Annual State of NHSScotland Assets and Facilities Report for 2014









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Foreword

This is the fourth year that the State of NHSScotland Assets and Facilities Report has been published. The report is now widely recognised as a key reference document which is used to inform decisions on the continuing investment in assets and facilities services to deliver the Scottish Government's "2020 Vision" for sustainable high quality in health. Getting the right assets and facilities services in place will be central to achieving the "2020 Vision" and will require major change to the type and distribution of assets and facilities services and the way in which we prioritise investment in the future.

This year's report builds on the work of previous years, focussing on monitoring and comparing year on year performance on a comprehensive basis across the totality of NHSScotland's assets and facilities services. The report presents a detailed and rigorous scrutiny of asset performance. In doing so it increases our understanding and knowledge of the contribution that ongoing investment in assets and facilities services is making to the delivery of 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.

The Report provides a range of information that should help Boards to target limited resources on achieving maximum benefit and value for money from investment.

As in previous years, Boards have been highly supportive in recognising the importance of this report and their willingness to provide information and to support the detailed scrutiny of performance that underpins the report is to be commended.

Calum Campbell

Chair of Assets & Facilities Programme Board Chief Executive NHS Borders Paul Gray Director-General Health and Social Care

1.0 Introduction

1.1 Purpose

The "Annual State of NHSScotland Assets and Facilities Report for 2014" is the national strategic report on asset and facilities management for the Scottish Government and NHS Boards' and Special NHS Boards' use. Its purpose is to review asset and facilities management performance, highlight areas of best practice, set target areas for improvement and monitor performance against the targets. This is the fourth year that the report has been published.

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.

This year's report confirms continued improvement in performance in a number of areas and in particular, it identifies an improvement in the quality and comprehensiveness of the Property and Asset Management Strategies (PAMS) submitted by Boards. 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.

1.2 Scope

The first report in 2011 focused primarily on NHSScotland property and estate issues. In 2012 the scope of the report was extended to cover all NHSScotland owned and leased physical assets (property, vehicles, medical equipment, and IM&T). In addition, from 2012 the report has examined a range of facilities management services that are closely linked to asset ownership. This widening of the scope of the report is aimed at understanding the opportunities for future investment across the different asset types. This is particularly important given the emerging landscape of new health & social care pathways which are increasingly being developed to deliver care outside of hospital environments.

The 2013 Report introduced an analysis of office accommodation, differentiating it from clinical accommodation. This year's report further develops this theme, incorporating some of the outcomes from the detailed examination of office accommodation carried out through NHS Scotland's "Smarter Offices" Programme which was established in October 2013.

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 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

Over recent years Scottish Government has carried out a number of key pieces of work which have set out the approach to improving quality in healthcare, a governance structure to align national work around the approach, the 2020 vision for what the healthcare system will look like in the future, and the strategic priority areas to deliver the vision for achieving sustainable quality in healthcare across Scotland. This work confirms the Scottish Government's commitment to providing care in a home or community setting with a focus on prevention and self-management and where hospital treatment is required for day case treatment to be the norm. This 2020 vision will have a significant impact on the type and distribution of assets and prioritisation of investment in the future.

The Quality Unit has worked with Cabinet Secretary and the NHS Boards to develop a route map to the 2020 vision for health and social care which identifies 12 priority areas for action in the three domains of the triple aim; quality of care, the health of the population and value and financial sustainability. It has been agreed that these form the basis for business planning, prioritisation, positioning and integration of all national work.

1.4.1 The 2020 Capital and Facilities Change Management Plan

The National 2020 Route Map identifies 12 priority areas which NHS Boards need to consider. A programme has been established to develop a 2020 Vision Route Map for Capital & Facilities to support implementation of the National 2020 Vision through the creation of a lean, more flexible estate and flexible assets that are responsive to care models and meet the future health and wellbeing needs of the population of Scotland. Within the context of developing and implementing change management activities and initiatives to support the opportunity to optimise the NHS Scotland assets, the following compelling vision helps to further link the Vision back to Capital and Facilities:

The National 2020 Vision is an exciting opportunity in Scotland to integrate Health & Social Care into a seamless person-centred system, to enable staff working in environments which are fit for purpose, and to deliver the highest quality safe care into the future. A route map is being developed as part of the programme established to develop a 2020 Vision Route Map for Capital & Facilities, aimed at supporting implementation of the National 2020 Vision, and which will form the basis for the development of a practical, user-friendly set of tools, templates and guidance material for Health Boards.

1.4.2 The Facilities and Shared Services Review

The Facilities and Shared Services Programme, established in 2011/12, is examining opportunities to improve efficiency and effectiveness through the development of strategic partnerships between Health Boards and, where appropriate, other public sector organisations. The areas of activity being examined are:

- Capital Planning/Project Management and Hard Facilities Management.
- Operational Management of Revenue Financed (including PPP/PFI) Contracts
- Decontamination of Medical Devices
- Transport.
- Waste Management.

All outcomes from these work streams will be considered by the Facilities and Shared Services Programme Board before being passed to the Efficiency Portfolio Board for approval. Annex F provides an update on the current status of this review.

1.4.3 Capital Planning and Prioritisation

As with other areas of Government spend, capital resources for physical health assets are limited. It is therefore essential that those resources available are

used to maximum effect. That requires a more formal approach to capital planning and prioritisation at NHS Board, regional, and national level. A Capital Planning and Prioritisation Short Life Working Group, which forms parts of the above Facilities and Shared Services Programme, has been established to take forward long term capital planning and prioritisation work to address capital constraints and fragmentation issues identified in previous State of NHSScotland Assets and Facilities Reports.

The Group's initial report concluded that the preferred strategy for delivering future capital planning services is one that is based on regional/geographic groupings of capital planning teams and resources. This proposed new strategy is expected to deliver significant benefits for NHSScotland.

The next stage for the CPSLWG is to prepare an Outline Business Case (OBC) for the regional model which will address the development of the preferred strategy, economic & financial appraisal, development of a risk register & management plan, and the development of an implementation plan. Further details of this review can be found in Annex D Capital Planning Review.

1.5 Procurement Efficiencies

The Scottish Government and Health Facilities Scotland procured a framework (Frameworks Scotland 2) for use by NHSScotland bodies to deliver cost and time efficiencies for publicly funded health and social care projects across Scotland. Frameworks Scotland 2 is now fully in use and reflects 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 average per year.

Frameworks Scotland 2 provides a route for the procurement of publicly funded construction, repair and maintenance projects in respect of health, social care and other facilities. It sits 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 has been 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 delivered is expected to be worth more than £1.6bn over a 10 year period. 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.

As part of the Review of Scottish Public Sector Procurement in Construction, the Scottish Government is leading on work streams and projects which relate to the development of the policy environment, with SFT leading those which are more about delivery on the ground, and Construction Scotland Industry Leadership Group (CSILG) delivering work streams around industry best practice.

1.6 Information Quality and Consistency

NHS Boards and Special NHS Boards have continued to improve the quality and consistency of information about the assets that they own and lease, including ensuring that this information is accurate and up to date. For example, a comprehensive programme of property appraisal surveys, supported and facilitated by Health Facilities Scotland, has been completed over the last 4+ years. As a result, most Boards are now reporting improved confidence in the quality and consistency of the property information that they submit for use in this report.

The extensive asset base covered by the scope of this report means that it has to gather a wide range of information from a number of different sources including:

- The Estate and Assets Management System (EAMS)
- Environmental Monitoring and Reporting Tool (eMART).
- ISD Cost Book
- Asset information Proformas provided annually by Boards for this report.

Boards, supported by HFS, have continued to improve the accuracy and consistency of the information held in these different systems, as well as gaining a better understanding of reasons for variation between the different information sources. An example of this improvement is the alignment of the data in EAMS and the 228 hospitals in the ISD Cost Book. In 2013 these facilities had a variance of 8.2% in recorded floor area. In 2014 this is now less than 1%. These improvements in data quality and consistency now provide a more robust basis for the performance analysis and monitoring presented in this report. Further actions will be taken to improve data consistency and robustness going forward.

The widening of the scope of this report in 2012 to cover vehicles, medical equipment and IM&T identified concerns on information quality for these assets. Boards have continued to work on improving the quality and consistency of data on these assets with improved confidence being noted, particularly towards information relating to medical equipment.

2.0 NHSScotland's assets

This section provides information on the current status of NHScotland's asset and, whilst it provides some comparative information on annual changes, more detailed information on performance trends is described in Section 5.

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



Special NHS Boards

NHS Education for Scotland	NHS Health Scotland
NHS National Services Scotland ¹	NHS National Waiting Times Centre
Healthcare Improvement Scotland	NHS 24
Scottish Ambulance Service	The State Hospitals Board for Scotland

It should be noted that all information presented in this section is broadly based on March 2014 information, unless otherwise stated.

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 £5.4 billion. Most of these assets relate to the estate (land and buildings) which are estimated to be worth circa £5 billion. Other significant fixed assets which are owned are vehicles, medical equipment and information management and technology (IM&T). An estimate of the Net Book Value of these owned assets is shown in the chart below.



Taken from information returned by each NHS Board

The NHS also has assets which it does not own including buildings, vehicles, medical equipment and IM&T. These assets are estimated to be worth a further £1.5 billion, the majority of which are hospitals and health centres managed under Public Private Partnership (PPP) agreements. Also, the majority of cars used by NHSScotland staff are leased, with staff paying for their own non-business element 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 these independent 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 4.5 million sq.m of building floor area encompassing buildings ranging in size from 40 sq.m to 200,000 sq.m. The majority (74%) of this is the hospital estate of the 14 NHS Boards and 2 Special NHS Boards (NHS National Waiting Times Centre and the State Hospitals Board). The 2013 ISD Cost Book records this hospital estate as 228 hospitals with a total building area of 3.34 million sq.m. This is broadly similar to that reported in last year's SAFR.

The other property types that account for the further 1.2 million sq. m. include health centres & clinics, day centres, offices, residential accommodation and industrial / storage units.

The tables that follow show an analysis of the hospital estate by type of hospital in terms number of sites and building area.

	Acute	Long Stay	Mental Health	Psychiatric & Learning Disabilities	Community	Other	Total
Number of Hospitals	38	48	37	14	62	29	228
Area sq.m	2,147,589	254,172	428,568	46,805	200,362	259,635	3,337,133
Percentage of total area	64%	8%	13%	1%	6%	8%	100%

The above table shows that whilst community hospitals are the most numerous (62) they only represent 6% of the total hospital estate in terms of building area i.e. a large number of small hospitals. In contrast, the 38 acute hospitals account for 64% of the total hospital estate in terms of building area.

The number of Long Stay Hospitals has reduced by seven since last year with the following either closed or now used for other purposes:

- Crumhaugh House
- Roadmeetings, Carluke
- Edenhall, Musselburgh
- Royal Victoria, Edinburgh
- Ashludie, Monifieth
- Falkirk Community Hospital
- Montfield, Lerwick

It should also be recognised that a number of the hospitals included in the broad categorisation of "Long Stay Hospitals" includes hospitals with acute long stay beds, psychiatric long stay beds and psychiatric day hospitals. These hospitals may also have other types of beds which are not classified as "long stay".

Providing services more locally is an integral part of the 2020 Vision and this is expected to have an impact on the size and distribution of the hospital estate. Subsequent changes in the hospital estate will continue to be monitored as part of SAFR in future years.

The current distribution of the hospital estate (by numbers of hospitals and by
area sq.m) across the Boards is shown in the tables that follow.

	Distribution of hospitals (numbers) across the NHS Boards						
Board	Acute	Long Stay	Mental Health	Psychiatric & LD	Community	Other	Total
NHS Greater Glasgow	8	6	8	2	0	5	29
NHS Tayside	3	2	5	3	8	7	28
NHS Grampian	4	1	3	1	17	2	28
NHS Highland	4	4	2	0	13	4	27
NHS Lothian	4	11	2	2	2	4	25
NHS Dumfries & Galloway	2	5	3	2	4	2	18
NHS Borders	1	6	2	0	4	3	16
NHS Lanarkshire	3	5	2	1	4	0	15
NHS Fife	2	1	4	1	4	0	12
NHS Forth Valley	1	4	4	1	2	0	12
NHS Ayrshire & Arran	3	3	1	1	3	0	11
NHS Western Isles	1	0	0	0	1	1	3
State Hospital	0	0	1	0	0	0	1
Golden Jubilee	0	0	0	0	0	1	1
NHS Orkney	1	0	0	0	0	0	1
NHS Shetland	1	0	0	0	0	0	1
							228

Distribution of hospital estate by area (sq.m)					
Board Total area sq.m		Percentage of NHSScotland Total Area			
NHS Greater Glasgow	909,465	27%			
NHS Lothian	513,418	15%			
NHS Tayside	409,935	12%			
NHS Grampian	295,638	9%			
NHS Fife	255,333	8%			
NHS Ayrshire & Arran	208,796	6%			
NHS Lanarkshire	193,996	6%			
NHS Highland	159,849	5%			
NHS Forth Valley	147,085	4%			
NHS Dumfries & Galloway	74,702	2%			
NHS Borders	62,372	2%			
Golden Jubilee	47,593	1%			
State Hospital	23,364	1%			
NHS Western Isles	20,495	1%			
NHS Shetland	7,869	0.2%			
NHS Orkney	7,223	0.2%			
	3,337,133	100%			

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.



The majority of all 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 a reasonable distribution of age profile across this estate, whilst also acknowledging that even with the substantial capital investment over recent years, 25% of the estate remains over 50 years old (note that some older properties are refurbished to modern standards rather than replaced). This age profile has improved from that reported in the 2013 SAFR report, with the percentage of properties less than 50 years old increasing from 72% to 75%.



2.1.3 Estate Condition

The Board's report that 59% of their estate is in good physical condition (category A or B) with 37% requiring investment to improve its condition (category C) and 4% being unsatisfactory and requiring major investment or replacement (category D).



The proportion of the estate in good physical condition of 59% is lower than the 67% reported in the 2013 SAFR. Boards advise that this is as a result of:

- Re-assessment of building condition as a result of the re-surveying of the estate. Typically, this annual resurveying relates to circa 20% of the estate but this year over 35% (1.6m sq.m.) has been re-surveyed. In particular, NHS Greater Glasgow and Clyde, who have the largest estate, has undertaken re-surveying and re-assessment of building condition on circa 40% of its estate. This has had a significant impact on the overall national position shown in the above pie chart.
- The continued lifecycle deterioration of buildings with increased age. The backlog reported annually is that which is currently identified and is a "snapshot" at the particular time and as buildings age, new backlog is identified. This is not always a gradual process and step changes in the identified backlog can occur in particular years particularly in relation to elements of the building with relatively short lifecycles such as some engineering systems.

Without the re-assessment of building condition and identification of new backlog as described above, it is likely that a small improvement (1%) in overall good physical condition would have been reported.

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

2.1.4 Estate Utilisation

The majority (77%) of the estate is fully utilised although some under utilisation and some overcrowding is evident as shown in the chart below.



This profile has remained relatively constant.

2.1.5 Estate Functional Suitability

The majority of the estate (65%) is functionally suitable for its current use (categories A and B) but 30% (category C) requires investment to improve its functional suitability and 5% (category D) requires major investment or replacement to achieve satisfactory functionality.

This profile shows a small (3%) decrease in the area of the estate in categories A & B compared to that reported in 2013. Boards have advised that this is as a result of the annual re-assessment of buildings for functional suitability.



2.1.6 Estate Backlog

NHSScotland's currently identified 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 reported by NHS Boards is shown in the chart that follows and identifies a base backlog maintenance expenditure requirement of £797 million, which is a reduction of £61million since 2013. This total also includes £95m of newly identified backlog in 2014 as a result of resurvey work undertaken up to 2014. On a comparative basis, the 2013 figure of £858m included a total of £55m of newly identified backlog up to 2013.



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.

Whilst there has been a reduction in the overall NHSScotland backlog maintenance expenditure requirement over the last year some NHS Boards have reported an increase in their backlog maintenance expenditure requirement due to reasons of an aging estate and reappraisal/re-surveying of parts of the estate.

The currently identified backlog expenditure requirement reported annually in this report since 2011 has been set at a consistent 2010 price base. However, as the economy continues to recover there are growing pressures to uplift the backlog expenditure requirement to reflect any inflationary rise in the cost of building and engineering works. It is, therefore, planned to update the backlog expenditure costs to take account of inflation in the 2015 SAFR, whilst also tracking underlying trends back to 2010/11 on a consistent base.

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



This is a similar risk profile to that reported last year. A significant amount of this backlog cost is in buildings which NHS Boards are planning to dispose of in the next ten years and non-clinical parts of the estate.

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

- Estate rationalisation and disposal of older properties avoiding the need for expenditure on backlog. Of the total backlog, £80m relates to properties expected to be disposed of in the next 5+ years.
- Replacing older properties with new facilities and avoiding the need for expenditure on backlog e.g. the new South Glasgow Hospitals project, Balfour Hospital in Orkney, and Dumfries and Galloway Royal Infirmary. Of the total backlog, £65m relates to properties expected to be replaced in the next 5+ years.
- Incorporating backlog works within major redevelopment, modernisation and refurbishment projects e.g. improvements to inpatient accommodation at Aberdeen Royal Hospital, Royal Edinburgh Hospital, and Ayrshire Central Hospital. Major refurbishment programmes will remove circa £50m of backlog over the next 5+ years.
- Undertaking specific projects to target the high and significant backlog e.g. inpatient accommodation at Monklands Hospital. Targeted backlog programmes will aim to remove circa £80m of backlog over the next 5+ years.
- 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 not necessarily represent further cash requirements in terms of capital or revenue since it is being addressed through the different approaches shown above. Further details on this are provided in section 5.1.4.

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 Office Accommodation

Data collected in March 2014 through the Smarter Offices Programme identified 223,499 sq.m of dedicated office accommodation across the NHS Boards and Special Boards. This represents circa 5% of the area of NHSScotland's total property assets and play a vital supporting role towards the effective and efficient delivery of healthcare services. This excludes the office accommodation which is embedded within clinical and other accommodation, which would add further to the overall size of the office estate.

Office accommodation for NHS Boards accounts for 165,000 sq.m (4%) of their estate, whereas for Special Health Boards it accounts for 58,000 sq.m (39%) of their estate. NHS Boards own circa 90% of their office accommodation, whereas Special Health Boards lease circa 80% of their office space.

NHS Boards' office accommodation generally has a much older age profile than that of Special Health Boards. This may reflect the fairly common practice in NHS Boards of adapting older and unsuitable clinical accommodation into office accommodation. The impact of this older asset base in NHS Board office accommodation is also reflected in other performance criteria such as poorer physical condition and functional suitability.

The table below summarises the returns received from Boards in March 2014 for the Smarter Offices Programme and shows that the office estate comprises 116 offices housing a staff of 13,868 FTE (15,196 headcount), occupying 14,563 desks at an annual cost of £36.9m.

	Health Boards	Special Health Boards	All Boards
	Doulus	Douras	
No of office premises	72	44	116
FTE in offices	9,126	4,742	13,868
Headcount in Offices	9,478	5,718	15,196
No of Desks	9,497	5,066	14,563
Total Occupancy Cost £pa	£17,568,982	£19,314,886	£36,883,868

It should be recognised that over recent years there has been significant rationalisation of office accommodation, particularly for Special Health Boards, with annually submitted PAMS highlighting significant progress in implementing new ways of working, improving utilisation and consolidation of office accommodation across Scotland. The NSS Best Practice Case Study "Office Consolidation and Rationalisation Programme" shown later in this report provides a good example of this progress.

2.3 Vehicle Assets

Analysis of vehicle assets is based on annual pro-forma information returned by each NHS Board. NHSScotland's vehicle assets comprise of approximately 10,400 vehicles, the majority of which are staff car scheme vehicles (59%) and operational cars (15%). The chart below provides a breakdown of NHSScotland's vehicle assets by type.



This excludes national logistics vehicles

The distribution of these vehicle assets and their ownership arrangements across NHS Boards and Special Health Boards is shown in the following two charts.





The vehicle age profile and condition profile for all NHS Boards is shown in the charts that follow and shows that circa 49% of the vehicles are less than two years, but with 13% over 5 years old. This represents a reasonable age profile for this asset group and indicates that investment is currently maintaining a reasonable standard of vehicle asset provision. This is also reflected in the overall good / adequate condition of these vehicles, with only 4% considered to be in poor condition.



2.4 Medical Equipment Assets

Information has been gathered from each NHS Board and the national imaging and radiotherapy equipment groups to gain a more accurate understanding of the scope and value of medical equipment across NHSScotland. In addition to the global overview of the value of medical equipment, it also sought more detailed information on the following specific equipment types:

- Renal dialysis equipment.
- Cardiac defibrillators.
- Infusion devices.
- Endoscopic equipment.
- Imaging equipment.
- Radiotherapy equipment.

This presented an overall estimated replacement value for Medical Equipment of \pounds 940m, which is an increase of \pounds 180m from the 2013 reported figure. This is due to a more robust assessment of medical equipment value and the focused inclusion of low value medical equipment (adding £125m, including £32million for devices).

