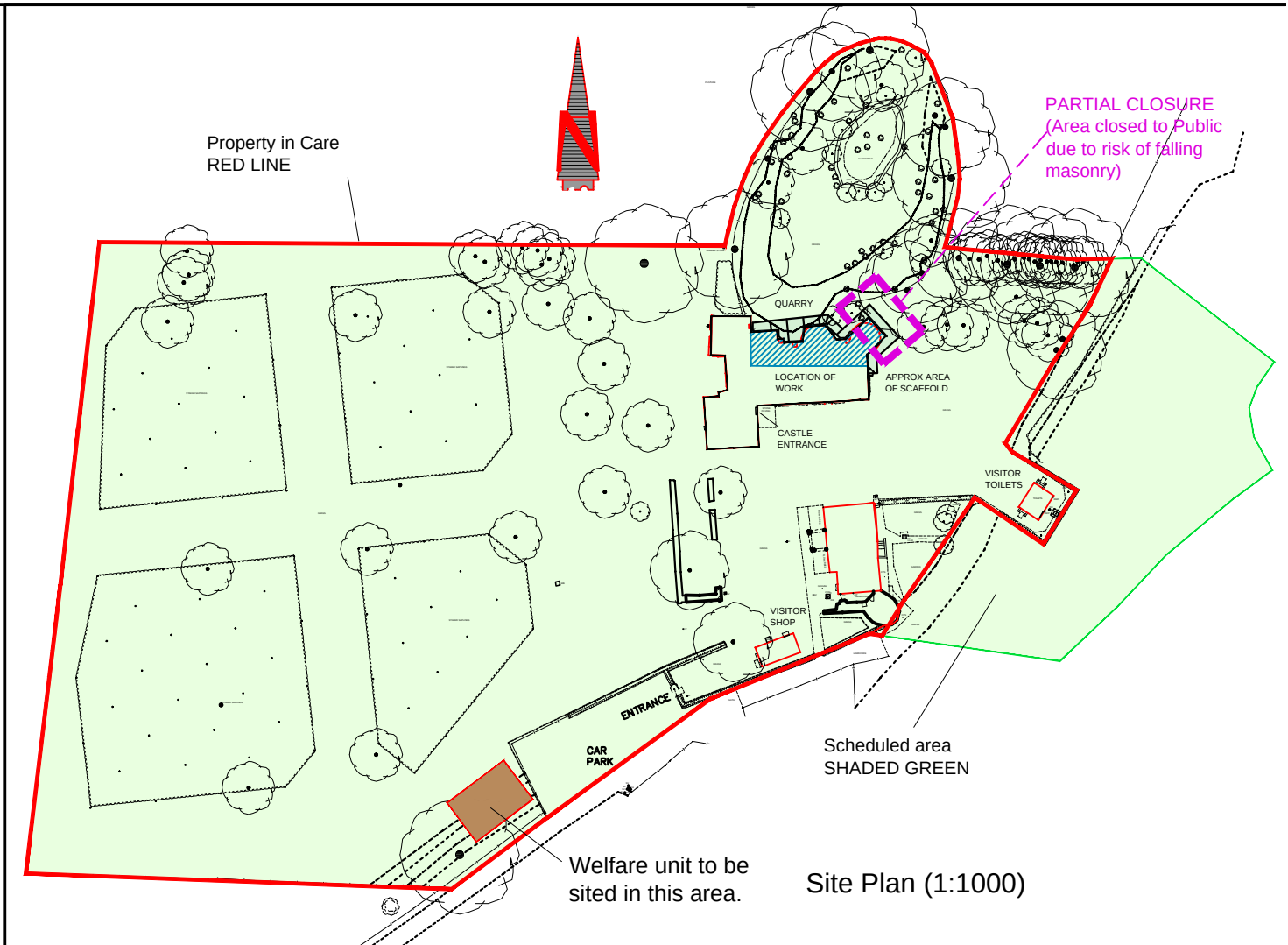
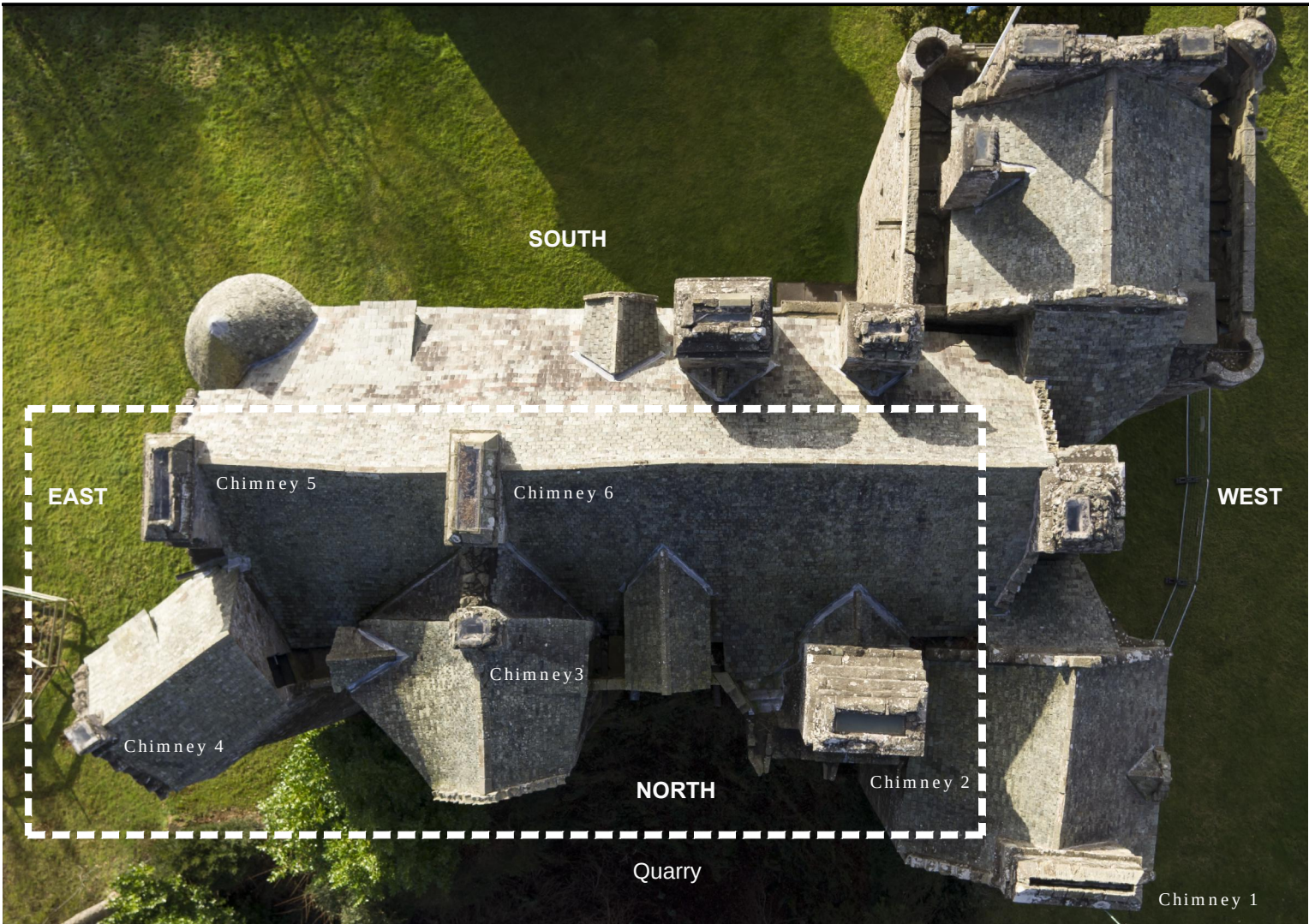
