



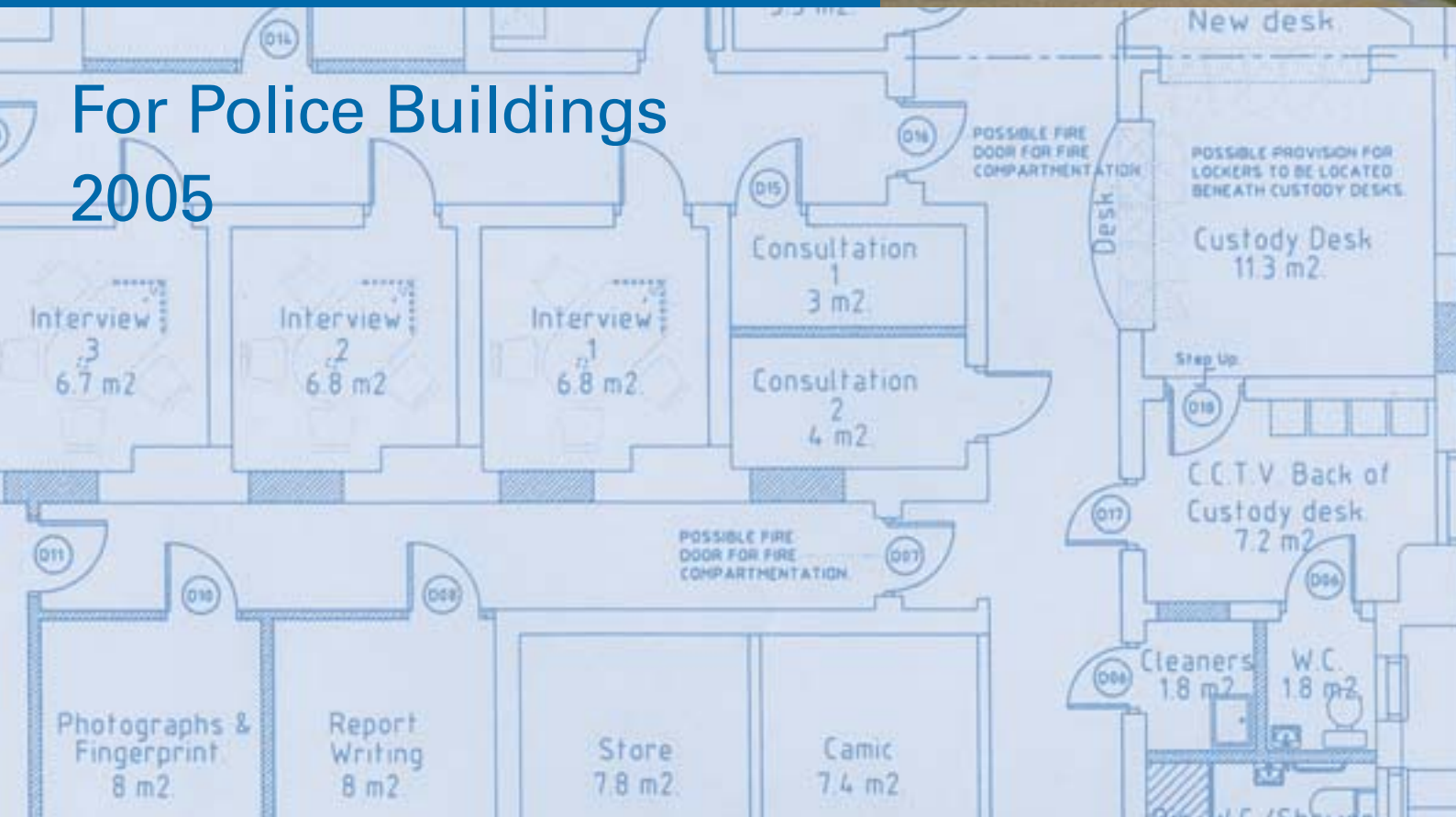
Home Office



DESIGN QUALITY



For Police Buildings
2005



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Foreword

I warmly welcome the completion of this new guidance.

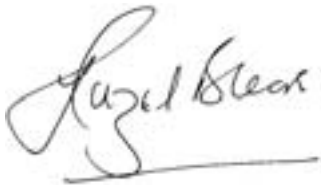
Good building design is not an unaffordable luxury or an expensive optional extra. It's a necessity. And while it undoubtedly requires leadership and commitment from police authorities and chief officers to achieve success, the long-term benefits will repay the initial investment.

A building that works well provides for the needs of both the staff and the visitors who use it. Staff who feel comfortable in their working environment are more likely to be happy and successful in what they do.

Police buildings should evoke civic pride and inspire confidence in those who see and use them. They form part of the physical fabric of the community in which they are based, and can serve as a focus for the community's sense of safety. Engaging effectively with communities, and placing their needs at the heart of service delivery, is a key element of our plans to reform policing. To achieve this, we need to make the spaces in which we interact with our communities accessible and comfortable for all.

But it's important to remember that good design is more than just façades and finishes. It is achieved through the approach, processes and adherence to high standards that are set out in this new Design Quality Guide.

This guide will prove to be both stimulating and useful to those of you involved in the key process of designing our new police buildings.

A handwritten signature in black ink, reading "Hazel Blears". The signature is written in a cursive style with a long horizontal line underneath.

Hazel Blears MP
Minister of State for Policing

1 Summary

1.1 Effective policing needs excellent buildings

“Police stations often form part of the physical fabric which constitutes our local communities. Just as other public services can have a place in our shared image of community, the local police station can serve as a focus for communities’ sense of safety... Not only can police forces respond to the demands of users but they can also seize on new builds as a real opportunity. Police forces can sell themselves and their reputation, an issue which forces do not fully exploit.”

Hazel Blears MP, IPPR Seminar, March 2004

The police need good buildings in the right locations. Investment in construction provides a valuable opportunity to catch up with the continuous changes in police priorities and methods and to implement the highest design aspirations. Whatever its size and function, from small facilities in shared premises to sector police stations and large divisional HQs, the success of a building depends on having the right brief and designer.

Design quality determines how well buildings fulfil current requirements and stand the test of time. Good design also provides better value for money over the life of the facility. Responsibility for achieving well-designed, effective police buildings lies with police authorities and chief officers, so this guide is for them, as well as for people delivering police accommodation.

Well-designed police premises contribute to:

- **success in police operations**
- **cost savings**
- **recruitment and retention of high-quality staff**
- **flexibility for operational and organisational change**
- **increased visibility and access to police services**
- **increased public confidence and a good public image**
- **a high return on investment, making further projects easier.**

The demands placed on police premises have increased: many must function 24/7 and provide public access, custody suites, control rooms and other specialist functions. All make use of sophisticated IT and must support constantly changing police operations in response to new national and international pressures, so flexibility is vital. Moreover, some premises are located alongside other community services, such as local authority offices, libraries or job centres.

1.2 Good police buildings

Property assets have three features that place primacy on their proper management, in that:

- **they are expensive – in terms of both their capital value and annual costs of upkeep**
- **they need to be carefully managed over their lives to ensure best value – eg use, maintenance and generation of income**
- **it takes time to determine carefully new property needs and to procure and provide them.**

Source: Royal Institution of Chartered Surveyors (2005) *Asset management in local government: Guidelines in outline*



1

^ The canopy was to have been stone, but using an artist's imagination has provided an image to remember and interest for occupants and passers by.



2

^ "I enjoy working in special operations because of the wide range of events. As well as all the activity going on, on the screens, televisions and radios when working in special operations, I also enjoy working with colleagues in a professional environment with like-minded competent operators."

Like any building, police buildings must:

- **be fit for purpose, a pleasure to use, visit and look at**
- **be easy and cost-effective to build, maintain, adapt and manage**
- **meet all statutory requirements and building regulations**
- **be designed for sustainability and avoid damage to the environment**
- **contribute positively to their surroundings: the site, the streetscape and local communities.**

In addition, well-designed police premises must seek to:

- **meet public needs**
 - be accessible, friendly and welcoming to the public
 - help the public feel protected and that the police are part of their community
 - help the police to feel proud of their service
- **have the right site**
 - be sensibly located for their particular operations
 - have secure, suitably segregated access for different categories of users
 - meet vehicular needs
- **be operationally efficient**
 - have up-to-date technology with capacity for the future
 - provide good facilities for specialist functions such as forensic laboratories
 - adapt to accommodate operational changes
 - provide for secure and safe treatment of those in custody
 - use efficient, contemporary office design concepts
 - have comfortable and attractive staff amenities
 - have adequate, well-planned, conveniently located storage
 - be designed at the right ergonomic scale, particularly with regards to circulation areas.

To achieve the appropriate balance of the above, a project needs the commitment, vision and support of chief officers and the police authority sponsoring it.

1.3 Getting the project right

Of the four broad project stages – preparation, design, construction and use – preparation is key. This is when clients can have most positive impact and make the most damaging mistakes. During the preparation stage, the project team lays the foundations for:

- **a well-formulated brief**
- **a clear process**
- **choosing the right designer**
- **a determined, knowledgeable, well-supported client team.**

Ten keys to good building design

- 1 Provide leadership, an inspired vision and clear objectives.**
- 2 Appoint and support a design champion.**
- 3 Budget for, and give, enough time from the very beginning.**
- 4 Use feedback from other projects, both local and in other forces.**
- 5 Develop and sign off a clear, complete and agreed brief.**
- 6 Agree a realistic budget.**
- 7 Select internal and external teams that will focus on quality and include a senior police officer committed to the project to represent user needs.**
- 8 Develop a long-term estate strategy, incorporating each project and its business plan.**
- 9 Understand and sign off each stage, then avoid changes.**
- 10 Think beyond the site boundary and consider sustainability.**

Police stations built in the last century and before often portrayed civic pride, permanence and authority. Today they need to convey professionalism, community involvement, protection of the community, effectiveness and a good working environment.



3

^ Norfolk's new police headquarters has benefited from the many lessons learned from the accessible and attractive working environments now common in commercial and public sector offices.



4

^ This refurbished heritage West Gas Purifying House in Toronto provides a community-oriented police facility which includes a community room and public amenities.



5

^ Savile Row police station is well integrated into the street, and has a solid, imposing style. This may be intimidating for some, and its congested city centre location could create operational disadvantages.



6

^ The formal front door is softened by planting. Simple but high-quality materials have stood the test of time, but this police station in Kentish Town has had to be adapted and extended to accommodate current needs.

