Dunyvaig Castle / Conservation Assessment

Islay / July 2022

Dunyvaig Castle
1755A
Islay
Scotland

GRAS with:

Islay Heritage
Client

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Revisions

Introduction

Fig. 1 Location of Dunyvaig Castle (circled) and the wider Lagavulin bay. Aerial image taken from Bing Maps, courtesy of Ordnance Survey

Purpose

An initial Conservation Assessment was prepared by the same team in 2019. This document is an updated version of that report that uses new survey data to provide improved orthographic images to record the condition and proposed repairs on each of the standing structures on the site including those that are not readily visible from ground level. In addition, the same team of professionals carried out a second site visit in 2022 to look for any incremental deterioration of the masonry that had taken place of the intervening 3-year period, and have also reviewed in more detail the archive photos of the site and the records of previous surveys and interventions.

This report is intended to advise Islay Heritage on the condition of the remaining fabric of Dunyvaig Castle on Islay, and to make recommendations on the consolidation and repair works required to halt further serious deterioration and bring it to a safe structural condition. Please refer to Appendices 3 & 4 for the new condition schedule and annotated drawings.

In addition, this report will describe proposals to provide interpretation of the site (Appendix 5) and concurrent archaeological investigation works, and to improve physical access by members of the public. Outline costs for all proposals will be provided.

It is understood that an application may be made to Historic Environment Scotland (HES) for a repairs grant under the Historic Environment Repair Grant programme (HERG) and the information provided within this report also aims to support support this application.

Background

Dunyvaig Castle is one of Scotland's most important historic sites and has been a Scheduled Monument since 1989 (SM4747, described by HES as 'Dunivaig Castle').

The castle and the area around it are owned by Diageo PLC, as is the nearby Lagavulin Distillery. In 1998, and after a ten-year period of project development, a programme of repair works was carried out by the then owners, United Distillers. The works were scaled back from an original scheme of general repairs and improvements to a smaller package of emergency works over a six-week period, focussing only on consolidation of the exterior of the tower's south wall. These works were grant aided by HES. No other repairs or interventions are believed to have have been carried out on the site

Islay Heritage (IH) is a well-established local charity (SC046938) with the aim of "*...furthering knowledge about Islay's past, and the many ways in which it can be explored and enjoyed by everyone*". Following a generous funding award from Diageo's contribution to 'Islay Good Causes', marking Lagavulin's 200th anniversary, IH undertook an archaeological assessment of Dunyvaig Castle, designated as the Dunyvaig and Hinterland Assessment Project (DHAP). That involved three seasons of field work in 2018, 2019 and 2021. Reports on each field seasons are available at http://islayheritage.org/dunyvaig/ . The DHAP is designed to inform the development of a research, teaching and community archaeology programme to be principally funded by HES that would be known as the Dunyvaig Project. The ultimate aim of that project is the transformation of a neglected historical site into a cultural heritage asset for residents and visitors to the island.

Introduction

Limitations

These recommendations are based on purely visual inspections carried out on site on 11.04.2019 and 19.04.2022 by the design team, and by inspection of a high-quality 3D digital model of the site prepared from a UAV (drone) survey carried out in March 2022. Inspection on site was available from ground level only and those parts of the structure that are built in, covered up or otherwise inaccessible have not been inspected. No opening up work, specialist investigation or testing has been carried out thus far and it is therefore possible that some aspects of these proposals may have to be revised when such further analysis is undertaken.

In making these recommendations, the overall aim is to put the fabric in a safe and structurally sound condition to the long-term future of the now ruinous castle, while also acknowledging the relative significance of individual elements and the need to prioritise works accordingly.

This report is prepared for the sole use of IH and liability cannot be accepted for its use by any other party

Context

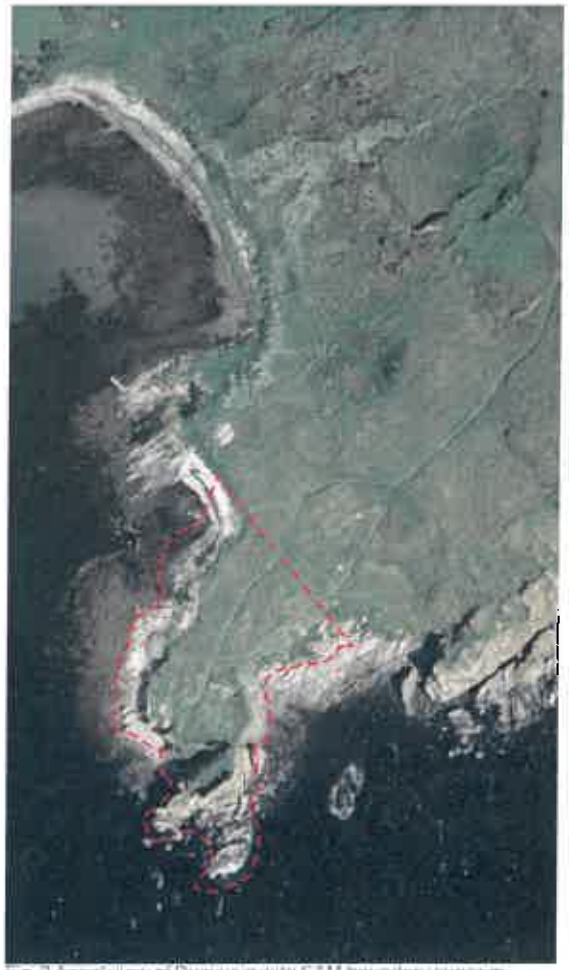

Fig. 2 Aerial view of Dunyvaig with SAM boundary superimposed. Image taken from Bing Maps, courtesy of Ordnance Survey

Location and Setting

Dunyvaig Castle is located on the south coast of the island of Islay, 75 miles west of Glasgow on the western Atlantic seaboard of Scotland. The castle itself is sited around three miles east of the village of Port Ellen, on the tip of a headland on the eastern edge of Lagavulin Bay. The world-renowned Lagavulin Distillery is located around 200m away, across the bay to the north west.

Access to the site from the A846 public road and cycle path network is via a single lane road with a gravelled turning head used informally for parking, and then along a 200m-long footpath over open grassland. There are no restrictions on access to the site such as gates or fencing.

The land is not within any designated sites for nature conservation, although the inshore area to the south east of the castle is designated as a Special Area for Conservation (South-East Islay Skerries SAC) for its population of common seals.

Outline History

The castle's history is still uncertain while reporting of the DHAP project is still being prepared, but is undoubtedly complex. The current tower is believed to have been constructed and altered more than once in the 16th century, but the site is reputed to have been the location of a much earlier fort and visible changes of masonry style at lower levels suggest that it may incorporate elements of an earlier castle dating to the 14th and 15th centuries.

The courtyards are believed have been constructed slightly later, possibly in the 16th or 17th centuries when castle was the object of much wrangling between the MacDonald's and rival clans. Dunyvaig was finally abandoned in the late 17th century after a final siege by the Coventanting army.

More recently, a scheme of emergency repair works was carried out in 1998, focussing exclusively on works to the exterior of the south wall of the tower on the Summit. At the conclusion of those works, it was recommended by the consultant team responsible for the project that a futher series of works were carried out. These comprised:

- Installation of interpretation and hazard signage to deter visitor access.
- Repair of the exteriors of the outer courtyard walls. This work was not then identified as being urgently required.
- Protection of the oven by infilling and grasing over.
- Reinstatement of missing pinning and mortar.
- Recapping of exposed wallheads.
- Repinning and protection of fittings to the seagate piers.
- Repair of the archway "in poor shape".
- Minor repinning to the inner face of the tower walls and securing the detached inner wall skin to the west end of the same.

For further information on the castle's history, please refer to the NRHE's Archaeological Notes for the site (http://canmore.org.uk/site/38002), and the DHAP reports for 2018, 2019 and 2021 at http://islayheritage.org/dunyvaig/.

Context

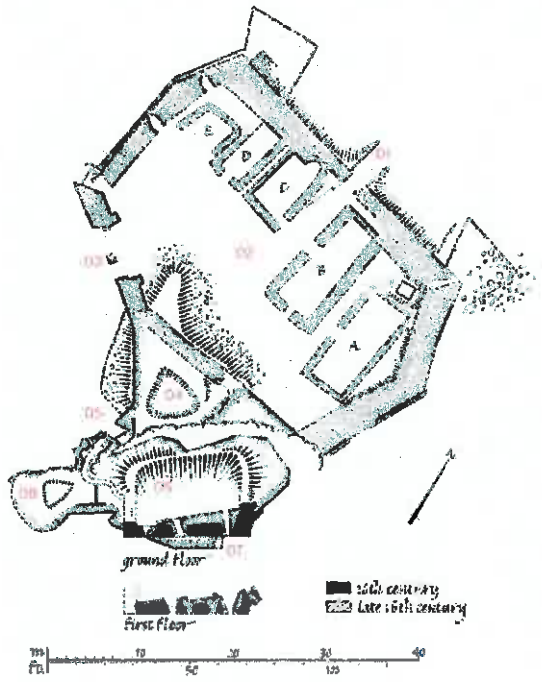

Fig. 3 Dunyvaig Castle ground floor plan with areas annotated. (Image originally RCAHMS, c.1976)

Description

For the purposes of this report, the condition survey covers only standing, above-ground archaeology. These areas are described in this report, using RCAHMS nomenclature, as:

1. Main Entrance
2. **Outer Courtyard**
3. Seagate
4. **Inner Courtyard**
5. Drawbridge
6. **Summit**
7. Tower
8. Bastion

Outer Courtyard

- The lowest level area of boundary walls enclosing an open area of approximately 1050m2 GEA. These walls, up to 3.5m thick, are pierced with a variety of openings, some of which are now blocked. The boundaries are in part built directly off the foreshore bedrock, making them vulnerable to coastal erosion, and are built of rubble stone with a thick turf capping, possibly added later to increase the height of the walls during the time of the final siege.
- The masonry of the seaward-facing rubble walls to the west and east now stands to a height of around 2.5m externally and 1m internally (the courtyard floor is higher than the foreshore). The west walls contains two narrow openings.
- The seaward-facing section of the rubble south wall contains an opening roughly 6m wide which was apparently an arched 'seagate'. The remaining sections of wall to either side of the opening are approximately 5.2m high on the exterior and 3.7m high internally.
- The remainder of the south wall is constructed of rubble masonry standing up to 3.4m high internally. An arched doorway leading to the inner courtyard has been largely infilled with collapsed masonry and the opening is now less than 1m high.
- The north wall is largely concealed by long turf but the 2018 archaeological excavation revealed a rubble masonry wall below this layer. The main entrance to the castle is at the centre of this wall. A possible beehive oven feature is built into the wall to the west of the entrance.
- Within the outer courtyard are the grassed-over footings of five rectangular inner buildings, together with a square pit, roughly 1.5x1.5x1.5m , that may have been a well.

Inner Courtyard

- The triangular mid-level area immediately below the tower, approximately 90m2 GEA. Much of this area is filled with collapsed rubble from the surrounding walls, now covered with turf.
- Standing remains consist of a rubble-built south-facing retaining wall that is up to 4m high externally.

Summit

- The remnants of a roughly rectangular rubble-built tower house or hall at the summit of the site on a high outcrop of bedrock. The majority of what remains is the south-facing external wall, around 13.8m long, 1m thick and approximately 5m high on the inside (12m high externally at the eastern end due to the irregular bedrock).
- There is evidence of the 1998 repair works to stabilise the exterior of the tower wall; two pattress plates and corbelled

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Fig. 4 General view of the Castle as seen from Lagavulin Distillery to the North West (April 2019)

underbuilding are visible on the seaward side. No other works were undertaken on either the tower or the remainder of the castle at the time.

- This summit area, including what was perhaps a bastion to the south west, covers an area of approximately 270m2 GEA. The whole area is separated from the inner and outer courtyards by a vertical rockface and a 1.6m wide opening in the footpath/stair that must originally have been covered by a retractable timber drawbridge supported by the remaining abutments.

Apart from reviewing the access routes to these specific areas, this report does not cover any other parts of the Scheduled Monument or nearby landscape. For a more detailed account of the castle and its site please refer to the NRHE's Archaeological Notes for the site (http://canmore.org.uk/site/38002), and the DHAP reports for 2018, 2019 and 2021 at http://islay-heritage.org/dunyvaig/.

Access and Health & Safety Issues

Sites such as Dunyvaig Castle are inherently dangerous, especially as it is relatively rural and there is little way to raise the alarm if there are accidents. The castle is a very prominent and attractive local landmark in an area that has an increasing number of tourist visitors. There are moral, legal, financial, reputational, business and marketing reasons for managing visitor safety.

When planning any works, including both construction and archaeology, the Construction (Design and Management) Regulations 2015) (CDM) must be taken into account. Clients, being the organisations or individuals for whom a construction project is carried out, must make suitable arrangements for managing a project. A suitably-experienced principal designer will most likely be required to be appointed by the client to plan, manage and monitor health and safety in the pre-construction phase, after which a principal contractor will take on these duties during the construction phase.

Consideration must be given to designing out or reducing the following risks wherever possible:

- Pre-existing risks such as the structural condition of the buildings and grounds,
- Risks inherent in accessing the site for survey, investigation and preliminary works
- Construction risks e.g. resulting from the choice of materials and methods of construction
- Ongoing risks for those maintaining or visiting the site once works are complete. It should be noted that the inspections were purely visual and undertaken in good weather conditions from ground level of the readily accessible parts of the site.

Part of the attractiveness of the site to visitors may be due to the fact that it is relatively unaltered and that walking on wall-heads and other exposed areas presents an exciting element of risk. However, visitors need to be aware of what risks they are taking in accessing the site, and the benefits of allowing access need to be balanced against any negative impacts on the monument itself as well as moral, legal and statuory obligations.

At present, access to and within the site is uncontrolled and is only suitable for ambulant visitors due to the challenging natural and man-made topography. There are currently no warning signs or fences to inform visitors about the site's poor condition or to deter or prevent access to the higher, more hazardous parts of the site. The only part of the site that is very

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difficult to access is the summit as it is protected by steep cliffs and the drawbridge opening on the footpath from the inner courtyard. However, the opening can be bypassed by more intrepid visitors if they scramble over steep rocks above a 4m plus drop at the drawbridge. There have been no known reported accidents at the site.

For a more comprehensive review of the issues surrounding visitor Health & Safety, please refer to *Managing Visitor Safety in the Historic Built Environment: Principles & Practice.*

Archaeological Assessment

IH, working with the University of Reading, has completed fieldwork for an archaeological assessment of Dunyvaig Castle, the DHAP Project. Three field seasons of excavation and survey were undertaken in 2018, 2019 and 2021, with reports available at http://islayheritage.org/dunyvaig/. Post-excavation is being undertaken and final reports being prepared.

Significance

A Statement of Significance is currently being developed for the site as archaeological and academic investigations continue.

- Although appearing to be primarily a 16th century building, some elements of Dunyvaig Castle are likely to date to at least the 14th century and it is a **rare** " iconic archaeological monument for not only Islay but also the western Atlantic Seaboard, pivotal to understanding its mediaeval history" (p.4, Updated Data Structure Report for the Dunyvaig and Hinterland Assessment Project 2018, Islay Heritage, March 2019). The seagate at Dunyvaig is a **unique** feature for the galley-castles of the western seaboard. In this respect it is of **national** importance.
- Outwith the masonry tower on the summit, the castle comprises two enclosed courtyards and an area of a low-lying coastal promontory. Archaeological study of these features suggests the castle saw a prolonged period of occupation into the 18th century, even after the tower itself was abandoned. All of these areas retain **good archaeological potential** for excavation.
- The site is at **risk of environmental pressures** related to its existing position and also the potential effects of climate change.
- The castle enjoys a **dramatic and striking setting**, which must be recognised as a signficant draw for a small but increasing numbers of visitors outside of its historic significance and associations.

Condition Assessment

Fig. 5 Photograph showing the gravelled car park / turning head (April 2019)

Fig. 6 Photograph showing footpath approach to the main entrance (April 2019)

Please also refer to Appendices 2, 3 & 4 for more detailed images, condition notes and drawings.

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Approach

Access from the gravelled turning head/car park to the site is via a winding grassed footpath across open ground that slopes down to the shore and castle. There is no disabled accessible route to the castle. Apart from some lower-lying areas that are somewhat soft, the track is in good condition with little surface erosion. Just within the boundary of the Scheduled Monument, the track passes a large rock with a deep cup-hole, possibly evidence of gear used to pull boats up onto the shore. The footpath also passes the grassed over footings of buildings, which may be contemporary with the castle or later in date (investigations are ongoing).

It should be noted that there are no passing places and a steep blind bend along the road leading to the turning head/car park, making it unsuitable for large numbers of vehicles or large vehicles. It is assumed that this road is public.

No change in observations since 2019.

Castle Generally

Photographs and written records from the last 60 years suggest that its condition has very slowly but progressively deteriorated to this point. Given the lack of repair and exposed location, the condition of the castle has been surprisingly stable. Most of the key issues identified in this report are the same as those described in a series of survey reports from the 1980's and 1990's, with many areas looking remarkably similar to their appearance in archive photographs dating to the 1960's. Despite these previous reports, only one limited programme of emergency stabilisation works was completed in 1998, focussing only on the exterior of the tower. This area now appears generally stable.

In summary, the main difference between the observations made at the completion of the 1998 emergency works and in 2022 is that the condition of the site has deteriorated further; many areas are now considered to require Urgent repair and one specific area is considered to require Immediate repair.

However, there is no way to confirm that the areas we have highlighted as in Immediate or Urgent need of repair (see Condition Schedule in Appendix 3) are not at risk of imminent or very swift and significant deterioration. Clear examples of incremental deterioration have been observed all over the site since 2019, but the outer courtyard walls facing directly onto the shoreline are of particular concern. This may well be a tipping point in the decline of the castle, which may be further exacerbated by the increasing visitor numbers on Islay and the immediate area, and by the forecast sea level rises and increased storm events resulting from climate change.

No timber structures or roofs remain on the site, and floors, stairs and much of the upper walling have been covered by layers of fallen masonry and turf that now provide protection to these buried remains. Apart from the remaining tower wall and the seagate opening, most of the standing masonry consists of what are now retaining walls in a poor condition. There are no surfaced paths and only limited areas of erosion.

The masonry is hard metamorphic coursed random rubble and horizontal pinnings, generally sourced on site, laid in lime mortar made with shelly local beach sand. Much of the pointing mortar and pointing have been lost from the face of the walls, leaving deep voids and unsupported stones in some areas.

There is no large woody vegetation affecting the masonry, and the only tree on the site is a stunted young tree north of

Condition Assessment

Fig. 7 General view of Outer Courtyard as viewed from the Summit (April 2019)

Fig. 8 General view of the seagate from the Outer Courtyard, with the footpath to the Inner Courtyard to the left (April 2019)

Please also refer to Appendices 2, 3 & 4 for more detailed images, condition notes and drawings.

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the outer courtyard that is not currently affecting the standing structures. Turf cappings/upper walls appear to be providing protection to the masonry below, absorbing moisture that would otherwise wash out more of the mortar. Sea thrift and other small plants have colonised crevices, and lichen has grown on the original facing stones, but these do not seem to be adversely affecting the structure of the walls.

Rabbit and other small mammal burrows are visible all over site, causing substantial disturbance in the lower areas.

Outer Courtyard

Since 2019, a small area on the external face of the west wall has partially collapsed, requiring Immediate repair, several stones have fallen out of the walls in various areas of the boundary walls, and larger areas are now identified as requiring underbuilding or rough racking. Since 1998, the condition of this area has since deteriorated generally. Many works in this area are now classed as Urgent, and some are Immediate.

Much of the facing stones have been lost from the exterior of the east- and west-facing walls, both of which are built on top the top of the shoreline and are therefore affected by wave action at times. The bastions facing the landward accesss to the site, at the NE and NW corners of the courtyard, have entirely collapsed or been demolished. The west wall contains two embrasures; the lintels over the northernmost have collapsed, some remain in situ over the southernmost. There is evidence of burrowing in both areas.

The central portion of north wall, including the remains of the entrance gateway, is largely protected by turf with little masonry exposed. The boundary wall at the rear of the possible oven built into this wall is undercut, and in 2019 fragments of charred wood inside suggest the oven may have been used as a shelter for a fire.

Both sections of wall on either side of the south wall seagate have also lost pockets of facing stones, particularly at the exposed corners. The interior of the south wall, facing into the outer courtyard, has a mixture of problems: fissures in the face of the adjacent high level bedrock, and missing facing stones and deep voids formed under the arched opening that require Immediate repair (although some of these may have been pockets for supporting timberwork that has since rotted away or a drawbolt).

The retaining walls of the possible well within the courtyard appear stable, but should be propped before any further excavations or repairs. The pit itself contains a mixture of debris. Some foundations in this area were exposed during archaeological investigations over the last five years and were then recovered with turfing over a geotextile that is visible in some areas.

Inner Courtyard

Since 2019, a stone has fallen out of the walls leading to the drawbridge, and larger areas are now identified as requiring underbuilding or rough racking. Limited areas require Urgent repair.

The condition of the arched opening is the same as described above. As the opening is now too low to be accessible except on hands and knees, an informal pathway has developed through the inner courtyard from the outer courtyard to the summit. This path runs along a mound of grassed rubble and turfed wallheads, with a steep drop of several metres on one side, and is eroding to expose earth.

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Fig. 9 General view of Inner Courtyard looking North to the arched opening from the Lower Courtyard to right, and current footpath over fallen rubble to the left (April 2019)

Fig. 10 General view of Inner Courtyard looking East to the drawbridge leading up to the Summit (April 2019)

Fig.11 General view of previously-repaired (1998 emergency works) exterior of the Tower wall on the Summit as viewed from the North East (April 2019)

Fig. 12 General view of interior of the Tower wall on the Summit (April 2019)

Please also refer to Appendices 2, 3 & 4 for more detailed images, condition notes and drawings.

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Condition Assessment

Fig.13 Typical view of undercut wallheads with rabbit burrows that are undermining masonry and footpaths - visible under turf at top and to right. (April 2019)

Please also refer to Appendices 2, 3 & 4 for more detailed images, condition notes and drawings.

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Summit

Since 2019, a stone has fallen out of the tower walls, and larger areas are now identified as requiring underbuilding, rough racking and futher inspection. Limited areas require Urgent repair.

After crossing the significant void at the former drawbridge, the eroded footpath, formerly a stair, continues up to the tower via the bastion. There are small remnants of walls in this area but the bastion itself has no standing boundary wall.

Access and Health & Safety

Although it appears relativeiy stabie, the site currentiy presents several significant risks that vary in level around the site, including:

- Undercut and poorly supported areas of bedrock, masonry and turfing that are at risk of collapse, some categorised as being in Immediate or Urgent need of repair. These risks, which are related to natural shape of the site the condition of the building and vary in scale depending on the area in question, exist even at the lowest part of the site and are often not obvious to visitors especially where they are walking above the unstable areas.
- Unstable bedrock that may be at at risk of collapse resulting in rockfall. This risk is related to the natural geology of the site but may not be obvious to visitors.
- Unprotected drops especially where walking along high wallheads, including along the tops of seaward-facing walls and cliffs, where scrambling around the drawbridge, and at the summit of the site. In some areas falls of many metres are possible that could result in serious or even fatal injuries given the height of the structures. These risks are inherent to the setting of the building and its nature as a ruined castle, and they are generally obvious to visitors as such, although there are some areas where the level of hazard is not visible until very close to the edge.
- The confined space of the low archway that is still used by some visitors but which presents a fairly obvious risk of head injury.
- Trip hazards due to voids and openings in the ground caused by uneven ground and animal burrows. These risks are inherent to many rural sites.

It should be noted that the 2019 and 2022 inspections were purely visual and undertaken in good weather conditions from ground level of the readily accessible parts of the site.

Recommendations

Aims

The aim of the project is to slow down the deterioration of Dunyvaig Castle, balancing the need to prevent further loss of architectural and archaeological features whilst at the same time improving physical and intellectual access; making the castle safer to enjoy and informing visitors.

There is no intention to increase the number of visitors to the site – the aim is simply to enhance the experience of those visiting the castle. It is recognised however, that the numbers of visitors to Islay has been steadily increasing and will continue to do so, inevitably bringing increased numbers to Dunyvaig Castle. The prime driver for more visitors is the expansion of the whisky industry, such as by Diageo's investment in Port Ellen and Caol Ila and the construction of new distilleries, notably the Farkin development close to Dunyvaig that will become the Portintruan distillery. The 'three distilleries path' in the south of Islay brings walkers and cyclists directly past Dunyvaig. The owenrs of the site have an opportunity to develop paid tours to the castle potentially as a combined package with a tour to the distillery, a business development outside the remit of this report.

The proposed works described below have been developed with a philosophy of minimum intervention, both to the buildings and the wider landscape setting, avoidance of conjectural restoration, and minimisation of maintenance costs. The conservation and repair techniques have been devised to change the existing structures and their appearance as little as possible, while carrying out as much as is needed to consolidate loose and unstable masonry. Any new masonry works to stabilise and support the structures intended to be legible on inspection by persons experienced in historic building conservation. Non-ferrous support bars are proposed in a few specific locations that would otherwise require new masonry facings to be constructed.

Local and closely-matching materials, sourced directly from the site where possible, are to be used in repairs to ensure the best technical and visual match with the existing building fabric.

