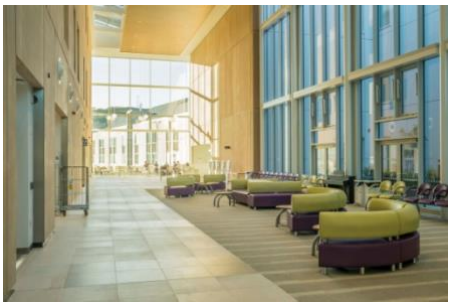
Annual State of NHSScotland Assets and Facilities Report for 2017



The new Dumfries & Galloway Royal Hospital opened in December 2017

7th Edition

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Foreword

This seventh edition of the State of NHSScotland Assets and Facilities Report (SAFR) is now widely recognised as a key reference document 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 supporting delivery of the new 'National Clinical Strategy for Scotland' and the 'Health and Social Care Delivery Plan'. These are anticipated to require change to be made to the type and distribution of assets and facilities services, as well as the way in which we prioritise investment in the future.

This year's report provides an update on the delivery of major infrastructure projects, highlights changes of approach to national and regionally planning to inform future investment plans, and provides a comprehensive asset performance update covering all asset and facilities management issues and initiatives across NHSScotland.

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

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Calum Campbell
Chair of Assets and Facilities Programme Board Chief Executive NHS Lanarkshire

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Christine McLaughlin
Director of Health Finance and Infrastructure
Scottish Government Health and Social Care Directorates

1.0 Delivering NHSScotland's Future

1.1 Introduction

Since the introduction of the Healthcare Quality Strategy for NHSScotland, and the Asset Management Policy introduced back in 2010, the health estate & facilities sector has been tasked with modernising the estate, delivering the most effective facilities services arrangements, and enhancing the potential from the best available medical equipment and IT assets. SAFR 2015 provided a mid-point review of improvements already made to asset management across NHSScotland and the major asset investment programme now delivered. This provided a reminder of how effective asset management and investment planning has become in supporting the delivery of NHSScotland's 2020 Vision.

This year has seen further progress in the completion of important NHS infrastructure projects; including the opening of the new Dumfries and Galloway Royal Infirmary, the Jack Copland Centre for Scottish National Blood Transfusion Service, a new facility for adult mental health inpatient services at Royal Edinburgh Hospital, the Maryhill Health & Care Centre in Glasgow, and primary & community care centres in Edinburgh, Glasgow and Grampian. Each of these new facilities will undoubtedly provide modern accommodation designed for enhanced service provision across acute, primary, community and elderly care.

The following provides an overview of the benefits that both the new Dumfries and Galloway Royal Infirmary and the Jack Copland Centre will have on the way that health and care is delivered and supported in the region.

1.2 Delivering the New Acute Hospital for Dumfries

Construction of the £275m replacement hospital in Dumfries will become a catalyst for the delivery of fundamental improvements in the way that healthcare is delivered in the region and bring major benefits to a population with significant demographic and geographic challenges.

The new 344 bed hospital will enable new models of care to be delivered through the introduction of single rooms, a combined theatre and 23 hour surgery area, and an integrated emergency care centre and assessment unit. The whole hospital is designed to provide patients with an enhanced level of care and treatment and, where necessary, be seen, diagnosed, and a treatment plan established, without using mainstream hospital beds.

This project is probably one of the largest and most complex projects ever delivered in Dumfries and it was therefore an important opportunity to be able to promote the economic regeneration of the area by offering employment and training opportunities for individuals, contracts for local businesses, and engagement with children and young people in schools and colleges. To date this has included over 50 (each) work placements, apprenticeships, and career events / presentations; plus 135 locally advertised employment opportunities. Local people have thus been instrumental in ensuring the successful delivery of this major construction project whilst at the same time gaining valuable experience working on this exciting new project.

1.3 The Jack Copland Centre

The new Jack Copland Centre brings together on a single site a range of Scottish National Blood Transfusion Services (SNBTS) which create a facility capable of delivering a first rate service in the processing, testing, supply, research and development of blood and human donor tissues and cells.

The new Centre will be adaptable to increasing and changing demands for the service, and is designed to improve regulatory standards, costs and operational efficiencies. It will also provide a modern, vibrant environment for staff to work within.

Blood donations from across Scotland will now be sent to this new facility for processing, testing and manufacturing before being transported to where they are needed for patients.

1.4 The Look Ahead

Looking further ahead, the new National Clinical Strategy and the Health and Social Care Delivery Plan are expected to generate plans to transform how health and care services are delivered in the future. In response, Regional Boards have been formed across the North, East, and West regions of Scotland to look at local, regional and national service reform and infrastructure investment needs to create a new, long term vision for NHSScotland.

A first step in this new direction will be to deliver the elective centres programme, which will develop a network of new treatment centres across Scotland. The service and property planning processes are continuing to develop for each of the six proposed centres at Golden Jubilee Hospital in Clydebank, St John's Hospital in Livingston, Edinburgh Royal Infirmary, Ninewells Hospital in Dundee, Raigmore Hospital in Inverness, and Aberdeen Royal Infirmary.

A new National Infrastructure Board is also expected to be formed in 2018 to support the emerging plans emanating from the National Clinical Strategy. It will develop a National Infrastructure Strategy to provide a framework for change and investment across the whole of NHSScotland, from which regional and local investment plans can be informed. It will also become a national authoritative body to ensure the continued safe and effective operation of the retained estate and other associated assets.

In this time of transformational change in healthcare provision, successful delivery of the National Clinical Strategy and Health and Social Care Delivery Plan will depend, in part, on the provision of a health and care estate, and supporting services, which are capable of adapting to and encouraging new models of care delivery. The initiatives described above are thus expected to form the necessary framework from which these changes can take place.

2.0 Performance of NHSScotland's Assets

This section of the report provides an overview of the current state of NHSScotland's assets whilst also reviewing asset and facilities services performance. The intention is to gain an insight into the significance of this asset base and also to appreciate where opportunities lie for improving performance.

The data used within this report is based on that currently available and reported from the beginning of the financial year 2017/18 i.e. April 2017. This includes:

- The latest asset performance information provided by NHS Boards in May 2017 covering property, office accommodation, vehicle and medical equipment assets.
- The latest facilities management costs published within the Scottish Health Service Cost Book (published in December 2016), covering NHS Boards' annual accounts for the reporting period 2015/16.
- PPP/PFI service charge costs from NHS Board's audited accounts for 2016/17.
- Information from NHSScotland's 2016 patient questionnaire survey which reports every two years.
- The limited information available on eHealth IM&T asset cost information, which was collated in 2012.

All 22 NHS Boards have contributed to this report by submitting their annual asset performance returns during May 2017.

All costs reported in this document include the impact of inflation but exclude the cost of VAT or other on-costs, unless specifically noted.

2.1 The Current Status of NHSScotland's Property Assets

The following provides an overview of the current status of NHSScotland's assets, with some comparative information on annual changes. More detailed information on the current status of property assets can be found in Annex A of this report.

Current status of NHSScotland's property assets			
Floor Area ('000's sq.m)	**2015**	**2016**	**2017**
Total:	4,478	4,434	4,379 ↓
Age (% less than 50 years old)	**2015**	**2016**	**2017**
	78%	77%	78% ↑
Condition (Good – category A or B)	**2015**	**2016**	**2017**
	66%	70%	72% ↑
Estate Utilisation (Fully Utilised)	**2015**	**2016**	**2017**
	81%	83%	83% –
Functional Suitability (Good – A or B)	**2015**	**2016**	**2017**
	72%	69%	70% ↑
Backlog Maintenance	**2015**	**2016**	**2017**
Including Inflation uplift	£898m	£887m	£899m ↑
Excluding inflation uplift	£809m	£763m	£723m ↓

This reports an overall improvement this year in the status of NHSScotland's property assets; including its age profile, condition, functional suitability and backlog maintenance (inflation uplift excluded).

2.2 The Current Status of NHSScotland's Vehicle Assets

The following provides an overview of the current status of NHSScotland's vehicle assets, with some comparative information on annual changes. More detailed information on the current status of vehicle assets can be found in Annex B of this report.

Current status of NHSScotland's vehicular assets

Number of Vehicles	**2015**	**2016**	**2017**
Owned*:	1,932	1,938	1,882
Leased:	2,516	2,264	2,303
Staff Car Scheme:	5,548	5,356	5,154
Long term hire:	155	222	240
Total:	**10,151**	**9,780**	**9,579 ↓**
Age (% less than 5 years old)	**2015**	**2016**	**2017**
	83%	81%	87% ↑
Total Mileage (000's)	**2015**	**2016**	**2017**
Owned:	30,616	32,900	28,823
Leased**:	24,332	19,841	24,107
Staff Car Scheme**:	27,049	21,533	27,422
Private Car Business Travel:	51,690	51,093	49,345
Total:	**133,688**	**125,368**	**129,698 ↑**
Fuel Type	**2015**	**2016**	**2017**
Petrol:	21.9%	20.6%	21.5%
Diesel:	77.7%	78.7%	77.4%
Alternative:	0.4%	0.7%	1.1%

* 66% of NHSScotland's owned vehicles belong to the Scottish Ambulance Service.
** The Leased figures and Staff Car Scheme figures do not include Long and Short Term Hire vehicles

This information reports a general reduction in the number of vehicles yet an overall increase in mileage, thus suggesting greater usage of the available vehicles. The age profile of these vehicles has further improved suggesting that they are in good condition and well maintained; some Boards indicate that those beyond 5 years old are often due to their lower annual mileage enabling an extended life.

An example of how the Scottish Ambulance Service is investigating the environmental benefits of introducing 'cleaner fuel' vehicles is provided in Annex F.

2.3 The Current Status of NHSScotland's Medical Equipment Assets

The following provides an overview of the current status of NHSScotland's medical assets, with some comparative information on annual changes. More detailed information can be found in Annex C of this report.

Current status of NHSScotland's medical equipment

Replacement Cost*	**2015**	**2016**	**2017**
Radiotherapy equipment	£66m	£65m	£67m
Imaging equipment	£269m	£271m	£259m
Renal dialysis equipment	£16m	£16m	£15m
Cardiac defibrillators	£20m	£20m	£22m
Flexible endoscopes	£84m	£78m	£78m
Infusion devices	£37m	£34m	£31m
Decontamination equipment	-	-	£23m
Other high value equipment:	£440m	£438m	£436m
Other low value medical equipment	n/a**	£108m	£116m
TOTAL:	**£932m**	**£1,030m**	**£1,048m**
Radiotherapy equipment (linear accelerators & CT simulators)	**2015**	**2016**	**2017**
Number of items:	35	38	38
Proportion within minimum lifecycle age:	100%	100%	100%
Imaging equipment	**2015**	**2016**	**2017**
Number of items:	2,745	2,658	2,838
Proportion within minimum lifecycle age:	69%	70%	57%
Cardiac Defibrillators	**2015**	**2016**	**2017**
Number of items:	3,850	3,926	3,999
Proportion within minimum lifecycle age:	85%	78%	78%
Infusion Devices	**2015**	**2016**	**2017**
Number of items:	20,190	20,757	20,920
Proportion within minimum lifecycle age:	76%	73%	76%

Current status of NHSScotland's medical equipment (cont'd)			
Flexible endoscopes	**2015**	**2016**	**2017**
Number of items:	3,035	3,106	3,063
Proportion within minimum lifecycle age:	85%	81%	79%
Renal Dialysis	**2015**	**2016**	**2017**
Number of items:	944	980	996
Proportion within minimum lifecycle age:	66%	63%	67%

* estimated cost of replacing all medical equipment, & leased / privately financed equipment
** n/a – represents comparative data not available in 2015

Medical equipment is a valuable asset both in monetary terms and in the important role it plays in the delivery of quality and safe healthcare across NHSScotland. There has been a small increase in the overall replacement cost of medical equipment between 2016 and 2017, which is mainly due to the introduction of decontamination equipment into this reporting category.

The careful management of medical equipment is enabling it to be used beyond its 'supplier recommended' lifecycle replacement date which supports more sustainable and realistic replacement programmes whilst still maintaining patient safety as the highest priority. This is particularly the case with the programme of active management of asset life across all imaging equipment; however, radiotherapy equipment continues to benefit from the nationally coordinated replacement programme with all equipment being replaced within the minimum lifecycle.

2.4 National Asset and Facilities Performance Framework

A key objective of this report is to monitor year on year change in asset and facilities services performance, and the National Asset and Facilities Performance Framework (below) has been used since first introduced in 2011 to provide an essential link between asset and facilities services performance and patient needs, as defined in the NHSScotland Quality Strategy's three Quality Ambitions.

The Framework uses 20 key performance indicators to monitor year on year progress in asset performance towards the achievement of the 2020 Vision targets. It should be noted that the 2020 Performance Targets are (a) aspirational and can be subject to review to reflect funding availability, 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.

		Performance Change 2016 to 2017				
	KPI No	Key Performance Indicator	SAFR 2016 Performance	SAFR 2017 Performance	Percentage Change from SAFR 2016	2020 Vision Stretch Targets
Patient Centred	1	Percentage of properties categorised as either A or B for Physical Condition facet of estate appraisals	70%	72%	3%	90%
	2	Percentage of properties categorised as either A or B for Quality facet of estate appraisals	68%	70%	3%	90%
	3	Positive response to Patient Questionnaire on patient rating of hospital environment	92%	92%	0%	95%
	4	Percentage of properties less than 50 years old	77%	77%	0%	70%
	5	PAMS Quality Checklist Overall Score (max score 100)	75%	69%	-8%	95%
Safe	6	Overall percentage compliance score from SCART	*	53%		95%
	7	Cost per square metre for backlog maintenance	£177	£170	-4%	£100
	8	Significant and high risk backlog maintenance as percentage of total backlog expenditure requirement	47%	45%	-4%	10%
Effective & Efficient	9	Percentage of properties categorised as either A or B for Functional Suitability facet of estate appraisal	68%	70%	3%	90%
	10	Percentage of properties categorised as 'Fully Utilised' for space utilisation facet of estate appraisals	83%	83%	0%	90%
	11	Building Area sq.m per Consumer Week (from Cost Book)	3.65	3.63	-1%	3.3
	12	Cleaning Costs £ per sq.m (from Cost Book)	43.75	42.91	-2%	38.6
	13	Property maintenance costs £ per sq.m (from Cost Book)	31.46	32.79	4%	29.5
	14	PPP Service Charge Cost £ per sq.m (from audited accounts & not Cost Book)	122.46	122.31	0%	110.1
	15	Energy Costs £ per sq.m (from Cost Book)	27.43	27.54	0%	24.8
	16	Rates Costs £ per sq.m (from Cost Book)	13.31	15.26	15%	13.7
	17	Catering Cost £ per consumer week (from Cost Book)	86.82	85.82	-1.2%	77.2
	18	Portering Costs £ per consumer week (from Cost Book)	52.10	55.08	6%	49.6
	19	Laundry Cost £ per consumer week (from Cost Book)	24.26	23.12	-5%	20.8
	20	Waste Cost £ per consumer week (from Cost Book)	11.75	12.08	3%	10.9

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

The "Current SAFR 2017 Performance" for KPI Nos 12 to 20 inclusive is based on the 2016 Cost Book information

KPI No 6* - this is a new benchmark KPI which uses a new set of assessment criteria

KPI No 7 has been adjusted to exclude inflation so that real performance can be compared.

KPI No 15 - Energy costs are outside the direct control of NHS Boards therefore reference is needed to Annex F to better understand energy consumption performance.

KPI No 19 includes laundry costs only, linen costs are no longer included

Figures and percentages have been rounded for ease of reporting purposes.

Percentage Change is the real percentage change 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.

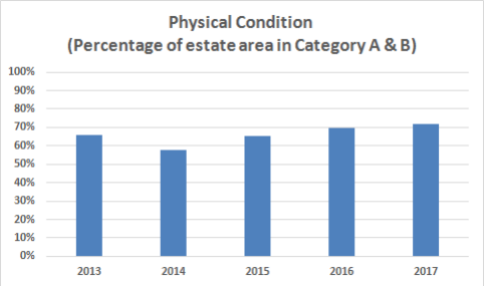
Annual changes to these KPIs are further explained in the following section.

2.4.1 Changes in National Asset Performance Framework KPIs

The following provides an overview of performance change over the last 5 years, 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).

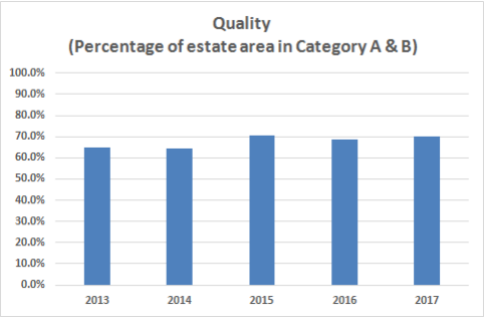


Physical Condition

Over that last four years there has been a steady improvement in the reported physical condition of the estate. Contributions to this improvement includes:

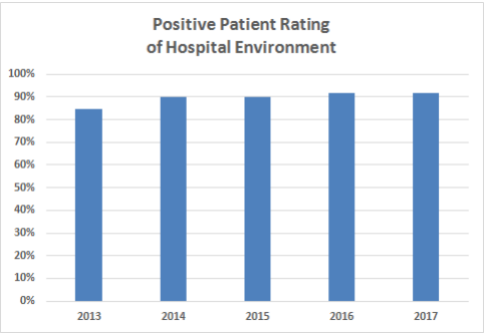
- Completion of the Queen Elizabeth University Hospital in Glasgow.
- The substantial programme of new primary & community care facilities across Scotland.
- Improvements made to the retained estate.

New hospital projects in Dumfries and Orkney, plus other planned smaller but as important health and care facilities, are expected to expand this modernised estate and replace outdated accommodation.



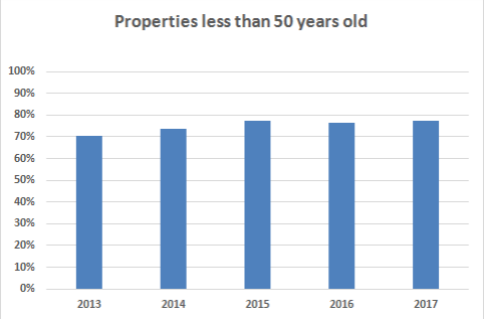
Quality

Unsurprisingly, the quality of the internal accommodation is in line with the physical condition of the overall and is expected to further improve as more new developments and refurbishment project of the existing estate are completed.



Patient Rating of the Hospital Environment

This indicator is now only published every two years; hence, the figures for 2016 and 2017 are the same. They do, however, show a continued gradual rise in this indicator of patients' opinion on the quality of the hospital environment. Patients with a positive response to their environment is now at 92% which is an extremely encouraging response rate.

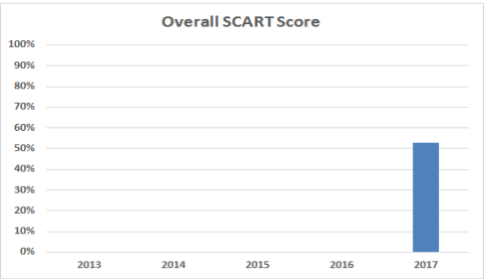


Properties less than 50 Years Old

This indicator is affected by the introduction of new properties, the sale or disposal of older accommodation, and also the natural aging of the estate. Over the last 5 years, NHSScotland's investment programme has enabled an important shift in the age profile of the overall estate, with more new facilities introduced than the rate of the existing estate reaching an age beyond 50 years.