- › Every building can aspire to excellence.
- » Every detail counts. Consult stakeholders and ensure they understand the building.



2 The operational importance of good design

2.1 Who this guide is for

This guide is intended for project funders (investment decision makers) and senior responsible owners (project owners), as well as the project teams delivering new buildings and facilities.

Police property teams have considerable expertise in meeting the needs of their clients – the police authority, police officers and the public. However, these professionals need input from other stakeholders, some of whom may be unfamiliar with capital projects and may not fully appreciate the extent to which well-designed buildings can support and enhance operational efficiency.

The guide contains:

- help in defining and identifying quality and its benefits, and ten keys to achieving it (section 3)
- an outline of the most important client tasks (section 4)
- checklists of questions and actions (section 5)
- lists of useful organisations and documents.

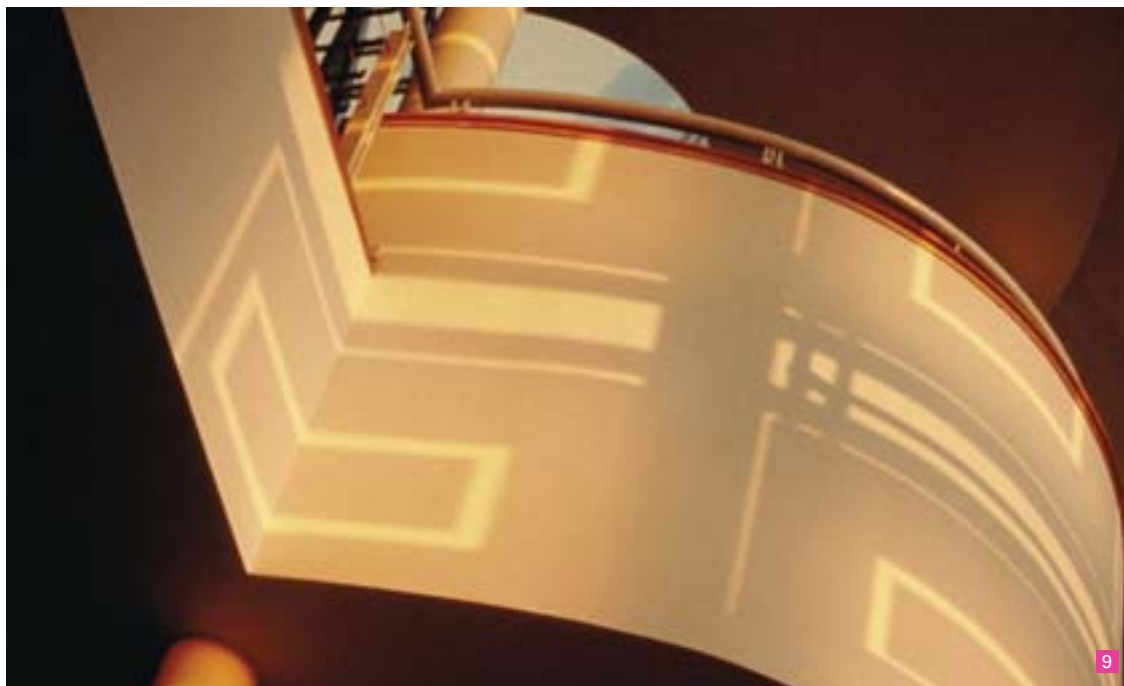
2.2 The main messages

Only good design provides good value for money. Achieving this requires commitment, time and skill, for which the ultimate reward will be a more successful, more effective and more appreciated police service. This guide, which supplements existing technical guidance, shows how to achieve a building that gives life-long value.

It emphasises the importance of:

- decisions taken early on
- the need to consult stakeholders, including the general public
- ensuring the brief is right, including distinguishing needs from wants
- selecting the best team for design and implementation
- using the right project processes.

These principles apply to all forms of procurement, for new or refurbished buildings, from a presence in a shared public service building or a small urban kiosk, to sector police stations, divisional HQs or buildings with specialised functions.



◀ The simple device of filtered sunlight adds interest and provides variety through the day.

Source: 'Translucent', 2000, a light artwork by Martin Richman, was commissioned by Balfour Beatty and Babcock & Brown. The commission was created in conjunction with Thames Valley Police, and developed and managed by Artpoint.

2.3 Difficulties with the current stock

All 43 forces in England and Wales have their own context and identity, yet they all need to adapt their buildings to meet changing local, national and international pressures and a range of challenging criteria.

For example:

- **two-thirds are open to the public**
- **a quarter are open 24 hours a day**
- **600 buildings have 24-hour custody centres.**

Almost half were designed more than 40 years ago and many no longer meet current organisational needs, mainly because of obsolete and inflexible layouts. Pressures from terrorism and new levels of regional and international cooperation against major crimes require investment in new technologies and facilities that are not always easy to achieve in outmoded buildings.

The public finds some police buildings unapproachable, others are merely old, run-down and out of tune with those whom they serve. The public needs to have confidence in the police service, and this calls for a design philosophy that emphasises the importance of public access to police buildings.

2.4 New building programme – an opportunity to rethink design

Police buildings are being built or refurbished to address current and emerging functional needs. Some are being relocated to the urban fringe, providing local services from satellites or shared premises. Refurbishment is creating a new, user-friendly image, even in old buildings, and providing a better work environment with improved equipment. Some forces are developing locations collaboratively with other agencies such as the courts, the fire service, local authority one-stop-shops, libraries, schools or health centres, and this approach is being actively encouraged.

3 Getting the project right

“Design is a specialist skill but it is not an exclusive activity and depends on a meaningful and sustained dialogue between designers and clients, users and communities.” Scottish Executive (2001) A policy on architecture for Scotland

3.1 What is good design?

Good design is about far more than exterior façades, colour schemes and style. A demand for quality is not an invitation to produce an extravagant design using expensive or unsuitable materials, or a complex, innovative structure. Rather, it is a quest for imaginative ways of delivering long-term operational, management and maintenance satisfaction from a building that is a pleasure to use, visit and look at.

Good police buildings

Like any building, police buildings must:

- **be easy and cost-effective to build, maintain, adapt and manage**
- **meet all statutory requirements and building regulations**
- **be designed for sustainability and avoid damage to the environment**
- **contribute positively to their surroundings: the site, the streetscape and local communities**
- **be a pleasure to use, visit and look at.**

In addition, well-designed police premises must:

- **meet public needs**
 - be accessible, friendly and welcoming to the public, including the disabled, balancing openness and security taking account of the threat level
 - help the public feel protected and that the police are part of their community
 - help the police to feel proud of their service
- **have the right site**
 - be sensibly located for their particular operations
 - have secure, suitably segregated access for different categories of users (police, public, suspects and their visitors)
 - meet vehicular needs for access, movement and parking
- **be operationally efficient**
 - have up-to-date technology
 - provide good facilities for specialist functions such as forensic laboratories
 - be able to adapt to rapid fluctuations in staff numbers, both short and long term

- allow for changes in operational requirements, including IT
- be flexible enough to accommodate the cultural changes needed to promote modern policing methods
- provide for the secure and safe treatment of those in custody
- use efficient, contemporary office design concepts: a fluid, team-based environment, no hierarchical space use, more shared areas, enclosure only where functionally essential, logical planning to facilitate building management and way-finding
- have comfortable and attractive staff amenities through all hours of opening (24/7 in many cases)
- have adequate, well-planned, conveniently located storage including places for storing and charging equipment
- be designed at the right ergonomic scale, particularly important for circulation areas.

3.1.2 The site

“Put your presence in places people can access and where communities congregate – and be flexible in this regard. Demand shifts – never put down inappropriate building ‘roots!’”

Alan Croney, Metropolitan Police

Finding a suitable location and a site with the right characteristics is the first step towards a successful design that will facilitate efficient policing.

The entire site and the area surrounding it matter. For example:

- **movement patterns on the site determine many aspects of the internal function, especially where segregated access is sometimes needed**
- **well-placed, clear signage to the site and the building must be planned from the start to assist infrequent users and visitors**
- **height and bulk affect the way the building fits into the wider neighbourhood**
- **the way the building is oriented and placed on the site affects security, views, sustainability and options for future adaptability.**

3.2 Why good design matters

Good design should aim to provide a building that meets policing needs. To achieve this, chief officers need to explain their understanding of changing systems and policing approaches and the needs of all relevant stakeholders must be considered before any design ideas are fixed.

Getting this initial brief right is crucial to success. Failure in this respect can result in opportunities for enhanced service delivery being lost, or worse, police operations, the reputation and development of the local force being hindered and money wasted.

Good design contributes to:

- **success in police operations**
- **cost savings**
- **recruitment and retention of high-quality staff**
- **flexibility for operational and organisational change**
- **increased visibility and access to police services**
- **increased public confidence and a good public image**
- **a high return on investment, making further projects easier.**



10

^ Vehicle movement and parking areas can be landscaped and planned to enhance the site. Provision may be required for secure garaging and car washing. The landscape brief must be clear about the need for security and visibility around the building.



11

^ The requirements of the Disability Discrimination Act 1995 for inclusive access in an existing building often result in a proliferation of ramps, rails and moving platforms. The design of these is critically important, especially at the main entrance. They should not look like an afterthought.

3.3 Assessing quality – the Design Quality Indicator

“It was clear during this session that the use and benefits of the DQI were far greater than we had envisaged and, with hindsight, we should really have used the tool at the outset of the scheme to help scope what we would like the scheme to deliver for us.”

Zoe Lewis, Cleveland Police, DQI briefing note, 2004

It is possible to assess design quality objectively and systematically, in ways that do not merely reflect personal opinion. One simple tool for doing this is the Design Quality Indicator (DQI).

The DQI allows all those involved in the design process, from project inception to completion and occupation, to assess and appraise design outcomes, including construction quality. It can be used by funders, users, all stakeholders, architects, designers and builders, at each key stage or ‘gateway’, from initial concept to post-occupation evaluation:

- to help define and articulate the brief clearly
- as a design review tool throughout the procurement process
- when the building is finished, for project and user feedback.

It can play a vital role at the very beginning of a project in establishing shared concepts and vocabulary for the project team and stakeholders, setting the parameters by which the building should be judged.

