Annual State of NHSScotland Assets and Facilities Report for 2012

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Foreword

The Scottish Government's "20:20 Vision" for sustainable high quality in health emphasises prevention, integrated health and social care and self management. This is changing the nature of health services in Scotland and driving changes to NHSScotland assets and facilities services. We are building new facilities and modernising existing ones, procuring new equipment, vehicles and IM&T infrastructure to support improved delivery of services and new models of care. It is right that we know the extent to which this investment and improvement in assets and facilities services are making a real difference to patients and staff and delivers best value.

This report aims to draw a consistent picture of how well the totality of assets and facilities services are performing against ongoing policy objectives both now and in the longer term. The report builds on the work started in 2011 on the State of the Estate Report to determine what is needed to monitor and compare year on year performance on a comprehensive basis to support continuous improvement. The report draws together a number of strands of work that together develop a comprehensive understanding of the performance of assets and facilities services across a range of policy perspectives: patient quality, operating efficiency, environmental sustainability and cost. This work will allow us to recognise the contribution that ongoing investment in assets and facilities services is making to achieve the long-term goals of improving the quality of the healthcare environment, shifting the balance of care closer to home, meeting environmental commitments and delivering value for money through increased productivity and efficient use of resources.

Since the first report for 2011, which was published earlier this year, Boards have been highly supportive and very proactive in recognising the importance of this report in supporting them to meet the challenges faced by NHSScotland – to continue to provide high quality assets and facilities services when less money is available and at a time when the Scottish people and regulatory expectations on overall care quality have never been higher. This year's report provides a very comprehensive review and analysis of asset and facilities services performance, much of which is unprecedented. The Boards are to be commended for their effort in providing the information required for the review and their willingness to support the detailed scrutiny of performance that is presented in the report.

Calum Campbell   **Derek Feeley**
Chair of Assets and Facilities Programme Board   Chief Executive NHSScotland
Chief Executive NHS Borders

1.0 Introduction

1.1 Purpose

The "Annual State of NHSScotland Assets and Facilities Report for 2012" is the second year of a new national strategic report on asset and facilities management for the Scottish Government and NHS Boards' and Special NHS Boards' use. Its purpose is to annually review asset and facilities management performance, highlight areas of best practice, set target areas for improvement and monitor performance against the targets.

The report will form part of the Scottish Government's formal performance review and investment planning process. It will inform the annual reviews of the Local Delivery plans (LDPs) through review of capital planning and infrastructure investment proposals. NHS Boards will be asked to use the performance framework set out in the report to demonstrate that assets are used efficiently, safely and support health care improvement. It will form the basis for setting target areas for improvement to be monitored by Scottish Government in partnership with Boards throughout the year. It will guide Capital Investment Group (CIG) investment approval decisions along with the Boards' annually updated and approved Property and Asset Management Strategies (PAMS).

The main body of the report provides key information and performance analysis on the full range of assets and facilities services covered by the scope of the report. More detailed information and analysis is provided in the Annexes to the report.

1.2 Scope

The first report in 2011 focused primarily on NHSScotland property and estate issues, but indicated that from 2012 onwards the report will cover all NHSScotland owned and leased physical assets (property, vehicles, medical equipment, and IM&T). In addition, from 2012 the report will examine a range of facilities management services that are closely linked to asset ownership. This widening of the scope of the report is aimed at increasing the understanding of the opportunities for changing the balance of future investment between the different assets types. This is particularly important given the emerging landscape where care pathways are increasingly being developed to deliver care outside of hospital environments.

1.3 Policy

The strategic agenda for healthcare services in Scotland is set by The Healthcare Quality Strategy for NHSScotland. This is the overarching strategic context for the direction, development and delivery of all healthcare services for the years to come both in terms of securing improvement in the quality of healthcare services, and in achieving the necessary efficiencies.

The Asset Management Policy for NHSScotland [CEL 35 (2010)] establishes the policy environment and key performance indicators for asset management. It makes mandatory the use of the national asset management system to collect data and the requirement to submit annually updated asset management strategies to the Scottish Government. The policy establishes a robust framework against which the planning, delivery, management and disposal of property and other assets is undertaken and assessed. The policy seeks to establish asset management excellence in NHSScotland.

1.4 Context

The Scottish Government has produced a 'Strategic Narrative' around its vision for sustainable high quality in health. Entitled "Achieving Sustainable Quality in Scotland's Healthcare: A '20:20' Vision", the document emphasises prevention, integrated health and social care and self management. It also calls for more of a shift from acute care to community care where appropriate. This strategic narrative now provides the context for taking forward the implementation of the Quality Strategy, and the required actions to improve efficiency and achieve financial sustainability. Many of the actions required are urgent in order to respond to the immediate challenges (demography, Scotland's public health record and the economic environment) and the need to simultaneously protect and improve quality. Everyone involved in the delivery of healthcare in Scotland is now asked to play their part in turning the vision into a reality. Part of this vision is to have a healthcare system where there is integrated health and social care, a focus on prevention, anticipation and supported self management. The Scottish Government is currently consulting on its proposals to radically reform health and social care through the creation of Health and Social Care Partnerships. This provides an exciting context to re-examine the way in which assets are used to support service delivery. These proposals include changes to how adult health and social care services are planned and delivered, aiming towards a seamless experience from the perspective of the patient, service user or carer. Proportionally, fewer resources – money and staff – will be directed in future towards institutional care, and more resources will be directed towards community provision and capacity building. This will mean creating new and potentially different opportunities for the way in which the assets of the NHS and Local Authorities are jointly used to deliver services. Over the last 15 months NHS Highland and The Highland Council have been exploring the way forward on this work, examining improving access and service users experience whilst aiming to maintain long term effectiveness and efficiency of service delivery.

The Scottish Government's Quality strategy and the new Quality Outcomes on 'the best use of available resources' puts the spotlight on asset management improvement to support the delivery of high quality cost efficient healthcare. Ongoing financial constraints make it essential that existing assets are managed efficiently and that Boards have robust plans to ensure the assets are 'right sized' and that surplus assets

are appropriately managed with any identified capital available from disposal being realised in an effective manner.

The three Quality Ambitions of *patient centred*, *safe* and *effective* described in NHSScotland's Quality Strategy, clarify the overarching principles that need to guide the further development and management of the NHSScotland asset base. These are summarised as follows.

- Integration of health, social and individualised care

- Health improvement and inequalities focus

- Large scale application of best practice

- Re-allocation of resources to target need and deprivation.

There can be little doubt that the above will have significant implications for NHSScotland assets and will drive change toward an overall more productive asset base that:

- Supports improved access and service user experience

- Provides accommodation and assets that are clinically suitable, effective and meet or exceed patient and staff expectations

- Minimises risk and promote safety for people who use our services, our staff and visitors and supports improved quality of healthcare

- Disinvests from assets with high operating costs, backlog maintenance requirements, or short remaining life where these do not meet future service requirements

- Seeks optimum solutions through co-location, integration and shared resources across service streams and with our partners in service delivery

- Improves property and asset performance on all key performance indicators

- Releases capital and revenue from the disposal of assets that are no longer required for current and future services to reinvest those proceeds for new developments

- Develops / procures flexible accommodation for locality based services

- Integrates services with other health and care facilities wherever possible and thereby improving inter-professional working

- Develops inherent flexibility in assets, to enhance responsiveness to service needs or activity adjustments, for both positive and negative variations

- Provides opportunities to rationalise the existing portfolio of buildings with the aim of reducing estate related ownership costs (energy, maintenance, capital charges etc) and avoiding the need for expenditure on backlog maintenance on buildings that are not fit for purpose.

1.5 Capital Planning and Prioritisation

After a lengthy period of significant growth NHSScotland's capital resources are under severe pressure over the Spending Review period 2011/12 to 2014/15. A total of £2 billion capital investment is available in the four years of the Spending Review and this will be supplemented by a further £750 million in revenue finance to be directed towards projects in NHSScotland whether as standalone Non Profit Distributing (NPD) projects or delivered via the hub initiative.

Given the scarcity of capital resources it is even more imperative that those capital resources available, and revenue applied to support those projects being taken forward using revenue finance, have maximum impact in providing quality health services and at the same time drive and facilitate increased productivity and efficiency in service provision. The overarching imperative is for decision making regarding investment and disinvestment to be driven by quality, not simply cost reduction. Boards' Property and Asset Management Strategies will need to clearly demonstrate the need for, and priority given to, any investment proposals and the opportunities that the investment provides to improve quality. In addition, the proposals should maximise the proceeds from disposal of surplus assets to support reinvestment in NHSScotland infrastructure including backlog reduction.

A new work-stream is being developed at the request of Scottish Government's Director of Finance, and in response to the 2011 State of the NHSScotland Estate Report findings. The remit of this work-stream is to:

- Develop prioritisation criteria and a draft list of investment priorities to inform planning and investment decisions by the Capital Planning Group and Capital Investment Group
- Develop medium to long term national investment and disposal plans based on information from the Boards' asset management plans and discussion with Boards
- Develop a strategic rationalisation and disposal model for operational and office accommodation

The work will consider a more formal approach to capital planning and prioritisation using a robust set of criteria to develop an affordable list of capital priorities which demonstrate measurable improvement in asset performance over time. It is anticipated that there will be a number of benefits from taking this approach. From a financial perspective it should be able to increase the effectiveness of investment and reduce the expenditure that is required to meet performance or increase the performance for the same level of expenditure. It will also provide a transparent

decision making process and enable a focus on the best mix of investments to meet performance and risk within the constraints that NHSScotland operate under.

1.6 Capital Procurement

The Scottish Government and Health Facilities Scotland is currently procuring a new framework (Frameworks Scotland 2) for use by NHSScotland bodies to deliver cost and time efficiencies in the delivery of publicly funded health and social care projects across Scotland. The establishment of this framework is presently scheduled for early 2013.

Frameworks Scotland 2 will reflect a strategic and flexible partnering approach to the procurement of publicly funded construction work and complements other procurement initiatives for the delivery of health, social care and other facilities in Scotland. It is expected to have a project "pipeline" of approximately £110m per year.

Frameworks Scotland 2 will provide a route for the procurement of publicly funded construction, repair and maintenance projects in respect of health, social care and other facilities. It will sit alongside alternative procurement routes available, namely hub and NPD projects. The hub initiative is led by the Scottish Futures Trust on behalf of the Scottish Government and is being implemented across five geographical territories across Scotland. In each territory, the participating public bodies have joined with a private partner to form a new joint venture company known as a hubCo that will deliver a diverse pipeline of projects. Across Scotland the total value of projects is expected to be worth more than £1.4bn over the next ten years. Hub will typically be utilised for community services in particular primary care projects and health and social care projects involving multiple public sector organisations. NPD will be used to procure large projects which will be privately financed. The principal focus of the work under Frameworks Scotland 2 is anticipated to be around the acute sector, and will include both refurbishment and new build work along with programmes of backlog maintenance and risk reduction work. It is anticipated that the majority of the work will be projects or programmes of work with construction costs in excess of £1 million.

1.7 Information Quality

NHS Boards and Special NHS Boards are responsible for providing and maintaining information about the assets that they own and lease including ensuring that this information is accurate and up to date. They are supported and facilitated in this by Health Facilities Scotland and together they continually work to improve the quality of data so that it assists better quality analysis and performance monitoring. During the last couple of years NHS Boards have focused on updating and verifying their records on estate assets as part of the development and implementation of the new Estate and Assets Management System (EAMS). Similarly, information on energy and waste has been updated as part of an initiative to revise and update the Environmental Monitoring and Reporting Tool (eMART). This report makes extensive use of the
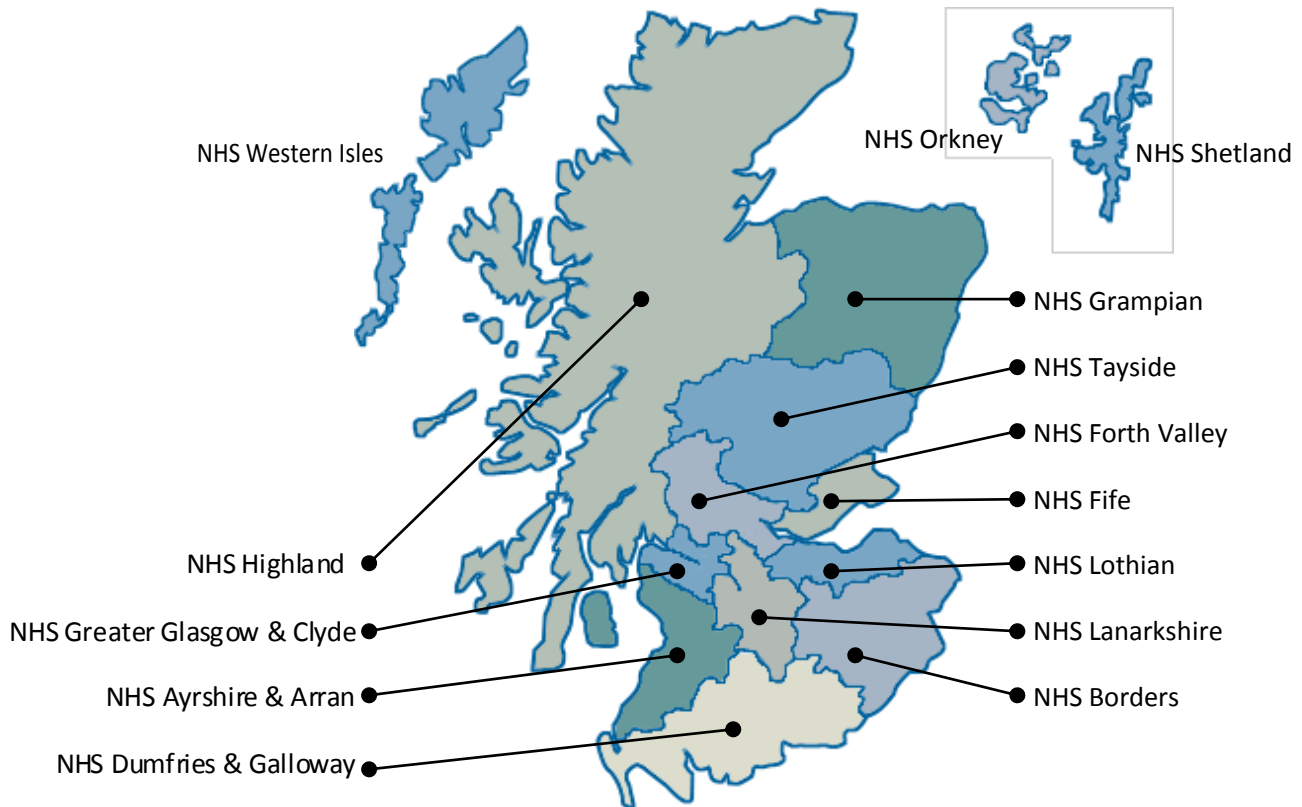
information and data provided by Boards to the ISD Cost Book, EAMS and eMART. In addition, the report uses information specifically provided by Boards for this report using standardised information proforma.

Development of the first State of the Estate Report in 2011 identified a number of issues in relation to the general quality and consistency of information of different information sources. As a follow up to the 2011 report a review was undertaken and recommendations for improving the quality and consistency of information were made to the Assets and Facilities Management Programme Board and the ISD Cost Book User Group. These recommendations were accepted and changes are being implemented during 2012 which will inform the 2012 Cost Book, due to be published in November 2012.   Since this report uses information from the 2011 Cost Book, issues remain regarding the quality of some of the information used to develop this report. In reality, given the extent and complexity of the NHSScotland asset base, improving information quality and consistency is likely to be an iterative and ongoing process for a number of years.

The widening of the scope of the report this year to cover vehicles, medical equipment and IM&T for the first time has identified further issues on information quality. The information systems for these assets are generally less well developed than those for property assets and in some cases Boards were unable to provide the information requested for this report. For equipment assets Boards should comply with the recommendations of the 2001 Audit Scotland report "Equipped to Care and" the 2004 follow up report. In addition, Boards should follow the guidance set out in Annex 3 of the "Policy for Property and Asset Management in NHSScotland (CEL35(2010).   As the data gathering and analysis continues to improve in quality it is expected that more robust strategies for managing investment, risk and opportunities associated with these assets will emerge. This will allow more extensive analysis of comparative performance to be undertaken on Vehicles, Medical Equipment and IM&T for next year's report. However, it should be recognised that for this year's report the quality and consistency of data in relation to these assets limits the conclusions that can be drawn from the analysis.

2.0 NHSScotland's Assets

The responsibility for the management of NHSScotland's assets rests with 14 NHS Boards and 8 Special NHS Boards.

NHS Western Isles

NHS Orkney

NHS Shetland

NHS Grampian

NHS Tayside

NHS Forth Valley

NHS Fife

NHS Lothian

NHS Highland

NHS Greater Glasgow & Clyde

NHS Lanarkshire

NHS Ayrshire & Arran

NHS Borders

NHS Dumfries & Galloway

Special NHS Boards

NHS Education for Scotland	NHS Health Scotland
NHS National Services Scotland[1]	NHS National Waiting Times Centre (Golden Jubilee)
Healthcare Improvement Scotland	NHS 24
Scottish Ambulance Service	The State Hospitals Board for Scotland

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[1] References to Special NHS Boards should be read to include NHS National Services Scotland, which is the common name for the Common Services Agency.

NHSScotland owns physical assets that are worth circa £5 billion. Most of these assets relate to the estate (land and buildings) which are estimated to be worth circa £4.6 billion. Other significant fixed assets which are owned are vehicles, medical equipment and information management and technology (IM&T). An analysis of the Net Book Value of these owned assets is shown in the chart below.
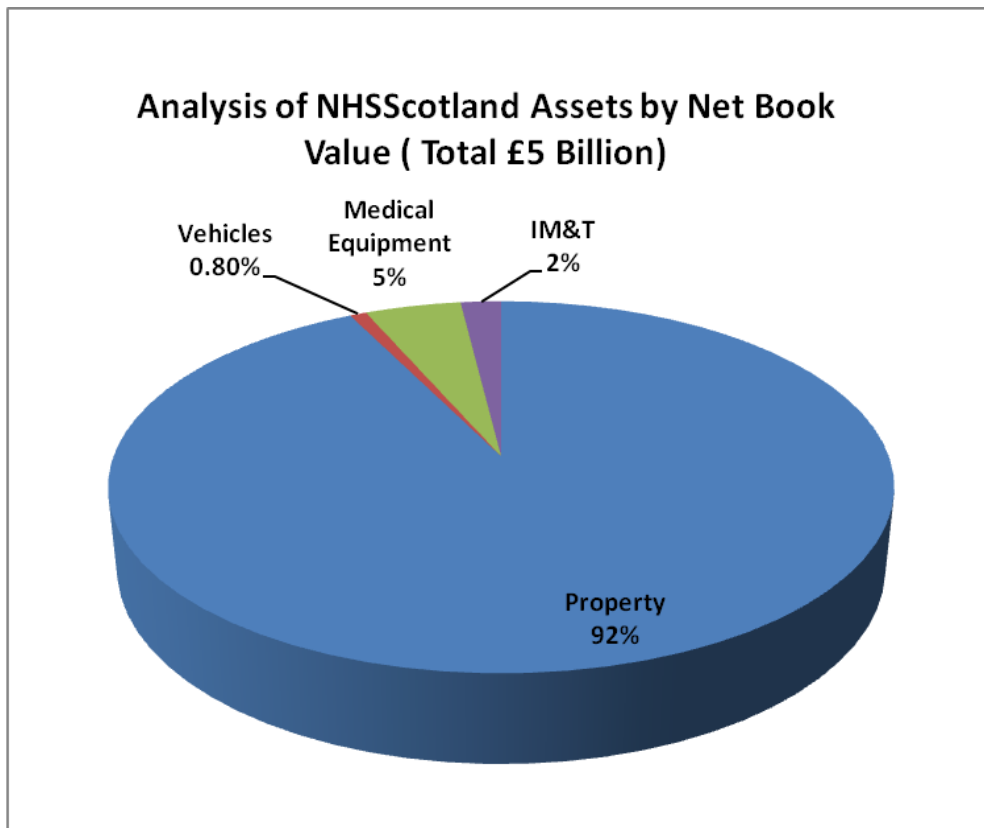

The NHS also leases assets which it does not own including buildings, vehicles, medical equipment and IM&T. These leased assets are estimated to be worth a further £1.5 billion, the majority of which are hospitals and health centres leased under Public Private Partnerships (PPPs) agreements. The majority of cars used by NHSScotland staff are also leased with staff paying for their own non business element and costs of these leased vehicles.

In addition to the NHSScotland owned and leased property assets, there are numerous smaller properties used to provide a range of community and family health services provided by GPs, Pharmacists, Dentists and Opticians, many of which are owned or leased by the practitioners themselves and paid for indirectly by the NHS through a range of charging and re-imbursement mechanisms.

2.1 Estate Assets

The NHSScotland estate comprises circa 4.4 million sq.m of building floor area encompassing over 1,800 buildings ranging in size from 40 sq.m to 200,000 sq.m. The majority (97%) of this comprises the hospital estate of the 14 NHS Boards and 2 Special NHS Boards (NHS National Waiting Times Centre and the State Hospitals Board). The chart below shows an analysis of hospital estate by hospital type.
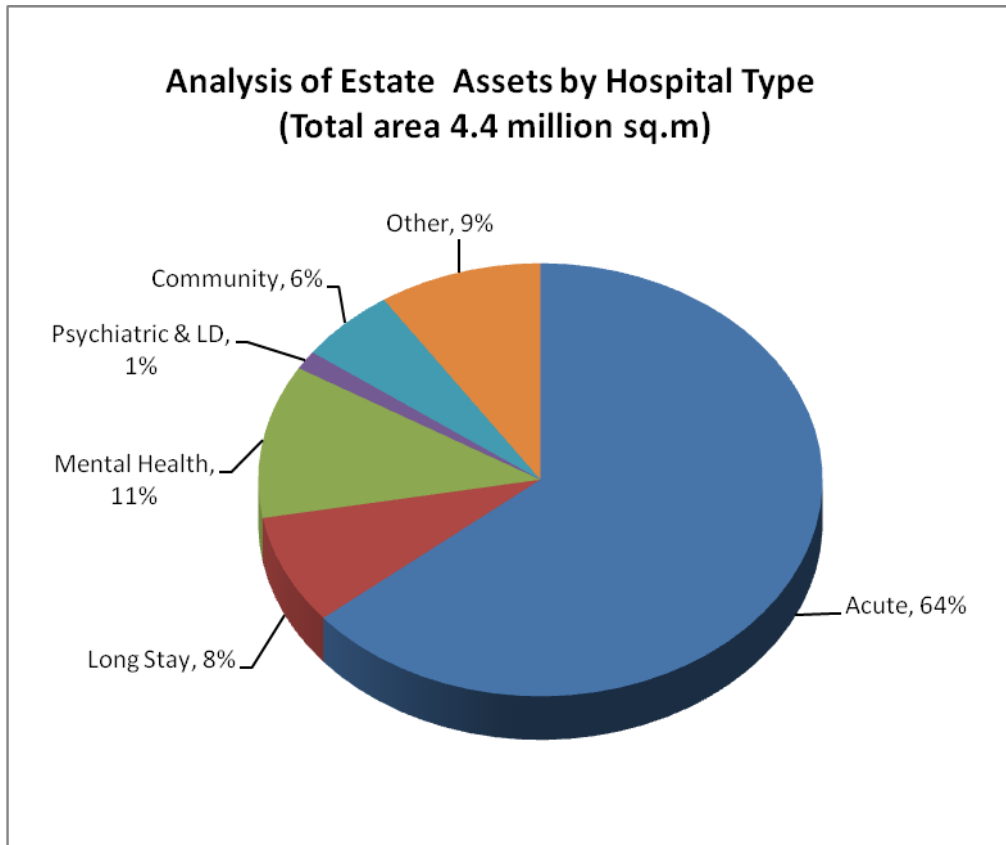
The chart overleaf shows an analysis of the current NHSScotland hospital estate by building type and compares this to 2002.
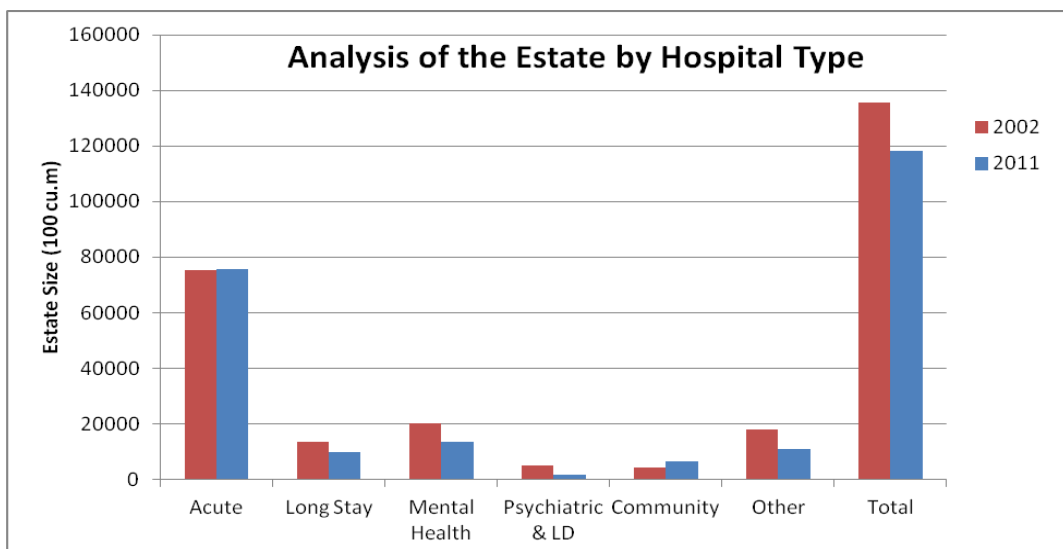

Data Source :ISD Cost Book

It is interesting to note that whilst the overall size of the estate has reduced by 13% since 2002 this reduction has been almost entirely in the non-acute estate with virtually no change in the acute hospital estate. The reduction in Long Stay, Mental Health and Psychiatric and Learning Disability Hospitals is in line with expectations given the general policy of reducing institutional care for these specialities. Furthermore, significant disposals of long stay sites have been undertaken over the last decade as a result of reduced hospitalisation and inpatient lengths of stay. These reductions in the non-acute hospital estate mean that over the last decade the acute hospital estate has increased from 55% to 64% of the overall hospital estate. However, it needs to be recognised that over this 10 year period, the space provision and quality of accommodation for acute care has risen considerably driven by:

- Patient's expectations in terms of privacy and dignity and the general quality of patient environment and care ie increased space provision (bed spacing), single rooms with en-suite wc/bathrooms.

- Increasing use of medical equipment both at the bedside and in diagnostic/treatment rooms and departments.

In addition to the hospital estate, the six Special NHS Boards (excluding the National Waiting Times Centre and the State Hospitals Board) have a combined estate of approximately 145,000 sq.m comprising offices and purpose designed accommodation for specialist services such as blood processing and testing, warehousing and garaging.

2.1.1 Estate Tenure

The majority of the NHSScotland estate is owned but PPP/PFI and leased properties are also significant as shown in the chart that follows.
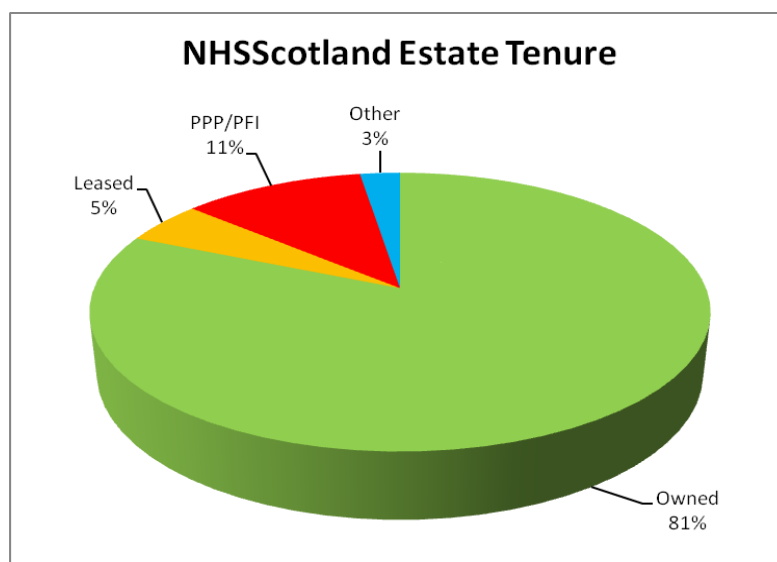
Nearly all of the office accommodation occupied by the Special NHS Boards is leased.

