

# Healthcare Procurements Methods

David Stark



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## Introduction and Method Used

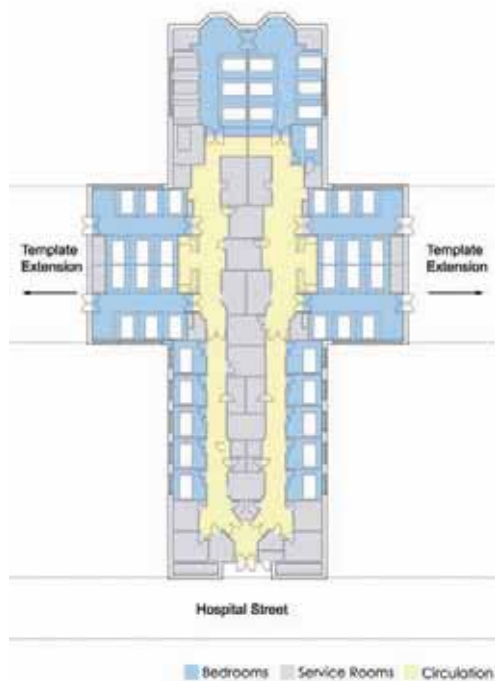
The British National Health Service is one of the largest healthcare providers in the world. When it decides to embark on a major programme of infrastructure renewal, the task is gargantuan. It has done this twice since it was formed. The procurement methods used to advance such programmes have a significant influence on the design outcome and to explore what these are and the mechanisms involved, a review of a number of hospital projects completed over a 50 year period took place, primarily from the records held by Keppie Design and from interviews held with project architects. The study

also reflects the debate currently taking place in the UK about the merits of Public Private Partnerships and the protocols and procedures arising from them.

## The First Major Hospital Building Programme

In the 1960s and early 1970s a vast number of hospital projects took place. Few major civic hospitals had been built since the beginning of the 20th century and the need for modernisation was great. In an era still recovering from the effects of two world wars, resources were in short supply and were spread thinly. Industrialised building techniques made up for a lack of labour, but in their novelty they lacked sophistication. If funds were exhausted on capital projects there was no allocation for planned maintenance, facility managers having to scramble to gain a share of the annual hospital budget. Buildings quickly deteriorated. The country borrowed extensively to pay for new hospitals, schools, colleges and houses. The economy lurched from one crisis to another, until the 1974 world oil crisis virtually stopped public funding of new projects.

With money tight, it was spent on essential clinical services and departmental area. Functional planning was paramount and dictated the design of buildings. Area was precious, so the public domain and qualitative features were minimized. Hospitals were 'machines for healing', and were usually soulless. Like much of the output of a very large, nationwide, socialised organisation, consistency in the general level of design provision was more important than achieving excellence.



**Figure 1** *A Nucleus ward plan*

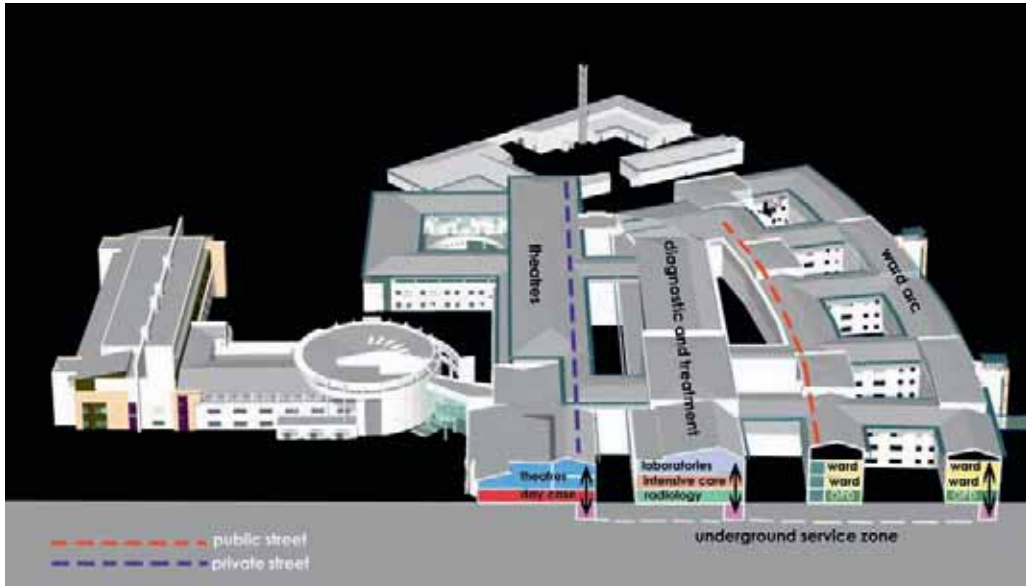
Standard planning systems and design guidance dampened design imagination and flair. Large hospital projects seemed to last forever as funding stalled during economic low points, and the whole process discouraged inventive designers. An architect being assigned a hospital design was like receiving a life sentence. Then, with money and work in short supply in the 1980s, and with the erosion of the protected professional status of the architect, highly competitive fee tendering led to a reduced design service. Construction was also keenly tendered, with building companies usually seeking extras after they had secured the works, extras that required token savings to be made on the design. Traditional, competitive tendering, using public money to fund projects, did not optimise the design outcome; quite the contrary.

