



REPORT

On

**ACRES FOLLY,
TULLAMORE
CO. OFFALY**

For

OFFALY COUNTY COUNCIL

Prepared by: Christopher Southgate, FIEI

December 2018

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REPORT

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1.0 Scope

We were instructed by Rachel McKenna, Conservation Officer, Offaly Co Council on behalf of the client, Offaly County Council to advise on strategy for the repair of *Acres Folly* together with recommendations for providing access for the general public. A methodology and specification together with drawings is provided.

The property is located adjacent to a public park in Tullamore and the local authority are proposing to upgrade the existing adjoining car park to public realm around the folly. These works are not covered by this survey which addresses the conservation of the fabric of the folly and the provision of staircases for public access.

The inspection was visual only and in the absence of physical works to the top levels we were not able to exactly predict the condition of the stonework. However, we made use of a drone survey (National Monuments 2018) and the current proposal offers the most likely course of action based on visual inspection and the drone survey.

Inspection of the masonry showed the majority of the structure to be in reasonable condition, with only minor vegetation and Ivy establishment. One section of coping stone is missing, and a section of the ground floor vaulting requires replacement. Replacement of timber lintels is required with durable precast concrete and appropriate external grilles and doors are required for security.

The staircase has been designed for semi-public access as shown on the drawings and is limited to around 20 people at any one time (see Appendix A).

The folly is in an important location in the Park in Tullamore and offers the opportunity of linking into a public realm scheme as the centre of events. The walls, after being whitewashed, could be used to project film or tourism information.



The folly will be part of a public realm scheme in the future and the current proposals are seen as the first phase of a plan to open the folly to the public. The use of a canopy is optional, but offers versatile protection from the weather and references the conical turrets of some follies.

Thus, the current proposals could be seen as a longer-term plan for the whole area of parkland development.

Levels at the rear of the property are quite steep and it is foreseen that in the first stage of works this area would be cordoned off with limited access for maintenance only. Further development by the local authority to the rear can occur independently of the current proposals.

2.0 Background

It is outside the scope of this report to give a historical background since the folly is described in '*Flights of Fancy Follies, Families and Demesnes in Offaly*' (R. Mc Kenna, Offaly County Council, 2017).

A survey was also carried out by James Howley in 2013, who was commissioned by Offaly County Council in 2013 and a more detailed survey to develop staircase options was carried out by Southgate Associates. These drawings are included in the appendix.

We also visited the council store where a number of masonry limestone staircase elements original to Acres are suitable for the reconstruction of the stone external steps. These are conceived as being used in a manner which is non-structural so that they are supported on blockwork rising walls on foundations, mass concrete infill or a suspended concrete landing slab.

A new staircase is proposed, to be constructed in galvanised open treads and landings whereas the handrails strings and supporting steelwork are conceived as painted steel.



The proposals see the external staircase as **restoration** in a similar manner to the original staircase whilst the internal staircase follows a policy of **intervention** in a modern manner distinct from the original.

3.0 Condition of the building

General

The general condition of the folly is good with a well-prepared mortar and stonework substantially intact. Large sections of the external render are also in good condition.

Ivy establishment and condition of parapets

	
<p>Minor Ivy growth is evident at the top of the structure and there is a capping missing from the South West elevation. Iron to be removed (Source Drone survey: National Monuments 2018)</p>	<p>Ivy establishment at base level to be treated and ivy removed from the wall as shown in Appendix B</p>

Recommendations

- Ivy should be treated in accordance with the methodology and specification in Appendix B
- A new stone capping is required for the South West elevation parapet wall as shown below. Existing perpendicular joints should be re-pointed in 1 :2.5 NHL 3.5 lime sand mortar.
- It is suggested that the old iron handrails at parapet level are carefully removed.

Exterior condition

	
Looking East	Looking East at lower level



North East elevation



South East elevation



South East elevation upper









South West ladder access where
external stairs is missing



Recommendations

- Exterior plaster is in good condition and should be cleaned with a hot steam conservation cleaning system such as 'Doff' and then treated with 3 coats of limewash
- New grilles should be provided for the windows
- New doors should be provided to the South West elevation at ground and basement level. These could be hardwood doors or metal gates, depending on budget and security considerations.
- A new external staircase in stone in the style of the original staircase and scar should be provided

Internal issues-Basement

	
Basement vault to NW. Clear out debris	Basement vault to SE. clear out debris
	
Masonry to walls in good condition	Masonry to vault in generally good condition towards entrance on SW wall. Entrance to be opened with new hardwood door for access for maintenance only
	
Top joint of arch requires some structural pointing	View of missing vaulted masonry from the ground floor to be replaced in brickwork /stonework in NHL3.5 lime mortar

Ground floor

	
<p>Once vault restored, the ground floor is to have a gravel finish with weep holes to basement level. Slate hearth stone to be provided</p>	<p>Slate threshold to be provided. Remainder of ground floor to be finished in gravel</p>



Lintels to be replaced over window openings and at fireplace, Masonry to be built up to original profiles. Minor vegetation treatment internally.

Recommendations

- Maintain plaster finishes
- Remove any timber elements and replace lintels and build up masonry to windows doors and fireplace in precast concrete to avoid deterioration
- New gravel floor on Terram 1000
- Weep holes to drain water to basement level
- New hardwood door and frame for security. Slate to threshold and fireplace

Upper levels

	
<p>Timber joists to be removed</p>	<p>Lime plaster to remain, no treatment proposed</p>
	
<p>Timber lintels to be replaced in concrete</p>	<p>Original scar of staircase to be left</p>



General view of first floor level. Ivy and vegetation -minor treatment. Timber joists to be removed lintels to be replaced in precast concrete. Plaster to remain unless unstable.

Recommendations

- Minimum work to plaster finishes
- Joists to be removed
- Lintels to be replaced and masonry built up in fireplaces door and window openings. Precast concrete recommended for durability
- Minor Ivy and vegetation treatment

Chimney stacks



These appear in reasonable condition and allowance made for patch pointing only (Source Drone survey: National Monuments 2018)

4.0 Recommendations

4.1 Ivy Growth

All ivy should be treated with 'Root Out' in accordance with the method statement. A brushwood killer should be applied in accordance with manufacturers recommendations during growing season. Once the foliage has absorbed the chemical, visible signs of the fact that the treatment is successful should be noticed and it will then be possible to cut back all the ivy growth down to the root structure and treat the roots. This involves roots embedded in masonry and those embedded in the ground. In the case of Acres, the main Ivy establishment is at the ground level and it should be possible to remove Ivy from the building quite easily. Once the root treatment has been completed any minor patch pointing can be completed.

The following is a proposed schedule of work for the repairs;-

- 1 Provide scaffolding externally and internally
- 2 Clear out basement, repair Vault and repointing to basement
- 3 Replace timber lintels with precast concrete and rebuild where necessary
- 4 Repair parapets including repointing and replace missing lime stone
- 5 Provide 2 no external hardwood doors and frames complete
- 6 Provide external grills to window openings
- 7 Provide gravel and paving finish to ground floor with weep holes
- 8 Provide external staircase using reclaimed limestone
- 9 Foundations to external stair
- 10 Blockwork and roughcast render to external stair
- 11 Concrete slab and concrete infill to external stair
- 12 Traditional steel handrail to external stair
- 13 New internal staircase complete as shown on drawings by specialist
Designed and fabricated to BS5950
- 14 Clean exterior with Doff and limewash
- 15 Clean up and make good externally

5.0 Conclusion

This report discusses a methodology for simple repairs of the masonry of the folly which is likely to be cost effective.

These involve:-

- External limewashing, and possible internal limewashing, if so desired
- Repairs to parapets
- Minor patch pointing and ivy treatment
- New doors and grilles to the exterior
- Replacement of lintels
- Repairs to ground floor vault and repointing of crown of arch to basement

A design for an external masonry and internal steel stair is proposed as shown on drawings in Appendix D

Chris Southgate MA MI Struct E FIEI C Eng.

Conservation Engineer

Southgate Associates

December 2018

APPENDIX A

DESIGN CRITERIA FOR STAIRS

Existing buildings

The building regulations state 'the adherence to guidance, including codes, standards or technical specifications, intended for application to new work may be unduly restrictive or impracticable. Buildings of architectural or historical interest are especially likely to give rise to such circumstances. In these situations, alternative approaches based on the principles contained in the document may be more relevant and should be considered'

The recommendations on maximum rise, minimum going, maximum pitch, and optimum values in each case based on I.S. 158:1987 and BS 5395-1:2010 and these have been substantially complied with.

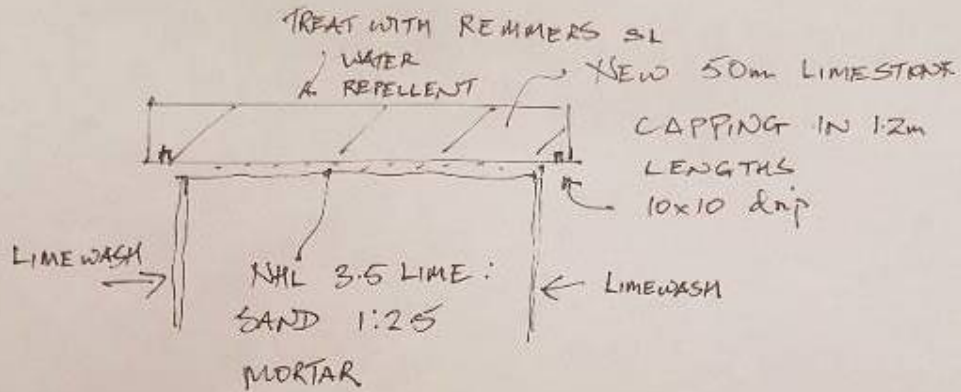
The stairs have been designed as **Semi-public stairs** which means stairs used by larger numbers of people, some of whom may be unfamiliar with the stairs.

There are not be more than sixteen risers in any one flight.

Guarding heights are 900 on flights and 1100mm on landings.

