Improving Standards of Design in the Procurement of Public Buildings
Cover: Gateshead Millennium Bridge, Newcastle – Gateshead
This report has been prepared by the Commission for Architecture and the Built Environment and the Office of Government Commerce. This report represents OGC operational guidance. The views are formally supported by the Better Public Buildings Group. The group is chaired by Lord Falconer and has representation at Ministerial and Official level from the following departments:

- Cabinet Office
- Department of Culture, Media and Sport
- Ministry of Defence
- Office of the Deputy Prime Minister
- Department for Education and Skills
- Department for Environment, Food and Rural Affairs
- Foreign and Commonwealth Office
- Department of Health
- Home Office
- Lord Chancellor's Department
- Department of Trade and Industry
- Department for Transport
- HM Treasury
- Department for Work and Pensions

The group also has representation from the:

- North Ireland Assembly
- National Assembly for Wales
- Scottish Parliament
Rt. Hon. Paul Boateng MP

Chief Secretary to the Treasury

I am delighted to sponsor the publication of this important and timely report which has been endorsed by all my Ministerial Design Champion colleagues. I congratulate Peter Gershon and Sir Stuart Lipton on their work, not least for the brevity and clarity with which they have tackled such a diverse and complex subject. I am also delighted that Sir John Bourn has lent the support of the National Audit Office to this report.

The report underlines the Government’s repeated message that sound, creative design is an essential ingredient to achieve best value for money. Through the working life of a building, design excellence can make service delivery more efficient and enhance the working environment for all those who use our public buildings.

Too often in the past, public building design has suffered under inefficient procurement practices, and as the report makes clear, we are still not achieving consistently the design standards that the Prime Minister called for in launching Better Public Buildings. The ability of all levels of government to act as “intelligent customers” remains a concern, and the recommendations set out in this report reinforce the work that OGC and CABE are already undertaking to address this.

I and my Ministerial colleagues remain firmly committed to improved procurement, and the report’s recommendations are consistent with the underlying objectives of our procurement policies. In particular, it reinforces the Government’s message that value for money does not end when construction is complete, but continues throughout the lifetime of a building, (whether a hospital, school or other public service). Policies are already in place to support the important step change required in the quality of our public spaces. Under the guidance of this report, I am confident that best practice can be achieved and reinforced to provide the very highest standards of procurement and design.
Sir John Bourn KCB

Comptroller and Auditor General, National Audit Office

Good design is essential for achieving value for money in construction. But this is not just about buildings being completed on time and within budget; it is also concerned with ensuring that the costs of operating buildings over their whole life are optimised and that those who use and work in public buildings gain real value from them. In this way buildings can make a major contribution to improving public services.

I have in my reports to Parliament drawn attention to instances when insufficient consideration had been given to building design with adverse consequences for value for money and service delivery. I therefore welcome this report and the importance it attaches to design excellence. I encourage all those involved in construction projects to adopt the good practice which it advocates.

Sir Stuart Lipton

Chairman, Commission for Architecture and the Built Environment

Two years ago the Prime Minister asked for a step change in the quality of new public building projects. Since that time, one of the greatest allies and supporters of the Prime Minister’s Better Public Building Initiative has been HM Treasury. They recognise the value that design adds, not only in the construction process, but also over the lifetime of the building. Better design has a direct impact on the standard of public services and the quality of life of those who use them.

Much has happened in the last two years, most notably the formation of the Ministerial Design Champions Group and the launch of the departmental action plans. However we are a long way away from ensuring that all public building projects deliver the quality that represents true value for money. This report provides practical steps for both central government and public sector construction clients to ensure that excellence in both design and procurement is delivered. The Prime Minister’s Better Public Building Award shows that we can deliver this quality – the ambition is to ensure that best practice becomes standard practice.
Introduction

In April 2001, the then Chief Secretary to the Treasury asked Peter Gershon, Chief Executive of the Office of Government Commerce (OGC) and Sir Stuart Lipton, Chairman of the Commission for Architecture and the Built Environment (CABE) to consider what steps might be necessary to ensure further improvement in the design quality of building and infrastructure projects procured by the public sector, and to develop a set of recommendations.