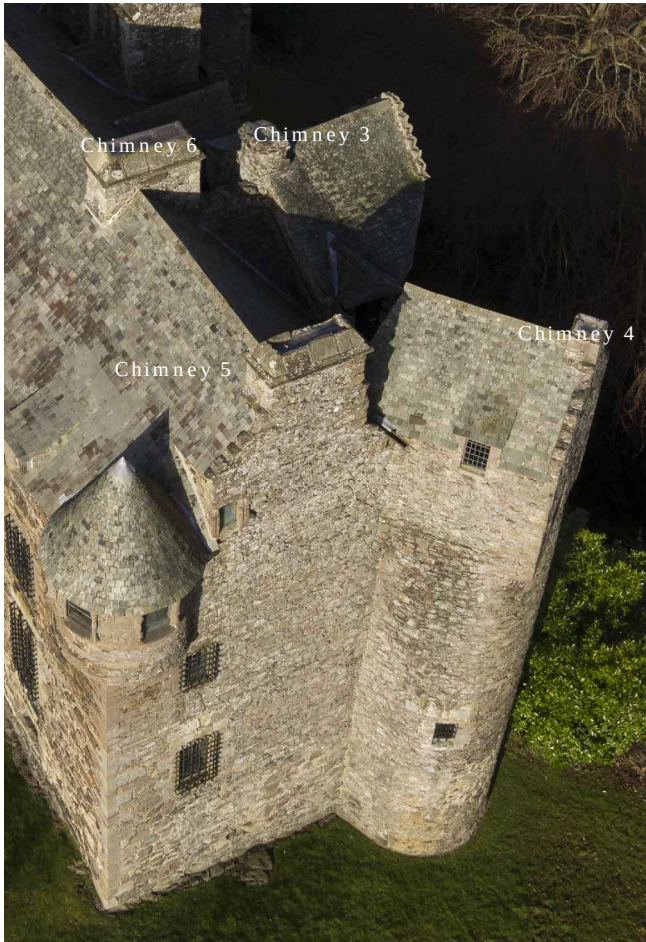