Recording

To date, the site has been the subject of 3D digital and geo-physical surveys, academic research into mortars and on-site archaeological investigations. Monitoring and recording of any areas disturbed or exposed during the works will be carried out by a suitably qualified person, and any archaeological recording on the site will be carried out to current recognised best practice standards.

Please also refer to Appendices 3, 4 & 5 for more detailed proposal notes and drawings.

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Recommendations

General Points

In summary, many of the works now proposed are similar or identical to those recommended in 1998 at the completion of the emergency works on the tower. The main difference is that the condition of the site has deteriorated further over the last quarter century and so a greater extent and area of work is now proposed with more urgency.

All work shall be overseen and carried out by a contractor experienced in the use of lime mortars in building conservation and construction management. The contractor must understand the sympathetic and careful approach required to maintain the unique character of the site, and all work shall be carried out in accordance with Historic Environment Scotland's current 'Advisory Standards for Conservation and Repair for the Historic Building Environment in Scotland'.

Work will be carried out in accordance with the Health and Safety at Work Act and all other current safety legislation. All scaffolding will be freestanding and no ties to existing structures will be permitted. Stonework is to be protected from damage by scaffolding, including boards, by foam packing and end caps.

Lime mortars should only be used between March and September to provide adequate time for initial carbonation to be reached before the onset on cold winter weather. The contractor must provide adequate protection from both low temperatures and drying winds, both while works take place and immediately afterwards. This is especially important in this case as the castle is subject to a maritime environment.

Access and Interpretation

Please refer to the Proposed Dunyvaig Public Access Plan in Appendix 5.

To meet its charitable purposes, IH wishes to enhance the opportunities for recreation and education relating to Dunyvaig Castle. The excavations at Dunyvaig have been made possible by a generous donation from Lagavulin/ Diageo, with the understanding that IH will make a permanent difference to the cultural heritage on Islay for the benefit of the island's resident and visitor community. As such, some permanent enhancement to the site is required.

Owing to the natural topography of the site, the distance from the public road to the castle, and the nature of the protected building itself, it is not considered reasonably practicable to provide wheelchair or other improved access to or within the castle.

Within the castle, it is not proposed to improve access up to the summit as to do so would require construction of a permanent new structure to bridge the former drawbridge opening. Building this structure could negatively impact on buried archaeology and the legibility of the original fabric, would create an additional maintenance burden, and would also allow access by more visitors up to what is already the most hazardous area of the site. Instead, it is proposed to provide alternative interpretation of the summit, to provide discreet but visible warnings about unprotected drops generally, and possibly to erect fencing at the drawbridge opening to deter visitors from accessing the summit area.

Islay Heritage is conscious of the need to avoid any encouragement of additional traffic in the vicinity of Dunyvaig and that the access road to Dunyvaig is currently a private road owned by its residents. Minimal intervention at Dunyvaig and its environs is desirable in light of the undisturbed archaeological deposits surrounding the castle and the natural

Please also refer to Appendices 3, 4 & 5 for more detailed proposal notes and drawings.

Recommendations

Fig.14 Typical view of lichens on facing stones and small plants growing in crevices (April 2019)

heritage and beauty of the area.

Taking all of these factors into account, Islay Heritage is recommending a new footpath that will lead from the existing Three Distilleries Pathway to the 'plateau' overlooking the castle, where a series of information boards will be positioned. This will enable visitors to gain an informative view of the castle, without encouraging use of the private road or access into the castle area itself.

Vegetation and Wildlife

The site will be inspected before works begin by a suitable specialist who will identify any rare or protected flora and fauna, and develop mitigation proposals.

Vegetation that is identified for permanent removal shall be carefully uprooted by hand and any regrowth treated with suitable biocide. Algae, lichens and moss in general will be left in situ except where dense mats provide a medium for possible woody vegetation growth. These shall be removed by hand, taking care not to mark friable stone surfaces. The use of pesticides and biocides will be minimised. Where they are used, plastic sheeting will be used to protect against spillages that could contaminate the site or archaeology.

All cutting and digging out of vegetation will be carried out by hand. Aerial root systems and branches that have intruded into joints in the stonework and cannot readily be removed after withering shall be left in situ. Following clearance, the site shall be regularly inspected and the regrowth of damaging regrowth controlled.

The works shall comply with the Wildlife and Countryside Act 1981. Bats, at roost and bird nests shall be left undisturbed and advice taken from SNH before work begins.

Repointing of Masonry

It is proposed that walls are repointed in the areas as indicated in the SE proposals in Appendices 3 & 4.

Generally, the pointing shall be carried out in the following manner:

- The exact extent of repointing shall be decided on site following removal of vegetation and detailed inspection with the client and HES in advance of work commencing. Suitable materials and techniques shall be developed following research and analysis before work begins. No existing sound mortar shall be removed.
- Pointing shall be carried out using lime mortar, with the mix being formulated to match laboratory-analysed samples of the existing mortars as closely as possible. Samples panels shall be prepared and approved to ensure the best match in terms of colour, texture and consistency before works begin on sit. All lime work shall be carried to in line with current recognised standards of best practice. Pinnings shall be replaced to match existing, reusing material from the site wherever possible.
- No facing shall be reinstated unless specifically agreed and required to support further areas of masonry, and unless there is documentary evidence to confirm exactly where fallen stones were originally positioned. Larger voids shall be filled with stiff mortar and stones/pinnings to to match the existing build. Putlog, joist and lintel holes shall not be infilled but the interior of cavities may be pointed. No slates or other building materials are to be introduced unless specifically indicated and required to aid weather or prevent bird nesting.

Please also refer to Appendices 3, 4 & 5 for more detailed proposal notes and drawings.

Recommendations

Consolidation and Other Masonry Stabilisation
It is proposed that walls are consolidated and further stabilised in the areas as indicated in the SE proposals in Appendices 3 & 4.

Generally, consolidation shall be carried out as follows:

- All such repairs shall be indicated on drawings, developed in conjunction with a suitably experienced structural engineer, and approved before work begins, and shall be recorded by an archaeologist both before work begins and after completion.
- Additional stone required to support any undercuts and build out wall cores shall match existing stone and be locally sourced.
- Unless otherwise indicated, crack stitching shall be carried out by packing the joints with lime mortar and stone pinnings.
- Grouting of voids is to be used only to stabilise limited areas of masonry, minimising or avoiding the need for taking down and rebuilding.
- Underbuilding and consolidation shall be carried out to support poorly supported corbels and loose upper masonry, using suitable stone.
- Rough racking shall be used, only where indicated on drawings and approved before works begin, to protect exposed wall cores and some wallheads. It shall be carried out by removing all organic material and failed mortars, and then lifting and rebedding loose stones in repair mortar in such a way as to retain the original appearance of masonry whist avoiding water ponding. This work may include adding additional masonry to direct water away from structures.
- Non-ferrous bars and anchors/pins are to be installed, only where indicated on drawings and approved before works begin, to provide additional support to areas of higher masonry and detached areas without the need to insert modern facing stones. These bars shall be discreetly positioned and the extent of embedment into sound masonry shall be agreed before works begin.
- All walls shall be repaired to avoid taking down and rebuilding, stabilising but not removing bows, bulges or other distortions.

Floors
In a few limited areas, footpaths are becoming eroded by excessive footfall, exposing earth. The method of surface reinforcement shall be agreed before works commence, avoiding the use of plastics in favour of hessian and other natural materials.

Animal burrows are to be infilled with inert material, leaving existing fabric undisturbed as far as possible. Options for deterring rabbits and controlling their numbers on the site are to be investigated further to prevent future problems.

Prioritisation of Work
Repair works are generally prioritised as being either Immediate, Urgent, Necessary or Desirable, with phasing relating to these classifications, as well as to visitor accessibility and a desire to make the most efficient use of any temporary works (e.g. scaffolding) that are necessary.

Please also refer to Appendices 3, 4 & 5 for more detailed proposal notes and drawings.

Recommendations

The following suggested phases of work may either be run concurrently or may be undertaken over several seasons, depending on several factors such as funding availability, the desire to maintain access to the site for visitors and archaeologists, and the capacity of the appointed contractor.

Emergency Works

- Repair of the area on the small area of recent collapse (large void), classed Immediate, on the external face of the west external wall of the outer courtyard.
- Repair of the archway, also classed Immediate, between outer and inner courtyards.
- Erection of temporary signage and fencing, the latter at the former drawbridge opening, to inform visitors of the hazards that the site poses and to restrict access to the summit.

These initial works could be used to develop a specification and methodology for following temporary works and repairs, enabling as much work as possible to be carried out within the limited lime season.

Phase 1

- Repair of areas classed Urgent and Necessary within the inner and outer courtyard areas, as these are the most accessible areas and have never previously been repaired. Priority should be given to works at the seagate as this is a very significant feature, and to underbuilding generally of poorly-supported higher masonry. A larger contractor with two squads of masons might be able to complete these works in a single working season, whereas a smaller contractor would likely have to spread these works over two or more working seasons.
- In order to make efficient use of temporary works and to ensure that repairs are long-lasting, Desirable works such as repointing should also be undertaken in the above areas.
- Archaeological investigation and recording.
- Vegetation and rabbit removal and control - methodology to be agreed
- Inspection of the SE corner of the tower from a temporary access scaffold. Unless determined to be Immediate, works in this area are to be carried out under Phase 2.

Phase 2

- Repair of areas classed Urgent and Necessary within the summit area, as this area is less accessible to visitors . These works could be undertaken in a single working season.
- In order to make efficient use of temporary works and to ensure that repairs are long-lasting, Desirable works such as repointing should also be undertaken in the above areas.
- Archaeological recording of new work.
- Footpath repairs, and installation of permanent hazard signage and fencing, interpretation (signboards) and other visitor access improvements.

It should be noted that lime mortars should only be applied from Spring to Autumn, so that they are able to cure adequately before cold winter weather sets in. In addition, works on a sea-side site may also be more adversely affected by strong winds that can adversely affect drying and setting of the mortars, by high tides and generally stormy weather than other comparable sites. For these reasons, it likely that the main repair works at Dunyvaig will be restricted each year to the period between Spring and Autumn - a working season. Winter working with lime is possible, but a contractor would have to provide additional protection by use of additional sheeting and insulation, which would increase project costs and increase the chance of failure.

Please also refer to Appendices 3, 4 & 5 for more detailed proposal notes and drawings.

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Costing

The total approximate cost of the works proposed under each phase is given below:

Emergency Works	£12,000.00
Phase 1	£301,500.00
Phase 2	£120,000.00
Subtotal	**£433,500.00**
Preliminaries	£151,725.00
Contingencies	£58,522.50
TOTAL APPROXIMATE COST	**£645,000.00**

These costs are indicative only are intended for guidance purposes, sufficient to begin discussions with stakeholders and to start the application process with Historic Environment Scotland and other funders.

It should be noted that:

- All proposed repair works shall be reviewed and developed as the project progresses, and remeasured on site, as all estimates have been prepared following two site visits from ground level only; one in 2019 and one in 2022.
- It is assumed that the Emergency and Phase 1 works will be undertaken simultaneously as this will be most economical.
- The design of the interpretation signboards is yet to be developed, although an indicative design is included in Appendix 5.
- An allowance of £20,000 has been included for supply of new matching stone for repairs, as fallen stone from the site is only to be reinstated where there is evidence for its exact previous location. This sum appears under Phase 2.
- No works have been included to encourage or enhance access to the site, other than the provision of the interpretation boards outside the SAM boundary and some basic maintenance of the existing footpath to the site.
- Preliminaries of 35% includes budget for items such as temporary access, utilities, security, site protection, access for plant and materials from the public road, and specialist contractor welfare/accommodation facilities for the duration of the works on site. A higher than average percentage has been allowed at this stage to cover the very challenging exposed seashore location, high sensitivity of the scheduled ancient monument site and landscape, the distance from the public road and mains utilities, and to reflect the current fluctuating state of the market. This figure is to be adjusted as the design of the works progresses and more accurate costs for temporary access scaffold etc. can be obtained.
- Contingencies are set at 10% as there are a number of uncertainties inherent in working with structures of this nature.

Please refer to Appendix 6 for more detail of the cost breakdown and a list of exclusions and assumptions.

Summary & Conclusions

Context
Dunyvaig Castle is a rare and complex monument of national importance containing a unique seagate feature. It retains good archaeological potential and has a dramatic and striking setting that attracts visitors who are already in the local area. However, it is at risk from environmental pressures.

Condition Assessment
Given its exposed location and a lack of maintenance, the castle's condition has been fairly stable for the last 60 years.

A series of survey reports from the 1980's and 1990's recommended that general consolidation and repair works were undertaken to many area of the castle to prevent loss of original fabric and to improve visitor safety. Despite this, only one limited programme of emergency stabilisation works was completed in 1998, focussing only on the exterior of the tower.

Today, some key areas of the castle are in a parlous state and it is difficult to determine how close they are to further serious collapse. Clear examples of incremental deterioration and minor collapses have been observed all over the site since previous inspections and the outer courtyard walls are of increasing concern. This may well be a tipping point in the decline of the castle, which may be further exacerbated by the increasing visitor numbers on Islay and the immediate area, and by the forecast sea level rises and increased storm events resulting from climate change.

Recommendations
The aim of the report is to establish proposals to slow the deterioration of Dunyvaig Castle and to sympathetically improve physical and intellectual access whilst retaining the unique character of the site. Minimising ongoing maintenance is of key importance in ensuring that the works are durable and provide value for money.

The Immediate priority is to stabilise the recently-collapsed area on the exterior of the west wall of the outer courtyard, to inform visitors of the hazards that the site poses and to restrict access to the summit. Of secondary, but also Immediate/ Urgent, importance is to then stabilise the courtyards and to inspect in the more detail the south east corner of the tower. The remaining Urgent works should then be carried out at the summit, with the focus likely to be on the inner face the tower as it was not repaired previously. It is Desirable to carry out general repinning and pointing across the site while the above works are undertaken in order to reduce maintenance and omit the need to rescaffold the same areas more than once.

The proposed repairs, while relatively simple in themselves, will require complex planning and comparatively expensive temporary works due to the building's location an exposed maritime setting without direct vehicle access or public utilities/facilities. Any contractor for the works will need to display experience in working successfully in similar locations.

If desired and if funding is available, all of the proposed works could be undertaken within a single year. However, works are also prioritised so that they could undertaken over a number of seasons to suit a smaller contractor or several phases of funding.

Costing
The full cost of the project is currently estimated to be in the region of £645,000, should all of the proposed works be undertaken as proposed.

Bibliography

The following references are specific to the site :

Canmore: National Record of the Historic Environment (Historic Environment Scotland), accessed June 2022. "Islay, Dunyvaig Castle". *https://canmore.org.uk/site/38002/islay-dunyvaig-castle.*

Daniels, M. (Visitor Safety in the Countryside Group), September 2015. *Managing Visitor Safety in the Historic Built Environment: Principles & Practice.*

Fry R., Castle A., Maričević D., February 2018. *Dunyvaig Castle: Results of the electrical resistance and the terrestrial 3D laser scan surveys August 2017.*

Hackett, S. J., 2 October 1989. *Scheduled Ancient Monument: Dunivaig Castle: Lagavulin: Islay: Argyll & Bute: Strathclyde - Architect's Report.*

Historic Environment Scotland, accessed June 2022. "Advisory Standards for Conservation and Repair for the Historic Building Environment in Scotland". *https://www.historicenvironment.scot/media/5283/advisory-standards-conservation-repair.pdf*

McLaren Murdoch & Hamilton Chartered Architects, (Driver, A.), March 1998. *Dunyvaig Castle: Islay: Preliminary Report.*

McLaren Murdoch & Hamilton Chartered Architects, May 1998. *Dunyvaig Castle: Islay: Proposed Consolidation Works.*

McLaren Murdoch & Hamilton Chartered Architects, November 1998. *Dunyvaig Castle: Islay: Consolidation Works & Record Photographs.*

Maričević D., Regan R., Clarke A., Waring L., Fry R., Rowena R., Batchelor, R. Hale L., Thacker M., Campos Blade R., Lambert-Gates S., King T. and Mithen S., March 2019. *Dunyvaig and Hinterland Assessment Project 2018: Archaeological evaluation and survey of Dunyvaig Castle and environs and the geophysical surveys at Barr an t-Seann Duine and Cill Mhoire in preparation for the Dunyvaig Project - Updated Data Structure Report.*

Appendix

01 Entry from Statutory Schedule of Ancient Monuments

Historic Environment Scotland

GRAS
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Edinburgh, EH6 6AL

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THE ANCIENT MONUMENTS AND ARCHAEOLOGICAL AREAS ACT 1979
AMENDED ENTRY IN THE SCHEDULE OF MONUMENTS

The entry in the Schedule of monuments appearing to the Secretary of State for Scotland to be of national importance compiled and maintained by him under Section 1(1) of the above Act in respect of the monument known as Dunivaig Castle, dated 4 September 1989 and recorded in the Division of the General Register of Sasines for the County of Argyll on 18 October 1989 is hereby in accordance with the provisions of section 1(5) of the above Act amended to show Dunivaig Castle as being situated in the Parish of Kildalton and Oa.

Given under the Seal of the Secretary of State for Scotland

[redacted]

Assistant Secretary
Date 15 DECEMBER 1992

Historic Scotland
20 Brandon Street
Edinburgh
EH3 5RA

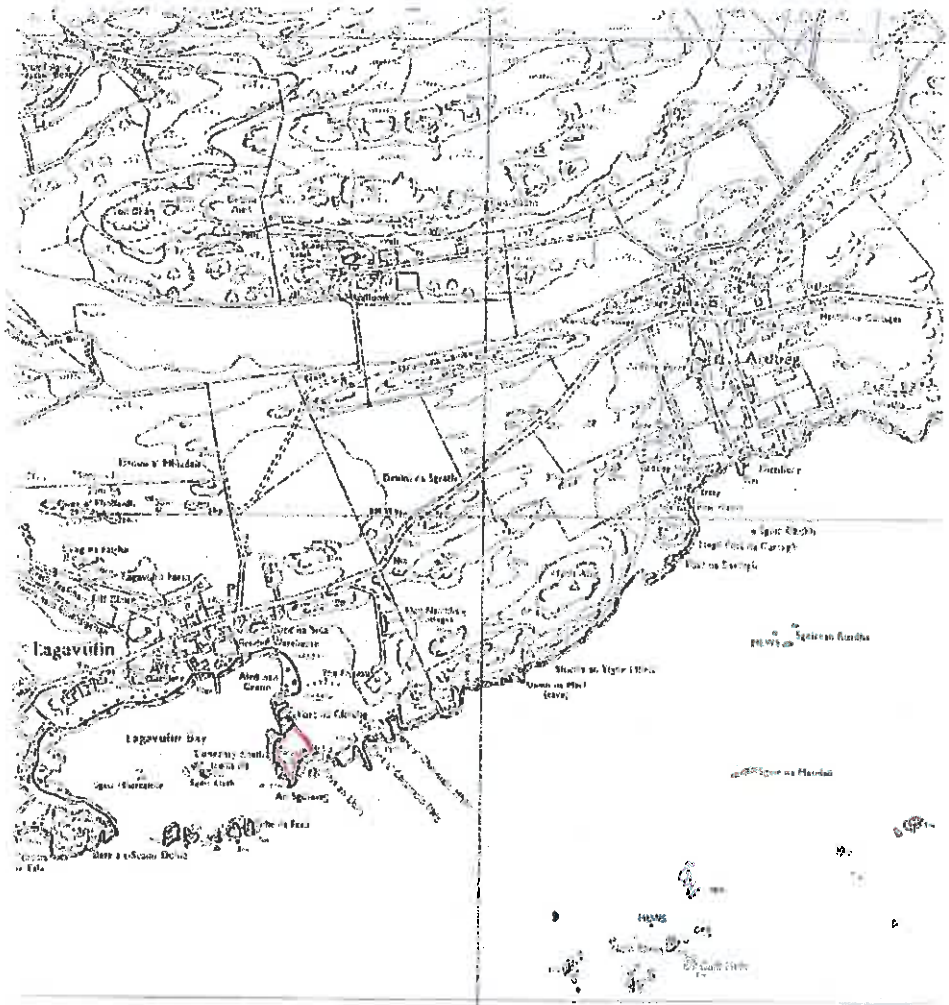
Register on behalf of the Secretary of State for Scotland in the Register of the County of Argyll.

[redacted]

Solicitor, Edinburgh, Agent

REGISTERS OF SCOTLAND
GENERAL REGISTER OF SASINES
COUNTY OF ARGYLL
Fiche ..... Frame .....
Presented and Recorded on 17 MAR 1993

B2102935.092



(2)

THE ANCIENT MONUMENTS AND
ARCHAEOLOGICAL AREAS ACT 1979

Amended entry in the Schedule
of Monuments

1992

Re: The Monument known as
Dunivaig Castle

in the Parish of Kildalton and Oa and
County of Argyll

File Ref:

Solicitor
to the
Secretary of State
for Scotland
New St Andrew's House
Edinburgh

B2102835.102 FAS 7333

THE ANCIENT MONUMENTS AND ARCHAEOLOGICAL AREAS ACT 1979
ENTRY IN THE SCHEDULE OF MONUMENTS

The monument known as Dunivaig Castle stands on a promontory on the east side of Lagavulin Bay. The earliest visible remains are those of an irregular enclosure wall, dating possibly from the later 14th century (or before). Overlying this are remains of a hall building, dating probably from the early 16th century, and an outer courtyard of the same date though modified and repaired early in the following century. The area to be scheduled includes the remains of the castle, a boat landing on the SW, and an area of the promontory measuring 85m on the NE and defined by the waterline on the other sides. The monument, which lies in the Parish of Kildonan and Oa and the County of Argyll as shown outlined in red on the Plan annexed and executed as relative hereto and which forms

[redacted]

hereby included in the Schedule of Monuments appearing to the Secretary of State for Scotland to be of national importance compiled and maintained by him under section 1(1) of the Ancient Monuments and Archaeological Areas Act 1979.

Given under the Seal of the Secretary of State for Scotland.

