

Proposed Stone Repairs

St James's Church, Ramsden Road, Wardle, Rochdale, OL12 9NX

Wardle Properties Ltd, 76 George Street, Oldham, OL1 9NX



February 2023– 129042

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1.0 Introduction

1.1 Purpose of Report

This report, with appendices, is prepared, on behalf of Wardle Properties Ltd, 76 George Street, Oldham, OL1 1LS, for submission to Rochdale Borough Council with respect to Condition 2 of Planning Consent 04/D42779, and specifically with respect to stone repairs and any rebuilding works.

1.2 Subject of the Report

The premises discussed in this report is St James Church, Ramsden Road, Wardle, Rochdale. This is a Grade II Listed Building (List Entry Number: 1203923).

Planning and Listed Building Consent was granted in 2014 for the conversion of the buildings into 5no. houses. Much of this work was undertaken but works stopped in circa 2009.

1.3 General matters

The report is prepared by Fisher German LLP Chartered Surveyors, The Estates Office, Norman Court, Ashby de la Zouch, Leicestershire, LE65 2UZ, following inspection by T Barton MRICS and Scott Batey BSc (Hons), both of Fisher German LLP, on 17th January 2023. The weather during the survey was very cold (circa minus 3 degrees Celsius) and dry.

1.4 Contact with Local Authority

We were advised by Rochdale District Council in an email on 20/01/2023 that the new stone proposed for repairs can be identified/confirmed, following the instruction of a stone mason, to avoid the need to utilise the British Geological Service stone matching service at this stage.

1.5 Limitations

Our external survey was undertaken from ground level, and from the flat roof to the south aisle. Our internal survey was undertaken from the accessible internal floor areas.

During our survey, internal areas had limited natural light during the survey and torches were used to partially compensate the same.

The previous owner undertook stone replacement to the dentil course at wall plate level to the south and north aisles. We do not have details of the stone used. The same however, appears to be sandstone and a good match to the existing material. Further details are included in the report.

Our inspection was visual only, and non-intrusive. No testing of materials or services were undertaken.

2.0 Proposed Repairs

2.1 Repairs undertaken as part of the development in 2004-2009.

The only repairs to stonework using new materials that were undertaken when the conversion of the premises was underway between 2004-2009 appear to be the new dentil stonework to the north and south aisle.

It is possible that the stone gutters to the Nave and Chancel were re-set/re-bed/overhauled, etc., although this is unclear and does not appear to have required new stone.

The new work to form the dentil courses is undertaken in sandstone, which appears to be a good match to the original stone to the building. We do not have details of its provenance.

The new dentil details to the north and south aisles comprise square edged blocks. We do not have evidence of the original dentil details and have assumed the new work replicates the former details.

2.2 Principles of Stone Repair

The principle of minimum intervention will be followed with respect to the proposed stone repairs at St James Church.

This in practice means for example, there are no proposals to steam clean external stonework. Where there is localised algal growth, graffiti, and corrosion run-off, this will be cleaned manually using proprietary solvent-based solutions, following tests to determine the best method. This is to minimise damage to underlying stone.

Similarly, minor contour scaling has occurred in numerous areas, as indicated in the appendix photographs. This process is common in sandstone and involves the thin outer layer effectively delaminating from the main stone. This is a natural process of weathering and at St James Church, is primarily affecting the tooled surface of the stone. The proposals do not intend to reverse or accelerate this process, or to restore any lost material.

In several isolated areas, stone is missing in entire sections. Where this has occurred, the proposal is to replace this stone, to reinstate architectural and weather proofing details.

Where localised impact damage has occurred, for example to string details, indent repairs will be undertaken to make good this decorative detail, for aesthetic purposes and to maintain the functional purpose of the drip to protect masonry below.

To maintain the existing stonework, where there are open joints between stones, these will be pointed in an appropriate mix (described below), to prevent water ingress and to preserve stonework.

2.3 General

New stone to be used for the repairs described below will be proposed to the Local Authority once a stonemason is appointed. New stone will be to the same geological type and appearance, in colour and texture as the existing, and with similar physical properties. No work to commence until written approval from the Local Authority is provided.