2.1.2 Estate Age Profile

The chart below shows the age profile of the NHSScotland Estate. It shows that even though there has been substantial capital investment over recent years, 26% of the estate is currently over 50 years old and a further 29% is over 30 years old.

Estate Age Profile

- Over 50 years old 26%
- 30-50 years old 29%
- 10-29 years old 26%
- Up to 10 years old 19%
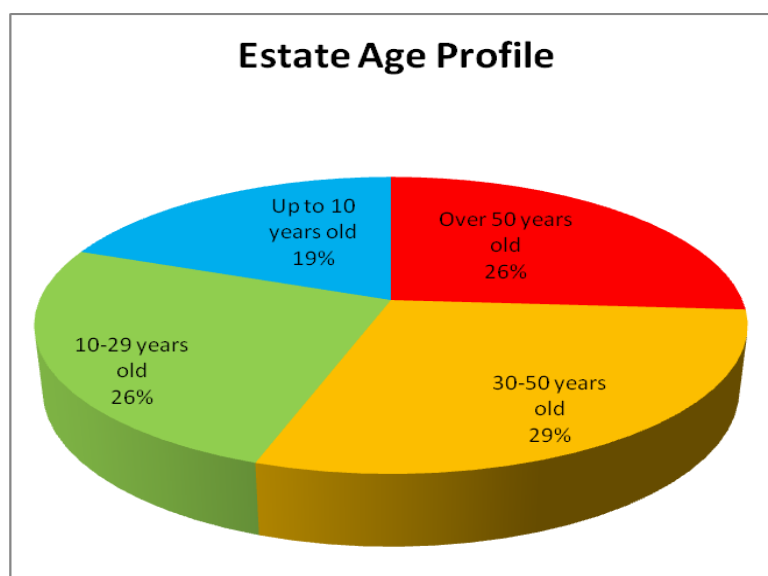
This estate age profile compares favourably with that reported in the 2011 State of the Estate Report as the percentage of properties less than 50 years old has increased from 63% to 73%. This improvement reflects the significant capital investment over recent years and the estate rationalisation undertaken by Boards.

2.1.3 Estate Condition

Approximately 70% of the NHS Boards' estate is in good physical condition (category A or B) with 27% requiring investment to improve its condition (category C) and 3% being unsatisfactory and requiring major investment or replacement (category D).
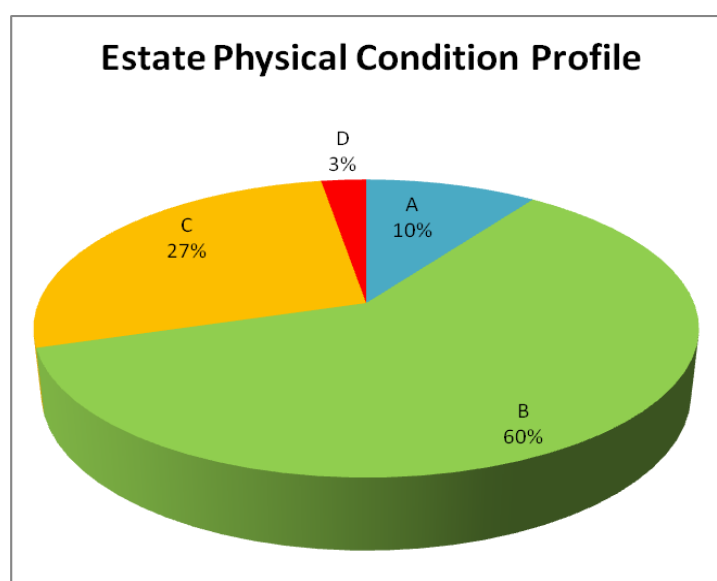
Estate Physical Condition Profile

- D 3%
- A 10%
- B 60%
- C 27%

NHS Boards which have buildings assessed as category D – "unsatisfactory" have indicated that they have plans in place to either dispose or replace these buildings over the next 10 years.

2.1.4 Estate Utilisation

The majority (75%) of the estate is fully utilised although some under utilisation and some overcrowding is evident as shown in the chart below.

Estate Utilisation Profile

Over-crowded 12%
Empty 4%
Under-used 9%
Fully used 75%
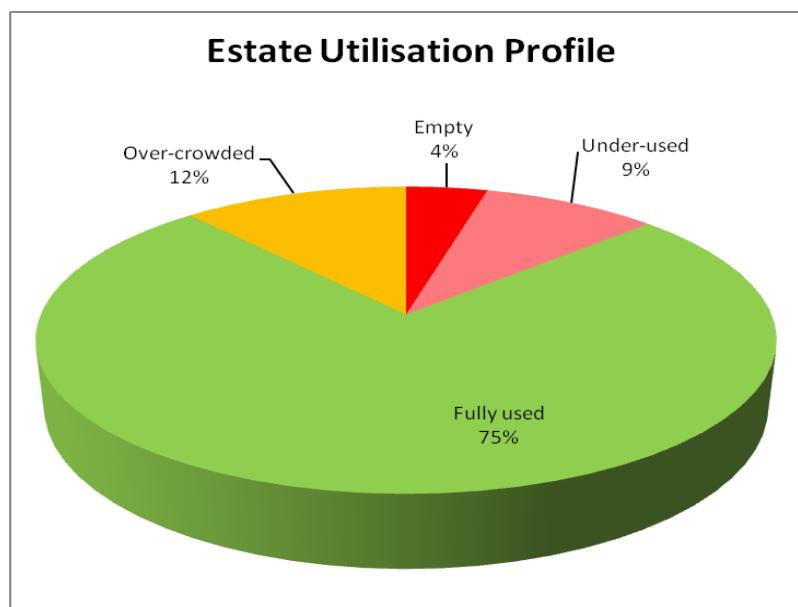
2.1.5 Estate Functional Suitability

The majority of the estate (66%) is functionally suitable for its current use (categories A and B) but 28% (category C) requires investment to improve its functional suitability and 6% (category D) requires major investment or replacement to achieve satisfactory functionality.

Estate Functional Suitability Profile

D 6%
C 28%
A 15%
B 51%
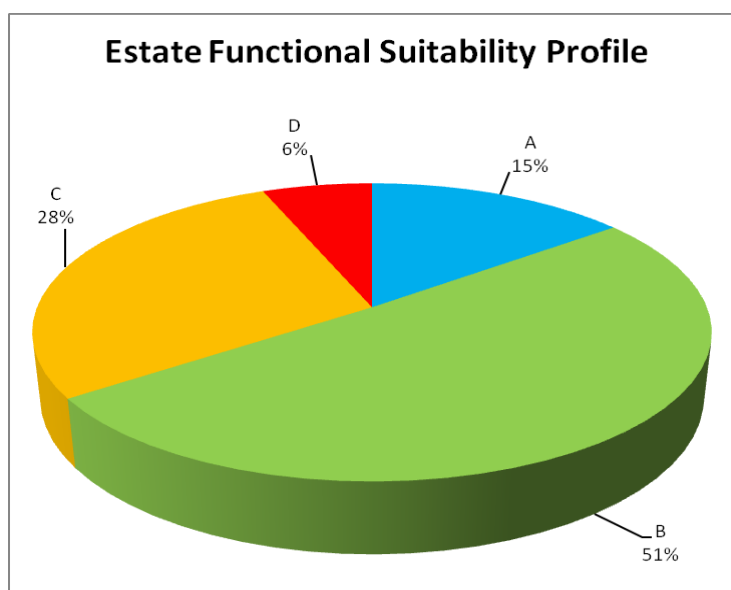
2.1.6 Estate Backlog

NHSScotland's estate backlog maintenance expenditure requirement is the base cost required to bring those parts of the existing estate which are currently not in satisfactory condition, back to Condition B (satisfactory). It is an on-going challenge for the NHS to balance investment between that which is focussed on service improvement and development,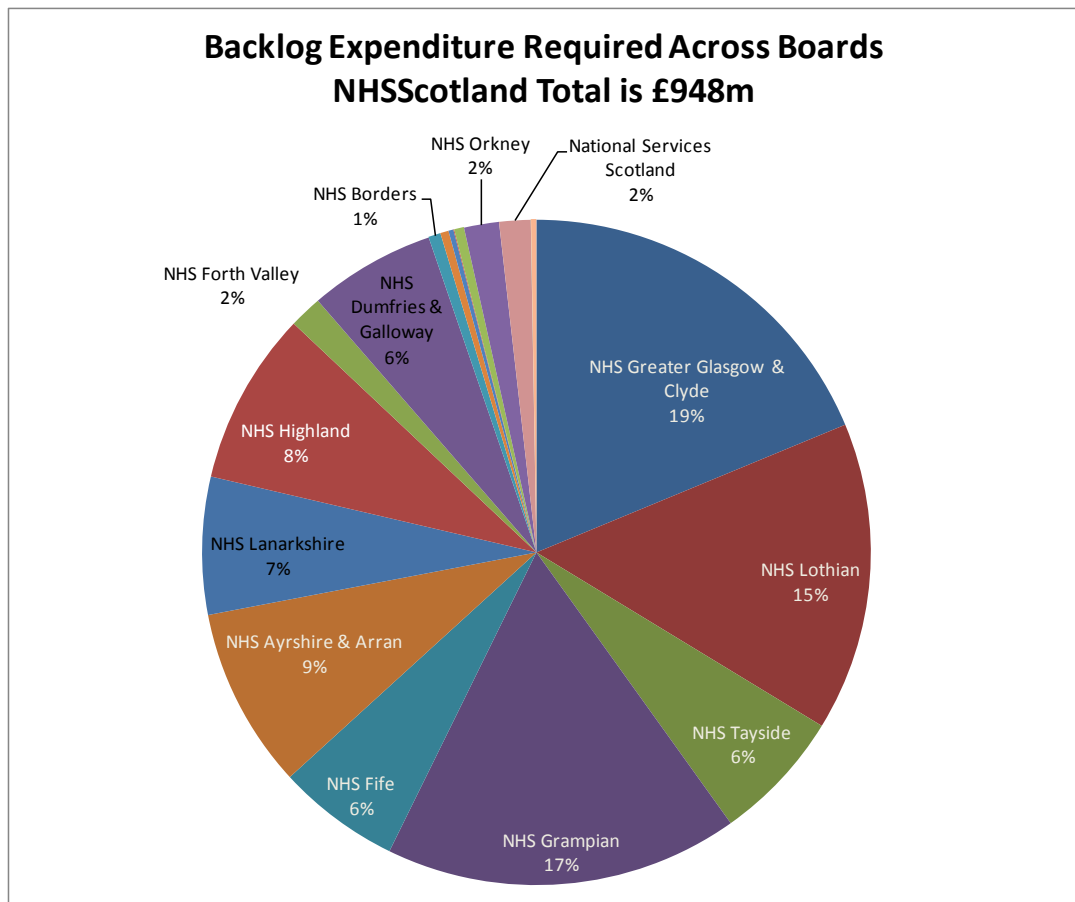 and that which is necessary to maintain buildings in a good condition and ensure that they are safe, reliable and fit for purpose.

An analysis of the backlog expenditure requirement across NHS Boards is shown in the chart that follows and identifies a base backlog maintenance expenditure requirement of £948 million, which is a £62 million reduction since 2011.

**Backlog Expenditure Required Across Boards
NHSScotland Total is £948m**

Note: the above chart includes all 22 NHS Boards and Special NHS Boards but those whose backlog is below 1% have not been separately identified for clarity of presentation reasons only.

The total backlog in the estate has been risk assessed and the results of this are shown in the chart that follows.

Backlog Maintenance Risk Profile
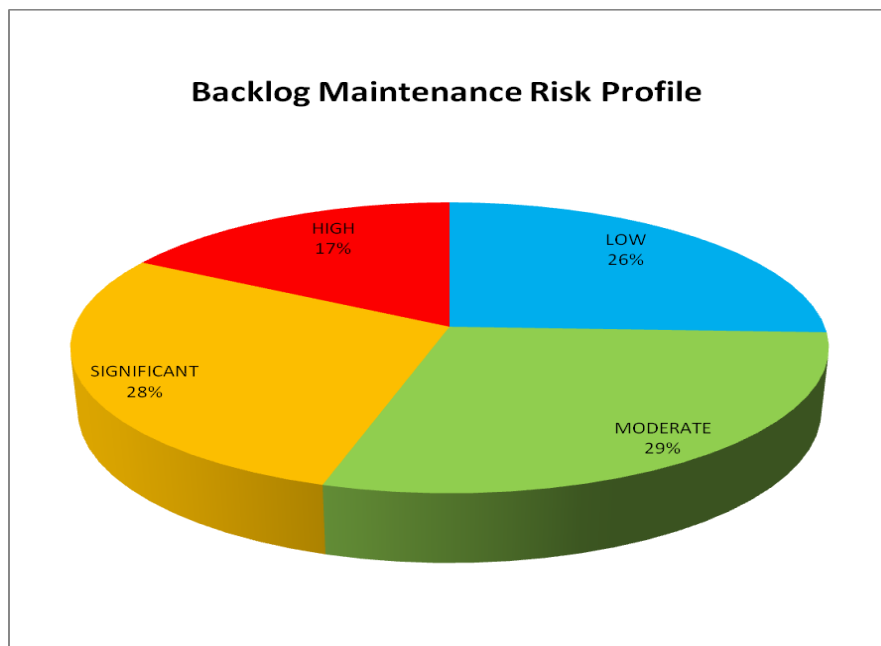
A significant amount of this backlog cost (£175 million) is in buildings which NHS Boards are planning to dispose of in the next ten years. It should also be recognised that around 20% of the current backlog maintenance expenditure requirement is in buildings which are classified as "non-clinical" and will have little impact on the patient's healthcare experience.

Although backlog is identified as expenditure requirement, in practice is likely to be addressed by a combination of:

- Estate rationalisation and disposal of older properties avoiding the need for expenditure on backlog

- Replacing older properties with new facilities and avoiding the need for expenditure on backlog

- Incorporating backlog works within major modernisation and refurbishment projects

- Undertaking specific projects to target the high and significant backlog

- Incorporating backlog work within operational repair and cyclical maintenance

Therefore, whilst the base backlog expenditure requirement is useful for monitoring "year on year" change in backlog it does necessarily represent cash requirement in terms of capital or revenue since it can be addressed through the different "non cash" approaches shown above. Section 5 of this report, Future Investment Requirements, describes how Boards are proposing to address backlog in the future.

Annex B of this report provides further information on the detailed analysis of estate condition and performance (including backlog) which has been undertaken to provide the information in this section of the report.

2.2   Vehicle Assets

NHSScotland's vehicle assets comprise approximately 11,000 different vehicles.   An analysis of the vehicle assets by type is shown in the chart that follows.
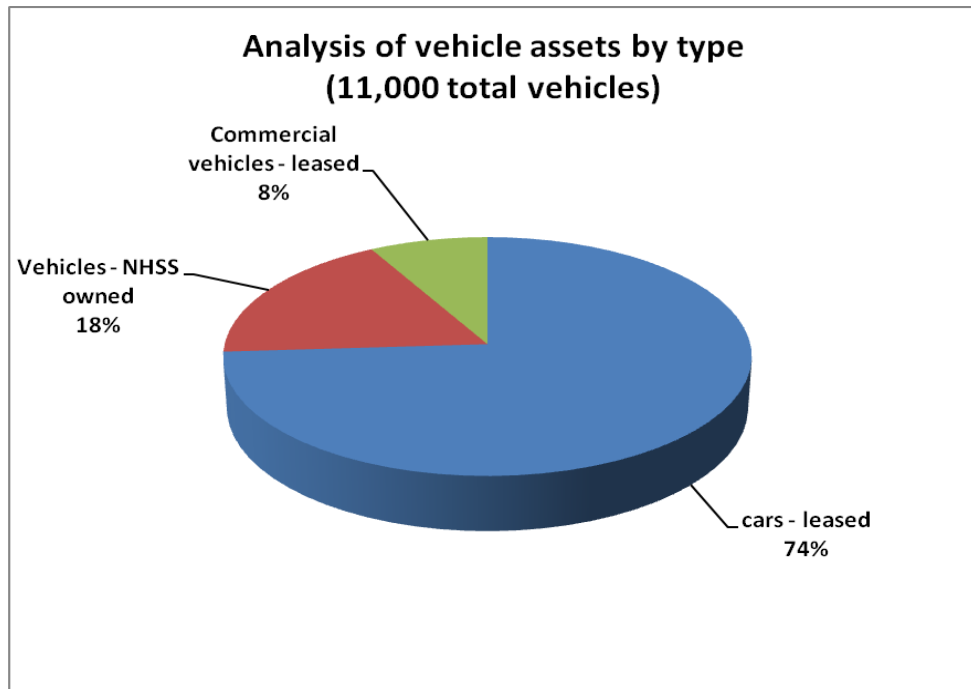
The distribution of these vehicle assets across the Boards is shown in the chart that follows.
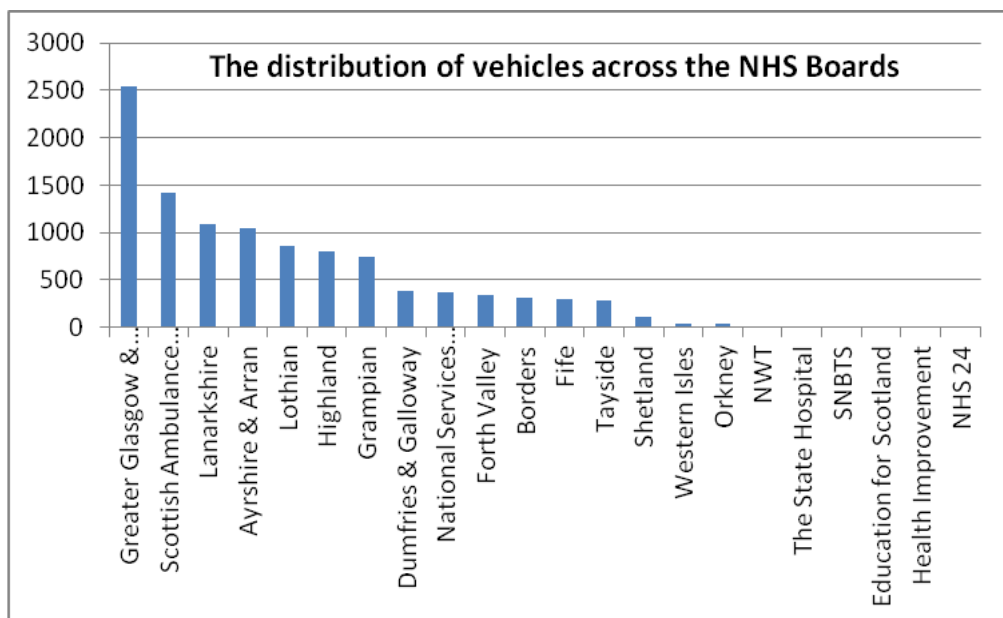
The vehicle age profile is shown below and shows that around a third of the vehicles are less than two years old but 26% are over 5 years old.

Vehicle Age Profile

- Less than 2 years 33%
- 2 to 5 years 41%
- > 5 Years 26%
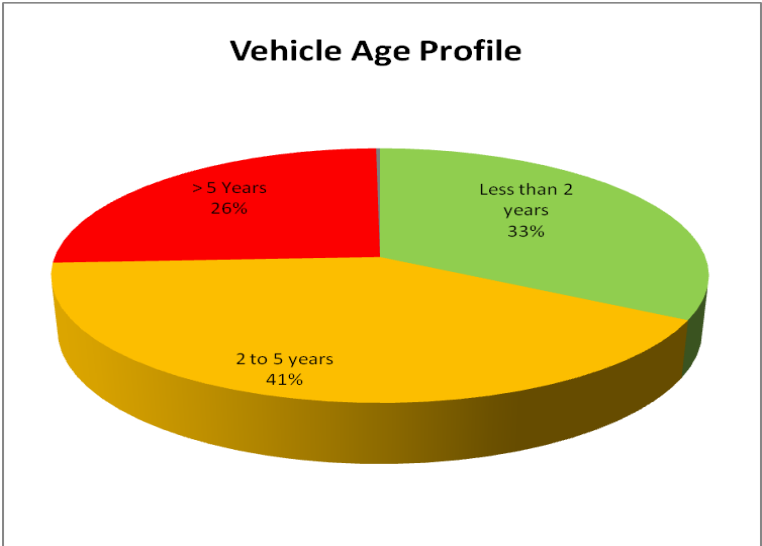
2.3 Medical Equipment Assets

NHSScotland's medical equipment assets comprise a large number of individual items including numerous small items. For this year's report the focus has been on high value equipment. However, it is recognised that the numerous small items of equipment are essential for the delivery of service and further work is needed to identify investment requirements and performance measures for these items.

There are 525 individual items of medical equipment with a replacement value of over £150,000. The chart below shows an analysis of these high value assets by equipment type.

Analysis of Medical Equipment Assets by Type (525 items over £150k in value).

- Micro-scopes 1%
- Radio-therapy 4%
- Lab Analyzers 2%
- Other 3%
- Mammo 3%
- Nuclear Med. 4%
- Other 30%
- MRI 4%
- CT 5%
- Interventional 5%
- Fluoro 9%
- General X-ray 30%
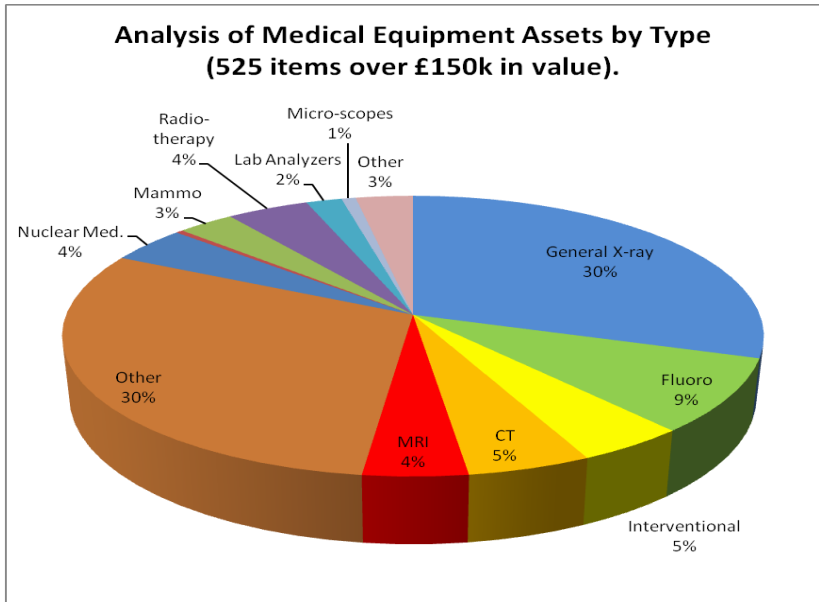
Excludes 6 Special NHS Boards

The distribution of the high value medical equipment assets across the NHS Boards is shown in the chart that follows.

The distribution of high value (>£150K) medical equipment assets across Boards
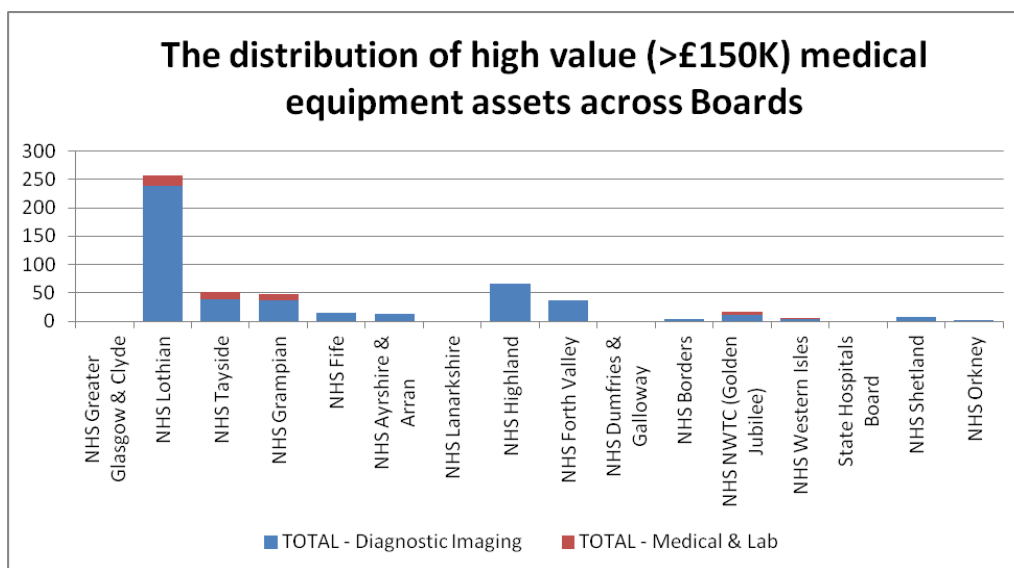
No information available for NHS Greater Glasgow and Clyde

The medical equipment age profile is shown below and shows that 32% is over 7 years old and likely to be approaching the end of its operational life.