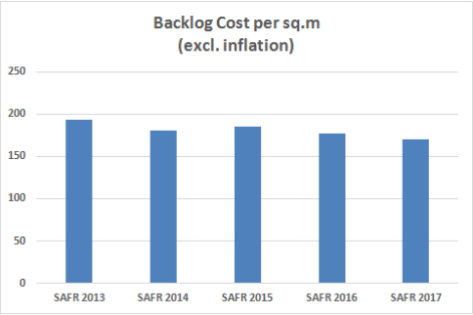
Future investment projects are expected to compensate for a naturally aging estate to support continued improvement in this indicator, which includes:

- The new Dumfries Hospital.
- The new Balfour Hospital in Orkney.
- The new Elective Centres programme across Scotland.
- The new Royal Hospital for Sick Children in Edinburgh.
- The new Baird Family Hospital and Anchor Centre in Aberdeen.
- The programme of investment in primary care facilities.
- And several other important investment projects which will replace old and outdated accommodation.



Overall percentage compliance score from SCART2

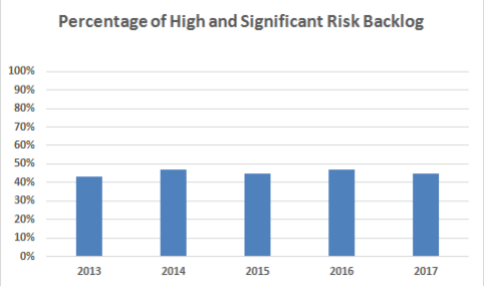
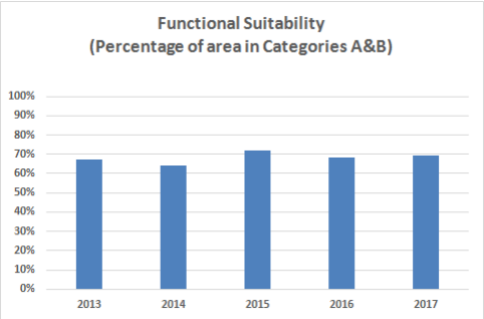
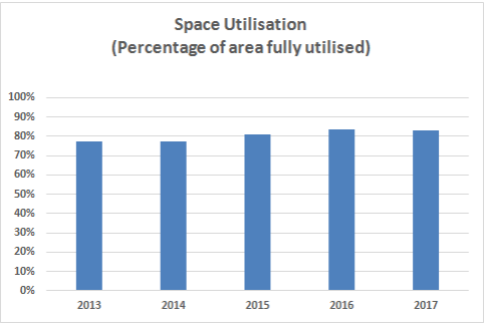
SCART is a self-assessment tool that indicates general compliance with policies and procedures related to property related statutory compliance. A new question set has been introduced which is currently being adopted by Boards. This introduces a new KPI benchmark point beginning from 2017. Current compliance status is equivalent to previous years but further improvements are expected as this new assessment process is fully implemented.



Backlog Maintenance Cost per sq.m.

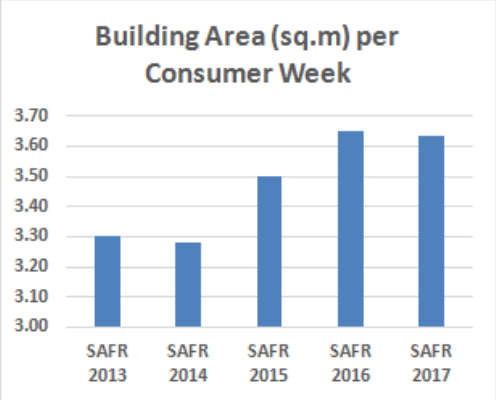
This indicator, which excludes the cost impact of inflation, continues to reduce gradually; which reflects the continued focus on reducing backlog maintenance across the NHSScotland estate.

Section 2.4.3 provides further details on the current status and movement of reported backlog maintenance.

	**Proportion of Significant & High Risk Backlog Maintenance** The proportion of significant and high risk backlog has reduced by two percentage points over the last twelve months, which is a significant achievement over this short period. It also demonstrates that resources are being focussed on areas of greatest priority in terms of backlog maintenance.
	**Functional Suitability** This year has seen a small improvement in this indicator to keep it around the 70% mark. Further improvements are expected in years to come, particularly as new hospital facilities become available over the next few years.
	**Fully Utilised Space** After several years of continued improvement in this indicator, the last 12 months has remained constant at its highest level. Space utilisation continues to be a key indicator of the effectiveness of usage of accommodation, which is further supported through the rationalisation of empty properties once services are moved to new accommodation.

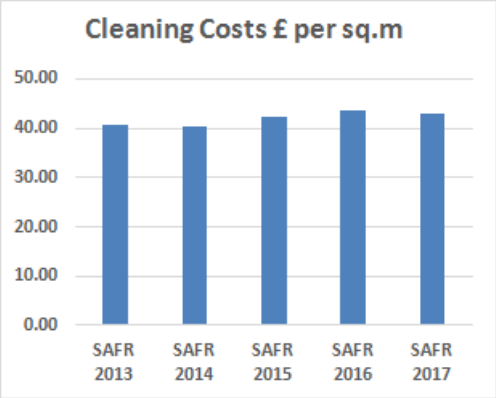
KPI Nos 11 to 20 - Cost Book Derived KPIs

Note: The latest SAFR 2017 Cost Book data is based on financial information for financial year 2015/16



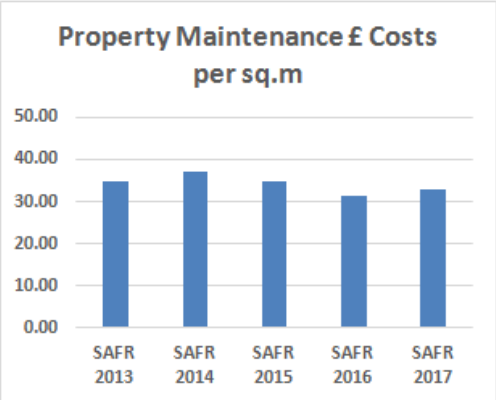
Space Utilisation - Building Area per Consumer Week

This indicator shows the hospital estate floor area relative to inpatient service activity. The SAFR 2017 data is based on reported cost information for 2015/16 which is similar to that reported in the previous year.



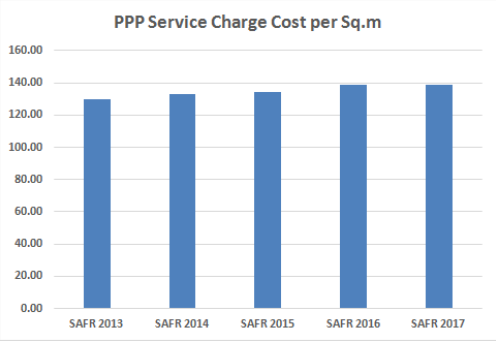
Cleaning Costs

Higher cleaning standards as a response to increased HAI standards of cleanliness, increased activity and usage of space, and normal inflationary / salary cost pressures have all impacted on this KPI. However, this seems to be offset by efficiency performance improvements which have resulted in below inflation increases.



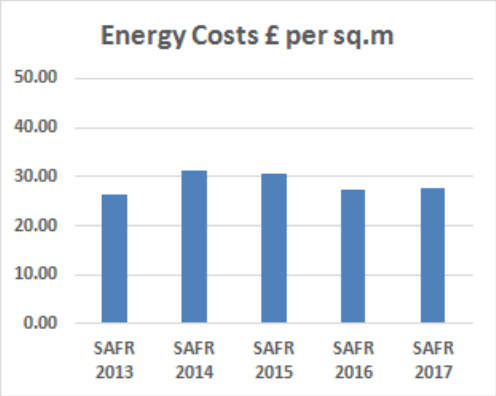
Property maintenance costs

Property maintenance costs have increased slightly this year which is mainly as a result of varying revenue spend on backlog maintenance included in the expenditure figures for property maintenance.



PPP – Service Charge Costs

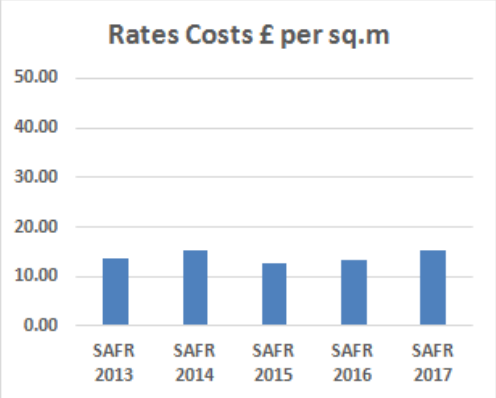
This KPI shows only the service charge element of PPP/PFI operating costs taken from NHS Boards' audited accounts (i.e. not from Cost Book information). It doesn't include interest or recharge payment elements of a unitary charge. The 2017 KPI hasn't changed from that reported last year despite inflationary cost pressures.



Energy Costs

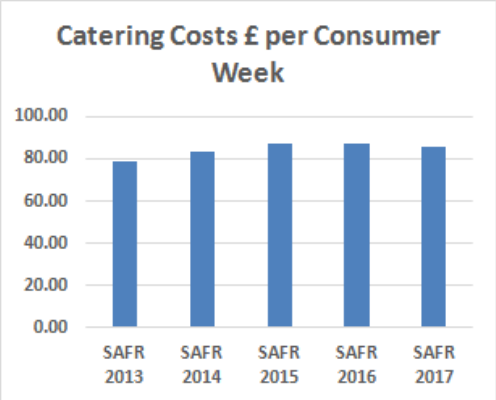
This KPI has remained fairly static when compared with the previous year despite an increase in consumption due to colder temperatures during the reporting year.

Furthermore, as energy cost changes are outside the direct control of NHSScotland then energy efficiency improvements are the main measure for reducing consumption and thus overall costs. Further information on energy performance is provided in Annex E.



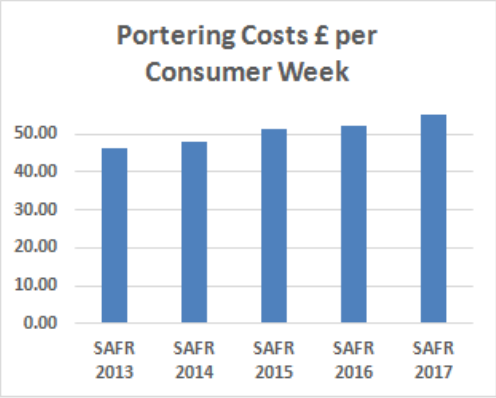
Rates Costs

Rates are generally index linked to inflation and subject to rates review changes, which are the main reason behind the small increase in this indicator.



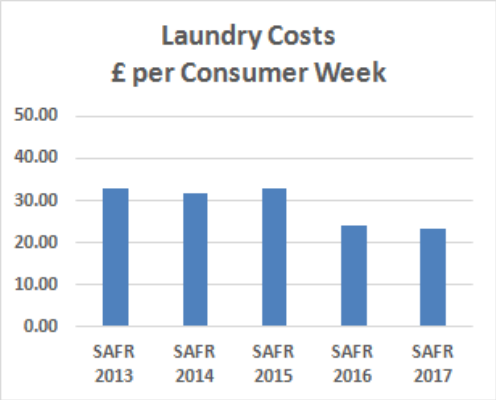
Catering Cost £/consumer week

This KPI has reduced for the first time over the five year reporting period despite increasing cost pressures such as increased patient choice, improved food quality, and inflationary cost increases.



Portering Costs

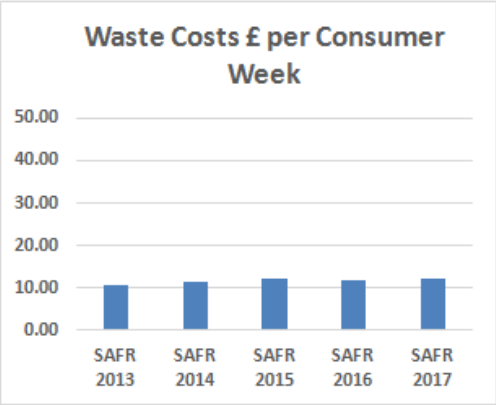
Boards explain that their Portering service is being used to carry out additional tasks in order to reduce pressures on front-line staff and the need for additional security staff in some instances. This is a key reason why the cost per consumer week has steadily risen since SAFR 2013.



Laundry Costs

The reduction in this indicator in SAFR 2016 was due to the removal of linen costs, and this year shows a further small reduction despite typical cost pressure increases.

Efficiency measures such as the move from conventional linen to fitted bedding have helped to control any cost increases.



Waste Costs

The cost associated with increased regulation on clinical waste and stricter controls over the segregation and disposal of waste have both put pressure on overall waste costs since 2012; however, this KPI still reports only small annual increases.

The scale of the above cost charts has, when convenient to do so, been kept at 0 - 50 to enable comparison of the scale of costs between charts.

It should be noted that a number of the above Cost Book derived KPIs use “consumer weeks” as the denominator in the KPI. This is primarily a measure of inpatient activity however it also takes some account for day patient activity. 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.

2.4.2 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. The tables that follow compare each Board’s performance on each of the 20 KPIs in the Framework. They are arranged to group NHS Boards into their regional areas. 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 in different ways 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	Properties categorised as either A or B for Physical Condition	Properties categorised as either A or B for Quality	Positive response on patient rating of 'hospital environment'	Percentage of properties less than 50 years old	PAMS Quality Checklist Score (%) - **2017** scores	Overall compliance score from SCART	Cost per square metre for backlog maintenance	Percentage of significant and high risk backlog maintenance	Properties categorised as either A or B for Functional Suitability	Properties categorised as 'Fully Utilised' for space utilisation
NHS Greater Glasgow & Clyde	70%	56%	87	80%	76%	75%	218	49%	59%	94%
NHS Lothian	55%	69%	89	69%	84%	75%	87	70%	70%	71%
NHS Tayside	95%	95%	93	79%	59%	24%	224	74%	85%	86%
NHS Grampian	66%	75%	92	59%	65%	59%	356	25%	72%	91%
NHS Fife	84%	76%	91	68%	59%	88%	224	63%	83%	88%
NHS Ayrshire & Arran	55%	84%	89	75%	76%	27%	275	21%	86%	65%
NHS Lanarkshire	97%	76%	85	92%	64%	92%	127	25%	74%	95%
NHS Highland	37%	46%	94	97%	60%	28%	234	30%	31%	43%
NHS Forth Valley	82%	80%	91	82%	73%	13%	93	15%	84%	96%
NHS Dumfries & Galloway	79%	53%	91	70%	66%	70%	591	54%	58%	48%
NHS Borders	98%	79%	83	95%	61%	77%	105	29%	73%	98%
NWTCB - Hospital	94%	93%	100	100%	77%	90%	10	0%	80%	96%
Western Isles	93%	99%	98	91%	65%	95%	17	12%	98%	98%
The State Hospital	100%	100%	-	98%	79%	69%	214	100%	100%	87%
NHS Shetland	73%	71%	98	48%	74%	65%	87	31%	75%	97%
NHS Orkney	25%	76%	92	58%	67%	57%	703	23%	50%	52%
NHS Board Average 2017:	**72%**	**70%**	**92**	**77%**	**69%**	**63%**	**211**	**45%**	**69%**	**83%**

Backlog in this table includes the cost impact of inflation.

The NHS Board Average 2017 excludes NHS National Boards.

Some SCART scores may be a combination of SCART I & SCART II scores.

The PAMS Quality Checklist review is carried out every two years when Boards submit their full PAMS, which is this year in 2017.

NHS Board	Building Area sq.m per Consumer Week	Cleaning Costs £ per sq.m.	Property maintenance costs £ per sq.m	PPP Serivce Charge Costs £ per sq.m	Energy Costs £ per sq.m	Rates Costs £ per sq.m	Catering Cost £ per consumer week	Portering Costs £ per consumer week	Laundry Cost £ per consumer week	Waste Cost £ per consumer week
NHS Greater Glasgow	3.8	35.2	25.8	62.0	28.9	15.7	74.9	66.2	11.1	10.9
NHS Lothian	3.8	44.9	29.7	173.0	27.0	13.2	98.0	55.9	26.3	9.6
NHS Tayside	4.4	34.2	29.0	66.0	25.1	14.6	85.1	66.5	18.9	7.7
NHS Grampian	3.6	72.1	44.8	0.0	33.8	15.7	76.3	60.3	22.5	15.0
NHS Fife	4.4	37.5	21.8	74.0	17.8	12.3	82.0	50.8	29.4	10.0
NHS Ayrshire & Arran	2.8	44.8	35.1	126.0	26.0	12.2	84.0	62.7	37.3	11.1
NHS Lanarkshire	2.2	49.8	64.2	267.0	24.8	17.4	96.0	32.7	37.2	15.5
NHS Highland	4.7	38.4	25.6	230.0	24.5	13.8	84.9	46.5	17.4	12.2
NHS Forth Valley	3.0	46.0	40.2	195.0	28.6	22.6	97.6	35.3	27.6	18.2
NHS Dumfries & Galloway	2.9	64.6	46.7	54.0	30.6	14.5	106.0	28.0	34.1	21.2
NHS Borders	2.8	53.7	43.8	0.0	28.2	19.0	71.0	28.6	23.2	5.3
Golden Jubilee	7.5	29.5	31.3	0.0	41.3	18.8	73.5	75.6	53.2	43.3
State Hospital	3.7	55.9	37.4	0.0	30.9	24.2	112.9	19.3	7.4	3.9
NHS Western Isles	3.2	43.8	45.0	0.0	37.2	28.0	114.0	37.3	37.7	17.1
NHS Shetland	4.9	54.8	58.6	0.0	43.2	17.7	210.8	125.1	40.9	17.3
NHS Orkney	3.3	69.9	72.0	0.0	43.4	24.6	120.1	53.8	-0.1	22.5
NHS Scotland 2015/16 Cost Book Average	3.63	42.91	32.79	122.31	27.54	15.26	85.82	55.08	23.12	12.08

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

Cost information is sourced from the latest Cost Book data for 2015/16.

PPP Service Charge Costs are derived from Boards' annual accounts and their proportion of PPP accommodation.

2.4.3 Current status of Backlog Maintenance

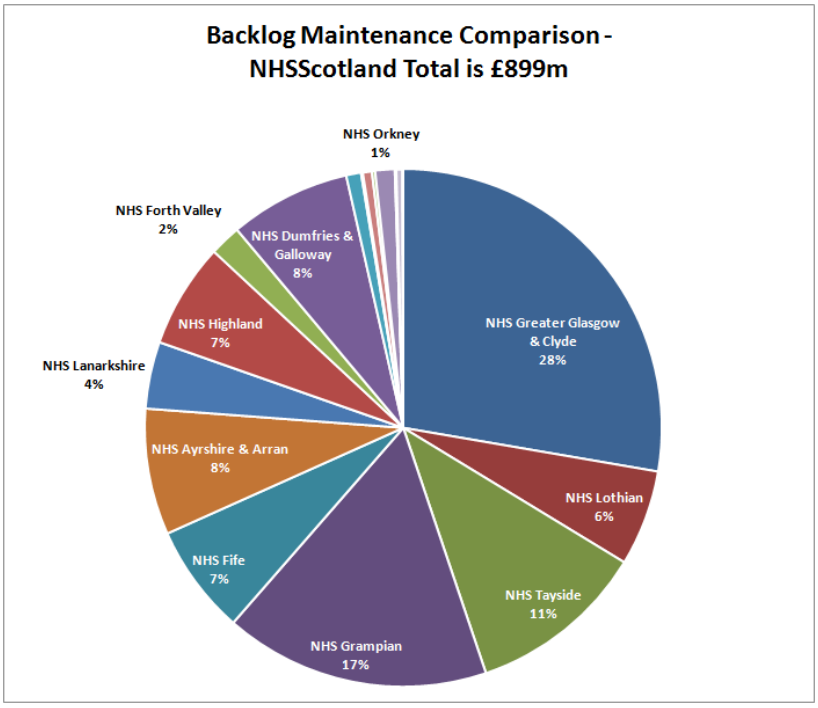
The current backlog maintenance expenditure requirement is the base cost required to bring those parts of the existing estate which are currently not in satisfactory condition, back to Condition B (satisfactory). It is, however, only a singular reference to understanding the current state of the estate and should not be considered in isolation to other important indicators such as the physical condition, age, and functional suitability of available accommodation; as described earlier in the National Asset and Facilities Performance Framework.