Prior to undertaking the repairs described in section 2.4 below, the stonemason will record the existing details, taking measurements, photographs, and detailed notes, including detailed profiles of the existing details to match, jointing widths, and tooling details. This will be undertaken by the stonemasons undertaking the work.

With respect to removal of old stones, the minimum is to be removed, taking care not to damage adjacent material.

New stones will be hand finished with no saw marks visible. New stones to match existing tooling, but not be artificially distressed.

New stone to be installed upon a bed of mortar to the base, back and sides, using packers if needed to prevent mortar slumping. All stone to well dampened to prevent drying out the mortar.

All stonework at St James Church will be undertaken by experienced and competent stonemasons.

2.4 New Stonework

2.4.1 Repair to Chamfered West Elevation Plinth Capping

The plinth capping is damaged and in parts missing, between the dashed lines indicated in the images below. The plinth capping forms part of the wall structure and appears to have split, in line with the main walls above the plinth. This work is required for aesthetic purposes and to prevent water saturation to masonry below plinth level.



Fig.1



Fig.2



Fig.3

As can be seen in Fig.2 above, the plinth capping forms a solid block, continuing behind the line of the tower masonry above. To repair the same, part of this stone should be removed.

Proposed work is as follows.

- a) Remove loose section of stone to the left-hand side of line b, indicated above.
- b) Prepare opening based on inserting 2no. new stones to match profiles of existing, with joint line at mid-point between lines a and b. Stones to be inserted in 2no. sections so as not to cause settlement of masonry above. Proposed joint line is at line C above.
- c) Perpendicular joints to match existing.
- d) Stone type to match existing.
- e) Pointing to be in lime mortar as described elsewhere.

The stone between lines C and B has a visible split in line with the wall above. The proposal to replace the splintered stone between lines C and B rather than retaining and re-fixing using adhesive and dowels is proposed to achieve the most durable and long-lasting solution, given the plinth will receive high quantities of water run off from the tower walls above.

2.4.2 Missing stone carving to Tower door

The stone carving to the left-hand side of the tower doorway is missing (Fig.1 in appendix). This will be replaced with a new carving to a detail and material approved by the Local Authority, following the instruction of a stone mason as part of the building works, to complement the existing carving to the right-hand side of the Tower doorway (Fig.2).

The missing stone carving to the tower door will be replaced with new to restore a characteristic of the building. Stone carvings are also present to the west elevation door into the Nave.

2.4.3 Reinstatement of South Aisle Verge Parapets

As detailed in the main report, prior to the works commencing, the south aisle formerly comprised stone verge cappings. These are to be reinstated, to replicate exactly, the details to the north aisle, in terms of dimensions, jointing, and fixings, and in matching stone.

Reinstatement of the south aisle verge parapets will restore an architectural characteristic of the building.

2.4.4 Various Indent Repairs

As indicated on the photographs in the appendix (Fig.3, 10, 20) and appended annotated drawings, there are several areas where small pieces of stone are missing to various string details. This stone is providing an architectural function but also a waterproofing function, encouraging water to be shed off the building as a 'drip' detail.

The proposal is to undertake indent repairs where this has occurred, to reinstate these details, to match the profile, joint characteristics, and finishing/tooling of adjacent areas. The maximum amount of fabric will be retained.

Indents to be installed on well prepared beds and secured using lime mortar with joints injected with lime grout.

2.5 Mortars

2.5.1 General

All mortars for bedding and pointing will use Natural Hydraulic Lime as the binder with no cement added, with this being NHL2 in all areas, aside from NHL3.5 to the verge parapets, given the relative exposure of these elements.

Aggregate for the mortar will be sand, which will be washed and well graded with a range of particle sizes from fine to coarser. Particle size to be limited due to the narrow width of joints. Sand to be supplied by specialist supplier.

Prior to pointing, a 1m² sample panel in stone to match the building will be constructed adjacent to the building and pointed in the proposed mix and finish. This will be approved by the Local Authority prior to use on the building.

Ratio of lime to aggregate to be 1:2.5 by volume.

