

**CONDITION REPORT AND
CONSERVATION/REPAIR PROPOSALS
FOR
NEWCASTLE MEDIEVAL GATEHOUSE
PHASE 1 WORKS
CMF 2025**



(JOB REF 28/23)

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Nov 2023/Jan 2025

1.0 INTRODUCTION

The site was inspected on the 4th of July and again on 11th of November 2023 by Dermot Nolan, Conservation Engineer. The monument was largely free from vegetation, apart from the east side which had bushes and a tree partially obscuring the fabric. Access to the upper floor was by a roughly made and unsafe stairs. There was no access to the upper parts of the walls. The purpose of the inspections was to permit preparation of proposals for the repair and conservation of the church at the site. There are several recorded monuments at the site, and these are scheduled for inclusion in the next RMP. The church and associated graveyard are in the care and ownership of the Church of Ireland.

The gatehouse (WI019-005002) is located on an elevated site and there is an associated ringwork nearby (WI019-005004). There was also a medieval convent nearby of which no trace remains.

Details of the dating and history of the gatehouse are provided in the archaeology section of the report.

The project has been accorded the CMF reference number CMF23-2-WI003 Newcastle Castle.

Two sets of Drawings are attached. Dimensioned drawings which also display a key to the windows and openings and Working drawings which specify the proposed works. Two sketch sections of the undercroft are included with the latter. Preliminary costings for Phase 1 Conservation Works are detailed at the end of this report.

2.0 DESCRIPTION

The National Monuments description of the castle and site is as follows:

Situated at the W end of a possible ringwork (WI019-005004-) in undulating terrain; the site formed part of the medieval borough of Newcastle (WI019-005----). The remains of a four-storey rectangular gatehouse built of uncoursed rubble with traces of internal plaster. The core of the building is medieval but was considerably altered in post-medieval times. On the W façade above the entrance are three niches with concave limestone frames, probably for armorial plaques. This entrance leads into an E-W barrel-vaulted room with opposing doorways to the left and right (with chamfered granite portals and arches) giving access to narrower vaulted chambers to the N and S. A smaller N-S chamber extends from the NE angle of the building and appears to have been largely subterranean. A linear stairwell rises from the N wall of the main ground-floor chamber leading to a room set between the ground and first-floor levels. This has a large fireplace towards the NW angle. In the E end of the N wall is a window ope with a floor-level chute below. The main first-floor chamber (dims. 6m E-W; 5.5m N-S) is supported by the entrance vault. It has two opposing windows in the E and W walls and a brick fireplace in the SE angle. No partition between this and the previous room survives, nor does the original means of access. Access to a S chamber at this level was

via a doorway in the W end of the S wall. Niches immediately above the window level were used to carry the floor supports of the second floor. This second floor is also divided by the wall on the S side from another room to the S. (O'Flanagan 1928, 73-4; Orpen 1908, 126-40; Simpson 1994, 211-12) The above description is derived from the published 'Archaeological Inventory of County Wicklow' (Dublin: Stationery Office, 1997). In certain instances, the entries have been revised and updated in the light of recent research. Date of upload/revision: 17 December 2008

A castle was built at the site during Norman times. The present structure is a substantial gate house, and its date of origin is somewhat obscure. Extensive alterations have been carried out over time. There is considerable documentary evidence of persons associated with the castle but little or no information about the history of the building itself. The gate house stands isolated on an elevated site in farmland and there are no associated above ground features or structures. It is represented on an estate map dated 1728 as a tri-partite structure of four stories (see the history section of this report). This is consistent with the present layout except that the southern part of the structure has been demolished. The building has many typical features of a medieval gatehouse. It has a through passageway with high arched ceiling suitable for the passage of loaded wagons, with service rooms on either side (those on the south side now demolished) and accommodation in the floors overhead. Access to the overhead areas is by a crudely constructed stone stairs from an opening in the north side of the central passageway. Another opening near the west end of the passage gives access to a long narrow vaulted undercroft. The undercroft has a window at the front (west) and a partially blocked former door opening at the back (east). The room widens near the rear into a vaulted chamber which gives access to the exterior through a wide arched opening in the north wall. A substantial chimney rises through the front of the undercroft to the top of the north wall. A blocked door opposite the access to the undercroft formerly opened into a similar undercroft on the south side (now demolished). There is remnant evidence of a flue on the inside of the south wall and of a possible brick chimney in the southeast corner.

The extant walls, arches and main chimney are very solidly built of stone masonry which appears to be composed of local 'Bray series' metamorphic slate deposits. The mortar is generally quite strong and there are few structural defects which might have been caused by vegetation growing within the fabric. The good condition of the mortar has prevented this from happening.

There are no visible extant copings, capping stones, window or door reveals or heads, battlements, machicolations, garderobe shuts or any other special features although such may be found when the ground vegetation is cleared. The walls were originally plastered inside and out and quite a lot of plaster remains although this is patchy in many locations.

The original building appears to have been a medieval defensive structure which typically would have had narrow windows or loops with stone architraves and lintols, heavily protected entrances, murder holes etc. It is quite clear that a major project of modernisation was undertaken here in more peaceful times. Very large interventions were made – possibly in the

seventeenth century. The windows were considerably enlarged and provided with chamfered brick reveals and timber heads. A brick chimney appears to have been inserted in the southeast corner. The upper part of the high arched entrance on the west elevation was filled in by masonry supported on a timber beam. Other openings were probably blocked. The north undercroft was untouched. Other interventions appear to be unrelated to this campaign – the blocked door in the east wall of the undercroft may have been taken out of use previously and the extant stairs, although it is an insertion, appears too crude to have formed part of the works at this time. It is likely that the access to the upper floors was in the now demolished south end.

On the first edition O S map the footprint appears to include the southern part, and this was apparently subsequently demolished during the nineteenth century because it is absent on the first 25" O S map. This map, however, shows a small rectangular structure (now gone) at the south west corner of the reduced building which may have been a remnant of the original larger structure.

