



June 2019

BLACKBURN CATHEDRAL

Quinquennial Inspection Report

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1.0

Executive Summary

1.0 EXECUTIVE SUMMARY

Blackburn Cathedral, like any historic building, requires constant upkeep and repair to maintain its condition and significance.

The Cathedral has benefited from a regime of Quinquennial fabric surveys which sets out both the repair and maintenance programmes every five years. As a consequence the Cathedral is in a generally good state of repair.

The Cathedral Chapter have continued to invest into the maintenance and upkeep of the fabric between quinquennial inspections.

The Cathedral has been recently successful with two large repair grant schemes 2016 and 2017 administered by the Cathedral Fabric Commission for England from the WWI Memorial Fund for undertake further fabric repairs. Those works have included high level roof repairs and the re lining of existing lead gutters together with masonry repairs and repointing to the north and south transepts, the west tower and to elements of the Lawrence King Lantern. This recent grant work has dealt with a large percentage of the required repair work as defined and identified in the previous Quinquennial Inspection 2014 (James W G Sanderson architect)

We are pleased to report that following this latest inspection (2019) that generally the Cathedral Fabric is in good condition. There are a number of repairs and maintenance items to be dealt with over the next five years to plan for in order to keep the fabric in the condition it currently enjoys. We list opposite the main repair issues that have been identified as a result of this survey.

Main External Repairs this Quinquennium

1. South Aisle and South Transept Masonry - Complete the external repointing of the Cathedral. Only the South Transept and South aisle remains to be completed. Note high level Clerestory masonry has already been completed.
2. West Tower – Complete Masonry repairs and repointing to the north, east and south facades. Note the high level pinnacles and crenulations have already been completed.
3. Central Lantern Tower – Repointing of parts of the masonry to the glazed section of the Lantern Tower. Repoint and maintain water protection at the junction with the glazing. High level inspection of the interior of the lantern.

Main Internal Repairs this Quinquennium

1. South Aisle – Re-decoration of the vaulted ceiling
2. Jesus Chapel – Redecoration of the Chapel and the consideration of a re-ordering of the Chapel
3. South Transept – Redecoration of the North and South Transept walls.
4. Lantern Tower – Redecoration of the Lantern interior and ceiling

Church House, the only other historic building within the Cathedral Precinct, is now unoccupied. This building previously housed the Cathedral and Diocesan Offices but this function was decanted into the new Cathedral Court building in 2016. The Cathedral Chapter are currently looking at a number of different options for the building in order to secure its immediate future. Currently the building remains in good order. Please note Church House does not form part of this Quinquennial Inspection and the chapter are dealing with this separately.

The precinct has had recent investment as part of the Cathedral Court works the new town square to the east has new public realm, new gardens and new planting. The new Cathedral Garth to the south is also new and in very good condition. The Public realm between Church House and the new Cathedral Court building has been re-laid in the existing York stone paving and sets to a new above ground carpark and all is in excellent condition.

2.0

Introduction

2.0 INTRODUCTION

This Quinquennial Inspection was carried out by the Cathedral Architect, James Sanderson BA Dip Arch RIBA and current Cathedral architect as defined under the Care of Cathedral Measure 1990 and amended 2011.

The Cathedral Church of St. Mary the Virgin is Grade II* Listed

The Survey was carried out during Spring 2019 and the previous Quinquennial was carried out in June 2014

2.1 WORKS SINCE THE LAST QUINQUENNIAL

The last Quinquennial Inspection was carried out in the spring of 2014.

The quinquennial report set out the current condition of the Cathedral Fabric. It identified a series of works that were identified as fabric repairs and maintenance that should, if possible be undertaken in the next quinquennial period 2014 – 2019..

I'm pleased to say that the Cathedral have been able to undertake a large amount of the recommended fabric repairs within the first 4 years of the quinquennial period. This has been largely paid for with grant from the Cathedral Fabric Commission (CFCE) through the WWI Memorial Grant Scheme with little or no call on Cathedral money.

The Cathedral has been successful in achieving two WWI Grant awards the first in 2016 for the sum of £295 k and the second one in 2017 with the sum of £ 195k. We have identified a further £200k of fabric repair that we can undertake (within this next quinquennium) that will deal with another large section of the recommended quinquennial works, largely external repairs to the South Transept and South Aisle walls. The Cathedral are in active dialogue with the CFCE to see if there is any underspend on this current grant round with a view to that being earmarked for Blackburn for us to use. If successful with this funding the Cathedral will be able to complete all the external quinquennial repairs as identified in this current quinquennium.

WWI Grant Round I Funding 2016

Total Project Cost - £ 295k

Start Date Sept 2016 completion Date June 2017

This first round of works was high level works to both the North and South Transepts, the crossing and the Lantern Tower. Completed works were as follows:

- North Transept – new leadwork gutters to east and west faces including aisle.
- North Transept – new leadwork flashing and upstands to gutter lining to east and west faces including aisles
- North Transept – New outlets and cess pits to east and west faces including aisles
- North Transept – New lead flashings to roof abutments north and south.
- North Transept – Repaired slate roofs east and west slopes and aisles
- North Transept – New lead covered ridge roll.
- North Transept – Repointing to inside of masonry parapets east and west including aisles.
- North Transept – Repointing to high level clerestory masonry east and west including window tracery and too inside of parapets.
- North Transept – New Lead spitters and hoppers and cast-iron r.w.p's
- South Transept – new leadwork gutters to east and west faces including aisles.



- South Transept – new leadwork flashing and upstands to gutter lining to east and west faces including aisles.
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- South Transept – Repaired slate roofs east and west slopes and aisles.
- South Transept – New lead covered ridge roll.
- South Transept – Repointing to inside of masonry parapets east and west including aisles
- South Transept – Repointing to high level clerestory masonry east and west including window tracery and to inside of parapets.
- South Transept – New Lead spitters and hoppers and cast iron r.w.p's
- South Transept – East Face new masonry top to existing buttress.
- Lantern Tower – New lead roofing to lantern roof.
- Lantern Tower – Repointed glazing and masonry elements.
- Lantern Tower – New Decothane coating to bottom of fleche.
- Lantern Tower – New Decothane coating to gutter perimeter.

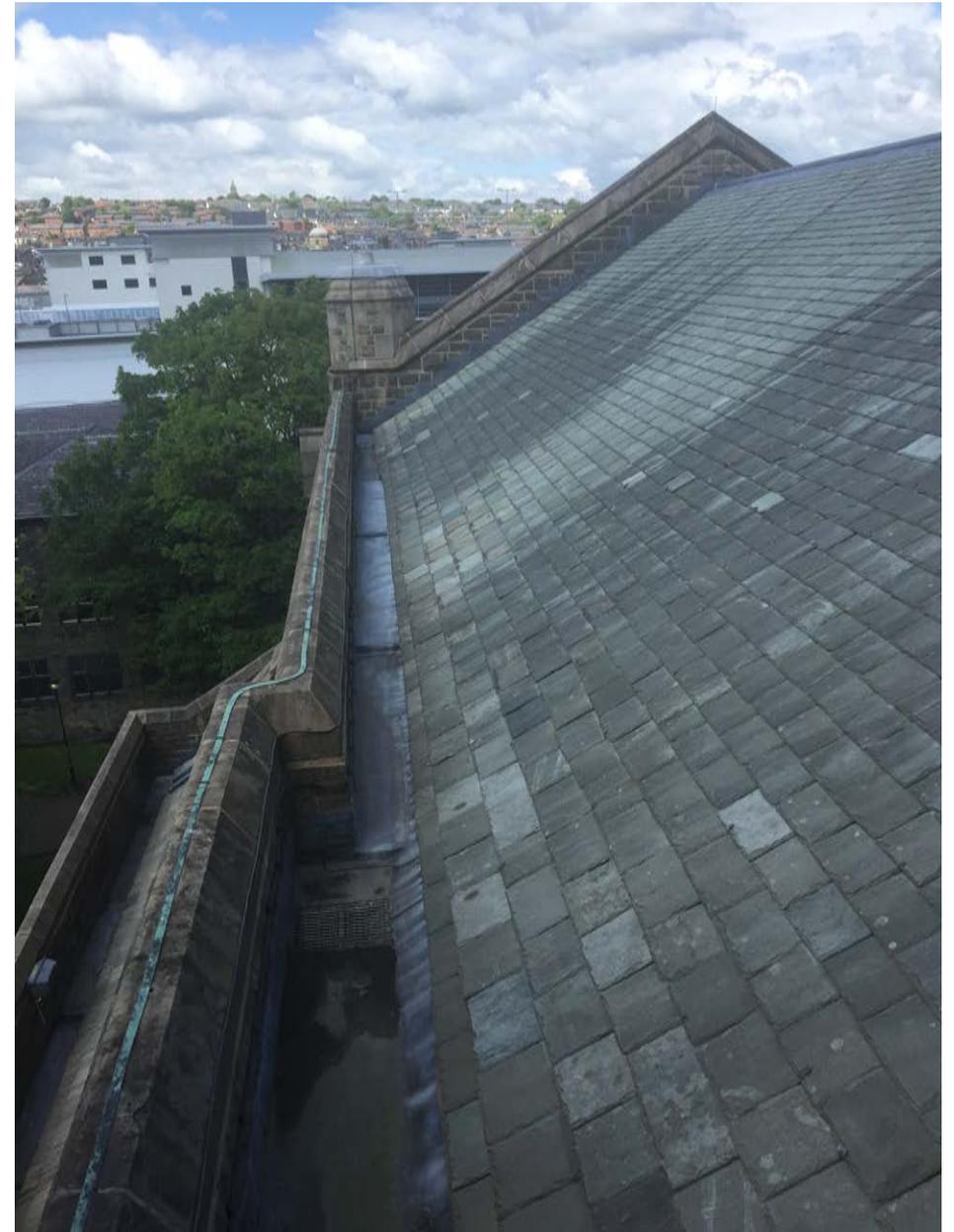
WWI Grant Round 2 Funding 2017

Total Project Cost - £ 195K

Start Date June 17 completion Date Nov 17

This second round of works was low level works to both the North and South Transepts and repair works to the West Tower including the roof and the ringing chamber and the clock
Completed works were as follows:

- North Transept – Low level pointing to east and west faces including tracery windows.
- North Transept – New cast iron r.w.p's east and west
- North Transept – Pointing to north face including tracery
- North Transept – Glazing repairs to north, east and west facades.
- North Transept – New buttress masonry top and repointing
- North Transept – Some new ground drainage to east end of the north transept
- West Tower – Replacement lead roof.
- West Tower – Repointing to high level pinnacles.
- West Tower – Repointing of masonry to west face including bell chamber louvres.
- West Tower – Repairs to bell chamber louvres.
- West tower – New rainwater goods.
- West Tower Interior – Replacement masonry windows to ringing chamber.
- West Tower Interior – Damaged plaster removed.
- West Tower Interior – Ventilation added to glazing.



Completed WWI Round 1 works – North Transept

2.2 LIMITATIONS OF THE QUINQUENNIAL REPORT

This Quinquennial is a summary report only on the general condition of the Cathedral, as is required by the Care of Cathedrals Measure 1990, 1994 and 2005; it is not a specification and must not be used for the execution of the work.

The report identifies the main areas of defects and does not identify minor repair items.

A separate inventory of furniture, fittings and fixtures has been prepared by others to the standards set out by the C.F.C.E. and as a consequence items falling into this category are not covered by this report.

The basic layout of the Cathedral is indicated on drawings in the appendix to this report.

This inspection has been purely visual, and no enclosed or inaccessible parts such as roof spaces, undersides of floors, gutters, drains etc. have been opened up for detailed inspection. We have not inspected woodwork or other parts of the structure which are covered unexposed or inaccessible and we are therefore unable to report that any such part of the property is free from defect in this respect.