Medical Equipment Age Profile
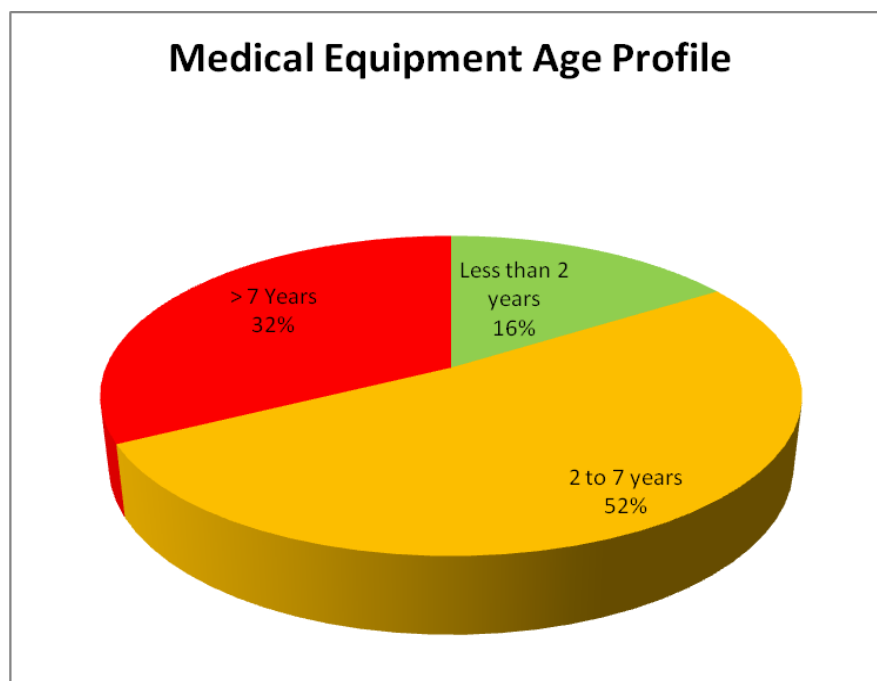
2.4   IM&T Assets

IM&T assets consist of infrastructure (cabling networks, servers etc.) and desktop and mobile equipment. There are approximately 41,000 separate infrastructure items and 97,000 individual items of equipment (desktop and mobile devices). The following chart provides an analysis by equipment/system type.
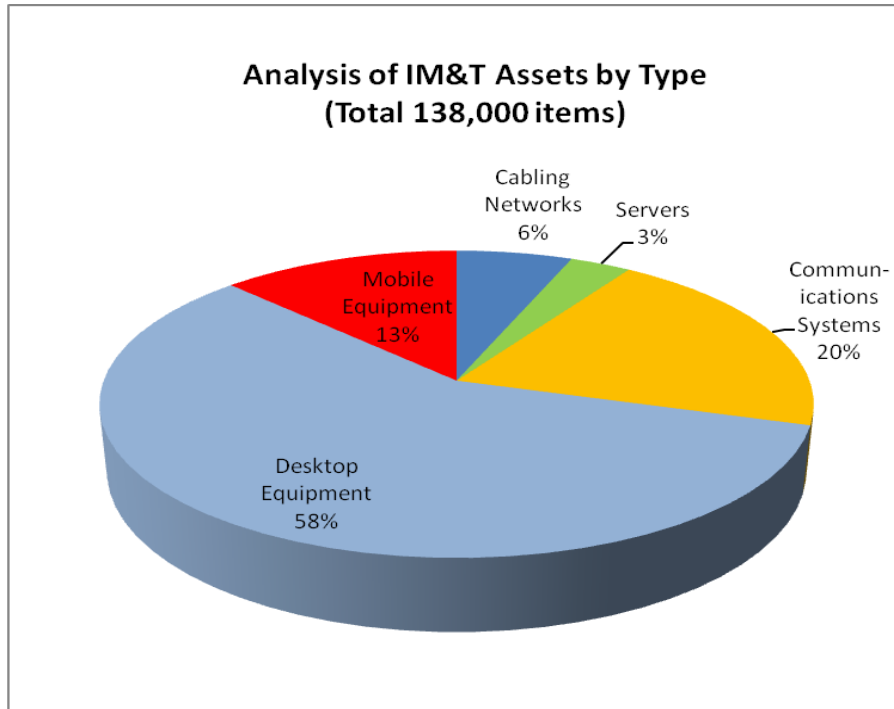
Excludes 6 Special NHS Boards

The distribution of these IM&T assets across the Boards is shown in the chart below.
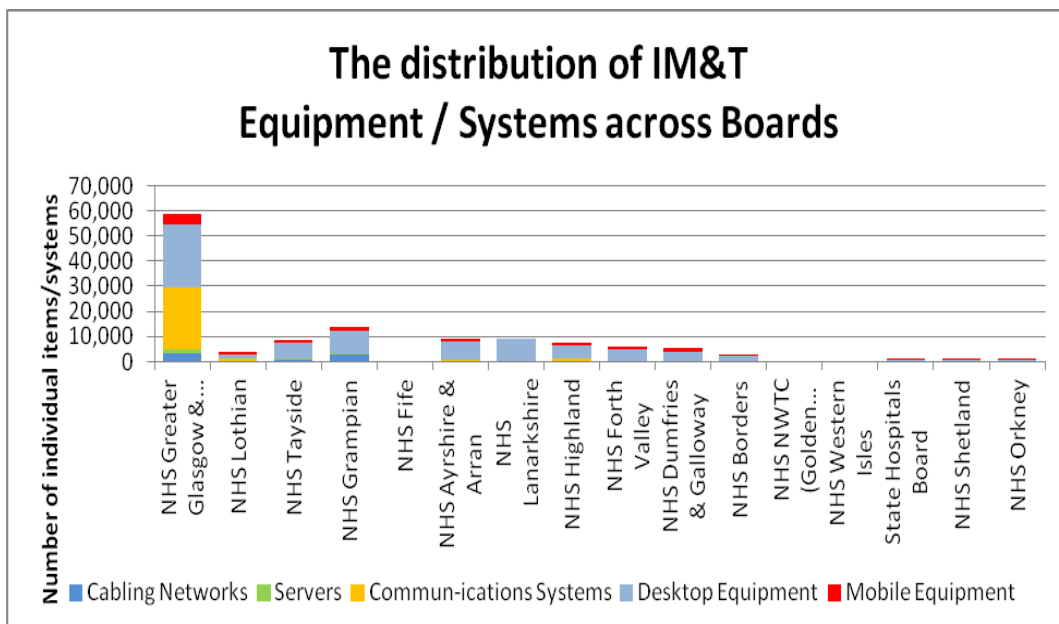
The age profiles for the IM&T equipment and infrastructure are shown separately   in the charts below.

IM&T Equipment Age Profile

- Age unknown 2%
- > 5 Years 22%
- Less than 2 years 20%
- 2 to 5 years 56%

3.0 The Annual Cost of Assets and Facilities Services

The revenue and lifecycle costs associated with asset ownership and use represent a considerable burden on NHSScotland budgets. This section of the report provides a summary of the annual cost of asset ownership and associated facilities management services.

3.1 Property Assets and Facilities Services - Annual Costs

There are significant annual revenue costs that are directly associated with property asset ownership including:

- Property Maintenance (regular day to day maintenance - excluding capital expenditure on upgrading/refurbishment and backlog works)
- Energy
- PFI Facilities Management Costs (primarily Hard FM)
- Rent and Rates
- Cleaning

There are also a range of facilities management services costs that are closely associated with property asset ownership including:

- Catering
- Portering
- Laundry and linen
- Waste disposal

The table below provides an analysis of these costs for the Hospital Sector of NHSScotland (250 hospitals) in 2010/11.

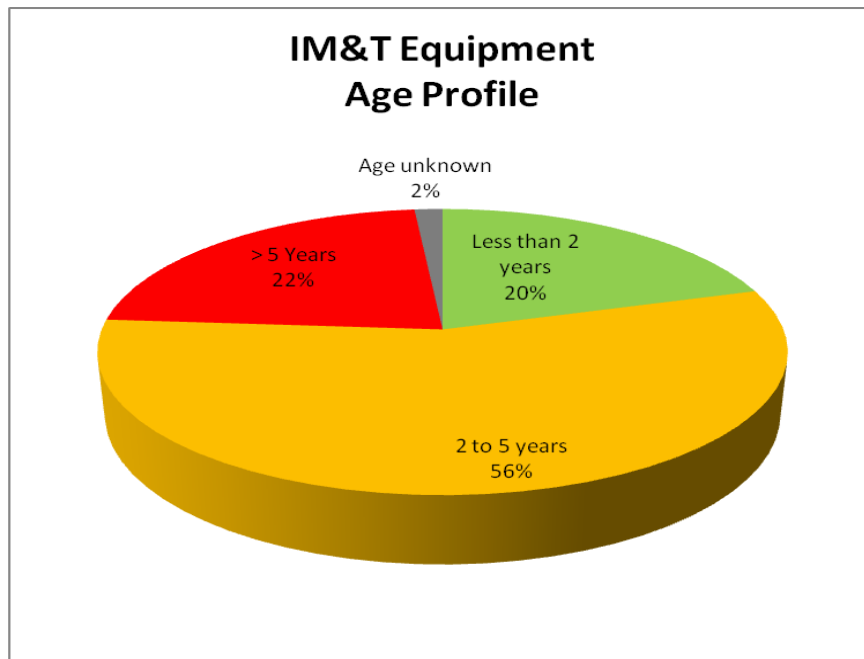|	Annual Property Asset and Facilities Services Costs	
	Expenditure £ 2010/11	Percentage of Total
Property Maintenance (capital and revenue costs)	113,949,249	18%
Cleaning	117,128,872	18%
PFI Facilities Management Costs	101,674,478	16%
Catering	80,866,039	13%
Energy	72,311,800	11%
Rent and Rates	60,303,082	9%
Portering	47,285,685	7%
Laundry and linen	34,164,405	5%
Waste Disposal	10,022,261	2%
Total	**637,705,871**	**100%**

Notes: 1) Excludes capital charges and depreciation on property asset
2) Excludes costs associated with Community and Family Health Services
3) Energy costs exclude costs associated with environmental taxes and levies e.g. EU ETS Payments

The table below shows the distribution of these costs across Boards and clearly demonstrates the differences in the size of Boards.

Board	Annual Property Ownership and Facilities Services Expenditure £	Board total as % of overall NHSScotland total expenditure on Property Asset and Facilities Services
NHS Greater Glasgow	173,062,909	27%
NHS Lothian	113,731,540	18%
NHS Lanarkshire	62,635,015	10%
NHS Grampian	52,158,776	8%
NHS Tayside	51,833,210	8%
NHS Ayrshire and Arran	41,036,177	6%
NHS Highland	32,387,108	5%
NHS Forth Valley	30,469,941	5%
NHS Fife	29,369,235	5%
NHS Dumfries and Galloway	15,665,212	2%
NHS Borders	11,618,164	2%
Golden Jubilee	8,309,824	1%
State Hospital	5,017,206	1%
NHS Western Isles	4,715,299	1%
NHS Shetland	3,434,590	1%
NHS Orkney	2,261,665	0.4%
Total:	637,705,871	100%

Interestingly, further analysis of these asset ownership and facilities services costs shows that, irrespective of the Board's size and other unique features, on average they represent around 11% of each Board's total hospital sector operating costs.

3.2 Property Assets – Lifecycle and Backlog Maintenance Costs

In addition to the regular day to day maintenance costs included in the annual property maintenance figures shown above, property assets require regular expenditure on lifecycle replacement of building and engineering elements of the estate. Historically, NHSScotland has invested too little on these lifecycle replacements, hence the build up of a significant backlog maintenance expenditure requirement (currently £948 million). However, over recent years Boards have had a particular focus on reducing backlog through targeted expenditure on high and significant risk backlog and rationalisation of the estate. This has resulted in a £62 million reduction in the backlog expenditure requirement since 2011.

In addition, NHSScotland's substantial capital investment programme over recent years has reduced the backlog expenditure requirement through new-build projects which replace old buildings and refurbishment schemes which incorporate backlog within the works.

Estimates of the future expenditure required on backlog maintenance and replacement of the estate are provided later in this report (Section 5: Future Asset Investment Requirements).

3.3 Vehicles – Annual Costs

NHSScotland's estimated annual expenditure on its vehicles assets is shown in the table below.

Annual Capital and Revenue Expenditure on Vehicle Assets		
Description	£	% of Total
Leasing costs - Cars	£20,000,000	36%
Fuel	£18,000,000	32%
Maintenance - owned vehicles	£ 8,000,000	14%
Insurance (including brokerage and accidental damage)	£ 7,000,000	13%
Leasing costs - Commercial vehicles	£ 3,000,000	5%
Total	£56,000,000	100%

Note: excludes capital charges and depreciation on owned fleet.

In addition to the above, many NHSScotland staff use their private vehicles for official business and claim fuel and running costs through expenses claims.

3.4 Medical Equipment – Annual Costs

The annual expenditure (capital and revenue) on medical equipment by Boards is shown in the table below.

Annual Capital and Revenue Expenditure £ on Medical Equipment Assets				
Description	High Value Equipment (>£150K)	Low Value Equipment	Total £	% of Total
Maintenance and servicing	5,639,329	15,178,286	20,817,615	33%
Leasing and revenue expenditure on equipment	3,996,802	2,870,364	6,867,166	11%
Capital expenditure in year on equipment replacement and acquisition	8,028,685	26,876,758	34,905,443	56%
Total	17,664,816	44,925,408	62,590,224	100%

Note: excludes capital charges and depreciation on owned equipment

As with property assets, there is a need to invest in the lifecycle replacement of medical equipment, particularly as equipment life is relatively short (often less than 15 years). Technical obsolescence can reduce the operational life of equipment even further because new technology can often offer improved patient care, reduced radiation doses and reduce costs. However, equipment vendors do now offer technology refresh pathways at the time of initial purchase of the equipment. Annex J provides more detail on the national medical imaging programme.

3.5   IM&T – Annual Costs

The annual expenditure on IM&T equipment is shown in the table below.

Annual Expenditure (Capital and Revenue) £ on IM&T Assets				
Description	Infrastructure - cabling networks, servers, communications systems	Equipment - Desktop and mobile	Total £	% of Total
Maintenance and servicing	12,278,295	8,947,000	21,225,295	54%
Leasing and revenue expenditure in year	1,865,966	1,258,375	3,124,341	8%
Capital expenditure in year	12,941,632	1,992,000	14,933,632	38%
Total	27,085,893	12,197,375	39,283,268	100%

The above costs exclude any backlog maintenance expenditure requirement in respect IM&T infrastructure such as cabling and servers.

3.6   Summary of Total Annual Asset and Facilities Costs

The chart below provides an analysis of the combined total asset and facilities annual expenditure.
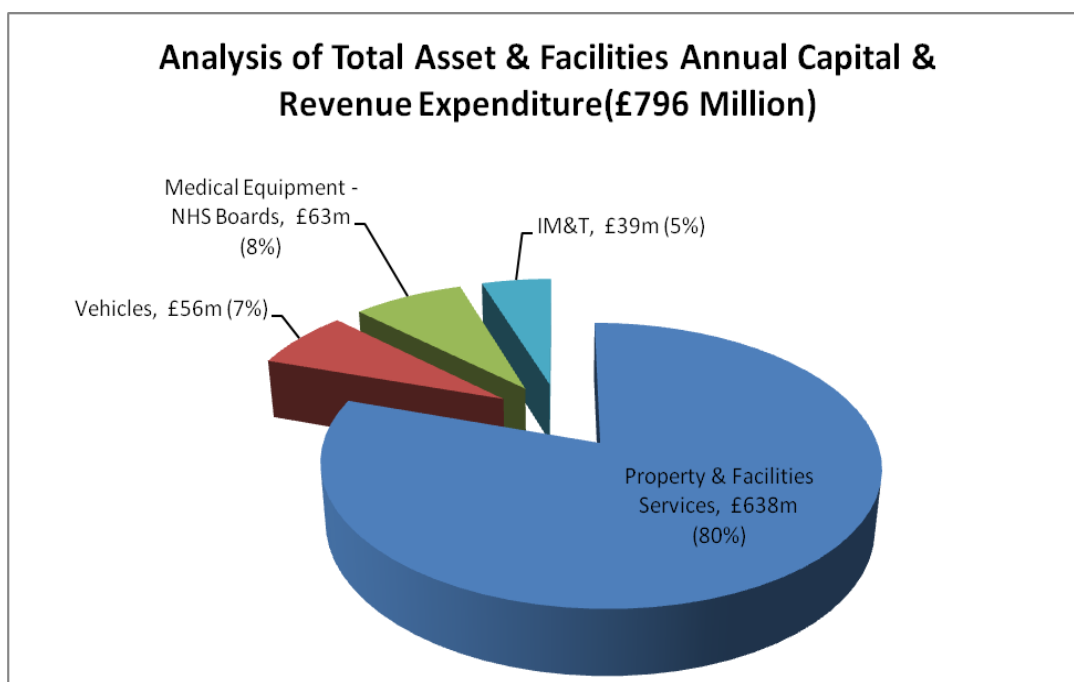
Notes: 1) Excludes capital charges and depreciation costs associated with asset ownership

2) Excludes any annual expenditure on lifecycle replacement and backlog maintenance

4.0 Performance

This section of the report reviews asset and facilities services performance across NHSScotland with the aim of gaining an insight into where opportunities lie for improving performance.

4.1 The National Asset and Facilities Performance Framework

The National Asset and Facilities Performance Framework provides an essential link between asset and facilities services performance and patient needs as defined in the NHSScotland Quality Strategy's three Quality Ambitions. Since introducing the Performance Framework in the 2011 State of the NHSScotland Estate Report further work has been undertaken to align the Framework with the outcome measures for the Quality Strategy developed by the NHSScotland Quality Measures Technical Group. The diagram below shows the relationship between the Quality Strategy and the National Asset and Facilities Services Performance Framework.
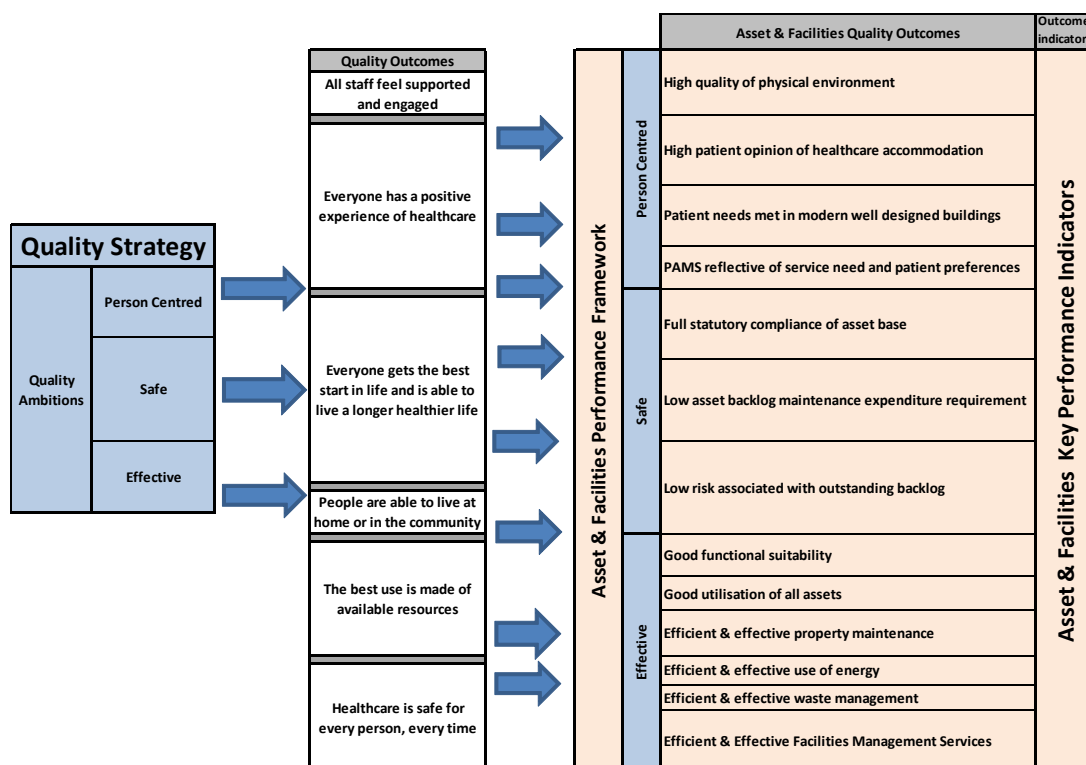
The Framework provides targets for improvement in asset and facilities services performance by 2020 and uses 23 key performance indicators to monitor year on year progress towards the achievement of these targets.

The National Asset and Facilities Performance Framework for 2012 is shown overleaf.

A separate Performance Framework has been now been developed for office accommodation and data to populate this will be collected and included in the 2013 State of the NHSScotland Assets and Facilities Report.

NHSScotland National Asset & Facilities Performance Framework

Quality Ambition	Performance Measure	KPI No	Key Performance Indicator	2020 Performance Target	Current 2012 Performance
Patient Centred	Quality of physical environment	1	Percentage of properties categorised as either A or B for Physical Condition facet of estate appraisals	90%	71%
		2	Percentage of properties categorised as either A or B for Quality facet of estate appraisals	90%	61%
	Patient opinion of healthcare accommodation	3	Positive response to Patient Questionnaire on patient rating of hospital environment	95%	83%
	Patient needs are accommodated in modern, well designed facilities	4	Percentage of properties less than 50 years old	70%	73%
	PAMS reflective of service needs and patient preferences	5	PAMS Quality Checklist Overall Score (max score 100)	95	60
Safe	Statutory compliance status of property asset base	6	Overall percentage compliance score from SCART	95%	68%
	Backlog maintenance expenditure requirement	7	Cost per square metre for backlog maintenance	£100	£215
	Level of risk associated with outstanding backlog maintenance requirement	8	Significant and high risk backlog maintenance as percentage of total backlog expenditure requirement	10%	45%
Effective & Efficient	Estate Functionally suitability	9	Percentage of properties categorised as either A or B for Functional Suitability facet of estate appraisal	90%	65%
	Estate Utilisation(from Property Appraisals)	10	Percentage of properties categorised as 'Fully Utilised' for space utilisation facet of estate appraisals	90%	75%
	Estate Utilisation (from Cost Book)	11	Building Volume 100 cu.m per Consumer Week (from Cost Book)	0.10	0.11
	Cleaning	12	Cleaning Costs £ per 100 cu.m (from Cost Book)	893	992
	Property maintenance	13	Property maintenance costs £ per 100 cu.m (from Cost Book)	846	965
	PFI - Facilities Management	14	PFI - Facilities Management Costs £ per 100 cu.m (from Cost Book)	775	861
	Energy consumption	15	Energy Costs £ per 100 cu.m (from Cost Book)	551	612
	Rent & rates	16	Rent & Rates Costs £ per 100 cu.m (from Cost Book)	459	511
	Catering	17	Catering Cost £ per consumer week (from Cost Book)	68	77
	Portering	18	Portering Costs £ per consumer week (from Cost Book)	40	45
	Laundry & Linen	19	Laundry & Linen Cost £ per consumer week (from Cost Book)	27	33
	Waste	20	Waste Cost £ per consumer week (from Cost Book)	7	10
	Vehicles	21	To be confirmed	0	0
	Medical Equipment	22	To be confirmed	0	0
	IM&T infrastructure and equipment	23	To be confirmed	0	0

Notes   (1) The "Current Performance 2012" for KPI Nos 12 to 20 inclusive is based on the 2011 Cost Book information (2) KPI No 15 - Energy costs have increased significantly in recent years and are projected to increase further through to 2020. These price increases are beyond the control of Boards, therefore it will be necessary to adjust this KPI each year to take account of energy price rises

4.1.1 Change in Framework KPIs - 2011 to 2012

A key objective of this report is to monitor year on year change in asset and facilities services performance to ensure that NHSScotland is progressing towards achievement of the 2020 targets in the National Asset Performance Framework. The table below shows the performance change between 2011 and 2012.

KPI No	Key Performance Indicator	2011 Performance	Current 2012 Performance	Percentage Change from 2011
	Performance Change 2011 to 2012			
1	Percentage of properties categorised as either A or B for Physical Condition facet of estate appraisals	68%	71%	4%
2	Percentage of properties categorised as either A or B for Quality facet of estate appraisals	69%	61%	-12%
3	Positive response to Patient Questionnaire on patient rating of hospital environment	83%	83%	0%
4	Percentage of properties less than 50 years old	63%	73%	16%
5	PAMS Quality Checklist Overall Score (max score 100)	55	60	10%
6	Overall percentage compliance score from SCART	77%	68%	-12%
7	Cost per square metre for backlog maintenance	£223	£215	4%
8	Significant and high risk backlog maintenance as percentage of total backlog expenditure requirement	54%	45%	16%
9	Percentage of properties categorised as either A or B for Functional Suitability facet of estate appraisal	62%	65%	4%
10	Percentage of properties categorised as 'Fully Utilised' for space utilisation facet of estate appraisals	76%	75%	-1%
11	Building Volume 100 cu.m per Consumer Week (from Cost Book)	0.10	0.11	-8%
12	Cleaning Costs £ per 100 cu.m (from Cost Book)	1029	992	4%
13	Property maintenance costs £ per 100 cu.m (from Cost Book)	1004	965	4%
14	PFI - Facilities Management Costs £ per 100 cu.m (from Cost Book)	807	861	-7%
15	Energy Costs £ per 100 cu.m (from Cost Book)	626	612	2%
16	Rent and Rates Costs £ per 100 cu.m (from Cost Book)	567	511	10%
17	Catering Cost £ per consumer week (from Cost Book)	78	77	1%
18	Portering Costs £ per consumer week (from Cost Book)	42	45	-6%
19	Laundry and Linen Cost £ per consumer week (from Cost Book)	32	33	-3%
20	Waste Cost £ per consumer week (from Cost Book)	8	10	-25%
21	Vehicles - To be confirmed	0	0	0%
22	Medical Equipment - To be confirmed	0	0	0%
23	IM&T - To be confirmed	0	0	0%

1%	Denotes Performance Improvement
-1%	Denotes Performance Deterioration
0%	Denotes no change in performance

Note: KPI No 15 for 2011 has been adjusted to take account of the increase in energy prices over the year which is out of the control of Boards. This adjustment enables year on year comparison of energy consumption rather than energy cost. Annex C of this report proposes additional KPIs which enable energy consumption to be measured rather than energy cost.

4.1.2 Review of Performance Framework KPIs

The table on the previous page shows that performance change between 2011 and 2012 has been mixed with 11 of the KPIs showing improved performance and 8 showing deterioration in performance.

Notwithstanding the continued issues on information quality, the results from the review of changes between 2011 and 2012 on the Performance Framework KPIs raise a number of issues that Boards need to address:

- The improvements in property condition, age and functional suitability appear to be inconsistent with the deterioration in performance in the quality facet KPI (No 2). However, this is likely to be primarily as a result of significant re-appraisal of the condition of property assets, including verification of historical data over the last year. The process of re-appraisal and verification of property information is ongoing and further improvements in the quality and consistency of information are expected as the EAMS system becomes fully operational over the next year.

- The 12% reduction in the overall SCART score (KPI No 6) is most likely due to a change in methodology over the year. Last year's figure was computed centrally whereas this year Board's have produced the scores and therefore, more accurately reflecting local issues.

- Both KPIs relating to estate utilisation (Nos 10 and 11) indicate deterioration in performance. This is concerning since many of the asset ownership and facilities services costs are primarily driven by estate size. Given the continuing trends in clinical practice, particularly less hospitalisation and increasing care at home, the overall size of the estate can be expected to reduce but the information available from the Cost Book does not show evidence of this expected trend. Furthermore, as shown earlier in this report the acute hospital estate has increased in size over the last decade. Boards will need to rigorously examine the current performance in relation to space utilisation since any space that is not fully utilised represents an opportunity to make better use of assets and improve efficiency.

- PFI – Facilities Management (FM) costs (KPI No 14) show an increase between 2011 and 2012 of 7%. However, interrogation of these PFI costs suggest that the information submitted to the Cost Book may not have been collated in a consistent way and further work is needed to be confident that these costs represent only the Facilities Management element of the total PFI unitary charge. Furthermore, it is also evident that the various PFI contracts held by NHS Boards provide different ranges of FM services and therefore, the PFI costs may not be directly comparable. Over the next year Health Facilities Scotland working closely with the Scottish Futures Trust will undertake a

detailed examination of current PPP/PFI contracts and their management. Best practice will be identified and shared. Annex E provides details of the review of PFI contracts.

- Portering and Laundry and Linen costs (KPI Nos 18 and 19) show increased unit costs over the year and by amounts in excess of inflation. A Review of Soft FM Services is currently being undertaken. The review is expected to identify opportunities for improving the efficiency of these services. Annex H provides more detail on the Soft FM Review.

- Waste costs (KPI No 20) appear to have risen sharply (25%). However, this is the first time that Waste has been reported in the Performance Framework and this result has most likely arisen as a result of the terminology and definitions used in the Cost Book no longer reflecting current waste practice. Furthermore, the data in the Cost Book is not consistent with that reported in eMART. Accordingly, recommendations will be made to update the 2012 Cost Book waste parameters in line with the Health Facilities Scotland Waste Management Steering Group report of September 2011. This will result in a common set of waste data reporting parameters and their appropriate descriptors, i.e. standardised definitions and calculation methods to allow comparable data on waste to be collected and presented in a consistent way. It should also be recognised that there has been some price and demand volatility in relation to waste in recent years which is outside of the control of Boards. Annex D provides a detailed commentary on a number of topical issues relating to Waste.

- Both the Cost Book and eMART show reductions in year on year energy consumption. However, energy prices are expected to continue to rise and are beyond the control of Boards. Therefore, there is a need for Boards to continue the good work that has resulted in the year on year reductions in energy consumption and to continue to rigorously pursue further reductions in order to mitigate the impact on NHSScotland of a potential doubling of future energy cost over the period to 2020. Annex C of this report provides a detailed review of NHSScotland's energy performance .

- Improved performance on physical condition (KPI No 1), building age (KPI No 4), functional suitability (KPI No 9) and backlog (KPI Nos 7 and 8) are evidence of the Board's focus over the last year on reducing backlog, re-appraisal and rationalisation of the estate. Case Studies Nos 5, 6 and 7 provide good examples of this approach. The review of the PAMS submitted by Boards this year show a continuation of this emphasis on rationalisation of the estate and reducing backlog which should further improve these KPIs.