The 2017 backlog maintenance expenditure requirement is reported as £899m, which is an increase of circa £12m since 2016. However, when the impact of inflation on costs is excluded from this indicator there is a reduction in backlog maintenance of circa £40m. Several Boards have contributed to this reduction, including the following:

- NHS Greater Glasgow & Clyde: (£28m).
- NHS Lothian: (£8m).
- NHS Tayside (£7m)
- NHS Highland: (£8m).

The main increase in backlog this year is from NHS Fife who have identified the need to invest in the external wall facade to the tower block at Victoria Hospital, Kirkcaldy.

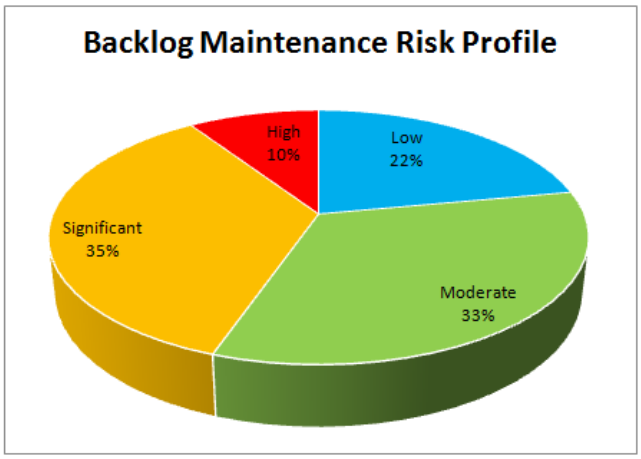
The following chart provides a breakdown of the current total £899m of backlog maintenance across each NHS Board:



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

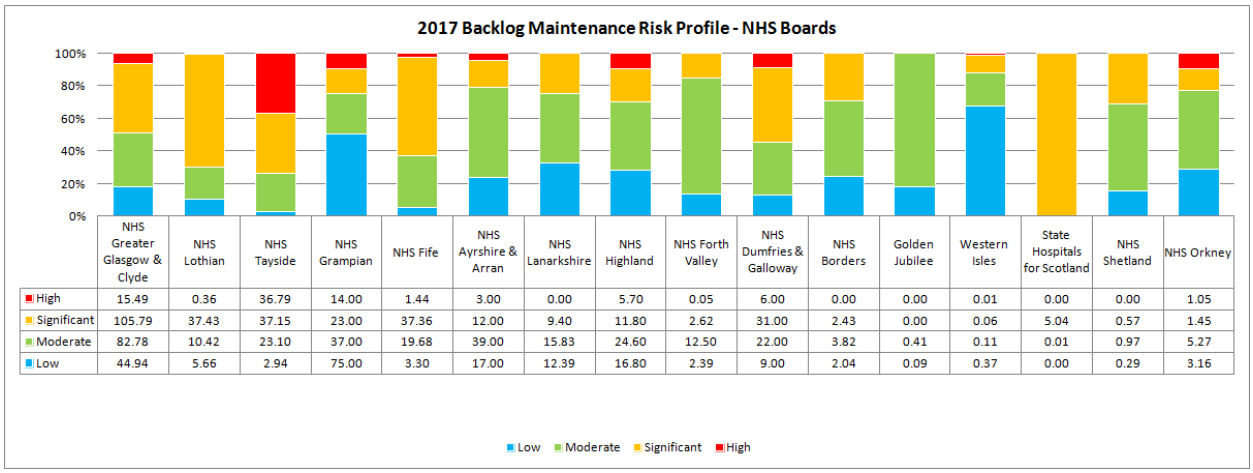
Improved asset management practice introduced since 2010 requires that all identified backlog maintenance is risk assessed so that appropriate mitigation actions can be implemented and maintenance activity can be logically planned and prioritised. This provides the necessary governance arrangements to enable the expected life of property elements to be extended and backlog to be managed in a safe and financially sustainable manner.

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

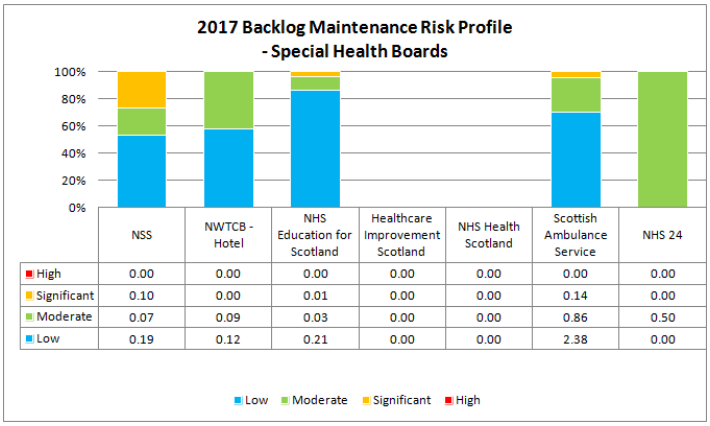


The proportion of Significant and High risk backlog maintenance has reduced from 47% reported in 2016 to 45% reported this year, which is particularly attributable to NHS Greater Glasgow & Clyde, NHS Highland, and NHS Forth Valley. This is mainly due to these Boards taking direct action to resolve priority areas of backlog maintenance, and also by reviewing their current risk assessments to ensure that they appropriately reflect the level of risk to service and business continuity once adequate mitigation actions have been introduced.

The variation in risk profile across the different NHS Boards is highlighted in the following table:



	NHS Greater Glasgow & Clyde	NHS Lothian	NHS Tayside	NHS Grampian	NHS Fife	NHS Ayrshire & Arran	NHS Lanarkshire	NHS Highland	NHS Forth Valley	NHS Dumfries & Galloway	NHS Borders	Golden Jubilee	Western Isles	State Hospitals for Scotland	NHS Shetland	NHS Orkney
High	15.49	0.36	36.79	14.00	1.44	3.00	0.00	5.70	0.05	6.00	0.00	0.00	0.01	0.00	0.00	1.05
Significant	105.79	37.43	37.15	23.00	37.36	12.00	9.40	11.80	2.62	31.00	2.43	0.00	0.06	5.04	0.57	1.45
Moderate	82.78	10.42	23.10	37.00	19.68	39.00	15.83	24.60	12.50	22.00	3.82	0.41	0.11	0.01	0.97	5.27
Low	44.94	5.66	2.94	75.00	3.30	17.00	12.39	16.80	2.39	9.00	2.04	0.09	0.37	0.00	0.29	3.16



	NSS	NWTCB - Hotel	NHS Education for Scotland	Healthcare Improvement Scotland	NHS Health Scotland	Scottish Ambulance Service	NHS 24
High	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Significant	0.10	0.00	0.01	0.00	0.00	0.14	0.00
Moderate	0.07	0.09	0.03	0.00	0.00	0.86	0.50
Low	0.19	0.12	0.21	0.00	0.00	2.38	0.00

Although backlog is identified as an 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. The scope of planned disposals over the next 5 years is outlined in Section 4.
- Replacing older properties with new facilities and avoiding the need for expenditure on backlog e.g. the estate rationalisation following the completion of the Queen Elizabeth University Hospital in Glasgow and further estate rationalisation once the new hospital replacement projects are completed in Dumfries and Orkney.
- Incorporating backlog works within major redevelopment, modernisation and refurbishment projects.
- Undertaking specific projects to target the high and significant backlog.
- Incorporating backlog work within operational repair and cyclical maintenance.

These strategies have been used to reduce the backlog maintenance expenditure requirement since a total figure of £1,010m was first reported in the 2011 SAFR. The following table provides a summary of the progress that NHS Boards have made in reducing this backlog between 2011 and 2017 (i.e. excluding inflationary cost adjustments and any additional newly reported backlog in that period):

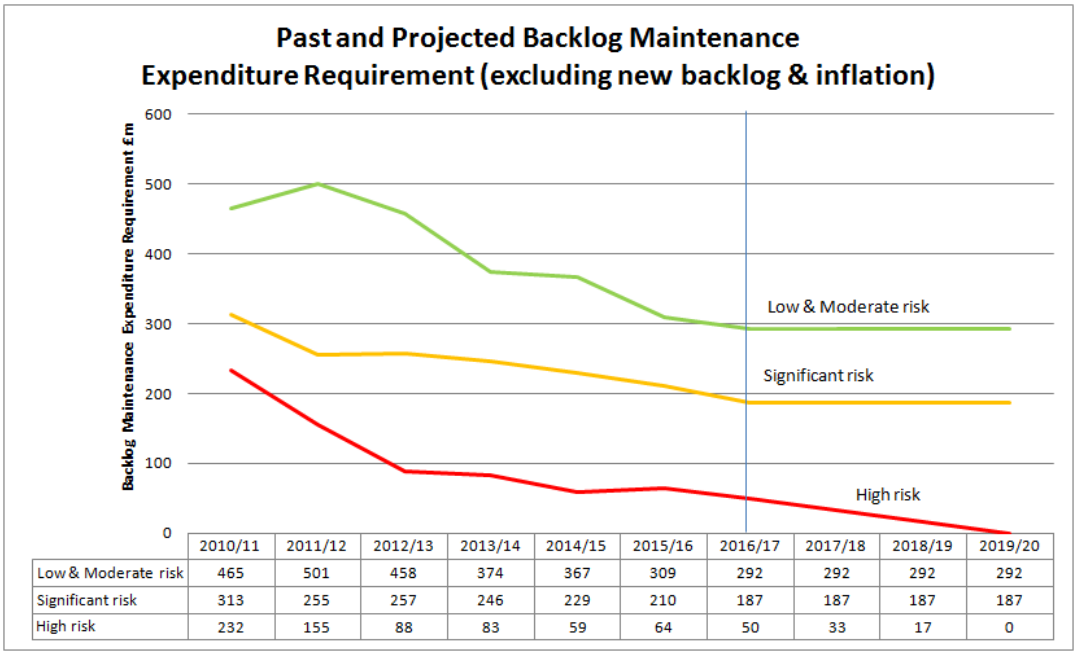
SAFR Reporting Year	Change to backlog costs since originally reported in 2011 SAFR (£m)
2011	1010
2012	911
2013	803
2014	702
2015	655
2016	584
2017	529

The table shows that NHSScotland has been able to successfully reduce the backlog maintenance expenditure requirement identified in 2011 by £481m to a current total of £529m in 2017. However, as identified earlier, the total backlog expenditure requirement reported by Boards in 2016 is £899 million which takes account of the impact of inflation on maintenance costs as well as additional newly identified backlog over the same period. 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 and cost adjustments identified within the year.

It should also 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.

The following chart uses the original backlog figure reported in the 2011 SAFR to track the actual annual change in this backlog (i.e. excluding the impact of newly reported backlog or inflation) up to 2016/17, and then plots the future reductions needed to meet the aspirational target of reducing this total to below £500m by 2020 with no outstanding High risk backlog maintenance:



	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
Low & Moderate risk	465	501	458	374	367	309	292	292	292	292
Significant risk	313	255	257	246	229	210	187	187	187	187
High risk	232	155	88	83	59	64	50	33	17	0

* excluding newly reported backlog & inflation

The chart shows that NHS Boards are close to reaching the aspirational target of reducing the original 2011 backlog total to below £500m by 2020; however, continued focus will be needed if they are to also eliminate all High Risk backlog within this period. Furthermore, the growing level of new backlog which arises as existing properties age will need to be incorporated into any future property improvement plans.

It is recognised that in practice new build and refurbishment / upgrade schemes will inevitably reduce all categories of risk assessed 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 continue to take place in parallel with the reductions in high and significant risk backlog and is a practical consequence of undertaking improvement works in buildings.

Whilst this analysis and projections of future backlog provides a high level indication of how backlog might 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).

2.4.4 Asset Performance for Office Accommodation

The NHSScotland Smarter Offices Programme was established in October 2013 with the aim of encouraging better utilisation of office accommodation across NHS Boards and National Boards.

By drawing on wider research undertaken by UK Government, the Programme has developed a set of performance measures covering workplace standards and benchmarks which this report has adopted as the Office Performance Framework. This includes setting a benchmark of 8sq.m. per Whole Time Equivalent (WTE) (i.e. space per person) for new and refurbished office space and 10sq.m. per WTE for all other office accommodation. It also includes a Desk to WTE of 80% (i.e. desks per person).

The tables over the page show NHS Boards' position in relation to these benchmarks, as well as the annual change in costs associated with this accommodation type.

This Office Performance Framework shows a steady improvement in the effective and efficient use of this office based accommodation; with National Boards getting close to the benchmark standard of 8 sq.m per whole time equivalent (WTE); currently at 8.8 sq.m./WTE.

Occupancy costs have risen slightly this year, with increases in the National Boards' accommodation only at 1.5%, whereas for the regional NHS Boards the increase is higher at 15% - this includes a re-adjusted Soft FM cost reported by NHS Greater Glasgow & Clyde and NHS Lothian.

Each of these indicators suggests that NHS Boards are improving the effective utilisation of this accommodation type; however, there are variations across Boards and within individual offices, hence providing scope for further improvements, which will continue to be monitored to ensure ongoing cost effectiveness.

Regional NHS Boards Total / Average	Space Standard (sq.m NIA)		Desk to WTE/FTE %	Office Accommodation Occupancy Costs 2016/17						
				Rent	Rates	Service Charge	Hard FM	Soft FM	Energy	Total Costs
	WTE/FTE	Desks		£ per m2 NIA	£ per m2 NIA	£ per m2 NIA	£ per m2 NIA	£ per m2 NIA	£ per m2 NIA	£ per m2 NIA
2017	12.3	12.4	98.7%	52	31	3	16	25	24	150.89
2016	12.7	13.0	97.6%	46	28	3	15	17	22	130.88
2015	14.5	13.9	104.1%	46	27	3	18	15	20	128.92

National Health Boards Total / Average	Space Standard (sq.m NIA)		Desk to WTE/FTE %	Office Accommodation Occupancy Costs 2016/17						
				Rent	Rates	Service Charge	Hard FM	Soft FM	Energy	Total Costs
	WTE/FTE	Desks		£ per m2 NIA	£ per m2 NIA	£ per m2 NIA	£ per m2 NIA	£ per m2 NIA	£ per m2 NIA	£ per m2 NIA
2017	8.8	9.5	91.9%	207	80	24	20	31	38	399.28
2016	9.0	9.5	94.9%	209	78	23	19	30	35	393.66
2017	9.3	9.8	85.45	213	77	23	23	26	33	395.40

NHS SCOTLAND TOTAL/AVERAGE										
All NHS Boards	Space per WTE	Space per desk	Desk to WTE	Rent / sq.m	Rates / sq.m	Service Charge / sq.m	Hard FM / sq.m	Soft FM / sq.m	Energy Cost / sq.m	Total Cost / sq.m
2017	11	12	97%	86	42	7	17	26	27	206
2016	12	12	97%	83	39	7	16	20	25	190
2015	13	13	101%	87	39	8	19	18	24	194

Green cells indicate an improvement on the previous year, whereas the rose cell indicates an increase.

2.5 Property and Asset Management Strategies (PAMS)

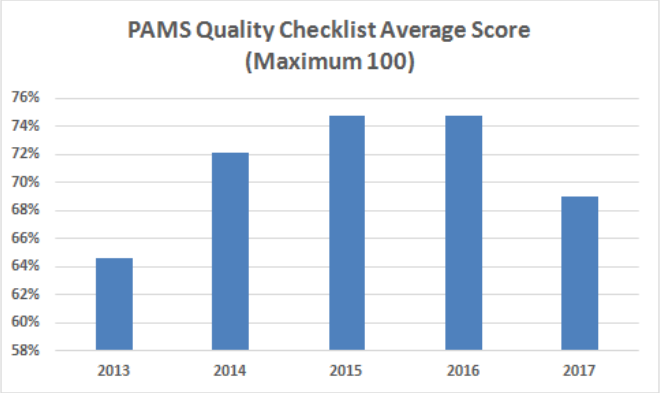
The Scottish Government's "Policy for Property and Asset Management in NHSScotland" requires all NHSScotland bodies to have a Property and Asset Management Strategy which is reviewed and approved annually by its Board. Health Facilities Scotland has provided comprehensive guidance and training to support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

A Property and Asset Management Strategy (PAMS) is the key strategic document for demonstrating how each NHS Board is performing against ongoing policy objectives both now and in the longer term. The Performance Framework also includes an average score for PAMS quality (KPI No 5). This results from a detailed review of each Board's PAMS.

2.5.1 Review of PAMS submitted in 2017

The State of NHSScotland Assets and Facilities Report provides an opportunity to review and compare each Board's PAMS to ensure that their future plans are aligned with NHSScotland's strategic investment priorities, and that proposed changes to their asset base will deliver tangible benefits to the delivery of health and care services whilst also improving the condition and performance of those assets.

The submission and review of Boards' PAMS documents is now undertaken every two years and, with a newly introduced PAMS guidance setting out more specific and challenging expectations, this year provided opportunity for greater scrutiny of the strategic nature of these forward looking plans. It is therefore difficult to directly compare this year's overall PAMS Quality score with the previous score in 2015, which suggests a reduction in score for this year, as shown in the following chart.



Overall, Boards seem confident in explaining the current status and geographic spread of all their assets and how the performance of these assets has improved over time; however, they are less successful in describing how this information is influencing understanding of their future investment needs. This is a similar feature when Boards successfully describe the local planning context behind their service plans but again find it difficult to link this to the likely impact on their assets and their future investment

needs. Investment plans are thus regularly provided which set out each Board's short to medium term plans but are limited in how they are prioritised using Strategic Assessments (a new requirement of the Scottish Capital Investment Manual), or what their longer term strategic plans are beyond the five year investment planning cycle.

The PAMS assessment results for each Board are shown in the table over the page. The colour coded key to this table is indicated below:

Overall Score	0	1 – 9%	10 – 49%	50 – 69%	70 – 79%	80 – 100%

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

Note: NHS Health Scotland and Healthcare Improvement Scotland are not shown in the above table as their position was unchanged in relation to PAMS in 2017.

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 (based on 2015/16 Cost Book data) of asset ownership and facilities management services. Whilst this section provides some comparative information on annual changes, more detailed information on performance trends was described earlier in Section 2.4.

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 for the last three years, and which are within the scope of the SAFR, are shown in the table that follows (excludes National Boards and the non-hospital estate).

