BLACKNESS CASTLE

LANDSCAPE CONSERVATION MANAGEMENT PLAN

HISTORIC ENVIRONMENT SCOTLAND | ÀRAINNEACHD EACHDRAIDHEIL ALBA

Collington winter
environmental

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Collington WINTER environmental

This landscape conservation management plan (LCMP), commissioned by HES to establish a better understanding of the cultural, historic and natural environment significance of the landscape setting of Blackness Castle, considers the landscape setting at Blackness Castle, Falkirk, which is a property in the care of Scottish Ministers and looked after on their behalf by Historic Environment Scotland (HES). With the significance of the landscape established, threats to the significance, together with opportunities for enhancement were identified. This evidence will support future management decisions being made, based on a sound understanding of the historic development, significance and current condition of the landscape.

Located on the south shore of the Firth of Forth, the castle and environs are designated as a Scheduled Monument. The intertidal zone, foreshore and part of the eastern PiC is designated as a Site of Special Scientific Interest (SSSI), with the intertidal zone and foreshore also designated as a Ramsar and Special Protection Area due to the large numbers of wintering waders and wildfowl which fly in each year.

Occupying a narrow promontory to the east of Blackness village, access, especially for vehicles, is becoming one of the major vulnerabilities for the landscape. The popularity of Blackness Castle has increased significantly, with the castle used as a popular television filming. Increased footfall takes a toll on the landscape fabric and below ground archaeology. One of the key concerns identified in this LCMP is visitor access and parking.

The intertidal & foreshore character area is rarely acknowledged as being a part of the visitor experience at Blackness and the long-term management of this character area appears to be overlooked. The potential effects of rising sea levels on the significant intertidal habitats, which are already reported to be in decline, is another key concern. The balance of the conservation needs of the intertidal and foreshore zone versus visitor needs and expectations is currently compromised and wintering bird populations are at risk as high numbers of visitors continue to enjoy the PiC.

Much of the PiC area is leased to Falkirk Council as a recreation area and is subsequently managed and maintained to an increasingly urban character, which detracts from the quality and historic character of the PiC.

There are significant opportunities to conservation and enhance the landscape and a series of management principles and an action plan are presented, to assist with future management decisions, creating a clear basis for ensuring that the most significant features are recognised, conserved and maintained. Opportunities to engage with the local community and key stakeholders is strongly recommended and links to initiatives such as the Green Action Trust's John Muir Way Greening Project are to be encouraged.

Priority recommendations include a review of current parking arrangements, with an aim of relocating the parking area outwith the courtyard, consultation with the NatureScot management officer of the SSSI/Ramsar/SPA to understand the conservation objectives and discuss opportunities to assist in achieving the objectives within the PiC area and the commissioning of a Grassland Management Plan, in consultation with Falkirk Council, to inform a holistic strategy for management and maintenance of all grassland areas, to encourage positive ecosystem services benefits. The development of a Design Guide is also recommended to establish a palette of materials and finishes which establish a 'house style' for all furniture, fencing and surfaces across the PiC area.

1.1 The Aims, Scope and Purpose

This Landscape Conservation Management Plan (LCMP) was commissioned by Historic Environment Scotland (HES) in August 2021 and considers the landscape setting at Blackness Castle, Falkirk, within the area in the ownership of Scottish Ministers and looked after on their behalf by HES.

The purpose of the plan is to allow HES to have a better understanding of the significance of the landscape associated with Blackness Castle (cultural, historic and natural) and to identify threats to significance, opportunities for improvement and factors that influence how HES continues to manage the landscape within the Property in Care (PiC) boundary. The scope of the LCMP is to cover the landscape, open space (both internal and external) and foreshore to the LMWS (low mean water spring) associated with Blackness Castle, including all the area within the PiC boundary and the scheduled monument area that extends further outwith the PiC boundary. This LCMP will enable HES to:

- Plan maintenance, conservation and repair works.
- Improve public access and understanding.
- Implement measures to help adaptation to climate change.
- Adapt the site to meet new or existing changes.
- Write a brief for any new design work that is needed.
- Plan activities to help people engage with their heritage.
- Identify gaps in knowledge and plan further research.

1.2 Blackness Castle and Landscape

Blackness Castle is located on the south shore of the Firth of Forth and to the east of the village of Blackness in Falkirk. Edinburgh is approximately 18 miles to the east, Falkirk is approximately 12 miles to the west, Stirling is approximately 23 miles to the north west and five miles to the south west is the medieval town and royal palace of Linlithgow. See *Figure 1.2.1 Blackness Castle Location*. Located on an outcrop of rock known as the Blackness, which extends out beyond Blackness Village, the castle occupies a prominent position on the.

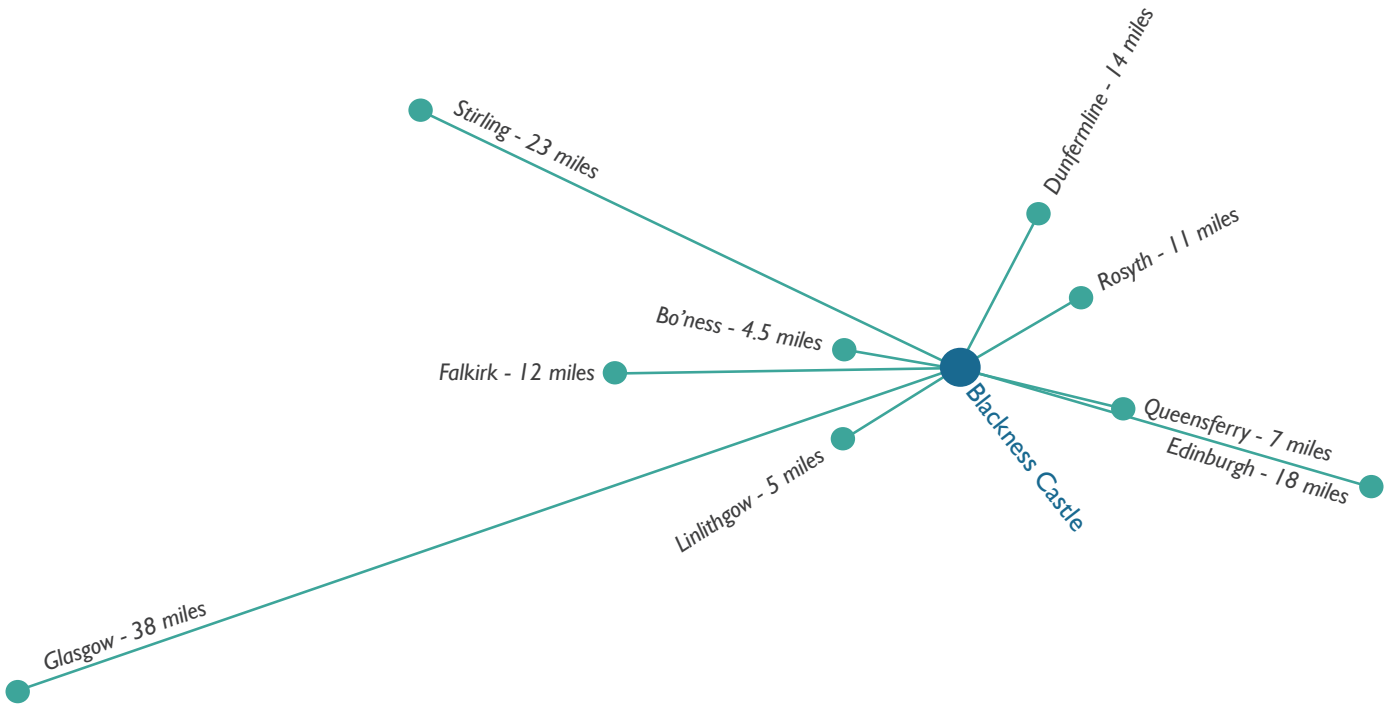


Figure 1.2.1 Blackness Castle Location.