Ariel photograph of roofs



North Elevation showing Roof and North wall.



East Elevation



Ariel photograph of site from North East.

**Notes**  
**Scaffold:**  
Options for scaffold provision have been investigated and it has been concluded that a self-supporting, buttress scaffold is impossible due to the difficult ground conditions of the adjacent quarry and that securing the scaffold through windows is impractical due to the existing leaded glass.

**The scaffold is proposed to have:**  
- All scaffold footings on secure base with No ground penetration.  
- Fixings at 4metre centres into existing mortar joints using **Hilti HKD M16 Anchors** (as confirmed/used in pull out test in previous phase of conservation works to Elcho Castle in 2015).  
- Kentledge blocks are to be used where possible.  
- Area around scaffolding to be made safe from public.

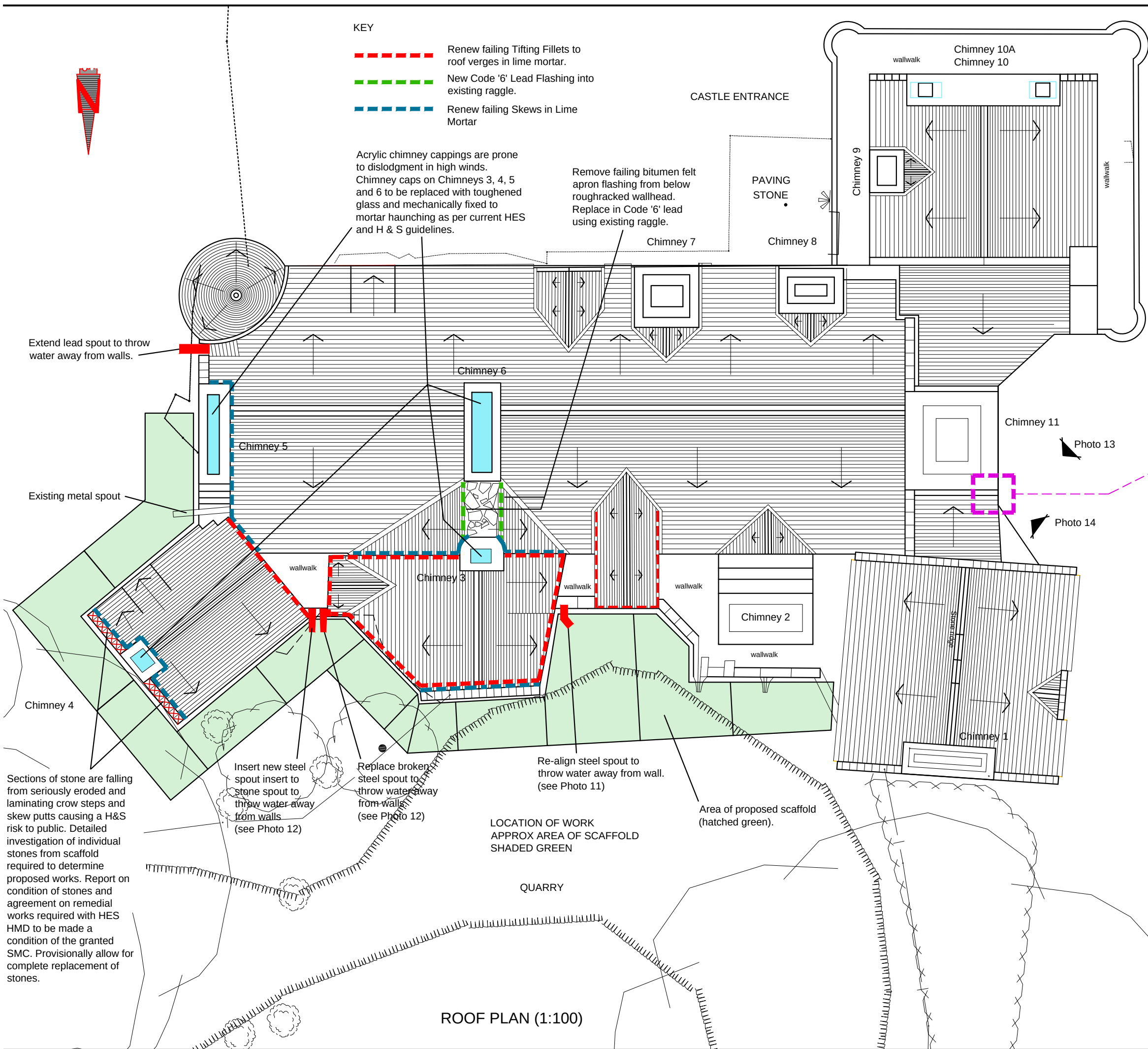
**Additional Notes:**  
- Grass areas to be protected.  
- Area to be agreed for messing unit and materials.  
- Visitor access areas (entrances, toilets, shop and car park) to be maintained at all times

- Residual Risks:-**
- A. Risk of falling - Edge protection required.
  - B. Risk of falling materials and tools - no access to works area. Area below must be protected and barriered - scaffold design to incorporate adequate measures.
  - C. Lifting gear required for transport and positioning.

|          |                                                |
|----------|------------------------------------------------|
| MONUMENT | ELCHO CASTLE                                   |
| PROJECT  | Site Plan and Photos<br>NE Tower Consolidation |



|                        |             |                          |
|------------------------|-------------|--------------------------|