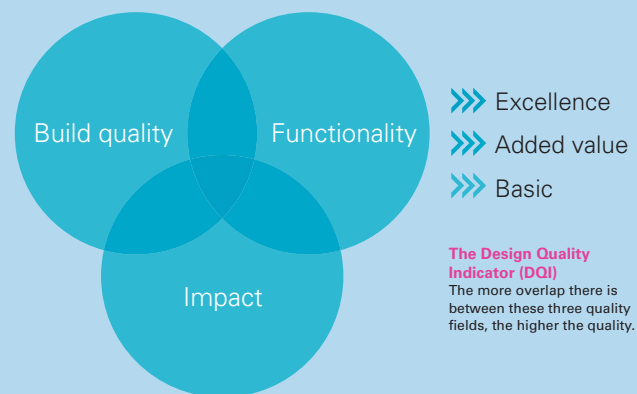


Table 1 The Design Quality Indicator

The DQI consists of about 100 simple questions clustered under ten headings, which are divided into three groups. Under each heading, about ten statements, with which you can agree or disagree on a scale of one to five, define aspects of what the building could be like.

The weight and importance allocated to the various issues depend on the priorities for each particular project.

IMPACT	BUILD QUALITY	FUNCTIONALITY
1 Character and innovation 2 Form and materials 3 Internal environment 4 Urban and social integration These refer to whether the building will create a sense of place and have a positive effect on the local community and environment, and to its potential impact on the arts of building and architecture.	5 Performance 6 Engineering systems 7 Construction These relate to the performance of a building, such as structural stability and the integration, safety and robustness of the systems, finishes and fittings.	8 Use 9 Access 10 Space These assess whether the building is designed to be useful and allow the required functions to be carried out smoothly and to evolve over time. They are used to evaluate the arrangement, quality and interrelationship of spaces with function in mind.

More information about the DQI can be found through the Construction Industry Council, which developed the tool with the support of CABE and others, See www.dqi.org.uk.

- Enough time must be allowed to get the best results.
- Initial capital costs may need to be higher to achieve best value for money.
- Even where the budget restricts choice, good design will still provide the best available value for money. Poor design, whatever it costs, gives poor value.

Quality, time and cost
– getting the balance right
Best value involves balancing these objectives without sacrificing any of them

QUALITY
'We must ensure quality'

TIME
'We must open as soon as possible'

COST
'We must make sure it's cheap'

Source: adapted from CABE (2003) *Creating excellent buildings: A guide for clients*

3.4 Key actions for good design

"Make certain that there are key people in place both at high level and in the end-user departments so that estates can concentrate on its professional service delivery and is divorced from the 'politics' of organisational life."

Michael Harris, Cheshire Constabulary

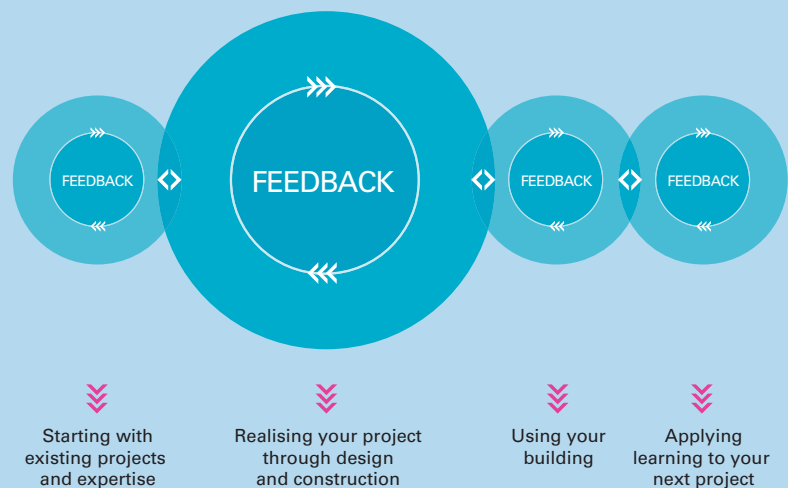
Good design can only be delivered by a team that is committed to quality and focuses on shared goals that meet the needs of internal and external stakeholders. The following ten key actions are relevant from the earliest preparation stage. They are interdependent and all contribute to making the project a real success. Senior people in the force and the police authority play an important role in enabling them to happen.

(See also CABE (2003) *Creating excellent buildings: A guide for clients*.)

Ten keys to good building design

- 1 Provide leadership, an inspired vision and clear objectives.
- 2 Appoint and support a design champion.
- 3 Budget for, and give, enough time from the very beginning.
- 4 Use feedback from other projects, both local and in other forces.
- 5 Develop and sign off a clear, complete and agreed brief.
- 6 Agree a realistic budget.
- 7 Select internal and external teams that will focus on quality and include a senior police officer committed to the project to represent user needs.
- 8 Develop a long-term estate strategy, incorporating each project and its business plan.
- 9 Understand and sign off each stage, then avoid changes.
- 10 Think beyond the site boundary and consider sustainability.

Feedback at all stages is an essential part of the process.



Source: adapted from CABE (2003) *Creating excellent buildings: A guide for clients*

3.5 Planning the long-term use of the estate

Forces need to develop and maintain strategies for their entire estate. Asset management is an important part of best value and high-quality service provision overall. It is fundamental to achieving quality, operational efficiency and enhanced public confidence from each building project. Decisions about prioritising what is needed, and where and when it is needed should be based on the long-term plan for developing and upgrading the whole estate. These decisions then define the individual projects. This long-term view helps safeguard against the changes in objectives or personnel that often occur over the long gestation of many projects.

The keys to successful estate planning are similar to those for creating excellent buildings. Although the process uses some different skills and expertise, it requires the same amount of dedication, determination and commitment to quality. For strategic planning for the entire estate, good information must be available about the existing stock, including:

- where buildings are
- their size and efficiency (gross internal, net internal and net usable areas and ratios – see Glossary)
- what they are being used for

- their condition
- their capacity and that of their sites
- their maintenance and running costs
- accessibility – vehicles, pedestrian, for the disabled
- their ‘green’ credentials – efficiency in terms of energy used and pollutants generated for heat, light and ventilation
- inherent possibilities and values in alternative uses.

While some of this information may be readily available, it is likely that some specific research will need to be undertaken. However, this analysis is essential to ensure that all buildings are as effective and useful as possible and should be updated regularly. This information is vital for effective asset management and formulating the business case for any project.

Formal feedback processes should be undertaken on existing buildings and completed projects, giving an invaluable understanding of how to provide the best buildings for police needs.

It should be noted that the concept of the estate or asset must also take into account that, increasingly, police forces are sharing premises with other services. The role that this change will play in asset management concepts should be carefully considered.



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◀ Different forces find a need for varied approaches to reception security. In St Aldate's there is no glass barrier – separation is achieved by level changes.

◀ In a building shared by the police and the community, a barrier at reception would be inappropriate. This Toronto building includes an accessible community room and an exhibition space as you enter the building.

3.6 Buildings that meet community policing objectives

Increased emphasis on neighbourhood policing and integration with the community has created a need for new types of premises. There are examples of forces sharing premises with other services such as ambulance and fire. In an increasing number of buildings, such as schools or community buildings, libraries, health centres, hospitals or shopping centres, a small police presence co-locates with other functions. In addition to providing a base for community policing, some are now showing secondary benefits for the 'host' organisations – such as less sickness absence or truancy where a police team is based in a school – which will encourage this type of arrangement.

In collaborative projects such as these, whether new build or in existing premises, it is even more important for the objectives to be clear and cooperation on the briefing and design is essential. The challenge for designers to make the best possible environment is greater under these more constrained circumstances than in wholly-owned projects.

The nature of the reception and public access is critical in this context. The force should carry out an operational risk assessment for each project, which can then be designed to suit the specified requirements.

Security is always an issue and the most appropriate approach must be selected for each location, whether physical barriers, spatial separation – as in St Aldate's – or no barriers – as in Toronto.

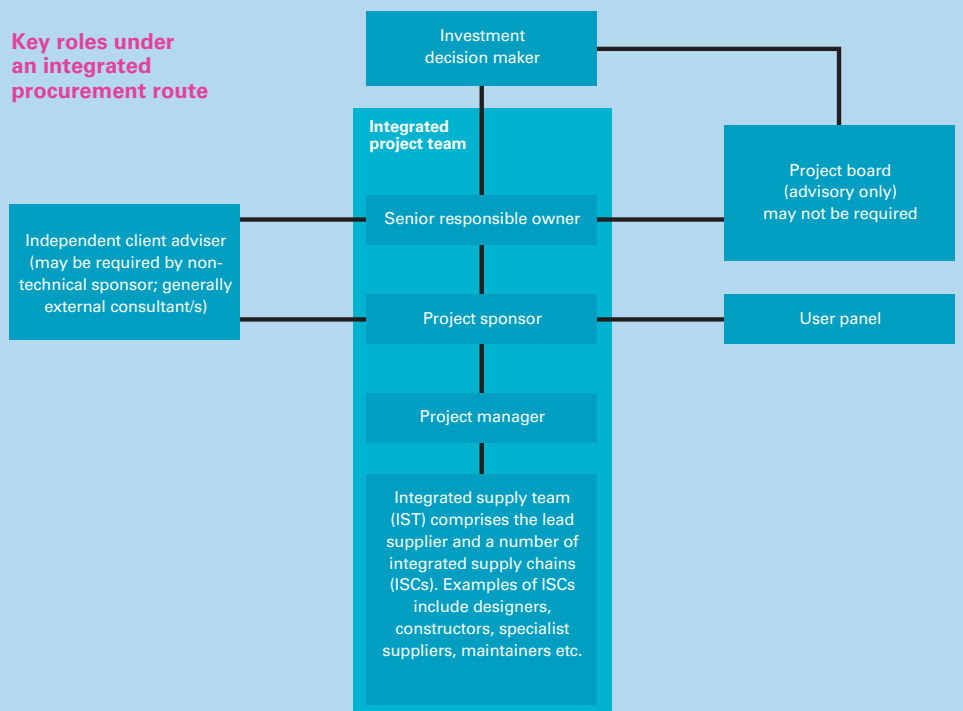
A friendly neighbourhood police post in a safe location may need limited physical security (although security of information will always be required and will have an impact on the building and access). Physical and visual security must be expertly designed for a central police station and wherever there is a custody suite.

Whatever the security required, reception areas in appropriate locations can be given an informal atmosphere, especially as many people visit police stations merely for information. Space can be provided for computer terminals providing access to police and other services, for artefacts explaining the history and current aspects of policing, or even for public meetings.