The spit (or ness) of rock upon which the buildings of Blackness Castle are focussed has determined its plan form: known as 'the ship that never sailed', the castle appears in profile as a great stone boat. Surrounded by a broadly triangular curtain wall, its prow (the Stem Tower) extends into the sea when the tide is high. Inland of its wider, southern extent is a nineteenth-century parade ground and barracks overlying a former defensive ditch. South of this rises a natural promontory (Castle Hill) defining the defensible area, which grades out to the lower-lying land upon which the historic harbour of Blackness village is set.

The PiC is described in the HES brief (2021) as extending up to 30ha up to the MLWS (mean low water spring) with the scheduled monument area associated with the castle and associated archaeology covering c 1.5ha. Landscapes associated with the castle cover the foreshore, amenity grass areas, salt marsh, native grassland, isolated trees and small pockets of scrub.

1.3 Geology & Soils

The bedrock deposit, which outcrops frequently across the site, is Dinantian To Westphalian Sills Of Lothians And Fife, a Carboniferous Period igneous bedrock formed c 308 to 359 million years ago in a local environment previously dominated by intrusions of silica-poor magma (BGS 2021). No superficial deposits are recorded on the rocky spit of land upon which the castle is located but on the shoreline are Quaternary Period intertidal deposits of silt and clay (ibid). Soils, where present on the southern portion of the site, are characterised as Breghorn brown soils, moderately acid, freely drained, derived from raised beach deposits of Carboniferous sands and gravels (SEPA nd).

The National Soil Map of Scotland describes the generalised soil type in the area as Brown Soils, with a parent material of drifts derived from Carboniferous sandstones, shales and limestones. The land capability for agriculture is described as 2, which is defined as '*Land capable of producing a wide range of crops*' (https://soils.environment.gov.scot).

1.4 Climate and Climate Change

The Met Office *State of the UK Climate 2021* (published July 2021) report provides key statistics on changing weather patterns across the UK, which included:

- *Year 2020 was third warmest, fifth wettest and eight sunniest on record for the UK. No other year has fallen in the top-10 for all three variables for the UK.*
- *2020 included the fifth warmest winter (December 2019–February 2020), eighth warmest spring, sixth warmest January, equal-fourth warmest April and equal-sixth warmest November for the UK in series from 1884.*
- *The most recent decade (2011–2020) has been on average 0.5°C warmer than the 1981–2010 average and 1.1°C warmer than 1961–1990.*
- *2020 was the seventh consecutive year where the number of air and ground frosts was below the 1981–2010 average. The number of air and ground frosts were both fourth lowest in the series from 1960/1961.*
- *2020 was the eighth warmest year for UK near-coastal sea-surface temperature (SST) in a series from 1870.*
- *The most recent decade (2011–2020) has been on average 0.3°C warmer than the 1981–2010 average and 0.7°C warmer than 1961–1990.*
- *2020 was the UK's fifth wettest year in a series from 1862, with 116% of the 1981–2010 average and 122% of the 1961–1990 average rainfall.*
- *2020 was one of the least snowy years on record. 2020 was the eighth sunniest year*

for the UK in a series from 1919, with 109% of the 1981–2010 average and 113% of 1961–1990 average sunshine hours.

- *Ten named storms affected the UK in 2020.*
- *Mean sea level around the UK has risen by approximately 1.5 mm year on average from the start of the 20th century, excluding the effect of vertical land movement, resulting in an overall rise of 16.5 cm over that period.*
- *For the 20th century the rate of sea level rise around the UK is close to the estimate of the global sea level rise.*
- *The rate of sea level rise has increased recently, exceeding 3 mm year for the period 1993–2019.*

Predictions that the UK winters are projected to become warmer and wetter on average and summers are projected to become hotter and are more likely to be drier, although wetter summers are also possible, is largely backed up by the data recorded.

Changing patterns in the weather do not affect Blackness Castle in isolation, however the combination of factors such as seasonal temperatures, precipitation and sea level rises, when combined with land-use and management factors such as ground compaction, can increase the risks posed by climate change. Whilst the built fabric of the castle is most likely to withstand factors such as rising sea levels, the intertidal zone, significant for the saltmarsh habitat which supports a wide variety of flora and fauna, is most likely to be affected.

In the 2017 report and as a first phase of an ongoing process to understand the risk to PiC posed by climate change, *Screening For Natural Hazards To Inform A Climate Change Risk Assessment Of The Properties In Care Of Historic Environment Scotland*, published by HES, is a baseline assessment of the risk from natural hazards has been carried out, using natural hazard datasets, to determine the risk of damage and loss to sites, as indicators of susceptibility to climate change. A number of key properties have been assessed and Blackness Castle is presented as one of the case studies.

> *Situated on the exposed banks of the Firth of Forth, like many of our Properties in Care, Blackness Castle is exposed to many natural hazards, including coastal flooding and coastal erosion. Blackness Castle is a good example of a site where interventions have already been carried out to mitigate against the risk of a particular hazard(s). The castle itself is somewhat protected by its own impressive curtain wall, however the south-east corner of the site is at 'High' risk of coastal erosion and coastal flooding. To mitigate against these hazards a small retaining wall was constructed to protect the site.*

The case study analysed the results of hazard maps which were generated using SEPA GIS-ready spatial datasets.

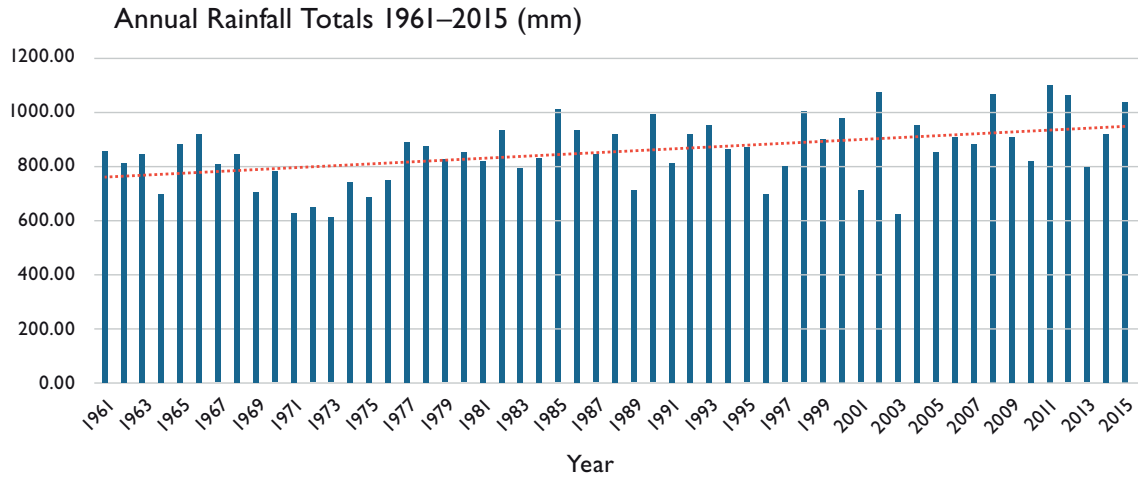
Whilst the castle is largely protected by a large curtain wall which surrounds the castle buildings, the case study found that the within the PiC boundary, there are areas which are very susceptible to natural hazard risk, primarily the area to the south east where the Black Burn enters the Firth of Forth. The case study concludes that Blackness Castle is at risk from fluvial, groundwater, pluvial and coastal flooding, as well as coastal erosion. The site is at medium risk from slope instability (*Table 1.1: Residual Risk Scores*).