The relative value of each equipment type as described above is shown in the following chart:



NHS Board	Radiotherapy Equipment	Imaging Equipment	All Other Medical Equipment
NHS Greater Glasgow	26,700,000	69,466,500	160,329,431
NHS Lothian	15,300,000	25,175,664	72,000,800
NHS Tayside	7,700,000	15,905,000	86,082,442
NHS Grampian	7,900,000	19,933,944	61,883,725
NHS Fife		9,780,800	48,852,587
NHS Ayrshire & Arran		10,834,000	38,897,140
NHS Lanarkshire		12,361,500	52,000,000
NHS Highland	4,303,000	14,561,959	37,619,000
NHS Forth Valley		8,269,500	36,835,223
NHS Dumfries & G.		5,050,000	12,876,373
NHS Borders		3,545,000	11,019,301
Golden Jubilee		7,085,000	27,568,480
NHS Western Isles		1,335,000	3,887,241
NHS Shetland		1,290,000	3,740,000
NHS Orkney		625,000	4,019,959
National Services Scotland		4,080,000	0
Scottish Ambulance Service			8,000,000
TOTAL	61,903,000	209,298,867	665,611,702
		936,813,569	9

A breakdown per NHS Board of medical equipment replacement value (as reported in the above chart) is provided in the following table:

Medical Equipment replacement within each Health Board is planned either on a rolling annual basis (e.g. endoscopy equipment) or in bursts to ensure standardisation (e.g. replace all defibrillators over a maximum of 2 years to ensure all devices are of the same model to ensure staff competence). Lifetime is based on clinical and technical obsolescence; the latter is often based on lack of service support and availability of parts. It should be recognised that for medical equipment, safety is the first priority, and equipment is maintained to high standards in NHSScotland to ensure low risk of failure or accidents. This high level of maintenance can enable the equipment to be operated safely over extended lifecycles.

Investment in lifecycle replacement of medical equipment can vary considerably on an annual basis and "peaks" of investment are often observed in particular years when major, large equipment is replaced.

A brief summary of the scope, operational value and funding plans associated with these equipment types is described over the following pages:

Renal Dialysis Equipment

Renal dialysis units are lifesaving facilities for people with renal disorders, providing renal replacement therapy. Dialysis machines are critical to these patients' quality of life. Dialysis machines are used within acute hospitals and increasingly in patients' homes, enabling care in the community. Increasingly hospitals are striving to use technology to improve patient's quality of life and this has resulted in the introduction of night-time dialysis sessions within acute hospitals and home dialysis. The survey found approximately 920 dialysis machines across NHSScotland with a replacement value of c.£15m. These support nearly 200,000 patient sessions per year within dedicated Renal Dialysis Units, with circa 65 patients dialysed at home. Approximately £1.4m (10% of value) was spent in 2013/14 on new equipment which would provide full replacement of this equipment type within 10 years (excluding inflationary adjustments). This is considered to be a just adequate investment profile but is tempered by concerns that 29% of units are currently over 8 years old.

Cardiac Defibrillators

A defibrillator is a life-saving machine that gives the heart an electric shock to restore normal heart rhythms in some cases of heart attack. Its importance in saving people from sudden death due to heart attacks is evidence by their prevalence throughout the community in places such as shopping malls. There are 2,160 reported cardiac defibrillators based in hospital environments across NHSScotland, with quantity planning based on the time required to access a defibrillator in case of emergency. Health Boards manage a further 1500 community based defibrillators, which, together with the defibrillators within the Scottish Ambulance Service accounts for an asset with replacement value of c.£20m. Procurements are managed to ensure defibrillator standardisation which is crucial to ensure staff familiarity. Defibrillators are expected to have a lifespan of 10 years which would require an average annual investment of approximately £2m p.a. to replace, though in practice each NHS Board will attempt to replace theirs over a shorter period of time. However, 15% of existing units are currently over 10 years old.

Infusion Devices

An infusion device delivers fluids and medication in solution to the patient in a controlled way. They do so safely, consistently and accurately for a wide range of clinical purposes including general medication delivery typical directly into patient's veins. They provide anaesthesia, chemotherapy, powerful heart acting medication and pain relief, with some devices enabling patients to control their own medication delivery. Their portability enables them to be used in the community, with the widespread use of portable devices, powered by batteries, supporting care in the community, particularly for pain and symptom relief (e.g. nausea and vomiting) in palliative care. Individually the infusions devices cost

between about £1k and £3k, but the cumulative value of the almost 20,000 devices is circa £32m.

Endoscopic Equipment

An endoscope is an investigative and screening device used to examine the inside of the body and to diagnose various conditions. Broadly speaking, endoscopy comes in two forms, those for use through natural body openings such as mouth, nose or anus (e.g. colonoscopy screening) or those devices used for surgical procedures such as keyhole surgery. This survey examined the former. These enable minimal invasive procedures often allowing patients to be treated as outpatients. This survey examined the number of flexible endoscopes in use within Scotland, including those used for upper and lower (covering colonoscopy screening) gastrointestinal examinations. There are 2,868 reported flexible endoscopes across NHSScotland with a replacement value of c. £70m. Approximately £3.8m (7% of value) was spent in 2013/14 on new units which would provide full replacement of this equipment type within 15 years (excluding inflationary adjustments). The expected useful lifespan of a flexible endoscope is 10 years, with lifespan dictated by the wear and tear associated with their normal use and their technical (withdrawal of manufacturer support) and clinical obsolescence (improved image quality and ease of use). The flexible endoscopes are used with light sources, video processors and monitors that represent an additional important financial and clinical asset not included in the £70m figure above. Nor is the surgical endoscopy equipment included. NHS Boards will need to carefully review and monitor the whole spectrum of their endoscopic equipment and its future investment requirements. It is also noted that 18% of units are currently over 10 years old.

Imaging Equipment

Imaging equipment plays a significant and important role in the provision of healthcare to patients within both the acute and primary care sectors. Diagnostic procedures increased between 2003/04 and 2006/07 by 38% (according to Audit Scotland), and this trend has continued with an increase of 37% between 2006/07 and 2009/10 in the number of patients having a CT, MRI or ultrasound test. In addition to diagnostic procedures, there is also an increasing number of interventional / therapeutic procedures carried out within imaging directorates. In many cases these have replaced major surgical procedures with minimally invasive procedures that have significantly reduced morbidity and length of hospital stay. The National Imaging Inventory has an estimated replacement value of £210m (incl VATand turnkey). The annual maintenance charge is £12.4million across the inventory and remains static from previous year.

Radiotherapy Equipment

The 5 Cancer Centres in Scotland have had a co-ordinated national equipment replacement programme in place since 1998, which has been instrumental in ensuring the efficient and timely replacement of radiotherapy equipment across NHSScotland. The continued delivery of cancer access targets is in part due to the timely replacement of ageing equipment. The timing of replacement of equipment reflects current national recommendations and the programme is managed and monitored by the National Radiotherapy Programme Board with the equipment financed from a ring fenced Scottish Government allocation. The success of this programme in introducing leading edge technology to enable the best possible treatment for cancer patients; with equity of access across Scotland, is considered to be a best practice model for the management and procurement of medical equipment.

2.5 IM&T Assets

Information on IM&T assets is based on data collected from the eHealth IM&T survey carried out in 2012. The purpose of that survey was to provide a baseline of overall IM&T expenditure within NHSScotland in order that a better understanding could be gained on the current profile of investment in IM&T, identify priority areas for future development and shape future investment plans. The survey also collected information on client devices and peripherals (devices are items such as desktop computers, laptops, tablets etc; whereas peripherals are items that support these devices, such as printers).

The following two charts provide a breakdown of information gathered on client devices and peripherals related to the number of such devices.





This information can be regarded as a baseline year which NHS Scotland can use to monitor future trends in the use of devices and peripherals. For example, NHS Scotland anticipates that the use of tablets and handheld devices will increase in future as the volume of care provided in the home environment increases and staff work on a more mobile / home working basis. By capturing this basic data, NHS Scotland will be able to monitor trends in device usage and use this information to inform future service planning.

3.0 The annual cost of assets and facilities services

The revenue and lifecycle costs associated with asset ownership and use represent a considerable proportion of NHSScotland budgets. This section of the report provides a summary of the annual cost (in 2012/13) of asset ownership and facilities management services. Whilst this section provides some comparative information on annual changes, more detailed information on performance trends is described in Section 5.

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 including revenue expenditure on backlog but excluding major 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 annual property and facilities services costs within the scope of the SAFR are shown in the table that follows for the three years for which the SAFR has been published (excludes Special Boards and the non-hospital estate).

	Annual Prope	erty Asset and Faci	lities Services Exp	enditure (£)
	2010/11	2011/12	2012/13	Percentage Change 2010/11 to 2012/13
Property Maintenance (capital and revenue costs)	113,949,249	117,679,791	123,457,925	8%
Cleaning	117,128,872	117,425,095	119,750,871	2%
PFI Facilities Management Costs	101,674,478	106,949,026	117,745,007	16%
Catering	80,866,039	81,039,194	84,888,978	5%
Energy	72,311,800	89,688,057	104,689,012	45%
Rent	60,303,082	9,028,816	14,649,596	0%
Rates		46,071,140	50,919,886	976
Portering	47,285,685	47,532,728	48,637,007	3%
Laundry and linen	34,164,405	33,566,916	32,120,687	-6%
Waste Disposal	10,022,261	10,779,203	11,829,875	18%
Total	637,705,871	659,759,966	708,688,844	11%
	Annual Increase	3.5%	7.4%	

Note: The above table excludes depreciation on property asset; costs associated with Community and Family Health Services, and energy costs exclude costs associated with environmental taxes and levies e.g. EU ETS Payments. Further details relating to energy costs are provided in Annex C.

It should be noted that the overall increase in costs over the three year period is heavily skewed by the large increases in Energy Costs over the period and that these increases in Energy Costs are out with the control of Boards. Also, PFI Facilities Management Costs have increased due to further schemes becoming operational over that period, including Forth Valley Royal Hospital, Midlothian Community Hospital, Victoria Hospital expansion (Fife), etc.

Previous work on SAFR has identified that these property assets and facilities services costs are primarily (but not exclusively) driven by building size (volume/area) and patient activity (as measured by consumer weeks). The change in these primary cost drivers over the last three years is shown in the table that follows. The table also shows the change in the number of hospitals in this period.

	2010/11	2012/13	Percentage Change 2010/11 to 2012/13
Number of hospitals	250	228	-9%
Building Area used for measuring cleaning costs (sq.m)	3,054,536	2,974,584	-3%
Consumer weeks	1,049,499	1,016,582	-9%
Annual Property Asset and Facilities Services Costs	637,705,871	708,688,844	11%

The table shows that the 11% increase over two years in expenditure on assets and facilities has been at a time when the property assets have been decreasing in terms of both the number of hospitals and the building size (area) and reduced inpatient activity (consumer weeks). However, it should be recognised that whilst inpatient activity (as measured by consumer weeks) has reduced there has been significant increases in the number of patients treated as outpatients or on a day case basis.

Interrogation of the ISD archive files has enabled a comparison of broadly similar assets and facilities costs and metrics over the last decade as shown in the two tables below.

	Expenditure on assets & facilities services			
	2003/4	2012/13	03/04 to 12/13 Increase	
Property Maintenance (capital and revenue costs)	91,398,478	123,457,925	35%	
Cleaning	72,559,057	119,750,871	65%	
PFI Facilities Management Costs	60,225,578	117,745,007	96%	
Catering	71,741,569	84,888,978	18%	
Energy	37,186,858	104,689,012	182%	
Rent	53,902,008	65,569,482	22%	
Portering	31,175,373	48,637,007	56%	
Laundry and linen	30,751,874	32,120,687	4%	
Waste Disposal	10,242,004	11,829,875	16%	
Total:	459,182,799	708,688,844	54%	
Number of hospitals	289	228	-21%	
Area (sq.m) used for cleaning	2,967,490	2,974,584	0.2%	
Consumer weeks	1,281,093	1,016,582	-21%	

It should also be recognised that over the ten year period significant changes in service delivery models have taken place including:

- **Property Maintenance** greater use of technology based environmental control systems in modern healthcare buildings which inherently require more sophisticated maintenance regimes.
- Cleaning the need for more rigorous cleaning to combat HAI
- **PFI Facilities Management** New hospitals have become operational during the period, PFI/PPP contracts are generally inflation linked, and

some facilities have no inpatient accommodation and thus have no inpatient consumer week data, e.g. two ACAD facilities in Glasgow.

- Catering Improved patient choice and food quality
- Rent & Rates generally indexed linked to inflation
- **Portering** development of mulit-tasking whereby porters take on roles previously undertaken by security and other staff
- Laundry and linen- efficiency measures, including move from conventional linen to fitted bedding, have counter balanced inflationary pressures resulting in a relatively small increase in the cost of this service
- **Waste** major regulatory changes introduced on clinical waste combined with re-cycling initiatives.

The profile of expenditure on assets and facilities services over this ten year period is shown in the table that follows and it is interesting to note that there has been very little change in this profile over the period. The one exception being energy which, as a percentage of total expenditure has increased by 7% points although even this is relatively low given the large increases in energy costs over the decade.

	Percentage of total expenditure on assets & facilities services			
	2003/4	2012/13	Difference	
Property Maintenance (capital and revenue costs)	20%	17%	-2%	
Cleaning	16%	17%	1%	
PFI Facilities Management Costs	13%	17%	3%	
Catering	16%	12%	-4%	
Energy	8%	15%	7%	
Rent & Rates	12%	9%	-2%	
Portering	7%	7%	0%	
Laundry and linen	7%	5%	-2%	
Waste Disposal	2%	2%	-1%	

3.2 Vehicles – Annual Costs

NHSScotland's estimated annual expenditure on its vehicles assets, as indicated through NHS Board information returns, is shown in the table below.

Annual Expenditure on Vehicle Assets							
Description	£	% of Total	No. of Vehicles	Average per Vehicle			
Insurance & accident costs (net cost)	£6.21m	13.06%	10,909	£569			
Fuel costs	£13.26m	27.89%	10,909	£1,216			
Maintenance & servicing costs - owned vehicles	£0.76m	1.59%	1,917	£394			
Leased vehicle costs (including maintenance)	£4.44m	9.34%	2,101	£2,115			
Hired vehicle costs	£0.43m	0.91%	181	£2,396			
Staff car scheme lease costs (including maintenance & mileage claims)	£22.45m	47.21%	6,710	£3,346			
Staff contribution towards private use	-£11.12m	-	6,710	(£1,657)			
Total Net Costs	£36.44m	100%	10,909	£3,341			

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 of circa £23m through expenses claims.

The Transport & Fleet Management Review is looking at ways in which improvements can be made to the efficiency and effectiveness of this fleet aimed at reducing these operational costs (see Annex E for further details).

3.3 Medical Equipment – Annual Costs

Medical equipment use requires operational (revenue) costs for associated consumables and accessories, for routine scheduled maintenance and for breakdown maintenance. The survey explored these operational costs that, together with the acquisition and installation costs, form the total cost of ownership (COO) of the equipment. Consumable and accessory costs are typically charged to individual departments and no central records will cover all these costs. In most cases maintenance costs (scheduled and unscheduled) are easier to identify. Maintenance is provided through a combination of in-house staff and external service suppliers, the later often through service contracts. Efforts are being made through robust negotiations to fix maintenance costs, in some cases for up to 10 years, to reduce the total cost of ownership of medical

devices. The annual maintenance expenditures reported by Boards is shown in the table that follows.

Description	Expenditure (£) (incl VAT)	% of Total		
Maintenance expenditure (excluding cost of in-house teams) on:				
Renal Dialysis Equipment	529,932	1%		
Cardiac Defibrillators	195,712	0.4%		
Flexible Endoscopes	3,607,562	7%		
Infusion Devices	327,359	1%		
Radiotherapy Equipment	1,536,532	3%		
Imaging Equipment	12,382,153	22%		
All other Medical Equipment	18,159,652	33%		
Lease costs (including associated maintenance etc)	757,835	1%		
Annual payments (including maintenance etc) for managed equipment services and private finance arrangements (excluding Laboratory managed services)	2,991,420	5%		
Cost of in-house teams responsible for management of medical equipment	9,517,198	17%		
All other revenue based expenditure on medical equipment	5,446,755	10%		
TOTAL ANNUAL EXPENDITURE ON MEDICAL EQUIPMENT:	£55,452,110	100%		

As with property assets, there is a need to balance investment between ongoing annual maintenance of medical equipment, investment in its lifecycle replacement and investment in new innovative developments that advance the cost effectiveness of health care, including the ability to provide health care in the community. These advances, some facilitated by integration with information and communication technology (ICT), offer patient benefits including improved patient care, improved quality of life for patients, care in the community, and for imaging equipment clearer sharper images with reduced radiation doses. Staff benefit from the improved equipment functionality, improved reliability, and ease of use as manufacturers respond to standards on ergonomics. As equipment life is relatively short (often less than 15 years) the level of maintenance needs to be sufficient to ensure its continued safety, availability and effectiveness within that period whilst accepting that other considerations, such as technical and clinical obsolescence, can influence the need to replace equipment earlier than planned.

3.4 IM&T – Annual Costs

The IM&T survey identified that the overall level of expenditure by NHSScotland on IM&T in 2011/12 (the base date for the expenditure analysis), was £236.5m. Of this total, £213m was incurred on expenditure items of a revenue nature, with £23.5m incurred on capital expenditure. An analysis of the revenue expenditure is shown in the chart below.



The capital expenditure on IM&T of £23.5 million in 2011/12 is similar to that planned by Boards over the next 5 years (£26 million per annum)

The total revenue expenditure of £213m is split as follows:

- £57.5m (27%) of non-recurring expenditure by NHS Boards to support national systems and deliver eHealth strategic priorities.
- £91.5m (43%) of revenue expenditure by NHS Boards.
- £53m (25%) of revenue expenditure by Special Health Boards.
- £11m (5%) expenditure by the Scottish Government eHealth Division.

The table that follows provides a summary of the overall total revenue expenditure incurred by NHSScotland expressed as a percentage of Revenue Resource Limit (RRL) for 2011/12. By taking RRL as a proxy for NHSScotland's overall annual revenue expenditure it is possible to obtain an indicative measure of the level of overall revenue resource committed to IM&T by NHSScotland.

Revenue Expenditure by NHS Board	RRL Percentage (%)	Revenue Expenditure by NHS Board	RRL Percentage (%)			
Geographical NHS Boards		Special Health Boards				
Ayrshire & Arran	1.82	NHS24	13.31			
Borders	2.46	Golden Jubilee (NWTC)	2.34			
Dumfries & Galloway	1.92	NHS Health Scotland	3.00			
Fife	1.57	Healthcare Improvement Scotland	1.73			
Forth Valley	1.31	National Education Services	0.61			
Grampian	1.48	National Services Scotland	7.07			
Greater Glasgow & Clyde	1.81	State Hospitals	2.11			
Highland	1.75	Scottish Ambulance Service	6.05			
Lanarkshire	1.63	Average:	4.37			
Lothian	1.34					
Orkney	2.27					
Shetland	2.41					
Tayside	1.82					
Western Isles	2.27					
Average:	1.67					
Total: 2.11						

al: 2.11

Based on information from the IM&T Survey on NHSScotland expenditure for 2011/12

The table identifies that in 2011/12 the overall level of revenue expenditure on IM&T incurred by NHSScotland was 2.11% of its overall RRL. The table also shows that NHS Boards spent between 1.31% and 2.46% of their RRL on revenue IM&T expenditure, while Special NHS Boards typically spent higher percentages reflecting the different nature of the services they provide. This is particularly evident in the case of NHS24, which spent 13.31% of its RRL on revenue IM&T expenditure.
3.5 Summary of Total Annual Asset and Facilities Costs

The chart below provides an analysis of the combined total asset and facilities annual expenditure that has been described earlier. The combined expenditure of £1.013 billion is an increase of circa 6% on the expenditure reported in the 2013 SAFR.



Notes: 1) Excludes capital charges and depreciation costs associated with asset ownership
2) Excludes any annual expenditure on lifecycle replacement and capital expenditure on backlog maintenance
3) Property & Facilities Service Expenditure is for the Hospital Estate only.

It should be noted that the above annual expenditure on assets excludes capital expenditure on:

- Replacement of existing assets both major capital schemes (Board capital and NPD) and smaller schemes procured through hubco.
- Replacement of major existing assets medical equipment, vehicles and IM&T – procured through revenue or Board capital.
- Major lifecycle maintenance/backlog such as boiler and major infrastructure and backlog replacement procured through Board capital.

4.0 Planned future investment in assets

Planned investment in NHSScotland's assets over the next 5 years is estimated to be circa £2.75bn (based on NHS Boards' 5 year investment plans presented in their PAMS). This will make a significant contribution to improvements in the condition and performance of these assets. It will also further enhance the important supporting role that assets play in the delivery of quality healthcare delivery. This investment will also enable the disposal of older properties which are expected to generate receipts of approximately £200m over the same period (subject to economic and market conditions).

This investment covers all asset types (property, medical equipment, IM&T, and fleet) and will be achieved through a combination of capital and revenue based investment. The following chart provides a breakdown of this investment.



4.1 Investment in Major Projects / Programmes

Investment in 'Major Projects / Programmes' accounts for 47% of the overall planned future investment described above and includes the key strategic investments planned by each NHS Board. They will be funded mainly though NHS Board capital or NPD / hub revenue based funding. The following chart provides a breakdown of the £1.3bn of investment associated with these major projects / programmes.



4.2 Investment in Primary and Community Care

In addition to the £1.3bn of investment on the major projects / programmes (which includes some larger Primary and Community Care projects) described above, a further £245 million is planned for new primary & community care projects. This investment is key to delivering the emerging Health and Social Care Integration agenda and shifting the balance of care from hospitals to local facilities and people's homes.

4.3 Income receipts from asset disposals

A direct consequence of investment in new facilities can often be a surplus of older accommodation no longer required for operational purposes. Boards have identified in their PAMS planned disposals of these surplus properties are expected to generate income sale receipts of over £200m over the next 5+ years. Scottish Futures Trust is actively supporting NHS Boards to maximise the potential of income receipts from these disposals.

The programme of anticipated income receipts per NHS Board over the next 5+ years are listed in the following table, but these are subject to change dependent upon economic and market conditions at the time of sale.