## Public Private Partnerships

In the early 1990s, despite another economic recession, public infrastructure was badly in need of renewal. The government did not want to return to the public spending crises of earlier years, with the consequences of high public borrowing, taxation and inflation. It was also concerned that public bodies were not efficient at spending money on large projects, with well-publicised examples of poor cost control and defective new buildings. The Conservative government therefore invented the Private Funding Initiative, where money would be borrowed from the private sector to design, build and operate public facilities, contracts for running the non-clinical services in the hospital being for 30 years. This would keep large capital projects off the balance sheet and treat them as services instead, with monthly payments to private sector operators.

A simplistic way of looking at it was that if one had £100 million to spend each year for ten years, one could build one hospital a year, or pay £10 million a year for ten hospitals over ten years, and have the benefits of new, efficient hospitals earlier. While it costs more for the private sector to borrow money than the public sector, the efficiencies that the private sector would bring to the process, and the risks it would take away from the public sector, would prove better value for money.

The big advantage of PFI projects (or 'Public Private Partnerships' as they have been better termed) is the integration of design, construction, maintenance, and services, such as cleaning, catering and laundry. Before PPP, designers only had some input as to how buildings would be built and maintained, but with the builder and facility manager available at design stage, more robust, whole life design solutions could be considered. For example, at the Royal Infirmary of Edinburgh and University of Edinburgh Medical School, more expensive, higher-quality finishes are used where they reduce maintenance costs



**Figure 2** *The servicing strategy at The Royal Infirmary of Edinburgh*

over the 30-year contract period. The additional costs of providing basement service distribution tunnels and extra access lifts are paid for by the enhanced efficiencies in the movement of materials and waste about the building when costed over 30 years. Toilets were prefabricated in a factory to a higher quality than they would have been on the building site.

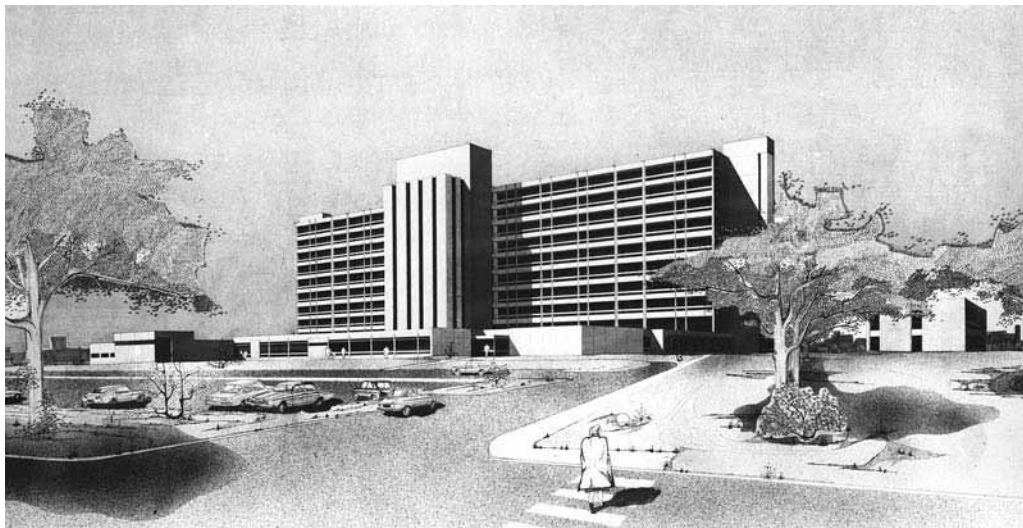
The hospital had been waiting 50 years for new premises. The public funds of the 1970s had only managed Phase 1 of the redevelopment of the Laurieston Place Infirmary before they ran out. Now with PPP, within seven years, a major hospital had been designed and built, handed over in phases from early 2002 to early 2003. This is very quick for such a large, complex building. The original Ninewells Hospital at Dundee took fifteen years to design and build in the 1960s and 70s.