[redacted]

Assistant Secretary
Date 4th September 1989

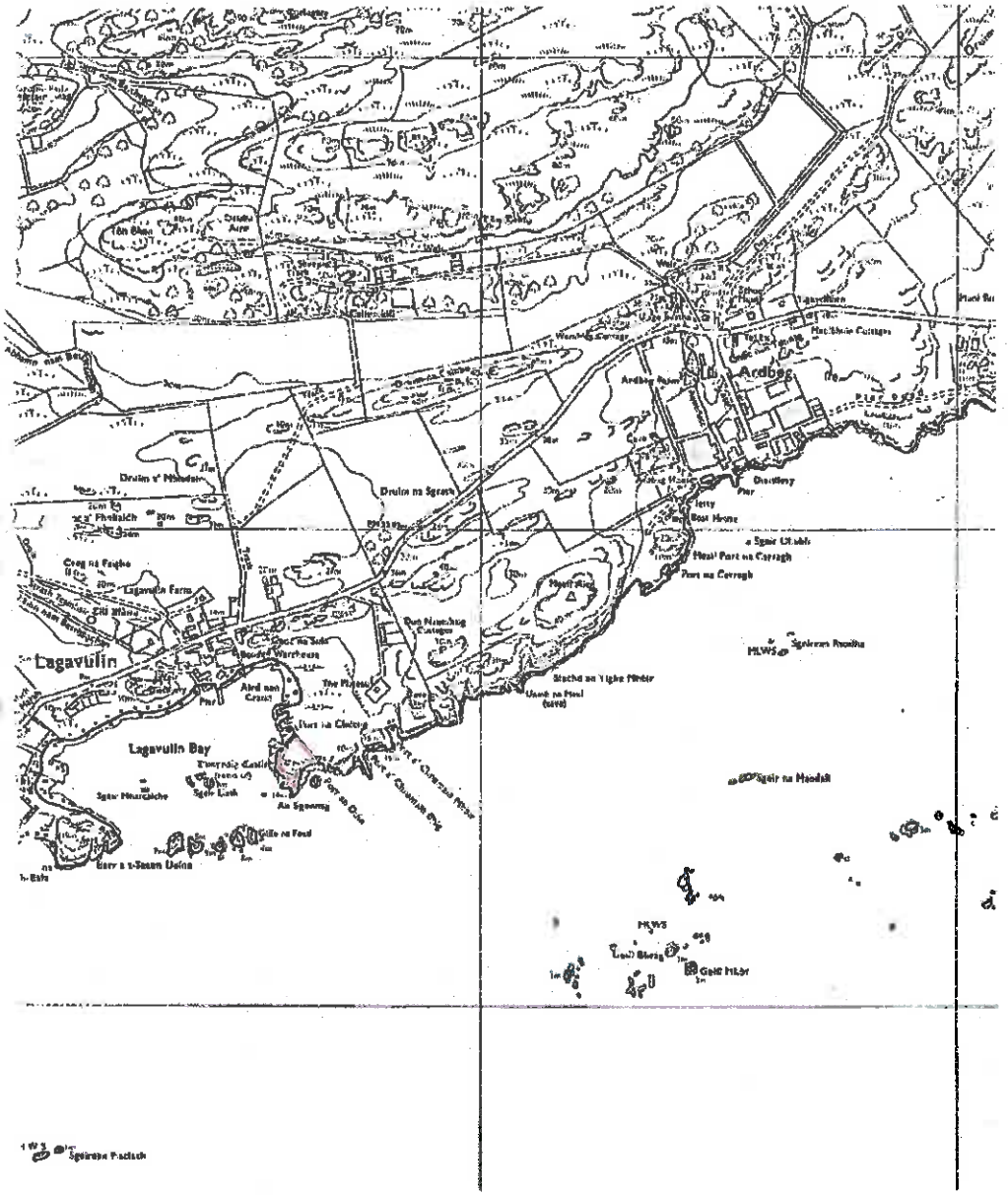
Historic Buildings and Monuments, Scotland
20 Brandon Street
Edinburgh
EH3 5RA

Register on behalf of the Secretary of State for Scotland in the Register of the County of Argyll

[redacted]
Solicitor, Edinburgh, Agent

P2102520.059

AR 89 296



THE ANCIENT MONUMENTS AND ARCHAEOLOGICAL AREAS ACT 1979

Entry in the Schedule of Monuments

1989

Re: The Monument known as Dunivaig Castle

in the Parish of Kildonan and Oa and County of Argyll

File Ref:

Solicitor
to the
Secretary of State
for Scotland
New St Andrew's House
Edinburgh

P2102620.059

Appendix

02 Site Photographs

(2019 Composite Images)
GRAS & DNA

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Please note that the following photographs may be distorted as they are composite photographs that have not been rectified

Panorama A of the Exterior of the East Sea Wall; Outer Courtyard (corresponds to Elevation 3 on drawing S-002)

Panorama B of the Exterior of the East Sea Wall, Outer Courtyard (corresponds to junction of Elevations 3 and 4 on drawing S-002)

Panorama C of the Exterior of the East Sea Wall, Outer Courtyard (corresponds to Elevation 4 on drawing S-002)

Panorama C of the Exterior of the East Sea Wall, Outer Courtyard (corresponds to Elevation 5 on drawing S-002)

Panorama A of the Exterior of the West Sea Wall, Outer Courtyard (corresponds to Elevation 6 on drawing S-003)

Panorama B of the Exterior of the West Sea Wall, Outer Courtyard (corresponds to Elevation 6 on drawing S-003)

Panorama C of the Exterior of the West Sea Wall, Outer Courtyard (corresponds to Elevation 7 on drawing S-003)

Panorama D of the Exterior of the West Sea Wall, Outer Courtyard (corresponds to Elevation 7 on drawing S-003)

Detail of West and East jambs of the Seagate opening, Outer Courtyard (corresponds to Elevation 8 on drawing S-003)

Panorama A of the Exterior of the South Sea Wall, Outer Courtyard (corresponds to Elevation 8 on drawing S-003)

Panorama B of the Exterior of the South Sea Wall, Outer Courtyard (corresponds to Elevation 8 on drawing S-003)

Panorama C of the Exterior of the South Sea Wall, Outer Courtyard (corresponds to Elevation 8 on drawing S-003)

Panorama A of the Interior of the South Wall, Outer Courtyard

Panorama B of the Interior of the South Walls, Outer Courtyard (arch to left, seagate to right)

Detail views of features in the Outer Courtyard (clockwise from top left: Possible well, Possible beehive oven, North opening in West Sea Wall, South opening in West Sea Wall)

Detail views of the arched opening feature as viewed from the Outer and Inner Courtyards

Panorama of the Interior of the Inner Courtyard (looking South East towards the Summit, arch just seen to left, drawbridge to right)

Panorama of the approach from the Inner Courtyard to the Summit, viewed from the South West (Tower to right)

Panorama of the Summit as viewed from the South West (Tower to right)

Panoramas of the Summit and Exterior of the South Tower Wall as viewed from the East and South East

Appendix

03 Condition Schedule

GRAS (& DNA)

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GRAS

1755A Dunyvaig Castle

Lagavulin

Isle of Islay

Argyll and Bute

Dunyvaig Castle
CS01_Condition Schedule

Revision	Date	Description	Draft issue
	23/06/2022		

GRAS
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Contents

General Notes

Summary

Background

Groves-Raines Architects Studio have been appointed by Islay Heritage to carry out an updated conservation assessment of the Scheduled Ancient Monument (SAM) site designated as Dunivaig Castle, SM4747 on Historic Environment Scotland's register. The property is owned by the Diageo PLC.

The schedule is intended to act as an appendix to the conservation assessment, the purpose of which is to describe the condition of the remaining fabric of Dunyvaig Castle, identify the main categories of decay and to make costed recommendations for its consolidation and repair.

Design Team

The Design Team appointed comprises Groves-Raines Architects Studio (GRAS), Structural Engineers David Narro Associates (DNA) and Quantity Surveyors Morham & Brotchie (Oban) (MBO).

Surveys

This schedule is based on a walk round survey carried out on the 18 April 2022 by the design team, updating an intial survey carried out in March 2019, together with a aerial survey carried out using a UAV (drone) in March 2022 by Caintech Ltd., with additional digital processing of the 3D model by Historic Environment Scotland.

Further survey work and analysis will be carried out once access is gained via scaffold etc.

Please note that if defects are found that are similar in nature to those described in this schedule, a similar approach will be adopted.

Methodology

Defects have been identified, photographed and located on elevational and plan drawings. The common defects have been grouped together and colour coded for ease of identification (see page 4). Specific repairs have been proposed using the methodologies and references described in the conservation assessment. Each repair has been given a prioritisation category.

Illustrations describing a summary of the issues of each elevation and floor have been provided at the beginning of the equivalent section. Please refer to separate information packages for full size drawings.

Priority categories

Immediate - *Imminent risk of collapse or health and safety risk - 3-6 months*
Urgent - *Risk of very rapid deterioration or loss of fabric - 6-18 months*
Necessary - *Risk of less rapid deterioration or loss of fabric - 1.5-5 years.*
Desirable - *Improvement of historic legibility, aesthetic considerations, or risk of long term deterioration or loss of fabric - 5-10 years.*

Limitations

This schedule has been prepared as part of a conservation assessment as should be read with it. Liability cannot be accepted for its use for any other reason.

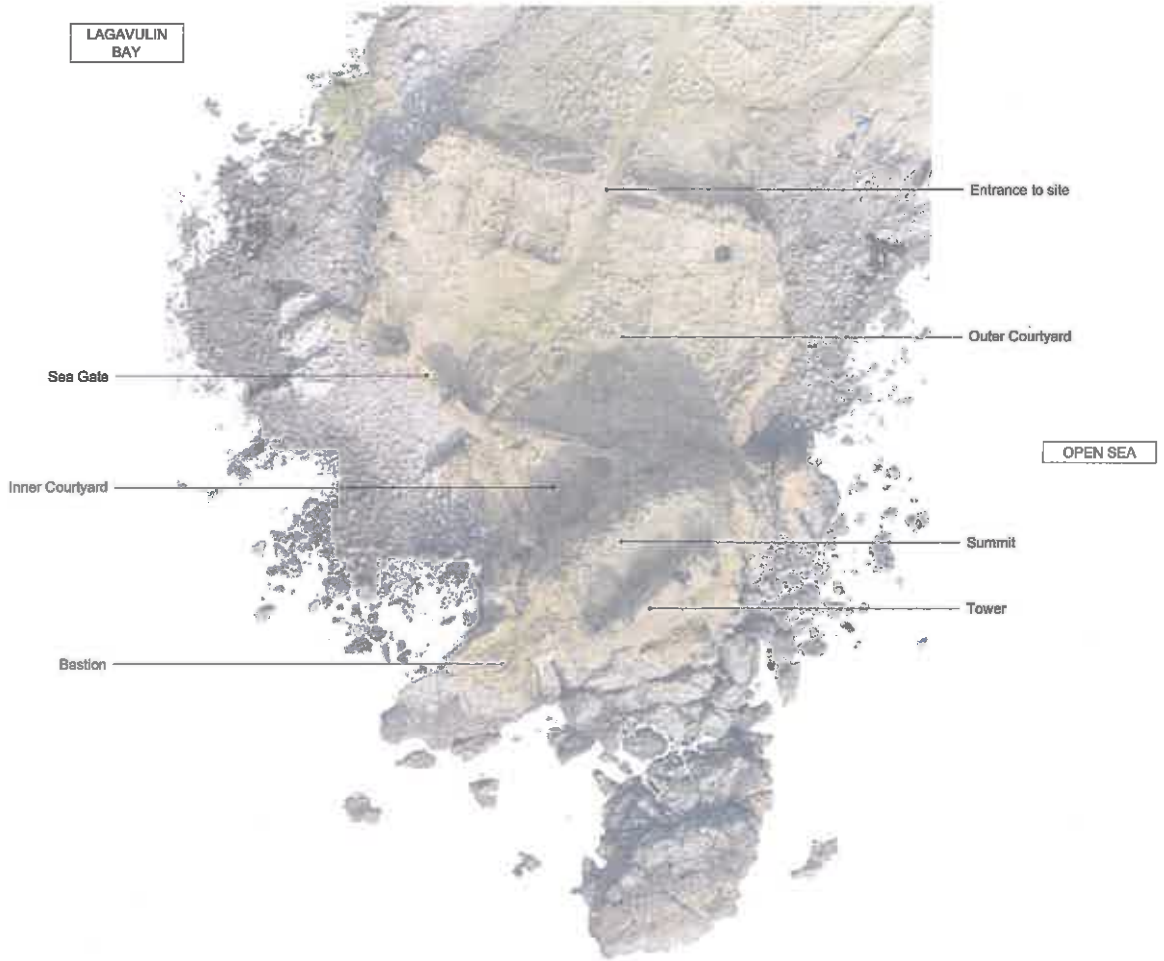
The non-intrusive surveys carried out thus far have had time and access limitations, and there may be additional repairs required that have not yet been identified. This schedule will serve as a template for other repairs where similar defects will be treated using the equivalent agreed methodology in this schedule.

In making these recommendations, the overall aim is to put the fabric in a safe and structurally sound condition to sustain the long-term future of the castle.

General decay identification and repair methodology

	Stonework	General Description	General Repair Methodology
	PR - Areas previously repaired in 1998	Areas of the Summit repaired as part of the emergency works package of 1998 and generally in good condition.	None required at present but areas should be regularly monitored, particularly where there is built-in steelwork or drips to relieve water ppressure behind.
	UM - Unsupported masonry and turfing	Missing outer layers of masonry, especially facing, that provides direct structural support to higher areas of masonry and turfing. Caused by gradual loss of mortar by weathering and/or physical cause such as wave action. High risk of collapse that could affect areas both above and below.	Underbuild/corbel out from a firm base only as required to provide support to the areas above, not replicating original facing masonry, or install non-ferrous support bars. Samples to be agreed in advance (eg type and source of stone and mortar, ratio of pinnings to mortar) See DNA drawing 19.0317 Detail 3 & 4.
	CE - Core exposed by loss of outer walling	Missing outer layers of masonry that are not directly providing support to masonry and turfing above. Causes as UM, above. Low risk of collapse but in time, and without repair, they will deteriorate further and lead to structural instability.	Rough rack exposed corework to consolidate and improve surface water run-off, not replicating original facing masonry. Samples to be agreed in advance as UM See DNA drawing 19.0317 Detail 1.
	ME - Erosion of mortar between masonry units	Mortar erosion leading to deep open joints, such as between arch voussoirs or other masonry units, leading to loosened masonry units and increased water ingress. Causes as UM, above. Risk as CE, above.	Deep pack, pin and repoint as necessary to consolidate and improve surface water run-off. Samples to be agreed in advance as UM. See DNA drawing 19.0317 Detail 2.
	LV - Large voids	Unstable/detached outer layers of masonry with voids behind. Causes as UM, above. Medium risk of collapse, high where providing support to areas above.	Following more detailed inspection, repairs may include grouting and/or limited rebuilding to match existing. Samples to be agreed in advance as UM. See DNA drawing 19.0317 Detail 6.
	SD - Sandstone distintegration	Erosion of the surface of isloated sandstone units, possibly granular distintegration. Causes may include differential weathering and/or alveolar weathering (salt crystallisation decay). Medium risk of individual unit loss, high where providing support to areas above.	Following more detailed inspection, replace sandstone unit or install stone indent at structurally important locations. Otherwise, carefully brush back friable material to sound surface and monitor for further deterioration.
	SM - Structural Movement	Areas of potential structural movement or concern, such as outward bowing or detached areas of wall faces or unstable bedrock fractures which require investigation and / or remediation. Possible high risk.	Areas to be inspected and SE input required, prepairs may include rock anchoring or pinning pack of detached masonry facing in place using Cintec or other system. See DNA drawing 19.0317 Detail 5.
	ME - Manmade erosion	Erosion of protective turf cappings, masonry and mortar at wallheads where walked over by visitors. Low risk but in time, and without reversal, this could lead to structural instability.	Consider installing signage or restricting access, particularly where there is a high risk of injury, and monitor for further deterioration.

Location Plan



Site Plan
Showing complete castle and context

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Outer Courtyard - General

There is no evidence of recent repairs but some archaeological excavations have been carried out in this area over the 5 or so years; geotextile separating layers and disturbance to turfing is still visible.

This area consists of the interior of the Outer Courtyard which is largely covered by grassy turf. The main features are the small embrasures and a small area of visible walling on the West wall, what may have been an oven immediately to the West of the castle entrance, and a square well to the NE. This area is readily accessible to visitors.

This area is generally in fair condition as little masonry is visible above ground, and some works are Urgent. However, the oven and well are both considerable trip/fall hazards and both may be structurally unstable. There has been no obvious deterioration of masonry since 2019.

Underbuilding is proposed to support the outer wall of the oven. The well should be investigated and may require pinning and packing to prevent collapse. It would be advisable to infill both features with sand and a turf capping to reduce the risk of further deterioration and accident. It would also be advisable to prevent burrowing as this is undermining walls, creating trip hazards and disturbing buried archaeology.

Building Repairs

- Previously Repaired
- Unsupported Masonry
- Core Exposed
- Mortar Erosion
- Large Voids
- Sandstone disintegration
- Structural Movement
- Manmade Erosion

OCG	Outer Courtyard - General			
Item	Description	Photo	Priority	Proposed Repair
OCG.1	Fragment of West wall internal face - Small but relatively intact section of walling with facings in a heavily trafficked area. Short turf capping that suggests it is being eroded by visitors climbing. Stones piled on top by visitors.		Desirable	Install interpretation to inform visitors of the designated status and sigificance of the site, and to deter disturbance and climbing. Any repairs should leave the various walls and blocked openings legible in the area of the lost SW embrasure.
OCG.2	Embrasure 1 to mid-wall - Partially collapsed lintels and evidence of undercutting by rabbits or possibly otters burrowing. Good turf covering.		Necessary	Retain in situ and reduce/prevent burrowing if possible to minimise further damage.
OCG.3	Embrasure 2 to North - No lintels remaining in situ and evidence of undercutting by rabbits or possibly otters burrowing. Well-defined jambs and turf capping to interior face. See also West external elevation.		Necessary	Retain in situ and reduce/prevent burrowing if possible to minimise further damage.
OCG.4	Oven - The historically-significant dome is generally stable but its exposed edge is thin and vulnerable to foot traffic. Masonry inside and below the rear walling has eroded leaving some stonework poorly supported and vulnerable. Significant risk of injury through trips and falls as a heavily trafficked area.	 20220420_1755A_DunyvaigCastle(111).JPG	Urgent	Void to be packed with inert, clean sand and additional turfing to be laid over to protect. Interpretation to be provided as an alternative.

OCG	Outer Courtyard - General			
Item	Description	Photo	Priority	Proposed Repair
OCG.5	Entrance in North Wall - Some exposed masonry but is generally well protected by turf capping and in good condition without excessive erosion from foot traffic.		Desirable	Inspect regularly for damage as this is a highly trafficked area.
OCG.6	Well - Deep open joints and possibly unstable/bulging retaining walls. Unsightly visible geotextile membrane and exposed/eroded earth. Significant risk of injury through falls as a heavily trafficked area.		Urgent/ Desirable	As a minimum, inspect for structural stability, and conceal geotextile with additional turfing to also protect wallheads. Following more detailed inspection, repairs may range from deep packing, pinning and repointing to rebuilding limited areas of unstable masonry. Propping to be provided during any internal works.
OCG.7	Animal burrowing generally - Particularly by rabbits, leading to collapse of areas of protective turfing, particularly at wallheads, and damage to buried archaeology. Risk of injury from trips and falls.		Desirable	Consider removal of rabbits from the headland and installation of unobstrusive rabbit-proof fencing.

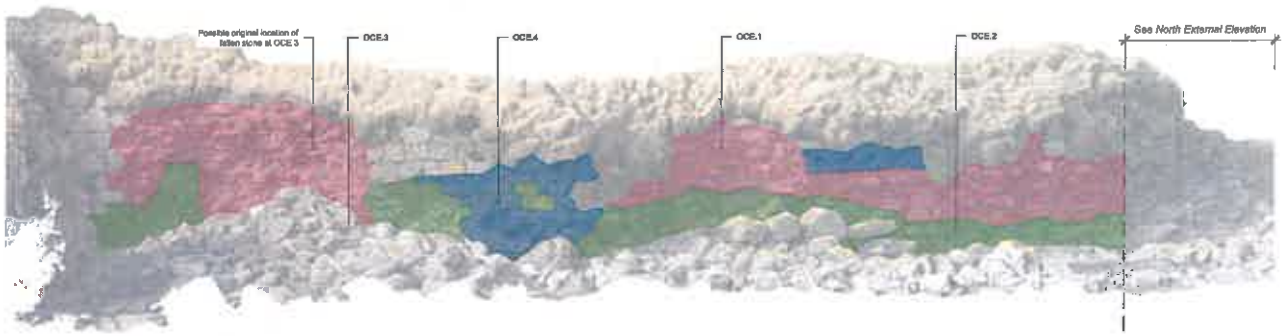
Outer Courtyard - East External Elevation

There is no evidence of recent repairs.

This elevation consists of two canted faces of roughly squared rubble stonework with a rubble core, capped by thick turf or the possible remains of an upper turf wall. A possible NE bastion, or projecting corner, has been lost. The walls sit directly above the high tide line, facing the open sea. This area is readily accessible to visitors.

This area is in poor condition and many works to this area are Urgent. In addition to the bastion to the NE, large areas of facing stones have been lost up to a depth of 1.2m, exposing the wall core. The remaining facing and turf above have little support in some areas. Three stones from the face appear to have fallen out onto the shore since 2019.

A mixture of underbuilding and rough racking is proposed to support the remaining facing. Gabions or other sea defences on the shore should be considered.



Building Repairs

- Previously Repaired
- Unsupported Masonry
- Core Exposed
- Mortar Erosion
- Large Voids
- Sandstone disintegration
- Structural Movement
- Manmade Erosion

OCE	Outer Courtyard - East External Elevation			
Item	**Description**	**Photo**	**Priority**	**Proposed Repair**
OCE.1	General loss of facing stonework and core material - Up to 1.2m deep in places, some of which is leading to poorly supported masonry and turf cappings. A larger area of repairwork has been identified since the survey of 2019. Caused by general mortar weathering and physical wave action. Significant risk of injury through falls as wallheads are a heavily trafficked area.		Urgent / Desirable	Rough rack or underbuild only as necessary to stabilise walling. Any repairs should leave the various walls and blocked openings legible in the area of the lost bastion. Consider general packing, pinning and repointing of eroded mortar joints to remaining facings generally to slow general deterioration.
OCE.2	General damage to wall base - In addition to OCE.1, there is some degradation of the bedrock and loose rock shoreline on which the wall sits. A larger area of repairwork has been identified since the survey of 2019. Caused by natural erosion of the shattered stone and physical wave action. This may be exacerbated in future by forecast sea level rises.		Urgent / Desirable	Ensure any rough racking or underbuilding is commenced from sound bedrock, reusing any loose masonry in the repairs as necessary. Consider installation of protective gabions or other sea defences to slow the impact of wave action and deterioration generally.
OCE.3	Loss of stone at high level to South end - One large stone has fallen onto the shore since 2019. Cause as OCE.1.		Desirable	Reinstate lost stone in its original position only if this can be determined accurately. If not, leave in situ. Repairs around as OCE1/2.
OCE.4	Loss of stone at low level at centre - A cavity has formed since 2019 at the base of the wall, with what appears to be the missing stone nearby. Cause as OCE.1/2.		Desirable	Reinstate lost stone in its original position only if this can be determined accurately. If not, leave in situ. Repairs around as OCE1/2.

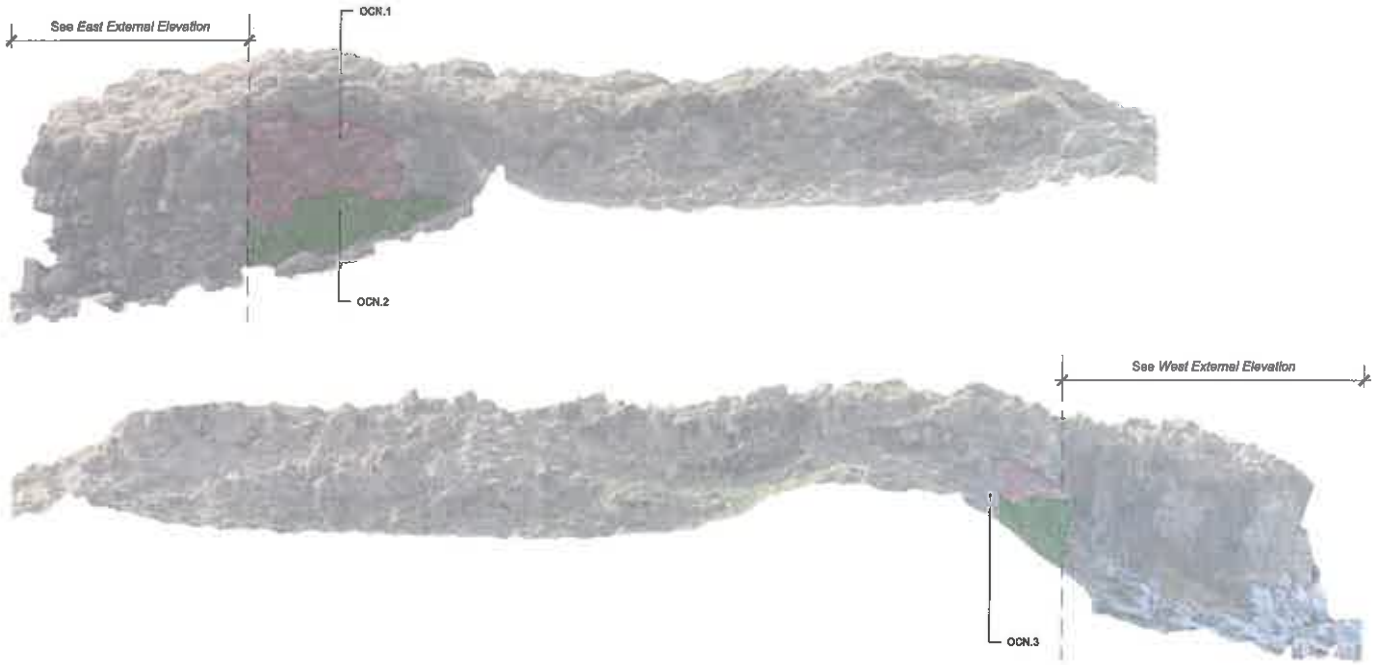
Outer Courtyard - North External Elevation

There is no evidence of recent repairs. Some archaeological excavations have been carried out around the entrance over the 5 or so years; geotextile separating layers and disturbance to turfing is still visible.

This elevation is largely obscured by thick turf or the possible remains of an upper turf wall. Possible bastions, or projecting corners, to the NE and NW have been lost. At the centre of the wall is an opening forming the entrance to the castle. This area is readily accessible to visitors.

Little masonry is visible on this elevation and the area is generally in good condition, except poor condition areas where the bastions have been lost, exposing the wall core ands with masonry loss visible since 2019. These works are Urgent.

A mixture of underbuilding and rough racking is proposed to stablise the exposed masonry.



Building Repairs

- Previously Repaired
- Unsupported Masonry
- Core Exposed
- Mortar Erosion
- Large Voids
- Sandstone disintegration
- Structural Movement
- Manmade Erosion

OCN	Outer Courtyard - North External Elevation			
Item	Description	Photo	Priority	Proposed Repair
OCN.1	General loss of facing stonework and core material - Very deep in places, some of which is leading to poorly supported masonry and turf cappings. A larger area of repairwork has been identified since the survey of 2019. Caused by general mortar weathering - limited wave action. Significant risk of injury through falls as wallheads are a heavily trafficked area.		Urgent / Desirable	Rough rack or underbuild only as necessary to stabilise walling. Any repairs should leave the various walls and blocked openings legible in the area of the lost bastion. Consider general packing, pinning and repointing of eroded mortar joints to remaining facings generally to slow general deterioration.
OCN.2	Facings stones on shore - One or two large stones on the NE appear to have fallen onto exposed bedrock since 2019 as lichen growth on one side suggests they have moved recently. Their exact previous location cannot currently be determined.		Desirable	Reinstate lost stones in its original position only if this can be determined accurately. If not, leave in situ. Repairs around as OCN.1/2.
OCN.3	Exposed loose material - A lack of protective turf covering has exposed a wide area of loose earth and stone where the NW bastion is believed to have been lost. Likely caused by foot traffic and general weathering.		Urgent	Reseed or returf to minimise futher erosion and damage to buried archaeology.

