



Trial project: Property Services Cluster - iESE	New delivery model / procurement route: Two Stage Open Book
Cost savings targeted: 14% (7% achieved to date)	
Other key benefits achieved: Challenging school place targets for each school year of the programme; aggregated demand giving clear and accurate pipeline for Tier 1 contractors and their supply chains; standardised designs, better and closer relationships between with key Tier 2 sub-contractors but key Tier 3 manufacturers; more accurate market intelligence; opportunities for skills training and new apprenticeships.	

Trial report sequence:	Kick off meeting	Brief / Team Engagement	Decision to Build	Build and Occupy
Cost saving basis:	Outline saving aspiration	Challenging cost target	Award Cost	Outturn Cost

Trial project details	
Project title	Property Services Cluster – Education Basic Needs Programme – Tranche 2
Client department	Local Government – Hampshire County Council, Surrey County Council, Reading Borough Council and West Sussex County Council
Project/Programme value	£119M (baseline gross cost including fees, FFE, ICT).
Form of project	New build & Refurbishment: Primary Schools
Main contractors	Osborne, Miller Construction and Mansell/Balfour Beatty
Lead designer	Hampshire County Council Property Services



Executive summary:

Hampshire County Council, Surrey County Council, Reading Borough Council and West Sussex County Council, formed the Property Services Cluster (PSC) and, using the iESE Framework, appointed Osborne, Miller and Mansell (now Balfour Beatty) to deliver 22 projects with a total budget inclusive of fees, and FFE of almost £119m. The projects are a mixture of new build, extension and refurbishment.

While all 22 projects are the subject of this case study, detailed testing and verification is being captured through deeper review of two projects within the programme.



Project summary

This trial is of a programme of work where 22 individual construction projects have been aggregated. As a single authority rarely has sufficient projects at the same time to achieve economies of scale through aggregation, Hampshire County Council, Surrey County Council, Reading Borough Council and West Sussex County Council formed the Property Services Cluster (PSC) and a Cluster Programme Office (CPO) has been established to direct the implementation of the Education Basic Need (Schools) Programme. The PSC is using the Improvement and Efficiency South East (iESE) South East and London Construction Framework for Major Projects to deliver this programme. This 2nd Tranche of the EBN Programme includes 22 projects for three of the four authorities with a total budget inclusive of fees, and FFE of almost £119m. The projects are a mixture of new build, extension and refurbishment. Osborne, Miller and Mansell (now Balfour Beatty) were jointly appointed from the iESE Framework through a mini-competition. The projects are currently in varying stages of progress with most in detailed design, some on site and 2 completed. It is expected that 15 will be design and construct and 7 will be construct only.

While Tranche 2 is the subject of this case study, in order to demonstrate the features, processes, techniques and benefits of this trial the detail testing and verification is being captured through deeper review of two projects within the programme:

1. West Of Waterlooville – Mansell - JCT
2. Horley, Church Of England School – Miller Construction – NEC 3A D&B

Programme Time Line

- Business Case / Programme Brief, April 2012
- Mini-Competition to iESE Framework, September 2012
- Pre-Construction Agreements and commencement of preconstruction work by integrated teams, December 2012, with informal engagement in advance
- Memoranda of Understanding with subcontractors concluded April/May 2013
- West of Waterloo start on site August 2013; Horley start on site November 2013

- 17 further Contract Awards – four sites to award Summer 2014
- Early completions – Westfield and Winnall Primary Schools, September 2013
- 13 further completions by September 2013, Westgate by December 2014
- Hurst Park, Portesbury and Stamford Green, completions by September 2015
- Cranmere and Battlebridge Lane (now called Limetree) will complete by early 2016

Key Programme Features

- standardised designs
- more accurate market intelligence
- opportunities for Skills Training and new Apprenticeships
- reduced costs
- improved programme certainty
- reduced risk
- greater innovation and improved relationships across the supply chain

Key Project features

- Substantial cost savings
- Innovative designs
- Flexible use of space
- Tight construction programme with improved programme certainty
- Collaborative working by integrated team, across Client and Contractor teams, as well as other programme contractors
- Commitment to local economy
- Improved employment and skills outputs

Client/Programme objectives and vision

Hampshire County Council, Surrey County Council, Reading Borough Council and West Sussex County Council, formed a council 'Cluster' and joint Working Agreements/protocols have been established between the authorities that permit the sharing of services, expertise and knowledge.

The 'Cluster' aims to save 14% of total construction and design costs in delivery by standardising design approaches; aggregating projects with substantial programmes of work and driving efficiencies through the supply chain. Wider objectives, strategies and metrics for performance measurement have been agreed between the authorities addressing seven benefit areas:



- A. Process Efficiency (in delivery)
- B. Outcomes (for Client and End-User)
- C. Quality and Cost
- D. Supply Chain Development
- E. Stakeholder Satisfaction
- F. Collaboration
- G. Design Processes and Standardisation.

