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BUTTERCROSS MONUMENT

REPORT on REPAIRS and PIGEON DETERRENTS

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1.0 BACKGROUND

1.1. Philip Hughes have been appointed by Winchester City Council to prepare a report that considers suitable approaches to conserving the monument and includes a mini options appraisal exercise to determine the most suitable means of providing pigeon protection.

1.2. Prior to our engagement Vallis and Hall Architects were engaged to carry out a condition survey of the monument which was completed between October and December 2022 and the results circulated in their document dated March 2023. We have not been able to undertake a detailed inspection of the monument and have only observed the condition of the monument from ground level and this condition survey has therefore been used as the basis of determining the overall condition of the monument and to support the proposals for repair that are discussed. Philip Hughes Associates cannot take any responsibility for any errors or inaccuracies in the condition survey.

1.3. This document has been produced by Samir Khatri MA RIBA Accredited Conservation Architect (AABC) on behalf of Philip Hughes Associates for discussion with the client and Historic England in advance of an application for Scheduled Monument Consent.

2.0 HISTORY OF THE MONUMENT

2.1. The Buttercross Monument is located on the High Street, Winchester SO23 9AH.

2.2. The monument is a Scheduled Ancient Monument, is Grade II listed and lies within a Conservation Area.

2.3. The monument is dated to the early 15th century and was formerly known as The City Cross. It is believed to have been commissioned by Cardinal Beaufort, Bishop of Winchester from 1404 to 1447. It is a holy cross but was used as a market cross since its construction where butter, cheese and eggs were sold from the steps that surround it.

2.4. The cross was restored by Sir George Gilbert Scott between 1865 and 1866. A major programme of repair works were carried out in 1991 by Winchester City Council.

2.5. The cross has suffered damage including the loss of pinnacles and the recent detachment and fall of one of the gable pinnacles above the arched opening on the first stage of the east elevation.

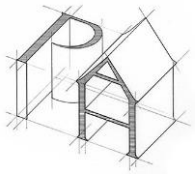
2.6. The council has a number of pieces of the monument that have become detached which are held in storage and are discussed further below.

3.0 DESCRIPTION

3.1. The monument is composed of a tall central shaft with four corner shafts rising to outer pinnacles with smaller inner shafts and pinnacles set inside these that are stabilised by flying buttresses. At base level a lierne vault connects the central shaft to the four outer shafts. Tie rods of bronze or copper are positioned at three levels of the monument to tie the shafts and pinnacles back to the central shaft.

3.2. At mid height there are four statutes, one on each face, of St John the Evangelist, William of Wykeham, Lawrence de Anne and Alfred the Great. It is understood that St John the Evangelist predates the Gilbert Scott restoration and that the remaining three were added by Gilbert Scott. Above these there are a further 8 smaller figures of the Blessed Virgin and Saints Bartholomew, John, Lawrence, Maurice, Peter, Swithun and Thomas. The figure of Saint Bartholomew on the east elevation is missing.

3.3. For the purpose of this report the monument has been divided in to 5 stages, identified as below:



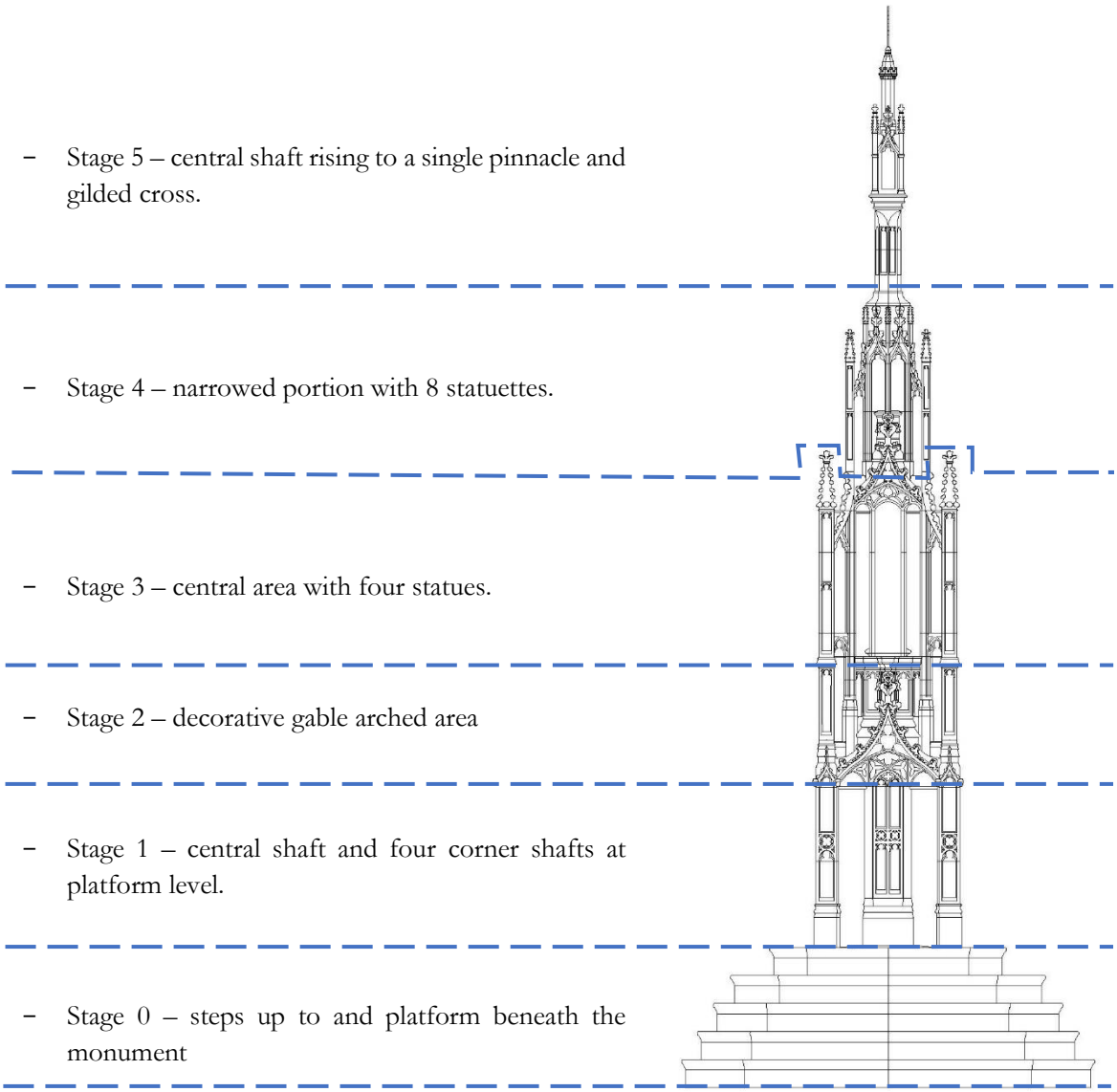


Fig 1 – Elevation of the Monument showing location of stages used in this report.

4.0 MATERIALS AND REPAIRS

4.1. The monument was originally constructed of Caen Stone and a visual inspection of the monument suggests that the lower parts of the four shafts, the central shaft and the lierne vault at stage 1 may be the only remaining visible parts that are Caen Stone.

4.2. We understand that Gilbert Scott's restoration work in 1865 was then carried out using Ketton Stone and that subsequent 20th century repairs were carried out using Bath Stone.

4.3. The drawing below by Owen Brown-Carter shows the monument in 1823 and illustrates that, at this time, three of the larger statues were missing. A number of the smaller statues are also missing. In addition, the tie rods are not present suggesting that these also were added by Gilbert Scott in 1865.

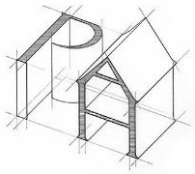


Fig 2 – Drawing by Owen Brown-Carter from 1823

4.4. Winchester City Council have shared with us documents in their possession which identify known repairs to the monument which are summarised below:

- **1865** – The external faces are rebuilt in Ketton Stone by George Gilbert Scott. The three large statues on the north, east and west sides are reinstated and copper or bronze tie rods are added.
- **1991** – Major repairs are carried out by WCC. These included the lifting and resetting of the two upper components of the shaft within section 5, replacement of pinnacles, finials and decayed stone, renewal of waterways to the rear of gable arches and around statues, shelter coating and cleaning of

the entire monument with a 'Clemco' sand blasting pencil jet. Documents recording the work carried out are included in Appendix 1.

- **1996 to 2008** – regular cleaning of the monument on a yearly basis (by local stonemasons Blackwell & Moody).
- **2005** – a missing finial is replaced and a small repair carried out by Blackwell & Moody using Stokes Ground Bath Stone
- **2012** – an application for Scheduled Monument Consent for cleaning of the statue using soft brushes, sponges and tap water is made. No record has been found of whether this was approved or not.
- **Jan 2012**- initial discussion with Richard Massey (former Inspector of Ancient Monuments) re: agreeing schedule of repairs - Initial debate over whether a new piece of stonework to replace the stage 2 west elevation arch gable finial could be carved or whether the broken fragments would need to be pieced back together.

4.5. WCC has in its possession a number of pieces of stone. These consist of the following and are discussed in more detail later in this document.

- Two pinnacles including finials from stage 4.
- Two finials – one from stage 3 and one from stage 4.
- The statue of Saint Bartholomew from the east facing side of stage 4.
- 3 pieces of the broken gable finial from the east facing side of stage 2.
- Smaller fragments from various places.

Fig 3 – Pinnacle from 4th stage.

Fig 4 – Pinnacle from 4th stage.

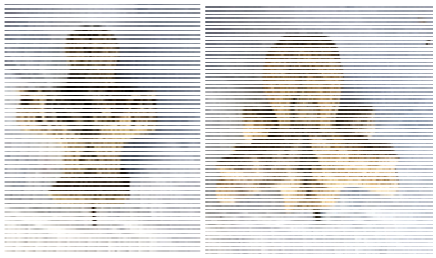


Fig 5 – Finials from 3rd and 4th stages.

Fig 6 – Statue of St Bartholomew.

Fig 7 – lower part of gable arch finial.

Fig 8 – upper two parts of gable arch finial.

5.0 CONDITION SURVEY

5.1. The monument was surveyed by Vallis and Hall Architects in 2022 and a detailed condition survey prepared with photographs of defects included. This survey was carried out from a cherry picker.

5.2. The survey identifies individual defects and indicates proposed repairs for each. The survey is comprehensive and detailed and as such it is difficult to absorb the extent and location of the defects identified and to comprehend the overall picture of the monument's condition. To make this easier to understand we have annotated the results of the condition survey on to the elevation drawings of the monument. These are included in Appendix 3.

5.3. The defects shown on the drawings have been grouped under the following headings:

- **Monitor** – where a defect of concern is observed but is not sufficiently developed or considered serious enough to require immediate attention.
- **Investigate** – the defect needs further investigation to establish the nature of the defect and to try to establish what is causing it.
- **Repair** – a defect in the masonry has been identified that requires repair. The repairs described are categorized as being either repointing, grouting, consolidation with lime mortar, shelter coating or refixing of disconnected or loose stone.
- **Stone indent/ replacement** – addition of a stone indent or new piece of stone where the existing is damaged or missing.
- **Clean** – cleaning of algae and/ or staining caused by general weathering or pigeon guano.

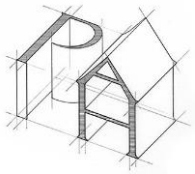
6.0 DISCUSSION WITH HISTORIC ENGLAND

6.1. A meeting was held with Alex Bellisario of Historic England on the 4th September 2023 to discuss the potential repairs to the Buttercross Monument. Notes from the meeting are included in Appendix 2. The points discussed are summarised below:

- **Stone repairs**
  - It was agreed that any approach should preserve as much stone as possible to avoid loss of historic fabric
  - Blanket sheltercoating was rejected by AB to avoid the loss of detail and of colour variation across the monument.
  - Sheltercoating, if applied, could be in a range of colours to suit the different stone types.
  - The damaged stage 2 gable arch finial should be reinstated and pinned together. Fibreglass reinforcement applied to the rear was proposed but AB thought that this would not be appropriate.
- **Cleaning**
  - Doff cleaning was rejected by AB because of the risk of damaging the stone.
- **Problems of pigeon infestation and how this should be dealt with**
  - AB advised that netting is not desirable.
  - Wire based and sticky and fire gel deterrents were discussed.

7.0 MASONRY REPAIRS

7.1. The condition survey identifies a range of defects to stonework and indicates proposed repairs for each. These are listed below but prior to the execution of any repairs each area will be re-assessed once a full scaffold is in place. Based on the recordings of the condition survey the following defects are anticipated to be repaired as follows:



7.2. **Failed or open mortar joints** – any failed or open joints will be raked out using hand tools and repointed with a lime putty based mortar.

7.3. **Previous repairs** – areas that have been pointed or repaired with a cement based mortar will be individually assessed to determine if removal is necessary and whether damage will be caused to the fabric by removal. Generally, where the pointing is sound and is not causing any deterioration of the surrounding masonry it will be left in place. Where the mortar is cracked or loose it will be removed with hand tools and repointed with a lime putty based mortar. Cement mortar that is causing decay to the surrounding stone will be carefully removed using hand tools and if not possible carefully controlled methods such as stitch drilling will be used to allow removal of the mortar without causing damage and repointed with a lime mortar.

Previous lime mortar based repairs will be inspected and defective repairs replaced with a lime putty based mortar.

7.4. **Hairline cracks** – the condition survey identifies a number of hairline cracks where voids may potentially be present on the monument. In conjunction with repairs to the surface of the crack these will investigated and where necessary voids will be grouted with a fine lime putty based grout using syringes and micro-pinned.

7.5. **Cracks** – some areas of masonry are identified as cracking. In particular this is noted across the statue of Lawrence de Anne on the east elevation of stage 3 (survey ref 4.45). Compared with photographs taken in 2015 and 2018 the crack appears to be wider and more extensive in the photograph included in the condition survey which suggests that this has worsened. It is unclear what is causing this and we will need to carry out further investigation to determine this. Possible causes are corroding ironwork (though no corroding ironwork has been identified anywhere else on the monument), instability in the fixings of the statue or movement in the surrounding fabric. It is noted that the statues of William of Wykeham on the north elevation and King Alfred on the west elevation have evidence of previous cracking across their chests though both have been repaired and are not currently showing any signs of movement.

Fig 9 – photo of statue of Lawrence de Anne taken in 2015 from Martin Kirby Associates Report.

Fig 10 – photo of statue of Lawrence de Anne taken in 2018 from Martin Kirby Associates Report.

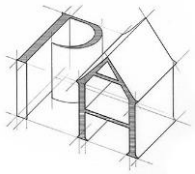
Fig 11 – photo of statue of Lawrence de Anne taken in 2022 from Vallis & Hall Condition Survey.

7.6. **Friable and decayed stonework** – areas of friable and decayed stonework are identified in the condition survey and these will be inspected and a suitable repair determined. Areas of friable masonry which do not require replacement are proposed to be first consolidated with applications of lime water.

Following this local mortar repairs using a lime putty based mortar and ceramic armatures (where the repair is deep) would be carried out to small areas where the stone has been lost and to aid water shedding from the face of the stone. In some areas stone replacement may be required where decay is severe and the need for this will be assessed based on whether the strength and integrity of the stone has been lost, the nature of the stone and the amount of detail lost through decay. The intended approach is to preserve as much of the existing stone as possible and this would incline us to undertake mortar repairs in the first instance and consider stone replacement only where absolutely necessary.

Fig 12 – friable masonry around the outer shafts at stage 1.

In some areas where stone replacement has been identified in the condition survey, for example to the outer corner roll mouldings on the stage 2 shafts, we would not automatically advocate new stone because the addition of new stone here would require a certain amount of sound stone to the body of the shaft to be removed in order to facilitate a sufficiently secure and robust repair for this exposed and vulnerable area. The repair here would therefore be limited to lime mortar repairs to allow water run

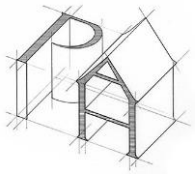


off and micropinning where stone is cracked or damaged. Though where a previous repair has failed consideration could be given to replacement of this if it did not cause further loss of fabric.

Fig 13 – the outer shafts at stage 1 have been the subject of continual repair and replacement stone could be considered where a previous repair has failed. However, where the moulding has been lost or damaged and not yet repaired we would be hesitant to propose replacement because of the potential loss of original fabric that would be required to put in place a robust repair.

After completion of consolidation, we would propose that the monument is selectively shelter coated. Shelter coating will provide protection to the surface of the monument and is particularly suitable to protect stonework that has been cleaned. In the 1991 repair works the monument is reported to have been cleaned with a 'sand blasting pencil jet'. It is likely therefore that the pores of the stonework will have been opened to a degree by the cleaning processes used and shelter coating could be used to fill the pores with a porous lime based material which would then act as a sacrificial coating to protect the stonework and reduce future re-soiling of the masonry. Shelter coating is not permanent and would potentially provide protection to the monument for 5 to 10 years. The monument was shelter coated in 1991 and little of this appears to remain.

It is understood that the monument is made of at least three different types of stone from various eras and visually this is apparent particularly in the difference between the Caen Stone at stage 1 and the Ketton and Bath Stones used above. The visual difference between the various stones is an important factor in the understanding of the development and history of the monument and should be maintained. Any shelter coating should therefore not be a single uniform homogenous coating and a number of different blends of sheltercoat (using different stone dusts and natural colourants) should be utilised so that they reflect the stone that they are applied to. Trials of different sheltercoat mixes will be undertaken before this work commences to determine the most suitable blend for each area.



The monument is composed of multiple layers of structure with some areas completely sheltered from weathering and this would therefore suggest that the shelter coating is not applied to all areas and should be applied only to those areas that are vulnerable and at risk of loss of detail or fabric. For example, the lierne vault at stage 1 retains its patina and is sheltered and should therefore not be shelter coated while the four outer shafts and the gable arches should.

7.7. **Missing stonework** – missing stone has been observed in a number of places. These are listed below

- Stage 0 – no stonework noted as missing.
- Stage 1 – no stonework noted as missing.
- Stage 2 – gable finial over arch missing on the east side.
- Stage 3 – crockets and finials
- Stage 4 – pinnacles, finials and statue of St Bartholomew missing.
- Stage 5 - no stonework noted as missing

Generally, we will seek to replace missing pinnacles and finials with new stone. It has been identified that Winchester City Council retain two pinnacles from the inner columns on the 4th stage and a finial from each of the inner and outer pinnacles on the 3rd and 4th stages and these will be refixed in place where currently missing. The finials that have become detached retain relatively short rods that fixed them in place. The existing rods will be removed and new longer rods installed to provide a firm fixing. The condition survey has identified a number of loose finials and this is perhaps indicative that all are fixed with insufficiently long rods. We would therefore propose to carefully dismount all finials to determine the length of the rods and to replace these with longer rods and refix them in place using resin.

7.8. **Reinstatement of the arch gable finial** - three large pieces of the fallen gable arch finial from the east elevation of stage 1 have been retained. The finial has been detached horizontally at the joint between it and the gable arch over the lierne vault and then broken into three pieces with further damage to the lower ribs of the bottom piece where stone has broken off, presumably when the piece fell and impacted on the ground. Some of the pieces of the ribs remain and can be fitted up to the lower part of the finial.

Fig 14 - view of the east facing gable arch where the finial has been lost.