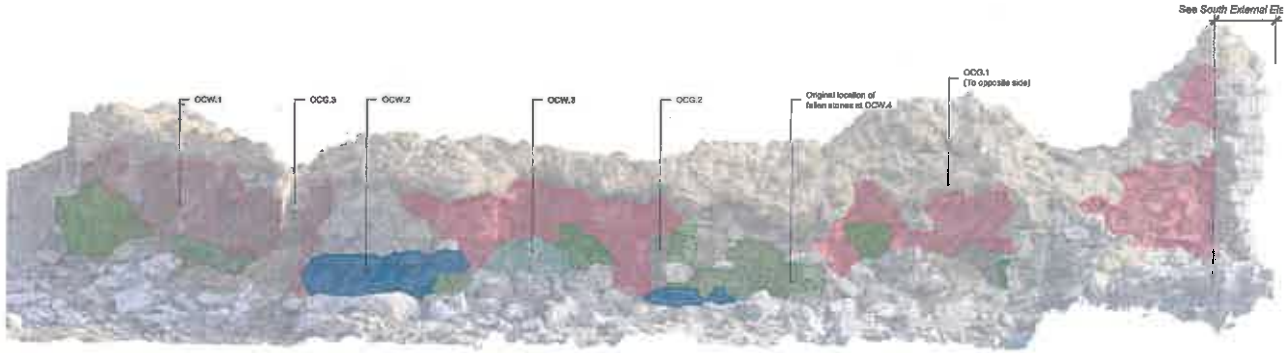
Outer Courtyard - West External Elevation

There is no evidence of recent repairs.

Like the East External Elevation, this elevation consists of two canted faces of roughly squared rubble stonework with a rubble core, capped by thick turf or the possible remains of an upper turf wall. The wall is pierced by the remains of three small embrasures. A possible NW bastion, or projecting corner, has been lost. The walls sit directly above the high tide line, facing Lagavulin bay. This area is readily accessible to visitors.

This area is in poor condition and many works to this area are classed as Immediate or Urgent. In addition to the bastion to the NW, large areas of facing stones have been lost, exposing the wall core. The remaining facing and turf above have little support in some areas. Lintels only remain over one embrasure - see General for details. There has been deterioration since 2019; a central area has slumped forward revelaing a deep void behind, and a nearby area of facing has fallen onto the shore.

A mixture of underbuilding and rough racking is proposed to support the remaining facing. Gabions or other sea defences on the shore should be considered.



Building Repairs

- Previously Repaired
- Unsupported Masonry
- Core Exposed
- Mortar Erosion
- Large Voids
- Sandstone disintegration
- Structural Movement
- Manmade Erosion

OCW	Outer Courtyard - West External Elevation			
Item	**Description**	**Photo**	**Priority**	**Proposed Repair**
OCW.1	General loss of facing stonework and core material - Very deep in places, some of which is leading to poorly supported masonry and turf cappings, especially around embrasures. A larger area of repairwork has been identified since the survey of 2019. Caused by general mortar weathering and physical wave action. Significant risk of injury through falls as wallheads are a heavily trafficked area.		Urgent / Desirable	Rough rack or underbuild only as necessary to stabilise walling. Any repairs should leave the various walls and blocked openings legible in the area of the lost bastion and lost SW corner embrasure. Consider general packing, pinning and repointing of eroded mortar joints to remaining facings generally to slow general deterioration.
OCW.2	General damage to wall base - Walling is generally in a poorer condition at the base. A larger area of repairwork has been identified since the survey of 2019. Caused by natural erosion of the shattered stone and physical wave action, although more sheltered than the similar East Elevation. This may be exacerbated in future by forecast sea level rises.		Urgent / Desirable	Ensure any rough racking or underbuilding is commenced from sound bedrock, reusing any loose masonry in the repairs as necessary. Consider installation of protective gabions or other sea defences to slow the impact of wave action and deterioration generally, and general packing, pinning and repointing of eroded mortar joints.
OCW.3	Collapsed area to base at North end - A deep void has been revealed at the base of the wall since 2019, with outer masonry appearing to have slumped outwards. Cause as OCW.2.		Immediate	Following more detailed inspection, repairs may include grouting to stabilise the void followed by limited rebuilding reusing existing masonry to match existing.
OCW.4	Stonework fallen onto shore at centre - 2-3 large grouped stones have fallen from mid-level onto the shoreline since 2019. Case as OCW.1.		Desirable	Reinstate lost stone in its original position only if this can be determined accurately. If not, leave in situ. Repairs around as OCW.1.

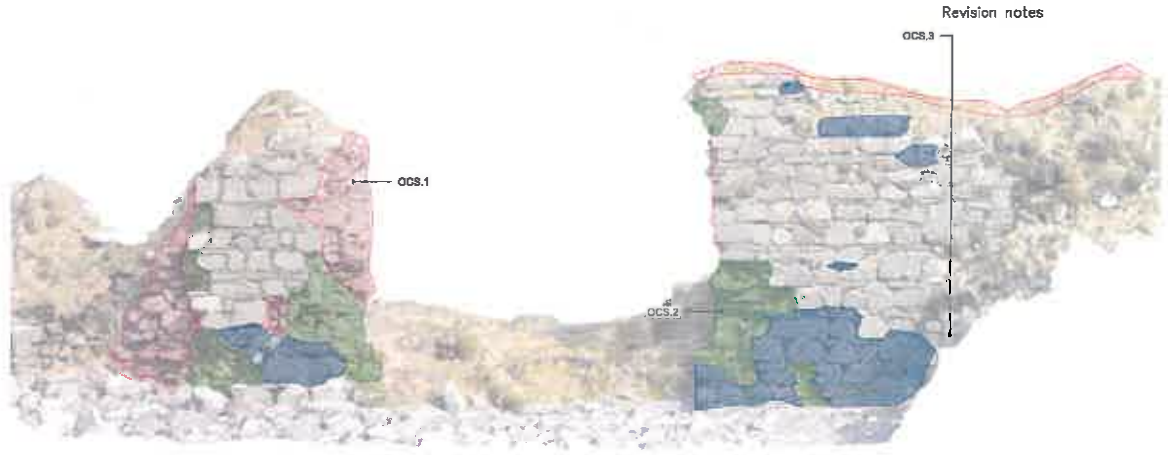
Outer Courtyard - South External Elevation

There is no evidence of recent repairs. Some archaeological excavations have been carried out to expose the original level of the seagate opening over the last 5 or so years.

This elevation consists of roughly squared rubble stonework capped by turf. The main feature are the tall jambs of the former seagate opening. The walls sit directly above the high tide line, facing Lagavulin bay. This area is readily accessible to visitors, and the turfed top of the East jamb has been eroded slightly by footfall.

This area is generally in poor condition and many works to this area are Urgent. The SW corner and some areas of facing stones have been lost, on the corners of the jambs in particular. The remaining facing and turf above have little support in some areas. There is a risband joint between the main walling and a poorly-built later wall to the right and this area is in very poor condition. There has been no obvious loss of masonry since 2019.

A mixture of underbuilding and rough racking is proposed to support the remaining facing. Gabions or other sea defences on the shore should be considered.



Building Repairs

- Previously Repaired
- Unsupported Masonry
- Core Exposed
- Mortar Erosion
- Large Voids
- Sandstone disintegration
- Structural Movement
- Manmade Erosion

OCS	Outer Courtyard - South External Elevation			
Item	**Description**	**Photo**	**Priority**	**Proposed Repair**
OCS.1	General loss of facing stonework and core material - Very deep in places, some of which is leading to poorly supported masonry and turf cappings. A larger area of repairwork has been identified since the survey of 2019. Caused by general mortar weathering and physical wave action. Significant risk of injury through falls as East Seagate wallhead is trafficked by visitors.		Urgent	Rough rack or underbuild only as necessary to stabilise walling. Consier general packing, pinning and repointing of eroded mortar joints to remaining facings generally to slow general deterioration.
OCS.2	General damage to wall base - Walling is generally in a poorer condition at the base. A larger area of repairwork has been identified since the survey of 2019. Caused by natural erosion of the shattered stone and physical wave action, although more sheltered than the similar East Elevation. This may be exacerbated in future by forecast sea level rises.		Urgent	Ensure any rough racking or underbuilding is commenced from sound bedrock, reusing any loose masonry in the repairs as necessary. Consider installation of protective gabions or other sea defences to slow the impact of wave action and deterioration generally, and general packing, pinning and repointing of eroded mortar joints.
OCS.3	Detached later walling - A low section of walling by the East Seagate is not tied into the earlier walling and is now unstable as it has deeply eroded mortar joints, a missing stone at the base and large voids behind. The turf capping to this area has visible eroded since photographs from 1962.		Urgent	Following more detailed inspection, repairs may include grouting to stabilise followed limited rebuilding reusing existing masonry to match existing. Turf capping should be reinstated to protect the wallhead.

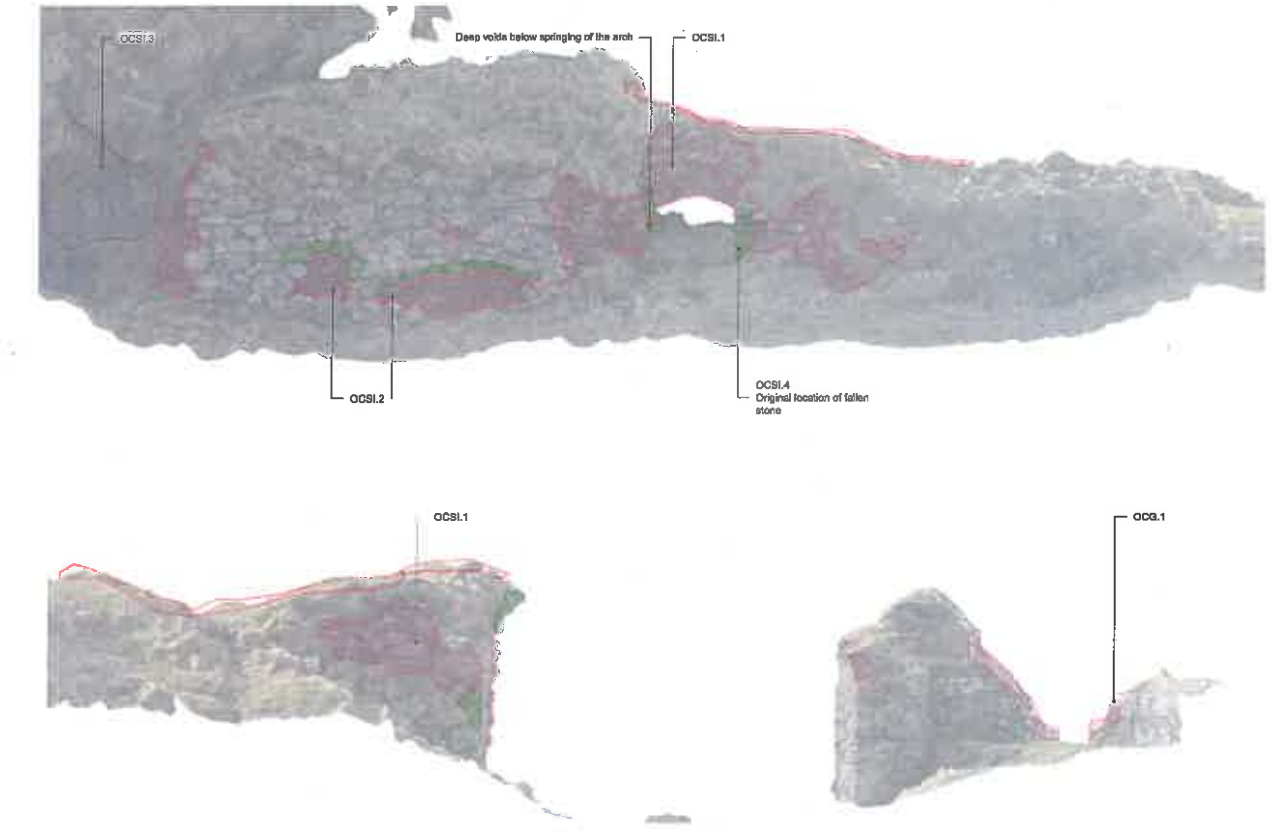
Outer Courtyard - South Internal Elevation

There is no evidence of recent repairs. Refer also to Outer Courtyard - South External Elevation.

This elevation consists of roughly squared rubble stonework capped by turf. The main features are the small arched opening that used to be a full-height doorway into the Inner Courtyard and the jambs of the seagate opening. The East end meets the bedrock of the summit. This area is readily accessible to visitors, who regularly crawl through the archway and use a turfed ramp of collapsed masonry to access the Inner Courtyard.

This area is generally in poor condition and many works to this area are Urgent. Some areas of facing stones have been lost leaving core exposed, including around the archway and in two pockets to the East. There are also pockets of missing stonework below the arch's springing, and gaps between the voussoirs - these works are Immediate. In addition, there are fractures in the bedrock to the East that should be investigated and which may require stablisation. Since 2019, a stone appears to have partially fallen out above one pocket of missing facing, and one stone from the archway has fallen out entirely.

A mixture of underbuilding and rough racking is proposed to support the remaining facing and arch. The arch itself is to be picked and packed to stabilise the voussoirs. Two non-ferrous bars are also proposed to support the pockets of missing facings.



OCSI	Outer Courtyard - South Internal Elevation			
Item	**Description**	**Photo**	**Priority**	**Proposed Repair**
OCSI.1	General loss of facing stonework and core material - Some of which is leading to poorly supported masonry, especially at the East end and around the archway. A larger area of repairwork has been identified since the survey of 2019. Caused by general mortar weathering. Significant risk of injury as the area is trafficked by visitors.		Urgent	Rough rack or underbuild only as necessary to stabilise walling. Stable turfed areas at the West end to be left in situ. Consider general packing, pinning and repointing of eroded mortar joints to remaining facings generally to slow general deterioration.
OCSI.2	Loss of facing stonework in two pockets to East side - Leading to poorly supported masonry, and one stone that has visible dropped since 2019. The rear of these pockets is generally stable. Caused by general mortar weathering. Significant risk of injury as the area is trafficked by visitors.		Urgent	Insert non-ferrous bars above each pocket, and reposition the partially-dropped stone over the East pocket back into its original and pack, pin and point around to secure. See DNA drawings 20.1373-SK01-06
OCSI.3	Fractured high level bedrock - Possible unstable bedrock has been identified to the East side of the walling at high level. Significant risk of injury as the area below is trafficked by visitors.		Urgent	Area to be inspected and SE input required, repairs may include rock anchoring using Cintec or other system.
OCSI.4	Deterioration to archway and loss of one stone - The arch is formed from small, irregular stonework and there are now significant voids between voussoirs. One stone has fallen from the West side of the opening onto the ground since 2019. There is a large void on the East side of great concern - see also ICG.1. Caused by general mortar weathering. Significant risk of injury as the area below is trafficked by visitors.		Immediate	Following more detailed inspection, deep pack, pin and repoint existing voussoirs, underbuilding any voids below the springing of the arch - see also ICG.1. Possible door sockets to either side of the archway opening should remain legible.

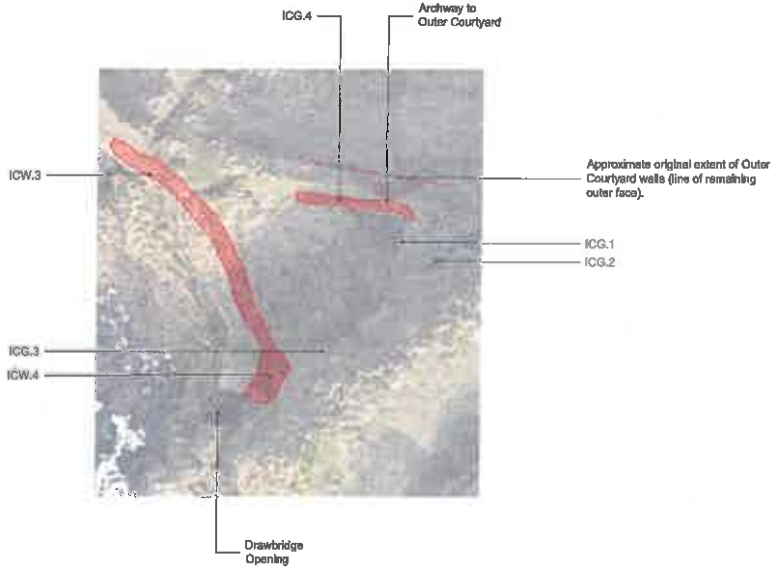
Inner Courtyard - General

There is no evidence of recent repairs.

The Inner Courtyard is a triangular area between the lower Outer Courtyard and the higher Summit. This area is bounded by partially-collapsed walls capped with turf to the West and North. To the SE is a steep cliff of near-vertical bedrock and two small areas of walling; a lower wall perpendicular to the South Internal Elevation and a curving wall perched high up on the bedrock. This area is readily accessible to visitors who access from the Outer Courtard by crawling under the arch or over the South Internal Wall.

This area is generally in fair condition except for a void in the wall to the East of the archway where facing stones have been lost - this area requires immediate repair. Water seepage through the fractured bedock below the higher section of masonry should be monitored. There has been no obvious deterioration of masonry since 2019.

Underbuilding is proposed to infill the void by the arch.



Building Repairs

- Previously Repaired
- Unsupported Masonry
- Core Exposed
- Mortar Erosion
- Large Voids
- Sandstone disintegration
- Structural Movement
- Manmade Erosion

ICG	Inner Courtyard - North Internal Elevation			
Item	Description	Photo	Priority	Proposed Repair
ICG.1	Pocket to low wall by archway - Loss of facing stonework in a pocket below the springing of the arch causing structural instability. Caused by general mortar weathering. Significant risk of injury if the arch should fail as the area is trafficked by visitors.		Immediate / Urgent	Rough rack or underbuild only as necessary to stabilise the facing above, prioritising the deep voids at the springing of the arch. Consider general packing, pinning and repointing of eroded mortar joints to remaining facings generally to slow general deterioration.
ICG.2	Poorly supported masonry above low wall - Voids visible are in turfing (possible rabbit burrows) below several stones above the low wall. Significant risk of injury from falling stones as the area below is trafficked by visitors.		Necessary/ Desirable	Rebed and/or underbuild loose masonry in original positions only as necessary to stabilise the wallhead. See also ICG.4.
ICG.3	Deterioration of high walling fragment - General mortar erosion of a hard-to-access section of walling part-way up the natural cliff face above Inner Courtyard. Also, bedrock in this area shows water seepage below the walling and lower down the wall face, which may lead to frost damage and structural deterioration over time. Significant risk of injury as the area below is trafficked by visitors.		Desirable	Consider general packing, pinning and repointing of eroded mortar joints generally to slow general deterioration. Monitor for any deterioration or movement in the bedrock, especially in areas of water seepage.
ICG.4	Erosion at over archway - Visitors have been observed walking along the turfed wallhead over the archway, eroding the protected turfing and where there are loose stones to edges and poorly supported masonry below. Significant risk of injury from falls and to visitors below. See also OCS.1.		Desirable	Consider stabilising eroded footpath areas using jute mesh and reseeding, and installing signage to deter trafficking of wallheads.

Inner Courtyard - West External Elevation

There is no evidence of recent repairs.

This elevation consists of roughly squared rubble stonework capped by turf, sitting partly onto the bedrock and elevated above the shoreline. The main feature is the void that separates the lower areas of the site from the Summit. It is thought that a timber structure that could be withdrawn in times of attack was originally used to bridge this gap. The area up to this drawbridge is readily accessible to visitors, who walk along the wallhead and then access the summit only by climbing around the very hazardous 3m+ drop.

This area is generally in fair condition as there is only one small pocket of missing facing stones and both sides of the drawbridge masonry appear stable. Limited works in this area are Urgent. There is a small amount of erosion to the walltop where it is used as a path, especially at the head of the East seagate and at the drawbridge. Since 2019, a stone appears to have fallen out onto the shore; it is unclear whether it has been dislodged from the the top edge of the drawbridge opening or elsewhere.

Rough racking is proposed to support the remaining facing in the pocket. It may be advisable to consider preventing access to the summit, due to the risk of falling from height, by installation of a barrier before the drawbridge.

Building Repairs

- Previously Repaired
- Unsupported Masonry
- Core Exposed
- Mortar Erosion
- Large Voids
- Sandstone disintegration
- Structural Movement
- Manmade Erosion

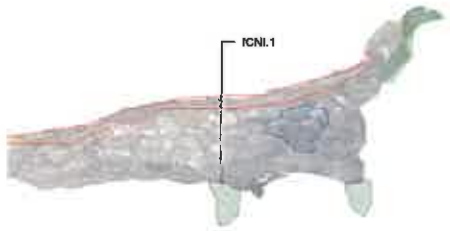
ICW	Inner Courtyard - West External Elevation			
Item	**Description**	**Photo**	**Priority**	**Proposed Repair**
ICW.1	Pocket of missing facing - Loss of facing stonework in a pocket below the informal footpath on top of the wall. Caused by general mortar weathering. Significant risk of injury as the area is trafficked by visitors and there is a 3+m drop to the shoreline below.		Urgent / Desirable	Rough rack or underbuild only as necessary to stabilise the facing above. Consider general packing, pinning and repointing of eroded mortar joints to remaining facings generally to slow general deterioration.
ICW.2	Fallen stone - A stone has recently fallen onto the shore below the wall, possibly since 2019. It appears that this stone may have been dislodged from the edge of the drawbridge opening as the remainder of the walling appears to be in fair condition with pinning mainly intact.		Desirable	Reinstate lost stone in its original position if this can be accureatly determined. Repairs around as ICW.1. See also ICW.3.
ICW.3	Erosion at East seagate - Visitors are observed walking onto the top of the East seagate, where there is poorly supported masonry below. Significant risk of injury as the area is trafficked by visitors and there is a 3+m drop to the shoreline below. See also OCS.1.		Necessary/ Desirable	As OCS.1. Consider restricting visitors to minimise risks of injury. Consider stabilising eroded footpath areas using jute mesh and reseeding.
ICW.4	Erosion at drawbridge edge - As ICW.2, a fallen stone on the shore may have fallen from the eroded North edge of the drawbridge, used to access the Summit area. The path to this area is also eroded, exposing soil and possible bburied archaeology. Significant risk of injury as the area is trafficked by visitors and there is a 3+m drop to the shoreline below.		Necessary/ Desirable	As ICW.2. Consider restricting visitors from the route up to the Summit to minimise risks of injury. Consider stabilising eroded footpath areas using jute mesh and reseeding.

Inner Courtyard - North Internal Elevation

There is no evidence of recent repairs. See also Outer Courtyard - South Internal Elevation.

This elevation has largely been obscured by turf but consists of rubble stonework capped by turf. The main feature is the archway from the Outer Courtyard that is now approximately 1m high. It is thought that this opening used to be full-height. This area is readily accessible to visitors, who can climb through the archway and over the wall from Outer to Inner Courtyards.

Although the facings around the archway are more intact than the side facing the Outer Courtyard, this elevation is generally in very poor condition, and works in this area are Immediate/ Urgent. Refer to Outer Courtyard - South Internal Elevation for details of the archway condition and proposed works. There has been no obvious deterioration of masonry on this side of the walling since 2019.



Building Repairs

- Previously Repaired
- Unsupported Masonry
- Core Exposed
- Mortar Erosion
- Large Voids
- Sandstone disintegration
- Structural Movement
- Manmade Erosion

ICNI	Inner Courtyard - North Internal Elevation			
Item	**Description**	**Photo**	**Priority**	**Proposed Repair**
ICN1.1	Loss of pockets of masonry to either side of the arch at springing level, and gaps between small voussoirs. Caused by general mortar weathering. No visible deterioration since 2019. Significant risk of injury if the arch should fail as the area is trafficked by visitors. See also Outer Courtyard - South Internal Elevation		Immediate / Urgent	Rough rack or underbuild only as necessary to stabilise the facing above, prioritising the deep voids at the springing of the arch. Pack, pin and repoint voussoirs as Outer Courtyard - South Internal Elevation. Consider general packing, pinning and repointing of eroded mortar joints to remaining facings generally to slow general deterioration.