4.1.3 Performance variation across Boards and hospital sites

Whilst the Performance Framework provides a useful national "picture" of performance on a range of asset and facilities management services, it does potentially mask variation in performance across Boards. Further analysis of the Performance Framework KPIs at Board level reveals very significant variation across Boards as shown in the Chart below.
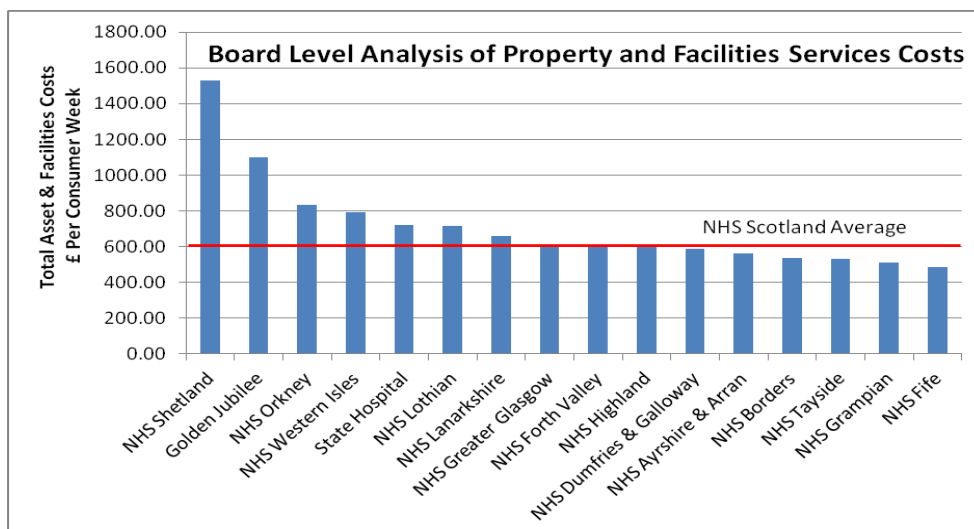
Note: The "Total Asset and Facilities Costs" shown in this chart relates to the £637 million expenditure on property and facilities services described in Section 3.1 of this report

Similarly, Board level analysis potentially masks variation in performance across individual hospital sites within Boards. This is demonstrated in the chart below which shows that whilst the Board level performance may be similar to the national average, there is considerable variation across the hospitals within the Board.
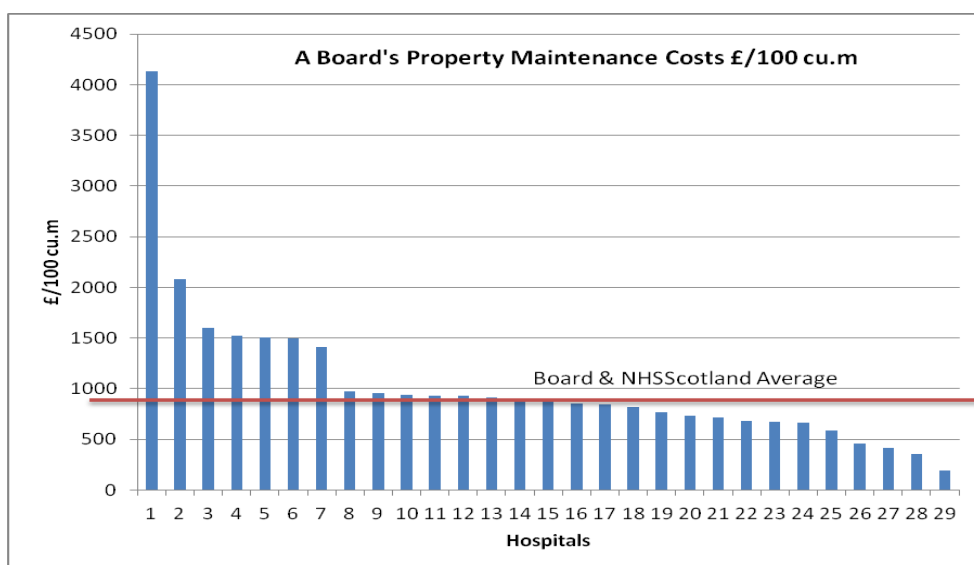
This variation in performance at both Board and hospital level is evident in all the Framework KPIs and is where the potential lies for improving efficiency once geography, demographics and local circumstances are taken into account. This potential is examined in further detail in Section 6 of this Report.

4.2 Property and Asset Management Strategies (PAMS)

The Performance Framework includes an overall score for PAMS quality (KPI No 5). This results from a detailed review of each Board's PAMS. It is important that Boards are able to describe, in a consistent way, how well the totality of their existing property and assets is performing against ongoing policy objectives both now and in the longer term. A Property and Asset Management Strategy (PAMS) is the key strategic document for demonstrating how each NHS Board is performing in meeting this requirement.

The Scottish Government's "Policy for Property and Asset Management in NHSScotland" requires all NHSScotland bodies to have a Property and Asset Management Strategy which is reviewed and approved annually by its Board. Health Facilities Scotland has provided comprehensive guidance and training to support Boards in developing their PAMS.

One of the key aims for a PAMS is that as it is implemented it will fuel continuous improvement in the condition and performance of the asset base in supporting the delivery of healthcare services.   The State of NHSScotland's Assets and Facilities Report provides an opportunity to review and compare each Board's PAMS.

4.2.1 Review of PAMS submitted in 2012.

The PAMS that were submitted in March 2012 show that the main focus over the next few years is to complete the current major investments plans and then to refocus on reducing backlog and improving the utilisation of existing property assets. This should result in substantial improvement in overall property performance of the estate. Generally, the PAMS show that Boards are increasingly linking their PAMS with service strategies – an essential requirement if investment in assets is to support the delivery of the Scottish Government's vision for the future.

A review of the quality and comprehensiveness of each submitted PAMS was carried out using the PAMS checklist introduced in the 2011 State of the Estate Report and the results from this are shown overleaf. This checklist is based on the Scottish Government's "Policy for Property and Asset Management" and the Health Facilities Scotland guidance for developing a PAMS. Whilst there has been improvement in a number of PAMS, there remains potential for further improvement. Currently, there is considerable variation in PAMS quality across Boards. The Scottish Government and Health Facilities Scotland have recently provided extensive feedback to Boards on their 2012 PAMS through individual Board reports and interviews. This feedback was aimed at supporting Boards to improve their PAMS for next year.

PAMS Quality Assessment Summary Score Sheet 2012

	Where are we now?	Where do we want to be?	How do we get there?	Implementation	Overall
NHS Ayrshire & Arran	Blue	Green	Green	Green	Green
NHS Borders	Green	Yellow	Green	Yellow	Green
NHS Dumfries & Galloway	Blue	Orange	Orange	Yellow	Yellow
NHS Fife	Green	Green	Green	Yellow	Green
NHS Forth Valley	Green	Yellow	Green	Green	Green
NHS Greater Glasgow & Clyde	Green	Yellow	Yellow	Yellow	Green
NHS Grampian	Blue	Green	Yellow	Yellow	Green
NHS Highland	Green	Yellow	Yellow	Yellow	Green
NHS Lanarkshire	Blue	Green	Green	Green	Green
NHS Lothian	Green	Yellow	Yellow	Yellow	Green
NHS Orkney	Orange	Green	Orange	Orange	Yellow
NHS Shetland	Green	Green	Yellow	Green	Green
NHS Tayside	Blue	Orange	Yellow	Green	Yellow
NHS Western Isles	Yellow	Yellow	Yellow	Yellow	Yellow
NHS NWTC	Red	Red	Red	Red	Red
State Hospital	Green	Green	Green	Yellow	Green
NHS Education for Scotland	Red	Red	Red	Red	Red
NHS Health Scotland	Green	Blue	Green	Green	Green
Healthcare Improvement Scotland	Orange	Yellow	Yellow	Yellow	Yellow
NHS 24	Green	Yellow	Yellow	Yellow	Green
National Services Scotland	Blue	Blue	Green	Blue	Blue
Scottish Ambulance Service	Yellow	Yellow	Yellow	Yellow	Yellow

Score Key

- Blue = Comprehensive information / PAMS provided which fully supports the Board's strategic vision
- Green = Good level of information / PAMS provided which supports the Board's strategic vision
- Yellow = Limited information / evidence provided but it does generally support the Board's strategic vision
- Orange = Provided information and/or overall PAMS lacks evidence of links with Board's strategic vision
- Grey = Limited information / evidence provided and lacks cohesion with Board's strategic vision
- Red = No information / PAMS submitted

Notes: 1) NES will update their PAMS once they have finalised their accommodation strategy for Glasgow and Edinburgh.
2) Although the NWTC submitted its PAMS in September 2012, scoring will be carried out next year on the content of the updated PAMS for 2013

5.0 Future asset investment requirements

Capital investment in assets in NHSScotland has more than trebled in recent years from £132.5 million in 2003/4 to £493.6 million in 2011/12. This investment programme has also been supplemented by the use of revenue finance for large infrastructure projects where, in the same period, over £500m of additional investment has been made. Much of this investment has focussed on procuring new, modern facilities to support the delivery of 21st Century Healthcare. However, the analysis of the current condition and performance of assets shown in this report indicates that a focus for future investment in assets is needed to:

- Maximise benefits and improve the experience of healthcare for patients

- Improve performance in terms of effectiveness and efficiency

- Mitigate risks to ensure that operational assets are safe and reliable in use.

Given the pressure on capital and revenue resources in the short to medium term, future investment in assets will need to focus on:

- Eradicating high and significant risk backlog

- Modernising and updating assets to ensure that they are "fit for purpose" and functionally suitable for the emerging new healthcare delivery models

- Investment in lifecycle replacement/maintenance to extend asset lives and reduce the build up of future backlog

- Improving performance through invest to save projects that embrace new technology, innovative service models and partnership working.

5.1 Investment to reduce estate backlog

Whilst there has been a significant reduction (£62 million) in NHSScotland's base backlog maintenance expenditure requirement since 2011 the level of outstanding backlog of £948 million remains high. However, as described earlier in this report, backlog is most likely to be addressed over the next 5 years through a combination of:

- Estate rationalisation and disposal of older properties avoiding the need for expenditure on backlog

- Replacing older properties with new facilities and avoiding the need for expenditure on backlog

- Incorporating backlog works within major modernisation and refurbishment projects

- Undertaking specific projects to target the high and significant backlog

- Incorporating backlog work within operational repair and cyclical maintenance

Whilst it is essential that high and significant risk backlog is addressed as a matter of priority, it is not practical or affordable to address all backlog over the short term (5 years).

Boards have estimated (based on their PAMS) that over the next 5 years backlog will be addressed through:

- Estate rationalisation and disposal of older properties avoiding the need for expenditure on backlog of £175 million

- Estate replacement through capital and revenue funded schemes together with other refurbishment/upgrading schemes which targeted expenditure on high and significant backlog will reduce the backlog by £256 over the next 5 years. This includes the impact of some of the current major capital schemes being completed over this period (South Glasgow) and expenditure targeted on backlog of circa £50 million per annum.

The chart below shows the impact of these approaches to addressing backlog.
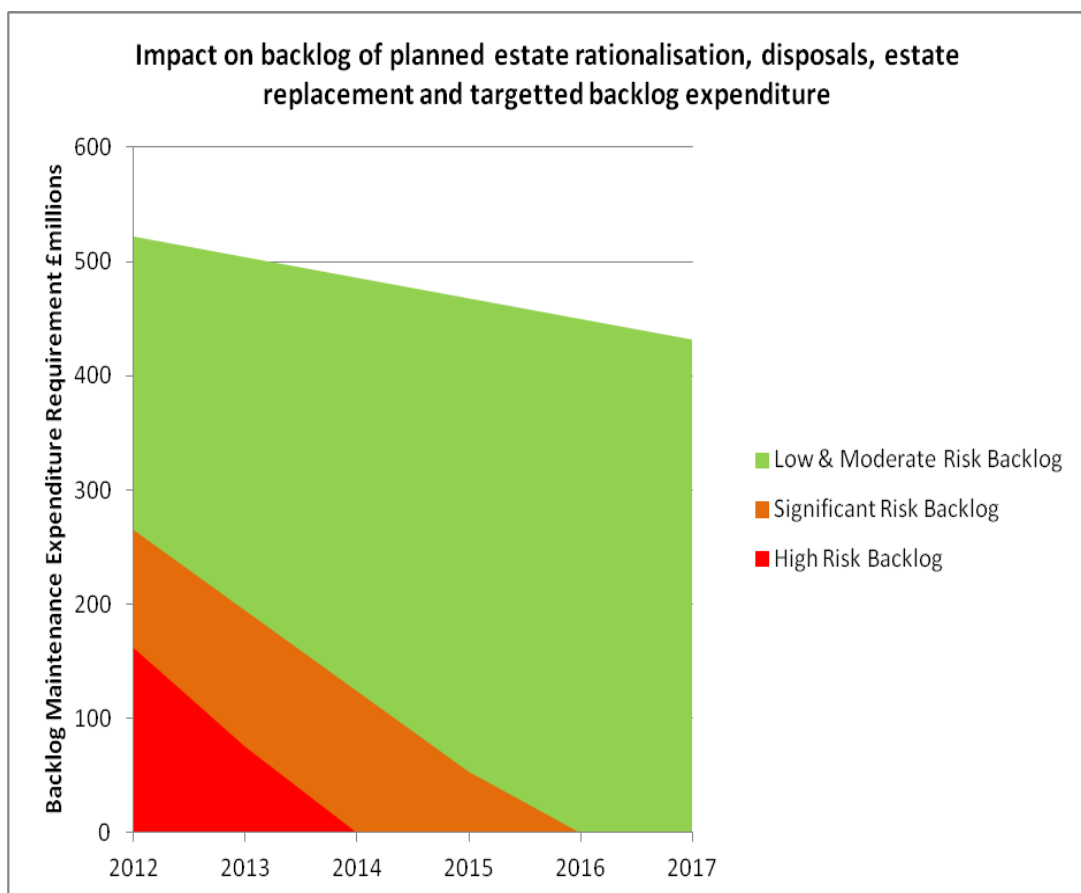
The chart shows that the Board's plans will enable high risk backlog to be eradicated within 2 years and significant risk backlog within 4 years. It will also reduce low and moderate risk backlog by £90 million over the 5 year period. The remaining low and

moderate risk backlog will continue to be addressed beyond the current 5 year planning period through a similar approach.

5.2   Investment required to replace estate assets

There will always be a need to replace buildings which have reached the end of their operational life and are functionally unsuitable for the delivery of modern healthcare services. Whilst major refurbishment is always considered as an option for these buildings, it is often uneconomic to bring them up to modern standards and replacement is the only viable option.

Approximately 26% of the existing estate is already over 50 years old and a further 29% is already between 30 and 50 years old (and will therefore, be over 50 years within the next 20 years). Therefore, a possible approach to identifying the future replacement investment requirement is to assume that around 50% of the existing estate will need to be replaced over the next 40 years. At current day new build construction costs this would equate to approximately £10 billion and therefore, in broad terms an annual investment of £250 million per annum over the next 40 years. This provides an initial view of a future investment requirement and it is recognised that further work is needed to develop a detailed investment plan based on a thorough examination of other options such as refurbishment/remodelling of existing buildings

5.3   Investment required to replace vehicle assets

As described earlier in this report, many of the NHSScotland vehicles are leased and therefore, the replacement cost of these vehicles is effectively included within the annual leasing costs. However, substantial vehicle assets remain owned, particularly those of the Scottish Ambulance Service and NHS National Services Scotland. These owned vehicle assets are estimated to have a current day replacement cost of around £75 million. These vehicle assets have relatively short lives and fleet managers advise that a realistic replacement programme would be 7 years. Therefore, in broad terms an annual investment of around £11 million per annum is required for vehicles. This estimate is broadly in line with a recently approved business case for Scottish Ambulance Service vehicle replacement which was for £35 million investment over four years.

5.4   Investment required to replace medical equipment assets

The NHSScotland medical equipment assets are estimated to have a current day replacement cost of approximately £450 million. Again, asset lives tend to be relatively short given the rapid advances in technology. The NHSScotland National Imaging Equipment Group advises that asset lives vary between 5 and 11 years depending on the particular piece of equipment. Therefore, taking a mid-point life of 8 years, the annual investment for equipment replacement would be around £57 million per annum (based on current day costs). However, there is some concern

that a backlog of equipment replacement has built up which could increase this annual investment requirement for replacement of equipment. Further work is planned to establish more robust replacement costs for next year's report.

## 5.5 Investment required in IM&T assets.

IM&T assets have been examined as two groups:

- Infrastructure (cabling networks, servers etc.)

- Desktop and mobile equipment

The estimated present day replacement cost of the infrastructure is £125 million Again, there is some concern that there is a build up of infrastructure backlog due to the rapid increase in the use of end user IM&T equipment which has now outgrown the capacity of the infrastructure. Hence there is an urgent need to review the investment needed to replace some of this infrastructure. The present day replacement cost of the desktop and mobile equipment is estimated to be £85 million. Given the issue on infrastructure backlog and the relatively short life of desktop and mobile equipment, the annual investment in infrastructure and equipment is estimated to be around £40 million per annum over the next five years.

5.6 Summary of asset investment requirements

The combined asset investment requirement of circa £400 million per annum is shown in the chart below. Although presented as a single investment amount, in practice some of the capital requirement may be funded through revenue schemes such as hub and leasing arrangement.
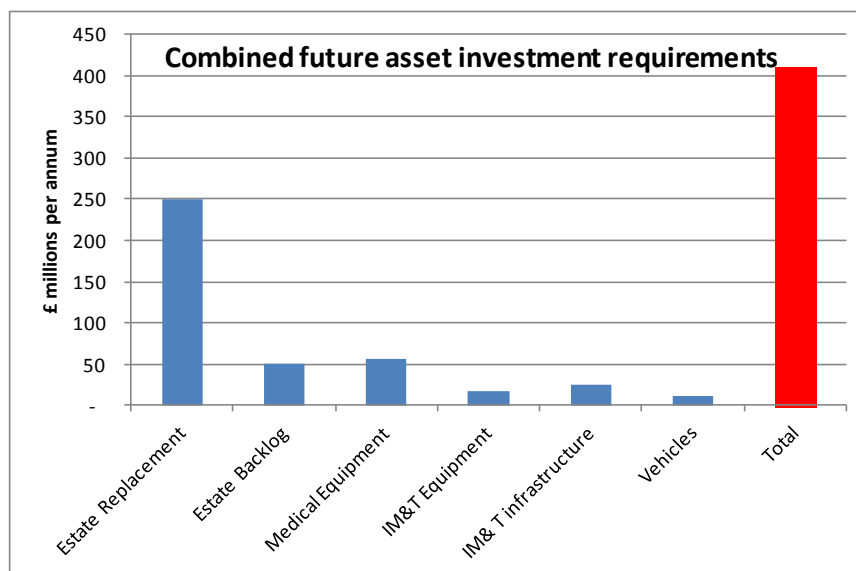
In broad terms(within 10%) this £400 million per annum estimated future asset investment requirement will be met from the NHSScotland LDP Infrastructure Investment Programme as shown in the table below.

	2012-13 £000s	2013-14 £000s	2014-15 £000s	2015-16 £000s	2016-17 £000s	Total over next 5 years
Statutory compliance and backlog maintenance :						
SAFR Estimated Future Investment Requirement	51,000	51,000	51,000	51,000	51,000	**255,000**
LDP Statutory compliance and backlog maintenance expenditure	49,975	70,939	70,816	69,769	69,742	**331,241**
Difference:	-1,025	19,939	19,816	18,769	18,742	76,241
Replacement of the existing estate:						
SAFR Estimated Future Investment Requirement	250,000	250,000	250,000	250,000	250,000	**1,250,000**
LDP expenditure:	452,682	382,596	181,842	64,859	71,540	**1,153,519**
Difference:	202,682	132,596	-68,158	-185,141	-178,460	-96,481
Medical Equipment:						
SAFR Estimated Future Investment Requirement	57,000	57,000	57,000	57,000	57,000	285,000
LDP Expenditure	49,271	45,792	49,263	51,745	63,752	259,822
Difference:	-7,729	-11,208	-7,737	-5,255	6,752	-25,178
Vehicles:						
SAFR Estimated Future Investment Requirement	10,000	10,000	10,000	10,000	10,000	50,000
LDP Expenditure	11,227	11,428	7,532	9,125	9,025	48,337
Difference:	1,227	1,428	-2,468	-875	-975	-1,663
IM&T:						
SAFR Estimated Future Investment Requirement	41,000	41,000	41,000	41,000	41,000	205,000
LDP Expenditure	17,460	13,007	15,171	16,000	14,001	75,639
Difference:	-23,540	-27,994	-25,829	-25,000	-26,999	-129,362
Total Estimated Future Investment Requirement from 2012 SAFR	409,000	409,000	409,000	409,000	409,000	2,045,000
Total LDP Expenditure	580,614	523,761	324,624	211,498	228,060	1,868,557
Difference	171,614	114,761	-84,376	-197,502	-180,940	-176,443

In addition to the investment requirements identified above there is expected to be further investment required to implement the recommendations of the Soft FM Review (see Annex H). Similarly, there is expected to be some investment required as a result of implementing the Zero Waste Plan and the Waste Regulations 2012 (see Annex D).

5.7 The balance of investment between assets

In the past, the estate has accounted for the majority of investment in NHSScotland assets. The results from the earlier analysis of future asset investment requirements, together with the annual costs of asset ownership and associated FM services are shown in the table below. This table clearly shows that, without change, estate assets could account for around 78% of future annual capital and revenue expenditure on assets.

	Future Investment £ millions per annum		
	Estate	Vehicles, Medical Equipment and IM&T	Total
Annual Cost of ownership and associated FM services	637	159	796
Future Investment requirements per annum	301	109	410
Total	938	268	1206
Percentage of total investment	78%	22%	100%

New technology, new drugs and emerging innovative service delivery models may mean that there will be less reliance in the future on estate assets to deliver healthcare and progressively more reliance on the other assets (medical equipment, IM&T and vehicles). This would be broadly in line with services increasingly being

provided in people's homes and in local settings using peripatetic teams, portable equipment and mobile computing to deliver services. Hence, as Boards develop their PAMS they need to evaluate the relative impact of re-balancing the investment in assets away from the estate and towards the other assets. This re-allocation of future investment has the potential to have a transformational impact on the investment in other assets. This is clearly shown in the table below which examines two potential scenarios for re-allocation of asset investment.

Scenario		Future Investment £ millions per annum		
		Estate	Vehicles, Medical Equipment and IM&T	Total
1	Current allocation of asset investment	938	268	1206
2	Re allocate 5% of estate investment to other assets	891	315	1206
3	Re allocate 10% of estate investment to other assets	844	362	1206

The table shows that a 5% and 10% re-allocation of estate investment enables investment in the other assets to increase by 18% (£47m) and 36% (£94m) respectively.

This potential for re-balancing investment across the asset groups presents a key challenge for NHSScotland over the next few years. Clearly, the case for changing the balancing in investment needs to be carefully evaluated in terms of benefits, costs and risks and will be different for each Board depending on local service models and current asset structures/performance. Boards should be examining the relative impact of changing the balance of investment across assets as part of their PAMS. An advantageous scenario could be one which invests in properties with a clearly defined long term need, disinvests from those that don't and uses the difference to improve the quality and performance of service delivery through investing in other assets.

The table that follows provides an indicative illustration of the impact of a 5% re-allocation of future investment away from the estate to other assets.

Investment re-allocation scenario		Estimated Total Future Annual Investment Requirement £m	Value of a 5% re-allocation of future estate investment £m	Impact on the estate to achieve this re-allocation of investment
Re-allocate 5% of future estate investment of £938 m (capital and revenue)	Annual cost of estate and associated FM services	637	32	Will require a 5% (220,000 sq.m) reduction in the size of the estate
	Backlog future investment requirement	50	3	Will require rationalisation and disposal of 7,500 sq.m of estate to avoid the need for expenditure on backlog
	Future investment in Estate replacement	250	12.5	Will require the capital expenditure on replacing the existing estate to be reduced by £12.5 m - roughly equivalent to 2500 sq.m of acute estate
	Total	938	47	

The table clearly shows that the impact of re-allocating investment from the estate to other assets groups is significant and will be challenging.

5.8 Key messages

The analysis of future asset investment requirements described in this section of the report has identified a number of key messages for Boards in terms of developing their future PAMS:

1. Estate rationalisation leading to disposal of surplus properties has the potential to:

    a. Reduced future backlog

    b. Lower future operational costs (property maintenance, energy, cleaning etc)

    c. Reduced future investment requirements for estate replacement,

2. Estate rationalisation is a key tool for addressing backlog since it avoids increasing the base backlog cost by VAT, fees, contingencies etc. The alternative approach of direct investment in eradicating backlog is costly and unlikely to be affordable.

3. Almost 70% of annual future expenditure is associated with the day to day estate and FM services costs (£637 million per annum). Therefore, it is

essential to focus on improving the performance on these services (reference Section 6: Potential for Performance Improvement).

4. A rigorous analysis of the impact of rebalancing of future investment between different asset groups should be an integral part of the development of Boards' PAMS. Relatively small changes in estate investment can have a large impact on the investment in other assets.

6.0 The potential for performance improvements

The performance analysis completed for this report indicates that there is good performance in many aspects of assets and facilities management in Boards. Not surprisingly given the size and complexity of these assets and services, the analysis also indicates significant variation in performance across both Boards and individual hospital sites. Boards need to thoroughly examine these variations in performance in order to better understand the causal effects for this variation and therefore, the potential for improvement in some areas. However, it needs to be recognised that potential efficiencies and savings relating to assets and facilities services may not always be achievable or desirable depending on the characteristics of the asset in question. Furthermore, potential savings should not drive the service function; the core function and quality of service provision of the service department must always be the first consideration. It also needs to be recognised that, in many cases capital and/or revenue investment will be needed to achieve these potential performance improvements and savings.

Notwithstanding the above, there is a need to examine the potential for performance improvement and this has been done by developing a number of scenarios where the impact of improvement in the Performance Framework KPIs (Nos 11 to 20) have been examined. The scenarios are based on the annual property assets and facilities services annual expenditure (£637 million) described earlier in this report. The scenarios examined were:

Scenario 1: Improve Estate Asset Utilisation (KPI No 11: Building Volume per Consumer Week): This scenario assumes that those Boards currently performing worse than the average for Scotland on this KPI can improve their performance to the NHSScotland average. Assuming that patient activity (consumer weeks) remains the same then this improvement would need to be achieved by reducing the size of the estate i.e. estate rationalisation, disposal of surplus property etc. This reduction in estate size will reduce costs that are primarily driven by estate size (cleaning, property maintenance, energy, PFI-FM and rent and rates). It should be recognised that the alternative way of improving performance on this KPI is to increase throughput (consumer weeks) which may provide opportunities for better utilisation of the best assets and enable rationalisation of the estate. In this scenario it is assumed that services will fully meet the NHSScotland National Cleaning Specification.

Scenario 2: Improve performance by reducing unit costs (£/sq.m) on cleaning, property maintenance, energy, PFI-FM and rent and rates. This scenario assumes that those Boards currently performing worse than the average for NHSScotland on the KPIs for each of these services improve their performance to the average. Example, the cost of cleaning per sq.m is reduced by investing in new floor cleaners that reduce cleaning times.

Scenario 3: Improve performance by reducing unit costs (£/consumer week) on catering, laundry and linen, waste and portering. This scenario assumes that those Boards currently performing worse than the average for NHSScotland on the KPIs for each of these services improve their performance to the average. Example, the cost of catering per consumer week is reduced by adopting a newly developed cooking appliance.

Scenario 4: Cumulative impact of Scenarios 1, 2 and 3. This scenario assumes that all three of the above scenarios are achieved. Since each scenario is independent there is no reason why they could not be achieved concurrently.

The results from modelling these scenarios are shown in the table below.