Fig 15 - view of intact gable arch finial on the west elevation.

Fig 16 – Front of assembled finial

Fig 17 – Rear of assembled finial

Fig 18 & 19 – reassembled fragments from the base of the finial.

The three parts of the final could be individually pieced together using stainless steel pins and then remounted on to the main body of the monument. However, the finial is of some size and weight and pinning on two horizontal lines with further pinning where it meets the monument means that it might be vulnerable to movement and eventual damage. We would therefore propose that a more robust

approach is taken whereby continuous rods are used to join and fix the elements together. There is a risk, however, that thermal movement in a continuous stainless steel rod could crack the finial and we would therefore split the repair in to two parts: joining the lower part to the monument with pins and then using a continuous pin(s) to join the two upper parts together and to the lower part.

The finial was originally fixed down to the head of the arch with two vertical bronze or copper rods to the rear of the base and would have relied on the bracing from the ribs to the front to stabilize it. The loss of these ribs means that the finial is less secure if refixed this way and we would suggest adding a further pin in the rear of the base to provide additional support. The fragments of the ribs can then be micropinned in place and missing elements of stone reinstated with mortar repairs.

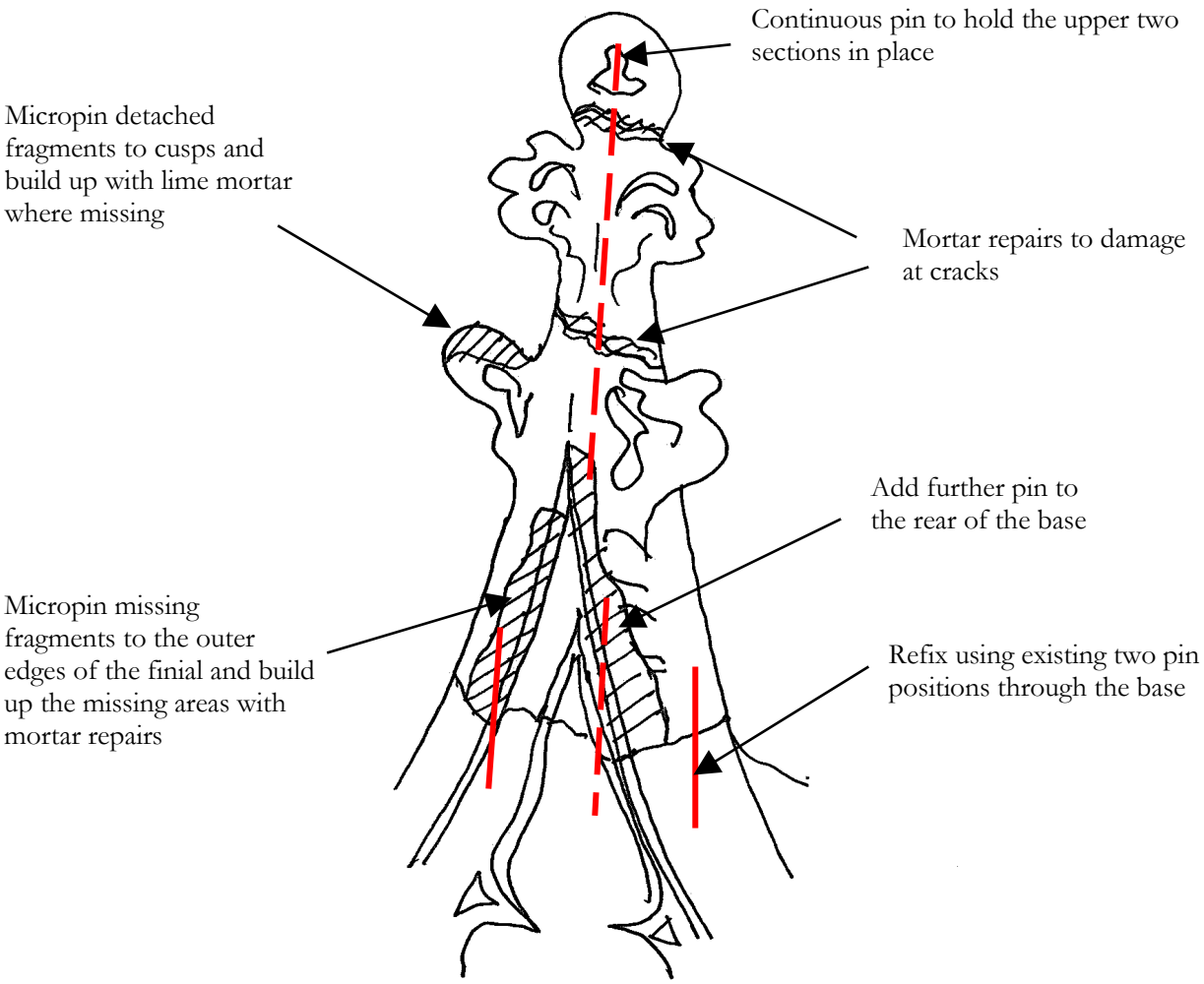
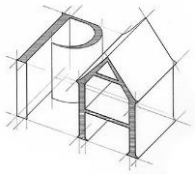


Fig 20 – proposed repairs and fixing method for gable finial.

7.9. **Stone for repairs** – we understand that in prior conversations with Historic England Bath Stone has been proposed for use where stone repairs or replacement is required and a previous specification for repair (produced by Martin Kirby Associates in 2019) identified Base Bed Stokes Ground Bath Stone (from Stokes Hill quarry near Limpley Stoke) as a suitable stone for use here because it has relatively good durability. Other quarries that could supply Bath Stone are Hartham Park and Park Lane (both



near Corsham). The final selection of the proposed stone will require samples of stone from the above quarries to be obtained and these viewed on site alongside the monument to determine which is most suitable.

7.10. **Further investigations** – the condition survey identifies a number of areas for further investigations. These relate to the junctions of the bronze or copper tied rods to the stonework where the masonry has spalled or been repaired. Other than here there are no indications elsewhere of corroding ironwork in the structure and it is possible that the spalling may have been caused by thermal movement. These areas will be carefully inspected and previous repairs carefully dismantled to expose the junction to allow an understanding of the cause of the spalling.

Fig 21 – tie rod junction to masonry with spalling masonry at junction.

7.11. **Monitoring** – earlier repairs, cracks and natural fissures in the stone are noted as requiring ongoing monitoring in the condition survey. These areas will be inspected as part of these works and appropriate repairs specified if thought necessary. Cracks that cause concern may have tell tales placed across them for future monitoring of movement.

8.0 CLEANING

8.1. The monument was cleaned using a sand blasting process in 1991 and then further cleaned on a yearly basis until 2008. This cleaning has resulted in a monument that does not suffer significantly from the pollution or ingrained staining that would have been sustained over a long period. An examination of the monument indicates that the primary staining that it suffers from are deposits of bird guano, debris from pigeon perching and roosting and lichen, algae and moss build up which have accumulated within a relatively short period. The deposition of guano appears to be worst on the sheltered south side of the monument. Runoff from the guano deposits is staining the monument and encouraging biological growth.

Fig 22 – runoff from guano deposits causing staining to the stage 1 shafts

8.2. Consideration of the type of cleaning proposed must first take in to account the type, condition and construction of the stonework of the monument. The monument is composed of three types of stone; Caen, Ketton and Bath Stone all of which are limestones and are considered relatively sensitive stones that are vulnerable to cleaning if applied too aggressively and without care. The Caen Stone at stage 1 in particular has an appreciable level of patina which contributes to the appearance of the monument

8.3. The condition of the masonry varies considerably due to the differences in age and stone type and therefore care must be taken in selecting the right method to suit the individual qualities of the stone in different places. The earlier Caen Stone at stage 1 is extremely delicate with the outer faces of the four columns in particular having, in places, a friable, crumbling surface.

8.4. The monument is intricately constructed with much fine detail and hard to reach areas. The complexity of the structure means that any cleaning method must be able to accommodate the intricacies of the construction so that cleaning is uniform and does not disproportionately affect or cause harm in areas where there is relief and detail.

8.5. Components are jointed together with fine mortar joints and, it is expected, supporting metalwork to hold individual components together. Visually bronze or copper tie rods restraining vertical elements back to the core are visible and notes from the 1991 works (where the uppermost single column element in stage 5 was removed and remounted using stainless steel rods) indicate that hollow copper rods and slate dowels were found holding the monument together which may date from the Gilbert Scott works of 1865.

8.6. Options for cleaning of stonework can be based in four categories, as follows:

- **Physical methods** – mechanically brushing and rubbing, using wet and dry abrasives or surface dressing.
- **Water based cleaning methods** – sponging, water sprays and steam cleaning.
- **Chemical methods** – applied as poultices or liquids using organic solvents, acidic or alkaline treatments.
- **Special methods** – laser cleaning and ultra-sonics.

8.7. The selected cleaning approach needs to achieve the following:
- Not cause any unnecessary damage to the masonry.
- Not remove the attractive patina of age. ie avoid over cleaning.
- Remove bird debris/nest deposits and guano build ups.
- Remove and neutralise guano staining.
- Remove biological growth (and prevent immediate regrowth if possible).

8.8. Because of the lack of long-term ingrained staining or pollutant staining we do not think that chemical or special methods of cleaning need to be considered for the monument. We also think that abrasive physical methods (such as wet or dry abrasives) would not be suitable because of the difficulty of controlling the application of these methods on the intricate surfaces of the monument and the resultant risk of damage that would occur.

8.9. Based on the above assessment the intended approach might be as follows:
1. Initial removal of guano deposits carried out using physical cleaning methods.
2. Localised cleaning using a water based method to remove guano and biological growth.
3. Treatment to guano stained areas to remove microbes and prevent immediate biological regrowth.

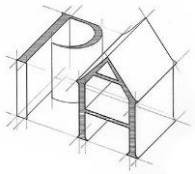
8.10. The initial physical cleaning method to remove guano deposits would entail wetting the spoil so that it cannot become airborne and then carefully easing and scraping away the majority using wooden spatulas. Moss would similarly be removed using wooden spatulas.

8.11. The delicate nature of the structure suggests that sponging and brushing would be the most appropriate method of water based cleaning as it is can be a highly controlled process. Sponging and brushing is methodical and labour-intensive and its controlled nature ensures that the minimum amount of water is used and that damage to delicate surfaces can potentially be avoided.

There are however areas of the monument (principally around the waterways where the pigeons have been roosting and perching more densely) that have more ingrained staining and biological growth caused by the guano deposits and we would advocate that for these areas a more intensive method is considered which would remove the ingrained staining and potentially neutralise the microbes. Care must of course be taken that this does not result in removal of the surface stone layer nor that the method introduces excessive water into the structure. In our experience, and in discussion with a local specialist conservation contractor, it is felt that a super-heated steam cleaning method, such as DOFF or Thermtech, could be suitable.

Other methods of water cleaning which include nebulous sprays, pressure washing and surface spraying have been rejected because they are either unsuitable for intricate surfaces or would introduce too much water in to the structure.

8.12. It is usual for cleaning trials using a shortlist of preferred methods to be carried out in advance of the works to determine the preferred method of cleaning. Normally a less important or hidden area that is easily accessible is used for this but with the monument this cannot realistically be done until there is a scaffold in place that allows access to higher levels where a suitable place for cleaning tests can be determined. Some consideration is therefore needed on whether it is feasible to carry out pre-contract trials.



9.0 OPTIONS for DETERRING PIGEONS

9.1. The monument has a number of identifiable areas where pigeons perch or roost within the structure. In these areas the pigeons deposit guano and this is unsightly, encourages algal growth and can damage the monument. Pigeon guano contains acids that can attack stone and deposit salts that can lead to later decay of the stone. Guano also contains nutrients which can encourage algal growth.

9.2. Based on the amount of guano and nesting material observed the most severely affected areas are shown on the following photographs and elevational drawing (figs 23 to 17) as summarised below:

- **Stage 2** – above and behind the four gable arch pinnacles over the stage 1 lierne vault. There is significant deposited material on the south elevation.
- **Stage 3 & 4** – on the heads and shoulders and around the feet of the four statues.
  The monument also offers a multitude of other sky facing surfaces where they can perch in particular flying buttresses and pinnacles.
- **Stage 4 –** behind pinnacles below stage 5 shaft though the extent of the problem is unclear from the condition survey photos.

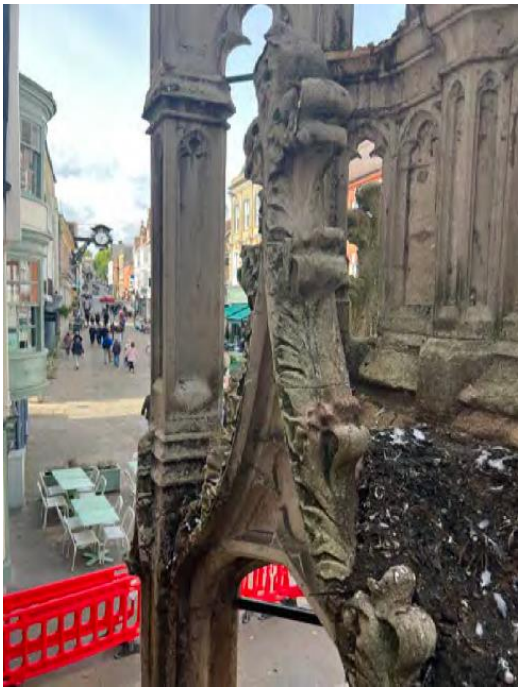


Fig 23 – Stage 2 area behind gable finials showing significant deposits and staining from pigeons.

Fig 24 – Stage 2 area around the feet of St John the Baptist on the south elevation.

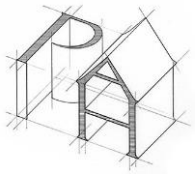


Fig 25 – Stage 3 area of the head of King Alfred on the west elevation.

Fig 26 –Waterways between stage 3 and 4 statues.

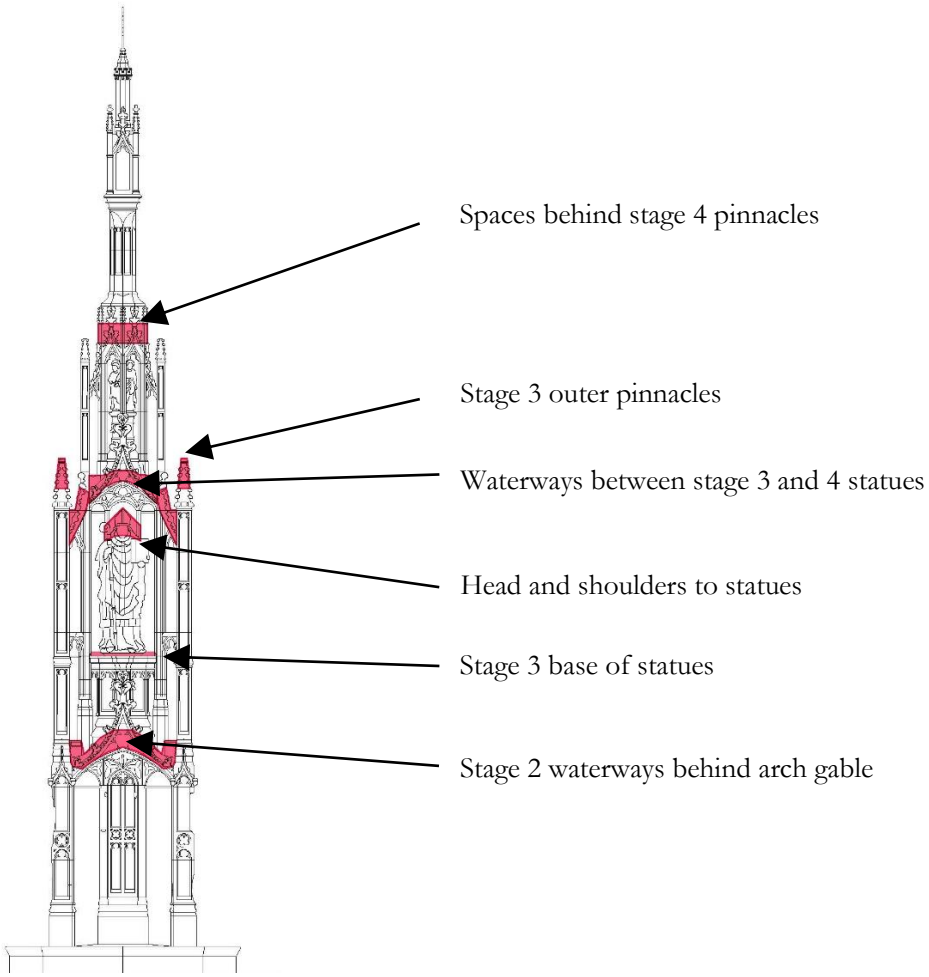
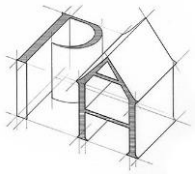


Fig 27 – principal areas affected by bird perching and roosting.



9.3. **Available Deterrents** - There are a wide range of deterrents available on the market and these are listed below accompanied by a discussion on each's merits and disadvantages.

- **Audible bird scarers** – this method involves the use of acoustic bird scarers which can be used to repel birds by combining their distress calls, danger calls and harassment sounds with the sounds of predator birds. The monument is located in a public area, surrounded by occupied buildings and the areas affected by pigeons are close to ground level and this method would be intrusive to neighbours and passing pedestrians.

- **Ultrasonic devices** – ultrasonic repellers are silent to humans so are potentially suitable for use in built up areas where an audible scarer cannot be used. The ultrasonic devices emits noises that birds find uncomfortable causing them to move away. However some people, particularly children, are sensitive enough to hear ultrasonic sounds and these devices could cause them discomfort. Bats can also be affected by these devices. Pigeon deterrent companies have also advised us that these are not effective with pigeons.
  This device would require a power supply bought to it if mounted on the monument.

- **Predator birds** – trained raptors will immediately clear the area of pigeons but the effect may only be temporary and the pigeons are likely to return once the raptor has left. The monument is positioned in a heavily used pedestrianised thoroughfare which would make the use of a predator bird difficult to organise and objections may be received from the public.

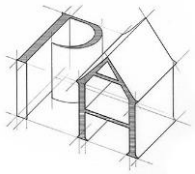
- **Netting** – enclosing the monument with netting would prevent the pigeons from alighting on the structure and is considered to be the most effective method as it completely prevents access. Pigeon netting is extensively used for this reason and, in some situations, can be relatively discrete if consideration is given to the colour and location of the netting. Regularly spaced fixings are needed to keep the netting in tension which need careful consideration.

Fig 28 – netting on a historic building

- **Decoys** – the use of effigies of predator birds can be used to deter the pigeons from the monument. However, in the longer-term birds generally get used to the decoys and they can therefore become ineffective.

- **Bird wires** – wires can be used to prevent the pigeons from landing by creating an unstable perching or landing area and are a very effective permanent solution.
  The wires are supported on spring loaded posts and the posts usually need to be mechanically fixed in to the structure so that the wires are kept in tension. It is possible to glue the posts in place but this requires a smooth surface and are not as reliable as mechanical fixings.
  Bird wires are most suitable for flat even surfaces where they can be easily installed with uninterrupted runs.

Fig 29 – bird wires with supporting posts.



- **Shock track** – these are similar to bird wires but they will also give the birds a shock. These are very effective but they are complicated to install, requires maintenance and a permanent power supply to be taken across to the monument.