The Architect has gained access to all areas of the building served by safe access ways. Close inspection of the Nave Porch Roofs, the Roof over the South Transept doors and other areas of high level masonry and windows has not been possible. Thus no assurance can be given, or implied, that these areas are without fault, structural or otherwise.

The Architect has not carried out any investigations to determine whether High Alumina Cement was used during the construction of the Cathedral, and we are therefore, unable to report that the building is completely free from risk in this respect.

Any extensive dampness may give rise to the formation, growth, presence or release of any fungi, moulds, spores or mycotoxins. We wish to confirm that we have not undertaken any testing, detection or monitoring of this.

It should be realised that serious trouble may develop in between quinquennial surveys if minor defects are left unattended. It is highly recommended that a careful inspection of the fabric be made at least once a year and immediate attention given to such minor matters as displaced slates and leaking pipes.

The last Quinquennial Inspection was carried out in the spring of 2014.

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2.2 LIMITATIONS OF THE QUINQUENNIAL REPORT

ELECTRICAL INSPECTION

Any electrical installation should be tested at least every quinquennium by a registered National Inspection Council for Electrical Installation Contracting (NICEIC) electrician, and a resistance and earth continuity test should be obtained on all circuits. The inspection and testing should be carried out in accordance with IEE Regulations, guidance note no 3. The engineer's test report should be kept with the Cathedral log book. A full inspection was undertaken in 2012 and an upgrade of some of the wiring circuits was undertaken as a result of that survey.

The lightning conductor should be tested every quinquennium in accordance with the current British Standard by a competent engineer, and the record of the test results and conditions should be kept with the Cathedral log book.

HEATING INSPECTION

A proper examination and test should be made of the heating apparatus by a qualified engineer, each summer before the heating season begins. The report should be kept with the Cathedral log book. The Chapter is advised to consider arranging a contract for regular maintenance of the installation.

FIRE PRECAUTIONS

All fire extinguishers should be inspected annually by a competent engineer to ensure they are in good working order with the inspection recorded in the Cathedral log book and on the individual extinguishers.

Note that new fire safety rules affecting all non-domestic premises came into effect on 01 October 2006. (The Fire Safety Order 2005)

The Chapter should ensure that there is a suitable and sufficient risk assessment in place. Further guidance is available at www.firesafetylaw.communities.gov.uk and www.churchcare.co.uk/building.

My understanding is that the Chapter have this in place.

MAINTENANCE

The repairs recommended in the report will (with the exception of some minor maintenance items) be subject to FAC or CFCE Approval.

Although the Measure requires the Cathedral to be inspected every five years, it should be realised that serious trouble may develop in between these surveys if minor defects are left unattended.

The Chapter has sensibly entered into contract with a local builder for the cleaning-out of gutters, valleys, hoppers and downpipes twice a year including small roofing repairs as and when required.

Further guidance on the inspection and the statutory responsibilities are contained in "A Guide to Church Inspection and Repair" and "How to Look After Your Church". "The Churchwarden's Year" gives general guidance on routine inspections and housekeeping, and general guidance on cleaning is given in "Handle with Prayer". All these booklets are published by the Council for the Care of Churches.

2.2 LIMITATIONS OF THE QUINQUENNIAL REPORT

SPAB

Faith in Maintenance is a new initiative which aims to help volunteers who look after historic places of worship by providing free training days to help them understand how their building works and how to solve problems caused by leaky gutters and blocked drains. Faith in Maintenance courses are open to volunteers from any faith group with an historic building to care for, listed or unlisted. For more information see <http://www.spab.org.uk/noticeboard/faith-in-maintenance/>.

INSURANCE

The Chapter are reminded that insurance cover should be index-linked, so that adequate cover is maintained against inflation of building costs. Contact should be made with the insurance company to ensure that insurance cover is adequate.

SAFETY

The Construction (Design and Management) Regulations 2007

The Chapter is reminded that construction and maintenance works undertaken may require the appointment of a competent CDM Co-ordinator, Designer and Principal Contractor. The role of the CDM Co-ordinator is to advise the Chapter on their duties in respect of the Health & Safety aspects of the construction works to include ensuring that a Health & Safety Plan is prepared, monitor the Health & Safety aspects of the design, advise on the satisfactory resources for health and safety and prepare a Health & Safety file on completion of the works.

HEALTH AND SAFETY

Overall responsibility for the Health & Safety of the Cathedral and Precinct lies with the Chapter. This report may identify area of risk as part of the inspection, but this does not equate to a thorough and complete risk assessment by the Chapter of the building and Precinct

ACCESS IMPROVEMENTS

The Disability Discrimination Act requirements concerning existing building structures came into effect in October 2004.

The Chapter should be aware that the Disability Discrimination Act has more general implications for the use of the building and specialist advice may be required.

The degree of compliance must be balanced against the requirements to protect the historic fabric of the building and to gain approval. Further advice is contained within the English Heritage publication "Easy Access to Historic Properties" also at www.churchcare.co.uk/legal.

Where it is not possible to fully comply with the recommendations, measures to reduce access restrictions should be introduced to the extent that is compatible with protection of the historic fabric.

MANAGEMENT OF ASBESTOS IN THE BUILDING

The control of asbestos at work regulations contain duties for the Chapter. The regulations came into force in May 2004. They will require an assessment of the building by the Chapter. If the presence of asbestos that has not been encapsulated is suspected a survey by a competent specialist should be carried out, including testing where necessary. The location and condition of asbestos containing materials should be recorded in an asbestos register. Where recommended by the survey report, the asbestos should be removed.

An assessment has not been covered by this report but we are aware that the Cathedral has a asbestos survey of its property and that it has a management plan in place for the management of the risk. An asbestos register should be available for any Contractors working on the building. Further information is included in the HSE code of practice The Management of Asbestos in Non Domestic Premises LI27 and guidance is available at www.churchcare.co.uk/building.

2.2 LIMITATIONS OF THE QUINQUENNIAL REPORT

PROTECTED WILDLIFE

A number of wildlife species found in churches and churchyards are protected by legislation and the approval of Natural England will be required for works in the protected species habitat. This may affect the timing of any proposed repairs. For general repairs, the presence of bats is the most likely to have implications for the timing of works.

It is recommended the Chapter contacts Natural England to establish the extent of protected species habitats in the Cathedral and the restrictions that will be placed on likely repair programmes.

Natural England will carry out an initial inspection of the building free of charge.

RECOMMENDATIONS

Throughout the report we have highlighted works of repair and have given them a rating in terms of importance over the next five years. The ratings are as set out below

- | | |
|------|---|
| A(F) | Works required to improve disabled access |
| A(G) | Works associated with compilation of the asbestos register. |
| A. | Urgent works requiring immediate attention. |
| B. | Works recommended to be carried out during the next 12 months. |
| C. | Works recommended to be carried out during the quinquennial period. |

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3.0

General Description of the Cathedral

3.0 GENERAL DESCRIPTION OF THE CATHEDRAL

Historical Background:

The Cathedral building is of several distinct eras.

The Bell Tower, Nave Porches, Nave and Aisles, and the Crypt areas below remain as parts of the original Parish Church. The foundation stone was laid in 1820 and is now the nave of the Cathedral. The architect was John Palmer (1785-1846) of Manchester. The church was designed in a fine 14th century Gothic style with a nave, north and south aisles and a tall west tower flanked by single storey vestibules.

The interior followed the general late Georgian arrangement of pews divided into blocks by central and side gangways, galleries above the aisles supported on iron columns and a further gallery across the west end which also contained the organ. The substantial undercroft was probably intended for burial vaults but was left largely unused as the public health movement led to objections to burials in churches. A vestry was accommodated in part of the vaults in 1888 by architect J. H. Stones of Blackburn.

Following some fire damage in 1831 repairs to the west tower were carried out by the nationally important architect Thomas Rickman. In 1875 there were major works to the church interior with further redecoration in 1905 by Paley and Austin, who were leading church architects in the northwest region at that time.

The galleries which once occupied the upper parts of the aisles have been removed.

In 1926 the Diocese of Blackburn was created and St Mary's Church was promoted to Cathedral status. In the 1930s William Forsyth, who was already architect to Salisbury, Rochester and Southwark Cathedrals and had an established reputation as a restorer of old churches, was asked to prepare designs for enlarging the new Cathedral. A crossing, north and south transepts and chancel were proposed in Longridge stone.



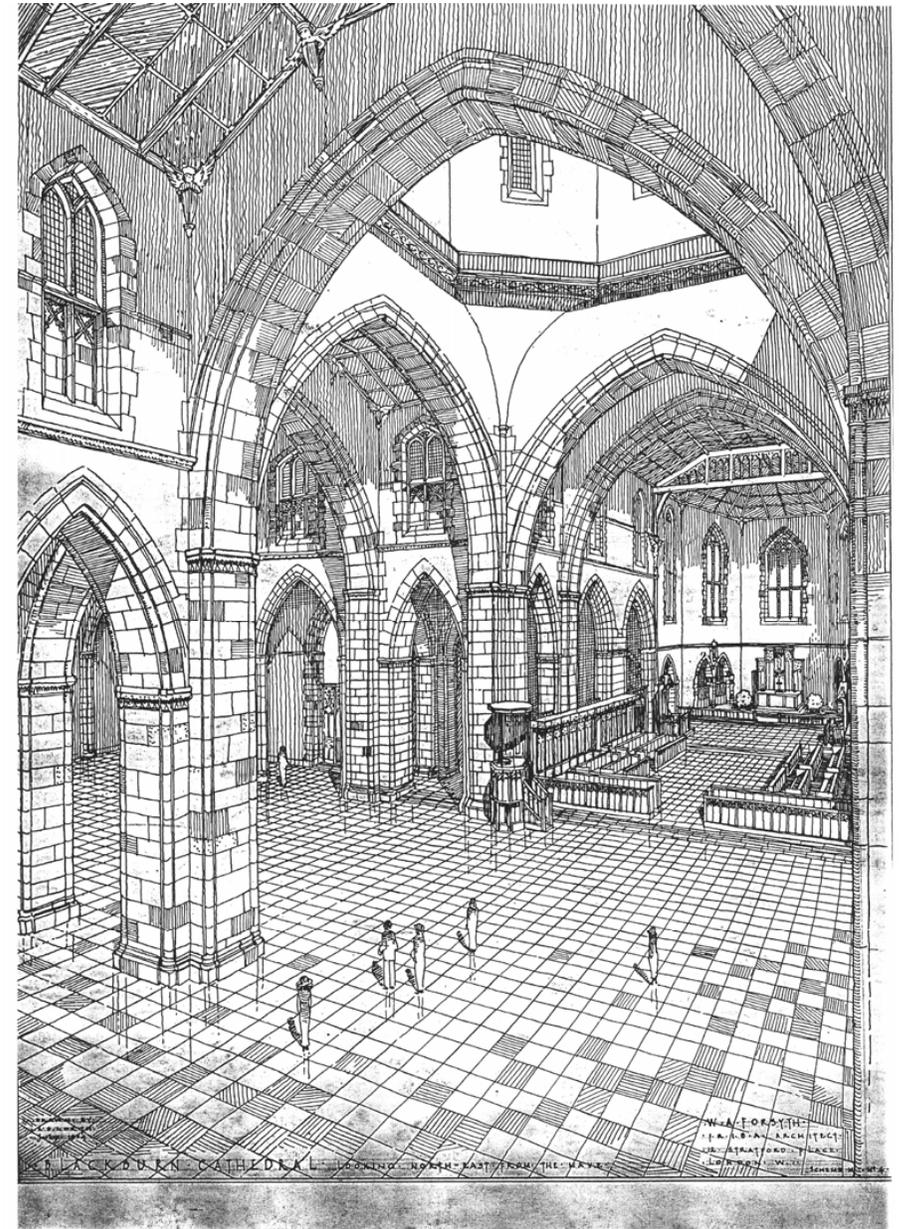
The scheme involved developing an elaborate processional entrance via the south transept, with two sets of grand stone steps flanking an observation niche for the Bishop of Blackburn.

