ST PETER'S CHURCH, APPLESHAW

QUINQUENNIAL INSPECTION

19th April 2021

The Goddard Partnership Ltd

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Appleshaw CHURCH

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Link to Dropbox file for all photographs taken during the inspection:

https://www.dropbox.com/scl/fo/edndy6ijrgfe5k1w4igap/h?dl=0&rlkey=geeg7537ugztauc5crsascxk9

A. INTRODUCTION

A.1. The Report

A.1.1. This is a general report only, as is required by the Inspection of Churches Measure, 1955: it is not a specification for the execution of the work and must not be used as such. The Surveyor is willing to draw up the specification and carry out all work necessary to assist the P.C.C. in applying for Faculty approval and to direct the execution of repairs.

A.1.2. Where it is recommended that a Surveyor's specification is drawn up for the essential repairs this is because impartial professional advice and contract administration are felt to be necessary. Because of the antiquity of the fabric the advice of a specialist Surveyor used to dealing with historic buildings should always be sought.

A.2. The Scope of the Report

A.2.1. This report is based on the findings of an inspection made from the ground or other places which can be easily reached, or from a ladder provided, to comply with the Diocesan Scheme under the Inspection of Churches Measure 1955, as amended by the Care of Churches and Ecclesiastical Jurisdiction Measure 1991.

A.2.2. It is emphasised that the inspection has been purely visual. 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.

A.2.3. Because of the height of the church, close inspection of high level masonry, roofs and ceiling plaster is not possible except in limited areas safely accessible by ladder. It is not possible, therefore to state that such areas are free from defect which may lead to a fall of materials from these areas.

A.2.4. Because this is a purely visual inspection, we cannot be certain that the building is free from asbestos-based or other harmful materials. Further advice should be sought before any building works involving the disturbance, removal, cutting or drilling of asbestos-based materials. Specialist survey is required and an asbestos register should be maintained to comply with current legislation. Further details on making an assessment are available on www.churchcare.co.uk/churches/guidance-advice/looking-after-your-church/health-safety-security/asbestos. The assessment has not been covered by this report and it is the duty of the PCC to ensure that this has been, or will be carried out.

A.2.5. The repairs recommended in the report will be (with the exception of some minor maintenance items) subject to Faculty Jurisdiction. Guidance on whether particular work is subject to Faculty can be obtained from the DAC.

A.3. Installations

A.3.1. Any electrical installation should be tested every five years by a NICEIC registered electrician in accordance with the recommendations of the Church Buildings Council. The inspection and testing should be carried out in accordance with IEE Regulations, Guidance Note 3, and an inspection certificate obtained in every case. The certificate and test report should be kept with the church log book. For further details including who is qualified to undertake the inspection please see www.churchcare.co.uk/churches/guidance-advice/looking-after-your-church/technicalmatters. An insulation resistance and earth continuity test should be obtained on all circuits.

A.3.2. This present report is based upon a visual inspection of the main switchboard and of certain sections of the wiring selected at random, without the use of instruments. Only obvious visible defects in these areas are noted.

A.4. Heating Installation

A.4.1. A proper examination and test should be made of the heating system by a qualified engineer each summer before the heating season begins and the report kept with the church Logbook. The P.C.C. should consider arranging a regular Inspection Contract.

A.4.2. The use of portable propane gas heaters within the church may nullify the fire insurance and will add to the risk of condensation.

A.5. Lightning Conductors

A.5.1. Ecclesiastical Insurance Company's current recommendations are that lightning conductors should be tested between every 2½ to 4 years, preferably varying the season (in addition to any works that may be recommended in this Report), in accordance with the current British Standard by a competent engineer. The record of the test results and conditions should be kept with the Church Logbook.

A.5.2. Periodic close examination of high level fittings is recommended, particularly the contact between the tape and the vane rod or finial.

A.6. Maintenance between Inspections

A.6.1. The P.C.C. is strongly advised to enter into an annual contract with a local builder for cleaning out the gutters and downpipes twice a year.

A.6.2. Although the Measure requires the church to be inspected by an Surveyor every five years, it should be realised that serious trouble may develop between surveys if minor defects, such as blocked gutters and downpipes, displaced slates and tiles, and leaking pipes are left unattended.

A.6.3. Guidance may be had from the Church of England website www.churchcare.co.uk and the pamphlet "How to Look After your Church", obtainable from Church House Bookshop, Great Smith Street, London, SW1.

A.7. Fire Precautions

A.7.1. Fire risk assessment is required by current legislation. This should be carried out by a responsible person appointed by the P.C.C.

A.7.2. The P.C.C.'s insurer should be consulted and the level and type of fire-fighting equipment agreed with. Further advice may be obtained from the Fire Prevention Officer of the local fire brigade.

A.7.3. A minimum of two water type fire extinguishers should be provided plus additional special extinguishers for the organ and boiler house as detailed below. As a general rule of thumb, one water extinguisher should be provided for every 250 square meters of floor area as follows:-.

General Area	Water
Organ	CO^2
Gas Fired Boiler	AFFF
Electrical Switchgear	CO^2

A.7.4. All extinguishers should be inspected annually by a reputable company to ensure they are in good working order and record made in the Church Logbook. Note that dry powder extinguishers are not recommended for use within enclosed spaces and not for use in historic buildings due to harmful residues.

A.7.5. Fire safety advice can be found at www.churchcare.co.uk/churches/guidance-advice/looking-after-your-church/heatlh-safety-security/fire-precautions.

A.8. Insurance

A.8.1. The PCC is reminded that the insurance cover should be index-linked, so that adequate cover is maintained against inflation of building costs. It is of course important to ensure that the basic sum insured is adequate at inception of index linking, as this will deal only with future inflation. The Ecclesiastical Insurance Group PLC, which covers the majority of churches in this country, will send its regional surveyors without charge to offer guidance as to the appropriate level of assessment in every case. However, an independent assessment of the insurers' recommendations should be considered.