| PROJECT DRAWING NUMBER | SMC         |                          |
| SCALE                  | 1:1000 @ A3 | ARCHITECT<br>DMBorthwick |
| DATE                   | Feb '2016   | DRAWN BY<br>BTPringle    |
| ARCHIVE NUMBER         | 312/140/079 |                          |



General Notes:-

**STONE** - Remove vegetation, brush down delaminating stonework. Re-point open joints, replace pinnings and re-point with lime mortar.

**CHIMNEYS** - Acrylic chimney cappings are prone to dislodgment in high winds. Chimney caps on Chimneys 3, 4, 5 and 6 to be replaced with toughened glass and mechanically fixed to mortar haunching as per current HES and H & S guidelines.

**SLATES AND RIDGES** - Replace all damaged or missing slates and cracked or damaged ridge stones.

**WINDOWS AND YETTS** - Paint all window Yetts to match existing (prepare with rust inhibitor). Investigate ends of bars to determine if more expansion from rust is likely. All window Yetts within scaffolded area to be repainted and socket holes tamped with lead wool to prevent further deterioration through rust. Overhaul all timber window frames within scaffold area. Linseed oil treatment to timber frames. Remove defective putty to surrounds and replace with new putty (whitening and linseed oil putty to lead cams directly into stonework, burnt sand and boiled linseed oil mastic to timber frames).



Corner of stone above spout has cracked and is likely to fall. Insert new stainless steel dowels to secure. (Work from Mobile Elevated Work Platform)

**Residual Risks:-**

**A.** Risk of falling - Edge protection required.

**B.** Risk of falling materials and tools - no access to works area. Area below must be protected and barriered - scaffold design to incorporate adequate measures.