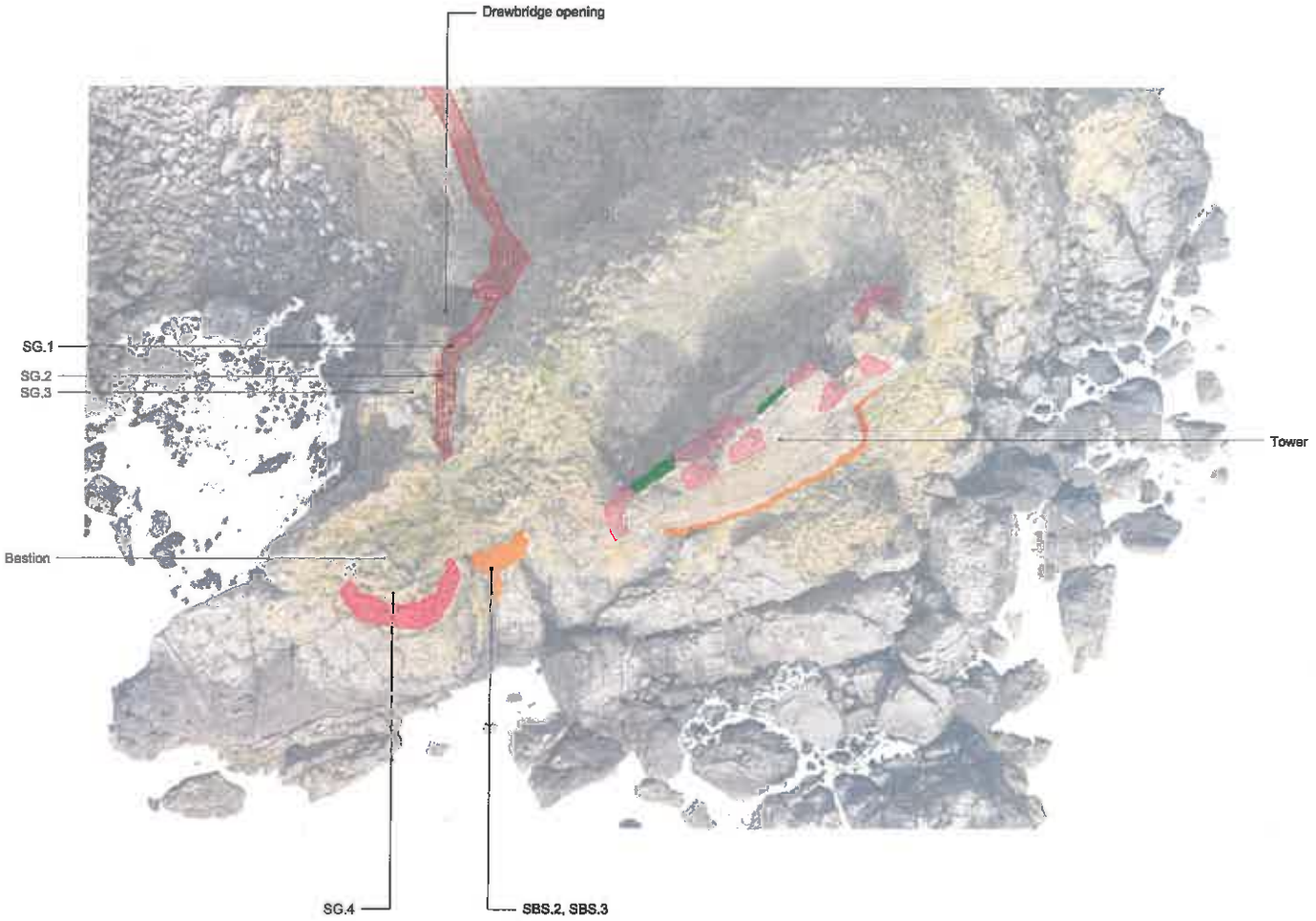
Summit - General

This area was subject to a 6-week programme of emergency repairs in 1998, but the works undertaken involved only repairs to the small areas of the exterior (seaward-facing) walls.

The Summit is the highest part of the castle site, consisting of several c.16th structures on a natural promontory providing expansive views over the wider area. The summit can only be accessed by intrepid visitors from the lower Inner Courtyard by climbing around the former drawbridge opening and a steep, rough path along the West side. This takes visitors up to the Bastion, and then up again to the Tower. Most of the Summit is covered by thick turf except for the walling described separately below, and it is bounded on all sides by high vertical cliffs without any edge protection so there is a high risk of injury to visitors via falls.

This area is generally in fair condition except for erosion of the footpath and the unprotected edges, so some works in this area are Urgent. There has been no obvious deterioration of the little visible masonry in this area since 2019.

It would be advisable to install signage, or a barrier and alternative interpretation to prevent visitors accessing the Summit and reduce the risk of injury.



Building Repairs

- Previously Repaired
- Unsupported Masonry
- Core Exposed
- Mortar Erosion
- Large Voids
- Sandstone disintegration
- Structural Movement
- Manmade Erosion

SG	Summit - General			
Item	Description	Photo	Priority	Proposed Repair
SG.1	Erosion of wallhead to drawbridge - Although the walling of the Summit-side of the drawbridge is generally in good condition, visitors must step onto one particular spot to climb around the void to the Summit, eroding the already-exposed rubble facing. No visible deterioration since 2019. Significant risk of injury as there is a 3+m drop to the shoreline below.		Necessary/ Desirable	Rough rack only as necessary to stabilise the wallhead. Consider general packing, pinning and repointing of eroded mortar joints to remaining facings generally to slow general deterioration. As an alternative, consider restricting visitors from the area to minimise risks of injury.
SG.2	Erosion of path from drawbridge - The steep path to the Bastion and Tower is deeply eroded, exposing soil, masonry and possible buried archaeology. No visible deterioration since 2019. The cause is a mixture of visitor trafficking and rainfall. Low risk of trips and falls.		Desirable	Consider stabilising eroded footpath areas using jute mesh and reseeding. As an alternative, consider restricting visitors from the area to minimise risks of injury.
SG.3	Deterioration of gateway walling fragment - General mortar erosion of a small section of walling part-way along the path between the drawbridge and Bastion. Turfing is provising some protection. No visible deterioration since 2019. Low risk of injury.		Desirable	As SG.1.
SG.4	Lack of protection of Bastion edge - The turfing is protecting the wallheads but it actually overhangs the masonry that itself may not be well supported below should not be walked on. Medium risk of injury only as the area is less trafficked, and there is the possibility of 10+m falls to the shoreline below.		Urgent	Consider restricting visitors from the area to minimise risks of injury.

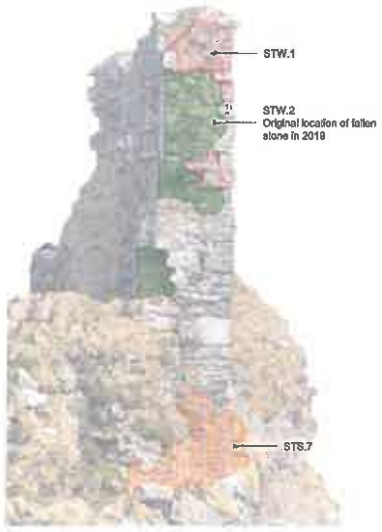
Summit - Tower - West External Elevation

This area was subject to repair in 1998, but the works undertaken involved only repairs to the cantilevered support to the SW corner of the tower.

As the West wall of the c.16th Tower has largely collapsed, this elevation consists only of the exposed roughly squared rubble walling and corework at the end of the South wall, and the recently rebuilt masonry of the SW corner below that projects out from the bedrock. The Summit of the site is accessible to visitors only by climbing around the former drawbridge void.

This area is generally in very poor condition as it is very exposed to the prevailing wind from the SW and the broken wall end is nearly vertical and therefore has little protective turf capping. Many works in this area are Urgent. Since 2019, at least one large stone has fallen out on the wallhead and onto the ground.

Rough racking is proposed to stablise the exposed wall core, especially where the stone has recently fallen out of the wall.



Building Repairs

- Previously Repaired
- Unsupported Masonry
- Core Exposed
- Mortar Erosion
- Large Voids
- Sandstone disintegration
- Structural Movement
- Manmade Erosion

STW	Summit - Tower - West External Elevation			
Item	**Description**	**Photo**	**Priority**	**Proposed Repair**
STW.1	General loss of facing stonework and core material - Most of the West wall has collapsed, leaving a near-vertical section of poorly-supported, loose masonry in a very exposed area and without protective turfing. A larger area of repairwork has been identified since the survey of 2019. Caused by general mortar weathering. Medium risk of injury only as the Summit is a less trafficked area.		Urgent	Rough rack or underbuild only as necessary to stabilise the broken wall end. Consider general packing, pinning and repointing of eroded mortar joints to remaining facings generally to slow general deterioration.
STW.2	Loss of stone from high level - One large stone has fallen onto the ground since 2019 (foreground, close to a previously-collapsed piece of unbonded later inner walling). Cause as STW.1.		Necessary	Reinstate lost stone in its original position if this can be accureatly determined. Repairs around as STW.1.

Summit - Tower - South Internal Elevation

There is no evidence of recent repairs.

This complex two-storey elevation of at least two phases consists of rubble walling with turf capping. The wall is pierced by three small window openings at ground floor level, and two larger openings at first floor level. There is some evidence that the building may have been divided internally by cross walls and perhaps a vaulted first floor structure, all of which are now missing. There is also erosion of the wallhead turfing to suggest that some visitors climb onto the first floor window sill at the East end.

Although the turf cappings are providing some protection, this area is generally in very poor condition as it is very exposed and many works in this area are Urgent. The wall core is exposed at both ends and in many areas including where there are missing walls, floors and quoins. There is a detached inner layer of later c16th masonry that has partially collapsed since 1983 and will continue to do so. Around the lower window openings, there are cracked but stable lintels and sills. Of greater concern are the poorly bonded outer jambs, some of which have been lost, and the long drop to the shoreline below. Since 2019, there has been no obvious loss of masonry except for that noted on the West External Elevation at the SW corner.

Rough racking, underbuilding, pinning, and a non-ferrous bar are proposed to stablise the exposed wall core, detached inner layer and support higher masonry.

Building Repairs

- Previously Repaired
- Unsupported Masonry
- Core Exposed
- Mortar Erosion
- Large Voids
- Sandstone disintegration
- Structural Movement
- Manmade Erosion

STSI	Summit - Tower - South Internal Elevation			
Item	**Description**	**Photo**	**Priority**	**Proposed Repair**
STSI.1	General loss of facing stonework and core material - Some of which is leading to poorly supported masonry, especially at the East end and around openings. A larger extent of repairwork has been identified since the survey of 2019. Caused by general mortar weathering and earlier collapse of adjacent walls in their entirety. Medium risk of injury only as the area is less frequently trafficked.		Urgent/ Desirable	Rough rack or underbuild only as necessary to stabilise walling. Stable turfed areas at the West end to be left in situ. Consider general packing, pinning and repointing of eroded mortar joints to remaining facings generally to slow general deterioration.
STSI.2	Unbonded inner skin of stonework on East side - This later masonry layer does not appear to be tied into the walling behind and a large section has collapsed since 1983. A larger area of unbonded stonework has been identified since 2019. The face of the older walling behind is generally stable. Medium risk of injury only as the area is less frequently trafficked. See also STW.2.		Urgent	Pin back the whole unbonded layer to the wall behind, underbuild the lowest section beside the low window opening, and insert a non-ferrous bar below the high area to the West . Repairs around as STSI.1.
STSI.3	Void to central area at high level - An area of facing stones have been lost, leaving adjacent stones poorly-supported. The exposed core behind is generally stable. There has been no visible deterioration of this area since 2019. Medium risk of injury only as the area is less frequently trafficked.		Urgent	Insert non-ferrous bar above the void. Repairs around as STSI.1.
STSI.4	Erosion at East upper window - Erosion of turfing and adjacent stonework suggests that some visitors climb up onto the this upper window sill to take advantage of the seaward views. This is likely to be damaging the already-loose masonry to the West side of the opening. Medium risk of injury only as the area is less frequently trafficked but there is a 10+m drop to the shoreline below. See also STSI.1.		Desirable	Consider restricting visitors from the area to minimise risks of injury.

STSI	Summit - Tower - South Internal Elevation			
Item	Description	Photo	Priority	Proposed Repair
STSI.5	Cracked lintel over East lower window - Only one of four stone lintels over this opening is cracked but stable. This was not specifically identified in 2019 but appears stable. Cause unclear but may be down to stone type. Low risk of injury as it is unlikely to deteriorate further in the near future.		Necessary	Monitor at regular intervals.
STSI.6	Cracked sill over East lower window - See Summit - Tower - South External Elevation. The only remaining sill to the lower windows is cracked. This was not specifically identified in 2019 but appears stable. Cause unclear but may be down to stone type.		-	See Summit - Tower - South External Elevation.
STSI.7	Poorly supported window jambs and sills - See Summit - Tower - South External Elevation. From the inside of the wall, voids are visible behind several of the lower window sills and jambs. This image shows a jamb to the West lower window.		-	See Summit - Tower - South External Elevation.
STSI.8	Cracked lintel over West lower window - Only one of four stone lintels over this opening is cracked. This was not specifically identified in 2019 but appears stable. Cause unclear but may be down to stone type. Low risk of injury as it is unlikely to deteriorate further in the near future.		Necessary	Monitor at regular intervals.

Summit - Tower - East External Elevation

This area was subject to repair in 1998, but the works undertaken included only one area of walling (new underbuilding evident where facing stones have been lost previously) and the cantilevered support to the high-level garderobe. Refer also to Summit - South and External Elevations.

This complex and very tall elevation consists of angled rubble walling with turf capping built directly off the bedrock of the base of the Summit. Probably built over more than phase of work, the irregular walling includes a projecting garderobe feature at first floor level.

Although turf capping provides some protection, and this walling was subject to limited emergency repairs in 1998, this area is generally in very poor condition as it is very exposed. Many works are Urgent. There are some voids between the walling and bedrock which it sits on and against, and also some areas of unsupported projecting masonry. The wall core is also exposed above ground floor level where the adjacent walls have been lost. There is also a possible bulge to the lower wall that should be investigated further. Since 2019, there has been no obvious loss of masonry.

Rough racking, underbuilding and repointing are proposed to stablise the exposed core, voids and support masonry above. It may also be necessary to undertake further works to anchor unstable lower-level masonry back to the bedrock.

Building Repairs

- Previously Repaired
- Unsupported Masonry
- Core Exposed
- Mortar Erosion
- Large Voids
- Sandstone disintegration
- Structural Movement
- Manmade Erosion

STE	Summit - Tower - East External Elevation			
Item	**Description**	**Photo**	**Priority**	**Proposed Repair**
STE.1	General loss of facing stonework and core material above ground level - Mainly the broken wall end, with some areas of poorly supported masonry. A larger extent of repairwork has been identified since the survey of 2019. Caused by general mortar weathering and earlier collapse of adjacent walls in their entirety. Medium risk of injury only as the area is less frequently trafficked.		Urgent	Rough rack or underbuild only as necessary to stabilise walling. Consider general packing, pinning and repointing of eroded mortar joints to remaining facings generally to slow general deterioration.
STE.2	Garderobe to wallhead - The projecting supports to the garderobe in the angle between the South and East elevations were repaired in 1998 and now appear in fair condition although there are visible deep joints between stones. Photo from 2019.		Desirable	Consider general packing, pinning and repointing of eroded mortar joints to slow general deterioration.
STE.3	General loss of facing stonework and core material below ground level, plus general mortar erosion between units at the East side - Small pockets in the angle between S and E elevations were repaired in 1998 but there are still large areas of poorly supported masonry. Extent as STE.1. Caused by general mortar weathering. Medium risk of injury only as the area is less frequently trafficked.		Urgent	As STE.1.
STE.4	Deep voids between masonry and bedrock - Anchors were installed to pin the S face back to the bedrock behind in 1998 but the deep voids created by movement and loss or mortar and pinnings were not infilled at the time. Appears to have been stable since 1962. These voids may allow water ingress behind adjacent walling. Low risk of injury as the areas below are not generally trafficked.		Necessary	As STE.1. See also STS.2.

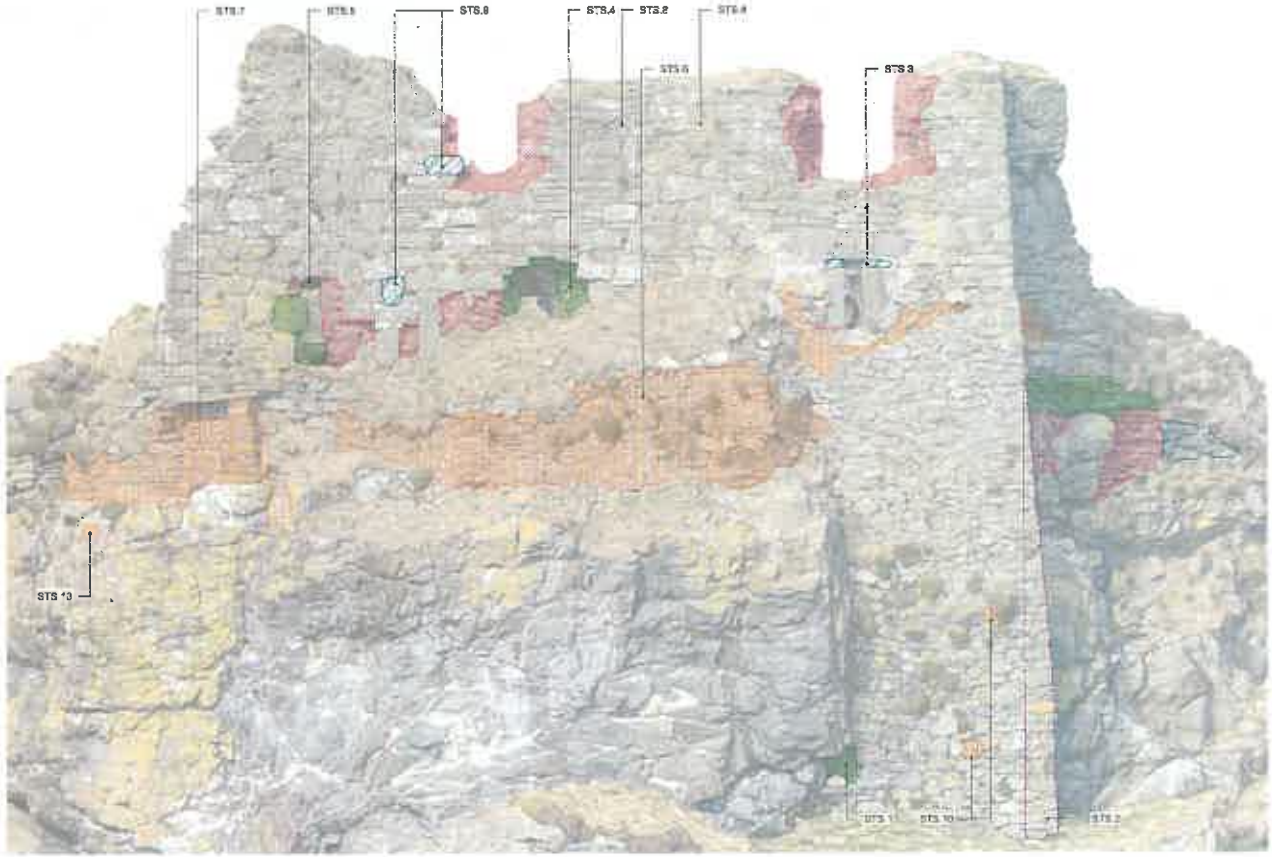
Summit - Tower - South External Elevation

This area was subject to emergency repair works in 1998; rebuilding and anchoring the support to SW corner of the tower, limited consolidation of the central area, and insertion of anchor supports to the East side where it had detached from the bedrock. Refer also to other Summit elevations.

This complex elevation consists of at least two phases of rubble walling with turf capping built directly off the bedrock; a low outer section of walling to the South and a more regular two-storey walling behind. Openings are as previously described under the interior, although further blocked openings are also visible in outline. The SW corner is corbelled out from the bedrock.

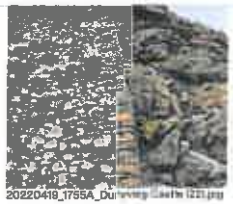
Despite turf capping and previous repairs, this area is generally in poor condition; the core is exposed where quoins are missing, plus window jambs may not be adequately bonded. Many works are Urgent. There is also a possible bulge to the East side of the previously-repaired lower wall that should be investigated further. Since 2019, there has been no obvious loss of masonry except for that noted under Summit - West External Elevation.

Rough racking, underbuilding and packing and pointing are proposed to stablise the exposed wall core, voids and support masonry above. It may also be necessary to undertake further works to anchor unstable lower-level masonry back to the bedrock.



Building Repairs

- Previously Repaired
- Unsupported Masonry
- Core Exposed
- Mortar Erosion
- Large Voids
- Sandstone disintegration
- Structural Movement
- Manmade Erosion

STS	Summit - Tower - South External Elevation			
Item	**Description**	**Photo - all 2019**	**Priority**	**Proposed Repair**
STS.1	General loss of facing stonework and core material above ground level - The worst areas were repaired in 1998, but there are some pockets of poorly suppoorted masonry. No obvious deterioration since 2019 but this image shows a specific area that has worsened since 1983. Caused by mortar weathering and earlier collapses. Medium risk of injury only as the area is less frequently trafficked.		Necessary	Rough rack or underbuild only as necessary to stabilise walling. Consider general packing, pinning and repointing of eroded mortar joints to remaining facings generally to slow general deterioration.
STS.2	Possible bulge to SE corner - Although the South elevation was pinned back to the bedrock with 3no. anchors (STS.10), there appears to be a bulge outwards to the East. This does not apppear to have visibly worsened since 1968.		Urgent	Following more detailed inspection, repairs may include inserting additional anchors to restrain the wall from bulging further outwards.
STS.3	Margins of East lower window - The white sandstone jambs supporting the lintel have decayed significantly, the lower jambs are poorly bonded into the wall, and the sill is cracked when viewed from inside. Isolated adjacent areas were repaired in 1998. It should be assumed that the central window (not visible from the shoreline) is in a similar condition.		Urgent	Following more detailed inspection, repairs may include full replacement of decayed/cracked stonework to ensure structural stability only.
STS.4	Margins of central lower window - The outer sills, jambs and lintel of this window have been lost, and the remaining outer facing above is poorly supported as a result. However, this opening has been stable since 1962. No external photo available.		Urgent/ Desirable	Rough rack or underbuild only as necessary to stabilise walling. Consider general repointing as STS.1.

STS	Summit - Tower - South External Elevation			
Item	Description	Photo - all 2019	Priority	Proposed Repair
STS.5	Margins of West lower window - The sill and several of the jambstones supporting the lintel have been lost, and those remaining are poorly bonded into the wall.		Necessary/ Desirable	Strap back the projecting jamb stone as rec. by SE and ensure the lintel is fully supported by underbuilding as required. Consider general repointing as STS.1.
STS.6	Previously-repaired outer section of walling - Along with a small area of the Tower wall to the East, the section of walling hugging the bedrock, below the 2-storey main wall, was partly repointed/rebuilt in 1998 and appears in fair condition although there may still be some deep voids in areas. This may be a very early section of walling.		Urgent	Following more detailed inspection, repairs may include inserting additional anchors to restrain the wall from bulging further outwards.
STS.7	Previously-repaired SW corner - Additional supports to the overhanging SW corner of the Tower, and an anchor below, were built in 1998 and now appear in fair condition although there is lime staining/efflorescence below.			Inspect at regular intervals. Consider general repointing as STS.1.
STS.8	Blocked earlier openings - Masonry infilling these earlier openings (at least two, not visible on the internal face) is unlikely to be bonded into the wall but appears in good condition.			Any repointing of the External wall face should not obscure important features as these may help future understanding of the development of the castle.

STS	Summit - Tower - South External Elevation			
Item	**Description**	**Photo - all 2019**	**Priority**	**Proposed Repair**
STS.9	Sandstone units - There are occasional white stones in the walling on this elevation only, appearing as jambs and isolated walling stones. They may be of local Bowmore sandstone and appear to be suffering from differential weathering against the harder metamorphic Argyll Group stone from the immediate area of the castle.		-	Any repair of the External wall face should not obscure the use of imported stone as this may help future understanding of the development of the castle.
STS.10	Further to STS.2, anchor plates are visible level at the base of the lower walling. These anchors were installed in 1998 to arrest the possible outward movement of this walling.			

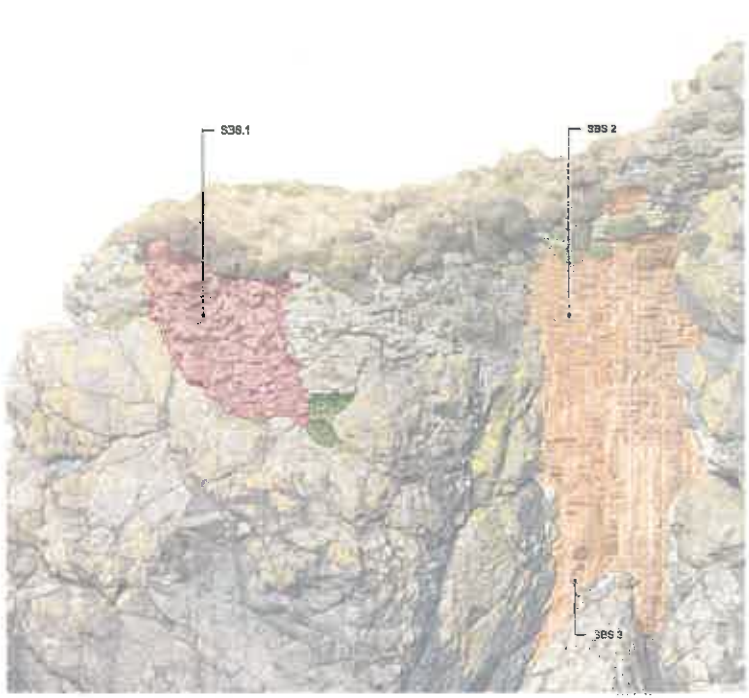
Summit - Bastion - South External Elevation

This area was subject to repair in 1998 but the works undertaken involved only repairs to the zone between the Bastion and the Tower (full rebuilding of masonry from the bedrock upwards, incorporating concealed steelwork and visible relieving arches). The Bastion walling to the West was not repaired in 1998.

This elevation consists of the rubble base of a projecting bastion overlooking the entrance to Lagavulin Bay, and a separate vertical section of modern stonework that supports the pathway up to the Tower that is sited to the East.