A.9. Disability Discrimination Act

A.9.1. The PCC should ensure that that they have understood the responsibilities of The Equality Act 2010. Further details and guidance are available at www.churchcare.co.uk/images/access-and-disabled-people.pdf.

A.10. Health and Safety

A.10.1. Overall responsibility for health and safety of the church and churchyard lies with the incumbent and PCC. This report may identify areas of risk as part of the inspection but it does not equate to a thorough and complete risk assessment by the PCC of the building and churchyard.

A.11. Bats and Other Protected Species

A.11.1. The PCC should be aware of its responsibilities where protected species are present in a church. Guidance can be found on www.churchcare.co.uk/guidance-advice/looking-after-your-church/bats.

A.12. Sustainable Buildings

A.12.1. A Quinquennial Inspection is a good opportunity for a PCC to reflect on the sustainability of the building and its use. This may include adapting the building to allow for greater community use, considering how to increase resilience in the face of predicted changes to the climate, as well as increasing energy efficiency and considering other environmental issues.

A.12.2. On 12th February 2020 General Synod recognised that we are in a climate emergency and committed to an ambitious carbon reduction target of Net Zero by 2030. The culture is changing fast, both outside and within the Church; questions of sustainability should inform all our buildings-related decisions from now on, and this report highlights opportunities for action. See also the Practical Path to Net Zero Carbon (PPNZC) document at the end of this report, and the Sustainability Countdown to 2030 section below.

A.12.3. The Church of England Research and Statistics Team has created an Energy Footprint Tool. This will tell your church what your 'carbon footprint' is, based on the energy you use to heat and light your buildings, and is part of the Online Parish Returns System. You will need to input the data from the most recent year's electricity and gas/oil etc bills, and the tool will then tell you the amount of carbon produced annually by heating and lighting your church building; it will also offer some helpful tips to reduce your carbon emissions. As you use the tool each year, you will be able to see how your church improves, as you take steps to cut your carbon footprint. Most dioceses now have a Diocesan Environmental Officer in post, who may be able to offer support, including on questions of ecology and biodiversity, and signpost you to further resources.

A.12.4. Sustainability Countdown to 2030; it will be for the PCC to set is priorities for sustainability improvements, and I would encourage you to use the Practical Path to Net Zero Carbon (PPNZC) appended to this Report to help set these. The following gives you a suggested timetable to address in the next five years, as we prepare for 2030 (references relate to the PPNZC):

A.13. Recommendations for Repairs in Order of Priority

A.13.1. These are recommendations for works required to be done at this church. The report will not include a formal estimate of costs, or a specification for repair works.

A.14. Churchyard

A.14.1. The PCC is responsible for risk assessment of trees and specialist arboricultural advice should be taken on mature specimens.

A.14.2. A systematic inspection of all standing headstones against toppling has not been undertaken. This remains the responsibility of the PCC.

A.14.3. The quinquennial survey is limited to visual observation on the date of the survey.

A.14.4. The quinquennial survey is limited to visual observation on the date of the survey.

B. GENERAL DESCRIPTION

B.1. Appleshaw Church comprises a very simple cruciform design with a chancel and a tower at the west end. The building is rendered and painted, and it follows a Gothick form, with simple two-centred lancet windows.

B.2. The list description for the building is as follows;

3049 APPLESHAW APPLESHAW

7/3 Church of St Peter In The Wood. 20.12.60 II

Parish church. Rebuilt on an old site In 1830, using a grant from the 'incorporated society for promoting the enlargement building and repairing of churches', architect T.M. Shurmer. Rendered walls and slate roof. Of a plain Gothic style, a cruciform aisleless.plan, most of the western arm (with thicker walls) being raised as a tower; west porch. The very plain exterior has pointed coupled windows (triple at the east and west ends) in the gables, chancel and tower, with small windows placed high just east of the tower. The tower has a parapet, and diagonal stepped buttresses, ending at the top as square piers, crowned by slender pyramid finials. The porch has a 4-centred arch: the side windows to the transepts are 2 (north) and 3 (south) light casements of domestic scale. The interior appears as a long narrow nave/ chancel, broken in the centre by the segmental-pointed arches of the transepts, and with a flat segmental plaster vault, stopped at the west by a tower arch. At this point the ceiling rises inside the tower, to provide space for the (virtually hidden) gallery. The north transept has a pointed plaster ceiling and the south transept (slightly narrower on plan) a semi-circular plaster _ vault. The south transept serves as a vestry, with a doorway beneath the gable window. There are wall monuments of 1785, 1798, 1807 and 1835, and a Royal Coat of Arms of William IV, of 1831. There is a Victorian octagonal font, but in the porch what appears to be the original font, comprising a very slender circular stone pillar, on a square base, with a vase top, now accommodating a shallow metal dish.'

Listing NGR: SP2947346468

C. GENERAL CONDITION

C.1. Although there remain areas where significant works are required (the tower and the windows), the PCC have made very significant efforts over recent years to catch up with the backlog of repairs. In there areas where work has been completed, this has all been finished to a very high standard, by experienced and skilled local contractors.

C.2. It is our view that the areas of repair are primarily as a result of less well executed work being carried out in the past, using materials which were not always the most appropriate for the situation. This has been recognised and resulted in a shift in the methodology which will now be followed.

C.3. The PCC are very conscious of the work which is still required, and we have every confidence that they will complete these outstanding items within the next few years.

D. RECENT WORK

D.1. Much work has been completed since the last inspection in 2014 including;

- Creation of the new vestry and accessible wc, including the introduction of new foul drainage.
- Floor repairs
- Phase I window repairs
- Urgent repairs to the roof
- Leadwork repairs
- Improvements to the surface water drainage

E. DETAILS OF DEFECTS AND NECESSARY REPAIRS:

E.1. ROOFS

E.1.1. The roofs to the church are covered using Welsh slate with lead ridges laid over timber rolls. The main roof covering the nave and the chancel extends from the east side of the tower, where a lead flashing has been provided at the abutment with the wall. Large parts of the flashing have been rendered over, which will make it difficult to replace or repair in the future without disturbing the wall. Where it is visible, the flashing does however appear to be in a fair condition.

