

Case Study 6

Cleveleys Coastal Defence Improvement Scheme

A poor quality environment affects health and limits individuals ambition and motivation to self-improve. The Cleveleys Coastal Defence Improvement and Promenade Enhancement Scheme has provided a safe, secure environment and we are working with leisure services to develop, enhance and promote healthy activities.

Cleveleys is a small coastal town within Wyre Borough on the Fylde coast of Lancashire. The coastal defence and environmental improvement scheme is being developed in partnership between Wyre Borough Council, Birse Coastal and other strategic partners. The partnership was formed in March 2004 following an extensive, quality-based tender compliant with European procurement. The contractor has been actively involved throughout the design period.

The Cleveleys Scheme provides an exciting, well-maintained seafront and promenade which will sustain the coastal community through: -

- Economic success and job creation
- The pleasure and pride it provides to local residents

The scheme has also: -

- Improved flood protection to 8,700 properties
- Improved communication with customers
- Integrated services for customers

The Cleveleys Scheme is Wyre Borough Council's largest ever civil engineering project and its first partnering contract.

Innovative Scheme

The Schemes innovations lie in the following: -

- The level of involvement of client and contractor in the design process
- The interaction and trust developed between partnership members
- The technical innovation through the use of offsite pre-cast facilities created specifically for this contract and that of a neighbouring authority.

Selection Criteria:
Partnering & Sustainability
NW Regional Construction Awards 2007 -
Lancashire Project of the Year

Client:
Wyre Borough Council
New Wave
Birse Coastal

Project Value:
£20 million

Savings Generated:
**72 weeks in construction time, £1 million
on whole life costs**

- The recognition and incorporation of the supply chain in the partnering process
- The development of processes and materials through early and ongoing testing

Improving Living Places and Living Economy

The original impetus for the Scheme was the need to protect the people of Cleveleys from coastal flooding.

The imaginative leap is to expand on this by seizing the opportunity at the same time to enhance the promenade. This is based on extensive consultation about what local people and visitors want from a seaside frontage.

This scheme is important because it is recognised as one of the highest priorities in England for flood risk.

Analysis undertaken by Halcrow Group Consulting Engineers in

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partnership with the Authorities own engineers of coastal structures identified the defences at Cleveleys as needing major reconstruction. The scheme is supported fully by Defra and Environment Agency.

The key target is to reduce the potential for coastal flooding to occur due to a breach of the Cleveleys sea defences from 20% to 2% by 2009.

The council has targets of: -

- Increasing satisfaction with public open spaces from 51% to 65% by 2008
- Redeveloping Cleveleys Promenade, completing phase 2 by 2007, and phase 3 by 2009

Thanks to successful partnering, the scheme will be completed by end-2007: -

- **72 weeks ahead of schedule** This phenomenal time saving has been calculated from the original target completion in the scoping study by Halcrow and based on experience from previous schemes. The savings have been achieved by: -
 - Precasting high risk elements (including the revetments)
 - Improved understanding of project through early contractor involvement
 - Phased working through the winter and summer - only made possible with agreement through planning and consultation
- **Saving over £1 million on whole life costs** The savings were derived from the independent auditors report, which indicated that the offer provided from the Contractor was 5% lower than other schemes.

The scheme is making a significant contribution towards increasing public satisfaction with open spaces and has enjoyed a high level of public support, as evidenced by:

- Feedback from public consultation
- The formation of the Cleveleys Seafront Partnership (an independent body comprising residents and local businesses to promote the seafront area)
- Comments made in the schemes visitor centre comments book

The new promenade has been developed for full accessibility, providing a high quality, safe environment for the user. Visitor orientation was a prime consideration in the design concept which incorporates features to entice the visitor along the length of the redeveloped promenade, providing focal points of interest, information, outlook and experience of the highest quality.

Rethinking Construction

Rethinking Construction highlighted benefits that could be achieved from changing construction processes. The report showed radical change could deliver real cost savings (up to 30%), eliminate waste in the delivery process, encourage innovation and learn from experience.

To capitalise on these benefits, and deliver best value, the Council replaced its old price-based competitive tendering with a quality-driven process using the NEC partnering contract. 26 contractors were assessed through a 3-stage selection process, evaluating: -

- Experience
- Financial stability
- Commitment to health & safety
- Employee skills
- References from clients, subcontractors and suppliers

The council also considered **early contractor involvement** was essential to achieve its key priorities, timescales and key design priorities.

The eventual contractor, Birse Coastal, was selected as preferred partner because of their knowledge and experience in delivering similar schemes and their appointment allowed much innovation in the scheme through: -

- Use of precast concrete
- Material testing in the field
- Development of optimum strength concrete
- Coloured concrete
- Practicalities in construction / standardisation whilst keeping to the architects vision
- Working with maintenance team to ensure final product will be serviceable

- Early procurement of materials (which has shielded the scheme from recent large increases in material costs)

Pain / Gain Share Incentivisation

The Scheme Partnerships has an open-book, live cost monitoring system which can be reviewed and observed at any time. Any savings or over-target expenditure will be shared equally between the partners.