**C.** Lifting gear required for transport and positioning.

|          |                                                |
|----------|------------------------------------------------|
| MONUMENT | ELCHO CASTLE                                   |
| PROJECT  | Roof Plan and Photos<br>NE Tower Consolidation |

 **HISTORIC SCOTLAND**  
**ALBA AOSMHOR**

|                        |             |                          |
|------------------------|-------------|--------------------------|
| PROJECT DRAWING NUMBER | SMC         |                          |
| SCALE                  | 1:100 @ A3  | ARCHITECT<br>DMBorthwick |
| DATE                   | Feb '2016   | DRAWN BY<br>BTPringle    |
| ARCHIVE NUMBER         | 312/140/080 |                          |



Photo 1

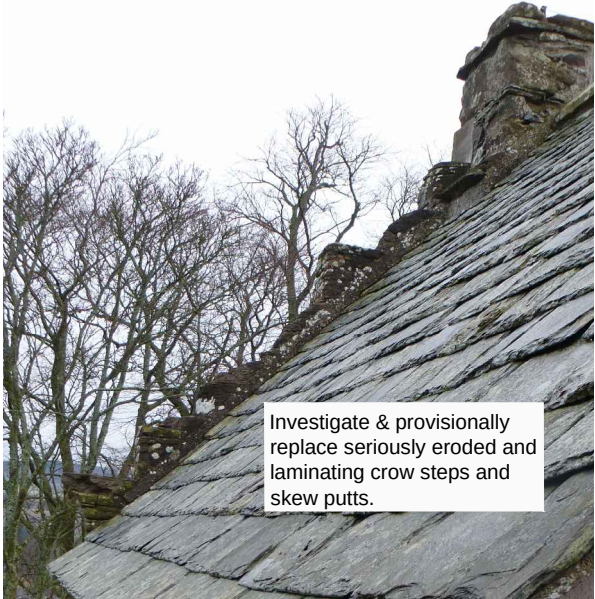


Photo 2



Photo 3 - Extend Lead Flashing, tuck under existing flashing.

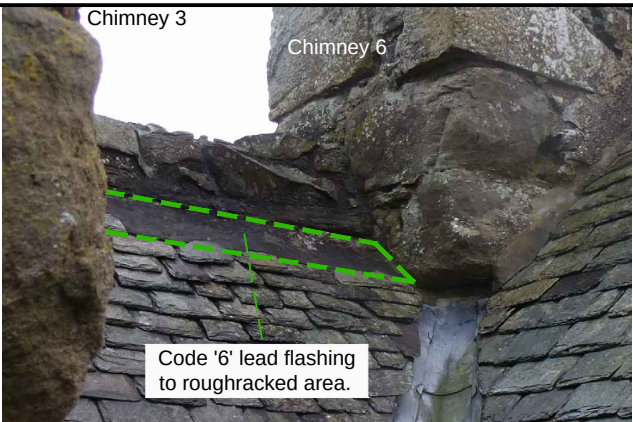


Photo 7 - failing felt flashing



Photo 8 - Loose slates and mortar fillet repaired/renewed.