Appendix C

Sketches

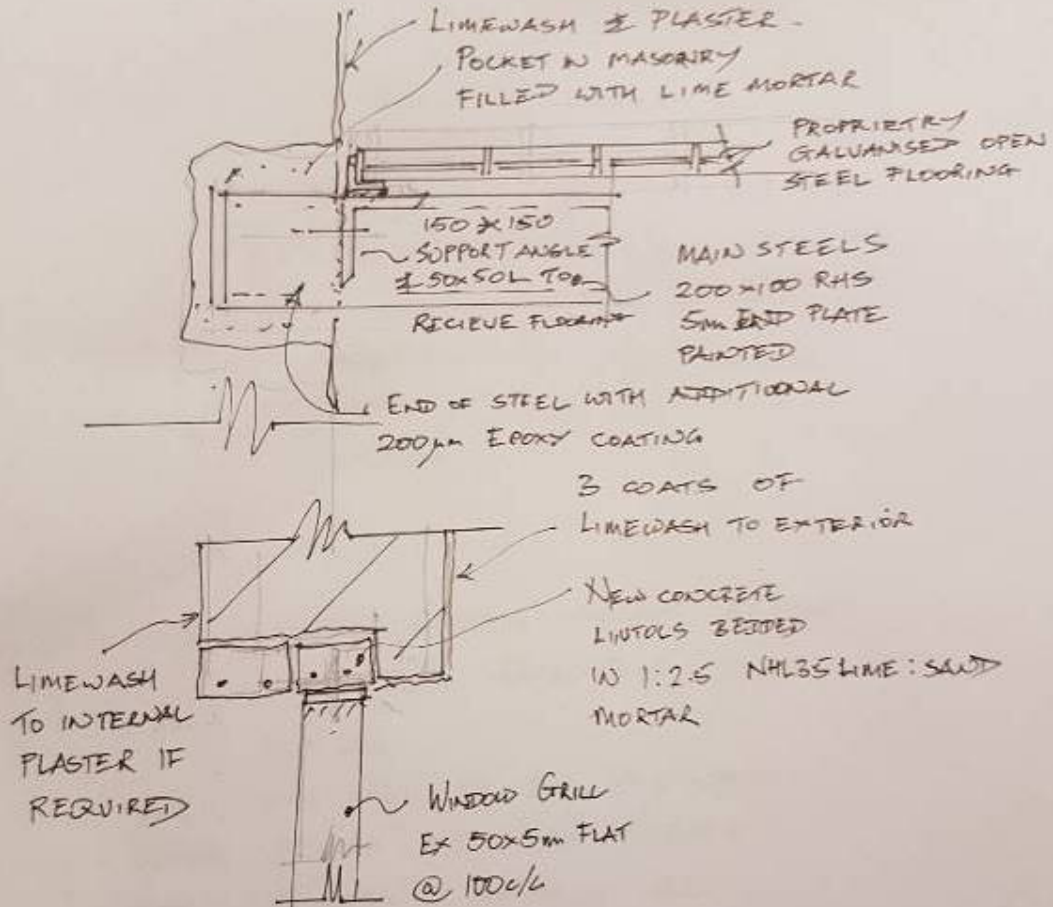


NOTE WHERE CAPPING INTACT REPOINT
IN 1:2.5 NHL 3.5 : SAND
MORTAR.

ALL CAPPINGS TO BE CLEANED
USING 'DOFF' PRIOR TO TREATING
WITH 3 COATS REMMERS SL
WATER REPELLENT.

ACRES FOLLY

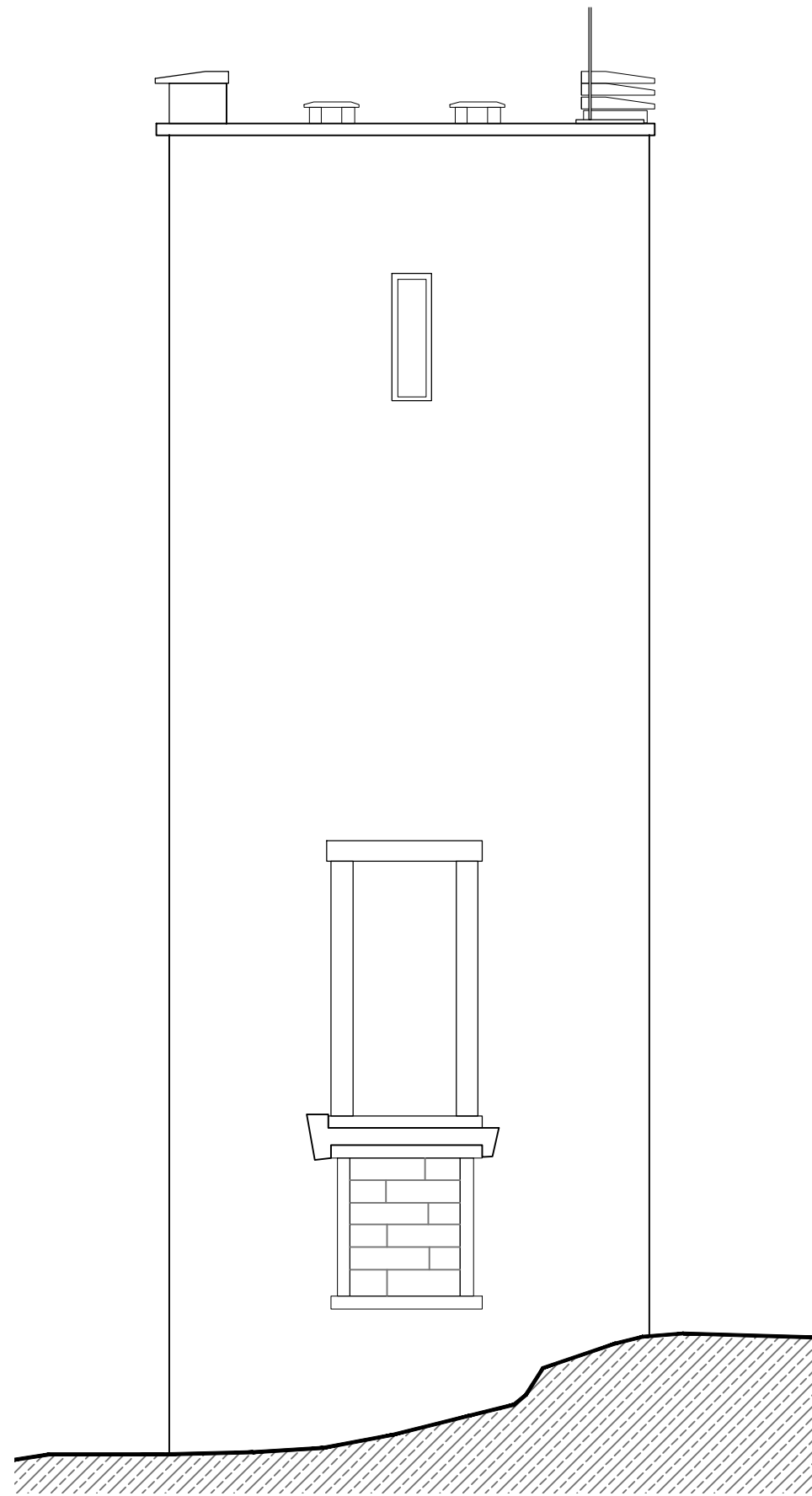
CAPPING DETAILS



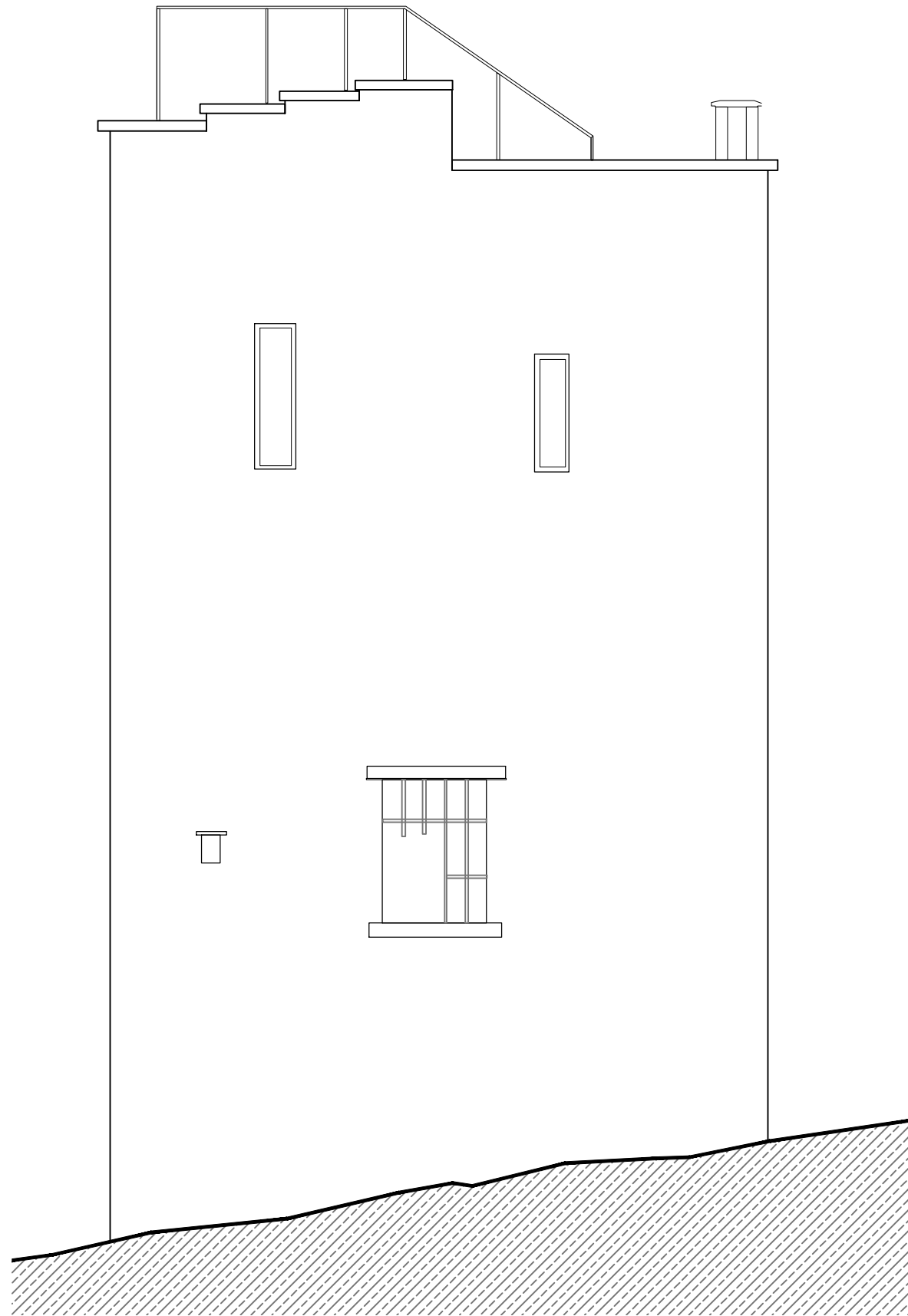
ACRES FOLLY TYPICAL
STEEL CONNECTIONS TO
MASONRY