NHS Board	Anticipated Future Income Receipts from Disposals (£m)
NHS Greater Glasgow & Clyde	87.0
NHS Lothian	34.6
NHS Tayside	10.0
NHS Grampian	12.1
NHS Fife	7.1
NHS Ayrshire & Arran	7.5
NHS Lanarkshire	17.0
NHS Highland	13.4
NHS Forth Valley	13.1
NHS Dumfries & Galloway	1.5
NHS Borders	1.1
NHS Western Isles	0.5
NHS Shetland	0.4
NHS Orkney	0.2
NHS National Services Scotland	5.0
Scottish Ambulance Service	0.6
TOTAL:	£211 million

4.4 Investment required on 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, NHS National Services Scotland, NHS Tayside, NHS Fife, and NHS Borders. The current 5 year investment plan for vehicle assets, which is taken from NHS Boards' own investment plans, is circa £9m per annum. Note, however, that earlier analysis of age and condition suggests that current vehicle assets are in reasonable condition and age thus do not suggest a current backlog of investment need.

4.5 Investment required on medical equipment assets

In relation to its overall £940m value, during 2013/14 a total of over £66m was spent on medical equipment. This would theoretically result in complete replacement of all existing equipment within 14 years (most equipment tends to need replacing within 7-15 years). This is the second year that this investment benchmark analysis has been undertaken from NHS Boards' pro-forma return information, which has changed from a replacement cycle of 12 years to the currently reported 14 years. Further analysis of future trends in this indicator will be important to understand the full implications of medical equipment funding levels. Note though that rapid technological developments in some equipment, including high cost radiotherapy, imaging equipment (CT and MRI) and endoscopy equipment, which together account for approximately 35% of the total value of medical equipment, reduces the effective lifespan of this equipment to 7 to 10 years.

Implications of not replacing medical equipment within a reasonable period include:

- Outdated equipment does not take advantage of new innovations aimed at improving patient care.
- Lack of parts for maintenance grows as equipment ages beyond 7 years.
- A backlog of medical equipment replacement needs can result in a reactive replacement strategy that does not support standardisation or optimize replacement decisions.
- Medical equipment that is lower priority for replacement may extend its continued use and eventually create a build-up of backlog replacement need.

4.6 Investment required on IM&T assets

NHS Boards are reporting planned expenditure on IM&T projects at £96 million over the next 5 years. This is lower than the £130 million reported in last year's SAFR. However, further IM&T investment is incorporated into some of the major investment projects associated with the refurbishment and replacement of property assets.

This expenditure is part of the overall eHealth Finance Strategy which has an annual budget of circa £90 million per annum over the next 3 years. In addition, eHealth Directorate retained funds may be used to contribute to refresh activities in relation to infrastructure. The eHealth Finance Strategy assumes flat funding in relation to Infrastructure over the next 3 years, this means RPI and upward pressures from existing contracts must be contained within the existing allocation. In addition to this, as development from the Strategic funding moves into a stable state, these systems or services would be incorporated within the

Application and/or Infrastructure portfolios. Funding for this needs to be absorbed within existing allocations. The chart that follows illustrates the financial landscape for eHealth.



In terms of the sufficiency of such investment, the annual investment in IM&T assets of £19m will meet the replacement value of these assets, currently estimated at £210 million, within circa 11 years. Careful management will be required to ensure that a build-up of infrastructure (network cabling, servers, etc.) backlog does not arise due to the increasing use of end user IM&T equipment, as well as the relatively short life of desktop and mobile equipment devices, which have the potential to outgrow the capacity of the infrastructure. This investment will also need to fund any additional investment in technology.

4.7 Summary of asset investment plans

The combined asset investment plans of circa £550 million per annum is shown in the chart below. Although presented as a single investment amount, in practice some of the capital requirement will be funded through revenue schemes such as NPD, hub and leasing arrangement.



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, environmental improvement investments, implementation of the Zero Waste Plan and the Waste Regulations 2012.

4.8 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. NHS Boards should continue to focus their investment strategies towards reducing backlog maintenance of high and significant risk backlog.
- 2. Estate rationalisation leading to disposal of surplus properties has the potential to:
 - a. Reduce currently identified and future backlog
 - b. Lower future operational costs (property maintenance, energy, cleaning etc.)
 - c. Reduce future investment requirements for estate replacement
- 3. 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 as a long term strategy. The Scottish Government have allocated £5 million to support the disposal of surplus assets.

- 4. 70% of annual recurring expenditure on assets is associated with the day to day operation and maintenance of the estate and the delivery of associated facilities services (£709 million per annum). Therefore, it is essential to focus on improving the performance on these services.
- 5. Estate replacement projects have the potential to bring about significant change to way in which the existing estate is configured and how it might continue to support the delivery of healthcare services. These opportunities for strategic change should be at the heart of each NHS Board's decision making process for estate replacement projects.
- 6. Investment plans should not ignore the requirements of the other assets, which need to be sufficient to ensure adequate replacement, but also for further investment in new technology that might introduce innovative solutions towards NHSScotland's 2020 Vision for quality healthcare provision, and potentially reduce reliance on continued investment in property replacement.
- In addition to the investment in assets planned by individual Boards, there are also a number of national initiatives supported by the Scottish Government to invest in assets.

5.0 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.

5.1 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. It should be noted that the 2020 Performance Targets are (a) provisional and subject to review to reflect the outcome of the work on the 2020 Vision, and (b) based on the qualification that their attainment will not reduce service quality. Broadly, half of the KPIs are based on quality measures and half are based on cost measures. The National Asset and Facilities Performance Framework for 2014 is shown overleaf.

NHSS	cotland National Ass	et & Fa	cilities Performance	e Framew	vork			
Quality Ambition	Performance Measure	KPI No	Key Performance Indicator	2020 Performance Target	Current 2014 Performance			
	Quality of physical environment	Percentage of properties 1 categorised as either A or B for Physical Condition facet of estate appraisals						
Patient Centred		2	Percentage of properties categorised as either A or B for Quality facet of estate appraisals	90%	65%			
Centred	Patient opinion of healthcare accommodation	3	Positive response to Patient Questionnaire on patient rating of hospital environment	95%	90%			
	Patient needs are accommodated in modern, w ell designed facilities	4	Percentage of properties less than 50 years old	70%	74%			
	PAMS reflective of service needs and patient preferences	5	PAMS Quality Checklist Overall Score (max score 100)	95	72			
	Statutory compliance status of property asset base	6	Overall percentage compliance score from SCART	95%	73%			
0(.	Backlog maintenance expenditure requirement	7	Cost per square metre for backlog maintenance	£100	£181			
Safe	Level of risk associated with outstanding backlog maintenance requirement	8	Significant and high risk backlog maintenance as percentage of total backlog expenditure requirement	10%	47%			
	Estate Functionally suitability	9	Percentage of properties categorised as either A or B for Functional Suitability facet of estate appraisal	90%	64%			
	Estate Utilisation(from Property Appraisals)	10	Percentage of properties categorised as 'Fully Utilised' for space utilisation facet of estate appraisals	90%	77%			
	Estate Utilisation (from Cost Book)	11	Building Area sq.m per Consumer Week (from Cost Book)	3.0	3.3			
	Cleaning	12	Cleaning Costs £ per sq.m (from Cost Book)	36.2	40.3			
Effective &	Property maintenance	13	Property maintenance costs £ per sq.m (from Cost Book)	33.3	37.0			
Efficient	PFI - Facilities Management	14	PFI - Facilities Management Costs £ per sq.m (from Cost Book)	31.8	35.3			
	Energy consumption	15	Energy Costs £ per sq.m (from Cost Book)	28.2	31.4			
	Rates	16	Rates Costs £ per sq.m (from Cost Book)	13.7	15.3			
	Catering	17	Catering Cost £ per consumer w eek (from Cost Book)	75.2	83.5			
	Portering	18	Portering Costs £ per consumer w eek (from Cost Book)	43.1	47.8			
	Laundry & Linen	19	Laundry & Linen Cost £ per consumer week (from Cost Book)	28.4	31.6			
	Waste	20	Waste Cost £ per consumer w eek (from Cost Book)	10.5	11.6			
Notes:	(1) The "Current Performance 2014" for	KPI Nos 12 to	o 20 inclusive is based on the 2013 C	ost Book informa	ation			
	(2) KPI No 15 - Energy costs have incre	ased significa	antly in recent years and are projecte	d to increase fu	rther through to			

2020. These price increases are beyond the control of NHSS Boards, so therefore it will be necessary to adjust this KPI each year to take account of energy price rises.

5.1.1 Change in Framework KPIs - 2013 to 2014

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 2013 and 2014.

	Performance Change 2013 t	o 2014		
		2013	Current 2014	Percentage
KPI No	Key Performance Indicator	Performance	Performance	Change from 2013
1	Percentage of properties categorised as either A or B for Physical Condition facet of estate appraisals	66%	58%	-12%
2	Percentage of properties categorised as either A or B for Quality facet of estate appraisals	65%	65%	0%
3	Positive response to Patient Questionnaire on patient rating of hospital environment	85%	90%	6%
4	Percentage of properties less than 50 years old	71%	74%	4%
5	PAMS Quality Checklist Overall Score (max score 100)	65	72%	12%
6	Overall percentage compliance score from SCART	72%	73%	2%
7	Cost per square metre for backlog maintenance	£193	£181	7%
8	Significant and high risk backlog maintenance as percentage of total backlog expenditure requirement	43%	47%	-3%
9	Percentage of properties categorised as either A or B for Functional Suitability facet of estate appraisal	67%	64%	8%
10	Percentage of properties categorised as 'Fully Utilised' for space utilisation facet of estate appraisals	77%	77%	0%
11	Building Area sq.m per Consumer Week (from Cost Book)	3.3	3.28	-1%
12	Cleaning Costs £ per sq.m (from Cost Book)	40.6	40.26	-1%
13	Property maintenance costs £ per sq.m (from Cost Book)	34.8	37.00	6%
14	PFI - Facilities Management Costs £ per sq.m (from Cost Book)	31.6	35.28	12%
15	Energy Costs £ per sq.m (from Cost Book)	26.5	31.37	18%
16	Rates Costs £ per sq.m (from Cost Book)	13.5	15.26	12%
17	Catering Cost £ per consumer w eek (from Cost Book)	79.1	83.50	6%
18	Portering Costs £ per consumer w eek (from Cost Book)	46.4	47.84	3%
19	Laundry and Linen Cost \pounds per consumer w eek (from Cost Book)	32.8	31.60	-4%
20	Waste Cost £ per consumer w eek (from Cost Book)	10.5	11.64	11%
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.

Note: figures and percentages have been rounded for ease of reporting purposes.

Percentage Change is the real percentage change since 2013 and not percentage point change.

'Percentage of properties' indicators are based on overall floor area, unless otherwise stated.

Cost based indicators are affected by external influences such as inflation, as well as performance.

Annual changes to these KPI's are further explained in the following section:

5.1.2 Changes in National Asset Performance Framework KPIs

The following provides an overview of performance change between 2011 (when the performance framework was first developed) and 2014, along with a short commentary on the changes.

KPI Nos 1 to 10 – Derived from property appraisal information and PAMS provided by Boards

(Note: 'Percentage of properties' indicators are based on floor area, unless otherwise stated).







KPI Nos 11 to 20 - Cost Book Derived KPIs

As part of the measures to improve the quality and consistency of data, the unit of measurement for building size was changed from 100 cu.m to sq.m in the 2012 Cost Book. Therefore, comparisons can only be made for the last two years on these KPIs.



Space Utilisation - Building Area per Consumer Week

There has been little change in this KPI over the last two years



Cleaning Costs

While this KPI has fluctuated over the four year period, overall, cleaning costs have only risen by around 3% over the period between 2011 and 2014; which is lower than CPI inflation of 10% during the same period. Boards also report that higher cleaning standards have been introduced over the last few years as a response to increased HAI standards of cleanliness.



Property maintenance costs

This KPI indicates an increase in property maintenance costs by around 6% over the last year. Boards advise that this is as a result of increased revenue spend on backlog maintenance included in the expenditure figures for property maintenance.







Waste Costs £ per Consumer

Week

2012

2013

2014

14.00

12.00

10.00 8.00

6.00

4.00

2.00 0.00

2011

Portering Costs

Portering Cost per consumer week has risen by around 13% since 2011. Apart from increased workforce costs, Boards explain that this service is being used to carry out additional tasks in order to reduce pressures on front-line staff. A review of Portering can also be found in Annex G, which includes the recommendation to install automated portering task tracking systems in appropriate locations.

Laundry & Linen Costs

Although there have been fluctuations year on year in this KPI it shows that over the period since 2011 Laundry and Linen costs per Consumer Week have reduced marginally. The Soft FM review of Laundry services (see Annex G) has recommended a business case to evaluate the reprovision of Laundry Production Units across NHScotland.

Waste Costs

This KPI shows a substantial increase (52%) in Waste Costs per Consumer Week since 2011. This is as a result of increased regulation and stricter controls over the segregation and disposal of waste. A review of Waste services falls under the Facilities Shared Services Review, with opportunities for future efficiencies described in Annex F.

As described above, the Strategic Review of Soft Facilities Management Services Programme and the Facilities Shared Services Review are both carrying out strategic reviews of FM services across NHSScotland to identify improvements and efficiencies that can be made to these services, and thus make improvements to the above performance KPI's.

It should be noted that a number of the above Cost Book derived KPIs use "consumer weeks" as the denominator in the KPI. It should be recognised that this is primarily a measure of inpatient activity and does not take account of increases in day cases, outpatients and A&E attendances. However, this does not invalidate the KPI since studies have shown that it is primarily inpatient activity which drives the numerator in each of these KPIs i.e. the two variables in each of these KPIs are highly correlated.

5.1.3 Performance variation across Boards

The Performance Framework is intended to provide a useful "national picture" of performance on a range of asset and facilities management services and the tables which follow compare each Board's performance on each of the 20 KPIs in the Framework. However, it should be recognised that comparisons between NHS Boards should be treated with some caution because:

- The size and scope of each Board's estate has historically developed over time.
- Increased spending can be a result of an improvement initiative.
- Boards may use different service delivery models to suit local circumstances i.e. number and type of duties carried out by domestic services staff may vary from site to site.
- Smaller Boards will be unable to achieve the economies of scale evident in the larger Boards.
- There are different specifications between Boards in the scope of each service.
- Allocation of costs between services and sites may not be uniform.
- Annual variances in non-recurring expenditure may distort operational KPIs i.e. expenditure on backlog incorporated within annual property maintenance costs.
- The introduction of new initiatives which improve performance take time to implement across NHSScotland.
- Clinical complexity / specialist services vary between hospitals and may drive cost differentials i.e. specialist clinical activity may result in higher clinical waste quantities and costs.
- Differences in pay and supplies costs across geographic areas i.e. some Boards may incur higher cost arising from remote and rural locations

NHS Board	Percentage of properties categorised as either A or B for Physical Condition	Percentage of properties categorised as either A or B for Quality	Positive response to Patient Questionnaire on patient rating of 'hospital environment'	Percentage of properties less than 50 years old	PAMS Quality Checklist Overall Score (%)	Overall percentag e complianc e score from SCART	Cost per square metre for backlog maintena nce	Percentage of significant and high risk backlog maintenance	Percentage of properties categorised as either A or B for Functional Suitability	Percentage of properties categorised as 'Fully Utilised' for space utilisation
NHS Greater Glasgow & Clyde	53%	41%	85	71%	70%	42%	168	46%	43%	70%
NHS Lothian	49%	73%	88	61%	90%	76%	101	78%	76%	74%
NHS Tayside	57%	92%	91	69%	64%	67%	114	57%	81%	84%
NHS Grampian	48%	69%	91	68%	79%	59%	379	37%	66%	89%
NHS Fife	81%	69%	84	76%	69%	82%	158	37%	78%	79%
NHS Ayrshire & Arran	49%	82%	89	69%	68%	70%	293	50%	88%	67%
NHS Lanarkshire	80%	69%	80	91%	75%	88%	197	25%	67%	98%
Highland	34%	40%	94	97%	59%	57%	329	33%	28%	58%
NHS Forth Valley	81%	79%	91	96%	73%	70%	37	16%	84%	95%
NHS Dumfries & Galloway	62%	50%	88	69%	77%	71%	473	55%	56%	48%
NHS Borders	100%	67%	89	86%	60%	79%	78	17%	64%	98%
NWTCB - Hospital	92%	93%	99	100%	61%	88%	59	15%	93%	98%
Western Isles	90%	98%	97	87%	79%	95%	66	5%	97%	97%
The State Hospitals Board for Scotland	100%	100%	-	98%	75%	95%	12	36%	100%	91%
NHS Shetland	57%	68%	91	53%	80%	65%	161	82%	72%	98%
NHS Orkney	28%	81%	90	52%	77%	72%	607	14%	45%	44%
NHS Board Average 2014*:	58%	65%	90	74%	72.1%	72%	188	45%	64%	77%

*: the size, scope and historical development of each Board's estate influences the 2011 starting performance base indicator and thus continues to impact on Boards' variation from the NHS Board Average

Board	Building Area sq.m per Consumer Week (from Cost Book)	Cleaning Costs £ per sq.m (from Cost Book)	Property maintenance costs £ per sq.m (from Cost Book)	PFI - Facilities Management Costs £ per sq.m (from Cost Book)**	Energy Costs £ per sq.m (from Cost Book)	Rates Costs £ per sq.m (from Cost Book)	Catering Cost £ per consumer week (from Cost Book)	Portering Costs £ per consumer week (from Cost Book)	Laundry & Linen Cost £ per consumer week (from Cost Book)	Waste Cost £ per consumer week (from Cost Book)
NHS Greater Glasgow	3.1	3.1 37.3 28.7		35.2	33.0	14.3	73.4	53.8	26.6	11.9
NHS Lothian	3.3	39.8	32.8	61.3	32.9	15.0	89.3	47.1	25.5	8.2
NHS Tayside	4.6	32.4	33.2	0.0	23.4	13.0	77.4	58.3	39.1	10.7
NHS Grampian	3.4	57.1	34.6	0.0	42.5	16.0	82.0	58.3	30.6	13.2
					(= 0	10-				
NHS Fife	4.4	32.9	20.8	82.1	17.2	12.5	81.6	46.4	27.9	11.4
NHS Ayrshire & Arran	3.0	40.0	49.2	17.4	24.9	11.6	84.4	56.3	40.1	10.4
NHS Lanarkshire	2.0	43.7	88.4	117.4	25.0	18.4	88.3	30.4	41.1	15.3
NHS Highland	3.3 41.0 37.2		37.2	15.3	49.0	18.1	100.6	39.0	27.8	10.6
NHS Forth Valley	3.0	44.0	41.8	21.5	29.5	22.7	87.0	29.1	36.8	10.3
NHS Dumfries & Galloway	3.2	58.5	48.2	17.6	30.1	14.7	104.1	26.5	41.5	15.8
NHS Borders	3.1	44.4	39.9	0.0	28.0	15.8	75.6	28.0	25.8	10.3
Golden Jubilee	6.3	23.2	53.0	0.0	50.0	27.1	97.7	55.3	56.6	39.0
State Hospital	3.3	61.2	34.5	0.0	38.2	23.6	104.6	16.5	7.5	5.0
NHS Western Isles	3.5	41.1	40.4	0.0	50.5	23.9	121.1	32.3	43.2	19.1
NHS Shetland	3.6	75.1	144.1	0.0	52.9	19.8	302.2	123.1	82.5	7.7
NHS Orkney	2.9	61.3	63.8	0.0	50.9	25.2	107.3	54.7	101.1	13.2
NHS Scotland 2013 Cost Book Average*	3.28	40.26	37.00	35.28	31.37	15.26	83.50	47.84	31.60	11.64

*: Comparisons between NHS Boards should be treated with some caution for the reasons outlined at the beginning of this section.

** - This KPI uses the floor area of each Board's estate hence higher costs are more reflective of the proportion of a Board's PPP estate than its performance.

5.1.4 Projected reduction in backlog maintenance expenditure requirement

In 2011, NHS Boards estimated that the then backlog maintenance expenditure requirement of £1,010 million would reduce significantly over the next 5 year period as a result of their plans for:

- Direct expenditure on reducing high and significant backlog.
- Rationalisation and disposal of older properties thereby avoiding the need for expenditure on backlog.
- Replacement and refurbishment of existing buildings with backlog.

The following table provides an analysis of the reduction to the backlog maintenance expenditure requirement originally reported in the 2011 SAFR:

SAFR Reporting Year	Change to backlog originally reported in 2011 SAFR (£m)
2011	1,010
2012	911
2013	803
2014	702

The table shows that NHSScotland has been able to successfully reduce the backlog maintenance expenditure requirement by £308m, to a total of £702m by 2014. This is generally in line with previous projections to reduce this backlog to circa £500m by 2017.

However, as shown earlier in this report, the total backlog expenditure requirement reported by Boards in 2014 is £797 million. This figure takes account of additional newly identified backlog over the same period, which on average is adding a further 4% per annum onto the net Backlog reported in SAFR. Since 2011, this has resulted in an additional £95m of backlog maintenance expenditure requirement being reported by Boards.

It should be recognised that newly identified backlog in buildings and engineering systems is an inevitable consequence of aging buildings that occurs as a result of:

 Building and engineering elements coming to the end of their operational life, which can vary significantly depending on the element – engineering components and systems can have relatively short operational lives with most requiring replacement within 20 years whereas building elements tend toward longer operational lives of up to 60 years. • Variations in normal day to day operational usage which can result in shorter than expected operational lives of elements and in some cases unpredicted failure of systems and the need for earlier than expected replacement.

Hence, the backlog reported by Boards in any one year is a total figure which incorporates both the impact of their investment to reduce the backlog identified in previous years and any new backlog identified within the year.

