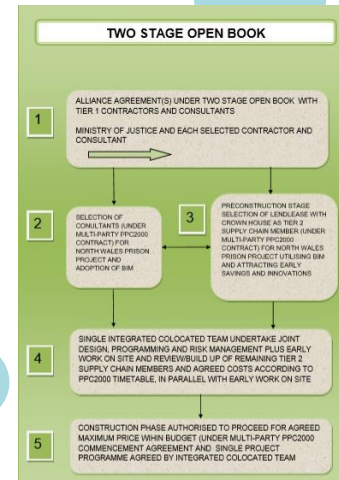


New Prison North Wales

Procurement route

Two Stage Open Book



Project details

Client department	Ministry of Justice
Project value	£156,923,058 cost estimated: £212,200,000
Form of project	New build prison
Main contractor	Lend Lease
Lead designer	Lend Lease
Client representative	AECOM
Cost consultant & CDMC	Sweett Group
Technical Assessor	WYG
Architect	Capita Symonds
Civil & Structural Engineer	TPC Consulting
M&E Engineer	Hoare Lea
M&E Specialist	Crown House

Procurement route description

The Two Stage Open Book is a system of preconstruction phase project processes governed by the early appointment of a full project team. This procurement model sees the Client invite prospective team members, whether for a single project or under a framework or alliance, to bid for a project on the basis of an outline brief and cost benchmark. The Two Stage Open Book model reduces industry bidding costs and enables faster mobilisation. It provides the opportunity for Clients to work earlier with a single Integrated Team, testing design, cost and risk issues ahead of commencement on site following full project award at the end of the second stage.

Ministry of Justice has created a collaborative basis under the PPC2000 contract for the design, construction and maintenance of a 2,100 place prison on a site in the Wrexham Industrial Estate. They selected a team from their National Alliance and undertook a 38 week of programmed early contractor contributions to design, risk management and finalisation of agreed costs. The team is also using the CITB Client-Based Approach to maximise employment and skills benefits from the project. The North Wales Prison project is trialling Two Stage Open Book, BIM Level 2, Project Bank Accounts and Government Soft Landings.

Key outcomes delivered via the procurement approach

- approx. £55m overall cost savings achieved through value management in a rising market
- collaborative working by integrated, co-located team
- 100 new apprenticeships created & provision of 2,150 work placement days working with local schools including their special needs pupils
- creation of employment with 66% of those working on site being local
- time certainty achieved through joint programming, including re-sequencing to avoid delays caused by late authorisation to start on site
- joint risk management minimising cost and time effects of unexpected site conditions
- innovative design solutions and operational efficiencies identified through use of BIM
- £38m has been spent on local businesses within a 50 mile radius of the site, and the team members have run local Supply Chain Events
- £82.7m spent on SMEs

Lessons learned

procurement

The team's understanding of the Two Stage Open Book was enhanced through access to the King's College London/Cabinet Office "Project Procurement and Delivery Guidance".

planning & cost management

The team benefited from clarity in the PPC2000 preconstruction phase "Partnering Timetable", which contained agreed deadlines and interfaces for each stage of collaborative design, sub-contract tendering and the costing of each work package including the progression of BIM models.

collaborative working

Early, transparent contractor engagement combined with the use of BIM has provided design improvements and has enabled value management at all stages of the project. Moreover, it has contributed to clear deadlines for each member of the team.

learning from the past

The use of lessons learned from the Oakwood prison project and consultation with operational colleagues has the carbon reduced footprint for the Entry Building/Energy Centre.

Key challenges

adaptability to change

Increased workloads & rising prices have led to a scarcity of package contractors willing to make the long-term commitments required by the scale of the project. The response of the team was to utilise Value Engineering measures to reach the Maximum Agreed Price

committed to collaboration

The work on Value Engineering to mitigate the threat of cost increases caused an unexpected delay in authorising start on site, which itself could have caused delays of up to two months. The co-located team worked closely together to restructure the construction phase of the programme in a way designed to eliminate this delay while maintaining transparent milestones

efficient communication

The main challenge was to ensure a full understanding among team members of how to operate a collaborative contract, for example in creating and using a multi-party integrated timetable

Positive opinions



M&E Engineer

“Through close collaboration with the wider project delivery team, we were able to provide innovative designs that took on the tough building environmental standards the client was aiming for and achieved an impressive EPC A rating, alongside BREEAM Excellent.