Photo 9



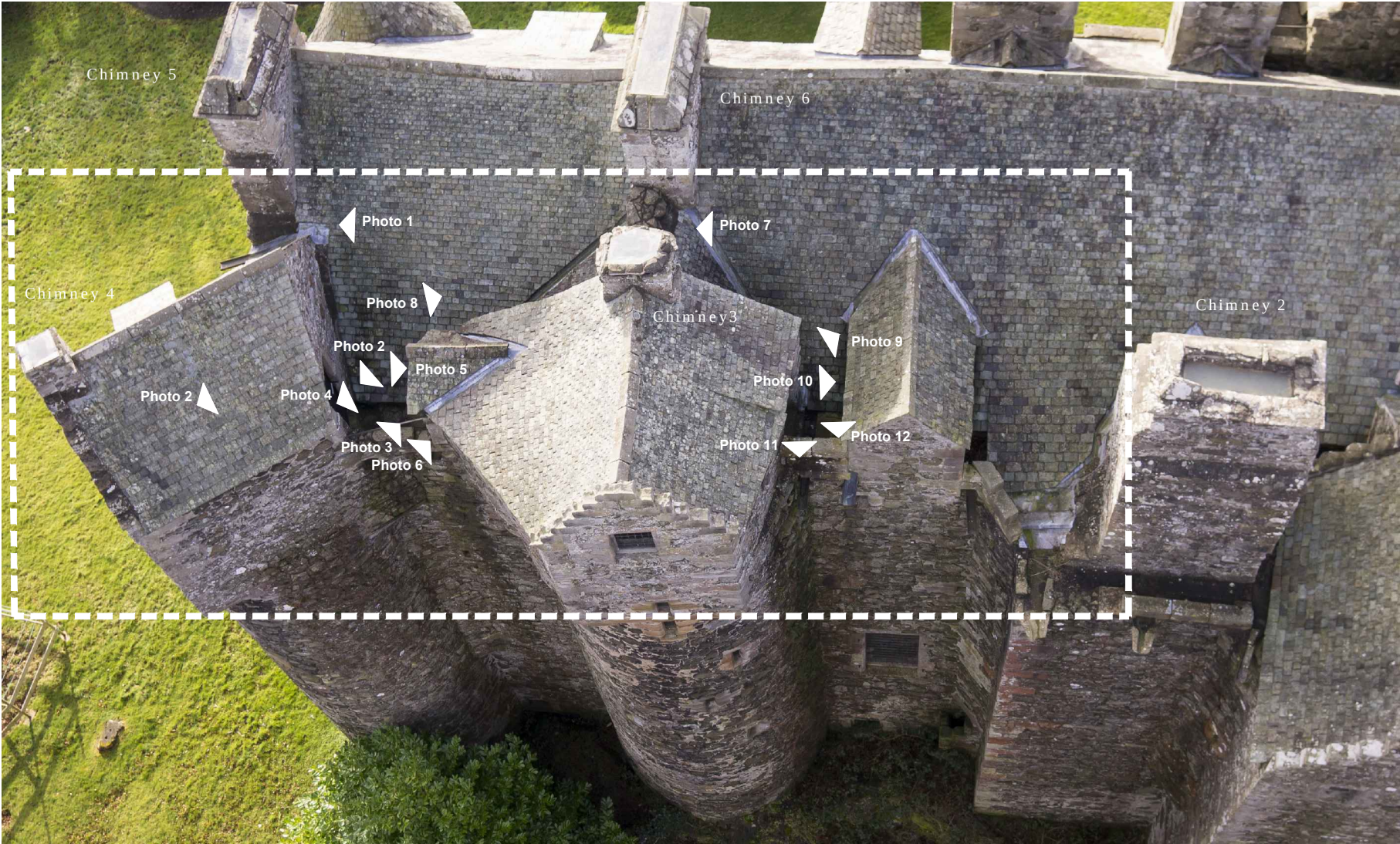
Photo 10 - Secret lead gutter blocked, **Clean out.**



Photo 11 - Spout needs to be re-directed away from wall.



Photo 12 - Renew broken steel spout and insert new steel spout insert to exist. stone spout to throw water away from walls.



Ariel photograph of roofs - Remove vegetation. Brush down delaminating stonework. Re-point open joints and Replace pinnings where necessary. Remove any shelves from projecting stonework with small mortar fillets (colour matched using stone dust).



Photo 4 - Loose slate at verge/eaves.



Photo 5 - Loose slate at verge/eaves.



Photo 6 - Loose slate at verge/eaves.

|          |                                       |
|----------|---------------------------------------|
| MONUMENT | ELCHO CASTLE                          |
| PROJECT  | Photo Sheet<br>NE Tower Consolidation |



|                        |             |                          |
|------------------------|-------------|--------------------------|
| PROJECT DRAWING NUMBER | SMC         |                          |
| SCALE                  | 1:1000 @ A3 | ARCHITECT<br>DMBorthwick |
| DATE                   | Feb '2016   | DRAWN BY<br>BTPringle    |
| ARCHIVE NUMBER         | 312/140/081 |                          |

Sections of stone are falling from seriously eroded and laminating crow steps and skew putts causing a H&S risk to public. Detailed investigation of individual stones from scaffold required to determine proposed works. Report on condition of stones and agreement on remedial works required with HES HMD to be made a condition of the granted SMC. Provisionally allow for complete replacement of stones.