3.0 DEFECTS NOTED

The main causes of damage to this structure are the complete decay of timber lintols installed in the late medieval period and extensive robbing of masonry material. Most of the damage is at the windows and at the base of the walls. The decay of the timber elements has endangered the masonry above the windows and in some cases this has fallen. In all cases the masonry above the windows is in an extremely vulnerable condition and it is only a matter of time before it collapses. Paradoxically, the interventions which enlarged the windows also created many re-entrant corners (at sills, reveals etc) which facilitate breaking out stone for robbing. The mortar used in the refurbishments may also have been weaker than the original mortar. Stone has been removed from many of the interior sills and reveals. Stone has also been removed from the wall bases, especially at corners (south-east, north-east, north-west). There has also been some disintegration of masonry at the bases of the walls due to water action and intrusive vegetation. In some areas facing stones have become dislodged from the wall. The stub walls on the east and west left when the demolition of the southern part took place are in poor condition with overhanging and loose masonry and exposed mortar joints.

4.0 PROPOSED REPAIRS

Approaches commonly used to repair historic masonry structures include underpinning, grouting, pointing, and rebuilding. Rebuilding must be minimised. Good conservation practice normally requires that materials employed in the works should be compatible with the original materials where possible. Samples of the existing mortar shall be taken, and repair mortar will be designed to be compatible with the original as far as possible. Outline proposals and specifications provided here should be reviewed and altered as necessary

following further investigation of remnant mortar and in-situ trials when the work begins.

Where re-pointing and mortaring

is proposed, the general specification for the mortar should be lime based using lime putty or NHL 2 in a ratio approximately 1:3. Detail design of the mortar will depend on the analysis of the existing mortar.

Remaining vegetation on all parts of the wall should be sprayed with an approved biocide or trimmed as appropriate and eco-plugs inserted in stumps. This work to be specified by the ecologist. (This should be repeated once a year as part of a maintenance program).

In general, localised grouting (with lime-based grout) and pointing and filling (with lime mortar) should be carried out as necessary in selected areas of the walls. All walls should be capped with lime mortar when the vegetation has been removed.

There are fallen stones within and around the building. Some of these may be cut stones or grave goods of archaeological interest. The vegetation in the vicinity of the building (including grass) should be cleared to permit examination of erratic and fallen stones, and to recover stones for use in the repair.

All works on the site should be carefully planned and an appropriate route for access for operatives and movement of materials should be identified. The route should be chosen to minimize damage to any possible archaeological evidence remaining and should be marked and surface protected. Similarly, a working area in or beside the castle should be identified and protected.

All walls shall be re-pointed as necessary on both faces, holes due to dislodged stones shall be filled and all wall tops shall be provided with a lime capping.

Vegetation clearance

Ecological advice should be obtained before any vegetation is removed. Prior to commencing conservation works, all vegetation should be removed from the masonry and ground vegetation should be cleared from a strip ca 1.5 metres around the external perimeter of the castle. Subject to the ecological advice removal of vegetation will require spraying with appropriate biocide, trimming and cutting vegetation and possible insertion of eco plugs in remaining roots.

Retrieving and sorting stone

When the vegetation is removed it is anticipated that fallen stones will be exposed and may be retrieved for use in the works. Cut stones from former building features may be retrieved. Therefore, the archaeologist should be present when the stones are being sorted so that archaeologically significant materials can be identified and set aside.

Sourcing stone

Imported stone for use in the repair works shall be sourced to match the original and shall be approved by the conservation consultant before use on site.

Repair of windows/openings

The building is in a very vulnerable state because of the complete failure of the timber lintols which were probably installed in the seventeenth century. The replacement of stone materials with timber was unfortunate because once the building became unroofed the lintols would have rotted. The destroyed lintols must be replaced otherwise the structure will gradually collapse. There are four alternative strategies for replacement namely:

- a. Timber
- b. Stone arching
- c. Blocking up the windows
- d. Concrete or Steel

Timber is an unsuitable material for use in an unroofed building. Even if treated, timber becomes vulnerable within quite a short time.

The construction of stone arches is not a realistic option because it would involve the wholesale dismantling of the masonry above the openings.

Blocking the openings would entirely change the character of the building and is not recommended.

Use of modern materials is usually avoided in repair of historic structures. Traditional materials are more compatible both for aesthetic reasons and more importantly because of physical and chemical interaction with the base material. However, in this case it is considered that there is no alternative to the use of modern materials. It is proposed that most of the openings will be provided with lintols of pre-cast concrete which will be set in lime mortar. In the case of the lintols over the passage entrances on the west and east walls (E2 and W1), where the loads and spans are excessive, it is proposed to use cast-in-situ reinforced concrete beams. In the case of the third-floor window (E5) on the east elevation, it is proposed to use stainless steel I-beams because of the excessive span. In all other cases pre-cast concrete lintols will be used as this is a more or less reversible intervention when they are set in lime mortar.

5.0 SCHEDULE OF WORKS

The Schedule of Works should be read in conjunction with the accompanying photographs and drawings.

1. Identify and mark out a route from the road for passage of personnel, equipment and materials. Protect the surface with boarding or appropriate sheeting.
2. Identify, mark out and protect a work and storage area in a suitable location beside the castle. The surface should be protected with boarding or suitable sheeting.
3. Treat with approved biocide and remove all vegetation on the wall faces and tops.
4. Clear all ground vegetation within the walls and in a strip 2m wide around the exterior. Expose fallen rubble for assessment and recovery. Note that the ground inside and in the general vicinity of the castle has become raised to some extent over the years.

5. WEST WALL

The works to openings W1-W8 are specified on drawing no 2, together with masonry repairs, lime capping, plastering and pointing.

6. NORTH WALL

The works to openings N1-N4 are specified on drawing no 5, together with masonry repairs, lime capping, plastering, pointing and vegetation removal.

7. EAST WALL

The works to openings E1-E4 are specified on drawing no 4, together with masonry repairs, lime capping, plastering, pointing and vegetation removal.

8. SOUTH WALL

The works to openings S1-S3 are specified on drawing no 3, together with masonry repairs, lime capping, plastering, pointing and vegetation removal.