E.1.2. The lead ridge covering to the roof is laid in separate lengths to allow for thermal movement between the individual sections. Lead clips secure the lower edge of the lead where it meets the slates. These are generally working as intended.

E.1.3. There is slight undulation in the profile of the roof where the ridge line rises where it meets the east wall over the chancel. This movement appears to have existed for many years, and it may have occurred soon after the building was built. It does not currently give cause for concern. This remains unchanged since 2014.

E.1.4. The roof is covered with moss, most notably on the north facing slope where it may remain in shadow for most of the day. Although the accumulation of moss is unlikely to damage the slates, it will potentially block the gutters and these should be checked on regular basis.

E.1.5. The verge over the east gable to the chancel has been pointed using a hard sand and cement mortar and this has cracked in a number of places. It does appear to remain firm however and no works are required at this time.

E.1.6. A new section of lead has been provided to the lead ridge where it had been gnawed by squirrels. This work was completed in 2020.

E.1.7. The slate roof covering on the south facing roof slope to the nave and chancel appears to be complete and no further works are required.

E.1.8. To the north and south sides of the nave there are two transepts with the south range forming the vestry. This has also been covered using a slate roof, which generally remains in a very good condition.

E.1.9. The form of the roof follows that previously described, with a lead covered ridge overlapping the slate below.

E.1.10. A very short valley gutter marks the junction between the roof to the transept and the roof of the nave.

E.1.11. A section of roof to the west facing vestry roof ha been damaged above the gutter this must be repaired as **a matter of urgency**.

E.1.12. Lead ‘dams’ have been introduced below the valley gutter and this is very likely to have reduced water spilling over the wall below.

E.1.13. Once again the flashing detail at the abutment between the wall of the nave and transepts has been formed using lead, which has then been rendered over. This is potentially be a weak spot where moisture can enter and it should be renewed.

E.1.14. One slate is missing below the ridge on the north side of the nave roof alongside the tower.

E.1.15. One slate was noted to have cracked and is missing on the north facing roofslope of the nave alongside the tower; this needs to be replaced.

E.2. TOWER ROOF

E.2.1. Access is gained to the tower roof by a loose ladder on the first floor gallery. There is no cover or lock to the ladder and although it is placed behind a piece of furniture, there is nothing to stop its unauthorised use. This should be corrected as **a matter of urgency**. This remains as noted in 2014, with no action having been taken.

E.2.2. There is a small timber landing alongside the organ and this forms an intermediate platform before reaching roof level. A short (fixed) galvanised ladder rises to the loft access trap with a further fibreglass hatch providing the weatherproof layer cover at roof level.

E.2.3. The roof to the tower has been covered using fibreglass. It would appear that this is around 25 years old. While the roof covering currently appears to be sound, the upper 'gelcoat' has begun to deteriorate[1] and we would anticipate that the roof may require replacement or significant overhaul within the next 5 years.

E.2.4. The church should therefore start budgeting for the repairs as the cost of the work is likely to be significant.

E.2.5. Within the centre of the roof there is a small open louvred cupola, which conceals the bells. This has a lead flat roof covering, complete with a lead apron at the base where it meets the fibreglass roof. The cupola is in a very good condition, with no works required.

E.2.6. Above the line of the fibreglass roof covering, a lead flashing has been introduced at the abutment with the parapet wall. This work all appears to have been completed at the same time the roof was laid and it remains in a good condition.

E.2.7. Above the lead flashing, a stainless steel drip has been introduced, which forms a bead to secure the edge of the lime rendered finish.

E.2.8. The render has begun to fail, most notably on the inside of the west wall, with large sections of the top coat missing for approximately 60% of the length of the parapet at this point. It is expected that the failure has occurred as a result of the driving rain having soaked into the wall, with the lime render then becoming susceptible to 'frosting' on the inside face. This appears to have occurred for a number of years. Although the loss of render has not been corrected, the extent and rate of decay has certainly slowed. The active failure remains in the south west corner only.

E.2.9. In our opinion, the problem is likely to have been exacerbated by the use of Keim paint on the outside face of the wall, which restricts the evaporation from the surface. A similar pattern of failure is now beginning to occur on the north wall, although this has only effected around only 5% of the surface to date. This remains as noted in 2014.

E.2.10. Above the line of the parapet, a stone coping provides protection to the wall beneath with the drip to the inside and outside edges. Several of the stones, most notably on the east facing elevation, have failed and these should be replaced. Two stones are particularly poor with more loose stone removed on the day of the inspection to prevent it from falling and damaging the slate roof below.

E.2.11. Earlier sand and cement mortar repairs have been introduced in the past, but these are now very loose. We would recommend that 3 lengths of the parapet coping are replaced, with all the open joints between the remaining sections repointed in lime.

E.2.12. At each of the four corners of the tower the buttresses rise to stone pinnacles with a crocheted tops. The pinnacles are all in a good condition, although the carvings have become covered in algae. No works are required at this time.

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[1] This normally occurs where it is exposed to sunlight

E.2.13. Although the fibreglass access hatch does provide an effective seal it is quite cumbersome to use and we would recommend that gas struts be fitted to compensate for its weight, making it easier to open

E.2.14. The original rubber seal is loose. This remains outstanding.

E.2.15. Two fire extinguishers were identified on the gallery adjacent to the organ, this included a CO_2 extinguisher and a water based extinguisher. Both were serviced in 2017.

E.3. RAINWATER DISPOSAL

E.3.1. The gutters which serve the building are generally formed using half round cast iron sections, with 3" diameter (circular) downpipes, discharging over grated gullies.

E.3.2. The condition of the guttering is generally good. All the gutters have been overhauled as part of the recent repair programme completed in 2020.

E.3.3. Only the work to the downpipes serving the tower remains outstanding.