Fig 30 – bird shock tracks.

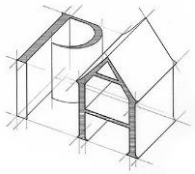
- **Spikes** – upward facing spikes are inexpensive and considered one of the most effective ways of preventing birds from landing. However, their application could potentially detract from the appearance of the monument if visible.
  The spikes would need to be glued to the surface of the monument

Fig 31 – spikes attached to the top of a wall.

- **Reflective surfaces** – reflective materials, such as CDs or tapes, reflect light which scares the pigeons. These work by being reflective shiny surfaces that are in constant movement that scare the pigeons.

Fig 32 – reflective tapes.

- **Sticky gels** – a sticky gel can be used which the pigeon's feet will get stuck to. The pigeons then avoid these areas because their feet get stuck and they then need to clean the gel off. Sticky gels tend to become ineffective as they dry or become covered in dust and then need to be reapplied. The gel is applied directly to the surface from an applicator gun and there is a long term risk of the gel leaching in to masonry. Smaller birds that are not considered pests can also become stuck in the gel.



- **Optical gels** – optical gels work by triggering a sensory response in the pigeons by emitting UV light which appears as flames or smoke to approaching birds. The gels can also contain strong smelling odours (such as citronella, peppermint oil and beeswax which also repels the birds. The gel comes in plastic dishes and these need to be adhered to the surface of the monument either which would need to be carefully considered.
  The gels have a fairly short usable life and need to be replaced after approximately 1 to 2 years.

Fig 33 – Optical gel trays fixed on top of a cornice.

- **Gas and vapours (methyl anthranilate)** – methyl anthranilate has a strong odour of grapes which birds are sensitive to. The gas needs to be present as a gas in the air so requires a hazer or fogger to scatter the particles. This is therefore not considered suitable for monument because of the need for a power supply, equipment fixed to the monument and maintenance requirements.

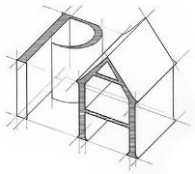
9.4. Of the above deterrents the applicable methods need to satisfy a number of criteria – that they should not damage the fabric of the monument, they should not harm the appearance and fabric of the monument, they should not affect the high street environment or general public and they should not disturb occupiers of the buildings around the monument.

With this in mind all of the possible solutions have particular drawbacks for this application:

- Audible and ultrasonic bird scarers, shock tapes and gas and vapours cannot be used because there is no power supply to the monument and there is no realistically feasible way of doing this. Any power supply would need to be bought up one of the stage 1 shafts (visually obtrusive and would require fixings) or across from a neighbouring building (again visually obtrusive). Audible scarers are also impractical in a populated area and ultrasonic scarers are gerenally regarded as ineffective.
- Predator birds work only temporarily when the predator is there.
- Decoys are considered ineffective in the long term.
- It appears to be impractical to fix bird wires to the monument. We considered wrapping the monument in carefully positioned wires but the wires need to be spring loaded so that they are unstable for the birds otherwise they become a perch and this is impossible to achieve without the spring loaded posts which need to be securely fixed in place.
- Netting, spikes and reflective surfaces are visually problematic (and Historic England in our initial meeting rejected netting). Netting requires mechanical fixings and spikes need to be glued in place usually with silicone.
- Sticky gel requires a direct application to the monument and is therefore unacceptable.

9.5. This realistically leaves us with one option which would be to use optical gels. These however have some downsides: they require replacement within 1 to 2 years, they require a flat unshaded upward facing surface (they rely on UV light to work) and they need to be fixed to the monument.

9.6. The gels are mounted within small clear plastic disc shaped trays and in some areas there are relatively flat surfaces (eg around the feet of the statues) and adjustments could be made to the waterways to form flat pads for mounting gel trays which makes the use of optical gels feasible for some areas of the monument. From the record of the 1991 repairs it is clear that the waterways behind the stage 1 gable arches and around the stage 3 statues have been reformed with lime mortar and because of this it would be acceptable to make changes here.



9.7. The trays are typically fixed using silicone adhesive which can be removed by the use of softeners (eg white spirit, methylated spirits, vinegar or alcohol). Alternatively the trays can be fixed with zip ties which would be preferable but this would limit their position to elements that the tie can be wrapped around of which there are few on the monument.

9.8. The limitations of gels therefore restricts their use to only a number of areas where they can be effectively mounted and these areas are relatively small in terms of their surface area which limits the number of trays that could be mounted. Consideration might therefore be given to the use of other methods which might include spikes if they are located where not visible from the ground and netting if a way can be found to fix them to the monument without damage.

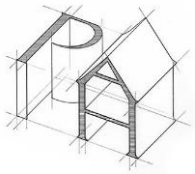
9.9. Netting needs to be fixed in a particular way. The netting needs to be kept taught for it to be effective and this is usually achieved by putting in place a tensioned stainless steel wire or rope to the perimeter of the area that the net is then tightly clipped to. The tensioned wire or rope is normally fixed in place with eye bolts fixed to the structure and must be placed so that there are no gaps the permeter. This is clearly problematic for the monument because fixings in to the structure are undesirable and because the monument is highly intricate with few regular surfaces to seal the netting perimeter to which limits the area s that netting could be used. The drawing below (fig 35) shows where netting could be used if installed as flat panels to protect the stage 3 statues. Fixing points are shown with red crosses and are placed to align with joints in the masonry to limit damage. The netting is available in three colours: black, stone and translucent and stone would potentially be the least obtrusive (see fig 28 above)

9.10. Where it is difficult to mount gels or the area is shaded (eg behind the statues heads) spikes could be fitted but we feel that this should really be a last resort if it is not possible to fit gels here.

9.11. The diagrams on the following pages indicate possible locations for optical gels, spikes and netting. The proposals do not have a solution to the raking buttresses from the stage 3 outer pinnacles to the stage 4 columns but it is hoped that optical gels would be sufficient to dissuade pigeons from alighting here.

9.12. It should be noted that the only certain method for deterring pigeons from the monument is total exclusion which in practice would mean netting the entire monument – which would be a wholly unacceptable solution. We have discussed the monument with pest control companies who all acknowledge the difficulties of deterring pigeons within the boundaries of what is permissible for the monument and it is apparent that the solutions proposed will not necessarily be 100% effective and this must be borne in mind when deciding how to proceed. These proposals have been put forward by balancing what is technically feasible (and potentially effective) with ensuring that the qualities and condition of the monument are unaffected.

9.13. Optical gels need to be replaced within 1 to 2 years and how and if this would be achieved needs to be considered if this approach is adopted. The only cost and time effective way of replacing them would be by cherry picker and placement of gel trays would need to be carried out with this in mind.



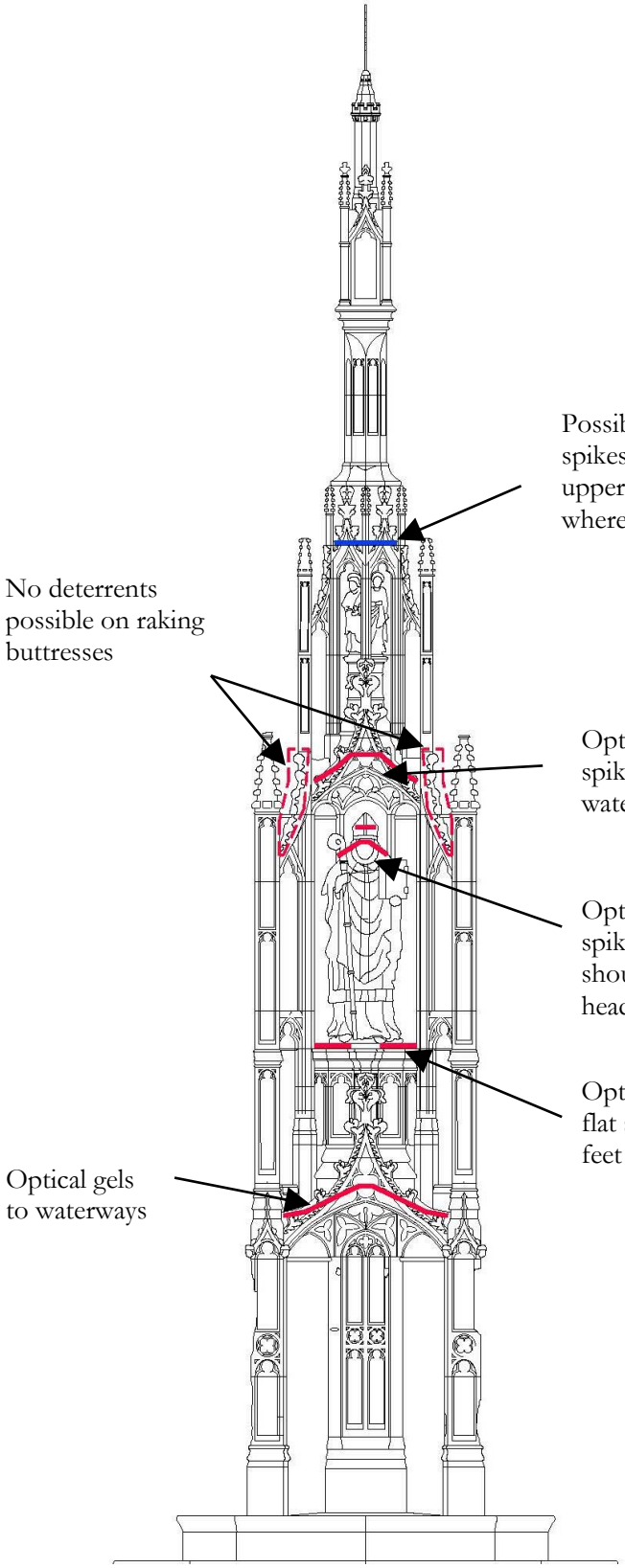


Fig 34 – proposed locations for optical gels and spikes.

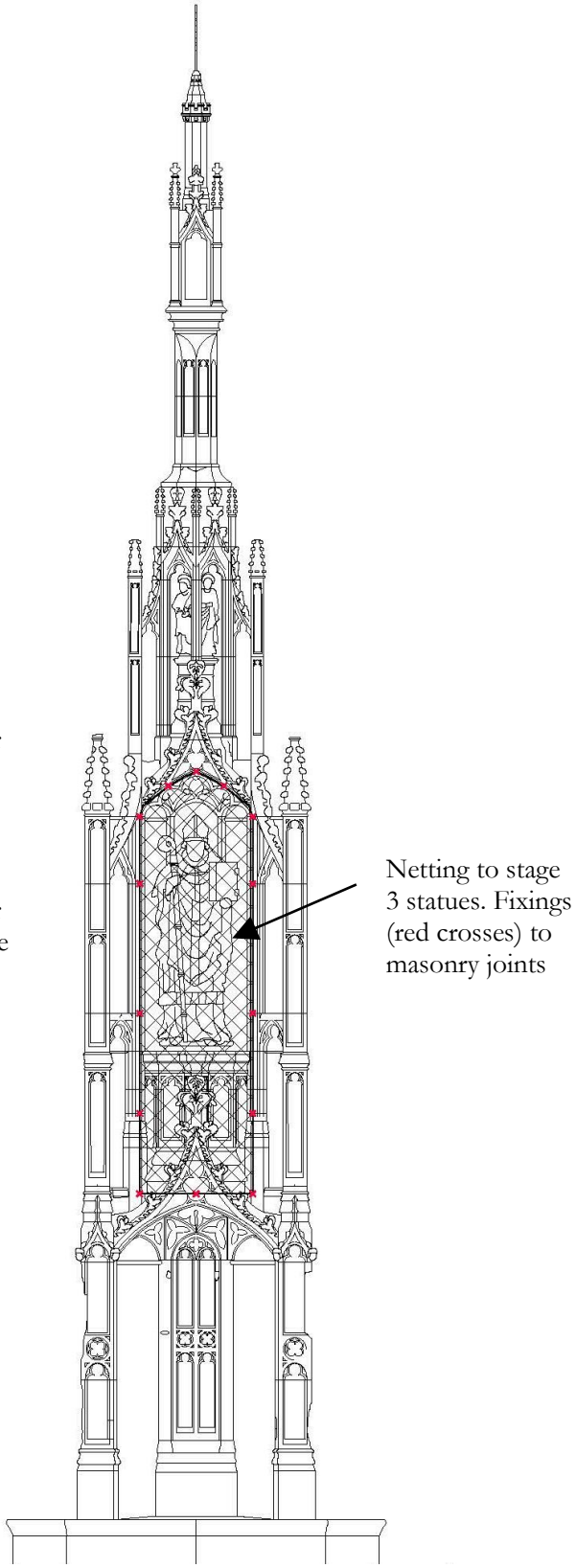


Fig 35 – possible netting positioning..

10.0 NEXT STEPS

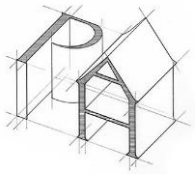
10.1. This document is to be submitted to Historic England for consideration after which an application for Scheduled Monument Consent will be prepared and submitted to Historic England for approval.

10.2. If consent is granted a contractor will be sought by competitive tender to carry out the repair and cleaning work as well as the pigeon protection work. Because of the importance and sensitive nature of the monument it is essential that the selected contractor is a stone conservator with appropriate skills and that they are experienced in the repair and cleaning of historic masonry buildings and structures and that they can demonstrate suitable recent experience to support this. In particular the execution of any cleaning method requires operatives who have been fully trained in the equipment to be used and have experience of and understand the nature of the material that they are working with.

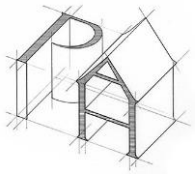
10.3. The company who will be selected for the pigeon protection work will, by their nature, be unlikely to have experience on a structure as sensitive as this. We would therefore seek to ensure that they are either engaged as the stone conservator's sub-contractor (so that they are closely supervised) or that any sensitive works (such as fixings if they are required) are carried out by the stone conservator on their behalf.

10.4. A Conservation Accredited Structural Engineer, Chris Smith, from Marbas has been contacted to provide advice on the repairs to the monument. No immediate structural issues are apparent from the condition survey but it is felt prudent that Chris should be involved to advise on any structural repairs that are necessary.

10.5. Following the completion of the intended repair works a regular programme of inspection, maintenance, cleaning and repair must be put in place to ensure that the monument is properly cared for.



APPENDIX 1 – DETAILS of 1991 REPAR WORKS



PAT RADFORD

NEW PAGE FOR EVERY ELEVATION. TUES

AGREED WITH ENGLISH HERITAGE.

THE BUTTERCROSS, WINCHESTER

Ancient Monument No: 303 Hampshire:

Restoration and Repairs carried out during June to September 1991

SUMMARY OF WORKS

Summary of Works carried out on The Buttercross - Taken from this Bronze Cross down through the lifts and around level on four elevations - North, South, East and West. All to be read with attached drawings and photographs.

West Elevation
From cross down through section A to F;

Section A

1. Whole section lifted with scaffold hoist, it was found that it was held by a 3/4" hollow copper tube dovel which was useless and was replaced by stainless steel dowels and grouted with a low viscosity compound.
2. ~~This~~ The bronze cross was cleaned, refurbished, SHELLACKED shellacored and gold leaf applied.
3. The stone crown and ~~domis~~ DOME beneath this cross suffered badly with copper stains and had hair-line cracks (see photo 1). This staining was partly removed with an AMMONIA ammonin poultice and cracks pinned with 1/8 stainless steel dowels. Again, set in a low viscosity compound.
4. Finnial left hand side renewed and doveled with stainless steel pins.
5. Fleur De ~~Leas~~ LIS - renewed and doveled with stainless steel pins.

Section B

6. Section lifted as Section A was held by a 1.1/2" hollow copper pipe and two slate dowels. These were replaced with stainless steel dowels set in low viscosity compound.
7. Column HAD was hairlined cracked ~~S~~ and was pinned with 1/8" dowels set in low viscosity compound.

Section C

8. Left hand column finnial and arch (see photo 2). Renewed and doveled with stainless steel dowels set in low viscosity compound.
9. Right hand finnial cut back square just below top of column and renewed as lefthand.
10. Right hand lower finnial, toppermost cross of this finnial renewed and doveled as before.
11. Arches above statues. This waterways between these arches were found to ~~hand~~ HAVE backrun allowing rainwater to pool - these have been built up where necessary with a mixture

of stonedust, lime putty and 10% white cement to allow the rainwater to run. AWAY

12. Fleur de ~~leas~~ LIS over alfrod sacraficial coat applied to right hand snall SNAIL below cross.

Section D

It was requested by Winchester City Council that the faint lettering should be recut on Alfred's Scroll ~~reading~~ which read "Ye Dome's of England (Translated "The Laws of England"). E. Hill felt it would be better not to have this done and keep original work (See photo 3). ENGLISH HERITAGE

Waterways at Alfreds Feet these were built with stone dust and lime putty up to allow rainwater to escape .

Section F

Sacraficial coat of stone dust and lime putty was applied to corners of outer columns where they had been eroded.
Waterways above arch had been built up with stone dust and ~~putty.~~ LIME PUTTY
Cracks on top right hand side of centre column and top of left hand outer column right hand side were filled with lime putty.

Whole Monument was cleaned to take off build up of carbon with sand blasting pencil jet at a pressure of 9-12 sq in. This was carried out with the upmost care. The Supplier of the equipment was "Clumco" CLEMCO

This cross was then given a shelter coat (Ross of Jerrico) THE ROSE of up to 28 coats where applied each allowed soak in until stone would receive no more.

Eroding Stone Where this stone works was severly eroded this was built up with stone dust and lime putty.

Sacraficial coat on exposed and worn areas. A sacraficial coat was applied made up with ? STONE DUST AND LIME PUTTY ~~AND CEMENT~~ ~~P.~~ ~~CEMENT~~, 10% WHITE Cement

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East Elevation

Section A

1. The bronze cross was cleaned refurbished shellacked and gold leafed.

2. Whole section when lifted was found to be held by a hollow 3/4" copper tube filled with Roman cement. This was replaced by Marine quality stainless steel dowels (sizes ?) Beded (BEDDED) on a low viscosity compound. X

3. Domis (DOME) above crown was stained by bronze cross. This was cleaned with In ammond (IAN AMMONIA) poultice.

4. Both finnials renewed left hand finnial damaged by vandels this (THE) first night. Scaffold went up second night boarding was topped by BARB WIRE

5. Waterways behind Fleu ds ~~leas~~ (LIS) was built up with stone dust and lime putty.

Section B

6. Whole of Section when lifted was found to be held by a hollow 1.1/2" copper tube filled with Roman cement and two square slate dowels. This was replaced by Marine quality stainless steel dowels size (?) beded (BEDDED) in a low viscosity compound. X

Section C

7. Inner finnial right hand side and monks head renewed (see photo 4)

8. Waterways built up behind Fleu de leas.

9. Outter finnial right hand side renewed (photo 4)

10. Roman cement (brown) on statue plinths taken out. Replaced with stone dust lime putty and 10% white cement.

Section D

11. Bronze rods were waxed with ?... X

12. Inner left hand pier built up in stone dust and lime putty.

13. ~~Outter~~ (OUTER LOG) left hand pier given sacraficial coat of stone dust lime putty.

