



SCOTTISH EXECUTIVE

Health Department
Directorate of Finance

Dear Colleague

A POLICY ON DESIGN QUALITY FOR NHSSCOTLAND

Please note that the following Policy has now been superseded
by -

**[CEL 19 \(2010\) - A policy on design quality for NHSScotland:
2010 revision \(2 June 2010\)](#)**



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A POLICY ON DESIGN QUALITY FOR NHSSCOTLAND

Summary

1. This letter provides colleagues with a statement of the Department's Policy on Design Quality for NHSScotland (Annex A). Associated with the policy is an Annex of policy guidance (Annex B) which should be reflected in the Design Action Plans and related operational policies of NHSScotland Bodies.
2. The policy requires that each NHSScotland Body appoints a Design Champion at Board level and a supporting Project Officer. Colleagues will already be aware of the requirement to appoint a Design Champion and supporting Project Officer through prior written notification from the SEHD Head of Property and Capital Planning which included a 'person specification' for the role.

Background

3. The attached policy statement reflects consultation with colleagues in the Scottish Executive, NHSScotland and Architecture and Design Scotland. It provides a concise definition of policy along with details of mandatory requirements which must be complied with by NHSScotland Bodies, although the Department recognises that these requirements may not be directly applicable to the day-to-day operations of those Special Health Boards which are not actively engaged in the procurement of new healthcare premises and refurbishments to existing healthcare premises.

23 October 2006

Addresses

For action

Chief Executives, NHS Boards.
Chief Executives, Special Health Boards.
Directors of Facilities, NHS Boards.
Directors of Estates, NHS Boards.

For information

Chief Executive, National Services Scotland.
Director, Health Facilities Scotland
Scottish Executive Architecture Policy Unit.
Chief Executive, Architecture and Design Scotland.
Chief Executive, Scottish Building Standards Agency.

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4. The fundamental principle upon which this new policy is founded is that all NHSScotland Bodies, as an integral part of the commitment to deliver the highest quality of environment for patient care, ensure that design quality is fully integrated into the healthcare building procurement process and is apportioned appropriate emphasis throughout all stages of this process.
5. Colleagues are advised that although the initial issue of this letter and attached policy statement will be in the traditional 'hard copy' format, the electronic version available from the Publications section of Scottish Health on the Web takes precedence [www.show.scot.nhs.uk/]. This will ensure that colleagues have access to the embedded hyperlinks to online policies, guidance, reference and other material.

Implementation

6. The implementation of this policy by NHSScotland Bodies must be supportive of and consistent with all other Scottish Executive policies and associated guidance which impacts upon and, has relevance to, the procurement and management of NHSScotland healthcare facilities.
7. In order to assist the initial implementation of this policy, the Scottish Executive Health Department (SEHD) has entered into a three year Framework Agreement with Architecture and Design Scotland (A+DS), the Scottish Executive's champion for good architecture, design and planning in the built environment to deliver a broad range of services to support NHSScotland to facilitate the design of modern, patient focused health care facilities that create community responsive environments.
8. A+DS will work with SEHD to:
 - raise the level of ambition for good quality design;
 - provide dedicated, hands on assistance to projects in setting the platform for delivering design quality and securing design teams that deliver that ambition; and
 - provide advice on the design quality of proposed healthcare facilities.
9. In broad terms A+DS plans to work with SEHD over the three year period to meet the challenges established in national policy. It plans to use a team of built environment experts to deliver a range of programmes to satisfy Ministers' expectations in relation to healthcare and broader community objectives through:
 - "enabling" projects;
 - establishing and facilitating a Design Champions network amongst NHSScotland Health Boards; and
 - interacting and advising on the design merits of proposals undertaking the Gateway Review process and the Key Stage Review process.

10. In order to enable A+DS to carry out its function, SEHD will:

- ensure each NHSScotland Board appoints a Design Champion at Board level and supporting Project Officer;
- refer suitable projects to both the Enabling and Design Assessment strands;
- provide regular updates of relevant issued policy documents, events and other background information; and
- arrange a formal review meeting between appropriate staff at SEHD and A+DS following the issue of each annual report and the final report.

11. Awareness and training will be required by NHSScotland on a number of issues in relation to the implementation of this Policy. This will be facilitated in the first instance through the Framework Agreement between SEHD and A+DS whereby appointed NHSScotland Design Champions will be provided with training and support appropriate to their role. It is envisaged that further support will be provided, as appropriate, by Health Facilities Scotland (HFS) through the provision of operational guidance and training via the HFS Continuous Professional Development programme.

Action

12. Addressees should ensure that a copy of this letter is cascaded to all appropriate staff with their area of responsibility.

13. The new Policy on Design Quality for NHSScotland and associated mandatory requirements take immediate effect.

Yours sincerely



ALEX SMITH
Interim Director of Finance



SCOTTISH EXECUTIVE

Health Department

A Policy on Design Quality for NHSScotland



Scottish Executive Health Department
Directorate of Finance
Property and Capital Planning
Property Branch

2006



A POLICY ON DESIGN QUALITY FOR NHSSCOTLAND

Purpose

The purpose of this document is to provide NHSScotland Bodies¹ with a clear statement of policy on design quality. It also provides guidance on how NHSScotland Bodies can ensure that design quality is embedded within the healthcare building procurement process.

Context

In recent years the value of good design has been increasingly recognised and a wealth of evidence based findings has demonstrated that good design adds value, not only from an economic perspective but also in terms of a range of social and environmental benefits. This capacity to add value is particularly important for healthcare environments, where the physical and psychological well-being of patients, staff and visitors is of paramount consideration.

At a UK level, the Prime Minister established the 'Better Public Buildings' initiative in October 2000 to achieve a step change in the design quality of publicly procured buildings. Following this, in 2001, the Scottish Executive (SE) launched its '[Policy on Architecture for Scotland](#)' which contained an objective "to promote a culture of quality in the procurement of publicly-funded buildings that embraces good design as a means of achieving value for money and sustainable development". Its policy on architecture promotes and encourages investment in well designed buildings in both the public and private sectors.

As one of the early steps in the implementation of its policy, the Executive reinforced the Prime Minister's initiative by taking forward design quality issues within the education sector. The present document now responds to the quality objectives of the Policy on Architecture for Scotland within guidance and initiatives particular to NHSScotland.

As stated in the foreword to the Scottish Executive document 'A Policy on Architecture for Scotland', *"buildings form a fundamental part of our physical environment and the quality of our buildings - of our architecture - has a vital role to play in bringing about the improvements we seek"*. This is especially poignant in the context of healthcare building, where well-designed health buildings can help patients recover their spirits and their health and have a positive effect on staff performance and retention, as well as improving the efficiency of operational relationships and providing better value for money in the context of whole-life costs. The Scottish Executive therefore recognises the importance of good building design as the physical means of delivery for a range of wider policy objectives

The Scottish Executive's Architecture Policy Unit (APU), which was established to implement policy commitments, can offer advice on design and acts as the sponsor body for [Architecture and Design Scotland](#), a Non Departmental Public Body established as the national champion for good architecture, design and planning in the built environment.

¹ NHSScotland Bodies in the context of this document means all Health Boards, Special Health Boards and the Common Services Agency performing functions on behalf of Scottish Ministers.

[‘Designing Places: A Policy Statement for Scotland’](#), launched in 2001, is an Executive campaign to drive up the standard of design in Scotland's towns and cities and sets out the Scottish Executive's aspirations for design and the role of the planning system in delivering these. It aims to demystify urban design and to demonstrate how the value of design can contribute to the quality of all our lives.

‘Designing Places’ sits alongside the Policy on Architecture. They share an overall aim to improve the life of the people of Scotland through improving the quality of our built environment. Achieving this depends on recognising the value of good design at all scales of development. Individually, buildings accommodate our activities, but collectively they define and shape our towns and cities and have the potential irrevocably to alter the character of our rural areas. A drive for quality cannot, therefore, focus solely on individual buildings - but must be concerned with the way that buildings, new and old, work together, and create places which affect our quality of life.

Health buildings can often be the places in which we may feel at our most vulnerable, whether as a patient, relative or friend. The quality of the building environment that we experience can provide us with calming reassurance or, conversely, it can accentuate our feeling of stress and unease.

Many factors can contribute to engendering a sense of ease, for instance:- the degree of natural light, brightness and airiness, colour and texture, an easily understood layout with clearly defined focal points, uncluttered signage and a clear distinction between the realms of public and private space, maintaining patient dignity.

In many health buildings, external public spaces are vitally important in that they can also provide the opportunity for positive respite in periods of stress. Sensitive landscaping and well-defined public space in a healthcare environment can provide far more than simply an attractive setting. Through careful design social or intimate, tranquil spaces can be created, providing an environment where people might want to sit or meet, and which further contribute to the healing process.

The creation of a new or refurbished facility can also bring with it the opportunity to show a positive civic presence, and the development of a high quality public building can do much to help the regeneration of communities. It is thus also a matter of considerable importance that health buildings respond to the urban or rural contexts in which they sit. This includes considerations such as how they fit within historic contexts, how the approach and entrance act to welcome concerned families and friends, and how they contribute to the quality of their neighbourhoods, both in terms of the buildings themselves and the places they create around them.

