

APPENDIX 1a – Letter of Support from Commissioners

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To follow – mid March 2016

APPENDIX 1b – Full Analysis of SaTH Patient Activity

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2014/15 out-turn

Services	Inpatient/Day Case	Non Elective and Maternity	Outpatient
Diagnostics	0	0	588
Emergency Care	0	1,088	3,486
Head and Neck & Ophthalmology	7,418	1,083	93,351
Medicine	2,893	24,266	101,639
Musculoskeletal	3,748	3,526	55,051
Surgical, Oncology & Haematology	30,527	8,545	89,058
Theatres, Anaesthetics & Critical Care	0	1	591
Therapies	0	0	13,150
Women and Children's	2,845	15,785	44,892
Total	47,431	54,294	401,806

APPENDIX 1c – Interim Estates Strategy

The Shrewsbury and Telford Hospital NHS Trust

Updating the Trust's Estates Strategy

March 2016

All NHS Trusts have a statutory responsibility for the management of their assets. A well-developed estate strategy that meets the needs of the organisation is an essential element of that management.

The Trust's estate strategy now needs to be updated to reflect the Trust's current position: a Strategic Outline Case for the Sustainable Services Programme that has been approved by the Trust Board; and the outcome of the Facet Surveys for both the Princess Royal and Royal Shrewsbury Hospitals.

Background

In 2012, as part of the Full Business Case submission for the Future Configuration of Hospital Services, the Trust's Estates Strategy was updated.

It was noted at this time that a new Estates Strategy would need to be developed following the completion of the works and moves described within this business case; predominantly the construction and opening of the Shropshire Women and Children's Centre at the Princess Royal Hospital (PRH) in September 2014.

Similarly during 2015, the Trust identified that the Facet Surveys of 2007 needed to be revised. This work was commissioned and was undertaken at the end of 2015. The summary reports are attached.

Current Position

Whilst the Trust's service challenges are primarily focussed around its workforce in particular clinical areas (A&E, Critical Care, Acute Medicine), day-to-day service provision and service development and improvement is hampered by the current estate. This is for a number of reasons and includes:

- A lack of formal 'reserve space' that would support surge capacity, maintenance or the testing of new delivery models
- The situation where services have 'out grown' their areas meaning that any service change is difficult
- A gap in the required numbers of facilities such as toilets and bathrooms to what is currently provided

The Trust therefore needs an Estate Strategy that clearly details the current estate, the subsequent challenges this generates, the estates response to new and emerging models of care and service configurations and a plan to address the backlog maintenance across both hospital sites.

Plan and Approach

The Trust will now develop a new Estates Strategy for 2016-2021. This will respond to the developing business cases for the Sustainable Services Programme and the areas identified above.

The Estates Strategy will be developed in partnership with clinical and corporate teams and will be submitted to the Sustainability Committee in May/June 2016 ahead of ratification by the Trust Board.

**REPORT FOR SHREWSBURY AND
TELFORD HOSPITAL NHS TRUST—
7 FACET SURVEYS SUMMARY
REPORT
PRINCESS ROYAL HOSPITAL**



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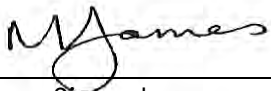
As part of this process, your deliverable has been checked and authorised for issue, as evidenced by the approval record below.

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REPORT FOR SHREWSBURY AND TELFORD HOSPITAL NHS TRUST – 7 FACET SURVEYS SUMMARY REPORT- PRINCESS ROYAL HOSPITAL

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1.0 KEY POINTS

The document provides an Executive Summary of the findings of the Seven Facet Property Appraisal undertaken at Princess Royal Hospital covering Physical Condition, Statutory, Function, Quality, Space, Disabled Access and Environmental Management.

It should be noted that costs identified within this document and within the MICAD system are net costs only and do not include for Project Management, Contractors allowance for overheads and profits, traveling time and transport, inspection of the works and VAT. Approximately, an additional 50% uplift will need to be applied to cover these costs (Appendix A provides an explanation of the breakdown of this uplift cost)

Key points are summarised below, further detail can be found on the following pages of this report and within the MICAD system.

Condition

The Estate is overall in a generally fair condition with total costs for a 10 year lifecycle of £17,310,032; this consists of a total of £9,094,895 of condition items which require immediate attention (Backlog), works which are required within the years 1 to 5 period (Impending Backlog) total £4,189,534 and a remaining £4,025,603 being items which require longer term lifecycle works within the 6-10 year period.

Backlog items have been risk assessed and total costs adjusted in accordance with the NHS document (A Risk Based Methodology for Establishing and Managing Backlog) to give a total risk adjusted backlog cost of £6,149,897 a significant number of items identified during the survey have been risk assessed as Significant or High risk resulting in a fairly high risk adjusted backlog cost.

Statutory

There are statutory items that require immediate remedial action in the majority of blocks with a total risk adjusted backlog cost of £129,816 for the whole site. The majority of costs under the statutory facet relate to fire safety with some costs for asbestos management works.

Function, Quality and Space

These three Facets have been assessed holistically with costs primarily going into the Functional Suitability facet; this is due to issues identified during the survey relating to layout, and facilities being unsuitable for current service users, which can lead to associated problems with the quality of the environment and space provision.

Defects have been noted to all facets as applicable however where items are primarily felt to be Functional suitability issues costs will be included in this facet only and this results in a total cost for function of £5,307,000, £34,965 for quality and a £0 cost for space.

Disabled Access

The accessibility of the physical environment for disabled users has been assessed with a cost of £141,890 being identified. Many of the costs identified are associated with sanitary provision and evacuation.

Environmental Management

No costs have been identified under the environmental management facet which is reported at a site level only. Energy performance is classified as a B under Estate code benchmarking and water consumption was overall felt to be well managed.

Some management tasks were noted to be required including review and board approval of energy, waste and transport policies.

Total costs for the entire surveyed Estate for all 7 facets are £23,047,577 for a 10 year programme (these are net costs).

2.0 INTRODUCTION

A seven Facet Property Appraisal was carried out at the Princess Royal Hospital site during October - November 2015. The survey covered the Condition of the properties, (including the fabric of the buildings, fixtures and fittings and the electrical and mechanical installations), Statutory Compliance, Space Utilisation, Functional Suitability, Quality of Environment, Disabled Access and Environmental Management.

The results are presented in tabular form on MICAD spreadsheets with total costs and Risk analyses of the Condition and Statutory costs.

2.1 AIM

The Aim of the Executive Summary is to identify the major defects and failures identified during the survey relating to the Facets. This will assist in highlighting particular trends or patterns in the problems identified, thus assisting in the planning of future maintenance, refurbishments, Estate Strategies or rationalisation of facilities and the way they are utilised to maximise the benefit to the Service Users and Staff. Conclusions and Recommendations relating to the management of the Estate are also included, based solely on the results of the survey and not clinical or other requirements.

2.2 SURVEYED PROPERTIES

The following properties were surveyed as part of this commission:

Block Identifier	Block Name
PRHAP	Block AP-Apley Clinic
PRHGG	Block GG- Grounds
PRHMA1	Block MA1-Sub-Station Medical Air Plant Room
PRHNA	Block NA-Boiler House/ Wrekin Maternity & Endoscopy
PRHNB	Block NB-Loading Bay/Sub Station 1 & 2
PRHNC	Block NC-Estates/MES/Stores & Catering
PRHND	Block ND - Pharmacy/Admin
PRHNE	Block NE - Admin Hub/Path Lab
PRHNF	Block NF - Apley Ward/AMU & Theatres 1 to 5
PRHNG	Block NG - Wards 12/14 & 19
PRHNH	Block NH Children's OP
PRHNJ	Block NJ - GP X RAY/Fracture Clinic & Plaster Room
PRHNK	Block NK - Ward 22 & Ward 24
PRHNS	Block NS - Mortuary/Path Lab/Admin Hub
PRHRO1	Block RO1-Sub-Station RO Plant
PRHRS	Block RS- Residences (1-8)
PRHRS	Block RS- Residences (9-17)
PRHRT	Block RT - Doctors Mess
PRHSB	Block SB - Paul Brown/ Wards 15 & 16
PRHSC	Block SC - Rehabilitation/ Education
PRHSD	Block SD - Main Entrance/ Education
PRHSE	Block SE - Outpatients/ Ward 4 & Renal
PRHSF	Block SF - Outpatients/Dental/ITU & HDU
PRHSG	Block SG - X Ray/Wards 06 & 07/CCU
PRHSH	Block SH - A&E/ Wards 08 & 09/Head & Neck
PRHSJ	Block SJ - Day Ward/Theatres 6,7 & 8/Wards 10 & 11
PRHSK	Block SK - Opthamology
PRHSS1	Block SS1-Sub-Station Generator Plant 3
PRHSS1	Block SS1-Sub-Station Generator Plant 4
PRHST	Block ST - Street
PRHT1	Block HT1-Sub-Station Transformer & RMU 5

Section 3 provides brief summaries of defects at the individual blocks and sites surveyed.

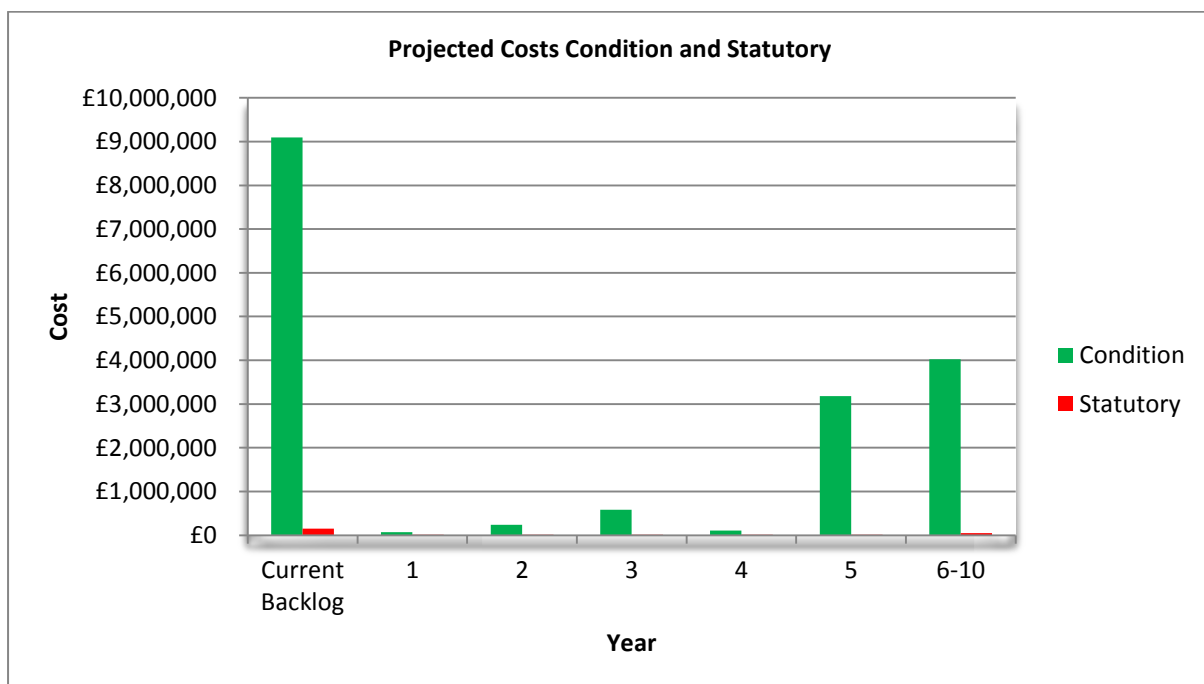
3.0 PROJECTED COSTS

In this section an overall analysis of costs for the whole surveyed Estate is provided followed by a summary of costs by site.

3.1 Projected Costs Condition & Statutory

The total projected cost for the rectification of all items identified under Condition is £17,310,032. The total cost for Statutory Compliance is £253,690. An indication of the projected costs per year is shown in Chart 1 below.

Chart 1 - Condition and Statutory Costs (Years 0 - 10)



A breakdown of the various ratings for both Condition and Statutory are shown in Charts 2 and 3 below.

Chart 2

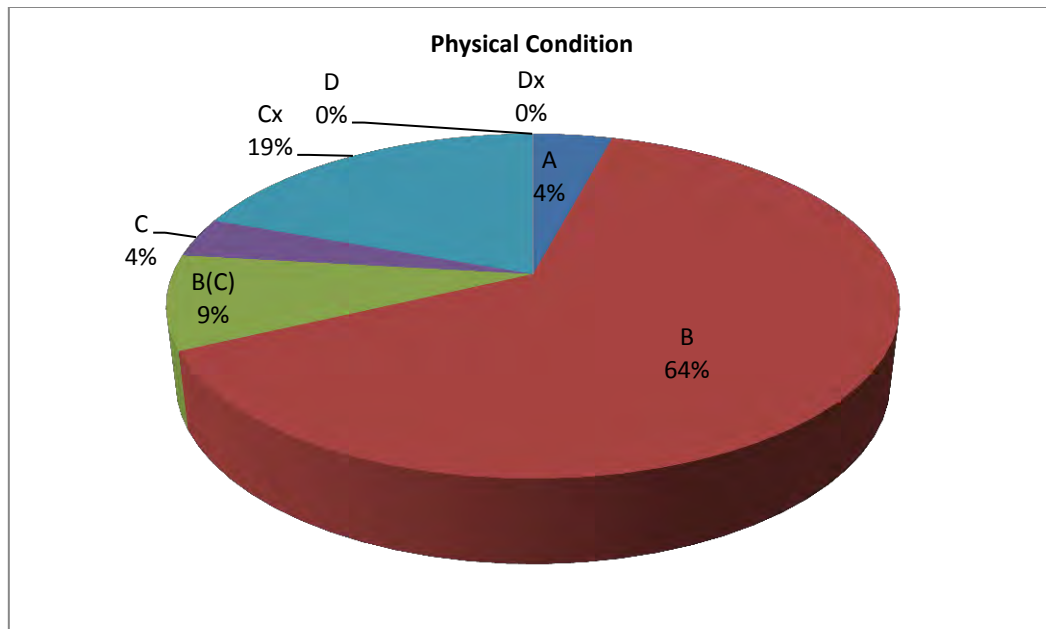
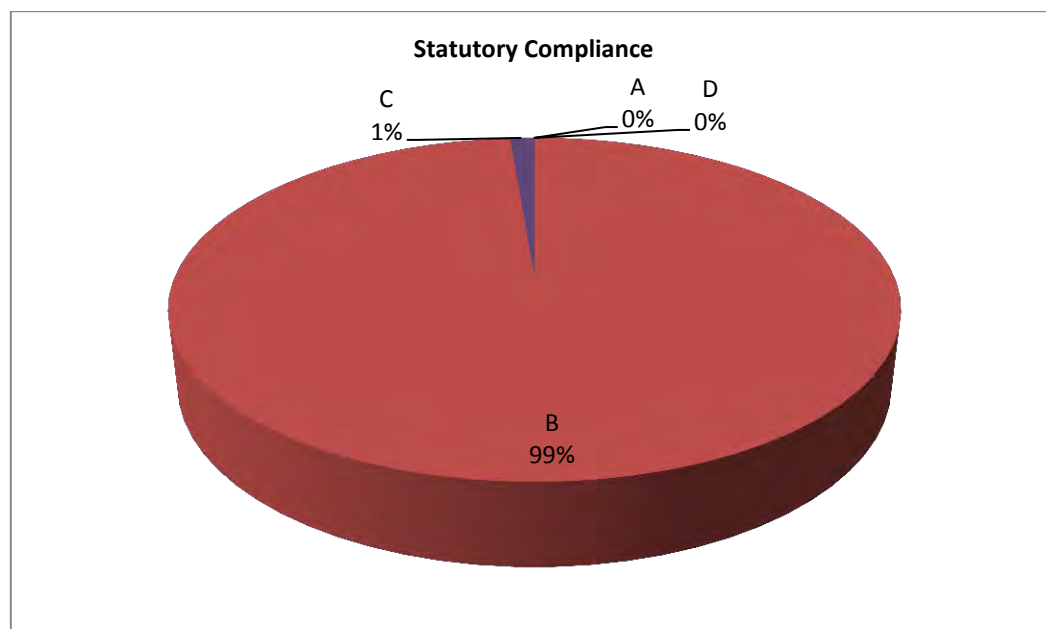


Chart 3



Where defects were duplicated in Condition or Statutory Compliance, e.g. for inadequate heating, the costs were only recorded under one facet. In the Facet spreadsheet where the duplicated costs are not entered, the alternative location of the cost is displayed in the 'Remedial Action' column.