9. UNDER CROFT

The works to the under croft are specified on drawing number 1 and on Sketch Sections 'A' and 'B'

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PHOTOGRAPHS

WEST ELEVATION



1. West elevation general



2. West elevation upper



3. West elevation Window W2 (external)



4. West elevation Window W7 (external)



5. West elevation Window W5 (external)



6. West elevation Windows W5 and W7 (internal)



7. West elevation entrance (Opening no. W1)



8. West elevation infill above entrance door (Note armorial plaques)

NORTH ELEVATION



9. North elevation general



10. North elevation interior above first floor



11. North elevation Window N4 detail



12. North elevation Window N3



13. North elevation Window N2



14. North elevation Opening N1



15. North elevation – damage at north-west corner



16. North elevation first floor - damaged chimney support wall at window N2

EAST ELEVATION



17. East elevation general view



18. East elevation – damaged masonry at north-east corner



19. East elevation damaged masonry above blocked former entrance – Opening E1



20. East elevation – entrance passageway, Opening E2



21. East elevation – Openings E4 and E3 (head)



22. East elevation –Opening E5



23. East elevation – damaged masonry between Openings E5 and E6



24. East elevation interior – Opening E3



25. East elevation interior – Opening E4



26. East elevation interior – south end (note block of brick masonry at south-east corner)

SOUTH ELEVATION



27. South elevation – general view



28. South elevation exterior – blocked door Opening S1



29. South elevation exterior – Windows S2 and S3 and stub of demolished west wall



30. South elevation exterior – detail of Window S3



31. South wall exterior – stub of demolished east wall



32. South wall interior – east end, note brickwork and flue.



33. South wall interior – west end, Windows W2 and W3

UNDERCROFT INTERIOR



34. Entrance passage – south wall



35. Entrance passage – south wall, pointed arch at east end



36. Entrance passage – south wall, circular arch at west end (note blocked door)



37. Entrance passage – south wall, damaged pier between the two arches



38. Entrance passage (looking west)



39. Entrance passage north wall – note hole in wall at west end, destroyed pier between arches and degraded masonry at wall base at the east end.