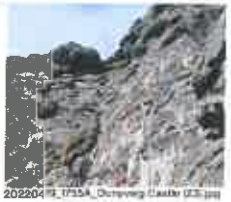
Although the modern stonework is in good condition, albeit marred by heavy lime staining/ efflorescence, the Bastion walling is in poor condition with much of the facing having been lost. Some works in this area are Necessary. Since 2019, there has been no obvious loss of masonry although this area was inaccessible and not closely inspected at that time.

Rough racking is proposed to stablise the exposed wall core.



Building Repairs

- Previously Repaired
- Unsupported Masonry
- Core Exposed
- Mortar Erosion
- Large Voids
- Sandstone disintegration
- Structural Movement
- Manmade Erosion

SBS	Summit - Bastion - South External Elevation			
Item	**Description**	**Photo**	**Priority**	**Proposed Repair**
SBS.1	General loss of facing stonework - The majority of facings appear to have been lost and deep mortar joints are visible but wallheads are protected by turf. No obvious deterioration since 2019. Caused by general mortar weathering. Medium risk of injury only as the Summit is less frequently trafficked.		Necessary/ Desirable	Rough rack or underbuild only as necessary to stabilise walling. Consider general packing, pinning and repointing of eroded mortar joints to remaining facings generally to slow general deterioration.
SBS.2	Upper section of modern walling - In 1998 this section of walling to the East side of the Bastion was rebuilt as the original walling was collapsing at the time. It includes two relieving arches and a 'sacrificial' steel internal framework (there is no record to confirm what this consists of) and is built directly off the bedrock. No obvious deterioration since 2019.		Desirable	Monitor at regular intervals, especially for movement or corrosion staining from the concealed steelwork.
SBS.3	Base of of modern walling - As SBS.2. The base of the walling appears in good condition and incorporates at least two weepholes to relieve water pressure behind the new stonework, but these are partly obscured by thick deposits of lime staining/efflosescent. This free lime may relate to the use of local beach sand or the general marine atmosphere. No obvious deterioration since 2019.		Desirable	Monitor at regular intervals and clear weepholes of lime build-up periodically.

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Appendix

04 Drawings

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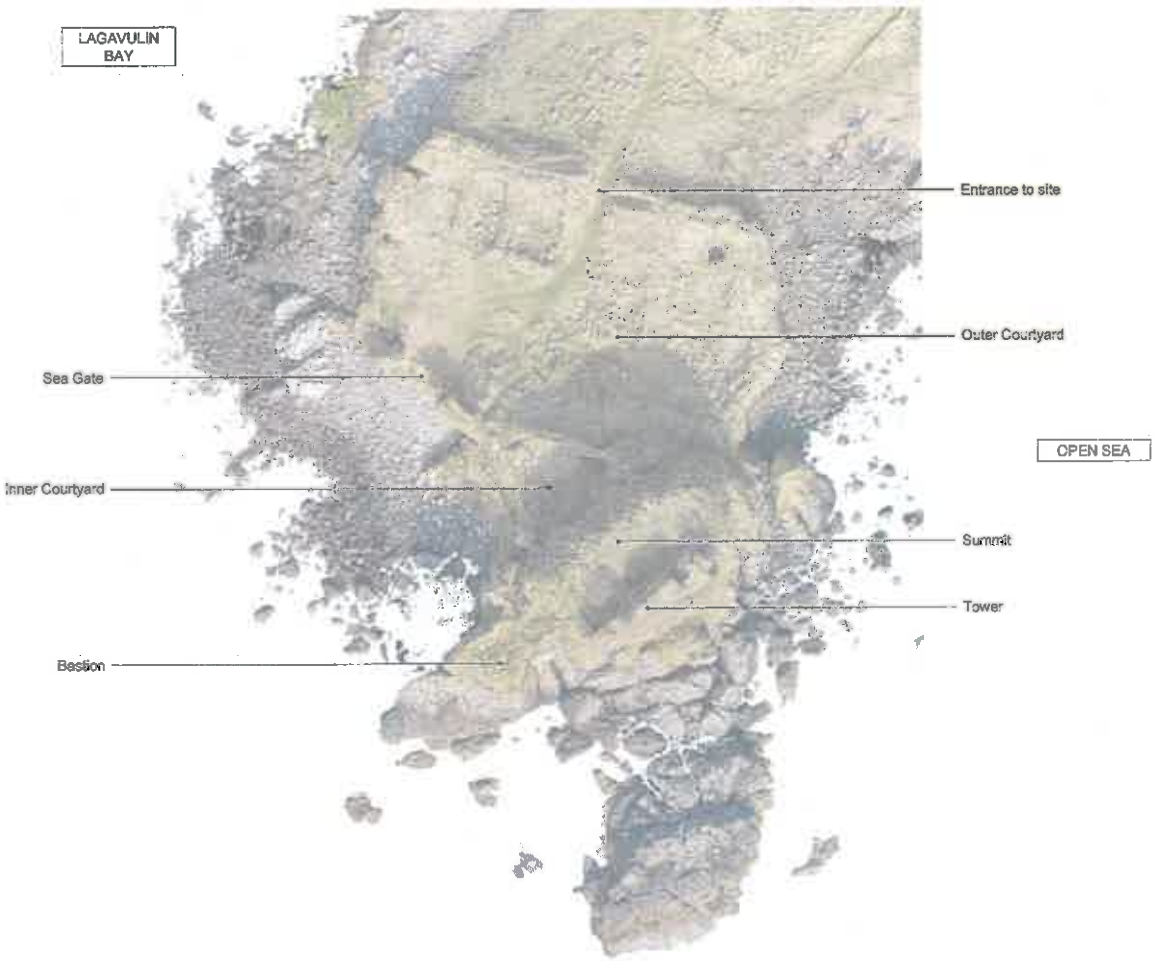
Revision notes



Site Plan
Showing complete castle and context

1:500 | 0 10m 20m

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Project Title
Dunyvaig Castle
Islay

Client
Islay Heritage

Status
Condition Report

Drawing Title
Existing
Plan

Date
Jun 2022

Rev
-

Size
A3

Scale
1:500

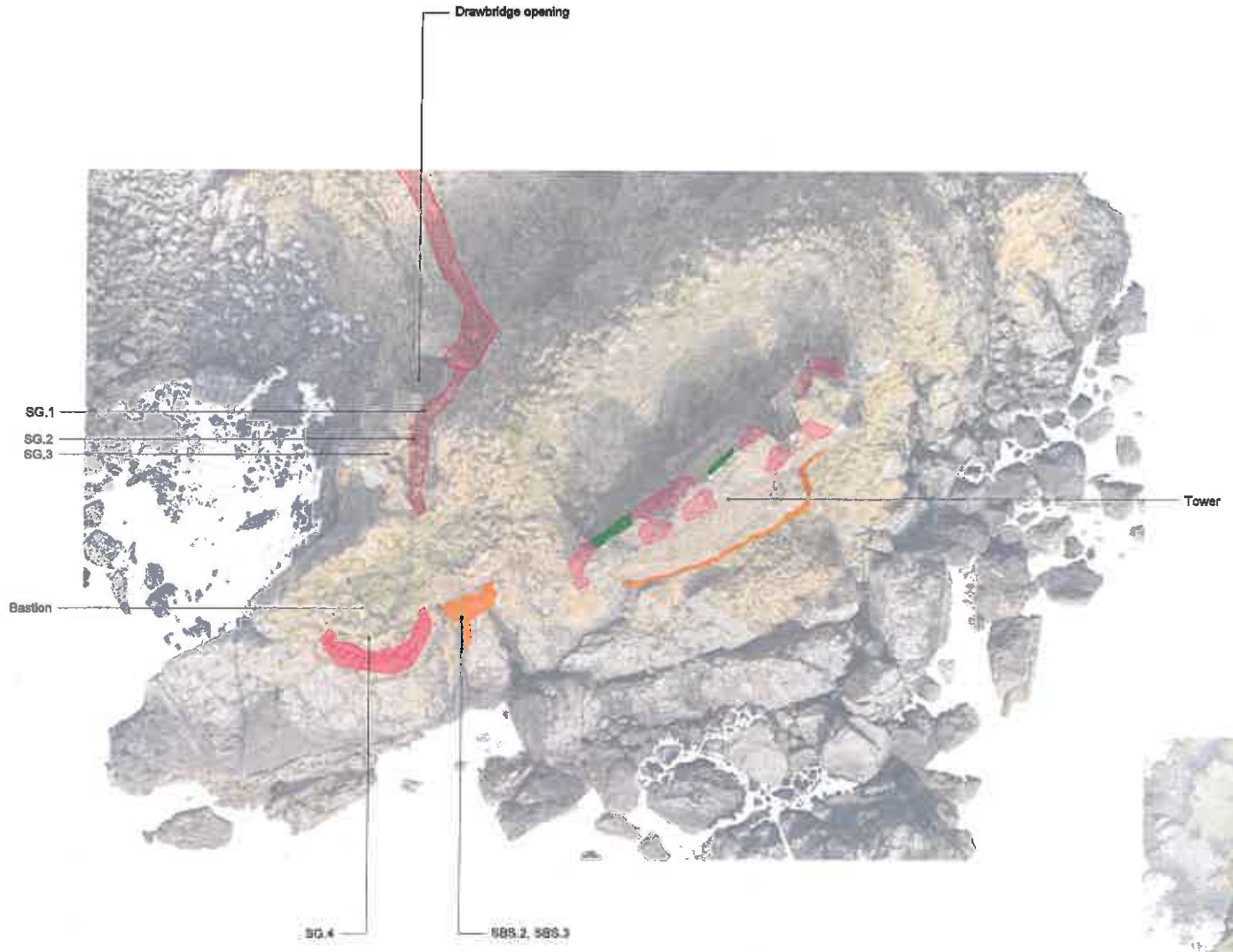
Project No.
1755A

Drawing No.
E-(00)-101

Drawn
CP

Checked
ZA

Revision notes



Summit
Site Plan 1:200

1:200 0 4m 8m

1:1250 0 25m 50m

LEGEND

Key	Stonework	General Description	General Repair Methodology
	PR - Areas previously repaired in 1998	Areas of the Summit repaired as part of the emergency works package of 1998 and generally in good condition.	None required at present but areas should be regularly monitored.
	UM - Unsupported Masonry and Turfing	Caused by gradual loss of mortar by weathering and/or physical causes such as wave action.	Undermudmortar out from a firm base only as required to provide support to the areas above, not replicating original facing masonry, or install non-ferrous support bars.
	CE - Core exposed by loss of outer walling	Missing outer layers of masonry that are not directly providing support to masonry and turfing above.	Rough rack exposed corework to consolidate and improve surface water run-off, not replicating original facing masonry.
	ME - Erosion of mortar between masonry units	Mortar erosion leading to deep open joints, such as between arch voussoirs or other masonry units, leading to loosened masonry units and increased water ingress	Deep pack, pin and repoint as necessary to consolidate and improve surface water run-off.
	LV - Large Voids	Unstable/detached outer layers of masonry with voids behind.	Following more detailed inspection, repairs may include grouting and/or limited rebuilding to match existing.
	SD - Sandstone Disintegration	Erosion of the surface of isolated sandstone units, possibly granular disintegration.	Following more detailed inspection, replace sandstone unit or install stone Indent at structurally important locations.
	SM - Structural Movement	Areas of potential structural movement or concern which require investigation and / or remediation, including detached masonry.	Areas to be Inspected and SE input required. Including pinning of loose masonry and rock.
	ME - Manmade erosion	Erosion of protective turf capping, masonry and mortar at walkheads where walked over by visitors.	Consider installing signage or restricting access, particularly where there is a high risk of injury, and monitor for further deterioration.

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Project Title
Dunyvaig Castle
Islay

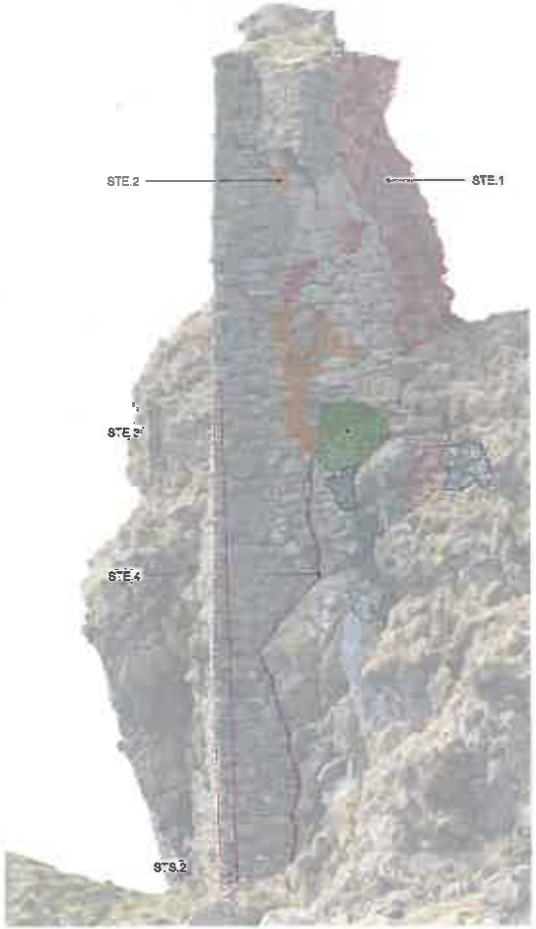
Client
Islay Heritage

Status
Condition Report

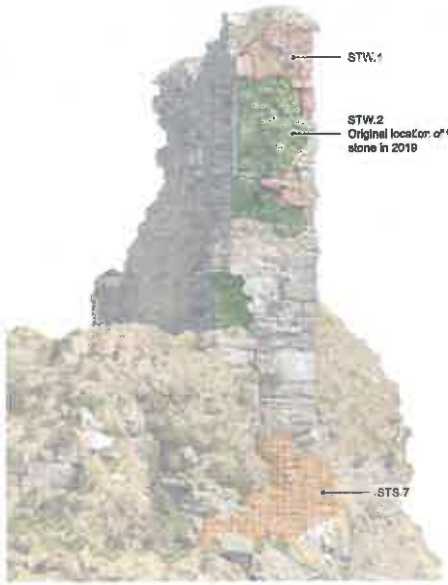
Drawing Title
Existing
Plan
Inner Courtyard and Summit

Date Jun 2022	Rev -
Size A3	Scale 1:200
Project No. 1755A	Drawing No. E-(01)-102
Drawn CP	Checked ZA

1.1 Elevation MM
Summit - Tower - South internal Elevation



1.2 Elevation NN
Summit - Tower - East External Elevation



1.3 Elevation LL
Summit - Tower - West External Elevation

1:75
0 2m 4m

NOTES:

- All structural information contained on this drawing has been written under the guidance of Structural Engineers, David Narro Associates, following a joint survey carried out by GRAS and DNA

LEGEND

Key	Stonework	General Description	General Repair Methodology
	PR - Areas previously repaired in 1998	Areas of the Summit repaired as part of the emergency works package of 1998 and generally in good condition.	None required at present but areas should be regularly monitored.
	UM - Unsupported Masonry and Tufting	Caused by gradual loss of mortar by weathering and/or physical causes such as wave action.	Underbuild/corbel out from a firm base only as required to provide support to the areas above, not replicating original facing masonry, or insert non-ferrous support bars.
	OE - Core exposed by loss of outer walling	Missing outer layers of masonry that are not directly providing support to masonry and tufting above.	Rough rack exposed cementi to consolidate and improve surface water run-off, not replicating original facing masonry.
	ME - Erosion of mortar between masonry units	Mortar erosion leading to deep open joints, such as between arch voussoirs or other masonry units, leading to loosened masonry units and increased water ingress	Deep pack, pin and repoint as necessary to consolidate and improve surface water run-off.
	LV - Large Voids	Unstable/detached outer layers of masonry with voids behind.	Following more detailed inspection, repairs may include grouting and/or tufted rebuilding to match existing.
	SD - Sandstone Disintegration	Erosion of the surface of isolated sandstone units, possibly granular disintegration.	Following more detailed inspection, replace sandstone unit or insert stone indent at structurally important locations.
	SM - Structural Movement	Areas of potential structural movement or concern which require investigation and / or remediation, including detached masonry.	Areas to be inspected and SE input required, including pinning of loose masonry and rock.
	ME - Manmade erosion	Erosion of protective turf coverings, masonry and mortar at walkside where walked over by visitors.	Consider installing signage or restricting access, particularly where there is a high risk of injury, and monitor for further deterioration.

1:1250
0 25m 50m

Revision notes

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Project Title
Dunyvaig Castle
Islay

Client
Islay Heritage

Status
Condition Report

Drawing Title
Elevation
Summit - Sheet 1

Date
Jun 2022

Rev
-

Size
A3

Scale
1:75/1:1250

Project No.
1755A

Drawing No.
E-(01)-301

Drawn
CP

Checked
ZA

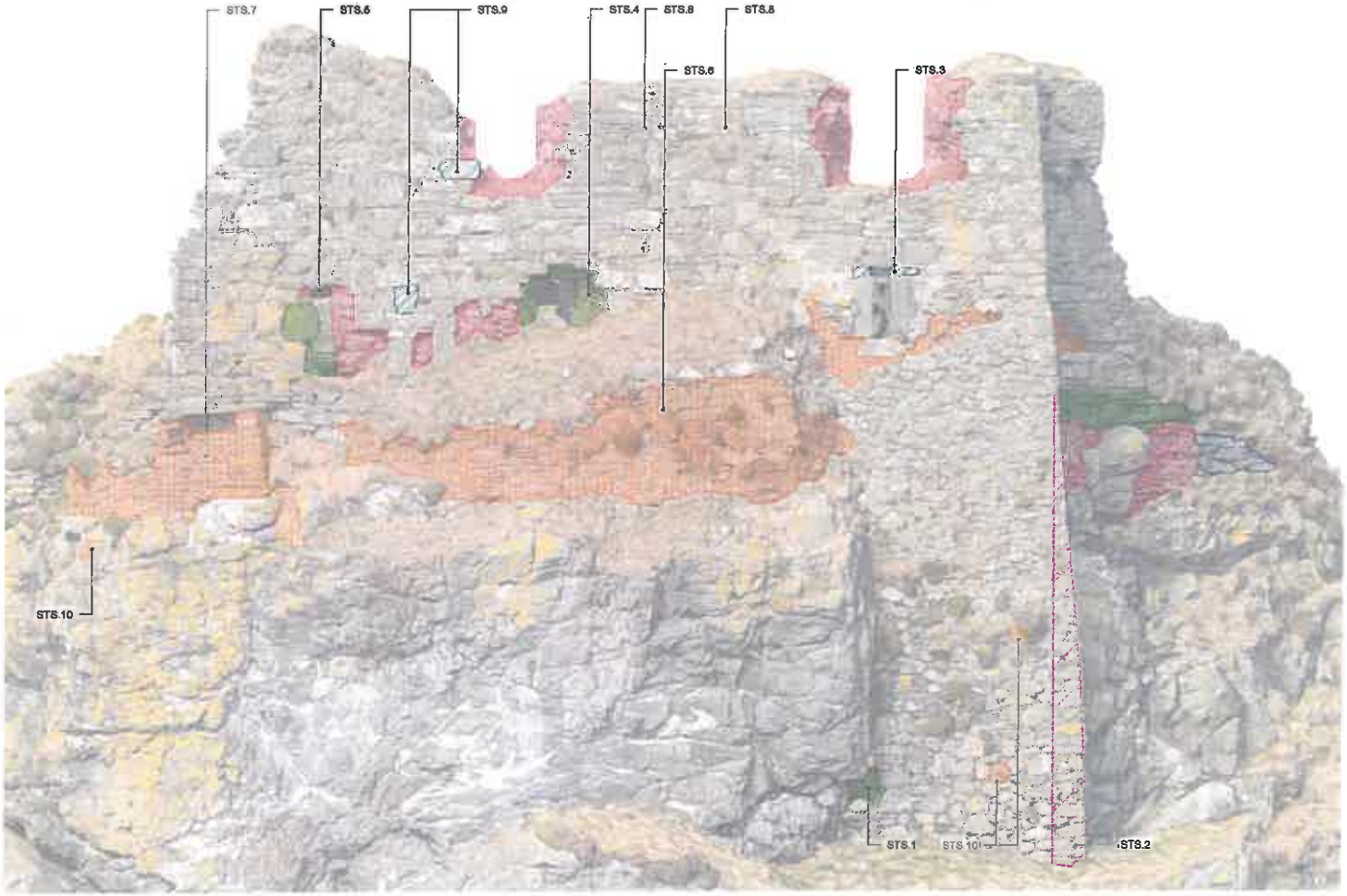
Revision notes

NOTES:

- All structural information contained on this drawing has been written under the guidance of Structural Engineers, David Narro Associates, following a joint survey carried out by GRAS and DNA

LEGEND

Key	Stonework	General Description	General Repair Methodology
	PR - Areas previously repaired in 1998	Areas of the Summit repaired as part of the emergency works package of 1998 and generally in good condition.	None required at present but areas should be regularly monitored.
	UM - Unsupported Masonry and Tuffing	Caused by gradual loss of mortar by weathering and/or physical causes such as wave action.	Underbuild/point out from a firm base only as required to provide support to the areas above, not replicating original facing masonry, or install non-ferrous support bars.
	CE - Core exposed by loss of outer walling	Missing outer layers of masonry that are not directly providing support to masonry and tuffing above.	Rough rack exposed stonework to consolidate and improve surface water run-off, not replicating original facing masonry.
	ME - Erosion of mortar between masonry units	Mortar erosion leading to deep open joints, such as between arch voussoirs or other masonry units, leading to loosened masonry units and increased water ingress	Deep pack, pin and repoint as necessary to consolidate and improve surface water run-off.
	LV - Large Voids	Unstable/detached outer layers of masonry with voids behind.	Following more detailed inspection, repairs may include grouting and/or limited rebuilding to match existing.
	SD - Sandstone Disintegration	Erosion of the surface of bedded sandstone units, possibly granular disintegration.	Following more detailed inspection, replace sandstone unit or install stone indent at structurally important locations.
	SM - Structural Movement	Areas of potential structural movement or concern which require investigation and / or remediation, including detached masonry.	Areas to be inspected and SE input required, including pinning of loose masonry and rock.
	ME - Manmade erosion	Erosion of protective turf coverings, masonry and mortar at walkheads where walked over by visitors.	Consider installing signage or restricting access, particularly where there is a high risk of injury, and monitor for further deterioration.



1.4 Elevation OO
Summit - Tower - South External Elevation

1:75 | 0 | 2m | 4m

1:1250 | 0 | 25m | 50m

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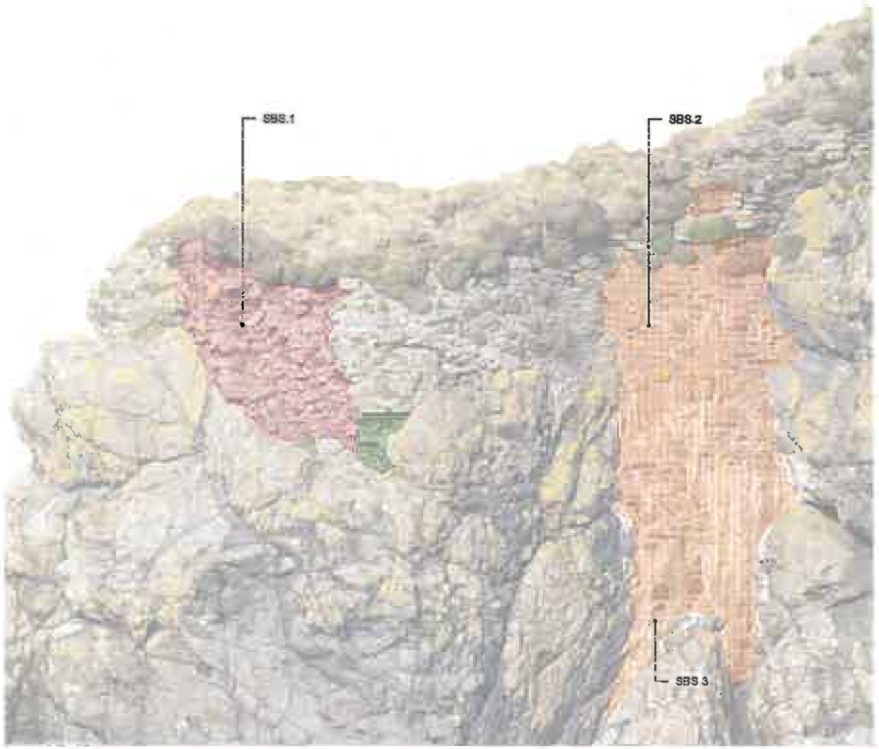
Project Title
Dunyvaig Castle
Islay

Client
Islay Heritage

Status
Condition Report

Drawing Title
Elevation
Summit - Sheet 2

Date: Jun 2022	Rev: -
Size: A3	Scale: 1:75/1:1250
Project No.: 1755A	Drawing No.: E-(01)-302
Drawn: CP	Checked: ZA



1.5 **Elevation OO**
Summit - Bastion - South External Elevation

1:75 0 2m 4m

1.6 **Elevation LL**
Summit - Bastion - West External Elevation

NOTES:

- All structural information contained on this drawing has been written under the guidance of Structural Engineers, David Narro Associates, following a joint survey carried out by GRAS and DNA

Revision notes

LEGEND

Key	Stonework	General Description	General Repair Methodology
	PR - Areas previously repaired in 1998	Areas of the Summit repaired as part of the emergency works package of 1998 and generally in good condition.	None required at present but areas should be regularly monitored.
	UM - Unsupported Masonry and Turfing	Caused by gradual loss of mortar by weathering and/or physical cause such as wave action.	Underbuild/corbel out from a firm base only as required to provide support to the areas above, not replicating original facing masonry, or install non-ferrous support bars.
	CE - Core exposed by loss of outer walling	Missing outer layers of masonry that are not directly providing support to masonry and turfing above.	Rough rack exposed corework to consolidate and improve surface water run-off, not replicating original facing masonry.
	ME - Erosion of mortar between masonry units	Mortar erosion leading to deep open joints, such as between arch voussoirs or other masonry units, leading to loosened masonry units and increased water ingress	Deep pack, pin and repoint as necessary to consolidate and improve surface water run-off.
	LV - Large Voids	Unstable/detached outer layers of masonry with voids behind.	Following more detailed inspection, repairs may include grouting and/or limited rebuilding to match existing.
	SD - Sandstone Disintegration	Erosion of the surface of isolated sandstone units, possibly granular disintegration.	Following more detailed inspection, replace sandstone unit or install stone indent at structurally important locations.
	SM - Structural Movement	Areas of potential structural movement or concern which require investigation and / or remediation, including detached masonry.	Areas to be inspected and SE input required, including pinning of loose masonry and rock
	ME - Manmade erosion	Erosion of protective turf cappings, masonry and mortar at wallheads where walked over by visitors.	Consider installing signage or restricting access, particularly where there is a high risk of injury, once monitor for further deterioration.