New procurement techniques and processes

The constructor partners, Osborne, Miller and Mansell (now Balfour Beatty) were jointly appointed from the iESE Framework through a mini-competition for all of the work included in the Tranche. This process took seven weeks, allowing for full and early contractor involvement. The contractors themselves have formed a *Cluster Delivery Team* which fully collaborates to share resources, information and supply chains. The Team aims to establish common designs, elements and components and, subsequently, common supply chains. This is allowing sub-contract appointments to be made across the whole Tranche, seeking to drive efficiencies through aggregation.

The team then used bespoke Preconstruction Agreements for the preconstruction phase of each project and standard form JCT and NEC contract for the construction phase of each project.

Each contractor is taking a lead role in specific areas such as programming, supply chain procurement or design. The projects are in varying stages of progress from viability to detailed design. Some of the projects will continue to be fully designed by the relevant client, whilst many of the others will be handed over to the contractor-led design teams at mutually agreed points.

Cost targets and savings

The PSC target began as 17.5% in delivery for the whole programme (tranches 1, 2 & 3). The re-aligned target for T2 is 14%, of which 7% has been achieved to date. There are further opportunities to secure efficiencies from other projects still in pre-construction and from post-contract supply chain discounts.

For individual schemes, the development of standardised designs and alternative solutions is leading to savings of >£285/m² driving costs <£1300/m² net (build cost, excluding prelims). Net build costs across the programme do vary

due client requirements for different specification levels, but costs at contract award are achieving this target on projects where demanded by clients.

Benefits achieved on West Of Waterlooville – Mansell (Balfour Beatty)

During the pre-construction period the design was challenged by the project team during design team meetings where the planners, estimators and entire project team identified alternatives that would potentially save time and/or money. The supply chain also offered better value options including significant savings:

- M&E Subcontractors (alternatives to Gas fired hot water heaters, radiators, conditioners and underfloor heating introduced);
- Piling alternatives for increased safety/lower risk;
- Roof Insulation –price options for several roof schemes so that the best value system could be incorporated into the design
- Wooden hall flooring – price options for the specified product and their suggested alternative.

The design for West of Waterlooville was developed through BIM. Hampshire County Council, Mansell and the supply chain used the outputs from this ‘pilot’ to draft Employers Requirement’s that are being implemented on the Aldershot and Park Prewett schemes.

Benefits achieved on Horley, Church Of England School – Miller Construction

Upon appointment to Tranche 2, Miller Construction were able to maintain a core team and supply chain from delivery of Tranche 1. The Cluster Delivery Team (CDT) formed with the other contractors on Tranche 1, allowed Miller to improve design management and supply chain efficiencies, and eliminate ‘missed opportunities’ that were acknowledged on earlier work.

All contractors jointly engaged with existing and potential Tier 2 and Tier 3 partners to identify the pipeline of opportunities available allowing those suppliers to contribute to cost efficiencies and provide added value through early engagement. Early engagement allowed Miller to value manage the specifications using Tranche 1 as the baseline. Working with designers and subcontractors this led to:



- Alternative ground floor solution to address nature of ground conditions (change from raft to pre-cast)
- Extensive use of contractor and subcontractor engineers to provide up front surveys to enable economic ground floor and paving designs
- Use of supply chain to carry out soil analysis early to de-risk ground conditions for client
- Ecology survey carried out to enable early discharge of planning conditions
- Alternative timber cladding to suit client
- Use of proprietary joist system
- Simplification of roof levels and parapet design

Examples of specific savings include:

- Single ply in lieu of built-up layered felt system (circa £15k saving)
- Internal gutters and parapets omitted in favour of roofs laid to falls and simple guttering (circa £22k saving)
- Gerlor Sport M impact resistant vinyl in lieu of sprung timber (circa £8k saving)

Knowledge of market conditions - early order of bricks preventing a significant delay and potential planning approval issue

Additional Benefits achieved through the programme/tranche

Examples of additional benefits achieved through the application of Two Stage Open Book throughout the programme/tranche include the following:

- Workshop approach by the Cluster Delivery Team (CDT) and Cluster Programme Office (CPO) to challenge existing designs and develop alternative solutions ensuring they are fully integrated and costed
- The BIM approach that was piloted on West of Waterlooville is being rolled out by Hampshire County Council on subsequent schemes including on Aldershot and Park Prewett
- Using the early appointed supply chain to bring certainty and knowledge to the viability of design/delivery solutions.

Effective engagement of the Tier 1-3 supply chains by and through the Cluster Delivery Team (CDT):

- Nearly 200 Memorandum of Understandings (MOU) signed with Tier 2 and Tier 3 Suppliers
- Supply Chain delivering discounts for multiple projects
- Collaborating early with specialists selected through the MOU and subcontractor supply chain process
- Taking a 'one team' approach on the projects with all parties from the client team through all tiers of the supply chain.