However, the building programme was protracted (largely due to the war)and although work began in the 1930s it was not until the 1960s that the building was made largely complete by the architect Lawrence King. New modern works of art were installed, such as Christ the Worker. This also included the original glass in the lantern of the crossing, the east window of St Martin's Chapel and various other additions, many by John Hayward. A new needle spire above the modern lantern was also added to reflect the building's increased ecclesiastical importance and prominence in the town.

Since the last Quinquennial there has been a major new development completed to the south side of the Cathedral. The Cathedral has constructed a new Town Square to the East of the precinct together with a new Cloister Garth to the south of the Cathedral Nave. Works to construct a new building to the south of the Cathedral (Cathedral Court) which now joins with the previously unfinished South Transept began in 2014 and was completed and occupied in May 2016. This building provides new living accommodation, refectory as well as a library and office space which also extend to deliver new and additional teaching spaces and meeting rooms. The previous above ground carpark is now discretely position below the footprint of the new Cathedral Court.

Cathedral Court does not form part of this inspection as the final completion certificate has not yet been completed and as such any defects are still be rectified by the main contractor. Once Final Certificate is issued Chapter will be responsible for the care of the fabric from that date forward and as such Cathedral Court will fall within a wider Quinquennial Inspection.

Also since the last Quinquennial the Cathedral has undertaken and adopted a new detailed Conservation Management Plan which gives a much more detailed description of both the history of the buildings and the site together with a detailed analysis of the significance of the building.



4.0

The Inspection

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	<h3>4.1 ROOF COVERINGS - TOWER</h3> <h4>Lantern Tower Roofs – Lower Lantern Quadrant Roofs</h4> <p>The tower quadrant roofs 4 No. are stainless steel sheeting, on Foam glass insulation and they fall towards the lantern and then into a 200mm wide gutter approximately 100mm deep which runs in two directions to outlets either onto the transept roof or the lower crossing roofs. These gutters also accept two downspouts from the lantern roof over. At their abutment with the parapets there is a stainless steel abutment and stainless steel cover flashing up to beneath the new stone coping stones. It would appear that the abutment is also a means of giving perimeter ventilation at the abutment with the walls.</p> <p>There are a number of open joints to some of the lower quadrant coping stones – these would benefit from re pointing.</p> <p>It was also noted that the quadrant roof on the North-west corner has been made up from a series of smaller sheets and as such has a large number of welds within the sheeting. It is also indented in a number of places possibly due to previous damage from ladders and access equipment. However there are no visible signs of water ingress from within the quadrant interiors. No action required at this time but the situation should be monitored.</p> <p>The quadrant roofs discharge water onto the transept and crossing roofs via very large octagonal hoppers, approximately 500mm wide and 700mm deep. The quadrant on the South-west corner is also compromised with additional welding adjacent to the access hatch. Each weld has the potential to cause a weakness in terms of water penetration. All hoppers and downpipes are running free.</p> <p>Each of the quadrant roofs has a square stainless steel sheet covered access hatch into each of the internal quadrants below. The inner rooms formed in the quadrants adjacent to the lantern have some evidence of salts in the masonry. I wonder if this is to do with the use of cement within the concrete capping's rather than inherent dampness. The high level extract system that has been installed within the quadrants is helping to ventilate these inner spaces.</p>		B

Plan Ref	Description	Photo.Ref.	Priority
	<p>Lantern Tower Roofs - Lantern Roof High Level</p> <p>There is good safe access to the Lantern Roof via a stainless steel Mansafe latchway system that has been installed to the north west corner of the lantern structure. I have been reassured that this is checked annually for safety.</p> <p>The Lantern Roof is an octagonal low pitched roof of approximately 5 degree pitch comprising stainless steel sheet roofing on, geotextile underlay on a layer of sheathing felt on Foamglass insulation on the original concrete structure and sub base. However since the last quinquennial this has now had a further protective roof added comprising of milled lead sheet on hardwood boarding laid to falls with drips as required. The roof falls to a shallow gutter approximately 250mm in width to the roof perimeter this is in stainless steel but this has now been further protected with a Decothane roof covering to cover the vulnerable neoprene expansion strips at each corner. There is a small circular rainwater outlet in eight locations, at approximately each corner, the outlet is 75mm in diameter and in some cases is set higher than the soffit of the gutter.</p> <p>The stainless steel outlets expel rainwater into small stainless steel hoppers approximately 150mm square and 200mm deep and then drains via 100mm square stainless steel down pipes onto the stainless steel quadrant roofs below. On inspection all these outlets are clear.</p> <p>One of the advantages of using a metal standing roof is its seamless quality and that it can be installed in long lengths without joints creating a large waterproof covering. In hindsight I believe it was a mistake to try and install such a material on an octagonal tower with a parapet gutter and with limited rainwater outlets. Hence the reason for installing a further protective roof covering and gutter membrane.</p> <p>There has been historic water ingress into the Lantern Tower almost from the completion of the metal roofing in the late 1990's. Over the last Quinquennium there have been a number of attempts to prevent water ingress including new pointing, new mastic joints, part lifting and relaying of the gutter soffit and cutting back of the geotextile membrane and now we have added an extra roof and gutter protection. I'm pleased to say water ingress has reduced but this must remain to be monitored.</p>		

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	<p data-bbox="522 321 1847 385">Note: the Decothane finish benefits from a 20 year guarantee but is to be periodically maintained and inspected to in order that this guarantee BE preserved.</p> <p data-bbox="522 421 598 449">Fleche</p> <p data-bbox="522 492 1847 628">From the centre of the lantern rises a tall, slender, hollow aluminium octagonal fleche, approximately 11M in height. In recent history the base of the spire has been coated in a Liquid Plastics Decothane roofing system which extends for approximately one metre up the internal face of the lantern and then through and across the centre concrete dome this has been repainted again in this quinquennial as part of the leadworks works described above.</p> <p data-bbox="522 664 1796 735">Each face of the spire is constructed in such a way as to allow any water ingress through the spire to drain out above the Decothane covering through purpose made ventilation / drainage grilles.</p> <p data-bbox="522 771 1847 871">Note: the Decothane finish benefits from a 20 year guarantee but is to be periodically maintained and inspected to in order that this guarantee is preserved. It is noted that a new coat of Decathane was installed in 2005 , 2014 and 2018.</p> <p data-bbox="522 906 1821 978">The aluminium spire itself looks plumb and has no sign of corrosion. A periodic high level inspection of the spire should be made including the large stainless steel terminal cross.</p>		C

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	<p>Around the perimeter of the lantern roof are natural stone pinnacles to Lawrence King's original design and smaller triangular pinnacles on the copings around the parapet edge. This masonry work is all new and formed part of the major works to the Lantern Tower undertaken in 1998.</p> <p>Since the last quinquennial the four large pinnacles have been inspected and repointed at their base. face of the quadrant are loose and require re-bedding.</p> <p>Lantern Masonry:</p> <p>The lantern itself is octagonal in plan and consists of large natural stone mullions framing decorative stained glass. All has been re-faced in natural stone 1990's. It is to the original design of Lawrence King.</p> <p>There are areas of masonry on the South and West faces of the lantern requiring re pointing. It was also noted that the pointing to stone mullions and glass junction which has fallen out and should be replaced on all eight sides of the lantern but again there seems to be a particular issue on South and West elevations. When repointing the mullion / glazing junction consideration to be given to installing a less brittle pointing solution and even a proprietary product.</p> <p>The integrity of the glazing however has not been compromised because beneath the mortar that has fallen away there is a separate softer compound which seems to be adhering very well between glass and stone.</p> <p>Lantern Interior:</p> <p>Due to the long term water ingress there remains signs of water damage to internal decoration at the junction between the ceiling and the glazed mullions. All is plastered and is a combination of wet plaster and plasterboard and skim facings. This requires internal inspection and redecoration. It is also recommended that a full structural survey of the Lantern fabric take place from an internal scaffold (during the decoration works) to ascertain the condition of the reinforced concrete structure and in particular any corrosion of the internal steel structure and reinforcement. Whilst an internal inspection is carried out the cables supporting the Corona should also be checked for structural integrity and condition.</p>		<p>B</p> <p>C</p> <p>C</p>

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	<p data-bbox="522 278 955 314">Nave Porch Roofs North and South:</p> <p data-bbox="522 349 1834 421">No safe access is available for close inspection of these roofs but a visual inspection has been carried out from the adjacent Aisle Roofs and West Tower.</p> <p data-bbox="522 449 1847 556">Both North and South roofs are partly covered in lead sheet to a flat roof area with lead covered vents and two slopes of diminishing welsh slate roofing. All associated cover and abutment flashings and gutters have been installed to current leadwork standards.</p> <p data-bbox="522 592 1847 699">There has been historic water ingress into the South porch directly above the light switching position on the East wall. This was noted at the 2009 Quinquennial and subsequent work in repointing in flashings appears to have dealt with any problems.</p> <p data-bbox="522 735 1847 835">The North Porch roof also appears to be in good order with no visible water ingress internally. Note the outlet on the West face of this roof is not visible from this inspection and as such should be inspected periodically for good maintenance.</p>		

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	<p>Nave Roof: North and South Slopes</p> <p>The Nave has a dual pitch roof, of approximately 32 degree slope in diminishing course Westmorland slate. The roof is in good condition but there are a significant number of tagged slates particularly to the West approximately twelve in total there are no damaged or broken slates. The ridge has a lead covered roll, there are lead flashings at the abutment with the Tower, the parapets are lead lined gutters and run from the Tower to the gable wall of the crossing. The joint between the flashings and the tower would benefit from re pointing.</p> <p>There are triangular lead covered flat roof areas adjacent to the crossing parapet where the nave widens to form the crossing. On inspection leadwork appears to be in good condition.</p> <p>Some lengths of lead to the soffit of the parapet gutters are in excess of that recommended by the Lead Code as is the upstand to the tilt fillet which is in excess of 400 mm high in some locations. Consideration should be given to cutting this down to the recommended 225 mm upstand and covering with a new abutment flashing. This is not urgent but would be something to consider as good practice.</p> <p>The pointing to the lead upstands of the parapet gutters has a mixture of approaches recently installed lead sealant in some areas and traditional lime pointing in others. There is some loss of horizontal pointing in some areas. Long term consideration and or all remedial pointing from this point onwards should be replaced with lime mortar back pointing with a 20mm deep lead sealant joint.</p> <p>Some pointing to parapet upstands and flashings is questionable and it would be prudent to replace as discussed above over a phased approach.</p> <p>The leadwork to the parapet gutters is laid onto timber boarding I walked the length of the gutters and did not feel that the gutter bases where suffering from any structural damage or rot.</p>		C

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	<p>Aisle Roof: North and South Slopes</p> <p>The aisles have single pitch roofs, approximately 33 degree pitch, in diminishing course Westmorland slates. The North roof slope was re-slatted prior to the 2009 Quinquennial so is approximately 15 years old as such it is in excellent condition as is the associated leadwork and flashings. There was no broken or slipped slates visible on this inspection to either the North or the South roof slopes.</p> <p>It is noted that the North Aisle roof/clerestory abutment has been totally re-dressed in new leadwork. New leadwork has been taken over the lead cills and up to the glazing line. Leadwork has also been installed over the drip moulds to the windows along the clerestory wall and also to the drip mould below the parapet stone. All is in good order.</p> <p>Lead rainwater chutes have been inserted into the depth of the slating to carry the discharged water from the higher level nave roof directly into the parapet gutters. This is an excellent detail and has now been used elsewhere on the Cathedral in particular the transept aisle roofs.</p> <p>Both Aisle roofs have stepped abutment flashings and lead lined gutters. All these areas of lead appear sound though the existing detailing does not comply with current standards. The parapet gutters have some ponding adjacent to the sump outlets, and the lead sheet is showing some signs of ageing on the South side but still sound on inspection.</p> <p>The leadwork to the gutters is on a boarded or hollow construction. It was noted that a number of the lengths of the lead guttering are longer than the lead code would recommend. The leadwork flashings and cover flashings at the abutment with the parapet appear to be new but the lead in the gutter soffit is older. There does not appear to be any signs of holing or splitting to the gutter soffit. Longer term consideration to some lead replacement should be considered in these gutters.</p>		C