E.3.4. The gutters will continue to be at risk of blocking with debris which falls from the nearby trees, many of which overhang the edge of the building. It is important to ensure that the gutters are kept clean as this will provide problems with damp internally. Where possible the trees should be cut back further away from the building.

E.3.5. Below the line of the gutter there is a painted timber soffit and while this is generally in a good condition.

E.3.6. Where the gutters discharge over the grated gullies, it would be normal to expect that these would be connected into a soakaway to allow any rainwater to drain into the soil. These are normally located at least 5m away from the building, however we are unable to establish whether these either exist or whether or not they remain in a good condition.

E.3.7. We would recommend that all the surface water drainage runs be rodded to check that they are operating correctly. Given the age of the system, it is quite possible that the pipes will have become blocked or cracked and they will need to be relaid.

E.3.8. New gutters have been provided to the west porch with downpipes connected to new soakaways. This work was completed in 2020.

E.3.9. There are a large number of roots which extend towards the building on the south side of the church and it is almost certain that these will have found their way into the drainage runs which, will cause the system to leak.

E.3.10. There is a large 4" diameter downpipe which provides drainage from the upper level of the tower. This pipe has been extended to reduce wall spilling over the base of the wall. The gulley needs to be kept clear on all sides of the building.

E.3.11. There is a brick lined channel which extends around the building on the north side. It is expected that this was originally used to provide a route for surface water from the downpipes to be directed towards the stream, before the surface water drainage system was installed.

E.3.12. Although this is now largely redundant, it does provide a useful secondary line of defence and we would recommend that it should be repaired, with any open joints repointed. This will improve the drainage around the base of the building and it will allow the base of the walls to dry out.

E.3.13. There are several areas where holes have formed alongside the east wall to the chancel.

E.3.14. In some areas the channel has become quite overgrown and this will need to be cleared from time to time.

E.3.15. The walls of the porch are finished using a very hard cement mortar to the plinth; this will be trapping moisture in the bas of the walls. The paint above is also poor and failing. The lime based render is very hard and consideration should be given to re-rendering the whole in a softer lime mix to allow the walls to breathe.

E.4. WEST PORCH

E.4.1. There is a small porch to the west end of the tower, which forms the main entrance to the church. This has been covered using a slate roof with lead flashing forming the abutment between the two parts of the building.

E.4.2. There is a crack from the underside of the arch to the apex. This should be repaired.

E.4.3. The rendering above the line of the lead where the porch roof meets the tower, has started to fail. This should be cut back and replaced. We would recommend a vertical cover flashing be provided over the lead laid over the slates, as this will provide a far more resilient and waterproof detail than the existing arrangement.

E.4.4. The gable to the porch has been formed using a parapet with stone coping. The lower section of stone on the northern side has been reset since the last Quinquennial Inspection, but the mortar work requires improvement (finishing).

E.4.5. At the time the stones are lifted and re-bedded the pins to both sides should be checked.

E.4.6. With the stone removed it is possible to see the junction between the slate and the stonework. It would appear that no lead flashing exists to weather the junction between the two. We would therefore recommend that lead soakers be introduced at this point, as the roof will otherwise be liable to leaks. This will involve the removal of the stone copings and the first row of slates, but the work would make a significant improvement to the weathering details, within this area.

E.4.7. A section of stone has failed to the west window surround below the darker painted reveal at low level (right hand side).

E.4.8. The decoration to the tower is significantly worse than noted in 2014.

E.4.9. There are two vertical cracks through the parapet wall on the west elevation above the stringcourse.

E.5. EXTERNAL WALLS

Tower

E.5.1. The tower is formed on a square plan with diagonal set buttresses marking the corners between the north east and west sides. The buttresses taper in depth at each of the three 'levels', with raking coping stones dividing the buttresses into three equal lengths.

E.5.2. The buttresses have been finished using a hard sand cement render, which has subsequently been decorated using a Keim paint. The colour of the Keim is a dark 'mushroom' shade, which provides a significant contrast with the main walls of the church. The Keim is generally in a fair to poor condition. It is now peeling most notably at high level at the changes in thickness to the buttress and directly below the raking capping. This now needs to be redecorated.

E.5.3. The west wall of the tower between the buttresses is formed using solid masonry over a brickwork plinth. The masonry has been rendered and repaired using different materials in the past, which gives a (slightly) patchy appearance.

E.5.4. Areas of repair have been mixed between highly textured pebbledash or harling finish mixed with a much smoother render used in isolated patches, most notably above the west window and at low level.

E.5.5. During the course of the inspection we 'tap tested' the render at low level and whilst some areas sounded hollow, there was no evidence to suggest that these are currently in danger of falling. This remains as noted in 2014. This should be monitored and if any cracks do appear then the PCC should contact the Goddard Partnership. It should be noted that our testing was limited to the wall areas close to ground level, and areas of plaster above *may* still be loose and potentially at risk of falling. This should be kept under review (by the PCC) for any changes in the surface (cracks etc), particularly after periods of hard frost, which may indicate a potential failure.

E.5.6. The south side of the tower shows a similar pattern of construction to that noted on the west elevation, with larger areas of textured harling finish. This all appears to be in generally in a fair condition.

E.5.7. Some making good has been completed to a crack below the south window and although the repair has not been well executed (a smooth render with textured render either side), this still appears firm.

E.5.8. Similar areas of repair were noted at high level below the line of the parapet; these also appear to remain firm, although the visual contrast between the two materials is quite stark.

E.5.9. The painted wall surface below the line of the sills is now flaking quite badly. It is expected that this occurs where water running down the window seeps into the wall below. This has been addressed by the introduction of a lead drip below the window.

E.5.10. There is a small area of ivy starting to grow at the base of the wall over the plinth. This should be removed, as ivy is potentially very damaging to rendered walls.

South Transept

E.5.11. The walls of the south transept are generally in a fair condition.

E.5.12. The condition of the walls to the south elevation are very poor and a series of test repairs are planned to inform the next phase of work to the tower.