The review has produced the following main conclusions:

- Good design is fundamental to achieving high-quality public buildings. HM Treasury and the National Audit Office agree that good design helps generate value to the taxpayer by creating environments that support improvements in public service delivery and by producing buildings and spaces of lasting civic value. It can also contribute to staff recruitment, retention and motivation.

- Design development costs are likely to be small in relation to the whole life operating costs of publicly procured projects and yet it is through the design process that the largest single early impact can be made on these costs.

- All current preferred public procurement methods – design and build, PFI and prime contracting – when done well, encourage the application of good design principles. However, with improvements to both the client culture and the procurement processes, we are convinced that higher standards still can be consistently achieved to the benefit of all those who use public buildings.

- As part of the Government’s aim to continue to raise standards, strengthening can usefully be effected in the following areas:
  - increasing recognition of the responsibility that flows from procuring a new public building, to tax-payers, users and to the surrounding community
  - raising the levels of client commitment to, and skills in, achieving design quality
- setting project budgets based on a realistic and full analysis of whole life costs and benefits
- setting clear benchmarks for the expected design quality, based on best practice
- understanding and communicating design needs to ensure that every opportunity is taken to improve the delivery of public services including healthcare, education and welfare services
- ensuring full stakeholder and end-user involvement in the design process
- signalling the importance of design to the procurement process at all key stages
- ensuring that planning, design and construction are seen as an holistic process
- insisting on high standards throughout the procurement process.

The report makes 11 recommendations which flow from these conclusions. These are all consonant with the underlying objectives of Government procurement policy, and do not require significant policy changes or major expenditure. If implemented consistently across Government, they will have a significant impact on performance standards. We believe that the necessary tools are already available, and that Government now needs to ensure that its performance brings design best practice to bear on all large capital programmes.
The Design Opportunity

The Government is committed to the largest public building programme for a generation. A massive increase in public capital investment is occurring, doubling the level of investment in just four years to £38 billion per year by 2003/04. One of the main products of this commitment will be a host of new and improved hospitals, schools and other public buildings and infrastructure.

At the same time the Prime Minister is committed to a step-change in the quality of public buildings. Government initiatives such as Achieving Excellence, Rethinking Construction and Better Public Buildings are all intended to deliver a procurement process that provides better design quality in an holistic sense, buildings with the following attributes – fitness for purpose, build quality, sustainability, adaptability, safety, efficiency, appreciation of context and an aesthetic impact that contributes to civic life.

The public procurement process should be producing buildings that facilitate the delivery of high-quality services and which will provide optimal value to the tax-payer. This includes, for example, improved wards for hospital patients, better educational environments for our children, and better working conditions for front-line staff.

Our starting point is the breakdown of a building’s costs. Over the lifetime of a building, the construction costs are unlikely to be more than 2-3% of total costs, but the costs of running a public service will often constitute 85% of the total. On the same scale, the design costs are likely to be 0.3-0.5% of the whole life costs, and yet it is through the design process that the largest impact can be made on the 85% figure.

This Government has had to start from a relatively low base. The quality of building procurement by the public sector has often been very poor. The buildings themselves have been of variable design quality. Projects were regularly delivered over-budget, late and often with defects.

It is in reaction to these considerations that new procurement methods such as partnering and PFI have emerged, to bring private sector discipline in risk management into the public procurement process. There are now three procurement models promoted by the Office for Government Commerce, and endorsed by the National Audit Office – ‘design and build’, PFI and prime contracting. Most of the conclusions and recommendations within this report are relevant to all three methods.
The Government is clear that it wants its preferred procurement methods to deliver a step-change in both the efficiency of procurement and the quality of the services which it delivers. To date, the evidence suggests that we have made considerable progress in achieving the improved efficiency but that we have not yet consistently achieved excellence in terms of design quality. There are several areas where further work could usefully be done, addressed in the report:

- encouraging a client culture which engages fully on systematically addressing whole life costing and quality issues
- involving end-users fully in the design process
- stressing the need to set budgets with regard not only for upfront capital cost but also to take full account of whole life costs, focusing on service outcomes, with clients not so much concentrating on the ‘pennies’ represented by the building (and maintenance) costs, but rather the ‘pounds’ represented by the delivery of public services within the buildings
- encouraging clients placing emphasis on the employment of a suitably qualified design team at the right time and in sufficient depth
- encouraging a full appreciation of public buildings as symbols of civic investment that can contribute to quality of life, community vitality and personal well-being
- ensuring that sufficient time is factored into the procurement process, to assist the pursuit of excellence in design.