The success of the partnership is built on trust, understanding and shared objectives and these have been achieved through: -

- Team building exercises
- Risk management workshops
- Value engineering throughout the design phase.

Throughout 2006, the whole team has been involved and informed by: -

- Establishing a project-specific, on-line information channel, available to all team members, suppliers and funding bodies
- Shared office accommodation
- Weekly design meetings
- Steering group meetings, involving client and contractor directors and service heads, to ensure high level support for the partnership

The partnership has developed an excellent understanding of each member. This has allowed blending of the partners' cultures and a philosophy of recognising and utilising each others' strengths.

Communication to staff and key stakeholders

At the start of design, a team charter was produced, from initial teambuilding exercises.

The charter encompasses the desired outcome for each partner, and receives ongoing review to ensure its continuing relevance.

The charter commits all partners to: -

- Deliver a quality scheme for the public
- Have pride in everything they do
- Work together and maintain a happy and

enthusiastic team spirit throughout

- Achieve an exemplary safety record
- Communicate effectively with all those involved or affected by the scheme
- Ensure the achievement of best value for the budget at all times
- Identify and implement innovative ideas / technology
- Solve problems - together
- Finish the scheme on time
- Deliver to the Council and public without defects
- Be considerate to the community and to the environment.

Value for Money

Value for money is the cornerstone of the Scheme, requiring total commitment from the whole team and its key suppliers - all team members and suppliers are enrolled in the drive for value.

The partnership established a specialist procurement department which formulated a bulk purchasing strategy for multiple projects in the locality. The supply chain has been enrolled and regular logistics meetings have been held to ensure quality, delivery and cost. Results of this include: -

- **Aggregate suppliers** invested in 16 new tipper wagons to meet increased demand and secure deliveries to existing customers
- **Concrete suppliers** bought 4 extra mixer trucks to supply the projects
- **Bulk purchasing of steel piles**, mass imported from Europe, provided the best possible buying gain and assured delivery.

The team collaborated to provide a **new local pre-cast facility**, serving both this and nearby coastal schemes, which:

- Yields substantial savings to all parties
- Reduces traffic movements
- Enables technological advances

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- Gives confidence in availability of materials and machinery
- Provides good understanding of risks and responsibilities, to drive down costs

The council's internal auditors have been involved throughout the scheme providing confidence in the process. An independent assessment of scheme costs by Theobald & Gardner concluded 'the target cost proposed is realistic and provides good value for money'.

The partnership's open and constructive collaboration towards the optimum solution has secured savings of over £1 million to date and they are actively working with neighbouring authorities on their construction projects to deliver further savings through: -

- Integration of work elements, for example sharing pre-cast facilities with Blackpool Council, joint sourcing of rock armour with Lancaster City Council
- Optimisation of suppliers

Identifying and reducing risk was at the heart of the design team's efforts. All risks were costed – and eliminated wherever possible – through risk-management and value-engineering workshops involving the whole team.

Outstanding risks were reviewed, and reduced by further investigations. Any outstanding risks were then apportioned, with financial measures to accommodate them should they occur. The outstanding risk and contingency has thus been driven down from 30% to less than 9% of the contract budget. This represents a reduction of £3.8 million in envisaged risks.

External Funding for the Scheme

The team has secured funding from a variety of sources, notably: -

- Defra
- Environment Agency
- North West Development Agency through the European Regional Development Fund
- Other departments within Wyre Borough Council

In total over 94% of the scheme's costs are being met by external funding agencies. Further funding

for environmental improvements is being pursued through Department of Trade & Industry, arts lottery and commercial bodies. The team has been able to adapt the design to incorporate extra objectives and scope as additional monies become available.

Benefits of the Scheme

- Developing an integrated public realm and coastal defence improvement scheme
- Developing a multi-functional team based on trust and mutual understanding of the desired outcomes
- Use of robust, high-quality materials for low whole life cost **eg: micro silica concrete, natural aggregates for colour, stainless steel**
- Incorporation of innovative ideas **eg: offsite manufacture using precast concrete**
- Improved understanding of risks and contingencies valued at £3.8 million
- Demonstrable savings of £1 million to date
- Securing external funding in excess of £14.5 million
- Improved health and safety through design – **the team achieved 200,000 hours of works without a reportable accident or loss in work time due to an accident in 2006**
- Programmed to meet the defined council objectives 72 weeks ahead of target
- Excellent public communication routes and consultation developed
- Understanding and meeting the expectations of our customers