Appendix D

Drawings



1 SOUTH WEST ELEVATION
SCALE 1:50



2 SOUTH EAST ELEVATION
SCALE 1:50

REV-1 - ISSUED FOR INFORMATION PURPOSES ONLY

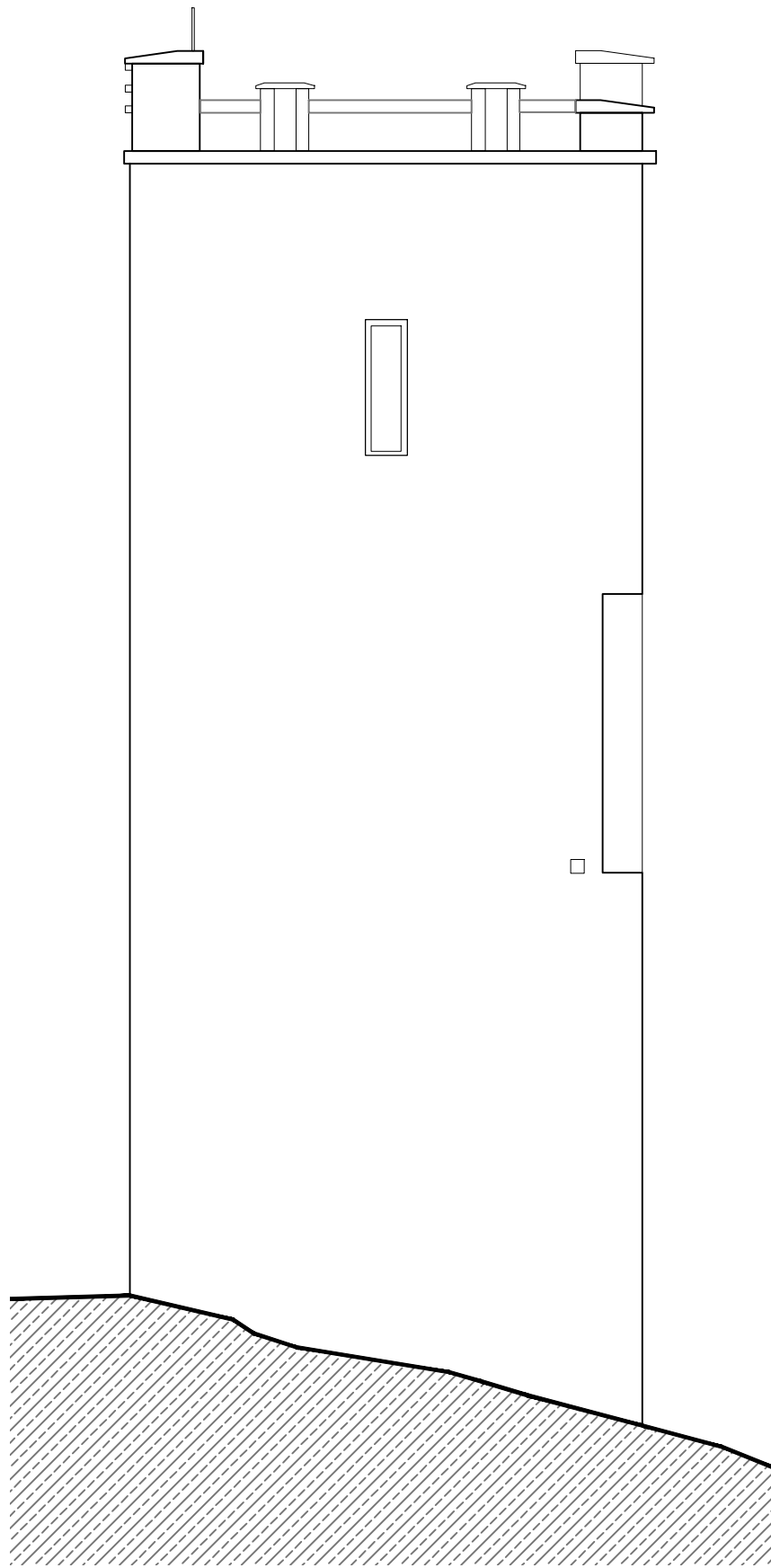
30/11/2018

NOTES:

1. All dimensions in millimetres
2. Information purposes only
3. This drawing to be read in conjunction with relevant consultants drawings
4. All works are to be carried out in accordance with current Building Regulations
5. All structural works to engineers spec. & detail.
6. Do not scale from drawings.
7. Site check all dimensions on the drawings.

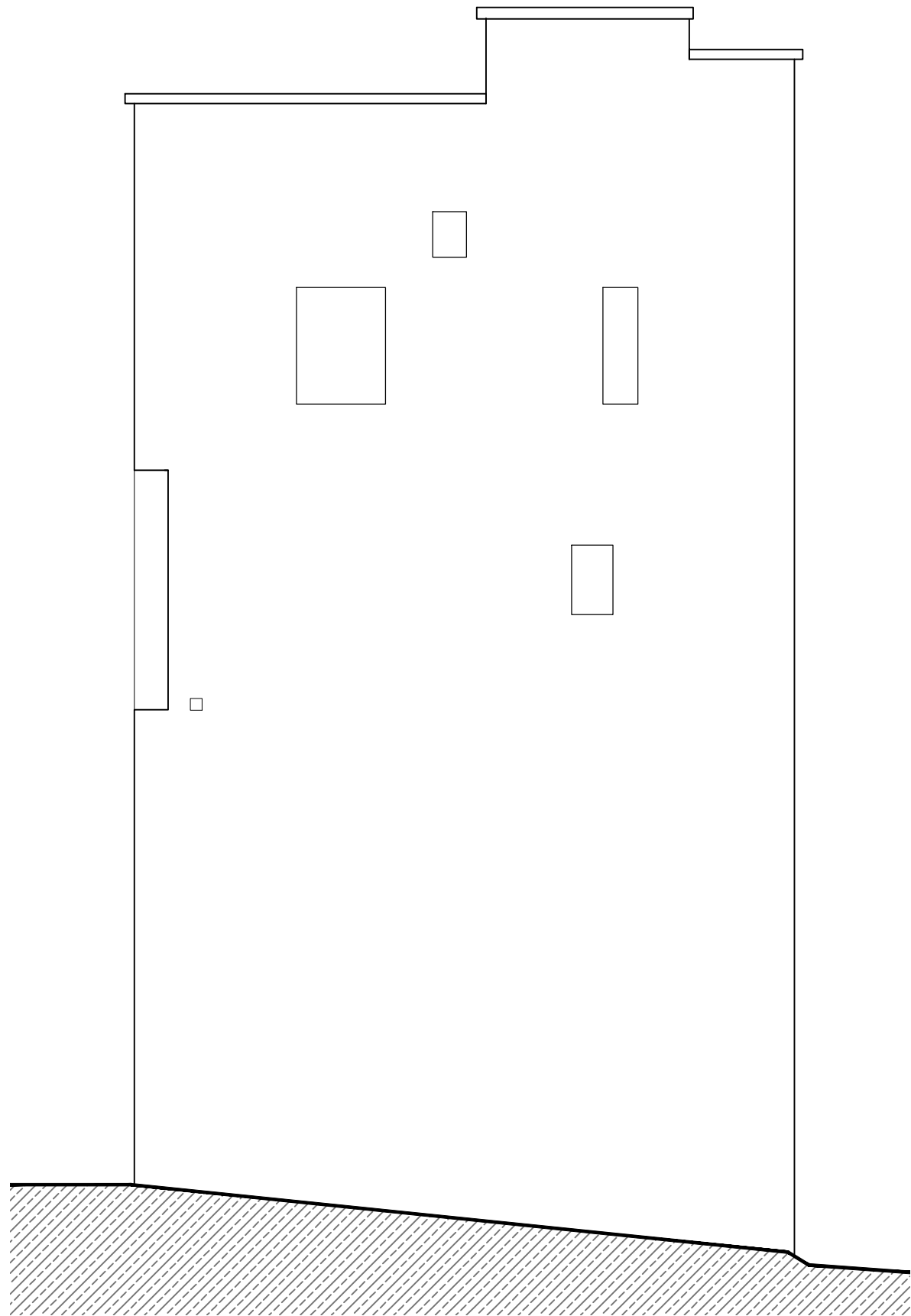


PROJECT: ACRES FOLLY	Southgate Associates Farren House, Cork Road, Midleton, Co.Cork Tel: 021-4570717 Fax: 021-4318633
DATE : NOV 2018	
SCALE: 1:50	
SURVEY OF ACRES FOLLY: ELEVATIONS SHEET 1	

