well on the qualification and skills KPI but there was also a noticeable high level of performance in customer satisfaction.

Case Study Hounslow Homes



Construction training within Hounslow Council had always been limited due to a lack of resources. Hounslow Homes (owned by the council) wanted to address this by spreading the gains and the costs of training schemes through the new supply chain for Decent Homes. Hounslow Homes' business performance has been good, and the Decent Homes programme was finished early, in 2006. New repairs and maintenance programmes to 2012 have now begun and are all delivered by the in-house team.

Hounslow Homes has a long-standing commitment to apprentice training with trainees taken on for three years. Trainees are involved in core trades and all types of repair work, all are expected to reach City & Guilds level 3 in their core trade. Training is delivered mainly by Acton College, and a Hounslow Homes' Training Manager looks after the interface between trainee, training and employment. Mainly funded in-house, a small amount of funding is obtained from Colleges which they access from the Learning and Skills Council. Funding is also received from Capital Workforce Development, which covers two thirds of the College costs.



Looking ahead, the new build schemes will be taking Hounslow Homes' apprentices as part of the contract, to learn site working conditions. It is hoped that successful tenders for contracts in other boroughs will provide further opportunities for apprentice training.

Value

Projects in this theme area will demonstrate how value has been considered as a driver throughout the project process, from design to construction and ongoing maintenance. Projects will look at how the facility can add the greatest possible benefit to end users. Examples of projects that would fit the remit of this theme include hospitals designed to improve patient recovery times, schools designed to aid learning or offices which show an improved staff productivity.

Value has been a key focus of activity for the Building and Estates Forum for some time. This activity saw the publication of the seminal document, Be Valuable in 2006. As well as the Building and Estates Forum, the Construction Clients' Group have, quite understandably, adopted Value as a Demonstration theme.

Value as a Demonstration theme has really only come to prominence in the last eighteen months or so and has seen little previous Demonstration activity. The Value agenda is seen as an evolution from whole life costing, taking the latter to a new level.

Whereas whole life costing, which is mentioned opposite, concentrates on the physical cost of operating and maintaining a facility, value concentrates on the additional benefits to the operator's business.

Case Study

Kensington Academy



Kensington Academy, in an economically deprived inner-city area of Liverpool, is the first new school to be developed jointly by the Roman Catholic Archdiocese and the Anglican Diocese of Liverpool. The client had very clear ideas for what the project had to achieve: community regeneration, significant improvement in the achievements of the school-children, and demonstrable environmental responsibility. The site was particularly challenging, with contamination issues from its former use as a council tip depot, a limited area, and a very sensitive local context on the edge of a historic park, with Victorian housing adjacent. The design solution needed to provide an educational environment which reflects the aspirations of the curriculum, whilst having a form which handles the site responsively.



The specialism of the Academy is the Environment, and the client's brief stressed the need for the building to facilitate environmental education, to model good environmental design practice, and if possible to offer itself as an educational resource, so that its environmental strategies were, wherever possible, clearly evident to the building users. To this end, the building achieved an 'excellent' rating in an independent pilot preliminary BREEAM assessment. The opening of the Academy has had a considerable positive impact, both on the students and wider community. In the recent announcement of the 'value-added' league tables, the Academy was the top school in the UK. This was seen to be largely attributed to the positive impact the building had on their studies.

Whole Life Costs

Projects in this theme area will be considering the long-term costs of maintaining and operating a facility rather than just the up-front capital costs. The clients of these Demonstration Projects may well have removed the barriers between capital and operational budgets that often prevent whole life considerations being taken into account.

In many cases the achievement of lesser whole life costs is directly related to the implementation of environmentally sustainable techniques. This theme area is directly related to the theme of Value, which appears earlier in the document. This theme has been adopted by the Department for Business, Enterprise and Regulatory Reform.

There has been an increasing focus on whole life costs in the last few years. This has been especially prevalent in the public sector and is illustrated by the forthcoming addition to the Treasury Green Book which will require public sector projects to consider whole life

costs at the outset. There have been Demonstrations that consider whole life costs since the outset of the programme in 1998. In the following year Constructing Excellence will also be undertaking an exciting piece of work revisiting old Demonstrations to determine whether there is a relationship between their efficacy as facilities and their success as construction projects.

Case Study

Leicestershire Schools Partnership



The Leicestershire Schools Partnership comprises the provision of four new replacement secondary schools, which are to be designed and constructed in two pairs. The project is being led by the Local Education Authority but there is also involvement from the County Council and the school heads. The local community was also encouraged to get involved with the project – including the opportunity to comment on the schools design – and this had real benefit in ensuring buy-in and support for the projects. A major consideration of this project was whole life costing, and a decision was made at the outset that if the capital budget could afford a particular step that would provide a saving in whole life costs terms, then the go ahead would be given. The payback period for the decision was each building's design life, being 60 years, and a number of decisions were made on this basis. For instance, the intelligent natural ventilation system had quite a high capital cost but the pay off was considered worthwhile. Furthermore, the buildings have been designed with flexibility in mind, considering how they should be able to adapt to the potentially different ways in which education is delivered in the future. The provision of ICT was a major consideration, with both hardwired and wireless technology installed in order to meet both short and long-term requirements. Whole life performance will be measured and monitored by Leicestershire County Council's energy section, and the results from the four schools in the partnership will be compared to those from existing schools buildings.

Demonstration Themes – 2007/08

The full list of Demonstration themes for the forthcoming year is:

Member Programmes of Demonstration

Constructing Excellence themes

Sustainability

Value

Leadership and people development

Integration and collaborative working

Housing Forum

Innovation in the supply of new homes

Improving existing stock

Planning

Mixed communities

New financial models for regeneration

Local Government Task Force

Fair payments

Cross-authority co-operation

Integrated teams

Sustainability

Infrastructure Forum

Long-term strategic planning

People and skills issues

Integration and collaborative working

Waste

Buildings and Estates Forum

Environment

Flexible working

Design management

Collaborative cost reduction

Procurement

Whole life/facilities management

Construction Clients' Group

Client driven health and safety

Value

Funded Programmes of Demonstration

ConstructionSkills

Construction Legacy – Housing

Construction Legacy – London

The Highways Agency

Early Contractor Involvement

Collaborative Highways Procurement

Department for Business, Enterprise and Regulatory Reform

Integration and collaborative working

Regional Projects

London

Waste management

North West

Economic, environmental and social sustainability

Wales

Sustainability

West Midlands

Logistics

Sustainability

Offsite fabrication

Integration and collaborative working

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Constructing Excellence South West	North West Development Agency
Constructing Excellence in Wales	Office of Government Commerce
Construction Knowledge Exchange	Polypipe
ConstructionSkills	St Helens Council
De Montfort University	Stepnell
Defence Estates	United House
Department for Business, Enterprise and Regulatory Reform	University College London
Durham County Council	University of Southampton
East Midlands Development Agency	University of Salford
East Thames Group	University of Reading
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