	Annual Property Asset and Facilities Services Expenditure (£)			
	2013/14	2014/15	2015/16	Percentage Change 14/15 - 15/16
Property Maintenance (capital and revenue costs)	119.1	115.4	116.6	1%
Cleaning	122.1	126.5	131.7	4%
PPP Facilities Management Costs	115.9	118.6	121.9	3%
Catering	85.6	87.2	84.1	-4%
Energy	105.3	100.6	98.0	-3%
Rent	19.9	21.0	8.2	-61%
Rates	43.8	48.8	54.3	11%
Portering	50.3	52.3	53.9	3%
Laundry only	32.2	24.4	22.6	-7%
Waste Disposal	11.8	11.8	11.8	0%
Total	**706.1**	**706.6**	**703.2**	**0%**
Annual Increase	**-0.4%**	**0.1%**	**-0.5%**	

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 E.

Laundry costs are affected by changes to reporting requirements which no longer includes linen costs.

The largest cost contributors are property maintenance, cleaning, PPP FM costs, catering and energy, which account for 78% of these costs. Rent is a combination of charges to the NHS and also income generated, and the reduction in this cost reflects Boards reporting an increase in rental income this year.

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, and the number of hospitals, is shown in the table that follows.

	2014/15	2015/2016	Percentage Change
Number of hospitals	216	202	-6.5%
Building Area used for measuring cleaning costs (million sq.m)	2.89	3.07	6.1%
Consumer weeks (millions) (in-patient activity)	1.00	0.98	-2.5%
Annual Property Asset and Facilities Services Costs (£millions)	706.6	703.2	-0.48%

The reduction in number of recorded hospital sites is due to a combination of consolidation of services onto single sites, disposal of redundant properties following completion of new facilities in previous years (e.g. site rationalisation following completion of the Queen Elizabeth University Hospital in Glasgow), and some minor re-classification of certain properties. However, the overall used floor area has increased in the same period which is a further indicator of the rationalisation of smaller, redundant properties as services move to larger, modernised estate.

The table also shows that the relatively unchanged overall cost is at a time when reported cleaning floor area has increased and inpatient activity (consumer week) decreasing slightly.

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	**£m**	**% of Total**	**No. of Vehicles**	**Average per Vehicle**
Insurance & accident costs (net cost)	£5.9m	12.8%	9,579	£613
Fuel costs	£10.8m	23.7%	9,579	£1,132
Maintenance & servicing costs - owned vehicles	£5.4m	11.7%	1,882	£2,853
Leased vehicle costs (including maintenance)	£5.9m	13.0%	2,303	£2,577
Hired vehicle costs	£1.3m	2.8%	240	£5,374
Staff car scheme lease costs (including maintenance & mileage claims)	£16.5m	36.0%	5,154	£3,198
Staff contribution towards private use	-£9.3m	-	5,154	-£1,796
Total Net Costs 2017	**£36.54m**	100%	9,579	**£3,815**
Total Net Cost 2016	£42.26			£4,321

Note: excludes 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 £23.5m through expenses claims.

The total expenditure on vehicle assets has reduced this year by over 13%, which is mainly due to reduced maintenance costs on owned vehicles for National Services Scotland and the Scottish Ambulance Service, plus a reduction in lease costs associated with the staff car scheme.

The Transport & Fleet Management Unit will continue to look at ways in which improvements can be made to the efficiency and effectiveness of this fleet aimed at reducing these operational costs further.

3.3 Medical Equipment – Annual Costs

The use of medical equipment 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 latter 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. A number of Boards have also indicated that they are developing strategies to improve the management of medical equipment and in some cases this includes increase of "in house" maintenance provision from Board's own medical physics and clinical engineering staff. The annual maintenance expenditures reported by Boards is shown in the table that follows.

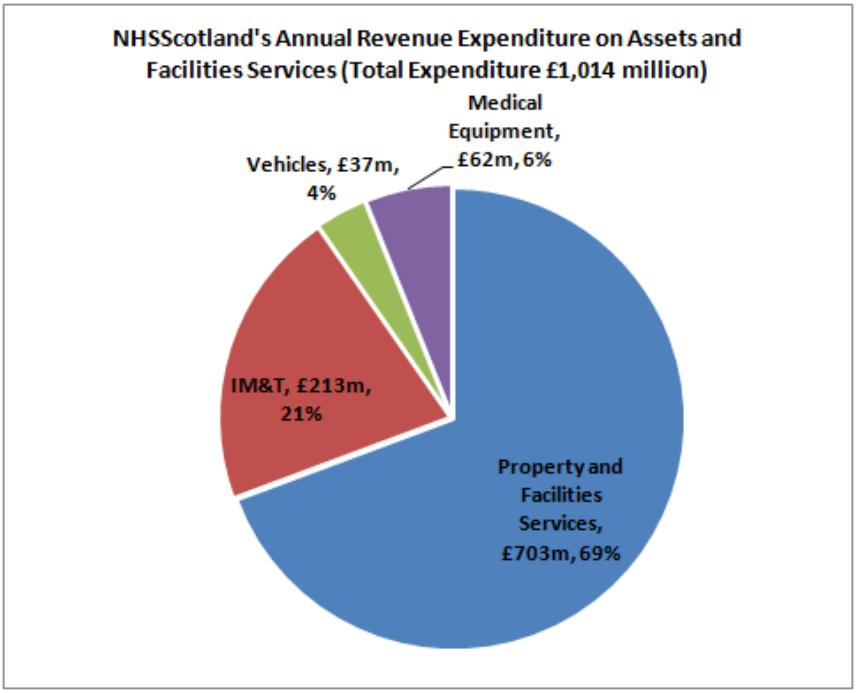
Description	2016 Expenditure (£m)	2017 Expenditure (£m)	% change
Externally sourced maintenance expenditure:	24.58	21.18	-14%
Imaging maintenance	13.44	12.26	-9%
Radiotherapy maintenance	1.15	1.08	-6%
In-house management / maintenance of medical equipment	17.70	16.04	-9%
Annual payments & lease costs for managed equipment services (excluding Laboratory managed services)	3.79	3.12	-17%
All other revenue based expenditure on medical equipment	7.97	7.82	-2%
TOTAL ANNUAL EXPENDITURE ON MEDICAL EQUIPMENT:	**68.63**	**61.52**	**-15%**

Costs exclude VAT

The cost of ownership associated with the medical equipment assets has reduced by 10% this year. The reduction in managed equipment services is likely to be due to expiry of lease contracts and then Boards re-considering the value of this type of arrangement due to recent changes in accounting standards.

3.4 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 £1,014 million is a small decrease on the expenditure reported in the 2016 SAFR.



Notes:

1) Excludes 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.

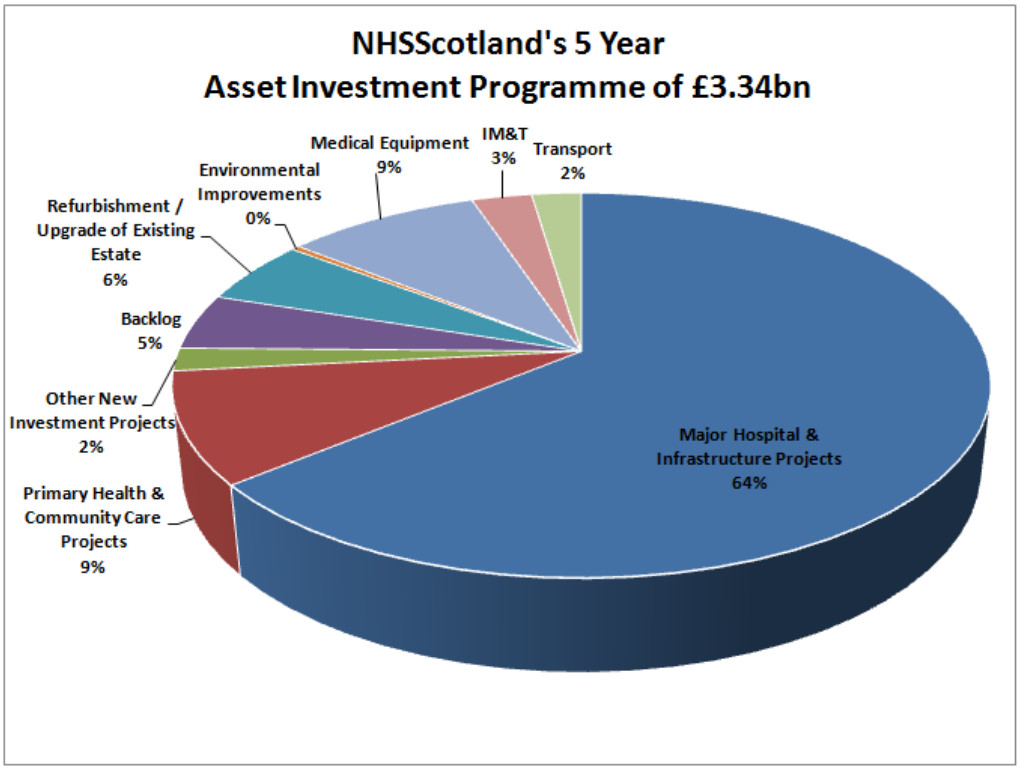
It should be noted that the above annual expenditure on assets excludes capital expenditure on:

- 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

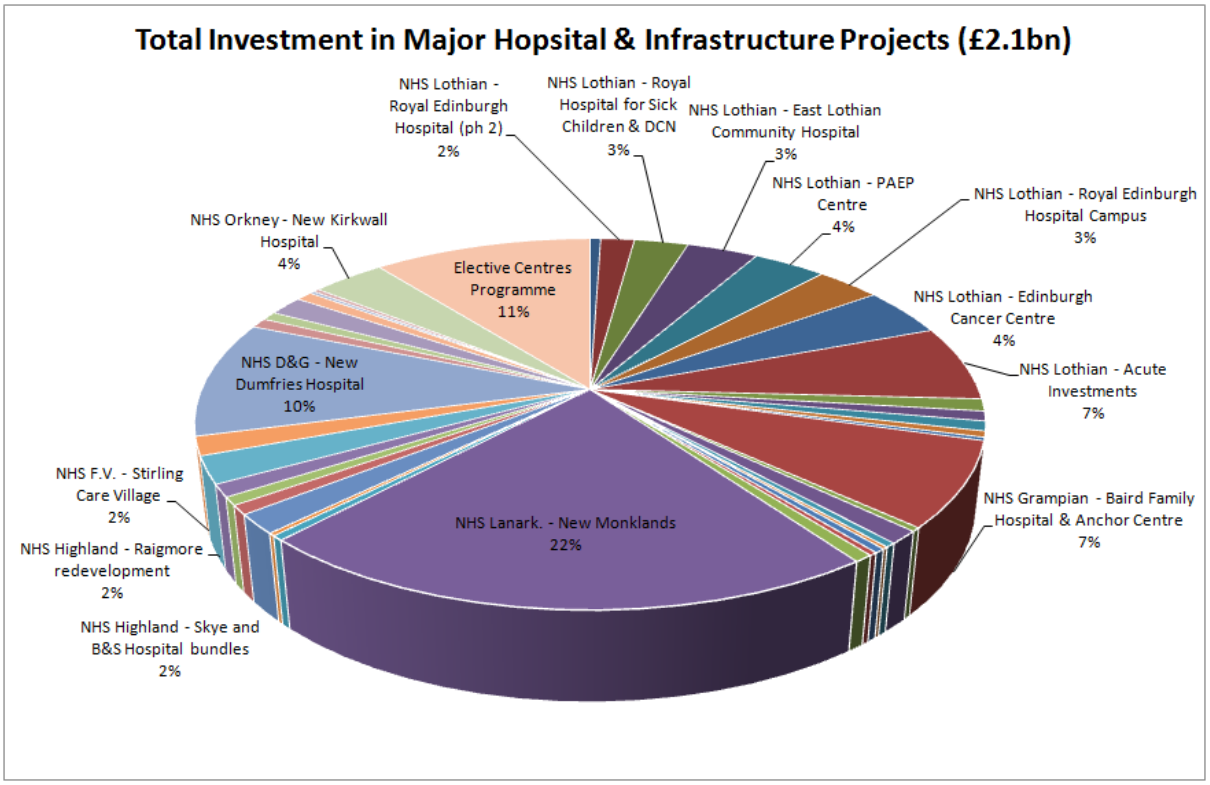
NHS Boards are planning investments in their assets over the next 5+ years of circa £3.34bn (based on NHS Boards' 5+ year investment plans presented in their PAMS). While major parts of this programme of investments are subject to funding availability and approval, it does represent a significant opportunity to further improve the condition and performance of these assets and enable the disposal of older properties which are expected to generate receipts of over £160m over the same period (subject to economic and market conditions). It will also further enhance the important supporting role that assets play in the delivery of quality healthcare delivery and NHSScotland's 2020 Vision.

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 Hospital & Infrastructure Projects

Investment in 'Major Hospital & Infrastructure Projects' accounts for 64% 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 £2.1bn of investment associated with these major hospital and infrastructure projects.



Note: while all major projects have been included in the above chart only those which are over 1% of the total investment have been listed, for clarity of presentation reasons only. Also, as the business case process for planning the new Monklands project is at an early stage, an element of these projected costs may fall out of the current 5 year investment programme.

4.2 Investment in Primary and Community Care

In addition to the £2.1bn of investment on the major hospital & infrastructure projects / programmes described above (which includes some primary and community care hospital projects), a further £300 million is being planned for new primary & community care projects; including at least 25 primary care projects planned for the next 5 years across Glasgow, Lothians, Tayside, Fife, Grampian, Highland, Forth Valley, and the Borders. This investment is key in 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 which they report an income value of circa £160m 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	45
NHS Lothian	53
NHS Tayside	11
NHS Grampian	17
NHS Fife	6
NHS Ayrshire & Arran	2
NHS Lanarkshire	6
NHS Highland	3
NHS Forth Valley	9
NHS Dumfries & Galloway	1
NHS National Services Scotland	5
Others	2
TOTAL:	**160**

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 and includes the Scottish Ambulance Service's vehicle replacement programme, is an average of circa £15m per annum. Earlier analysis of age profile suggests that there isn't currently a backlog of investment need for these assets but funding levels will need to be maintained to continue to support this position.

4.5 Investment required on medical equipment assets

In relation to its overall £1bn replacement value, during 2016/17 a total of over £53m was invested in medical equipment. This would theoretically result in complete replacement of all existing equipment within 20 years. However, as a general planning rule most equipment should be replaced within a 10 - 15 year cycle; hence, the current investment level seems to be set below the minimum level with limited scope for investment in additional equipment. This appears to be a continuing trend of constrained investment in medical equipment replacement which is having to be carefully managed by extending the life of equipment whilst reducing any failure risks.

Note that annual investment in medical equipment can rise and fall as equipment replacement is grouped together to improve purchasing efficiencies, but also rapid technological developments in some equipment, including high cost radiotherapy, imaging and endoscopy equipment, which together account for approximately 30% of the total value of medical equipment, reduces the effective lifespan of this equipment to 7 to 10 years. The speed of change in technology over the last 10 years has added further pressure to upgrade equipment more regularly and to meet the additional cost of this technologically enabled equipment. There are also specific peaks in investment requirements often associated with earlier equipping programmes for new hospitals.

Accordingly, future investment in medical investment would need to double if it was to achieve an ideal position of a full replacement cycle of 10 years.

Further information is available in Annex C on medical equipment assets.

4.6 Investment required on IM&T assets

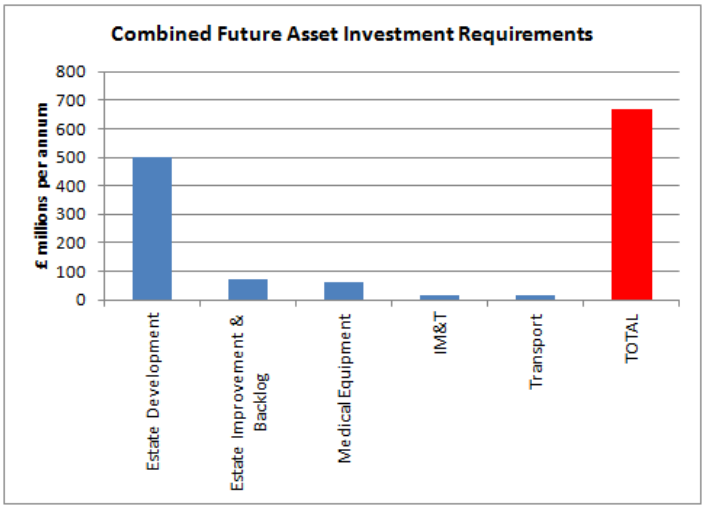
NHS Boards are reporting planned expenditure on IM&T projects of circa £100 million over the next 5 years, which is similar to that reported in last year's SAFR. Further IM&T investment is also incorporated into some of the major investment projects associated with the refurbishment and replacement of property assets.

This expenditure is part of the overall eHealth Finance Strategy and, in addition, the Scottish Government's eHealth Division retained funds may also be used to contribute to refresh activities in relation to infrastructure.

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 £670 million per annum are 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 Shared Services and Soft FM reviews, and any environmental improvement investment projects.

Annex A
Review of NHSScotland's Property Assets

This Annex provides a detailed analysis of property, vehicles, medical equipment and IM&T asset performance which supports the summarised information provided in the main body of the report.

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

National NHS Boards

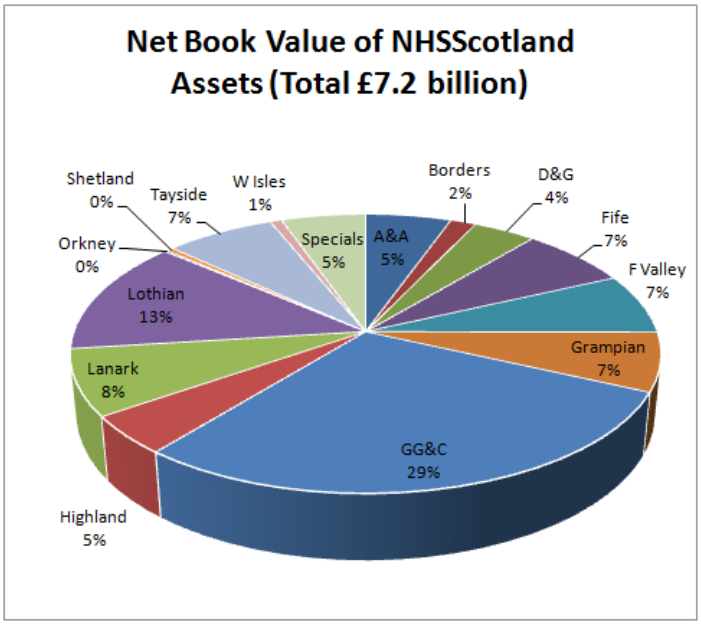
NHS Education for Scotland	NHS Health Scotland
NHS National Services Scotland	NHS National Waiting Times Centre
Healthcare Improvement Scotland	NHS 24
Scottish Ambulance Service	The State Hospitals Board for Scotland

The information presented in this annex combines information from all 22 NHS Boards and National NHS Boards, however, some charts and tables split the analysis between the 16 Boards with in-patient accommodation (labelled NHS Boards), i.e. all 14 NHS Boards plus the NHS Golden Jubilee Hospital and the State Hospitals Board for Scotland, and the 6 remaining National NHS Boards.

It should be noted that all information presented in this section is broadly based on April 2017 information, unless otherwise stated.