Client team structure.

Source: Office of Government Commerce (2003) *Achieving Excellence in Construction*
2 – Project Organisation
– roles and responsibilities

Key roles under an integrated procurement route



3.7 The importance of sustainable design

The building must place minimum strain on the environment – immediate, local and global. Energy efficiency, natural ventilation, renewable materials, minimal waste, enhancement of natural features and a location that eliminates unnecessary travel should be included in the brief wherever possible.

Some police forces are trying out sustainable ideas, such as:

- recycled grey water to flush WCs
- combined heat and power
- photovoltaic cells to generate electricity, sharing any surplus with other buildings in their force
- green roofs.

Such initiatives may not always seem to make economic sense, but will become less expensive if more people adopt them and can have significant benefits for revenue costs, so they must be seriously considered.

3.8 Appointing the client team

Whatever the size of the project, there are a number of important roles to fill. Many people will play a part in large projects, carrying out specific tasks, or supporting the project over a long period. In smaller projects one person may take on several of the main roles, viewing each as distinct with its own requirements. Roles and responsibilities need to be clearly defined and each person's accountability must be understood and accepted.

3.8.1 The chief officer

The client leader – the investment decision maker – must be committed to the success of the project and have an understanding of how the design of the whole estate will contribute to the objectives of the force. This is the role for the chief officer. Sometimes, for large or strategic projects, the chief officer will also be the senior responsible owner (SRO). Although day-to-day involvement is not necessary, the SRO's key tasks are to:

- understand the concepts of good design
- ensure the best available design team is selected
- be available to the project leader when support or direction is required
- be credible to all the stakeholders
- 'own' and support the project vision
- sign off key decisions.



◀ An atrium can provide interest as well as daylight.

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3.8.2 Project board

“Incorporate a member of the police authority onto the project board.”

Steve Hodgkinson, Lancashire Constabulary

A group of people, drawn from all the main stakeholders, can be formed to support the project. This board needs to meet and agree the project direction as it evolves. It must be able to review the project at critical stages and input any concerns and requirements. For a large project this board will be formal, meet regularly and include people not directly concerned with the development of the project. For a small one, it may be less formal and consist entirely of people on the project team. Support from the police authority is needed and having a representative on the project board can be an excellent way of securing this.

3.8.3 The project leader, or project sponsor, and project manager

These roles go by different names in different organisations. A project leader must balance and manage all aspects of the project to achieve its objectives. A professional project manager may be brought in, especially for large projects, but an internal project leader with suitable skills, support and time to

spend on the project is still needed. The project leader needs to:

- understand the overall objectives of the project and the big picture
- understand the value of good design and recognise when good decisions have been reached
- identify what makes good and bad police buildings
- know what is needed in detail for police operations
- be able to get support from chief officers and the police authority
- ensure the right criteria are used to select the design team
- know when the design champion should use their influence
- lead, motivate and use the skills of a team
- communicate well, in and outside the organisation
- work within budgets
- understand value and risk – sometimes with advice.

> A training event provides opportunities to exchange experiences, update knowledge and stimulate enthusiasm, while providing tools for the design champion role.

» West Mercia Constabulary's SOHO, CJC and call centre at Shrewsbury.



3.8.4 A user-client (customer-client) or user panel

“Involve only police officers of inspector level and above who are responsible for the decisions that they impose on others.”

Steve Hodgkinson, Lancashire Constabulary

There must be someone who represents and speaks for user needs at the general as well as the detailed level. This person should:

- **be an experienced police officer, someone of at least inspector level, with broad experience of operational areas**
- **have the authority to decide between ‘needs’ and ‘wants’**
- **have regular involvement throughout briefing and design stages**
- **have adequate time – availability may be needed over a long period. Full-time involvement will be needed for a large project**
- **plan and manage formal opportunities for exchange of information**
- **use a structured approach to:**
 - collect information from all user groups
 - organise it for communication
 - check that it has been understood and taken into account.

3.8.5 A design champion


The design champion must be able to:

- **convince people of the importance of quality**
- **inspire the designers to maximum creative input**
- **protect quality when time, budget or inertia threatens it.**

The design champion appointed for the project must have enough time and the necessary authority to carry out the role. The client and the whole team must see the champion as equally relevant to the project as the finance and purchasing lead, or the property specialist. The champion should belong to the organisation that benefits from the project.

It is better to appoint someone other than the project leader to avoid potentially conflicting priorities. While someone with building experience has the advantage of being familiar with the construction process and of understanding drawings, a design champion with experience unrelated to property can add another perspective and enrich the project.

The design champion needs to judge the likely outcome of different design approaches. To do this, even a property professional may sometimes need special training and assistance. Also, it is important to visit other buildings, with the plans in hand, and helpful to do formal evaluations using a check list such as the DQI.



◀ The support of senior officers, choice of the right design team and determination to achieve the best results are essential to success.

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Quality must be demanded at many points in the process, and it is the role of the design champion to see that the requirement for design quality is articulated clearly:

- **in the vision statement**
- **in the outline and the detailed brief**
- **as part of the selection criteria for the design team and building contractors**
- **as the basis for critiques when sketches and detailed designs are reviewed, and when the building is occupied.**

A project design champion needs to attend key meetings and communicate regularly with the team throughout the project. They should be available from the earliest preparation stage to scrutinise documents, play a role in consultant selection – helping to devise the criteria as well as participating in interviews and visits – and examine design proposals, always questioning whether appropriate quality is being achieved. They must maintain a focus on design quality at all times and avoid other roles in the project.

3.8.6 Independent client advisers

“Early professional advice/involvement is also important, especially for larger projects.”

Tim Wendels, Nottinghamshire Police

Design advice should be provided throughout the project by the design team members. However, additional support and advice may be very valuable, especially in forces where the main project personnel or in-house property team has no professional training in design or construction.

At the early stages, a design adviser can help:

- **a less experienced design champion, project leader or client leader to discover the best ways to get quality**
- **the project leader to check that the brief is complete and clearly communicated**
- **the client team choose the right designer, for example by devising the quality questions and scoring for the selection of the implementation team.**

The internal project team should question and understand fully the reasons for advice given by any adviser, to be sure that the adviser really appreciates the needs of the policing project.

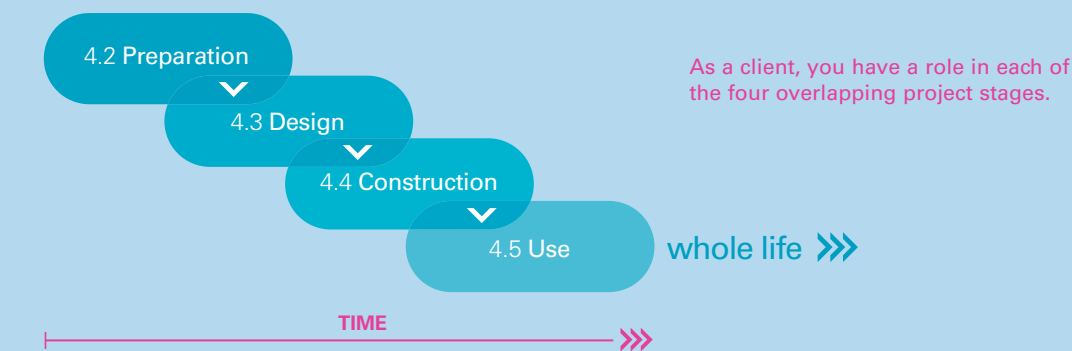
4 How to achieve better designed buildings

4.1 Project stages

Construction projects fall broadly into four basic stages: preparation, design, construction (implementation), and use (occupation).

As the client, your influence on the design will vary according to the procurement route used. With any route, however, the preparation stage is when the basis is laid for a well-designed building.

Projects may not follow the sequential pattern of the diagram. Integrated processes aim to bring design and construction thinking together as early as possible, for maximum understanding, good joint working and the opportunity to create the most cost-effective and buildable designs. However, whatever pattern the project takes, the client must always carry out the activities in the table below.



Source: adapted from CABE (2003) *Creating excellent buildings: A guide for clients*

Table 2 **Client activities**

PREPARATION	DESIGN	CONSTRUCTION	USE
<ul style="list-style-type: none"> • Define aims/objectives • Set up client team • State business case • Consult stakeholders • Prepare outline brief • Appoint architect • Arrange site appraisals • Arrange feasibility studies, option appraisals 	<p>EARLY DESIGN STAGE</p> <ul style="list-style-type: none"> • Develop detailed brief • Agree sketch concepts • Check that approvals have been considered and are likely <p>DETAILED DESIGN STAGE</p> <ul style="list-style-type: none"> • Check that developed design is suitable (in terms of quality, cost and time) • Ensure permissions are obtained • Select builder • Plan fit-out and move • Confirm funding before starting on site 	<ul style="list-style-type: none"> • Hand over site to contractor • Visit site, with permission • Show progress to the stakeholders, users, community • Finalise fit-out and move plans 	<ul style="list-style-type: none"> • Welcome the users • Let the building 'settle down' • Evaluation and feedback

Appendix 1 indicates how these tasks fit in with two other ways of describing project stages: the RIBA plan of architects' work and typical stages for local authority PFI projects.

4.2 Preparation

“Ensure that there is adequate time for each stage of the project. A rushed project will probably be an unsuccessful one.”

Tim Wendels, Nottinghamshire Police

The preparation stage is when there is the most opportunity to influence the project and achieve maximum quality. The key concepts and design principles should be established before a large proportion of the budget has been spent. New ideas and changes of direction are costly or even impossible once design is well under way – and even more so once construction has started. Setting the right brief and selecting the right designer are probably the most important outcomes of this stage.