Met Office weather station data for the Central Belt area reveals that annual rainfall

Site Information				Hazard Ratings					
Roofed Monument (Occupied)	Staffed	Seasonal Access	Houses Collections	Fluvial Flooding	Ground-Water Flooding	Coastal Flooding	Pluvial Flooding	Coastal Erosion	Slope Instability

Table 1.1: Residual Risk Score (Source Historic Environment Scotland).

totals have been increasing steadily since the early 1960s, with approximately an additional 200mm rain falling annually (*Graph 1.1: Annual rainfall totals recorded in the Central Belt of Scotland, 1961 to 2015).*



Graph 1.1:Annual rainfall totals recorded in the Central Belt of Scotland, 1961 to 2015 (Source Met Office).

Using the UKCP09 climate change projections tool and with the assumption that the general climate trend across Scotland will result in warmer and wetter winters and hotter and drier summers, the predictions for Blackness Castle have been calculated., with the conclusion that " *Under a high emissions scenario, by the 2050s, winters at Blackness could be 10% wetter than they are currently, with summers being approximately 13% drier" (Table 1.2: Projected changes to the climate at Blackness).*

Time Scale	Avg Max Temp (C)	Avg Min Temp (C)	Rainfall (%)
Annual	+ 2.6°C	+ 2.2°C	0
Summer	+3.6°C	+2.9°C	-13%
Winter	+2.3°C	+2.2°C	+10%

Table 1.2: Projected changes to the climate at Blackness. Data taken from UKCP09 (Source Historic Environment Scotland).

1.5 Historic Environment Scotland

The Blackness Castle came into State Care in 1905 and was disponed to Scottish Ministers from The Crown Estate Commissioners in 1999

HES as the lead public body for the historic environment and its predecessor bodies, have cared for Blackness since it came into state care in 1905. HES led on the

development of Scotland's historic environment strategy **Our Place in Time, The Historic Environment Strategy for Scotland** (2014), HES ensures that the historic environment is managed, enhanced and valued, for current and future generations. Our Place in Time sets out a VISION for the historic environment:

> *Scotland's historic environment is understood and valued, cared for and protected, enjoyed and enhanced. It is at the heart of a flourishing and sustainable Scotland and will be passed on with pride to benefit future generations.*

This vision is underpinned by a series of high level aims:

- **Understanding** – *By investigating and recording our historic environment to continually develop our knowledge, understanding and interpretation of our past and how best to conserve, sustain and present it.*
- **Protecting** – *By caring for and protecting the historic environment, ensuring that we can both enjoy and benefit from it and conserve and enhance it for the enjoyment and benefit of future generations.*
- **Valuing** – *By sharing and celebrating the richness and significance of our historic environment, enabling us to enjoy the fascinating and inspirational diversity of our heritage.*

People, Place and Landscape (September 2019) sets out the vision and approach of NatureScot and HES for managing change in Scotland's landscapes in response to climate change. **Climate Action Plan** (February 2020) sets out HES's approach as the Scottish Government declared a climate emergency in April 2019. Set out over a five year period, the action plan sets out a programme of work, including how HES will change operations and transforming the way that PiC are protected (See Section 5.3 fur further details).

1.6 Designations

The statutory and non-statutory designations that apply to the wider landscape within which the PiC boundary at Blackness Castle, are discussed below. Full details of designations are listed at Appendix A and illustrated at *Figure 1.5.1: Designated Assets*.

1.6.1 Scheduled Monuments

The majority off the PiC is now a designated Scheduled Monument, after the castle was de-listed as a Category A listed building in 2017 in favour of inclusion within the wider Scheduled Monument. The scheduled area now includes the castle and its immediate surroundings, including Castle Hill, St Ninian's Chapel footings and the ruinous remains of the dovecote to its south-east . The scheduling specifically excludes the former officer's quarters, barracks block (both of which are listed at Category C), custodian's house, offices and wash house on the drying green (the latter no longer present); the above-ground elements of all modern boundary walls and modern fences; the above-ground elements of all signage and services; the modern decking of the pier, the top 300mm of all modern paths and paved areas to allow for their maintenance; all modern railings and staircases within the castle.

These areas, and their landscape settings, are protected by the Ancient Monuments and Archaeological Areas Act 1979. Scheduling is restricted to the most important examples of each type of monument, and to those for which this type of designation provides the most appropriate protection (HES 2016, 2018, 2019b).

1.6.2 Listed Buildings

The following buildings and structures have been listed under the Planning (Listed