14. Statue of Lawrence De Anne (photo) was cleaned with sand blasting pencil Jet with a pressure of 9.12 LB for Sq.In This was carried out with the upmost skill and care. It was requested by Winchester City Council the faint lettering on the sash that Lawrence is holding Charta Privilegiorm (Translated Charter of Privledges) should be recut . Ed Hill felt that the original work should be maintained.

ENGLISH HERITAGE

15. The Waterways at Lawrence De Anne Feet were built up to allow entrapped water to escape with lime putty and stone dust.

Section E

16. Eroded ornamental work on arch pinnicle built up with stone dust and lime putty.

17. ~~Lime wash~~ SHELTER COAT applied to open stone work - 20 coats.

18. Sacraficial coat applied to weathered plinths.

19. Waterway built up with stone dust and lime putty to allow entrapped water to escape.

Section F

20. Arch supported to allow left hand plinth to be renewed (See photo 9) when old was cut away it was found that the damaged part was in fact a stone case budded onto the eroded original and held with iron clamps and ~~weld~~ BEDDED HELD square with load LEAD run into star snaped SHAPED set of grooves.

21. Sacraficial coat applied to outter lugs of cross stone work and lime putter.

22. Centre pier and vaulted arch cleaned carefully with sand blasting pencil jet.

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South Section

Section A

1. Bronze cross was cleaned refurbished shellacked and gold leafed.

2 Whole section lifted A.B.D. (East elevation) Dome above crown cleaned and repaired A.B.D. (West elevation).

3. Base of column cracked stitched together with 1/8" stainless steel pins set in low viscosity compound.

4. R.H. finnial renewed held with stainless steel dowel set in low viscosity compound budded on stone dust and lime putty mortar. BEDDED

5. Left hand finnial top built up with stone dust and lime putty.

6. Waterways built up A.B.D. - east elevation.

7. Column lifted and refixed A.B.D. - east elevation.

Section B

8. Centre and left hand flutes where damaged - cut back and renewed.

9. Column lifted and refixed A.B.D. - east elevation.

Section C

10. Waterways built up A.B.D. - east elevation.

11. Left hand finnial cut back squared on column and renewed fixed by stainless steel dowel set in low viscosity compound bedded on stone dust and lime putty mortar (see photo 11)

12. Right hand finnial top renewed.

13. Statue Thomas and Blessed Virgin - sand blasted with pencil jet A.B.D. West elevation (photos 12 & 13).

14. Waterways built up A.B.D.

15. Top of lower finnial left hand renewed.

Section D

16. Waterways built up behind arch. A.B.D.

17. St. John the Evangelist (only original statue) cleaned with pencil jet to remove surplus carbon built up (See photo 14)

18. Sacraficial coat applied to right hand inner outer columb (see photo 14)

19. Waterway at Statue base built up A.B.D.

Section E STATUE COAT

20 ~~Lime wash~~ to centre columb 28 coats sacraficial coat to open stone work on top of ornamental arch. A>B>D>

21. Waterway built up A.B.D.

Section F

23. Centre columb carefully cleaned with pencil jet. A.B.D.

24. Sacraficial coat applied to outer columbs. A.B.D.

25. Plinth renewed A.B.D. (east elevation)

North Elevation

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Section A

1. Bronze cross was cleaned refurbished shellacked and gold leafed.

2. Whole Section lifted A.B.D. (east elevation)

3. Both finnials renewed and fixed A.B.D. (east elevation) (see photo 15)

4. Fleur de ~~Leas~~ LIS renewed and fixed A.B.D. (east elevation) (see photo 15)

5. Waterways built up as B.D.

Section B

6. Columb lifted A.B.D. (east elevation)

Section C

7. Small top finnial left hand on centre columb renewed A.B.D.

8. Waterways built up

9. Inner left hand finnial renewed A.B.D.

10. Inner right hand finnial columb and supporting arch renewed A.B.D.

11. Statue Lawrence (photo 16) and Peter (photo 17) cleaned with pencil jet. A.B.D. Waterways at base built up.

12. Waterways at lower arch built up.

Section D

13. Centre column 20 coats of lime wash.

14. Sacraficial coat applied to open ornamental stone work on inner supporting arch Right hand side (photo 18)

15. Statue William of Wykeham - with book of statue (photo 19) inscribed statua College Beata Maria De Winton (Translated Statue of the College of the Blessed Mary of Winton) It was requested by Winchester City Council to recut eroded lettering but E.Hill felt that original work should remain. ENGLISH HERITAGE

16. Broken hand and seal were left as they are by ~~E.Hill~~ ENGLISH HERITAGE's request (See photo 20)

17. Waterways built up at base of statue (photo 21)

Section E

18. Centre column 28 coats of lime wash.

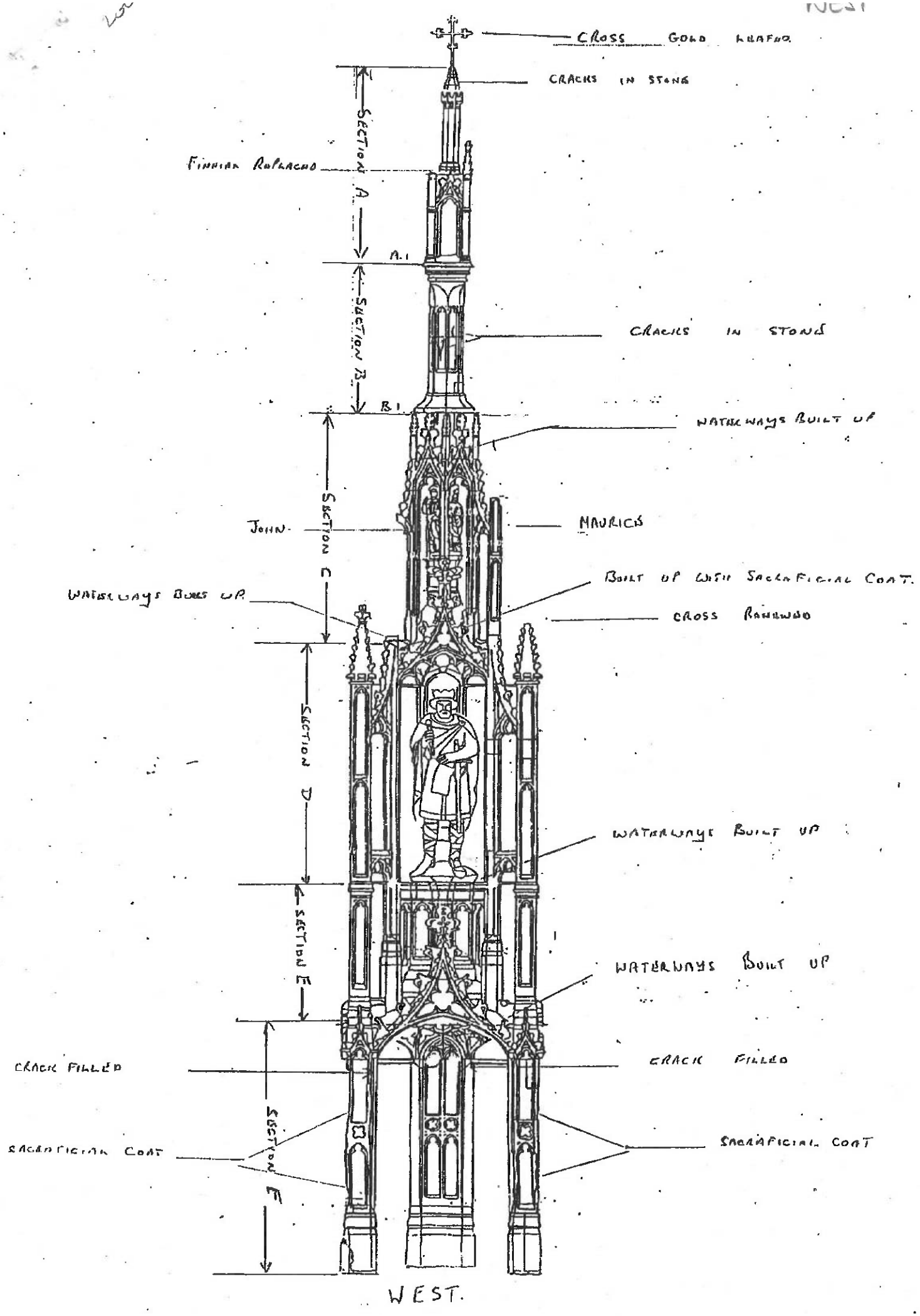
19. Pinnicle of Arch reneved and fixed A.B.D. (photo 21).

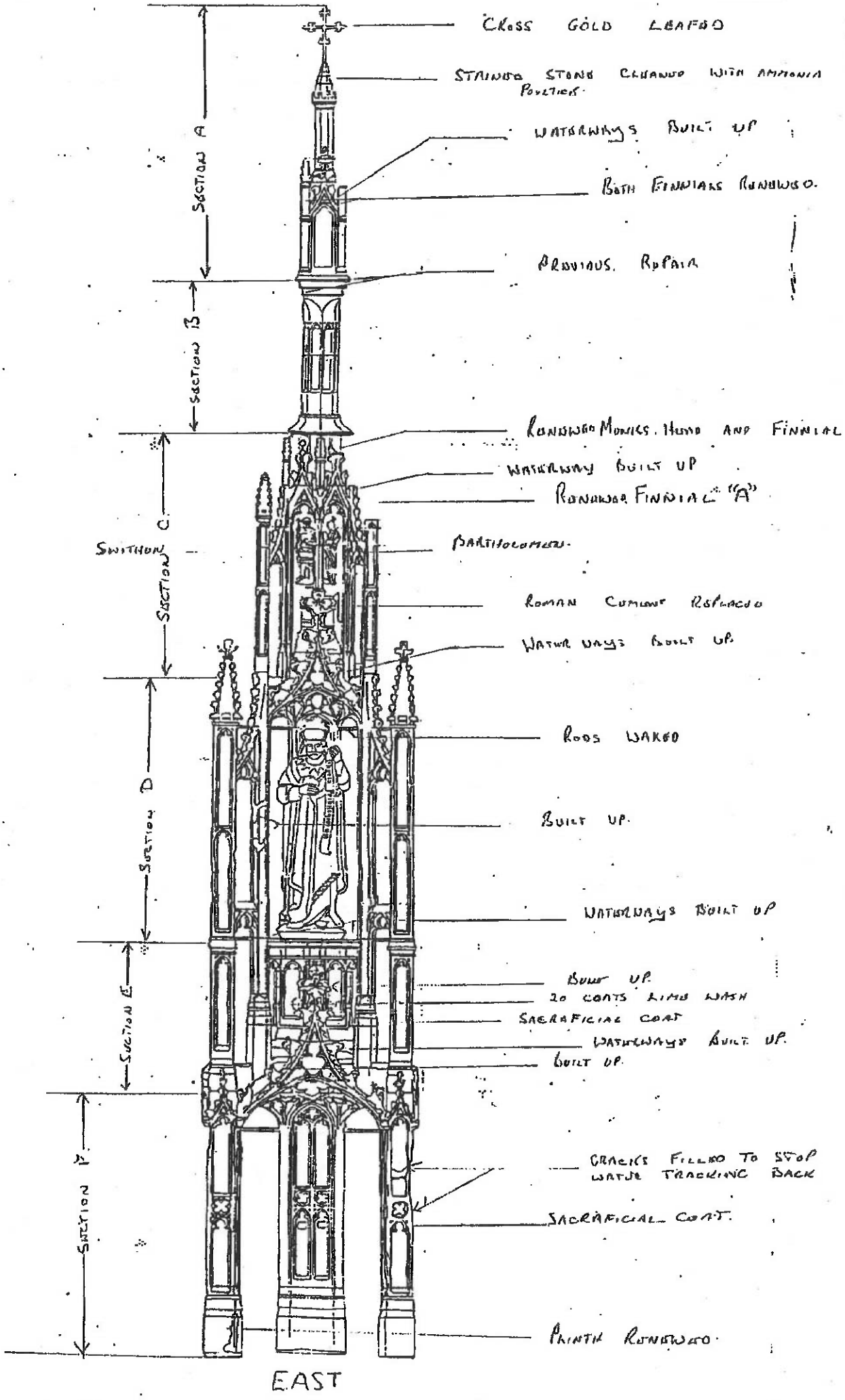
20. Waterways built up.

Section F

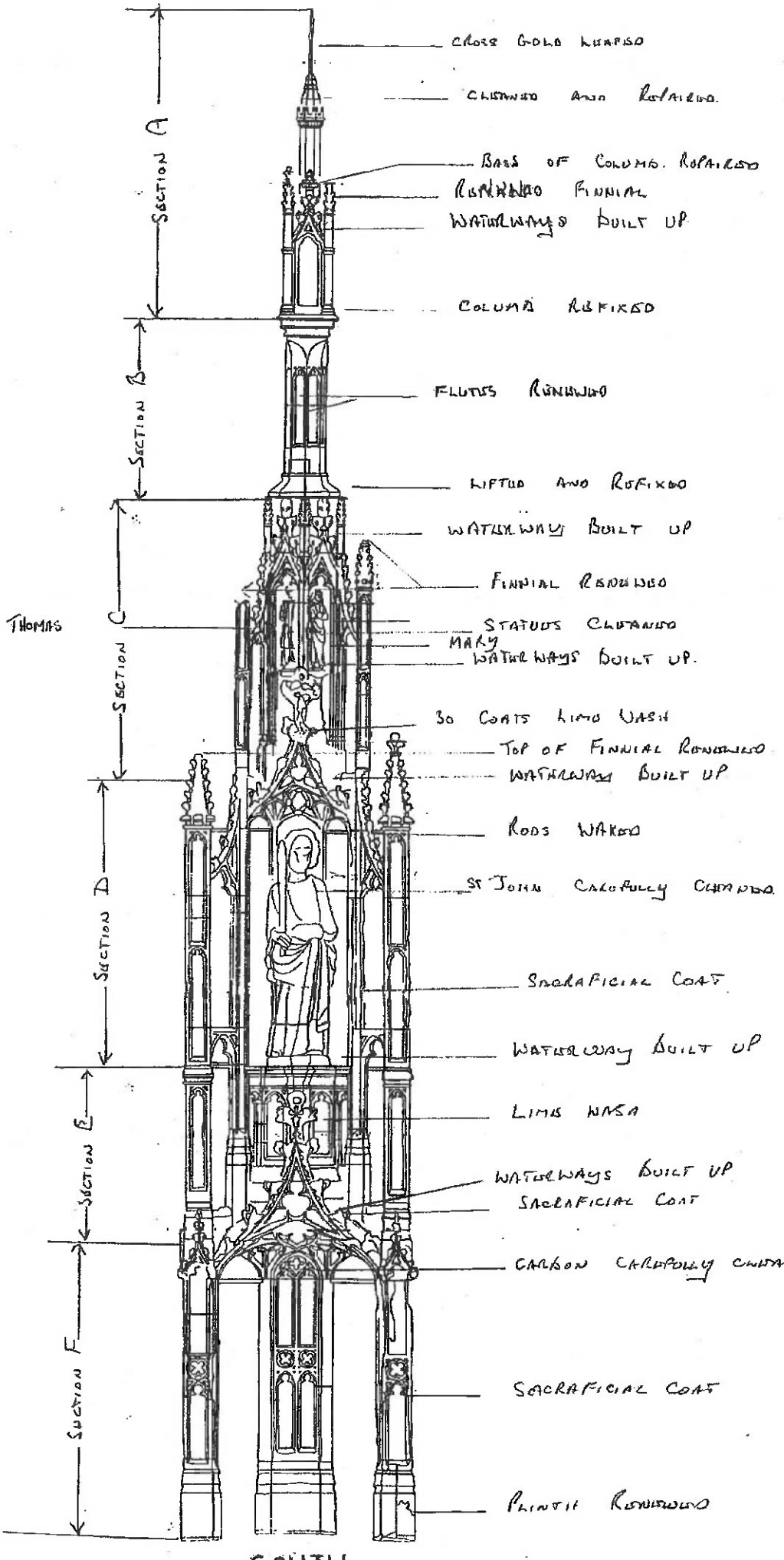
21. Centre column and vaulted arch carefully cleaned with pencil jet A.B.D.

22. Sacraficial coat applied to outer columns.

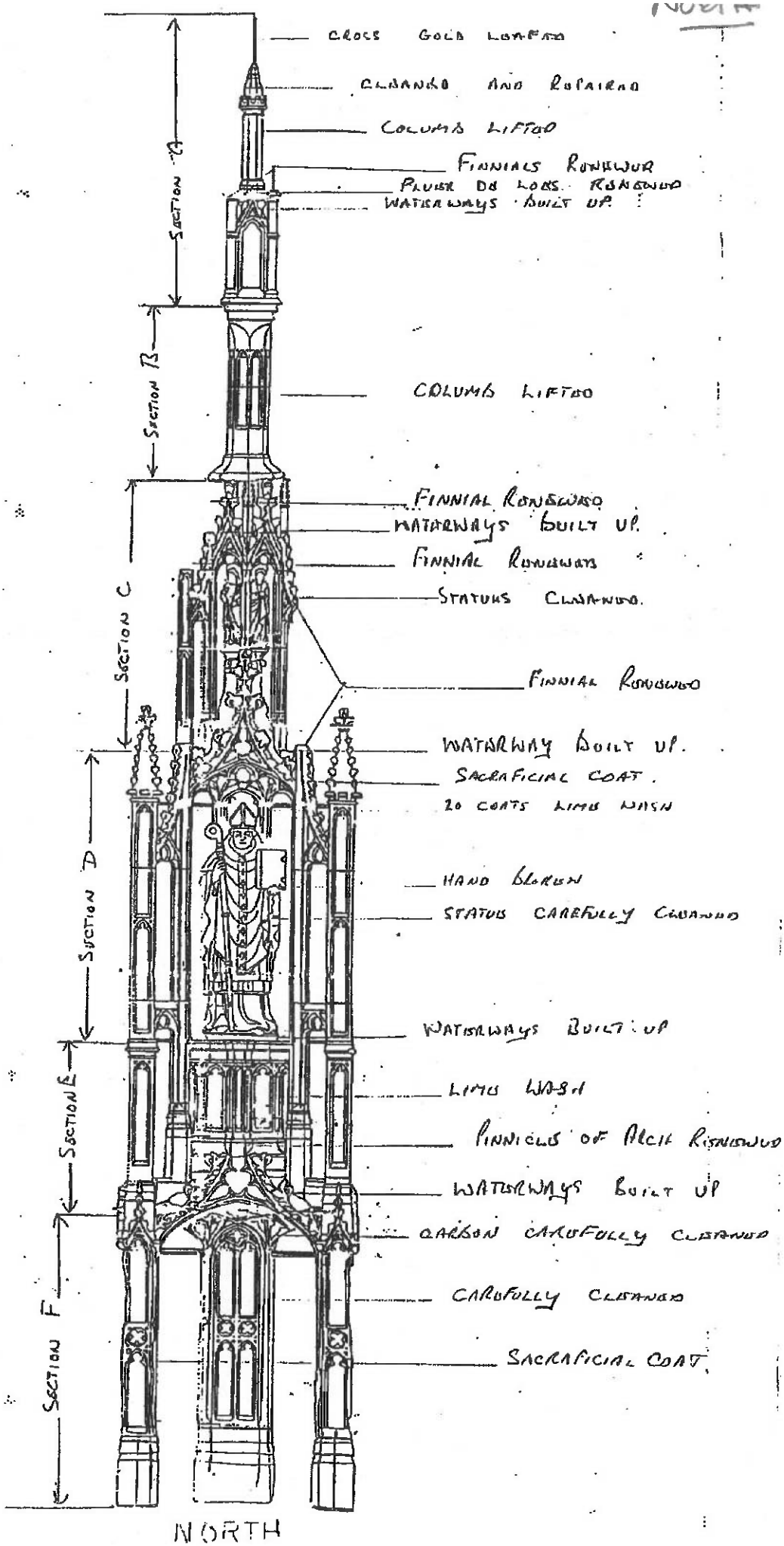

CROSS GOLD LEAFED
CRACKS IN STONE
SECTION A
FINIAL REPLACED
A.1
SECTION B
CRACKS IN STONE
B.1
WATERWAYS BUILT UP
SECTION C
JOHN
MAURICE
BUILT UP WITH SACRIFICIAL COAT
WATERWAYS BUILT UP
CROSS REMADE
SECTION D
WATERWAYS BUILT UP
SECTION E
WATERWAYS BUILT UP
CRACK FILLED
CRACK FILLED
SECTION F
SACRIFICIAL COAT
SACRIFICIAL COAT
WEST.