Poor decisions or omissions early on can lead to disasters. For example, the site should be where the planned functions are most needed and can best be carried out, and can enhance the community and the neighbourhood. A superb building will not perform as well as it could in the wrong location, merely chosen for reasons of availability or cost. A building that is too

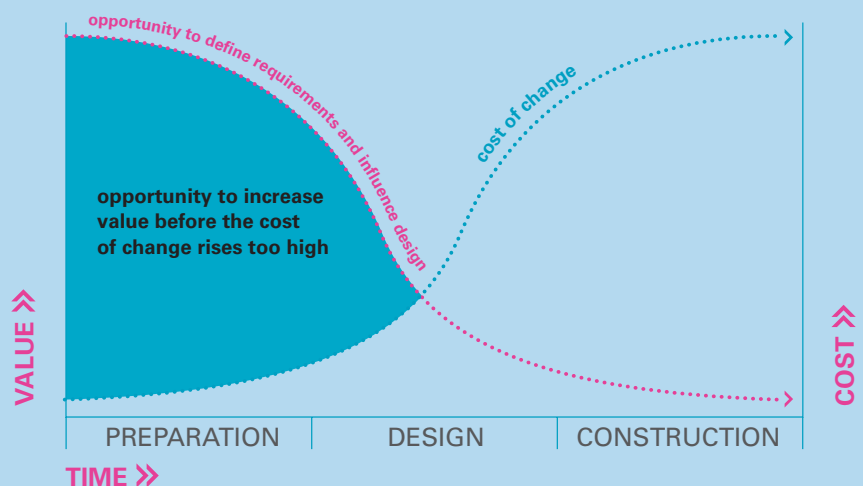
large, too small, non-functional or unadaptable is likely to be one where the brief was not well researched, was poorly communicated, or where goals were not agreed or were changed during the project. Often this is the result of not giving enough time at the beginning to collecting, understanding and communicating information.

The extended gestation period for some projects means they may be overtaken by events. The brief must make this possibility clear and request appropriate adaptability – an important feature of good design. The reason behind the requirements in the brief must be set down for the design team to understand, together with how these relate to the way the estate strategy supports the objectives of the force. This will ensure that, if the context changes, the project can respond more effectively.

The following sections describe crucial tasks that the client must carry out in the preparation stage to help achieve a functional, high-performance and inspiring building.

“The graph of costs of change vs ability to make changes (right), is always a useful one to have on the board during project meetings with an assessment of ‘where we are today’ on the time axis. Good for focusing attention.”

Michael Harris,
Cheshire Constabulary



Opportunity to increase value

The start of the project is when most can be done to add value through careful preparation and adequate time for design.

Source: adapted from CABE (2003) *Creating excellent buildings: A guide for clients*

› An atrium can be used as a space the public can use to pass through, with secure areas overlooking it.



Essex Police Force vision for its new building at Dunmow

1. Make a strong, modern, architectural statement within the landscape.
2. Create a modern police building which is easily recognisable.
3. Include environmental building services features.
4. Use good quality materials which have preferably been produced from recycled products and sustainable resources.

This has been used to communicate with planners, user groups and potential designers.

4.2.1 State a vision for the project

A short, memorable and inspiring statement of the project vision should underpin the project objectives and the brief. The vision must remain clear and relevant as the project develops. It should be a constant point of reference for the client and the implementation teams, and will help ensure that the design delivers the right building. It should be used to communicate with all the stakeholders so that they can relate their needs to the overall concept for the building, see how they fit in and contribute positively to the process. Finally, it can appear on the invitation to the opening of the new building.

4.2.2 Identify stakeholders and how to interact with them

“Client consultation – you really need to understand the user needs.”

Kim Glenister, Wiltshire Constabulary

Consulting with stakeholders is an essential part of developing a good brief. The process for stakeholder involvement must be clear and actively managed.

A communication strategy must be developed, implemented and adhered to, and a specific member of the client team should be responsible for seeing that it is carried out effectively. A list of groups and individuals to be consulted should be compiled and reviewed regularly, and a list of their concerns kept up to date.

Some stakeholders require formal consultation, for example:

- the police authority
- the local planning authority.

They may have considerable influence on the outcome of the project and must have an early input before sketch designs are finalised.

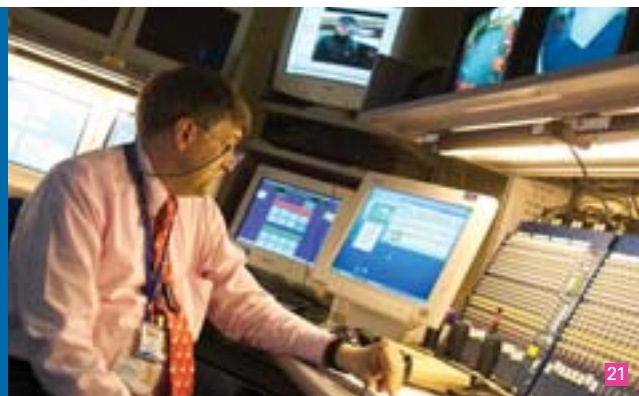
Others will determine the functional brief, for example:

- senior officers must be involved in communicating policing trends
- other experienced officers know what works on a day-to-day basis
- building and property managers understand how user needs interact with design and specification.



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Information about user needs must be gathered from officers and managers who understand what works and what doesn't.



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Other stakeholders need information and may provide valuable insights that should be taken into account, for example:

- neighbourhood groups and crime reduction partners
- victim support organisations
- local representatives of groups with disabilities
- headteachers of local schools.

Carrying out timely consultation will repay the time and effort involved. Sensible suggestions can be incorporated so that potential hostility is defused and essential details are got right, resulting in a smoother project process. Expectations should not be raised about what a new building may provide if they cannot be met, but nor should any groups feel their views are unduly ignored.

All stakeholders should be kept informed of progress. Bulletins, intranet sites, presentations, Q&A sessions, visits to the site once construction starts and a launch party should all be considered at appropriate moments. Where community policing can be supported, these can continue once the building becomes operational, so that people can visit the building, learn about policing activities and feel more confident that their police force understands their needs.

4.2.3 Establish and agree objectives

“Do not assume that new build as opposed to refurbishment/extension is the best option. Look at what the building can be, not at what it currently is.”

Andy Sheppard, Essex Police

A project may have a number of objectives, which should be prioritised and agreed by funders and the client team, including officer representatives, and other relevant stakeholders. They should be recorded, referred to regularly, amended only if essential, and used as the basis for checking proposed solutions. They will contain, as a minimum, an indication of:

- the main activities to be housed
- design priorities to be considered
- the desired image to be projected, such as efficient, friendly.

Confused or unclear objectives are a frequent cause of dissatisfaction with the outcome of a project, particularly in rapidly changing organisational and operational environments.

4.2.4 Look at other examples

“Assume that other forces have already done what you are seeking to do. Do not be afraid to ask for information. Reinventing the wheel is pointless and costly, whereas improving the wheel benefits all.”

Andy Sheppard, Essex Police

The in-house project team will benefit from feedback from other projects, which can be gained by:

- visiting new projects built by other police forces
- discussing with property teams, users and designers

- reading about successes or failures in journals or on the internet
- carrying out formal reviews of current buildings and past projects.

Feedback from other projects will build up the necessary knowledge base. The aim is to understand what has been achieved, what works well and what must be avoided. Factual information is needed such as cost per square metre, net usable or net internal area per person, environmental performance of systems and materials used, as well as more general value judgements. The website of the charity Usable Buildings (www.usablebuildings.co.uk) provides a range of techniques for gathering such information.



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^ Opportunities can be taken to contribute to the public realm. A water feature need not be space consuming.



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^ Colour provides interest at the same time as helping to identify different zones of the building.

4.2.5 Select and support the client team

The team, and its members, must be given enough time and authority to accomplish the role effectively. Some people will be part of the client team (see 3.8) for the duration of the project while others will contribute for shorter periods.

4.2.6 Plan and obtain the right external advice

Not every client team will provide the skills needed. External quantity surveyors are regularly used for financial information but the need for help with briefing or judging design quality is less often acknowledged.

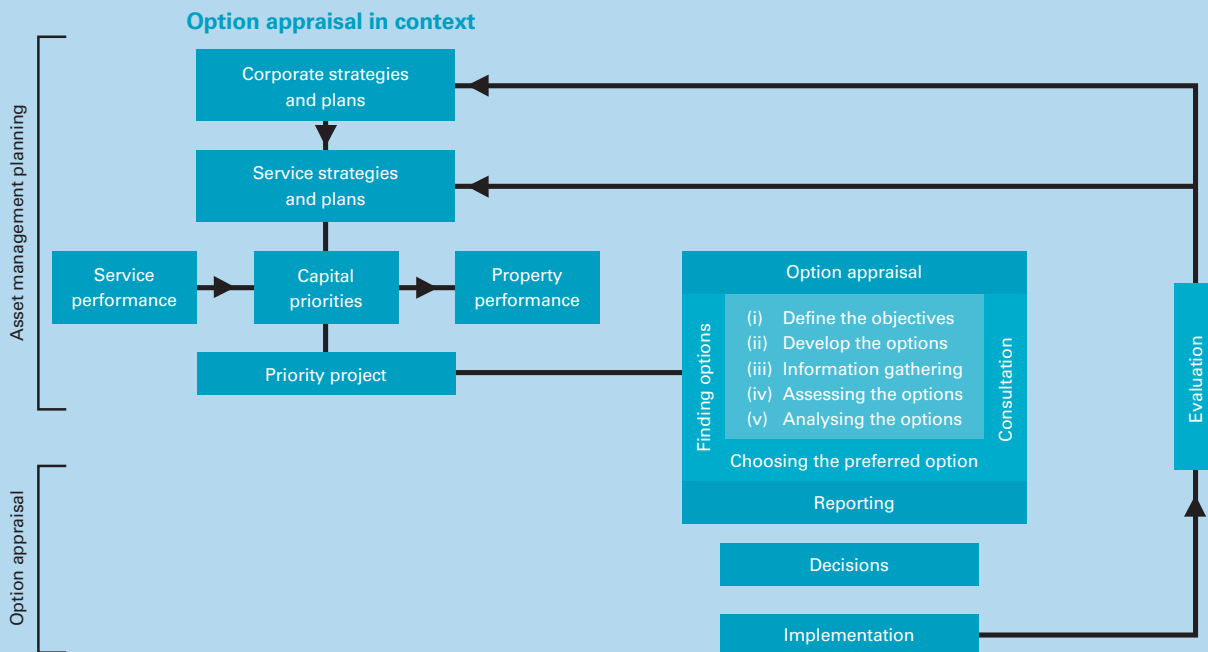
External advisers must be selected as carefully as the implementation team (see 4.2.10). Recommendations should be formally followed up and what different people can offer should be systematically compared. It is essential that the individuals selected work well with the project leader, and that they have the same attitude to project quality as the client team. When using an adviser in a design capacity, it must be made clear that this person will not necessarily be involved in the actual design of the building. Indeed, in many cases their role will be to critique the design of others throughout the project.



