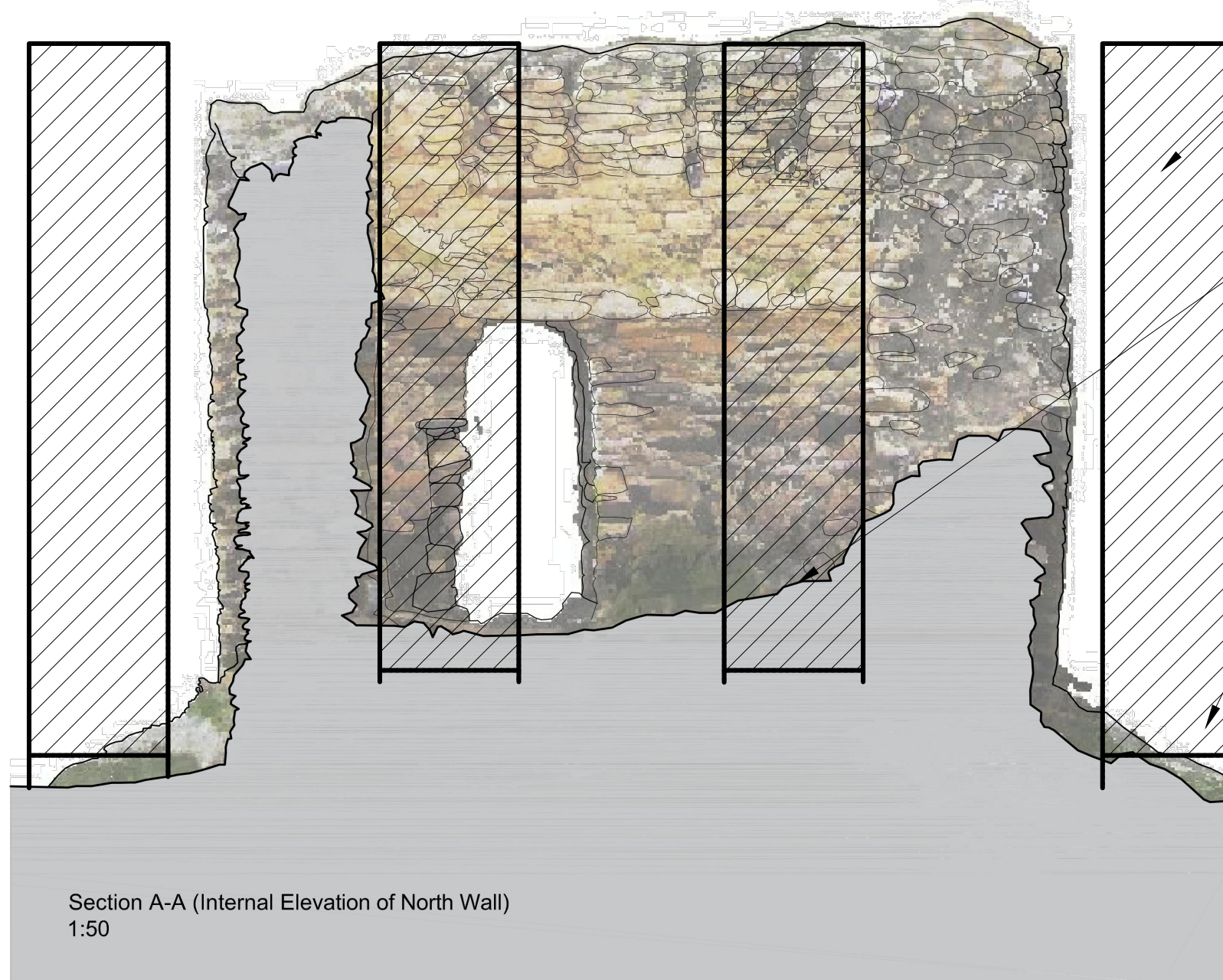


Plan - Indicative Scaffold Layout
1:50

Scaffold to take no support from castle structure and no fixings to be made to existing castle structure. Ties through existing openings are permitted.

Hatch denoted proposed scaffold layout to allow access to full external and internal faces of stone work, provide access to full extent of wall head and allow for bridging scaffold through gap in wall to east facade

Scaffolding to be held down against wind uplift using ballast as specified by specialist designer. No fixings to be made into the rock surface without first consulting Architect and Engineer



Section - Indicative Scaffold Layout
1:50

Scaffold to allow access full height of walls and allow access to wall head for capping.

Internally, clear all rubble and vegetation from ground to allow scaffold to sit onto consolidated surface. Once cleared, contractor to assess best method of scaffold erection and method of holding down. Allow for drilling into rock head each corner

Externally, clear all loose rubble as per Sequence of work note and access ground conditions. Scaffold to allow full perimeter access.

Contractor responsible for ensuring that scaffold is sufficiently held down to resist wind load - allow for 8No. fixings into rock round perimeter.

DO NOT SCALE FROM THIS DRAWING. WORK TO FIGURED DIMENSION ONLY.

NOTES

1. All DNA drawings are to be read in conjunction with the relevant DNA Specification and all relevant Architect's and Service Engineer's drawings and Specifications.

SCAFFOLD DESIGN

1. This drawing together with drawing No. 15.256-02 show the principles that are to be adopted in the design of the temporary access structure.