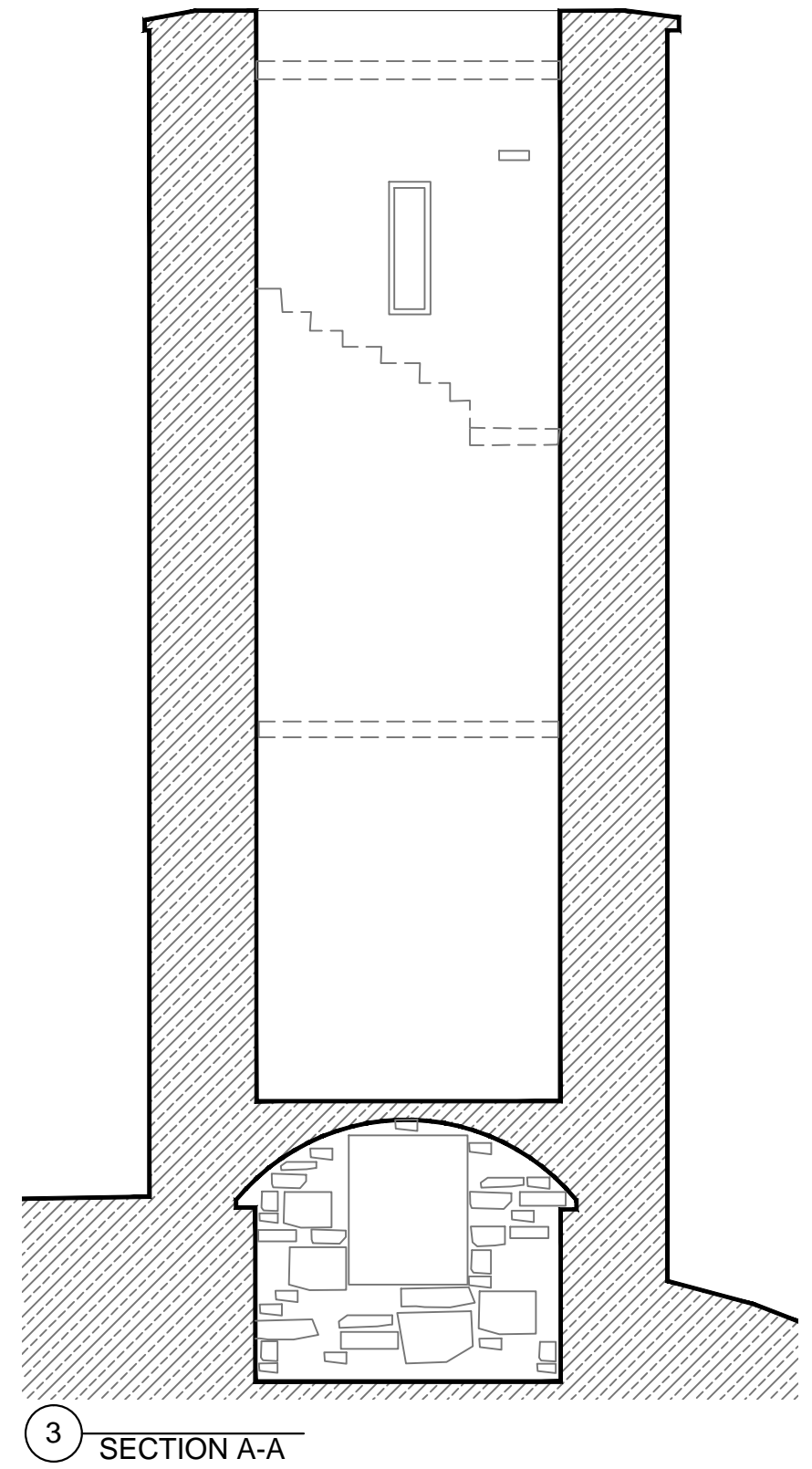


1 NORTH EAST ELEVATION
SCALE 1:50

- NOTES:
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 - 2. Information purposes only
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 - 4. All works are to be carried out in accordance with current Building Regulations
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 - 6. Do not scale from drawings.
 - 7. Site check all dimensions on the drawings.



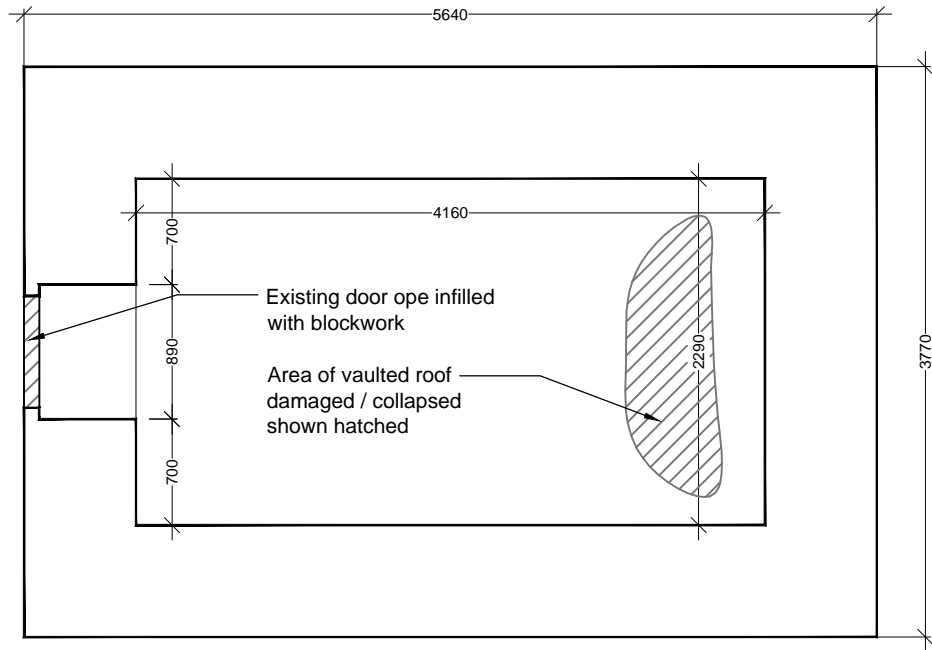
2 NORTH EAST ELEVATION
SCALE 1:50



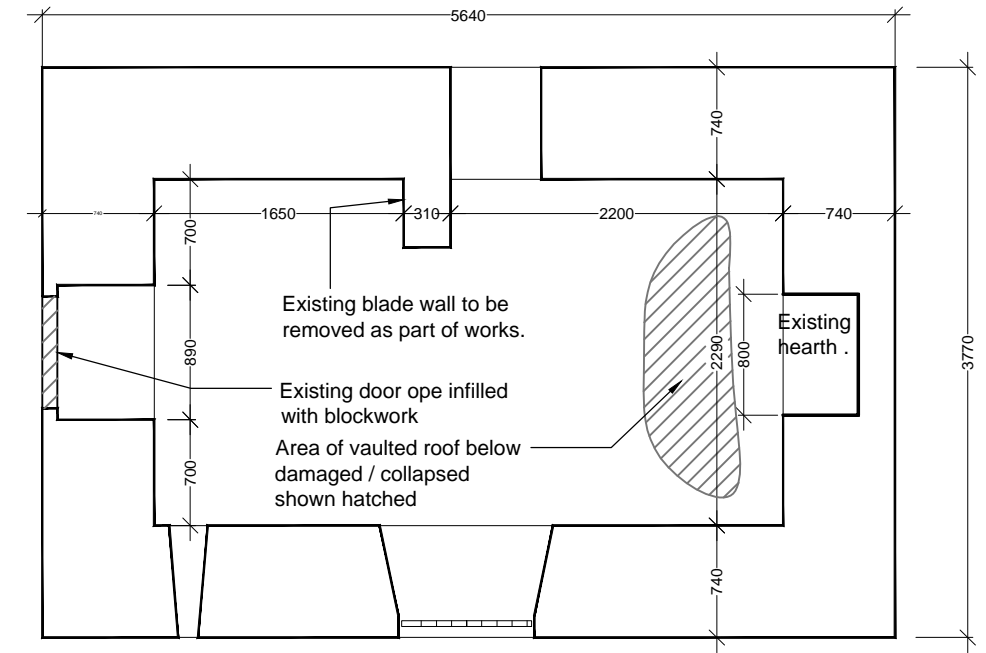
3 SECTION A-A

REV-1 - ISSUED FOR INFORMATION PURPOSES ONLY 30/11/2018

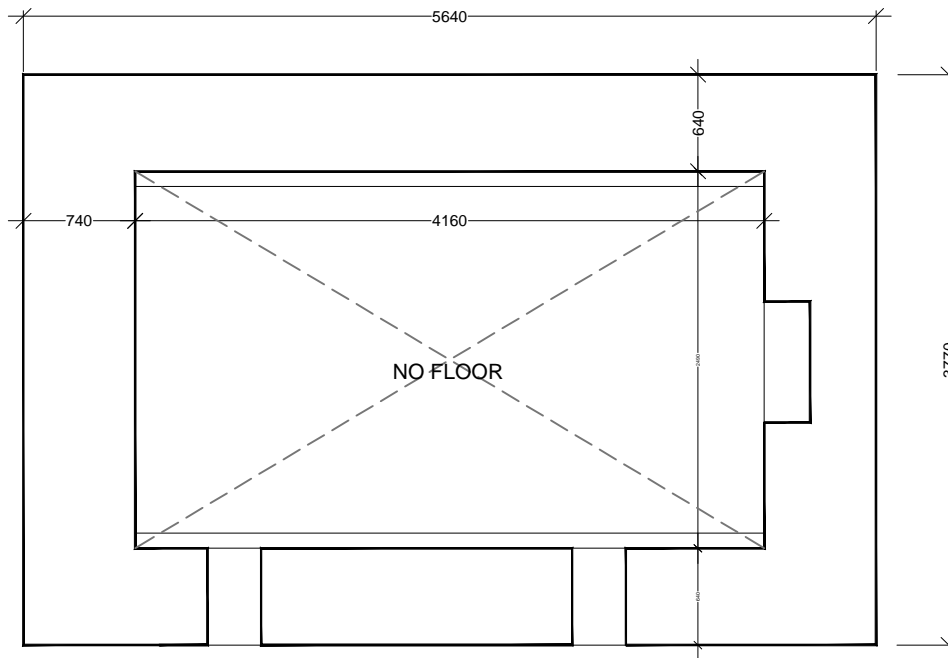
	PROJECT: ACRES FOLLY	Southgate Associates Farren House, Cork Road, Midleton, Co.Cork Tel: 021-4570717 Fax: 021-4318633
	DATE : NOV 2018	
	SCALE: 1:50	
SURVEY OF ACRES FOLLY: ELEVATIONS SHEET 2 & SECTION A-A		