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1:1250 0 25m 50m

Project Title
Dunyvaig Castle
Islay

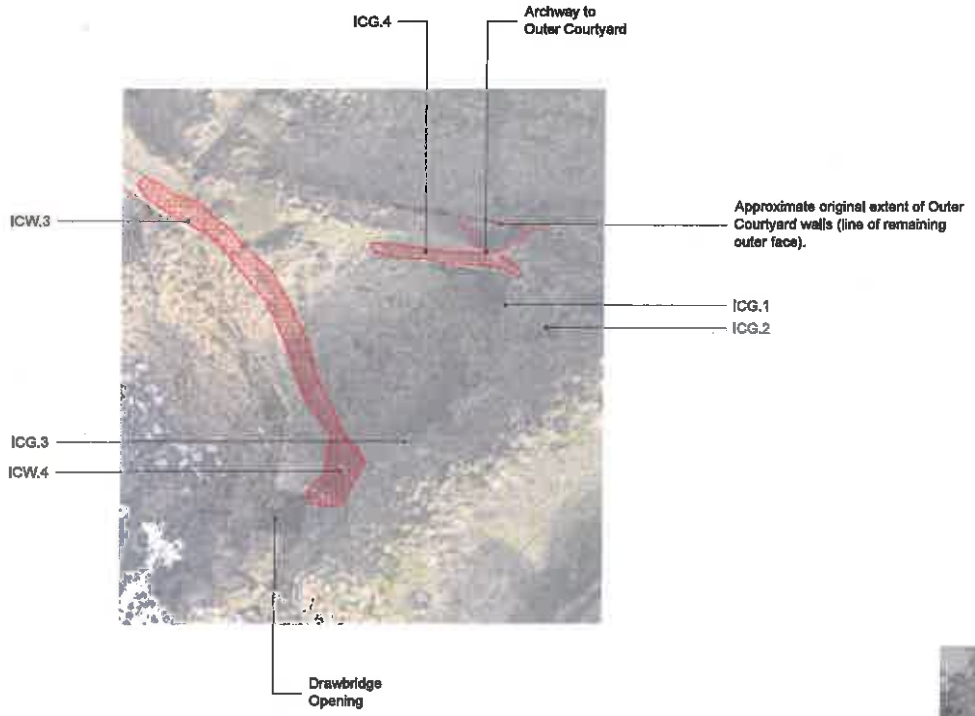
Client
Islay Heritage

Status
Condition Report

Drawing Title
Elevation
Summit - Sheet 3

Date	Rev
Jun 2022	-
Size	Scale
A3	1:75/1:1250
Project No.	Drawing No.
1755A	E-(01)-303
Drawn	Checked
CP	ZA

Revision notes



Inner Courtyard
Site Plan 1:200

1:200 | 0 | 4m | 8m

1:1250 | 0 | 25m | 50m

LEGEND

Key	Masonry	General Description	General Repair Methodology
	ME - Man made erosion	Erosion of protective lime cappings, masonry and mortar at wallheads where walked over by visitors.	Consider installing signage or restricting access, particularly where there is a high risk of injury, and monitor for further deterioration.
	CE - Core exposed by loss of outer walling	Missing outer layers of masonry that are not directly providing support to masonry and lining above.	Rough rack exposed corework to consolidate and improve surface water run-off, but replacing original facing masonry.

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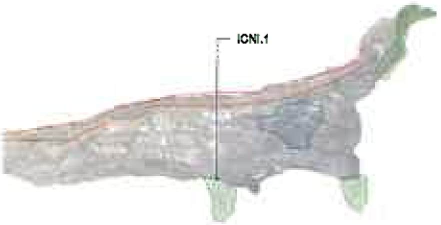
Project Title
Dunyvaig Castle
Islay

Client
Islay Heritage

Status
Condition Report

Drawing Title
Existing
Plan
Inner Courtyard

Date	Rev
Jun 2022	-
Size	**Scale**
A3	1:200
Project No.	**Drawing No.**
1755A	E-(02)-103
Drawn	**Checked**
CP	ZA



2.1 **Elevation JJ**
Inner Courtyard - North Internal Elevation

2.2 **Elevation FF**
Inner Courtyard - South External Wall

1:75 0 2m 4m

NOTES:

- All structural information contained on this drawing has been written under the guidance of Structural Engineers, David Narro Associates, following a joint survey carried out by GRAS and DNA

LEGEND

Key	[illegible]	General Description	General Repair Methodology
	PR - Areas previously repaired in 1998	Areas of the Summit repaired as part of the emergency works package of 1998 and generally in good condition.	None required at present but areas should be regularly monitored.
	UM - Unsupported Masonry and Turfing	Caused by gradual loss of mortar by weathering and/or physical cause such as wave action.	Underbuild/corbel out from a firm base only as required to provide support to the areas above, not replicating original facing masonry, or install non-ferrous support bars.
	CE - Core exposed by loss of outer walling	Missing outer layers of masonry that are not directly providing support to masonry and turfing above.	Rough rack exposed corework to consolidate and improve surface water run-off, not replicating original facing masonry.
	ME - Erosion of mortar between masonry units	Mortar erosion leading to deep open joints, such as between arch voussoirs or other masonry units, leading to loosened masonry units and increased water ingress	Deep pack, pin and repoint as necessary to consolidate and improve surface water run-off.
	LV - Large Voids	Unstable/detached outer layers of masonry with voids behind.	Following more detailed inspection, repairs may include grouting and/or limited rebuilding to match existing.
	SD - Sandstone Disintegration	Erosion of the surface of isolated sandstone units, possibly granular disintegration.	Following more detailed inspection, replace sandstone unit or install stone indent at structurally important locations.
	SM - Structural Movement	Areas of potential structural movement or concern which require investigation and / or remediation. Including detached masonry.	Areas to be inspected and SE input required, including pinning of loose masonry and rock.
	ME - Manmade erosion	Erosion of protective turf cappings, masonry and mortar at wallheads where walked over by visitors.	Consider installing signage or restricting access, particularly where there is a high risk of injury, and monitor for further deterioration.

Revision notes

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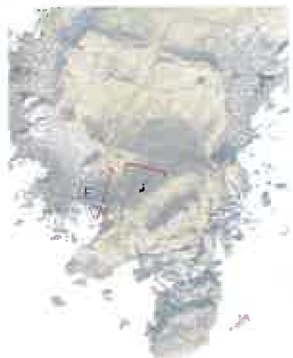


1:1250 0 25m 50m

Project Title
Dunyvaig Castle
Islay

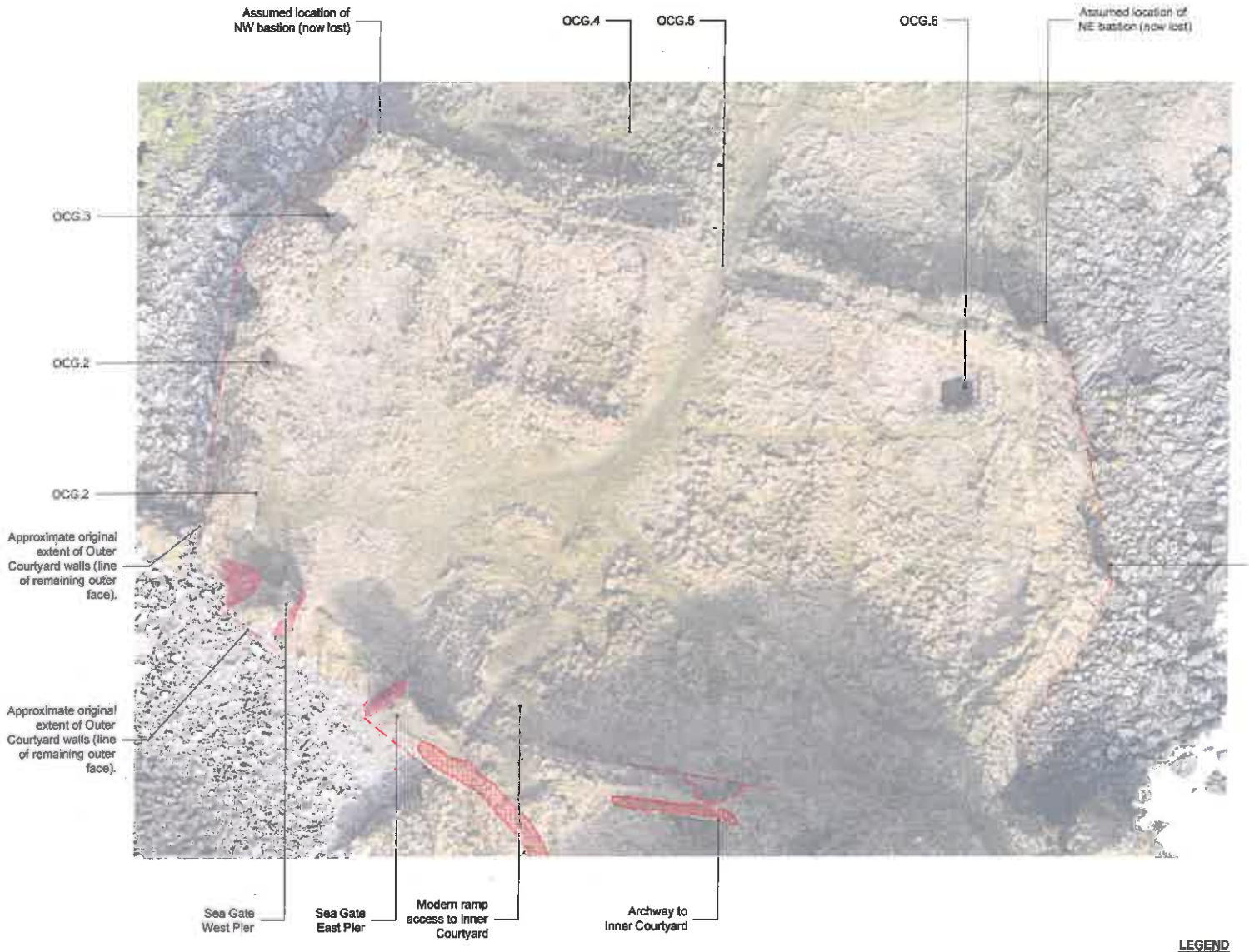
Client
Islay Heritage

Status
Condition Report

Drawing Title
Elevation
Inner Courtyard - Sheet 1

Date Jun 2022	Rev -
Size A3	Scale 1:75/1:1250
Project No 1755A	Drawing No. E-(02)-304
Drawn CP	Checked ZA

Revision notes



1:1250 0 25m 50m

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Project Title
Dunyvaig Castle
Islay

Client
Islay Heritage

Status
Condition Report

Drawing Title
Existing
Plan
Outer Courtyard

Date
Jun 2022

Size
A3

Project No.
1755A

Drawn
CP

Rev
-

Scale
1:200

Drawing No.
E-(03)-104

Checked
ZA

LEGEND

Key	Stonework	General Description	General Repair Methodology
	ME - Manmade erosion	Erosion of protective turf coppings, masonry and mortar at wallheads where walked over by visitors.	Consider installing signage or restricting access, particularly where there is a high risk of injury, and/or monitor for further deterioration.
	OE - Core exposed by loss of outer walling	Missing outer layers of masonry that are not directly providing support to masonry and turfing above.	Rough rack exposed core work to consolidate and improve surface water run-off, not replicating original facing masonry.

Outer Courtyard
Site Plan 1:200

1:200 0 4m 8m

Revision notes

1:1250 0 25m 50m

NOTES:

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LEGEND

Key	Stonework	General Description	General Repair Methodology
	PR - Areas previously repaired in 1998	Areas of the Sunroll, repaired as part of the emergency works package of 1998 and generally in good condition.	None required at present but areas should be regularly monitored.
	UM - Unsupported Masonry and Tufting	Caused by gradual loss of mortar by weathering and/or physical causes such as wave action.	Underbuilt/bonte' out from a firm base only as required to provide support to the areas above, not replicating original facing masonry, or metal non-ferrous support bars.
	CE - Core exposed by loss of outer facing	Missing outer layers of masonry that are not directly providing support to masonry and tufting above.	Rough rack exposed corework to consolidate and improve surface water run-off, not replicating original facing masonry.
	ME - Erosion of mortar between masonry units	Mortar erosion leading to deep open joints, such as between arch voussoirs or other masonry units, leading to loosened masonry units and increased water ingress	Deep pack, pin and repoint as necessary to consolidate and improve surface water run-off.
	LV - Large Voids	Unstable/detached outer layers of masonry with voids behind.	Following more detailed inspection, repairs may include grouting and/or limited rebuilding to match existing.
	SD - Sandstone Disintegration	Erosion of the surface of jointed sandstone units, possibly granular disintegration.	Following more detailed inspection, replace sandstone unit or inlaid stone indent at structurally important locations.
	SM - Structural Movement	Areas of potential structural movement or movement which require investigation and / or remediation, including detached masonry.	Areas to be inspected and SE input required, including pinning of loose masonry and rock.
	ME - Manmade erosion	Erosion of protective Lnf coppings, masonry and mortar at wallheads where walked over by visitors.	Consider installing signage or restricting access, particularly where there is a high risk of injury, and monitor for further deterioration.

3.1 Elevation BB

Outer Courtyard - North External Elevation

1:75 0 2m 4m

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Project Title
Dunyvaig Castle
Islay

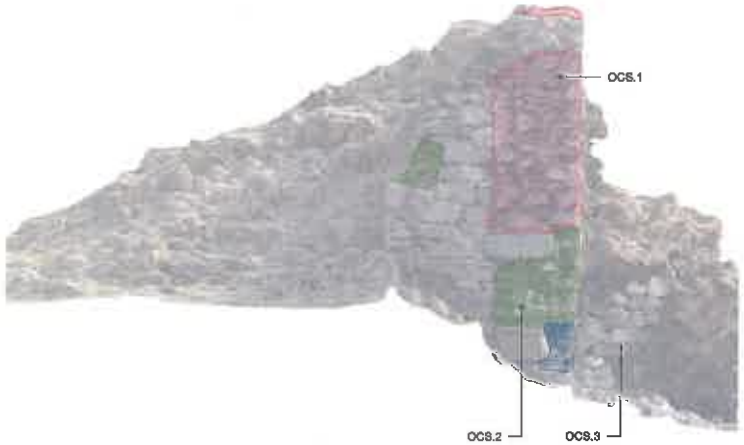
Client
Islay Heritage

Status
Condition Report

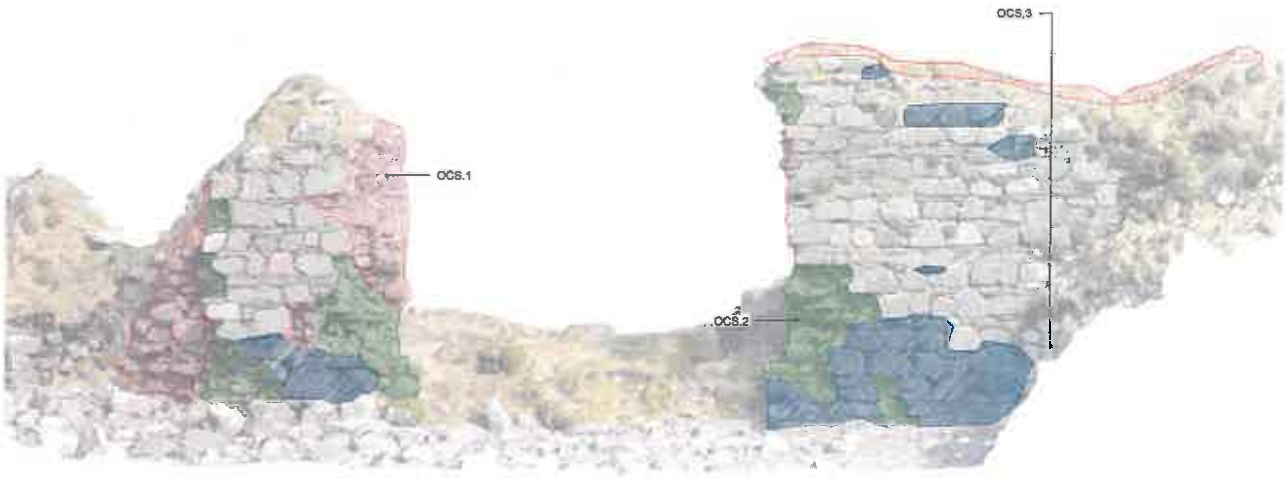
Drawing Title
Elevation
Outer Courtyard - Sheet 1

Date: Jun 2022	Rev: -
Size: A3	Scale: 1:75/1:1250
Project No.: 1755A	Drawing No.: E-(03)-305
Drawn: CP	Checked: ZA

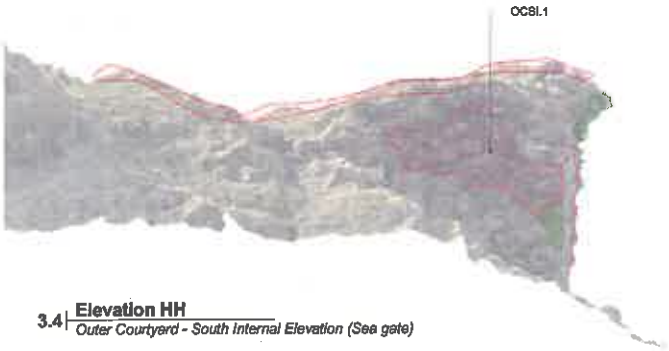
Revision notes



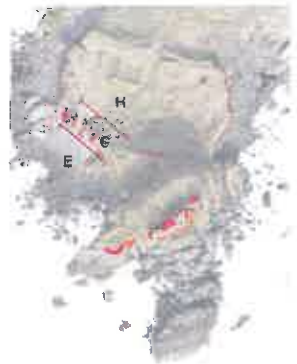
3.2 **Elevation GG**
Outer Courtyard - South External Elevation - Sea gate Elevation



3.3 **Elevation EE**
Outer Courtyard - South External Elevation



3.4 **Elevation HH**
Outer Courtyard - South Internal Elevation (Sea gate)



1:75 | 0 | 2m | 4m

1:1250 | 0 | 25m | 50m

NOTES:

- All structural information contained on this drawing has been written under the guidance of Structural Engineers, David Narro Associates, following a joint survey carried out by GRAS and DNA

LEGEND

Key	Stonework	General Description	General Repair Methodology
	PR - Areas previously repaired in 1998	Areas of the Summit repaired as part of the emergency works package of 1998 and generally in good condition.	None required at present but areas should be regularly monitored.
	UM - Unsupported Masonry and Turfing	Caused by gradual loss of mortar by weathering and/or physical causes such as wave action.	Underbuild/rebed out from a firm base only as required to provide support to the areas above, not replicating original facing masonry, or install non-ferrous support bars.
	GE - Core exposed by loss of outer walling	Missing outer layers of masonry that are not directly providing support to masonry and turfing above.	Rough rack exposed ashwork to consolidate and improve surface water run-off, not replicating original facing masonry.
	ME - Erosion of mortar between masonry units	Mortar erosion leading to deep open joints, such as between arch voussoirs or other masonry units, leading to loosened masonry units and increased water ingress	Deep pack, pin and repoint as necessary to consolidate and improve surface water run-off.
	LV - Large Voids	Unstable/detached outer layers of masonry with voids behind.	Following more detailed inspection, repairs may include grouting and/or limited rebuilding to match existing.
	SD - Sandstone Disintegration	Erosion of the surface of isolated sandstone units, possibly granular disintegration.	Following more detailed inspection, replace sandstone unit or insert stone indent at structurally important locations.
	SM - Structural Movement	Areas of potential structural movement or concern which require investigation and / or remediation, including detached masonry.	Areas to be inspected and SE input required, including pinning of loose masonry and roll.
	ME - Manmade erosion	Erosion of protective turf coppings, masonry and mortar at wallheads where walked over by visitors.	Consider installing signage or restricting access, particularly where there is a high risk of injury, and/or monitor for further deterioration.