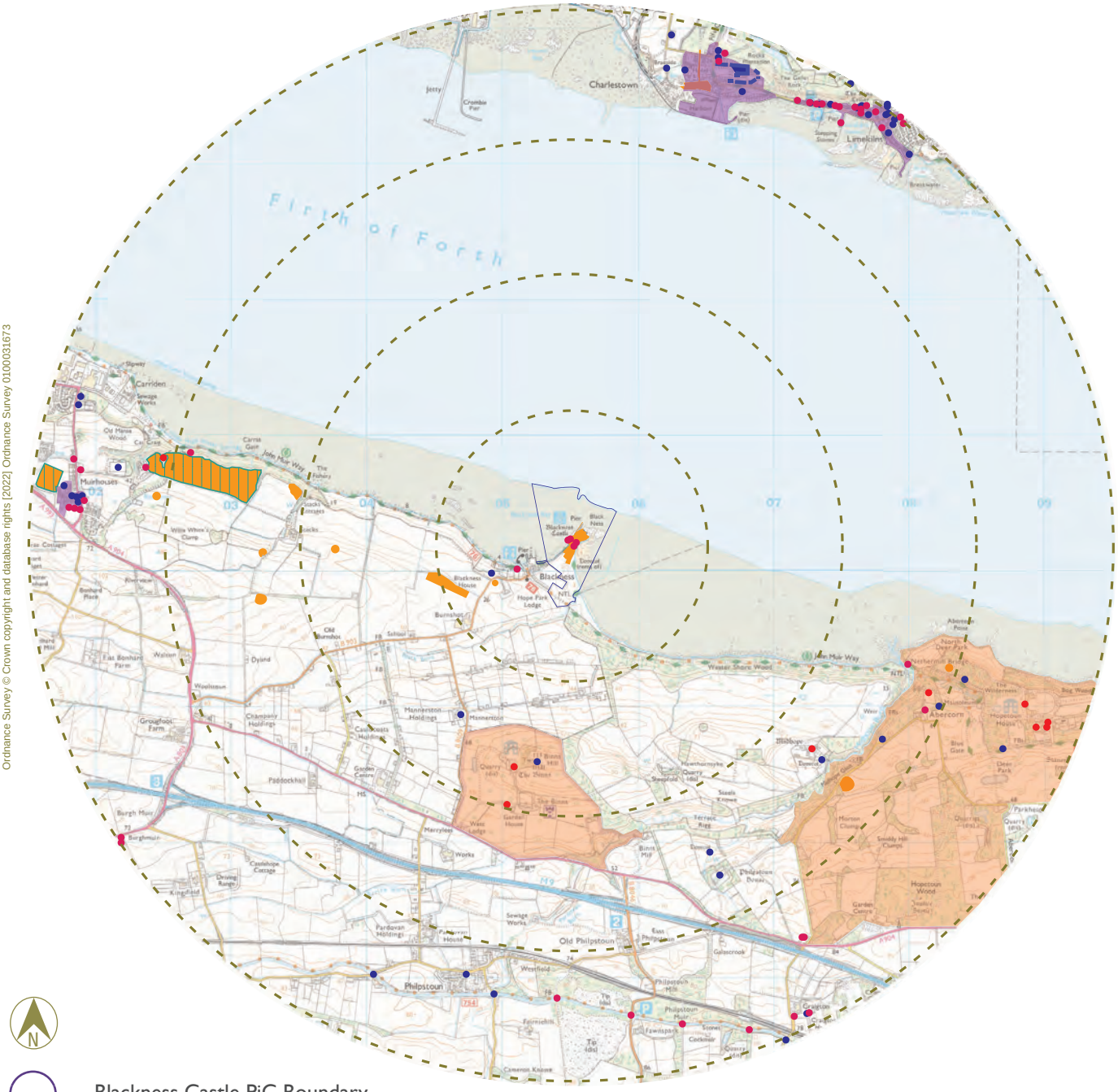


Figure 1.6.1 Landscape Designations

Buildings and Conservation Areas) (Scotland) Act 1997, for their special architectural or historic interest and are considered to be relevant to this LCMP for Blackness Castle.

Just west of the castle, the former officers' quarters (Listing Category C) is a two-storey, ten-bay Scots baronial symmetrical building of coursed and squared sandstone with ashlar margins. South-east of the castle, between Castle Hill and the eastern lawn and former parade ground, the former barracks block (Listing Category C) is of two storeys and 16-bays. See *Appendix A* for full listing information.

1.6.3 Site of Special Scientific Interest (SSSI)

SSSIs are the country's very best wildlife and geological sites and they include some of our most spectacular and beautiful habitats. '*Scotland has 1,422 SSSIs, covering around 1,011,000 hectares or 12.6% of Scotland's land area (above mean low water springs). Sites range in size from the very small, like Bo'mains Meadow SSSI, at just under a hectare, to the vast Cairngorms SSSI, which extends to more than 29,000 hectares*' (NatureScot).

The current legal framework for SSSIs is provided by NatureScot under the Nature Conservation (Scotland) Act 2004.

The Firth of Forth SSSI (Site code: 8163) is of importance for a variety of geological and geomorphological features, coastal and terrestrial habitats, vascular plants, invertebrates, breeding, passage and wintering birds. It comprises a mosaic of intertidal and coastal habitats. Extensive mudflats make up much of the intertidal zone, with areas of sand, shingle, rock and boulders. Associated coastal habitats include saltmarsh, grassland and sand dunes. Unlike the SPA and Ramsar designations (see below), which cover the low water areas with the PiC boundary, the Firth of Forth SSSI additionally covers the land areas to the east of the castle within the PiC.

1.6.4 Special Protection Area(SPA)

Special Protection Areas (SPAs) is a designation under the European Union Directive on the Conservation of Wild Birds. Under the Directive, Member States of the European Union (EU) have a duty to safeguard the habitats of migratory birds and certain particularly threatened birds.

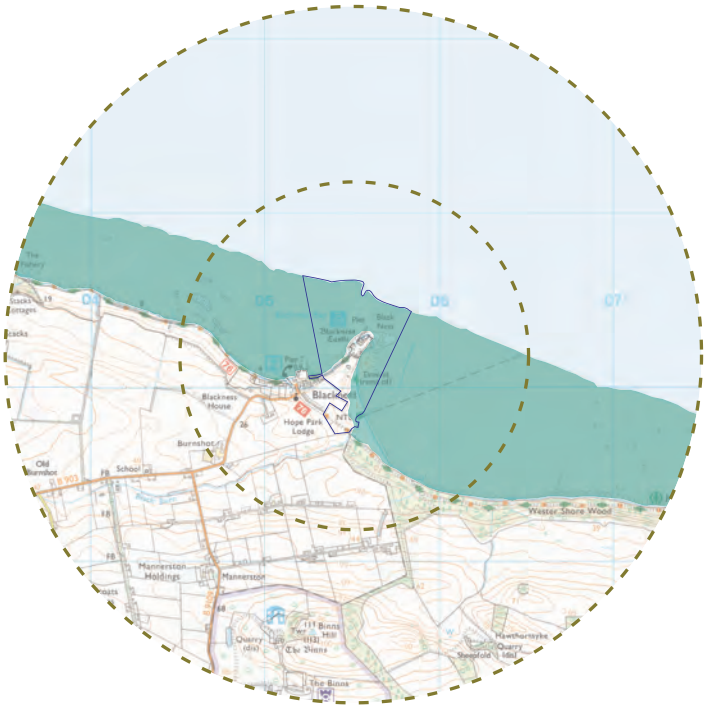
'*Scotland is internationally important for many species of wild birds due to our location in north-west Europe, and our varied range of wild and semi-natural habitats.*

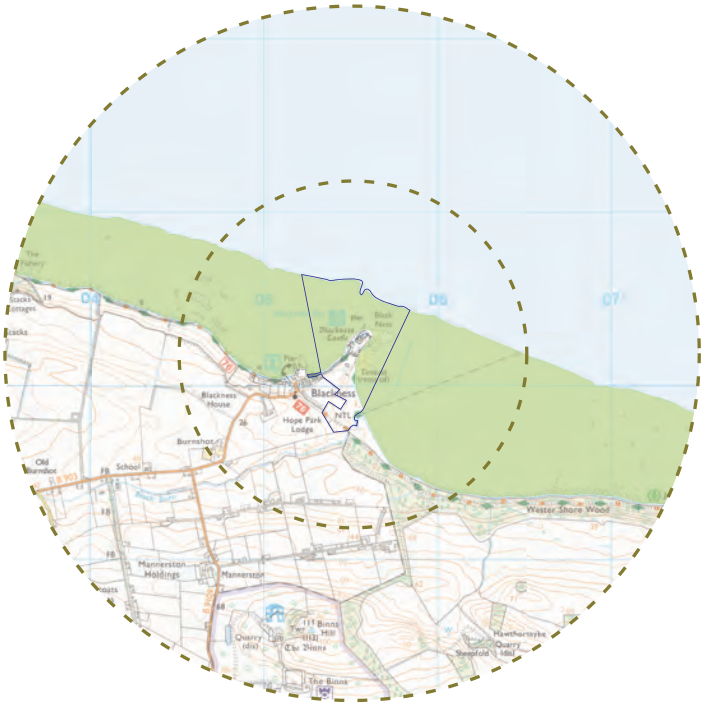
Scotland has 162 classified SPAs, from the north of Shetland to the cross border Solway Firth SPA, as well as within inshore and offshore waters. This also includes a suite of 12 marine SPAs which were classified in December 2020. Together they cover an area of around 2.75 million hectares (27,500 square kilometres) of Scotland's land and sea' (NatureScot).