With PPP, the capital cost is less critical for project creation, and funds can flow to initiate major renewal of public facilities. Politicians love

PPPs because they deliver. The initiative has been such a success that there are more schools and hospital projects than the design and construction market can cope with. Its success is its greatest danger of its failure, as demand outstrips supply. As architects, we have left behind the world where standard NHS solutions were the inevitable consequence of tight budgets, and now regularly visit other countries to learn the best of world hospital design. Instead of one or a few projects at a time, and then a famine, there is a constant supply of new hospitals throughout the UK where we can apply lessons learned in conjunction with clinicians, builders and facility managers.

### **Deficiencies in the Current PPP Process**

These are the advantages of Public Private Partnerships, and in many ways the design offer has improved, but usually where it is advantageous to the private sector provider, in the long-term ownership and facility management of the hospital. The high cost of tendering these massive



**Figure 3** *The utilitarian nature of early NHS hospital design*

service-based contracts continues to be an issue, especially on larger hospitals where there is a complicated, phased redevelopment. The opportunities are many, but the number of large organisations available to bid for them is limited. The deficiencies in the current system can be summarised as follows.

### **There is little incentive to improve the clinical effectiveness of hospitals**

If a hospital capital cost is £x, the running costs for a 30 year PPP contract period, which the private partner can make more efficient, will be over £5x. However, the cost of NHS staff and clinical services within that period might be £200x. Since the PPP provider does not employ doctors, nurses and other medical staff, there is no direct incentive to design the building and facility management services to make their activities more efficient. In PPP prisons, where warders require to be employed by the private sector provider, the whole life costs of facilities have been halved (Scottish Executive Consultation on the Future of the Scottish Prison Estate 2002). Each member of staff saved in a prison due to efficient design saves about £1 million over a PPP concession period.

In hospitals it has been demonstrated that some ward layouts might involve nurses in up to 2 hours more walking per day than others. This is 2 hours that would be better spent with patients, and with medical staff in short supply in most countries, making their working lives more efficient and providing better quality environments for them to work in, would be good value for money. Unfortunately, in this major aspect of the whole life costing, the public sector cannot spend extra on the £(1x + 5x) element (the capital cost and facilities management) to save on the £200x element (the clinical operation of the hospital), but is limited by the old cheapest cost approach on capital spend when compiling its business case. Nor is there time or money during the bid process to adequately explore these clinical benefits.

### **The quality of patient and staff environments is too low**

The low cost culture prevailing in NHS hospitals over the last 50 years has led to low aspirations and expectations of NHS managers. This, and the cumbersome PPP process, especially during the frantic bid stage, are leading to many

poor quality design solutions. There is currently a preponderance of deep plan buildings being selected for PPP projects, where views out are poor, natural light and ventilation minimised and public spaces cramped and unattractive. Such buildings may also contribute to HAI problems and may not meet government sustainability targets.

While clinical adjacencies will initially be close and construction costs reduced, such densely planned buildings will be difficult and disruptive to reconfigure for inevitable changes in clinical practice, storing up problems for the future.

### Conclusion

When a government finds a reliable method of delivering large-scale projects, it is loathed to make changes to it, despite deficiencies in design outcomes and excessive bid costs. Such deficiencies have arisen from the protocols for PPP projects being driven by accountancy and legal factors which are easier to determine than qualitative ones. The response from the design community has been the development of design tools to objectively measure design outcomes, related to evidence-based quality assessment.

In addition, design is gradually being appreciated to be key to the success of the procurement process in benchmarking the project parameters at the outset and providing a reliable definition of the bid. More design work reduces bid costs and timescales over the project life.