Scenario No	Performance Scenario	Improved KPIs	Impact	Total Asset Ownership and Facilities Services Costs	Potential Efficiencies	
				£ per annum	£ per annum	% of current costs
	Existing Performance	None	None	637,705,871	-	-
1	Improve asset utilisation	Building Volume per Consumer Week	Lower total costs on those services driven primarily by estate size ie cleaning, property maintenance, energy , rent and rates	602,928,551	34,777,320	5%
2	Lower unit costs of cleaning, property maintenance, PFI FM, energy, rent and rates	Cost £ per 100 cu.m building	Lower total costs of cleaning, property maintenance, PFI FM, energy, rent and rates	583,214,282	54,491,589	9%
3	Lower unit costs of catering, laundry and linen, waste and portering	Cost £ per Consumer Week	Lower total costs of catering, laundry and line, waste and portering	632,948,631	4,757,239	1%
4	Scenarios 1, 2 and 3 concurrently	All above	All the above	544,645,623	93,060,248	15%

The results from the modelling of these scenarios show that the impact of performance improvements in the Framework KPIs could be efficiencies of over £90 million per annum. Furthermore, these scenarios could be considered fairly conservative since they are based on Boards improving their performance on KPIs only to the NHSScotland average and no improvement on those KPIs where the average is already being achieved.

The ways in which Boards can work towards achieving these potential efficiencies will be different for each Board. In many cases, significant investment will be required to bring about change. For example, the four energy reduction projects described in Annex E have the potential to achieve savings of circa £32 million per annum but will require an initial investment of around £224 million. The annexes in relation to soft FM, fleet management, national procurement and shared services also provide possible options to achieving these efficiencies.

The information emerging from the benchmarking programmes should, over the next couple of years, enable Boards to focus on areas that can be developed into achievable programmes for performance improvement. In addition, the benchmarking information linked to the performance framework should provide a robust set of metrics for measuring the effectiveness and efficiency from proposal stage through to post project evaluation.

7.0 Forward Look to 2013 and 2014

7.1 Innovation and Collaborative Working

It is widely recognised that the demands for healthcare and the circumstances in which it will be delivered will be radically different in future years. From advances in technology through to changes in clinical practice and greater collaborative working, the need for innovation has never been greater.

Assets and facilities services can be a key enabler for achieving NHSScotland's Quality Ambitions and for delivering the Scottish Government's "20:20 Vision" for sustainable high quality in health including a healthcare system where there is integrated health and social care.

Advances in technology are driving changes in healthcare that are likely to significantly impact on the NHSScotland's asset base. These technologies are enabling care pathways to be developed which deliver more care outside of hospitals and therefore there is likely to be less reliance in the future on buildings to deliver services. Hence, it is essential that the asset base is closely aligned with these changes in service delivery models. This will include the need to carefully examine the balance of investment needs across the different types of assets going forward if the NHS is to maximise the potential benefits of the new technologies and the innovative and collaborative working. The performance improvement scenarios shown earlier in this report are the basis for further work on the development of a financial model for evaluating alternative investment proposals.

7.2 Delivering improvements in quality at lower cost

It is clear that demographic trends and global pressures on health spending will not allow increases to quality that increase costs. The Scottish Government is working with Boards to identify opportunities to deliver improvements in quality at lower cost.

The NHSScotland Efficiency and Productivity Framework is clear that conventional approaches to efficiency will be insufficient to deliver the depth and duration of efficiency savings required over the next three to four years. The purpose of the Efficiency and Productivity Framework is to give real focus to identifying a range of changes which will support Boards to achieve this alongside the Quality Strategy and to support Boards to redesign services bringing together all of the dimensions of quality, including value for money. The State of NHSScotland's Assets and Facilities Report is part of this initiative to identify changes that support Boards to deliver improvements in quality and reduce costs by providing an annual high level assessment of the progress that NHSScotland is making on improving the performance management of assets and facilities services. The focus for improving performance is expected to be on estate rationalisation, space utilisation and benchmarking.

The case studies included in this report demonstrate that some Boards are at the forefront of the initiatives on innovative and collaborative working and delivering improvements in quality at lower costs. The inclusion of these case studies in this report is aimed at enabling Estates and Facilities Teams within Boards to identify, share and spread good practice and act on opportunities to improve performance.

7.3 Future State of the NHSScotland Assets and Facilities Reports

The development of the 2013 and 2014 State of NHSScotland Assets and Facilities Reports will see work on:

- Further improving the quality and consistency of the information on assets and facilities, particularly in respect of the wider range of assets (vehicles, medical equipment and IM&T) introduced in this year's report. This will include the implementation of further measures to improve the alignment of the ISD Cost Book with the operational assets and facilities information systems such as EAMS and eMART.

- Further development of the Asset and Facilities Performance Framework as a key tool for monitoring performance at national, Board and local levels. This will include further work on the setting of performance targets with particular focus on ensuring that they are realistic and achievable within available resources. It will also include the development of KPIs for vehicles, medical equipment and IM&T assets which are similar to those for property and facilities services and provide a balanced approach to measuring quality, efficiency and risk.

- The work on developing a more formal approach to capital planning and prioritisation using a robust set of criteria to develop an affordable list of capital priorities should demonstrate measurable improvement in asset performance over time. From a financial perspective it should be able to increase the effectiveness of investment and reduce the expenditure that is required to meet performance or increase the performance for the same level of expenditure. This annual report and in particular the Performance Framework provide an ongoing opportunity to demonstrate improved investment decision-making.

- Development of guidance and training for Boards on the development of strategies for vehicles, medical equipment and IM&T assets that address the key questions that this report need to answer:

  - What are the risks that NHSScotland face in relation to these assets?
  - What investment is needed in these assets?
  - What opportunities are there for changing the balance of investment between the different assets types?

- Establishing a library of best practice case studies with the aim of drawing on the outcomes from these studies to provide an evidence base for informing decisions on future investment in assets and for modelling the potential for future performance improvement.

- Alignment of the 2013 report with the work and outcomes of the NHSScotland Soft FM Review. This review will deliver a report on soft facilities services identifying improvement opportunities relating to:

  - Utilising relevant technological innovations from across the world to improve service effectiveness and efficiency,

  - Synergies and efficiencies that can be achieved by joining up service delivery across Health Board boundaries, regions, pan Scotland or delivered in conjunction with other public bodies,

  - Ensuring that best practice is identified and as far as is practical is put into operation across as much of NHSScotland as it would be practical to do so,

  - Applying new evidence based practice to Soft FM and to stop historical practices which have evolved over time with limited or no basis in evidence,

  - Identifying opportunities to generate income for NHSScotland through improved retail delivery and careful marketing of spare (contingency) production capacity,

  - Assessing the advantages / disadvantages from contracting out work to other public sector providers.

The work on these future State of Assets and Facilities Reports provides an opportunity to identify and find solutions to some of the issues and barriers to improving performance that have been identified to date. These future reports will focus on demonstrating success, and ensuring that important seeds are sown for the delivery of longer term benefits, performance and efficiency improvements in the assets and facilities services across NHSScotland.

Annex A
Case Studies

This annex of the report provides short summaries of a number of best practice case studies covering different aspects of managing assets and facilities services in NHSScotland. In addition to the benefits to participating Boards, there are outputs from these case studies that are of value to a wider audience in NHSScotland. The case studies are aimed at promoting the sharing of good practice and provide the reader with information on actions being taken elsewhere in NHSScotland to deliver improvements in the performance, efficiency and sustainability of assets and facilities services. It is envisaged that this will be a key feature of this annual State of NHSScotland Assets and Facilities Report, aimed at helping NHSScotland to develop capability and capacity to deliver high performing, efficient and sustainable assets and facilities services. They have been selected because they are innovative and should have a significant impact on performance. Also, they should be easily replicated more widely across NHSScotland.

Best Practice Case Study 1
NHS 24 - Telehealth and Online Services

NHS 24 unscheduled care service provides round the clock access to health information and support to the people of Scotland. During the out of hours period, NHS 24 is one of the main 'gateways' into NHSScotland unscheduled care services for the whole of the country. This activity operates via the telephony platform with complex call routing in operation to try to ensure that callers, where possible, are answered at their nearest regional centre. However, all operatives have access to a sophisticated, on-line, national Knowledge Management System which gives all staff the same access to local information, wherever they are in Scotland. The kind of information they need access to is pharmacy locations/opening hours, where the closest A&E is etc.

Over the last few years, we have improved our web access and online facilities by updating NHS24.com and introducing NHSInform.com. Both of these sites contain helpful information for self-care, including the 'body map' system for helping users to indentifying possible ailments. They also offer an on line enquiries function so that people can send their health queries in by e-mail, if this is their preferred communication style, and are responded to in the same way. All online enquires are vetted for appropriateness with any query that appears linked to a person being symptomatic is contacted by a clinician for reasons of patient safety.

NHSInform.com, in particular, contains current health information to support the prevention of ill health, early detection activities and various zones for self-help, such as health screening programmes and mental health wellbeing.

There are a number of 'additional services' in pilot phase with partner boards including:

Patient Reminder Service – In an effort for the NHS Boards to improve clinic efficiency and cut down on "Did not attends" (DNAs), NHS 24 is providing a reminder service for several clinics. Using a software system which is able to calculate propensity to DNA using patient demographics, we can target those most likely, calling them a week in advance of their appointment to confirm or cancel. Early results are very positive delivering a reduction in DNAs and fuller utilisation of clinic appointments.

MSK – A telephone pre-screening service for musculoskeletal conditions to reduce the numbers of patients unnecessarily referred for physiotherapy and to promote appropriate self-care.

Best Practice Case Study 2
NHS Grampian - Foresterhill Energy Centre

NHS Grampian's new Energy Centre was commissioned to serve the current and future energy requirements of the Foresterhill Health Campus. This was in response to:

- failing and insecure current energy production facilities, with boiler plant nearing the end of its economic life and high associated labour costs;
- increased energy requirements associated with recent and future developments at the Foresterhill Health Campus, including new clinical services and additional medical teaching and research facilities for the University of Aberdeen;
- steep increases in energy costs;
- NHS Grampian, NHSScotland, Scottish Government and UK Government policies and drivers relating to energy consumption and greenhouse gas emissions.

Following detailed assessment of potential options, it was decided to replace the existing boiler house with a new energy centre comprising more efficient plant on a brownfield site. The new plant includes a gas turbine Combined Heat and Power (CHP) plant, a biomass boiler and three dual fuel boilers. These will provide all heat, and around 90% at peak loads of the electricity requirement of the Foresterhill Health Campus.

The steam plant comprises:

- one gas turbine CHP unit providing base load steam demand and 5.3MW of on-site power generation
- one 1.5MW biomass steam boiler fuelled on locally sourced wood chip to meet the higher winter steam demand
- two 8.5MW and 1 x 6.5MW dual fuel (gas/oil) steam boilers to meet peak demand.

The steam plant configuration was designed with N+1 redundancy to provide security of supply with a 1MVA standby generator providing 'black start' capability and a gas booster set providing 2000m^3/hr at 18 bar pressure.

The entire plant is housed in a single building with integral woodchip delivery and storage using fully automated flatbed 'walking-floor' trailers. The plant is designed to provide a 16% reduction in CO_2 emissions (9830 tonnes/annum) and a 39% reduction in energy costs (£2.95M at 2010 prices).

Air dispersion modelling was undertaken to determine the minimum height of the flue stack required to ensure there was no increase in levels of air pollutant concentrations (NOx, CO, PM_{10} and $PM_{2.5}$ particulates) at local sensitive receptors.

The project achieved Building Research Establishment Environmental Assessment Method (BREEAM) Excellent status, and has recently won the Industrial Category in the annual BREEAM Awards.

Best Practice Case Study 3
Scottish Ambulance Service – Working Together for Better Patient Care

The Scottish Ambulance Service 5 year Strategy 'Working Together for Better Patient Care' is aligned with the Scottish Government's Quality Strategy and has five key work streams. These are examining how clinical care can be provided more locally to patients, especially in rural areas – some of which can be achieved through eHealth proposals and investment in technology infrastructure.

Therefore, the eHealth Strategy is one of these key work streams. This has 2 key areas of significance; Telehealth, whereby decision support can be accessed through professional to professional lines involving clinicians within NHS Boards supporting Scottish Ambulance Service staff in diagnosis and treatment. Thus enabling patients in unscheduled care situations to either stay in their own home or remain within a community hospital setting. This benefits the patient and also assists NHS Boards in terms of reduction in in-patient and A&E attendances.

The Scottish Ambulance Service is also working in partnership with NHS24 to introduce a single clinical triage system that will utilise the most up to date clinical evidence to effectively triage patients, again, with unscheduled care requirements.

This system, due to be implemented in the summer of 2013, has the potential to be used in A&E Departments and GP surgeries and will direct patients to definitive care efficiently and effectively. This will also lead to more care delivered at home and a reduction in A&E attendances.

Multidisciplinary Teams

Where possible, the Scottish Ambulance Service co-locates its premises with other NHS bodies as part of its PAMS. As well as making effective use of NHS estate, this also has the benefits of closer working between NHS staff. This leads to the development of multidisciplinary teams, including Scottish Ambulance Service staff, which can provide anticipatory care and health checks to patients in their communities.

Property Locations

One of the key HEAT[i] targets for the Scottish Ambulance Service is the achievement of an 8 minutes response to Category A Emergency patients for 75% of the population. To ensure this target is achieved, ambulance station locations in particular areas need to be sited to best effect to enable to HEAT target to be achieved. So whilst, co-locations, hub initiatives etc may make financial sense, if the property is not correctly sited for the HEAT target, Scottish Ambulance Service cannot enter into these proposals.

The Scottish Ambulance Service, in terms of all assets, Property, Vehicles, IM&T, ensure that these are aligned with Working Together for Better Patient Care and the Quality Strategy. Each has a different timescale, however, are all flexible enough to accommodate changes to the way healthcare is delivered right across Scotland. The strategy has elements that can benefit the wider NHS and are structured to deliver services as efficiently and effectively as possible.

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[1] HEAT Targets are NHSScotland's targets for performance in the areas of **H**ealth Improvement, **E**fficiency, **A**ccess and **T**reatment

Best Practice Case Study 4
NHS Forth Valley - Investment in eHealth

NHS Forth Valley is one of the leading NHS Boards to introduce eHealth into the hospital ward environment. This initiative has achieved significant benefits to patient safety, patient care, improved access to information, and significant financial savings through improved efficiencies.

NHS Forth Valley has introduced electronic Bed Management through its eWARD system which now covers all its hospital inpatients. The system also includes a Nurse Handover facility, Hospital at Night clinician handover facility, District Nursing Discharge letters, and patient discharge medication management.

Medicines reconciliation on admission and discharge is one of the most valued facilities provided by eWARD, both for patient safety and streamlining the patient discharge medication process, minimising delays to discharge.

Further efficiencies through electronic communication were realised by the development of supporting technologies between Acute and Primary Care.

While eWARD had been in use for some time, it did not record patient beds and staff interacted with it infrequently, resulting in significant delays in updating the location of the patient on the system. With the introduction of the Bed Management module, dedicated touch screen computers and availability from every eWard computer, visibility and access to this information has improved. The resulting improvement in system update times improved the accuracy of information available for the management of hospital capacity and discharge planning which was previously gathered through a team of Patient Flow Co-ordinators (Bed Managers) walking to each ward on a 24/7 basis.

Accurate information and remote access to patient flow/demand management has meant that floor walking was no longer required,

Mean eWard transfer update time

leading to an annual recurring saving of £130k.

Further benefits/efficiencies achieved include standardisation of ward information and processes, reduced duplication in recording patient location information, and availability of 'at a glance' patient status for visiting clinical staff; all synergistic objectives of the Releasing Time to Care initiative.

NHS Forth Valley's work on the eWard Bed Management facility has been nationally recognised, winning the NHSScotland Event 2011 Infrastructure Poster prize. This year, it has been short listed for the HSJ Efficiency Awards 2012 with its award submission "*Using Electronic Ward Maps to manage Patient Flow*" in the Efficiency in Information Technology category.

Best Practice Case Study 5
NHS Grampian – Whinhill Medical Practice

Whinhill Medical Practice opened its doors to patients on 8 December 2010. This development was completed as part of NHS Framework Scotland and was the first project in Scotland to be delivered under this programme.

The two-storey, modern and bright facility is a multi-agency centre, providing six GP consulting rooms, social services and community nursing offices, as well as a police station with its own entrance. This environment promotes collaborative and partnership working and brought together the merged Belmont and Ferryhill Medical Practices as Whinhill Medical Practice, and a local community policing team for the West End.

Whinhill Medical Practice provides a range of General Medical Services to patients registered at the practice. This includes the management of long term conditions, routine immunisation of children, annual flu immunisation programme, health screening programmes, Diabetes clinic and a Nurse-led Minor Illness Clinic.

The aim of the Whinhill Police Office is to take local policing closer to you and achieve this through higher visibility and easier accessibility as this new modern station has brought the local policing team for the West End area together under one roof.

The ethos of partnership working was promoted from the outset, not only between NHS Grampian, Aberdeen City Council and Grampian Police as public sector bodies, but also the Principal Supply Chain Partner (PSCP), led by Scottish Firm Morrison Construction.

This partnership working also involved staff and service users by gathering their views and ideas during a series of team workshops led by Architects Halliday Fraser Munro and keeping local residents up to date with activities using newsletters and an open day in the local community centre.

As part of NHS Framework Scotland Programme and more specifically the Whinhill Medical Practice project, the key criteria set out by NHS Grampian was to attain a BREEAM Excellent rating for the new Facility. Morrison Construction as the PSCP set out at a very early stage in the gateway process that the only way to achieve the "Excellent" rating was through partnership and collaborative working with the entire team.

Whinhill Medical Practice achieved the BREEAM Excellent rating for the Design and Procurement Stage on 14 December 2011. The Final Post Construction Assessment is ongoing and there is confidence the BREEAM Excellent rating will be re-confirmed in the very near future.

The project was also completed earlier than the scheduled programme and below the target cost value.

Best Practice Case Study 6
NHS Lanarkshire – Estate Rationalisation

NHS Lanarkshire's property investment and estates rationalisation plan has resulted in a significant improvement in its overall estate performance KPIs, including a net floor space reduction of 9%, annual lease savings of circa £300k, and a reduction in backlog maintenance of circa £12m.

An outcome from NHS Lanarkshire Property Strategy 2009-13 was a need to rationalise parts of its estate. This was advanced through 3 main activities:

1. **NHS Lanarkshire's Service Strategy**
   This identified a need for investment in new buildings to replace ageing premises with poor functionality, poor physical condition and high maintenance costs.
   It also involved removal of surplus property from the estate portfolio.

2. **NHS Lanarkshire's Office Accommodation Review**
   This identified the opportunity to centralise its executive management team, senior managers and some corporate functions on a single site.
   This would bring a range of efficiencies and improved management performance from making better use of existing buildings and utilising more modern facilities.

3. **Review of all Lease Arrangements**
   The aim was to ensure that at the earliest break clause the opportunity to provide services in alternative existing premises was taken.

A four year programme of works was undertaken with an overall investment of circa £85m. This resulted in:

- The construction of 4 new Community Health Centres at Carluke, Coatbridge, Bellshill, and Airdrie;
- Refurbishment of 2 Health Centres in East Kilbride and Hamilton;
- Refurbishment of 2 Buildings to establish the new Board HQ in Bothwell.
- Replacement of 2 mental health inpatient facilities at Hamilton and Coatbridge.

As a result of the above, 10 buildings were declared surplus to requirements and were scheduled for disposal. An initial programme of demolition of 8 buildings has been completed. Of the final 2 buildings, one is scheduled for demolition in August 2012 and the second is being marketed for sale. The remaining land has been declared surplus and is being managed for disposal by **NHS Lanarkshire's** Property Strategy Group.

The relocation of staff and services from these sites was successfully achieved through the implementation of the estates rationalisation plan, developed and carried out following extensive consultation and planning with service user groups.

The outcome of this programme has been a significant improvement in property performance KPIs, thus ensuring that its property assets continue to meet modern service needs, as well as public and patient quality expectations.

Best Practice Case Study 7
NHS Grampian – Reprovision of services, Maud

NHS Grampian made available a capital grant of £2.15m to Maud Village Trust for the construction of the Old Mart Community Resource Centre. This allowed the decommissioning of Maud Hospital and the re-provision of more community-based services for the Central Buchan population.

Through a thorough engagement and consultation with the public , the local population recognised they did not require a local hospital to deliver future services. This project demonstrated a community approach to integration of services involving the NHS and Local Authority, Third sector and crucially the population.

The service redesign ensured that people had the opportunity to live at home living more fulfilled lives with greater independence rather than occupying a local hospital bed.

The facility is managed by Maud Village Trust and a partnership agreement is in place between Maude Village Trust and NHS Grampian. A management committee with representation from both organisations meets quarterly to deal with maintenance and budgetary issues relating to the building. Day-to-day management is via The Centre Manager, employed by Maude Village Trust. There is also an occupancy agreement in place with Aberdeenshire Council for local authority staff based there.

The Old Mart Community Resource Centre is truly a community resource and provides the following for health and community care:

- Base for Older People's Team – Health and Social Work
- Base for Mental Health Team

- GP consulting room – used by Mintlaw Group Practice and visiting consultants
- Range of therapies – Physiotherapy, Podiatry, OT etc
- Base for Health Visiting Team
- Treatment rooms /gym – e.g. falls prevention classes, ante-natal classes, health promotion events etc
- Assessment kitchen
- Community meeting facility

The original intention was to provide day hospital/service and out-patient facilities, but these have not been progressed. The gym facility run by MVT is well resourced and popular with the local community.

The remainder of the complex, the former mart site, has been developed by the Trust and provides:

- Base for Buchan Dial-a-Bus
- Café
- Gardens
- Play area
- Community crèche
- Units – for use by businesses/meeting facilities

These facilities complement services being provided within centre.

It was the intention to provide 6 GP beds at Culsh Nursing Home in New Deer, however, that was not progressed. Demand has been met from within Fraserburgh Hospital as the emphasis has been on reducing length of stay and more capacity has been created.

Best Practice Case Study 8
NHS Grampian: Health and Care Framework

NHS Grampian has developed a Health and Care Framework of guidance and tools to support its development of a detailed picture of how health and healthcare will be developed in Grampian.

The NHS Board embarked upon a number of Pathways Projects as part of the Health and Care Framework development. Two of these pathways centred on geographical areas – Forres and Inverurie. The work carried out in each area differed in their approach but had may common elements. The work was conducted with a range of stakeholders using both NHS staff and independent consultants.

Throughout the engagement work was guided by both NHS Corporate communication staff and Scottish Health Council to ensure conformity with *Inform, Engage and Consult* responsibilities. In broad terms the approach taken in each area comprised of the following:

Process:

- Needs analysis
- Workshops
- Public engagement
- Clinical engagement
- Partner engagement
- Option generation
- Data analysis and benchmarking
- Cost projections

Engagement

- Use of structured questionnaires
- Community council
- Meeting with public reps
- Meetings with GPs
- SMT, OMT, HCCSP, OPSOG, HMD
- Practice Participation Group for Inverurie
- Working Group
- Local Authority Officers and Councillors
- Third Sector
- Friends of Hospital
- Scottish Health Council

Data Sources

- Integrated Resource Framework
- PAS Admission Data
- Local Medical Knowledge
- HEAT data
- Health Profile (Health Intelligence)
- Practice Profile

The Health and Care Framework is not a single plan or strategy. The framework aims to provide direction, initiatives and actions that will continue to evolve. It is also the framework within which NHS Grampian and its partners will make difficult decisions about the allocation of resources, Grampian services, facilities and corporate strategies. In addition, it is the framework within which Community Health Partnerships and acute services will make detailed changes to services, and how public health and health improvement will achieve long terms aims in relation to the health of the population as a whole.

Best Practice Case Study 9
NHS National Services Scotland – Meridian Court Refurbishment

In June 2011 NHS National Services Scotland (NSS) relocated 415 staff from 5 leased office properties across central Glasgow to Meridian Court, a surplus Scottish Government building close to Glasgow's Central Station.

The move to Meridian Court presented NSS with a range of unique challenges and opportunities in terms of:

- Re-use of surplus Scottish Government office space with a long lease that might otherwise have remained empty in the prevailing difficult commercial climate;

- Transformation of a tired and non-functioning 1970's building where many of the building services, fixtures and fittings were approaching or beyond their useful life and the layout required significant reconfiguration to meet modern office standards;

- Designing a new working environment to meet the needs of different NSS functions moving from multiple sites to a single building solution;

- Introduction of green technologies e.g. chilled beam, energy efficient lighting systems etc.;

- Developing and incorporating new design principles within the fit-out which focused on flexible workspaces to support more collaborative and dynamic work styles;

- Cost constraints demanding creative solutions to meet the need to reduce space while continuing to meet NSS operational needs and staff aspirations.

NSS has delivered a contemporary working environment that has surprised and delighted its staff who have successfully transitioned to a shared open-plan working environment (where even senior managers and medical consultants do not have dedicated cellular office space).

The open-plan workspace on the upper floors of the building is supported by informal meeting and break-out zones for non-confidential meetings and discussions, touchdown and hot-desking facilities for visiting colleagues, quiet rooms for individual concentrative work and formal meeting rooms equipped with video conferencing and presentation technology. The reception, conference rooms, touchdown and Aroma café on the ground floor provide business and amenity facilities for staff and visitors alike and serve to enhance the NSS corporate identity.

The efficient design and use of space at Meridian Court is reflected in an overall space standard of 10.3 sq.m. NIA per person. By 2014 space utilisation within the building will be further improved following implementation of NSS plans to further consolidate and rationalise its office accommodation in Glasgow. Enabled by a move from 1:1 desking to a shared desking model NSS plan to increase occupancy to a total of 456 staff at a space standard of 9.4 sq.m.NIA per person.

NSS has breathed new life into a potentially redundant building and delivered a working environment that provides efficient modern in design and is flexible enough to respond to future strategic and operational requirements.

In March 2012 the success of this project was recognised when Meridian Court was short-listed for the British Council of Offices (BCO) Regional Awards in the refurbished/recycled workplace category.
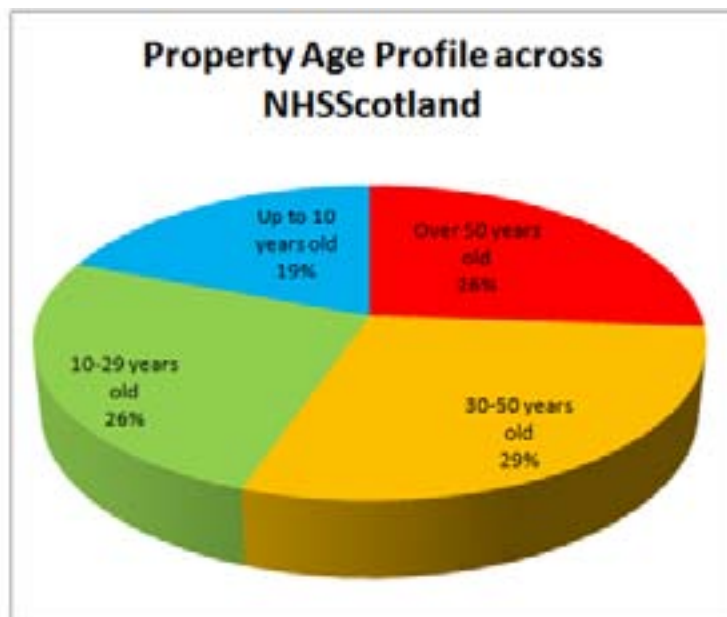
Annex B
# Review of Estate Assets and Performance

This Annex provides a detailed analysis of property and asset performance which supports the summarised information and analysis provided in the main body of the report. The information presented in this annex on age and tenure combines information from all 22 NHS Boards and Special NHS Boards whereas the subsequent sections on condition and performance of property assets is split between the 16 Boards with in-patient accommodation (labelled NHS Boards), ie all 14 NHS Boards and 2 Special NHS Boards namely the NHS National Waiting Times Centre (Golden Jubilee) and the State Hospitals Board for Scotland) and the 6 remaining Special NHS Boards.