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	<p>Towards the West end of the gutter the gutter depth at the roof abutment increases significantly. The lead code recommends that the height of lead upstand in this position be no greater than 225mm, in this location it is at least 400mm high. This is a condition that was noted on the Nave roof also. Long term consideration should be given to replacing this with a trimmed upstand and a new associated abutment cover flashing.</p>		C
	<p>It was noted that sacrificial lead has been installed at the base of the lead chutes in the gutter itself. This is an excellent detail. There is also sacrificial lead at the top of the lead chutes where the rainwater pipe discharges. The sacrificial lead does not require replacement at this time.</p>		
	<p>Both Aisle roofs have a lead covered access hatch into the plaster vaulted roof spaces below. Both roof spaces where inspected and in general terms the roof structure and plaster ceiling vault below are in good order. There is good access and lighting in these areas to facilitate the inspection.</p>		
	<p>The South Aisle has some discoloration of the trimming timbers adjacent to the roof hatch however all appeared dry on the day and there did not seem to be any long term issue. The Structural steelwork in the roof could benefit from repainting.</p>		C
	<p>Below the purlin in the South West corner there appears to have been remedial repair in the past. There is a marking on the wallplate that would benefit from a a more detailed survey by a timber specialist. Ventilation in the roof voids is acceptable but it would be prudent to increase this if possible through better design.</p>		C

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	<p>East and West Crossing Roofs:</p> <p>These two small roofs abutting the Lantern Tower each are dual pitch roofs, approximately 32 degree in pitch, in diminishing course Westmorland slates. The roof coverings are in good order although there are a number of lead or copper slate clips .</p> <p>The ridge is a lead covered roll, there are lead flashings at the abutments with the Lantern walls and lead lined gutters. All lead appears sound though the detailing does not comply with current standards and the lead is showing signs of ageing. Some pointing to flashings have been carried out in this Quinquennium.</p> <p>West roof north face It is noted that the rear of the parapet wall, i.e. at the abutment with nave is made of brickwork. The pointing of the brickwork is in poor condition, particularly at the flashing junction, there are also a number of spalling bricks requiring attention. The flashings appear to be in good order but we suggest that the brickwork wall be suitably re-pointed, and repaired as necessary. Alternatively the lead could be increased in height and taken into the joint below the coping stone therefore covering the brickwork .</p> <p>The coping stones to the parapet wall could also benefit from one or two joints being raked out and re-pointed, particularly in the North-west corner where there is one vertical open joint in the stone.</p> <p>Access to these roofs is via an adjacent vice turret, the turret is in natural stone with stone dressing details it has a brick interior and has a treated pine octagonal pitched roof covered in lead, all in good order. There is a new Oak door out from the top of the turret stair onto the stone paved landing.</p>		C

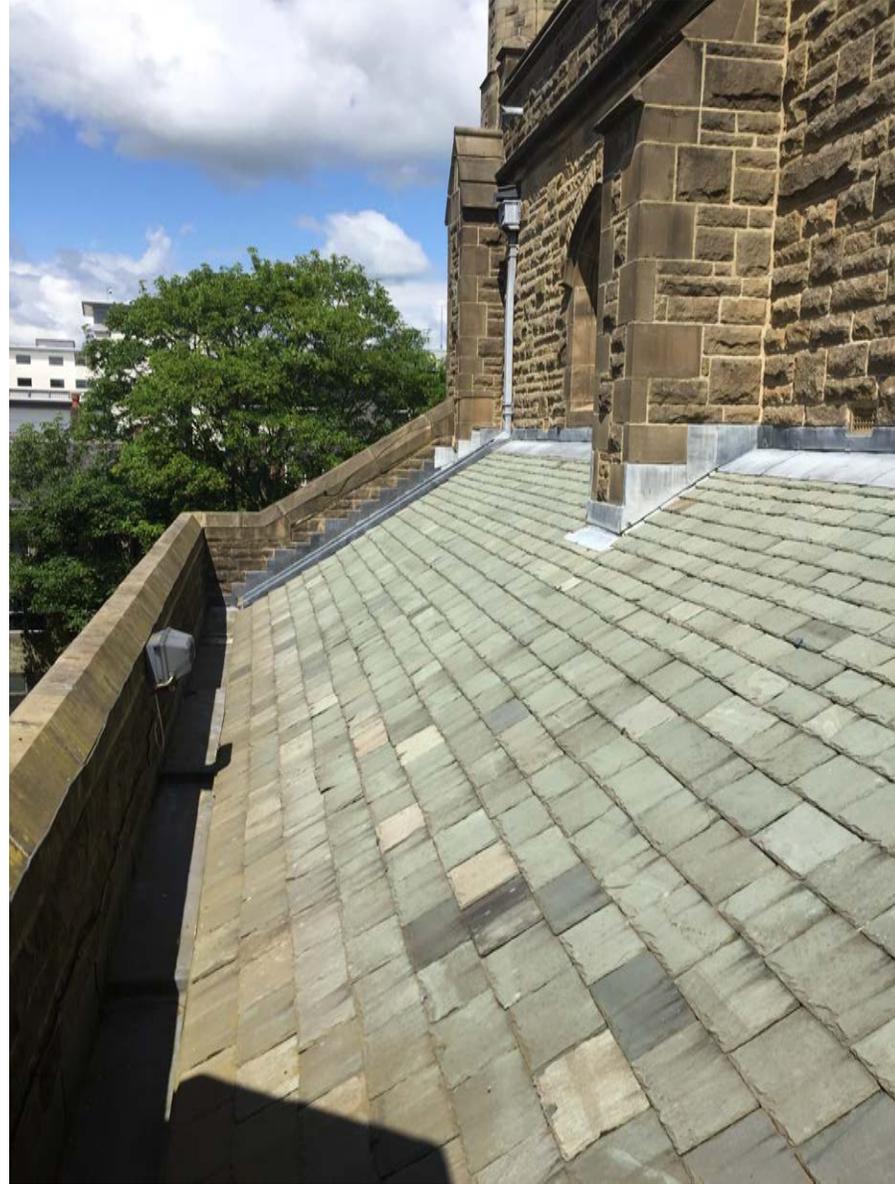
4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	<p data-bbox="522 282 937 318">Transept Roofs – North and South</p> <p data-bbox="522 354 1796 425">The transept roof have double pitch roofs, approximately 40 degree pitch, in diminishing course Westmorland slates. There were no slipped or broken slates on this inspection.</p> <p data-bbox="522 461 1847 596">Both east and west slopes to both north and south transepts have been thoroughly overhauled in this last quinquennium. See notes earlier in this document confirming the works undertaken. All gutters and linings have been replaced, all lead flashings at abutments have been replaced. The internal face of all the parapets have been re pointed as have the coping stones and the exterior wall faces.</p> <p data-bbox="522 632 1031 668">All was in excellent condition on inspection.</p> <p data-bbox="522 704 1719 739">The newly installed stainless steel guards to all gutter outlets should be cleaned thoroughly and regularly.</p>		

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	<p data-bbox="522 285 1044 321">Transept Lower Roofs: East and West faces</p> <p data-bbox="522 357 1860 456">The Transept Lower Roofs are also reached via the stone-topped octagonal vice tower this has a new brick interior and stone dressings externally. It has an octagonal lead covered roof and all is in good order. Access is gained onto the flat roof via a new Oak door.</p> <p data-bbox="522 492 1821 564">The lower Transept roofs are of single pitch, approximately 29 degree slope, in diminishing course Westmorland slates. The roofs are generally sound but there are a number of lead or copper slate clips.</p> <p data-bbox="522 599 1758 664">There are lead abutment flashings, lead flashings and lead lined gutters to each roof. There are also flat lead covered areas adjacent to the North-west and South-west turrets at the east end of the aisles.</p> <p data-bbox="522 699 1860 878">Both east and west slopes to both north and south lower transepts have been thoroughly overhauled in this last quinquennium. See notes earlier in this document confirming the works undertaken. All gutters and linings have been replaced, all lead flashings at abutments have been replaced. The internal face of all the parapets have been re pointed as have the coping stones and the exterior wall faces. New water chutes from high level gutters have been installed.</p> <p data-bbox="522 913 1031 949">All was in excellent condition on inspection.</p> <p data-bbox="522 985 1719 1013">The newly installed stainless steel guards to all gutter outlets should be cleaned thoroughly and regularly.</p>		

4.0 INSPECTION



Completed WWI Round I works – North Transept Lower Roofs

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	4.2 EXTERNAL WALLS		
	The West Tower		
	<p>Stonework to the North face of the Tower is in good order. The stone tracery to the belfry louvres is in excellent condition. The stonework to the clock surround and the clock face itself are in good order. There are some areas of repointing required and 3 or 4 masonry stones that require re dressing. The clock face requires repainting and re gilding.</p>		C
	<p>The glazing to the bell ringing chamber windows is in fair condition but its junction with the masonry surround is questionable (north and south faces only) There has been historical water ingress into the Bell Ringing Chamber at this junction on all three glazed sides of the Tower. However through the last quinquennium work was carried out to the west window in terms of replacement masonry and re glazing and this has improved as a result. There is a ventilator installed in the bottom righthand corner of the glazing not only is this poor visually it is contributing to water ingress into the chamber due to its poor condition. Ventilator to be removed and new glazing option to be adopted incorporating an agreed ventilation solution. North and South only.</p>		C
	<p>Stonework to the West Face of the Tower: As part of the WWI memorial grant funded works large parts of the west face of the tower from the bell ringing chamber upwards have been repointed and masonry repairs have been undertaken to masonry ashlar and carvings. This work included the replacement of stone mullions and tracery stones. New window ventilation installed as part of the works.</p>		C
	<p>Stonework to the South Face of the Tower: There are some areas of repointing required and 3 or 4 masonry stones that require re dressing. The clock face requires repainting and re gilding.</p>		C
	<p>Stonework to the East face of the Tower: There are a number of stones below the fretted parapet to the east face of the Tower that are suffering a small amount of erosion. Although not serious, consideration should be given to re-dressing back to a sound surface approximately 2 M² of stonework in this location. Similar repair work is required to an area of stone above the crockets on the North-east pinnacle at this same position, perhaps 1 M².. There is some deterioration to the stone at the abutment with the flashing of the Nave roof, again this is not serious but should continue to be monitored.</p>		C