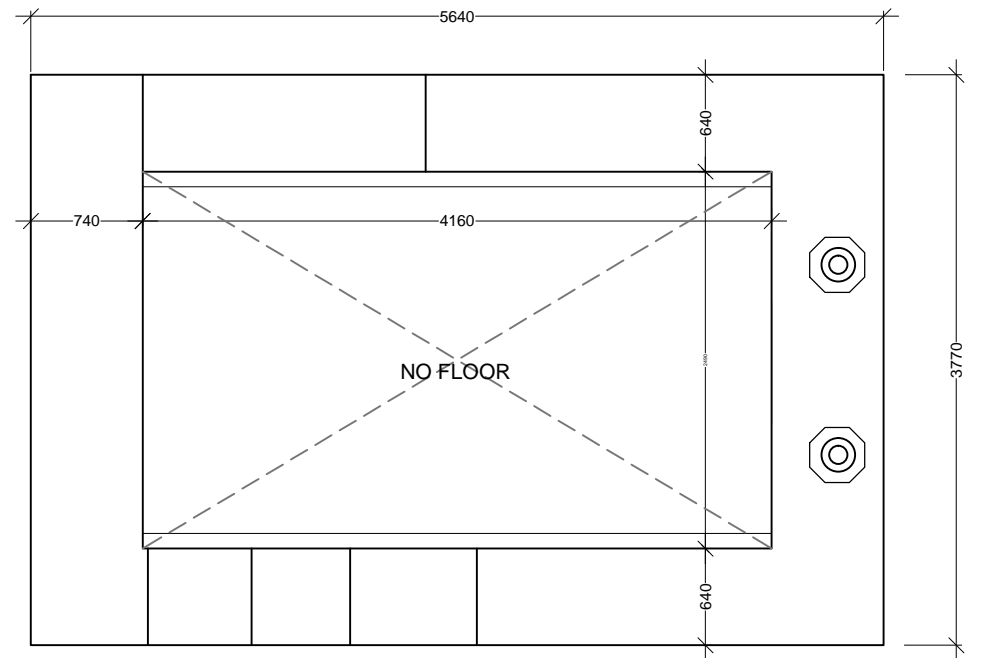
1 BASEMENT PLAN
SCALE 1:50



2 ENTRANCE PLAN
SCALE 1:50




2 FIRST FLOOR PLAN
SCALE 1:50

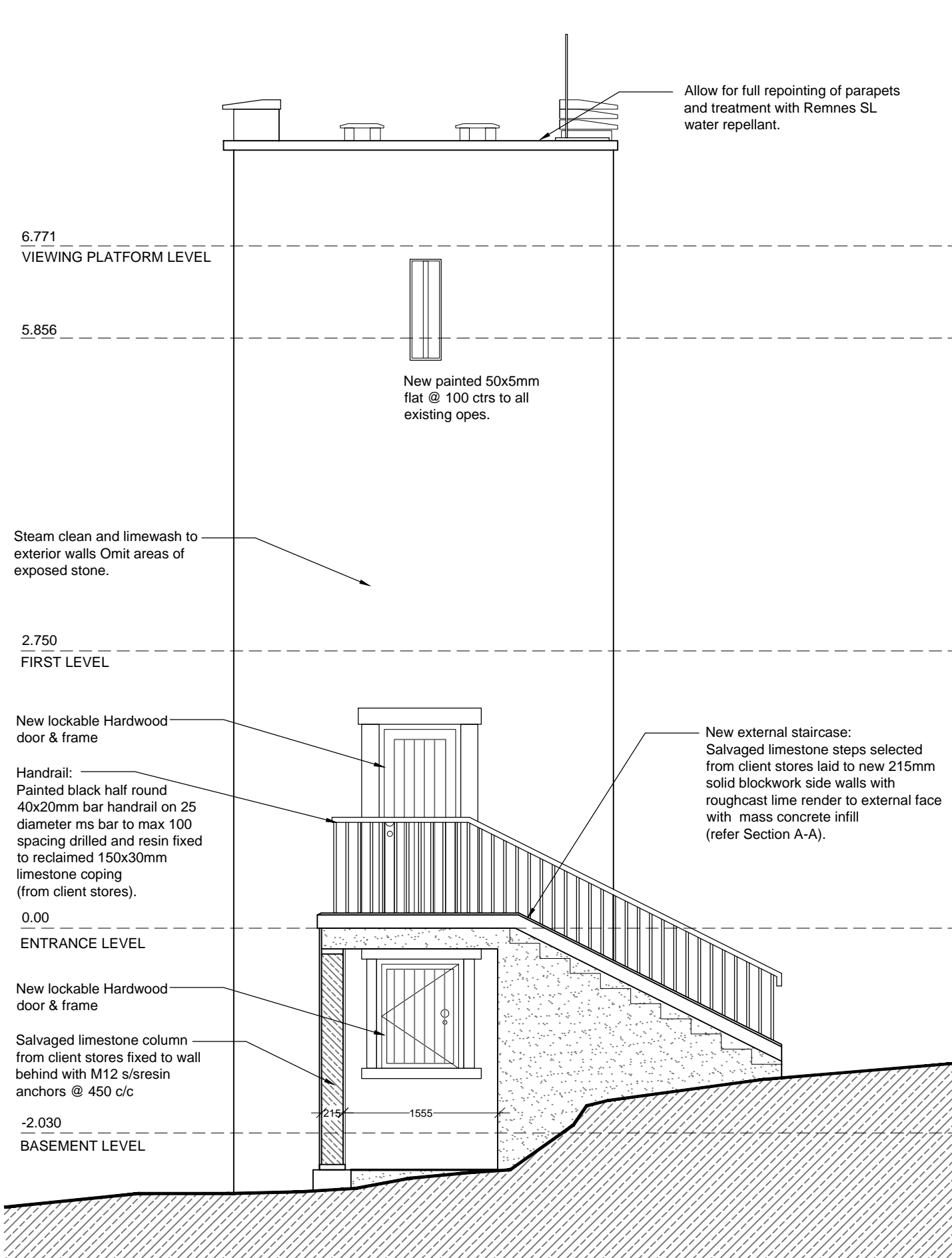


4 VIEWING PLATFORM PLAN
SCALE 1:50

- NOTES:**
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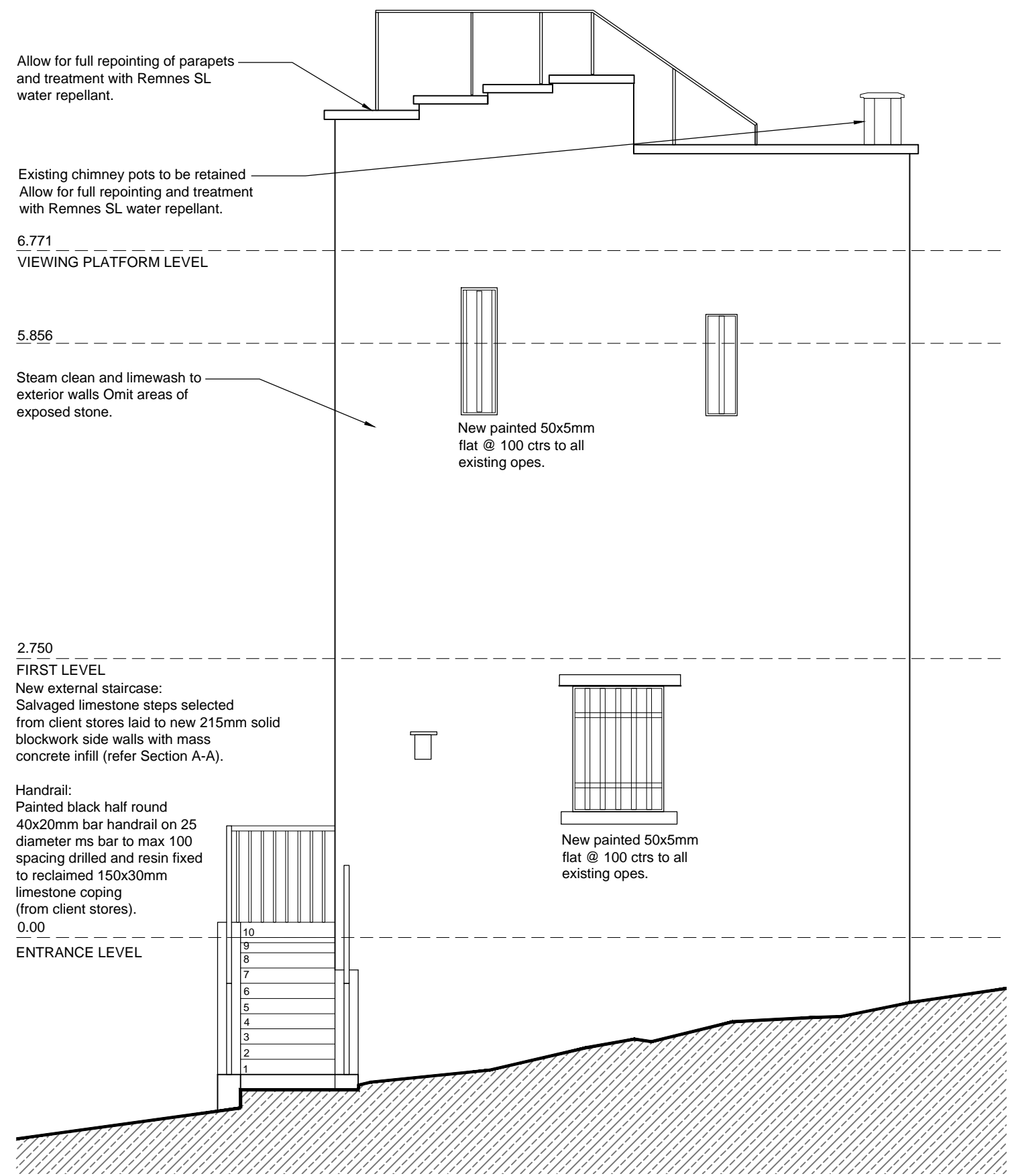
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 SOUTHGATE ASSOCIATES HERITAGE CONSERVATION SPECIALISTS	PROJECT: ACRES FOLLY	Southgate Associates Farren House, Cork Road, Midleton, Co.Cork Tel: 021-4570717 Fax: 021-4318633
	DATE : NOV 2018	
	SCALE: 1:50	
	SURVEY OF ACRES FOLLY: FLOOR PLANS	