Please note these are net costs only and do not include for Project Management, Contractors allowance for overheads and profits, traveling time and transport, inspection of the works and VAT. Approximately, an additional 50% uplift will need to be applied to cover these costs (See Appendix A for further details).

3.2 Backlog and Impending Backlog

Items which have been assessed by the surveying team as in a condition which requires immediate rectification have been scored as a C rating or less these are classified as Backlog maintenance items which require action immediately, for items which are currently in a satisfactory condition but were felt likely to require attention within the next 5 years these have been scored as a B(C) condition and these items are known as Impending Backlog items. (See Appendix B for further details on rankings).

Examples of the difference between backlog and impending backlog can be seen to the Site Infrastructure report deteriorated corroded drainage is in need of immediate attention and so is ranked as C and has a backlog cost year 0. On the same report additional secondary and tertiary supplies to VIE compound are recommended to improve resilience this is not a backlog item but is recommended for attention at year 5 this therefore is an impending backlog item ranked B(c).

3.3 Backlog Maintenance Costs (Costs Year 0)

Backlog Maintenance and Statutory costs (items which have been identified for immediate rectification) are graded as Low, Moderate, Significant and High Risk. The division of Low, Moderate, Significant and High Risks plus the calculation for Risk Adjusted totals were carried out as per the NHS Estates guide 'A Risk-Based Methodology for Establishing and Managing Backlog'. The Risk Adjusted totals take into account the perceived 'Risk' of the defect in terms of 'Likelihood' and

'Severity', the estimated cost for rectification and, in the case of Low or Moderate Risks, the estimated remaining life of the building. For Low and Moderate Risks the projected costs are divided by the estimated life expectancy of the building as prescribed in the Guide, for Significant and High Risk items no adjustment is made. (See Appendix D for the risk assessment process and matrix).

The Risk adjusted backlog formula is based on the premise that the eradication of safety-critical backlog will have greater impact on the Risk Adjusted figure than non-critical backlog (and hence will focus attention on reducing 'High' and 'Significant' risk sub-elements). Similarly, the higher the remaining life of each building/block the longer the period in which the lower risk sub-elements can be addressed and therefore the lower the risk adjusted backlog figure.

Within the MICAD system no building remaining life is normally assigned to Site Infrastructure, the result is that when running Risk Adjusted Backlog reports, risk totals for Site Infrastructure are not taken into account. To remedy this issue a building remaining life of 20 years has been assigned to Site Infrastructure to ensure all backlog risk items are included in the calculations.

The total Backlog cost, for both Condition and Statutory (including costs for site infrastructure) are shown in Table 1 below.

Table 1 (Backlog costs year 0)

Risk Totals (Condition)		Risk Totals (Statutory)	
Low Risk Totals	£57,761	Low Risk Totals	£0
Moderate Risk Totals	£2,963,142	Moderate Risk Totals	£24,600
Significant Risk Totals	£5,910,167	Significant Risk Totals	£129,090
High Risk Totals	£163,825	High Risk Totals	£0
Total Backlog Cost	£9,094,895	Total Backlog Cost	£153,690
Total Risk Adjusted Backlog Cost	£6,149,897	Total Risk Adjusted Backlog Cost	£129,816

The figures given above for the 'Low', 'Moderate', 'Significant' and 'High' Risk totals are the total sums taken from the 'Condition' and 'Statutory' spreadsheets. The 'Total Risk Adjusted Backlog Costs' are the totals for all the 4 Risk groups, but divided by the remaining life of the building for 'Low' and 'Moderate' risks only, hence the Total Risk Adjusted Backlog Cost appears less than the sum of the 4 Risk Groups (See Appendix C for the risk adjusted backlog formula.

An example of a significant risk item is found to the Site infrastructure report -No mains water ring installed so issues regarding resilience / continuity of supply. Water storage is provided but is considered inadequate (6-8 hours of supply).

An example of a low/moderate risk item would be decoration or floor finishes.

A breakdown of the backlog costs, by risk for both Condition and Statutory are shown in Charts 4 and 5 below.

Chart 4

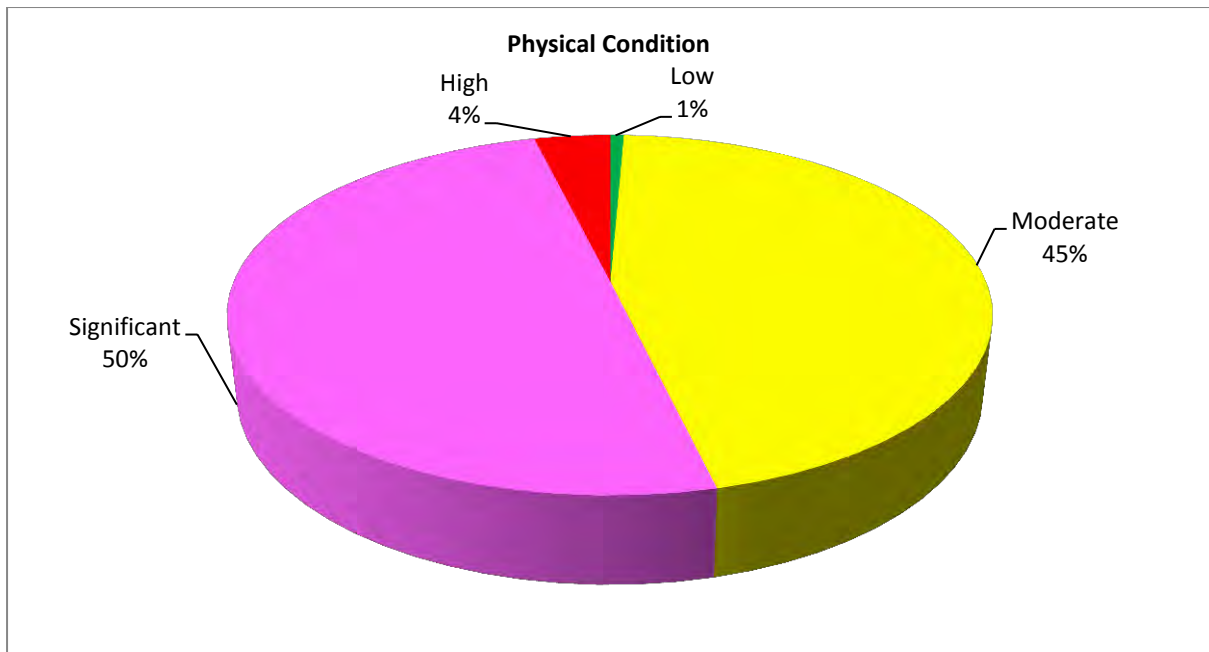
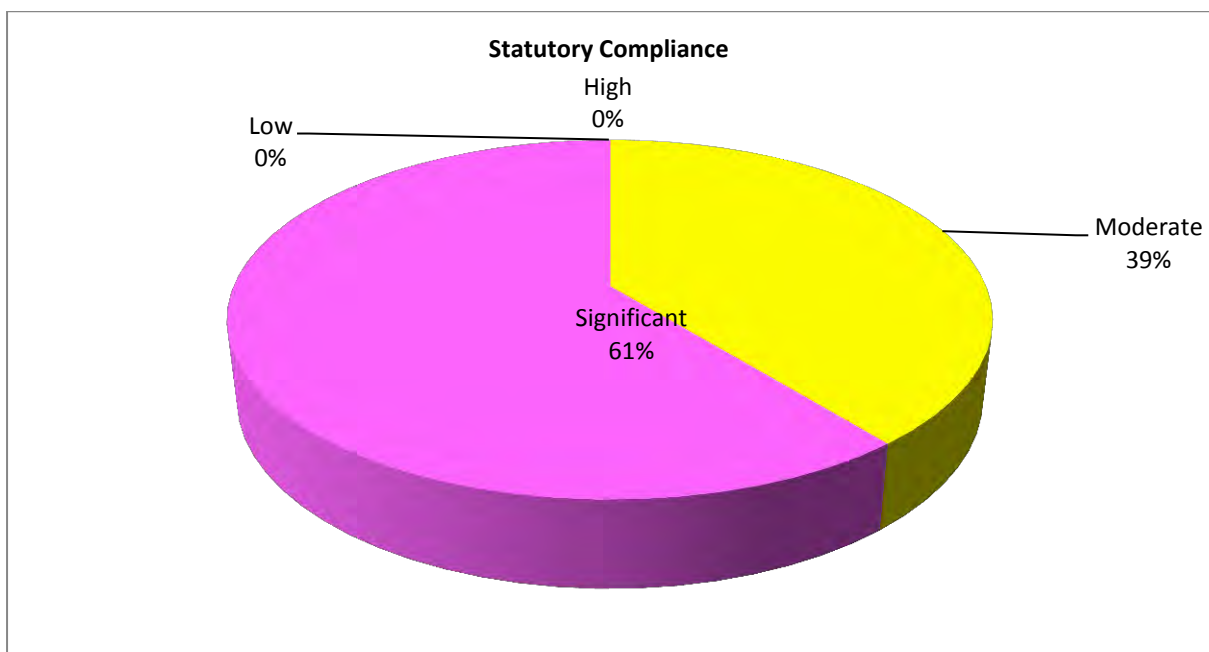


Chart 5



3.4 Impending Backlog costs

Impending backlog relates to B(C) sub-elements; sub elements currently in Condition B that will fall below B within 5 years, assuming no major investment in the interim.

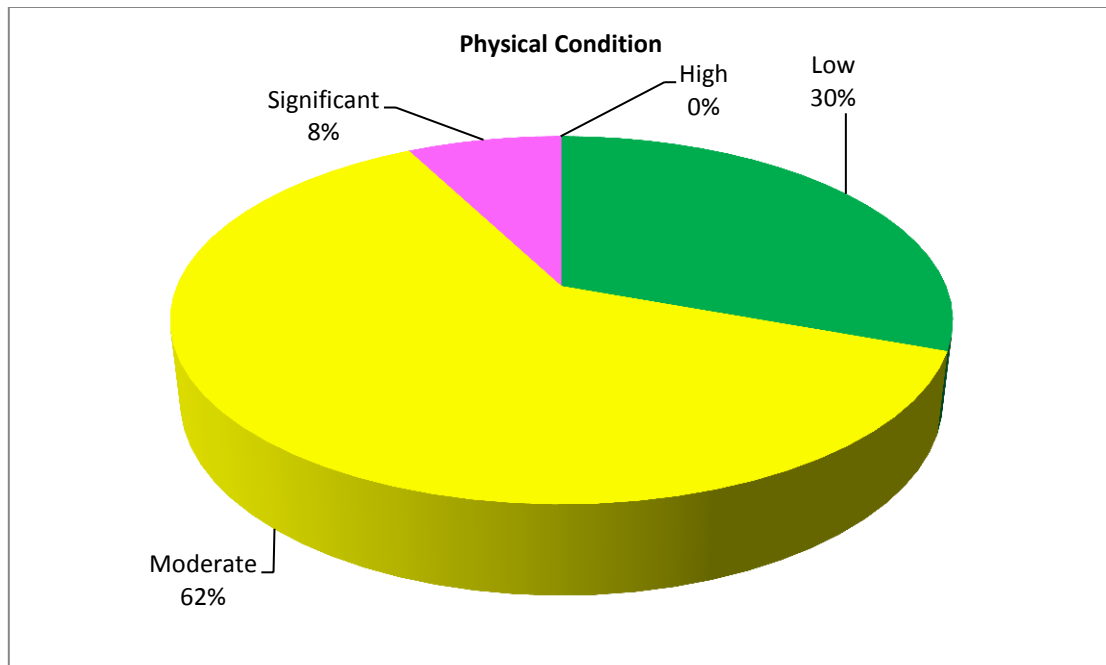
The total Impending Backlog costs, for Condition (including costs for site infrastructure) are shown in Table 2 below.

Table 2 (Impending backlog costs years 1-5)

Impending Backlog By Risk (Condition)	
Low Risk Totals	£1,035,243
Moderate Risk Totals	£2,689,015
Significant Risk Totals	£465,276
High Risk Totals	£0
Total Impending Backlog	£4,189,534

A breakdown of the impending backlog, by risk for Condition is shown in Chart 6 below.

Chart 6



3.5 Lifecycle Costs Years 6-10

Condition items that may require works within the 10 year life cycle in years 6-10 are scored as a B with a cost designated in the year 6-10 column, common instances where this may occur includes decoration which has a typical lifecycle of 7 years, but other instances may include items that in the surveyors judgement will reach the end of design life and require upgrade.

The total cost for the entire surveyed estate for items in years 6-10 is £4,025,603.

3.6 Projected Costs Function, Quality, Space, Environment & DDA

A breakdown of the Facet Totals for Functional Suitability, Quality, Space, Environment and Disabled Access are shown in Table 3 below. *Note that Defects identified under these facets are not assigned a year for remedial action to be undertaken and no risk assessments are undertaken.* (See Appendix B for further details)

Table 3

	Total Cost
Functional Suitability	£5,307,000
Space Utilisation	£0
Quality	£34,965
Environmental Management	£0
Disabled Access	£141,890
TOTAL	£5,483,855

3.6.1 Function, Quality and Space

The Function, Quality and Space facets are closely related and often areas which are functionally unsuitable also have issues related to space utilisation and quality, to avoid double costing of defects therefore costs have only been included to one facet which is usually Functional Suitability with the majority of costs coming under the Critical Dimensions Element. This is often due to changes in service users and old estate which it is difficult to reconfigure to provide suitable facilities for today's work practices. A typical example of this is current recommendations are for a maximum of 4 beds to a multi-bed bay with ensuite facilities, many ward areas do not currently meet this criteria having 6 bed bays and no ensuite facilities for example to blocks SG and SJ. Another example is that of changes in equipment use and the reliance on larger equipment/different operational requirements that cannot easily be accommodated within current layout an example of this is Block ND Pharmacy

where there is inadequate provision of storage facilities to allow the required quantities of pharmaceuticals to be stored. Another example is to X-ray where some rooms are too small for new X-ray equipment.

The surveyor takes an overall view of the functional area and judges whether it will be possible to provide adequate facilities within the current space provided and would therefore allow for reconfiguration, if it was felt that there was an inadequate space provision and combined reconfiguration and extension cost would be allowed. In some cases if the location means that extension is not possible in that location then a cost for a new build provision will be provided.

In many cases during the survey it was felt that overall the functional suitability was poor therefore the majority of the costs are within this facet. The costs within the Quality facet relate primarily to comfort engineering issues i.e. heating and ventilation and also to issues relating to appearance of the area.

3.6.2 Environmental Management

The environmental management facet is assessed at site level only and examines environmental management of the Estate.

Benchmarking of energy performance in accordance with Estatecode benchmarks gave a performance of 62GJ/100m³ which is a B ranking. In addition water usage was monitored and felt to overall be well managed.

Environmental policies including energy, waste and transport were all under review and this process needs to be completed and board approval obtained.

3.6.3 Disabled Access

The access into the physical environment was assessed, survey recommendations are in accordance with published guidance including relevant Building Regulations, British Standards and other recommended access guidance for example published by UK government sectors and other disability rights bodies.

Where costs for major reconfiguration, extension or rebuild have been included to Functional suitability no costs have been included to the Disabled Access facet to avoid double costing.

Many defects identified relate to evacuation primarily fire alarm systems, other issues commonly identified are the provision of adequate sanitary facilities for example Block NA Maternity has no disabled sanitary facilities.

3.7 Total Costs

A summary of total costs for the whole surveyed Estate are shown in Table 4 below.

Table 4

	Total Cost
Physical Condition	£17,310,032
Statutory Compliance	£253,690
Functional Suitability	£5,307,000
Space Utilisation	£0
Quality	£34,965
Environmental Management	£0
Disabled Access	£141,890
TOTAL	£23,047,577

A breakdown of total costs per building for the whole surveyed Estate is shown below.