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	Nave – South Elevations		
	<p>This is the 1822 part of the Cathedral (The Former Parish Church) The masonry here consists of a larger stones of smooth hand tooled ashlar walling stone. A large amount of masonry repair work has been carried out on this elevation previously. Curiously the masonry on this façade has a brighter more 'orange 'appearance particularly when viewed in the sun light. This is not a normal characteristic of this type of stone (Local Grit Stone – Accrington Delph) and is not evident on other facades built with the same masonry and of the same age. One would suspect that perhaps this masonry has been cleaned in the past with a mild acid or similar product which appears to have brought to the face of the stone any iron deposits that may have been present. This is not unattractive but does give some concern regarding the longer term condition of the stone and whether it may have been damaged during any process that took place.</p>		
	<p>There are a number of stones on this façade that have either lost their face previously or are suffering serious delamination of crust layers. Others are showing signs of heavy contour shailing and exfoliating. See Photographs. The repair work that has taken place previously has dealt with some of this previously but a further 15 or so stones now need a similar treatment of redressing and repointing back to a sound surface. This work should be undertaken as a priority as there is a small chance of harm from small amounts of falling masonry.</p>		B
	<p>Generally speaking the stone is in excellent condition, but the full south façade now requires complete repointing.. The masonry to the window tracery is generally in good condition however some joints require repointing. There are some isolated small areas of missing detail to hood moulds and decorative carving– see photographs. The intention would be to deal with these in the redressing work listed above as a comprehensive package of stone repair and repointing on this façade.</p>		C
	<p>In the south east corner of the South Nave there is an octagonal vice tower which connects the Crypt, and the Cathedral and also gains access on to the parapets of both the Transept and Nave roofs. This part of the Cathedral is in the 1930's masonry. All is in good order. The Vice Tower is topped with a copper clad roof pinnacle roof structure, again, all in good order. The top section of this tower has been repointed as part of the WWI Memorial Grant funding but the lower parts of the tower require complete repointing.</p>		C

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	<p>South Transept - West Elevation.</p> <p>There are two large tracery windows into the upper transept and two smaller square headed windows lighting the Crypt. The walling stone is of a smaller scale to the Nave and is a coursed pitch faced grit stone often referred to as 'Lancashire Points' locally. The masonry is good condition as are all the headstones, quoins, string courses etc. but all stone faces from below clerestory level require complete repointing. Note above this level was repointed as part of the WWI memorial fund works.</p> <p>The sills, heads, tracery, quoins etc are in a tooled ashlar. There are a number of cement repairs that have taken place in the past. There seems to be a weathered struck joint throughout this is to be removed and replaced during the repointing work.</p> <p>Elsewhere on the cathedral the hood moulds have been covered with a lead capping, long term consideration should be given to this on the 1930's Cathedral extension.</p> <p>There are two large lead down pipes on this elevation with very large hoppers dated 1950. These extend down into approximately 2m high cast iron down pipes. The lead pipes are in good order.</p> <p>The glazing to the windows is in good condition save for one panel which appears to have a vandal light protection this is discoloured and does also not allow ventilation to the stain glass behind. This should be replaced.</p>		C

Plan Ref

Description

Photo.Ref.

Priority

South Transept– South Elevation

The buttress furthest west on this elevation has numerous open joints particularly between the quoin stones and the walling stone. Although the pointing is slightly better here, compared to that described earlier, repointing is necessary. There are also open joints displayed in the upper parts of the parapet on this elevation. There is also some vegetation in some of the open joints and it would appear that the coping stones have opened joints that also need attention. The hood mould directly below the coping stone of the racking elevation also has open joints requiring attention.

The masonry pointing generally on this elevation is poor it is better at higher levels but much poorer at lower levels. The pointing technique on the upper levels is good and should be maintained as a model for the whole of the 1950's construction.

The large south window tracery is in fine condition but again requires repointing. There are larger number of open joints at the central positions on the lower tracery detail, these require repointing.

The glass to the window looks in good condition, although I note it is not protected. The west face of the large buttress to the right of the Transept has a number of open joints, particularly at the south west corner all the way up the buttresses which all require repointing.

We recommend that the whole south elevation of the transept be entirely repointed with then next 2 or 3 years.

C

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	<p>South Transept– South Elevation</p> <p>It has not been possible to inspect the flat roof over the central arcade without further access support. The parapet wall over the central arcade has one or two open joints in the coping. The walling stone generally to the whole of the arcade face and to the crypt is showing numerous examples of open joints. Repointing required.</p> <p>There are copper weatherings that have been installed to the horizontal course at floor level. This copper covering only extends half way down the length of the cornice sill mould and is lifted, battered and torn in places away along its length.</p> <p>The whole of this weathering should be removed and replaced and fitted around all of the columns along the full length down the face of the sill and finish neatly across the front edge.</p> <p>The glazing that has been introduced into the arcade is poor in terms of scale and design. Long term consideration for its removal / replacement should be considered.</p> <p>There are two rainwater pipes on this facade and these are well painted and appear to be running clear.</p>		C

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	<p>South Transept– South Elevation Crypt Entrance</p> <p>There are two sets of timber double doors into the Crypt these have been recently repainted as part of the Cathedral Court works.</p> <p>There are three pairs of leaded light windows at Crypt level. Each pair contains a cast iron hopper. The glass itself is in good condition. It would appear that there were some former copper guards fixed to the face of these windows. The fixings are still shown and consideration should be given for the removal of these fixings. Longer term it is the intention that the Cathedral will install a new heritage centre into the Cathedral Crypt it would seem sensible to consider replacing the glass and hoppers into these openings at that time. Clear glazing into the Crypt area to be considered.</p> <p>The previous incomplete masonry staircases on this elevation have been removed as part of the Cathedral Court works. The most eastern stair has been replaced with a new store in matching masonry and detail.</p> <p>At the top of the new extension listed above, the southwest corner of the last buttress requires repointing. Joints have been pushed back to 15-22mm in some places. The south elevation above the second porch doorway is in better condition, but there are some open joints in the coping stone and also the lower string mould. The east elevation of the large buttress, ie the other end of the upper arcade is in better condition, however there are two smallish holes at around porch roof level that require refilling with a full natural stone replacement.</p> <p>The arcade that has been filled in to form the east end of the internal space should be reconsidered. The fan grill in this location is poor visually and requires repainting., the masonry is not consistent with the rest of the Cathedral.</p> <p>The moulded and painted doors at the top of the remaining staircase are in good condition but does require repainting.</p> <p>The copper roof over the east porch roof appears to be in good condition there are one or two areas of masonry repointing required but this would be addressed within the wider total façade pointing.</p>		C

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	<p>South Transept - East Elevation</p> <p>There is a stone of approximately 150 high by 200 mm wide that has been removed and should be replaced.</p> <p>WWI memorial works have been undertaken in the last quinquennium to this façade. Masonry has been repointed at higher levels , rainwater pipes have been replaced and the large central buttress has been reconfigured with the installation of a new stone weathering to the top of the buttress.</p> <p>The wall and tracery masonry itself is in good condition although repointing is required at lower levels. High level repointing was undertaken as part of the WWI works described elsewhere.</p> <p>At the centre of the transept façade there is a large stone buttress which rises vertically towards the parapet (this now has a new stone weathering installed at its summit)</p> <p>There are a number of open joints particularly to the quoin stones on all of the vertical buttresses on this elevation.</p> <p>Consideration to be given to continuing the repointing of the Cathedral on this façade as part of the South Transept works described above.</p> <p>There is a horizontal string mould approximately 600 mm below the parapet stone this has now been repointed along its length. as elsewhere on the Cathedral consideration could be given to covering the hood moulds with a lead sheet.</p>		C

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	<p>South Wall - Loyals Chapel</p> <p>This part of the Cathedral has been fitted with recently new parapet stones as part of the roofing works undertaken in the late 1990's.</p> <p>This elevation has been successfully repointed during the last quinquennium and sets a good template for the wider repointing works suggested for the South Transept.</p> <p>The timber door into the kitchen requires re decoration.</p>		C
	<p>East Elevation - Loyals Chapel</p> <p>The masonry generally in good condition, there is a small area of broken stained glass to the bottom right hand pane. The window below into the kitchen again in good condition.</p>		
	<p>South Wall - Jesus Chapel</p> <p>This elevation has been successfully repointed during the last but quinquennium and sets a good template for the wider repointing works suggested for the South Transept.</p> <p>The tracery window itself is in good condition as are the new parapet stones above. At lower level there is a square headed timber door into what is called the Builders Yard. This door requires replacement due to timber rot.</p>		C
	<p>East Elevation - Jesus Chapel</p> <p>The Healing of the Nations Sculpture is fixed to the east end of the Cathedral. In term of long term maintenance, the fixings of this should be checked regularly; perhaps every couple of years or so by a specialist and of course the wiring should be tested too. The masonry itself to the east elevation would be appear to be in good order throughout. There are issues with pigeons in this location this is damaging the masonry below and behind the sculpture. This is a potential health hazard and protection methods require increasing in this location.</p>		B

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	<p>North Elevation - Jesus Chapel</p> <p>In excellent condition and repointed as part of the recent WWI memorial works.</p>		
	<p>East Elevation - Cannon Stair</p> <p>In excellent condition and repointed as part of the recent WWI memorial works.</p>		
	<p>North Elevation - Cannon Stair</p> <p>In excellent condition and repointed as part of the recent WWI memorial works.</p> <p>The Vice Stair is in good condition as are the lancet windows and is the new lead roof summit.</p> <p>The sill to the blocked up arcaded window is holding water and as such has historically stained the wall rather badly. Consideration should be given to dressing the sill with a new lead covering.</p>		C

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	North Transept – North Elevation		
	<p>In excellent condition and repaired and repointed as part of the recent WWI memorial works.</p>		
	<p>To the left of centre there is a large buttress which has now had a replacement coping stone head detailed installed as part of the WWI memorial works.</p>		
	<p>The large central window is in good condition, the glazing has been repaired as part of the recent works. I note there are five hoppers installed into the glazed window the condition of which is difficult to ascertain from this level, these should be inspected periodically and consideration to their removal should be considered.</p>		
	<p>The lower window into the Song School has masonry in good condition. There are three hoppers these have been restored and the glazing fixed as part of the more recent Song School development.</p>		

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	<p data-bbox="522 278 930 321">North Transept – West Elevation</p> <p data-bbox="522 349 1617 392">In excellent condition and repaired and repointed as part of the recent WWI memorial works.</p> <p data-bbox="522 421 1770 521">Below each of the window sills there was some evidence of dampness to the external wall face (prior to the repointing) consideration to be given to installing lead flashings over the window sills as on the Nave North elevations see earlier notes.</p> <p data-bbox="522 564 1541 606">The glass in all of the windows has been restored as part of the WWI Memorial works.</p> <p data-bbox="522 635 1133 678">Rainwater pipes have been replaced and re painted.</p> <p data-bbox="522 706 1490 749">Plant room doors have been renovated and repainted since the last quinquennium.</p>		

Plan Ref	Description	Photo.Ref.	Priority
	<p>North Elevation of the Nave</p> <p>A large amount of masonry work has been done here in previous QQ's. SINCE THE 1990's Generally speaking the masonry is in excellent condition, it is well pointed and has been redressed where necessary. The lead work to both the sills and hood moulds and also the horizontal drip mould below the parapet is all in good condition see earlier notes from roof level.</p> <p>North Elevation of the North Porch</p> <p>Again this has been redressed in previous QQ's and is in good condition</p> <p>The very large diameter rain water pipe on the north elevation of the tower has been replaced as part of the recent WWI memorial works.</p> <p>External decorations</p> <p>The Arms of the Diocese, the Royal Arms, the West Doors and the other external doors all have painted finishes which are reasonable condition. These have all been recently repainted and re gilded.</p> <p>The flag pole (West Tower) see notes elsewhere.</p> <p>Generally the mild steel hoppers in the windows require redecoration throughout some of these have been picked up in the external masonry survey above.</p> <p>A number of the cast iron rainwater goods require redecoration as noted in the text above. We would recommend that we undertake a detailed audit of the downpipes and cast iron goods and seek to repaint and repair within this next quinquennium.</p>		C

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	4.3 INTERIOR		
	Entrance Porch – below West Tower		
	Plastered walls with oak panelling to dado level. Oak vestibule with four single doors. Decorative ceiling over all in good order.		
	Note – There are some concerns regarding the glazing in the vestibule doors – is this safety glass report to be undertaken		B
	Nave porches North and South Aisles		
	Plastered walls and ceilings throughout recently re-decorated.		
	North Porch is used as Virger's office.		
	South Porch		
	This has been fitted out with kitchen and ambulant w.c. fitted during the last but one quinquennial period. The South Porch also houses the Cathedral fire detection control panel and intruder alarm. Staircase leads down to columbarium entrance and the wider Crypt. All is in good order.		