CROSS GOLD LEAFED
STAINED STONE CLEANED WITH AMMONIA POULTICE
WATERWAYS BUILT UP
BOTH FINIALS REMADE
PREVIOUS REPAIR
REMADE MONIES. HEAD AND FINIAL
WATERWAY BUILT UP
REMADE FINIAL "A"
BARTHOLOMEW
ROMAN CUMINE REPLACED
WATERWAYS BUILT UP
ROOS CARED
BUILT UP
WATERWAYS BUILT UP
BUILT UP
20 COATS LIME WASH
SACRAFICIAL COAT
WATERWAYS BUILT UP
BUILT UP
CRACKS FILLED TO STOP WATER TRACKING BACK
SACRAFICIAL COAT
PLINTH REMADE
SECTION A
SECTION B
SECTION C
SECTION D
SECTION E
SECTION F
SWITHUN
EAST

SOUTH


SECTION A
SECTION B
SECTION C
SECTION D
SECTION E
SECTION F
CROSS GOLD LEAFED
CLEANED AND REPAIRED
BASE OF COLUMN. REPAIRED
REPAIRED FINIAL
WATERWAYS BUILT UP
COLUMN REFIXED
FLUTES REMADE
LIFTED AND REFIXED
WATERWAYS BUILT UP
FINIAL REMADE
THOMAS
STATUES CLEANED
MARY
WATER WAYS BUILT UP.
30 COATS LIME WASH
TOP OF FINIAL REMADE
WATERWAYS BUILT UP
RODS MADE
ST JOHN CAREFULLY CLEANED
SACRAFICIAL COAT
WATERWAY BUILT UP
LIME WASH
WATERWAYS BUILT UP
SACRAFICIAL COAT
CARBON CAREFULLY CLEANED
SACRAFICIAL COAT
PLINTH REMADE

SOUTH


CROCE GOLD LEAFED
CLEANED AND REPAIRED
COLUMNS LIFTED
FINIALS RENEWED
PLUMB DO LOOS. RENEWED
WATERWAYS BUILT UP
SECTION A
COLUMNS LIFTED
SECTION B
FINNIAL RENEWED
WATERWAYS BUILT UP.
FINNIAL RENEWED
STATUES CLEANED.
SECTION C
FINNIAL RENEWED
WATERWAY BUILT UP.
SACRAFICIAL COAT.
20 COATS LIME WASH
HAND BLOWN
STATUS CAREFULLY CLEANED
SECTION D
WATERWAYS BUILT UP
LIME WASH
PINNICLES OF NICH RENEWED
WATERWAYS BUILT UP
CARBON CAREFULLY CLEANED
SECTION E
CAREFULLY CLEANED
SACRAFICIAL COAT
SECTION F
NORTH

Notes of meeting with Historic England 4.09.2023

Attendees:

Alex Bellisario - HE

Samir Khatri - Philip Hughes Associates

Graeme Todd – WCC

Faiza Hassan – WCC

Daniel Ayre WCC

Buttercross

Pigeon Proofing

- GT advised that electrical deterrent not possible, due to difficulty of securing an electrical supply
- AB advised that netting the structure not desirable
- AB + SK general discussion of wire based deterrents to prevent pigeons landing
- SK suggested gel based deterrents – 'sticky' surface to render inhospitable to pidgeons
- AB mentioned Firegel
- Agreed approach to explore a staircase of different options – condition on SMC
- DA to try and contact freeholders of adjacent properties to explore approach to discourage pigeons more generally

Finial

- General agreement to pin existing fragments of stone together, to reconstruct finial for reinstatement
- GT request to install fibreglass reinforcement rod to the rear of finial to increase strength and longevity of repair
- AB unwilling to consider such reinforcement, does not consider necessary
- SK suggested that once fragments had been assembled and number/location of pins determined that means of affixing could be decided
- DA has 3 pieces of finial in HE Team storage

General stone repairs

- SK explained general approach to preserve as much of existing stone as possible, but to use mortar repairs where needed to limit moisture collection
- All in agreement

Cleaning

- GT request to allow DOFF cleaning of monument.
- AB unwilling to consider such an approach, due to softness of the Caen stone
- SK to prepare range of cleaning options, which can be considered on a case by case basis, subject to condition on SMC

Sheltercoat

- GT request to allow limewash sheltercoat on the monument
- AB unwilling to allow blanket sheltercoat which hides range of colours of stonework
- AB + SK suggestion of range of colours in a sheltercoat to be considered on a case by case basis

Actions

- SK to prepare draft proposals for submission to AB by end of 2023
- Aim to submit formal SMC in early 2024 SMC can be determined quickly – 6 weeks max
- Works likely to commence in Spring 2024 at earliest
- DA to write to owners of surrounding buildings

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1.25 Modern re-pointing to risers remains sound IMG 1092

1.26 Build up of dirt and debris to pitting in work stone treads IMG 1092

1.24 Heavily worn and pitted tread and riser IMG 1086

1.21 Pointing failing to butt joints in treads IMG 1086

1.36 Spalling to top surface of tread trapping debris and moisture IMG 1093

1.22 Crack in tread stone IMG 1086

1.35 Hairline crack in tread surface IMG 1093

1.23 Modern hard mortar repointing IMG 1086

1.34 Algal growth on surface of stone treads and risers IMG 1093

1.27 Hairline crack to tread IMG 1092

1.28 Loss of pointing to bed joint under nosing IMG 1092

1.20 Heavily worn tread IMG 1086

1.31 Open bed joints to lowest tread IMG 1093

1.19 Algal growth on surface of stone treads and risers IMG 1085

1.30 Modern pointing failing to perp joint between risers IMG 1093

1.18 Split in heavily worn tread IMG 1085

1.32 Crack in face of nosing IMG 1093

1.17 Loss of pointing to but joints on each tread stone IMG 1085

I

M

1.33Historic repair to hairline crack IMG 1093

1.39 Hairline crack in face of nosing IMG 1098

1.16 Open bed joint under nosing IMG1080

1.29 Corner of nosing unstable due to cracking IMG 1093

1.40 Hairline crack along face of nosing IMG 1098

1.14 Worn and cracked surface to corner of tread, but stone is not loose IMG 1080

1.4 Moss growth and algal growth to inscribed riser IMG 1070

1.9 Hairline cracking to tread surface

1.38 Open bed joint under tread IMG 1098

1.11 Crack under nosing moulding IMG 1072

1.10 Open bed joint under nosing IMG1072

1.37 Moss growth and loss of pointing to bed joint IMG 1098

1.15 Accumulation of moss on surface IMG 1080

1.8 Algal growth to worn stone at base IMG1071

1.7 Crack along face of nosing IMG1071

1.6 Loss of pointing to base of riser IMG1071

1.5 Natural fissures in face of noising IMG1071

1.12 Loss of surface of tread IMG 1078

1.13 Modern repointing to lowest stone risers IMG 1079

Key

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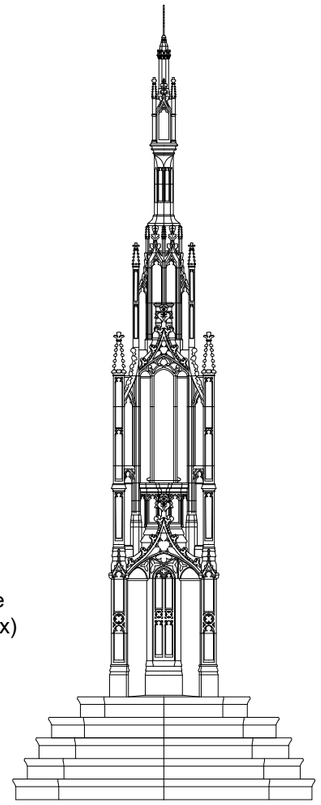
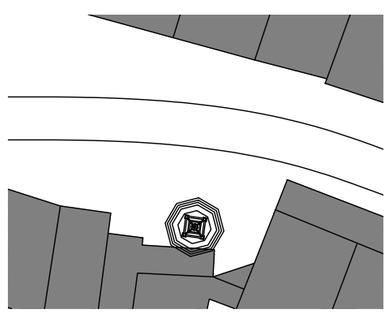


Stage 0N

REV	DATE	NOTES	BY
~	25-07-2023	Drawing originated	XXX

Key Plan



JOB TITLE

Winchester

Buttercross Monument

N

Approx.

DRAWING TITLE

Stage ON

Condition Survey Repairs

JOB No	DWG No	REV
631/02	011	~

DRAWN BY	SCALE	DATE
LK	1:20	Jul 2023

PHILIP HUGHES ASSOCIATES
HISTORIC BUILDINGS CONSERVATION CONSULTANTS
OLD MANOR STABLES TOUT HILL WINCANTON SOMERSET BA9 9DL TEL: 01963 824240 FAX: 01963 824642

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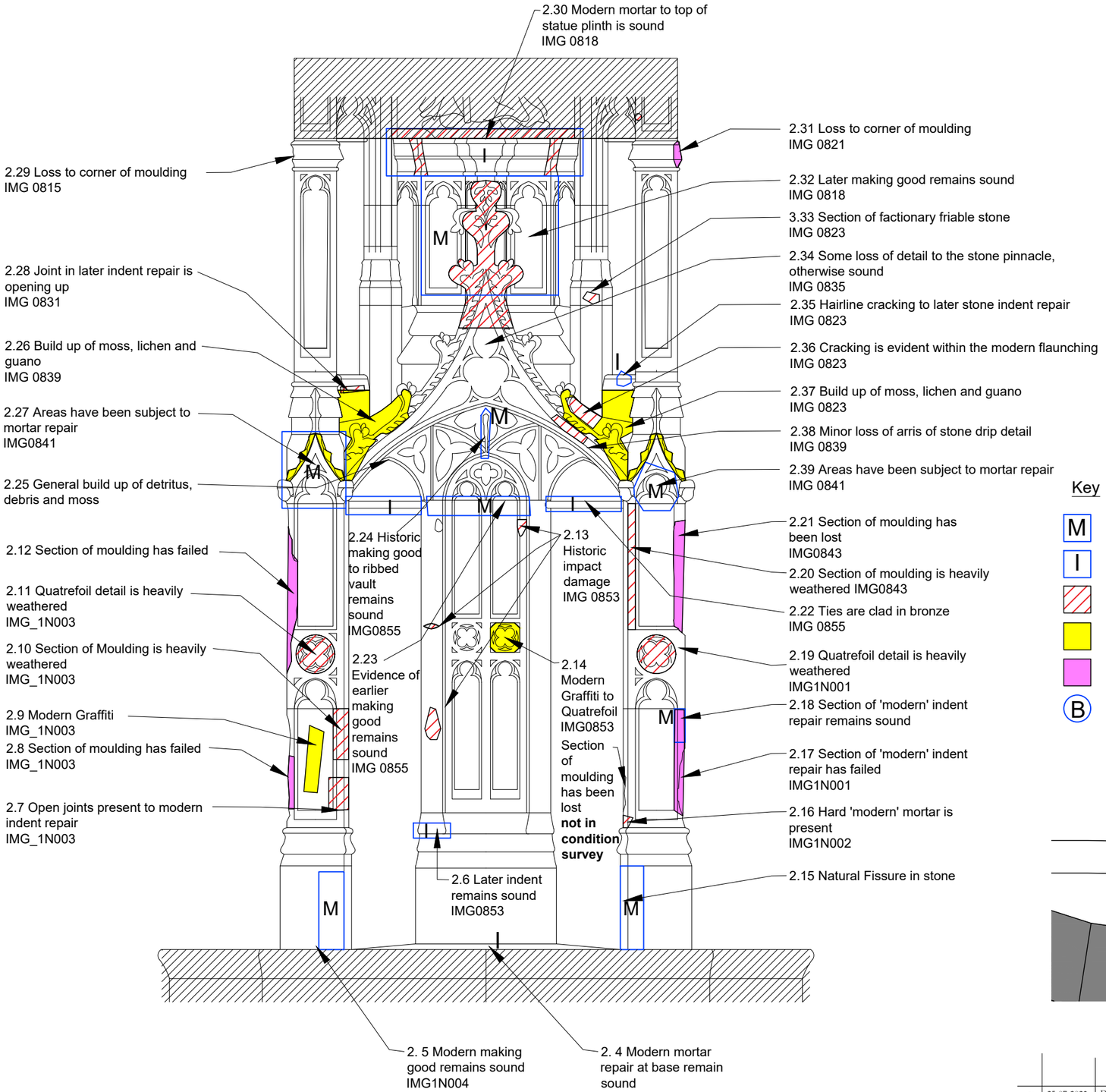

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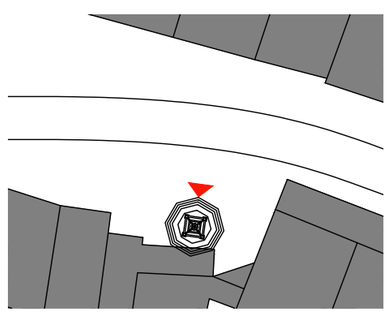

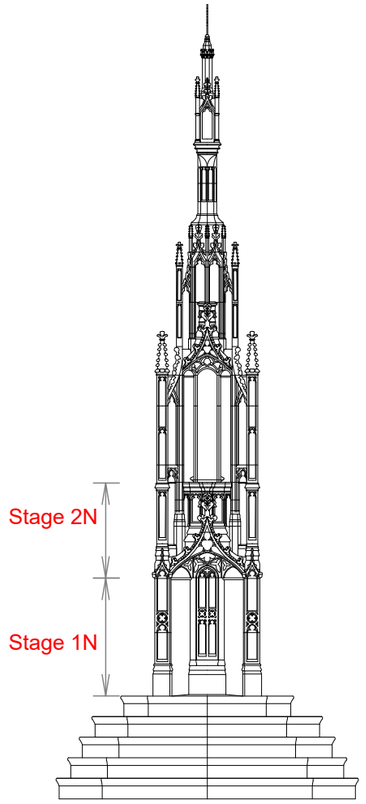

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JOB TITLE
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Buttercross Monument

DRAWING TITLE
Stage 1N and 2N
Condition Survey Repairs

JOB No	DWG No	REV
631/02	012	~

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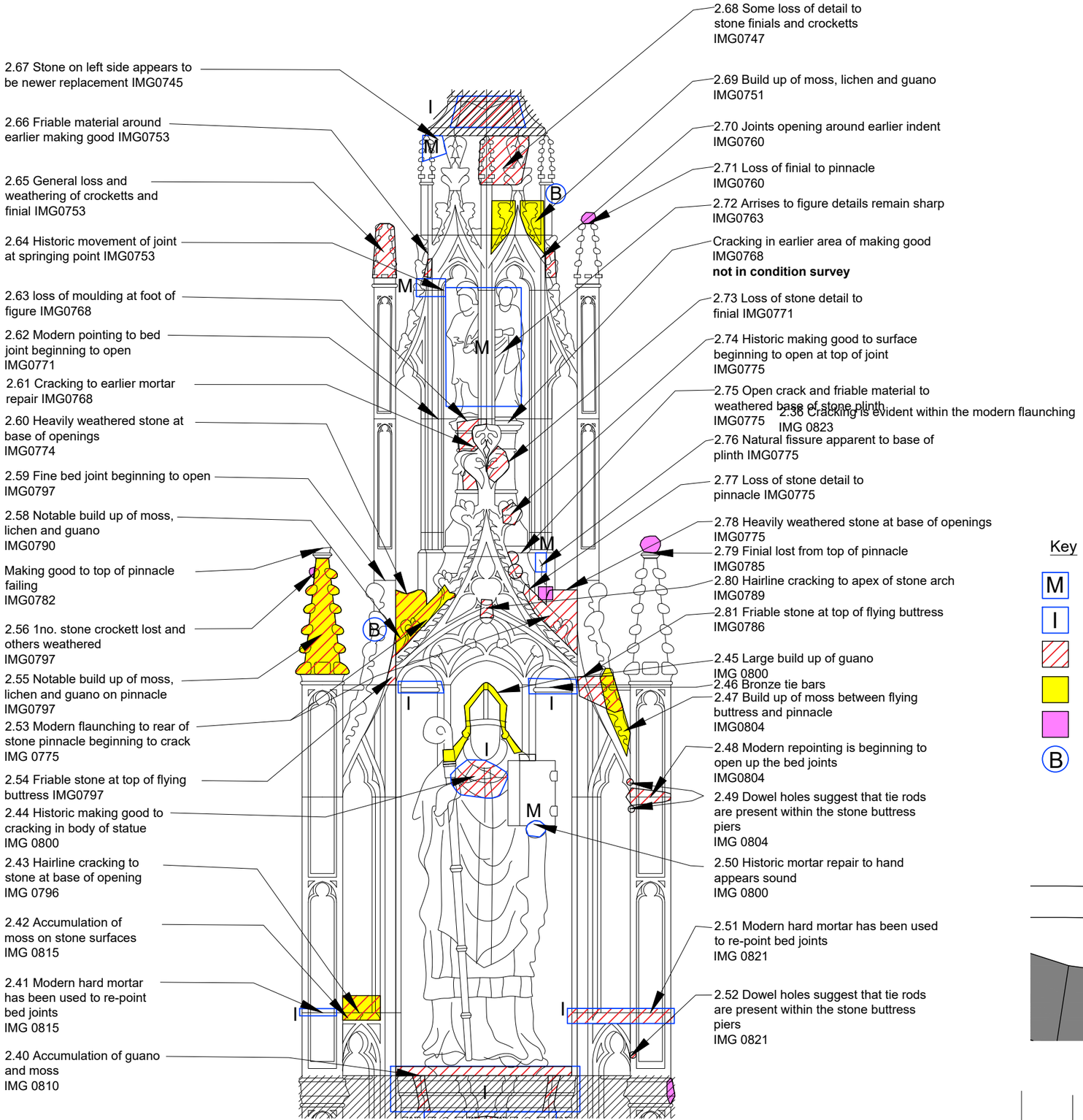