Asset Value

NHSScotland owns physical assets that are worth circa £7.2bn, the majority of which relates to the estate (land and buildings), but also includes owned vehicles, medical equipment and information management and technology (IM&T) assets.



Taken from Boards' accounts information

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 £1.4bn, 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.

Note: the higher Net Book Value reported this year is taken directly from all NHS Boards' financial accounts, rather than previously being reported from submitted information.

Estate Size

The NHSScotland estate comprises circa 4.4m. sq.m of building floor area encompassing buildings ranging in size from 40 sq.m to 200,000 sq.m. The majority of this is the hospital estate of the 14 NHS Boards and 2 National NHS Boards (NHS Golden Jubilee Hospital and the State Hospitals Board). The 2016 ISD Cost Book records this hospital estate as 200 hospitals with a total building area of 3.56m sq.m.

The other property types that account for the further 0.82m sq. m. includes health centres & clinics, day centres, offices, residential accommodation, and industrial / storage units.

The table that follows shows an analysis of the hospital estate by type of hospital in terms number of sites and building area.

	Acute	Long Stay	Mental Health	Psychiatric & LD	Community	Other	Total
Number of Hospitals	37	39	27	12	65	22	202
Hospital Area (million sq.m)	2.29	0.25	0.42	0.06	0.23	0.31	3.56
Percentage of total area (rounded)	64%	7%	12%	2%	6%	9%	100%

The above table shows that whilst community hospitals are the most numerous (65) 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 37 acute hospitals account for 64% of the total hospital estate in terms of building area.

The total number of hospitals included in this analysis has reduced by 14 since last year, mainly due to a combination of consolidation of services onto single sites, disposal of redundant properties following completion of new facilities in previous years (e.g. site rationalisation following completion of the Queen Elizabeth University Hospital in Glasgow), and some minor reporting re-classification of certain properties. However, the overall used floor area has increased in the same period which is a further indicator of the rationalisation of smaller, redundant properties as services move to larger, modernised estate.

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.

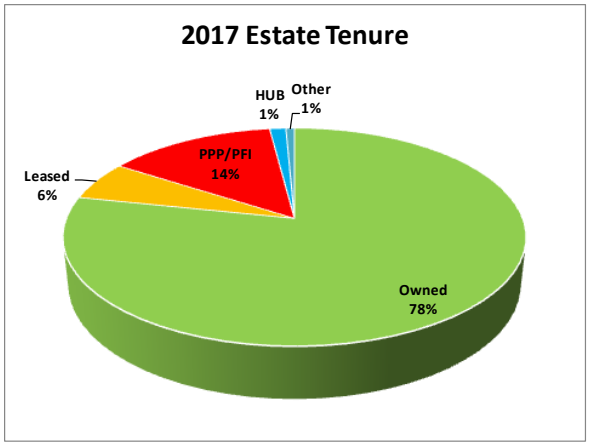
The current distribution of the hospital estate (by numbers of hospitals and by area sq.m) across the Boards is shown in the tables that follow.

	Distribution of hospitals across the NHS Boards						
Board	**Acute**	**Long Stay**	**Mental Health**	**Psychiatric & LD**	**Community**	**Other**	**Total**
NHS Greater Glasgow	7	4	6	1	0	4	22
NHS Lanarkshire	3	5	2	1	4	0	15
NHS Tayside	3	2	4	2	8	5	24
NHS Dumfries & Galloway	2	3	1	2	6	2	16
NHS Ayrshire & Arran	3	3	1	1	3	0	11
NHS Grampian	4	1	3	1	17	2	28
NHS Lothian	4	11	2	1	2	2	22
NHS Fife	2	1	3	1	4	0	11
NHS Highland	4	4	1	0	14	3	26
NHS Borders	1	4	2	1	3	2	13
State Hospital	0	0	1	0	0	0	1
NHS Western Isles	1	0	0	0	1	1	3
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
NHS Forth Valley	1	1	1	1	3	0	7
							202

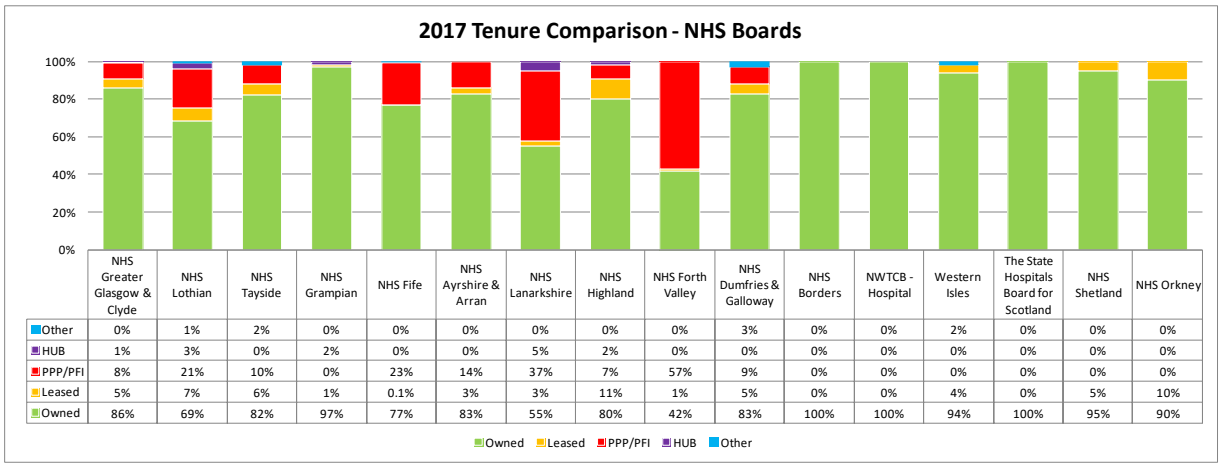
Distribution of hospital estate by area (sq.m)		
Board	**Total area sq.m**	**Percentage of NHSScotland Total Area**
NHS Greater Glasgow	1.02	29%
NHS Lothian	0.56	16%
NHS Tayside	0.38	11%
NHS Grampian	0.32	9%
NHS Fife	0.25	7%
NHS Highland	0.22	6%
NHS Lanarkshire	0.21	6%
NHS Ayrshire & Arran	0.20	6%
NHS Forth Valley	0.15	4%
NHS Dumfries & Galloway	0.07	2%
NHS Borders	0.06	2%
Golden Jubilee	0.06	2%
State Hospital	0.02	1%
NHS Western Isles	0.02	1%
NHS Shetland	0.01	0.3%
NHS Orkney	0.01	0.2%
	3.56	**100%**

Estate Tenure

The majority of the NHSScotland estate is owned (78%) but for some NHS Boards PPP/PFI (including NPD and Hub) and leased property is a significant proportion of their estate, as shown in the charts that follow.

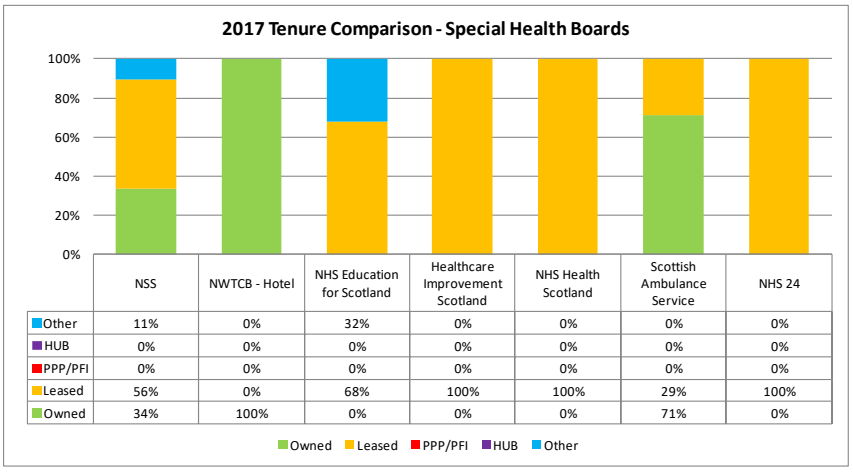


Tenure profile above includes all 22 NHS Boards and National NHS Boards, where information is available



	NHS Greater Glasgow & Clyde	NHS Lothian	NHS Tayside	NHS Grampian	NHS Fife	NHS Ayrshire & Arran	NHS Lanarkshire	NHS Highland	NHS Forth Valley	NHS Dumfries & Galloway	NHS Borders	NWTCB - Hospital	Western Isles	The State Hospitals Board for Scotland	NHS Shetland	NHS Orkney
Other	0%	1%	2%	0%	0%	0%	0%	0%	0%	3%	0%	0%	2%	0%	0%	0%
HUB	1%	3%	0%	2%	0%	0%	5%	2%	0%	0%	0%	0%	0%	0%	0%	0%
PPP/PFI	8%	21%	10%	0%	23%	14%	37%	7%	57%	9%	0%	0%	0%	0%	0%	0%
Leased	5%	7%	6%	1%	0.1%	3%	3%	11%	1%	5%	0%	0%	4%	0%	5%	10%
Owned	86%	69%	82%	97%	77%	83%	55%	80%	42%	83%	100%	100%	94%	100%	95%	90%

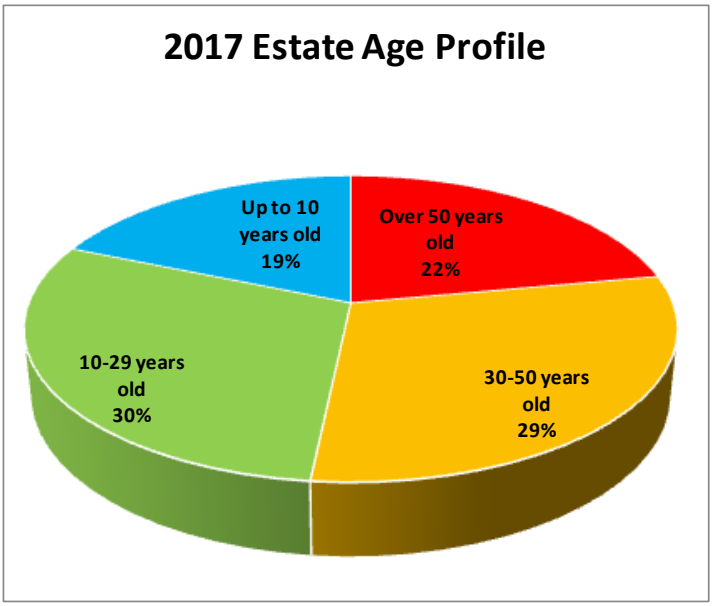
The majority of office accommodation occupied by National NHS Boards is leased.



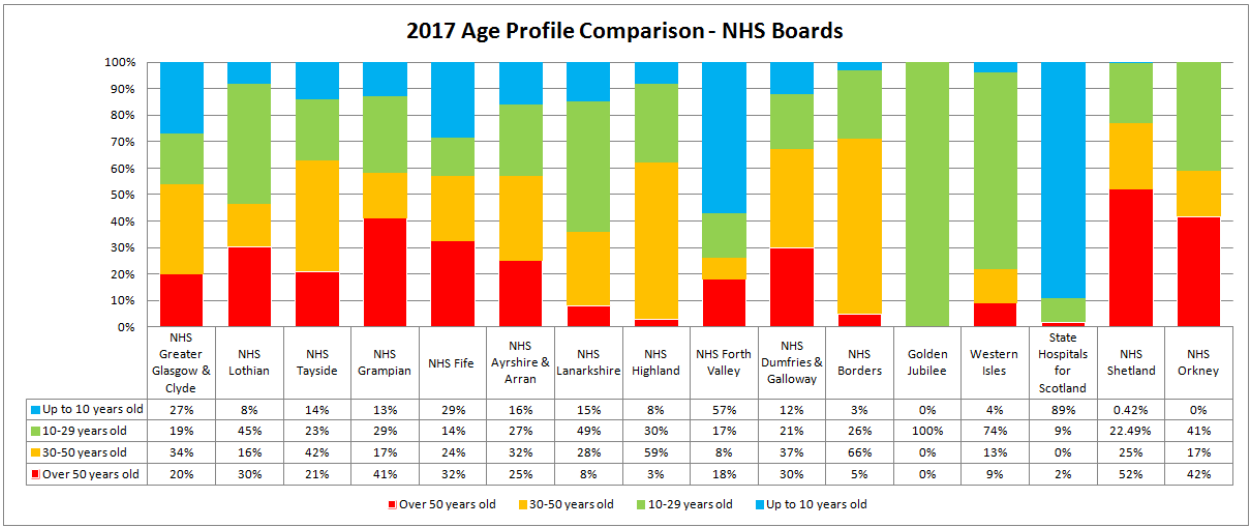
	NSS	NWTCB - Hotel	NHS Education for Scotland	Healthcare Improvement Scotland	NHS Health Scotland	Scottish Ambulance Service	NHS 24
Other	11%	0%	32%	0%	0%	0%	0%
HUB	0%	0%	0%	0%	0%	0%	0%
PPP/PFI	0%	0%	0%	0%	0%	0%	0%
Leased	56%	0%	68%	100%	100%	29%	100%
Owned	34%	100%	0%	0%	0%	71%	0%

Estate Age

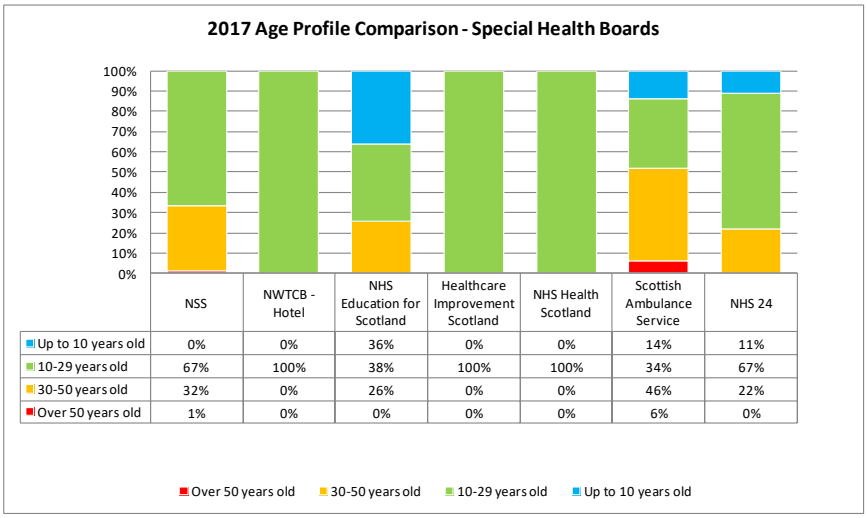
NHSScotland occupies approximately 820,000 sq.m (19% of the total) of relatively new / modern accommodation (i.e. less than 10 years old), which is an increase of 153,000 sq.m since 2011, and is evidence of the significant capital investment in property assets over recent years. There does, however, remain 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 22% of the estate remains over 50 years old (note that some older properties are refurbished to modern standards rather than replaced).



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



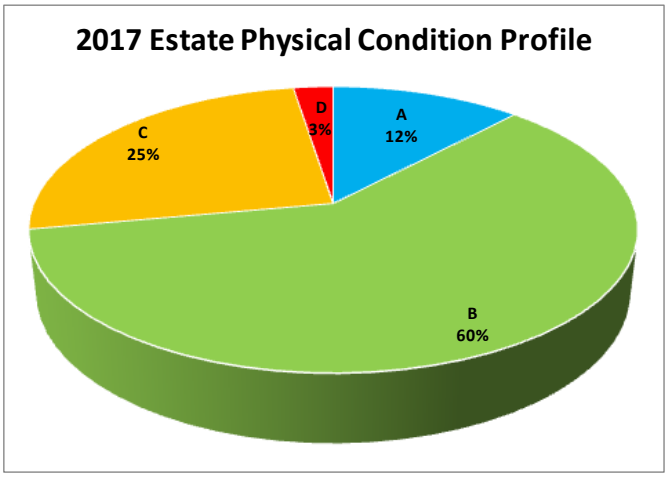
	NHS Greater Glasgow & Clyde	NHS Lothian	NHS Tayside	NHS Grampian	NHS Fife	NHS Ayrshire & Arran	NHS Lanarkshire	NHS Highland	NHS Forth Valley	NHS Dumfries & Galloway	NHS Borders	Golden Jubilee	Western Isles	State Hospitals for Scotland	NHS Shetland	NHS Orkney
Up to 10 years old	27%	8%	14%	13%	29%	16%	15%	8%	57%	12%	3%	0%	4%	89%	0.42%	0%
10-29 years old	19%	45%	23%	29%	14%	27%	49%	30%	17%	21%	26%	100%	74%	9%	22.49%	41%
30-50 years old	34%	16%	42%	17%	24%	32%	28%	59%	8%	37%	66%	0%	13%	0%	25%	17%
Over 50 years old	20%	30%	21%	41%	32%	25%	8%	3%	18%	30%	5%	0%	9%	2%	52%	42%



	NSS	NWTCB - Hotel	NHS Education for Scotland	Healthcare Improvement Scotland	NHS Health Scotland	Scottish Ambulance Service	NHS 24
Up to 10 years old	0%	0%	36%	0%	0%	14%	11%
10-29 years old	67%	100%	38%	100%	100%	34%	67%
30-50 years old	32%	0%	26%	0%	0%	46%	22%
Over 50 years old	1%	0%	0%	0%	0%	6%	0%

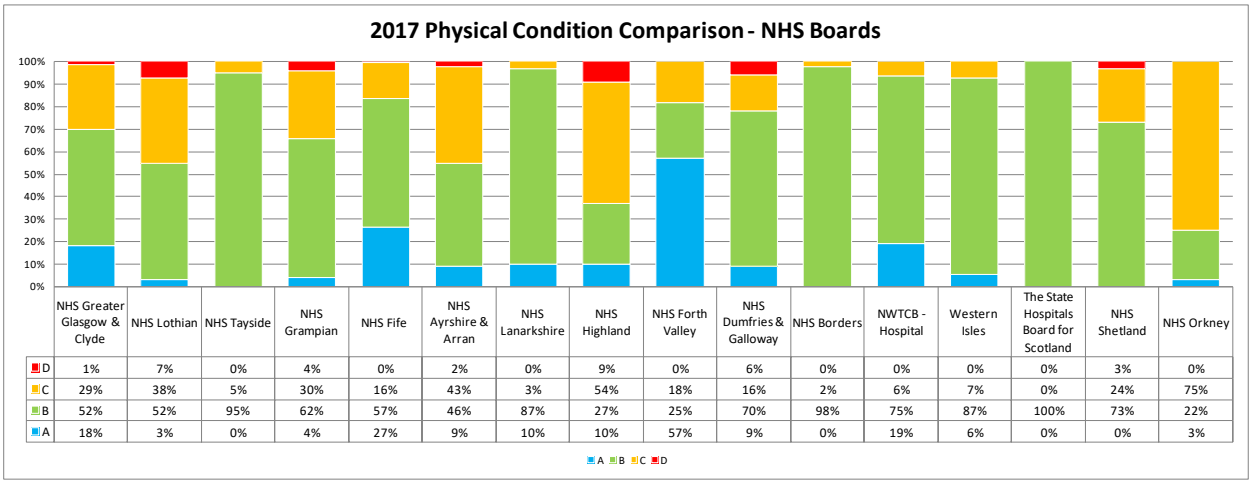
Estate Condition

The Boards report that 72% of their estate is in good physical condition (category A or B) with 25% requiring investment to improve its condition (category C) and 3% being unsatisfactory and requiring major investment or replacement (category D).