The following chart uses the backlog originally reported in the 2011 SAFR to track the actual annual change in this backlog (i.e. excluding the impact of newly reported backlog) up to 2013/14, and then plots future expectations to meet the 2016/17 projection reported in last year's SAFR:



* excluding newly reported backlog

The chart shows that the greatest reduction in backlog maintenance that occurs between 2010/11 and 2013/14 relates to high and significant risk items, which confirms that as the overall backlog is reducing Boards are continuing to address high and significant risk backlog. This will remain a key focus for improvement in future years.

It is also recognised that in practice new build and refurbishment / upgrade schemes will inevitably also reduce low and moderate risk backlog when, for instance, this backlog is in the same building/area in which the high and significant risk backlog is present, hence, it is accepted that some reduction in low and moderate risk backlog will take place in parallel with the reductions in high and significant risk backlog and is a practical consequence of undertaking works in buildings.

The following table outlines the proposals being taken forward by NHS Boards that will further reduce total backlog maintenance. It also shows the impact of not taking forward the replacement projects by predicting the life cycle costs over the next 20 years if they were retained. This would add at least £500m to the future burden of backlog maintenance expenditure requirement if retained in their current state:

	Projected Impact on backlog	Avoided Future Life Cycle / Backlog Costs (next 20 years) ⁴
Currently reported total backlog:	£797m	
Main investment projects on new facilities replacing older properties ¹ :		
Completion of the South Glasgow Hospitals	-£12m	£300m
Replacement of Maternity Hospital at Aberdeen Royal Infirmary	-£5m	£15m
Replacement of Royal Hospital for Sick Children & DCN	-£2m	£50m
Replacement of Dumfries Hospital and rationalisation of existing estate	-£37m	£85m
Replacement of Balfour Hospital, Orkney	-£9m	£50m
Main investment projects redeveloping existing estate ¹ :		
Major backlog programme to existing inpatient accommodation at Aberdeen Royal Infirmary	-£15m	
NHS Ayrshire & Arran's 'Building for Better Care' investment programme & redevelopment of Ayrshire Central Hospital site	-£20m	
Redevelopment of Royal Edinburgh Hospital site	-£15m	
Further Estate Rationalisation ² :	-£80m	
Direct Investment on Backlog ³ :	-£80m	
Anticipated backlog following impact of above proposals:	£522m	

1: Based on impact of investments taken from Boards' PAMS & EAMS information.

2: Estate rationalisation taken from Board's PAMS, EAMS information, and disposal register.

3: Assumed backlog reduction is 50% of direct investment outlined in Boards' PAMS & pro-forma information.

4: Estimates taken from the Capital Planning System lifecycle model, totalling £500m but excluding future inflation.

Of the retained backlog from the above table, **24%** is in non-clinical areas and a further **42%** is of low to moderate risk backlog only; neither of which will

materially impact on the delivery of healthcare services. Of the remaining circa £180m, (of which, a substantial proportion is the £95m of newly reported backlog), Boards have in place plans to reduce this through investment plans not included in the above list, and also to mitigate any outstanding risks through good asset & risk management practices.

In summary, whilst this analysis and projections of future backlog provides a high level indication of how backlog is likely to be reduced over the next few years, it needs to be recognised that in practice it is very difficult to accurately project changes in backlog in existing buildings, and timings for estate rationalisation can be influenced by a number of factors including operational priorities and market forces (in relation to disposals).

Future SAFR reports will continue to monitor annually how Boards are actually reducing their overall backlog as well as the risk profile of the backlog.

5.1.5 Estate Performance at Hospital Level

As part of the ongoing development of the Estate Asset Management System (EAMS) it is now possible to report on property asset KPI's such as backlog maintenance and physical condition at hospital level. Analysis of this information enables identification of hospitals with the highest backlog maintenance cost and the largest area of accommodation categorised as either C or D for the facet of physical condition. This enables comparisons to be made between these hospital level indicators and highlight the strategic plans for improvement included within the appropriate NHS Board's PAMS. The results of this analysis and the strategic plans for improvement can be found in the following two tables:

The following table lists the 10 NHSScotland hospitals with the highest total cost for backlog maintenance, which naturally focuses on larger accommodation types. The total cost associated with these properties of circa £290m accounts for 36% of the overall backlog maintenance cost for NHSScotland; with over half of this £290m attributable to significant and high risk backlog. Prioritisation of investment on these properties would make a significant contribution to reducing NHSScotland's backlog maintenance burden.

NHS Board	Property	Total Backlog Cost	Strategic Plan (identified from the Board's PAMS)
NHS Greater Glasgow & Clyde	Inverclyde Royal Hospital	£44m	Part of general backlog maintenance & service infrastructure investment programme
NHS Dumfries & Galloway	Dumfries & Galloway Hospital	£37m	Planned replacement of hospital and estate rationalisation between 2015/16 - 2018/19
NHS Ayrshire & Arran	Crosshouse Hospital	£36m	Phased service developments over next 5 years to 'front door services' & new Combined Assessment Unit, plus ongoing direct backlog investment
NHS Lanarkshire	Monklands Hospital	£34m	Prioritised backlog investment programme in place
NHS Tayside	Ninewells Hospital	£31m	Part of general backlog maintenance programme & longer term investment plans are being developed
NHS Greater Glasgow & Clyde	Royal Alexandra Hospital	£31m	Part of general backlog maintenance & service infrastructure investment programme
NHS Greater Glasgow & Clyde	Glasgow Royal Hospital	£22m	Part of general backlog maintenance & service infrastructure investment programme
NHS Lothian	Western General, Edinburgh	£21m	Masterplan for site being developed, including reprovision of Department of Neurosciences, and infrastructure investment plans
NHS Fife	Victoria Hospital, Kirkcaldy	£19m	Part of general backlog maintenance programme
NHS Lothian	Royal Edinburgh Hospital	£17m	Phased redevelopment of site from 2014 onwards
	TOTAL BACKLOG:	£292m	

The following table lists the 10 NHSScotland hospitals with the largest overall area categorised as either C or D for the facet of Physical Condition. The total area of over 445,000 sq.m. represents 12% of NHSScotland's overall hospital estate.

Prioritisation of investment on these properties would, therefore, make a significant contribution towards improving the physical condition of NHSScotland's overall estate.

10 Hospitals with largest floor area categorised as either C or D for the facet of Physical Condit													
NHS Board	Property	KPI: Percentage in C or D	Floor Area (sq.m) in C or D	Strategic Plan (identified from the Board's PAMS)									
NHS Grampian	Aberdeen Royal Infirmary	65%	80,466	Backlog investment programme in place									
NHS Lothian	Western General Hospital	50%	61,235	Infrastructure investment planned with particular focus on steam plant, electrical distribution, fire alarm, external fabric and drainage									
NHS Lothian	St. John's Hospital	79%	60,422	Investment programme for roof and window replacement									
NHS Greater Glasgow & Clyde	Gartnavel General Hospital	77%	49,701	Part of general backlog maintenance & service infrastructure investment programme									
NHS Lothian	Bangour Village Hospital	14%	40,486	Part of NHS Lothian's disposal strategy									
NHS Lanarkshire	Monklands Hospital	77%	40,190	Prioritised backlog investment programme in place									
NHS Dumfries & Galloway	Dumfries & Galloway Hospital	66%	31,540	Planned replacement of hospital and estate rationalisation between 2015/16 - 2018/19									
NHS Lothian	Royal Edinburgh Hospital	59%	29,184	Phased redevelopment of site from 2014 onwards									
NHS Ayrshire & Arran	Crosshouse Hospital	39%	26,664	Phased service developments over next 5 years to 'front door services' & new Combined Assessment Unit, plus ongoing direct backlog investment									
NHS Ayrshire & Arran	Ayrshire Central Hospital	90%	26,653	Planned replacement (circa 2015/16) with new integrated mental health and community hospital facility									
	Т	OTAL AREA:	446,541										

5.1.6 Asset Performance for Office Accommodation

The NHS Scotland Smarter Offices Programme was established in October 2013 with the aim of supporting improved utilisation of office accommodation across the NHS estate. An interim report was prepared jointly by the Scottish Futures Trust (SFT) and NHS National Services Scotland (NSS) in April 2014 and provides details of the work undertaken to deliver the Programme in the six months to March 2014 through initial engagement with Health Boards and a data collection exercise. This initial work has produced a more robust data set for offices, providing a strong platform for measuring on-going performance which can now be used for this report.

The Smarter Offices Programme, drawing on wider research undertaken by UK Government, has developed a set of performance measures covering workplace standards and benchmarks which this report has adopted as the Office Performance Framework. This Office Framework uses eleven KPIs as shown in the tables overleaf.

The Office Performance Frameworks for both Health Boards and Special Health Boards show that there is significant variation across Boards in terms of performance as measured by the eleven KPIs. The interim report on the Smarter Offices Programme recognised this variation in performance across Boards and identified significant potential for improving performance and providing savings in office accommodation costs for NHSScotland.

It is intended that the Smarter Offices programme will continue with the aim of:

- Improving performance of the current office estate
- Supporting Boards in developing offices strategy and New Ways of Working
- Promoting collaboration across the public sector on office strategies
- Development of case studies for successful office strategies
- Further development of Key Performance Indicators (KPIs) and benchmarking for office accommodation

This report will use the Office Performance Framework to monitor changes in performance over future years.

Office Accommodation Performance	Framework										
Health Boards	Space sq.m(NIA) per headcount	Space sq.m(NIA) per WTE/FTE	Space sq.m(NIA) per Desk	Desk to Headcount %	Desk to WTE/FTE %	Rent £/sq.m(NIA)	Rates £/sq.m(NIA)	Service Charge £/sq.m(NIA)	Hard FM £/sq.m(NIA)	Soft FM £/sq.m(NIA)	Energy £/sq.m(NIA)
NHS GG&C	21.7	22.8	21.0	103%	109%	27.7	20.1	-	27.2	18.6	20.6
NHS Lothian	11.0	12.0	11.5	95%	104%	133.6	46.5	0.4	4.0	22.7	14.9
NHS Tayside	13.4	13.6	12.8	104%	106%	79.9	19.2	-	18.2	34.5	26.1
NHS Grampian	11.2	11.2	11.7	96%	96%	66.3	60.9	0.5	36.8	25.4	37.8
NHS Fife	14.2	15.4	14.0	102%	110%	8.0	22.5	-	5.6	5.6	26.4
NHS Ayrshire & Arran	13.3	14.3	11.4	116%	125%	33.2	20.7	-	7.9	6.0	18.9
NHS Lanarkshire	6.0	6.0	6.7	89%	89%	23.4	25.8	-	19.9	12.9	17.0
NHS Highland	8.1	8.8	8.2	98%	107%	122.6	63.3	2.2	8.2	6.0	29.8
NHS Forth Valley	21.2	21.2	18.6	114%	114%	51.9	25.4	8.0	21.5	11.6	24.2
NHS Dumfries & Galloway	20.3	20.3	22.7	89%	89%	14.3	10.0	-	13.5	11.2	20.1
NHS Borders	8.5	8.5	9.7	88%	88%	-	28.7	-	10.2	10.4	29.5
NHS Western Isles	10.3	10.3	10.2	102%	102%	61.8	72.2	-	18.6	76.3	26.6
NHS Shetland	12.9	12.9	11.4	113%	113%	25.0	18.1	-	-	44.2	23.6
NHS Orkney	8.7	8.7	8.7	100%	100%	156.3	63.0	-	3.3	23.5	42.7
NWTC/Golden Jubilee	10.4	10.4	10.4	100%	100%	-	23.3	-	27.9	22.0	30.5
The State Hospitals Board for Scotland	42.9	46.1	45.2	95%	102%	-	8.3	-	13.1	18.6	32.7
Average	14.2	14.7	14.2	100%	104%	45.9	26.8	0.7	17.6	17.0	23.1

Office Accommodation Performance Fi	amework										
Special Health Boards	Space sq.m(NIA) per headcount	Space sq.m(NIA) per WTE/FTE	Space sq.m(NIA) per WTE/FTE Space sq.m(NIA) per Desk		Desk to WTE/FTE %	Rent £/sq.m(NIA)	Rates £/sq.m(NIA)	Service Charge £/sq.m(NIA)	Hard FM £/sq.m(NIA)	Soft FM £/sq.m(NIA)	Energy £/sq.m(NIA)
NHS National Services Scotland	10.8	11.7	10.5	103%	111%	222.16	75.52	17.56	17.76	27.43	27.70
NHS Education for Scotland	8.8	11.0	9.7	91%	113%	210.83	85.60	74.70	-	8.36	15.54
Healthcare Improvement Scotland	11.7	12.8	10.7	109%	119%	195.99	85.89	44.07	17.39	41.16	19.70
NHS Health Scotland	9.1	10.0	12.4	74%	81%	278.48	90.56	0.00	20.29	31.96	35.30
Scottish Ambulance Service	11.2	13.8	12.8	88%	108%	99.42	53.73	3.20	14.50	43.02	22.74
NHS 24	6.4	9.6	9.7	66%	99%	143.51	50.18	21.76	29.16	28.69	46.80
Average for SHBs	9.2	11.2	10.5	88%	107%	198.86	72.03	26.12	17.46	27.10	29.42

5.2 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.

5.2.1 Review of PAMS submitted in 2014

The PAMS that were submitted in March 2014 show that the main focus over the next few years is the delivery of NHSScotland's substantial asset investment programme and the rationalisation of the estate to reduce backlog and improve the utilisation of existing property assets.

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. Generally, the review has identified that Boards are increasingly able to link their PAMS to their service strategies; which is essential if the investment programme in assets is to achieve the expected health and care benefits, and deliver the Scottish Government's vision for the future. It has also demonstrated a year on year improvement in the quality and comprehensiveness of the PAMS submitted by Boards, as shown in the chart that follows.



The Scottish Government and Health Facilities Scotland have recently provided extensive feedback to Boards on their 2014 PAMS through individual Board reports and interviews. This feedback was aimed at supporting Boards to further improve their PAMS for next year.

The 2014 PAMS Quality Checklist Score for each of the Boards is shown in the chart overleaf.

PAMS Quality Assessment Summary Score Sheet 2014																									
	Where are we now? Where) we w	vant t	o be?	Но	w do	we ge	et there	2?	Ir	nplen	ienta	tion				Overa		
NHS Ayrshire & Arran	X	\geq	\geq	×	X	Ì	Ň	Ì			X	\succ			\sim	\sim		×			Ì			Ú	
NHS Borders	>			\geq			ž					\succ			\geq	\rightarrow	\rightarrow	×							
NHS Dumfries & Galloway	\geq	\geq		<u>}</u>		X						\succ			\sim	\rightarrow	\rightarrow	\rightarrow			Ì				
NHS Fife	X								-		Ì	\succ			\geq	\rightarrow	\rightarrow	\rightarrow			Ì				
NHS Forth Valley				\geq			À									\rightarrow	~	\rightarrow			Ì				
NHS Greater Glasgow & Clyde	X			×	\geq	\geq					À	\succ				\rightarrow	\rightarrow				Ì			Ű	
NHS Grampian		\geq										\succ			\geq	\rightarrow	~	\rightarrow							
NHS Highland	\geq		\geq	$\mathbf{\mathbf{x}}$		\geq	\geq	\geq	,					,		\rightarrow									
NHS Lanarkshire	X			\geq	\geq	ľ	Ž				X	\geq			\sim	\rightarrow	X	\rightarrow	U		Ì			Ŭ	
NHS Lothian	X			\geq	\geq	Ĭ	Ň			Ŭ					Ś	\rightarrow	\rightarrow	\rightarrow	\rightarrow					Ŭ	Ú
NHS Orkney	X	X		×	\geq	Υ	Ž				X				$ \leq $	\rightarrow	×	×	U		Ì			Ŭ	
NHS Shetland			\geq			Ĭ	Ň			Ŭ	X	\succ			$ \leq $	\sim	Ŷ	×	U		Ì	X		Ű	
NHS Tayside		X				Ĭ	Ž	Ű	,		Ĭ	Ŭ			\sim	$\langle \rangle$	~				Ì	X		Ű	
NHS Western Isles		\geq				X	X				X					\rightarrow		\rightarrow						Ú	
NHS NWTC	\geq			\geq	\geq		X		-							\rightarrow	~				Ì				
State Hospital	X			\geq		Ž	Ž				X	\geq	X		\sim		~					X		Ŭ	
NHS Education for Scotland	\geq	\geq		\geq		Ň	Ž				X					\rightarrow		\rightarrow						Ű	
NHS Health Scotland	λ	X		\geq	\geq		X			Ŭ	X	\succ			\geq	\rightarrow	\rightarrow	\rightarrow	U					Ű	
NHS 24						X	X				X				\geq	\geq		\rightarrow						Ű	
National Services Scotland		X					X			Ŭ	X					\rightarrow		\rightarrow	\rightarrow					Ű	Ŭ
Scottish Ambulance Service	X		\geq	\geq	\geq	X	X				X	\succ					~	~			\geq	\geq		Ú	
Score Key		\geq	\geq	\geq	\geq	=	Com	prehe	ensive	e infor	rmatic	on / P	AMS	provide	ed wh	ich fu	lly su	ppor	ts the	e Boa	rd's s	trate	gic vis	ion	
		\geq	\geq	\geq		=	Goo	d leve	el of ir	nform	ation	/ PAN	/IS pro	ovided	which	n supp	oorts t	he B	oard'	s stra	ategic	visio	n		
		\geq	\geq			=	Limi	ted in	form	ation	/ evid	ence	provi	ided bu	it it do	oes ge	eneral	ly su	pport	t the	Board	d's str	ategio	c visio	'n
		\geq				=	Prov	ided i	inforr	natior	n and/	or ov	erall	PAMS I	acks e	evide	nce of	links	s with	h Boa	rd's s	trate	gic vis	ion	
		>				=	Limi	ted in	form	ation	/ evid	ence	provi	ided an	d lack	s coh	esion	with	Boar	rd's st	trateg	gic vis	ion		
						=	No i	nform	ation	PAN	NS sub	omitt	ed												

Note: Healthcare Improvement Scotland are not shown in the above table as their position was unchanged in relation to PAMS in 2014

6.0 Delivering NHSScotland's 2020 Vision

Getting the right assets and facilities services in place will be central to achieving the Scottish Government's "2020 Vision" for sustainable high quality in health. Delivery of this vision will require major change to the type and distribution of facilities and the way in which future investment is prioritised across all asset groups.

The significant capital and revenue based investment plans described earlier in this report already form a key part in the delivery plans towards the 2020 vision, by focussing on improved quality in health and care services and a commitment to pursuing the three Quality Ambitions of safe, effective and person centred care, as set out in NHSScotland's Quality Strategy.

6.1 Realising the benefits from Property Asset Investment

Three of the most significant property asset investment plans over the next 5 years involve the completion of the New South Glasgow Hospitals project, the development of a new Royal Hospital for Sick Children in Edinburgh, and the reprovision of Dumfries & Galloway Royal Infirmary. Together they amount to a future investment programme of over £600m (this excludes investment already spent on New South Glasgow Hospitals).

These three investments alone will replace over 300,000 sq.m. of outdated accommodation; replace buildings in poor physical condition, reduce estate backlog maintenance risks and significantly improve the functional suitability and space utilisation of the NHSScotland estate. This investment will also deliver on the triple aims of the 2020 Vision by providing modern facilities that improve the quality of care provided, support the ability to improve the health of the population, and help to secure value and financial sustainability of health and care services.

In addition to these three major projects, a wide range of smaller but no less significant projects are being delivered across NHSScotland; including the following projects which focus on delivering new health, social and community care service models, improvements to facilities in remote and rural parts of Scotland, and patient focussed safety related to the control of blood transfusion facilities:

Stirling Care Village

The proposed Stirling Care Village is a joint development between NHS Forth Valley, Stirling Council, the Scottish Ambulance Service and Forth Valley College, to be located on the site of Stirling Community Hospital. This is an opportunity to provide a range of co-located, integrated services for the Stirling and wider communities. The Care Village concept is one which is aimed at developing the flexibility of care provision that will be needed in the future whilst introducing economies of scale that will enable these services to be affordable and sustainable in the longer term.

Over recent years, Stirling Social Care Services have worked with NHS Forth Valley to demonstrate transformational change to the delivery of care for older people over recent years. This has been achieved through the development of a broad range of large scale intermediate care services including short stay intermediate care assessment beds, reablement, Therapeutic Day Support and Falls Prevention. The successes include:

- 22% reduction in care needs through the effects of reablement.
- 50% of those admitted to intermediate care following hospital discharge return home at the end of their placement.
- Minimised delayed discharge from hospital

The current model of care is based on more intensive short term intervention resulting in reduced ongoing service as clients are enabled and more independent. This developing model of care is seeing a shift in overall trends for local authority spend with some reductions in long term care spend to increased care at home spend. Current modelling indicates that if this model can be developed to its full potential, it would have a significant effect in containing some of the cost pressures as demographic changes impact on service demand.

In order to improve outcomes for service users and to reduce the affordability gap in service delivery due to population change, further development of current service provision is required. The new service model is based on an increase in care at home delivery and a rehabilitative approach wherever possible. A natural consequence of this approach will be a reduction in the need for permanent care home beds, which will release some resources currently tied up in this provision.

The provision of care in this way is expected to ensure that people are able to stay at home longer. Preventative activity will minimise the long term interventions required for older people while the introduction of a care village approach will lead to increased flexibility in service provision and economies of scale.

The Older Peoples' Care Hub will be a 116 bed facility in which, reflective of the changing model of care, nearly 70% of these will be integrated, health & social

care service provision with the ultimate aim of flexibility across the environment to cope with future change.