^ People can enjoy the building quality while at work or relaxing – this location can be used flexibly for formal meetings or social interaction.



^ Care in small details: continuity of surface patterns inside and out, and precise and careful implementation where materials meet support a good vision.



Source: RICS (2005) *Asset management in local government*

4.2.7 Prepare a business case, a feasibility study and an option appraisal

“Asset management aims to ensure that local authorities have the right space, at the right time, in the right place and at the right cost so as properly to support their strategic corporate and service goals and objectives. It is a vital process for identifying property implications of corporate and service needs and then ensuring their delivery to support the achievement of successful corporate and service outcomes.”

Source: RICS (2005) *Asset management in local government: Guidelines in outline*

The business case is a key part of any project. It contains cost information, based on at minimum an outline idea of the overall amount of space required, a likely site and a timeframe. Financial realism is essential, so issues of desired quality as well as function should be included in the projected costs.

Every project faces budget constraints. These are real and must be understood from the start so that expectations are realistic. However, ‘best value’ is **not** the same as lowest cost. The cost of design is such a very small part of the capital cost of a building, let

alone of revenue cost over time, and it is worth investing more in the design process to get the optimum outcome. Choosing the best available design team and allowing adequate time to resolve design are key to achieving this.

Feasibility studies and option appraisals should also be carried out. For more complex projects, when there are several different ways of achieving the goals, the strategy for the entire estate is very relevant. One option that should always be considered is ‘do nothing’. This should set out the extent to which objectives can be met without a building project.

The business case will need updating when detailed information is available from an expanded brief. The project must be checked regularly against this business case as it takes shape.

4.2.8 Decide the funding and procurement strategy

“Funding – quality is usually the first thing to go if there is insufficient funding. This links with planning – if you proceed with an inadequate budget this will lead to compromises and quality reduction later in the design process.”

Tim Wendels, Nottinghamshire Police

Table 3 **Level of authority influence over design**

	DESIGNER DIRECTLY EMPLOYED	DESIGNER INDIRECTLY EMPLOYED	DESIGNER WORKING FOR SPV CONTRACTOR
TYPE OF PROJECTS	Traditional, eg G/C works1/JCT	Design and build some Public Private Partnership Prime contracting	Design Build and Operate/ Design Build Finance and Operate/private developer schemes
Level of influence over design			
DESIGN INCEPTION	Very high	High	Medium
SCHEME DESIGN	High	Medium	Low
WORKING DRAWINGS	Medium	Low	Very low
CONSTRUCTION	Low	Low	Very low

The cost implications of the chosen approach, for capital and revenue, need to be clear, and a realistic, inflation-proofed budget must be agreed to and then preserved to ensure that project quality is not sacrificed when other budgets are stretched.

The way in which the project is procured has a significant effect on what is done, when it is done, who has the main influence at each stage and how the different members of the teams relate to each other. There may be limited opportunity to choose a specific procurement route, but it is important to understand the strengths and weaknesses of each in order to get the best from whichever method is used. In the context of design quality, it is important to understand how the procurement process affects the extent to which the police client has a direct influence on design during the design period.

The cost implications of the chosen approach, for capital and revenue, need to be clear and a realistic budget allowing for inflation must be agreed and ring-fenced to ensure that quality is not sacrificed to meet short-term pressures when other budgets are stretched.

4.2.9 The outline brief

“Formulate the brief at the highest level, ie police command teams who can impose the force standard. Otherwise every department wants the earth.”

Graham Clark, Northumbria Police

Allow enough time at the briefing stage. The brief is the foundation of any project. It is simply not possible to create the right building with a brief that is incomplete, has internal incompatibilities or keeps changing. It must be carefully drafted, with input from everyone who has a real stake in the building: the police authority, the chief officers, the actual police officers who will use it, the facilities and property team that looks after the estate, and the public. For buildings offering combined services, specific external groups will also be involved. If necessary, get help from a briefing specialist or have the brief reviewed by an external adviser.

The first stage of the brief – the ‘outline’ brief – is needed early in the preparation stage and will influence outline costs for the business case, site requirements, and potential planning permission issues, all of which have to be understood from the start. It should indicate the types of spaces required. A typical breakdown of space is described in the Audit Commission’s document, *Action Stations* (page 41), although in practice spaces vary from project to project.

The brief will evolve as the project becomes more clearly defined. All the details cannot be known at the outset, nor will all the people who will contribute have been identified. A detailed brief will be developed from the outline brief towards the end of the preparation stage or as part of the design stage. It will act as the instructions to the design team. At this early stage, however, the overall size of the accommodation required should be compared with the available site to ensure that adequate space is available.

➤ Shared meeting rooms instead of owned offices, at the hub of the open-plan office, create an atmosphere of flexibility and communication.

» Clear, open-plan layouts with simple furniture allow flexible teams to function efficiently. Adding shared areas with small changes to the lighting to emphasise a focus point for interaction and meetings has helped to transform the office without new furniture or expensive changes.



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“Adopt modern office and related usage design solutions aggressively (open-plan offices, furniture and utilisation criteria). Disassemble the historic content of ‘police stations’ and rigorously challenge why they all need to be in one building.”

Alan Croney, Metropolitan Police

Typical sample space breakdown

Standard office space	60%
Circulation	16%
Custody	4%
Canteen, social etc	10%
Other	10%

A large part of many police buildings is likely to comprise standard office space. The art of planning and detailing of efficient, attractive office space is well developed and should:

- foster open-plan work styles for flexibility and communication
- provide shared rather than ‘owned’ areas wherever possible
- be planned and detailed for high levels of utilisation
- provide clear layouts with facilities in similar locations on all floors or zones
- use modern, ergonomic furniture
- exploit natural light and views for desk-based staff.

Police buildings are increasingly benefiting from the flexibility of open-plan working areas. Well-designed furniture and ergonomic equipment are essential.

Table 4 **Typical list of criteria and possible weightings**

	Percentage of score
Capacity of the team for your scale of project	5%
Overall depth of resources – ability to successfully handle any loss of key people	5%
Track record for quality – general	5%
Track record – for your project type	5%
Understanding of client requirements	5%
Time allocation for specific team members	5%
Relevant skills and qualifications of key people	5%
ICT and technical resources/competencies	5%
QA systems	5%
Responsiveness to client needs	5%
Ability to work within a multidisciplinary team	5%
Indefinable ‘personal chemistry’	5%
Total quality count	60%
Cost	40%

The way judging is done must be agreed and laid down at the outset. For instance, are scores arrived at independently and then averaged, or are they arrived at through discussion and consensus? Weighting quality against cost can still present problems. For example, does the lowest cost automatically get the maximum score available for this element, even if it may actually appear somewhat unrealistic? How much is the possible score reduced if the cost difference is large rather than small?

4.2.10 **Select the external team**

“Improved appointment system for consultants and contractors (is needed) to break away from the ‘lowest price is best’ mentality.”

Steve Hodgkinson, Lancashire Constabulary

Towards the end of the preparation period the design team must be selected. This is probably the most critical decision relating to design quality and the process must be thorough and well informed. For large projects, it can be lengthy and should be planned well in advance. The choice of contractor is also important and may be taken at the same time or later. Other consultants may be selected individually, or a multidisciplinary team may be brought together by the design or design and build team. A competitive process may be used to select consultants for a ‘framework’ or partnering arrangement for several projects, or for a specific project.

The project leader must ensure that the process for choosing the external team members is clear, well understood and agreed by the client team.

“Setting up a framework agreement with professional support services has been extremely useful in cutting down lead-in times on project development.”

Michael Harris, Cheshire Constabulary

The selection should consider the following:

- **Relevant track record for design quality – though not necessarily experience in police buildings.**
- **How to balance quality against cost – the value of greater skills, experience or capabilities of external specialist advisers may far outweigh the higher costs of using them.**
- **A fixed set of pre-qualification criteria should be drawn up to review a long list (up to ten could be invited).**
- **A short list (for a large project, say, five) should be reviewed in detail.**
- **The same people should interview and judge all candidates, to ensure consistency.**
- **Buildings designed or built by the short-listed candidates should be visited.**
- **Previous clients and users of these buildings should be asked for their views of the process and the finished project.**
- **The offices of the short-listed candidates should be visited.**
- **Experience of building for the police is not essential, though it may give greater confidence in the choice.**
- **An ability to listen to the client's needs and respond with flair is essential.**
- **Financial stability and an ability to work on the required scale should be demonstrated.**

4.3 Design

With the basic decisions about going ahead accepted, the procurement route, site, and budget agreed, all the team on board, and the outline brief understood, the project can be further developed.

4.3.1 Develop a detailed brief and a schematic response

“Question your own needs, the processes, the way things have always been done/stored – is this still the best, or habit?”

Kim Glenister, Wiltshire Constabulary

Whether the detailed brief is prepared before or after choosing the implementation team depends on the procurement route chosen. Buildings always need to adapt to changes as the organisation evolves new methods, new alliances and new structures. The brief must describe likely trends and the designs must indicate how such potential changes can be accommodated. These issues must be understood at the highest level; chief officers will need to be involved in this for large projects.

Input should come from the main stakeholders, user representatives with operational and facilities management knowledge and the project team. The brief should be tested to ensure it covers everything, for example by considering how different users with specific objectives or tasks to carry out will move through the site and the building.

It will normally take several iterations to reach a fully detailed brief and an idea that can be successfully developed into the final design, as proposals are reviewed and amended. By working together at this stage, the design team and the client can build up a shared understanding of opportunities for the project. Joint development of the detailed brief should be specified as the way in which the selected team will be

› Bringing daylight into a stairwell can be done with style.

» Refurbishment and extensions provide different opportunities to transform the service. In this case the police and fire service have come together in one extended building.

»» Unplanned actions can reduce the quality of the environment. They may provide lessons for future projects and current management.



expected to work, and both parties should make allowances for the time, cost and personnel this will require.

4.3.2 Fit-out

Planning for occupation must start very early during the design phase by considering in detail how the building will be used, and include issues such as planning and arranging for installation of furniture and equipment. This may seem premature, but it will help the designers reach the most appropriate solution. Specialised equipment or materials may need to be ordered well in advance. Sustainability and manageability all need to be considered alongside the broader concepts to deliver a desirable building fit for a long and useful life.

Using an artist on the design team can enhance the building and need not add to the cost (see photograph N° 1 on page 3). A building that contributes to the neighbourhood by adding features that can be appreciated by all can enhance public confidence.