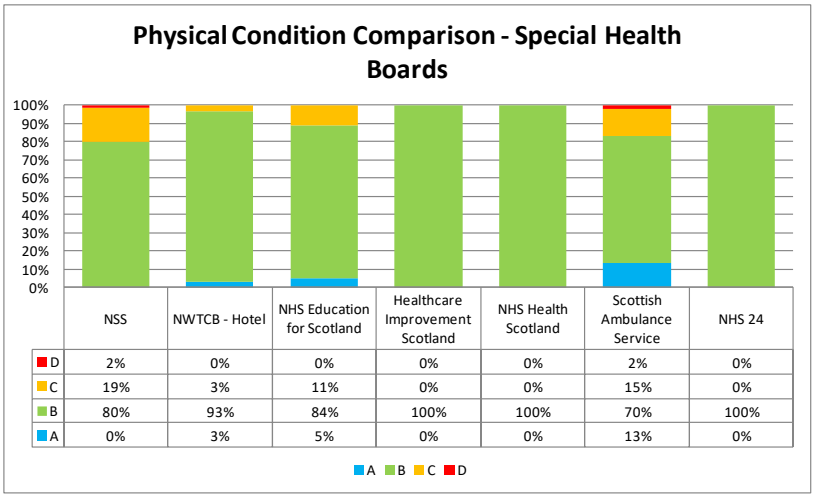


The proportion of the estate in good physical condition of 72% is higher than the 70% reported in the 2016 SAFR. Boards advise that this is as a result of the rationalisation of parts of the NHSScotland estate following completion of associated property replacement projects.

The two charts that follow highlight the variance in condition across the NHS Boards.



	NHS Greater Glasgow & Clyde	NHS Lothian	NHS Tayside	NHS Grampian	NHS Fife	NHS Ayrshire & Arran	NHS Lanarkshire	NHS Highland	NHS Forth Valley	NHS Dumfries & Galloway	NHS Borders	NWTCB - Hospital	Western Isles	The State Hospitals Board for Scotland	NHS Shetland	NHS Orkney
D	1%	7%	0%	4%	0%	2%	0%	9%	0%	6%	0%	0%	0%	0%	3%	0%
C	29%	38%	5%	30%	16%	43%	3%	54%	18%	16%	2%	6%	7%	0%	24%	75%
B	52%	52%	95%	62%	57%	46%	87%	27%	25%	70%	98%	75%	87%	100%	73%	22%
A	18%	3%	0%	4%	27%	9%	10%	10%	57%	9%	0%	19%	6%	0%	0%	3%



	NSS	NWTCB - Hotel	NHS Education for Scotland	Healthcare Improvement Scotland	NHS Health Scotland	Scottish Ambulance Service	NHS 24
D	2%	0%	0%	0%	0%	2%	0%
C	19%	3%	11%	0%	0%	15%	0%
B	80%	93%	84%	100%	100%	70%	100%
A	0%	3%	5%	0%	0%	13%	0%

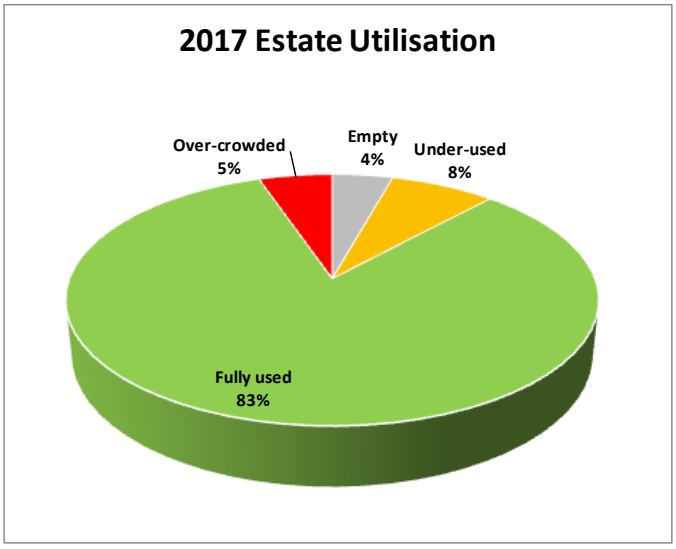
Further to the above Board level analysis, it is now possible through the Estate Asset Management System (EAMS) to report on estate KPIs such as physical condition and backlog maintenance at hospital level. Analysis of this information is being used by NHS Boards to link their property improvement needs and their strategic & service plans for improvement included within their PAMS.

NHS Boards which have buildings assessed as category D – “unsatisfactory” have indicated that they have plans in place to either dispose, replace, or improve these buildings over the next 5-10 years.

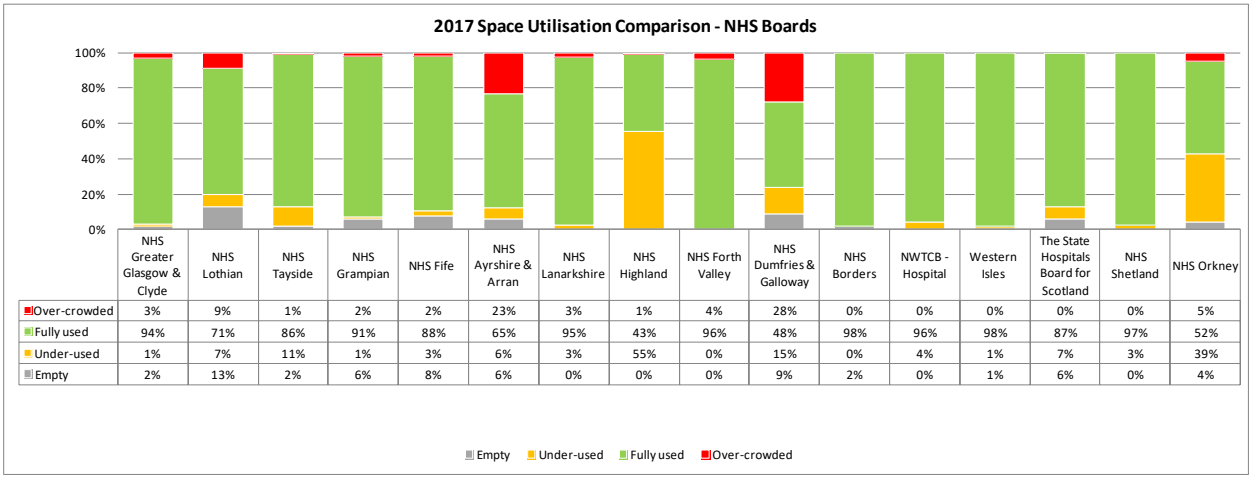
Estate Utilisation

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 83% of the NHSScotland estate is fully utilised although some under utilisation and some overcrowding is evident as shown in the chart below.

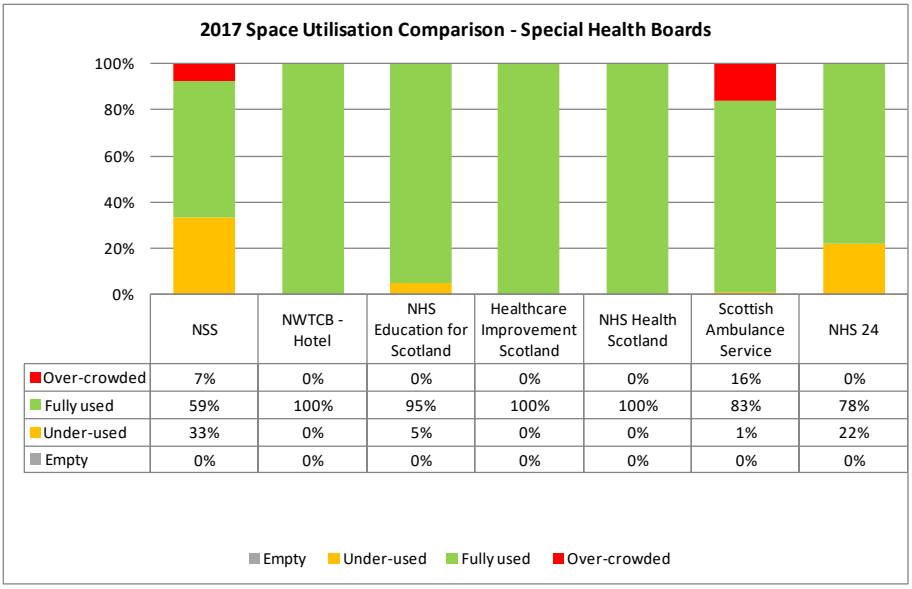
This profile has remained the same as reported in 2016 SAFR.



The following charts highlight that space utilisation can vary across the NHS Boards.



	NHS Greater Glasgow & Clyde	NHS Lothian	NHS Tayside	NHS Grampian	NHS Fife	NHS Ayrshire & Arran	NHS Lanarkshire	NHS Highland	NHS Forth Valley	NHS Dumfries & Galloway	NHS Borders	NWTCB - Hospital	Western Isles	The State Hospitals Board for Scotland	NHS Shetland	NHS Orkney
Over-crowded	3%	9%	1%	2%	2%	23%	3%	1%	4%	28%	0%	0%	0%	0%	0%	5%
Fully used	94%	71%	86%	91%	88%	65%	95%	43%	96%	48%	98%	96%	98%	87%	97%	52%
Under-used	1%	7%	11%	1%	3%	6%	3%	55%	0%	15%	0%	4%	1%	7%	3%	39%
Empty	2%	13%	2%	6%	8%	6%	0%	0%	0%	9%	2%	0%	1%	6%	0%	4%



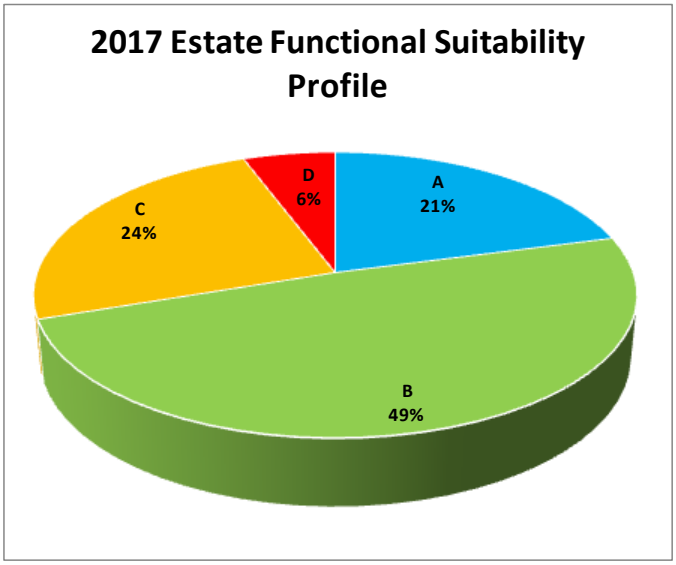
	NSS	NWTCB - Hotel	NHS Education for Scotland	Healthcare Improvement Scotland	NHS Health Scotland	Scottish Ambulance Service	NHS 24
Over-crowded	7%	0%	0%	0%	0%	16%	0%
Fully used	59%	100%	95%	100%	100%	83%	78%
Under-used	33%	0%	5%	0%	0%	1%	22%
Empty	0%	0%	0%	0%	0%	0%	0%

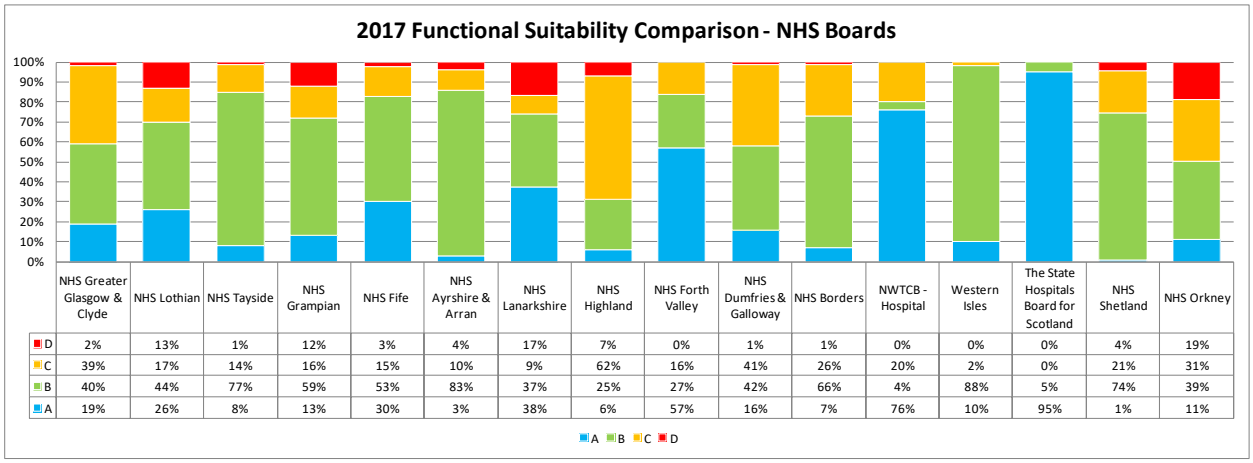
The under utilisation of accommodation across NHS Highland and NHS Orkney reflects the challenges faced from such a geographically diverse area and the need to maintain and provide critical healthcare facilities in locations with relatively low population masses.

Estate functional suitability

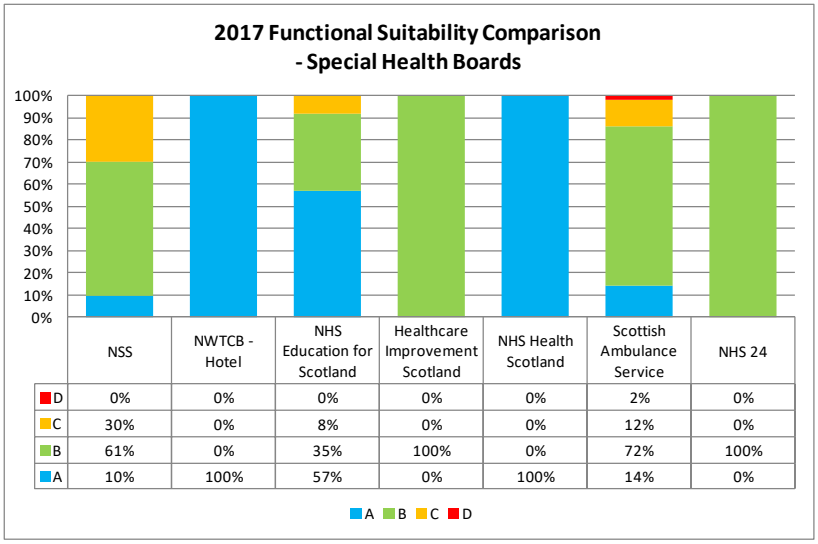
The estate also plays an important role in supporting the effective delivery of services. Poor functional suitability often results in inefficient working practices, increased staffing levels and poor clinical outcomes. Approximately 70% of the NHSScotland estate is functionally suitable but, as shown in the charts that follow, this can vary significantly across NHS Boards.

This profile shows a slight 1% increase in the area of the estate in categories A & B compared to that reported in 2016. Boards have advised that this is as a result of the annual re-assessment of buildings for functional suitability.





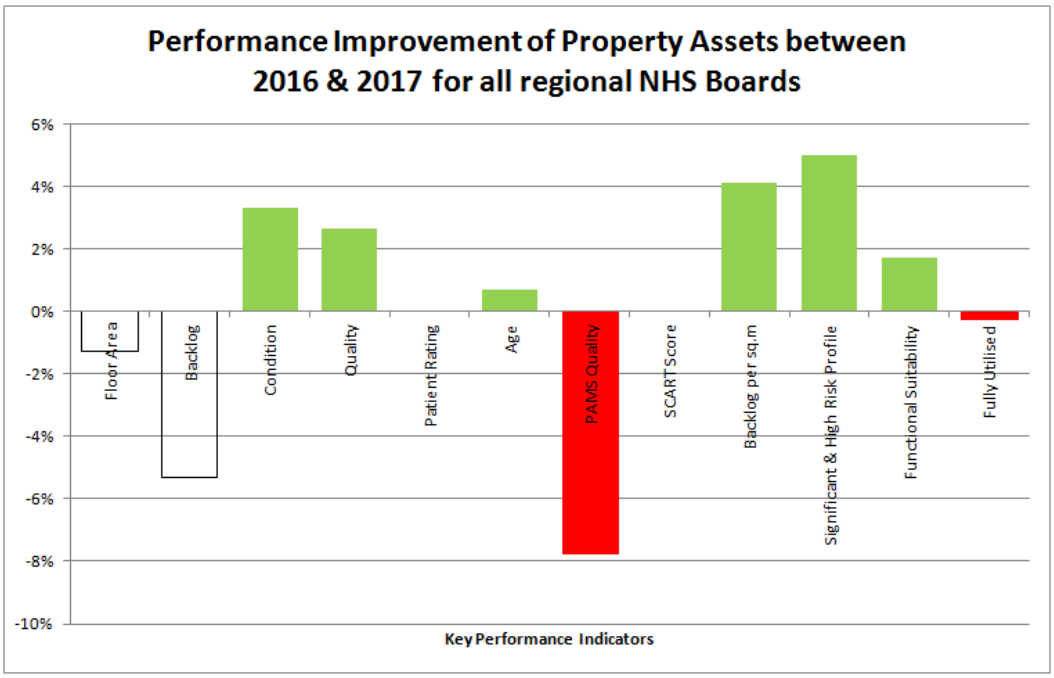
	NHS Greater Glasgow & Clyde	NHS Lothian	NHS Tayside	NHS Grampian	NHS Fife	NHS Ayrshire & Arran	NHS Lanarkshire	NHS Highland	NHS Forth Valley	NHS Dumfries & Galloway	NHS Borders	NWTCB - Hospital	Western Isles	The State Hospitals Board for Scotland	NHS Shetland	NHS Orkney
D	2%	13%	1%	12%	3%	4%	17%	7%	0%	1%	1%	0%	0%	0%	4%	19%
C	39%	17%	14%	16%	15%	10%	9%	62%	16%	41%	26%	20%	2%	0%	21%	31%
B	40%	44%	77%	59%	53%	83%	37%	25%	27%	42%	66%	4%	88%	5%	74%	39%
A	19%	26%	8%	13%	30%	3%	38%	6%	57%	16%	7%	76%	10%	95%	1%	11%



	NSS	NWTCB - Hotel	NHS Education for Scotland	Healthcare Improvement Scotland	NHS Health Scotland	Scottish Ambulance Service	NHS 24
D	0%	0%	0%	0%	0%	2%	0%
C	30%	0%	8%	0%	0%	12%	0%
B	61%	0%	35%	100%	0%	72%	100%
A	10%	100%	57%	0%	100%	14%	0%

Performance Improvement of Property Assets

The following chart provides a comparative overview of performance improvement in property assets between 2016 and 2017.