The proposal also incorporates the co-location of 4 of the city's Practices on the site, which would provide a number of benefits:

- More efficient and effective provision of services.
- Adjacency/integration with the proposed services for Older People.
- Adjacency with other healthcare services, including Community Nursing and others to be provided in the Community Hospital.
- More effective use of the NHS estate
- The Practices can divest themselves of their outdated/outmoded premises

The Scottish Ambulance Service is another major partner in the project with plans to relocate from their current base in Stirling and workshop facilities in Falkirk to the Care Village. In addition to enhanced facilities and learning opportunities for the SAS workforce the move to the Care Village would allow greater integration and partnership working between Scottish Ambulance Service Paramedics and other clinical colleagues in the Minor Injuries Unit and the GP out of Hours Service. The Ambulance Service is committed to supporting the wider NHS to achieve a shift in the balance of care by extending the range of pre-hospital care, working in partnership with NHS Boards to agree and implement evidence based pathways of care that will see more patients being treated in their homes or local communities. This is a focus which can only be enhanced by the proposed co-location in the Care Village.

Though not a procurement partner as such, Forth Valley College brings another dimension to the Care Village project with several potential strands to their involvement. The College will support the training and continued professional development of a future health and social care workforce through the utilisation of opportunities and facilities in the Care Village, providing employment, training, placement and volunteering opportunities for local people. There will also be the opportunity to work with the other partner organisations to foster staff training and development, utilising existing facilities on site as well as those within their Stirling Campus.

Aberdeen Health and Care Village



The NHS Grampian 2020 Vision describes a health service that seeks to support people to remain healthy and in their own communities for as long as possible. Redesign of services will help to deliver this by creating opportunities to support wellbeing and self care and provide support, investigation and treatment in community settings.

The Aberdeen Community Health and Care Village (Health Village) is a key part of delivering the 2020 Vision in the city of Aberdeen. The Health Village is an urban community hospital (without inpatient beds) delivering diagnostic and treatment services for the people of Aberdeen and Grampian.

The Health Village will support self-care with the wider community care team, by helping people to remain well, independent and in their own communities where appropriate.

It provides a wide range of services, including cardiac rehabilitation, dental, dietetics, minor procedures, out-patients, physiotherapy, podiatry, radiology, sexual health services and speech and language therapy. Additionally, there will be a healthpoint/ carerspoint information service and access to learning space for patients, carers and staff. A small number of services will be delivered from the Health Village in partnership with Aberdeen City Council and Police Scotland.

Benefits for patients include:

- Creates an environment that encourages and supports self-care that is appropriate for each individual patient and their carer(s).
- Is a friendly and welcoming place which encourages patients, potential patients and carers to make use of its services.
- Provides a wide range of diagnostic and treatment services for the people of Aberdeen and Grampian, improving access to services.
- Is centrally located with nearby parking and reasonably accessible by bus for people from throughout the city.
- Encourages multi-professional working, to improve care for patients and their families.
- Aims to reduce anxiety and ensure, as far as possible, a smooth, timely, productive and pleasant experience for patients.
- Provides patient groups and voluntary groups with access to the learning facilities for the benefit of individuals' health and care.

Care Village on the site of the current Royal Victoria Hospital, Edinburgh

A Care Village on the site of the current Royal Victoria Hospital, Edinburgh is proposed to be taken forward in line with available resources and seeks a new approach to the care of people whose discharge is delayed in their transition from acute hospital clinical care back home or to other settings more appropriate to their ongoing care requirements.

The challenge for a care village on the site of the RVH based on this approach is how to ensure that consistent and cohesive operating policies and systems, as well as high quality environmental considerations, meet the triple aims of (a) improving the quality of care and the environment for occupants, (b) creating more capacity and (c) doing so at a lower unit cost. Success will mean far fewer unacceptable delays in the discharge of patients from acute hospitals, currently characterised as a lack of available care home beds and packages of home care in Edinburgh, which has to be compensated for by the retention of old and unsuitable NHS beds. Although there are some innovative service elements already in evidence across Lothian, including step down, 'Compass' (integrated community older peoples' service), step up and 'hospital at/to home', a more comprehensive whole-system model is needed to provide a longer term solution as well as having the potential for wider application to existing hospital and other sites across Lothian.

The concept of a care village is to ensure that patients, many of whom may have been admitted to hospital in emergency circumstances but whose acute clinical episode of care has concluded, are not detained within a hospital bed when their reablement or rehabilitation can be progressed within a more relaxed and conducive environment at home or in more homely surroundings. This will also include complex packages of intensive rehabilitation for patients in need of what is sometimes referred to as intermediate or interim care, but which can still be administered within a properly designed care village setting.

The essence of flexibility and tailoring care to individual needs within a care village presents a range of other opportunities, e.g. for people requiring end stage palliative care who would otherwise be admitted to an acute hospital.

Replacement Hospital and Healthcare Facilities for NHS Orkney

The procurement for a replacement hospital and health care facilities for NHS Orkney has recently been approved by the Scottish Government. This significant hospital and healthcare facilities development will provide a range of services for the Orkney population whilst also supporting a positive patient and staff experience in the delivery of person centred, safe and effective health care and service.

The Board's ambition is to reshape the way services are provided and the provision of a new Rural General Hospital incorporating an East Hub Primary Care facility, Public Dental Service and an adjoining clinical support services/facility represents one element of a series of system wide changes.

The age, condition and functionality of the existing facilities were causing serious business continuity risk and their replacement will address:

- Overcrowding and lack of storage;
- Poor accommodation and its impact on patient experience (temporary/portable buildings added to increase toilet and wash facilities in clinical areas);
- Infection control including decontamination risks;
- Patient environment and site layout austere interior and impersonal exterior, outdated space standards with poor clinical adjacencies;
- Deteriorating engineering infrastructure (heating, plant etc) and the risk of 'business interruption';
- Significant backlog maintenance; and
- Buildings no longer fit for purpose (care delivery) with high carbon emissions and costly to run.

This investment is expected to provide the following benefits to patients and staff:

- Improved patient and staff experience;
- Improved staff recruitment and retention;
- New ways of working and improved performance;
- Repatriations;
- Locality based health and care delivery in partnership with other providers, including the Third Sector;
- Improved adjacencies and environmental ambience; and
- Improved access.

New Scottish National Blood Transfusion Production Centre

Construction work commenced on the Scottish National Blood Transfusion Service's new Production Centre in August 2014 which will bring together in one place processing & testing, IT support, engineering, head office, selected R&D, donor administration, tissue & cells, and quality functions. The new building of circa 10,500 m² plus 1,500 m² of garaging space will provide a net reduction of 3,567 m² (18%) on current space.

Through the provision of the National Centre, the Blood Transfusion Centre (BTC) will be able to:

- Make a step change in the future sustainability of service delivery and to respond to anticipated increases in demand
- Reduce operating costs
- Continue to meet the regulatory standards required to continue to deliver its services in future years
- Maintain and invest in skills and Scotland's expertise, developing our innovative capability

The new facility will deliver the strategic objectives described above by:

- Delivering future proofed facilities that give the service the flexibility to respond to changing demographics and increasing demand, particularly the ability to deliver new cellular therapies.
- Minimising the number of buildings requiring a regulatory licence and ensuring ongoing regulatory compliance in purpose built, licensed accommodation thereby reducing regulatory risks and costs.
- Designing process improvement/lean principles into a purpose built facility to enable new ways of working that will increase levels of efficiency both in terms of operational services and the efficiency of the facility itself. Close adjacencies between related specialities and disciplines allows the design brief to maximise operational synergies.
- Consolidating onto a single manufacturing site which will also drive efficiencies and synergies through rationalisation;
- Providing an improved working environment and conditions and opportunities for staff.

The provision of a new National Centre also provides NSS with a unique opportunity to create a building which is environmentally efficient, low carbon, has an improved indoor environment and with the potential to incorporate sustainable design.

6.2 Potential benefits from a strategic approach to Office accommodation

The Smarter Offices Programme referred to earlier in this report is intended to support NHS Boards and Special Boards to develop a strategic approach to their office accommodation which will have the following benefits:

- Improving performance of the current office estate using measurement against their peer group and against target benchmarks.
- Further development of New Ways of working aimed at optimising the space efficiency of office accommodation
- Promoting and facilitating collaboration across the public sector to explore opportunities for shared use of space
- The development of case studies from successful office strategies to show the benefits of new ways of working projects from within NHS Scotland and the wider UK NHS estate.
- Further development of the Asset Performance Framework for Office Accommodation to ensure clarity in Framework KPIs and reduce target space allocation from 10sqm/FTE to 8sqm/FTE for new and refurbished office accommodation to align with changing practice in the wider public sector.

All NHS Boards recognise the importance of rationalising their office estate to maximise efficiency and reduce unnecessary space and, over recent years, the Special NHS Boards have made significant progress towards this by maximising the utilisation of their office accommodation. This has been achieved through the introduction of 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 & Asset Management Strategy which was 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.

The Scottish Government, along with Scottish Futures Trust, will be supporting NHS Boards and Special Boards to develop strategic plans for their 2015 PAMS which consider the above opportunities for improvement, as well as further

opportunities from the wider public sector office accommodation. This has the potential to bring about the following benefits:

- Provision of affordable support accommodation to the NHS that is better able to respond to future changes in strategic direction
- Improve current office accommodation performance issues, where opportunities exist, in terms of space utilisation, functional suitability and physical condition
- Improve the quality of working environment and thereby facilitate the retention and recruitment of staff
- Improve the availability of staff welfare facilities and promote positive staff morale.
- Providing flexible, well designed, efficient space that is able to cope with uncertainty around future property needs, support opportunities to change working practices, and introduce new technology
- Support Scottish Government environmental sustainability agendas through the appropriate procurement, design and operation of its property assets.
- Maximise opportunities for staff to develop and deploy their knowledge, skills and personal qualities creatively to add value to the business and service provision
- Enable more integrated/collaborative working and thereby encourage better use of skills and resources
- Achieve synergies from shared use of accommodation and support services.

6.3 Potential benefits from a more strategic approach to investment in medical equipment

Medical equipment is a valuable asset both in monetary terms and in the important role it plays in the delivery of quality healthcare across NHSScotland, with modern standards of available equipment used to support better patient care and improved efficiency and effectiveness of service delivery. The strategic management of medical equipment within each NHS Board should be aligned to its strategic aims. The strategic approach, supported by careful planning (replacement planning and, responding to changes in clinical care, procuring different additional equipment) will lead to better availability of the equipment required for patient care. Current examples of this across NHSScotland include:

• The programme of investment in new radiotherapy machines has enabled advanced treatments to be delivered in less than two minutes; rather than

the 15-20 minutes needed for conventional radiotherapy treatment, and are capable of treating in excess of 40 patients per day.

- Modern imaging equipment is now designed to keep radiation dosage to as low as reasonably achievable thus reducing the associated risks to patients and staff.
- The introduction of Digital Radiology technology provides instant image results, allowing the radiology staff to verify image clarity immediately after taking the image. This avoids the wait sometimes required whilst the image quality is verified
- Medical Equipment is integral to the delivery of keyhole surgery which has significantly reduced the length of stay in hospital for patients. It has enabled complex surgery, particularly abdominal surgery, to be undertaken without the associated trauma of major open surgery.
- Examinations of the digestive and intestinal system (gastroscopy and colonoscopy) using flexible endoscopes provide minimally invasive methods of diagnosis of pathologies including cancer, with the ability to carry out some treatment. Developments including specialised imaging techniques (narrow band imaging to more clearly show abnormal cells) are improving the quality of the images.
- Modern standards of medical equipment enable cataract surgery to be carried out on a day surgery basis resulting in improved service effectiveness, patient convenience, and patient safety.
- Clinical Portals for example in cardiology where ECG recordings are wirelessly uploaded in real time to a data base where anyone can view them or use them to compare against previous recordings In the event of the patient being admitted at another hospital the recordings are immediately available.
- Cooling of patients who have had an out of hospital cardiac arrest has proven to increase recovery.
- The total number of adverse incidents related to medical devices reported centrally in Scotland is 250 per annum. This number has been fairly constant over the past few years. Of that 250, only 40 are related to medical equipment (note: the actual causes of these incidents may not necessarily be the medical equipment itself).

There are, however, opportunities to improve the strategic approach to investment in medical equipment, and the support that they provide to patient care, such as:

• Sharing knowledge and learning from good practice investment models already in place for radiotherapy and imaging equipment. This has the

potential to improve the effectiveness of investment decisions in other critical medical equipment.

- Developing strategic national advice of how medical equipment could improve healthcare prevention through better / more screening equipment and thus support reduction in hospital admissions.
- Provide further advice for the 2014 SAFR on appropriate life cycle replacement periods for different categories of medical equipment.
- Improving the accuracy of reporting on the value and performance of medical equipment through the SAFR pro-forma process.
- Introducing a harmonized database across NHSScotland of medical equipment that would improve the robustness of comparable performance data and support decisions on investment priorities and resources.
- Providing national advice on the introduction of new advances in medical equipment, and forecast growth areas, such as:
 - Computerised devices and medical IT systems.
 - Robotic surgical systems.
 - Advanced imaging systems.
 - Wireless products.
 - Equipment associated with minimally invasive therapeutic procedures.
 - Home and self-care products.
 - Patient monitoring systems.

In order to take forward these opportunities, it is recommended that the SAFR Medical Equipment Group, along with other technical and strategic members, are initially tasked with investigating and reporting back on the benefits that could be gained from taking such an approach to the strategic management and investment in medical equipment. To support this it is proposed to establish a Medical Equipment Management Expert group, with a draft terms of reference submitted via the SAFR programme board for approval.

6.4 Realising the benefits from NHSScotland's eHealth Strategy

The potential of information technology to support and transform healthcare services is fully recognised across NHSScotland and eHealth has a pivotal role to play in ensuring that the 2020 Vision for Healthcare in Scotland and its Quality Ambitions are delivered.

The building blocks for future IT enabled progress are now in place following implementation of the eHealth Strategy for 2008-11, with eHealth now moving from an acquisition / development phase towards exploiting the value of the new capabilities acquired during 2008-11. The new eHealth Strategy 2011-17 is

therefore a revenue based improvement programme, leveraging the IT assets to support the quality improvements that NHSScotland has committed itself to.

Progress in implementing the eHealth Strategy will be used within the SAFR domain as the basis upon which investment needs are better understood and priorities are recognised. The benefits to be gained from implementing the eHealth Strategy can then be more closely integrated with other NHSScotland investment priorities and decisions.

7.0 Forward Look to 2015 and 2016

7.1 Innovation and Collaborative Working

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 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.

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 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.

7.2 Future State of the NHSScotland Assets and Facilities Reports

The work on future State of the NHSScotland Assets and Facilities Reports will continue to provide an opportunity to identify and find solutions to some of the issues and barriers to performance improvement that have been identified to date. They 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.

More specifically, the development of the 2015 State of NHSScotland Assets and Facilities Report will:

- Continue to challenge and ensure pace, momentum and impact on asset and facilities performance in pursuit of the NHSScoltand Quality Ambitions and its 2020 Vision. This will include continued arrangements to review and provide feedback on the quality of Board's PAMS and changes in asset performance.
- Continue to develop the National Asset Performance Framework to measure national improvement towards the Quality Ambitions and the 2020 Vision. This will include further work on the setting of performance targets within the Asset and Facilities Performance Framework with particular focus on ensuring that they are realistic, achievable and based on current investment plans.
- Highlight the improvements already made in asset and facilities performance that underpin delivery of the Quality Strategy and the 2020 Vision.
- Continue to monitor the quality and consistency of information on assets and facilities, particularly in respect of the wider range of assets (vehicles, medical equipment and IM&T). 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.

- Align the SAFR report with the outcomes and recommendations from the 2020 Capital and Facilities Change Management Plan and monitor progress on its delivery across NHSScotland.
- Monitor how asset management workforce strategies are being developed to support implementation of proposals contained within Boards' Property & Asset Management Strategies and capital investment plans, particularly reflecting on the impact of the national Capital Planning Review currently underway.
- Progress work on establishing a library of best practice case studies and presenting them in this report. The aim being to draw 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.
- Continue to include the work and outcomes of the NHSScotland Soft FM and Shared Services reviews.
- Monitor Board's performance on delivering their PAMS and the impact that this has had on both Board and national level performance.

This annual report is, therefore, expected to continue to develop as the key reference document for monitoring asset and facilities services performance 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.

The case studies are aimed at promoting and learning from good practice, and to 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 continue 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 NSS Office Consolidation and Rationalisation Programme

NSS is one of 22 NHS Scotland Health Boards and is accountable to the Scottish Government. NSS's purpose is to "support Scotland's health" and it achieves this by maximising the health and financial impact of its services, reflecting the organisation's desire to not only benefit the health of the people of Scotland but also ensure value for money, avoid cost and seek additional savings where required. Positioned at the heart of the health service, NSS provides national strategic support services and expert advice to all of NHSScotland. NSS also plays an active and crucial role in the delivery of effective healthcare to patients and the public. NSS works closely with partner organisations, especially local NHS Boards.

In the context of seeking to reduce cost, maintain or improve services and provide good and modern accommodation for staff, NSS has delivered key results in terms of:

- Its own office property portfolio
- Sharing its estate and estate services with other NHS Scotland Health Boards
- Tangibly contributing to the wider public sector agenda on smarter offices

In accordance with the Scottish Government Health and Social Care Directorate's "Policy for Property and Asset Management in NHSScotland" CEL 35(2010), NSS has a Property and Asset Management Strategy (PAMS) in place which is reviewed, updated and approved annually by the NSS Board. The PAMS is an integral part of NSS's corporate planning process and plays a major role in supporting, enabling and facilitating change and modernisation of NSS services.

The strategic objectives of the NSS PAMS are as follows:

To drive change towards a more productive asset base that:

- Facilitates improved service delivery and user experience to customers and promotes partnership working with stakeholders;
- Is clinically suitable, effective, supports improved quality of healthcare and meets or exceeds user expectations;
- Is safe and secure, fully compliant with all applicable statutory and regulatory requirements, minimises risk and promotes safety for people who use our services, our staff and visitors;
- Is "fit for purpose" and sufficiently agile to respond to the inevitable uncertainty around organisational and functional change over the long term;
- Enables optimum solutions through co-location, integration and shared resources across service streams and with our partners in service delivery;
- Represents good "Value for Money" and is demonstrably affordable in terms of capital and revenue investment;
- Disinvests from assets with high operating costs, backlog maintenance or short remaining life where these do not meet future service requirements;
- Is environmentally sustainable, moving towards a "carbon neutral" asset base;
- Improves asset performance against all key performance indicators.

Between 2003 and 2011 NSS successfully completed a significant number of property acquisitions and disposals across Scotland (primarily in Edinburgh, Glasgow and Aberdeen) aimed at consolidating and modernising its portfolio of office accommodation. This resulted in the replacement of most of NSS's stock of old, inflexible and dilapidated office accommodation with modern, fit for purpose facilities which were best able to meet business needs going forward.

Since 2011, NSS has embarked on a programme of further consolidating and rationalising its office estate with a specific focus on:

- improving space utilisation and driving out inefficiencies
- reducing recurring revenue costs
- providing well designed space that supports changing working practices and new technology and enables the introduction of agile working
- achieving synergies from sharing accommodation and support services with other NHS Scotland Health Boards

In order to support this programme, NSS, supported by Scottish Government, has been proactive in identifying opportunities to optimise the utilisation of office accommodation in Edinburgh and Glasgow by generating co-location opportunities with other Special Health Boards, thereby both reducing accommodation costs overall and also achieving best value in terms of shared facilities and services.

As a consequence Scottish Ambulance Service successfully relocated its headquarters functions to Gyle Square, Edinburgh between December 2011 and March 2012. Subsequently, Healthcare Improvement Scotland also relocated their Edinburgh based operations from Elliott House to Gyle Square in September 2012, and during February and March 2014 NHS Health Scotland relocated their Edinburgh based operations from Woodburn House and Thistle Street to Gyle Square. This now means that the Edinburgh based operations of 4 Special Health Boards are now co-located in what has become a Special Health Board "hub" at Gyle Square. In addition, NHS Health Scotland co-located with NSS in Glasgow through a relocation of their Glasgow based operations to remaining surplus Scottish Government space in Meridian Court in March 2013.

The following table illustrates the changes in the NSS's office estate from FY12 to the present date and through to FY16 when the current programme of office consolidation and rationalisation will be completed and further initiatives will be required:

NSS Office Accommodation		FY12	FY14	FY16	FY12 v FY16	
					+/-	% +/-
	Total	27,366	24,418	20,320	(7,046)	(25.7%)
Space (m² NIA)	% of total estate	38.4%	35.8%	31.9%	(6.5%)	(16.9%)
	per person	11.95	10.84	9.19	(2.76)	(23.1%)
Cost of space	Total	£10.38 m	£9.18m	£7.74m	(£2.64m)	(25.4%)
(Recurring Revenue)	% of total estate	69.7%	65.4%	60.9%	(8.8%)	(12.6%)
	per person	£4,470	£4,074	£3,500	(£970)	(21.7%)

The following table illustrates the recurring revenue savings as a consequence of implementing the NSS programme of office consolidation and rationalisation since 2012 to the present date and then forward over the next ten years to 2024:



From a FY Baseline of £10.38m per annum the total cumulative savings (Baseline plus inflation v Actual) over the 13 year period amount to more than £48.4m which is broken down as follows:

FY12 - FY14: £ 2.7m
FY15 - FY19: £18.8m
FY20 - FY24: £26.9m
Total: £48.4m

As part of the development of the first NHS Scotland "State of the Estate Report" in 2011, a framework of property key performance indicators (KPIs) was introduced which links property performance with the delivery of the NHS Scotland Quality Ambitions. Subsequently NSS played a leading role in developing the framework to ensure relevance to NHS Scotland's office estate. The work undertaken to implement the NSS PAMS will continue to enable NSS to achieve (and some cases exceed) the National Asset Performance Framework targets in relation to office accommodation in future years.