Healthcare buildings play a significant part in the environment and, increasingly, patients are becoming "empowered" to demand better environments in which they receive healthcare. It is appropriate that we embrace such matters and introduce appropriate policies and initiatives in Scotland.

At the heart of this policy is the recognition that strong client commitment is required to deliver facilities that provide the high quality caring environments we desire. We are now looking to NHSScotland bodies to develop their individual visions for the kind of places in which patients and staff would wish care to be provided.

The term ‘good design’ is not merely a question of style or taste but describes what arises from the intelligent and creative synthesis of many interrelated factors such as: strategic planning of healthcare provision; social and physical regeneration; the local urban (or rural) context and forms; links to infrastructure and transport; sustainability agendas; the building’s sense of welcome; intelligibility of layout; security; unobtrusive supervision; ease of use and maintenance; efficiency; and, promotion of human dignity. It covers the way in which buildings sit within and, contribute to, their community as well as how they work and look. Successful healthcare design resolves a wide range of functional requirements efficiently whilst, at the same time, exploring the opportunities to provide an uplifting environment for patients, visitors and staff.

Design should not be thought of as an “add-on extra” in health buildings or, indeed any building. Irrespective of questions of quality, the process of design must in any case take place, as it is an inevitable activity arising from the decision to build. But good design need not cost more and the difference between achieving good or poor quality outcomes is more often the result of having the right knowledge or advice, understanding, care and commitment.

Many aspects of good design are not subjective. A design can be evaluated objectively through the use of appropriate tools such as Design Quality Indicators (DQIs) to assess whether the building will function efficiently and effectively; whether there is clear evidence of thoughtful, imaginative and even inspirational proposals that will not only work, but work better; whether the building integrates with its surroundings in an appropriate manner and creates a sense of place and; whether the materials, construction methods and the proposed layout will enhance long-term value for money.

The physical form of a development can enhance or detract from the qualities of a place and can support or undermine the intended uses. In every part of a city, town or village where there is scope for change there will be a wealth of opportunities for achieving good design. **In order to achieve value for money (VFM), good design has to combine fitness for purpose and flexibility with whole-life costs which is a fundamental requirement of public sector procurement policy.** By integrating a high standard of design quality early in the procurement and design process, cost savings associated with the whole-life revenue costs of a facility can be reduced for a comparatively small additional investment to the capital. In addition to long term operational savings, such well directed initial investment in a high quality healthcare environment helps boost staff morale and improves working conditions, recruitment and retention.

Design evaluation, in particular Post Project Evaluation, can contribute to the emerging field of “evidence-based design” which is proving a valuable tool in the design process towards both reducing costs and improving outcomes. Research has shown that evidence-based design methods, introduced early in the process of facility programming and design can improve the experience of patients who will be treated within the healthcare facility and assist in health recovery which results in improving medical outcomes, shorter bed stays, greater throughput and a reduction in patient and staff stress.

The [Commission for Architecture and the Built Environment](#) (CABE), through its work on healthcare buildings, has established key elements of good healthcare design which include the following:

Good urban design allowing the building to contribute positively to the urban environment and providing a clear, easy approach that is integrated with public transport.

Good public open space where pedestrians are prioritised over cars so that the building is not dominated by landscaping requirements. Well landscaped external space benefits staff,

patients and visitors, offering an alternative environment to rest and relax away from the stresses inherent in healthcare environments.

A clear plan with a natural progression from public to treatment rooms. Ideally visitors should be able to see their destination from their starting point.

A single reception point makes for a clear expression of the entrance on the outside, an early welcome once inside and assists in orientation when travelling around the building. Security and privacy issues can be resolved in the detail design of the reception area.

Circulation and waiting areas that are pleasant and calming places in their own right, designed with human dignity in mind. Where waiting and circulation are combined, this should be achieved to the benefit of each.

Robust and attractive materials, finishes and furnishings – structure and detail should all correspond to a clear approach to design, benefiting whole life costs by reduced maintenance and replacement.

Generous amounts of natural light and ventilation contributes to good, energy efficient environmental conditions throughout. In addition to providing a comfortable and Therapeutic environment, such provision improves the external feel of the building, provides views out and aids navigation within. The provision of views and positive distraction and the ability to control one's environment have been shown to be instrumental in patient recovery and in staff health and satisfaction.

Capacity to adapt to future changes is key to the long-term utility of the building and therefore its sustainability and VFM. Aspects such as sizing rooms generously and arranging them thoughtfully can allow flexibility. Viewing space as a resource, not a territory, helps patterns of use to evolve over time.

The Way Forward

The recent Scottish Executive Health Department report "[Building a Health Service: Fit for the Future](#)" (the Kerr Report) is particularly apt in the context of design quality of healthcare building. The report recognises that the NHS in Scotland needs to change, not because it is in crisis but because Scotland's Healthcare needs are changing rapidly and we need to act now to ensure that we are ready to meet the future challenge. In looking ahead over the next 20 years the report identifies a number of key messages:

- that NHSScotland delivers sustainable and safe local services;
- that we redesign where possible to meet local needs but specialise where required having regard to clinical benefit and access;
- the NHS as a service to be delivered primarily in local communities rather than in hospitals;
- a focus on preventative anticipatory care rather than reactive management.

The report highlights that the new models of care being introduced will have an impact on the services that NHSScotland provides. With public expectations changing regardless of where care is delivered it is paramount that we deliver the highest quality environment for healthcare. Implementing the recommendations will go a long way to ensuring that buildings of a quality which the people of Scotland expect are delivered.

It is critical that design issues are addressed regardless of the procurement method used to deliver healthcare buildings and, that the outcomes specified for these buildings in terms of the care environment are reflected in their design. However, the implementation of design quality and the procurement route used have a particular relationship and therefore the procurement method used can have a significant bearing on the development of design quality during the process. Although it can be argued that good design is independent of cost, it's relationship with design management and procurement in practice needs careful examination. The recently published National Audit Office report "[Improving Public Services Through Better Construction](#)" (March 2005) supports this view and advocates that all key stakeholders should be involved and all proposals subjected to independent challenge before key design decisions are made and that design and decision-making be based on "whole-life value".

The concept of 'evidence-based design' has already been mentioned in the context of Post Project Evaluations. There has been a historical assumption that each healthcare building has to be unique in order to fulfil the vision and aspirations of the brief which can, unfortunately, result in the repetition of mistakes, albeit perhaps unintentionally. The starting point for any new healthcare building should, logically, be the successes of one or a number of existing buildings based on a careful analysis of what constitutes the 'good' and what constitutes the 'bad'.

Also of importance is the emerging field of 'supportive healthcare design'^A. Traditionally, there has been an assumption that the main requirement placed upon a healthcare facility should be the mitigation of infection or the risk of exposure to disease. Additionally, through decades of advances in medical science and technology, many healthcare designers and technicians have been conditioned to create buildings that are successful delivery platforms for new technology. By concentrating on the need for functional efficiency and the pathogenic concept of disease and health, healthcare facilities have been procured which contain environments which can be considered stark, institutional, stressful to their occupants and thus detrimental to the quality of care they are intended to provide. In spite of evidence of the major stress caused by illness and the subsequent traumatic experience of hospitalisation, there has, historically, been comparatively little emphasis on the creation of surroundings which can calm patients, reinforce their ability to cope in such environments and generally address their social and psychological needs.

The process of 'supportive design' begins by eliminating the environmental characteristics which are known to contribute to stress or can have negative impacts on outcomes and, importantly, continues by emphasising the inclusion of characteristics in the healthcare environment which research has indicated have the ability to calm patients, reduce stress and strengthen their ability to cope and promote healthy, healing processes.

(Ref ^A: Ulrich R S, 2000 - 'Effects of Healthcare Environmental Design on Medical Outcomes'
Ulrich R S, 2000 - 'Evidence based environmental design for improving medical outcomes. Proceedings of the conference: *Healing By Design: Building for Healthcare in the 21st Century*', McGill University Health Centre, Montreal)

Due to the length of time that healthcare buildings may be in use there is potential to constrain changes in delivery practices. It is therefore vitally important that design processes are an integral part of a robust procurement mechanism in order to ensure that buildings are not only functional when constructed but are flexible and adaptable over their entire lifetime.

SEHD will continue to play its part in supporting and implementing wider Scottish Executive procurement strategies and policies by setting these within a healthcare-specific context.

Policy Aims

- The purpose of this policy is to articulate the Scottish Executive Health Department's ambition for NHSScotland's estate and to embed the need for well designed healthcare environments as an integral part of service delivery. It also provides guiding principles which a NHSScotland Body's Design Action Plan should address ([Annex B](#)) and two further annexes providing reference to relevant Scottish Executive Health Department property-related policies and supporting guidance ([Annex C](#)) and, useful references and web links ([Annex D](#)).
- The Scottish Parliament has articulated the desire that Scotland becomes "*the best small country in the world*" and has further asserted that the quality of our built environment is a key factor in achieving this, not only to benefit the country's residents but, to influence the international perception of Scotland. The Scottish Executive Health Department believes that improving the quality of our caring environments is crucial to delivering the confident, compassionate Scotland that is aspired to.
- Therefore this policy statement requires that all NHSScotland Bodies, as an integral part of the commitment to deliver the highest quality of environment for patient care, ensure that design quality is fully integrated into the healthcare building procurement process and is apportioned appropriate emphasis throughout all stages of this process.