40. Rough stairs to first floor



41. West wall of undercroft (Opening W2)



42. North wall of the undercroft, west end



43. Undercroft looking towards north-east



44. Undercroft – arched opening at east end looking north (Opening N1)

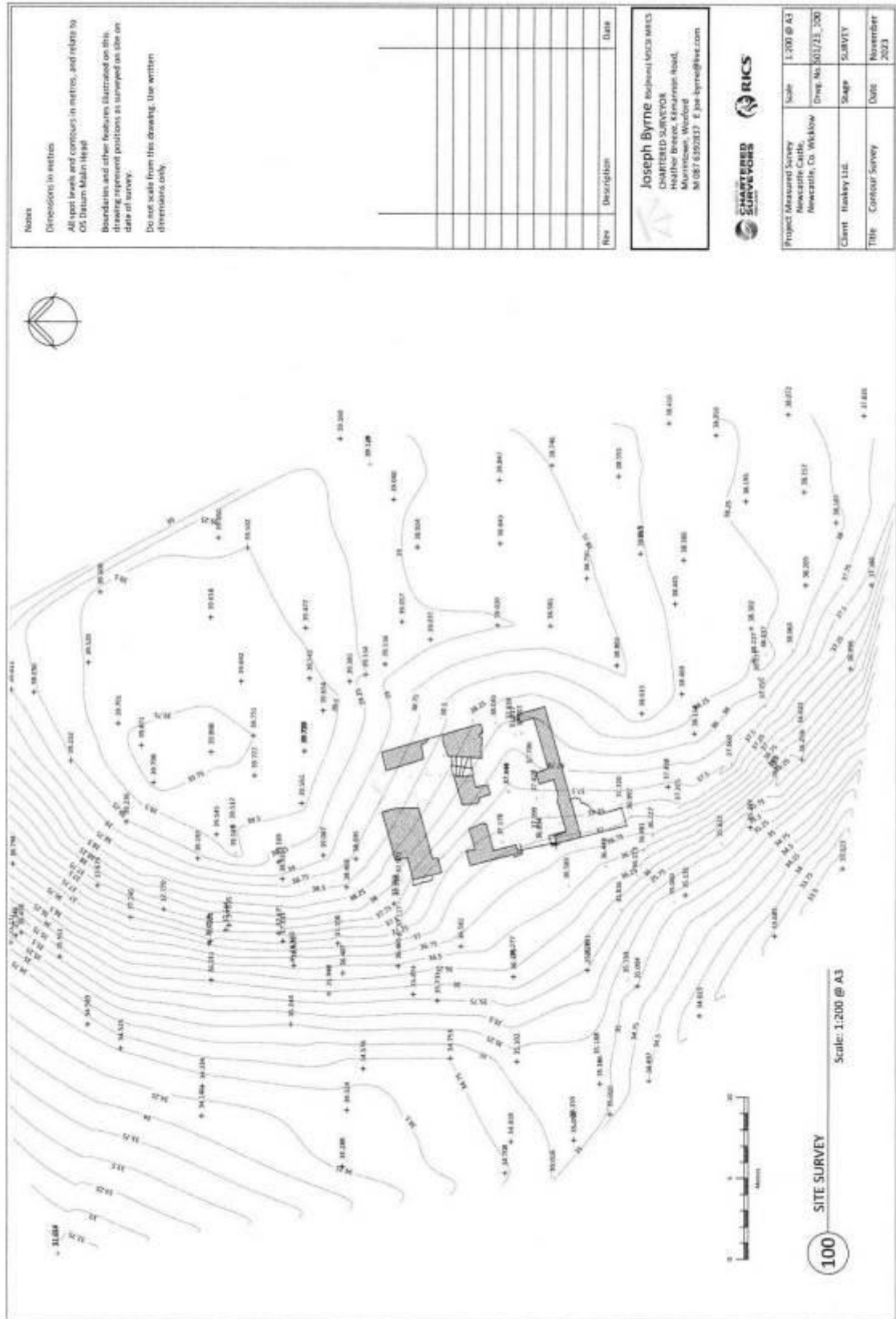


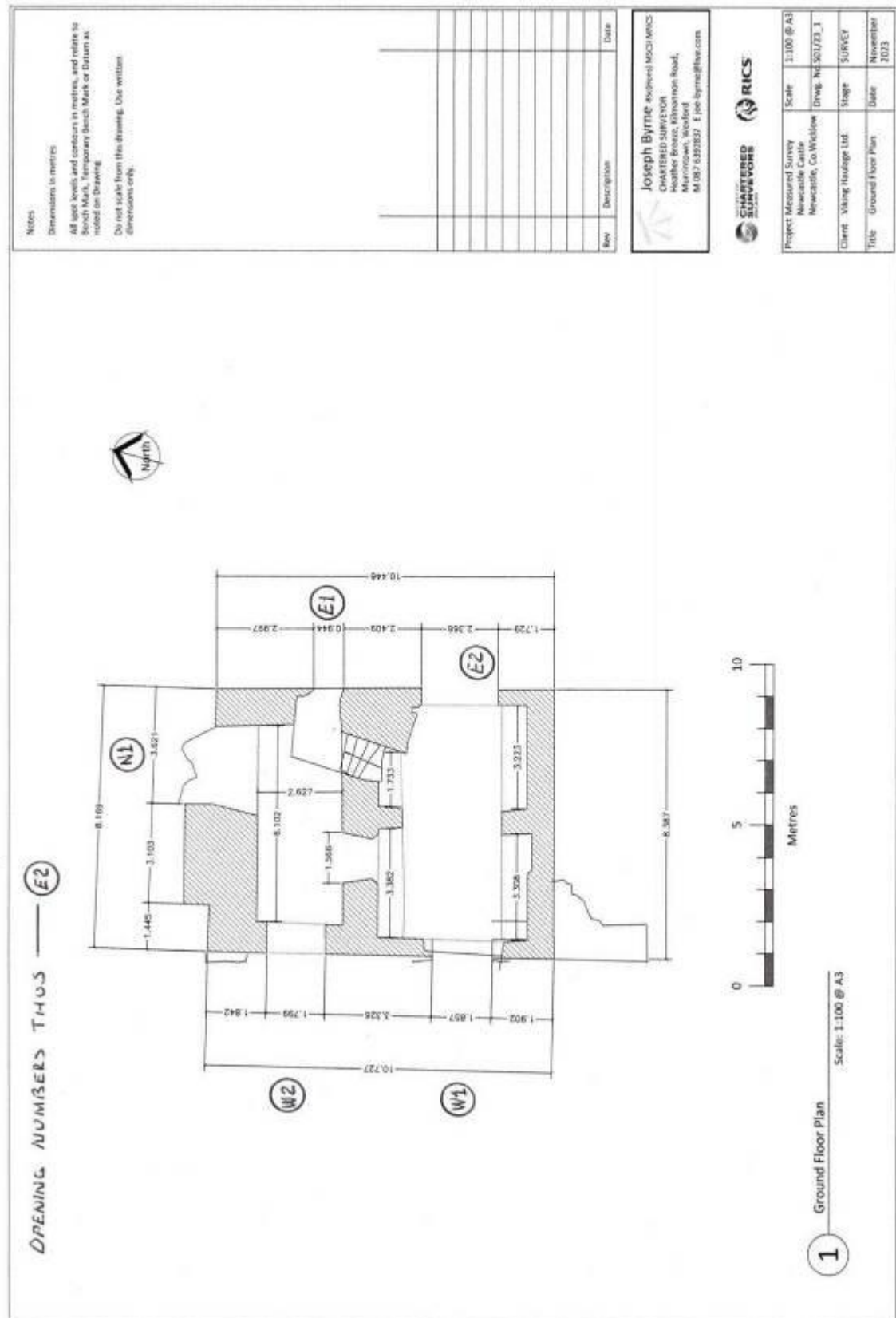
45. Undercroft looking east – note poor arching support to the stairs



45. Undercroft south wall – note poor arching support to the stairs

DIMENSIONED DRAWINGS







Do not scale from this drawing.
Use written dimensions only.



Scale: 1:100 @ A3

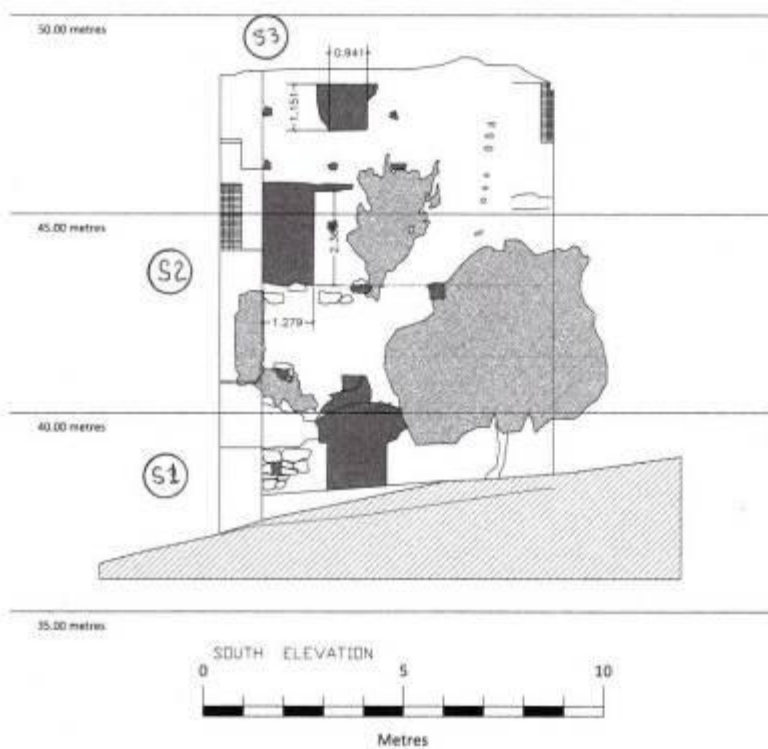
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Measured Survey Newcastle Castle Newcastle, Co. Wicklow	Draw. No	501/23_2
Client: Haskey Ltd.	Stage	SURVEY
Title: West Division	Date	November 2023

OPENING NUMBERS THUS — (52)

Dimensions in metres.

All levels and contours in metres, and relate to
Ordnance Survey Datum Malin Head

Do not scale from this drawing.
Use written dimensions only.