### The PPP bidding process is complex, expensive and its outcomes unreliable

Major PPP hospitals cost millions of pounds to bid, since the design, construction, facility management and funding proposals require to be determined. Had the construction industry not been emerging from a deep recession in the mid-1990s when a 1% margin on construction work was good (PPP investments should make a 10-14% annual return), it would not have risked the costs of experimenting with this new procurement method. A £200 million hospital (capital value) will cost at least £2 million to bid, but success might mean a £1.5 billion service contract over the next 30 years. While some new participants have entered the market from overseas in the last five years, only a small number of organisations can afford to bear the costs incurred in PPP bidding, and many large UK organisations will not now bid for large

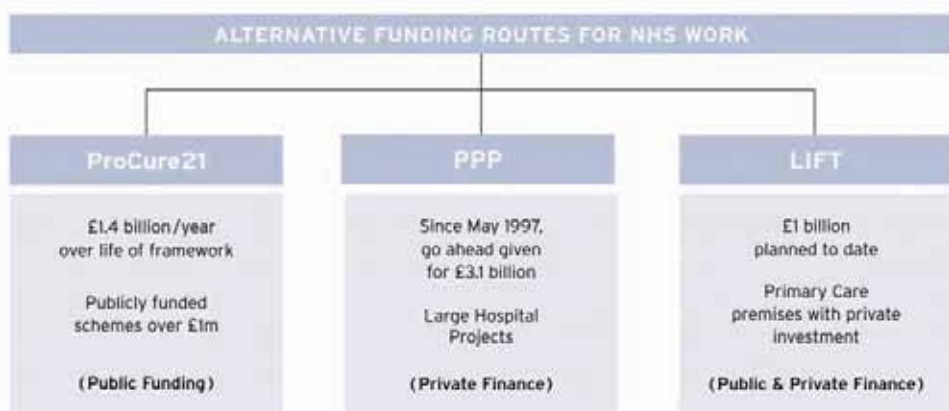


Figure 4 Funding Chart

hospitals. Most projects are delayed because the public sector client has not considered its requirements and affordability limits well enough before going to the market. Since bidders have no guide to the affordability level when they start bidding, unrealistic bids are often presented as they respond enthusiastically to the aspirations of the hospital. Last minute changes are made to designs as cost overruns are detected by the public sector client.

Delays compound affordability problems and can lead to a vicious cycle of savings exercises and lost time. Quality inevitably suffers as the public sector project team's control reduces and its options are closed out.

Design is the key to the issues that cause the inefficient and expensive PPP procurement process. Until sufficient design work is carried out, funding packages, construction planning, market testing, facility management programmes and a whole host of other PPP elements cannot be defined. If the design is flawed, the chances are they will also be. The use of public sector design exemplars to benchmark quality and affordability, and the involvement of the private sector in helping to ensure that these are sufficiently robust and realistic, is the only sensible way forward.

### **Local Investment Finance Trusts (LIFT) and ProCure 21**

The imaginative procurement initiatives at the beginning of the 21st century are not limited to PPPs, which are appropriate for large, stand-alone projects. To upgrade primary care facilities in England, LIFT projects are similar to PPPs in that private sector partners supply the accommodation requirements for health provision via a long-term service contract. However in these projects, a number of community facilities in a locale are bundled together, with the 'client' organisation being a joint venture between local stakeholders (the primary care organisation, local doctors, local authorities, etc.),

the private sector operator, and central government in the form of an organisation called Partnerships for Health. Potential private sector providers tender for the work on the basis of the first few or typical buildings, and the successful bidder continues to develop the design and construction of a series of buildings in the local area, with costs benchmarked against the initial schemes. Some of these buildings are quite small, perhaps valued at £1 million, but with the transfer of clinical activity and respite care from major hospitals to primary care facilities in the community, some projects can be valued at over £20 million. A bundle of projects might be valued at £100 million. While the ability to influence design from the start of the project is potentially beneficial, the difficulty in satisfying a wide range of interests is frustrating and time consuming.

The other initiative is ProCure 21, where twelve supply chains were chosen in 2003 to design and build, on a national basis, a programme of publicly funded acute hospital projects, each over £1 million in value. Each supply chain contains national building contractors, local ones, designers, facility managers and suppliers. Having qualified to be one of the twelve supply chains by demonstrating the ability to adopt a partnering ethos, and having set financial parameters and rates, individual projects are then developed and negotiated without recourse to normal competitive tendering, cutting costs and timescales.

Again, hospitals have the combined skills of designers, builders, and facility managers at their disposal from early business case stages of projects. In return, each supply chain must share its design and construction knowledge with the National Health Service to pool best practice towards raising the standards of projects in general. The initiative is sufficiently new that it is not possible yet to judge whether the desired improvements in quality, standards and economies will be delivered.