Scope

This policy must be considered alongside other Departmental policies bearing upon property including those for fire safety, property transactions, construction procurement, property management and environmental management. Such policy statements are intended to inform the formulation and updating of operational policies and guidance. Such operational policies and property strategies are important corporate expressions of a NHSScotland Body's intentions and as such should be a manifestation of integrated service planning and the appropriate involvement of all relevant interests.

The policy must also be supportive of other relevant Health Department, Scottish Executive and Government policies and commitments.

Policy Statements

Statement 1 All NHSScotland Bodies, as clients, must commit to the integration of design quality in the procurement of healthcare building throughout all stages of the process, regardless of procurement route used.

Statement 2 All NHSScotland Bodies must have a policy on design quality – a [Design Action Plan](#) - consistent with and supportive of the Department's property-related policy and supporting guidance (listed at [Annex C](#)) and, with the policy guidance contained within [Annex B](#) of this document.

Statement 3 The SEHD must provide guidance on compliance with those aspects of statutory and mandatory requirements which are particular to the procurement, design and delivery of healthcare buildings and guidance on best practice. This will be effected through the publication of appropriate operational guidance by [Health Facilities Scotland](#).

Mandatory Requirements

1. Each NHSScotland Board must have a clear, articulated policy on design quality – a [Design Action Plan](#) – consistent with the Department's policy.
2. Each NHSScotland Board must appoint a member of the NHS Board to act as [Design Champion](#) at a strategic level and, where not impractical, also a Senior Officer to act as supporting Design Champion at a technical level.
3. All NHSScotland Bodies engaged in the procurement of both new build and refurbishment of healthcare buildings must do so in compliance with EU, UK and Scottish Executive procurement policy and guidance.
4. All NHSScotland Bodies, as clients, must ensure the development of a clear project brief which should not only describe the physical requirements of the building but should also articulate the Board's vision and aspiration.
5. All NHSScotland Bodies engaged in the procurement of both new-build and refurbishment of healthcare buildings must use and properly utilise the English Department of Health's [Activity DataBase \(ADB\)](#) as an appropriate tool for briefing, design and commissioning. If deemed inappropriate for a particular project and an alternative tool or approach is used, the responsibility is placed upon the NHSScotland Body to demonstrate that the alternative is of equal quality and value in its application.
6. All NHSScotland Bodies must use [Design Quality Indicator \(DQI\)](#) tools as appropriate to manage their design requirements through the life of a project. The English Department of Health's [Achieving Excellence in Design Evaluation Toolkit \(AEDET\)](#) and associated supplementary tools such as ASPECT are recognised as the exemplars towards achieving the appropriate level of project design management.

Monitoring

7. All NHSScotland Bodies engaged in the procurement of both new-build and refurbishment of healthcare buildings must conduct thorough and, independent, Post Project Evaluations and Post-Occupancy Evaluations and make available to SEHD any resulting evaluation data which will be used in the formulation of generic reports to inform future policy and disseminate nationally the lessons learned.

Training

8. Awareness and training will be required by NHSScotland on a number of issues in relation to the implementation of this Policy. This will be facilitated in the first instance through the Framework Agreement between SEHD and Architecture and Design Scotland whereby appointed NHSScotland Design Champions will be provided with training and support appropriate to their role and, additionally, through ad-hoc support as deemed appropriate from [Health Facilities Scotland](#).

Policy Guidance

A NHSScotland Body's **Design Action Plan** should be consistent with and supportive of the guidance contained within this Annex and the policy and guidance documents listed at [Annex C](#).

[The following guidance aligns in part with the Scottish Executive "*Construction Procurement Manual: Section 6 – Design quality in building procurement*" but with appropriate additions and amendments in order to apply to the healthcare context.]

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Design quality in building procurement

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- [Evaluating good design](#)
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Role of the client

Project brief

- [Activity DataBase \(ADB\)](#)

The Client Design Adviser

Design Quality Group

The Design Team

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- [Maintaining design quality on site](#)

Public space

Use of the arts in healthcare

Design quality in building procurement

Key issues

- Good design is not an alternative to value for money (VFM), but is integral to its achievement. A good building project must also contribute to the environment in which it is located, deliver a wider range of social and economic benefits and be adaptable to accommodate the needs of future users. An enhanced built environment which incorporates principles of good design can improve the quality of life of those who use and work in public buildings. Throughout the life of a building, design excellence can improve the standard of public service delivery, make it more efficient and contribute to staff recruitment and retention. Good design can ensure that capital costs are competitive and that savings can be achieved on running costs through reduced maintenance, energy and operating costs without compromising the attractiveness and quality of the building. **Therefore investing in good design can make the most beneficial and effective use of resources, can add value and represents a sound investment in the future. High quality building design is therefore a key mechanism in providing VFM in the provision of healthcare services.**
- **Good design is not merely a question of visual style or personal perception but arises from the careful synthesis of many interrelated factors including architectural vision, functionality and efficiency, structural integrity and build quality, accessibility, security, sustainability, lifetime costing, flexibility in use and a sense of space in the community.**
- Clients must be clear about the level of funds available for a project from the outset and ensure that their aspirations for quality are underpinned by realistic and affordable assumptions.
- Clients must carefully assess and define their priorities before appointing design consultants.
- The process must allow for effective consultation with all stakeholders to establish a clear, well-defined brief.
- Sufficient time and resources should be allocated towards establishing the client's design quality aspirations.
- The Client's Design Advisers must be retained throughout the construction process in order to monitor the quality of design and finishes.
- Post Project Evaluations of building programmes are mandatory for major projects and any lessons learned must be shared with the Scottish Executive and other NHSScotland bodies.
- Quality Based Selection (QBS) is a structured procedure for selecting a design team and professional advisers. Design competitions are a means to primarily select specific design ideas or outline design ideas for a project, rather than the design team personnel.
- All public sector appointments, irrespective of the client's preferred nature of competition or reference to any other guidance on design competitions, must be consistent with EU procurement rules in terms of process and outcome. Public sector clients must ensure that design team appointments follow the procedures described in [Section 3 Annex A](#) of the works procurement guidance part of the Construction Procurement Manual. Detailed

guidance on the appointment of consultants, conditions of contract and contract guidance in a NHSScotland context is contained within 'PROCEDURE: Property Procurement Guidance for NHSScotland', published by [Health Facilities Scotland](#). Quality aspects cannot be considered in isolation but must be assessed as part of the VFM evaluation which also takes account of fee proposals.

- The role of an informed client is vital in ensuring the successful delivery of the project within the agreed timescale and budget and to the required standards and requirements of all users.

Achieving good design

From the outset, clients must be clear about the level of funds available for a project and ensure that their aspirations for quality are underpinned by realistic and affordable assumptions through establishing the right budget. These quality matters and functional requirements must then be set out in a clear and thorough project brief. In order to monitor and control the procurement, design and construction processes, procedures and responsibilities should be clearly defined (and assigned). Ideally, designers should engage in challenging and constructive dialogue with the client, building users and those involved in supplying and manufacturing materials, goods and services. All concerned should work to a realistic and robust timetable, which gives the design team enough time to develop and achieve a good solution.

An informed, demanding and committed client is vital in ensuring that aspirations for quality are maintained throughout the procurement, design and construction processes.

By nature of their complexity, healthcare buildings can be expensive to manage and maintain due to the imposition of build cost constraints during the procurement process in order to adhere to a short-term financial hurdle. **It is therefore imperative that the process recognises the need to address the whole-life cycle of the building and the integral part that good design can play in mitigating potential future financial penalties imposed by the adoption of such a short-term vision. Whole-life costing must be the standard for investment decisions. Those involved in the making of such decisions will be ultimately judged on the lifetime VFM of their decisions rather than whether they managed to get a project past the initial financial hurdle.**

Healthcare facilities and the associated equipment used therein must be designed to support all the people who are likely to use them in order to operate effectively. It is therefore vital that all potential users of a proposed facility – staff, public and patients – are involved early in the design process and throughout its progress. Additionally, stakeholders such as regulators, professional bodies, community bodies, etc, should also be engaged throughout the process as this has the potential to provide a valuable source regarding the projected use of the facility, the processes which will be undertaken therein and how the facility's users will work or interact with it. Early user involvement in the design process can help ensure that a planned facility will support the people who are to use it.

The standardisation of systems and processes to be carried out within a proposed facility, layouts, room orientation, human interfaces, wayfinding and even storage can provide many benefits for patients, staff and visitors. Standardisation can help reduce mental workload and thus reduce errors, can make errors and departures from normal working easier to detect and can allow the transfer of skills and staff between departments with reduced training needs. Thus standardisation in conjunction with a wider engagement with users and stakeholders can also enhance safety.

The Scottish Executive Health Department requires that NHS Boards appoint Design Champions at Board and Senior Officer level to consolidate a commitment to the championing of good design.