NSS is also playing a leading role in developing and delivering the NHS Scotland "Smarter Offices Programme" in conjunction with Scottish Futures Trust. The programme is focused on the corporate office portfolios of Health Boards and Special Health Boards and its key objectives are to:

- Improve the utilisation of office accommodation across NHS corporate office facilities by identifying opportunities for consolidation and rationalisation, increased agile working and shared use of space with other public sector partners
- Identify appropriate Key Performance Indicators (KPIs) for monitoring and benchmarking of performance through the national performance framework
- Use the national performance framework to improve the utilisation of NHS office accommodation through benchmarking and comparison with best practice and industry standards
- Review of asset management strategies and provide challenge to improve performance
- Agree target areas for improvement with each Board
- Identify areas of best practice within each Board and develop plans for rollout
- Develop investment and savings plans

Best Practice Case Study 2 NHS Lothian - Creation of a Centralised Transport Hub

Background

It was recognised that there was no consistency in the approach to arranging inpatient transport. A pilot study was undertaken In January 2012, on the RIE site where all wards were instructed to arrange all inpatient transport through the RIE Discharge Lounge. This resulted in all transport resources being used more efficiently and there is stricter control over the booking of private ambulances.

The Business Challenge

NHS Lothian faced the following challenges:

- Practices for arranging transport required improved governance arrangements, were unsustainable and incurred unnecessary cost.
- The requirement for a more rigorous patient needs assessment which ensured that appropriate transport was available for those patients who need it.
- The number of ways requests were being made and the need of inpatient transport requests from all sites to be channelled through a central transport hub.
- A lack of governance covering usage of private ambulance providers by NHS Lothian
- The need to better utilise the existing SAS resource, volunteer cars and in-house vehicles and to stop using all private ambulance providers as soon as possible

The Solution

Following a pilot study undertaken at the Royal Infirmary of Edinburgh, where all requests for transport was directed through the Discharge Planning Lounge, it was agreed to extend the pilot study to explore the option to expand the principle of a central point of contact and to develop a centralised Transport Hub site through which transport requests for all sites across UHD would be channelled. The Hub operates between 0800 and 1900, Monday – Friday and between 0900 and 1600 at weekends.

The staffing of the Hub is shared between the SAS and NHS Lothian. The full-time SAS dispatcher post will continue between 0900 and 1700, Monday to Friday. The staffing levels were based on estimated demand, using 7,500 as the monthly average number of discharges and transfers across UHD as a starting point. An assessment of the potential activity through the Hub was made using the most accurate data available. The staffing requirement is monitored and will be revised once accurate activity data available and until the demand could be validated, the posts were offered as temporary contracts.

Best Practice Case Study 3

Project Brief: Re-use and Redeployment of Decommissioned Assets

Background

Resource Efficient Scotland and the Scottish Futures Trust (SFT) are jointly delivering a project to work with various public sector organisations in Scotland in the process of decommissioning buildings, to understand the options available for re-use and redeployment of mobile assets for the following key product groups – furniture, textiles and small electrical equipment – and to create tools and supporting guidance for the development of a register of mobile assets within an organisation.

Key Stakeholders

- Scottish Futures Trust (delivery partner)
- Zero Waste Scotland Circular Economy Team
- Health Facilities Scotland (Decommissioning Unit)
- Up to five pilot decommissioning sites (to be confirmed)
- Local private/third sector organisations (asset disposal)
- Scottish Public Bodies

Anticipated Outputs

- Bespoke software to support mobile asset surveys
- Mobile Asset Register tools and supporting guidance, including methodologies
- Pilot Mobile Asset Registers for up to five decommissioning sites

Anticipated Benefits

- Improved data on volume and tonnage of mobile assets within public sector organisations.
- Improved data on the 'true' costs and carbon impact of choosing reuse, redeployment or recycling for disposal of mobile assets
- Provision of data to aid the development of the business case for repair services and re-use hubs in Scotland
- Influence public procurement processes to stimulate demand for recycled, remanufactured, refurbished and re-used products

Best Practice Case Study 4 NHS Ayrshire & Arran – Girvan Community Hospital

Since its completion, Girvan Community Hospital has picked up a number of awards including the "Building Better Healthcare Award for Best Sustainable Design", and "Health Facilities Scotland Award for Energy and Environment". More recently, and according to a recent article published on the Renewable Energy Systems in Hospitals website, Girvan Community Hospital **is one of the most sustainable hospitals in the world** producing two thirds of its energy from renewable sources. Renewable heat and hot water is generated from a 700kW biomass boiler, and electricity is generated from a 100kW wind turbine. Other energy saving features include utilising natural lighting combined with internal automated lighting controls, variable speed motors and pumps and natural ventilation.

Sustainable design was embedded from the start of the building process which ensured that the use of renewable materials in its construction together with the use of renewable energy technologies to lower the buildings total carbon emissions and ensure sustainability goals are being upheld through to the finished product. Both medical teams and community members alike played a large role in putting forward ideas for the new hospital. The result of which has set the standard to which all new hospitals within the NHS Scotland should be built.

The biomass boiler supplies the hospital with 92% of its total heat, combined with the wind turbine which produces 25% of the hospital's electrical demand. This gives a total renewable energy use of 66%. The renewable technologies implemented have reduced the carbon emissions of the hospital by 50%. This equates to a saving of around £1.6 million over a 20 year service life.

Future plans for this hospital and other healthcare sites include the installation of LED lighting, solar PV panels, and air to water heat pumps, which all have the potential to further reduce the hospitals carbon emissions and energy use, with a target goal of becoming the first carbon neutral hospital, where its utilities will be cost neutral.

As part of NHS Ayrshire and Arran's commitment to reducing their energy and carbon emissions, they have also recently won a national award for the best renewable project of the year in the Public Sector for the Arran War Memorial Hospital bio mass boiler project. This accolade was received at the 2014 Heating & Ventilation News awards ceremony in London. The hospital has moved from using oil as the primary source for heating, to a wood chip biomass boiler. The wood is sourced sustainably from the island and is maintained by teams on the island too, making the project fully sustainable.

Annex B Review of Estate Assets and Performance

This Annex provides a detailed analysis of property asset performance which supports the summarised information and analysis provided in the main body of the report. The information presented in this annex within the pie charts combines information from all 22 NHS Boards and Special NHS Boards, whereas the subsequent charts and tables split the analysis between the 16 Boards with in-patient accommodation (labelled NHS Boards), i.e. all 14 NHS Boards plus 2 Special NHS Boards (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 930,000 sq.m (21% of the total) of relatively new / modern accommodation (i.e. less than 10 years old), which is an increase of 240,000sq.m since 2011, and is evidence of the significant capital investment in property assets over recent years. 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 25% of the estate remains over 50 years old.



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





Estate Tenure

The majority of the NHSScotland estate is owned (78%) 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.



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





Physical condition

Analysis of the information contained within each NHS Board's Property and Asset Management Strategy (PAMS) shows that approximately 59% of the NHSScotland estate is in good physical condition (category A or B) but, as shown in the three charts that follow, this can vary significantly across the NHS Boards.







Further to the above Board level analysis, it is now possible, through the Estate Asset Management System (EAMS), to report on estate KPI's such as physical condition and backlog maintenance at hospital level. Analysis of this information enables links to be made between property improvement needs and the strategic plans for improvement included within the appropriate NHS Board's PAMS.

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 £797m, which is a £213m 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 backlog 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.

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 across the NHSScotland estate, whereas the following chart shows backlog maintenance expenditure requirement per unit of total building floor area for each NHS Board.



It should also be recognised that around 21% 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.



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 37% of the total backlog maintenance expenditure identified is high or significant risk clinical space. This includes some 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

Accommodation space has a direct relationship with cost. The aim, therefore, is to hold only that space which is needed to support the delivery and support of effective and efficient service delivery. Analysis of the information contained within each NHS Board's Property and Asset Management Strategy shows that approximately 77% of the NHSScotland estate is fully utilised but, as shown in the charts that follow, this can vary significantly across the NHS Boards.







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.

Functional suitability

The estate also plays an important role in supporting the effective delivery of services. Poor functional suitability often results in inefficient working practices, increased staffing levels and poor clinical outcomes. Approximately 65% of the NHSScotland estate is functionally suitable but, as shown in the charts that follow, this can vary significantly across NHS Boards







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 2012. 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:



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.

Performance Improvement of Property Assets

The following chart provides a comparative overview of performance improvement in property assets between 2013 and 2014.



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 patient rating, age of properties, PAMS Quality, SCART Score and backlog maintenance per sq.m. 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. 2013-14 has also seen a significant reappraisal of the condition and performance of property assets, including verification of existing data. This has had an impact on the above results and can explain some of the further variation in performance results between 2013 and 2014.

Annex C

Review of Energy Performance

In support of the aspirations of the Climate Change (Scotland) Act 2009, and the associated duties incumbent upon public sector bodies, NHSScotland Boards continue to be proactive in reducing energy consumption and associated greenhouse gas (GHG) emissions.

In the reporting year 2012/13, the cost of energy across NHSScotland's hospital sites (as reported in the ISD Cost Book) was circa £104.7 million – a 16.7% increase on the previous year (and a 44.8% increase on reporting year 2010/11). However, absolute energy consumption at these sites (not corrected for the influence of weather) increased by only 9.24% in the same period, reflecting the ongoing challenge of rising energy costs. Since reporting year 2010/11, absolute energy consumption (not weather corrected) has increased by 3.62%.

Rising energy costs continue to be a challenge for NHSScotland Boards. As with other public bodies in Scotland, the NHSScotland Boards purchase the majority of their energy via the Scottish Public Sector Utility contracts (managed by Procurement Scotland). These utility contracts cover electricity, gas, water, some liquid fuels and biomass pellets. Wholesale energy costs and the management fees associated with these contracts make up only 50% of total costs. The remainder is comprised of pass through charges, regulatory charges, environmental taxes and levies.

Currently the only areas that NHSScotland Boards can have influence on are the wholesale energy costs and the management fees paid to suppliers for the services they provide. NHSScotland Boards have no ability to control the application of the pass through charges, including regulatory charges and environmental taxes that are levied at a standard rate. Indeed, most of these are set at UK Government level. NHSScotland Boards proactively respond to all public consultations on proposed tax/ levy changes but ultimately, these are beyond their control.

Wholesale energy costs are subject to market forces. NHSScotland works with its other public sector partners in actively managing the purchase of energy on the wholesale market through a national Risk Management Committee run by Procurement Scotland. Through this committee, maximum target costs are set to ensure the least risk of exposure to market changes.

NHSScotland Boards' key response to rising energy costs is to drive costs downwards through proactive energy management and reduced energy consumption.

The table that follows summarises the energy consumption and cost figures for 2012/13 and preceding years. The percentage change in energy consumption between 2012/13 and the two preceding years is also shown.

	2010/11		201	1/12	2012/13			
Board	£	kWh	£	kWh	£	kWh	% change in kWh since 2011/12	% change in kWh since 2010/11
NHS Ayrshire & Arran	£3,914,322	78,795,444	£4,996,300	72,043,715	£5,189,911	77,423,651	7.47	-1.74
NHS Borders	£1,348,397	27,085,518	£1,526,142	24,293,478	£1,744,823	25,404,536	4.57	-6.21
NHS Dumfries & Galloway	£1,563,022	47,938,572	£2,365,061	45,887,502	£2,245,003	49,481,287	7.83	3.22
NHS Fife	£3,003,175	87,042,665	£4,041,255	82,591,834	£4,379,574	117,429,333	42.2	34.9
NHS Forth Valley	£3,133,854	78,282,675	£5,129,401	82,341,935	£4,338,549	74,504,665	-9.52	-4.83
NHS Grampian	£7,820,458	169,490,880	£9,989,613	164,147,488	£12,571,578	212,969,192	29.74	25.65
NHS Greater Glasgow & Clyde	£19,968,223	500,446,891	£24,390,741	468,678,296	£29,976,889	486,542,584	3.81	-2.78
NHS Highland	£6,005,545	82,053,638	£6,848,708	76,221,189	£7,834,292	82,413,588	8.12	0.44
NHS Lanarkshire	£4,514,517	101,434,805	£4,469,560	90,462,907	£4,856,766	95,914,401	6.03	-5.44
NHS Lothian	£10,487,365	245,711,792	£12,852,893	236,876,750	£16,882,365	257,995,117	8.92	5.00
NHS Orkney	£294,507	4,370,775	£395,906	4,406,528	£367,325	4,443,459	0.84	1.66
NHS Shetland	£477,291	3,859,197	£407,661	4,444,204	£415,900	3,845,427	-13.47	-0.36
NHS Tayside	£6,618,783	173,409,677	£8,457,389	164,329,385	£9,578,954	171,873,617	4.59	-0.89
NHS Western Isles	£792,794	10,423,551	£1,029,796	9,771,581	£1,035,947	10,093,859	3.30	-3.16
NHS National Waiting Times Centre	£1,590,185	38,817,786	£2,043,684	37,299,705	£2,378,604	39,419,329	5.68	1.55
The State Hospitals Board for Scotland	£779,362	11,346,441	£814,505	11,324,940	£892,531	10,876,557	-3.96	-4.14
TOTAL	£72,311,800	1,660,510,307	£89,688,057	1,575,121,437	£104,689,012	1,720,630,602	9.24	3.62

It should be noted that reporting year 2012/13 was significantly colder than either 2010/11 or 2011/12, and this would account for the rise in consumption in 2012/13. If weather correction is applied to the energy consumption figures (i.e. fluctuations in energy consumption due solely to weather changes are removed), then the reporting year 2012/13 shows a *reduction* in weather-corrected energy consumption of 2.73% over the previous year. Since reporting year 2010/11, weather-corrected energy consumption has increased by only 0.46%.

It is also important to take into account changes in the size of the estate. Between reporting years 2011/12 and 2012/13, there was a 1% increase in the reported hospital estate areas (and a 0.5% increase since 2010/11). For example, in the above table, NHS Fife shows a marked increase in energy consumption. However, the NHS Fife estate grew by over 23% in the same period. Therefore, it is more accurate to consider a KPI of energy consumption per m^2 when reviewing relative energy performance.

During 2012/13, the average energy performance (weather corrected) across the NHSScotland hospital estate was 449.0 kWh/m² – a 3.69% reduction over the previous reporting year, and a 0.06% reduction since 2010/11.

The table that follows shows energy KPI performance (weather corrected) for each Board since $2010/11^2$.

	2010/11	2011/12	2012/13				
Board	kWh/m2	kWh/m2	kWh/m2	% change in kWh/m2 since 2011/12	% change in kWh/m2 since 2010/11		
NHS Ayrshire & Arran	351.8	338.9	324.9	-4.14	-7.65		
NHS Borders	418.0	415.6	386.8	-6.92	-7.47		
NHS Dumfries & Galloway	544.6	557.3	484.2	-13.12	-11.10		
NHS Fife	403.1	398.2	424.0	6.47	5.17		
NHS Forth Valley	342.9	426.4	379.1	-11.08	10.57		
**NHS Grampian	475.9	539.1	548.5	1.72	15.25		
NHS Greater Glasgow & Clyde	489.0	490.5	468.8	-4.43	-4.12		
NHS Highland	387.6	408.2	393.3	-3.65	1.48		

² By way of comparison, NHS Trusts in England reported an average energy performance of 419 kWh/m² in reporting year 2012/13.

NHS Lanarkshire	470.4	483.6	465.5	-3.74	-1.04
NHS Lothian	476.3	505.6	490.2	-3.06	2.90
*NHS Orkney	500.4	560.8	500.4	-10.76	0
*NHS Shetland	435.4	392.3	446.6	13.84	2.57
NHS Tayside	386.5	395.2	367.2	-7.08	-4.98
NHS Western Isles	583.0	584.2	538.3	-7.86	-7.66
*NHS National Waiting Times Centre	718.3	737.8	695.5	-5.73	-3.17
* ***The State Hospitals Board for Scotland	722.2	507.7	425.1	-16.27	-41.14
TOTAL	449.3	466.2	449.0	-3.69	-0.06

Table notes:

*Board data based on single hospital site.

**During 2011/12, a new large-scale CHP system was installed at a site in NHS Grampian. This resulted in more kWH being used, but has significantly reduced GHG emissions.

***During 2011/12, the State Hospital underwent considerable refurbishment, including the installation of a new biomass boiler

HEAT Target Performance

NHS Boards continue to report their hospitals' energy consumption and GHG emissions under the HEAT Target (Phase 2)³. This 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 the 2009-10 baseline year. This equates to a 10% reduction in energy performance by 2020. For 2012/13, NHS

³ The Health Efficiency Access Treatment target E8 applies to hospital sites only. Data is weather corrected at site level. Therefore, these figures cannot be compared directly with data from ISD Cost Book.
Boards had to achieve a 2.97% reduction in energy consumption compared with 2009/10.

The HEAT Target also requires NHS Boards to achieve a 3% year-on-year reduction in carbon dioxide (CO_2) emissions from fossil fuels only, based on a 2009/10 baseline. For 2012/13, NHS Boards had to achieve a 8.73% reduction in energy consumption compared with 2009/10.

Note that the HEAT Target figures will be different to those presented above. This is because the dataset used does not consider all the same sites, a different weather correction method is used, and the impact of site disposals/ additions are not included.

The HEAT Target performance figures for 2012/13 showed that NHS Boards' hospital sites reduced their energy consumption by 5.84% against the baseline year - 2.93% better than target. In the same period, CO_2 emissions from fossil fuel use were reduced by 7.86% against the baseline year - 0.69% worse than target. The poorer CO_2 performance was in part due to the ongoing operation of a large Combined Heat and Power (CHP) plant at NHS Grampian's main hospital site. As the current HEAT target calculation method does not include GHG emissions from electricity, the positive impact of the CHP on overall emissions cannot be demonstrated.

Future Plans

During financial year 2012/13, c £11.2million was invested in energy efficiency projects across the NHSScotland Boards via the EcoHospitals initiative. These projects should result in annual savings of over 34million kWh and £4.3million (at current energy costs). Assuming no change in estate size or weather conditions, this would have the impact of reducing the overall NHSScotland KPI to 439.3kWh/m² (a 2.13% reduction on 2012/13).

A further £16.6million is due to be invested in energy efficiency projects in 2013/14 and 2014/15. Once implemented, these projects should see the NHSScotland KPI reduce to 429.7kWh/m² (a further 2.17% reduction on 2012/13).

NHS National Services Scotland, in collaboration with Scottish Government and the Scottish Futures Trust, has developed a Strategic Energy Efficiency Programme for the NHSScotland Boards. The aim of this Programme is to identify and implement maximum energy savings across the NHSScotland estate via a new procurement and financing approach. The first projects under this Programme are expected to be procured in mid 2015.

Annex D Capital Planning Review

The Capital Planning Short Life Working Group (CPSLWG) has recently completed an exercise of developing and appraising options for the future delivery of capital planning services for NHSScotland. The Group's report, describing the outcomes from this exercise, concluded that the preferred strategy for delivering future capital planning services is one that is based on regional/geographic groupings of capital planning teams and resources.

This proposed new strategy is expected to deliver significant benefits for NHSScotland.

The Group acknowledged in its report that prior to implementing the new strategy, further work is required, particularly in relation to:

- The detailed arrangements for regional/geographic models in different areas of Scotland.
- The need to maximise potential benefits from the new strategy whilst taking into account the practicality of staff travel times/costs in relation to delivering services in different areas of the country.
- The extent to which the new strategy can adopt "new ways of working" as an integral part of the model i.e. the use of modern IM&T systems which enable staff to work as teams without necessarily needing them to be physically co-located, flexible working arrangement such as home working, mobile working and hot desking.
- The confirmation of the report's assumption that the new strategy can be implemented within existing resources.
- Addressing the concerns of some members of the Group that the benefits of the new strategy for capital planning activity associated with projects procured through Frameworks may be marginal.

The work completed by the Group to date has confirmed the strategic context for the project, made a robust case for change and provided stakeholders with a preferred way forward having identified and undertaken an analysis of a wide range of available options.

The next stages in the development of this project are summarised as follows:

- Develop the details and evidence base for the preferred strategy revisiting assumptions made in order to verify the preferred option.
- Determine the potential value for money of the proposed new strategy by revisiting and building on the option appraisal work already completed to demonstrate value for money from the proposed new service delivery strategy.

- Ascertaining the affordability and funding requirements for the new strategy by comparing current funding within Boards with the requirements for the new strategy.
- Undertake a detailed risk assessment of the new strategy and identify plans for mitigating and managing the risks.
- Determine the practicalities of implementing the changes required to enable the new strategy to be implemented across all Boards including timescales and key tasks.
- Drafting a comprehensive business case document that provides a compelling case for change and clearly demonstrates both the value for money and the affordability of the new strategy.

Annex E

Transport and Fleet Management Review

Background

The NHSScotland (NHSS) Transport and Fleet Management Review is progressing well under the direction of the Facilities Review & Shared Services Programme Board.

The three elements of the review include; - Fleet Management, Car Leasing and Logistics. The objectives of this workstream are:

Fleet Management Review: to investigate and identify the potential synergies to be gained from greater collaboration between the 22 NHS Boards in Scotland, with regards to the provision and management of the Fleet.

Car Leasing: to identify opportunities to standardise the schemes, removing unwarranted variation and improving cost recovery, and collaborate on their management.

Logistics: to review the current NHSScotland logistics infrastructure, including understanding routes and types of logistics functions that are provided, and identify opportunities to ensure best utilisation of vehicles and maximise the efficiency and effectiveness of the Fleet.