Estate Age

NHSScotland occupies approximately 850,000sq.m (19% of the total) of relatively new / modern accommodation (i.e. less than 10 years old), which is an increase of 160,000sq.m since 2011 and is evidence of the significant capital investment in property assets over recent years. Investment in NHS assets, including investment in new properties, has more than trebled in cash terms in recent years, from £132.5 million in 2003/04 to £557.4 million in 2010/11 – plus £500m of additional revenue based investment. There does, however, remain substantial scope for improvement and further investment, or disposal, in the estate in order to move away from old, poor quality and functionally unsuitable properties. The following charts show the range of property ages for the NHS Boards, which indicates that 26% of the estate remains over 50 years old (a ten percentage point improvement on 2011 status).
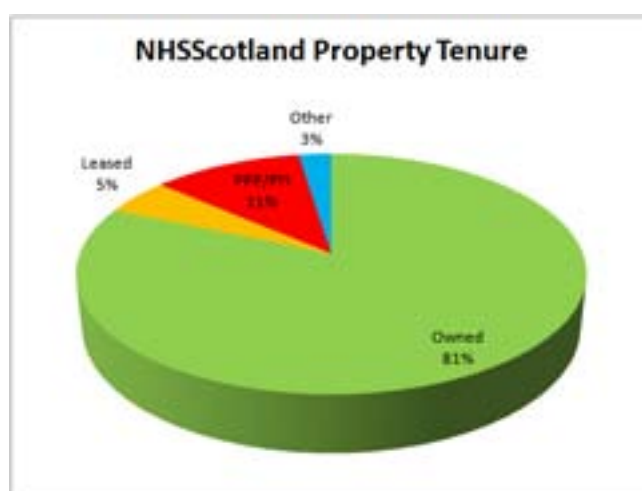

Age profile above includes all 22 NHS Boards and Special NHS Boards

Age Profile Comparison - NHS Boards

Age Profile Comparison - Special NHS Boards
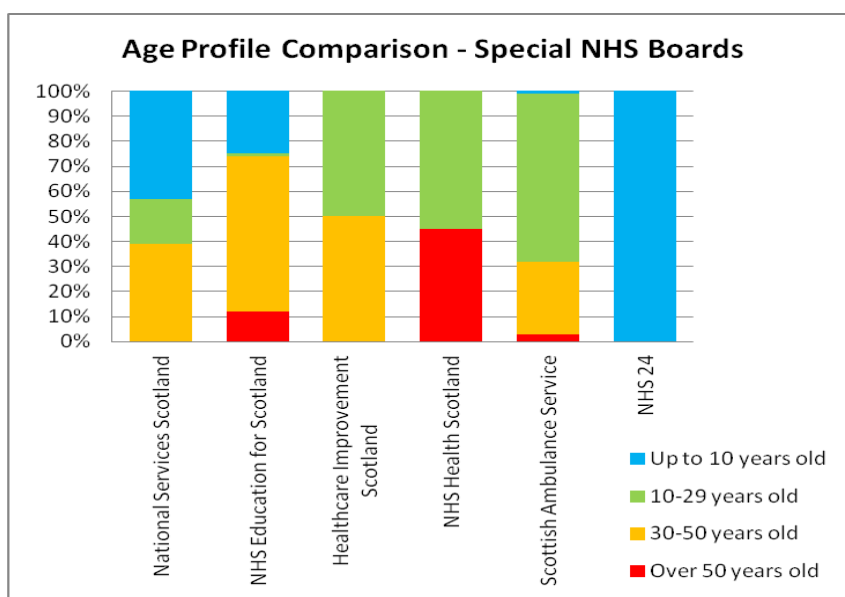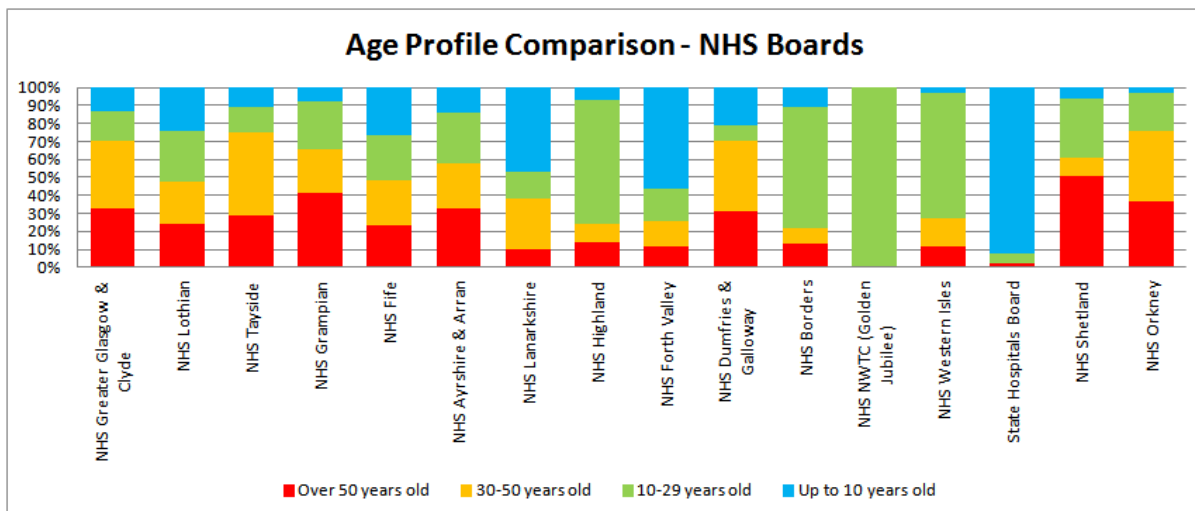
Estate Tenure

The majority of the NHSScotland estate is owned (81%) but for some NHS Boards PPP/PFI and leased property is a significant proportion of their estate, as shown in the two charts that follow.


NHSScotland Property Tenure

Tenure profile above includes all 22 NHS Boards and Special NHS Boards, where information is available

Tenure Comparison - NHS Boards

Legend: Owned, Leased, PPP/PFI, Other
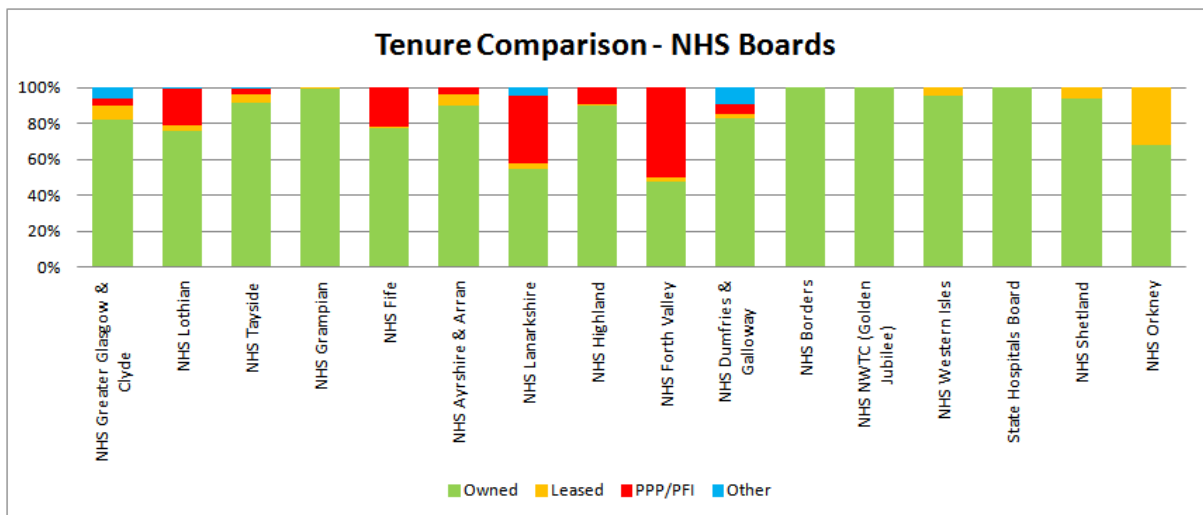
Physical condition

Analysis of the information contained within each NHS Board's Property and Asset Management Strategy (PAMS) shows that approximately 71% of the NHS Boards' estate is in good physical condition (category A or B) but, as shown in the chart below, this can vary significantly across the NHS Boards.
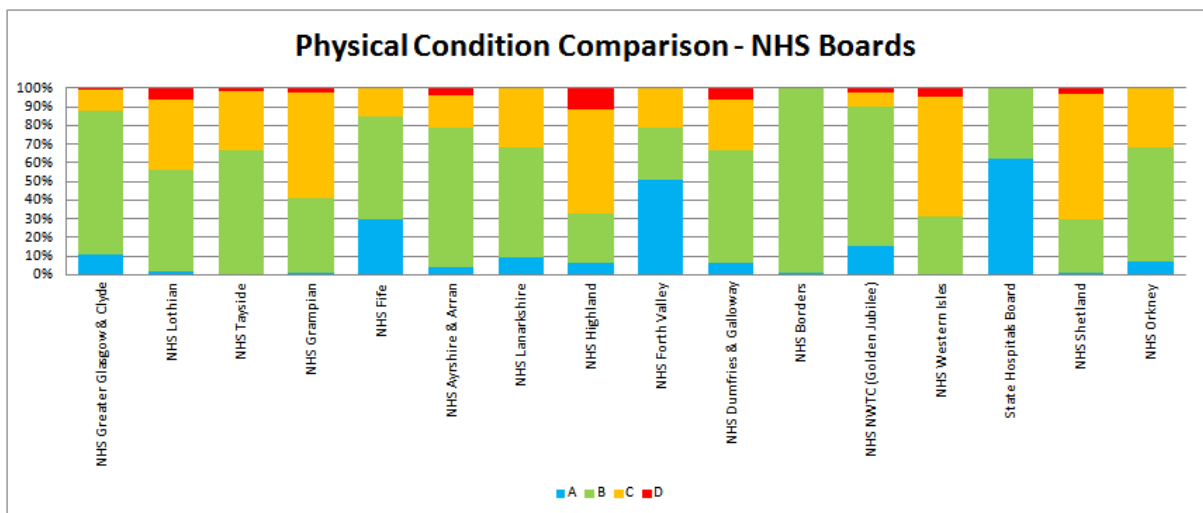
Physical Condition Comparison - NHS Boards

Legend: A, B, C, D

NHS Boards which have buildings assessed as category D – "unsatisfactory" have indicated that they have plans in place to either dispose or replace these buildings over the next 10 years. Hence, the overall amount of buildings in category D is expected to significantly reduce in these NHS Boards.

Backlog maintenance costs

Backlog maintenance costs arise from maintenance that has built up over a number of years and is now giving rise to poor condition and performance. These backlog maintenance costs have been identified as those required to bring the estate back to Condition Ranking B (satisfactory). It is an on-going challenge for the NHS to balance investment between that which is focussed on service improvement and development, and that which is necessary to ensure existing properties do not cause harm or undue disruption to service delivery.

An analysis of the distribution of backlog across NHS Boards is shown in the chart below. It identifies a backlog maintenance cost of £948m, which is a £62m reduction since 2011.
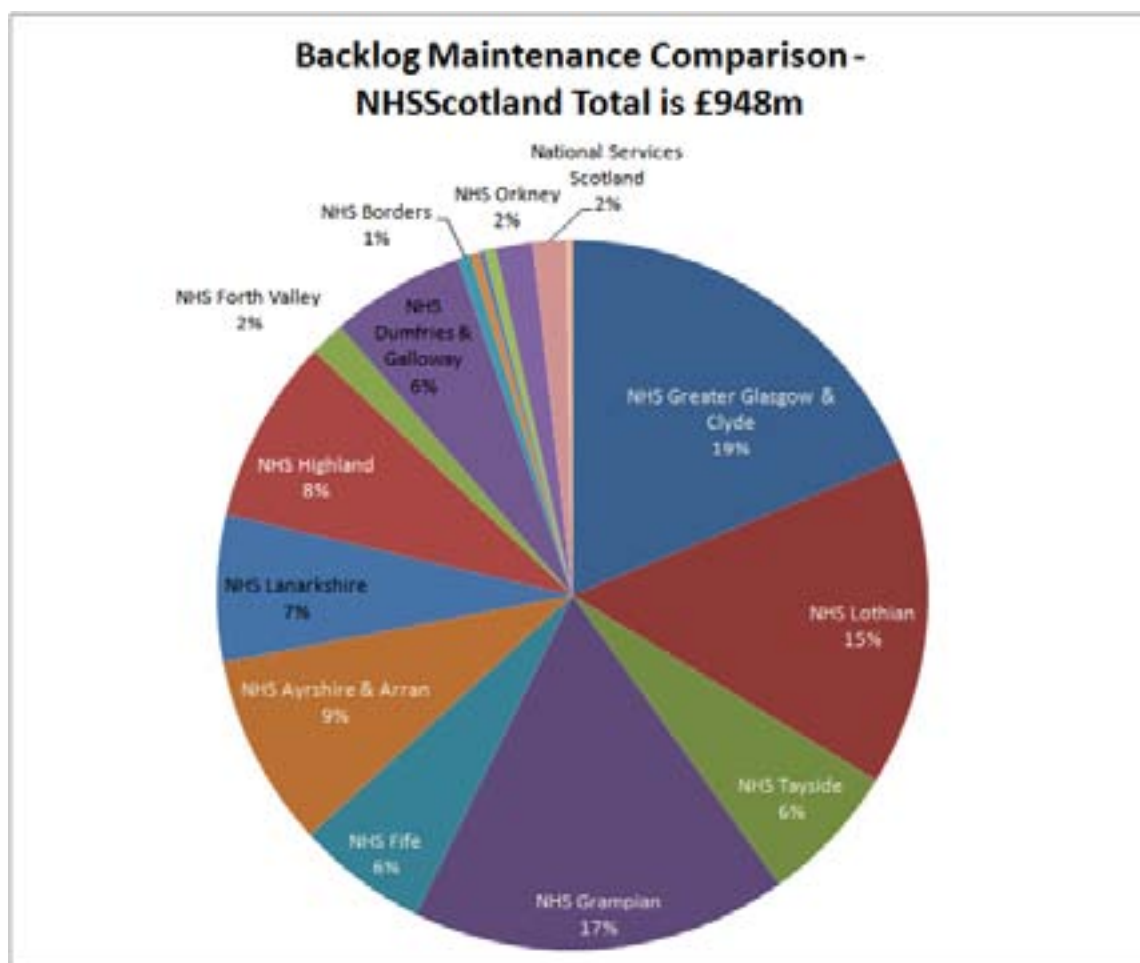
Note: the above chart includes all 22 NHS Boards and Special NHS Boards but those whose backlog is below 1% have not been separately identified for clarity of presentation reasons only.

By the very nature of a mixed use and mixed aged estate, backlog maintenance will always be present in such a large and diverse estate. The emphasis should, therefore, always be on ensuring that the level of backlog maintenance does not unduly increase the risk of building or engineering service failure to an extent that it could have a detrimental impact on each NHS Board's ability to function effectively, efficiently and safely.

NHSScotland managers are focussed on mitigation strategies for the significant backlog maintenance requirement to ensure that high and significant risk backlog is prioritised, based on the risk it poses, for investment within the finite resources made available to

them. This is to be reflected in their PAMS with the analysis supported by guidance developed by Health Facilities Scotland to ensure that a common approach is taken across NHSScotland to the assessment of risk.

The two key strategies for reducing backlog maintenance are either to invest directly in the rectification of backlog or to rationalise the estate to remove those properties with high levels of backlog maintenance. For the current stock of modern buildings future backlog can be avoided by ensuring the right levels of expenditure on both operational and cyclical lifecycle maintenance.

The following chart identifies the profile of low, moderate, significant and high risk backlog for each NHS Board.
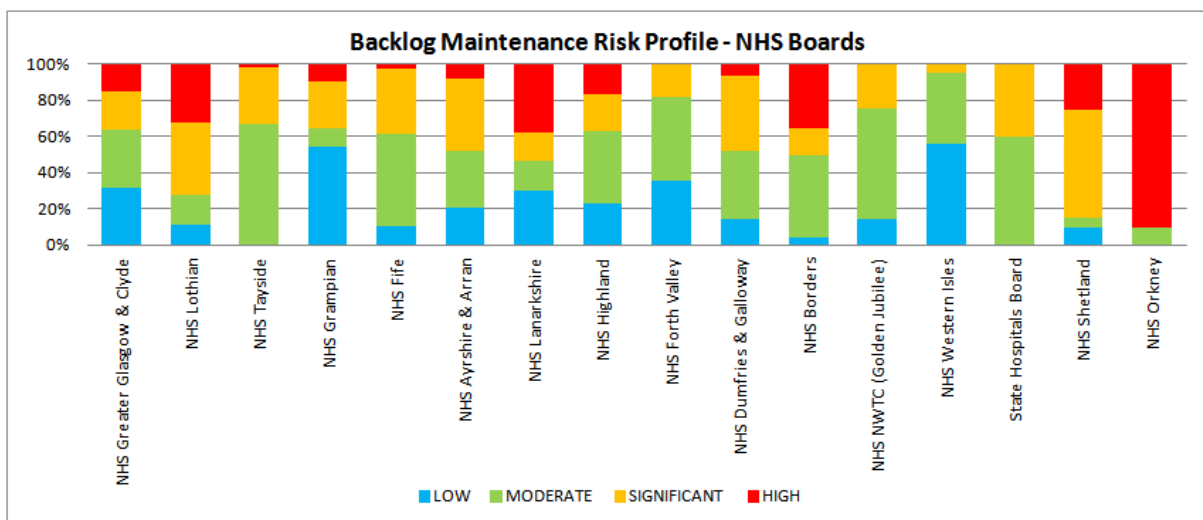

The earlier pie chart expressed the total amount of Backlog Maintenance Cost per NHS Board whereas the following chart shows the average backlog maintenance expenditure requirement per unit of total building floor area for each NHS Board.
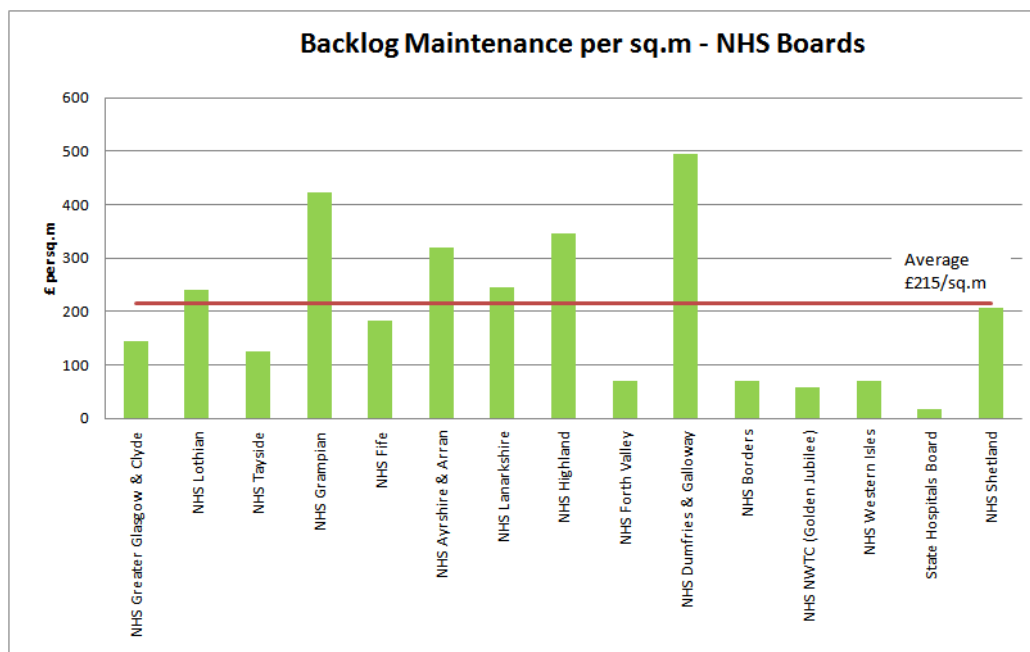
The average backlog expenditure per sq.m shown in the above chart is based on the total building floor area, whereas in practice it can be expected that the majority of backlog will be associated with the areas of poor physical condition (condition C and D). Hence, the backlog cost in a particular area that is in poor physical condition may well be considerably in excess of the average shown in the above chart.

It should also be recognised that around 12% of the current backlog maintenance expenditure requirement is in buildings which are classified as "non-clinical" and will have little impact on the patient's healthcare experience. An analysis of this by NHS Board is shown in the chart below.

Proportion of Backlog Maintenance between Clinical & Non-Clinical Spaces - NHS Boards
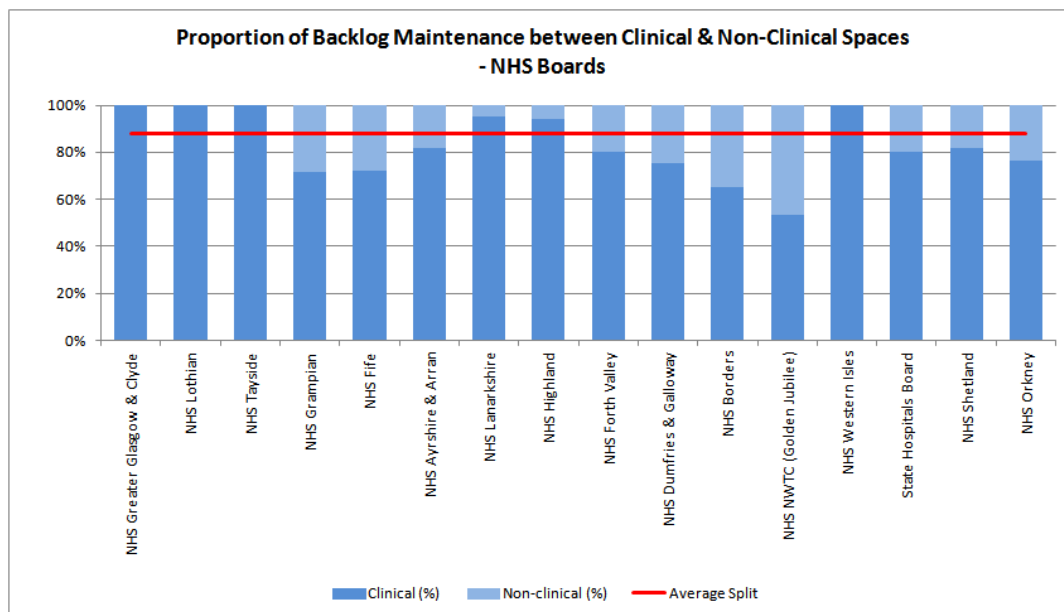
Note: not all NHS Boards have provided a split between Clinical and Non-clinical therefore the real 'Average Split' is likely to be even lower.

Approximately 45% of the total backlog maintenance expenditure identified is high or significant risk clinical space. This includes property identified for disposal.

NHS Boards are already targeting high and significant risk clinical backlog maintenance through planned maintenance and re-provision plans outlined in their PAMS. Overall, Scottish Government budgeting levels should be sufficient to reduce existing high and significant clinical backlog maintenance levels for retained property to manageable levels over the next five years.

For lower risk backlog maintenance and non clinical space, Scottish Government will work with NHS Boards to develop detailed long term plans for rationalisation and disposal of surplus, unsuitable, poor quality properties, and life cycle planned maintenance plans for retained property. These will be updated annually as part of the PAMS update and reviewed more formally through the LDP process.

## Space utilisation and functional suitability

Accommodation space has a direct relationship with cost. The more space that is provided the more ownership and occupancy related costs will be incurred. The aim, therefore, is to

hold only that space which is needed to support the delivery and support of effective and efficient service delivery. Under utilisation of space incurs wasted financial resources, whereas under provision of space can result in ineffective and/or inefficient working practices and poor clinical outcomes.

The following chart shows the proportion of each NHS Board's estate that is reported as being fully utilised.
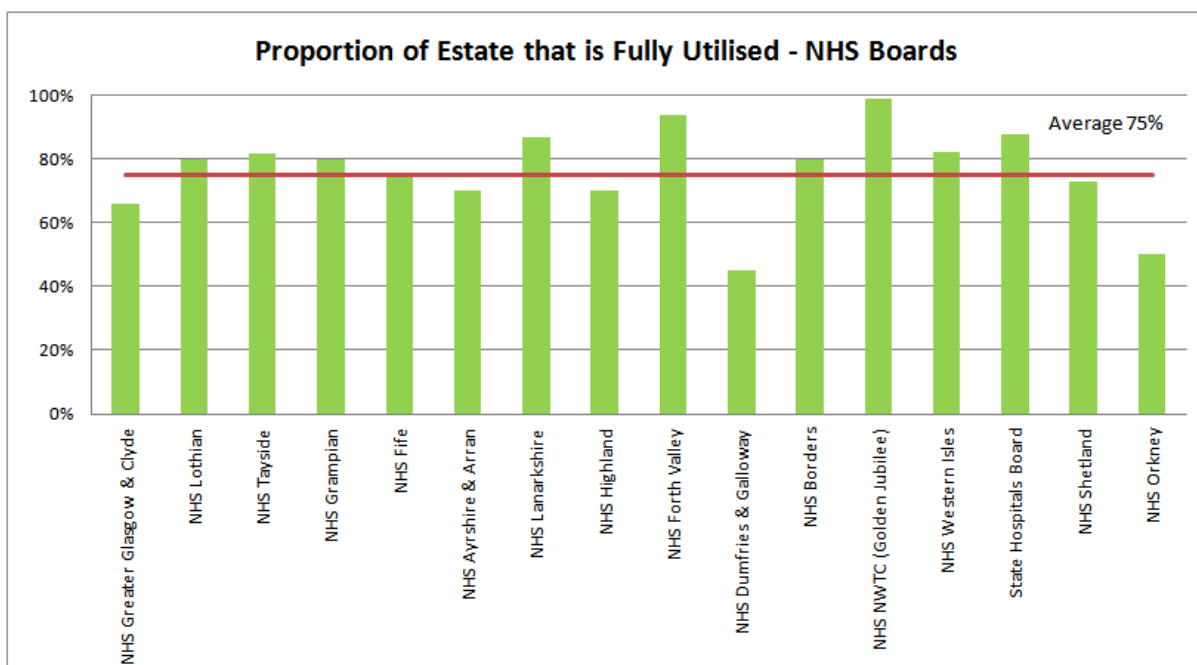
The chart below shows, in comparison with full utilisation, the proportion of each NHS Board's estate that is reported as empty, under used and overcrowded.
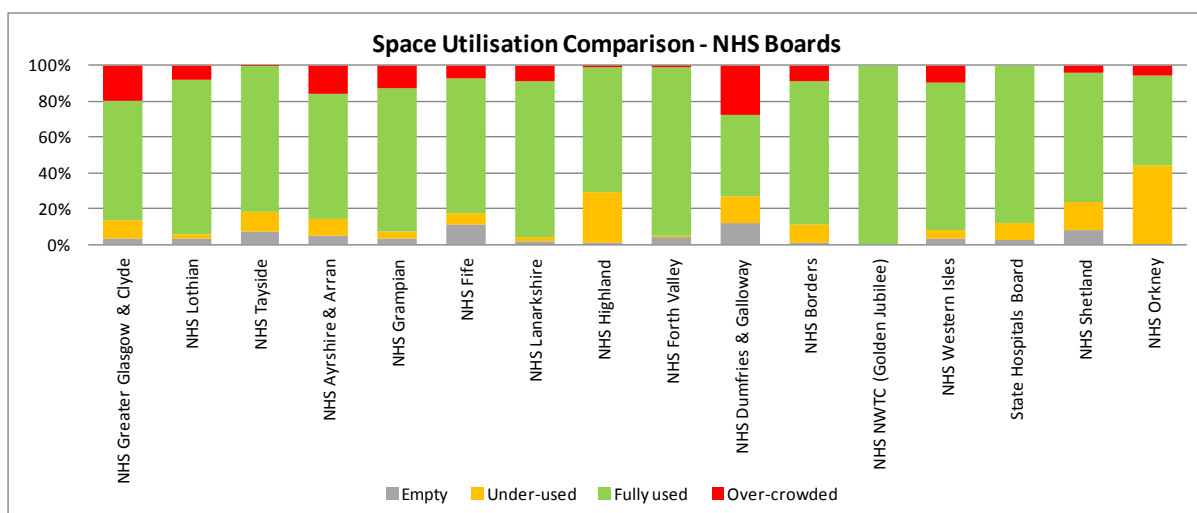
The under utilisation of accommodation across NHS Highland and NHS Orkney reflects the challenges faced from such a geographically diverse area and the need to maintain and provide critical healthcare facilities in locations with relatively low population masses

The estate also plays an important role in supporting the effective and efficient delivery of services. Poor functional suitability often results in inefficient working practices, increased

staffing levels and poor clinical outcomes. Therefore, it is an important component of the organisation's overall performance. The proportion of the estate reported by NHS Boards as being functionally suitable (category A or B) is shown in the following chart.