E.5.13. At the time the south wall is rendered, it is recommended a lead or similar flashing is provided to protect the wall beneath.

E.5.14. A number of cracks have appeared on the east wall of the vestry, most notably below the window. These appear to be historic, with no suggestion that the movement is either progressive or ongoing. The extent of the cracking remains unchanged since 2014.

E.5.15. Ivy is now growing at the base of the wall and this needs to be removed.

E.5.16. The south wall of the chancel shows signs of having been repaired in the past, with large areas of smooth render introduced between the textured (earlier) work. On closer inspection the render appears to have been applied directly over the top of the earlier surface. It is expected that this was applied where the outer layer of the earlier work failed. Although the appearance is very patchy it all appeared to remain firm.

E.5.17. A horizontal crack has formed over the drainage channel and this needs to be raked out and filled.

E.5.18. There is a small crack which extends from below the window to ground level. This marks the junction where the building was extended (?) to form the chancel. This remains as noted in 2014.

East Wall Chancel

E.5.19. The condition of the east wall of the chancel follows that of the rest of the building. There are sections of loose hollow sounding render below the east window, although these still remain firm.

E.5.20. The pattern of the render on the east wall is very mixed, with the upper pebble dashed surface having fallen away in the past. This occurred many years ago. It has since been redecorated over a number of times.

E.5.21. The general appearance of the wall is fair.

The Nave and Chancel, North Wall

E.5.22. The wall to the nave and chancel is in a fair condition. There is evidence of a small structure having been removed in the past (below the window) and this may have previously housed either the organ blower or possibly a small stove. The wall appears sound.

E.5.23. The east wall to the north transept is in a fair condition, however there is an area where the wall is quite damp and the paint surface is badly stained. This corresponds to an area where the gutters leaked for sometime, as a result of an open joint between the individual sections. This section of gutter has now been repaired and the wall is starting to dry out.

North Transept, North Gable

E.5.24. The condition of the paintwork is rather poor where it is in the shade for much of the year.

E.5.25. There is considerable algae buildup at low level and below the level of the sills.

E.5.26. Although the appearance of the wall is rather patchy, the condition of the render remains fair.

West Wall, North Transept

E.5.27. The wall is generally in a fair condition. It appears that it may have been re-rendered using hard sand and cement harling finish. This contrasts with the rest of the building. The paint finish has started to fail at low level above the brick plinth and this will require redecoration within the next two years.

E.5.28. A section of render is very loose at the base of the wall alongside the nave; this should be replaced.

Tower, North Wall

E.5.29. Ivy is starting to grow alongside the wall and this should be removed.

E.5.30. The north wall of the tower has been repaired a number of times in the past with cracks extending above from the window to the parapet level.

E.5.31. There is also a line noted within the decoration which appears to represent an earlier campaign of repair and possibly where a greater number of coats were applied in one position from the other.

E.5.32. There are a large number of horizontal cracks within the sand and cement render at high level and it is expected that these have occurred as a result of shrinkage. We are unable to confirm whether the render is well adhered to the masonry behind and this requires further investigation.

E.6. DOORS AND WINDOWS

E.6.1. The entrance doors to the west porch are formed in softwood with beads applied to the outside surfaces to form coffered panels. Splits are now showing in some of the panels.

E.6.2. There are some minor splits in the timberwork which have been filled in the past. Repairs have been completed in the past at the base of the frame on the righthand side.

E.6.3. The projecting weather bar at the base needs filling.

E.6.4. The door requires redecoration within the next 18months.

Window W1 South Side of the Tower

E.6.5. Window W1 is a single two centered arch with two lancet lights in the central panel over. The design forms a very simple 'Gothic' appearance, set within a timber mullion with contrasting coloured glass secured within diamond set lead cames[2]. This window is in a very poor condition.

E.6.6. At the base of the window, a new timber temporary cill has been provided to prevent water entering. This is only a short term measure until the window is repaired.

E.6.7. The base of the central mullion has been repaired in the past although this repair has now failed.

E.6.8. The decorations are very poor and it should be expected that extensive repairs works will be required to this window.

Window W2 (nave) South.

E.6.9. Lancet with bottom hung casement; rusting and requires repair

Window W3

E.6.10. There is a three light timber window with diamond set leaded lights to the west wall of the vestry. The timberwork remains in a fair condition, although it does need redecoration. We would recommend that this is completed within the next six months. This remains outstanding from 2014.

E.6.11. The leaded glazing all remains in a fair condition.

Vestry South Door

E.6.12. There is a simple four panelled door to the vestry. This has been replaced as part of the vestry improvements completed in 2020. It is new.

W4 (Vestry South Elevation)

E.6.13. The window above the south door to the vestry follows a similar pattern to that noted to the tower, with a bottom hung hopper light provided in the right hand panel.

E.6.14. This window has been overhauled as part of the vestry project and it now remains in a very good condition.

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[2] The name for the leadwork securing the glass

Window W5

E.6.15. There is a small three light window on the east side of the transept. The leaded light glazing to the left and right hand panels is very loose, with two quarries[3] having cracked. This area of glass will need to be removed and re-leaded. This is quite urgent.

E.6.16. The historic original glass should be reused as part of the work.

South Window (Nave W6)

E.6.17. The window to the nave is in a poor condition. The left hand section of the window has been adapted to form a bottom hung hopper light with the glazing to the upper section of the hopper requiring re-leading.

E.6.18. A new timber cill section has been added (2020) at the base of the window to replace a very poor base. Further more extensive repairs are expected to the centre mullion.

E.6.19. The window is in need of redecoration.

E.6.20. A new lead drip has been provided below.

East Window to Chancel (W7)

E.6.21. The east window to the chancel comprises three lancet lights set between a two centred arch. The window has a painted image of Christ on the cross and was provided in memory of Ellen Maria Stock.

E.6.22. Although the window is in a fair condition it is quite dirty and does need careful clean by a suitably experienced specialist.