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	<p>The Nave</p> <p>There are four stone monolithic columns to each aisle and a further 20th Century composite column to the east supporting the Clerestory walls. The aisle and west walls are plastered between natural stone dressings. Column D5 has diagonal flaws some of which have been re-pointed and repaired.</p>		
	<p>The Sanctuary Crossing</p> <p>The 20th Century masonry piers supporting the reinforced concrete frame of the lantern tower have dressed stone and plaster finish as elsewhere. All in good order.</p> <p>Hanging Coroner over central altar - suspension cables to be periodically tested</p>		C
	<p>The North and South Transepts</p> <p>The 20th Century masonry piers supporting the clerestory walls generally are plastered with dressed stone surrounds to the doors and windows. All in good order.</p> <p>The North Transept north gable has defective plaster at high level in west corner, this is linked to previous water ingress which has now been rectified following the high level WWI memorial works to the transepts. It is also noted that the former open masonry flue was located within the north wall in this location. There is also damaged decorative finishes to the horizontal string course on the west wall of this same location.</p> <p>Now the high level leadwork has been completed for over 12 months redecoration of the wall faces and the decorative paintwork to the roof timbers, cornices and moulding can now take place.</p>		C

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	<p>Clerestory walls</p> <p>Double tracery glazed lights between bays</p> <p>One masonry block has been recently tooled back to sound surface.</p>		
	<p>The North East stairway.</p> <p>This area, IIC, has plastered walls, to first floor and exposed brickwork at crypt level.</p> <p>Base of column CII cracked through masonry - this should be monitored.</p>		C
	<p>Jesus Chapel.</p> <p>The Jesus Chapel has plastered walls and ceilings. There has been historic water ingress through the wall structure on bay I2D (South). This external façade has now been repointed and the wall plaster has now dried out sufficiently for the redecoration works to take place.</p> <p>Hanging tester over altar - suspension cables to be periodically tested.</p>		C
	<p>St. Martin's Chapel.</p> <p>This Chapel, IIE, has plastered walls and ceiling. There are signs of efflorescence at low level, this is difficult to explain in that the Chapel is at first floor level. Consideration to be given to installing lead dressing to external string course.</p>		C

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	Arcade, 9H		
	<p>Sited in the former external entrance to the South Transept is the Cathedral Shop (previously the Education Centre at the last Quinquennial) . The plaster vaulted ceiling has a long horizontal crack in the central bay this requires careful repair. The West window has open mortar joints requiring repointing.</p>		C
	<p>Signs of water ingress at high level to the South/East and South/West corners - further external inspection of roof over required.</p>		C
	Crypt Areas, bays 1-7		
	<p>These areas formed the original Crypt to the 19th Century Parish Church. The rooms are formed with plastered masonry walls and stone vaulted ceilings although most are covered with suspended plaster ceilings. Throughout these areas there are signs of damp at the base of the walls, particularly adjacent to the piers and the Nave external walls. The damp is causing efflorescence and decay of the plaster there have been recent attempts to cover this with replacement paint systems. It may be that inappropriate plaster and decorative finishes have been used in the past. These areas should be surveyed by a damp proofing specialist and possible remedial work undertaken.</p>		C
	Crypt Areas, bays 8-12		
	<p>These areas form the extended Crypt constructed in the 20th Century. The walls of the central Crypt area are in exposed brickwork (painted white generally) with dressed stone quoins and arches. All appears sound. Note: Stone dressings set back from brickwork this is thought to have been to receive a plaster finish as the upper Cathedral Spaces.</p>		
	<p>The South Porch, H9, has areas of efflorescence on the brickwork and damp penetration to brickwork due to relatively high ground levels and the poor condition of the incomplete stair roofs above. Much of this will be addressed following the proposed new Crypt works. New W.C facilities have been constructed as part of the Cathedral Court development these are plastered and tiled spaces with timber suspended ceilings. All is in good condition.</p>		

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	<p>Bell Tower</p> <p>The Bell Ringers chamber has historically had painted masonry walls. And historically there has been water ingress through the junction of the masonry walls and the glazed windows. There have also been signs of condensation on the walls and ventilation and heating has required up grading. Metal openers in glazing to be reviewed as being the correct way to ventilate this space? Since the last Quinquennial major work has been undertaken in the ringing chamber with new masonry works and glazing repairs to the west elevation. Plaster has been removed and the external masonry walls are being allowed to dry out prior to re covering. Permanent trickle ventilation has been introduced into the cross windows. It is the intention to continue this work to both the north and south elevations in this next quinquennium.</p> <p>The Clock Chamber has painted masonry walls there are signs of some brickwork erosion lamination adjacent to the internal rainwater pipe. Redecoration required in this location.</p> <p>The Clock is dated 1950 and is by William Potts and Sons Ltd. of Leeds. The clock is serviced annually by this firm.</p> <p>The Bell Chamber has masonry walls, lime washed in part. The Bell Tower contains nine bells set within an oak frame. The framing to the bells and the operating mechanism all appears to be in order. It is a well-ventilated space. The roof is accessed via a steep timber staircase set within the south west corner of the chamber – this gives good safe access for maintenance of the Tower roof.</p> <p>The Bell Tower roof has a lower frame of timber beams bearing onto cast iron brackets at mid points of Bell Tower walls. A central post links this frame with the upper frame supported on a timber wall plate. All appear sound. The void is unheated and well ventilated.</p> <p>The roof has been recently recovered in new leadwork as part of the WWI memorial grant scheme. There has been a historic problem with the junction of the flagpole and the roof structure this had now been solved with the installation of a new lead roof. Unfortunately the timber flagpole has become rotten and as such has been made safe prior to its replacement.</p>		C

Plan Ref	Description	Photo.Ref.	Priority
	<p>ROOF STRUCTURE AND ROOF VOIDS</p>		
	<p>Nave Roof</p>		
	<p>Accessed from the Bell ringing chamber via a steep set of timber steps. The Nave Roof main roof trusses are at approximately 2.5 centres, spanning between the Aisle Clerestory walls. The trusses carry the ridge beam and two purlins to each side, the roof is rafters and sarking. The roof structure has been repaired in the past. Many of the truss tie beams have steel channel reinforcement at the end bearing and some concrete padstones have been inserted at the wall bearing. All appear sound.</p>		
	<p>The plaster vaulted ceilings below are formed with timber framing spanning between trusses/outer walls. All are clear of debris and appear sound.</p>		
	<p>The Nave roof has a fire protection cavity barrier on the fifth truss from the west formed with plaster with sealed joints and a fire door. There is an aspirator system fitted into the roof void.</p>		
	<p>The Nave roof has fitted a central access walkway and timber access ladders from the walkway to the roof access hatches give good access out onto the nave roof.</p>		
	<p>The Nave roof has no insulation nor any controlled ventilation see later note.</p>		
	<p>The Aisle Roofs</p>		
	<p>The Aisle roofs are supported on monopitch roof trusses at approximately 2.5M centres spanning between the Aisle Clerestory and outer Aisle walls. The trusses carry the purlins, rafters and sarking. All is in good condition.</p>		
	<p>The plaster vaulted ceilings are constructed with timber framing spanning between trusses/outer walls. There is some debris on the ceilings this should be removed but with great care so as not to damage the delicate nature of the vaults. The Aisle roofs have no insulation nor any controlled ventilation.</p>		

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	<p>Transept High Level Roofs</p> <p>The Transept roofs are supported on steel roof trusses spanning between the Clerestory walls. The trusses support the purlins, rafters and sarking. All are in good condition.</p> <p>The Transept roofs have no insulation nor any controlled ventilation..</p>		
	<p>Roof Insulation - Generally</p> <p>No roof insulation exists in any of the pitched roof voids. Consideration should be given to installing insulation and improving roof void ventilation.</p>		C

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	CEILING AND CEILING VOIDS		
	Entrance porch: this has a high rib vaulted ceiling with highly decorated ribs and carving all in excellent condition.		
	Nave porches: These plastered ceilings have small access hatches to voids above. These were not inspected at this time.		
	The Nave: The Nave has a 'Gothic style' plastered vaulted ceiling with decorative ribs and bosses. This has been completely redecorated in Spring 2014 and is in excellent condition and sets the standard for any future decoration.		
	The Aisles: These have classical ribbed ceilings. There are defects to the plasterwork in a number of bays small amounts of local re-decoration. This has deteriorated over the Quinquennium in particular to the South side most likely due to thermal stress on this façade. These ceilings now require local repair to the plaster panels and redecoration throughout. Last decorated in 1976.		C
	The Crossing: There are 4 No. plastered vaulted ceilings between the masonry columns, each highly decorated and in good order.		
	The Transepts: Both the high level and side ceilings to the north and south transepts have highly decorated rectangular panelled ceilings. Note: Some water damage in Bay 8B - see previous notes relating to Transept gutter repairs over this now requires redecoration		C
	The Lantern Tower: the high level ceiling has had water ingress particularly at the south west corner. See previous notes regarding the Lantern Tower. Re-decoration and high level inspection required in this area.		C
	The North-East Staircase, Jesus Chapel, St. Martins Chapel: These areas all have horizontal plastered ceilings in good condition. There is a hairline crack in the ceiling of St Martins Chapel – unfortunately this runs through the decorative central motif so is a difficult defect to repair. This should be monitored over the next quinquennial.		C

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	<p>Crypt Areas, bay 1-7: These areas generally have suspended plastered ceilings with ceiling trap doors at regular intervals. The Chair Store bays and the Games Room are open to the underside of the painted stone vault. All appear sound. Note the Cathedral have lagged the flow and return heating pipes within the ceiling voids that serve the underfloor heating installation above within the Cathedral suspended floor.</p>		
	<p>Crypt Areas, bays 8-12: The central Crypt area does not have ceilings but has a painted soffit to the reinforced concrete floor slab. There are some signs of cracking in the central area which should be monitored.</p>		C
	<p>There are numerous damaged and uneven areas throughout, especially where service routes have been formed. Such penetrations reduce the fire resistance of the floor above and all should be considered for repair and upgraded for fire protection. The numerous service cables/pipes located on the underside of the ceiling are haphazard and unsightly.</p>		C
	<p>It is noted that there are a number of large long cracks in the soffit of the suspended concrete slab running North D10 and South in Bay D8, F9, G9 and E9. Although these don't appear to have changed during the last five years it remains a recommendation that Chapter seek advice from a structural engineer regarding this condition.</p>		C
	<p>The Song school has been completely renovated prior to the last Quinquennial . A new acoustic ceiling has been installed in the practice area and a new suspended plaster ceiling has been installed in the entrance corridor.</p>		
	<p>The new Ladies Toilets and Gents Toilets have suspended timber and plaster ceilings all in good condition.</p>		

4.0 INSPECTION

Plan Ref

Description

FLOORS AND STAIRWAYS

Generally

The ground floor of the Nave and Aisles in the original 19th Century Church area is supported on masonry vaulting. The ground floor of the Transepts, Sanctuary and Jesus Chapel is a 20th Century reinforced concrete structure. The Crypt is a reinforced concrete floor. The upper floors of the Bell Tower are of timber construction and the upper quadrants in the Lantern Tower are reinforced concrete.

Entrance Porch:

The floor is formed with limestone flags in good order.

Nave Porches:

These have stone flag floors with inset matwells (South only).