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Project Title
Dunyvaig Castle
Islay

Client
Islay Heritage

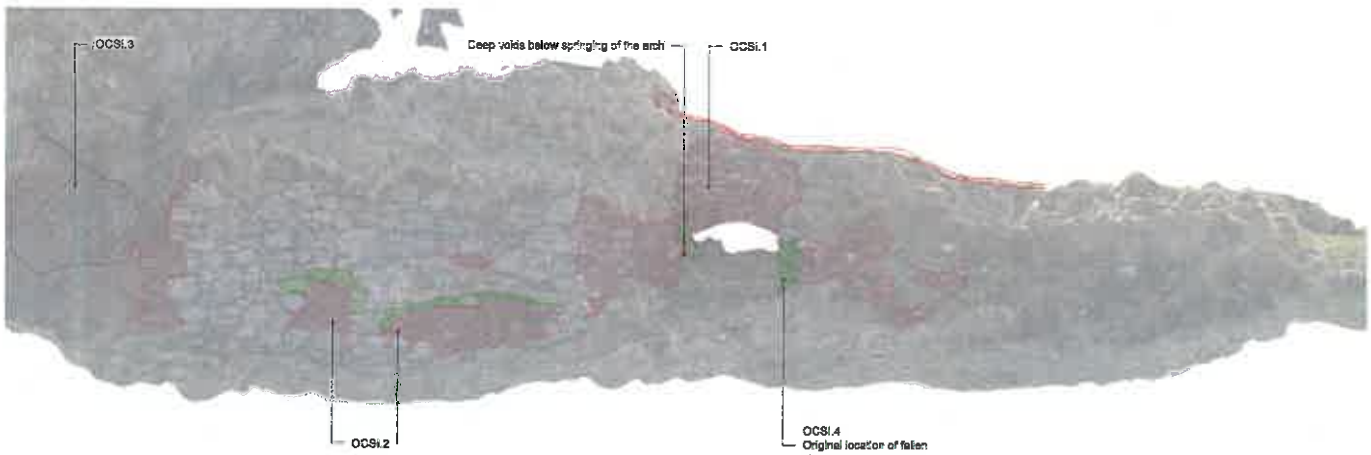
Status
Condition Report

Drawing Title
Elevation
Outer Courtyard - Sheet 2

Date Jun 2022	**Rev** -
Size A3	**Scale** 1:75/1:1250
Project No. 1755A	**Drawing No.** E-(03)-306
Drawn CP	**Checked** ZA

Revision notes

1:1250 | 0 25m 50m



3.5 Elevation II
Outer Courtyard - South Internal Elevation

1:75 | 0 2m 4m

NOTES:

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LEGEND

Key	Stonework	General Description	General Repair Methodology
	PR - Areas previously repaired in 1998	Areas of the Summit repaired as part of the emergency works package of 1998 and generally in good condition.	None required at present but areas should be regularly monitored.
	UM - Unsupported Masonry and Turret	Caused by gradual loss of mortar by weathering and/or physical cause such as wave action.	Underbuild/corbel out from a firm base only as required to provide support to the areas above, not replicating original facing masonry, or install non-ferrous support bars.
	CE - Core exposed by loss of outer walling	Missing outer layers of masonry that are not directly providing support to masonry and infill above.	Rough rack exposed corework to consolidate and improve surface water run-off, not replicating original facing masonry.
	ME - Erosion of mortar between masonry units	Mortar erosion leading to deep open joints, such as between soft vesicular or other masonry units, leading to loosened masonry units and increased water ingress	Deep pack, pin and repoint as necessary to consolidate and improve surface water run-off.
	LV - Large Voids	Cracks/delaminated outer layers of masonry with voids behind.	Following more detailed inspection, repairs may include grouting and/or limited rebuilding in watch existing.
	SD - Sandstone Disintegration	Erosion of the surface of isolated sandstone units, possibly granular disintegration.	Following more detailed inspection, replace sandstone unit or install stone indent at structurally important locations.
	SM - Structural Movement	Areas of potential structural movement or concern which require investigation and / or remediation, including detached masonry.	Areas to be inspected and SE input required, including pinning of loose masonry and rock.
	WE - Manmade erosion	Erosion of protective turf coverings, masonry and mortar at walkheads where walked over by visitors.	Consider installing signage or restricting access, particularly where there is a high risk of injury, and monitor for further deterioration

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Project Title
Dunyvaig Castle
Islay

Client
Islay Heritage

Status
Condition Report

Drawing Title
Elevation
Outer Courtyard
Sheet 3

Date
Jun 2022

Rev
-

Size
A3

Scale
1:75/1:1250

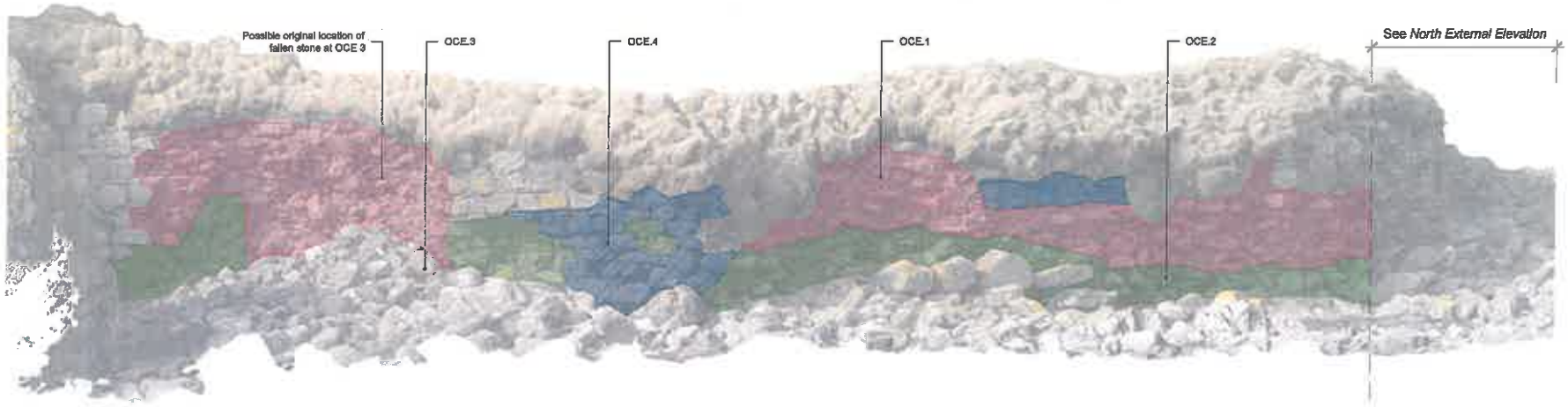
Project No.
1755A

Drawing No.
E-(03)-307

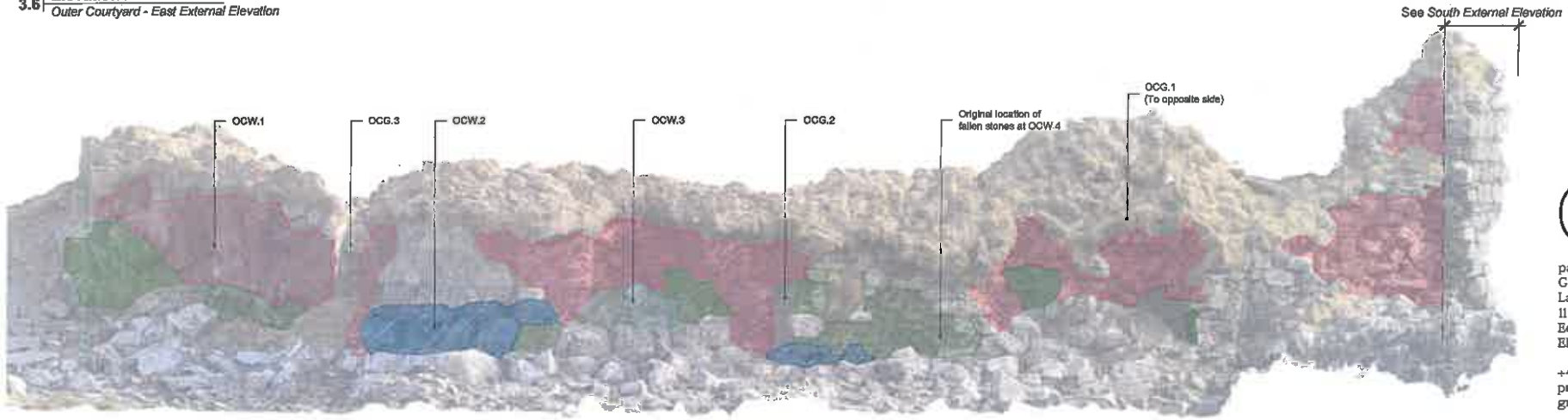
Drawn
CP

Checked
ZA

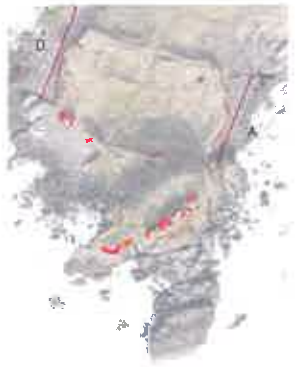
Revision notes



3.6 Elevation AA
Outer Courtyard - East External Elevation



3.7 Elevation DD
Outer Courtyard - West External Elevation



1:75 0 2m 4m

1:1250 0 25m 50m

LEGEND

Key	Stonework	General Description	General Repair Methodology
	PR - Areas previously repaired in 1998	Areas of the Summit repaired as part of the emergency works package of 1998 and generally in good condition.	None required at present but areas should be regularly monitored.
	LIM - Unsupported Masonry and Tuning	Caused by gradual loss of mortar by weathering and/or physical cause such as wave action.	Underbuild/corbel out from a firm base only as required to provide support to the areas above, not replicating original facing masonry, or install non-ferrous support bars.
	CE - Core exposed by loss of outer walling	Missing outer layers of masonry that are not directly providing support to masonry and tuning above.	Rough rack exposed coursework to consolidate and improve surface water run-off, not replicating original facing masonry.
	ME - Erosion of mortar between masonry units	Mortar erosion leading to deep open joints, such as between arch voussoirs or other masonry units, leading to loosened masonry units and increased water ingress	Deep pack, pin and repoint as necessary to consolidate and improve surface water run-off.
	LV - Large Voids	Unstable/detached outer layers of masonry with voids behind.	Following more detailed inspection, repairs may include grouting and/or limited rebuilding to match existing.
	SD - Sandstone Disintegration	Erosion of the surface of isolated sandstone units, possibly granular disintegration.	Following more detailed inspection, replace sandstone unit or install stone indent at structurally important locations.
	SM - Structural Movement	Areas of potential structural movement or concern which require investigation and / or remediation, including detached masonry.	Areas to be inspected and GE input required, including pinning of loose masonry and rock.
	ME - Manmade erosion	Erosion of protective turf cappings, masonry and mortar at wallheads where walked over by visitors.	Consider installing signage or restricting access, particularly where there is a high risk of injury, and monitor for further deterioration.

NOTES:

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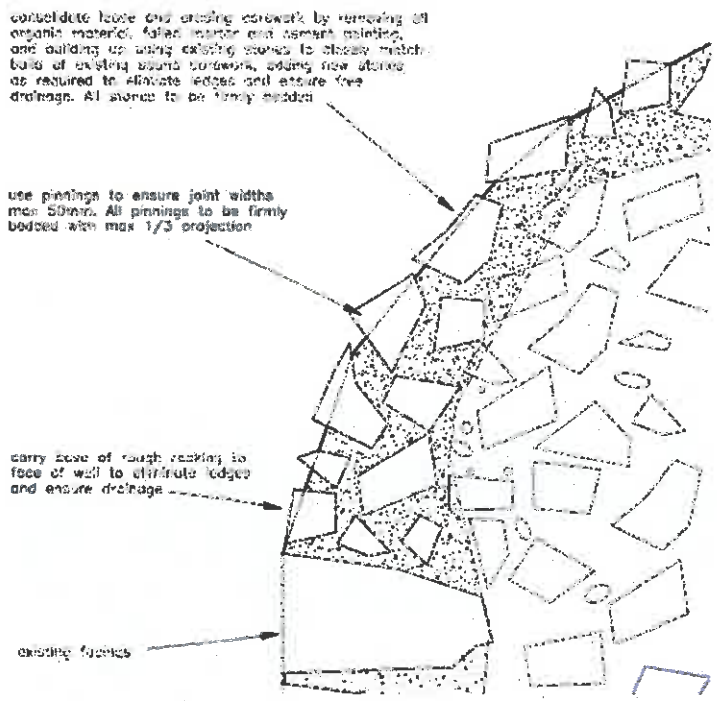
Project Title
Dunyvaig Castle
Islay

Client
Islay Heritage

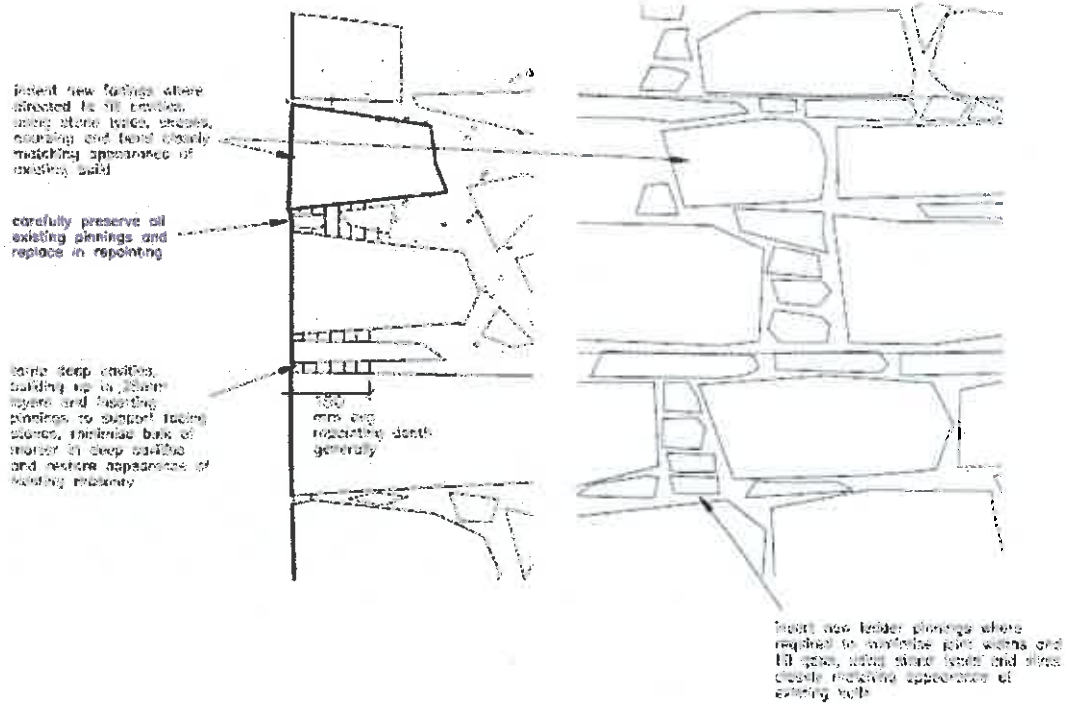
Status
Condition Report

Drawing Title
Elevation
Outer Courtyard - Sheet 4

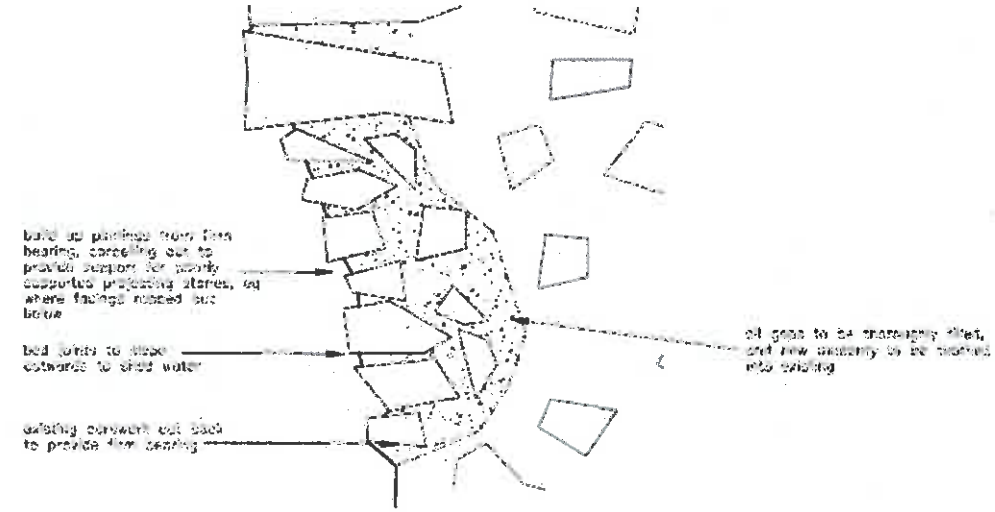
Date Jun 2022
Rev -
Size A3
Scale 1:75/1:1250
Project No. 1755A
Drawing No. E-(03)-308
Drawn CP
Checked ZA



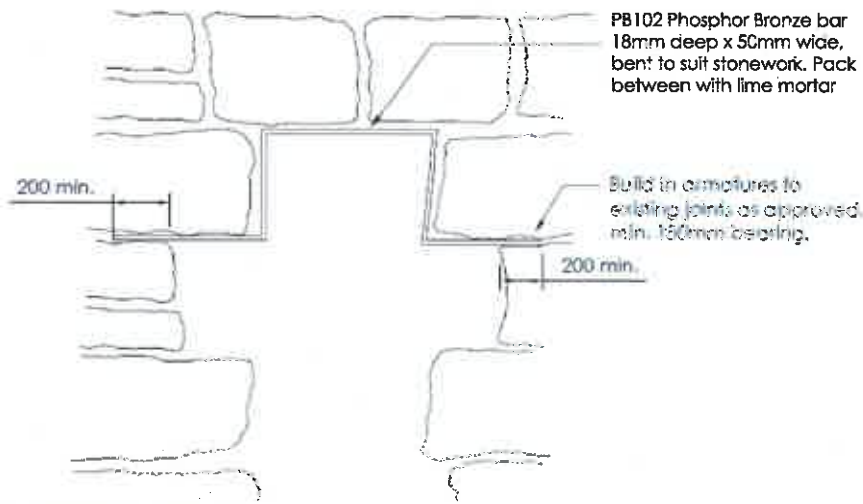
Detail 1 – Rough Racking (NTS)



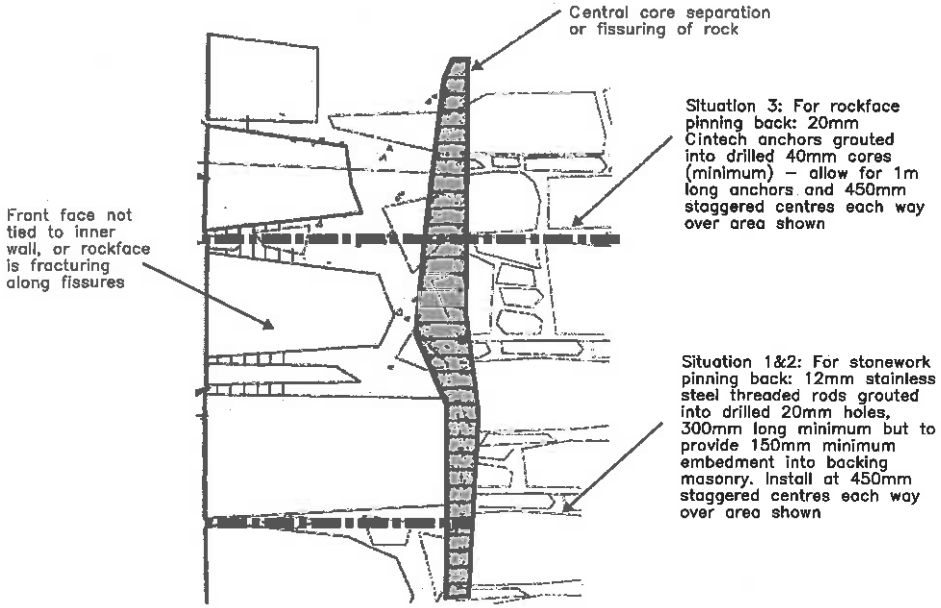
Detail 2 – Mortar Joint Treatment (NTS)



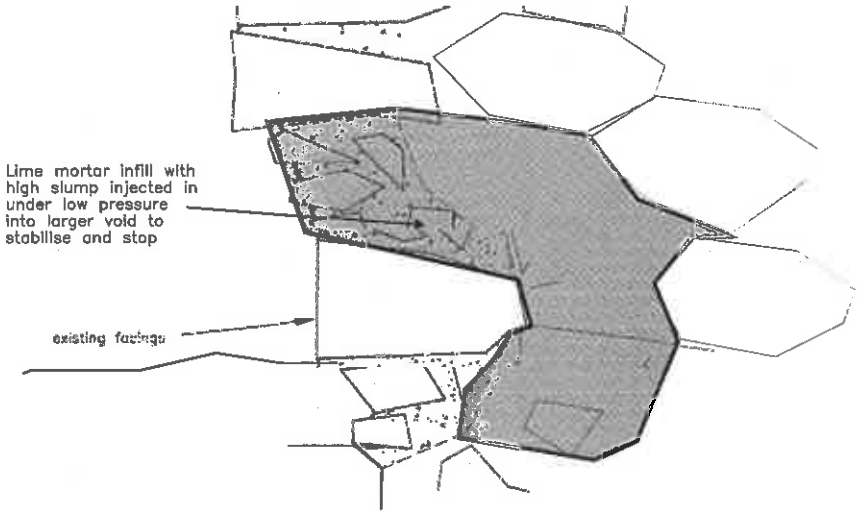
Detail 3 – Underbuild (NTS)



Detail 4 – Bronze Bar Detail (NTS)



Detail 5 - Structural Movement - Fixing Back (NTS)



Detail 6 - Large Voids (NTS)

Appendix

05 Proposed Dunyvaig Public Access Plan

Islay Heritage

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ISLAY HERITAGE
DUALCHAS ÌLE

Dunyvaig Castle Public Access Proposal

This proposal has been submitted to Diageo, the owners of Dunyvaig Castle for comment and ultimate approval.

To meet its charitable purposes, Islay Heritage wishes to enhance the opportunities for recreation and education relating to Dunyvaig Castle. The excavations at Dunyvaig have been made possible by a generous donation from Lagavulin/Diageo, with the understanding that Islay Heritage will make a sustainable difference to the cultural heritage on Islay for the benefit of the resident and visitor community on Islay. The excavation will be undertaken over a limited time period, leaving the site of Dunyvaig as it appears today. As such, some permanent enhancement to the site is required.

There is no intention to increase the number of visitors to the site – the aim is simply to enhance the experience of those visiting the castle, whether Islay residents or visitors to the island. Islay Heritage recognises however, that the numbers of visitors to Islay has been steadily increasing and will continue to do so, inevitably bringing increased numbers to Dunyvaig Castle. The prime driver for more visitors is the expansion of the whisky industry, such as by Diageo's investment in Port Ellen and Caol Ila and the construction of new distilleries, such as Ardnahoe.

Lagavulin currently receives 30,000 visitors a year. Many of these use the 'Three Distilleries Pathway', which provides a striking view of Dunyvaig castle when arriving at Lagavulin.

In devising its proposal, the Islay Heritage Trustees have taken the following factors into account:

- Meeting Islay Heritage's charitable purposes and Lagavulin/Diageo's intention in the provision of its donation to Islay Heritage.
- The current visitor experience to the castle is of limited quality. There is no information about the site to indicate its date, historical context and significance for Islay and the wider region. This inhibits the use of Dunyvaig as an educational and recreational resource for visitors.
- Access to the site is along a private road that runs in front of a number of houses. The road provides limited parking. Understandably, the residents have concerns about their road providing the only access to the castle and their privacy needs to be respected.
- Any encouragement additional vehicle traffic is to be strenuously avoided.
- Because of the archaeological deposits, unspoilt beauty of the site and its historical significance, minimal intervention at Dunyvaig is desirable.
- Value for money.

The pathway

Taking the above factors into account, Islay Heritage proposes that a new footpath is established that runs directly from the Three Distillery Pathway to the 'plateau' immediately beyond the end of road way. At that location a number of display boards will be constructed to provide information about the castle. This pathway will avoid any use of the private road, while by placing the information boards at the plateau rather than the castle itself, the number of visitors who chose to access the site itself will be minimised. The nature of the pathway needs further consideration, following evaluation of the ground surface and consideration of costs. A pathway with a similar surface to that of the Three Distilleries Pathway appears desirable, allowing cycle and wheel chair access. This might, however, be cost prohibitive and hence a means to consolidate the existing ground surface is being considered. A fence on the path's eastern side to provide a clear demarcation from the private road

The information boards

The information boards will be designed to use local materials and to fit the style used elsewhere on Islay, such as at Finlaggan and at Port Mor. They will provide a history of the castle, account of the excavations and significance of the site.

Steven Mithen, s.j.mithen@reading.ac.uk

On behalf of Islay Heritage Trustees, 19 July 2019

Appendix

06 Costings

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ISLAY HERITAGE

CONSERVATION ASSESSMENT

DUNYVAIG CASTLE

REPORT

ON

INITIAL BUDGET COSTS

25th July 2022

MORHAM & BROTCHIE
Chartered Quantity Surveyors

RICS

INTRODUCTION

Initial Budget Costs have been prepared in accordance with the following updated drawings.

Architect drawings:-

1755A	E (01)-311
	E(2-3)-312
	E (03) 313
	Architects Condition Schedule dated 23/06/22

Costs are based on the Architects descriptions and photographs contained within the overall Report and the Structural Engineers Costing overlays and detail sheets

Preliminaries are calculated to allow for the increasing travel and accommodation costs to and from the Island and to allow the additional cost of Ferry freight.

Difficulties in access to the site are also allowed for in this section as well as insurances for the works, small tools and plant, site management costs, site cabins, welfare accommodation etc.

High scaffolding costs are shown separately in Phase (1) works.

INITITAL BUDGET COSTS PREPARED JULY 2022

EMERGENCY WORKS

Areas of collapse classed immediate			£	2,500.00
Repairs to Archway between inner and outer Courtyard			£	2,500.00
Signage and fencing to summit and former draw bridge opening			£	7,000.00
PHASE (1)				
Structural Engineers works to inner and outer Courtyard areas including:				
Inspecting areas previously repaired in 1998	£	11,600.00		
Work to unsupported masonry and turfing	£	30,000.00		
Work to cores exposed by loss of outer walls	£	68,500.00		
Work to structural movement	£	4,000.00		
Work to erosion of masonry between masonry joints	£	11,600.00		
Work to sandstone disintegration	£	5,300.00		
Work to manmade erosion	£	4,000.00		
Scaffolding	£	120,000.00		
Mortar	£	20,000.00	£	275,000.00
Structural Engineers Costs Overlays of Architects drawings				
E (01)-311 E (2-3)-312 E (03) -313				
Archaeological investigation and recording allow meantime			£	25,000.00
Rabbit removal and control and burrow filling			£	1,500.00
Temporary Notices and Safety Notices				INCLUDED
PHASE (2)				
Structural Engineers works to summit area			£	55,000.00
Archaeology to summit area allow meantime			£	10,000.00
Strimming and clearing vegetation to Footpaths and filling holes to allow Visitor access improvements. Erect fencing			£	20,000.00
Cairns and Way Markers (3 No sets of boards only) Interpretation by IH			£	15,000.00
Access road and Car Park Improvements				EXCLUDED
Guided Boat Tour access improvements, say £150,000 to £250,000 allow meantime (including preliminaries and contingencies)				EXCLUDED
Supply of locally sourced matching stone allow meantime			£	20,000.00
			£	**433,500.00**
PRELIMINARIES AT 35%			£	151,725.00
			£	585,225.00
CONTINGENCIES AT 10%			£	58,522.50
			£	643,747.50
		SAY	**£**	**645,000**

ASSUMPTIONS AND EXCLUSIONS

ASSUMPTIONS

Costs are Initial Budget costs only and may be subject to change as the Scheme develops and further information becomes available.

All costs have been reviewed prior to inclusion in the Final Report.

Consolidation and other works are based on the Architects descriptions and photographs contained within the overall Report and the Structural Engineers Costing, overlays and detail sheets.

There is no information available at this stage for the road and Car Park improvements or the proposed Boat Landing area. These items have been excluded from this report.

All costs include Preliminaries and Contingencies which are shown separately.

It is assumed that sufficient quantities of locally sourced stone will be imported to site to carry out the consolidation works.

It is assumed that all of the consolidation works are done in a single continuous uninterrupted contract programme period.

Archaeology should run in parallel with the consolidation and rabbit eradication.

EXCLUSIONS

Professional Fees

VAT

Statutory Consents, Fees and Charges

Local Authority Fees

Grants or Interventions Funding

Unforeseen Dilapidations in stone walls cores

Guided Boat Tour access improvements

Access Road and Car Park Improvements

Prepared by: Morham & Brotchie
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Date 25th July 2022

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