[illegible]

South Elevation

Scale: 1:100 @ A3

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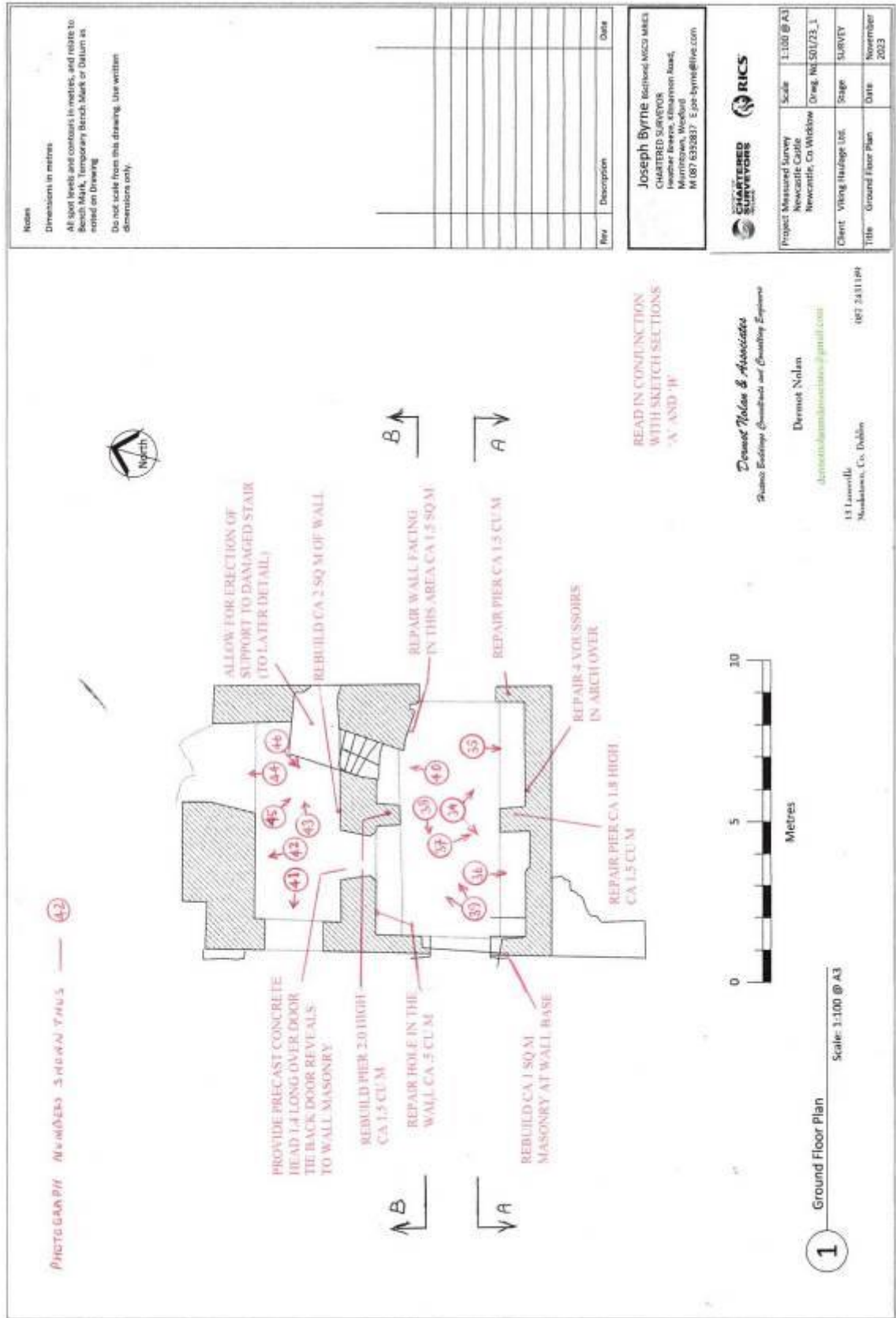


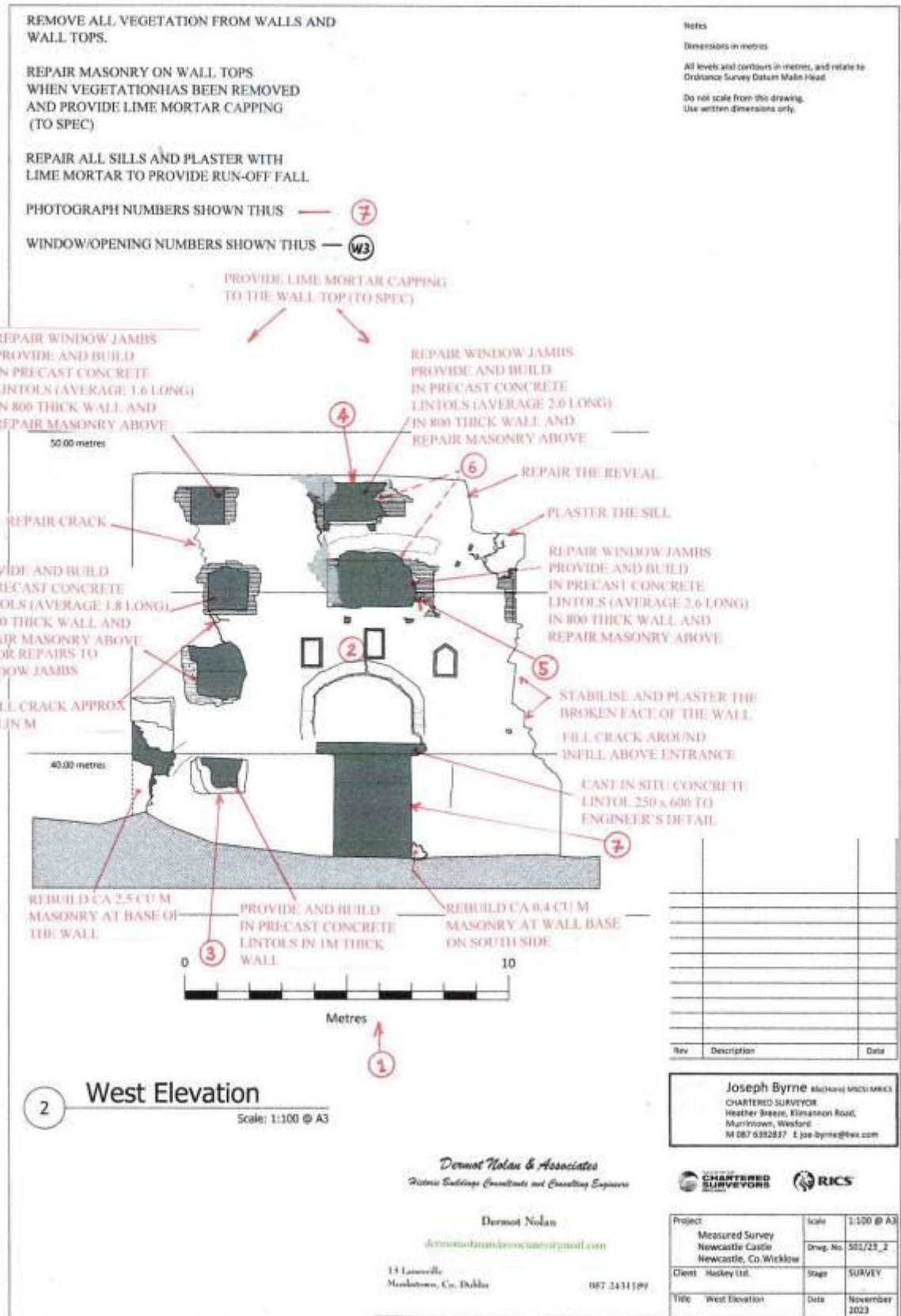
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		Dwg. No	SC1/23_3
Client	Hawley Ltd.	Stage	SURVEY
Title	South Elevation	Date	November 2023