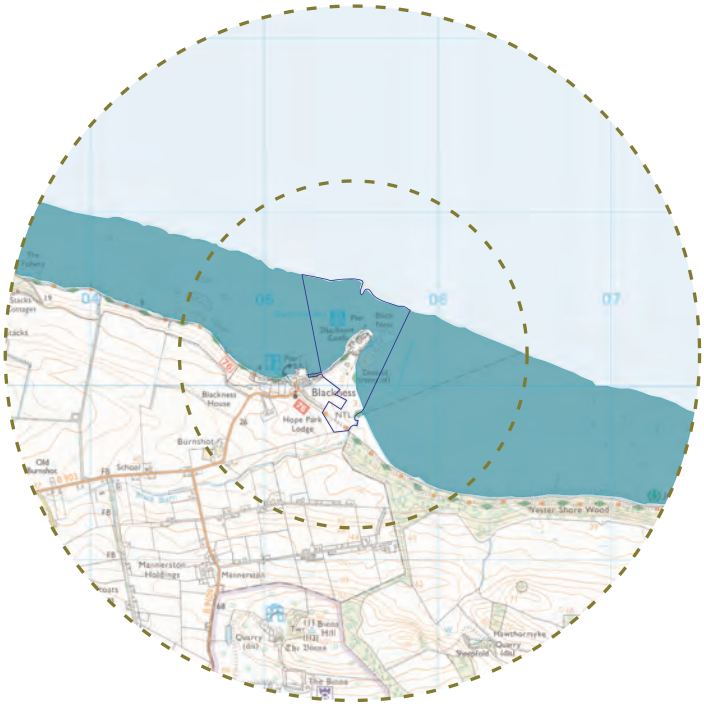
The boundary of the Firth of Forth SPA (UK9004411) largely follows that of the SSSI and qualifies by regularly supporting a variation of non-breeding birds, and migratory waterfowl.

1.6.5 Ramsar

Ramsar sites are classified under the Convention on Wetlands of International Importance. '*Most Ramsar sites in Scotland are linked to the European site network - either as a Special Protection Area (SPA) or Special Area of Conservation (SAC). All are underpinned by Sites of Special Scientific Interest (SSSIs). These sites may be of importance for their wide variety of waterbirds, bogs, lochs, coastal wetlands and other water-dependent habitats and species*' (NatureScot). Ramsar sites are protected through measures to protect and







N

- Blackness Castle PiC Boundary

Ecological Designations

- *Firth of Forth Site of Special Scientific Interest (SSSI)*

- *Firth of Forth Special Protection Area (SPA)*

- *Firth of Forth RAMSAR*

Figure 1.6.2 Ecological Designations

enhance the European sites (and SSSIs, where relevant) that they overlap with.

The Firth of Forth Ramsar was designated in October 2001 (updated May 2005) and covers an area of 6313.68ha of a coastal area which includes estuaries, mudflats, rocky shorelines, beaches and saltmarsh habitats which are important for a large number of wintering waders and wildfowl, however it is considered to act as a single ecological unit.

1.7 The Team

The project team at Collington Winter Environmental comprises Jane Winter as project lead and supported by Olivia Collington, Katie Bird and Christopher Winter.

Jamie Quartermaine, Helen Evans and Debbie Lewis from Oxford Archaeology undertook the historical and archaeological research and walkover survey.

1.8 Acknowledgements

We would like to thank Sarah Franklin, Landscape Manager at HES for her assistance throughout the review process and especially thank Graeme Sinclair, Richard Strachan, Stefan Sagrott and Alan Duncan for their time, valued information and enthusiasm for this project.

2

2.1 The History of the Landscape

The following section presents a summary of the historical and archaeological background of Blackness Castle and its surroundings. Little is known about the early history or prehistory of the site, however its form (particularly the locally-prominent Castle Hill) and landscape setting, jutting into the Firth of Forth, would have made it both widely visible and defensible, from land and sea.

Previously available sources and the references contained therein (eg HES 2018) were examined for a general history to ascertain the specific histories of individual features identified by the landscape survey. Documentary and archival sources may consist of estate maps, photos, aerial information, existing surveys, inventories, proposal plans, paintings and prints. Many of these sources are available digitally: National Records of Scotland (NRS), National Library of Scotland (NLS) and map library and Scottish Archive Network (SAN) were searched. In addition to these, other internet databases were searched for information regarding the survey area, including British History Online, Watercolour World and Britain from Above.

The historical context to the study area and archaeological assessment is set out in detail at *Appendix B* and outlines the key periods in the development of the landscape at Blackness Castle.

2.2 Landscape Design Evaluation

2.2.1 Burials on Castle Hill

Castle Hill and its environs have been the focus for several burials, but circumstances of their discovery mean most are not securely attributable in terms of their precise location and date.

Figure 2.2.1 Footprint of the building believed to be St Ninian's Chapel, Castle Hill, facing east.

In part, this is due to the presence of St Ninian's chapel, which today is exposed as a footprint of ruinous walls on the top of the Castle Hill outcrop (*Figure 2.2.1*). This site has not always been known, however. On the historic Ordnance Survey maps of 1856, 1896 and 1915, the site of St Ninian's chapel is recorded c 200m to the south-west of its present position, beneath a modern house. The present site, first noted on the OS National Grid map of 1955, was not described as the remains of St Ninian's chapel by the RCAHMS (1929), so does not seem to have been exposed when they visited the site in 1926.

In 1902 it was reported in the Scottish Antiquary that '*Some workmen making excavations at Blackness in connection with the erection of a new cottage came upon a human skeleton…….The place where the skeleton was found is quite near the site on which existed St Ninian's Chapel, traces of the altar of which are still visible….*' (Anon 1902, 203).

Given that the burial was exposed during building a cottage, it seems likely that the 1902 inhumation may have been on the site where the chapel had previously been recorded by the OS, rather than its present location on Castle Hill.

Two burials reported upon in 1945, in Proceedings of the Society of Antiquaries of Scotland (Low 1945) came from the brow of the hill, having apparently been excavated some years previously. One of these was a cremation accompanied by an Early Bronze Age Food Vessel (later sent to National Museums Scotland; (*Figure 2.2.2*);

Figure 2.2.2 Blackness Food Vessel (NMS ref X.EE150; Image © National Museums Scotland).

Figure 2.2.3 Camore image (1167013) of Castle Hill graves, adjacent to wall of St Ninian's chapel (©RCHME).