Fire safety

Fire safety legislation and standards generally state that all people should be evacuated from a building in the event of fire. In terms of healthcare premises, this is not the case due to certain circumstances. Fire in a hospital or other healthcare building can be especially serious because of the difficulties and dangers associated with the emergency evacuation of patients, many of whom will be highly dependent. Therefore in such buildings the concept of progressive horizontal evacuation is the norm and is cited as so within the [Technical Handbooks to the Building \(Scotland\) Regulations 2004](#). However, because of other special requirements particular to fire safety in healthcare buildings, guidance and recommendations contained in NHSScotland Fire Safety Management guidance, including NHSScotland Firecode, which is additional to the mandatory requirements set out in the Technical Handbooks to the Building (Scotland) Regulations 2004, must be adhered to. This additional guidance is ratified by the [Scottish Executive Health Department's Fire Safety Policy](#). The requirements of NHSScotland Firecode must be considered throughout the design process in addition to the requirements of the Building (Scotland) Regulations 2004. NHSScotland Firecode is published by [Health facilities Scotland](#).

Designing for equality

NHSScotland, as a provider of services, is subject to equality legislation which requires the provision of services which are accessible to everyone. In a healthcare environment it is important to recognise the complexity and the number of difficulties with which patients, staff and visitors may have to cope on a day-to-day basis. Sensory impairments, perceptual problems, reduced mobility, chronic pain, communication barriers, are but a few. Informed planning and design plays an important role in enabling people of all abilities access to services and facilities. It is therefore essential that the concept of "access and egress for all" is incorporated early in the design process and throughout its progress and that best practice guidelines are followed. By considering equality issues early in the design process, costs associated with addressing equality issues can be minimised which would inevitably prove more onerous if addressed retrospectively.

Egress for all in the case of an emergency must also be considered during the design process. Everyone rightly expects that if they are in a public building when an emergency occurs they should be subject to evacuation procedures which come into force to ensure their safety. However, in healthcare buildings there may be many persons who, by nature of their presence there or otherwise, may be particularly vulnerable. In particular, in larger healthcare buildings such as hospitals it will not be possible to ascertain the number of people who may have an impairment, let alone the type of impairment or, the number of people who may have cognitive or communication or language difficulties. Addressing the needs of all in the context of emergency egress early and throughout the design process will have significant benefit towards the procurement of a facility which ensures the safety of patients, staff and the general public.

Evaluating good design

Design evaluation can be structured around a number of key design issues. To support the continual improvement of the construction and procurement process, Post Project Evaluations (PPEs) of building programmes are mandatory for major projects with a cost in excess of the delegated limits and are an integral requirement of the Scottish Capital Investment Manual (currently under review). However, it is recognised that all projects would

benefit from such evaluation and any lessons learned should be shared with the Scottish Executive and other NHSScotland bodies in order to inform best practice and future policies. Independent PPEs should be carried out before the break up of the design team to review the success of the project against its original objectives, its performance in terms of time, cost and quality outcomes and whether it has delivered value for money.

Guidance on Post Project Evaluations can be found within the Scottish Capital Investment Manual.

Post-Occupancy Evaluations (POEs) also have a significant role. The key advantage of POEs is the opportunity to achieve improvements in the ways future buildings will support operational objectives. Participants often identify areas where design improvements could be made and ways in which buildings and equipment could be used more cost effectively. These may only be minor, but they could produce significant benefits to future designs. The process of evaluation can provide important feedback on whether resources are being targeted at the most important areas. This can also enable poorly functioning or seldom used features to be eliminated from future designs and the repetition of mistakes to be avoided.

The nature of PPE and POE reports must be set out and agreed at the start, and project sponsors must ensure that provision is made for the independent preparation of both when setting budgets and timetables.

PPEs and POEs can be valuable in the formulation of “evidence based design” methodology. As has been stated in the preambles to this policy document, the field of “evidence-based design” is proving a valuable tool in the design process towards both reducing costs and improving outcomes. Research has shown that evidence-based supportive design methods, introduced early in the process of facility programming and design can have significant impact on the design of physical environments which can affect patient medical outcomes and care quality. An important impetus for the growing international awareness of healthcare facility design has been mounting scientific evidence that certain environmental design strategies can promote improved outcomes whereas other approaches can worsen patient health.

The business case

The business case process must include statements of expectation for design quality. The preparation of the Outline Business Case should be the starting point for embedding design quality issues into the procurement process and, ideally this should be initiated during Phase II of the Business Case process at the point from which service objectives are established, as defined within the SEHD Scottish Capital Investment Manual (currently under review). Discussions with professional advisers at the earliest stage can assist in determining and defining design priorities and setting project objectives. Consideration of the design issues must continue throughout the entire process.

For projects which are to be provided under the Private Finance Initiative (PFI) the guidance contained within the Department of Health publication '[Design Development Protocol for PFI Schemes: Revision 1](#)' (August 2004) should be followed, in so far as it is applicable in Scotland, for the preparation of Business Cases.

Role of the Client

The key role of the client is to develop a clear, well defined brief. At the beginning of the project, the client will need to establish the nature and scale of what is required. Clients should establish the views and aspirations of all stakeholders, and their aims will become the

reference point throughout the design and construction stages and can be used to test the overall success of the project over the long term. As with any building project, the initial stages are vital and, a period when the most value can be added. Providing sufficient time and resources for strategic thinking will produce dividends in the long run. An informed and motivated client is critical to the success of a project.

As part of their responsibilities, the client must:

- fully develop a client strategy which has identified the need for the building whilst setting and securing a budget for the project. Understand that the budget cannot be finally established until the brief is settled;
- set a realistic and achievable timetable allowing sufficient time for consultation, brief development and for design;
- involve their Design Champion throughout the briefing and project delivery and listen to their comments;
- allocate sufficient time and resources to establish the client's design quality aspirations and set out clear benchmarks which the client must reinforce through all stages of the process;
- consider the skills and experience required of individual client team members, assess in-house skills and, where necessary, engage external consultants;
- appoint a Client Design Adviser to aid in the preparation of the brief and the assessment of the schemes that come forward through any competitive design process;
- consult with stakeholders to establish a clear, well-defined brief;
- be informed and demanding about operational requirements and quality objectives to get the best possible outcome from the procurement process;
- articulate the Board's requirements not only through the use of DQIs but in a clearly expressed brief that establishes and communicates their vision for the development;
- show commitment to achieving a well-designed and constructed project by giving design quality a high percentage in the assessment of bids and publishing that ratio. Make sure that bidders understand that poor or mediocre developments are not acceptable;
- establish clear and effective routes for communication between the Client Team and the bidding Design Teams during the bidding process so that the Board's needs and aspirations can be more fully discussed and incorporated into the designs that are brought forward. Establish a Design Quality Group to work with the bidders throughout the ITN process, commenting on and directing the solutions that are brought forward;
- choose a Delivery/Design Team which is committed to achieving the best quality possible within the agreed budget and timetable; allow sufficient fee budgets for the work that the designers must do;
- not allow design time to be squeezed in order to recover time lost in the programme for other reasons – good design takes time;

- carry out Post project Evaluations (PPEs) and Post Occupancy Evaluations (POEs) and ensure that the reports from these are available to SEHD for formulation of generic reports which can properly feed back into future procurement processes.

Project Brief

A vital factor in achieving high quality design is that clients have a firm and well developed view of what they want, before appointing design consultants, and that this is clearly stated in project briefs. A well-developed brief, with common consensus on operational and quality priorities, is essential for the provision of better design. A rigorous approach to this stage of work will significantly improve the client's capacity to deliver a quality project.

On the other hand, proceeding with sketchy and under-investigated assumptions can be detrimental to the outcome of the project. Statements that set out the client's aspirations on design in terms of matters such as character and durability should be incorporated into briefs.

Detailed guidance on the development of the Project Brief is available to NHSScotland Bodies from within PROCODE: Property Procurement Guidance for NHSScotland, published by [Health Facilities Scotland](#).

Of particular importance in the context of healthcare buildings is the need for the Project Brief to incorporate policy, guidance and best practice in relation to reducing Healthcare Associated Infections (HAI). Guidance to ensure that prevention and control of infection issues are identified, analysed and planned for at the earliest stage of the provision of new or refurbished healthcare facilities is contained within Scottish Health Facilities Note 30 (SHFN 30): 'Infection Control in the Built Environment: Design and Planning', published by [Health Facilities Scotland](#). Additionally, Health facilities Scotland has developed a system which aims to assess and manage the risk of infection in the built healthcare environment called HAI-SCRIBE, an acronym for Healthcare Associated Infection System for Controlling Risk in the Built Environment. HAI-SCRIBE has been designed as an effective tool for the identification and assessment of potential hazards in the built environment and the management of these risks. The tool should be applied from the design and planning stages of a project through to the occupation and operation of the facility.

The project brief should also contain statements on the client's desired approach to sustainability. Integral to the design and procurement process, a commitment to sustainable design can bring real benefits in terms of reduced running costs and quality of environment for users. Further guidance on achieving sustainability in construction procurement is set out in the [SEHD Environmental Management Policy for NHSScotland](#) and in [Section 7 of the Scottish Executive Construction Procurement Manual](#).

To assist NHSScotland Bodies in delivering sustainable solutions and embedding energy efficiency into healthcare building projects, Health Facilities Scotland has developed an exemplar Environmental Management System, GREENCODE, through which NHSScotland Bodies can continually aim to improve the environmental performance of their property and, exemplar energy efficiency guidance, EnCO₂de, which aims to ensure that everyone involved in procuring, managing and using healthcare buildings and equipment thinks about the implications of energy use.