2.5.2 Pointing

The pointing is in fair condition to the building generally, but is missing in numerous localised areas.

Pointing is generally missing to most of the south and north aisles, and we anticipate all these elements will require repointing. In addition, pointing to buttresses to the chancel are generally missing, and will require repointing. In other areas, isolated pointing will be required to exclude rainwater from joints, but this will be on a localised basis, rather than requiring wholesale repointing.

Joints to be prepared by removing loose mortar using hand tools to a depth of 10mm. No mechanical tools, including circular saws to be used, to prevent damage to arises to stonework.

2.6 Other work

2.6.1 Helical Ties

Helical ties are proposed above the Nave Window to tie joint between the vertical crack, and potentially between quoins and the main wall structure to the eastern corner to the south aisle to tie these areas together, given the width of the joint appears to have opened.

Given the narrow joints to the stonework, 4.5mm diameter helical ties are proposed. Installation to follow supplier's recommendation, and briefly as follows;

- Removal of mortar along selected bed joint. This will be done using hand tools. The use of circular saws is strictly forbidden as this will open up and provide uniformity to stone arises.
- Flush joint with clean water, insert helical tie to manufacturer recommended dimensions assuming to be 45mm, and bond with proprietary grout supplied by preferred system manufacturer.
- Bars to be spaced at 300mm to 450mm intervals to selected areas. Following installation of bars, bed joints to be pointed in lime mortar to match specification used elsewhere.

2.6.2 De-frassing

Where frassing has occurred to stonework around windows and doors and within reveals, the same are to be brushed off using a stiff brush.

The intention is to enable improved water run-off and to enable a fuller inspection prior to pointing repairs.

2.6.3 Removal of Graffiti and Corrosion run-off

Tests to be undertaken to determine the best method of removal, and an appropriate level of cleaning. Graffiti to be removed using proprietary solvent-based graffiti removal spray rather than sand-blasting or mechanical methods.

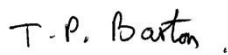
Similarly, a proprietary solvent-based rust removal solution to be used to clean stone following corrosion run off from the metal security shutters, following tests to determine the best method of removal.

The objective is to remove the graffiti and corrosion staining causing minimal impact to underlying stone.

2.6.4 Removal of Environmental soiling

Where soiling to stone has occurred following failure of rainwater goods, this will be removed using a proprietary solvent-based mould and algae removal, manually and not pressurised water.

Signed:

A handwritten signature in black ink, appearing to read 'T. P. Barton'.

T P BARTON BSc (Hons) PGDip MSc MRICS

For and on behalf of Fisher German LLP

Dated: 22nd February 2023

Appendix 1 - Photographs



Fig.1 - Missing carving to left hand side to tower door.



Fig.2 – Carving present to right hand side tower door. To be used as an historical reference for the reinstatement to the left-hand side



Fig.3 – Indent repair required adjacent to tower door opening.



Fig.4 – Contour scaling to stone around tower door opening. De-frass.



Fig.5 – General weathering and loss of section to stonework to Tower arch. De-frass



Fig.6 – General weathering and loss of section to stonework to Tower arch, contour scaling, missing pointing. De-frass and pointing of joints proposed.



Fig.7 – Contour scaling to quoin block. Proposed to de-frass.



Fig.8 – Contour scaling to stone generally. No work proposed.