E.6.23. The mullions to the window appear to be reconstituted stone (possibly Roman cement ?). These are in a fair condition.

The North Window to the Nave (W8)

E.6.24. The north window to the nave is in a better condition than the windows already identified on the more exposed south side of the building. The window has a hopper light to the right hand side. The top glazing panel to the hopper light requires redecoration and re-leading.

E.6.25. The window also requires redecoration with the hopper light beginning to rust at the base.

E.6.26. A new cill and lead flashing were provided in 2020.

Window W9

E.6.27. There is a two light window to the east wall of the north transept. This window is in fair condition, although it does require cleaning and redecorating.

E.6.28. One quarry has cracked, and the lead to the right hand panel is loose.

Window to the North Transept (W10)

E.6.29. This is in a fair condition although the hopper light is beginning to corrode. This requires repair.

E.6.30. The lozenge light to the top of the window is badly distorted.

E.6.31. There is also repair noted to the central mullion at the base of the window with a new timber section needed to be scarfed in. This has been filled as a short term repair.

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[3] Quarry: An individual piece of glass within a leaded light window.

E.6.32. The cill and lead flashing have been added to shed water.

North Transept (W11)

E.6.33. This is in a fair condition, although the frame requires redecoration. This remains outstanding from 2014.

Lancet Window at High Level (W12)

E.6.34. This has a small hopper light and the hopper is beginning to corrode. This requires redecoration.

Tower Window North Side (W13)

E.6.35. The frame requires redecorating with a repair required to the central mullion at low level.

E.6.36. The leaded lights are otherwise in a good condition.

E.6.37. A new cill and lead flashing were added in 2020.

West Window to Tower (W14)

E.6.38. The west window is a large window forming three two centred arched lights set within a central two centred arched opening. The window appears to be in a poor condition, although it is expected that it may be suffering many of the same problems identified elsewhere.

E.6.39. The timber mullions to the window are all in a poor condition with the paint peeling. These need to be rubbed down and redecorated. We would expect this window will require extensive repairs at the time the tower project is put in hand.

F. INTERNALLY

F.1. SOUTH PORCH

F.1.1. Walls to the south porch are painted and plastered. These have been 'lined out' to represent ashlar. The walls are generally in a fair condition.

F.1.2. There is some failure of the plaster at the base of the doors, although this is not considered to be significant. This is associated with the use of hard cement repairs externally.

F.1.3. There is a very minor crack between the west wall of the tower and the porch. This is not considered to be significant and can be raked out and filled. This remains as noted in 2014.

F.1.4. The underside of the ceiling is painted and plastered and this remains in a fair condition.

F.2. GALLERY

F.2.1. There is a small gallery at the west end of the church, within the tower. The front edge of the gallery is marked by a continuous timber balustrade set on the inside of the arch on the east wall of the tower.

F.2.2. The staircase leading to the gallery is timber with a painted balusters and varnished handrail. It is generally in a good condition and feels firm to tread.

F.2.3. There are two pews to the gallery at first floor level. These are set on raised steps.

F.2.4. While the height of the (east) handrail appears to comply with current legislation facing the nave a raised section of pew seating does form potential area of risk over the open staircase. We would therefore recommend that this handrail be extended so that it is at least 1100mm higher than the top of the seat. This should be considered **as a matter of urgency**. This remains outstanding.

F.2.5. The (lath and plaster) ceiling above the gallery is in a relatively poor condition, particularly over the organ where large sections have become quite badly cracked. It is expected that this section of ceiling will need to be repaired. This remains outstanding.

F.2.6. The walls at gallery level are painted and plastered and it is generally in a good condition.

F.2.7. The extent of the staining is now quite extensive and it is expected to relate to problems of condensation, which appear widespread inside the church.

F.2.8. There are areas where damp staining appears to be coming through the wall finishes and to some extent this may be expected where it is constructed using a solid masonry wall.

F.2.9. The problems of dampness seen within the tower are also considered to be associated with the use of the Keim paint on the outside of the building. Although this is a *relatively* porous material, it is not a substitute for limewash which would have been used at the time the building was originally constructed. This would have allowed the building to breathe, reducing the levels of damp.

F.2.10. The floor of the gallery is timber boarded. This is generally in a good condition, although a gap has opened up between the edge of the gallery and the balustrade with some deflection noted over the line of the beam which spans the gallery. It is expected that there has been some deflection in the past although this no longer appears to be ongoing. This should be monitored over the next twelve months, to check. This remains unchanged since 2014.

F.3. FLOORS

F.3.1. The floor of the nave is covered using 9" square clay pammet tiles laid in a stretcher bond between raised pew platforms (to either side). Although the edges of the pew platforms on the south side are formed using oak, the boards beyond have been formed using a modern softwood.

F.3.2. Modern softwood has also been used on the platforms to the northern side of the building and it is expected that these were replaced as a result of damp and decay beneath.

F.3.3. A small section of the original oak boarding remains below the two easternmost pews. This is likely to be the last remnants of the original floor surface.

F.3.4. Vents have been introduced in the raised floor pew platform to improve ventilation. This is essential to control the level of damp below the floor. This *must* be maintained, otherwise the timbers will be placed at significant risk of decay/ fungal attack.

F.3.5. The floor at this level is lower than the external ground level and it is therefore particularly important that the gulley serving the tower is kept unblocked.

F.3.6. The pamment floor is generally in a very good condition and although some of the individual tiles have cracked, they still remain firm.

F.3.7. Two of the pamment tiles within the north transept were noted to be loose. This should be repointed although it is expected that it may start to move again over the course of time.

F.3.8. Some timber decay was noted within the timber (tongued and grooved) boarding at the base of the wall on the east side of the transept. This corresponds to the problems with the gutter outside. This needs to be resolved as **a matter of urgency** to prevent any further decay in either the dado boarding or the floor. This remains outstanding from 2014.

Chancel

F.3.9. The floor of the chancel has been lifted and relaid using a modern terracotta of a similar design to that used on the original church. This is in a fair condition, although it has become quite marked in places.