Greater and more accurate market intelligence through sharing knowledge (cost trend data and avoiding supply chain overload):

- A co-ordinated approach to procurement by the Cluster Delivery Team (CDT)
- Developing a Tranche-wide programme for key trades to identify, plan and manage peaks in procurement and construction activities
- Continued communication to identify the impact of change and delay to procurement and delivery activities
- Sharing of CDT opinions on market cost trends
- 24 key manufacturers offering discounts across their product ranges.

High levels of Stakeholder Satisfaction across the Programme:

- Higher iESE Gateway 3 and Gateway 4 scores (Westfield School awarded 100% by client project team at Gateway 3 for both Supply Chain and Project Management)
- Satisfied end-users where school projects handed over to date
- Two-stage process: Better alignment of outcomes with the originally planned brief, budget and programme

Delivering opportunities for Skills Training and new Apprenticeships

- A co-ordinated approach by the CDT delivering Employment and Skills Plans for groups of projects in the same localities (adopting the Client-Based Approach)
- This is supported by the CoTrain Shared Apprenticeship Scheme (founded by SECBE, Hampshire County Council, Surrey County Council, Miller and Osborne). The scheme now has CITB-accredited "National Skills Academy



Status". Across all 3 tranches a total equivalent of 9.1FTE new entrant trainees has been recorded. Progress is continuing to be monitored.

Overall assessment (interim)

Through the use of the iESE Framework and the aggregation of demand across four authorities, the Property Services Cluster has given the opportunity for benefits to be created for clients through Two Stage Open Book procedures.

Tier 1 contractors and Tier 2/3 subcontractors and suppliers have responded to the opportunity for increased flows of work by offering discounts and behaving in an open and sharing manner with the client users and fellow suppliers.

The Shared Apprenticeship across the Tranche/Programme is beginning to offer opportunities for more training and apprenticeships.

The assessment of the Trial Project Support Group at this **interim stage** is that this case study is demonstrating how public sector clients are able to drive real efficiencies and training and apprenticeship benefits. Evidence will be consolidated in the coming months.

Key lessons

As this is an interim case study, it is too early to draw conclusions as to lessons learned.

Miscellaneous

Authors:
This case study has been produced by Professor Peter McDermott of the University of Salford working as Project Mentor, in conjunction with Professor David Mosey of King's College London Centre of Construction Law, working as Academic Partner

Key contributors include:

- iESE, Hampshire County Council, Surrey County Council, Reading Borough Council and West Sussex County Council, Osborne, Miller and Mansell/Balfour Beatty.

Background: Trial Projects programme

The Government Construction Strategy aims to change the relationship between clients and the

entire supply chain within the industry. The trial projects perform a central role in delivering the Strategy's sustainable 15-20% reduction in costs and are currently testing 3 new procurement models (Cost Led Procurement; Integrated Project Insurance; Two Stage Open Book) that were proposed by industry and developed by a joint task group. Case study reports are therefore an output of monitoring the progress and outcomes of the trial projects. They are produced at four stages: Kick-off Meeting; Brief / Team Engagement; Decision to Build; Build and Occupy. Other case study reports can be found at:

<https://www.gov.uk/government/publications/government-construction-strategy-trial-projects>.

Project contacts

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How the reported savings were achieved				
Strategic context		Client	Collaborative	Supply chain
Aggregation of demand	Yes	22 projects aggregated by four clients		
Significant committed spend	Yes	£119m programme		
Standardised procurement / streamlined approval processes	Yes		Joint MoUs with Subcontractors	
Lean programming	Yes		Joint programming by Clients and Tier 1 Contractors	
Client cost data base	Yes	Published benchmarks		
Performance management				
Common new delivery model characteristics deployed		Client	Collaborative	Supply chain
Challenging cost target / open book				
Affordable standardised output / outcome requirement	Yes		Development of standardised designs	
Early contractor involvement	Yes		Preconstruction Agreements	
Lower tier engagement: fully integrated supply chain	Yes			Nearly 200 MoUs with Subcontractors
Lower tier engagement: innovation encouraged / achieved	Yes		Early consultation on proposals for savings and improved value	
Standard form of contract with minimum amendments	Yes	JCT and NEC Construction Phase Contracts and bespoke Preconstruction Agreements		
Effectively led change in team behaviours and practices	Yes		Integrated Client and Tier 1 Contractors "Cluster"	
Two Stage Open Book characteristics deployed		Client	Collaborative	Supply chain
First stage selection of integrated team on open book basis and ability to deliver savings / project objectives	Yes	Selection from IESE framework		
Joint work of integrated team (incl. Tier 1 and lower tier contractors) on design, risk management, reduced costs under early appointments	Yes		Bespoke Preconstruction Agreements	
Approval to construct on basis of demonstrable ability of team to achieved targeted costs and progress against project objectives	Yes	Award of NEC and JCT Construction Phase Contracts		



Other cross cutting initiatives deployed		Client	Collaborative	Supply chain
Building Information Modelling	Yes	BIM Level 2 adopted on selected projects		
Procurement Routemap				
Government Soft Landings				
Project Bank Accounts				