This report aims to address these issues. We consider that any procurement process can secure a good design if the client is committed and has the skills, has an adequate budget, has a focus on whole life costs, and ensures that the integrated supply team includes a quality designer.
What is Good Design?

Good design is not primarily a question of style and taste. It is adherence to a set of time-honoured, objective principles that determine whether or not a building works well for all users and the community.

Design encompasses functional efficiency, structural integrity, sustainability, lifetime costing, and flexibility as well as responsiveness to the site and to its setting.

In order to achieve good design, it is necessary to have strong bidders, an end-user that knows exactly what is needed, a thorough brief and designers who can engage in a challenging and constructive dialogue with both the public sector procurer, end-users and the supply and manufacturing base. The planning of a sufficiently robust timetable to achieve a good solution is essential.

Good design involves creativity, and it should lead to simplification and to savings in cost. It does not consist of using expensive materials for their own sake or of providing lavish areas and volumes. It also takes account of standard products and manufacturing processes, often through early involvement of the supply side in the design process to inform the design – this is captured in the slogan “design for manufacture” rather than “manufacture for design”.

A good design team will also ensure that capital costs are competitive, and that savings can be achieved on running costs. By enhancing the environment in which a service is provided, it can increase outputs and add to the quality of service. Through innovation, it can also give the facility a competitive advantage in attracting both users and staff. Good design can also contribute to wider policy objectives, such as those relating to the protection of the environment, without compromising the procurement policy objective of optimum combinations of whole life costs and quality to meet users' requirements.

Good design can be summarised as a mix of the following attributes:

i. **Functionality in use:** is the building fit for purpose, or even better, does it use know-how and innovation to provide business and social value? Does it optimise the operational cost of core services and, in particular, the productivity of staff?

ii. **Build quality:** is the building built on whole life cost principles - built to last and easy to maintain?
iii. **Efficiency and sustainability:** is the building designed in a way that it will be completed on (or before) time, to budget and to specification? Is the building environmentally efficient, in terms of where it is located, how it has been constructed and how it will be used?

iv. **Designing in context:** is the building respectful of its context, strengthening the identity of the neighbourhood in its landscape? The Government’s guidance on urban and rural design, ‘By Design’ states that any new development should accord with the following principles – character, continuity and enclosure, quality of public space, ease of movement, legibility, adaptability and, where appropriate, diversity of use.

v. **Aesthetic quality:** the procurer may have architectural requirements that will form an essential element of the design process. These could include the need for distinguished architecture, or the need for a building to harmonise with other existing buildings.

For a more detailed description of how to assess quality of design, CABE’s publication, *Design Review* is available from its website.
We are convinced that it is possible to achieve excellence in design through the PFI process. Indeed, there are several examples in operation.

When it is used appropriately, PFI offers certain advantages over other methods of procurement:

- it offers the prospect of better value for money than other procurement methods, with a proper focus on whole life costing, fully integrating – under the responsibility of one party – up-front design and construction costs, with ongoing service delivery, operational, maintenance and refurbishment costs
- it ensures an integrated supply team is in place from the earliest stages of the design process, which should help ensure that maximum design value is generated, and that functional and workable design solutions are developed
- it should provide wider opportunity and incentive for innovative solutions as to how service requirements can be delivered.

However, to maximise these benefits, clients need to make PFI work for them, and that entails their being aware of the following:

- while the PFI client always transfers to the private sector the design risk involved in building, managing and maintaining the new facility, the client does not always transfer the network and interface risks (i.e. the relationships with other services supplied by the client and with services delivered by the client within the facility). It is therefore essential that the client (and particularly the end-user) understands fully and communicates clearly their design needs and aspirations in running a high quality public service. This must become the norm in all such “mixed economy” PFI projects
- PFI represents a change in contractual relationships compared with traditional procurement methods in that the designers are not contracted directly to the client. The PFI designer’s contractual responsibility is to the Special Purpose Vehicle in terms of meeting the terms of the output specification. The client must therefore ensure that relationships are structured in such a way that there is direct and ongoing dialogue with the design team about service needs, involving the end-users wherever possible to ensure that their needs are not compromised.