M&E Specialist

“We are delighted to be recognised for the contribution we have made to the local community on the project. It's been a fantastic team effort, from procurement establishing the relationships with local SMEs to those training apprentices and work placement students.



Former prison governor

“I've been involved with the project for nearly 2 years and I've seen how the building has come together. The building itself was one part of the project, the other part was the people and we've managed to recruit locally. I'm really proud to start making the vision of this project come true.



Main contractor

“It's quite challenging - we've put a lot of commitments to the local economy. A project at this scale brings a lot of disruptions, therefore we set up a local committee, an ambition board with members from Wrexham council, Lend Lease and the Ministry of Justice. This team worked closely to look at opportunities to find local labour, local supply chain to then be able to find the way to involve them in the project and bring them to the site.



Lendlease

“The use of PPC2000 and ECI places a huge reliance on behaviours (values). The contract, which is much more flexible than the NEC suite, works well with people that want to use it well. Fortunately, this was the case for New Prison North Wales project.

The project has brought a great deal of social value - we have created hundreds of jobs, thousands of training days, and an environment where many of the permanent staff were drawn from the local area. We had the opportunity to create great relationships with the community.

Client objectives & vision

This project provided one of the largest new-build prisons in Europe, with the potential to alleviate pressure on existing prisons and also to deliver important business, employment and training opportunities in North Wales. The vision of the Ministry of Justice and its team is to use Two Stage Open Book, a model already proven on their previous projects, as a means to maximise project value. This includes the use of collaborative techniques to control costs in a rising market, to ensure cost and time certainty and to create an integrated team where all supply chain members make early contributions to design and project planning.

A particular priority for the project team was to offer new jobs and training in North Wales and to ensure the maximum involvement of businesses within a 50-mile radius of the site. The client took an active role at all stages of the project, including participation in the activities of the co-located team.

The team has adopted the Two Stage Open Book procurement model and have followed the systems and techniques described in the King's College London/Cabinet Office "Project Procurement and Delivery Guidance Using Two Stage Open Book and Supply Chain Collaboration". They have used the PPC2000 form of contract which sets out a structure for multi-party, two-stage project alliancing that describes the processes of Two Stage Open Book.

The reason for this approach

The client has a long-established commitment to early contractor involvement, collaborative working and BIM under the terms of its 2004 and 2012 multi-party Strategic Alliance Agreements. Moreover, through its extensive use of the multi-party PPC2000 project partnering contract.

The client has regularly obtained measurable benefits from collaborative procurement in its delivery of over 10,000 new or refurbished prison places between 2004 and 2012. Building on this track record, the client wishes to maximise the early involvement of Tier 1 and Tier 2 supply chain members to improve value and reduce risk through clear and complete exchanges of project data. Nonetheless, the value is maximised through learning from previous projects, collaborative decision-making and the integration of the roles and responsibilities of the team without any member giving up their legal rights and obligations.

The difference from traditional approach

- this approach shows how client-led collaborative contractual systems can support reduced design and construction risks for all team members
- the Two Stage Open Book procurement route encourage early exploration and agreement of improved economic, social and environmental value
- it provides a fully integrated use of BIM without the distraction of multiple two-party protocols

Client's observations

Ministry of Justice

“An EU-compliant framework has been created within which early contractor involvement is an established system. Over the course of successive projects, framework contractors build up designs and solutions that they know will meet MoJ specifications, and are able to transfer these from one project type to another. Ministry of Justice have created a collaborative culture to bring together the consultants, Tier 1 and Tier 2 contractors at the earliest stage and to develop cost savings, innovations and improved efficiency before starting on site.

Two Stage Open Book has been greatly enhanced through the use of BIM for designs developed and costed at the point of team selection and those developed, prior to and during construction. For collaboration to span both the capital build activities and the ongoing maintenance and operation of the facility is in line with the Government Soft Landings strategy.



For more information on the case study click [here](#)