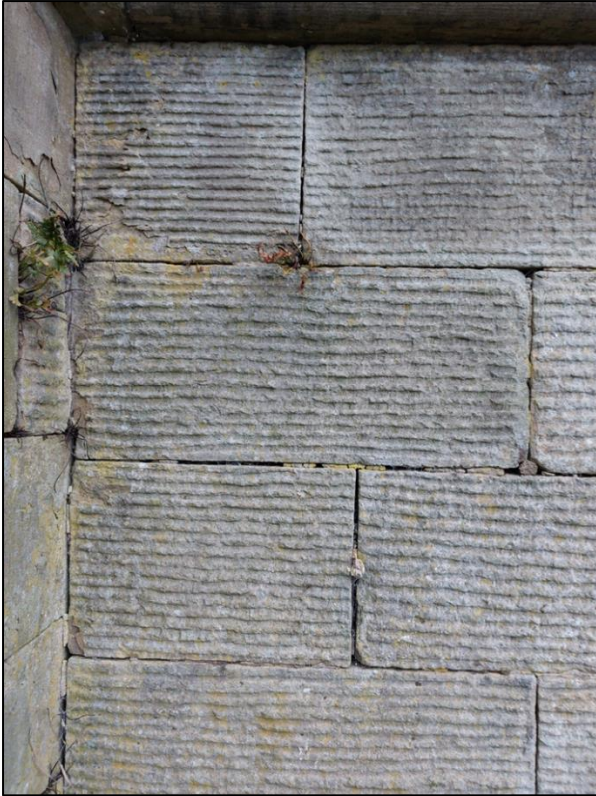


Fig.9 – Example of missing pointing. Repoint all open joints.



Fig.10 – Lost weather detail to buttress. Indent repair to string detail around buttress



Fig.11 – Loss of section to drip detail. Proposed indent repair to reinstate drip detail.



Fig.12 – Algal growth to be removed.



Fig.13 – Algal growth and graffiti to be removed



Fig.14. Contour scaling to chancel door. De-frass.



Fig.15 – Open joint above first floor window to south Nave



Fig.16 – Open joints between quoins and main wall. Deep pointing to wide joints to quoins. Helical ties if quoins are loose.



Fig.17 – Photograph to show narrow joints in blocks.



Fig.18 – Corrosion run off from metal shutters to be removed.



Fig.19 – Soiling following saturation of stone adjacent to guttering. To be manually cleaned/brushed off with water.



Fig.20 – Missing stone to string detail over windows. New indent repair proposed to reinstate string detail at head of window



Fig.21 – North Aisle



Fig.22 – North Aisle



Fig.23 – North aisle



Fig.24 – Inappropriate sealant filler to west elevation of north aisle. Proposed to remove and point.



Fig.25 – Contour scaling on isolated block to west elevation. De-frass and remove loose stone.



Fig.26 – Contour scaling on isolated quoin block to west elevation. De-frass.



Fig.27 – Missing plinth capping stone to west elevation to tower.



Fig.28 – Missing plinth capping stone to west elevation to tower.