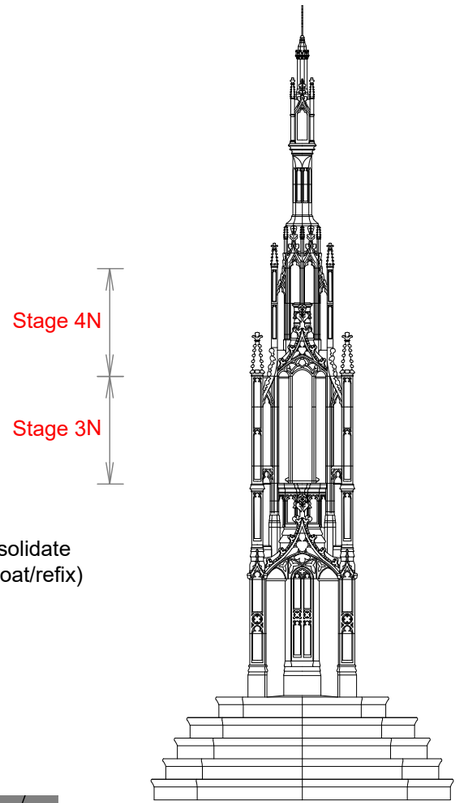

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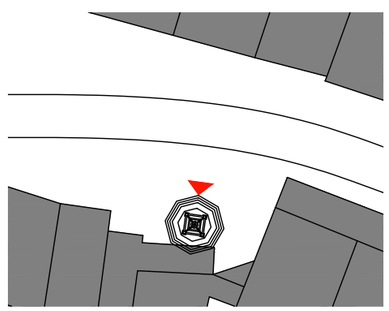

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JOB TITLE
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Buttercross Monument

DRAWING TITLE
Stage 3N and 4N
Condition Survey Repairs

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631/02	013	~

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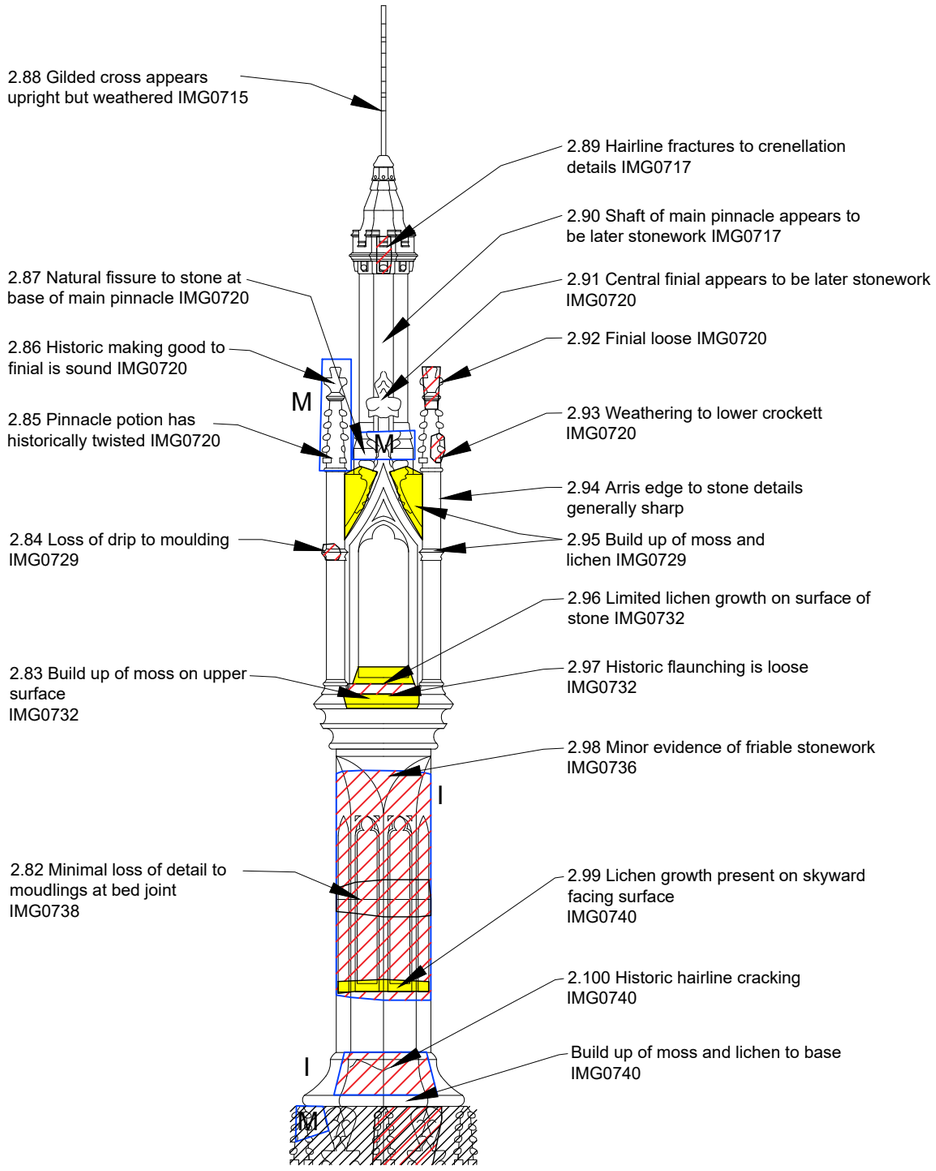

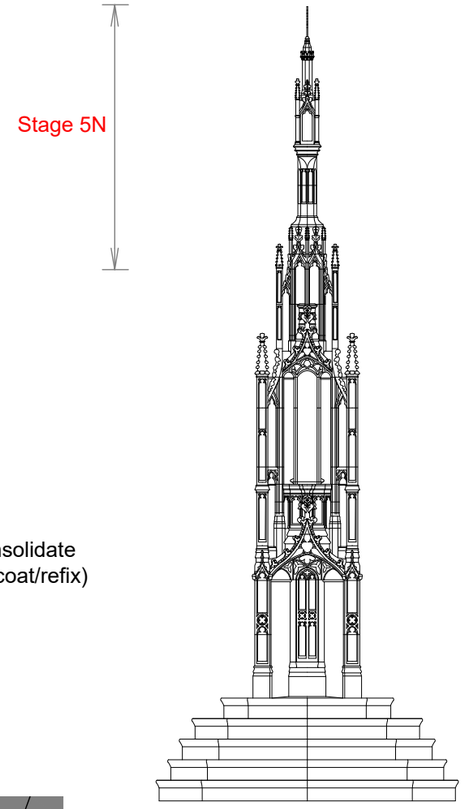

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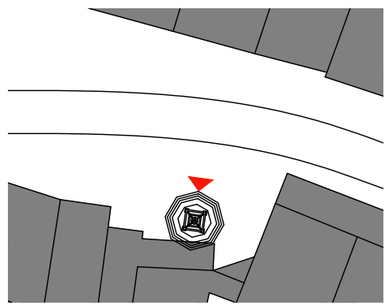

REV	DATE	NOTES	BY
~	25-07-2023	Drawing originated	LK

JOB TITLE
Winchester
Buttercross Monument

DRAWING TITLE
Stage 5N
Condition Survey Repairs

JOB No	DWG No	REV
631/02	014	~

DRAWN BY	SCALE	DATE
LK	1:20	Jul 2023

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Note - Few photos of repairs in condition survey to this area. Check carefully.
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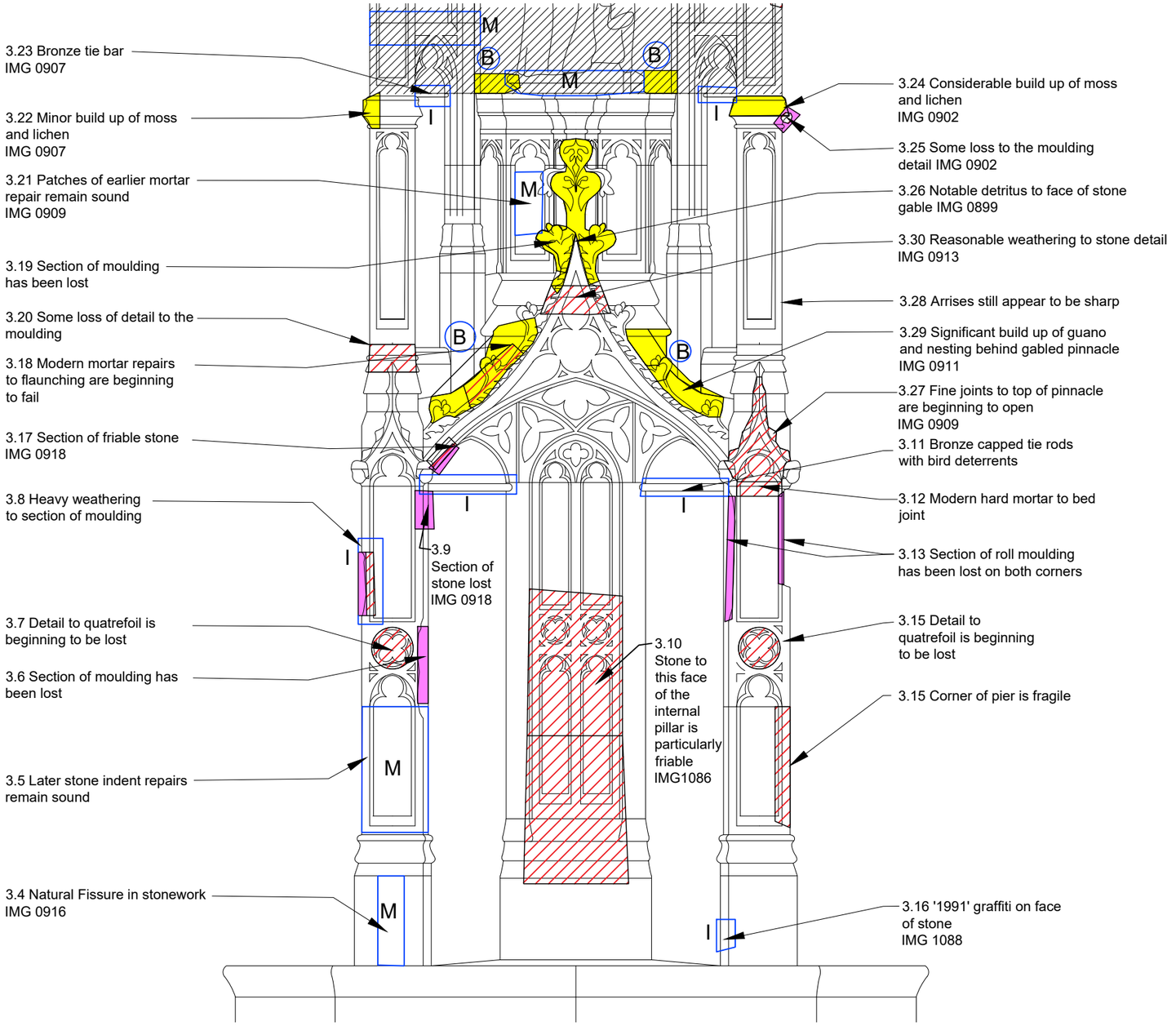
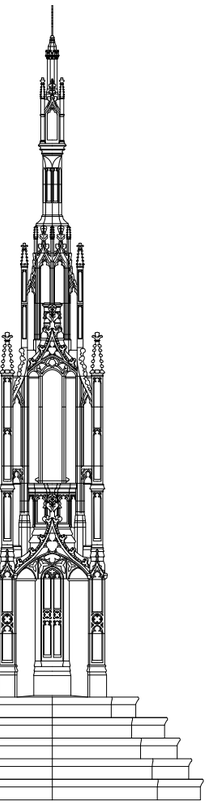


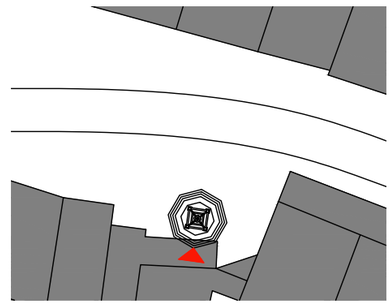
2.36 Cracking is evident within the modern flaunching IMG 0823



Key

- M Monitor
- I Investigate — Stage 2S
- Repair (repoint/grout/consolidate with lime mortar/shelter coat/refix)
- Clean — Stage 1S
- Stone indent
- B Bird deterrent

Key Plan



REV	DATE	NOTES	BY
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JOB TITLE
Winchester
Buttercross Monument

DRAWING TITLE
Stage 1S and 2S
Condition Survey Repairs

JOB No	DWG No	REV
631/02	021	~

DRAWN BY	SCALE	DATE
LK	1:20	Jul 2023

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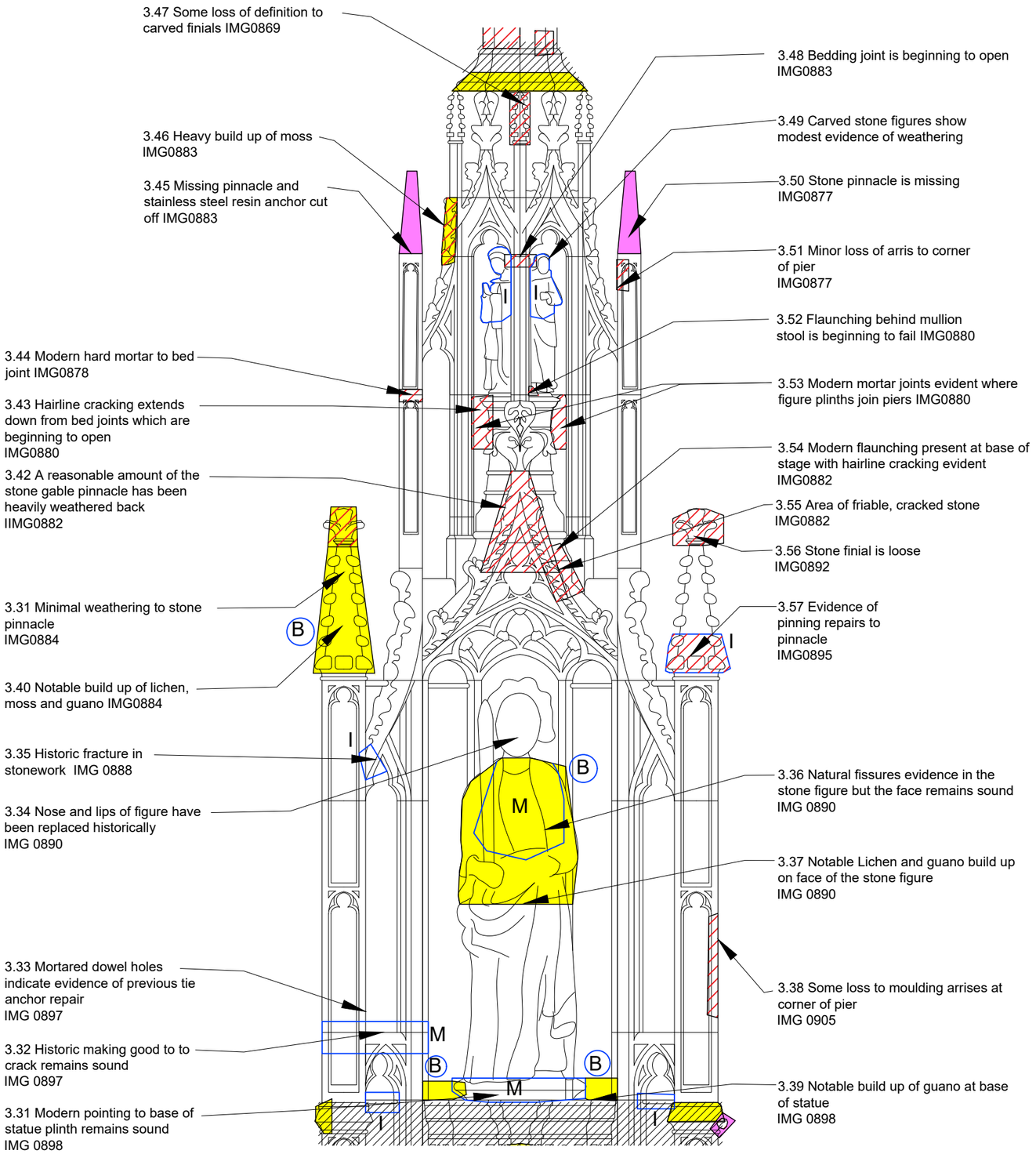

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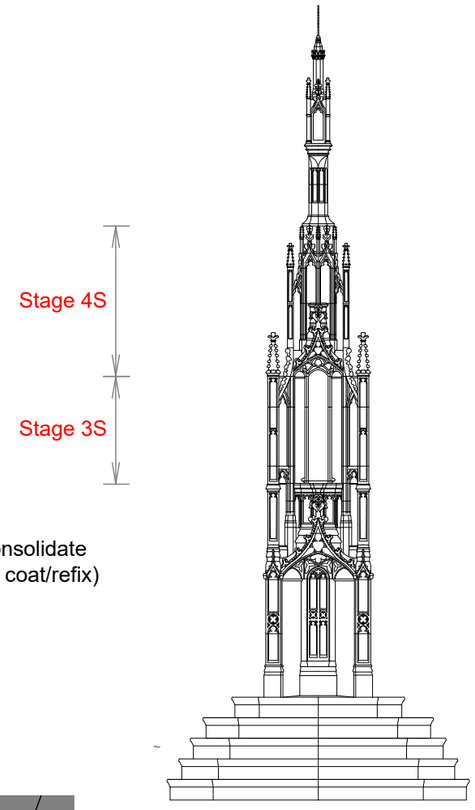

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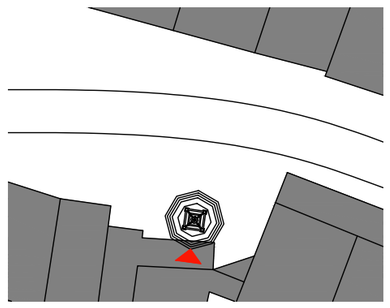

