

Partnering keeps school project on target



Chilton Primary School and Community College, Durham

Client and Designer – Durham County Council
Constructor – Shepherd Construction
Mechanical and Electrical Contractor – Rotary Northern
Structural Consultants – Davies Tindale Associates
Rewire Contractor – Durham County Council Service Direct

Case history

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It is normally unwise to start construction until you've nailed down the scope of work. But Durham County Council has shown it is possible to proceed confidently in partnership with a trusted contractor using a target contract and an appropriate pain/gain formula. The three-stage, £2.5m conversion of separate infants and junior schools into Chilton Primary School is the fourth school built by the Durham Schools Partnering Project.

The problem confronting Durham's Environment and Technical Services Department is a common one – how to keep control of costs yet commit to an urgent/complex staged contract before the brief has crystallised. Project Manager, Bruce Kirtley, says: "Partnering gave a way forward to get the project going while the brief was still changing. We could control the risks by collaborating with our partners and involving them in design development."

Chilton Primary School is a model for integrated use of facilities by pupils and the wider community, such as the gymnasium and assembly hall. Dedicated community uses include a fitness suite, squash courts, social club, meeting rooms and education in the community space.

Although the project was mainly funded from the council's Elimination of Surplus Places budget, the government's *Sure Start* programme provided £150k towards multi-agency support for pre-school children. While this money was welcomed, the initiative complicated the planning and design process.

The scheme started at £2.0m and increased by £0.5m over its life. Allowing for variations, the entire project ran about 5% over the budget allocated to the work. Savings on phases one and two, contracted to Shepherd Construction, amounted to 10% of the target cost. Kirtley says: "Traditional procurement would have led to major cost increases." This work was delivered on time, despite unexpected complications including concealed defects, asbestos and the development of the brief to include additional classrooms.

WHAT PARTNERING ACHIEVED AT CHILTON PRIMARY SCHOOL

The project happened on time – Officers believe the most important result was that despite uncertainty about the ultimate scheme, the buildings were handed over according to the staged programme delivery dates and that the whole school was ready for the new academic year in autumn 2002. The key to this achievement was the highly collaborative relationship between the school, contractor and the designers.

Customer satisfaction – The head teacher's assessment could be rated 'tough but fair'. Satisfaction with the finished product and service from the consultancy team scored a respectable 8/10; the service from the contractor rated even better at 9/10. Value for money (quite a subjective indicator if used without comparative data) rated 7/10. The client's impression was marred by some defects that had an impact on operations. The project scored well with 9/10 for environmental impact of materials and processes and also waste, noise and dust control.

Cost savings – Under the pain/gain agreement, the client and contractor shared savings from the adjusted target cost. The gain due to the client and contractor was 10% of the target cost, shared equally. Had the cost exceeded the target, the client had the comfort of a guaranteed maximum price.

Design costs – Design costs are about 25% less than budgeted, despite the need to have several design reviews. The savings arose from involving the supply chain in design development, simplified communications within the team and avoidance of confrontation.



Central atrium at Chilton Primary School

LESSONS LEARNED:

To get the best out of a partnered, target-cost contract:

- **Early sharing of objectives enables partners to understand each other's position and work towards mutual goals.**
- **A more robust accounting process with staged closure of packages would have given better prediction of final cost.**
- **Strategic partnering is necessary for developing the potential of the supply chain to give better value for money.**

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The Rethinking Construction Strategy model – applied to this innovation



THE CHALLENGE

The objective, instigated by the council's Elimination of Surplus Places scheme, was to amalgamate Chilton Junior/Community College and Chilton Infants (in a nearby Victorian building) into one primary school. It would potentially accommodate up to 420 children and reduce running costs. The concept of sharing facilities with the wider community (as already occurred at Chilton Junior) would be expanded with multi-agency support for pre-school children and more community facilities. Protracted negotiations about what pre-school support facilities should be provided, as well as uncertainties about the scope of asbestos, threatened to delay planning and design.

The main budgets were time limited and the scheme needed to be implemented within the budget period.

THE SOLUTION

In 2000, Durham County Council decided to run partnering trials on four schools - two new build and two alteration projects. Durham selected Shepherd for the alterations at Chilton (see also M⁴I demonstration project 246 Tanfield Comprehensive School). Under the ECC Option C, target-cost contract the parties shared savings 50/50 below the target price. The client would bear all costs between target and guaranteed maximum price (GMP) and the contractor all costs above GMP.

The council gave Chilton Primary School the green light in November 1999 and concept design started immediately. Shepherd joined the team in time for buildability input to the detailed design starting in March 2000.

Phase 2 design work was carried out in parallel with construction of Phase 1 works.

Phase one (new build) – The design was revised to ensure that the *Sure Start* facilities were fully integrated. The 39-week construction was handed over in November 2001, as planned. Asbestos was then removed during a six-week interval between the new build and refurbishment.

Phase one (refurbishment) – This phase was built in two parts, demanding strict segregation of work from the occupied areas.

This 36-week phase was completed on time in August 2002, ready for school to resume.

Phase two (demolition and new build) –

This shorter (19-week programme) ran in parallel with the end of phase one. A three-storey block was demolished and replaced with a single-storey wing. This completed the last section of eliminating surplus places work to schedule.

Phase three (rewire) – This additional work was assigned to the council's direct labour organisation. Unforeseen asbestos removal delayed completion until January 2003.

HOW PROBLEMS WERE ADDRESSED

Shepherd hosted a one-day value-engineering workshop at the start of the project and there were further sessions run in conjunction with design team meetings during the project. The design team decided, on buildability grounds, that cast in situ ground floor slabs should be replaced with a beam and block floor system, and that a full steel-framed system should be replaced with a hybrid steel and masonry system.

The contractor was involved with various technical problems along the way such as screeding over an unsound wood-block floor. Shepherd built on the experience from another school partnering project they were building in nearby Redcar.

Dividing phase two into two parts, which permitted 50% occupancy at all times, overcame a shortage of classrooms. The alternative was to hire temporary classrooms, which would have cost another £50k.

WHAT HAPPENS NEXT

The council judged the Durham Schools Partnering Project a success and accepted the next challenge, Strategic Alliancing, so that they could develop preferred suppliers and foster partnerships in the supply chain.

Wates Construction secured the five-year contract in August 2002 with an option for another two years. The benefits of long-term contractor involvement in developing the 'school product' and partnering the supply chain are eagerly awaited.

Next steps:

Things you could do to apply these ideas:

- Read the other case studies on the Durham Schools Partnering Project in M⁴I demonstration projects Nos. 245, 246 and 247, at www.m4i.org.uk
- See how strategic partnering works for North Tyneside schools in M⁴I demonstration project 239, at www.m4i.org.uk
- Use the Respect for People Toolkits in school projects (especially *Work in Occupied Premises*), available from Rethinking Construction. Apply to be a Respect for People demonstration project. Tel: 020 7837 5702.



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