It is important to emphasise that dealing with these two issues as set out above is existing best practice.
Every client procuring a new public building should be a design champion. This requires an openness to pursue innovative approaches to promote design quality.

Some less experienced clients are not aware of the diversity of procurement options and sometimes perceive that there is a single procurement orthodoxy that must be observed if funding is to be made available. They may feel restricted in their ability to take innovative steps due to a fear of ‘breaking rules’ or indeed the law.

At the same time, procurement expertise is often not well entrenched, especially in smaller client organisations and can lead to a degree of conservatism in the application of procurement methods. This can be compounded by a reluctance to commit scarce resources to development work, including legal and design advice, ahead of guaranteed central government funding.

These client attitudes may result in a culture of risk avoidance in parts of the public sector, such that even if the final outcome is a poor quality building, so long as the procurement process will stand up to external scrutiny, especially by audit, based on rigid application of perceived (rather than actual) Treasury priorities, the client body feels secure.

In reality, there is no need for a mechanistic application of public procurement methods. Rather, the selection and application of appropriate procurement routes should be flexible enough to reflect different sets of circumstances. This flexibility should encompass:

- the scope and content of project specifications
- how the aspiration for design quality is reflected through the definition of the outline business case and the calculation of project budgets
- the ability of clients and end-users to inform their own understanding of requirements with better researched design briefs in advance of procurement
- the means by which quality is assessed through the bid evaluation process, and
- the steps and speed required to reach preferred bidder status, including the amount of design work required prior to the appointment of a preferred bidder, i.e. the realism of the timetable.
Of course, greater flexibility should not be at the cost of greater inefficiency. The rationale for the concern with exploiting flexibility is to reflect the need for clients to be able to ensure that the building they procure will enable them to deliver the services for which they retain operational, network and interface risks.

To secure greater client flexibility and innovation also requires Government and other key organisations to send clear and consistent messages of support. It should therefore be made clear in all departmental procurement guidance that achieving the objectives of the Prime Minister’s Better Public Buildings Initiative is an important objective of all public capital projects.

To this end, there is a need to update and improve departmental guidance on building design, so that clients can use up-to-date guidance with confidence to give clear expression to their aspirations for a building within their project specifications. As with building regulations, there are some basic parameters, e.g. optimum classroom sizes, hospital circulation spaces, that should help to standardise and speed up the process, while giving the public sector a degree of certainty over functional quality of final outcomes. However, it is important that these essential effects of implementing sectoral guidance are seen as minimum benchmarks which any bidder should have to meet or better, and this should become standard practice, where appropriate.
Getting the Budget Right

There is already clear Central Government guidance on taking an holistic whole life approach to setting project budgets, but we believe that this needs further development and encouragement, if we are to see current best practice becoming the norm. Fundamental to making public procurement work well, is ensuring the client is able to put an economic value on the added benefits of design quality. This includes areas where there is a direct economic impact on the public sector such as staff retention, patient recovery times and crime rates. In addition we believe that work needs to be done to help allow economic appraisals to factor in and promote the social value of design, such as the patient experience, educational achievement and civic pride. This is conceptually novel within economic appraisal techniques used by the Government, but progress in methodology is being made in these areas.

Although there are significant gaps in the evidence base, sector specific studies do exist:

- In health, a Nottingham University study comparing outcomes pre and post hospital redevelopment found that well-designed wards resulted in lower pulse and mean arterial blood pressure readings, shortened post-operative stays and lower drug consumption.

- In education, a PriceWaterhouseCoopers study for DfES found that capital investment in schools had the strongest influence on staff morale, pupil motivation and learning time.

- In improved recruitment and retention generally, a study at the Chelsea and Westminster Hospital found that over half the nurses and doctors said that the quality of the hospital environment was a very important factor in why they chose to work there and chose to stay there. Evidence from some of the early PFI hospitals indicates that staff share similar attitudes in that sector, too.

Specifically, within PFI, the establishment of the Public Sector Comparator (PSC) has an important role in formulating the scope of a project but it explicitly does not set the affordability ceiling for the project. In practice, some public sector procurers, especially in local authorities still try to equate budgets, and therefore the acceptable level of PFI bids, to a Public Sector Comparator figure that is based on historic desk data and which does not reflect an aspiration for quality and best value.