Project	Scale	1:100 @ A3
Measured Survey Newcastle Castle Newcastle, Co Wicklow	Dwg. No.	501/23_4
Client: Haskey Ltd.	Stage	SURVEY
Title: East Elevation	Date:	November 2023



WORKING DRAWINGS





REMOVE ALL VEGETATION FROM WALLS AND WALL TOPS.

REPAIR MASONRY ON WALL TOPS WHEN VEGETATION HAS BEEN REMOVED AND PROVIDE LIME MORTAR CAPPING (TO SPEC)

REPAIR ALL SILLS AND PLASTER WITH LIME MORTAR TO PROVIDE RUN-OFF FALL.

PHOTOGRAPH NUMBERS SHOWN THUS

(20)

WINDOW/OPENING NUMBERS SHOWN THUS

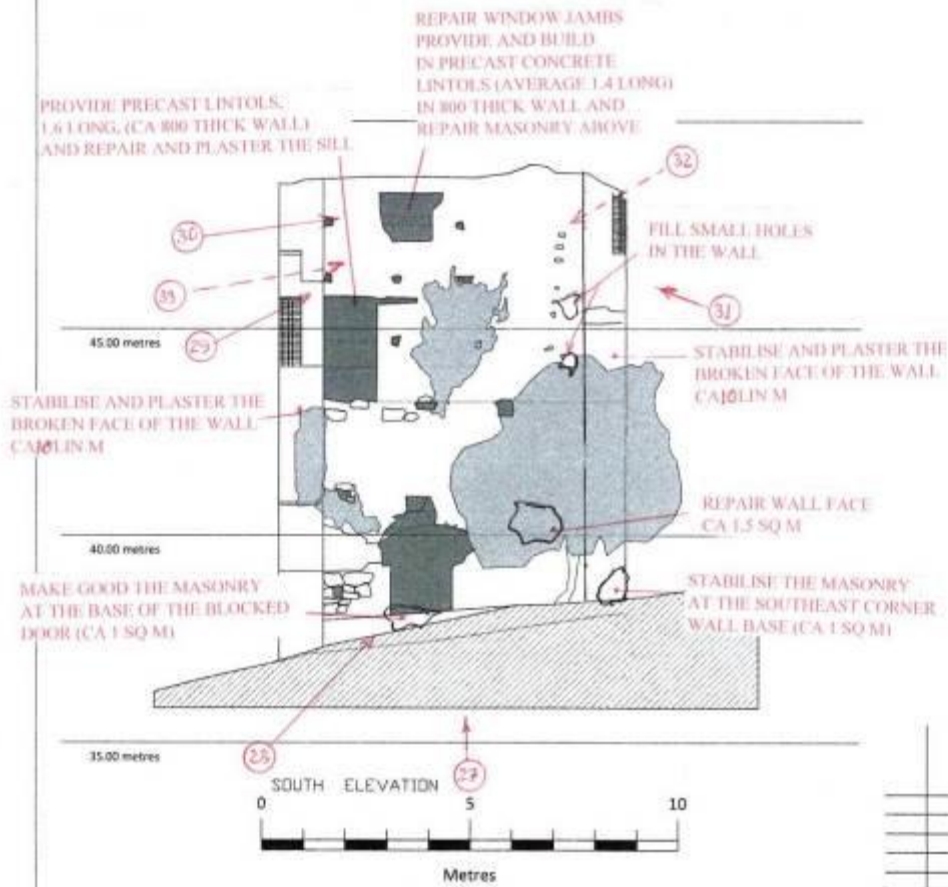
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Notes

Dimensions in metres

All levels and contours in metres, and relate to Ordnance Survey Datum Mean High

Do not scale from this drawing. Use written dimensions only.