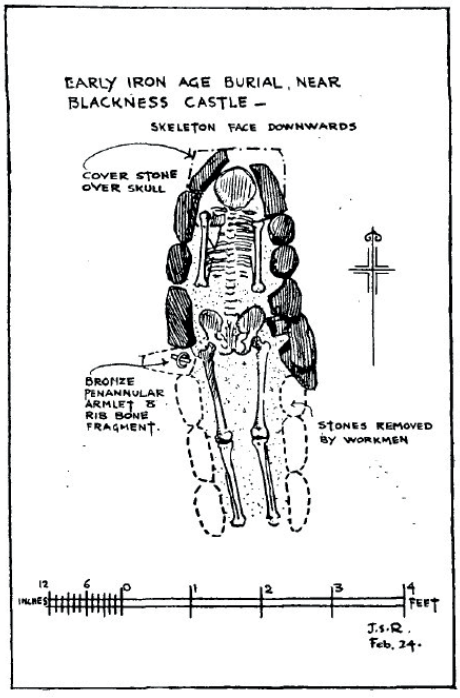


Figure 2.2.4 Sketch plan of the burial, from Richardson 1924.

and radiocarbon-dated to 2030-1780 cal BC (Canmore ID 49519)). Analysis of the cremated remains indicated the presence of at least two individuals, one adult and one young child (Low 1945). The second burial was an inhumation, analysis of which revealed two pairs of petrous bones (hard parts of the temporal bone housing the inner ear) indicating the presence of two individuals (ibid). The report also suggests that the remains analysed constituted only some of the graves' contents (ibid) suggesting loss of some of the remains, and probably a degree of mixing.

Photographs on Canmore, attributed to RCAHMS and dated to 1931, illustrate two graves with inhumations, one of the graves containing two skulls (Catalogue Nos A47085-92). The graves lay adjacent to a stone wall, seemingly on the brow of Castle Hill, and several piles of spoil. One of the photos (SC 1167023; *Figure 2.2.3*) has what appears to be the east side of Blackness Bay in the background. The photographs all have the same caption: 'View of skeletons uncovered outside chapel'. Whilst it is not known if the burials reported on in 1945 were from the same phase of works, the explanation of their location ('In digging a ditch on the crest of the ridge at the extremity of which stands Blackness Castle' (Low 1945; 174)) suggests this was probably the case.

Canmore reports a visit to the site by RCAHMS in 1956, whereupon the probable site of the graves was identified, in the location of 'small earthworks' which were the remains of a wartime military post where a ditch was being dug that exposed them (RCAHMS 1978, 18). The earthworks identified conform to a 1916 plan of World War One defences on Castle Hill, suggesting that the 1931 'date' of the photographs was long after the burials were actually exposed (probably the date when they were copied by the RCAHMS), and that at least 30 years had elapsed between their excavation and the publication of the inhumation and Food Vessel cremation in 1945. That the burials were probably identified during the digging of ditches during the construction of World War One defences on Castle Hill may also shed some light on when St Ninian's Chapel was exposed in its present location.

In addition to burials on Castle Hill (and the inhumation recorded in 1902 probably from the eastern part of Blackness village), an inhumation burial was recorded by workmen digging a flowerbed, north of the barracks building in 1924 (*Figure 2.2.4*). This was originally dated to the early Iron Age, for reasons unclear other than the interred individual had been wearing a bronze armlet (Richardson 1924). Based upon its morphology and decoration, however, the armlet or bracelet has since been suggested to date to the six of seventh century AD, with similarities to examples from mainland Europe (Stevenson 1983; *Figure 2.2.5*). There is a photograph of the grave on Canmore (SC1166995).

Dating the burials: The Food Vessel cremation dates to the Early Bronze Age (2030-1780 cal BC (Canmore ID 49519)), and although not scientifically dated, the inhumation with the armlet is probably Early Medieval, based on stylistic similarities with examples mainly on mainland Europe (Stevenson 1983). The remainder of the inhumations on the site cannot be dated with any certainty. However, those on the top of Castle Hill appear to have been found adjacent to the west-facing wall of the chapel. If this was indeed the case, they were oriented north-to-south rather than west-to-east as with most Christian burials. This could indicate a pre-Christian date. The Early Medieval inhumation found to the north of Castle Hill was also oriented north-to-south (*Figure 2.2.4*). It is possible, therefore the burials identified are part of a wider cemetery group associated with the Blackness promontory. An undated enclosure to the south of the

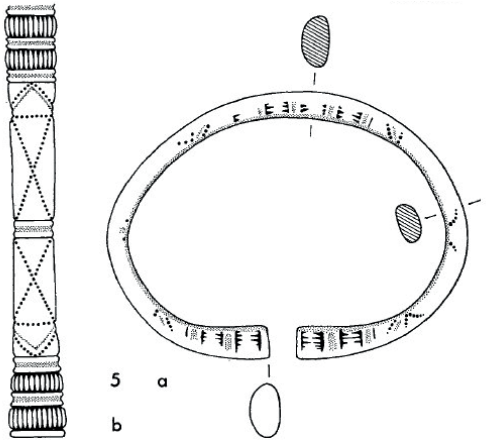


Figure 2.2.5 Illustration of the bracelet, from Stevenson 1983.

promontory could be associated (OA43; Rose Geophysics 2021). Also from the site, a Celtic cult figure was found in Blackness Castle, where it had been acquired by the Office of Works without provenance or history.

According to local knowledge, the figurine was found on the site of an early church beside Blackness Castle and placed in the joiners' workshop there, where it lay for many years (Ross 1967, 188). Based on its posture and the presence of indentations on its head (possibly to hold antlers), it is believed to represent Cernunnos (ibid; *Figure 2.2.6*).

Figure 2.2.6 Blackness figurine (Canmore Image 437396).

On the evidence of the burials and figurine it possible that Blackness may be the site of a pre-Christian burial site later superseded by is use as a Christian chapel. St Ninian, who may have founded and is buried at Whithorn Priory in Dumfriesshire, is associated with conversions amongst the fourth or fifth-century Southern Picts, and their lands south of the Firth of Forth (Britannica nd; Royal Burgh of Whithorn nd).

2.2.2 Linlithgow and Blackness: Medieval History

The castle's medieval history is intimately linked with nearby Linlithgow, known to have been occupied in the Roman period and as the site of a royal residence since at least the reign of David I (1124–53) when it was created as a royal burgh. Linlithgow is sited on a loch within which possibly Iron Age Crannogs have been identified and its church, St Andrews, was probably an early chapel site (HES 2021a).

Bo'ness is at the eastern end of the Antonine Wall (built c 142 between the Firths of Forth and Clyde during a short-lived attempt at territorial expansion north of Hadrian's Wall). A small associated with a vicus field system and roadways, has been identified at Carriden, 4km west of Blackness. A piece of Roman pottery from Blackness is known to have been amongst a collection donated to the National Museum of Scotland (Price 1977) and this has been linked with an interpretation of a fort derived from un-verified aerial photographs showing possible ditch features south of the village and west of the Black Burn (Canmore ID 49138). Given that Linlithgow is known to have been occupied by the Romans it is possible that Blackness could also have been used during this period, and could have been reached from a postulated Roman Road along the south side of the Forth Estuary.

Linlithgow is situated c 4km inland from Bo'ness and Blackness, and Blackness has always been its harbour. Ships are recorded as loading and unloading there in 1200 (MacIvor 1983; HES 2018) and the trade probably helped to fund the building of both castles (Stell 1988). In 1301, King Edward I of England wintered in Linlithgow during his attempt to conqueror Scotland. He had the site heavily fortified, and it acted as a supply depot for his 1304 assault on Stirling Castle: it follows that Blackness harbour may well have served a pivotal role (HES 2018). In 1389 the 'port' at Blackness was granted to the Royal Burgh of Linlithgow but whether a castle existed to protect it at this time is not known (Graham 1971; Stell 1988).