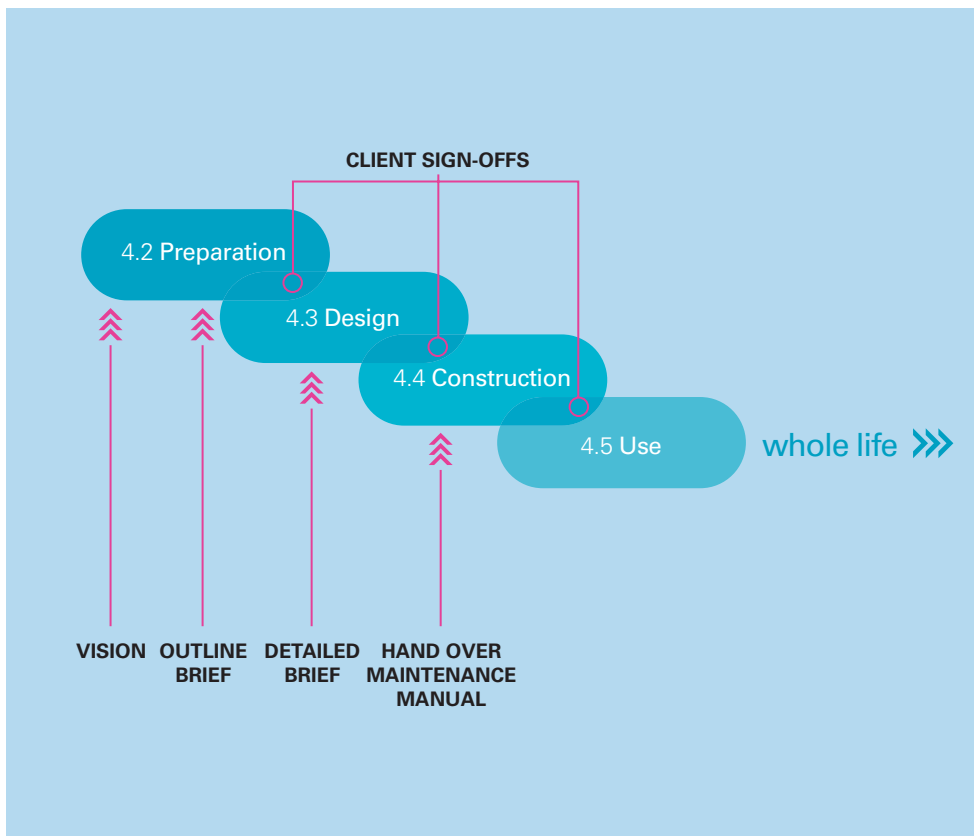
Fitting out can start as soon as the construction work allows, but is often handled as a separate phase of work after handover and may be planned by a different design team. A working group, representing the different user groups, should be involved in decisions about layouts and furniture, before the process of selecting and purchasing items begins. A period for delivery and installation must be built into the timetable.

4.3.3 Monitor and evaluate quality

Specification of design quality starts at the briefing stage and judging quality starts at sketch concept stage, reviewing:

- **spatial diagrams for the site as a whole**
- **adjacency diagrams for the functions within the building**
- **a three-dimensional vision of the building bulk, style, appearance**
- **indication of the impact on and relationship to neighbours.**





^ Simple timber buffers can stand up to hard wear.

Source: adapted from CABE (2003) *Creating excellent buildings: A guide for clients*

The Design Quality Indicator (see 3.3) is a suitable evaluation tool and should be used to consider whether the design meets the vision, and whether the specific elements and qualities asked for in the brief have been provided. Qualitative aspects, including interior space, natural and artificial light, volume, visibility and finishes, should be assessed. It is always helpful to carry out a formal review of designs, so a checklist of questions covering the original aspirations and objectives will be needed. This can supplement or replace the DQI.

A design review should look at:

- the site, the project context and its contribution to the local area
- aesthetics, image and the handling of enclosure of external and internal space
- potential for off-site fabrication, use of standard materials and achieving economic and efficient construction
- health and safety risks likely to arise on construction
- access for everyone of all abilities
- landscaping and building orientation
- how well the organisation will be able to function in the building
- site planning and car parking provision
- how the building and site will look in various conditions of light and weather
- adaptability, suitability for different uses
- access to natural light, management of air quality and temperature
- control of noise nuisance internally and with respect to neighbours
- storage and 'back-of-house' areas – planning and adequacy
- suitability and maintainability of materials
- spatial efficiency, including circulation and security
- ease of running and managing the building and its equipment
- how well the parts of the building or open space relate to each other
- sustainability/energy efficiency proposals.

More details can be found in CABE (2002) *Design Review*.



^ Circulation must be appropriate for officers and equipment.



^ Attractive locker rooms are good for morale.

4.3.4 Examples of how to think through some important details

Ergonomic circulation

Officers may wear bulky equipment, so enough space is needed to allow easy movement through the building. Walls and corners must be protected from damage. The materials used will dominate the environment and must be carefully chosen for long-term good looks as well as for robustness.

Locker rooms

These can help foster good morale by emulating the amenities of a good health club, rather than being a purely functional 'service' space. They are the first port of call for officers on arrival and must:

- give the message that staff are valued
- be easy to reach as officers arrive at the building
- be conveniently planned, with places to sit, and to change in private
- provide lockers large enough for official items of uniform, civilian clothes and some personal possessions
- have good shower facilities
- allow for a change in ratio between male and female officers
- allow for growth in numbers.

Storage

Staff amenities, break-out spaces, suitable for 24/7 working and accessible from office areas, and light, airy spaces for refreshment are needed.

Properly planned storage can make all the difference to operational efficiency:

"when something happens you need to get out of the door quick, and there are certain things you need to be able to get your hands on!"

4.3.5 Sign off critical design stages

"Get sign-off to development proposals/brief etc and, aside from maybe a few minor amends to meet unforeseen circumstances, make no change during build."

Michael Harris, Cheshire Constabulary

The main stakeholders need to participate in the review process so that they can see what they will be getting and agree any desirable compromises. When the views of significant groups are not canvassed at the sketch stage, changes may be demanded later when it is too expensive, if not impossible, to make them.

Once all the adjustments have been made, a formal sign-off is needed. This should happen at the outline and detailed stages of the brief, and at sketch design and detailed design stages. Sign-off is ultimately the responsibility of the chief officer.

4.3.6 Value and project management

Cost and risk control procedures, and expert project management are needed throughout the project. These do not in themselves ensure quality, but without them quality may suffer.

From time to time, the entire team should review how to achieve the desired outcomes and derive maximum benefit from the available budget. This must not be a cost-cutting exercise but should plan how benefits can be extended. Priorities must be clear. Inevitably there will be a desire to reduce costs, but care should be taken not to sacrifice elements that may seem dispensable but which will actually make the building a special place for those who use it. Risk workshops and value engineering and brainstorming meetings are useful ways to challenge complacency and review solutions to help ensure a successful outcome. Care should be taken to ensure value engineering does not result in poor value for money by loss of long-term flexibility and usability of the completed building.

4.4 Construction

The client is less involved during construction than during other stages. However, this is when large sums of money are spent so everyone needs to be comfortable with what is being built. During this period, the main responsibilities of the client are to:

- **manage the contract it has awarded**
- **see that funds are in place and available as required**
- **ensure that the plan of works meets the timetable for the operations that will use the completed building**
- **ensure the programme does not disrupt those who work in the vicinity during the contract period**
- **monitor construction progress to ensure the contract requirements are met**
- **undertake regular site visits**
- **communicate with users and other stakeholders, so that they are kept informed of construction progress, including any changes.**

4.4.1 Site supervision

Attention to detail is crucial so that quality is not spoiled by poor delivery. This may require full-time or near full-time supervision on larger projects but, in any event, regular detailed examination of working drawings, checking of design calculations, and on-site inspection is strongly advised. Care, however, should be taken not to reassume risk allocated to the developer or builder under the awarded contract. Specialist procurement or legal advice should be sought where the way to achieve this is unclear or uncertain.

4.4.2 Handover and commissioning

The handover is a formal occasion that marks when the builders move out and leave the building to the users. The building should only be accepted by whoever becomes responsible for it if it meets the requisite standards as originally agreed. This does not mean that everything will be perfect and all systems will work as planned from the move in. Small imperfections can be corrected in the first weeks of occupation. Users should be made aware of this and their support enlisted to ensure that problems are noted and dealt with as soon as possible.

It is nearly always necessary to spend time, sometimes a full year, fine-tuning service systems until they meet the required design standards. The more straightforward the service systems are, the easier it is to get them working to their design standards. The final design drawings are sometimes not a completely accurate representation of what was built. Any changes made during construction should be recorded and a full set of drawings of what was actually built should be prepared for the client's files. The building manual, a final iteration of the brief, and the health and safety file must be given to the client as part of the handover.

› Clear signage in the right places is essential for any building.



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› Car park markings carefully aligned with the bricks.



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4.5 Use/occupation

As the construction project comes to an end, people will be able to start using the building. If it is well designed it should both meet their needs and exceed their expectations.

4.5.1 Move-in

Move-in can only take place once the fit-out is complete. Information should be provided for all users about any new systems that may have been installed, the site and the neighbourhood if it is new to them.

4.5.2 Evaluation and feedback

“Feedback at completion. Undertake your own assessment of where things went well or not so well. Review the whole process and the consultants’ and contractors’ performance. Carry out a user satisfaction survey after six months of occupation.”

Graham Clark, Northumbria Police

At the end of every project, there must be a period of assessment. Feedback that assesses how well the building actually meets the needs and expectations of users and whether it is performing as promised, is a basic part of achieving quality. Many feedback techniques exist, some general and others for very specific elements, such as for energy use or the DQI for quality. Whatever approach is used, it should be carried out formally and the results should be acted on as appropriate and fed in to future projects. Acting on findings from a feedback process can often enhance the quality of the project simply and quickly. Also, a detailed post-project review can ensure that in future projects the best elements are repeated and the same mistakes are not made time and time again.

A true test of the success of the project is how far it improves the ways in which the force can work with the community and deliver a better service.



◀ The community can understand and support police objectives if they learn about them from an early age. There are opportunities for public exhibitions and general access in some reception areas. Welcoming the public inside police buildings will help develop good community relations.

5 Quality questions

The following questions should be considered very early on in the project. They will help ensure that the project context, the brief and the designs are clear and based on sound foundations, so that the outcome delivers the quality needed and gives the force best value from the project.