Activity DataBase (ADB)

[Activity DataBase \(ADB\)](#) is the briefing, design & commissioning tool for both new-build and refurbishment of healthcare buildings. It is a briefing and design package with an integrated

textual and graphical database, an interface with AutoCAD and an extensive graphical library - the complete tool for briefing and design of the healthcare environment.

ADB is produced by the Department of Health in England and is endorsed for use in Scotland by the Scottish Executive Health Department as the preferred briefing and design system for NHSScotland. It has been developed to assist in the construction, briefing development, design and alteration of healthcare facilities.

In 2005, the Scottish Executive Health Department, in association with the NHSScotland Property and Environment Forum (now [Health Facilities Scotland](#)) launched an initiative to support NHS Boards in the implementation of ADB throughout NHSScotland by way of a national agreement in which SEHD would fund the first year's licence subscription to ADB and Health Facilities Scotland would provide ongoing training and user-network support. This is now in place and NHS Boards, having recognised the merits and cost-effectiveness of the system, are expected to continue to subscribe annually on their own behalf.

Spaces designed using ADB data automatically comply with English planning guidance (such as Health Building Notes (HBNs) and Health Technical memoranda (HTMs) as ADB forms an integral part of the English guidance publication process. Whilst Scottish users can create their own project-specific briefs and designs using ADB's extensive library of integrated graphics and text which includes room data sheets, room layouts and departmental room schedules, extreme care should be taken to ensure that such data generated by the package are consistent and compliant with Scottish-specific guidance such as Scottish Health Planning Notes, Scottish Hospital Planning Notes (SHPNs) and Scottish Health Technical Memoranda (SHTMs) as published by [Health Facilities Scotland](#).

The Client Design Adviser

The first few decisions at the start of a project can have a very significant impact on the quality of the design. The challenge is to break the mould of 'fixed thinking' which too often leads to projects which are not the best solution possible. By employing a Client Design Adviser (CDA) early in a project, clients can become empowered to question fundamental issues. The interface between the project team and the users can be effectively smoothed by the CDA – healthcare officials are in the main not trained to read design plans which often results in buildings being 'signed off' which fail to reach their potential. The appointment of a CDA is, naturally, an additional cost but good preparation is vital to the creation of a good project.

The CDA is appointed by the Client as a consultant to the Client Team and operates in the sole interest of the client to achieve best value outcomes through design. However, healthcare buildings often constitute complex engineering systems, the design and maintenance of which must be addressed at the design stage. Also, many of the key issues surrounding healthcare building design are irrevocably connected with sustainability. It is vitally important, therefore, that the CDA is capable of understanding the range of issues and has the ability to provide the necessary breadth of input.

The CDA acts from the inception of a project through to its completion, performing a range of tasks to help ensure that the healthcare buildings delivered are of the highest quality including:

- contributing to the understanding and knowledge of design;
- reviewing user needs and assisting in the preparation of the outline brief;
- drafting documentation;

- judging the quality of ideas and suggestions;
- suggesting and evaluating delivery team members;
- asking searching questions of all those involved in supply; and
- facilitating consultation with stakeholders.

Design Quality Group

The Client needs to ensure that all schemes designed in the competitive process up to Invitation To Negotiate are acceptable. In order to ensure this, it is advisable to set up a Design Quality Group to review the designs alongside the user consultation process. The group should be kept small and will normally be made up of the Project Director, Building Project Director, Client Design Adviser and some input from the A+DS Enabler, if appointed.

A typical format for a Design Quality Group review would be:

- bidders submit designs beforehand and Group members review them privately;
- the Design Quality Group meet to discuss the designs and formulate any questions to clarify, in order;
- the Group meet with the bidders and hold a brief Q & A session;
- Group members then collate and agree on comments which are subsequently fed back to bidders, normally on the same day.

This entire process can be carried out in a matter of a couple of hours per bidder, and ideally would be done at 3 points during the ITN process. The three meetings would follow a similar format, but have slightly different objectives:

- the first is arguably the most important, being carried out before the design becomes fixed in peoples' minds;
- the second is useful to see how the bidders have listened to and, taken account of, the group's comments; giving an indication of their partnering abilities;
- the third meeting, just before the designs are fixed, is a good time to test the bidder's grasp of costing issues and whether there is duplication or superfluous space in the design.

It is important that bidders are aware beforehand that it is the fundamental issues which will be considered – they shouldn't appear at review meetings with 'completed' designs! Bidders should view the review as an opportunity to learn about the client's reaction to their proposals rather than using the time to justify their design as it stands.

The Design Team

Design Team selection

There are several methods of selecting the appropriate design team for a project, including Quality Based Designer Selection (QBS) which is a structured procedure for selecting a

design team, and design competitions, which primarily select specific design ideas or outline designs for a project, rather than the design team personnel.

The Scottish Executive's [Construction Works Procurement Guidance: Section 3 – Procurement Strategies and the Appointment of Consultants and Contractors](#) provides information on some of the different procurement strategies available and the consultancy roles and professional advice that may be required at the various projects stages. Further advice is contained in the [Guide to the Appointment of Consultants and Contractors](#) published by the [Office of Government Commerce](#).

Detailed guidance on the appointment of consultants, conditions of contract and contract guidance in a NHSScotland context is contained within PROCODE: Property Procurement Guidance for NHSScotland, published by [Health Facilities Scotland](#).

Regardless of the procurement strategy adopted, the appointment of a design team, consultants, professional advisers, etc, should be based upon the principles adhered to in Quality Based Selection methodology, outlined below. The [Royal Institute of British Architects \(RIBA\)](#), together with the [Construction Industry Council](#), has published a booklet of Guidance for Clients to Quality Based Selection.

Quality Based Designer Selection (QBS)

QBS looks for an appropriate balance of design skills, experience, innovation, and an ability to perform on schedule to the required standards and within budget. A client, or client committee, selects a team based upon a weighted scoring of a list of relevant factors, including technical capacity, resources, previous experience of similar projects, deliverability of the design and partnering arrangements, aimed at determining which design team is most able to handle the project successfully.

Throughout a building project, designs will be developed through constant dialogue with the design team, so it's essential that a key selection consideration is inter-personal skills; the client must feel that it has the ability to work with the designers.

It is essential to know that a design team's claimed expertise is actually currently available. The question of whether a design team has completed major quality projects within the past five years may give a more fair comparison between long established and new design teams. It is important to ensure that the principal designer responsible for successful past projects is present for the interview, and such individuals should be named in the contract if that design team is successful.

Design competitions

A competition to select an outline design, rather than the design team members, requires the client to have a well developed brief for the project. Design competitions may be appropriate where there is either a unique problem that will benefit from a wide range of design approaches being explored (along with likely considerable public interest - which may be the case on a major new public building) or where the competition promoter wishes to encourage the development of new talent.

Procedure for appointing the Design Team

All public sector appointments, irrespective of the client's preferred nature of competition or reference to any other guidance on design competitions, must be consistent with EU procurement rules in terms of process and outcome.

The appointment or competition must therefore:

- strike the correct balance between quality and price to achieve whole-life VFM;
- evaluate the quality and price aspects against clear, unambiguous and pre-determined criteria;
- assess the technical and financial capacity of the design team (including design partnership arrangements) to deliver the project on time and within budget, as well as to the required standards of quality; and
- maintain a full and transparent record of all aspects of the competitive process from start to conclusion, including the evaluation of the pre-qualification questionnaires as well as the selection and award stages.

NHSScotland Bodies must follow the guidance on the appointment of consultants contained within Section 2 of PROCODE: Property Procurement Guidance for NHSScotland. Also, as Public Sector clients, NHS Bodies must ensure that design team appointments follow the procedures described in [Section 3 Annex A](#) of the works procurement guidance part of the Scottish Executive Construction Procurement Manual which sets out appropriate criteria to use at both the selection (short listing) and award (bidding) stages of the appointment process, as well as indicative quality: price evaluation ratios for different types of project.

Design Team selection criteria

Selection criteria should include design ability, aspiration, financial status, insurance provisions and technical capacity; the last of these enables consideration to be given to resources, technical suitability and past performance. This stage also aids production of an objective and transparent short list of the most suitable organisations, from all those that expressed interest in providing design services.

Selection criteria at the bidding stage

The award criteria enables a further qualitative assessment to be made of the specific proposals for the project - not just technical merit of the design proposals but also other aspects of successful delivery such as proposed team-working, management arrangements, and project team organisation.

Where design partnerships are proposed - perhaps to combine the innovative skills of a new or small design practice with the experience and resources of a longer-established designer - the award criteria enables the client to assess the ability of both parties to fulfil their responsibilities and to evaluate the compatibility of working cultures and practices. Visits to the design offices of all candidates, including those forming partnerships, should follow a consistent approach and involve the same personnel.

NHSScotland Bodies, as clients, should consider the benefits to be accrued from requesting an Interim Bid Submission from bidders, particularly in a PPP or joint venture (such as “hub”) initiative context. This should be based upon clearly specified requirements within the Invitation To Negotiate (ITN) documentation and should be undertaken at an approximate mid-point stage through the period from release of OJEU to the return of ITN documentation with clear expectations on outputs from bidders that are measured but, not too cumbersome, perhaps structured by means of the use of the AEDET Evolution design evaluation tool.