3

South Elevation

Scale: 1:100 @ A3

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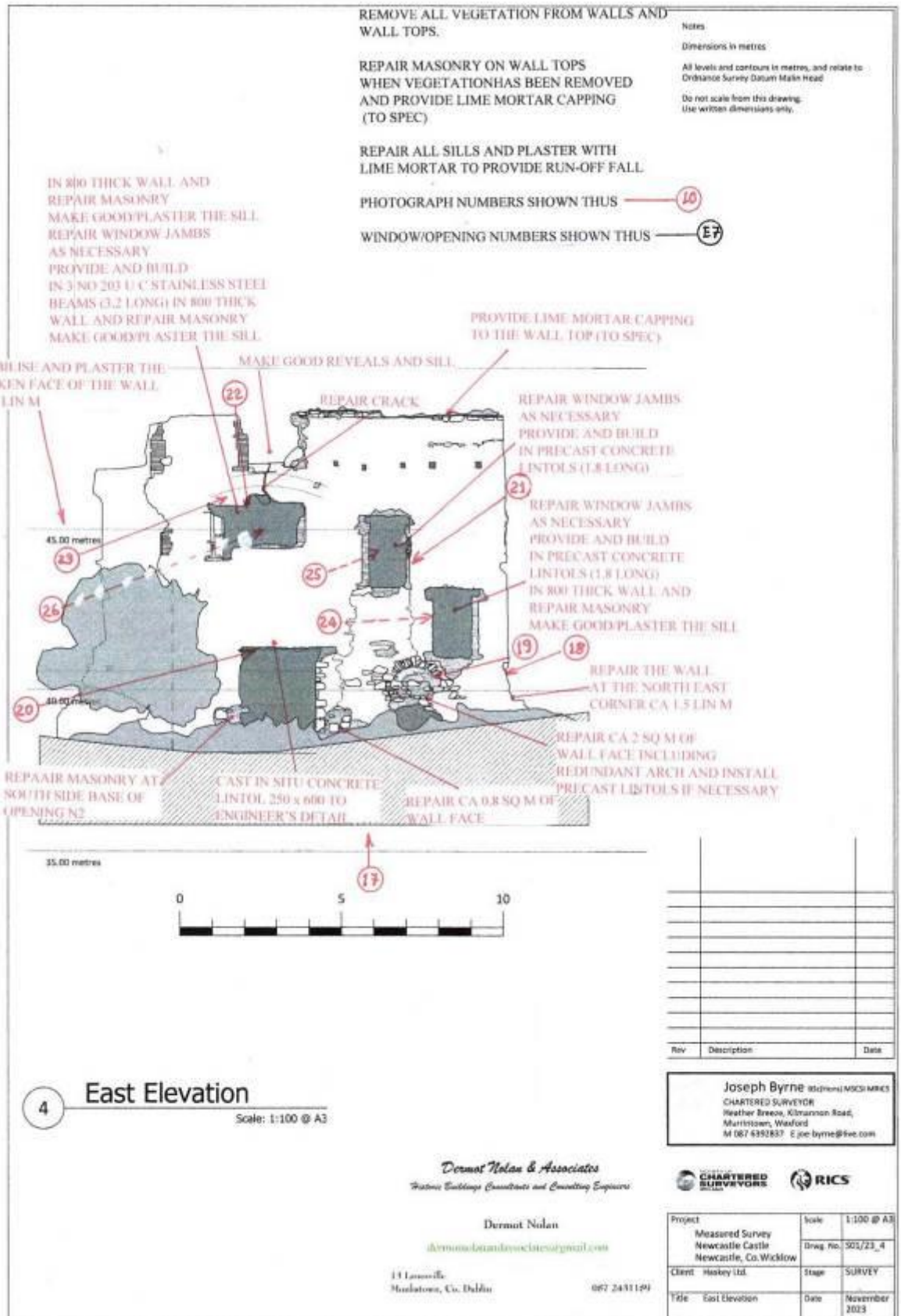
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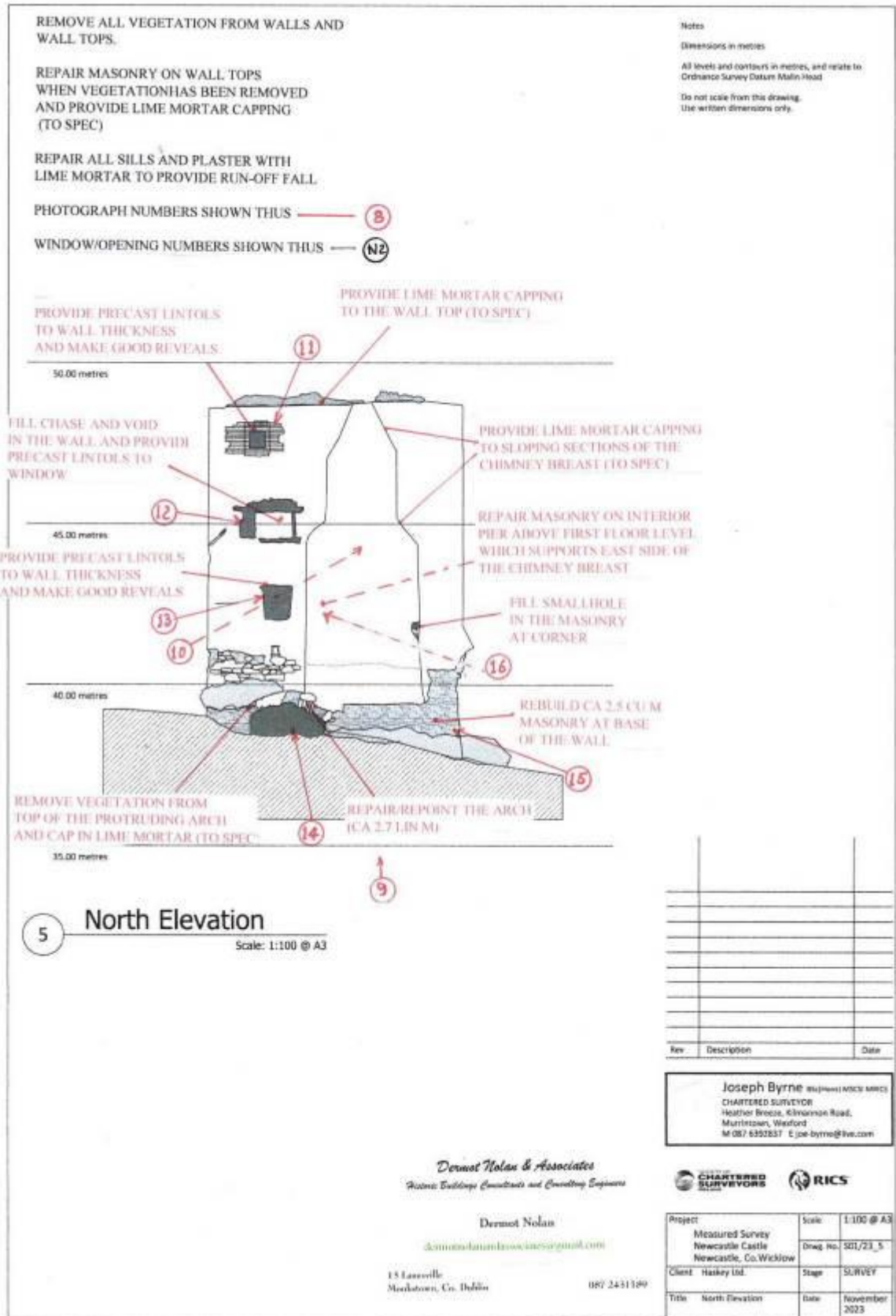
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CHARTERED SURVEYORS

RICS

Project	Measured Survey Newcastle Castle Newcastle, Co. Wicklow	Scale	1:100 @ A3
Client	Haikay Ltd.	Drawg. No.	S01/23_3
Title	South Elevation	Stage	SURVEY
		Date	November 2023