Block Number	Name	Physical Condition		Statutory Compliance		Function	Quality	DDA	Total current Backlog	Total Costs
		Backlog Year 0	Impending years 1-10	Backlog Year 0	Impending years 1-10					
	SITE INFRASTRUCTURE	£201,042	£370,280	£129,390	£100,000	n/a	£0	£8,100	£330,432	£808,812
PRHAP	AP Apley Clinic	£31,223	£34,433	£4,900	£0	£1,500	£5,165	£3,600	£36,123	£80,821
PRHGG	Grounds	£0	£0	£0	£0	£0	£0	£0	£0	£0
PRHMA1	Sub-Station Medical Air Plant Room,	£674	£824	£0	£0	n/a	n/a	n/a	£674	£1,498
PRHNA	Block NA -Boiler House/ Wrekin Maternity & Endoscopy	£73,807	£667,011	£10,500	£0	£0	£9,500	£19,900	£84,307	£780,718
PRHNB	NB - Loading Bay/Sub Station 1 & 2	£51,002	£66,728	£0	£0	n/a	n/a	n/a	£51,002	£117,730
PRHNC	Block NC - Estates/MES/Stores & Catering	£587,625	£808,547	£0	£0	£0	£0	£7,240	£587,625	£1,403,412
PRHND	Block ND - Pharmacy/Admin	£189,687	£107,653	£0	£0	£164,000	£0	£2,970	£189,687	£464,310
PRHNE	Block NE - Admin Hub/Path Lab	£415,663	£534,463	£100	£0	£150,150	£8,800	£9,260	£415,763	£1,118,436
PRHNF	Block NF - Apley Ward/AMU & Theatres 1 to 5	£729,059	£438,675	£0	£0	£727,500	£0	£1,220	£729,059	£1,896,454
PRHNG	Block NG - Wards 12/14 & 19	£0	£99,529	£0	£0	£0	£0	£0	£0	£99,529
PRHNH	Block NH childrens OP	£0	£37,077	£0	£0	£0	£0	£150	£0	£37,227
PRHNJ	Block NJ - GP X RAY/Fracture Clinic & Plaster Room,	£0	£115,374	£4,500	£0	£150,500	£2,000	£4,580	£4,500	£276,954
PRHnk	Block NK - Ward 22 & Ward 24	£0	£166,998	£0	£0	£0	£0	£0	£0	£166,998
PRHNS	Block NS - Mortuary/Path Lab/Admin Hub	£242,562	£166,297	£0	£0	£50,000	£0	£6,000	£242,562	£464,859
PRHRO1	Sub-Station RO Plant	8,514.00	£9,400	£0	£0	n/a	n/a	n/a	£8,514	£17,914
PRHRS	RS Residences (1-8)	108,874	£207,759	£0	£0	£0	£0	£1,420	£108,874	£318,053
PRHRS	Block RS Residences (9-17)	222,824	£172,842	£0	£0	£0	£0	£11,120	£222,824	£406,786
PRHRT	Block RT - Doctors Mess	£43,555	£28,388	£3,300	£0	£0	£0	£7,270	£46,855	£82,513
PRHSB	Block SB - Paul Brown/ Wards 15 & 16	£25,296	£651,379	£0	£0	£65,000	£0	£1,550	£25,296	£743,225
PRHSC	Block SC - Rehabilitation/ Education	£800,297	£432,151	£0	£0	£0	£0	£13,500	£800,297	£1,245,948
PRHSD	Block SD - Main Entrance/ Education	£123,324	£336,710	£0	£0	£0	£0	£1,920	£123,324	£461,954
PRHSE	Block SE - Outpatients/ Ward 4 & Renal,	501,588	£352,071	£0	£0	£374,500	£0	£9,050	£501,588	£1,237,209
PRHSF	Block SF - Outpatients/Dental/ITU & HDU	£710,265	£371,206	£1,000	£0	£725,000	£0	£10,440	£711,265	£1,817,911
PRHSG	Block SG - X Ray/Wards 06 & 07/CCU	£823,952	£365,177	£0	£0	£1,250,050	£0	£10,750	£823,952	£2,449,929
PRHSH	Block SH - A&E/ Wards 08 & 09/Head & Neck	£629,038	£424,185	£0	£0	£535,000	£0	£1,860	£629,038	£1,590,083
PRHSJ	Block SJ - Day Ward/Theatres 6,7 & 8/Wards 10 & 11	£987,613	£325,493	£0	£0	£1,113,800	£9,500	£4,970	£987,613	£2,441,376
PRHsk	Block SK - Opthamology	£0	£25,308	£0	£0	£0	£0	£3,470	£0	£28,778
PRHSS1	Sub-Station Generator Plant 4	£674	£3,839	£0	£0	n/a	n/a	n/a	£674	£4,513
PRHSS1	Sub-Station Generator Plant 3 ,	£674	£73,119	£0	£0	n/a	n/a	n/a	£674	£73,793
PRHST	Block ST - Street	£1,585,389	£821,547	£0	£0	£0	£0	£1,550	£1,585,389	£2,408,486
PRHT1	Sub-Station Transformer & RMU 5,	£674	£674	£0	£0	n/a	n/a	n/a	£674	£1,348
	TOTAL	£9,094,895	£8,215,137	£153,690	£100,000	£5,307,000	£34,965	£141,890	£9,248,585	£23,047,577

4.0 SITE AND BLOCK SUMMARIES

The following provides a summary of significant issues found at Princess Royal Hospital, for further details on these and other issues identified reference should be made to individual reports within the MICAD system.

4.1 Site Infrastructure

4.1.1 Condition

- Drainage is deteriorated in places, corroded due to age, frequent blockages throughout site
- Many uneven road and path surfaces
- No ring installed so issues regarding resilience / continuity of supply to steam/condensate systems
- No mains water ring installed so issues regarding resilience / continuity of supply. Water storage is provided but is considered inadequate (6-8 hours of supply).

4.1.2 Statutory

- Fire risk assessments required
- Compartmentation surveys required
- On-going management of asbestos
- Remedial works required to lightning protection systems

4.1.3 Quality

- No defects noted

4.1.4 Disabled Access

- Improvements to disabled parking and signage
- Uneven surfaces create trip hazards
- Poor contrast to bollards to some areas

4.1.5 Environment

- Policies in place but some review and approval required to energy, waste and transport policies
- Lack of parking provision

4.2 Block AP-Apley Clinic

4.2.1 Condition

- Aged boiler plant and calorifiers
- Aged heating systems
- Aged electrical systems including distribution boards
- Poor emergency lighting

4.2.2 Statutory

- Fire alarm system manually operated bell only (no fire alarm system)
- Unguarded radiators to public areas

4.2.3 Function, Quality and Space

- No panic alarm (nurse Call) system
- Poor signage
- Some inappropriate floor finishes

4.2.4 Disabled Access

- Disabled WC needs improvement
- Narrow corridors make access difficult
- No lowered section to reception

4.3 Block GG- Grounds

4.3.1 Condition

- See site infrastructure for defects

4.3.2 Statutory

- See site infrastructure for defects

4.3.3 Function, Quality and Space

- See site infrastructure for defects

4.3.4 Disabled Access

- See site infrastructure for defects

4.4 Block MA1-Sub-Station Medical Air Plant Room

4.4.1 Condition

- Timber fascias soffit fair, treatment flaking and deteriorated.
- Aged/weathered external light fittings

4.4.2 Statutory

- No defects noted

4.5 Block NA-Boiler House/ Wrekin Maternity & Endoscopy

4.5.1 Condition

- Aged water treatment plant
- 3 no. DX units serving scan rooms ageing (c. 2002) reported to be prone to break down
- Aged electrical systems level 1
- Aged distribution boards to boiler room

- R/o unit in the boiler house obsolete and on last legs (on risk register)
- Pressure units undersized
- Nurse call system obsolete (all n/call system in building requires upgrading)

4.5.2 Statutory

- No defects noted

4.5.3 Function, Quality and Space

- Poor sound insulation to scanning rooms
- Air conditioning required to one scan room

4.5.4 Disabled Access

- No accessible sanitary facilities to Maternity Ward
- Inadequate vision panels to corridor doors
- Alarms are audible only
- Intercom located too high and it is not clear if the call has been answered

4.6 Block NB-Loading Bay/Sub Station 1 & 2

4.6.1 Condition

- Original electrical systems require replacement
- Original emitters in poor condition in corridor and loading bay area and bed store, including high level Biddle unit heaters.
- Aged distribution boards

4.6.2 Statutory

- Painted floor warning markings worn in loading bay and main corridor.

4.7 Block NC-Estates/MES/Stores & Catering

4.7.1 Condition

- Aged emergency lighting
- Aged catering switchgear
- Aged electrical systems
- Aged servery equipment
- Aged cold room chillers
- Aged heating systems

4.7.2 Statutory

- No defects noted

4.7.3 Function, Quality and Space

- No defects noted

4.7.4 Disabled Access

- No disabled toilets to restaurant
- Alarms are audible only

4.8 Block ND - Pharmacy/Admin

4.8.1 Condition

- Timber fascias soffit fair, treatment flaking and deteriorated.
- Roof leaks starting to appear
- Aged suspended ceilings
- Blitzer condensing units for cold room require upgrade and coldroom requires refurbishment
- Aged electrical systems
- Aseptic suite AHU requires UPS installing

- Aged AHU to aseptic suite (all AHUs aged and needs replacing bar W&C build and ward 17)

4.8.2 Statutory

- No UPS provided for Pharmacy Aseptic Suite air handling unit.

4.8.3 Function, Quality and Space

- Lack of storage space in department to store drugs, not able to keep the necessary supplies required by guidance
- Aseptic suite is no longer fit for purpose
- Reception area is vulnerable, there is no security screen and the desk is not manned
- Rear door to stores is on a combination lock and vulnerable to intruders

4.8.4 Disabled Access

- No disabled WC provided
- Alarms are audible only
- No lowered section to reception desk

4.9 Block NE - Admin Hub/Path Lab

4.9.1 Condition

- Substation 2 original 500kVA transformers and ring main units require upgrade, along with associated original cabling / switchgear
- Aseptic suite AHU requires UPS installing.
- Aged electrical systems
- Aged laboratory benching
- Aged suspended ceilings
- Aged floor finishes
- Aged heat emitters

4.9.2 Statutory

- No voltage warning sign on electrical switch cupboard

4.9.3 Function, Quality and Space

- Path labs area now too small for current demand
- There are no training facilities
- Rear door does not lock
- No air conditioning in Pathology lab, compromising functioning of machines and equipment.

4.9.4 Disabled Access

- No accessible sanitary facilities
- No lowered section to reception desk
- Alarms are audible only

4.10 Block NF - Apley Ward/AMU & Theatres 1 to 5

4.10.1 Condition

- Timber fascias soffit fair, treatment flaking and deteriorated.
- Leaks staring to appear on roof
- Substation 2 LV switch room - main Merlin Gerin LV switchboard is original and requires upgrade
- Aged electrical systems
- Aged nurse call
- Some aged suspended ceilings
- Aged floor finishes
- Oxygen and vacuum services in Apley Ward are generally poor with inadequate bed coverage and requires upgrade
- 5 theatres lights aged and will require replacing soon

- All AHU plant aged requires replacing
- No UPS & IPS to theatres only backed by main generators
- Med gas alarm required upgrading (on risk register)

4.10.2 Statutory

- No defects noted

4.10.3 Function, Quality and Space

- Theatres are generally too small for current recommendations, however they are manageable
- There are only 6 recovery spaces for 5 theatres these spaces are also cramped
- There is not enough equipment storage space, with many items cluttering up main corridors
- HDU bay is too short, curtain cannot be closed due to door
- Poor quality heating and ventilation systems

4.10.4 Disabled Access

- Intercom is located too high
- Alarms are audible only

4.11 Block NG - Wards 12/14 & 19

4.11.1 Condition

- Lifecycle décor
- New part of W&C build but infrastructure feeding ward is of existing build hence only essential supply backed by generator
- Drains of existing aged pipe work

4.11.2 Statutory

- No defects noted

4.11.3 Function, Quality and Space

- No defects noted

4.11.4 Disabled Access

- No defects noted

4.12 Block NH- Children's OP

4.12.1 Condition

- Lifecycle décor
- New part of W&C build but infrastructure feeding ward is of existing build hence only essential supply backed by generator
- Drains of existing aged pipe work

4.12.2 Statutory

- No defects noted

4.12.3 Function, Quality and Space

- No defects noted

4.12.4 Disabled Access

- Intercom too high for wheelchair users

4.13 Block NJ - GP X RAY/Fracture Clinic & Plaster Room

4.13.1 Condition

- Ageing flooring
- Lifecycle décor
- Ageing air conditioning units

4.13.2 Statutory

- No defects noted

4.13.3 Function, Quality and Space

- Many parts of the department are now overcrowded - waiting area, main consulting room corridor (one corridor cannot be used by patients due to placement of clinical waste bins)
- Consulting room and examination rooms are generally too small
- X-ray room off waiting area is small therefore only has limited use
- No panic alarm system
- Privacy to some changing cubicles is compromised by smokers congregating outside

4.13.4 Disabled Access

- No accessible changing facilities in X Ray
- Inadequate vision panels to circulation doors
- Alarms are audible only
- Corridors obstructed by seating etc.

4.14 Block NK - Ward 22 & Ward 24

4.14.1 Condition

- Lifecycle décor

4.14.2 Statutory

- No defects noted

4.14.3 Function, Quality and Space

- No defects noted

4.14.4 Disabled Access

- No defects noted

4.15 Block NS - Mortuary/Path Lab/Admin Hub

4.15.1 Condition

- Timber fascias soffit fair, treatment flaking and deteriorated.
- Leaks staring to appear on roof
- Aged electrical systems
- Aged heating systems
- Some aged lab benching
- Aged doors
- Some aged suspended ceiling

4.15.2 Statutory

- No defects noted

4.15.3 Function, Quality and Space

- Inadequate body fridges
- Some poor quality lighting

4.15.4 Disabled Access

- No disabled toilet facilities

4.16 Block RO1-Sub-Station RO Plant

4.16.1 Condition

- Aged softener plant
- Aged electrical systems

- Aged water distribution

4.16.2 Statutory

- No defects noted

4.17 Block RS- Residences (1-8)

4.17.1 Condition

- Some aged boiler plant
- Aged electrical systems
- Aged heating emitters
- Aged décor

4.17.2 Statutory

- No defects noted

4.17.3 Function, Quality and Space

- No defects noted

4.17.4 Disabled Access

- No disabled parking provision
- Alarms are audible only

4.18 Block RS- Residences (9-17)

4.18.1 Condition

- Some aged boiler plant
- Aged electrical systems
- Aged heating emitters
- Aged décor

- Poor fire alarm systems

4.18.2 Statutory

- All bedrooms and most kitchens do not have detectors installed.

4.18.3 Function, Quality and Space

- No defects noted

4.18.4 Disabled Access

- House 17 has no accessible shower facilities
- Alarms are audible only

4.19 Block RT - Doctors Mess

4.19.1 Condition

- Aged boiler plant
- Flaking external décor
- Aged electrical systems
- Aged heating emitters

4.19.2 Statutory

- Aged battery / mains fire detectors only - most areas do not have detectors installed.

4.19.3 Function, Quality and Space

- Poor quality appearance
- Underutilised

4.19.4 Disabled Access

- Poor quality disabled toilet
- Poor signage

- Alarms are audible only

4.20 Block SB - Paul Brown/ Wards 15 & 16

4.20.1 Condition

- Original Sauter BMS / control components require upgrade to Trend system
- Timber fascias soffit fair, treatment flaking and deteriorated

4.20.2 Statutory

- No defects noted

4.20.3 Function, Quality and Space

- 6 bedded bays are cramped. There is a low ratio of single rooms
- Inadequate sanitary facility provision

4.20.4 Disabled Access

- Alarms are audible only

4.21 Block SC - Rehabilitation/ Education

4.21.1 Condition

- Timber fascias soffit fair, treatment flaking and deteriorated
- Roof leaks starting to appear.
- Aged electrical systems
- Aged nurse call
- Original (c. 1987) pool tank, timber surround and pool water heating, filtration, control and treatment equipment require refurbishment
- Aged suspended ceilings
- Aged floor coverings

4.21.2 Statutory

- Aged floor finishes

4.21.3 Function, Quality and Space

- Heating and ventilation systems poor quality
- Aged and poor quality appearance

4.21.4 Disabled Access

- Disabled WC's to Physio are poor
- Alarms are audible only
- Vision panels to corridor doors are unsuitable

4.22 Block SD - Main Entrance/ Education

4.22.1 Condition

- Timber fascias soffit fair, treatment flaking and deteriorated.
- Roof leaks starting to appear.
- Some aged electrical systems
- Some aged suspended ceilings
- Some aged floor finishes

4.22.2 Statutory

- No defects noted

4.22.3 Function, Quality and Space

- Poor layout ward level 2 means observation is poor
- Poor signage and use of colour to dementia ward

4.22.4 Disabled Access

- Poor signage to sanitary facilities
- Lack of variable seating to waiting areas
- Alarms are audible only

4.23 Block SE - Outpatients/ Ward 4 & Renal

4.23.1 Condition

- Timber fascias soffit fair, treatment flaking and deteriorated.
- Roof leaks starting to appear.
- Aged wiring systems
- Some Aged nurse call
- Some aged medical gas systems
- Some aged sanitaryware
- Some aged suspended ceilings
- Some aged floor finishes

4.23.2 Statutory

- No defects noted

4.23.3 Function, Quality and Space

- Many of the reception desks in outpatients are not staffed, therefore the monitoring of patients coming in to each clinic is not done
- No panic system to consulting rooms to most areas
- Ward 4 have cramped bed space in bays and side rooms, there is a lack of ensuite facilities and a low ratio of side rooms
- Space between patients in dialysis inadequate

4.23.4 Disabled Access

- Disabled WC is poor quality
- Inadequate vision panels to circulation doors
- Alarms are audible only

4.24 Block SF - Outpatients/Dental/ITU & HDU

4.24.1 Condition

- Timber fascias soffit fair, treatment flaking and deteriorated.
- Roof leaks starting to appear
- Aged electrical systems
- Aged nurse call
- Aged medical gas to Dental
- Aged heat emitters
- Some aged suspended ceilings
- Aged medical gas distribution

4.24.2 Statutory

- Unsafe storage in store room next to equipment store on 1st floor.
- ITU isolation rooms do not meet HTMs not true isolation rooms
- HDU AHU not adequate air flow

4.24.3 Function, Quality and Space

- Many of the reception desks in outpatients are not staffed, therefore the monitoring of patients coming in to each clinic is not done
- No panic system to consulting rooms to most areas
- ITU has inadequate provision of side rooms, 2 provided but one cannot be used due to poor observation. Relatives facilities are inadequate

including overnight accommodation. Inadequate staff facilities including female changing. There is no entrance/reception area to greet visitors.