Proportion of Estate with Functionally Suitable Accommodation (A or B)
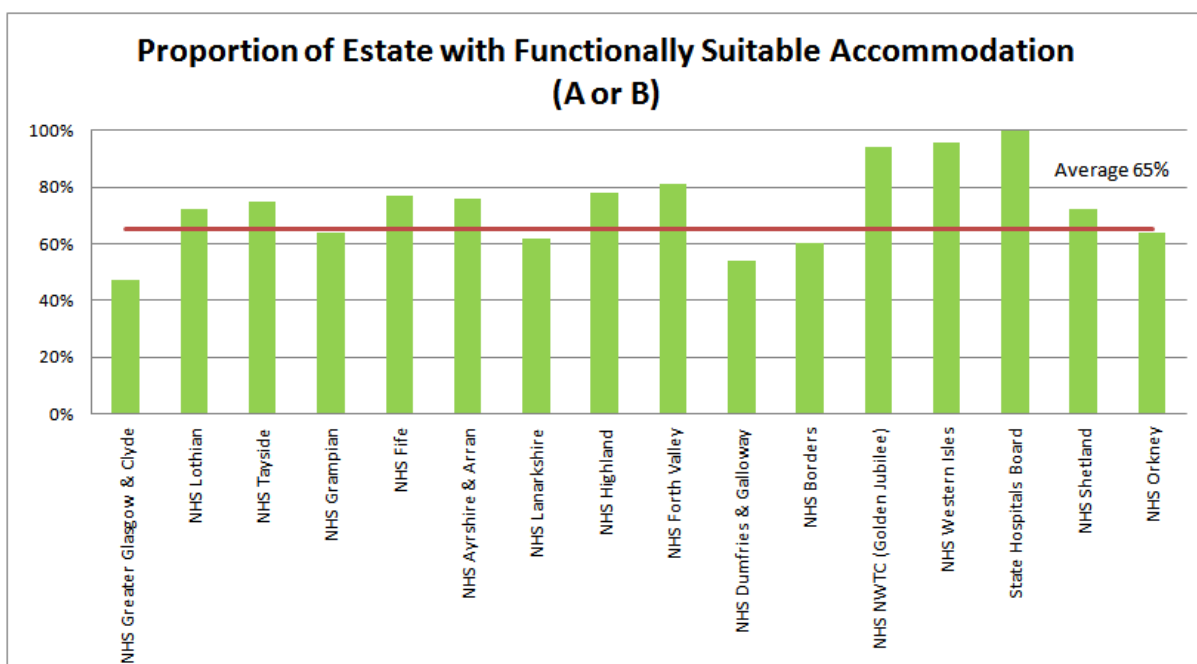

The chart above indicates a relatively good level of performance since it shows that approximately 65% of all accommodation is reported as functionally suitable (a 3 percentage point improvement on 2011 status).

NHS Boards are currently reviewing their data and performance on space utilisation and functional suitability as part of the PAMS development process.

Patient Satisfaction Survey Results relevant to Premises

Better Together is Scotland's patient experience programme, using the public's experiences of NHSScotland to improve health services. One of the key elements it is currently focussed on is the Inpatients Patient Experience Survey 2011. This asked a range of questions about people's experiences of staying overnight in a Scottish hospital and included a particular question that was relevant to the condition and performance of the hospital estate, namely "Q.13 *Overall, how would you rate the hospital environment*?" The following chart shows the results of the response to this question for each NHS Board:

Positive Patient Opinion on Hospital Environment
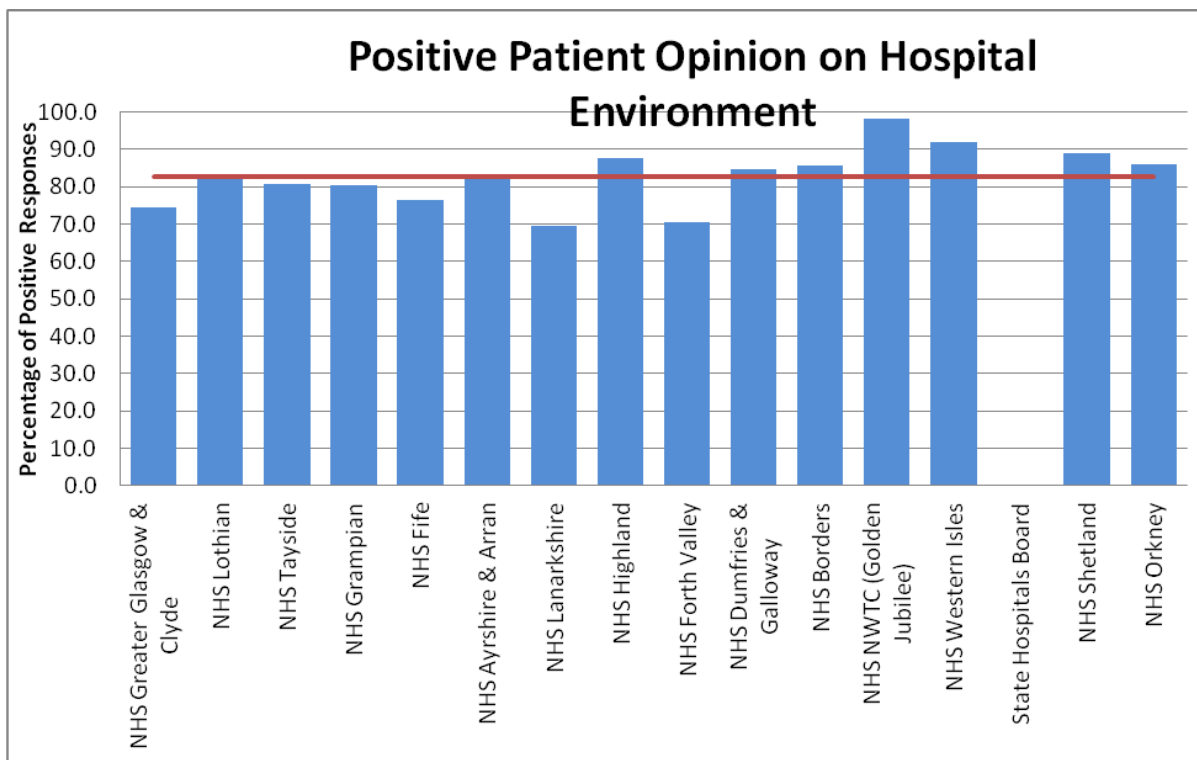
Note: No data is available for the State Hospital Board

The results are generally positive across all NHS Boards, however, it needs to be recognised that these results are based on only one question and, therefore, should not be taken as indicating overall patient satisfaction in NHSScotland premises. An enhanced question is required to assess patient and public opinion of the estate and facilities services covering:

- Accessibility for able and disabled patients and staff
- Signposting and user friendliness of building spaces
- The internal visual, aural and thermal built environment
- Privacy and dignity
- Patient and staff opportunities to control comfort
- Access to nature and outdoors
- Facilities services – cleanliness, catering, portering etc

Performance Improvement of Property Assets

The following chart provides a comparative overview of performance improvement in property assets between 2011 and 2012:

Performance Improvement of Property Assets between 2011 & 2012 for NHS Boards

Key Performance Indicators
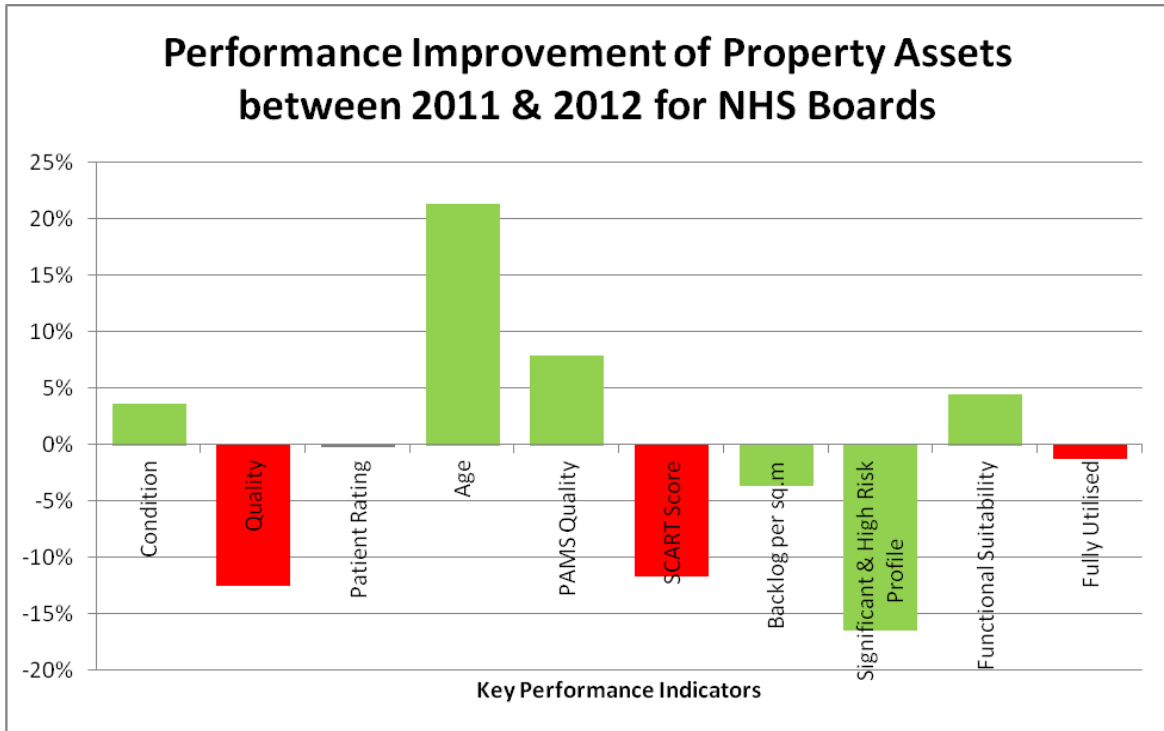
Note: green bars above the horizontal indicate a positive improvement whereas a red bar below the horizontal indicates a performance reduction

The above chart highlights performance improvement in several key indicators; such as property condition, age, quality of PAMS, backlog maintenance and functional suitability. The main focus for NHS Boards over this year has been estate rationalisation and reduction in backlog maintenance and these positive results reflect the good progress made on these initiatives. 2011-12 has also seen a significant re-appraisal of the condition and performance of property assets, including verification of existing data. This has also had an impact on the above results and can explain some of the further variation in performance results between 2011 and 2012 (particularly the reduced performance scores for Quality, SCART score and Fully Utilised).

Condition and Performance of Special NHS Boards' Property Assets

The information presented in this section of the annex relates to the following 6 Special NHS Boards:

- NHS National Services Scotland.

- NHS Education for Scotland.

- Healthcare Improvement Scotland.

- NHS Health Scotland.

- Scottish Ambulance Service.

- NHS 24.

Together, their combined estate accounts for approximately 145,000 sq.m of accommodation, as shown in the chart that follows:
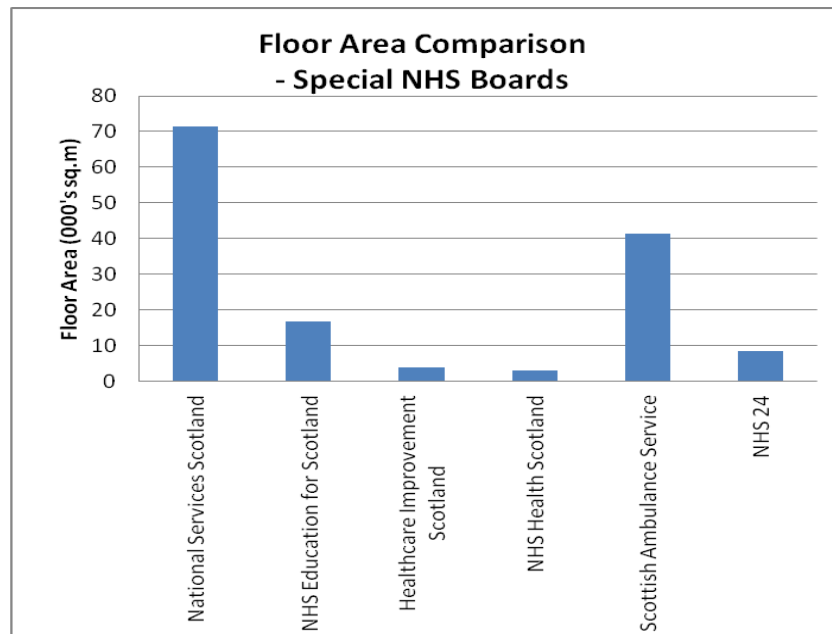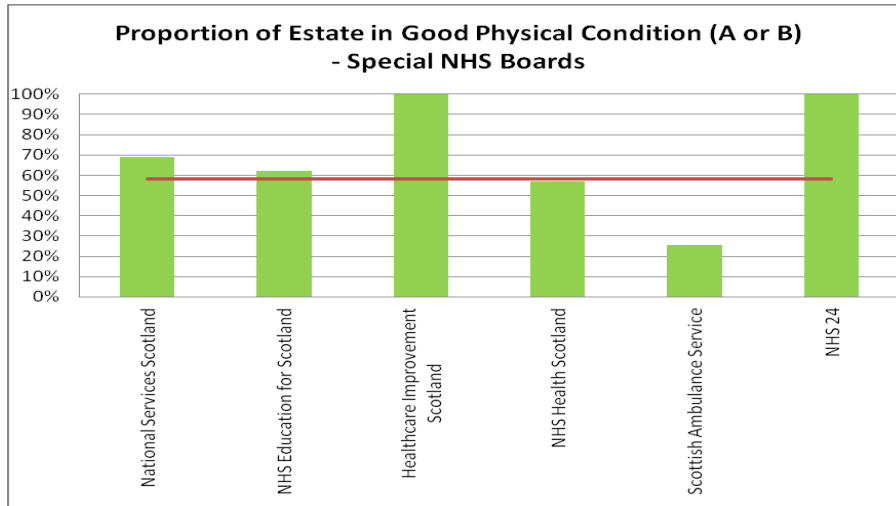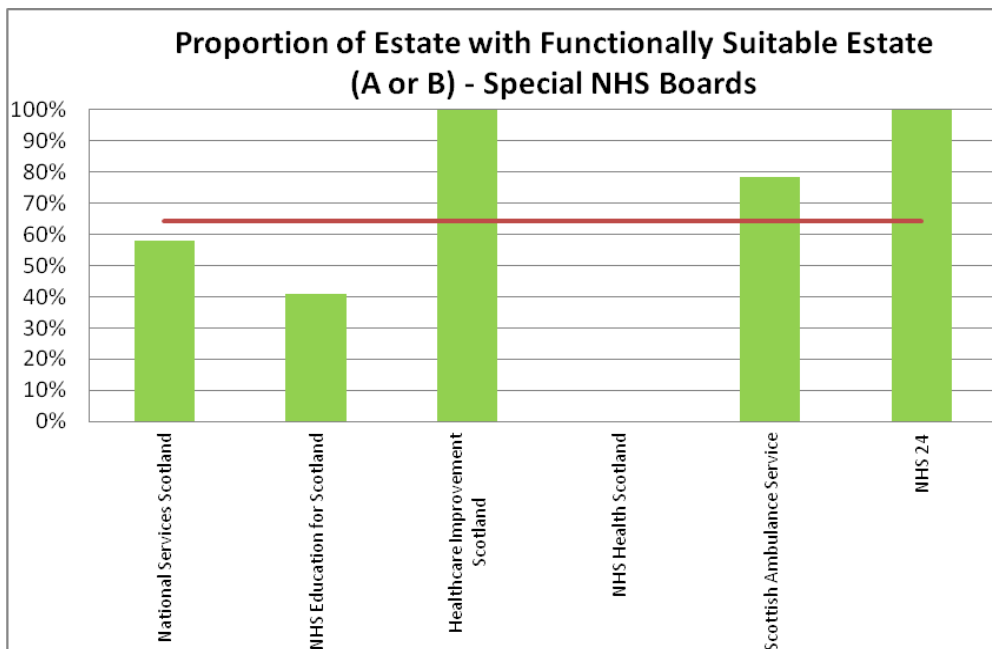
Condition and Performance

The physical condition of these properties is slightly poorer than that of the NHS Boards, with only 58% in good physical condition (category A or B), compared with 71% for the NHS Boards, as shown in the chart below:

Proportion of Estate in Good Physical Condition (A or B) - Special NHS Boards

A bar chart showing the proportion of estate in good physical condition for Special NHS Boards. The vertical axis ranges from 0% to 100% in 10% increments. A red horizontal line sits at approximately 58%. The bars are:
- National Services Scotland: ~68%
- NHS Education for Scotland: ~61%
- Healthcare Improvement Scotland: 100%
- NHS Health Scotland: ~57%
- Scottish Ambulance Service: ~26%
- NHS 24: 100%

The functional suitability of these properties is similar to that of the NHS Boards, with 64% being functionally suitable, as shown in the chart below:

Proportion of Estate with Functionally Suitable Estate (A or B) - Special NHS Boards

A bar chart showing the proportion of estate with functionally suitable estate for Special NHS Boards. The vertical axis ranges from 0% to 100% in 10% increments. A red horizontal line sits at approximately 64%. The bars are:
- National Services Scotland: ~58%
- NHS Education for Scotland: ~41%
- Healthcare Improvement Scotland: 100%
- NHS Health Scotland: 0%
- Scottish Ambulance Service: ~78%
- NHS 24: 100%

Note: NHS Health Scotland report that 100% of their estate is in Category C (unsuitable) for Functional Suitability

The space utilisation of these properties is similar to that of the NHS Boards, with 72% of accommodation being fully utilised, as shown in the chart below:

Proportion of Estate that is Fully Utilised - Special NHS Boards

Bar chart showing:
- National Services Scotland: 60%
- NHS Education for Scotland: 85%
- Health Improvement Scotland: 100%
- NHS Health Scotland: 55%
- Scottish Ambulance Service: 82%
- NHS 24: 100%

(A horizontal reference line is shown at approximately 72%.)
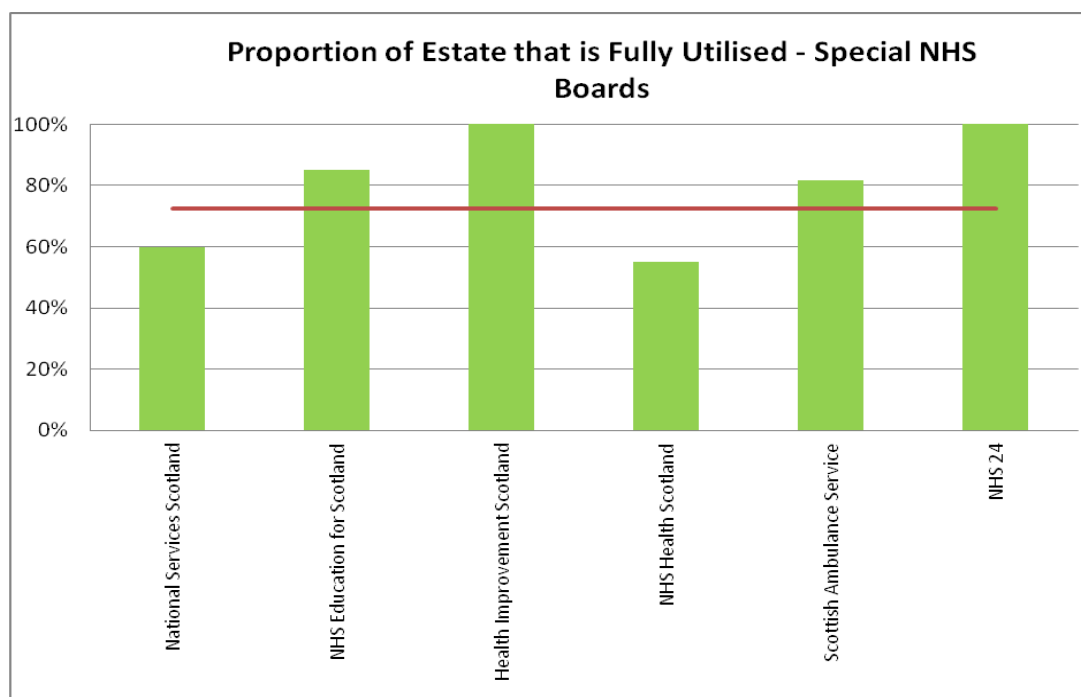
Special NHS Boards – Office Accommodation

Any examination of the NHSScotland estate needs to recognise that much of the property occupied by the Special NHS Boards is office accommodation which is quite different in form and functionality from the majority of the accommodation occupied by the NHS Boards. An example of this is the tenure status of occupied accommodation where there is much greater use of leased office accommodation in the Special NHS Boards.

All Special NHS Boards recognise the importance of rationalising their estate to maximise efficiency and reduce the number of Special NHS Board properties. Special NHS Boards are currently focusing on maximising the utilisation of Meridian Court in Glasgow and Gyle Square in Edinburgh which will have a significant impact on the overall amount of leased properties held.

Whilst the Special NHS Boards are an essential and integral part of NHSScotland, their office estate has more in common with the wider civil and government estate that is occupied by government departments and agencies. This very large public sector office estate also has much in common with the extensive office estate that is occupied by a wide range of private sector bodies and organisations.

Over recent years the Special NHS Boards have made significant progress on introducing new ways of working, flexible working and workplace redesign. In particular, NHS National Services Scotland (NSS) has done extensive measurement of space efficiency and costs

across its own large and diverse office estate as part of implementing its Property Strategy which is focused on:

- Providing well designed and efficient space which is flexible towards embracing changing working practices and new technology

- Maximising the opportunity for staff to develop and deploy their knowledge, skills and personal qualities creatively to add value to the business and services

- Achieving synergies from shared use of accommodation and support services.

Case Study 9 in this report describes an exemplary office refurbishment project recently completed by NHS National Services Scotland.

An NHSScotland National Office Performance Framework has now been developed which will enable the performance of the Special NHS Board's office accommodation to be measured and monitored on an annual basis as part of this report. It is similar to the framework used for the NHS Boards but KPIs have been developed which are relevant and specific to office accommodation and facilities services. This framework will be populated and presented in the 2013 State of Assets and Facilities Report.

It should also be noted that within their total estate the NHS Boards also have significant amounts of office accommodation which benefit from similar best practice arrangements as those in Special NHS Boards. Work is in hand with a number of NHS Boards to further review their office accommodation in line with the UK Government standard benchmarks for office accommodation.

Annex C
Review of Energy Performance

A reduction in energy consumption will make a significant contribution towards the Scottish Government's aim to reduce greenhouse gas emissions as described in the Climate Change (Scotland) Act 2009. A reduction in energy consumption is also very important in the context of increasing fuel costs and the impact of the resulting cost increases on the delivery of core NHSScotland services. The current cost of energy for NHSScotland's hospitals is *circa* £70 million per annum. Considerable overall energy price rises are expected over the next decade and no change in the current levels of energy consumption in the NHSScotland would likely to see a doubling of energy costs to around £140 million per annum by 2020. Hence, energy performance is a key issue which will be monitored and reported on annually through this NHSScotland State of Assets and Facilities Report.

As in previous years the 2010-11 Annual National Environment Report continued to report that NHSScotland has a good track record of reducing energy consumption year on year measured over the last 25 years. The climatically adjusted energy consumption for 2010-11 was 3.1% down from the previous year making a cumulative reduction of 45% in energy consumption for the last 25 years.

A new HEAT target (Phase 2) came into operation from April 2010 which requires a year-on-year energy efficiency improvement of 1% on all energy sources based on an overall improvement by 2050 of 33% (or one third) on the comparative performance as at 2009-10 base year. This equates to a 10% reduction in energy performance by 2020.

In previous years, the Key Performance Indicator (KPI) used to report energy consumption in hospitals has been $GJ/100m^3$ (heated building volume). However, most other non-domestic building types report energy consumption as kWh/m^2 and this is the KPI suggested in the new Public Sector Sustainability Reporting Guidance issued by the Scottish Government in January 2012. It is proposed to use this form of KPI in future years for NHSScotland reporting.

During 2010/11, the average energy performance across NHSScotland hospital estate was 473 kWh/m^2 (61 $GJ/100m^3$)[2]. However, it would be misleading to recommend an absolute target KPI for all hospitals based on this figure. The NHSScotland estate is diverse, having a wide range of hospital types, such as large teaching hospitals and small community hospitals, and from widely varying construction periods, i.e. from the turn of the previous century to today.

There is also a HEAT target (Phase 2) in relation to carbon dioxide (CO_2) emissions. This is a 3% year-on-year reduction in CO_2 from fossil fuels, based on a 2009/10 baseline. In 2010/11, the climatically adjusted CO_2 emissions from fossil fuel sources were 4.6% down from the

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[2] NHS Estates 2010-11 energy data provides an average value for NHS England of approximately 423 kWh/m^2 (58$GJ/100m^3$)

previous year. Going forward, there is a need to report on all CO_2 emissions from NHSScotland estates and this will be reflected in reporting for 2011/12.

The table below shows the average energy performance KPIs for hospitals for the different NHS Boards and Special NHS Boards for the last 2 years and future values if the present energy reduction targets are carried forward and met.

NHS Board or Special NHS Board	Hospital KPIs		
	Average kWh/m^2	Average kWh/m^2	Average kWh/m^2
	2009-10	2010-11	10% reduction against 2009-10
NHS Ayrshire and Arran	366	360	329
NHS Borders	424	435	381
NHS Dumfries and Galloway	592	558	533
NHS Fife	429	422	386
NHS Forth Valley	533	464	480
NHS Grampian	517	523	465
NHS Greater Glasgow and Clyde	500	496	450
NHS Highland	434	429	391
NHS Lanarkshire	487	482	438
NHS Lothian	501	492	451
NHS Orkney*	504	552	454
NHS Shetland	408	387	367
NHS Tayside	414	405	373
NHS Western Isles	582	597	524
National Waiting Time Centre (Golden Jubilee National Hospital)*	721	736	649
The State Hospital Board for Scotland*	605	740	544
OVERALL AVERAGE	480	473	432

Note that Boards marked with an asterisk (*) have only one hospital site. KPIs for these Boards may be misleading as they are being compared to Boards with a mixture of hospital sites.

It should also be noted that the large increase in KPI for the State Hospital Board for Scotland relates to major construction work being undertaken on that site during 2010/11. Future consumption figures for this site are expected to be substantially lower as the new buildings have been built to a much higher energy performance specification.

As evidenced by the 1.5% KPI reduction from the 2009-10 base year, Boards continue to produce savings against a backdrop of national resource constraints. Energy prices continue

to rise above inflation levels and are beyond the control of Boards. Therefore, whilst we expect energy consumption to continue to decrease, this may not be reflected in a similar reduction in energy costs.

Assuming all hospitals achieve their HEAT targets, there would be an average 10% reduction in energy consumption by 2020. Across the NHSScotland Estate, this would lead to a minimum annual reduction in energy expenditure of approximately £7million[3] per annum. As this is based on current utility costs, this saving would be expected to rise year on year. It should also be noted that the above figure does not include additional savings from reduced environmental taxes and levies (e.g. Carbon Reduction Commitment Energy Efficiency Scheme) and potential Renewable Heat Incentive (RHI) and Feed-in Tariff (FiT) revenues.

Achieving these challenging energy reduction values will require significant investment in energy efficiency improvements across the NHSScotland estate.

The table below shows the potential cost savings(energy costs only) that could be achieved by each Board based on a 10% reduction in energy use.