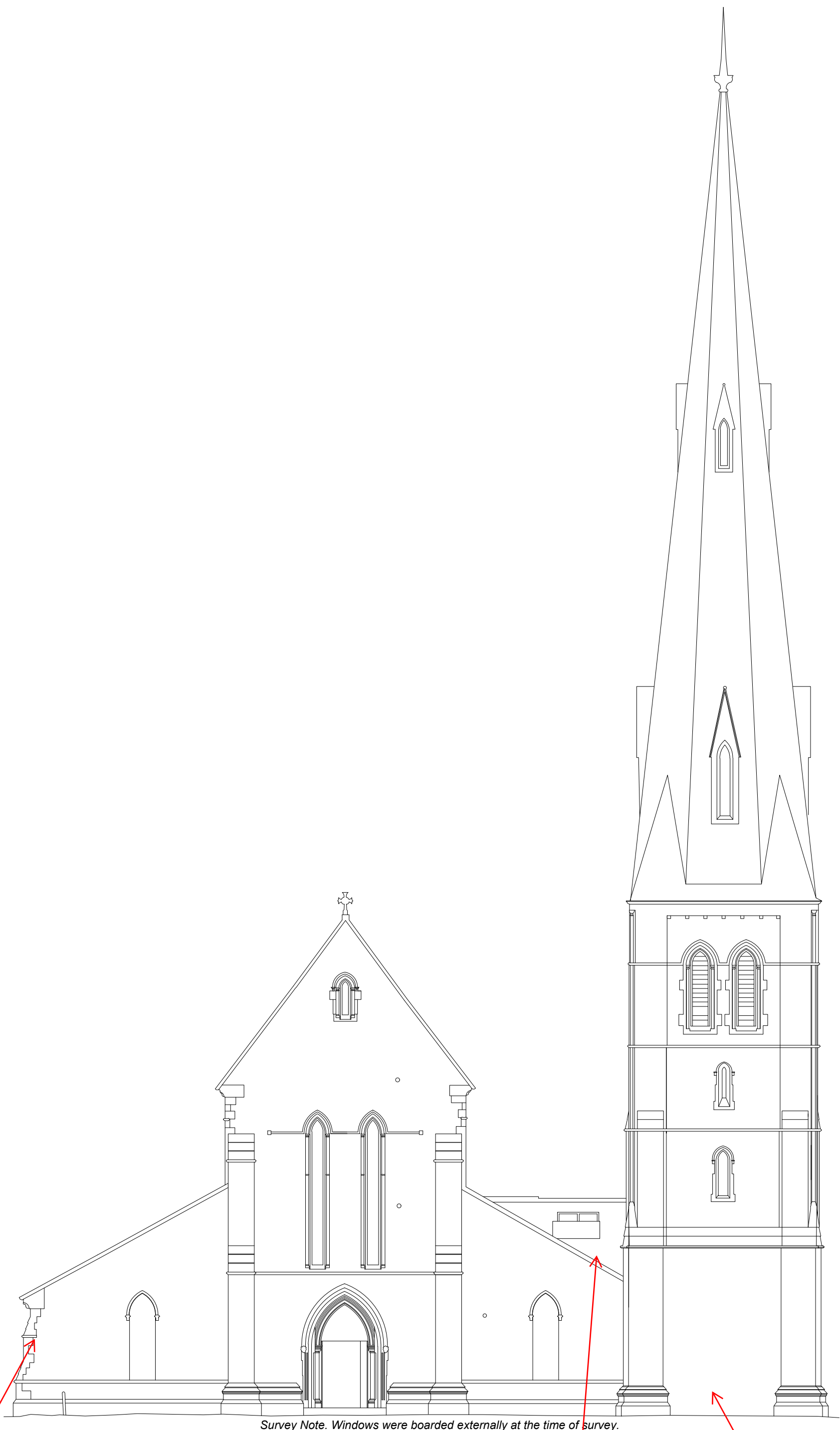
Fig.29 – Missing plinth capping stone to west elevation to tower.

Appendix 2 – Annotated elevations indicating proposed repairs.