4.24.4 Disabled Access

- No disabled WC for relatives in ITU, HDU
- Inappropriate vision panels to circulation doors
- Alarms are audible only
- Dental reception has no lowered section

4.25 Block SG - X Ray/Wards 06 & 07/CCU

4.25.1 Condition

- Timber fascias soffit fair, treatment flaking and deteriorated.
- Roof leaks starting to appear
- Aged electrical systems
- Aged nurse call
- 10 (9 Daikin, 1 Mitsubishi) DX units serving Scan rooms, MRI waiting and control rooms in mixed condition
- Aged heat emitters
- Some aged suspended ceilings
- Aged medical gas distribution

4.25.2 Statutory

- No defects noted

4.25.3 Function, Quality and Space

- Some x-ray rooms are now undersized for new machines to go in. There is no segregation of inpatients/outpatients. The main waiting area is undersized. There is a lack of storage space.
- Wards have cramped bed space in bays and side rooms. There is a lack of ensuite facilities and a low ratio of side rooms.

- Aged and poor quality appearance
- Poor quality heating systems

4.25.4 Disabled Access

- Lack of accessible sanitary facilities to many areas
- X ray reception has no lowered section
- Unsuitable vision panels to corridor doors
- Intercom is located too high
- Alarms are audible only

4.26 Block SH - A&E/ Wards 08 & 09/Head & Neck

4.26.1 Condition

- Timber fascia's soffit fair, treatment flaking and deteriorated.
- Roof leaks starting to appear
- Aged electrical systems
- Some aged nurse call
- Some aged medical gas systems
- Aged heat emitters
- Some aged suspended ceilings
- Some aged floor finishes

4.26.2 Statutory

- No defects noted

4.26.3 Function, Quality and Space

- Majors/minors too small (although extension is imminent), there is no mental health suite, no body viewing room for relatives, staff room is currently also used a patients kitchen

- Ward 9 has cramped bed space in bays. There is a lack of ensuite facilities and a low ratio of side rooms.
- Poor quality appearance

4.26.4 Disabled Access

- Alarms are audible only

4.27 Block SJ - Day Ward/Theatres 6,7 & 8/Wards 10 & 11

4.27.1 Condition

- Timber fascia's soffit fair, treatment flaking and deteriorated.
- Roof leaks starting to appear
- Aged electrical systems
- Some aged nurse call
- Some aged medical gas systems
- Aged heat emitters
- Some aged suspended ceilings
- Some aged floor finishes

4.27.2 Statutory

- No defects noted

4.27.3 Function, Quality and Space

- Theatres are undersized, in particular theatre 8 has no anaesthetics room
- Wards cramped bed space in bays. There is a lack of ensuite facilities and a low ratio of side rooms.
- Privacy and dignity in scanning rooms is poor due to poor sound insulation between rooms and corridor.
- One of the scan rooms does not have A/C.

- Wards 10 and 11 have aged finishes, fixtures, fittings and lighting throughout.

4.27.4 Disabled Access

- Disabled WC to day theatres change area requires upgrade
- No lowered section to day theatres reception
- Alarms are audible only

4.28 Block SK – Opthamology

4.28.1 Condition

- Lifecycle decor

4.28.2 Statutory

- No defects noted

4.28.3 Function, Quality and Space

- Staff report that an intruder alarm is fitted but is not currently in use

4.28.4 Disabled Access

- Steps to rear of property only
- Alarms are audible only

4.29 Block SS1-Sub-Station Generator Plant 3

4.29.1 Condition

- Timber fascias soffit fair, treatment flaking and deteriorated
- Aged original generator
- Aged wiring systems
- Aged lighting

4.29.2 Statutory

- No defects noted

4.30 Block SS1-Sub-Station Generator Plant 4

4.30.1 Condition

- Timber fascias soffit fair, treatment flaking and deteriorated.
- Aged distribution board
- Aged lighting
- All AHU aged from PC to PJ
- Fire dampers aged and obsolete
- BMS system in fair condition however all actuators are aged and will need replacing
- Generators under sized and can only support essential supply
- Several of the roofs have leaks and most valleys require attention
- Several areas requires needs new flooring

4.30.2 Statutory

- No defects noted

4.31 Block ST – Street

4.31.1 Condition

- Original air handling units to PRE/F/G/H/J
- Fan control panels original
- Aged wiring systems and distribution boards
- Aged heating distribution
- 8 no. Original fire damper controls require upgrade at fire panels 1 - 8 in original construction.

- Roofs will require repair within the near future
- 3 no. Concept 2 level 2100 kg lifts (Lifts 1 to 3) original (1987) require upgrade. Controls have had a past upgrade.

4.31.2 Statutory

- No defects noted

4.31.3 Function, Quality and Space

- No defects noted

4.31.4 Disabled Access

- Alarms are audible only

4.32 Block HT1-Sub-Station Transformer & RMU 5

4.32.1 Condition

- Timber fascias soffit fair, treatment flaking and deteriorated.

4.32.2 Statutory

- No defects noted

5.0 CONCLUSIONS

The Estate is overall in a generally fair condition with a total risk adjusted backlog of £6,149,897. The majority of areas will require lifecycle replacements to some items with a total impending backlog (years 1-5) of £4,189,534 for the whole site.

There are Statutory items that require immediate remedial action in the majority of blocks with a total risk adjusted backlog cost of £129,816 for the whole site.

As part of the Trust's Estate Strategy it is recommended that the Trust addresses statutory compliance items first, followed by high risk backlog items under physical condition, followed by significant then moderate and low risk items. It may also be appropriate to address the significant issues identified under Function, Quality, Space and Environmental as discussed below during any Capital works to address backlog issues.

Impending backlog issues should be tabled as per the recommended year of remedial action and as appropriate by risk as described for backlog items above, i.e. high risk items should be addressed as a priority in that years impending works.

A significant item identified is a £5,307,000 cost for functional suitability for the whole Estate. This is primarily due to changes in service provision, changes in work practices and expansions in teams within buildings that are simply too small for function or were constructed and designed for another function which does not provide a suitable layout and space for services. Older Estate is often difficult to reconfigure to provide correct layouts and facilities suitable for today's work methods and services and costs have been allowed to reflect this. Space provision is also an issue to some areas.

Quality of the environment to some blocks was an issue with a cost of £34,965 identified for the whole Estate with recommendations including improvements to general appearance and comfort engineering being common issues.

Space issues are generally Functional suitability issues primarily therefore all costs have been assigned to that facet.

A cost of £141,890 has been identified for Disabled Access which includes improvements to sanitary facilities and evacuation systems including fire alarms, other improvements include to reception areas and access and corridor doors.

Total costs for the entire surveyed Estate for all 7 facets are £23,047,577 for a 10 year programme (please note these are net costs and we recommend a 50% uplift).

7.0 APPENDIX A – UPLIFT

Item	Percentage
Addition for main contractor's preliminaries, overheads and profit	10%
Allowance for Contingency	10%
Addition for Professional Fees	10%
Addition for Value Added Tax	20%
Addition for Decanting	Excluded
Addition for Trust Direct Costs	Excluded
Allowance for Inflation`	Excluded
TOTAL UPLIFT	50%

8.0 APPENDIX B – PROPERTY APPRAISAL USER NOTES

1	Reporting at sub-element level	
2	Reporting at Premises level or by Block if premises are sub-divided	
3	The physical condition of each sub-element is categorised as follows :	
	A	As new and can be expected to perform adequately to its full normal life.
	B	Sound, operationally safe and exhibits only minor deterioration
	B(C)	Currently as B, but will fall below B within five years
	C	Operational, but major repair or replacements is currently needed to bring up to condition B
	D	Operationally unsound and in imminent danger of breakdown
	X	Supplementary rating added to C or D to indicate that it is impossible to improve without replacements
4	Costs for Condition Defects to be scheduled over years 1-10	
5	Risk Assessment using (5 x 5 matrix) on sub-elements if Backlog (i.e., current defects) with a score of 7 or less. The results of the risk assessment exercise will feed into the immediate and longer-term investment planning process.	
	Low Risk :	Should be addressed through agreed maintenance programmes or included in the later years of the estate improvement strategy
	Moderate Risk :	Should be addressed by close control and monitoring; can be effectively managed in the medium term so as not to cause undue concern to statutory enforcement bodies or risk to healthcare delivery or safety. These items require expenditure planning for the medium term.
	Significant Risk :	Require expenditure in the short term but should be effectively managed as a priority so as not to cause undue concern to statutory enforcement bodies or risk to healthcare delivery or safety.
	High Risk :	Must be addressed as an urgent priority in order to prevent catastrophic failure, major disruption to clinical services or deficiencies in safety liable to cause serious injury and/or prosecution.
	Risk Ranking	Score Range
	Low	1 - 6

	Moderate	7 - 10
	Significant	11 - 16
	High	17 - 25
6	Costs for any Statutory Non-Compliance deemed to be backlog in year 1. Each sub-element is ranked according to compliance with mandatory requirements (including 'Firecode') and statutory safety legislation as follows-	
	A	Complies fully with current mandatory fire safety requirements and statutory safety legislation
	B	Complies with all necessary mandatory fire safety requirements and statutory safety legislation with minor deviations of a non-serious nature
	B(C)	Currently as B, but will fall below B within five years as a consequence of unabated deterioration or knowledge of impending mandatory fire safety requirements or statutory safety legislation
	C	Contravention of one or more mandatory fire safety requirements and statutory safety legislation, which falls short of B
	D	Dangerously below conditions A and B
7	Photographs to be taken of Building frontage and any significant defects	
8	If Sub-element is not present condition is n	
9	Disabled Access Statutory safety requirements under facet 5; other Disability Access issues to be reported under Facet 2 : Functional Suitability	
10	Functional Suitability - Assessed on the basis of three elements; internal space relationships, support facilities and location	
	A	Very satisfactory, no change needed
	B	Satisfactory, minor change needed
	C	Not satisfactory, major change needed
	D	Unacceptable in its present condition
	X	Supplementary rating added to C or D to indicate that nothing but a total rebuild or relocation will suffice (that is, improvements are either impractical or too expensive to be tenable)
11	Space Utilisation - An overall judgement about the space under consideration' categorised as follows -	
	Empty : (E)	Empty or grossly under-used at all times (excluding temporary closure)
	Under-Used : (U)	Generally under-used, utilisation could be significantly increased
	Fully Used : (F)	A satisfactory level of utilisation

	Overcrowded : (O)	Overcrowded, overloaded and facilities generally over-stretched
12	Quality - For each element is assessed to produce an overall ranking of the quality of the estate as follows -	
	A	Facility of excellent quality
	B	A facility requiring general maintenance investment only
	C	A less than acceptable facility requiring capital investment
	D	A very poor facility requiring significant capital investment or replacement
	X	Supplementary rating added to C or D to indicate that nothing but a total rebuild or relocation will suffice (that is, improvements are either impractical or too expensive to be tenable)
13	Energy - For Strategic Planning Purposes, the ranking for the site and/or building block based on the following energy usage per unit volume figures	
	A	35-55 GJ per 100 cubic metres
	B	56-65 GJ per 100 cubic metres
	C	66-75 GJ per 100 cubic metres
	D	76-100 GJ per 100 cubic metres
	X	Supplementary rating added to C or D to indicate that nothing but a total rebuild or relocation will suffice (that is, improvements are either impractical or too expensive to be tenable)
14-	DDA	
	A	Facility of excellent quality for disabled access
	B	A facility requiring general maintenance investment only
	C	A less than acceptable facility requiring capital investment to improve disabled access
	D	A very poor facility requiring significant capital investment or replacement to improve disabled access
	X	Supplementary rating added to C or D to indicate that nothing but a total rebuild or relocation will suffice (that is, improvements are either impractical or too expensive to be tenable)
<u>DDA Audits Priority</u> Priorities 1 and 2 do not meet the recommendations of Building Regulations Part M or provide a significant barrier to accessibility: 1- High Priority – poor provision meaning that item is not suitable and not accessible. Presents a significant obstacle to access. In some cases a safety issue is highlighted here FOR EXAMPLE ACCESS TO THE BUILDING ENTRANCE IS NOT POSSIBLE DUE TO STEPS		

2-Medium/High Priority- poor provision, presents obstacle to access but its significance is deemed to be lower

FOR EXAMPLE NO MARKED DISABLED BAYS BUT PARKING IS AVAILABLE

Priorities 3 and 4 do not meet the recommendations of BS8300 or do not meet the recommendations of Building Regulations Part M but are of a lower priority due to the type of area, or the likelihood of access being required

3-Medium./Low Priority- There are improvements possible in provision, which would improve accessibility in accordance with BS8300

FOR EXAMPLE PROVISION OF IMPROVED SIGNAGE IN ACCORDANCE WITH BS8300

4-Low Priority- Low priority improvements which would improve accessibility

FOR EXAMPLE PROVISION OF VARIABLE HEIGHT SEATING

9.0 APPENDIX C – RISK ADJUSTED BACKLOG

The formula used to calculate the Risk Adjusted Backlog cost for each building/block is as follows:

$$\text{Risk Adjusted Backlog (£)} = \frac{\text{Non-critical backlog}}{\text{Remaining life of building/block}} + \text{Safety-critical backlog}$$

Where:

Non-critical backlog (£) = Total backlog cost relating to low and moderate risk sub-elements for the building/block.

Remaining life (years) = Remaining life of the building/block.

Safety-critical backlog (£) = Total backlog cost relating to significant and high risk sub-elements for the building/block.