In 1430 Sir George Crichton, Admiral of Scotland and Sheriff of Linlithgow, acquired Blackness (MacIvor 1983). At this time, King James I was in the process of re-building Linlithgow Palace. The late 1430s and 1440s saw the minority of James II, and bloody power struggles between the Regent Douglas, the Livingstons and the Lord Chancellor of Scotland William Crichton who was George's cousin (Oram 2008). As well as being close to Linlithgow, Blackness was a key strategic position near to one of Douglases strongest castles at Abercorn. Douglas reportedly burnt George's 'blak nestis' in 1444 in retaliation for his burning of Douglas' 'grangis of Abercorne and Strabrok and uther five placis' (Groome 1882; Sweet 2021).

Blackness Castle is first mentioned in the historic records in 1449 (HES 2018). Although in the early years of James II minority, the Douglases and the Livingstons had power over the young King, by 1448 the Crichtons were in the ascendency and had regained some of their influence. James II achieved his majority 1448 and began to take control of his lands and consolidate his political power (Oram 2008). Shortly afterwards, in 1449, Livingston and his sons were arrested and imprisoned in the dungeon of Blackness, the first explicit mention of the castle (Sweet 2021).

In 1453 the death of William Crichton left George exposed to his then enemies: the following year he was compelled to name James II his heir and assign his assets to the king. George's (disinherited) son then seized Blackness Castle but it was captured by James' forces. It became a royal castle in 1454 (CSG 2014).

In 1465 the Crown authorised the burgesses of Blackness burgh to build a harbour, with permission to take stones and lime for that purpose from the castle, the demolition of which was ordered at the same time (Graham 1971). The area granted for the port comprised the whole promontory of Blackness to the north of St Ninian's Chapel (ibid), which presumably remained extant on Castle Hill at the time. In 1481, English naval raids on the Firth of Forth resulted in Blackness (possibly the village/port) being 'thoroughly torched and spoiled' by an English fleet, with a large ship harboured there being sized by John Lord Howard (Sadler 2010).

At some point in the later fifteenth century the Crown resumed control of the castle. In the build up to his defeat and death at the Battle of Sauchieburn in 1488, James III stayed at the rebuilt Blackness Castle whilst undertaking peace negotiations with his increasingly rebellious nobles and in expectation of foreign troops who never arrived. His son, James IV, stayed at the castle in 1491 during which time he heard mass (presumably at St Ninian's) and during a visit in 1506 was entertained by minstrels (HES 2018).

Although Blackness Castle had been used as a state prison since as early as 1449

(MacIvor 1983) it was during the sixteenth century when this role was made more permanent. In 1517 the keeper was paid extra due to the great costs of acting as a prison warden (HES 2018). After a major re-building in 1543 by the then keeper James Hamilton of Finnart, the castle was declared impregnable by Sir Ralph Sadler, an English nobleman in Scotland to arrange a marriage of the infant Mary Queen of Scots and the Prince of Wales (MacIvor 1982). Sir James Hamilton, illegitimate son of James Hamilton 1st Earl of Arran, was a second cousin of James V and a skilled architect, having been appointed Steward of the Royal Household and the King's Master of Works. He was responsible for work on several Royal residences including Linlithgow (ibid; McKean 1995; CSG 2014).

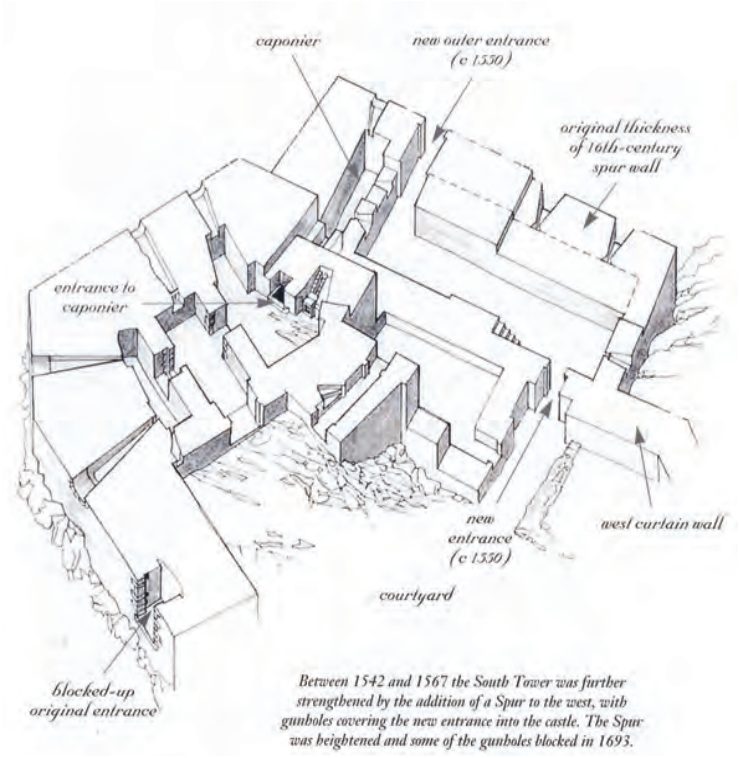


Figure 2.2.7 Cutaway reconstruction of the sixteenth century caponier additions (from MacIvor 1983).

Also in 1543, Blackness Castle received its best-known visitor Cardinal Beaton of St Andrews, who opposed closer links with protestant England (HES 2018). Beaton was one of the main rivals of the James Hamilton, 2nd Earl of Arran, a Regent of Scotland during Mary Queen of Scots' minority and James Hamilton of Finnart's half-brother (McKean 1995). Other political prisoners during this period included Andrew Melville provost of New College St Andrews for slandering James IV from his pulpit and Lord Maxwell of Caeraverock in 1584 for displaying pro-Catholic tendencies (ibid).

Much the present-day Blackness Castle dates from the 1543 rebuild, which is of great interest in the story of the development of fortifications to take account of artillery (CSG 2014). The works include the enormously thickened curtain wall facing south and east with their huge, wide-mouthed gun holes which confronted bombardment with defensive guns positioned to give all round firepower. (ibid). The main entrance, now visible as a blocked doorway in the vulnerable east wall where it may have crossed an enclosing ditch, was moved to the south end of the west wall (MacIvor 1983; *Figure 2.2.7*). This new entrance was protected by a single storey forework featuring a dog-leg passage to the south of which was a caponier. The caponier (a rare form of gun-gallery) is one of only two known in the British Isles; the other is at Finnart's own castle of Craignethan (McKean 1995; HES 2018). The central 'main mast' tower was probably heightened at this time then used to house prisoners.

Figure 2.2.8 Inside the curtain wall, facing south, the central tower and the exposed bedrock ground surface.

The old crenellations can still just be seen just over halfway up the tower incorporated into the later masonry (CSG 2014; *Figure 2.2.8*). The south tower, which became known as the Governor's House, was also heightened to four storeys plus a crow-stepped garret, with a hall on the first floor. It was also extended on an L-plan with the addition of the north-west wing with access by a spiral staircase (Sweet 2021).

During the Anglo-Scottish wars of the so-called Rough Wooing in the 1540s and 50s Henry II of France agreed in 1548 to a military intervention in Scotland under terms including Dunbar and Blackness Castles being garrisoned

by French troops (Sweet 2021). The castle was used by the Scotto-French forces as the main ammunition depot.