Relation of selection criteria to budget considerations

The qualitative criteria adopted at the selection and award stages should be appropriate for the individual project and weighted to suit the circumstances. It is important that these aspects aren't considered in isolation but should be assessed as part of the VFM evaluation which takes account of fee proposals. [Section 3 Annex B of the Scottish Executive Construction Procurement Manual](#) describes other aspects of appointing consultants, including the various ways of paying for professional services. In circumstances where *ad valorem* (usually percentage) fee structures are appropriate, consideration must always be given to the application of an abatement or capping mechanism in order to contain fee costs at a fair and appropriate level.

Criteria used during selection and award stages must be applied consistently by all of those involved in that stage of the procurement procedure. In other words, once selection and award criteria are established, individual members of a sift or tender evaluation panel must not apply different criteria. Furthermore, once selection criteria are established, they should be made available to candidates. Award criteria must be set out in either the OJEU contract notice or the contract documents.

Design Quality

Evaluating design quality

General

There are, inevitably, some aspects of what constitutes 'good design' that can be subjective, but these are primarily issues of style. However, many other design issues can be assessed objectively - whether a building will function efficiently and effectively; whether there is clear evidence of thoughtful, imaginative and even inspirational proposals that will not only work, but work better; whether it responds positively to its surroundings; whether it provides well-defined and meaningful public spaces for patients and the community; and whether the materials, construction methods and the proposed layout will enhance long-term value for money. The Scottish Executive [Construction Procurement Manual: Section 6 – Design quality in building procurement](#) lists a number of key issues to be considered in evaluating a design.

General guidance on achieving value for money (VFM) in works procurement, based on seeking to achieve an optimum combination of whole life cost and quality, is set out in [Section 2 of the Scottish Executive Construction Procurement Manual](#). Evaluating and achieving consensus on quality can be facilitated through the use of formal techniques and there are a number of tools which can help. The Construction Industry Council (CIC), for example, has developed its Design Quality Indicator (DQI) to evaluate the design quality of buildings throughout the development and life cycle of a project.

Achieving Excellence Design Evaluation Toolkit (AEDET)

However, healthcare building design frequently involves complex concepts which are more difficult to measure and evaluate. In order to address these specifics in a DQI context the Department of Health (England) Estates and Facilities Directorate has developed the [Achieving Excellence Design Evaluation Toolkit \(AEDET\)](#), the latest version of which is AEDET Evolution and is a tool specifically directed towards achieving excellence in design rather than ensuring compliance with legislation, regulation and guidance. High scores in AEDET do not therefore necessarily guarantee compliance with statute.

The AEDET Evolution toolkit assists NHS Bodies in managing their design requirements from initial proposals through to post-project evaluation. It is a benchmarking tool and forms part of the guidance for PFI, joint ventures including 'hub' and, conventionally funded schemes. AEDET Evolution contains evaluation criteria which ensure that design takes place within a common, industry wide framework. The toolkit enables the user to evaluate a healthcare building design in a non-technical way that covers the three key areas of **impact**, **build quality** and **functionality**.

AEDET Evolution uses ten key criteria that have evolved from sources including the [Commission for Architecture and the Built Environment \(CABE\)](#) and the [Construction Industry Council \(CIC\)](#) to establish an industry-wide framework for assessing design. The ten key criteria are:

Uses

Service philosophy, functional requirements and relationships, workflow, logistics, layout, human dignity, flexibility, adaptability and security.

Access

Vehicles, parking, pedestrians, disabled people, wayfinding, fire and security.

Spaces

Space standards, guidance and efficient floor layouts.

Character and innovation

Excellence, vision, stimulation, innovation, quality and value.

Citizen satisfaction

External materials, colour, texture, composition, scale, proportion, harmony and, aesthetic qualities.

Internal environment

Patient environment, light, views, social spaces, internal layout and wayfinding.

Urban and social integration

Sense of place, siting, neighbourliness, town planning, community integration and landscaping.

Performance

Daylight, heating, ventilation, air conditioning, acoustics, passive thermal comfort.

Engineering

Emergency systems, fire safety, engineering standardisation and prefabrication.

Construction

Maintenance, robustness, integration, standardisation, prefabrication, health and safety.

Using AEDET Evolution

AEDET Evolution is a tool for evaluating the quality of design in healthcare buildings. It delivers a profile that indicates the strengths and weaknesses of a design or an existing building. It is not meant to produce a simplistic single overall score. Because of the nature of design, which inevitably involves trade-offs, it may not be possible to produce a building which would have the maximum score for all the sections. Indeed it may quite often be the case that a high score for one statement reflects a design which inevitably may be scored

low on another statement. A single overall score would thus be misleading and uninformative.

AEDET Evolution can either be used by individuals or in workshops by groups. In the latter case it is probably desirable that an experienced user of AEDET Evolution should facilitate the group to avoid excessively lengthy debate. AEDET Evolution can be a helpful tool in enabling a group to come to a common understanding with the help of a facilitator who can moderate group discussions.

AEDET Evolution can be used at different 'scales' in evaluating the design of a healthcare building, e.g. at a building scale, a department scale or a complete site scale. The level of detailed information available may dictate the scale of the evaluation.

AEDET Evolution is designed to be used by those involved in the commissioning, production and use of healthcare buildings. In particular public and private sector commissioning clients, developers, design teams, project managers, estates/facilities managers and design champions may find AEDET Evolution a helpful and useful tool. User clients such as patient representatives and members of the general public should also be able to use AEDET albeit within a workshop environment alongside other more experienced professionals.

When to use AEDET Evolution

AEDET Evolution can be used to evaluate existing buildings in order to compare them or understand their strengths and weaknesses.

AEDET Evolution can be used on the plans for new buildings in order to evaluate and compare designs.

AEDET Evolution can be used on "imaginary" buildings in order to set standards for preparation of a brief.

AEDET can be used at various stages during the design of healthcare buildings – as the level of detail of the information available increases it should be possible to respond to more of the statements in the tool. AEDET Evolution can also be used in the preparation of Interim Bid Submissions (see "Selection criteria at the bidding stage" above).

A Staff and Patient Environment Calibration Tool (ASPECT)

To complement AEDET Evolution, the Department of Health (England) Estates and Facilities Directorate has developed the [ASPECT toolkit](#). ASPECT stands for A Staff and Patient Environment Calibration Tool and is based on a database of over 600 pieces of research. That research deals with the way the healthcare environment can impact on the levels of satisfaction shown by staff and patients and on the health outcomes of patients and the performance of staff.

This research and the ASPECT toolkit itself are set out under 8 headings. ASPECT can be used as a stand alone tool, or it can be used to support AEDET Evolution to provide a more comprehensive evaluation of the design of healthcare environments.

When used to support AEDET Evolution it enables the user to score the Staff and Patient Environment Heading of AEDET Evolution in a more detailed, accurate way.

The toolkit has 3 layers which allow users to create a design evaluation profile:

- the SCORING layer on which you score;

- the GUIDANCE layer that gives more detailed help;
- the EVIDENCE layer that points to available research evidence.

Role of Architecture and Design Scotland (A+DS)

[Architecture and Design Scotland](#) has been established by Scottish Ministers as the National Champion for Good Architecture, Design and Planning in the built environment. Its aim is to operate within the Executive's policy framework on architecture and design, as well as in partnership with a range of bodies in the private and public sector to help turn the aspirations of policy into reality.

The aim is to raise the quality of new development, so that high standards of layout and design are the rule, not the exception. Overall, the development of well designed and attractive cities, towns and villages will support Ministers' determination to make Scotland a better place to live, work and visit.

A+DS has taken over the independent Design Review and Advisory roles of the Royal Fine Art Commission for Scotland and has a wider and more proactive role in advocating the benefits of good design through Enabling, Advocacy, Research and Communications activities.

Projects of strategic significance, making a significant impact on the local environment, or particularly sensitive sites or setting new standards for the future will be considered within the A+DS independent Design Review process through meetings with a Design Review Panel.

The role of A+DS is to be proactive in promoting the qualities and benefits of good design by:

- inspiring excellence in all kinds of development from housing estates to major cultural buildings.
- encouraging high quality public buildings (e.g. schools and hospitals) and public places.
- stimulating and supporting a demand for better design by clients and the public for improved quality from investors, developers and the design professions.
- working in partnership with local authorities, government agencies, professional bodies, non-government organisations and where appropriate local communities to develop effective design policies, frameworks and guidance.
- improving skills and design in the built environment through training, by working with universities and professional bodies.
- communicating and disseminating key messages, in a clear and accessible form, on architecture and design to a wide audience, including the media.
- building up evidence which demonstrates the value of investment in good design.
- considering new thinking on how the built environment needs to respond to drivers such as climate change, the sustainable development agenda, technological advances and demographic changes.

SEHD and A+DS have developed a range of initiatives to assist NHSScotland in addressing design quality issues in the procurement of healthcare building projects. These initiatives include:

- training and advocacy to support the introduction of Design Champions within every NHSScotland Board;
- enabling by providing “hands-on” assistance to projects; and
- carrying out assessments of the design merits of significant projects to advise and inform the Gateway Review and Key Stage Review processes.