Fleet/Transport is an integral part of many of the services which NHSS provides, whether by front line staff or support services, and can have a direct impact on the safety and quality of patient care. Fleet acquisition and operating costs – Fuel, Maintenance and Leasing – continue to rise, which is creating cost pressures on budgets. There are a number of reviews planned within NHSS, which will have a direct impact on the operational requirements of the NHSS fleet and it is, therefore, imperative that the Fleet/Transport structure is flexible and resilient and is able to respond positively to any planned changes that are required.

NHSS fleet replacement value is in the region of £226m, of which £113m is for the pool and commercial fleet and £113m is for the Lease Car fleet. The annual operating costs for the total fleet is £62m, of which the majority of the spend - £41m, is for the pool and commercial fleet. These costs do not include Drivers associated costs. With such a large replacement cost and associated annual operating costs, NHSS must ensure that best value and robust equitable service delivery standards are being achieved.

Fleet Management

The aim of the Fleet Management Review was to investigate and identify the potential synergies to be gained from greater collaboration between the 22 NHS Boards in Scotland, with regards to the provision and management of the Fleet.

An Options Appraisal process for the future delivery of the Fleet Management structure was undertaken during the summer of 2013The preferred option to develop the shared management of NHS Board fleets within regional areas, supported by the creation of a National Support Unit, was approved by the Facilities Review & Shared Services Programme Board on 25th March 2014. The Programme Board also endorsed the need to procure national Telematics and Fleet Management systems. The report proposed that the fleet management support function would sit within NHS National Services Scotland (NSS).

The main features of a Regional Model with National Support are:

- The shared management of Board fleets within a regional area supported by a national support function
- A lead NHS Board provides the Fleet Management operation for the region and is responsible for ensuring that all Fleet requirements are met
- The Regional Managers (line managed by the lead NHS Board) form part of a national Fleet Management Team, coordinated by the national support function, to ensure that collaborative opportunities are fully explored and executed
- The National Support Function includes a Fleet Management and Fleet Engineering arm, responsible for carrying out duties that are currently undertaken locally, which could be carried out centrally. For example, Telematics support, vehicle procurement, technical specifications, vehicle trials etc.
- Vehicles remain in the ownership of the individual NHS Boards. Boards agree vehicle replacement requirements in advance for a pre-determined period and remain responsible for vehicle acquisition funding

Benefits of the proposals include;-

Financial benefits

- Appropriate structures / structural reorganisation combined with a national approach, and a wider introduction of telematics and fleet management, has the potential to significantly influence the service provision and costs through improvements in efficiency, effectiveness, and economies of scale, and realise savings in the region of £6m over the next 5 years, with anticipated additional below the line savings.
- Reduction in insurance premiums; The NHSS fleet insurer has advised that the use of telematics may result in a reduction in loss ratio, which could result in reduced premiums over time. One of the current telematics providers has advised that this reduction could be as much as 12%. Within NHSS this figure has been discounted to 5% subject to improvements demonstrating an overall reduction in the loss ratio.

- Reduction in accident damage and excess paid; With an increasing trend towards a mobile workforce, taking steps to mitigate accident risk extends an employer's duty of care profile and can reduce claim costs, generating cash releasing savings.
- Increase in fuel efficiency (MPG); Case studies show that there is significant
 potential to reduce fuel costs substantially if telematics were to be introduced
 across the fleet, especially where current manual systems for recording are in
 place. Case studies show that savings can be up to 15%. This in turn not only
 reduces costs, but reduces the amounts of harmful emissions that are produced
 by the vehicle fleet, including a similar % reduction in CO2.
- Reduction in mileage and associated fuel costs; Telematics is a powerful tool for managing and reporting on vehicle asset utilisation. Through better management of the fleet there is potential to reduce the number of miles that are travelled, which could increase the utilisation of the vehicles, and in turn reduce the amount of fuel used, the number of vehicles that are required and the cost of maintenance.
- National Joint Fleet Procurement; Co-ordination and standardisation of vehicle specifications for NHSScotland will result in greater buying power, better utilisation of vehicle assets, reduced operating costs etc. Initial analysis indicates potential to reduce commercial and pool vehicle replacement and leasing costs by £175k - £500k per annum if all NHS Boards agreed to standardise specifications and commit to joint procurement and replacement numbers.

Non- financial benefits:

- Investment in the establishment of a National Support Unit, together with the procurement of fleet systems, will ensure that agreed Fleet Management and Fleet Engineering duties, currently undertaken in multiple instances at NHS Board level, are carried out once nationally and consistently for NHSScotland
- Improve resource utilisation; National support function has potential to significantly reduce duplication and achieve better utilisation of staffing resources. Tasks undertaken by the National Support Unit will reduce pressure on NHS Boards.
- More efficient use of staff time; efficiencies in the car leasing function would be realised through standardising processes moving all NHS Boards toward the upper quartile of performance, and enhanced through the automation of manual processes, in particular obtaining quotes.
- Reduce variation; ensure a common national approach to fleet management through adoption of consistent practices and procedures across NHSScotland. Consistency of Fleet Management and Telematics systems in use across NHSScotland providing the ability to analyse data consistently across NHS Boards.

- Operational resilience and control; national systems and central support unit introduce the ability to manage functions on a regional or national basis.
 Potential to improve resilience through a larger joint operation, working closely with a national support function that can draw on a wider range of shared expertise. Recognition of gaps and weaknesses within current operating structures and ensure that transport governance standards are achieved.
- National visibility and robust management information; will provide a wealth of information including utilisation, fuel consumption, vehicle location etc. allowing for proactive decisions to be made based on real-time management information allowing NHS Boards to manage local fleets more effectively.
- National expertise; provide the ability to develop dedicated national expertise to carry out Fleet Management and Fleet Engineering duties, currently undertaken multiple times, once nationally and consistently for NHSScotland. The formation of a dedicated professional service specialising in functional areas, such as, telematics analysis and reporting, development of technical specifications, vehicle procurement etc. to meet current and Option 2: Regional with National Support

Car Leasing

Car lease policies have been developed since the late 1980s and have grown organically. The adoption of Trust Status introduced the provision of a lease car under certain terms as a "benefit" which was available to some sections of staff leading to further variation in the terms and conditions of lease car arrangements. When examining the car leasing arrangements which existed in NHS Boards it was noted there were 21 different policies covering 21 NHS Boards.

There are obvious opportunities to standardise the schemes and collaborate on their management. To this end, the car leasing workstream has analysed the various policies that exist across NHSScotland and has considered options for a more joined up and standardised approach.

A report was submitted to the Facilities Review & Shared Services Programme Board and the recommendations were approved on the 25th March 2014. The Recommendations focused on opportunities for the removal of variation and improved cost recovery associated with the adoption of a common set of principles for the assessment of financial viability of a car lease scheme; potential efficiencies to be realised through an automated Car Leasing Management Fleet Management System for NHSScotland; and potential efficiencies through changes to the management structure for the delivery of the car leasing function.

1. NHS Boards phase in all core principles upon renewal of existing leases (i.e. next 3-4 years) and new arrangements to commence for all new leases from no later than 1st April 2015. This recommendation is designed to remove variation when considering the financial viability of car lease schemes while also accepting there may be sound operational reasons to adapt policies in the knowledge that there are practical, and service requirements necessitate making car lease schemes more attractive to staff. However, this would be carried out knowing that the scheme adopted was not financially viable.

- 2. To seek funding for the initial purchase/ development of a Car Leasing Fleet Management System for NHSS. (Preferably, this will form part of the Commercial Fleet management system). This will improve efficiency through automation of various tasks to allow all NHS Boards to attain improved national level of performance, introduce consistency of Car Leasing Fleet Management Systems, allow data to be analised consistently across NHS Boards, introduce resilience into the operations and introduce the ability to manage the function on a regional or national basis.
- 3. Explore opportunities to increase collaboration leading to the potential for a virtual national team. This service would be enhanced by a single instance reporting system (i.e. a common Car Leasing Management System. This has the potential to improve resilience and make the operation more efficient.

Logistics

The logistics element of the review is considering the utilisation of the commercial vehicle fleet, the associated staffing resource, and the Boards interface with the National Distribution Centre.

Current processes, procedures, routes, and functions across NHS Boards are being evaluated in order to ascertain and gain a better understanding of the total cost and potential synergies that exist within the many Logistics operations.

Considerable opportunities exist for a more joined up approach across Scotland, with potential to realise better utilisation of the vehicle and logistics resources and improve the effectiveness and efficiency of the operations.

The main objective of the logistics work stream was to review the current NHSScotland logistics infrastructure, including the understanding of routes and types of logistics functions delivered.

Specific areas of focus were:

- Understanding the mapping and routes driven for NHS Boards
- Identification of fleet base lines, total in-scope vehicles, estimated costs etc
- Sharing of best practice examples and opportunities for efficiencies
- Identify areas where we can increase vehicle utilisation and maximise efficiency and effectiveness of the transport fleet
- Produce recommendations on future delivery of logistics operations

• Give consideration to wider changes to services e.g New South Glasgow Hospital, Soft FM Review

This work builds upon a pilot undertaken in NHS Grampian. The scope of the project included transportation of goods and services focussed on the commercial fleet (excluding patient and people transport) across NHS Scotland.

A data collection exercise was undertaken in September 2013 to capture vehicle assets and journeys travelled during a 4 week period across NHSScotland. This included all vehicles concerned with the transportation of goods and services across mainland territorial NHS Boards (partial data available for NHS Highland), Scottish National Blood Transfusion Service (SNBTS) and National Distribution Centre (NDC). Warehousing, sub-contracted volume and patient and staff transport e.g. porters / Scottish Ambulance Service (SAS) were considered out of scope.

Over the period from November 2013 to February 2014 the dataset was cleaned, validated and analysed by Information Services Division (ISD) working with individual NHS Boards.

Radial Distribution modelling on the dataset was carried out by DHL between February and June 2014. This produced a set of models which can demonstrate potential efficiencies which could be achieved in terms of fleet size, total kilometres travelled, and hours worked by varying base parameters.

The following opportunities have arisen for consideration and implementation:

- NHS Boards should consider the use of multi use vehicles as a means to reduce overall fleet cost and size
- Consideration should be given to the sharing of estates vehicles across trade
- NHS Boards should share plans on the replacement of fleet and share capacity of under-utilised fleet
- NHS Boards should consider in-sourcing the use of some couriers and taxis used for non-staff/patient transport by better utilising the fleet
- Efficient and Safe driving standards should be introduced across the fleet.
- Soft / Hard FM services review should consider the appropriate logistical model to support future cross boundary services
- NHS Boards to review detailed re-sequencing and other routing models to optimise local routes with the goal of achieving £1m/pa saving/cost avoidance.
- Central coordination for logistics within a Board would be beneficial in terms of accountability and driving efficiency.
- Commercial vehicles should follow a standardised national specification

• There is potential in some NHS Boards to offset the requirement for agency staff through re-sequencing of current driving routes

Next Steps

- Funding is being sought to set up a National Fleet Management Support operation
- Funding is being sought to procure and introduce a standardised Telematics system and Fleet Management system, both of which will be rolled out across NHSS commercial fleets
- The Car Leasing recommendations will be submitted to the NHS Boards Chief Executives' Group in August 2014. Following approval from the Efficiency Portfolio Board, the recommendation for NHS Boards to phase in all core principles upon renewal of existing leases will be passed to Scottish Government to facilitate negotiation at national level and, if necessary, prepare guidance to NHS Boards
- Funding is being sought to procure a quoting system for the NHSScotland leased car operation
- A report on the Logistics review will be submitted to the Facilities Review & Shared Services Programme Board in August 2014.

Conclusions

Significant progress has been made within the Transport and Fleet Management Review working within the QuEST Facilities Shared Services Programme. Subject to funding, the proposals will:

- Create a Fleet Management/ Transport national strategic function operating at best in class standards, reducing variation and delivering efficiency savings for future investment in front line patient services to support local Fleet operations
- Ensure more effective and efficient use of NHSScotland fleet resource and deliver service improvements in areas which are weak
- Ensure consistent governance and resilience is embedded across NHSScotland Fleet Management/ Transport/ Car Leasing operations and the function has the ability to adapt and respond to a changing Health & Social Care environment

Annex F Facilities and Shared Services Review

Background

In 2011 the Strategic Facilities Group of Health Facilities Scotland identified a number of areas where there could be opportunities to improve the quality of services and potentially create efficiencies by the more effective exchange of good practice and potentially sharing services across the traditional NHS Board boundaries.

The initial areas of activity which were considered by the programme were:

- Capital Planning and Hard Facilities Management.
- Operational Management of PPP/PFI Contracts
- Decontamination of reusable Medical Devices
- Transport.
- Waste Management.

Governance and Engagement

NHS Board staff are fully engaged in the provision of data and review of services. The Governance structure was altered during 2014 and the Review of Soft Facilities Management and the Hard Facilities Shared Services Programme were brought into a single structure. Under the Chairmanship of Jeff Ace, Chief Executive, Dumfries and Galloway NHS Board the Facilities Review and Shared Services programme Board (FRSSPB) has been responsible for the Programme.

The professional and technical advisory structures of Health Facilities Scotland's Strategic Facilities Group remain the primary source of advice when examining the current services, examples of best practice and areas of unwarranted variation.

Staff representatives are identified through the Scottish Partnership Forum. Where specialist topics are being considered every effort is made to identify staff representatives with skills and experience in that particular field. Where there are difficulties in identifying appropriate members of staff every effort is made to consult as widely as possible to ensure staff are engaged in the process.

Work Streams

To enable an accurate, or as accurate a baseline as possible to be established a significant data collection exercise has been undertaken. This allows the scope of the exercise to be agreed and the cost and quality improvements which are delivered as a result of changes made to be quantified.

Capital Planning and Hard Facilities Management

Capital Planning

The capital planning process, from initial agreement to hand over of the completed project, was identified as the scope of the exercise. A fully inclusive option appraisal was completed in Spring 2014 and a preferred option, based on a geographical model of service delivery, was identified. This was approved by the FFSSPB. A detailed business case will be developed and presented the FRSSPB in autumn 2014.

Good Practice

Staff from the capital Physical Planning Department in Grampian Health Board continue to support the delivery of some aspects of the NHS Highland capital programme.

Hard Facilities Management

Areas of productive opportunity were examined and a recommendation report was considered by the Facilities Shared Services Programme Board. It identified £400k of productive opportunity.

The next phase of this exercise is examining the range and availability of skills necessary to deliver the operational management of the estate in a safe and effective way.

Operational Management of PPP/PFI Contract

A Business Case has been developed in support of the establishment of a Specialist Support Team to assist Boards to develop and improve PFI/PPP Contract Management skills within the NHS to ensure that Boards "get what they pay for" in term of service quality and quantum, out of their existing PFI/PPP Contracts. The Specialist Support Team will bring expert knowledge of operational contract management by further developing collaborative working with colleagues in Scottish Futures Trust (SFT). Two members of Staff from SFT will work collaboratively within the Team on a 0.5 WTE basis.

A Recommendations Report highlights a number of areas of improvement and possible savings which provides the basis for a prioritised work plan for the Specialist Support Team. The Team have a savings commitment of £2.16 m across Scotland, to be delivered by March 2016, as well as a number of non financial benefits.

The Team are already influencing the future Standard forms for Revenue funded Hub Schemes and NPD Pipeline Projects in the light of operational experience, this aspect of their work is increasingly important as the number of revenue funded schemes increases.

Good Practice

The PFI/PPP Advisory Group is a very active forum for help, advice and collaboration and is facilitating the development of the informed client role by sharing experience and cooperation between Boards with common PFI providers. SFT Colleagues bring lessons learned from their In-depth Reviews and these are proving to be very influential for Board representatives. In term of the savings target NHS Lothian have already reported recurring savings of £0.67m for the Financial Year 2013/2014.

Sterile Services

Endoscopy Decontamination

This activity generally takes place close to the department which undertake the procedure. The practice within these was recently reviewed and a programme of capital investment to upgrade decontamination facilities undertaken and the demand for capital has been estimated. Due to the nature of the service the sharing of decontamination services was not seen as a viable option.

There is effective sharing of information through the Health Facilities Scotland advisory structure.

Local Decontamination

Local decontamination services vary, primarily based on the geography of the area being served and the availability of compliant facilities. Where considered a more cost effective solution, some podiatry service have move to single use instruments. The review of these services has been undertaken and the current arrangements are seen as the most appropriate for each Board. The options for sharing services are extremely limited.

Central Decontamination

Health Boards currently support theatre activity by providing decontamination services across NHS Scotland. The data collected as part of the development of the contingency plan needs to be refined to allow it to be used as a strategic planning tool. This information will be gathered and used to identify any spare capacity in the physical assets used to provide this service. Options will then be developed to assess the suitability of this capacity to support clinical services.

The likely capital investment in this service has been identified and possibilities to utilise existing capacity in the current infrastructure, reducing capital investment and improving services will be explored.

The need for a consistent tracking and traceability system has been identified. Work will continue to reach a solution on this issue.

The contingency plans developed locally by each NHS Board have been shared through this project and noted by the Programme Board.

Good Practice

The gathering of data relating to the likely capital investment will allow more effective allocation of capital.

Transport

Fleet Management

Proposals to develop a national support structure with regional and local management has been developed and approved by the FRSSPB. The business case will be developed in partnership with staff side colleagues and presented for approval by the FRSSPB prior to being submitted for funding.

Logistics

A detailed review of all delivery routes in Scotland has been undertaken and analysed to identify productive opportunities.

Car Leasing

Proposals to adopt a more consistent approach to the development of Lease Car Policies has been presented to the FRSSPB and is being consulted upon.

Waste

Zero Waste Scotland has worked closely with Health Facilities Scotland to scope the issues associated with the implementation of the Waste Scotland Regulation 2011.

The Waste Management Steering Group has identified 5 areas which have the potential to deliver efficiencies, possibly using a shared service model. Further consideration will be made by the National Waste Steering Group

They are:

- Food Waste
- Furniture
- WEEE
- Reverse Logistics
- Administrative processes

A national training programme was introduced to ensure NHS Boards were prepared to adopt the new waste regulations with effect from the 31st of December 2013.

Process

All outcomes from the work streams will be considered by the Facilities Shared Services Programme Board before being passed to the Efficiency Portfolio Board for approval.

Annex G

Strategic Review of Soft Facilities Management Services

1. Objectives

Review all Soft Facilities Management Services across NHSScotland to see how the current service works and look at a number of service improvement opportunities to improve efficiency, patient safety and user satisfaction.

The outcome of this work will be a review report which will be presented to NHS Chief Executives and the NHS Efficiency Portfolio Board to agree which opportunities should be taken forward.

2. Progress

In January 2013 a brainstorming event was held which gave NHS facilities staff from across NHSS the opportunity to take an active role in the strategic direction for Soft FM, challenge current thinking and suggest service improvements / efficiencies in all services covered by the review. From the event, over 150 proposals and ideas were generated which, along with suggestions contained within the original Project Initiation Document, has provided the foundation for this review.

NHS HFS Technical Advisory Groups and a subgroup of the Strategic Facilities Group considered and shortlisted the proposals and ideas generated from the event and considered whether the suggestion should be taken forward as part of the programme, not to be considered, not prioritised as this stage or should be referred back to the Technical Advisory Group to be progressed.

The key themes from these items were then assessed and service improvement opportunities developed (As shown in Chart 1 below). These were then were approved by the Assets and Facilities Management Programme Board in June 2013.

Chart 1 - Service Improvement Opportunities assessed as part of the Strategic Review of Soft FM Programme



Strategic Service Review Groups, with Partnership representatives, were formed in August 2013 which assessed the current service provision (baseline data) and the service improvement opportunities and made recommendations for project initiation.

The programme has utilised existing data sources wherever possible. For operational service data there is a range of potential sources. The Scottish Health Service Costs (known as the Costs Book) is the only source of published costs information for NHSS and provides a detailed analysis of where resources are spent in the NHSS. This information is mainly derived from financial and statistical data compiled by Scottish Health Boards. For Soft FM services, the Costs Book data has an element of proportioned costs for central services, such as HR, Payroll etc, which are not directly under the control of Soft FM management and budgets and vary across NHS Boards. Utilising this data source would not be able to provide an accurate reflection on the operational features and costs of Soft FM services across NHSS.

HFS operates the Facilities Management System (FMS) which is used to support benchmarking in a selection of Soft FM services across NHSS. As NHS Boards' usage with the FMS matures, data completeness, accuracy and reliability will improve. The FMS Benchmarking system predominately reviews services across NHSScotland, however some service information is limited to larger acute sites and does not include Soft FM service delivered at smaller location or collect any retail data. Utilising only this data source would have limited the scope of this review and would not be able to accurately reflect current service provision across the entirety of Soft FM services. Baseline service data gathered for Catering, Domestic, Linen & Laundry, Portering and Retail services, as guided by the Strategic Service Review Groups, covers the financial year of 2012/13 and more recent where relevant.

Catering Reviews and the Catering Information System

Also completed as part of the Soft FM programme in 2013/14, was an independent review of patient and non-patient catering services across all NHS Boards. These individual reviews provided each NHS Board with an accurate and Board-specific appraisal of:

- Catering operations in each NHS site
- Accurate costs for provision of patient meals
- Non-patient trading account balance
- Opportunities to improve quality, reduce cost and increase income in the short and medium term.

These catering reviews have been completed by a catering expert, who has worked within the NHS environment in a number of locations. Catering reviews for all NHS Boards were completed by May 2014. Although there is significant variation in the costs of patient meals, food and labour across NHSScotland, the initial findings have also shown a high standard in the quality of food and service.