Objectives

- What are the objectives and the 'vision' for this project?
- Who 'owns' and will support this vision?
- Does it both capture the imagination and reflect functional needs?

Stakeholders

- Is there a list of stakeholder contacts?
- Do we have information about their main concerns?
- Have these been incorporated into the brief?
- Has a process for interaction been defined?
- Who is managing the programme of consultation and communication?
- Which stakeholders are involved in important review stages?
- Is a member of the police authority on the project board?

Feedback

- What other projects have been looked at for insights?
- Has the DQI been used?
- Is there a process for reviewing quality regularly during the project?
- Have user/stakeholder views been systematically collected?

Brief

- Who 'owns' the brief?
- Is there a user panel that contributes and checks information?
- Who will sign off the brief?
- How is the vision expressed in the brief?
- Have all stakeholders participated in agreeing the brief?

Design champion

- Is there a design champion?
- Does he/she need training/support?
- What arrangements have been made for their involvement?

Budget

- Is the budget adequate for the quality required?
- Is the budget secure and inflation-proofed?

Client advisers

- Has any external design advice been sought?
- For what aspects of the project are advisers being used?
- What expertise do your advisers need and have?

Selecting the design team

- Who has direct control over the choice of designers?
- How has the requirement for quality been expressed in any advertisements for interest in the project?
- Who is judging the quality of the designers?
- What percentage weight is given to design quality in the selection process?

Appendix Project stages

The names for the RIBA project stages are often used in the context of building projects. This table indicates how they relate to the four basic stages set out in this guide, and to the client tasks that need to be managed by the project team.

The table shows that the client team has a considerable number of tasks highly relevant to design quality in the preparation stage. Some new construction is funded through various forms of public-private partnership, such as PFI. This

has the advantage of making capital funds available which might otherwise be hard to raise.

However, it introduces new issues into building procurement that must be carefully managed, may well extend the timescales and can also alter revenue implications, all of which must be taken into account in the business plan. The descriptions of the process recognise such procurement processes require a lot of client input at the preparation stage, far more than in traditional procurement.

FOUR BASIC PROJECT STAGES	RIBA PLAN OF WORK STAGES	PFI – TYPICAL STAGES	MAIN ACTIVITIES FOR CLIENT AND THE PROJECT TEAM
PREPARATION	<ul style="list-style-type: none"> • Inception • Feasibility of project tested 	<ul style="list-style-type: none"> • Outline business case • Feasibility • Reference scheme • Authority decision to proceed • OJEU advert • Expressions of interest from bidders • Pre-qualification • Long listed bidders invited to submit proposals • Bidders short listed 	<ul style="list-style-type: none"> • Define aims/objectives • Set up client team • State business case • Consult stakeholders • Prepare outline brief • Appoint architect • Arrange site appraisals • Arrange feasibility studies, option appraisals
DESIGN	<ul style="list-style-type: none"> • Outline design prepared • Scheme design prepared • Draft working details prepared • Production information prepared • Bills of quantities prepared • Tenders obtained and contractor appointed 	<ul style="list-style-type: none"> • Invitations to negotiate documents issued • Tender evaluation • Negotiation, preferred bidder appointed • Contract close 	<p>EARLY DESIGN STAGE</p> <ul style="list-style-type: none"> • Develop detailed brief • Agree sketch concepts • Check that approvals have been considered and are likely <p>DETAILED DESIGN STAGE</p> <ul style="list-style-type: none"> • Check that developed design is suitable (in terms of quality, cost and time) • Ensure permissions are obtained • Select builder • Plan fit-out and move • Confirm funding before starting on site
CONSTRUCTION	<ul style="list-style-type: none"> • Planning for all site requirements • Operation on site • Completion 	<ul style="list-style-type: none"> • Construction commences/ site activity 	<ul style="list-style-type: none"> • Hand over site to contractor • Visit site, with permission • Show progress to the stakeholders, users, community • Finalise fit-out and move plans
USE	<ul style="list-style-type: none"> • Feedback 		<ul style="list-style-type: none"> • Welcome the users • Let the building 'settle down' • Evaluation and feedback
REFERENCE	<i>Plan of Work</i> RIBA Publications London 2000	Local authority PFI building project – 4ps guidance for local authorities	

Output specifications

In traditional procurement and some design and build processes, a detailed brief is developed after the design team has been selected. The designers, and possibly contractors, can take part in the briefing process, contributing ideas, to ensure that they fully understand the final detailed brief. A traditional brief usually states some design aspects of the finished building that the client clearly wishes to see, like particular room sizes or finishes.

Public Finance Initiative (PFI) projects present a new challenge. When an 'output specification' is the basis for design, as for PFI, it must be complete before the PFI team is selected as the prospective PFI providers use it as the basis for their bids to design, build, manage and run the finished building for 25–30 years.

The output specification describes what the client needs in terms of how the building will be used and how it should perform, rather than specifying design details. Control over design passes over fairly early in the project to the PFI providers, so the output specification has to anticipate future needs particularly clearly. This can be a challenge. Clients who have experience of PFI projects should be consulted to discover if, in hindsight, anything important was forgotten in their output specifications, what form of phrasing ensured there were no misunderstandings and what proved to work better than anticipated. External expert advice at this stage is essential.

Glossary

Many terms are explained in CABE (2003) *Creating excellent buildings: A guide for clients*, CABE, London and in some of the other books in the bibliography. The ones here may be encountered in other documents about construction, or are used in this guide without full definitions.

Area measurement

Several area measurements are used in buildings. The Royal Institution of Chartered Surveyors (RICS) has produced a set of accepted definitions, of which the most common are:

- gross external area (GEA): the area enclosed by the outer surface of the external walls, used for development control and planning permissions
- gross internal area (GIA): the area enclosed by the inner surface of exterior walls
- net internal area (NIA): the GIA less internal structure, vertical circulation (stairs and lifts), plant and WCs
- net usable area (NUA): the area that can actively be used, equivalent to the NIA less horizontal circulation routes.

Brief

This is a written description of your aims, the needs of the police force users, the quality and value expected and the time and cost limits for the project. A senior officer must sign it off so that the project team can use it to develop the final design.

Construction, Design and Management Regulations (CDM)

These regulations require a client to appoint a planning supervisor to check that construction, site and project health and safety are taken into account throughout the planning and design phases and to coordinate the production of the health and safety file.

Integrated process

Collaborative techniques to unite the client, designers and builders with the aim of increasing efficiency and harmonising processes. Joint decision making between separate groups about the integration of IT systems or software is an example. In construction projects, this refers to a variety of design-and-build approaches where design benefits from early input by the contractor. The designer, contractor and client work together from the start to achieve the agreed project objectives.

Official Journal of the European Union (OJEU)

Often referred to as OJ (the 'Official Journal') and formerly known as OJEC. A daily journal advertising the service requirements of all public procurement projects, including construction projects. Publicly funded projects over a certain size must advertise here for professional teams and builders.

Option appraisal or option analysis

Before agreeing the building project, several alternatives should be appraised to ensure the right strategy is adopted. Typically, between three and five options should be considered, including a 'do nothing' option. Analysis of the options may give different weighting to various qualities. It may be decided during this process that a building project is not the best way to achieve the agreed objectives.

Practical completion

The architect generally issues a certificate showing satisfactory completion of the construction. It normally allows the contractor to invoice the client for all but a small portion of the contract sum. The outstanding portion is called the 'retention'.

Whole-life cost

All costs over the entire life of the building – usually 30 years – including building construction, running, replacement, maintenance, adaptation and repair costs. Sometimes called life-cycle costs.

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Photography

Cover images
top to bottom

Building	Architect/designer	Photo credit
Holborn police station Dunmow police station Abingdon police station	Essex Police Property Services Department Building Design Partnership	Alexi Marmot Associates (AMA) Essex Police Property Services Department AMA
1 2 Marsham Street	Terry Farrell and Partners	AMA
2 Recruitment	–	–
3 Norfolk Police HQ – atrium	Building Design Partnership	Balfour Beatty Construction Ltd
4 Divison 51 police station, Toronto	Stantec Architecture Ltd	www.4by5.com
5 Savile Row police station		AMA
6 Kentish Town police station	Norman Shaw	AMA
7 Southwark station plaque	–	Medical Architecture and Art Projects (MAAP)
8 Kidderminster treatment centre	MAAP	AMA
9 Abingdon police station	Martin Richman	c/o Dominic Berning
10 Fire and police station for the Government District, Berlin	Sauerbruch Hutton Architects	Bitter & Bredt
11 Treasury, Whitehall	Foster & Partners Access (consultant) David Bonnett Associates	Adrian Cave
12 Division 51 police station, Toronto – front desk	Stantec Architecture Ltd	www.4by5.com
13 St Aldate's police station		AMA
14 Chester Constabulary-Ellesmere Port DHQ	Fairhurst Design Group Ltd and Taylor Young	Taylor Young
15 Training brochure cover		
16 SOHQ, CJC and call centre for West Mercia Constabulary at Shrewsbury	Buttress Fuller Alsop Williams in conjunction with Associated Architects	
17 SOHQ, CJC and call centre for West Mercia Constabulary at Shrewsbury	Buttress Fuller Alsop Williams in conjunction with Associated Architects	
18 4 Brindley Place	Stanton Williams	AMA
19		AMA
20		AMA
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23 Brindley Place	Townshend Landscape Architects commissioned by The Fountain Workshop	AMA
24 2 Marsham Street	Terry Farrell and Partners	AMA
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26 Brooklands, English Heritage's East of England headquarters	van Heyningen & Haward	Peter Mackinven
27 Wellington House, Department of Health	AMA	AMA
28 Clacton-on-Sea police station	Atkins Global	AMA
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32	–	AMA
33	–	AMA
34	–	AMA
35 Kidderminster – WC sign		AMA
36 Essex – paving	–	AMA
37 Schoolchildren	–	AMA

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Acknowledgements

This document has been put together by the Buildings and Estate Management Unit (BEMU) at the Home Office with encouragement from the Commission for Architecture and the Built Environment (CABE), and assistance from AMA Alexi Marmot Associates. Thanks are due to all those in police forces who provided information and photographs and generously arranged visits to their buildings.

This publication underpins the Home Office intention to ensure that public buildings help towards the delivery of excellent services. If you have queries, or comments that could help develop this material, please contact:

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