PSCs (in respect of PFI) and budget setting (in general) should be based on solid evidence and should reflect a commitment to best value for money, incorporating a commitment to high standards of design.
It is fair to say that rigorous benchmarking in the public sector is in its infancy. Not enough public sector clients have had access to design expertise and therefore have had few means of measuring the quality of what they are being offered. There has been little or no benchmarking, little use of reference to overseas best practice and patchy dissemination of best practice when it occurs. As a result, some parts of the public sector may perpetuate historic assumptions and mistakes, and overplay the role of financial modelling.

It is essential that clients embarking on public building projects should be encouraged to use recognised client advice. In the same way that a client would not consider embarking on a project without a lawyer and surveyor, so design expertise should be considered equally indispensable.

It is the responsibility of Government to help address the design skills deficit within the client base. The recommendations at the end of the report will help address this issue.

At the same time, Government Departments should be investing sufficiently in developing their evidence base for improving design knowledge and competences. A higher level of targeted research investment may help clients to measure the impact of design quality and improve benchmarks against international best practice.
Understanding and Communicating Design Aspirations

Across all procurement methods, there is a need for the client properly to understand and communicate their design aspirations before appointing the contractual team. For example, in PFI, Government guidance requires clients to establish reference schemes to assist the definition of the business case and the public sector comparator.

It is clear that in many cases, particularly in respect of PFI and partnering contracts, the full potential of the use of reference scheme or other early design work to assist the client has not been realised. Clients have properly been concerned with not pre-empting or restricting the ability of the private sector to respond to the project brief. They may not have appreciated the possibility of fully exploiting the process of drawing up the reference scheme to inform the project definition.

The definition of the reference scheme has considerable potential for the client in helping to determine and validate what outputs and outcomes they are seeking for the project. It can also provide invaluable learning for the development process for clients and end-users who are unlikely to have had previous experience. This is particularly the case in respect of building design where needs and priorities can be articulated through the process of design itself in advance of the formal tender process.

Understanding design aspirations can involve commissioning exemplar design work in advance of the main tender process. In some cases, this has involved, for example, the client commissioning drawings from a designer, perhaps appointed through a competition, to work up ideas alongside the client. Bidders can then either adopt (and/or improve) upon the exemplar design, or can seek to do better through their own design proposals.

Clients can be confident that use of such exemplar design work is fully consistent with Government procurement policy where the relevant Accounting Officer is satisfied that such an approach offers value for money. OGC and CABE will be taking the opportunity to review projects where exemplar designs are being used to seek to draw further knowledge of how these schemes work in practice.
Evaluating Quality

There are several ways in which the client can attempt to make sure that the selection of the right counterparty results in a high quality design.

First, it makes sense for the client to state, unequivocally, within the project documentation, that the quality of the design (and indeed the design team) will be a significant factor in drawing up the short-list. The assessment would then be on the basis of a mix of track record and early creative response to the project brief.

Second, it is important to communicate to the bidders from the outset of the process not only the importance and relative weighting of design criteria but also the importance placed on the identity of the expertise that the client will be relying upon in making design judgements. In other words, there should be transparency in order to signal intent.

If clients put sufficient emphasis on relevant skills, appropriate competencies and resources, track record and prior experience of the teams as recommended in OGC procurement and PFI guidance and reject from bidding processes those who fail to make the required mark, the market should quickly understand that it will have to invest adequately in design as well as legal and financial advice.
One of the keys to a successful project outcome is to involve the future building users early and often within the process. In a procurement method such as PFI, where much of the design work is undertaken as part of the selection process, it is therefore essential for end-users to be properly consulted by the bidding teams. However, even more important is that end-users are fully involved in defining the business case and project brief, including the content of any output specification. There should also be ongoing end-user representation within the client and contract management teams.

Particular care is required when grouping projects together. Bundling 20 or 30 schemes in a single contract poses challenges to securing quality outcomes without safeguards being put in place; at this size, any benefits of economies of scale risk being swamped by the diseconomies of insufficient time and resources to do a good job, based on extensive end-user consultation, unless extremely good planning and resourcing are in place.