Nave, North and South Transepts, Sanctuary and St. Martin's Chapel:

The floors are finished with Derbyshire fossilized limestone and incorporate a low pressure hot water - underfloor heating system (thought to be a narrow copper pipe system bedded on sand) There are a number of continuous cracks in the limestone flooring, generally running north - south and particularly at the west end and E8. The cracking although unsightly is not hazardous and is perhaps due to the floor being laid with insufficient movement joints or having a hard cement mortar joint and bedding. The cracked areas should be cut out and the flagging re-laid. One holed flag in bay D2. A poor area of cracked paving in bay E5 - 4 or 5 slabs affected.

C

The steps up to the Sanctuary Area are finished with limestone as the rest of the Nave with black marble risers and plastic edging strip to demark the change in level. Consideration to be given to a more attractive system of demarcation. There is a slight opening up of joints on the radiating lines of the octagonal floor pattern these are slightly raised and could possibly cause a trip hazard. Particularly to the South East of the Sanctuary. Consideration to be given to relaying this area.

C

C

Photo.Ref.

Priority

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	<p>Jesus Chapel:</p> <p>This area has fitted carpet on what appears to be a timber deck. The void below does not appear to be ventilated however all appears to be in good condition. The carpet is tired and discoloured in areas consideration is being given to its replacement.</p>		C
	<p>Choir Stalls:</p> <p>These areas have timber framed, chipboard finished boxing to bring the floors to the levels required. These are chipped and marked in a number of locations. Consideration should be given as to their replacement / repair.</p>		C
	<p>The Arcade (Now the Cathedral Shop):</p> <p>The floor here has carpet tiles on what appears to be a timber deck all in reasonable condition.</p>		
	<p>The Crypt Areas, bays 1-7:</p> <p>The Toilets have vinyl tile floor finish. .</p>		
	<p>The Chair Store areas have no floor finish it is an exposed concrete finish.</p>		
	<p>The Chester's room is well carpeted.</p>		
	<p>The Games Room has a carpet tile floor which is in poor condition .</p>		
	<p>The remaining areas have timber block flooring. All in reasonable condition, no loose blocks found.</p>		

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	<p>The Crypt Areas, bay 8-12</p> <p>Large areas of “Polycoat” water based painted floor finish installed to the whole of the crypt floor all appears to be wearing well.</p> <p>There are timber ramps from the Crypt level to the kitchen door and the Disabled Persons WC both of which are awkward.</p> <p>The Crypt (Builders Yard) has an exposed concrete floor.</p> <p>The song school has a combination of new carpets, carpet tiles and new vinyl floors. The upper mezzanine (Suspended timber deck) is finished in carpet tiles. The toilet areas have been fitted with non-slip vinyl’s.</p> <p>The Kitchen has a ceramic tile finish which is in reasonable condition for its age.</p> <p>The new crypt toilets have new vinyl floor coverings in good condition.</p> <p>Bell Ringers Chamber:</p> <p>The Bell Ringers room has a carpet tile finish.</p> <p>The Clock Chamber has timber boarding on timber joists. The floor has been patched and is generally adequate though the missing boards in the north-west corner should be replaced. The floor should be kept clean and clear.</p>		C

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	<p>Nave South Porch Stair to Crypt and South Aisle Stair to Crypt</p> <p>The stairs generally have vinyl tiles and nosings and a wrought iron handrail / balustrade. It has been noted that the last riser on the Porch Stair is higher than the rest due to the installation of the underfloor heating pipes to the nave. Some minor repairs are required to some of the tiling.</p> <p>It is also noted that current standards stipulate a maximum of 16 steps per flight before a change in direction direction and therefore is contrary to current standards.</p>		C
	<p>North East Stair to Crypt (canons stair)</p> <p>The stair is an unfinished cast concrete stair. It is unsightly and does not comply with current standards in that the rise is inconsistent. A protective barrier 1100 cm high above finished floor level should be installed across the top of the stone wall below the window on the east wall.</p>		B
	<p>North West Turret Stairs, North East Turret Stairs, South West Turret Stairs</p> <p>These stairs are spiral stairs formed in concrete. Damage to the steps has been caused where services have been inserted but generally all are sound. There are no handrails and all stairs should have a protective rail installed to the edge of the top stair.</p>		

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	<p data-bbox="522 282 726 311">Bell Tower Stairs</p> <p data-bbox="522 354 1821 454">The stairs are spiral stone stairs. Above the clock chamber the central post is cast iron. There is a rope handrail. The steps are sound generally. There is some water ingress at the very top of the staircase it is likely that some repointing required externally in this location.</p> <p data-bbox="522 496 1796 561">The timber access stair from the bell chamber up to the flat roof over is in good condition and provides good access for maintenance.</p> <p data-bbox="522 596 886 661">PARTITIONS AND SCREENS Sanctuary and Chapel Screens</p> <p data-bbox="522 704 1821 839">The screens defining the area of the Sanctuary, Jesus Chapel and St. Martin's Chapel were designed by Laurence King and are formed with wrought iron and hardwood timberwork. The screens incorporate engraved glass. All are in good condition. A couple of the decorative finials are crooked on the Sanctuary Screen and would benefit from straightening.</p> <p data-bbox="522 875 1847 939">The sanctuary screen incorporates mild steel gates that open up between the back of the sanctuary and the access area to the rear these are painted and all is in good order.</p> <p data-bbox="522 982 904 1011">South Transept door enclosures:</p> <p data-bbox="522 1053 1796 1118">There remains one redundant glazed inner porch. It is a glazed metal framed doors in timber frame with timber framed ceiling over - possibly by Laurence King.</p> <p data-bbox="522 1153 1796 1218">The previous right hand porch has been removed as part of the new Cathedral Court development works to provide a new direct entrance into the new extensions.</p>		C

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	<p>Crypt Toilet, Servers Vestry, Song School</p> <p>These partitions are timber framed with obscured glazed panels. The glazing adjacent to the doors should be upgraded to safety glass where possible.</p> <p>A new timber and glazed screen has been installed into the song school development.</p> <p>Crypt Builders Yard.</p> <p>Temporary partitions have been installed between the masonry structure. These are formed with timber framing and plasterboard. Consideration to be given to their removal. Although these will be removed as part of the proposed Crypt redevelopment.</p> <p>North East Staircase (Canon Stair)</p> <p>The partition at the bottom of the stair across the stair landing is formed with ply on timber framing. This is unsightly and does not comply with current standards for fire screens. This will be dealt with as part of the proposed Crypt redevelopment.</p>		<p>C</p> <p>C</p> <p>C</p>

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	DOORS Generally		
	There are a large number of different types/styles of internal doors throughout. Generally the doors and door frames are in reasonable condition. Minor repairs to ironmongery are required to a number of doors.		C
	Doors on fire escape routes		
	Most of these doors do not open in the direction of escape and do not have suitable escape ironmongery. These doors should be altered/upgraded as part of the ongoing fire precaution risk assessments.		C
	Fire Doors		
	The door between the 20 th C Crypt and the former Parish Church, the doors along the Crypt Corridor and into the Columbarium have been upgraded and now provide a good level of fire separation.		
	Doors with glazing		
	All glazed doors should be inspected and glazed as necessary with safety glass to current Building Regulations		C

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	4.4 INTERNAL DECORATIONS Walls to the First Floor, Nave, Aisles and Transepts		
	<p>These walls are generally painted plaster. All would benefit from some amount of redecoration. The Cathedral has not been decorated, except for small areas, since 1976.</p>		C
	<p>Note there is an area of damaged plaster adjacent to the replica Pix in the South Transept – this was due to a leaking external r.w.p that has now been replaced. The wall is now sufficiently dry to allow the re decoration of this area.</p>		C
	Ceilings to the Nave, Aisles and Transepts		
	<p>These panelled ceiling all have decorative paintwork to a high standard. The Nave ceiling has been recently redecorated and all is in excellent condition.</p>		
	<p>There are small areas requiring some local redecoration not thought to be due to water ingress but more to do with thermal movement in the substrate. Particular attention to be given to:</p>		
	<p>South Aisle vaulted ceiling a number of panels South Transept lower roof south end North Transept all high level corners. North Aisle vaulted ceiling a number of panels</p>		C
	Ceilings to the N.E. Staircase, Jesus Chapel and St. Martin's Chapel		
	<p>In excellent condition note the previous discussion regarding the hairline crack in the St Martins Chapel.</p>		

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	Crypt Areas		
	<p>The walls and ceilings to the Chesters room and vestry's are generally painted plaster. There are a number of areas of defective paintwork due to rising damp or condensation. These areas should be redecorated following any damp proofing works see previous notes in the report.</p>		C
	<p>The walls in the central Crypt area, the Chair Store and Games Room are all painted brickwork. The ceiling in the Crypt is the painted underside of the concrete floor slab, the ceilings in the Choir Store and Games Room are the painted soffit of the stone vaulting.</p>		

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	MONUMENTS, ARTWORKS, MEMORIALS ETC. Sanctuary		
	Central Altar : Free standing in Portland Stone in good condition.		
	Corona: a ring sculpture in steel suspended by steel wires from the Lantern Roof. Includes decorative light fittings. It is essential that the supporting wires to the Corona be checked for condition.		C
	Dove of Peace: carving to underside of Lantern roof boss in good condition.		
	Angel Sculptures: steel sculptures located in the Tower pendentives in good condition.		
	Bishop's Throne and Canon's Stalls: 1960's design in steel and timber part of the King design.		
	North Transept		
	Bishop's Throne: Original ornate gothic style carved hardwood throne with side seats. Medieval Misericord seats: thought to be from Whalley Abbey carved in oak some small broken areas consideration to be given to a detailed restoration.		C
	Mothers Union Banner		
	Virgin and Child Sculpture		
	Director of Music memorial stone – recently installed in the south wall of the North transept by the artist Charles Gurney in slate and gilt.		

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	Choir		
	Pulpit: 19 th Century ornate gothic style carved hardwood pulpit		
	Choir stalls: 1960 design in steel and timber to the design of Lawrence King		
	Jesus Chapel		
	Altar: freestanding		
	Tester: Suspension to be tested.		C
	Icon:		
	Crucifix of the Rood: carved by Advent Hunston from the former Parish Church		
	St. Martin's Chapel		
	Regimental banners		
	Statue of St. Martin		
	South Transept		
	The Font		
	Pax Madonna: fibreglass enlarged replica of the medieval pax		

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	<p>Nave</p> <p>Stations of the cross by the artist Penny Warden have been installed in a circular progression around the Cathedral (2005) Starting at the west end of the Cathedral and culminating in the South Transept. Large oil paintings on Canvas. The Cathedral has an ambition to light these stations.</p> <p>Christ the Worker: large steel sculpture to the design of J. Hayward sited on the west wall. Note this has been lightly dusted as part of the Nave Ceiling repainting programme.</p> <p>External pulpit – some work required external see previous notes regarding glazing and roofing materials.</p> <p>West Entrance and Nave Porches</p> <p>Carvings above 3 No. external doors: wood / fibre glass with gold leaf recently redecorated.</p> <p>Two coats of arms on Tower walls – masonry painted recently redecorated.</p>		
	<p>FITTINGS AND FIXTURES</p> <p>Crypt Toilets (Parish Church area)</p> <p>The inner room contains two WC cubicles, four stall urinals and three hand basins. All appliances are old but adequate. Consideration should be given to refurbishing the area to provide separate male and female facilities, better screening and ventilation would also be useful.</p> <p>Crypt Kitchen - The kitchen now largely redundant is in reasonable condition. Appliances to be checked periodically both electrically and for gas connections..</p>		<p>C</p> <p>C</p>