10.0 APPENDIX D- RISK BASED METHODOLOGY EXTRACT FROM NHS DOCUMENT

5. RISK ASSESSMENT

Figure 5.1 Risk assessment process

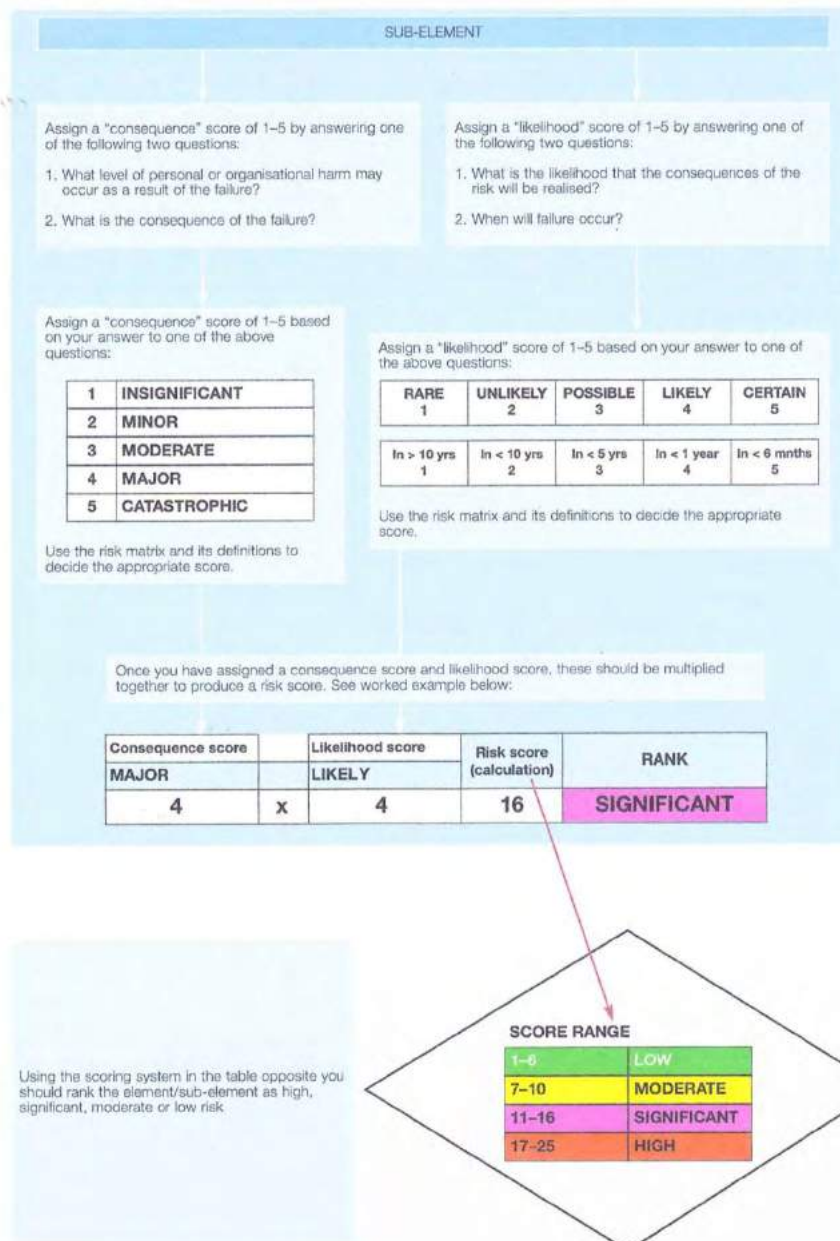


Figure 5.2 Risk matrix

SCORE RANGE	RISK RANKING
1-6	LOW
7-10	MODERATE
11-16	SIGNIFICANT
17-25	HIGH

Rating	PROBABILITY OF FAILURE				
	1	2	3	4	5
Failure descriptors	RARE	UNLIKELY	POSSIBLE	LIKELY	CERTAIN
	None or minimal remedial action required and/or new/recent upgrade. Estimated time to failure may be circa > 10 yrs	Normal wear and tear. Sound, operationally safe and exhibits only minor deterioration. Estimated time to failure may be circa < 10 yrs	Reasonable physical damage/deterioration. Reassignment of life may be acceptable based on technical tests or residual robustness. Estimated time to failure may be circa < five yrs	Major physical damage/deterioration. Failure apparent/assessed as imminent or unacceptable built environment. Not appropriate to reassign life. Estimated time to failure may be circa < one yr	Failure occurred. Unacceptable built environment. Not appropriate to reassign life. Estimated time to failure may be circa < six months

	SEVERITY		Health & safety	Environment	Business	Operational/ building/ engineering element	Fire/statutory Complies with mandatory fire safety requirements and statutory safety legislation.	Fire/statutory Complies with mandatory fire safety requirements and statutory safety legislation with minor deviations of a non-serious nature	Fire/statutory Known contravention of one or more requirements – which falls short of "B".	Fire/statutory Dangerously below "B"	Fire/statutory Dangerously below "B"
	Rating	Descriptor									
POTENTIAL CONSEQUENCES	1	INSIGNIFICANT	No injury/breach of guidance/procedures	No or minimal impact breach of guidance/procedures.	Unlikely cause of complaint. Litigation remote. Minimal reputation loss/limited awareness within organisation.	Minimal or no impact. Minimal or no disruption.	1	2	3	4	5
	2	MINOR	Minor injury/ill health (first aid or self-treatment). Breach of legal requirement.	Breach of legal requirement.	Possible complaint. Litigation unlikely. Loss of reputation (widespread internal awareness).	Localised impact. Disruption to normal services.	2	4	6	8	10
	3	MODERATE	Moderate injury/ill health statutory obligations. Improvement notice issued.	Single breach of legal requirement. Improvement notice issued.	Possible complaint. Possible litigation. Loss of reputation. National paper reporting.	Moderate impact. Moderate disruption to normal services.	3	6	9	12	15
	4	MAJOR	Major/significant injury or long-term incapacity/disability. Prohibition notice issued.	Multiple breach of legal requirement. Prohibition notice issued.	Litigation expected. Loss of reputation. National reporting.	Major/significant impact. Severe disruption to normal services.	4	8	12	16	20
	5	CATASTROPHIC	Fatality and/or permanent incapacity/disability. Prosecution.	Multiple breach of legal requirement. Prosecution.	Litigation certain. National adverse publicity.	Critical impact. Service closure.	5	10	15	20	25

SIX FACET REVIEW

ROYAL SHREWSBURY HOSPITAL



VERSION 7

SURVEY CARRIED OUT BY

the
OAKLEAF GROUP
MARKET LEADING SURVEYS

JANUARY 2016

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1. THE PROJECT TEAM

The Project Team comprises:

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2. INTRODUCTION

The Oakleaf Group carried out a Six Facet Survey at the Royal Shrewsbury Hospital on behalf of Shrewsbury and Telford Hospital NHS Trust during August to September 2015.

The following report summaries each of the six facets surveyed and includes:

- Facet 1: Physical Condition
- Facet 2: Functional Suitability
- Facet 3: Space Utilisation
- Facet 4: Quality Audit
- Facet 5: Statutory Compliance
- Facet 6: Environmental Management

The following blocks have been surveyed:

Site Code	Site Name
RSH23	Maternity
RSH24	Boiler House
RSH25	Grounds & Ancillary Buildings
RSH27B	Blocks Adjacent to Staff Residential
RSH27C	Blocks Adjacent to Staff Residential
RSH27D	Blocks Adjacent to Staff Residential
RSH28	Pathology
RSH29	Mortuary
RSH30	Out Patients Department
RSH31	Administration
RSH32	Pharmacy
RSH33	WD31, WD32, Fertility & EPAS
RSH34	Catering
RSH35	X-Ray
RSH36	A&E
RSH37	Head & Neck
RSH38	I.T.U
RSH39	Stores
RSH40	Sterile Services (SSD)
RSH41	Theatres
RSH42	Ward Block
RSH43	Estates Department
RSH44	Faculty of Health
RSH45	Radio Therapy & Chemo
RSH46	Mytton Oak Centre
RSH47	Renal Unit
RSH48	Phlebotomy / ShropDoc - Elizabeth House
RSH49	Ward Block Extension

Site Code	Site Name
RSH50	Treatment Centre
RSH51	Hamar Centre
RSH52	Hummingbird Centre
RSH54	Learning Centre
RSH55	Daisy Chain Nursery
RSH56	Cancer Treatment Centre

3. PROJECTED COSTS

3.1 Projected Costs – Physical Condition & Statutory Compliance

This section summarises the costs associated to the Royal Shrewsbury Hospital in relation to Physical Condition and Statutory Compliance.

The Physical Condition facet looks at the following: Building (Structure, Roof, Internal Fabric, Fixtures and Fittings etc), Mechanical (Heating Systems, Ventilation, Lifts etc) and Electrical elements (Electrical System, Fixed Plant, Telecommunications etc).

The Statutory Compliance Survey reviews: Asbestos, Health & Safety, Fire Safety, Disabled Access, Legionella Control and various other aspects.

Backlog Maintenance Works (Items at Condition C and D)

Total remedial work required for the current year:

Building Survey	£ 32,316,350
M&E Survey	£ 3,505,350
Statutory Survey	£ 10,100,000
Fire Survey	£ 652,100
TOTAL COST	£ 46,573,800
Cost per m2 (average)	£ 758.53/m2

Note that the statutory costs include for the safe removal of known asbestos, this is not a statutory requirement to remove however the cost will be incurred as part of any refurbishment/remodelling work.

Impending Backlog (Items at Condition B(C))

Total remedial work likely to be required within a five year period:

Building Survey	£ 3,725,500
M&E Survey	£ 5,112,352
Statutory Survey	£ 0
Fire Survey	£ 49,150
TOTAL COST	£ 8,887,002
Cost per m2 (average)	£ 144.74/m2

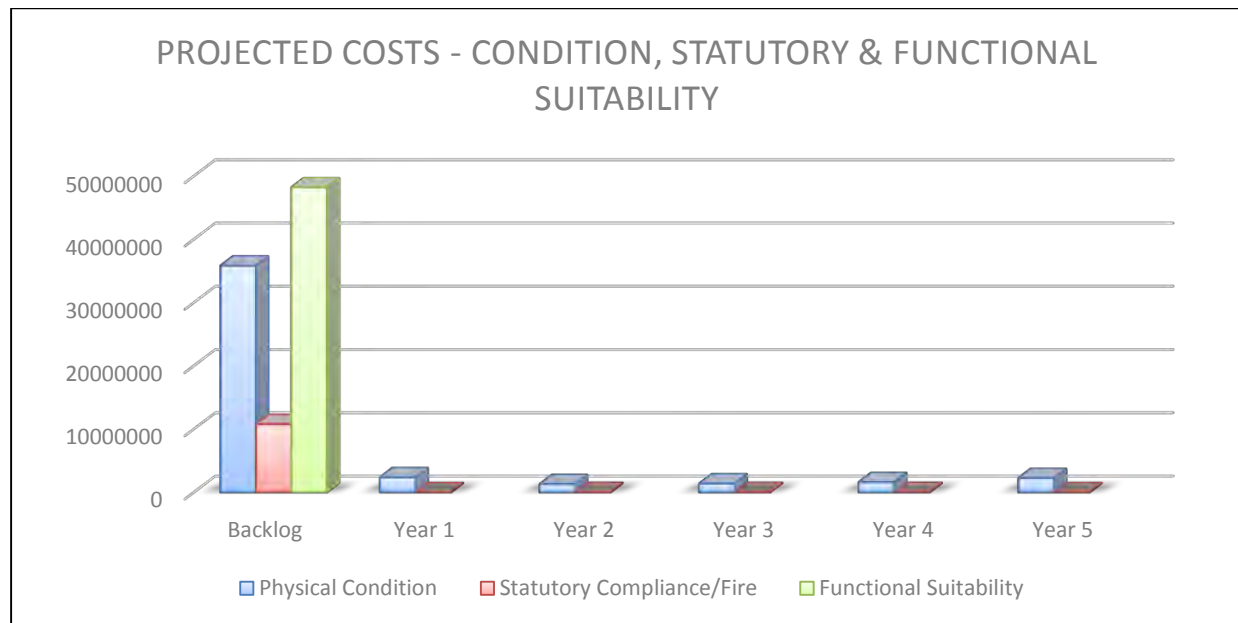
Functional Suitability (Items at Condition C and D)

Total remedial work likely to be required within a five year period:

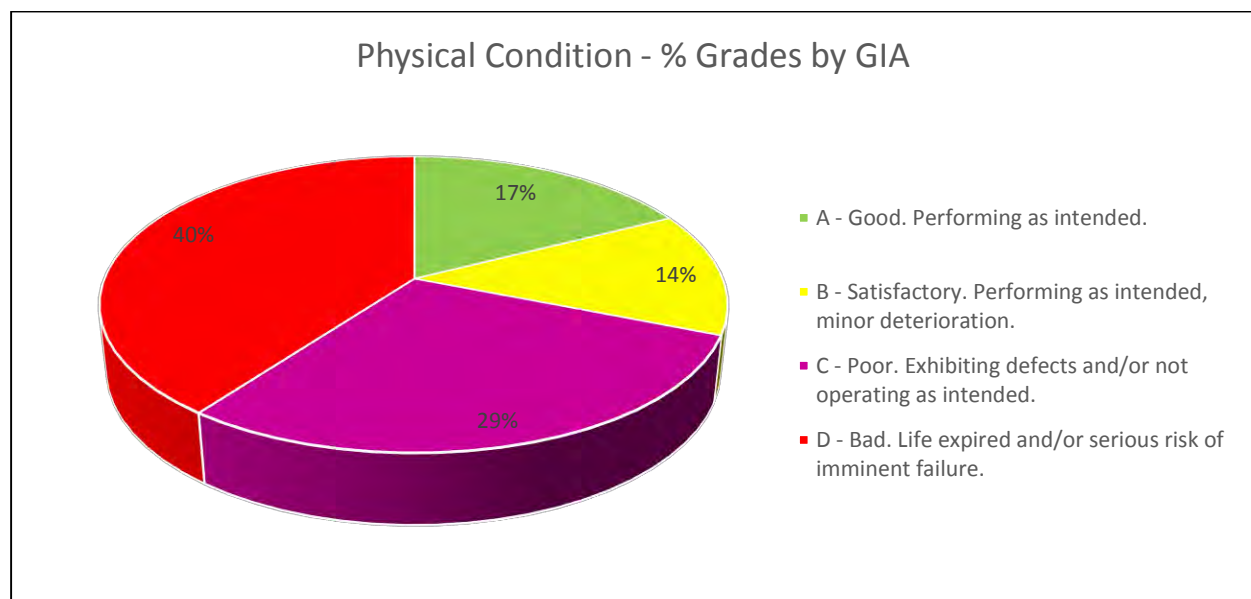
Functional Suitability	£ 48,213,000
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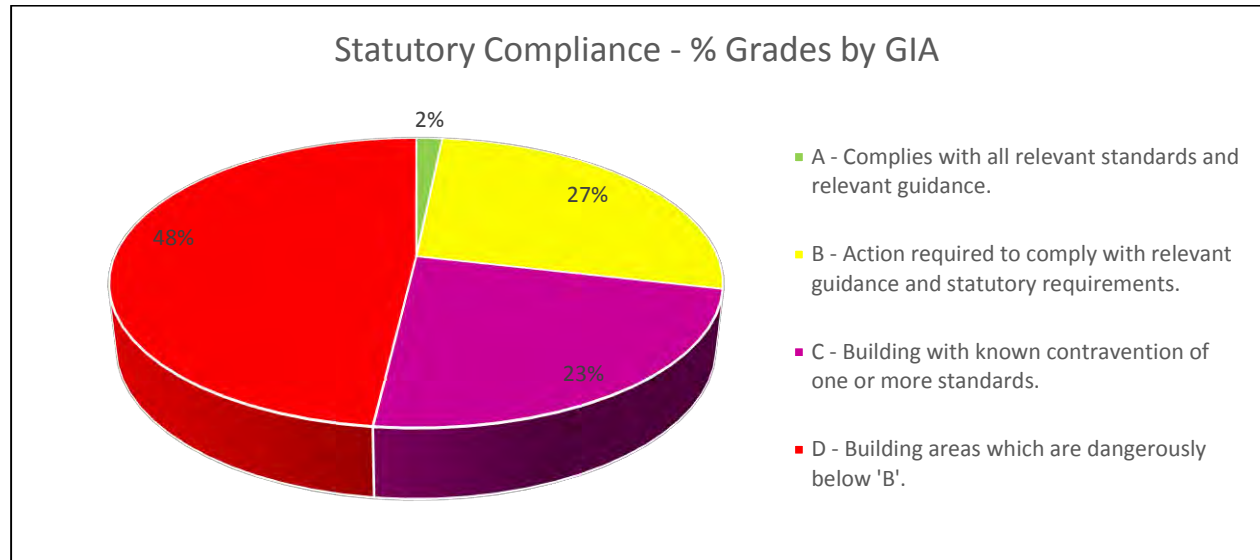
Note that the functional costs relate to providing new and suitable ward accommodation providing optimum bed spacing and sanitary provision and for new build Emergency department.

An indication of the projected costs per year is shown in the Chart below.



A breakdown of the block gradings for each facet (percentage based on GIA of building)





The pie charts above shows the grades of the blocks surveyed. *This is based on the surveyor's subjective view of the overall condition of the block.*

For detailed methodology, please see the Facet 1 Physical Condition Report.