F.3.10. Small areas of repointing are required between the individual pamments.

F.3.11. An oak nosing marks the line of the step at the centre of the chancel and below the line of the altar. This is in a fair condition.

F.3.12. The floor beneath the altar is covered using a Victorian encaustic tile using contrasting cream, black and red tiling. The floor is generally in a good condition, although it has been stained in the past most notably to the edges. The floor otherwise feels firm to tread.

F.3.13. We were not able to gain access to the vestry at the time of the inspection and were unable to comment on this area of the building.

F.4. WALLS

F.4.1. The walls within the church are painted and plastered above a vertical softwood match boarding. The walls have been decorated in white with a contrasting 'willow green' picking out the details and quirks around the window and the arches to the north and south transepts. The condition of the plasterwork is generally good.

F.4.2. Some damp was noted inside the wall corresponding to the position of the downpipe which serves the tower. This should be checked to ensure that it is not leaking.

F.4.3. The condition of the plaster is generally good, although some patches were noted to be hollow.

F.4.4. There is also some mould buildup particularly within the northern end of the north transept. It is expected that this may be a particularly cold surface with the mould having occurred as a result of condensation rather than any penetrating damp. This has become far more extensive since the inspection in 2014. The problem requires further investigation, using data loggers.

F.4.5. There is a very interesting remnant of the earlier decoration scheme within the chancel showing The Lords Prayer. Some overpainting has occurred at the top of the design and particular care will need to be taken to ensure that no further erosion of the original work occurs.

F.4.6. There is a timber screen which separates the main body of the church from the vestry. This is thought to be around 30 years old. The screen is formed using diagonal set tongued and grooved softwood boarding placed within a softwood frame.

F.4.7. The existing door width has been widened as part of the recent work to provide access to the toilet beyond.

F.4.8. A new ramp has been added, to ease the transition between the two parts of the church and to allow access to the wc beyond.

F.4.9. The glazing above is formed using Georgian wired glass. This is designed to provide fire protection between the two areas although it is rather incongruous within the setting.

F.5. CEILINGS

F.5.1. The ceilings within the nave and the transept are formed using a very shallow barrel vault. These appear to be constructed using lath and plaster over timber formers set below the roof trusses. It was not possible to gain access in the void above the ceiling and so we are unable to comment whether these areas are free from defects.

F.5.2. The ceiling to the nave while generally appearing to be in a fair condition, has cracked along the centre of the arch with a crack running from the east window to the centre of the crossing. This crack does appear to have been filled in the past and it appears that it may have reopened. It is possible that there is some very minor spreading of the roof, where it is unrestrained at wall plate level. This should be reviewed by a suitably qualified structural engineer following a period (say 18 month) period of measurement.

F.5.3. Repairs have been completed to the crack in 2020 and the plaster was pinned to either side despite these repairs the crack has re-opened. Further investigation is now recommended.

F.6. FURNISHINGS

Pews

F.6.1. The pews within the church are of a simple Victorian design constructed using deal (softwood). These all appear to be in a good condition.

F.6.2. We could see very little evidence of any timber decay or beetle infestation within any of the floors or the walls with the exception of the panelling on the east wall of the north transept.

Font

F.6.3. There is a small font at the west end of the building. This follows a 14th century octagonal design with blind arcading rising to two centred arches. The font has an oak cover with decorative iron strap work. The font is not lead lined, but it remains in a good condition.

Wall Tablets

F.6.4. There are a number of tablets on the walls within the church and these generally appear to be in a good condition.

F.6.5. There is some corrosion of one of the iron cramps which secures the tablet to John Butcher. In time this will need to be removed. The tablet does seem to remain secure for the time being, although it should be kept under review.

F.6.6. The lower section of the tablet does sound hollow and we would recommend that this is checked by a conservator. This remains outstanding from 2014.

F.6.7. The tablet to Jason Ivy on the north wall of the crossing also appears to be slightly loose and this should be checked at the same time.

F.6.8. There is a fine Royal hatchment on the wall to the east of the stairs. Consideration could be given to repositioning this in a more prominent location.

G. SERVICES

G.1.1. The services within the buildings include electrical lighting, small power, and electric heating. The lighting within the building is generally provided with spot lights mounted below the line of the wall plates within the nave and the chancel, with two pendents within the north transept.

G.1.2. The spot lights are fitted with reflector bulbs to reduce glare.

G.1.3. A number of the lights do not use energy efficient fittings and we would recommend that this should be considered as a means of satisfying reducing the 'footprint'. At the time the lamps are replaced, it is possible that the more lighting will be required.

G.1.4. The heating within the church is provided using bar heaters mounted on the wall surfaces to nave and chancel. Similar heaters are fixed on the underside of the ceiling within the north transept.

G.1.5. It is not known how efficient the heating is although it always tends to be very costly to run. We also suspect that this form of heating will be contributing to the problems condensation in the building.

G.1.6. There are a number of power sockets around the church and these are generally wired using mineral insulated copper cabling. This is considered to be best practice as it is a fire resistant wiring.

G.1.7. The services to the new vestry have been renewed completely with a new electrical distribution box provided as part of the work. This is all in an excellent condition.

G.1.8. It is not known whether the PCC have commissioned an Asbestos Survey of the building. This has been a requirement for a number of years and it should be put in hand as **a matter of urgency**, if this has been overlooked.

H. CHURCHYARD AND BOUNDARIES

H.1. The path to the church has been formed using resin bonded gravel with a shallow ramp leading to the south porch. The path has started to subside and this is causing a trip hazard. Plans are in preparation for this to be repaired and replaced with a new 'tar and chip' finish.

H.2. Iron gates mark the entry to the churchyard and these have distorted quite badly and they are no longer able to close. The distortion has happened since the resin bonded path was laid with an arc having formed below the right hand gate. Although the movement remains as noted in 2014, plans are now in preparation for the gates to be rehung on the inside of the posts so they can be closed.