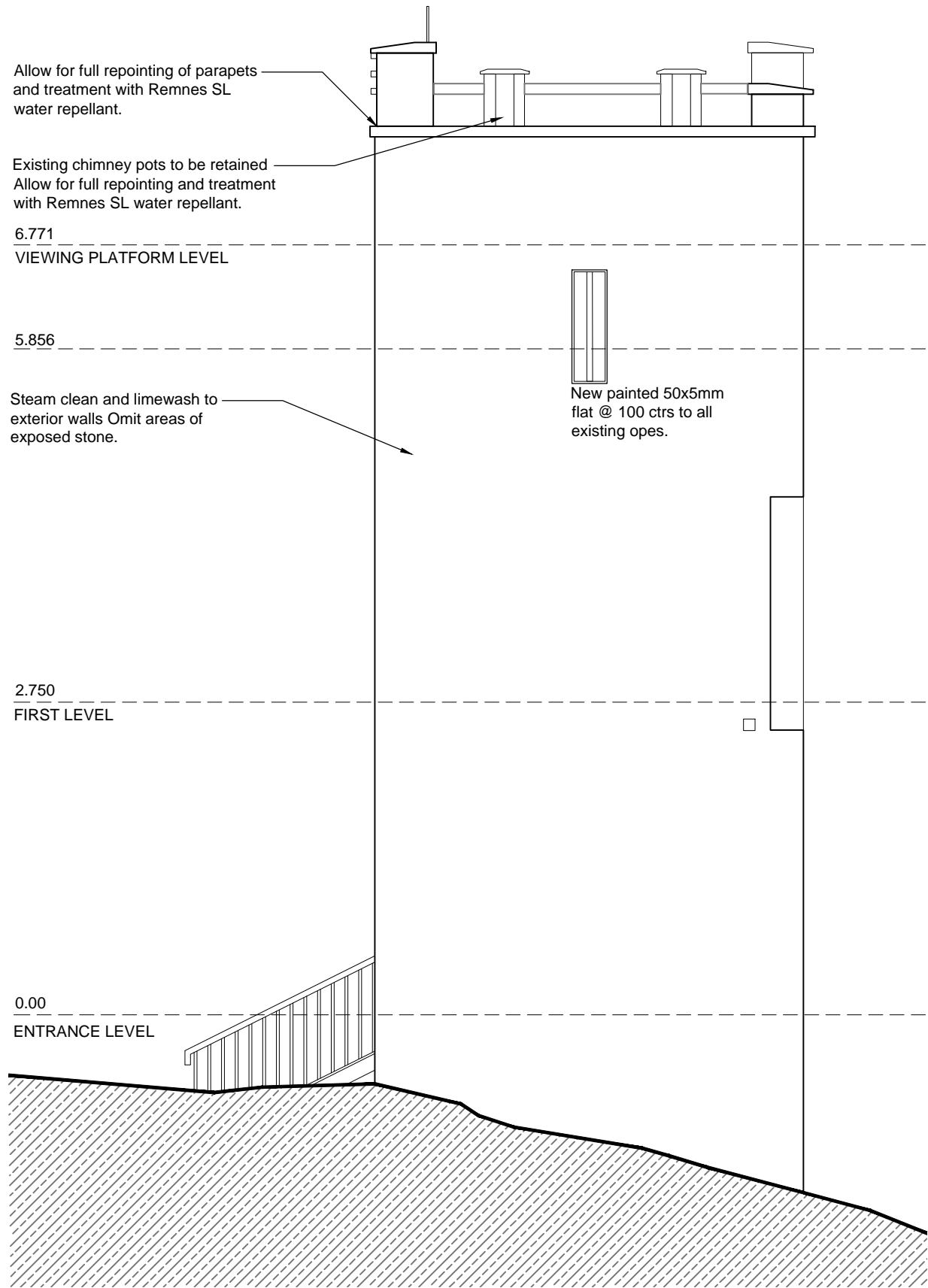
- NOTES:
1. All dimensions in millimetres
 2. Information purposes only
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 7. Site check all dimensions on the drawings.

1 SOUTH WEST ELEVATION
SCALE 1:50



2 SOUTH EAST ELEVATION
SCALE 1:50

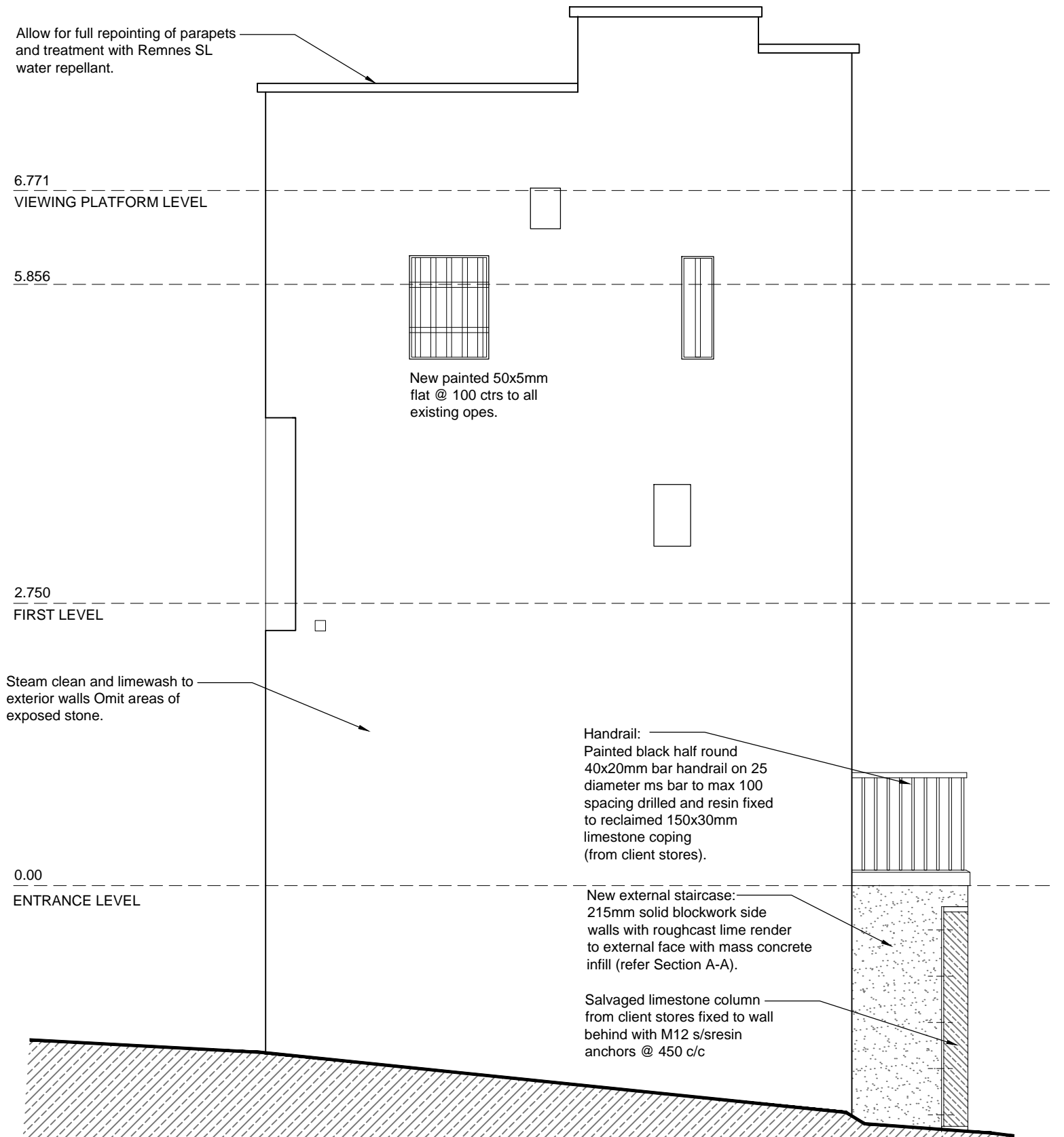
REV-1 - ISSUED FOR INFORMATION PURPOSES ONLY		30/11/2018
PROJECT: ACRES FOLLY		
DATE : NOV 2018		
SCALE: 1:50		
PROPOSAL FOR ACRES FOLLY: PROPOSED ELEVATIONS SHEET 1		
 <p>SOUTHGATE ASSOCIATES HERITAGE CONSERVATION SPECIALISTS</p>		<p>Southgate Associates Farren House, Cork Road, Midleton, Co.Cork Tel: 021-4570717 Fax: 021-4318633</p>



1 NORTH EAST ELEVATION
SCALE 1:50

NOTES:

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7. Site check all dimensions on the drawings.