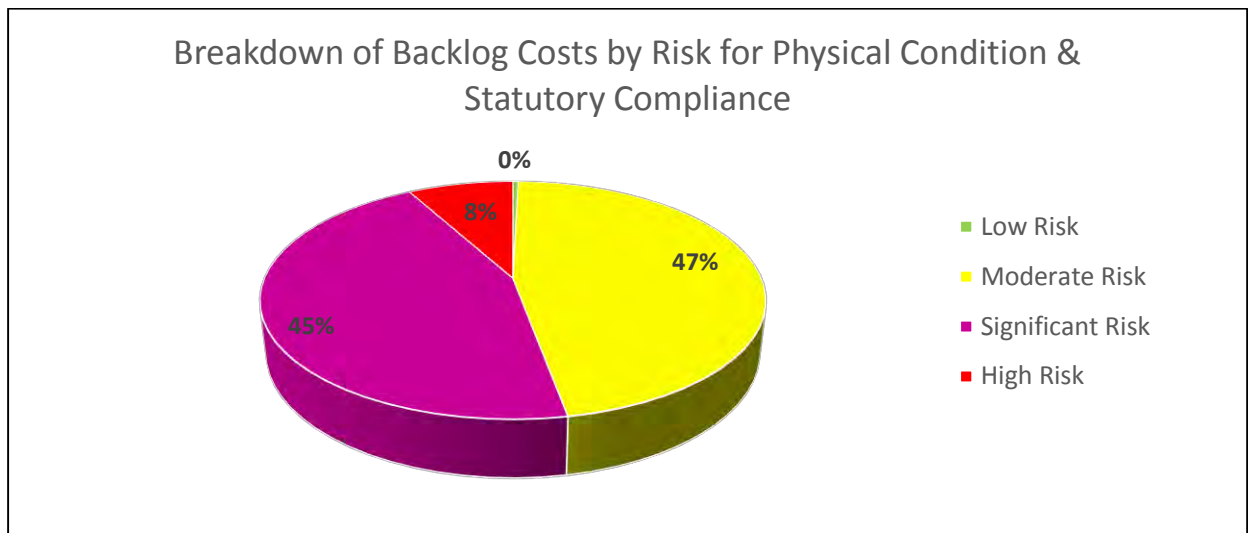
Please note, further statutory items to be included once received from the Trust.

3.2 Backlog Maintenance Costs (Exc Functional Suitability)

The backlog maintenance cost is the cost identified to bring assets at a condition of C or below in terms of their physical condition and/or statutory compliance up to a condition B. Condition rankings are based on those given in 'Estatecode' and are referenced within the methodology of the Physical Condition Report.

Each element/sub-element will be risk assessed in order to identify the high risk items within the estate by using the Risk Assessment Matrix (See Facet 1 Physical Condition Report methodology for more details).

Backlog Summary	Physical Condition	Statutory Compliance
Low Risk	£185,250	£0
Moderate Risk	£11,752,650	£10,000,000
Significant Risk	£20,893,500	£0
High Risk	£2,990,300	£752,100
Total Backlog	£35,821,700	£10,752,100



3.3 Risk Adjusted Backlog

The Risk Adjusted Backlog identifies the cost of combining the backlog costs and associated risk rankings by the remaining life of the building (See Facet 1 Physical Condition Report methodology for more details).

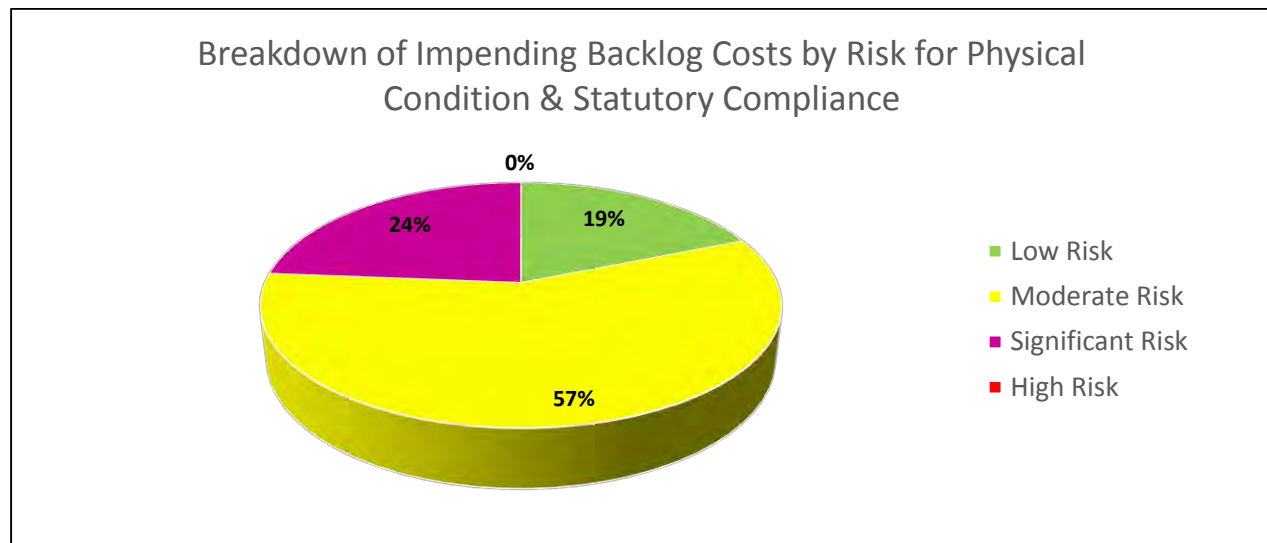
	Physical Condition	Statutory Compliance
Risk Adjusted Backlog	£24,230,941	£1,085,433

3.4 Impending Backlog Costs (Exc Functional Suitability)

The impending backlog costs refer to those items that are considered condition B at present but will fall below condition B within the maintenance schedule (5 years).

Table below shows the total impending backlog for Physical Condition and Statutory Compliance.

Impending Backlog Summary	Physical Condition	Statutory Compliance
Low Risk	£1,675,250	£0
Moderate Risk	£5,051,352	£49,150
Significant Risk	£2,111,250	£0
High Risk	£0	£0
Total Impending Backlog	£8,837,852	£49,150



Note that nominal cost statutory items refer to local lifecycle failures of fire equipment only

3.5 Projected Costs – Quality, Space, Environmental & DDA

Table below shows the breakdown for the remaining facets.

Facet	Total Cost
Space Utilisation	No costs allocated
Quality	Costs inc. to Facet 1
Environmental Management	No costs allocated
Disabled Access	£530,000
TOTAL COST	£530,000

3.6 Projected Costs – All Facets total 5 Year Spend

Facet	Total Cost
Physical Condition	£44,659,552
Statutory Compliance	£10,801,250
Functional Suitability	£48,213,000
Space Utilisation	No costs allocated
Quality	Costs inc. to Facet 1
Environmental Management	No costs allocated
Disabled Access	£530,000
TOTAL COST	£104,203,802

A breakdown of the costs per building and the overall grades are located in the dashboard below.

Royal Shrewsbury Hospital		Gross Floor Area	61,400m ²	Backlog Summary	£s	Site Location & Description
Mytton Oak Road		Net Usable Area	49,120m ²	Low Risk	£185,250	Royal Shrewsbury Hospital is a medium sized acute hospital located to a sloping site on the Western edge of Shrewsbury town centre. Buildings to the site are predominately of concrete frame construction and built circa 1970 with numerous additions built circa 2005 which include the Treatment Centre and the Ward Block Extension.
Shropshire		Building Year	1970-2010	Moderate Risk	£21,752,650	
SY3 8XQ		Total Backlog	£46,573,800	Significant Risk	£20,895,500	
		Total Budget	£8,887,002	High Risk	£3,748,400	
Survey Date		August to September 2015	Total Cost (Exc. On Costs)	£55,460,802	£46,573,800	



Condition & Statutory Backlog Maintenance Works

Total remedial work required for the BUILDING, M&E, STATUTORY & FIRE Elements:

Building	£32,316,350
M&E	£3,505,350
Statutory Compliance	£10,000,000
Fire Safety	£752,100
Backlog Total Cost	£46,573,800

Condition & Statutory Future Planned Costs for Future Maintenance Works (5 years)

Total remedial work likely to be required within a 5 year period for the BUILDING, M&E, STATUTORY & FIRE Elements:

Building	£3,725,500
M&E	£5,112,352
Statutory Compliance	£0
Fire Safety	£49,150
Future Planned Total Cost	£8,887,002

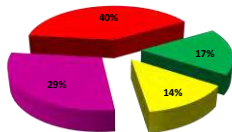
Net Combined Total Costs (Condition & Statutory) £55,460,802

Gross Combined Total Costs (Condition & Statutory) £83,191,203

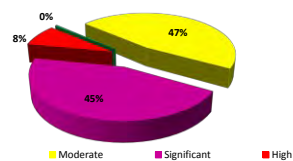
The on-costs include for: Contingency, Fees, Prelims, Profit and VAT (50%).

Breakdown of Overall Grades based on GIA

- A - Good. Performing as intended.
- B - Satisfactory. Performing as intended, minor deterioration.
- C - Poor. Exhibiting defects and/or not operating as intended.
- D - Bad. Life expired and/or serious risk of imminent failure.



Condition Backlog Costs by Risk



Block Code	Block Name	GIA	Condition & Statutory		Facet Grades & Costs										Overall Grade & Costs	
			Backlog Costs (2015)	Budget Costs (2016-2020)	Facet 1 Condition Grade	Facet 2 Function Grade	Facet 3 Function Cost	Facet 3 Space Utilisation	Facet 4 Quality Compliance	Facet 5 Statutory Compliance	Facet 6 Fire Safety	Facet 7 Environmental	Facet 8 DDA	Facet 8 DDA Cost	Overall Grade	Total Cost (Net)
RS423	Maternity	4000	£13,003,400	£1,008,252	C	C	£0	Underused	D	D	C	TBC	C	£0	D	£14,011,652
RS424	Boiler House	1100	£389,300	£231,600	C	C	£0	Fully Used	B	D	B	TBC	D	£0	C	£620,900
RS425	Grounds & Ancillary Buildings	20ha	£15,821,100	£1,299,500	B	B	£0	Underused	C	B	B	TBC	C	£530,000	B	£17,650,600
RS427B	Blocks Adjacent to Staff Residential	750	£251,150	£45,950	D	D	£0	Underused	D	D	C	TBC	D	£0	D	£297,100
RS427C	Blocks Adjacent to Staff Residential	750	£252,200	£60,500	D	D	£0	Underused	D	D	C	TBC	D	£0	D	£312,700
RS427D	Blocks Adjacent to Staff Residential	750	£273,000	£47,250	D	D	£0	Empty	D	D	C	TBC	D	£0	D	£320,250
RS428	Pathology	2400	£803,500	£310,900	C	D	£0	Overcrowded	D	D	B	TBC	C	£0	D	£1,114,400
RS429	Mortuary	750	£2,042,600	£2,350	D	D	£0	Fully Used	D	D	B	TBC	C	£0	D	£2,044,950
RS430	Our Patients Department	3000	£670,000	£504,300	C	D	£0	Fully Used	C	D	B	TBC	C	£0	D	£1,174,300
RS431	Administration	3000	£870,600	£356,300	C	C	£0	Overcrowded	C	D	B	TBC	C	£0	C	£1,226,900
RS432	Pharmacy	800	£80,000	£0	B	B	£0	Fully Used	B	B	B	TBC	C	£0	B	£80,000
RS433	W013, W012, Fertility & EPAS	4000	£1,302,900	£641,850	C	D	£1,468,500	Overcrowded	D	D	B	TBC	C	£0	D	£3,413,250
RS434	Catering	2000	£668,000	£240,500	D	C	£0	Underused	D	C	B	TBC	C	£0	D	£908,500
RS435	X-Ray	1500	£345,150	£366,500	C	D	£0	Overcrowded	D	D	B	TBC	C	£0	C	£711,650
RS436	A&E	1500	£1,220,000	£205,650	C	D	£5,940,000	Overcrowded	C	D	B	TBC	C	£0	C	£7,365,650
RS437	Head & Neck	1150	£2,181,500	£118,000	C	D	£1,468,500	Overcrowded	C	D	B	TBC	C	£0	D	£3,760,000
RS438	LTU	750	£320,800	£115,100	C	D	£0	Overcrowded	C	D	B	TBC	C	£0	D	£435,900
RS439	Stores	2150	£280,700	£25,300	D	C	£0	Fully Used	C	D	B	TBC	C	£0	D	£306,000
RS440	Sterile Services (SSD)	400	£412,500	£2,000	D	D	£0	Underused	C	D	B	TBC	C	£0	D	£414,500
RS441	Theatres	1600	£4,133,750	£164,000	D	D	£0	Fully Used	D	D	B	TBC	C	£0	D	£4,297,750
RS442	Word Block	8000	£853,050	£1,977,700	C	C	£26,713,500	Fully Used	C	C	B	TBC	C	£0	C	£29,544,250
RS443	Estates Department	800	£114,600	£41,750	C	B	£0	Fully Used	B	C	B	TBC	D	£0	C	£156,350
RS444	Faculty of Health	2000	£145,400	£185,500	C	C	£0	Underused	C	C	C	TBC	D	£0	C	£330,900
RS445	Radio Therapy & Chemo	3000	£70,500	£161,500	B	B	£1,468,500	Fully Used	B	B	B	TBC	C	£0	B	£1,700,500
RS446	Mytton Oak Centre	1500	£30,000	£134,900	B	B	£0	Underused	B	C	B	TBC	B	£0	B	£154,900
RS447	Renal Unit	1000	£20,600	£76,000	B	B	£0	Fully Used	B	B	B	TBC	B	£0	B	£96,600
RS448	Phlebostomy / Shrap/Dac - Elizabeth House	200	£0	£16,100	B	C	£0	Overcrowded	C	B	B	TBC	C	£0	B	£16,100
RS449	Ward Block Extension	3000	£0	£122,700	A	C	£11,154,000	Fully Used	B	B	A	TBC	B	£0	A	£11,276,700
RS450	Treatment Centre	4750	£22,000	£224,200	A	A	£0	Fully Used	A	B	A	TBC	B	£0	A	£246,200
RS451	Hamar Centre	500	£0	£78,800	B	B	£0	Fully Used	B	B	B	TBC	B	£0	B	£78,800
RS452	Hummingbird Centre	750	£3,000	£47,050	B	B	£0	Fully Used	B	B	B	TBC	B	£0	B	£50,050
RS454	Learning Centre	1000	£0	£25,000	A	A	£0	Fully Used	A	A	A	TBC	B	£0	A	£25,000
RS455	Day Chain Nursery	550	£2,500	£35,000	B	B	£0	Fully Used	B	B	B	TBC	B	£0	B	£37,500
RS456	Cancer Treatment Centre	2000	£0	£15,000	A	A	£0	Fully Used	A	B	A	TBC	B	£0	A	£15,000
RS456	TOTAL	61,400	£46,573,800	£8,887,002	-	-	£48,213,000	-	-	-	-	-	-	£530,000	-	£104,203,802

Legends:

Physical Condition:

- A - Good. Performing as intended.
- B - Satisfactory. Performing as intended, minor deterioration.
- C - Poor. Exhibiting defects and/or not operating as intended.
- D - Bad. Life expired and/or serious risk of imminent failure.

Quality

- A - A facility of excellent quality.
- B - A facility requiring general maintenance investment only.
- C - A less than acceptable facility requiring major capital investment or replacement.
- D - A very poor facility requiring major capital investment or replacement.

DDA

- A - Reasonably Accessible
- B - Minor Barriers to Access
- C - Major Barriers to Access
- D - Building not considered accessible.

Functional Suitability

- A - Very satisfactory, no change needed.
- B - Satisfactory, minor change needed.
- C - Not satisfactory, major change needed.
- D - Unsatisfactory in its present condition.