NHSScotland Design Champions

The Scottish Executive Health Department requires that NHS Board Chairs are responsible for nominating a member of the NHS Board and a Senior Officer to take on the roles of Design Champions for the Board. The Senior Officer should have knowledge and experience in capital investment procedures and expertise in technical matters. Both must be in a position to influence the overarching policies, procedures and ethos of the organisation, albeit in their own manner.

A Design Champion should be:

- well respected and an excellent communicator who is able to promote the need for good design to a wide variety of audiences, both within the Health Board and externally. Both appointees should be able to persuade colleagues and the wider community of the benefits of well designed healthcare buildings;
- a consensus builder, able to bring together the various stakeholders both within the local authority and the wider community; and
- able to see the ‘bigger picture’ and help develop a ‘vision’.

The Design Champions, ideally, are in a position to influence the work undertaken by the Health Board but it is important that the roles are not created for status but, for action.

The role of the Design Champion is not project specific but is to advocate design quality and to ensure that mechanisms are in place within the NHS Board to deliver the design agenda. NHS Design Champions will be supported initially by Architecture and Design Scotland through a Framework Agreement with the Scottish Executive Health Department which requires A+DS to:

- establish and facilitate an NHS Scotland Design Champions Network;
- provide an induction pack for use by the NHS Scotland Design Champions Network’s members to assist them in undertaking their duties as design champions;
- hold at least two NHS Scotland Design Champions Network events per year.

Design Champions will be expected to work with all the necessary disciplines. The role of the Design Champion is expected to include a responsibility to ensure that:

- the building promotes civic pride;
- patients and staff are consulted and their views addressed;

- the building fits into the local surroundings and settings;
- the building is fit for purpose;
- the building takes on board modern technology;
- the design considers sustainability issues;
- quality is questioned throughout the process;
- there is support for resisting change which reduces quality and VFM.

The Design Champion should ensure that:

- aspirations for design quality underpin all projects undertaken across the NHS Board;
- a Board Design Action Plan is produced and delivered;
- a design vision is established in order for the Board to produce clear briefs within which these aspirations are clearly stated;
- all procedures encourage the achievement of high quality design;
- an assessment is made of the current environment for patients, staff and visitors;
- the Achieving Design Excellence Evaluation Toolkit (AEDET) is used throughout a project where appropriate;
- the evaluation of tenders is based on VFM and not lowest cost;
- budgets and timetables are realistic;
- the Board has the correct skill mix to deliver the design agenda;
- the scheme includes the full involvement of the local community and the support of clinical and other staff.

The Design Champion will raise the profile of design excellence by:

- encouraging the selection of designers with a proven track record of good design or design awards;
- promoting awareness of national and international best practice in healthcare design;
- encouraging schemes, either refurbishments or new build, to be put forward for local and national competitions and awards;
- maintaining a forum for regular review and feedback to the Board;
- recognising the support, guidance and initiatives available.

It is important that NHS Boards acknowledge the fact that the role of Design Champion is one that requires a considerable amount of time. Design Champions are required to

understand what constitutes good design across a range of different and, sometimes very technical, disciplines and the amount of time required to do so can easily be underestimated.

Enabling

Enabling seeks to provide dedicated hands-on assistance to those charged with delivering a project or establishing the policy framework for the delivery of other projects. At its very basic level enabling seeks to influence that project's particular outcome so that the chances of achieving design quality are enhanced. However, the enabling process seeks to work at a much deeper and broader level by imparting the skills, capacity and confidence to the client team so that design quality can be raised in each successive project.

Architecture and Design Scotland provides enabling advice which is delivered by A+DS staff and by leading professionals working as consultants for A+DS. The enabler's involvement is generally at the outset of the design and briefing process, before the appointment of a design team or a developer.

The A+DS enabling work supports commissioning organisations in their aspirations for design quality, championing the highest standards in urban design, landscape, architecture and regeneration - with the aim of achieving better- designed spaces and places. It assists public building programmes to secure good value for money by providing direct advice on critical areas that impact on the final design of the project. These are issues such as project vision, client resources, briefing, and competitive selection of design and developer teams.

The enabling service also contributes to the overall understanding of procurement processes and best practice in built environment and public space projects.

SEHD will work with A+DS to identify a number of key projects to enable and this work will be funded through the initiative. Those NHS Boards which are embarking on the first major project for some time or, a project that presents particularly difficult design issues, may also wish to consider approaching A+DS to assist in:

- embedding the qualities of good design in the procurement process;
- providing early hands-on advice;
- the development of the brief;
- exploring key design issues.

Design assessment

Currently, project approval mechanisms focus on how a building is procured with less emphasis on the merit of what is to be procured. Design Assessment is intended to balance this so that 'why' we build and 'what' we build can be seen alongside 'how', in making the decision to build.

Design Assessments will be carried out at 3 key points during selected projects to look at the merits of what is proposed. The information that may be assessed will depend on the project stage and procurement route but is likely to include a number of the following aspects:

- the quality and content of the briefing information prepared;
- the impact of the chosen procurement procedures (timetables, submission requirements etc.) on the development of design quality;

- the site options and appraisals that have been carried out;
- any Public Sector Comparator design that has been developed;
- the proposals to be submitted for Outline Planning Consent;
- proposals brought forward as part of the bidding process for Design & Build and PPP/PFI schemes;
- early proposals under development by appointed Design Teams.

Design Assessments will be carried out by a team established by A+DS. A representative of the assessment team and a report detailing the Assessment Team's conclusions will be available to Gateway Review Teams and to PartnershipsUK to aid their evaluation of the project.

Role of Health Facilities Scotland

Health Facilities Scotland (HFS) is a division of National Services Scotland and provides operational guidance to NHSScotland Bodies on non-clinical topics such as:

- estates engineering;
- building and architecture;
- procurement;
- fire safety;
- environment;
- energy;
- property management;
- clinical waste management;
- sterilisation;
- legionella and other estates related pathogenics;
- hazards and safety action notices.

This assists the NHSScotland meet the Government's policy and strategic aims and to establish professional/technical standards and best practices, including the promotion of new initiatives in the field of healthcare practice and management. Clearly HFS can have a pivotal role to play in the implementation and support for this Policy, both through the provision of supporting guidance and through their Continuous Professional Development (CPD) programme which provides essential training to NHSScotland personnel on operational issues as impacted by national policies and objectives.

Maintaining design quality on site

There is a risk that, once a project moves on to site, the client may underestimate the effort which will continue to be required to maintain design quality. Any shortcuts taken at this stage can put the overall design quality of the project at risk. The client's design advisers must be retained throughout the construction process in order to monitor the quality of design and finishes.

These advisers should also ensure that design aims are not sacrificed in the management of change during the running of the project. If design standards and quality thresholds are clearly defined, then the review process throughout the delivery stage should provide sufficient safeguards against quality dilution. A structured process of quality checks during construction is important to ensure that what has been agreed is actually being provided. All partners should be involved in these checks as the risks of unsupervised changes on site can affect a wide range of matters, such as the provision of resource areas necessary for facilities management and the quality of finishes, which in turn may affect both cleaning and maintenance.

Public Space

A statement setting out the Executive's aspirations for design and the role of the planning system in delivering public spaces is described in the published document [Designing Places: A Policy Statement for Scotland](#).

It is important that public space is not considered as an afterthought. New public buildings need to be responsive to their contexts, both in terms of their scale and form, and in the materials they use. It is not enough to simply respond to the appearance of surrounding buildings; it is important to also think in terms of the integrity of surrounding public spaces. In the creation of new public buildings, it is important that the design team is perceptive of the buildings' relationships to the maintenance or improvement of existing public spaces or the potential for new public spaces.

The creation of public buildings can also give something positive to the public realm rather than simply create residual areas around them, and clients may wish to consider whether the location of a building is sufficiently sensitive to merit the inclusion of an urban design specialist on the team. An approach is required which gives due consideration to the way in which the spaces created by buildings will be used, and to the needs of users in terms of accessibility, safety, lighting, shading, shelter, orientation, views, surfaces, seating, planting, and maintenance.

Use of the arts in healthcare

There may be scope for the involvement of artists or craftsmen in a project. When successfully implemented, artworks can help to create more distinctive and attractive buildings and urban spaces and enhance the public's experience of an architectural space. In a healthcare perspective, artwork can have an even more positive effect. NHSScotland can benefit in many ways from the adoption of the arts in healthcare programmes including better patient environments and an improvement in staff morale. It is recognised that art in healthcare can benefit the NHS through the promotion of user and staff involvement in the design of the healthcare environment and can subsequently have an impact on health outcomes. There is growing evidence that patient recovery rates and stress levels are improved by the adoption of appropriately selected art in healthcare programmes. The integration of art can also assist in improving the communication of health information and the redesign of services. The involvement of staff, patients, artists and local communities at

the earliest stages of the design process for new buildings and refurbishments can result in innovative, creative solutions.

The use of art in a healthcare setting need not be restricted to the visual arts. Other arts activities which involve music, performing arts, storytelling and patient workshops can have therapeutic benefits and can have great value in certain healthcare environments. Art-related therapy, e.g. dance, music, drama or art creation, is recognised as an integral psychological and creative tool for the improvement of physical and mental well-being.

Some NHS Boards retain the services of “artists in residence”. However, Boards may also wish to seek specialist advice from public art agencies with regard to including artwork within a project.