H.3. The church should undertake topple testing to ensure all headstones are safe

H.4. Cracking was noted to one of the table tombs within the churchyard alongside the North side of the tower. This should be repaired. This is now becoming urgent.

H.5. Ivy should be removed from all monuments.

BOUNDARY WALLS

H.6. Walls enclose the churchyard on all sides. These include a flint and brick wall to the west elevation with a tiled capping. The mortared capping has been lifted and relaid in the past although this is beginning to fail. Further repairs are required.

H.7. Ivy is now becoming established over the surface and this should be removed to prevent damage.

H.8. Tiles are missing top the coping and these should be replaced.

H.9. Vegetation is also beginning to grow behind the raking brick sections on the rear face of the wall and this will cause the wall to deteriorate quite quickly if it is not corrected.

H.10. A section of the East wall is leaning badly and is on the point of failure.

H.11. The south wall of the church is an older wall largely constructed with flintwork with a tiled capping set between brickwork piers.

H.12. The wall is generally in a good condition although it is now beginning to lean in a number of areas.

H.13. The ivy at the base of the wall should also be removed as this will cause it to decay more quickly.

H.14. Any tiles which are missing from the top of the wall should also be replaced as this will allow water to enter the top of the wall causing it to fail.

H.15. A number of tiles to the east wall within the churchyard are missing or slipped and these should be re-fixed. Similar problems were noted on the north wall.

H.16. Although we have not completed a comprehensive inspection of all of the grave stones within the churchyard there is some deterioration of the very fine table tomb to the north side of the tower. This includes rusting of the iron cramps which secure the sides and corner panels. This requires repair.

H.17. A hole has also opened up around the base of the tomb and this should be filled.

I. SUSTAINABILITY

I.1.1. The church is historic, and this represents challenges in terms of how improvements can be made to the building without having a negative impact on the building fabric. This not only includes the direct impact of a change, but also the indirect consequences, which may not be immediately obvious, but where they are nevertheless extremely important. It is possible and indeed likely that some measures appropriate for less significant churches may have too great an impact at Appleshaw to be possible. Each therefore need to be considered in turn.

Heating

I.1.2. The current method of heating is likely to be contributing to the problems of condensation in the building. In our opinion, the needs of the users for warmth must be balanced with the conservation of the building fabric, both visually in how any new installation is introduced, but also to prevent the risk of condensation etc.

I.1.3. We would recommend this is therefore investigated in greater detail before a firm recommendation is made. The use of data loggers is recommended to allow the nature of the environment to the monitored before a firm recommendation is made.

Insulation

I.1.4. Limited opportunities exist for providing insulation over the ceiling area and to the internal walls. Ventilation must be maintained.

Lighting

I.1.5. Given that the building currently has relatively modest lighting, any new installation is likely to add to the current energy usage! Part of the atmosphere within the building is where there are few concessions to modernity, and any new lighting would need to be very discrete indeed, to minimise visual impact.

I.1.6. Any new fittings would be LED, to reduce energy consumption.

Alternative provisions

I.1.7. Although energy efficiency often focusses on heating, lighting and power further environmental improvements could also include the use of rainwater harvesting etc.

I.1.8. The PCC may also wish to consider a policy to reduce or eliminate the use of plastics etc for any new work, with renewable materials being less damaging for the wider environment.

I.1.9. We would be able to provide further advice as appropriate when dealing with the care and repair of the building.

J. SUMMARY OF RECOMMENDATIONS

PRINCIPAL ITEMS OF MAINTENANCE AND REPAIR

Many of the following items will require a Surveyor's specification, but we would be happy to advise on items of a maintenance nature, which the volunteers may feel able to undertake.

Items Requiring Routine Regular Maintenance

- Keep gutters, downpipes and drains clear
- Check and renew any broken roof tiles or shingles
- Electrical test
- Lightning conductor test
- Maintain Asbestos Register
- Churchyard maintenance
- Monitoring movement

Items Requiring Urgent Attention

- Roof repair E.1.11, E.1.14, E.1.15
- Fit cover over ladder E.2.1
- Re-fix seal E.2.14
- Remove Ivy E.5.10, E.5.15, E.5.29, H7, H13
- Re-lead window E6.15
- Raise handrail F.2.4
- Timber decay F.3.8
- Check monument F6.6, F.6.7
- Asbestos Survey G.1.8
- Repair wall H.10

Items Requiring Attention within the Next Two Years

- Reset floor tiles F.3.7
- Renew lead E.1.13, E.4.3, E.4.6
- Render repair E.2.8, E.2.9, E.2.11, E.5.28, E.5.31
- Replace copings E.2.10
- Downpipes overhaul E.3.3
- Re-point channels E.3.12, E.3.14
- Re-render porch E.3.15
- Repair crack E.4.2, E.4.9, E.5.17
- Mortar repair E.4.4
- Repair table tomb H.4
- Stonework repair E.4.7
- Redecoration E.4.8, E.5.2, E5.24, E.5.27, E.6.4, E.6.10, E.6.34, E6.35
- Door repairs E.6.3
- Window repairs E.6.5, E.6.8, E.6.9, E.6.24, E.6.25, E.6.28, E.6.29, E.6.30, E.6.39
- Repair boundary wall H.8, H.9, H.15

Items Requiring Attention within the Next Three to Five Years

- Repair fibreglass roof E.2.3
- Repair plaster F.1.2, F.1.3
- Repair ceiling F.2.5
- Re-point floor F.3.10
- Repair path H.1
- Repair gates H.2

Desirable Improvements

- Remove moss E.1.4
- Fit gas struts E.2.13
- Trim trees E.3.4
- Re-render tower complete E.5.8
- Conservation clean to glass E.6.22
- Change lights to low energy fixings G.1.5

Further Investigations

- Check soakaways E.3.6, E.3.7
- Investigate render E.5.32
- Investigate condensation problem F.2.7, F.4.4, G.1.5
- Check deflection to gallery F.2.10
- Investigate crack to ceiling F.5.3