Acrylic chimney cappings are prone to dislodgment in high winds. Chimney caps on Chimneys 3, 4, 5 and 6 to be replaced with toughened glass and mechanically fixed to mortar haunching as per current HES and H & S guidelines.

Replace all damaged or missing slates and cracked or damaged ridge stones to roof within scaffold area.

Re-align steel spout to throw water away from wall. (see Photo 11)

Replace broken steel spout.

Insert new steel spout insert to stone spout

Chimney 6 behind

Chimney 3

Chimney 4

Chimney 5

General Notes:-

**STONE** - Remove vegetation, brush down delaminating stonework. Re-point open joints, replace pinnings and re-point with lime mortar.

**CHIMNEYS** - Acrylic chimney cappings are prone to dislodgment in high winds. Chimney caps on Chimneys 3, 4, 5 and 6 to be replaced with toughened glass and mechanically fixed to mortar haunching as per current HES and H & S guidelines.

**SLATES AND RIDGES** - Replace all damaged or missing slates and cracked or damaged ridge stones.

**WINDOWS AND YETTS** - Paint all window Yetts to match existing (prepare with rust inhibitor). Investigate ends of bars to determine if more expansion from rust is likely. All window Yetts within scaffolded area to be repainted and socket holes tamped with lead wool to prevent further deterioration through rust. Overhaul all timber window frames within scaffold area. Linseed oil treatment to timber frames. Remove defective putty to surrounds and replace with new putty (whitening and linseed oil putty to lead cams directly into stonework, burnt sand and boiled linseed oil mastic to timber frames).

Image courtesy of McGibbon and Ross, Castellated and Domestic Architecture of Scotland Vol II - D. Douglas 1887

Residual Risks:-

- A. Risk of falling - Edge protection required.
- B. Risk of falling materials and tools - no access to works area. Area below must be protected and barriered - scaffold design to incorporate adequate measures.
- C. Lifting gear required for transport and positioning.

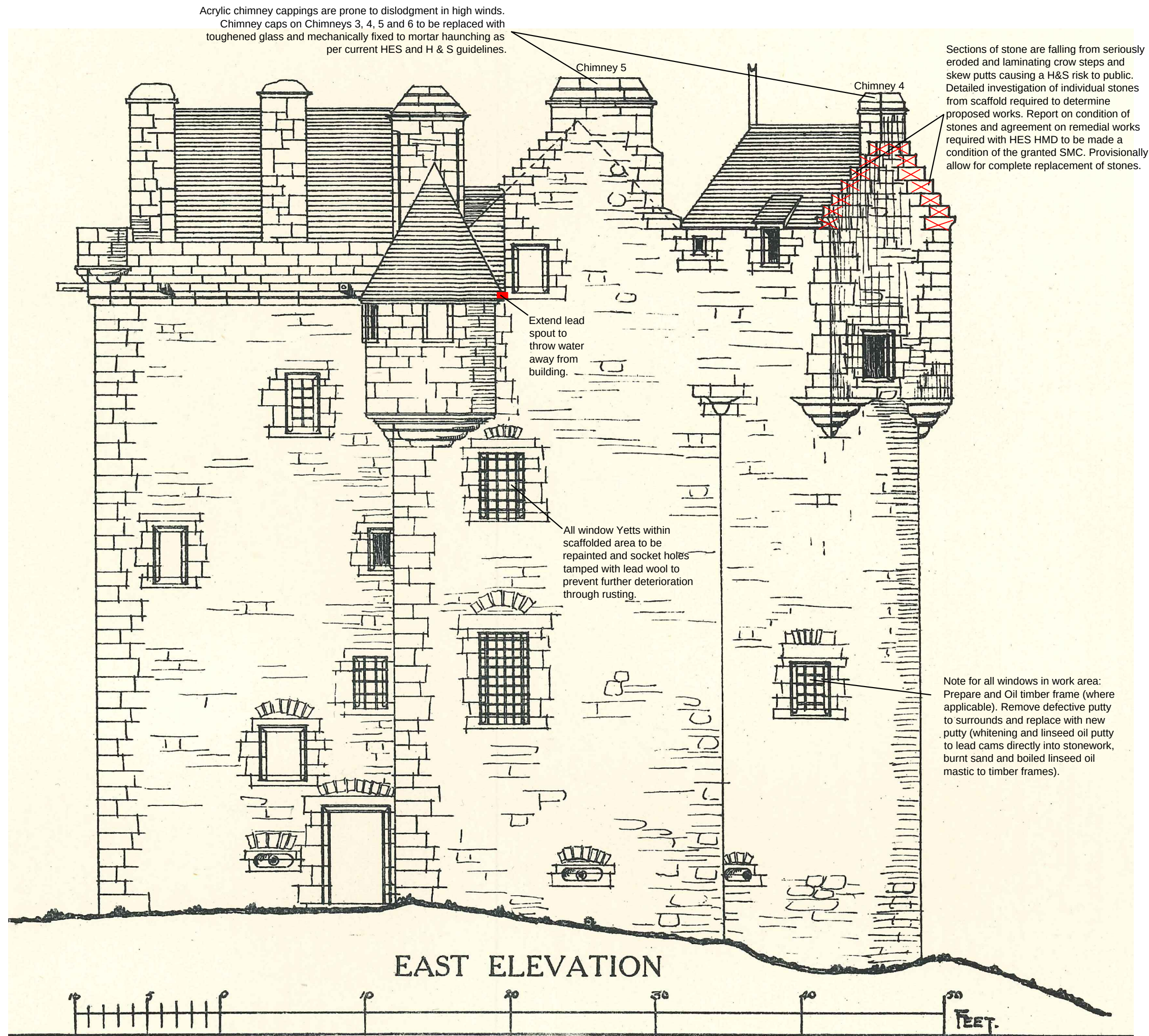
|          |                                           |
|----------|-------------------------------------------|
| MONUMENT | ELCHO CASTLE                              |
| PROJECT  | North Elevation<br>NE Tower Consolidation |