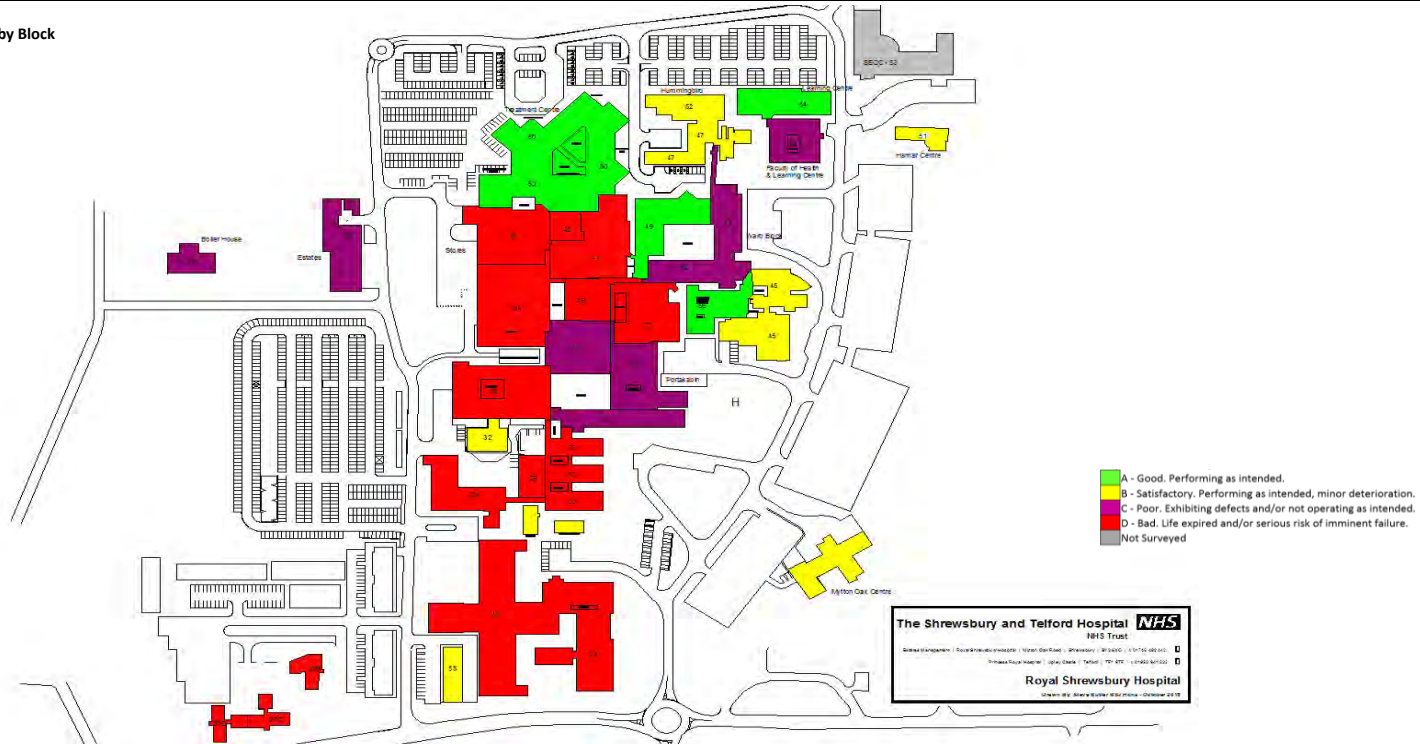
Statutory Compliance

- A - Complies with all relevant standards and relevant guidance.
- B - Action required to comply with relevant guidance and statutory requirements.
- C - Building with known contravention of one or more standards.
- D - Building areas which are dangerously below 'B'.

Royal Shrewsbury Hospital		Gross Floor Area	61,400m²	Backlog Summary	£s	Site Location & Description
Mytton Oak Road		Net Usable Area	49,120m²	Low Risk	£185,250	
Shrewsbury		Building Year	1970-2010	Moderate Risk	£21,752,650	
Shropshire		Total Backlog	£46,573,800	Significant Risk	£20,893,500	
SY3 8XQ		Total Budget	£8,887,002	High Risk	£3,742,400	
Survey Date		August to September 2015		Total Cost (Exc. On Costs)	£55,460,802	
				Total Backlog	£46,573,800	

Royal Shrewsbury Hospital is a medium sized acute hospital located to a sloping site on the Western edge of Shrewsbury town centre. Buildings to the site are predominately of concrete frame construction and built circa 1970 with numerous additions built circa 2005 which include the Treatment Centre and the Ward Block Extension.

Site Plan showing Overall Grades by Block



4. SITE & BLOCK SUMMARIES

4.1 Site Infrastructure

4.1.1 Condition

- Site wide lighting requires upgrading with costs allocated within the maintenance schedule to replace lamps as required.
- Substantial works are required to replace failing sub-surface cast iron foul water pipes; costs based on anecdotal comments from estates staff.
- Site-wide replacement of failing calorifiers with new plate heat exchangers has been included at site level. The Trust may opt for a site-wide 'de-steaming' scheme with the introduction of satellite boiler houses, this is beyond the scope of a Six Facet survey and no further costs have been allocated.

4.1.2 Statutory

- Costs have been allocated for the removal of known asbestos, at the time of survey further detailed asbestos surveys were being undertaken and costs allocated within the survey are based on removal costs from similar era hospital estates surveyed by Oakleaf. It should also be noted that there is no statutory requirement to remove the asbestos however when refurbishment or remodelling works are required substantially increased maintenance costs can be incurred.
- Ductwork cleaning is required as a matter of urgency with costs allocated accordingly.

4.2 Block RSH23 – Maternity

4.2.1 Condition

- Significant roof replacement and upgrade schemes are required with GWP roof lights defective and allowing significant water ingress.
- Original aluminium windows are in excess of forty years and are difficult to operate and no longer open as intended.
- Internal finishes are dated with significant investment required to generally improve the condition of flooring, ceilings and to redecorate.
- Sanitary areas are not to expected standards with costs allocated to refurbish both public and ward area WCs.
- The basement area is prone to flooding with costs allocated to investigate cause and to remedy as required.
- Theatre ventilation to the decommissioned maternity theatre does not conform to HTM 03-01; costs allow for full refurbishment including to provide compliant air handling.
- Substantial investment is required to upgrade lifecycle expired electrical infrastructure.

4.2.2 Function, Quality & Space

- The ward areas have been effectively mothballed and do not conform to modern expected standards. Refurbishment costs have been included within the condition section to avoid duplications.
- The existing maternity theatres have been decommissioned and are not fit for purpose. Refurbishment costs have been included within the condition section to avoid duplications.
- Generally the building is in poor decorative order and does not meet the basic expected quality standards, costs included within condition facet to upgrade.
- Given the partially vacant areas within the building the block has been reported as underused.

4.3 Block RSH24 – Boiler House

4.3.1 Condition

- Robel Coaltherm boiler and associated plant requires removal and replacement to improve the overall resilience of heating to the site.
- The reverse osmosis plant requires replacement.
- The Enwarmatic water treatment plant requires replacement.
- The asphalt and mineral felt roof coverings are failing and in generally poor condition with their replacement required.
- Sanitary fittings require upgrading.

4.4 Block RSH25 – Grounds & Ancillary Buildings

4.4.1 Condition

- The sub surface service ducts that run to the west of the site have been supported by acrow props and require significant investment to prevent structural collapse and to reinforce to ensure increase vehicle loads are accounted for. Given that the defect could affect fire tenders reaching site, it also has statutory implications.
- Large scale resurfacing of aging asphalt roads and car parks is required with costs apportioned to resurface within the condition data.

4.5 Blocks RSH27B, 27C & 27D – Blocks adj. Staff Residential

4.5.1 Condition

- The blocks are largely vacated with all existing flats requiring complete refurbishment to bring up to current standards.

4.6 Block RSH28 – Pathology

4.6.1 Condition

- Significant flat roof upgrade and replacement required.
- Original aluminium windows are in excess of forty years and are difficult to operate and no longer open as intended.
- Old medical gas pipework is unused and requires removal, including below ground duct to remove the risk of the redundant pipes leaking.
- Internal finishes are dated with significant investment required to generally improve the condition of flooring, ceilings and to redecorate.
- Sanitary areas are not to expected standards with costs allocated to refurbish changing areas and WCs.
- Laboratory Benches are dated and require upgrading to modern standards.
- Internal doors are dated and do not confirm to current standards.

4.6.2 Statutory

- Tripping circuits due to portable air conditioning units.

4.6.3 Function, Quality & Space

- Ventilation and cooling is poor with widespread use of portable A/C units currently being used.
- Area is overused and running beyond capacity with additional office, laboratory and storage space required.

4.7 Block RSH29 –Mortuary (part surveyed, due to significant building works)

4.7.1 All Facets

- Area is dated and falls below current standards with it recommended that the on-going refurbishment is extended to include all of the Mortuary areas.

4.8 Block RSH30 – Out-patients

4.8.1 Condition

- Significant flat roof upgrade and replacement required with localised failures present.

- Original aluminium windows and doors are in excess of forty years and are difficult to operate and no longer open as intended.
- Fitted units and sink units are dated and not to current standards with their upgrade and replacement allowed for.
- Sanitary areas are not to expected standards with costs allocated to refurbish public and staff WCs.

4.9 Block RSH31 – Administration

4.9.1 Condition

- Significant flat roof upgrade and replacement required with localised failures present.
- Original aluminium windows and doors are in excess of forty years and are difficult to operate and no longer open as intended.
- Internal finishes are dated with significant investment required to generally improve the condition of flooring, ceilings and to redecorate.
- Sanitary areas are not to expected standards with costs allocated to refurbish staff WCs.
- The moveable racking to Medical Records is reported as being in poor condition and requiring replacement.
- 2No. Lift cars are dated with their refurbishment allowed for.

4.9.2 Function, Quality & Space

- All floors noted as overcrowded, including Medical Records to Level 0, OPD and entrance to Level 1 and Admin to Level 2.

4.10 Block RSH32 – Pharmacy (Aseptic Unit)

4.10.1 Condition

- Aseptic AHU and control panel are beyond their expected life and require replacement.

4.11 Block RSH33 – WD31, WD32, Fertility & EPAS

4.11.1 Condition

- Significant flat roof upgrade and replacement required with localised failures present.
- Original aluminium windows and doors are in excess of forty years and are difficult to operate and no longer open as intended.

- Internal finishes are dated with significant investment required to generally improve the condition of flooring, ceilings and to redecorate.
- Sanitary areas are not to expected standards with costs allocated to refurbish public & staff WCs.
- AHUs are beyond their expected life and require replacement with costs for associated ductwork alterations also included.

4.11.2 Function, Quality & Space

- It is not possible to provide adequate bed spacing within the current ward curtilage, without reducing overall bed numbers. Costs have been allocated under the condition facet.
- Ward 32 has been reported as having a lack of WC and shower facilities with costs allocated to install adequate facilities.
- Fertility treatment & laboratory areas are below recommended size, with the reconfiguration of the area recommended.
- Reported issue with clean air supply to Fertility laboratories with costs to replace AHUs included within the condition facet.
- Majority of areas are overcrowded with additional space required to accommodate needs.

4.12 Block RSH34 – Catering

4.12.1 Condition

- Significant flat roof upgrade and replacement required with localised failures present, North lights also in poor condition with their replacement required as part of roof works.
- Original aluminium windows and doors are in excess of forty years and are difficult to operate and no longer open as intended.
- Internal finishes are dated with significant investment required to generally improve the condition of flooring, ceilings and to redecorate.
- Subsidence beneath quarry tiled floor to Wash-Up and Trayed Meals Areas notable with further investigation required.
- Sanitary areas are not to expected standards with costs allocate to refurbish public & staff WCs.
- Internal doors are dated and do not confirm to current standards.
- Reported issues relating to sub-surface drainage with restricted access due to ACMs, repairs understood to be costly and time consuming.
- 4No external Weathrite chillers are approaching the end of their expected life and as such their upgrade and replacement has been allowed for.

4.12.2 Function, Quality & Space

- Kitchen staff currently have no break out area provided, with it recommended that suitable facilities are provided.
- The block is considered to be under-used with excessive space being present to the Main Kitchen and associated staff areas.

4.13 Block RSH35 – X-Ray

4.13.1 Condition

- Significant flat roof upgrade and replacement required with localised failures present.
- Original aluminium windows are in excess of forty years and are difficult to operate and no longer open as intended.
- Sanitary areas are not to expected standards with costs allocated to refurbish public & staff WCs.

4.13.2 Function, Quality & Space

- Waiting areas & changing cubicles do not meet current standards.
- Department is overcrowded with a lack of clinical, office and storage space being available.

4.14 Block RSH36 – A&E

4.14.1 Condition

- Significant flat roof upgrade and replacement required with localised failures present.
- Original aluminium windows are in excess of forty years and are difficult to operate and no longer open as intended.
- Internal finishes are dated with significant investment required to generally improve the condition of flooring, ceilings and to redecorate.
- Sanitary areas are not to expected standards with costs allocated to refurbish public & staff WCs.
- Internal doors are dated and do not confirm to current standards.

4.14.2 Function, Quality & Space

- Staff commentary suggests that at peak times the existing accident and emergency department is undersized and cannot cope with current levels of demand. The layout does not in any way conform to the requirements of HBN 15-01. Further feasibility studies are required including detailed use over time studies to identify exact demands and a cost has been included within the functional suitability section for new build accommodation.

Note: Allow further cost of £9m for newbuild A + E to conform to HBN 15-01.

4.15 Block RSH37 – Head & Neck

4.15.1 Condition

- Significant flat roof upgrade and replacement required with localised failures present.
- Original aluminium windows are in excess of forty years and are difficult to operate and no longer open as intended.
- Theatres 10 & 11 are dated with a number of elements falling below HBN 26, costs allocated for their complete upgrade and refurbishment.
- The roof top AHU is considered to be beyond its expected life with its complete replacement required.

4.15.2 Function, Quality & Space

- It is not possible to provide adequate bed spacing within the current ward curtilage, without reducing overall bed numbers. Costs have been allocated under the condition facet.

4.16 Block RSH38 – I.T.U.

4.16.1 Condition

- Original aluminium windows are in excess of forty years and are difficult to operate and no longer open as intended.
- Internal finishes are dated with significant investment required to generally improve the condition of flooring, ceilings and to redecorate.
- Sanitary areas are not to expected standards with costs allocated to refurbish public & staff WCs.

4.16.2 Statutory

- Sluice room does not conform to current standards and requires upgrading and refurbishment.

4.16.3 Function, Quality & Space

- It is not possible to provide adequate bed spacing within the current ward curtilage, without reducing overall bed numbers. Costs have been allocated under the condition facet.
- No patient WC/Shower & kitchen is currently provided, with the recommendation that suitable facilities are provided.
- Ventilation has been reported as being very poor with works to re-design and improve the current system recommended.
- Storage issues have been reported with the unit considered to be generally undersized.

4.17 Block RSH39 – Stores

4.17.1 Condition

- Significant flat roof upgrade and replacement required with localised failures present.
- Original aluminium windows are in excess of forty years and are difficult to operate and no longer open as intended.
- Roller shutters to loading bay are dated and have been subject to sustained impact damage, their upgrading and replacement is required.
- Numerous walls have been subject to impact damage with increased wall protection recommended.

4.17.2 Function, Quality & Space

- Reported that a significant amount of space is used for archive material that could be more efficiently stored off-site freeing up space for day to day equipment.

4.18 Block RSH40 – Sterile Services (SSD)

4.18.1 Condition

- Significant flat roof upgrade and replacement required to raised store with localised failures present.
- Original aluminium windows to roof level are in excess of forty years and are difficult to operate and no longer open as intended.
- Internal finishes are dated with significant investment required to generally improve the condition of flooring, ceilings and to redecorate.
- AHU is not in operation with a cost for its re-instatement included.
- Steam pipework supplying the non-operational autoclaves requires removal / replacement depending on future use.

4.18.2 Statutory

- Area is considered to be in a poor condition with numerous elements failing HBN 13, a cost for the area to be refurbished conforming to current standards has been included.

4.18.3 Function, Quality & Space

- Area is part used for storage with the remaining areas vacant, recommended that a review be carried out to make best use of space.

4.19 Block RSH41 – Theatres

4.19.1 Condition

- Original aluminium windows to roof level are in excess of forty years and are difficult to operate and no longer open as intended.
- Theatres 1 & 4 are dated with a number of elements falling below HBN 26, costs allocated for their complete upgrade and refurbishment.
- Internal finishes are dated with significant investment required to generally improve the condition of flooring, ceilings and to redecorate.
- Sanitary areas are not to expected standards with costs allocated to refurbish staff WCs and changing areas.

4.19.2 Function, Quality & Space

- HDU - It is not possible to provide adequate bed spacing within the current ward curtilage, without reducing overall bed numbers. Costs have been allocated under the condition facet.
- HDU - No domestic cupboard available with its provision required.

4.20 Block RSH42 – Ward Block

4.20.1 Condition

- The seals to the external concrete cladding panels are reported to have started to fail with their inspection and replacement been allowed for.
- The main aluminium automatic entrance door to the block is reported as being in poor condition and requiring replacement.
- Internal finishes are dated with significant investment required to generally improve the condition of flooring, ceilings and to redecorate.
- Sanitary areas are not to expected standards with costs allocated to refurbish public & staff WCs.
- Bedside lights throughout the wards are dated and unsuitable with their upgrading and replacement allowed for.

4.20.2 Statutory

- A Dunham Bush refrigeration chiller containing R22 gas was noted to the main plant room, this has since been reported as obsolete and not in use, however it is a statutory requirement to ensure the chiller has been decommissioned and good practice for the complete plant to be disposed.
- Hot water reported as being too hot to Ward 28 on Level 5 with possible scalding risk to dementia patients.

- LST covers to radiators inconsistent with risk areas.

4.20.3 Function, Quality & Space

- It is not possible to provide adequate bed spacing within the current ward curtilage, without reducing overall bed numbers. Costs have been allocated under the condition facet.
- Reports of poor ventilation to the wards throughout the block.
- No drugs room present to the CCU (Ward 24) on Level 3.
- Level 4 Ward 26 (Amputees) Sanitary provision not fit for use by patients with reconfiguring of areas to fit use recommended.
- Reports of limited office and storage space to the wards throughout the block.
- Reports of blocked circulation routes to wards restricting movement of beds carrying patients to appointments.
- No relative rooms available to certain wards.