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	<p>Servers Vestry</p>		
	<p>This room has built in cupboards along the window wall.</p>		
	<p>Sacristy, Deans Room, Canons Room</p>		
	<p>These rooms all have built in cupboards/fittings. All are in reasonable condition.</p>		
	<p>Chandeliers</p>		
	<p>The Nave / Aisles have chandeliers hung from the ceilings (to the design of Lawrence King) These are simple 1960's style. The support cables are thought to be defective and all should be checked and replaced / repaired as necessary.</p>		B
	<p>We understand that longer term the Cathedral are considering replacing these fittings as part of a major re-lighting project.</p>		
	<p>ORGAN</p>		
	<p>The Organ was built in 1969 by J. W. Walker and Sons, London. The Organ is in four parts, located at high level on masonry decks around the Sanctuary areas. The console is located in front of the Choir.</p>		
	<p>Although awkward access is possible for those who regularly maintain the instrument. The instrument is regularly maintained and serviced all is in good condition.</p>		

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	<p>SURVEY REPORT - SERVICES</p> <p>ELECTRICAL INSTALLATION</p> <p>Refer to separate Inspection carried out by others. The electrical inspection report was not complete prior to this Quinquennial inspection and it may be that there are various electrical recommendations or works that will be necessary. These will be added into this survey at a later date as an appendix to this document.</p> <p>MECHANICAL INSTALLATION</p> <p>It is recommended that an annual survey and inspection of the mechanical installation take place by a suitably qualified engineer. Relatively new plant has recently been installed as part of the Cathedral Court upgrade and works to the boiler house with the installation of new boilers and CHP unit. As such we are confident that the Mechanical system is currently well maintained and in excellent condition.</p> <p>LIGHTNING CONDUCTOR</p> <p>Any lightning conductor should be tested every Quinquennium (in addition to any works which may be recommended in this Report) in accordance with the British Standard Code of Practice, No. C.P. 326 1965 by a competent electrical engineer, and the record of the test results and conditions should be kept with the Church Log Book.</p> <p>The Lightning conductor was upgraded in 2013 with the installation of low level vandal guards.</p>		

Plan Ref	Description	Photo.Ref.	Priority
	<p>SOUND SYSTEM</p> <p>The Cathedral has a sound system designed, installed and maintained by R. G. Jones Sound Engineering, 16 Endeavour Way, Wimbledon, London, SW19 8UH. The system covers the Nave, North and South Aisles, the Choir Stalls, the Sanctuary area and the North and South Transepts.</p>		
	<p>LIFT</p> <p>The chair lift rises from the Crypt Chair Store to the Cathedral floor. The lift is serviced annually by H Breakell & Co Blackburn Ltd – Parklands, Heywood Lancashire OL10 2TT.</p>		
	<p>FIRE PRECAUTIONS</p> <p>Generally</p> <p>In general the Cathedral has undertaken a number of works over the last three quinquennial to better comply with current standards for Fire Precautions.</p> <p>The installation of a full fire protection system and aspirator system has been completed previously with funding from English Heritage.</p> <p>At least one fire-extinguisher of the right type should be provided; there should also be one additional extinguisher of the foam or CO2 type where the heating apparatus is oil-fired. (There are three main types and it is essential to have the appropriate one in the appropriate place. Advice should be sought from the Local Authority Fire Prevention Officer).</p> <p>The Cathedral has a detailed Fire Policy in place this should be reviewed annually to catch up on any legislation changes.</p>		

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	<p>Fire Risk Assessment</p> <p>It is a statutory duty to carry out a Fire Risk Assessment. It should be carried out in accordance with the CFCE "Fire safety management in Cathedrals", (1997) advisors note. This has been undertaken and the Cathedral has a good fire management plan in place. However annual reviews should be taking place.</p>		
	<p>Fire Fighting Equipment</p> <p>There are a number of fire extinguishers in the building. These are inspected annually by UK Fire Protection (Rentals) Ltd., West Midlands House, Willenhall, W. Midlands, WV13 2HA.</p>		
	<p>Fire Prevention</p> <p>The storage of furniture and equipment must be carefully managed to minimise the risk of fire. The roof voids, the Clock Chamber, the circulation areas of the Crypt and the Plant Room should all be kept clean and clear.</p>		

Plan Ref	Description	Photo.Ref.	Priority
	<p>VENTILATION Generally</p>		
	<p>All areas of the Cathedral rely on natural ventilation.</p>		
	<p>Cathedral Ground Floor</p>		
	<p>The Ground Floor of the Cathedral has only a few windows with opening hoppers. These should all be repaired/maintained and their use managed.</p>		
	<p>There is some mechanical ventilation at high level within the Lantern Tower. This contributes to good air flow throughout the Cathedral further enhanced by the underfloor heating.</p>		
	<p>Crypt</p>		
	<p>Generally the rooms in the Crypt are inadequately ventilated. This is particularly the case for the internal rooms and those areas where numbers of people gather. This will be improved by the proposed Crypt redevelopment project. In the long term it is recommended that a system of mechanical ventilation is provided throughout the Crypt. In the short term the existing hoppers in the windows should be repaired/maintained and their use managed.</p>		
	<p>The newly fitted out Song School has had new mechanical ventilation fitted this appears to be working well in this location.</p>		
	<p>Bell Tower</p>		
	<p>There are signs of condensation staining in the Bell Ringers Chamber, due to a lack of ventilation and heating. The hoppers to the windows should be repaired/maintained and their use managed. A new system of natural ventilation has been added into the glazing – this should be monitored to see if it a success.</p>		

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	<p>EXTERNAL LIGHTING</p> <p>The main path between the Boulevard (East) and Darwen Street is well lit with Local Authority lighting columns. Many of the remaining areas of the precinct are poorly lit some of this has been addressed with the new development project particularly to the south and east of the Cathedral with the new public realm that has been delivered.</p>		
	<p>CCTV SYSTEM</p> <p>The current system has been recently added to as part of the Cathedral Court Development and it is well maintained.</p>		
	<p>SECURITY SYSTEM</p> <p>The Cathedral building is well protected by a security system installed and maintained by Atlas Alarms.</p>		

Plan Ref

Description

Photo.Ref.

Priority

4.5 Cathedral Precinct

The Cathedral environs is characterised by a large area of lawn and an arboretum of fine trees to the north of the precinct. This area continues around the east end of the Cathedral and partly across the west front. The north west corner of the precinct is the former site of the earlier Parish Church and as a consequence there are a number of masonry memorials all of which are in good condition.

Since the last Quinquennial there has been a large change to the Cathedral precinct in particular to the South and the East of the Cathedral. There is a new public Square to the east comprising of new hard landscape and soft decorative planting in beds.

To the South of the Cathedral a new Cathedral Garth has been created utilising the old grave ledgers to create new hardstanding, planted beds with fruit trees with raised lawns. The Garth is laid out as a rectangle based on the model of a Cathedral Cloister.

The former decorative cast iron railings and masonry base wall has been removed from the east boundary to create a more open and transparent precinct. The original fabric has been preserved for possible future use at the west boundary of the precinct with Darwen Street.

The new public square is maintained by the Local Authority as is the wider precinct to the North and West.

The Cathedral maintains the new Cathedral Garth.

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	<p>West Entrance</p> <p>A natural stone flag ramped access to the West Entrance has been installed. There is also a stone flag path to the Bell Tower door all is in good order and we are aware that the Cathedral makes all necessary pavement repairs as and when necessary.</p>		
	<p>North Aisle</p> <p>There is a wide natural stone flag path with stone sett edging and a flight of steps down to Crypt level at the east end. The steps require extensive repointing and res setting in part.</p> <p>The flags are generally covered in organic growths and are extremely slippery when wet (due to North facing location) The flags should be thoroughly cleaned and consideration should be given to installing a surface tooling to help prevent slippage. Alternatively the paving should be treated regularly with a proprietary cleaner to remove organic growth on a biannual cycle.</p> <p>There are three crypt windows that are naturally lit by light wells which are protected by low masonry walls which require re-pointing. A protective railing should be considered across these openings to prevent un authorised access and any accidental falls.</p>		C
	<p>North Transept</p> <p>The paths are formed with natural stone flags and ledger stones. Some recent repairs have been made here to loose flags as part of the WWI Memorial works.</p>		

4.0 INSPECTION

Plan Ref	Description	Photo.Ref.	Priority
	<p>A retaining wall edges the path on the west and north sides. The west section is leaning inwards towards the transept. Consideration should be given to rebuilding this section of retaining wall. Elsewhere there are areas of repointing required.</p>		C
	<p>The flight of 3 steps on the north east corner has been rebuilt.</p>		
	<p>Paths adjacent to the East End</p>		
	<p>This area is subject to the new development and as such has new hard landscaping generally and all is in good condition.</p>		
	<p>Paths adjacent to the South</p>		
	<p>The above ground carpark that sits between Church House and the new Cathedral Court building has been re laid using the original York stone flags. As such all is in excellent condition.</p>		
	<p>Paths adjacent to the South Aisle</p>		
	<p>New paths formed from natural stone ledgers all in excellent condition as part of the new garth design.</p>		

5.0

Aims and objectives

5.0 AIMS AND OBJECTIVES – Conservation Principles

Ongoing inspections should aim to identify areas where a programme of maintenance and repair would maintain the good condition of the building.

The main aim is to ensure that the building fabric is in good condition for the proper running of the Cathedral and associated buildings to continue its mission and its wider role in the community.

The Cathedral has by statute to undertake a 5 yearly fabric condition survey (The Quinquennial Inspection) This is a very useful mechanism for maintaining the building fabric and identifying programmes of repair and maintenance and preventing disrepair.

A programme of regular maintenance and repair should be implemented.

It is recognised that to keep buildings in good order, planned maintenance procedures are necessary. The intention is to ensure that the site is kept in a good state of repair and to continue the current good practice of a coordinating group that can be proactive and report back to relevant organisations.

Inspections of the buildings should be made regularly, and the maintenance plan should be updated to respond to the changing needs of the site. See Recommendation 9 above.

Any repair work or alterations should be adequately researched and carried out by skilled professionals.

It is important that any repair or alterations to the building be viewed within the wider context of the historic built fabric, making necessary reference to the existing schedule of significance and gazetteer already complete for the site. Any further research into the original design of specific spaces or features should be carried out, and advice should be taken from appropriate professionals such as a conservation architect, expert in paint analysis, or structural engineer.

Before carrying out any repair work, care should be taken to choose the most appropriate material and techniques available for the work.

The minor details on all listed and scheduled buildings are recognised as being important. The character of a building can be eroded by the replacement of small parts with new elements which are inappropriate. Care needs to be taken in the selection of materials and in the choice of appropriate craftsmen. 'Like-for-like' replacement is the basis on which repair work can be carried out to listed buildings without the need for permission but clarification will be obtained where there is any doubt that it is only repair. Seek advice from the Cathedrals Fabric Advisory Committee (FAC)

'Like-for-like' replacement requires attention to the detail of the design and the nature of the materials used. Stone needs to be carefully chosen for origin, size, colour and texture. Attention needs to be given to paint colour and finish. Small elements, such as door handles, doors, gates, etc., can be significant, where possible repairs to original elements will be the preferred option rather than replacement with similar new elements.

The implications of listed building legislation will be explained regularly to all new staff, senior staff and to members of the maintenance department.

The rather tightly drawn distinction between repair work and alteration will not necessarily be apparent to members of staff, even where current practice is good. Some restrictions on the sort of materials to be used and the procedures for obtaining consent will need to be made clear, particularly if staff change over time.

Confirm a robust management structure for the site

To ensure the long-term well-being of the building, with a management structure which has the ability to affect maintenance and repairs as well as to respond to commercial and other pressures and be a sustainable building.

6.0

Action Plan

6.0 ACTION PLAN

Five year plan

We have drawn up a separate spreadsheet that identifies the works that have been categorised in this report.

The works are categorised as A , B and C as defined in the introduction.

The intention is to work with Chapter in grouping the works together into packages of works in order to maximise value in terms of reduced scaffolding costs and preliminary costs.

Once packages of works have been identified we will agree an order of priority and seek funding for those works as part of a five year plan.

Packages of work can be presented to FAC for approval prior to the works being undertaken.