2 NORTH EAST ELEVATION
SCALE 1:50

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PROJECT: ACRES FOLLY

DATE : NOV 2018

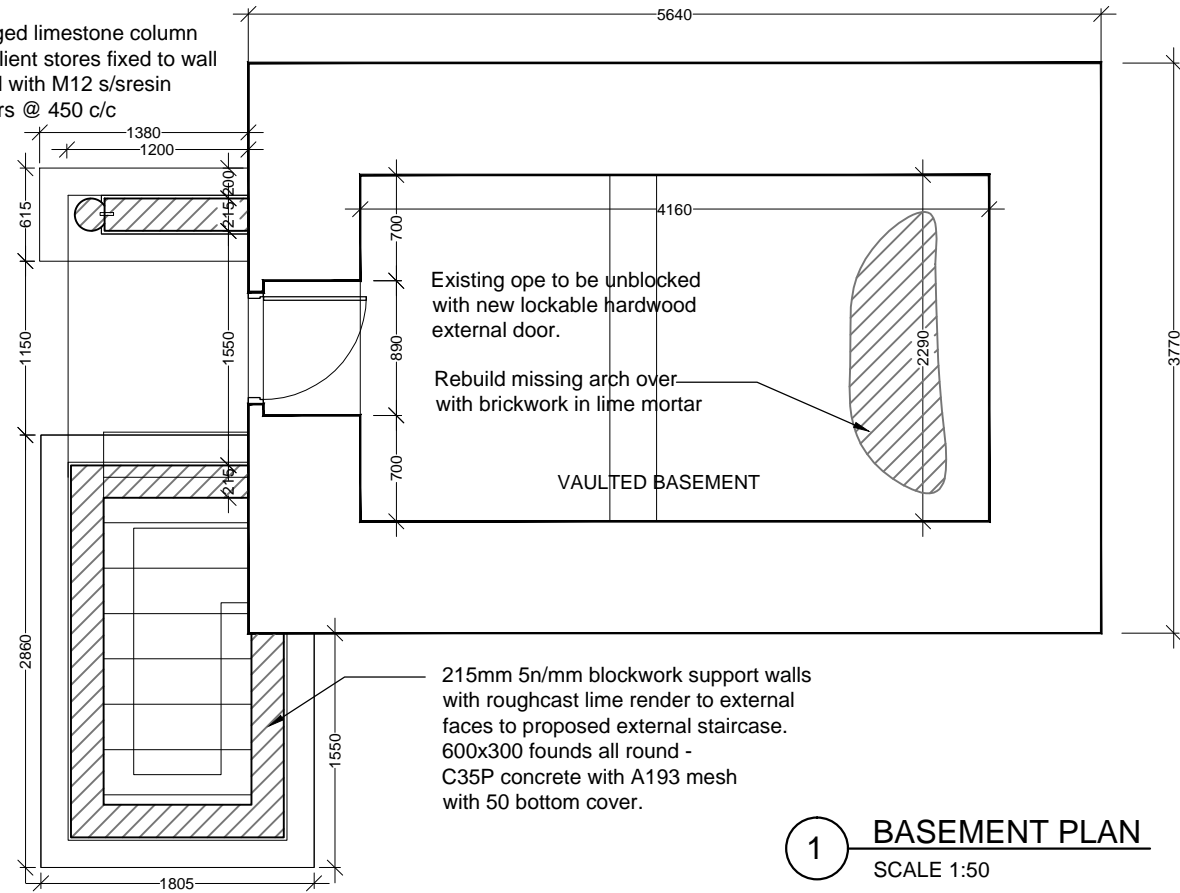
SCALE: 1:50

PROPOSAL FOR ACRES FOLLY:
ELEVATIONS SHEET 2

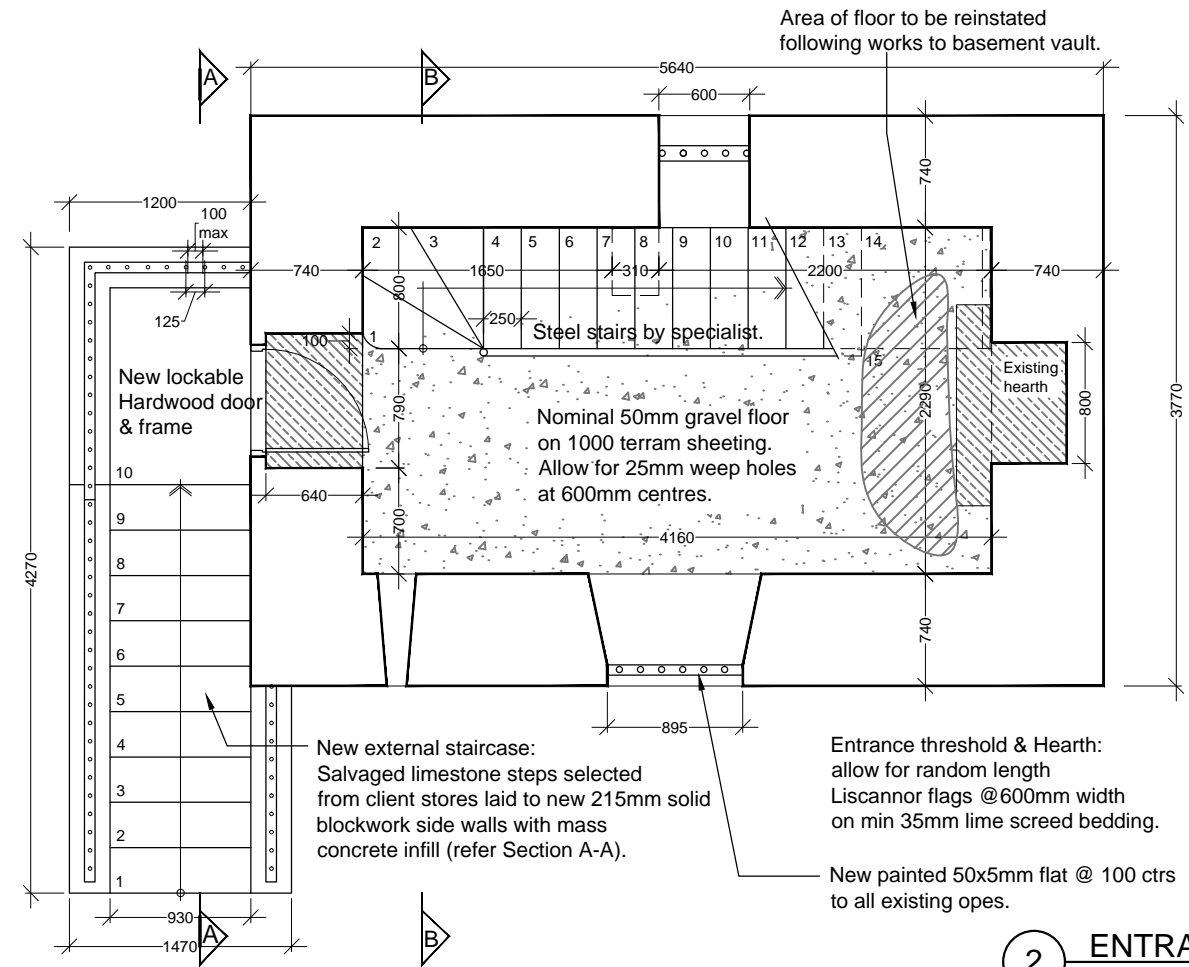


Southgate Associates
Farren House,
Cork Road,
Midleton,
Co.Cork
Tel: 021-4570717
Fax: 021-4318633

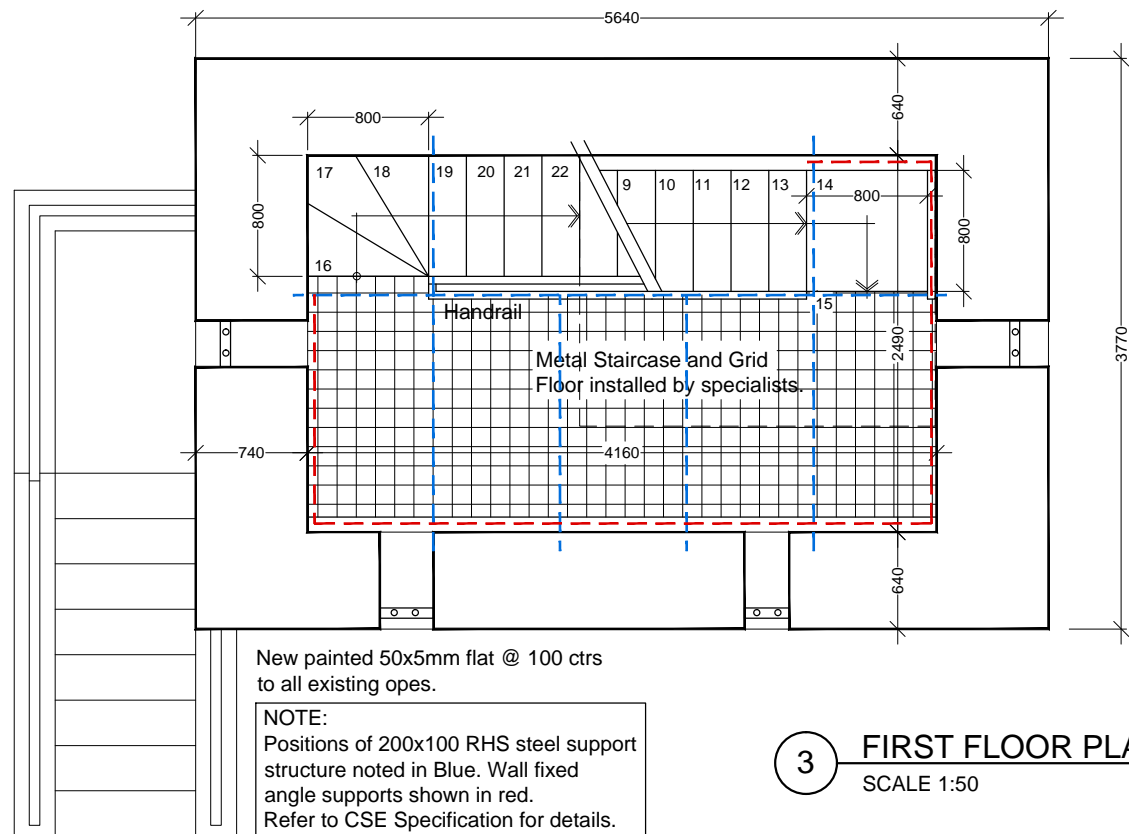
Salvaged limestone column from client stores fixed to wall behind with M12 s/resin anchors @ 450 c/c



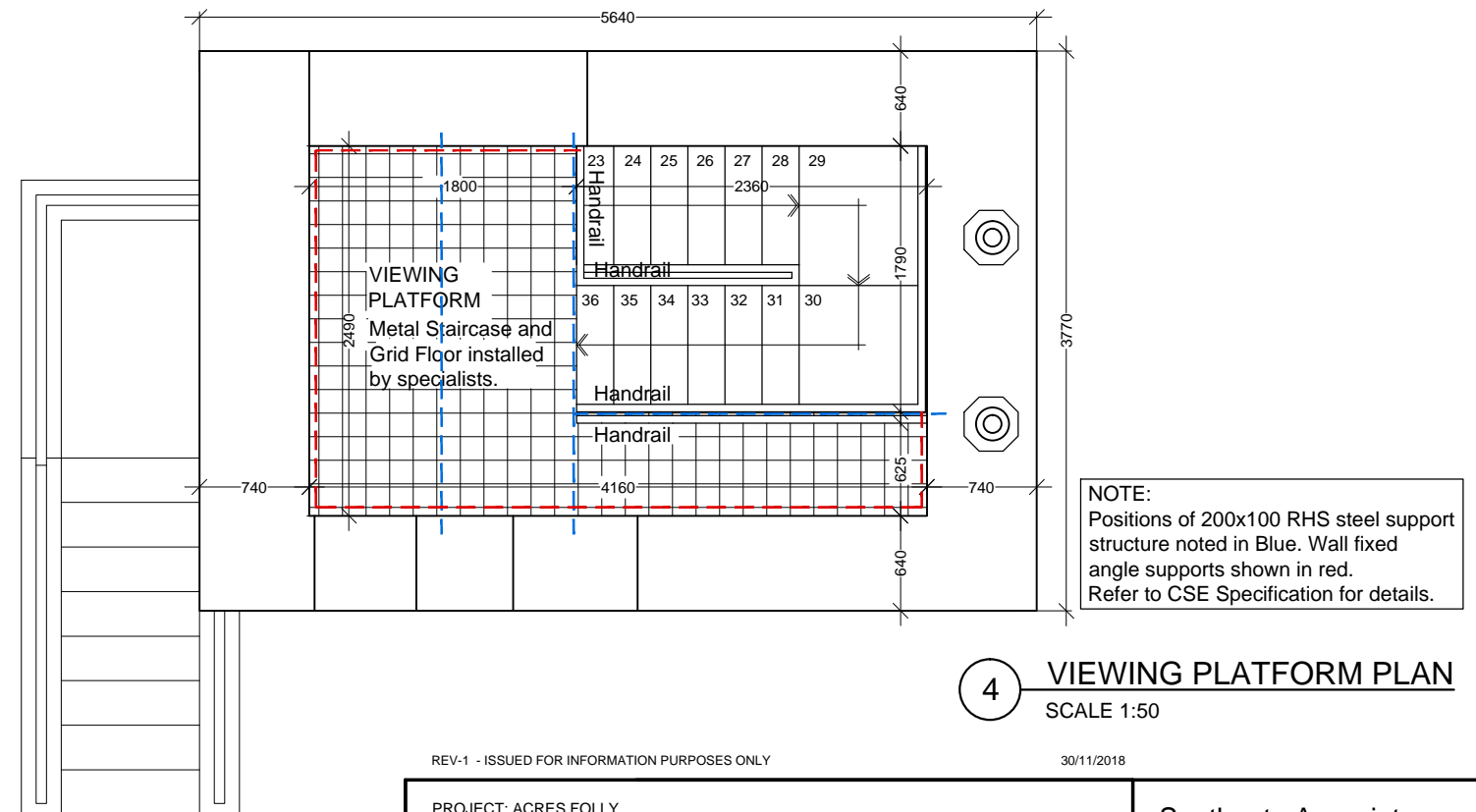
1 BASEMENT PLAN
SCALE 1:50



2 ENTRANCE PLAN
SCALE 1:50



3 FIRST FLOOR PLAN
SCALE 1:50



4 VIEWING PLATFORM PLAN
SCALE 1:50

NOTES:

- All dimensions in millimetres
- Information purposes only
- This drawing to be read in conjunction with relevant consultants drawings
- All works are to be carried out in accordance with current Building Regulations
- All structural works to engineers spec. & detail.
- Do not scale from drawings.
- Site check all dimensions on the drawings.
- Stairs designed for 4KN/sqm live load to CSE specification.
- Shop drawings to be supplied to Client & Eng. for comment / approval.
- Stairs to be Galvanised to CSE Specification,

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30/11/2018

PROJECT: ACRES FOLLY

DATE : NOV 2018

SCALE: 1:50

**PROPOSAL FOR ACRES FOLLY:
PROPOSED FLOOR PLANS**



Southgate Associates
Farren House,
Cork Road,
Midleton,
Co.Cork
Tel: 021-4570717
Fax: 021-4318633

Allow for full repointing of parapets and treatment with Remnes SL water repellent.

6.771
VIEWING PLATFORM LEVEL

5.856

Steam clean and limewash to exterior walls Omit areas of exposed stone.

New painted 50x5mm flat @ 100 ctrs to all existing opes.

2.750
FIRST LEVEL

New lockable Hardwood door & frame

Handrail:
Painted black half round 40x20mm bar handrail on 25 diameter ms bar to max 100 spacing drilled and resin fixed to reclaimed 150x30mm limestone coping (from client stores).

0.00
ENTRANCE LEVEL
150mm deep RC slab with A393 mesh with min 50mm bottom cover.
Salvaged limestone flag finish.

215mm solid blockwork walls with roughcast lime render

-2.030
BASEMENT LEVEL

Founds to new staircase walls:
600x300mm concrete footing with A142 mesh with 50mm min bottom cover.

- NOTES:
1. All dimensions in millimetres
 2. Information purposes only
 3. This drawing to be read in conjunction with relevant consultants drawings
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 5. All structural works to engineers spec. & detail.
 6. Do not scale from drawings.
 7. Site check all dimensions on the drawings.
 8. Concrete founds to C35P.

Allow for full repointing of parapets and treatment with Remnes SL water repellent.

Internal wall finish:
Existing plaster finishes to be retained with any loose plaster to be removed as required and walls lime washed throughout.

Internal wall finish:
Existing plaster finishes to be retained with any loose plaster to be removed as required and walls lime washed throughout.

Internal staircase:
Galvanised metal open thread stair case supplied and fitted by specialists. Stringer to be primed for selected paint finish.

Handrail and guarding:
50x5mm ms flat at 100mm centres, balustrade surface fixed to stringer of stairs.
Selected Paint finish to stringer, balustrade and handrail.

New external staircase:
Salvaged limestone steps selected from client stores laid to new 215mm solid blockwork side walls with roughcast lime render to external face with mass concrete infill (refer Section A-A).

1 SECTION A-A
SCALE 1:50

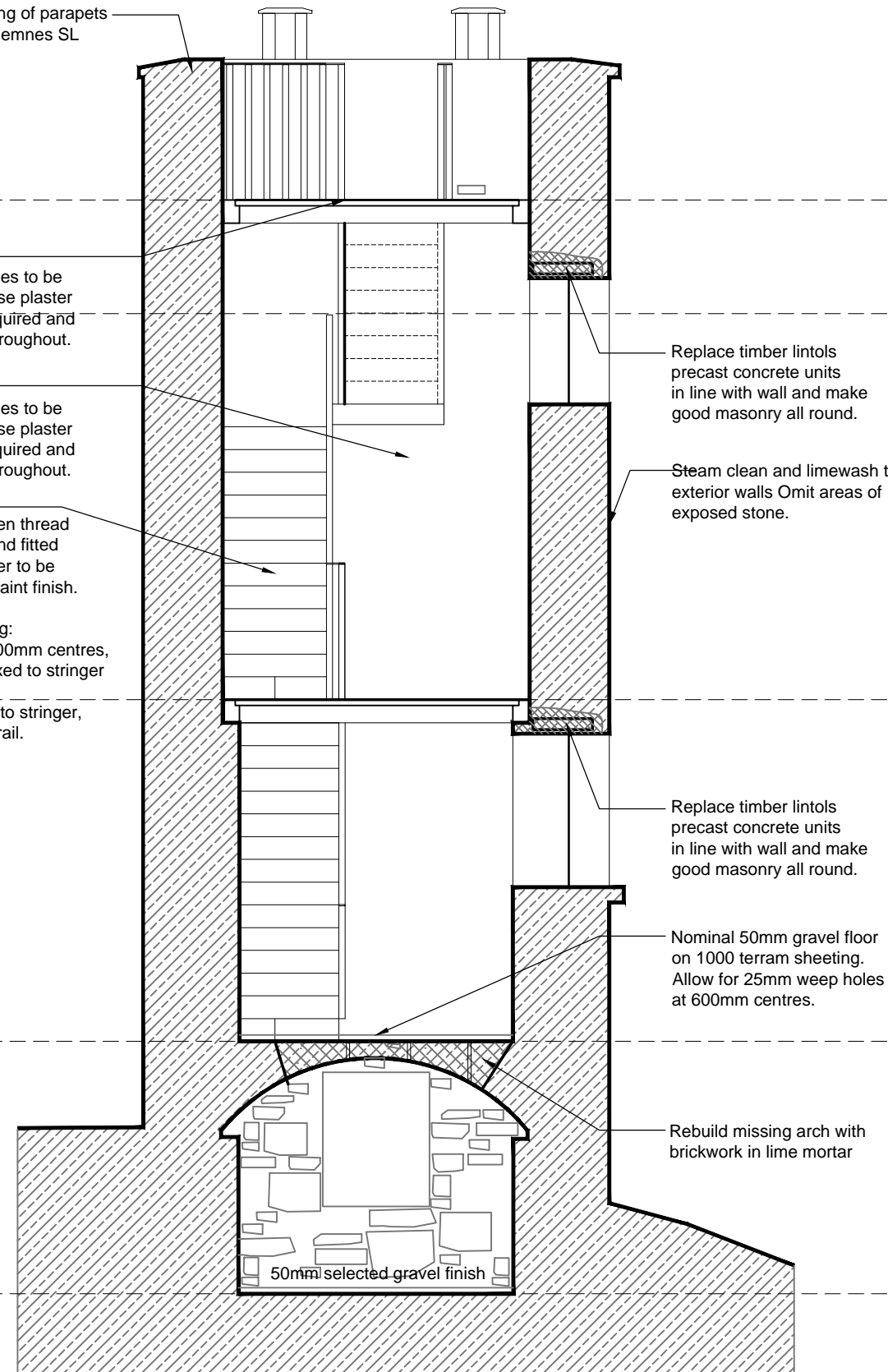
Internal wall finish:
Existing plaster finishes to be retained with any loose plaster to be removed as required and walls lime washed throughout.

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Existing plaster finishes to be retained with any loose plaster to be removed as required and walls lime washed throughout.

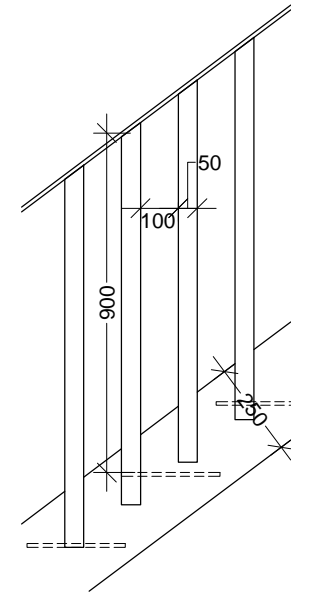
Internal staircase:
Galvanised metal open thread stair case supplied and fitted by specialists. Stringer to be primed for selected paint finish.

Handrail and guarding:
50x5mm ms flat at 100mm centres, balustrade surface fixed to stringer of stairs.
Selected Paint finish to stringer, balustrade and handrail.

New external staircase:
Salvaged limestone steps selected from client stores laid to new 215mm solid blockwork side walls with roughcast lime render to external face with mass concrete infill (refer Section A-A).



2 SECTION B-B
SCALE 1:50




3 STAIR DETAIL
SCALE 1:20

Internal staircase:
Galvanised metal open thread shown dotted.
Handrail and guarding:
50x5mm ms flat at 100mm centres, balustrade surface fixed to stringer of stairs.
Selected Paint finish to stringer, balustrade and handrail.

REV-1 - ISSUED FOR INFORMATION PURPOSES ONLY

30/11/2018

 <p>SOUTHGATE ASSOCIATES HERITAGE CONSERVATION SPECIALISTS</p>	PROJECT: ACRES FOLLY	<p>Southgate Associates Farren House, Cork Road, Midleton, Co.Cork Tel: 021-4570717 Fax: 021-4318633</p>
	DATE: NOV 2018	
	SCALE: 1:50 & 1:20	
<p>PROPOSAL FOR ACRES FOLLY: SECTIONS A-A & B-B</p>		