Following on from the Catering Reviews it was clear that catering teams needed the support of a bespoke information tool. The Catering Information System has a number of features including:

- stockPlan Stock take and tracking module bespoke to the location and supports electronic data capture
- prodPlan production planning and tracking that allows full interrogation and analysis of all aspects of the catering department including menu costings and wastage tracking
- *manReport* Management reporting suite allowing full analysis and trending
- salesPlan full retail sales analysis with innovative price tracking and setting

The rollout of the Catering Information System across NHSScotland continues. The system was originally piloted in Borders and Fife. The system has now been introduced in NHS Orkney, Shetland and Tayside.

The Catering Information System is also being used within Monklands Hospital (NHS Lanarkshire) and this includes the trial of *menuPick* - an electronic bedside meal ordering system for patients. The Hotel Services team member enters patients' meal choices into a handheld tablet which transmits the orders to the catering department for planning, preparation and delivery.

The menuPick system is being implemented in 11 wards resulting in a better quality food offering, timely delivery and significant reductions in food wastage across these wards. The new system has also helped to simplify the meal ordering process, benefiting patients and releasing nursing staff time for more care related duties.

3. Soft FM 2012/13 Productivity Findings

As the service models in operation across NHSScotland vary, so does productivity. Soft FM productivity measures, such as the cost of inputs to provide defined outputs, indicate a significant range across all services.

There is a degree of natural variation influenced by a number of factors including geography, existing service arrangements, Board functions, existing equipment or buildings, shift patterns, PFI arrangements or management structures. For example, The Island Boards (NHS Orkney, Shetland and Western Isles) receive the Scottish Distant Islands Allowance (SDIA), paid to all public service employees, which therefore reflects in the higher labour costs relative to mainland NHS Boards. A High Security Environment Allowance is also paid to The State Hospital employees.

However the productivity baselines also indicate potential for reducing efficiency variation in Board practices through improved standard and target setting as well as realising prioritised service improvement opportunities.

Catering

The total food and labour cost per patient per day varies across the different service types. Chart 2 demonstrates that Bulk and Plated Hotline services cost on average £16, Cook Freeze and Delivered Meals between £11.46 and £11.65 and the Cook Chill service £7.57. It should be noted that the Cook Chill service relates to one particular production unit in NHS Grampian which is no longer operational. The type of service model influences the costs division between staffing and food, i.e. a Delivered Meal service may have a higher food cost than a conventional in house system but a lower staffing cost.

Service Type	Total no. of Meals per day	Food Cost Per Patient Per Day (£)	Labour Cost Per Patient Per Day (£)	Total Food & Labour Cost Per Patient Per Day (£)
Cook Chill Bulk In House	1,212	3.60	3.97	7.57
Cook Freeze Bulk In House	4,887	5.04	6.42	11.46
Delivered Meal Service	14,535	4.45	7.20	11.65
Hotline Plated	19,575	4.57	11.38	15.95
Hotline Bulk	7,469	4.46	11.57	16.03

Chart 2 – NHSScotland Catering Productivity by Service Type, 2012/13

Laundry

For Laundry services Chart 9 below, shows that all NHS Boards had a total cost per item processed under 40p with the exception of NHS Orkney, Shetland and Western Isles. NHS Grampian has the lowest cost per item pre-income at 24p and Greater Glasgow & Clyde have the highest mainland Board costs at 38p per item. The total cost per processed item (staffing and non-staffing costs) excludes transport costs associated with the delivering and collection of items to and from sites.

NHS Fife, Greater Glasgow & Clyde and Lanarkshire provide a significant laundry service to other NHS Boards which reduces the cost per processed item. 8 NHS Boards have external income streams ranging from £8k (Orkney) to over £270k (Borders) which is not captured in Chart 3.



Chart 3 – NHSScotland Laundry Costs per Processed Item, 2012/13

Domestic and Portering

Productivity measures for Domestic and Portering services are less well defined than that for Catering and Laundry. These measures do not accurately capture the number and types of tasks and duties, which do not directly impact on the square meterage of sites and occupied bed days. Square meterage figures are not dynamic and therefore may not be updated on a frequent basis throughout the year to take account of Hospital and Ward closures and openings.

Productivity measures for Domestic and Portering services are less well defined than that for Catering and Laundry. These measures do not accurately capture the number and types of tasks and duties, which do not directly impact on the square meterage of sites and occupied bed days. Square meterage figures are not dynamic and therefore may not be updated on a frequent basis throughout the year to take account of Hospital and Ward closures and openings.

Within Domestic services, as shown in Chart 4, there were 3 Boards with total costs greater than £50 per square metre cleaned (Borders, Dumfries & Galloway and Orkney) in 2012/13. With the exception of NSS, all others Boards had total costs which ranged

from £26 (National Waiting Times Board) to £48 (The State Hospital). A number of Boards are only able to provide partial supplies costs as budgets in a number of cases are held in other departments.





Within Portering services, as shown in Chart 5, there are 4 Boards where the total cost per occupied bed day was greater than £8 (Ayrshire & Arran, Greater Glasgow & Clyde, Orkney and Shetland). With the exception of The State Hospital, where portering services do not carry out patient movement or mailroom duties, all other Boards ranged from £4 (Dumfries & Galloway) to £8 per bed day (Fife and Western Isles). In 5 Boards the total cost per square metre was greater than £20 (Borders, Greater Glasgow & Clyde, Lanarkshire, Orkney and Shetland). With the exception of The State Hospital, all other Boards ranged from £7 (The National Waiting Times Board) to £20 (Ayrshire & Arran and Lothian).

Chart 5 – NHSScotland Portering services Total Cost per square metre and per Occupied Bed Day 2012/13



Retail

In Retail, Chart 6 identifies that the annual income from pharmacies per square metre ranges from £211 (Ayrshire & Arran) to £429 (Lothian). The annual income from private retail per square metre ranges from £72 (Forth Valley) to £1,449 (Grampian). The annual income from the RVS and other charitable organisations per square metre ranges from £152 (Lothian) to £407 (Lanarkshire). NHS Greater Glasgow & Clyde's annual income is available from only one site (58 sqm), which represents 7% of the RVS or charitable organisation retail space in the Board area.

There are 4 Boards with a fixed minimum guaranteed rental income from the retail units operated by the RVS or other charitable organisations (Greater Glasgow & Clyde, Lanarkshire, Lothian and Tayside). Donations from RVS or charitable organisations are not captured in these figures.

Chart 6 – NHSScotland Annual Retail Income per Square Metre, as at April 2014



4. Strategic Service Review Group Recommendations

Catering

- Introduction of a patient ordering and stock control system across NHSScotland and the reprovision of catering production units are prioritised for implementation.
- Implementation of a patient ordering and stock control system and the reprovision of catering production units will set the direction for the introduction of the other 3 efficiency proposals - meal delivery systems, retail catering and a move towards standard patient menus.
- NHSScotland should ultimately move towards a more standardised range of menus, but there will be some significant disparity in regard to the associated timelines.

Domestic

- The national procurement of standardised domestic floor cleaning equipment and materials is prioritised for implementation as part of the programme.
- Boards should also identify an annual budget or investment profile to ensure that equipment is fit for purpose and supports the national procurement exercise. Annual data on Boards' equipment status should also be collected centrally.
- An annual survey of nursing staff in relation to communications between nursing, domestic and infection control staff should be carried out.
- A national Domestic Productivity Tool should be developed and implemented across NHSScotland.

Laundry

- Production of a business case, which evaluates the reprovision of Laundry Production Units across NHSScotland, is prioritised for implementation.
- The national procurement opportunity for equipment and maintenance would be more suitably taken forward following the conclusion of the review into the Laundry Production Unit establishment.
- An NHSScotland national linen policy or guidance document should be developed in conjunction with Health Protection Scotland.

Portering

- Introduction of a fully automated Porter Task Tracking System is prioritised for implementation.
- Introduction of an automated mailroom sorting system can have an impact on areas with high throughput of mail, but it is not suited to a large number of sites. However, it is believed that such a system may well be suitable for use in a large NHS Board or on a shared basis

Retail

- Introduction of a national framework for lease agreements in NHSScotland which also takes account of the range in demographics and footfall across different sites.
- When a retail opportunity becomes available, Boards should ensure that the introduction of Aroma cafes and retail outlets are assessed initially before any external organisations are considered.
- Boards should actively review available space to explore if there are any retail opportunities that would enhance the patient experience and provide an additional income stream to the Board.

General Recommendations

- The FMS Benchmarking central team to widen its scope in order to offer better support to Boards' data management and reporting activities. This should include:
 - The ability to validate Boards' submissions and procedures.
 - Introduce a standardised process for capturing service feedback and measuring patient and staff experience
 - Working with named contacts in each NHS Board to ensure appropriate submission of service data
- NHS Boards should ensure that gross internal area square meterage and operational space figures are regularly reviewed and updated.

• The National Costing Group should explore a change to the Costs Book to include a template for Boards to complete which identifies Overhead Allocation as a separate cost element in order to ascertain the true costs across FM services.

Annex H

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 etransformation 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.

Analysis of the IM&T Gartner Survey 2011/12 (used to identify the costs in this SAFR Section 3.4) shows that:

- over half of the benchmarked spend (c£74.9M) is classified as Applications Support or Development, and over half the 1,082 IM&T staff dedicated to these areas
- whilst Data centre costs are c£19.3M, over a quarter of this cost is attributable to the 138 staff
- the Data centre and 'Client and Peripherals' areas could be considered the most commodity like services, yet account for nearly 37% of FTEs (401) and c£42.8M of benchmarked spend.

Whilst NHSScotland compared well against its peer group, Gartner were able to indicate areas for improvement such as considering data centre consolidation, or shifting to cloud based services. The implications of this on staff and resources would need to be considered.

The priorities for work within the Applications and Infrastructure funds can be categorised into the following:

- 'Must Do' projects. These are systems at end of life, or existing contracts for services and licenses that are due for renewal.
- 'Invest to Save' projects. The sole basis for undertaking these projects is to release savings in the future.
- 'Potential Development' projects. These are projects designed to move the national infrastructure (including application architecture) in a strategic direction, or to absorb costs for new national systems.

Of the categories listed above, the last two are optional. The eHealth Leads could take no action in these areas. Ongoing costs for national solutions developed within the Strategic fund continue to be considered for accommodation within the existing Application and Infrastructure funds.

'Must Do' Projects:

Within the Applications and Infrastructure funds there are a number of systems and services that are due for replacement. During FY13 the Leads progressed all of the

priority areas. During FY14 the focus will be on progressing the business cases for the 'Must Do' projects defined below:

- N3 Replacement (SWAN)– current contract ends FY14
- NHS Mail replacement current contract ends FY14
- Support Needs System (SNS) currently out of support
- Scottish Breast Screening (SBS) due in FY2013
- CHI Modernisation includes GPRS
- Child Health systems dependent on the CHI modernisation

To date, NHSScotland has been able to fund the NHS contribution to the SWAN business case development from within the Infrastructure investment fund, and additional savings made by the NISG team managing N3. A significant cost pressure in FY15 will be associated with funding the repayment of financing for SWAN. To meet the proposed finance model in the SWAN business case, financing was required from the SG Health Department and NHS NSS. This financing has been provided to NHSScotland on the basis that it would be repaid in the subsequent 2 years. The overall amount to be repaid will not be confirmed until after the SWAN Business Case is completed. Provision in the Infrastructure investment fund will be made to absorb this cost, once the contract has been finalised.

The NHS mail replacement business case has been underway throughout the year. Different models and funding scenarios have been explored at a high level and business case development will progress during FY14. The proposed solution will require migration from the existing NHS Mail system, and if agreed, from non-NHS Mail systems to the new service. Work will be required to define and agree what the new service will provide, and the migration plans of each Board into the national service. If the replacement service incorporates existing non-NHS Mail Boards there is likely to be a net increase in the annual cost of NHS Mail. A provision of £500K p.a. has been included in the financial plan to cater for the increase. A provision of £1.7M has been made to cater for migration costs to the replacement service.

The Scottish Breast Screening Programme (SBSP) IT replacement project has been delayed. As agreed with the Scottish Government, the eHealth Leads would not contribute to the development of the replacement system. eHealth Leads will continue to have a presence on the project board for the IT system replacement, monitoring progress and raising concerns with the project chair on potential impacts on the Boards.

The VME modernisation programme was progressed throughout FY13, with an Outline Business Case developed for CHI Modernisation, and an Output Based Specification for the Child Health Systems. If the OBC is agreed then a competitive dialogue procurement will be commenced throughout FY14. There is some latitude on when the business case is approved and the implementation begins, however it is recognised that this may result in additional costs on SCI Store (demographics services) and local Board systems. The Child Health systems replacement for School, Pre-School, support Needs System and SIRS will progress throughout FY14 with work commenced on the OBC for these systems. Extensive stakeholder engagement will be required on the development of these documents.

Emerging Trends in the Supplier market

Over the past five years NHSScotland has made significant investment in both the GP and PMS markets. When considered against the 'locked out' market created by Connecting for Health in England, this has been an attractive market place for eHealth suppliers to come to. NHSScotland has made its investment decisions, and a number of key suppliers have now been selected for the future of eHealth in Scotland.

In the past 2 years there has been a significant shift in the eHealth market across the UK. With the dismantling of Connecting for Health, and the scaling back of NPfIT, the eHealth market in NHS England has now become open to many of the vendors that had previously been 'locked out' of that market. In addition to these changes, the Department of Health has made significant sums of money available to support eHealth initiatives in NHS England. With the shift in direction from the NHS in England a number of our key suppliers are focusing time and effort on this market. This is likely to continue for the next 2-3 years and could result in a lack of access to the best resources from our suppliers, and a shift in strategic development focus towards the demands of the English market, ahead of those for NHSScotland. This is likely to be most noticeable in our GP suppliers, PMS supplier and PACS supplier, but may also become evident in some of our more niche suppliers such as Carestream.

Large scale investment in new eHealth systems in NHSScotland is unlikely over the coming 5 years. Following the successful implementation of new PMS solutions across the majority of NHSScotland hospitals, and the GP systems deal with EMIS and Vision, there remains small scale investment in key pieces of the eHealth architecture. Contrast this with the emergence of tenders in NHS England, and the scale of investment announced there, keeping suppliers focused on Scotland will be difficult.

The current Atos contract ends on 31st March 2018. This represents a significant opportunity to transform this relationship and the core pieces of the eHealth architecture. For a number of key systems (CHI, ECS, SCI Store) this provides a clear break point where changes can be introduced with limited financial impact. At worst it allows eHealth to reset key elements of the contract to fit with future delivery, and a mechanism to encourage other suppliers into NHSScotland.

Horizon Scanning 2016 onwards

To ensure ongoing affordability of the Infrastructure and Applications systems and services, monitoring of the agreed cost reduction work from previous years will need to be maintained. Given the criticality of the funding gap in FY16, slippage on these projects will add pressure to an already tough fiscal position.

As outlined in the previous sections, there are a number of inbuilt cost pressures within existing contracts and agreements for the Infrastructure and Application funds. The overriding priority for the eHealth Leads is to ensure that these cost pressures are met from within the existing allocation from the eHealth Programme Board. Activity to identify and implement cost reductions will continue to be a priority.

FY16 represents a year of significant financial pressure on the Applications and Infrastructure funds. On present projections there will be a deficit of c£3.3M that will need to be addressed. Significant work will be required during FY14 and FY15 to close this gap, and to develop a contingency plan for dealing with any residual deficit.

In order to achieve the target date for VME Migration (31st March, 2018) focused effort will be required over the next 4 years. Whilst the current plan for the CHI/GPRS, Child Health systems and SIRS replacement would see the bulk of spending on a new system being incurred in FY16, there will need to be procurement activity undertaken in the preceding years, and preparation activity on the mainframe, as well as an active programme of engagement with the diverse stakeholder community

As the 'closing the loop' work continues, it becomes clear that a HEPMA business case may come forward in the next 3 years. Whether funded by the Boards, the eHealth Directorate or in a combined funding model, like PMS, this is likely to represent an investment in the tens of millions, over the lifetime of the project. Given the SWAN funding position, and the continued pressure on eHealth IM&T budgets, work will need to be done to identify savings that could be released to fund this programme of work.

Health and Social Care Integration will increasingly take focus across NHSScotland. With the creation of the Health and Social Care Partnerships (HSCPs) a new model of commissioning NHS services looks likely to arise. From this, complex and at present, difficult to determine IM&T requirements will come forward. This is particularly acute for Health Boards with more than one HSCP to support. Working towards open systems and open models of information sharing will be key to delivering the needs of these partnerships. For some Boards this may present a significant internal challenge, especially considering the current shape of the workforce. Whilst Health and Social Care Integration may not require significant investment in systems, it is likely to drive up the demand for mobile devices, and mobile access to data, which will have an impact on workloads for eHealth across NHSScotland.

With the rise of smart phones and tablet devices, there is an increasing demand for access to systems and data away from the traditional desktop environment. This represents a significant challenge to eHealth and suppliers, who have traditionally sourced systems fit for MS Windows based environments. unless there is significant demand from other clients, suppliers are likely to choose a preferred mobile/tablet provider and make their product fit for purpose. Others may not consider any investment in this space. NHSScotland Health Boards may choose different devices to provide services to their clinicians, potentially leaving suppliers in a position where they must

support 3 different platforms for one system. All of this is likely to increase cost pressures on IM&T over the next 5 years. This is without considering the necessary support models and structures required for mobile working.

Patient centred care is an integral part of delivering healthcare. With the increasing penetration of smart phones, tablet devices and the internet usage, it should be expected that patients will demand more information about their care pathway, and to see more of their data on-line. Whilst this is currently a mostly passive relationship with the citizen, increasingly this will change, following the success of initiatives such as 'My Diabetes, My Way', and through telehealth and telemedicine initiatives. Boards will need to increasingly cater for this type of interaction. In-line with equity of access policies, and consistency of care across Scotland, this will require much greater standardisation across the NHS both in IM&T and in some instances care delivery. eHealth departments will increasingly find themselves in the middle of this, having to securely make data available, and harmonise systems across their portfolio.

With the procurement of TrakCare, and the deployment of Clinical Portal, there is an increasing reliance on IM&T to support NHSScotland activity. As Order Communications is deployed across health boards, it becomes increasingly necessary for IM&T departments to provide 24*7 support. In some cases this is at odds with existing terms and conditions for staff already employed in departments. Increasingly clinical directors will be looking for continuity of support, and the eHealth Leads will need to find a way of providing this. Given the current shape of the workforce, a regional support model, or shared service model may need to be considered, as not all Boards will be able to provide 24*7 support for all systems and services.

Significantly changing the contract with Atos in April 2018 has the potential to release streams of funding that can be used to encourage smaller and more nimble suppliers. Whilst this may introduce complexity into NHSScotland contract management, the potential benefit is to have a set of suppliers more aligned to eHealth strategy. In addition the changing of the contract will allow NHSScotland to significantly change key parts of the national IT infrastructure without affecting service delivery. Doing this would allow for re-investment to support some of the opportunities and issues highlighted above.

eHealth Finance Strategy 2011 - 2017

In March 2014 the eHealth Strategy Board agreed to the update of the eHealth Finance Strategy and development of an outline business plan that:

i) Aligns all eHealth funding streams with delivery of the updated eHealth strategy.

ii) Identifies the strategic priorities and budget required to maintain the existing level of service and support key Scottish government policy developments such as health and social care integration and 2020 vision. iii) Identifies changes to current budgets and priorities that maybe required to achieve the updated strategic outcomes.

iv) Sets out the strategic role that some of the special Boards have in delivering and supporting national IM&T infrastructure, services and information management in support of the eHealth strategy delivery.

v) Considers whether strategic priorities are best delivered nationally/regionally/locally, and the right mix of workforce skills and sourcing strategy to deliver.

vi) Considers the supplier partnerships and funding mechanisms that will be required to achieve the outcomes and drive innovation.

Annex I

REVIEW OF SCOTTISH PUBLIC SECTOR PROCUREMENT IN CONSTRUCTION

Background

In October 2013, Ken Lewandowski and Robin Crawford published the report on their review. Their vision was of an approach to public sector construction procurement which achieves better collaboration in design-led, efficient and effective procurement and which has regard to sustainability in all senses of the word. They believed that the power of public spending must be harnessed to benefit the sustainability of the Scottish economy to create and support jobs as well as to provide the infrastructure which will keep Scotland working for generations to come.

The report made 67 recommendations covering a number of broad themes: leadership; sectoral capacity/capability; management information; innovation; technology and sustainability; and prioritisation and co-ordination of investment planning.

On the 14th May 2014, the Deputy First Minister announced in a written parliamentary answer that she was asking the Public Procurement Reform Board to oversee the delivery of the report's recommendations and that the Scottish Government accepted all the recommendations except, for the time being, the appointment of the Chief Construction Adviser.

The Scottish Government, working with the Scottish Futures Trust and Construction Scotland's Industry Leadership Group, is developing a programme to deliver the recommendations of the review prepared by Robin and Ken

Broadly speaking, the Scottish Government will lead work streams and projects which relate to the development of the policy environment, with SFT leading those which are more about delivery on the ground and Construction Scotland Industry Leadership Group (CSILG) delivering work streams around industry best practice.

All recognise the need to engage and involve key players across all parts of the sector.

The implementation of the report's recommendations will represent a major change programme across the public sector and the Scottish Government is committed to playing its full part to support it. Leaders of other public bodies are strongly encouraged to consider what they can do to develop capability in relation to construction procurement. In line with the review's first recommendation, the construction procurement policy function within the Scottish Government has been strengthened, and good progress is already being made on the following recommendations

- Establishing a mechanism under the existing PPRB to bring together key stakeholders to drive the procurement reform agenda as it relates to construction.
- Commissioning research into design led procurement.
- Developing new guidelines for certain aspects of the operation of the hubCo model.
- The use of project bank accounts in Scotland.
- The collation of Sectoral records of project costs, including what they were estimated to cost at business plan and contract award stages and actual cost on completion to provide meaningful benchmark figures for the public sector in Scotland.



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