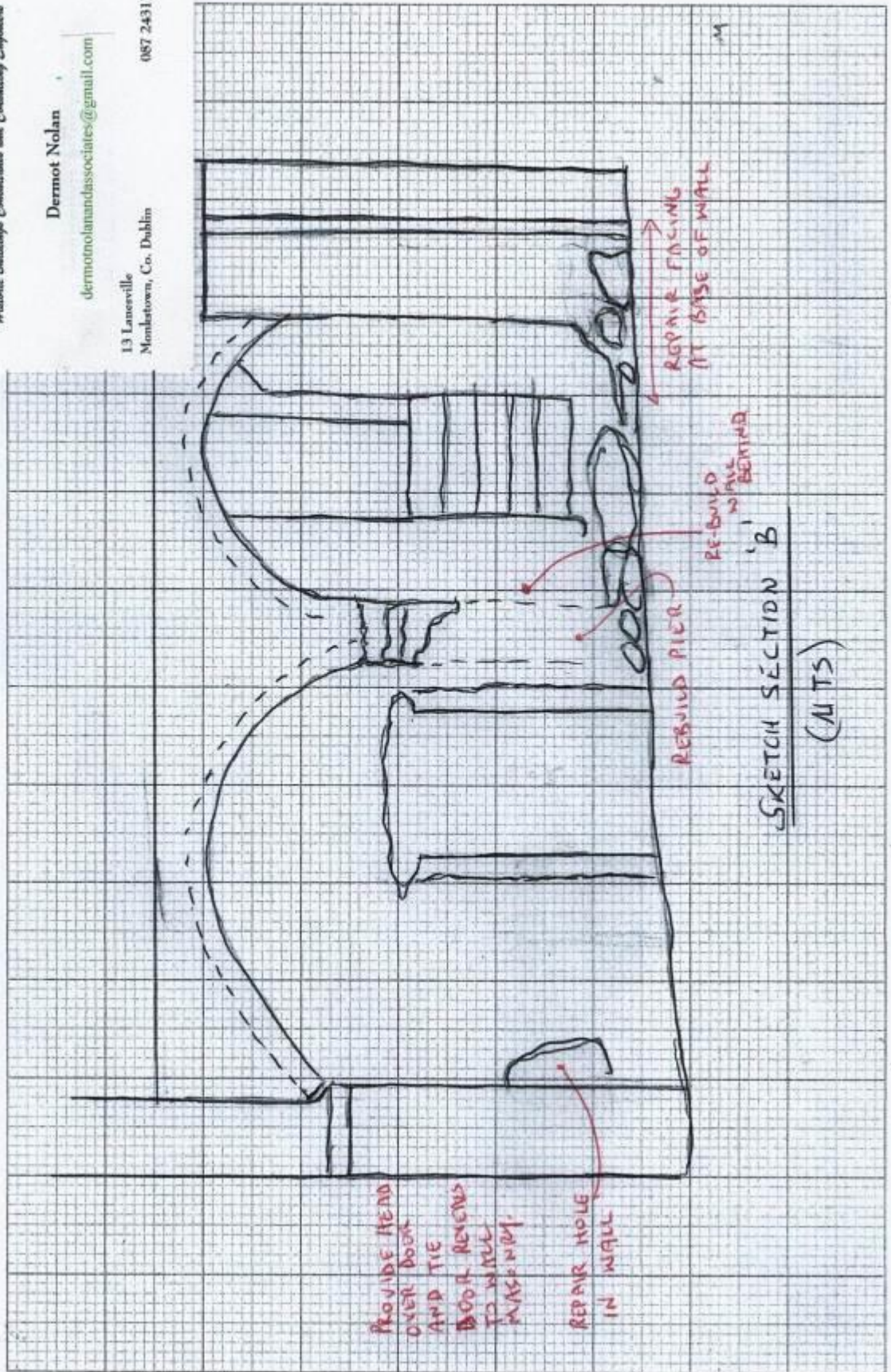
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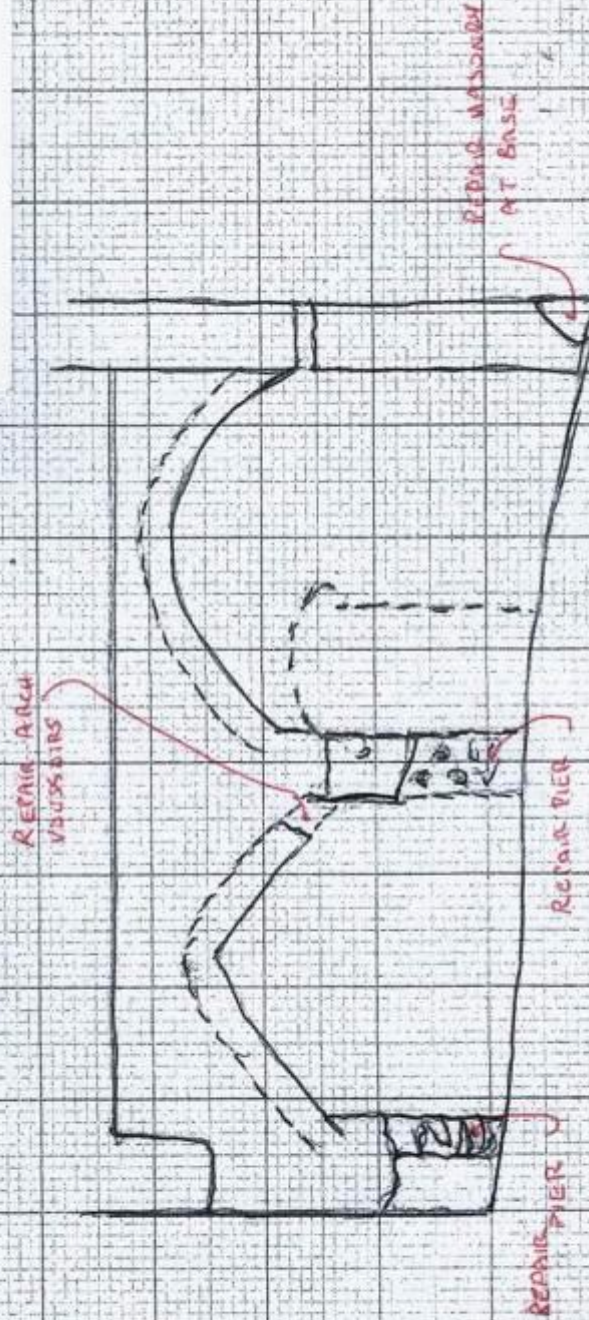
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RETAIN ARCH
 VAUSSURES



SKETCH SECTION A

(N.T.S.)