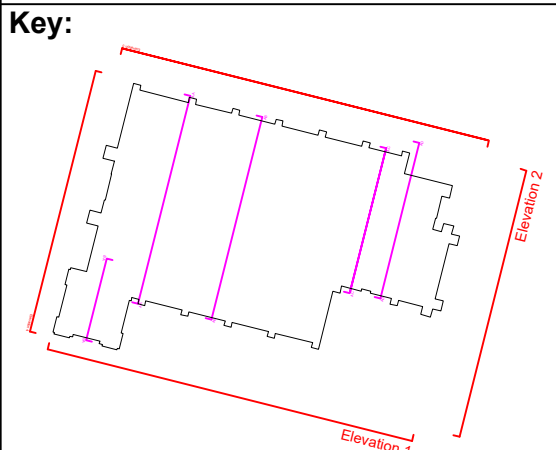
Elevations 3 & 4



Datum 195.00m
Elevation 3



Datum 195.00m
Elevation 4



Rev.	Date	Revision Details

Client: Wardle Properties Ltd

Project: St James's Church,
Ramsden Road, Wardle
OL12 9NX

Title: Elevations 3 & 4
As Existing Proposed Stone
repair annotations



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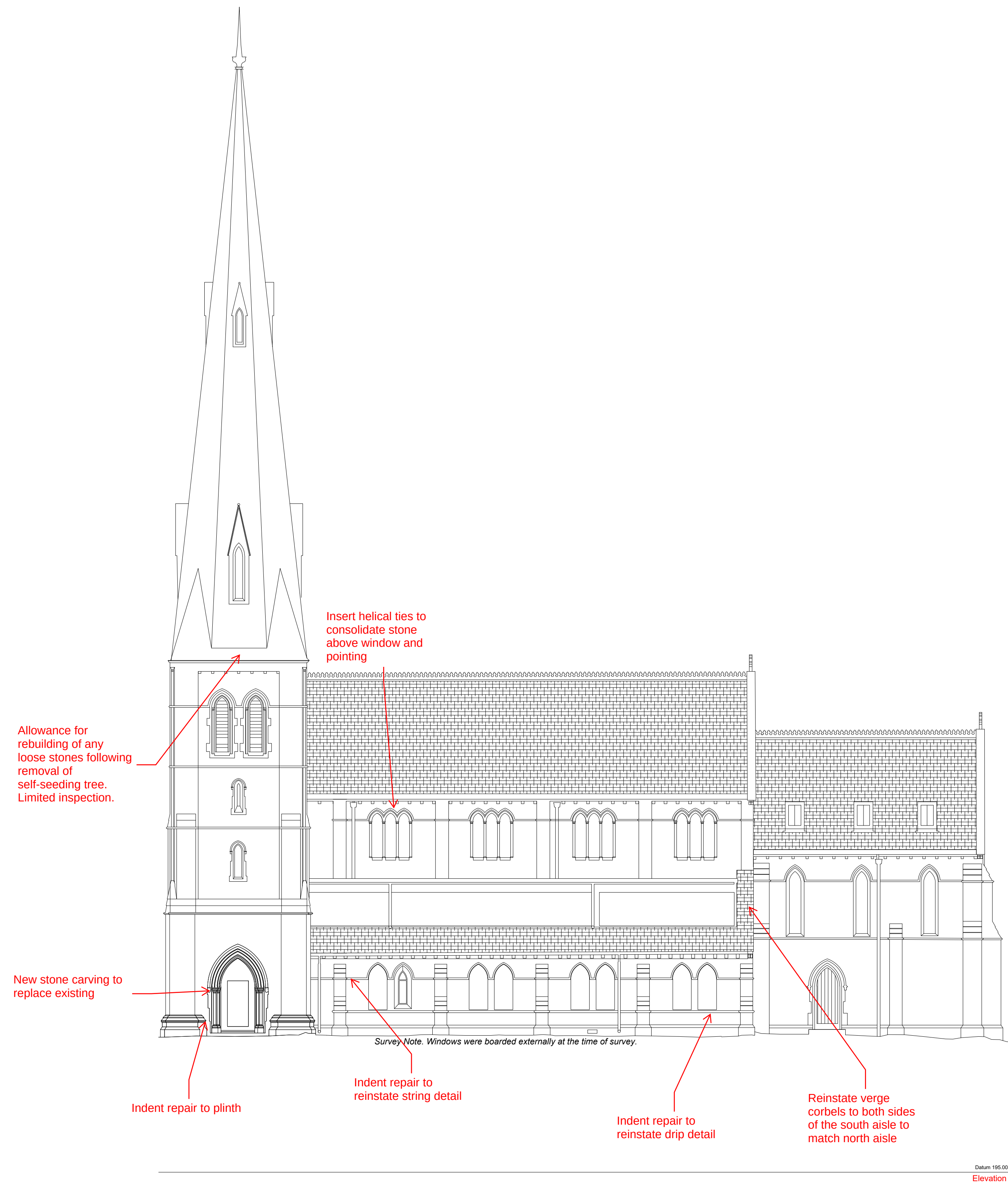
Date: May 2022

Drawn: MM/SN **Checked:** TB

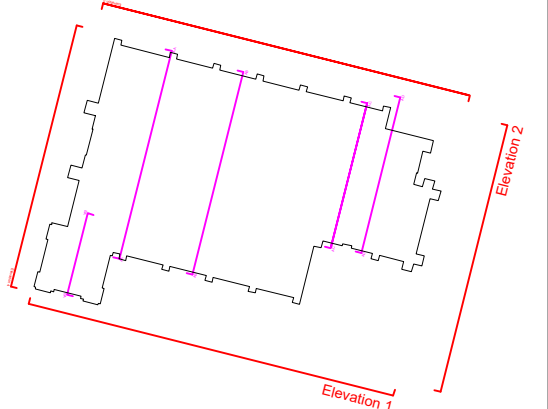
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Elevations 1 & 2



Key:



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Title: Elevations 1 & 2
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