HISTORIC SCOTLAND

ALBA AOSMHOR

|                        |           |             |             |
|------------------------|-----------|-------------|-------------|
| PROJECT DRAWING NUMBER |           | SMC         |             |
| SCALE                  | NTS @ A3  | ARCHITECT   | DMBorthwick |
| DATE                   | Feb '2016 | DRAWN BY    | BTPringle   |
| ARCHIVE NUMBER         |           | 312/140/082 |             |



- General Notes:-
- STONE** - Remove vegetation, brush down delaminating stonework. Re-point open joints, replace pinnings and re-point with lime mortar.
- CHIMNEYS** - Acrylic chimney cappings are prone to dislodgment in high winds. Chimney caps on Chimneys 3, 4, 5 and 6 to be replaced with toughened glass and mechanically fixed to mortar haunching as per current HES and H & S guidelines.
- SLATES AND RIDGES** - Replace all damaged or missing slates and cracked or damaged ridge stones.
- WINDOWS AND YETTS** - Paint all window Yetts to match existing (prepare with rust inhibitor). Investigate ends of bars to determine if more expansion from rust is likely. All window Yetts within scaffolded area to be repainted and socket holes tamped with lead wool to prevent further deterioration through rust. Overhaul all timber window frames within scaffold area. Linseed oil treatment to timber frames. Remove defective putty to surrounds and replace with new putty (whitening and linseed oil putty to lead cams directly into stonework, burnt sand and boiled linseed oil mastic to timber frames).

Image courtesy of McGibbon and Ross, Castellated and Domestic Architecture of Scotland Vol II - D. Douglas 1887

**Residual Risks:-**

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- C. Lifting gear required for transport and positioning.

|          |                                          |
|----------|------------------------------------------|
| MONUMENT | ELCHO CASTLE                             |
| PROJECT  | East Elevation<br>NE Tower Consolidation |



**HISTORIC SCOTLAND**  
ALBA AOSMHOR

|                        |           |             |             |
|------------------------|-----------|-------------|-------------|
| PROJECT DRAWING NUMBER |           | <b>SMC</b>  |             |
| SCALE                  | NTS @ A3  | ARCHITECT   | DMBorthwick |
| DATE                   | Feb '2016 | DRAWN BY    | BTPringle   |
| ARCHIVE NUMBER         |           | 312/140/083 |             |