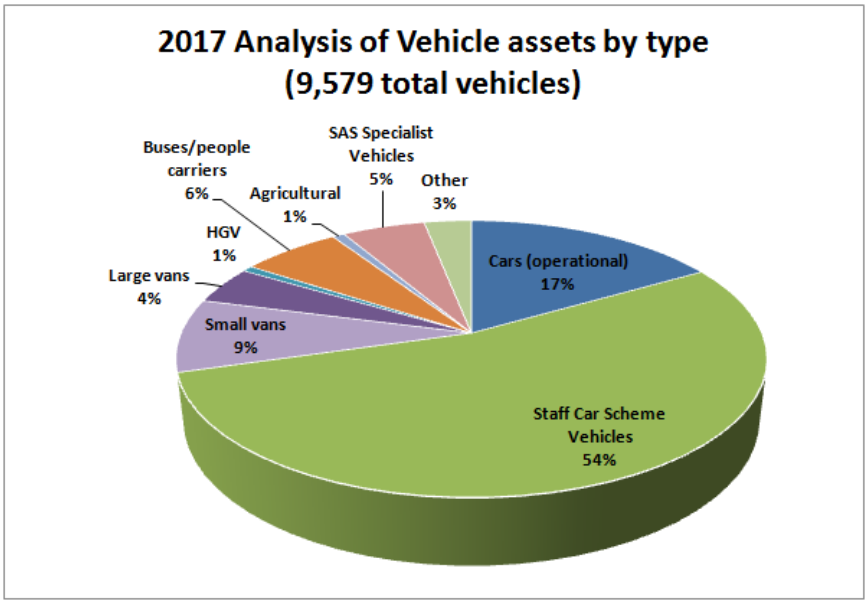


Note: green bars above the horizontal indicate a positive improvement whereas a red bar below the horizontal indicates a performance reduction.
The backlog analysis excludes inflation for comparative purposes.
The PAMS Quality assessments take place every two years hence score are compared over a two year period.

The above chart highlights a general improvement this year in each of the performance KPI's; with improvements for physical condition, quality, backlog maintenance and functional suitability. The reduced score for PAMS quality is due to the introduction of new assessment criteria which sets a new, more challenging baseline; which Boards are expected to improve upon in subsequent years.

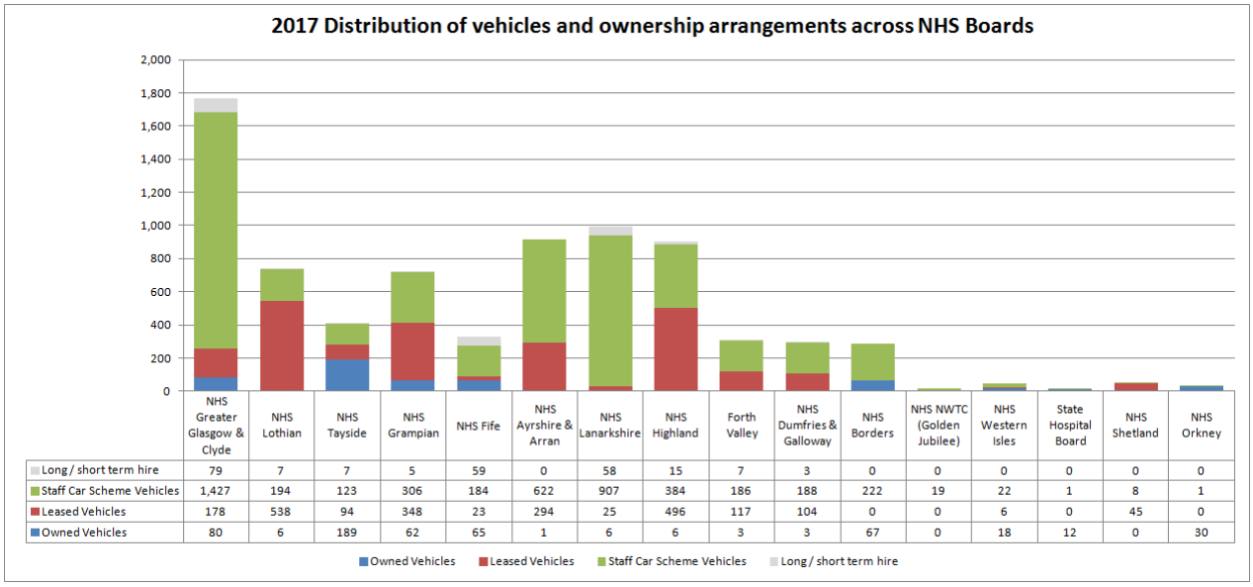
Annex B
Review of NHSScotland's Vehicle Assets

Analysis of vehicle assets is based on annual pro-forma information returned by each NHS Board. NHSScotland's vehicle assets comprise of approximately 9,600 vehicles, the majority of which are staff car scheme vehicles (54%) and operational cars (17%). The chart below provides a breakdown of NHSScotland's vehicle assets by type.

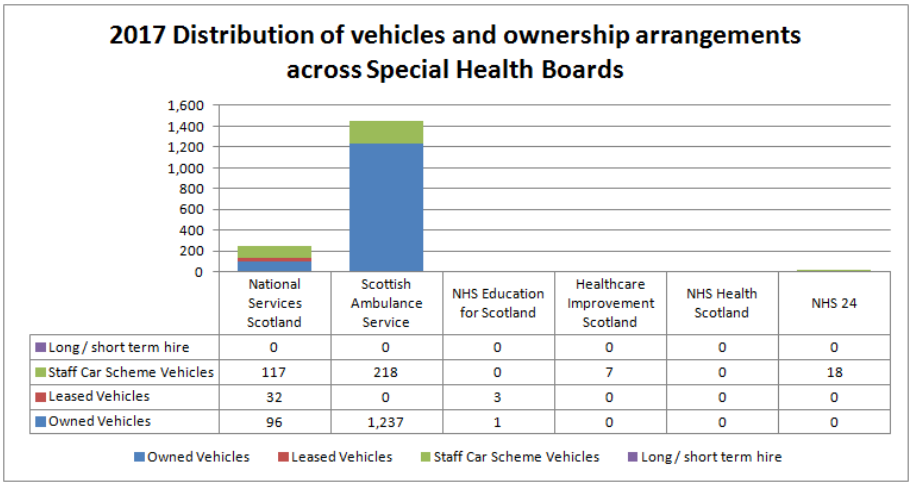


This excludes national logistics vehicles

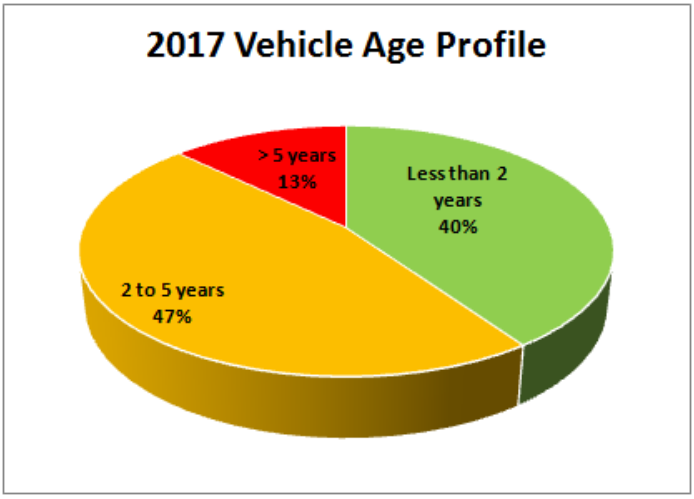
The distribution of these vehicle assets and their ownership arrangements across NHS Boards and National Health Boards is shown in the following two charts.



	NHS Greater Glasgow & Clyde	NHS Lothian	NHS Tayside	NHS Grampian	NHS Fife	NHS Ayrshire & Arran	NHS Lanarkshire	NHS Highland	Forth Valley	NHS Dumfries & Galloway	NHS Borders	NHS NWTC (Golden Jubilee)	NHS Western Isles	State Hospital Board	NHS Shetland	NHS Orkney
Long / short term hire	79	7	7	5	59	0	58	15	7	3	0	0	0	0	0	0
Staff Car Scheme Vehicles	1,427	194	123	306	184	622	907	384	186	188	222	19	22	1	8	1
Leased Vehicles	178	538	94	348	23	294	25	496	117	104	0	0	6	0	45	0
Owned Vehicles	80	6	189	62	65	1	6	6	3	3	67	0	18	12	0	30



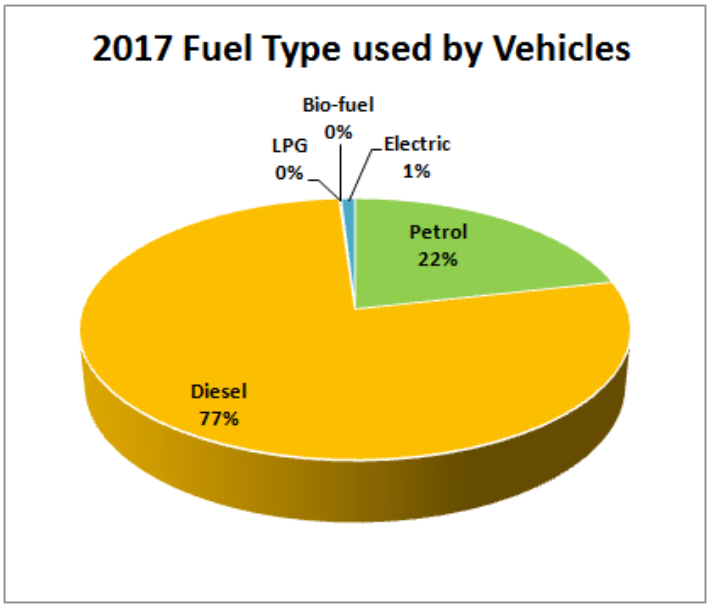
The vehicle age profile for all NHS Boards is shown in the charts that follow and shows that circa 85% of the vehicles are less than five years old. This represents a reasonable age profile for this asset group and indicates that investment is currently maintaining a reasonable standard of vehicle asset provision.



Comparative information on vehicle mileage is sufficient this year to monitor annual changes from the previous year (see table below).

Total Vehicle Mileage	2017		2016		% Change in Total Mileage
	Total (million)	Per Vehicle	Total (million)	Per Vehicle	
Owned	28.82	15,315	32.90	16,976	+7%
Leased	24.11	10,468	19.84	8,764	-18%
Staff Car Scheme	27.42	5,321	21.53	4,020	-20%
Staff Private Car	49.35		51.09		-1%
TOTAL Mileage	129.70		125.37		

The type of fuel used by these vehicles is also an important consideration and the following chart shows the current reliance on diesel fuel (77% of vehicles). However, there continues to be a gradual increase in the number of alternatively fueled vehicles, which is now at 100 vehicles, a 50% increase from last year.



Electric accounts for 1%, and the other alternatives 0.14%

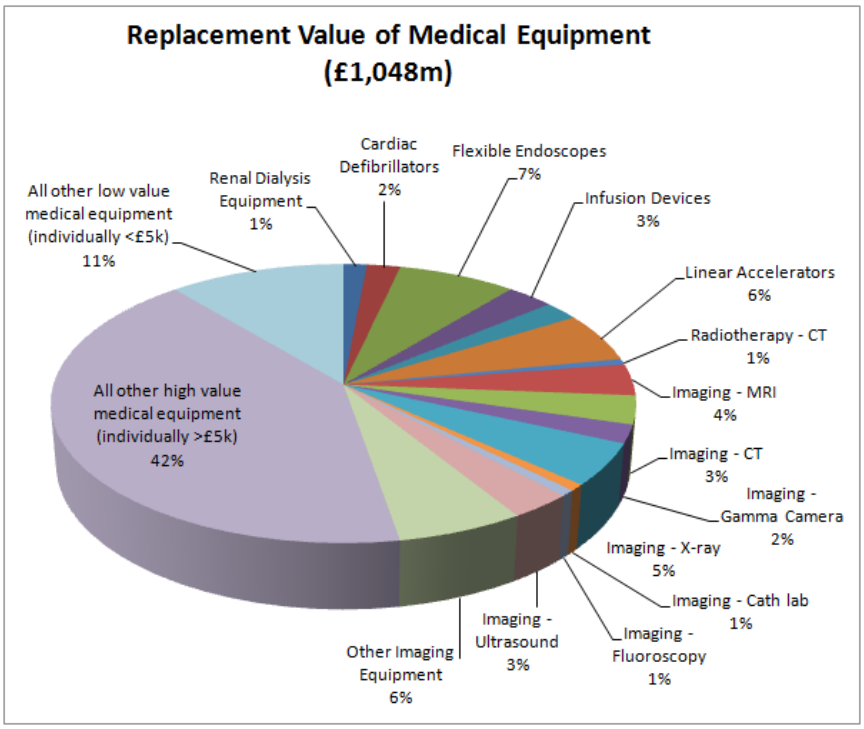
Annex C
Review of NHSScotland's Medical Equipment

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.
- Decontamination equipment.
- Imaging equipment.
- Radiotherapy equipment.

This presented an overall estimated replacement value for Medical Equipment of £1,048m, which is a decrease of £10m from the 2016 reported figure.

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



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

NHS Board	Radiotherapy Equipment	Imaging Equipment	All Other Medical Equipment
NHS Greater Glasgow	33.9	81.1	153.9
NHS Lothian	13.1	33.2	99.1
NHS Tayside	7.3	20.8	49.8
NHS Grampian	7.7	26.5	123.6
NHS Fife	0	10.9	28.0
NHS Ayrshire & Arran	0	13.2	38.0
NHS Lanarkshire	0	17.4	61.8
NHS Highland	4.9	15.6	32.8
NHS Forth Valley	0	9.9	37.5
NHS Dumfries & G.	0	6.0	18.0
NHS Borders	0	4.5	9.1
Golden Jubilee	0	9.4	25.8
State Hospital	0	0	0.01
NHS Western Isles	0	1.8	6.8
NHS Shetland	0	1.7	6.8
NHS Orkney	0	1.4	6.1
National Services Scotland	0	5.3	14.0
Scottish Ambulance Service	0	0	10.8
TOTAL	**66.9**	**258.8**	**722.0**
	1,047.7		

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 996 dialysis machines across NHSScotland with a replacement value of circa £15.5m. These support nearly 255,000 patient sessions per year within dedicated Renal Dialysis Units, with circa 75 patients dialysed at home.

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 2,461 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 1,647 community based defibrillators, of which 542 are within the Scottish Ambulance Service. A replacement programme is currently at planning stage to upgrade all ambulance based units with Advanced Life Support (ALS) units, which will further improve outcomes for patients.

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 over 20,900 devices is circa £31m.

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 over 3,000 reported flexible endoscopes across NHSScotland with a replacement value of c. £78m. 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 £78m 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.

Imaging Equipment

Imaging equipment continues to play a significant and important role in the provision of healthcare to patients within both the acute and primary care sectors.

Magnetic Resonance Imaging (MRI) and Computerized Tomography (CT) are modalities of diagnostic equipment that are essential in almost all patient pathways and meeting waiting time targets associated with accident and emergency, oncology and diagnostics.

The National Imaging Inventory has an estimated replacement value of c. £259m (excl. VAT but incl. turnkey costs). The annual maintenance charge is £12.3m across the inventory.

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. This equipment has a replacement value of £67m.

Annex D
Shared Services: Clinical Engineering Programme

Clinical Engineering is a component part of Medical Physics and has wide-reaching responsibilities including the management of over 100,000 devices. It has the largest, broadest and deepest reach into clinical services under one national structure.

Sitting under the NHS Scotland Shared Services Health Portfolio, the Clinical Engineering Programme was launched in December 2016 to consider innovative approaches to healthcare across primary, secondary and community locations and facilitate a framework development for safe, effective implementation of new healthcare technology across Scotland.

The Programme has been developing quickly with three projects well underway. The Programme Team has been engaged in planning activity with key stakeholders for the three workstreams including the development of project plans, initial data gathering activity and the establishment of Advisory Groups.

The Programme formally launched in April 2017 with the following three Projects:

National Medical Equipment

The National Medical Equipment workstream aims to deliver a Once for Scotland approach to the management of medical equipment.

A National Medical Equipment Framework project will initially focus on a specific subset of medical equipment, analysing the pathway through the equipment lifecycle to identify areas for best practice, harmonisation, cross boundary collaboration and the benefits of standardisation. The project will ensure a safe and cost effective harmonised approach to Medical Equipment Management for Scotland.

It is anticipated that the benefits of such an approach will result in a more cohesive, cross Health Board approach, the introduction of standard nomenclature and tagging conventions, consistency in the approach to maintenance and calibration, and the opportunity to realise efficiency gains.

Managed Introduction of New Technologies

The Managed Introduction of New Technologies workstream will provide a robust process for the safe and effective introduction of new technologies into patient care.

The first project is ‘The National 3D Printing Framework Project’ aiming to deliver an exemplar that enables a Scotland wide, integrated approach to the use of 3D printing.

The project will focus on exploring the uses of 3D printing, consider funding and the pool of printers within the service, the benefits of economies of scale, a single Quality Management System and co-ordinated research collaborations.

Health Technology Informatics

The Health Technology Informatics workstream aims to enable data from patient home monitoring devices to be effectively captured and analysed to support clinical decision making across a range of specialties.

The National Translational Technology Informatics Project will specifically focus on type 1 diabetes patients aged 13-25. The project aims to deliver an exemplar whereby diabetes patient's home managed data is transferred instantly from device to a cloud environment. This data is analysed and subsequently fed to the clinician in the form of a dashboard, which will provide notifications and key data to enable informed decision making on prioritisation of patients.

This personalised approach to care will ensure that the right patients are seen at the right time and efficiencies are improved. This will result in better outcomes for patients.

In addition, benefits such as real time data, clinical alerts, bed and cost savings will be realised while contributing to a safer patient environment, improved self management and havening a more anticipatory approach to this condition.

Annex E
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 2015/16, the cost of energy across NHSScotland's hospital sites (as reported in the ISD Cost Book) was £98,000,000 – a 2.6% *decrease* on the previous year. Absolute energy consumption at these sites (not corrected for the influence of weather) *increased* by 6.58% in the same period.

Since 2010/11, energy unit costs have risen year on year, but 2015/16 is the second year to show an overall decrease in energy costs. This is due to proactive energy management across the NHSScotland estate coupled with competitive wholesale energy costs which have been passed through to NHSScotland Boards via the Scottish Public Sector Utility contracts (managed by Scottish Procurement). These utility contracts cover electricity, gas, water, and some liquid fuels.

It should be noted, however, that 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. These additional charges have risen substantially in recent years.

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. Most of these are set at UK Government level.

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 Scottish Procurement. Through this committee, maximum target costs are set to ensure the least risk of exposure to market changes. In 2015/16, the Risk Management Committee was successful in achieving a 33.6% reduction in actual costs paid against maximum target costs for electricity and a 35.7% reduction in actual costs paid against maximum target costs for gas.

NHSScotland Boards' main response to rising energy costs continues to be to drive costs downwards through proactive energy management and reduced energy consumption.

The table that follows summarises the energy consumption and cost figures for 2015/16 and preceding years. The percentage change in energy consumption between 2015/16, the preceding year and FY 2010/11 is also shown.