4.21 Block RSH43 – Estates Dept.

4.21.1 All Facets

- Building requires general modernising including upgrading of WC facilities and refurbishment of offices however is in generally reasonable order given the block's usage.

4.22 Block RSH44 – Faculty of Health (Under part refurbishment)

4.22.1 Condition

- Glazed roof lights located to the pitched roof are dated and in deteriorating condition with their replacement required.
- Aluminium windows are dated and unsuitable with rust visible to numerous frames.

4.22.2 Function, Quality & Space

- Noted as being underused, however refurbishment works are currently being undertaken.

4.23 Block RSH45 – Radiotherapy & Chemo.

4.23.1 Condition

- External Airdale chiller to Cobolt plant room is beyond its expected life with replacement required.
- Changing Cubicles to Level 1 are dated and unsuitable with their upgrading and replacement required.

4.23.2 Function, Quality & Space

- It is not possible to provide adequate bed spacing within the current ward curtilage, without reducing overall bed numbers. Costs have been allocated under the condition facet.

4.24 Block RSH46 – Mytton Oak Centre

4.24.1 Condition

- Assisted WCs & Bathrooms to the South and East wings are dated and unsuitable with their upgrading and refurbishment required.

4.24.2 Function, Quality & Space

- Noted as under-used with many of the rooms not occupied.

4.25 Block RSH47 – Renal Unit

4.25.1 Condition

- Bedside lights throughout are dated and unsuitable with their upgrading and replacement allowed for.

4.26 Block RSH48 – Phlebotomy / ShropDoc (Elizabeth House)

4.26.1 Function, Quality & Space

- Noted as being overcrowded with large volumes of patients at certain times.
- Reception and waiting room noted as being poorly situated with access and privacy issues.

4.27 Block RSH49 – Ward Block Extension

4.27.1 Function, Quality & Space

- It is not possible to provide adequate bed spacing within the current ward curtilage, without reducing overall bed numbers. Costs have been allocated under the condition facet.

4.28 Block RSH50 – Treatment Centre

4.28.1 All facets

- No significant defects noted.

4.29 Block RSH51 – Hamar Centre

4.29.1 Condition

- Sanitary areas are not to expected standards with costs allocate to refurbish public & staff WCs.
- Kitchen units are dated and require replacement.

4.30 Block RSH52 – Hummingbird Centre

4.30.1 All facets

- No significant defects noted.

4.31 Block RSH54 – Learning Centre

4.31.1 All facets

- No significant defects noted.

4.32 Block RSH55 – Daisy Chain Nursery

4.32.1 Condition

- The rubber play surface to the external playground is subsiding along the building edge with its re-instatement required.

4.32.2 Statutory

- Boiler has been noted as being excessively hot with additional ventilation required.

4.33 Block RSH56 – Cancer Treatment Centre

4.33.1 All facets

- No significant defects noted.

5.00 Disabled Access Audit

5.00.1 Site Wide Comments

- Signage is inconsistent throughout the site with its review and upgrading recommended. Allow £50,000 per annum.
- Accessible parking is provided to key areas and is clearly marked.
- Key building entrances are via suitable automatic doors that provide 24 hour access.
- Receptions are varied in their suitability, with the lack of provision of split height desks and hearing loops being the two main issues.
- Circulation routes are generally considered to be of a suitable width and provide clear definition between floor, walls and ceilings.
- Lifts are dated and as such do not conform to current guidelines relating to accessibility. Costs included within condition survey.
- Accessible WCs are varied in their location and suitability with recommendations to increase their number and refurbish those that do not provide suitable accessibility.
- Access to and around the restaurant is poor including the servery and pay counters, with various recommendations being made.
- Accessible changing facilities to departments like X-Ray are not provided and are recommended to be installed.

5. APPENDIX

Methodology

Physical Condition

Each element is given a condition Grade A, B, C, CX, D or DX. If the item has a remaining life of less than five years it is also given a cost to either repair or replace the item.

A = Good. Performing as intended and operating efficiently.

B = Satisfactory. Performing as intended but exhibiting minor deterioration.

B(C) = Items currently condition B but will fall to condition C within 5 year period.

C = Poor. Exhibiting major defects and/or not operating as intended.

D = Bad. Life expired and/or serious risk of imminent failure.

X = Added to C or D if item cannot be repaired and must be replaced.

NHS EstateCODE Risk Assessment Matrix

SCORE RANGE		RISK RANKING	
1-6		LOW	
7-10		MODERATE	
11-16		SIGNIFICANT	
17-25		HIGH	

Rating		PROBABILITY OF FAILURE				
Failure descriptors		1	2	3	4	5
		RARE	UNLIKELY	POSSIBLE	LIKELY	CERTAIN
		None or minimal remedial action required and/or new/recent upgrade. Estimated time to failure may be circa > 10 yrs	Normal wear and tear. Sound, operationally safe and exhibits only minor deterioration. Estimated time to failure may be circa < 10 yrs	Reasonable physical damage/deterioration. Reassignment of life may be acceptable based on technical tests or residual robustness. Estimated time to failure may be circa < five yrs	Major physical damage/deterioration. Failure apparent/assessed as imminent or unacceptable built environment. Not appropriate to reassign life. Estimated time to failure may be circa < one yr	Failure occurred. Unacceptable built environment. Not appropriate to reassign life. Estimated time to failure may be circa < six months

SEVERITY		Health & safety	Environment	Business	Operational/ building/ engineering element	Fire/statutory Complies with mandatory fire safety requirements and statutory safety legislation.	Fire/statutory Complies with mandatory fire safety requirements and statutory safety legislation with minor deviations of a non-serious nature	Fire/statutory Known contravention of one or more requirements – which falls short of "B".	Fire/statutory Dangerously below "B"	Fire/statutory Dangerously below "B"	
Rating	Descriptor										
POTENTIAL CONSEQUENCES	1	INSIGNIFICANT	No injury/breach of guidance/procedures	No or minimal impact breach of guidance/procedures.	Unlikely cause of complaint. Litigation remote. Minimal reputation loss/limited awareness within organisation.	Minimal or no impact. Minimal or no disruption.	1	2	3	4	5
	2	MINOR	Minor injury/ill health (first aid or self-treatment). Breach of legal requirement.	Breach of legal requirement.	Possible complaint. Litigation unlikely. Loss of reputation (widespread internal awareness).	Localised impact. Disruption to normal services.	2	4	6	8	10
	3	MODERATE	Moderate injury/ill health statutory obligations. Improvement notice issued.	Single breach of legal requirement. Improvement notice issued.	Possible complaint. Possible litigation. Loss of reputation. National paper reporting.	Moderate impact. Moderate disruption to normal services.	3	6	9	12	15
	4	MAJOR	Major/significant injury or long-term incapacity/disability. Prohibition notice issued.	Multiple breach of legal requirement. Prohibition notice issued.	Litigation expected. Loss of reputation. National reporting.	Major/significant impact. Severe disruption to normal services.	4	8	12	16	20
	5	CATASTROPHIC	Fatality and/or permanent incapacity/disability. Prosecution.	Multiple breach of legal requirement. Prosecution.	Litigation certain. National adverse publicity	Critical impact. Service closure.	5	10	15	20	25

Formula used to calculate the Risk Adjusted Backlog is as follows:

$$\text{Risk-adjusted backlog (£)} = \frac{\text{Non-critical backlog}}{\text{Remaining life of building/block}} + \text{Safety-critical backlog}$$

Functional Suitability

Reviews: Internal Space Relationships, Support Facilities & Location

Category	Comment
A	Very satisfactory, no change needed.
B	Satisfactory, minor change needed.
C	Not satisfactory, major change needed.
D	Unacceptable in its present condition.

Space Utilisation

The review identifies:

E = Empty

U = Under-Used

F = Fully Used

O = Over-Used

Quality

Reviews: Amenity, Comfort Engineering & Design Appearance

Category	Comment
A	A facility of excellent quality.
B	A facility requiring general maintenance investment only.
C	A less than acceptable facility requiring capital investment.
D	A very poor facility requiring major capital investment or replacement.

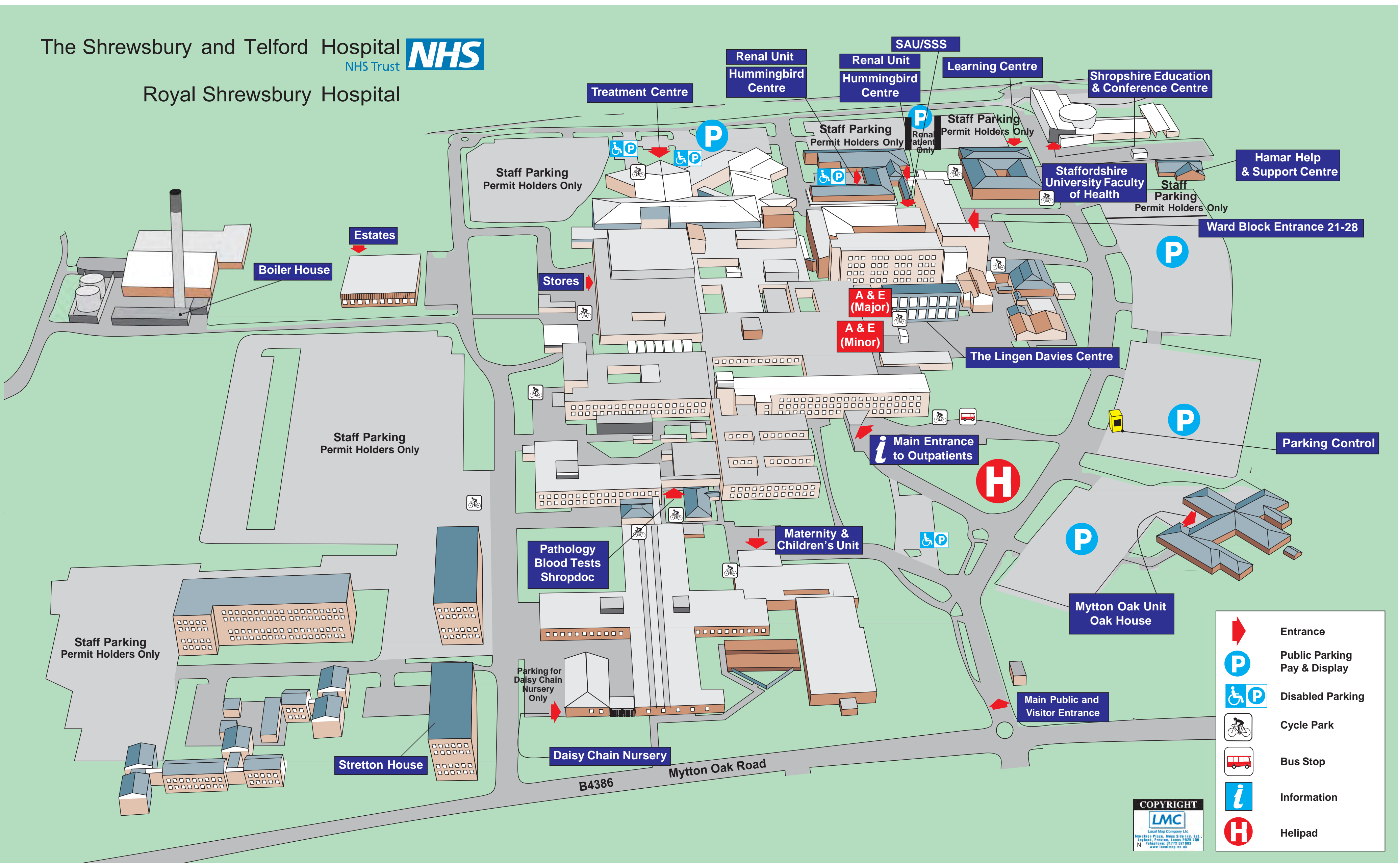
Statutory Compliance

Reviews: Asbestos, Health & Safety, Fire Safety, Disabled Access, Legionella Control and various other aspects.

Category	Comment
A	Complies with all relevant standards and relevant guidance.
B	Action required to comply with relevant guidance and statutory requirements.
C	Building with known contravention of one or more standards.
D	Building areas which are dangerously below 'B'.

APPENDIX 1d - RSH EXISTING SITE PLAN

The Shrewsbury and Telford Hospital
NHS Trust
Royal Shrewsbury Hospital

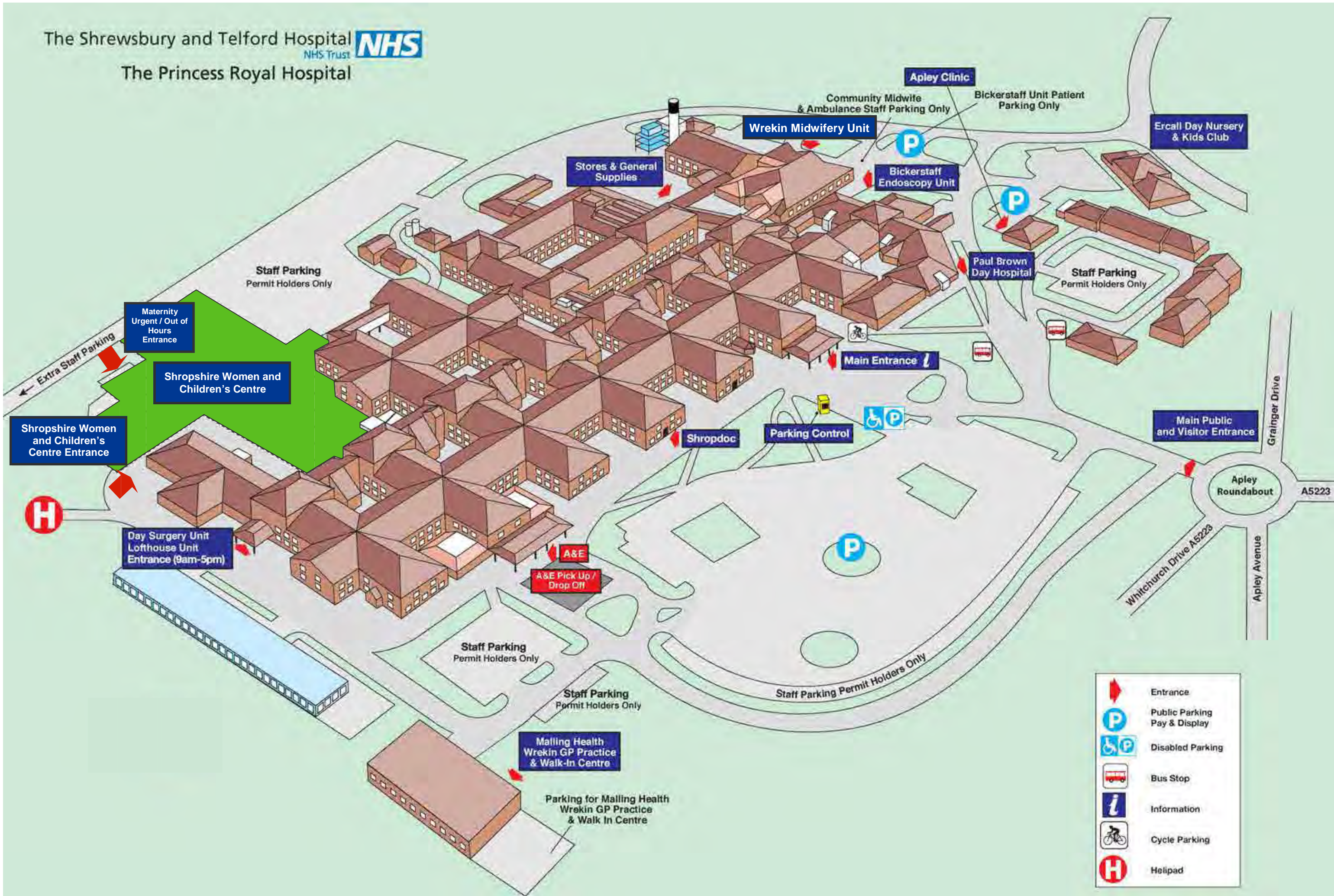


- Entrance
- Public Parking Pay & Display
- Disabled Parking
- Cycle Park
- Bus Stop
- Information
- Helipad

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APPENDIX 1e- PRH EXISTING SITE PLAN

The Shrewsbury and Telford Hospital NHS Trust
The Princess Royal Hospital



-  Entrance
-  Public Parking Pay & Display
-  Disabled Parking
-  Bus Stop
-  Information
-  Cycle Parking
-  Helipad