REV	DATE	NOTES
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JOB TITLE

Winchester

Buttercross Monument

DRAWING TITLE

Stage 3S and 4S

Condition Survey Repairs

JOB No	DWG No	REV
631/02	022	~

DRAWN BY	SCALE	DATE
LK	1:20	Jul 2023

N

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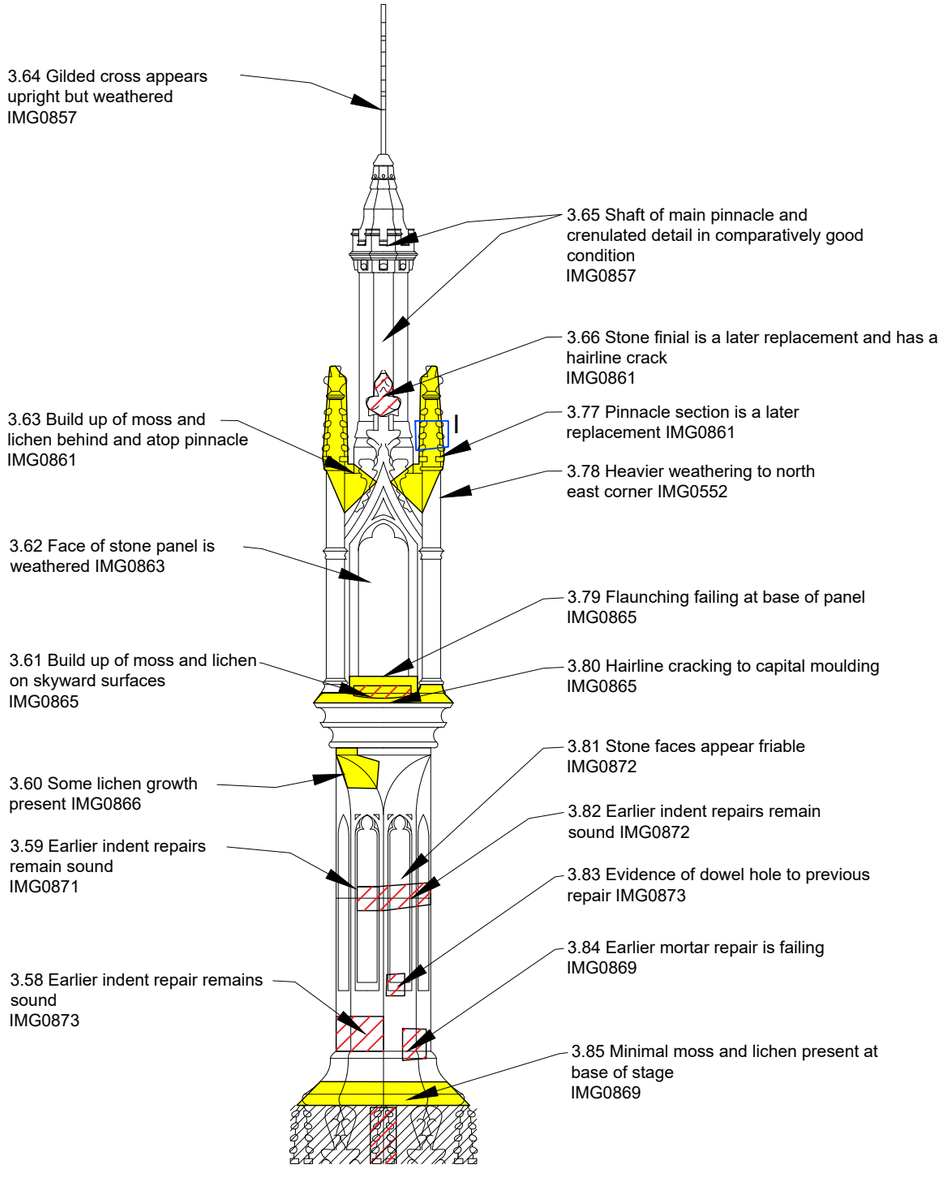

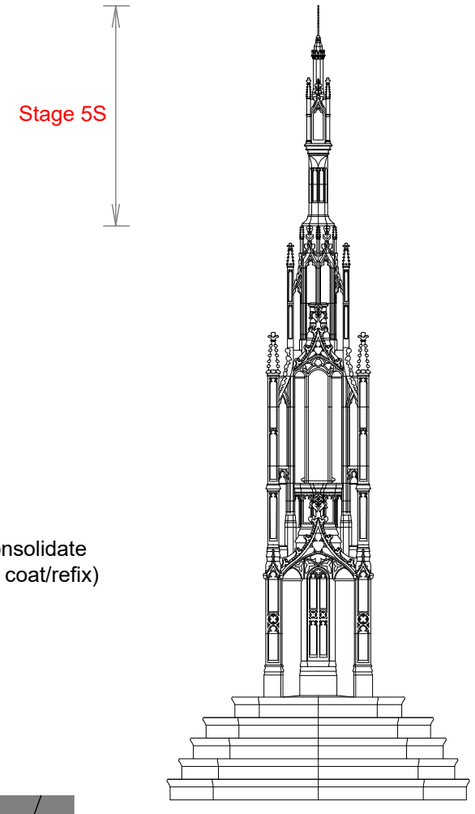

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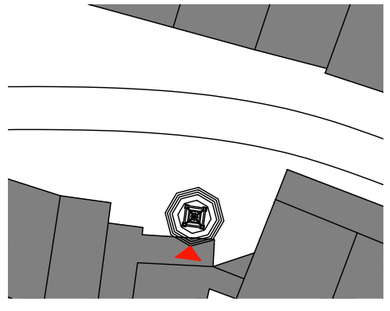

REV	DATE	NOTES
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JOB TITLE
Winchester
Buttercross Monument

DRAWING TITLE
Stage 5S
Condition Survey Repairs

JOB No	DWG No	REV
631/02	023	~

DRAWN BY	SCALE	DATE
LK	1:20	Jul 2023

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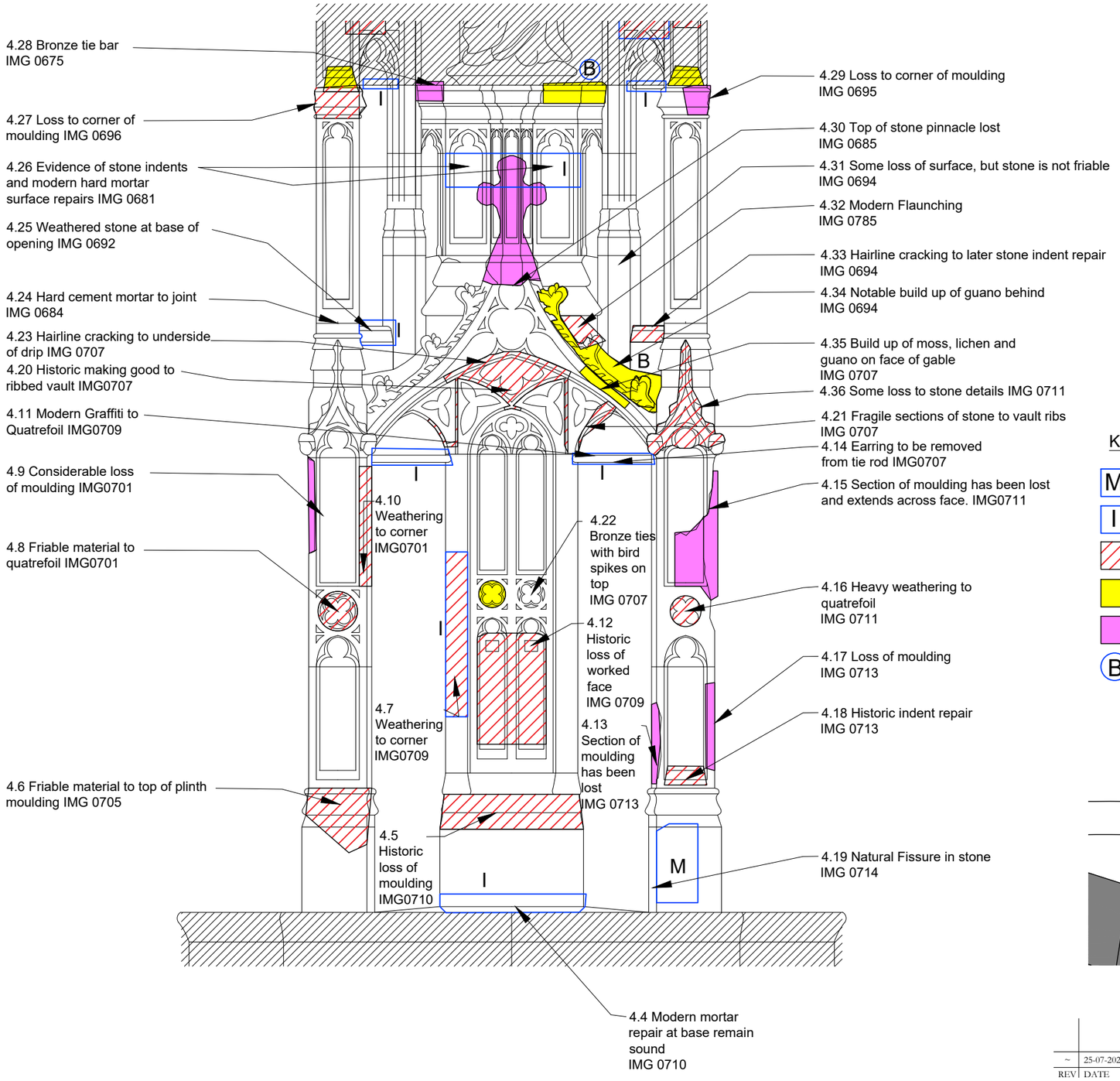

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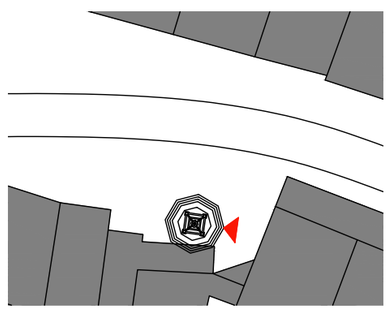

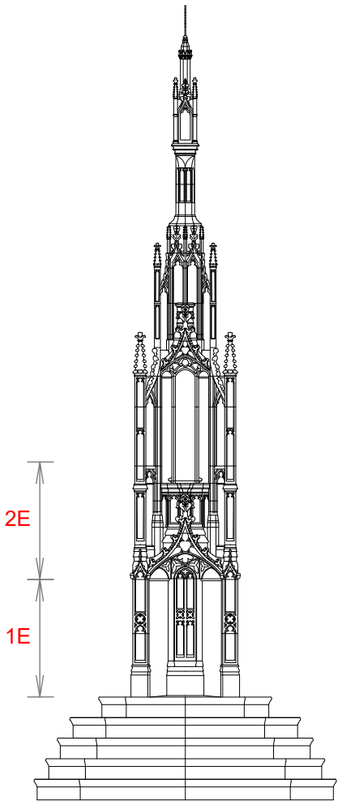

REV	DATE	NOTES
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JOB TITLE
Winchester
Buttercross Monument

DRAWING TITLE
Stage 1E and 2E
Condition Survey Repairs

JOB No	DWG No	REV
631/02	031	~

DRAWN BY	SCALE	DATE
LK	1:20	Jul 2023

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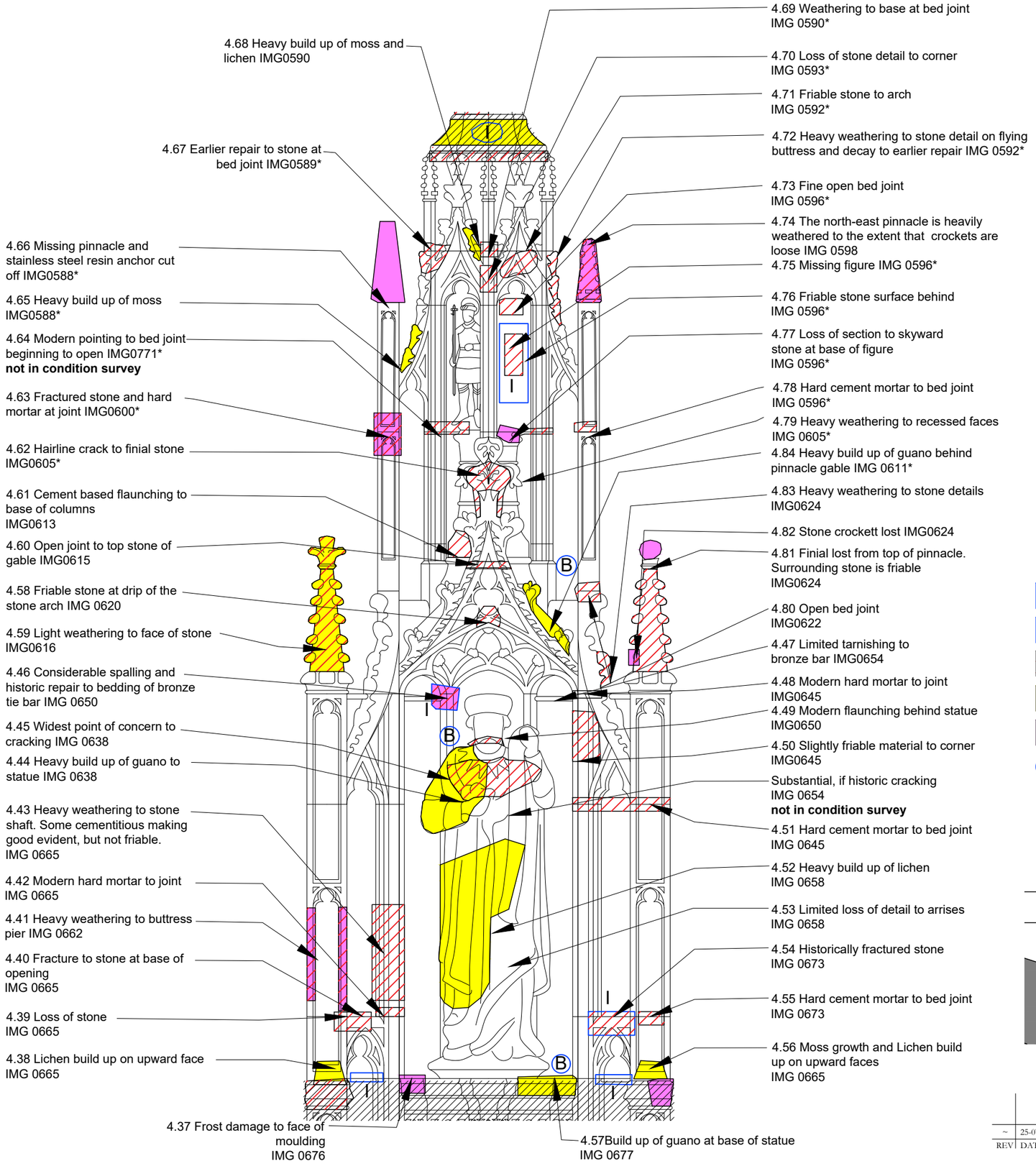

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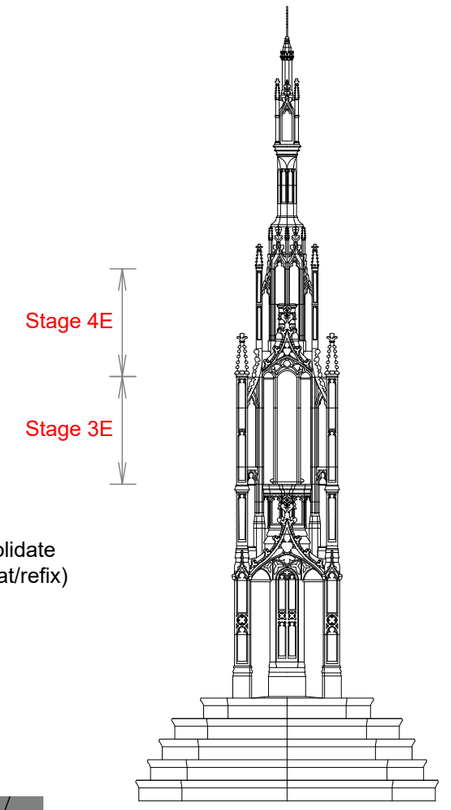

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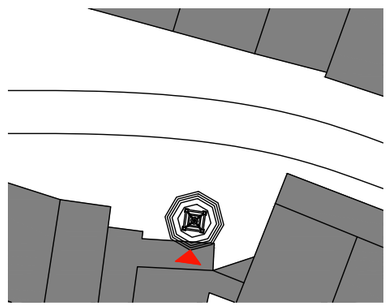

REV	DATE	NOTES
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JOB TITLE
Winchester
Buttercross Monument

DRAWING TITLE
Stage 3E and 4E
Condition Survey Repairs

JOB No	DWG No	REV
631/02	032	~

DRAWN BY	SCALE	DATE
LK	1:20	Jul 2023

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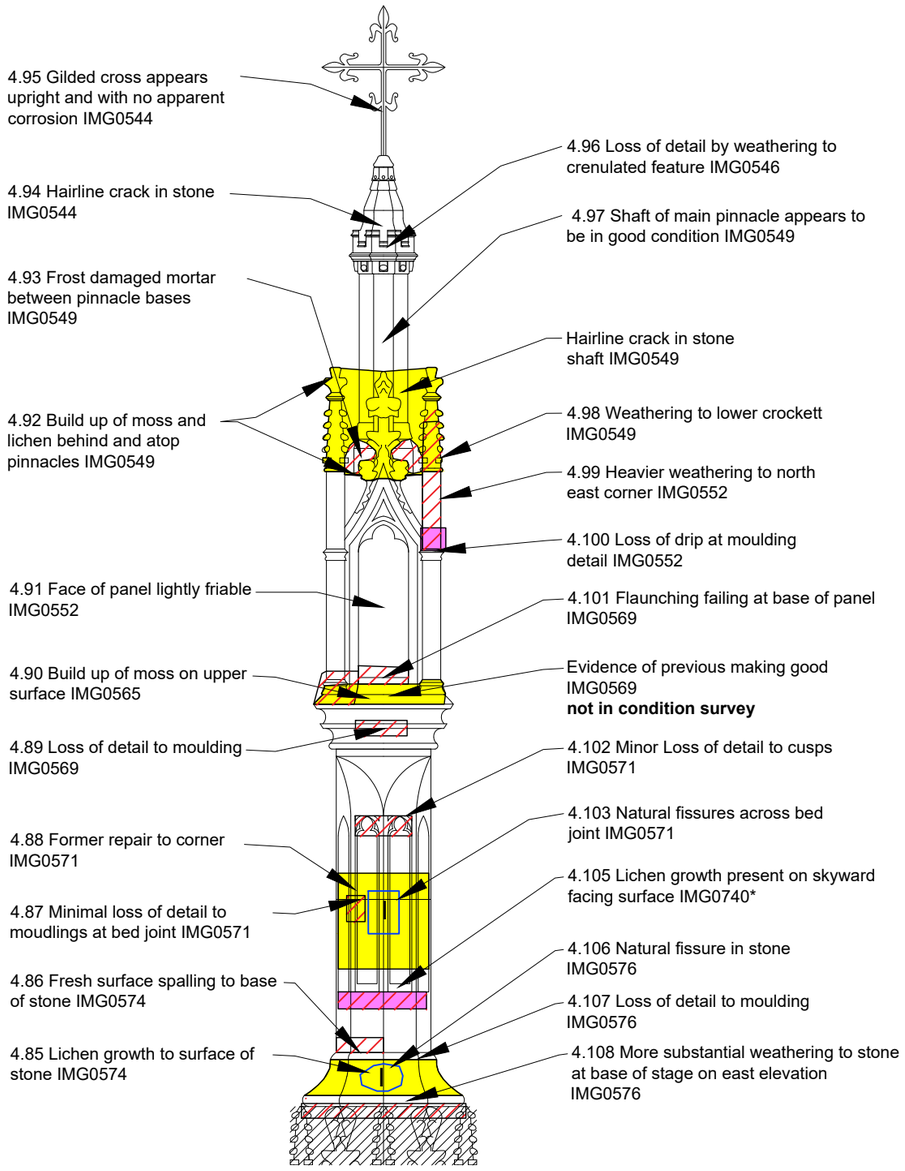

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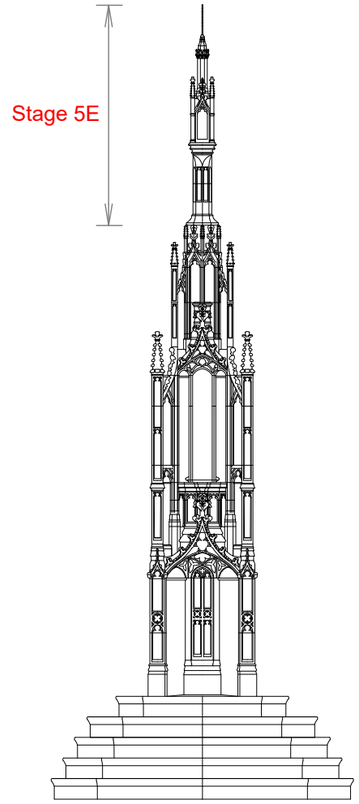
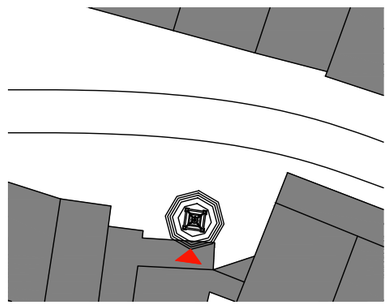
These drawings include the observations, defects and repairs as described in the 'Condition Survey for the Buttercross Monument' dated March 2023 produced by Vallis & Hall. Philip Hughes Associates cannot, therefore, take any responsibility for the information included on these drawings.