Board	2010/11		2013/14		2014/15		2015/16			
	£	kWh	£	kWh	£	kWh	£	kWh	% change in kWh since 2014/15	% change in kWh since 2010/11
NHS Ayrshire & Arran	£3,914,322	78,795,444	£5,092,905	73,766,320	£4,833,829	70,366,522	£5,152,280	101,131,942	43.72%	28.35%
NHS Borders	£1,348,397	27,085,518	£1,692,560	22,839,177	£1,737,461	23,063,469	£1,681,658	23,441,512	1.64%	-13.45%
NHS Dumfries & Galloway	£1,563,022	47,938,572	£2,500,227	39,690,797	£2,205,440	38,657,995	£2,272,967	40,267,815	4.16%	-16.00%
NHS Fife	£3,003,175	87,042,665	£4,400,662	106,985,161	£4,032,375	98,913,012	£4,360,661	88,540,234	-10.49%	1.72%
NHS Forth Valley	£3,133,854	56,788,314	£4,687,648	67,650,212	£4,702,804	65,803,797	£4,177,459	67,189,664	2.11%	18.32%
NHS Grampian	£7,820,458	169,490,880	£12,400,014	198,005,353	£10,985,574	194,279,336	£10,846,743	201,524,566	3.73%	18.90%
NHS Greater Glasgow & Clyde	£19,968,223	465,204,125	£30,022,971	454,335,901	£29,944,411	436,498,348	£29,357,605	474,047,635	8.60%	1.90%
NHS Highland	£6,005,545	82,053,638	£6,885,020	74,234,505	£6,290,336	78,516,325	£5,460,715	81,831,348	4.22%	-0.27%
NHS Lanarkshire	£4,514,517	101,434,805	£6,223,039	85,181,638	£5,640,122	78,383,492	£5,212,059	91,798,602	17.11%	-9.50%
NHS Lothian	£10,487,365	246,294,935	£16,158,779	235,583,630	£15,447,305	224,253,014	£15,212,146	234,029,169	4.36%	-4.98%
NHS Orkney	£294,507	4,370,775	£521,915	3,437,414	£338,814	4,176,342	£346,425	4,698,457	12.50%	7.50%
NHS Shetland	£477,291	4,622,434	£502,417	3,700,692	£506,266	3,420,817	£435,004	3,696,289	8.05%	-20.04%
NHS Tayside	£6,618,783	173,409,677	£9,799,341	164,672,435	£9,925,199	158,383,012	£9,492,670	163,578,260	3.28%	-5.67%
NHS Western Isles	£792,794	10,423,551	£1,941,689	10,283,870	£969,610	9,563,407	£803,463	9,862,563	3.13%	-5.38%
NHS National Waiting Times Centre	£1,590,185	38,817,786	£2,572,131	39,352,709	£2,318,312	36,578,314	£2,445,338	35,006,419	-4.30%	-9.82%
The State Hospitals Board for Scotland	£779,362	11,346,441	£793,028	9,831,750	£724,555	9,396,327	£728,439	10,229,556	8.87%	-9.84%
TOTAL	**£72,311,800**	**1,605,119,560**	**£105,294,356**	**1,589,551,564**	**£100,602,213**	**1,530,253,529**	**£97,985,632**	**1,630,874,031**	**6.58%**	**1.60%**

It should be noted that reporting year 2015/16 was colder in temperature than 2014/15, and this may account for the increase in consumption in 2015/16. It is also important to take into account changes in the size of the estate. Between reporting years 2014/15 and 2015/16, there was a 1.91% increase in the reported hospital estate areas. Therefore, it is more accurate to consider a performance indicator of *weather-corrected energy consumption per m^2* when reviewing relative energy performance.

During 2015/16, the average energy performance – corrected for weather and area - across the NHSScotland hospital estate was 439.9 kWh/m^2 – a 4.22% reduction over the previous reporting year, and a 2.59% reduction since 2010/11.

The table that follows shows energy KPI performance for each Board since 2010/11.

Board	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16		
	kWh/m2	kWh/m2	kWh/m2	kWh/m2	kWh/m2	kWh/m2	% change in kWh/m2 since 2014/15	% change in kWh/m2 since 2010/11
NHS Ayrshire & Arran	349.4	336.6	322.7	372.4	373.8	508.1	35.91%	45.43%
NHS Borders	415.0	412.5	384.1	395.4	396.1	380.2	-4.03%	-8.39%
NHS Dumfries & Galloway	540.9	553.3	480.9	527.1	516.2	537.7	4.18%	-0.58%
NHS Fife	400.7	395.7	421.5	424.4	420.9	353.4	-16.03%	-11.79%
NHS Forth Valley	449.8	403.6	376.6	471.9	483.5	456.4	-5.60%	1.46%
**NHS Grampian	475.9	539.1	548.5	625.9	625.6	589.0	-5.85%	23.78%
NHS Greater Glasgow & Clyde	479.9	487.1	465.7	452.3	444.7	444.8	0.02%	-7.32%
NHS Highland	380.0	409.3	393.5	460.6	519.7	353.8	-31.93%	-6.91%
NHS Lanarkshire	470.4	483.6	465.5	437.6	415.2	440.0	5.96%	-6.46%
NHS Lothian	476.1	505.3	489.8	410.6	400.4	417.7	4.32%	-12.26%
*NHS Orkney	500.4	560.8	500.4	452.2	561.4	571.5	1.80%	14.21%
*NHS Shetland	350.7	392.3	446.6	487.0	459.9	449.7	-2.22%	28.21%
NHS Tayside	386.5	395.2	367.2	443.9	476.3	369.7	-22.37%	-4.33%
NHS Western Isles	540.8	589.7	539.1	498.6	473.7	442.0	-6.68%	-18.26%

Board	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16		
	kWh/m2	kWh/m2	kWh/m2	kWh/m2	kWh/m2	kWh/m2	% change in kWh/m2 since 2014/15	% change in kWh/m2 since 2010/11
*NHS National Waiting Times Centre	718.3	737.8	695.5	694.4	674.3	588.7	-12.70%	-18.04%
* ***The State Hospitals Board for Scotland	722.2	507.7	425.1	435.3	434.6	431.6	-0.69%	-40.23%
TOTAL	**451.6**	**465.3**	**447.5**	**459.0**	**459.3**	**439.9**	**-4.22%**	**-2.59%**

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.*

Future Plans: Energy

During 2015/16, a new energy monitoring and targeting system – eSight – was procured for the NHSScotland Boards. This will facilitate more accurate recording and reporting of energy consumption and associated GHG emissions, and as the system uploads metered data automatically, it will allow more proactive energy management across the estate. Financial year 2016/17 marks the first reporting year under the new system and will allow the whole estate – not just hospital sites – to be evaluated.

November 2016 saw the introduction of mandatory Public Sector Climate Change Reporting. This impact all major public bodies within Scotland and 19 of the 22 NHSScotland Boards are required to produce annual reports.

The Public Sector Climate Change Reports include information on greenhouse gas emissions from waste arisings, water consumption, fleet transport, and business travel, as well as building energy consumption. The reports also include information on NHSScotland Boards' actions relating to climate change mitigation and sustainable procurement.

Reports are produced annually and administered by the Sustainable Scotland Network. All reports are in the public domain and can be accessed from:

https://www.keepscotlandbeautiful.org/sustainability-climate-change/sustainable-scotland-network/climate-change-reporting/climate-change-reports/

Annex F
Best Practice Case Studies

This annex of the report has been used since the first edition of SAFR in 2011 to highlight and share innovative solutions and best practice 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. Two further case studies are included below on environmental improvements to the Scottish Ambulance Service's fleet, and an evaluation of the successful introduction of a tracking system for medical devices at Forth Valley royal Hospital.

The accompanying table provides a reference summary of previously published best practice examples, with information on which SAFR report can be referenced for further details.

It is envisaged that this section will continue to 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.

Best Practice Case Study 1
Scottish Ambulance Service: fleet environmental improvements

The Scottish Ambulance Service vision is to move to zero emission vehicles as quickly as possible working with available technology and infrastructure, forcing innovation while ensuring patient care.

The transition from traditional fossil fuel vehicles will not be completed overnight but through adoption of existing technology now, the Service intends to significantly improve sustainability by reducing environmental impact during the transition period.

Where diesel vehicles have been specified as the most effective in a role, the early introduction and ongoing use of EU6 compliant engines (exclusively since 2016) set dramatically higher standards on NOx emissions (the oxides of nitrogen which are linked to urban air quality issues) and particulates (soot). This results in emissions from the diesel vehicles being close to similar capacity petrol engines, while still offering far lower CO2 emissions.

The priority looking forward is on alternative fuels, reducing the use and reliance on fossil fuelled vehicles. The Scottish Ambulance Service committed to trailing electric powered vehicles. It is the first UK service to bring electric powered paramedic rapid response vehicles on to its operational fleet with the introduction of converted BMW i3 response vehicles in Edinburgh, Aberdeen and Glasgow. Electric charging points are initially located at four sites to accommodate these vehicles during the evaluation period but analysis is ongoing to prioritise the planned roll out of charging points across all Scottish Ambulance Service locations.

Initial trials of the i3 in partnership with BMW arranged through the Service's National Vehicle Design and Equipment Group were very positive and tested performance exceeded existing vehicles in this role. Following winter trails, it is hoped that this type of vehicle will be specified into this role nationally.

Where the technology is not yet in place to replace fossil fuel powered vehicles, such as the larger engine A&E vehicles operating 24/7, we are evaluating Hydrogen Fuel Cell Technology. It will not replace the fossil fuel but early indication show it can reduce emissions by up to 80% and improve fuel economy by up to 20%. This is also being evaluated in Paramedic Rapid Response Vehicles (where mileage/use and current technology prohibits charging as an effective solution).

Unfortunately hydrogen technology as a single power source is not currently a viable option for the Scottish Ambulance Service due to the limitation of two filling sites (Aberdeen and Leven) and the limited vehicle options (Toyota and left hand drive Hyundai Tucson). Discussions with vehicle manufacturers remain open and active, pressing for emerging technology that the Service can showcase.

Best Practice Case Study 2

Passive RFID Tracking of Mobile Medical Devices within Forth Valley Royal Hospital

This is an evaluation of the use of active Radio Frequency Identification (RFID) tracking of medical devices, first introduced at Forth Valley Royal Hospital in June 2014. To date 10,000 of its 14,000 mobile medical devices have been labelled with passive tags.

The main drivers for their introduction were:

- To improve the ability to track mobile medical devices so that they could be located quickly when required for clinical use or maintenance.
- To reduce the time wasted by staff locating equipment.
- To improve equipment utilisation; in turn reducing the amount of surplus / unnecessary medical devices in circulation and wasted costs.

An evaluation of the new system has identified the following successful outcomes:

1. Increased efficiency of planned maintenance

Equipment can now be located in a much shorter time. For example, it is now possible to audit the entire Theatre Recovery Suite (30 beds) in less than 3 minutes, rather than previously taking a whole day. The system can then identify any devices requiring maintenance which reduces the impact on service delivery.

2. Accurate inventory of equipment (including location)

Internal audit reports highlight significant improvements in being able to identify the precise location of medical equipment and devices, with spot checks confirming the accuracy of this data.

3. Reduction in staff time spent locating equipment – releasing time to care

A recent staff survey asked how quick it now was to find equipment when needed; the average response was 9 out of 10 across 18 wards / departments.

4. Reduction in replacement equipment costs by reducing the numbers required

As a result of using RFID tags and using the data collected to inform decision making, an identified total of £360k has been saved. These savings, and the resale of decommissioned equipment that is no longer required, allowed the department to roll out the use of RFID tracking to more areas and to purchase equipment that was due for replacement but would not have otherwise been replaced.

Summary of other Case Studies Published in SAFR since 2011:

NHS Board	Best Practice	Benefits	SAFR Year
Strategic & Service Planning			
NHS National Services Scotland	NSS were the first NHS Board in Scotland to use scenario planning to develop a PAMS that was agile and flexible to long term change.	The process provided a valuable insight into how future change could impact on the need for property and assets, and the decisions that the organisation is likely to face in the future in relation to these assets.	SAFR 2013
NHS Highland	The redesign of rehabilitation services across two inpatient sites in Fort William focussed on the patient journey using LEAN methodology and the need to centralise inpatient activity at the Belford Hospital and outpatient activity at the Health Centre.	This project has resulted in a vastly improved patient experience, improved conditions for staff, and reduced bed days. It also enabled a ward facility to become surplus to needs and freed for disposal.	SAFR 2013
NHS Grampian	Following a thorough engagement and consultation process involving the public, the local population agreed that the existing Maud Hospital facility was no longer required, and they would be better placed with more community based services.	The service redesign ensured that people had the opportunity to remain longer at home rather than occupying local hospital beds, and it also demonstrated a community approach to integration of services.	SAFR 2012
NHS Greater Glasgow & Clyde	The Board's Acute Service Review (ASR) aimed to modernise services across the City by renewing its acute healthcare facilities in tandem with a redesign of patient service delivery. The new Queen Elizabeth University Hospital was a pivotal phase of this strategy.	Enables modern healthcare to be provided in fit for purpose buildings and clinical environments, with resulting improvements to the patient experience and the working environment for staff.	SAFR 2011
NHS Fife	Following on from extensive public consultation, there was an identified need to change in-patient mental health services from three to two geographic locations.	This resulted in the re-provision of clinical service accommodation with modern, design award winning facilities which enabled the provision of care facilities which encourage social activity and interaction from within patient focussed, innovative and sustainable building environments.	SAFR 2011

NHS Board	Best Practice	Benefits	SAFR Year
Asset Management			
NHS Highland	NHS Highland have introduced an Enterprise Asset Management System to control the maintenance of its estate, integrating the functions of purchasing, maintenance, asset history, and contract maintenance.	It enables information to be available which can optimise future maintenance and replacement planning and enable condition based monitoring and reliability centred maintenance to be carried out. It is also improving planned to reactive maintenance workload ratios.	SAFR 2013
NHS Lanarkshire	NHS Lanarkshire's property investment and estates rationalisation plan involved a programme of replacing outdated service accommodation, centralising its corporate office function, and review all existing lease arrangements.	Better use was made of existing buildings and old facilities were replaced with more functionally suitable and better quality accommodation. The four year programme achieved a net floor space reduction of 9%, annual lease savings of circa £300k and a reduction in backlog of circa £12m.	SAFR 2012
NHS National Services Scotland	The refurbishment of a 1970's office building in the centre of Glasgow was the enabler towards the relocation of 415 NSS staff from 5 leased office properties across central Glasgow to a surplus Government building at Meridian Court.	It re-used surplus office space with a long lease, transformed a tired and non-functioning 1970's building, introduced a new working environment for staff which enable more flexible working, and reduced overall space needs.	SAFR 2012
NHS Lanarkshire	NHS Lanarkshire used Frameworks Scotland2 to develop a 5 year rolling programme of investment to address its backlog maintenance and statutory compliance risks.	It enabled the development of a long term arrangement to be developed to rectify its backlog issues as efficiently and effectively as possible, without the need for repeated tender processes.	SAFR 2015

NHS Board	Best Practice	Benefits	SAFR Year
Facilities Management Services			
NHS Forth Valley	Automated Guided Vehicles (AGV's) were incorporated into the new Forth Valley Royal Hospital in order to separate out staff and patient flows from visitor and FM services.	The intention was that this would reduce opportunities for cross infection, improve the hospital environment, enhance the patient experience, and promote a calmer, more therapeutic atmosphere. Also, by keeping patient flow separate from visitor and FM traffic, patients can be moved between wards or to theatre in a more controlled environment.	SAFR 2011
Office based Strategies			
NHS National Services Scotland	Since 2011, NSS has embarked on a programme of further consolidating and rationalising its office estate with a specific focus on improving space utilisation, reducing recurring revenue costs, and creating agile and flexible working environments for staff.	The recurring revenue savings as a consequence of implementing the NSS programme of office consolidation and rationalisation from 2012 through to 2016 is projected to be £2.6m – a 25% saving over that period.	SAFR 2014
NHS National Services Scotland	NSS implemented a programme of mainly office based property rationalisation to support its strategic model of property provision since the year 2000.	Improved building performance, improved quality of working environment, flexible working spaces, shared use of accommodation, and reduced revenue costs.	SAFR 2011
NHS Lothian	In 2010, NHS Lothian undertook a Clinical Accommodation Release Strategy (CARS) to create additional clinical accommodation on hospital sites currently used for office accommodation purposes.	Valuable clinical accommodation was freed up with resources directed towards front line service delivery. It also enabled better efficiency, improved working environment, and reduced energy consumption.	SAFR 2011

NHS Board	Best Practice	Benefits	SAFR Year
Energy & Environmental Management			
NHS Grampian	A new energy centre was commissioned to serve the current and future energy requirements of the Foresterhill Health Campus whilst also taking advantage of modern and more efficient CHP plant, biomass boiler and three dual fuel boilers.	This award winning project was designed to provide a 16% reduction in CO_2 emissions and a 39% reduction in energy costs.	SAFR 2012
NHS Greater Glasgow & Clyde	Glasgow undertook a review of its central laundry facilities in 2009 with the intention of developing more efficient processes for the recycling of the trade effluent and creating a sustainable use of both water and gas energy resources.	It has managed to achieve 70% water and 95% heat recovery from introducing these new processes, with an expected pay back of less than 3 years.	SAFR 2011
NHS Tayside	Ninewells in Dundee implemented an ongoing programme of investment in energy efficient lighting schemes to reduce energy waste and improve the building environment.	The scheme has contributed significantly to energy, carbon and financial savings, as well as enhancing comfort levels for patients and staff. The schemes are expected to have a payback of between 7 to 10 years.	SAFR 2011
NHS Ayrshire & Arran	A wide range of environmental, sustainable and renewable technologies were integrated into the new Girvan Community Hospital in order to minimise its environmental impact and reduce future revenue consequences without compromising on quality or functional suitability.	It was estimated that the building performance would lead to a reduction of 3% of NHS Ayrshire & Arran's current CO_2 emissions and was also expected to receive income from the installed wind turbine.	SAFR 2011
NHS Lothian	Installation of electrical supply voltage optimiser technology to reduce electricity and operating costs by reducing incoming power to more accurately match the electrical loading of the equipment on site thus reducing the carbon foot print.	Savings in electrical energy consumption were expected to be between 9 – 12%.	SAFR 2011

NHS Board	Best Practice	Benefits	SAFR Year
IM&T & eHealth			
NHS Lothian	NHS Lothian was one of the first Boards to introduce a single 'cradle to grave' electronic patient records system in Scotland incorporating 'Fairwarning Privacy Surveillence Solution'. This covered approximately 850,000 patients and 1.3m records. Part of this initiative was to encrypt all 4000 laptops and USB devices in order to prevent data loss.	This was part of the drive to prevent security breaches and data loss, and thus be able to provide assurance to patients that their data was in safe hands.	SAFR 2013
NHS Forth Valley	NHS Forth Valley was one of the leading NHS Boards in introducing electronic bed management into the hospital ward environment through its eWard system.	It provides medicines reconciliation on admission and discharge which improves patient safety and streamlines patient discharge medication and thus minimising delays to discharge. The bed management module improves the management of hospital capacity and discharge planning, thus removing the need for 'floor walking'.	SAFR 2012
Other Assets			
NHS Lothian	NHS Lothian expanded a pilot study in 2012 to create a centralised transport hub to coordinate all inpatient transport needs.	This resulted in all transport resources being used more efficiently and there is now stricter control over the booking of private ambulances.	SAFR 2014
Resource Efficient Scotland and the Scottish Futures Trust (SFT)	These two organisations are jointly delivering a project to work with various public sector organisations in Scotland who are in the process of decommissioning buildings, to understand the options available for re-use and redeployment of mobile assets.	Anticipated benefits include improved data on volume, tonnage and cost of the disposal of mobile assets within the public sector, and to enable better decisions to be made on the potential for re-use or redeployment of these assets rather than disposal.	SAFR 2014

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