NHS Board or Special NHS Board	10% reduction
NHS Ayrshire and Arran	£330,844
NHS Borders	£111,562
NHS Dumfries and Galloway	£213,460
NHS Fife	£379,284
NHS Forth Valley	£199,125
NHS Grampian	£753,803
NHS Greater Glasgow and Clyde	£2,151,965
NHS Highland	£355,071
NHS Lanarkshire	£412,272
NHS Lothian	£1,088,462
NHS Orkney	£20,236
NHS Shetland	£20,409
NHS Tayside	£754,644
NHS Western Isles	£44,874
National Waiting Time Centre (Golden Jubilee National Hospital)	£171,290
The State Hospital Board for Scotland	£52,007
TOTAL	£7,059,308

Energy reduction projects currently under consideration across the NHSScotland estate include:

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[3] Energy costs do not remain static and have shown a tendency to increase year on year. Therefore, all cost and cost saving values will change over time.

1. Conversion of existing oil-fired heating systems to alternative fuel sources, e.g. natural gas and biomass. As well as affording carbon and cost savings, this would also increase security of fuel supply, particularly at off gas grid sites. This has the potential to save approximately £3 to £4million per annum, and would require around £10 to 12million of investment.

   This could reduce the present KPI by c 39 kWh/m^2.

2. A review of other heating equipment across NHSScotland, followed by a prioritised programme of replacement or refurbishment. This includes Combined Heat and Power (CHP), high-efficiency boilers, burner units and controls, and alternative fuels and energy sources. This has the potential to save approximately £20million per annum and would require approximately £180million in investment.

   This could reduce the present KPI by 36 kW/m^2.

3. Upgrading of dated inefficient lighting installations to modern counterparts and controls. This has the potential to save around £3million per annum and may require approximately £12million in investment.

   This could reduce the present KPI by 10 kW/m^2.

4. Review of existing motors and drives, and installation of modern high efficiency motors, drives and controls where appropriate. This has the potential to save c £5million per annum and may require c £20million in investment.

   This could reduce the present KPI by 16 kW/m^2.

The 4 projects above are almost exclusive of one another; therefore the potential energy savings could be directly cumulative. In combination the projects (if implemented in full) have the potential to reduce the present average KPI by c100kWh/m^2 (from c 473 to c 372 kW/m^2), an overall improvement of c 22.5% on 2009-10 figures. At an overall cost of c £224million, and with potential savings and earnings of c £32million per annum, a payback of c 7 years could be achieved. Savings are exclusive of any potential RHI and FiT revenue, and of any reductions to environmental taxes and levies.

Project reference	KPI reduction kWh/m^2 pa	Financial saving £m	Potential Cost £m
1	39	4	12
2	36	20	180

3	10	3	12
4	16	5	20
	Total	32	224
	Simple payback		7 years
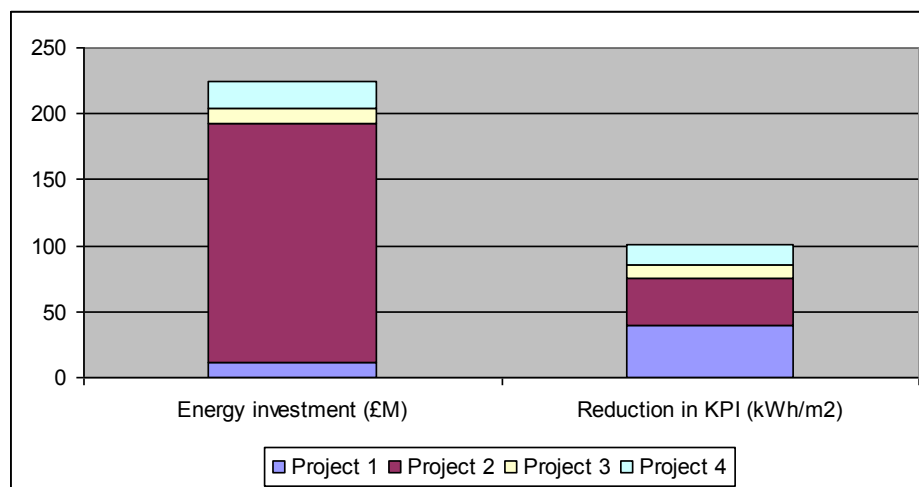
In addition, the following items are kept under constant review:

- Superior energy performance requirements for all new builds and refurbishments, in line with NHSScotland sustainability aims;

- Installation of appropriate renewable energy and low carbon designs, such as wind turbines in rural areas, heat pump techniques, and combined heat and power systems where they are suited to healthcare environments;

- Alternative renewable and low carbon energy sources to increase security of fuel supply and flexibility.

- Potential Community integration projects to alleviate fuel poverty and inequality, such as District Heating and Smart Grid techniques;

- Application of new and innovative techniques as they emerge onto the market (e.g. smooth surfaced LED lighting, and phase change materials) that are suitable for use in healthcare environments;

- Continuation of Board energy and carbon management initiatives, such as: proactive energy monitoring and targeting, keeping staff informed, and instilling good energy housekeeping habits.

Given the continuing trends in clinical practice, particularly less hospitalisation and shorter lengths of stay, increasing care at home and self care, Boards can be expected to rationalise and reduce the size of their hospital estate over the next decade with consequential energy expenditure savings.

Annex D
Review of Waste Services

Background

This is the first time that waste has been included in the State of the NHSScotland Assets and Facilities Report, and it is likely to be the subject of increasing focus and attention in the coming years. The Scottish Government wishes to track waste performance carefully, seeking improvement for a number of reasons. These include needing effective responses to the Waste (Scotland) Regulations 2012 and recent sustainability policy requirements, as well as to reduce costs. NHS Boards' waste management costs amounted to just over £10m in 2010-11, with 'cost per consumer week' increasing by some 25% from the previous year.

The Government's vision is for Scotland to be a zero waste society "where waste is seen as a valuable resource, valuable materials are not disposed of in landfills, and most waste is sorted for recycling, leaving only limited amounts to be treated". Adoption of the waste hierarchy is at the heart of the Zero Waste Plan (June 2010) and the 2012 Regulations to improve waste performance. The five principles of the hierarchy are: (a) prevention; (b) preparing for re-use; (c) recycling; (d) other recovery, e.g. energy recovery; and (e) disposal.

National Performance Framework Target and KPI for waste

To measure NHSScotland's performance, the 'waste cost per consumer week' KPI was derived solely from Cost Book data under code 430 (domestic waste uplift and disposal costs, and 'hospital incineration' costs). More detailed codes are also given: ash removal (5573); refuse disposal (5574); trade effluent charges (5576) and clinical waste (5577) The terminology here, and scope, no longer reflect current waste practice or reporting, and only cover the 250 hospitals in the Cost Book. These issues may in part explain the differences between eMART data for the same period. Accordingly, recommendations will be made to update the Cost Book waste parameters.

Benchmarking

In 2011, the NHSScotland Waste Management Steering Group (WMSG) recommended revision of the eMART waste KPIs, to align reporting with regulatory requirements and current procedures in Boards. Previously, the KPIs had captured 5 elements: clinical waste (an out-of-date term), recycled waste, WEEE, skip waste and domestic waste. The new format includes some 38 KPIs in 6 main groups: healthcare (yellow, orange and red stream) wastes; source-segregated domestic waste for recycling; and un-segregated domestic waste sent either to a Materials Recovery Facility, or to landfill or other treatment. Key advantages are that the new approach can account, not just for hospital waste, but for all wastes produced on a Board-wide basis; it also removes some of the inaccuracies of site-based reporting where waste is transferred, often from a range of small sites, to a bulking station.

The KPI recommendations were approved by the SFG and the Benchmarking Programme Board. The new format was used for the first time to capture the 2011/12 waste data. That

data will be used as the basis for the 2013 SAFR, and will inform updating of the Cost Book categories. This will help to consolidate a new and more accurate baseline from which to monitor waste management performance in future. Boards will now complete quarterly eMART returns from 2012/13 onwards, using the new format to inform the benchmarking process.

Finally, the new reporting arrangements reflect the fact that waste may generate some income streams for Boards, as quality recycled materials have some market value, e.g. cardboard, metals, etc. The relevant KPIs will be brought to the attention of the Cost Book User Group.

Waste (Scotland) Regulations 2012

The Waste (Scotland) Regulations 2012 are detailed but, broadly, require:

- Businesses (including hospitals) to present dry recyclable materials (glass, metals, plastics, paper, and card/cardboard) for collection from 1 January 2014
- Businesses (temporarily excluding hospitals[4]) to ensure separate collection of food waste from 1 January 2014
- Key recyclables (plastics and metals) to be removed from mixed waste prior to incineration (from 1 July 2012)
- Local authorities to provide householders with a collection service for dry recyclables (from 1 January 2014) and food waste (from 1 January 2016)
- Materials collected separately for recycling to be banned from going to landfill or incineration (from 1 January 2014)
- Biodegradable municipal waste to be banned from going to landfill, from 1 January 2021
- Food waste disposal to be banned from entering the public drain or sewer from 1 January 2016 (potential implications for hospital sluices and food macerators)
- That the quality of recyclate is not to be compromised by poor segregation or mixing with other wastes, and so as not to hamper further recycling.

Industry's response, particularly that of the waste services sector, is vital to help NHSScotland meet its responsibilities under these regulatory requirements.

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[4] Hospitals, as defined in section 108 of the National Health (Scotland) Act 1978(b), and businesses producing less than 50kg of food waste per week, are exempt from this requirement between 1 January 2014 and 31 December 2015

The Waste Management Steering Group (WMSG) and Zero Waste Scotland (ZWS)

The WMSG represents all NHS Boards on waste management issues and has a key coordinating and support role, including the development of technical guidance and training. It ensures that Boards are not left to cope alone with the complex range of strategic waste management issues and compliance requirements. Recently, the WMSG's role has been strengthened by engaging in partnership with ZWS, as part of the ZWS health sector support programme. ZWS is recruiting staff and initiating projects to:

- build on recent work understanding the amounts, origins and composition of healthcare and other wastes arising from NHS Boards;
- further develop understanding of what the Regulations will mean for NHSScotland
- identify, wherever possible, an indication of associated infrastructure costs required to implement and comply with the Regulations, to allow Boards to develop investment plans and business cases for Scottish Government funding
- clarify the operational and procedural changes required, to help improve procedural guidance (and associated training) for NHS staff, principally through revisions to Scottish Healthcare Technical Note 3 (SHTN3).

Waste management recommendations and NHSScotland investment planning

One key purpose of the State of the NHSScotland Assets and Facilities Report, and benchmarking, is to take account of a range of issues from performance and risks to legal compliance and other requirements, and then identify and analyse trends leading to possible improvements.

The results of the WMSG and ZWS work will be disseminated at the first opportunity. Whilst it is too early to quantify the investment costs required in waste management-related infrastructure, procedural guidance and staff training, the new Regulations will mean, almost inevitably, a focus on the range of bins and other receptacles of appropriate sizes required for effective source-segregation and collection of the various waste materials specified. These, the 'food waste to drain' ban, and segregation of food waste will present operational and financial challenges for all Boards at wider roll-out where applicable across the whole estate.

New national domestic waste contract

Earlier in 2012, NSS National Procurement established a national framework contract for the provision of municipal/domestic waste services. Boards are able to take advantage of this contract, which will run for two years prior to review.

Annex E

Review of PPP/PFI Facilities Management Contracts

One of the areas identified by Health Facilities Scotland for examination is the operational management of the current PPP/PFI contracts across Scotland.

Contracts have been entered into for facilities management services as part of PPP/PFI contracts since the mid 1990s. The terms and conditions of early contracts are inconsistent and are being managed by Boards at a variety of levels. To date there has not been coordination of the management of these contracts at a national or regional level.

At present there are 26 contracts across 9 NHS Boards covering a variety of services, the value of these contracts is £963m. This figure will, depending upon the contract, include the unitary charge (the cost of the buildings etc), rates, utilities and facilities management cost. A significant proportion of this figure will, due to the nature of the contracts be fixed however opportunities may exist around the semi-fixed and variable costs to, in conjunction with the contractors, explore the delivery of a high quality more cost effective service.

In order to extract best value and increase the quality delivered through these contracts there will be closer cooperation across the service, a greater sharing of experience and a more consistent approach to the management of these contracts. This will ensure the services provided by the contractors, on behalf of the NHS in Scotland are patient centred, deliver a consistent high quality and are value for money.

Working closely with the Scottish Futures Trust a detailed analysis of the current contracts and their management will be undertaken, and best practice will be identified and shared.

Annex F
Transport and Fleet Review

At present there are up to 28 individually managed fleets within NHSScotland and it is estimated that collectively, these fleets total approximately 11,000 vehicles. The operating costs (Revenue) of the combined fleet are circa £56 million/annum.

The NHSScotland fleet of vehicles has been funded from both capital and revenue budgets, depending upon the funds available. There are no standard commercial technical specifications for commonly used vehicles, each Board specifying and procuring vehicles and their maintenance to their own specification.

All NHS Boards and some of the Special NHS Boards have their own fleet management operations and there is little evidence of collaborative working at present, other than the use of some central procurement contracts, which include leasing, fuel cards and insurance. All but the Scottish Ambulance Service outsource their maintenance, some NHS Boards include it as part of their Contract Hire arrangements, some subcontract to Scottish Ambulance Service and other Government workshops, and others have separate arrangements with commercial garages.

In order to identify the potential synergies to be gained from greater collaboration of fleet management within NHSScotland, both structural and functional, a scoping study is being carried out at a national level. This study will focus at a strategic level and will map the business processes inside each NHS Board's fleet and transport operations. All gathered data will be evaluated and analysed, and option appraisals will be generated, which will identify the opportunities and benefits that may exist through the reduction of variation and greater collaboration between NHS Boards and where appropriate with other public sector bodies. The overall aim will be maximum efficiency without compromising operational effectiveness and where possible improve the quality of service to patients.

One of the key recommendations from the report will be around the strategic procurement of the NHSScotland fleet of vehicles, agreed national specifications for the various classes of vehicles and a structured approach to the market which will deliver the maximum benefit from the market by the use of coordinated national procurement processes. This would consider the option of capital purchase against the cost of leasing.

Annex G
Facilities Shared Services Review

Introduction

In order to improve the quality and efficiency of services the Scottish Government's Quality and Efficiency Support Team (QuEST) is working with NHS Boards to provide a national approach to the efficiency and productivity agenda. Shared services is one of seven work streams within this portfolio of work.

The sharing of services by public sector organisations is increasingly recognised as an effective method of improving the quality and efficiency of services while reducing costs. Implemented well, the work has significant transformational potential: simplified and standardised service delivery, improved customer service, strengthened governance arrangements and opportunities to share good practice between comparable organisations. A robust and formally constituted governance structure has been established within NHS Scotland and is tasked with delivering the high level objectives set out in the Efficiency and Productivity Framework. The Shared Services Programme Board is responsible to the NHS Efficiency and Productivity Portfolio Board of the Scottish Government for shared services across all aspects of non-clinical support service.

The Facilities Shared Services Programme Board forms part of this governance structure and is tasked with, improving the quality and efficiency of services delivered to patients and other customers, improved governance, resilience and sustainability of services. Traditionally, services have been structured and managed by Boards in the geographic areas for which they are responsible. This has not always resulted in the most efficient use of time and resources.

While there are a number of good examples of Boards sharing services or facilities with other Boards or public sector organisations. The decision to co-locate or share resources is generally an operational decision which takes advantage of local circumstances and the need to deliver services more effectively and will only involve the service partners directly involved in a particular service.

The development of a more strategic approach to the delivery of shared services is crucial to optimising the revenue benefits and avoidance of inefficient capital and revenue spend.

Work Streams

Identified by Health Facilities Scotland, through the Strategic Facilities Group, and ratified by the Facilities Shared Services Programme Board, an initial five areas of opportunity have been identified. These work streams are led by senior managers with significant experience in service delivery, supported by the Boards, QuEST and where appropriate the Scottish Futures Trust.

Utilising the existing advisory structures which support the Strategic Facilities Group the following areas of activity will be scrutinised and recommendations made to the service regarding the opportunities which exist to improve the quality and increase the efficiency the service.

PPP/PFI

The operational management of PPP/PFI contracts has been inconsistent. There are currently 26 contracts managed by 9 NHS Boards.

With support from The Scottish Futures Trust all contracts are being reviewed and current management arrangements assessed. All those involved in the management of PPP/PFI will be engaged in the process of review both at Board and national level in order to extract the maximum benefit from sharing best practice.

Contracts for facilities services as part of the PPP/PFI arrangements have developed over time and there is a need to examine early (first generation) contracts and establish a more consistent and strategic approach to their management.

Working with colleagues in National Procurement, The Scottish Futures Trust and those delivering the contracts on behalf of the Boards, maximise the benefit of existing and future contracts for the purchase of goods and services used by the PPP/PFI providers.

Capital Planning and Hard Facilities Management Manpower Review

The effective management of capital and revenue expenditure is vital to the long term delivery of high quality, effective and efficient clinical services. The management of capital and revenue budgets and projects has been the responsibility of each Health Board.

With the changing profile of capital and revenue funding there is potential for there to be inconsistencies in the distribution of staff, skills and the allocation of capital and revenue resources.

There will therefore be a review of the staff and skills available across the service and an examination of the synergies which exist within and across the service. The hub Territory Partnership Boards, Scottish Futures Trust and all relevant bodies will be involved in this process.

The estates function relies upon the technical knowledge and expertise of highly skilled and experienced staff. The age profile of this group of staff indicates a large proportion of staff with specialist skills will leave the service over the next 5/10 years. A close examination of the skill set necessary to deliver a safe, quality service that is available now and in the short, medium and long term will be carried out. Opportunities to share services and skills across the existing Board and public sector organisations will be explored and recommendations made on how to deliver services into the future.

Sterile Services

The provision of sterile instruments, on time and to the required standard is essential to the delivery of a safe, high quality service while meeting waiting time commitments.
The production of sterile instruments is governed by legislation and it is necessary to ensure the decontamination equipment and the environment used to process the equipment meets the necessary standards. This requires significant capital and revenue investment.
It is important that there is capacity in the system to meet all of the demands of the clinical service by optimising the available resource. By using the principles of simplifying processes, to make them more efficient, standardising, to remove inconsistency and sharing, to increase efficiency, sterile services will be reviewed and recommendations made regarding the strategic direction of the service.

Transport

The procurement and management of the NHSScotland vehicle fleet is undertaken in a variety of ways across NHSScotland with no consistent specification or standard being set. Data regarding the size and condition of the fleet, whether owned or leased, will be undertaken and a clear direction for the future procurement and management of this asset established. The availability of depots and workshops across the public sector will be examined and the shared use of these facilities considered.
Standard specifications and quantities of vehicles will be established to enable effective replacement of vehicles through a national procurement process. To maximise public sector benefit, common specifications can be shared with other agencies to increase the quantum of spend in this area.

Waste Management

Contracts for the uplift and processing of all significant waste arising from NHSScotland have been established, the majority on a national basis. However the Waste Scotland Regulations 2012 will fundamentally change the way in which waste is segregated, uplifted and processed with the aim being to remove the need to landfill waste.
The Waste Management Steering Group, working with Zero Waste Scotland, Scottish Government, the waste industry, local authorities and the service will develop strategies, including reverse logistics, source segregation etc to maximise the benefit of existing and yet to be developed services to ensure NHSScotland meets its obligations under the legislative framework and sustainability agenda set by the Scottish Government.

Soft Facilities Management Services

There is currently being undertaken a review of soft facilities management services including catering and laundry. There may be areas of these services which will lend themselves to the adoption of shared services across NHSScotland or the wider public sector.

Annex H
Strategic Review of Soft Facilities Management Services

Facilities management is the integration of processes within an organisation to maintain and develop the agreed services which support and improve the effectiveness of its primary activities. Facilities management encompasses multi-disciplinary activities within the built environment and the management of their impact upon people and the workplace.

Effective facilities management, combining resources and activities, is vital to the success of any organisation. At a corporate level, it contributes to the delivery of strategic and operational objectives. On a day-to-day level, effective facilities management provides a safe and efficient working environment, which is essential to the performance of any business – whatever its size and scope.

Within NHSScotland Soft FM is a distinct (but allied) set of services to Estates and are delivered across all NHSScotland sites and have a significant impact on the patient environment. Many of these services are linked directly with Estates services, often through the use of assets such as buildings, infrastructure and equipment.

Looking to the future

In recent years, a heightened awareness of the facilities management sector has been evident, driven by a number of factors including:

- Interest in outsourcing as a 'hot' management topic
- Heavy media coverage of PFI/PPP initiatives and
- Increasing attention being paid to the sector by the financial community

Facilities management is a vital strategic discipline because it translates the high-level, strategic change required by senior decision makers into day-to-day reality for people in their work or living space. Excellent facilities management can, amongst other things:

- Deliver effective management of an organisation's assets
- Enhance the skills of people within the facilities management sector and provide identifiable and meaningful career options
- Enable new working styles and processes – vital in this technology-driven age
- Enhance and project an organisation's identity and image
- Help the integration processes associated with change, post-merger or acquisition
- Deliver business continuity and workforce protection in an era of heightened security threats

Within NHSScotland significant change has taken place in Soft FM services as a result of Scottish Government initiatives such as the HAI Taskforce and Nutritional Improvement Programme. However, what has not been undertaken is a full and comprehensive NHSScotland wide strategic review of the basic systems and processes within Soft FM to ensure further quality improvement and that they remain effective and efficient. In particular, there is a need to draw on 'best practice' models from around the world to identify new practices and methodologies, to assess the potential for utilising relevant technological innovations to improve service effectiveness and efficiency and improve the overall patient experience. The full strategic review of Soft FM includes:

- Catering Services
- Linen and Laundry Services
- Domestic Services
- Portering Services
- Security
- Transport
- Retail

The review will be undertaken by Health Facilities Scotland with temporary support from external consultants during a number of the phases of the project. The outcomes of the review will be detailed within an options document provided to the Shared Services Board in 2013. This options paper will outline short, medium and long term options across the full range of facilities services and provide a fully researched 'shopping list' with financial modelling.

Over the past 12 months Health Facilities Scotland has been working with a systems design company to develop and implement an IT based data capture system to provide Facilities management benchmarking analysis across a range of FM services. This system is now providing benchmarking reports to Boards on a quarterly basis. As part of the benchmarking exercise, four high level KPIs are being developed for use in future reports. These KPIs will fall under the service headings of;

- Catering Services
- Domestic Services
- Estates
- Laundry

Successful organisations in future will approach FM as an integral part of their strategic plan. Those organisations that treat FM as a 'commodity overhead' will be at a significant strategic disadvantage.

Annex I
eHealth Strategy 2011-2017

The eHealth Strategy 2011-2017 provides NHS Boards with the opportunity to drive eHealth enabled improvements closer to the front line of service delivery and to align eHealth more closely with the NHSScotland Quality Strategy. Five new strategic eHealth aims have been developed and these will be the focus of activity over the next six years. They are: supporting people to communicate with NHSScotland; contributing to care integration; improving medicines safety; enhancing the availability of information for staff; and maximising efficient working practices. The eHealth Strategy aims to leverage the IM&T assets to support the quality improvements that NHSScotland has committed itself to through the Quality Strategy.

The potential of information technology to support and transform healthcare services is universally recognised. In Scotland, eHealth has a pivotal role in enabling a radical e-transformation in the way in which high quality integrated healthcare services are delivered efficiently and effectively to people of all ages across the country.

The focus on five strategic eHealth aims as an enabler of quality improvements in healthcare services across Scotland will have considerable implications for the way in which asset will be used to support service delivery in the future. Increasingly, patients and staff will focus on the use of IM&T assets rather than property assets to receive and delivery care. It also changes the way in which performance is measured. Boards' eHealth Plans will be aligned to LDPs and will include:

- benefits being maximised from IM&T assets that have been acquired during the previous strategy (2008-11);

- information and evidence on eHealth's contribution towards achieving the five strategic eHealth aims;

- promotion and implementation of good practice and successful local initiatives more widely;

- convergence of approaches to delivery in order to reduce duplication of effort and reduce cost;

- collaborative working between Boards and cross-border eHealth developments

Society is increasingly comfortable with self-service models of interaction and although face-to-face services have not disappeared, their dominance has been replaced by a much more diverse mix. Although NHS24 delivers telephone based and online services, NHSScotland relies heavily on face-to-face consultations and the way people receive healthcare remains largely unchanged despite the radical transformation in the way in which other public services are delivered. eHealth can enable NHSScotland to take advantage of the everyday technologies already used by most people in their daily lives.

eHealth could contribute to a radical transformation in the delivery of health and social care services in Scotland over the next decade through enabling people to access and interact with their health records electronically, and through a greater emphasis on the delivery of services through different communication channels, e.g. online by patient portals or electronic windows to information, via email, websites, digital channels and social media.

Section 5.7 of this 2012 State of the NHSScotland Assets and Facilities Report begins to explore the potential and implications of shifting the balance of future capital and revenue investment between assets groups i.e. from property to IM&T infrastructure and equipment. This initial work has shown that a relatively small shift in investment between asset groups has the potential for transformational change in the magnitude of investment in other asset groups. Further work is needed to model this type of change in investment and the implications for services and existing assets. In particular, it raises a number of questions that need to be addressed:

1. At what point in the future can we expect the eHealth Strategy to have a material impact on the need for property assets and how can we plan for this change?

2. What impact is the eHealth Strategy likely to have on organisational structures, staff numbers and the way in which people work? Will these new ways of working impact on the need for physical assets such as staff bases, offices, meeting rooms as well as clinical spaces?

3. What risks are involved in changing the balance of investment from property to IM&T assets and how can we manage and mitigate these risks?

4. What are the implications for the estate of re-balancing investment and is there sufficient flexibility in estate assets to respond to this change?

5. How can we unlock existing investment in property to support increased investment in IM&T?

6. How will we measure and monitor the pace of change towards a more IT enabled healthcare environment?

7. Can we identify the sustainable benefits from embracing and integrating new technology into the healthcare delivery models?

8. What information (staff numbers, costs, benefits etc) do we need to be able to properly model alternative investment choices and make the case for change towards an IT enabled future?

9. What funding vehicles are most appropriate for investing in IM&T infrastructure and can we demonstrate value for money from these investments?

Annex J
National Medical Imaging Programme

In response to the Audit Scotland report "Better Equipped to Care (2004)", the Scottish Government recognised the need to provide sufficient funding for sustainable investment in medical equipment and chose to provide a specific investment to NHS Boards in the last spending review to cover major purchases. It was recognised within this report that equipment needed to be the "correct type in the correct place at the correct time" to ensure patient safety and allow up to date medical practice.

Over the last spending review period a total of £30m capital funding was allocated annually to Boards in recognition of the need for continued and sustained investment in medical equipment. This additional investment allowed Boards to proactively manage equipment through robust capital planning and guaranteed replacement programming.

Within the last 10 years new hospitals have been built and new equipment procured for the commissioning of the new builds. The majority of this equipment, along with existing equipment, is coming to the end of useful life due to age and technical obsolescence and is urgently needing replaced.

Investment in equipment has been essential to Boards achieving national performance challenges such as the "4-week target for diagnostic tests" and the "18-week referral to treatment targets". Without sustained investment in equipment the ability to meet these challenges diminishes.

National Imaging Equipment

Imaging directorates contribute significantly to the management of almost all NHS patients treated in hospital and many seen in primary care. The Audit Scotland Review of NHS Diagnostic Services: 2008 stated NHS diagnostic activity had grown between 2003/04 and 2006/07, reporting increases of 38% in the number of radiology tests. This trend has continued with an increase of 37% between 2006/07 and 2009/10 in the number of patients who have had a CT, MRI or ultrasound test. The imaging directorates must ensure that these examinations are carried out appropriately and efficiently to facilitate the management of patients and to ensure that clinical services achieve the challenging targets that they have been set.

In addition to diagnostic procedures, there are also an increasing number of interventional or therapeutic procedures carried out within imaging directorates. In many cases these have replaced major surgical procedures with minimally invasive procedures, which have significantly reduced morbidity and length of hospital stay. Effective and efficient equipment management and replacement is core to providing a state of the art service. Failure to fund and manage equipment effectively ultimately results in:

- Breaches in waiting time guarantees
- Increased downtime
- Increased costs
- Decrease in staff morale and patient confidence within the service.

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