2. These drawings are to be read in conjunction with Groves-Raines Architects drawings and scope of works.

3. Particular requirements of the scaffold design are noted thus on the drawings. These layouts are indicative only to give an indication of where access is required. The design of the scaffolding is the responsibility of the contractor

4. The scaffold is to be designed by a competent scaffold designer in accordance with BS5973 : 1993.

5. The scaffold are to be designed to withstand the following loads:

Basic wind speed (Vb) : 27m/s
Altitude Factor (Sa) : 1.12
Seasonal Factor (Ss) : 1
Directional Factor (Sd) : 1
Probability Factor (Sp) : 1
Terrain & Building Factor : 1.96

Snow load in accordance with BS 6399-Part 3. Using the following parameters : 0.75 kN/m²

Together with any additional loads arising out of the contractor's preferred method for working. The structures should be designed for whichever combination of loads gives the worst case design conditions.

6. Scaffold platforms and walkways to be designed in accordance with BS 5973 and to carry the following loads:

2.0 kN/m²
2.7 kN Point load anywhere on surface.

7. Moisture must not penetrate the temporary roof onto any internal surfaces or surfaces not designed or intended to be wetted that may be exposed during the works.

SEQUENCE OF WORK

- Contractor to establish any areas of loose or potentially unstable masonry prior to commencing any works. If there are areas of immediate concern preventing contractor starting step 2, inform Engineer and Architect.
- Prior to commencing any duntakings, a full photographic survey of the existing masonry is to be undertaken in collaboration with Archaeologist.
- Identify, with input from Structural Engineer, areas of masonry that may require duntaking to make work area safe. Any such areas are to be fully recorded and stones individually numbered prior to duntaking.
- Once immediate work area is safe, contractor is to go about task of salvaging fallen stone. The contractor should refer to the provided photographs of the East Wall prior to collapse and attempt to find key facing stones. Prominent stones visible in the photos of pre-collapse should be numbered on the photos and matching stones found on site correspondingly numbered with chalk.
- Set aside all useable stone and clear ground internally and round castle perimeter from all loose material and vegetation.
- Erect scaffold to allow full access to building (see separate scaffold notes adjacent)
- Contractor to mark and record all stones in areas marked for duntaking and then carefully take down to well consolidated stone.

GENERAL NOTES

Clearance and demolitions

- Vegetation growth should be removed from the walls.
- Root growth into the joints of the masonry to be removed.
- Take down partial area of walls only as indicated.

General Repairs to Rubblestone Walls.

- Generally rake out existing pointing and cracked, damaged or decayed mortar. Take care not to rake out more than is necessary and not to destabilise masonry in the process.
- Carefully cut out frost damaged and badly cracked stone; replace with stone to match existing.
- Take down local areas where masonry in very poor condition and where disturbed by root growth; salvage stone for reuse
- Prior to taking down, contractor to record existing bond & pattern to allow new masonry to match. Re-use existing stone in original location where possible.
- Rebuild using salvaged stone laid in lime mortar; coursing, size of stones, pattern of pinnings & joint widths to match existing. Any new stone required is to be sourced to match existing - stone type to be agreed with Architect and Historic Scotland prior to ordering.
- Generally replace missing pinning stones (size and pattern to match existing) and repoint using a lime mortar to Architects specification
- Where rebuilding portions of walling, allow for infilling voids within the rubble core with thinned lime mortar to consolidate fill prior to stone replacement. This is to be done where raking edges of wall are being left to ensure that there are no voids and that facing stone has a sound backing and, where required, stainless steel fixings have good substrate to fix into.

Treatment at wall heads

- Full perimeter of wall head to receive unitil mortar capping - To be approved by Historic Scotland. Capping to be a minimum of 50mm thick.

Facing stones. Stones to be carefully numbered where taken down and recorded for replacement. Any new stone required is to be chosen to match existing and to be agreed with Architect and Historic Scotland prior to ordering.

- Remove any loose stone
- fix ties into good stone in core to suit new stone joint positions
- Ties to be positions minimum one every two courses and 450mm horizontal centres.
- Ties to be recessed from face of wall minimum 100mm
- Rebuild stone to infill gap reusing existing stone where possible

Rubble stone core. Where rebuilt, as far as possible, stone to be salvaged from site. Where new stone required agree with Architect and HS prior to ordering. Allow for use of a thinned lime mortar to infill core voids and provide sound bedding for new masonry work and, where required, fixing steel ties.

Detail 1 - Typical Infill Detail
1:20

0 1m 2.5m 5m
SCALE 1:100

Rev	Description	By	Date
Status			
INFORMATION			
david narro associates			
Consulting Structural & Civil Engineers			
34-36 Argyle Place, Edinburgh, EH8 1LT T: 0131 229 5553 F: 0131 229 5090 W: http://www.davidnarro.co.uk E: mail@davidnarro.co.uk			
24 James Morrison Street, Glasgow, G1 5PE T: 0141 552 6080 F: 0141 552 7418 W: http://www.davidnarro.co.uk E: mail@davidnarro.co.uk			
Client BEN LOYAL Ltd.			
Architect GROVES-RAINES ARCHITECTS			
Job Title CAISTEAL BHARRAICH BEN LOYAL ESTATE			
Sheet Title PLANS AND DETAILS SCAFFOLD ARRANGEMENT			
Drawn RT	Designed RT	Checked -	
Scale 1:50		Date Dec 2015	
Drawing No. 15.256-01		Revision A	