Key

- M — Monitor
- I — Investigate
- Repair (repoint/grout/consolidate with lime mortar/shelter coat/refix)
- Clean
- Stone indent
- B — Bird deterrent

Key Plan



REV	DATE	NOTES
~	25-07-2023	Drawing originated

JOB TITLE
Winchester
Buttercross Monument

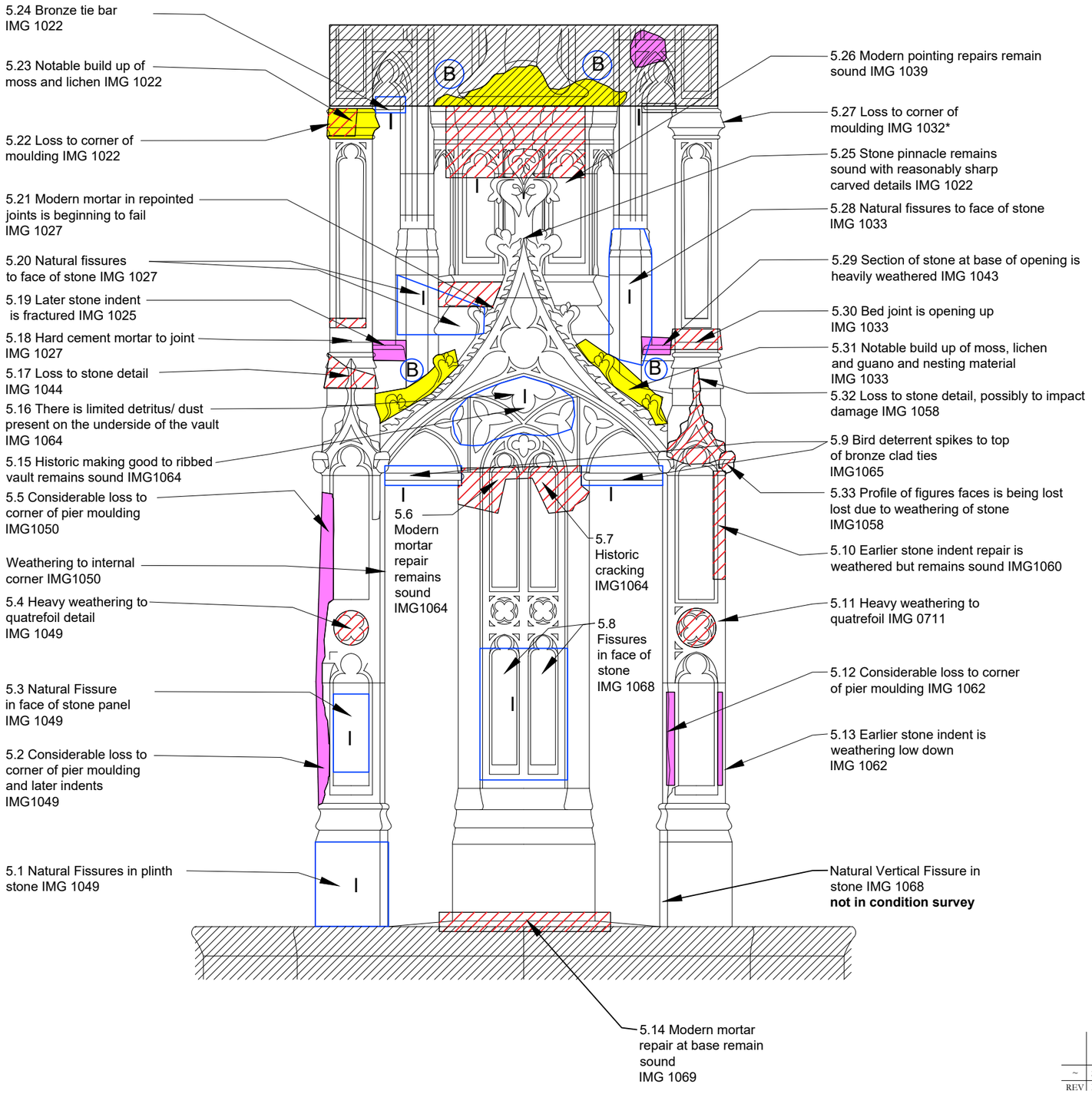
DRAWING TITLE
Stage 5E
Condition Survey Repairs

JOB No	DWG No	REV
631/02	033	~

DRAWN BY	SCALE	DATE
LK	1:20	Jul 2023

N
Approx.

PHILIP HUGHES ASSOCIATES
HISTORIC BUILDINGS CONSERVATION CONSULTANTS
OLD MANOR STABLES TOUT HILL WINCANTON SOMERSET BA9 9DL TEL: 01963 824240 FAX: 01963 824642



NOTES:

Do not scale from this drawing - responsibility is not accepted for errors made by others in scaling from this drawing.
All dimensions are to be checked on site prior to construction.
Any discrepancies are to be reported to Philip Hughes Associates for clarification.

Note - * Incorrect photo references in condition survey.

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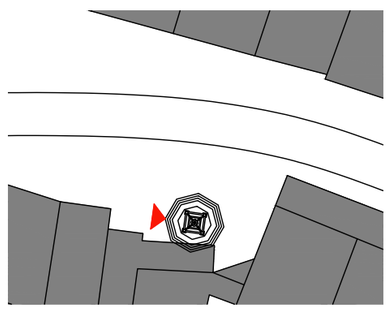
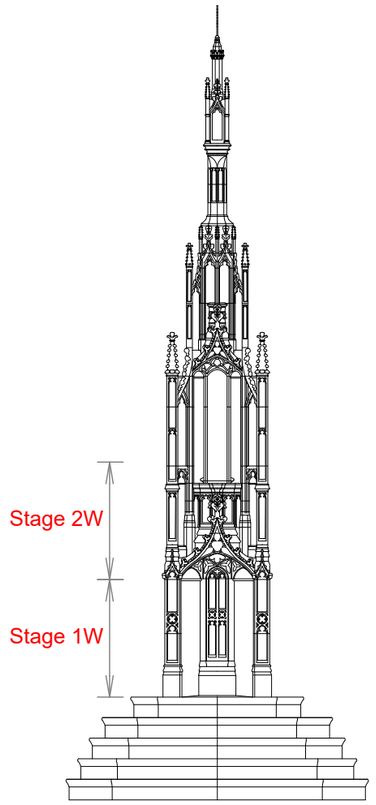
Key

M	Monitor
I	Investigate
	Repair (repoint/grout/consolidate with lime mortar/shelter coat/refix)
	Clean
	Stone indent
B	Bird deterrent

Key Plan





REV	DATE	NOTES
~	25-07-2023	Drawing originated

JOB TITLE
Winchester
Buttercross Monument

DRAWING TITLE
Stage 1W and 2W
Condition Survey Repairs

JOB No	DWG No	REV
631/02	041	~

DRAWN BY	SCALE	DATE
LK	1:20	Jul 2023

N
Approx.

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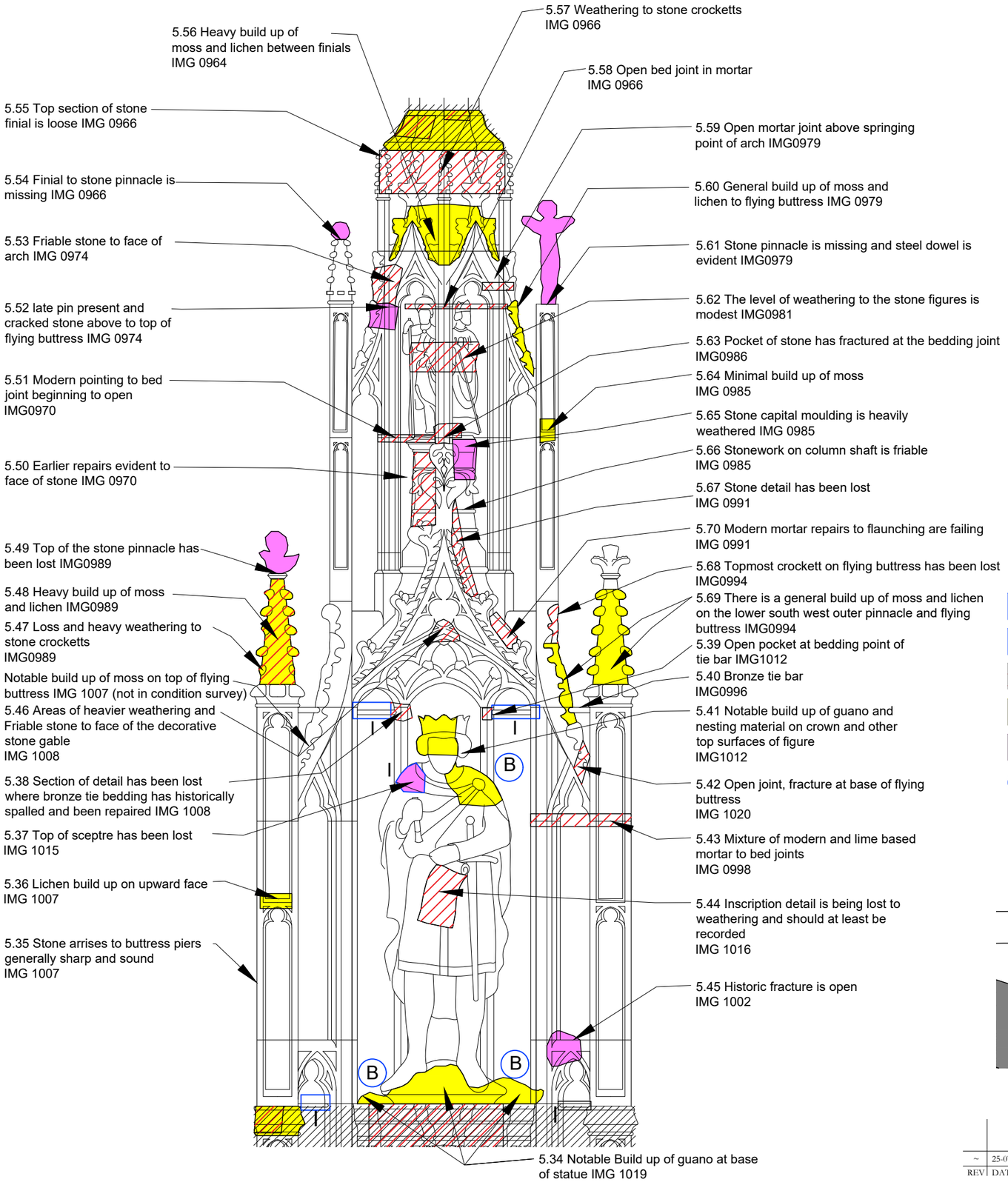
OLD MANOR STABLES TOUT HILL WINCANTON SOMERSET BA9 9DL TEL: 01963 824240 FAX: 01963 824642



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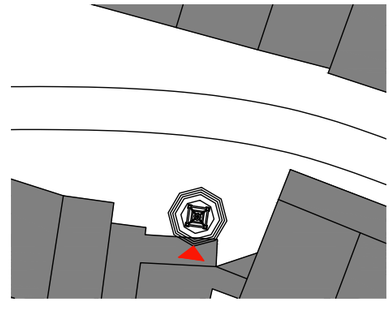
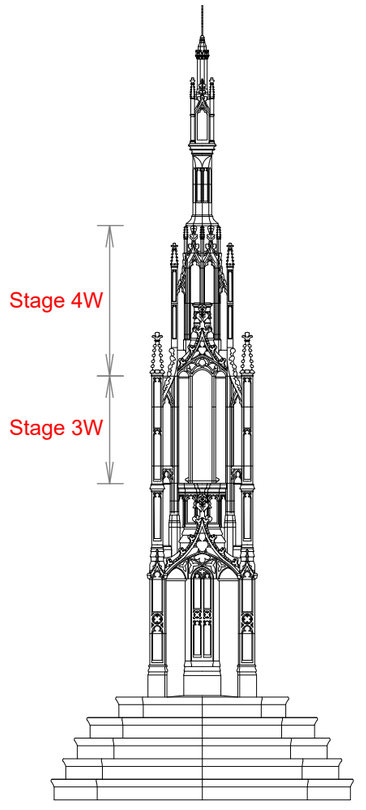
Key

M	Monitor
I	Investigate
	Repair (repoint/grout/consolidate with lime mortar/shelter coat/refix)
	Clean
	Stone indent
B	Bird deterrent

Key Plan





REV	DATE	NOTES
~	25-07-2023	Drawing originated

JOB TITLE
Winchester
Buttercross Monument

DRAWING TITLE
Stage 3W and 4W
Condition Survey Repairs

JOB No	DWG No	REV
631/02	042	~

DRAWN BY	SCALE	DATE
LK	1:20	Jul 2023

N
Approx.

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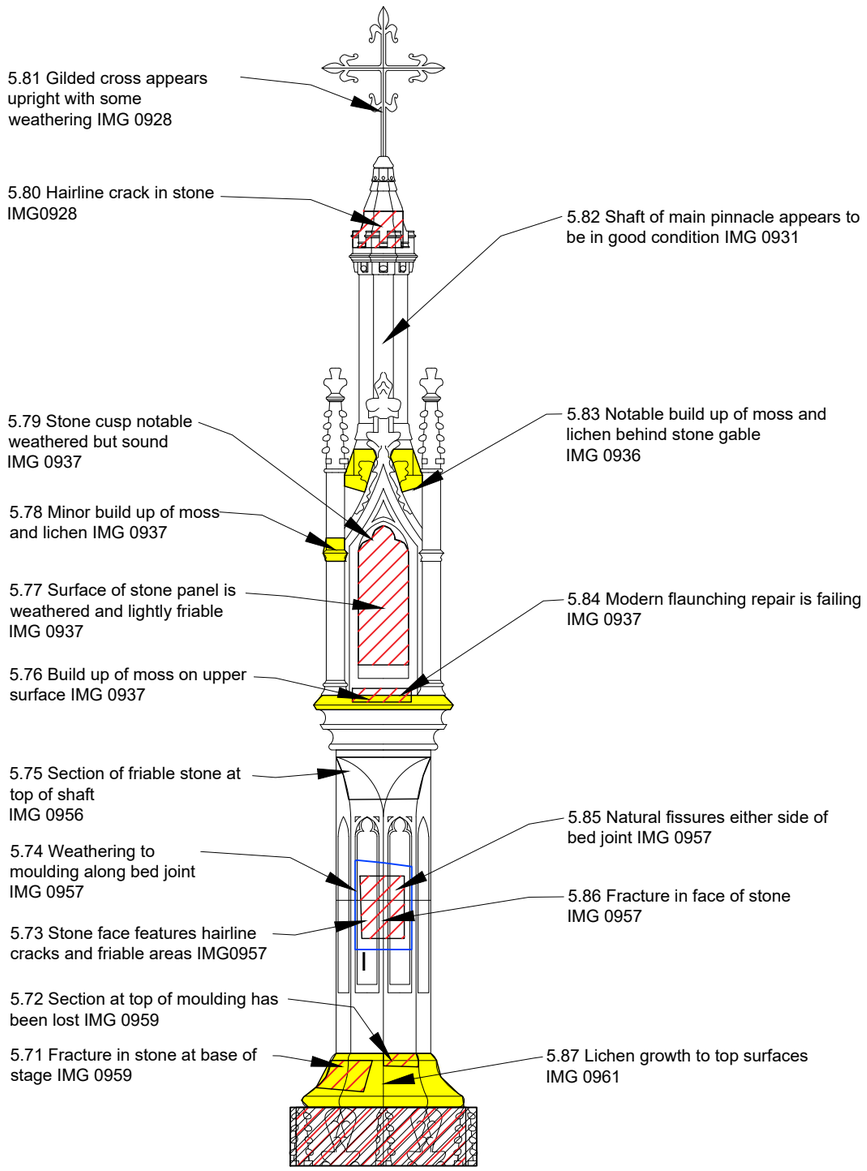
OLD MANOR STABLES TOUT HILL WINCANTON SOMERSET BA9 9DL TEL: 01963 824240 FAX: 01963 824642



NOTES:

Do not scale from this drawing - responsibility is not accepted for errors made by others in scaling from this drawing.

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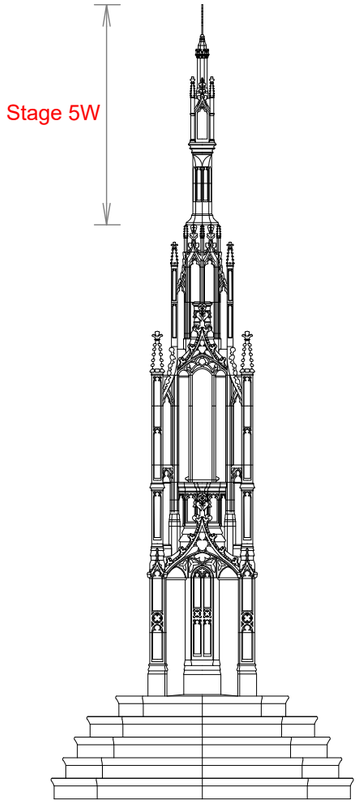
Any discrepancies are to be reported to Philip Hughes Associates for clarification.

Note - All photos referenced in condition survey are of stage 5 south not stage 5 west. Repairs identified are therefore based on text only.

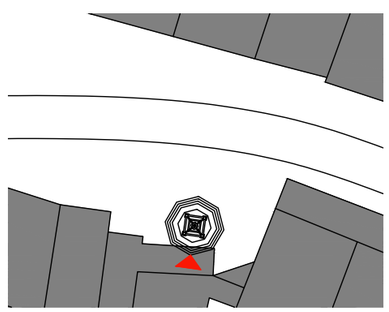
These drawings include the observations, defects and repairs as described in the 'Condition Survey for the Buttercross Monument' dated March 2023 produced by Vallis & Hall. Philip Hughes Associates cannot, therefore, take any responsibility for the information included on these drawings.



Key

- M — Monitor
- I — Investigate
- Repair (repoint/grout/consolidate with lime mortar/shelter coat/refix)
- Clean
- Stone indent
- B — Bird deterrent

Key Plan



REV	DATE	NOTES
~	25-07-2023	Drawing originated

JOB TITLE
Winchester
Buttercross Monument

DRAWING TITLE
Stage 5W
Condition Survey Repairs

JOB No	DWG No	REV
631/02	043	~

DRAWN BY	SCALE	DATE
LK	1:20	Jul 2023

N
Approx.

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APPENDIX 2 – NOTES of 4th SEPTEMBER 2023 HISTORIC ENGLAND MEETING

APPENDIX 3 – CONDITION SURVEY ELEVATION DRAWINGS