The Government’s motivation in packaging smaller PFI projects to achieve economies of scale through an efficient procurement process and a degree of standardisation of product is well understood and accepted by procurers. But buildings are not commodities such as computers or office furniture. They are distinct projects within a unique mix of location, user needs and broader economic and social circumstances. If this is not respected within the design process it will be impossible to deliver a well-designed scheme. At the very least it will fail on two of the five design criteria set out in this report – urban design and aesthetics. It is also highly likely to fall down in terms of overall functionality.

There are, however, established means of dealing with this problem:

- being aware of the risks of large project packages of 20-30 schemes in a single contract risks compromising quality; at this size, any benefits of economies of scale must be accompanied by sufficient resources to recognise and deal with the challenges posed by the size and multiple locations of the project e.g. by making adjustments to the timetable and putting sufficient people and skills (however organised within the integrated design team) on the job to achieve sufficient quality

- considering dealing with schemes sequentially so that the design team can spread their effort in terms of both user consultation and detailed design; (such an approach can combine the advantages of PFI and prime contracting)

- permitting (or requiring) the SPV to employ a number of different design teams to spread the load and to ensure that the design process reflects unique local circumstances.
The main risk for design quality after appointment of a contractual team is that of time compression for the design team.

In particular, the client must be watchful of the risk of contractor value engineering (which is a respectable activity in itself) reducing the design quality of the approved scheme. Where cuts are proposed, it is critical that the client has access to both independent design expertise and user consultees in making the necessary choices, i.e. acts as an intelligent client.

There is again a real danger of the client losing focus once the project moves on to site and yet experience shows that this can be a period during which the project design quality is at most risk of being diluted. As with any project, there is a tendency for contractors to seek short cuts in terms of the quality of materials, finishes and general workmanship, if they can achieve this without prejudice to their own income streams. Again, this requires actions as an intelligent client.

The appointed client design advisers should be involved throughout the construction process to monitor the quality of design and finish and should never be allowed to be signed off pre-completion as an unnecessary additional expense. This conclusion also echoes the Government’s own Rethinking Construction emphasis on the integrated design and construction team.
The Recommendations

These recommendations flow directly from the analysis and conclusions presented in the report:

1. Every public sector client undertaking one or more capital projects above an agreed threshold should appoint a senior design champion for the project.

2. All Departments should also have in place clear procedures to ensure that schemes that do not achieve an acceptable level of design quality do not receive public funding and do not proceed until they do.

3. Government Departments should repeal or update procurement guidance to bring it into line with the Government’s policy on design and sustainability issues.

4. OGC should keep under review in its Gateways and Project Review Group processes, and in Departmental review processes, how design issues are addressed, to ensure that the design process is properly managed within the procurement process, including:
   - the use of appropriate design advice
   - the benchmarking of design standards
   - the evaluation of design quality
   - endorsement and approval processes.

5. Departments should ensure that clients adopt an appropriate mix of minimum design standards or quality thresholds, outputs and desired outcomes, within their project specifications, sufficient to reflect and protect the legitimate interests of the public sector client as an ongoing service provider.

6. Within their design action plans, Government Departments should demonstrate how they will devote appropriate time, training, research, resources and expertise to individual construction clients falling under their responsibility, including design management issues.

7. Departments should ensure that clients use PFI only where it offers best value for money taking account of a properly constructed and realistic Public Sector Comparator which reflects current best practice and conformity to all relevant Government policy, including its commitment to design excellence.
8. CABE (and OGC) should publish specific guidance on involving users of buildings in the procurement process, including the design stages.

9. Public sector clients procuring project bundles under a single contract should demonstrate to the satisfaction of the relevant Department and, where applicable, the Gateway process and PRG (Project Review Group), how they will address the design challenges involved.

10. CABE and OGC should investigate further the benefits and demerits of the use of design exemplars in real cases, wherever undertaken.

11. Departments should ensure that clients are signalling the importance of design quality as a project selection criterion from the outset of the selection process through the documentation, in the weighting given to design and design capability in the bid evaluation criteria, and finally in the development of contractual documentation and sign-off procedures.
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CABE, the Commission for Architecture and the Built Environment, is the national champion for better places: places which work better, feel better, are better. We offer advice and guidance to all those who create, manage and use buildings and the spaces between.

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