Boards may wish to consider allocating a specific budget for the inclusion of artwork as an integral element of a project. However, care should be taken to ensure that any resulting expenditure is proportionate to the benefits and is appropriate to the building's status and function, in order to avoiding subsequent criticism of the project for inappropriate use of public funds.



Scottish Executive Health Department property-related policies

[Fire Safety Policy \[NHS HDL\(2005\)53\]](#)

Scottish Executive Health Department

http://www.show.scot.nhs.uk/sehd/mels/hdl2005_53.pdf

[NHSScotland Property Transactions \[NHS HDL\(2001\)15\]](#)

Scottish Executive Health Department

http://www.show.scot.nhs.uk/sehd/mels/HDL2001_15.htm

[Construction Procurement Policy \[NHS HDL\(2001\)47\]](#)

Scottish Executive Health Department

http://www.show.scot.nhs.uk/sehd/mels/HDL2001_47.htm

[Property Management Policy and Other Related Matters \[NHS HDL\(1999\)44\]](#)

Scottish Executive Health Department

http://www.show.scot.nhs.uk/sehd/mels/1999_44.pdf

[Environmental Management Policy for NHSScotland \[NHS HDL\(2006\)21\]](#)

Scottish Executive Health Department

http://www.show.scot.nhs.uk/sehd/mels/hdl2006_21.pdf

[Revised Interim Capital Guidance \[NHS HDL\(2002\)87\]](#)

Scottish Executive Health Department

http://www.show.scot.nhs.uk/sehd/mels/hdl2002_87.pdf

Supporting guidance

Scottish Capital Investment Manual

[Scottish Executive Health Department](#)

[Private Finance and Capital Unit website](#)

Scottish Executive Health Department

[The Design Development Protocol for PFI schemes: Revision 1, August 2004](#)

Focuses on the information that must be finalised between a NHS Trust (England) and bidders at each stage of the PFI process up until Financial Close. Although written for the NHS in England, NHSScotland users should ensure that the guidance is adopted in so far as it is applicable to Scotland.

http://www.show.scot.nhs.uk/pfcu/PDFs/DDP_rev1_letter.pdf

NHSScotland Fire Safety Management / NHSScotland Firecode

[Health Facilities Scotland](#)

[NHSScotland Property Transactions Handbook](#)

Scottish Executive Health Department

PROCEDURE: Property Procurement Guidance for NHSScotland

[Health Facilities Scotland](#)

NHSScotland Property Management System

[Health Facilities Scotland](#)

GREENCODE

[Health Facilities Scotland](#)

EnCO₂de

[Health Facilities Scotland](#)

Scottish Health Facilities Note 30: Infection Control in the Built Environment: Design and Planning

[Health Facilities Scotland](#)

HAI-SCRIBE: HAI System for the Control of Risk of Infection in the Built Environment

[Health Facilities Scotland](#)



Useful references and web links

General

Health Facilities Scotland

Provides operational guidance to NHSScotland healthcare bodies on non-clinical topics including: building and architecture, procurement, property management, estates engineering, energy & environment.

<http://www.hfs.scot.nhs.uk/>

Architecture and Design Scotland

The Scottish national champion for good architecture, design and planning in the built environment.

<http://www.ads.org.uk/>

Centre for Architecture and the Built Environment

The UK government's advisor on architecture, urban design and public space.

<http://www.cabe.org.uk/>

Construction Industry Council

The representative forum for the professional bodies, research organisations and specialist business associations in the construction industry.

<http://www.cic.org.uk/>

Art in Healthcare

A new forward-looking arts-in-health organisation formed from Paintings in Hospitals Scotland and the Friends of Paintings in Hospitals Scotland.

<http://www.artinhealthcare.org.uk/newpages/>

Scottisharchitecture.com

Provides a network of digital resources relating to architecture and the built environment

<http://www.scottisharchitecture.com/>

The Lighthouse

Scotland's centre for architecture, design and the city

<http://www.thelighthouse.co.uk/>

SUST. – The Lighthouse on Sustainability

Aims to raise awareness of the importance of a sustainable approach to design in the built environment by providing increased access to guidance, tools and techniques for clients, design teams and community-based groups.

<http://www.sust.org/>

Scottish Executive links

Scottish Executive Architectural Policy Unit

Promoting and encouraging better architecture.

<http://www.scotland.gov.uk/Topics/Arts-Culture/arch/intro>

Scottish Executive Construction Procurement Manual

Provides the Executive's Departments, Associated Departments, Executive Agencies and most sponsored bodies (as well as the Scottish Parliament Corporate Body and the Forestry Commission in Scotland) with mandatory policy and procedures for understanding construction works projects.

<http://www.scotland.gov.uk/Publications/2005/11/28100404/04066>

Scottish Executive Planning and Building

The provision of planning guidance and advice, construction procurement guidance and technical advice for government departments and other bodies.

<http://www.scotland.gov.uk/Topics/Planning>

Scottish Building Standards Agency

An executive agency of the Scottish Executive to undertake the national functions related to the building standards system.

<http://www.sbsa.gov.uk/>

Scottish Executive Sustainable Development

The Scottish Executive's contribution to the UK strategic framework for sustainable development.

<http://www.scotland.gov.uk/Topics/SustainableDevelopment>

Sustainable Development Policy into Practice – New Buildings

This report describes progress in work by Scottish Executive agencies and divisions to further the sustainable development of new buildings, both domestic and non-domestic.

http://www.sbsa.gov.uk/current_standards/Sustainability.htm

Scottish Executive Private Finance and Capital Unit

Policy and guidance on planning NHS capital developments including those developed through public private partnerships.

<http://www.show.scot.nhs.uk/pfcu/>

GP Web

Information for practices and others involved in GP & Primary Care premises issues to enable users to seek out best practice solutions to accommodation problems within their premises as well as the procurement routes available for new or extended facilities.

<http://www.show.scot.nhs.uk/gpweb>

Department of Health (England) links and publications

OnDesign

OnDesign is a visually-led repository of information that aims to assist the creative and functional design process in healthcare design, and to encourage networking and the sharing of knowledge and best practice between healthcare design schemes.

<http://www.design.dh.gov.uk/content/introduction/home.asp>

IDEAS

A design tool to aid NHS clients and their architects and design consultants to develop their briefs and design ideas.

<http://design.dh.gov.uk/ideas/>

Achieving Excellence in Design Evaluation Toolkit (AEDET)

The AEDET Evolution toolkit evaluates a design by posing a series of clear, non-technical statements, encompassing the three key area of Impact, Build Quality and Functionality.

http://www.design.dh.gov.uk/content/connections/aedet_evolution.asp

A Staff and Patient Environment Calibration Tool (ASPECT)

ASPECT is a tool for evaluating the quality of staff and patient environments in healthcare buildings and can be used as a stand-alone tool or in conjunction with AEDET to provide a more comprehensive design evaluation of healthcare environments.

<http://www.design.dh.gov.uk/content/connections/aspect.asp#toolkit>

Activity Database

The briefing, design & commissioning tool for both new-build and refurbishment of healthcare buildings.

<http://adb.dh.gov.uk/>

The architectural healthcare environment and its effect on patient health outcomes

A research project funded by the Department of Health and led by Professor Bryan Lawson and Dr Michael Phiri of the University of Sheffield School of Architecture, in collaboration with John Wells-Thorpe. The document is available for purchase from The Stationery Office, ISBN 011322480X.

<http://www.tsoshop.co.uk/bookstore.asp?Action=Book&ProductId=011322480X>

The Healing Environment

Part of the English Department of Health's Improving the Patient Experience initiative, this site looks at the components of a healing environment.

http://patientexperience.nhsstates.gov.uk/healing_environment/he_content/home/home.asp

Primary and Social Care Premises

Identifies the key considerations and actions for those involved in the planning, briefing and design of primary and social care premises, and gives some guidelines on funding, procurement and design.

(Note: English-specific guidance only – use with caution)

<http://www.primarycare.nhsestates.gov.uk/secure/content.asp>

Other references

OGC Procurement Guide 09: Design Quality

Office of Government Commerce 2004

Part of the OGC Achieving Excellence Procurement Guides

<http://www.ogc.gov.uk/assets/images/cp0069.pdf>

A guide to quality based selection of consultants: a key to design quality

Published 1998, £15.00 ISBN 1 898671 14 1

Construction Industry Council recommends this Guide as an inclusive guide and method for delivering construction clients with the consultants services they require and to realise the real economies and benefits to be had from good design.

<http://www.cic.org.uk/services/publicationsCIC.shtml>

Effects of Healthcare Environmental Design on Medical Outcomes

Ulrich R S, 2000

http://www.designandhealth.com/edu_res/Roger%20S.%20Ulrich%20p49.pdf

Visual landscapes and psychological well-being, Landscape Research, Vol. 4, No. 1

R S Ulrich, 1979

<http://www.tandf.co.uk/journals/carfax/01426397.html>

Human responses to vegetation and landscapes, Landscape and Urban Planning, Vol. 1

R S Ulrich, 1986

<http://www.sciencedirect.com/science>

Stress recovery during exposure to natural and urban environments Journal of Environmental Psychology Vol. 11

R S Ulrich, R F Simons, B D Losito, E Fiorito, M A Miles, M Zelson

<http://www.elsevier.com/locate/issn/0272-4944>