Modifications seem to have continued into the reign of Mary Queen of Scots (1562-67). The caponier, named the Spur, was raised by another storey and converted into a strong defence flanking the entrance gate (HES 2018; *Figure 2.2.7*). Blackness held out in support of Mary from the time of her abdication in 1567 through the following civil war until 1573, with the garrison harrying ships in the Forth and raiding the opposite shores of Fife (CSG 2014). The castle was eventually blockaded but not formally besieged and was in the end captured by a trick (ibid).

Under James VI, the Scots Calendar of State Papers for 1589-93 includes many references to Blackness being used to house political prisoners, including nobles close to the King (Boyd and Meikle 1936). The introduction to the papers (ibid, ix-xxix) outlines how the hereditary feud between Huntly and Moray, for example, flared up into a series of quarrels with serious political implications. In February 1592, the Earl of Moray was done to death by Huntly and his followers. Huntly was a favourite of the King who it was alleged at the time had granted him a blank commission, being a tacit assent to the execution. The subsequent actions of the Chancellor and the King were held to justify these suspicions, preparations for an expedition against Huntly being postponed and Huntly allowed to ward himself under easy conditions in Blackness Castle, and to abide a trial which legal technicalities and court intrigues were bound to render abortive (ibid). A letter during this period from Robert Bowes (Elizabeth I's Ambassador to Scotland) to Burghley (her chief advisor) stated that 'Huntly had so many of his servants in Blackness that he is thought to be master thereof at his will, and that he rather takes his pastimes than endures any imprisonment' (op cit 552, 567).

2.2.3 Blackness Castle: Post-medieval Period

Sixteenth and seventeenth century governors or keepers of Blackness included James Durham of Duntarvie to whom James VI granted lands of Bonytoun and Blaknes traditionally held by the keeper in 1588 (Sweet 2021). Durham was granted a charter for the same lands in 1591, the same date as a carved panel once associated with the ruinous dovecote (OA21) which still stands on the site (ibid).

In 1592 the King appointed Sir James Sandilands of Slamannane as captain of the castle and granted him the coal and charcoal from the lands of Bonyngtoun and Blaknes (Sweet 2021). He resigned the captaincy in 1598 when it was granted to Alexander Livingston, 7th Lord Livingston and later 1st Earl of Linlithgow (ibid). He died in 1621 and was presumably succeeded as keeper of Blackness by his son, Alexander Livingston, 2nd Earl of Linlithgow and 8th Lord Livingston. In 1640 the 2nd Earl resigned his positions as constable and keeper of Linlithgow Palace and Blackness Castle in favour of his son, George Livingston the 3rd Earl who succeeded his father in 1648 (Sweet 2021).

In 1644-5 a Scottish civil war was fought between Scottish Royalists—supporters of Charles I—and the Covenanters, allied with the English Parliament, who eventually defeated them. The Covenanters then crowned Charles II at Scone, intending to place him on the thrones of England and Ireland as well. The Anglo-Scottish War (aka Third English Civil War) ensued, with Scotland invaded and occupied under Oliver Cromwell (Stewart 2017). After being bombarded from land and sea, Blackness Castle was captured by Cromwell's forces under General Monck in 1651. This badly damaged the castle's fabric and it was probably at this time that St Ninian's Chapel was destroyed (HES 2018). The 3rd Earl of Linlithgow was confirmed in 1661 and again in 1669 in the

office of constabulary and keeping of Linlithgow Palace and Blackness Castle. Under his custodianship in 1667 the south tower was converted into barracks and the main tower was remodelled to serve as a prison for Covenanters, many of whom were imprisoned during the 1670s and 1680s by Charles II and James VII (Sweet 2021).

The garrison of Blackness Castle comprised of 41 men in 1691 when the castle was used to imprison opponents of William and Mary (HES 2018). In 1693 Captain William Erskine was described as lieutenant governor (Sweet 2021). The Spur was heightened further when it was altered for use as a gun platform, had a wall walk constructed and an angle turret added at the south-west corner. The north tower was reduced in height with the top storey cut down to serve as a three gun battery pointing out into the Forth, accessed via stairs from the east wall walk.

Blackness was one of four castles in Scotland, along with Dumbarton, Stirling and Edinburgh, that was guaranteed to be maintained according to the Acts of Union of 1707, aiming to protect the Lowlands from any possible incursions south by Highlanders (Sweet 2021). In the same year Blackness Castle became a military base rather than a state prison (Morris and Barclay 2017). The central and south towers were converted into barracks and the gun ports in the south tower were blocked up and converted into bread ovens (HES 2018).

The National Library of Scotland holds two undated Board of Ordnance plans of the castle, probably from the first half of the eighteenth century. The first (ms.1650 Z.46/61a) shows the layout of buildings and rooms within the curtain walls, where the south tower and the prison tower were being used as barracks. Several buildings, no longer present, are shown up against the curtain walls. At the north end of the west curtain wall are two ruinous barracks converted to kail yards, and on the east wall were an office, also converted to a kail yard, a 'quite ruinous' brewhouse and a stable, 'quite out of repair'.

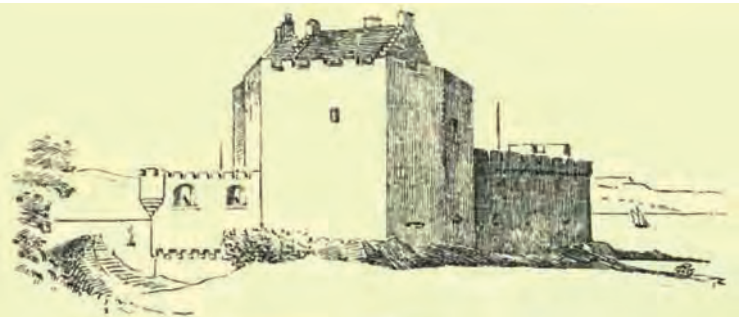


Figure 2.2.9 Spur and south tower in 1794, from a sketch by D. Allan (from a series preserved in the Royal Scottish Academy) reproduced by MacGibbon and Ross 1886.

The second Board of Ordnance plan (ms.1650 Z.46/61b illustrates the location of the gun batteries. The key to the latter notes the presence of, '*The four gun battery*' (the Spur); facing east, a '*terrace with four gun ports without guns*'; and, at the Stem end, a '*battery to the sea of one gun*'. (Morris and Barclay 2017)(*Figure 2.2.9*). Roy's Military Map of Scotland (1747-55) depicts Blackness Castle at this time, but it doesn't appear to have been of strategic importance: apart from an outline of the castle the only identifiable features are a square representing the governor's garden and the pier in Blackness village.

By the start of the French Revolutionary Wars, in 1795 the posts of governor and deputy-governor were held by non-residents, as virtually honorary titles, and the Blackness Castle garrison comprised two gunners, a sergeant, two corporals and around 12 privates (MacIvor and Tabraham 1993). Limited gun defenses were built there as part of a wider scheme to protect the Forth's shipping and commerce interests (Morris and Barclay 2017). Board of Ordnance records list Blackness as being mounted with five 6-pdr guns in 1805, but a review of coastal artillery in 1806 listed no armament (ibid). In January 1818, following a visit from the Ordnance Storekeeper, the Master Gunner wrote to the Office of Ordnance, reminding them of the poor standard of his quarters

and informing them there was a one-gun battery where the platform wanted fresh laying, water ran down the walls of the storehouse and the magazine under it and part of the arch at the sally port had fallen in. He also suggested that if the place was strong enough to carry guns, he could wish to have serviceable guns sent as well as stores (ibid).

The port of Blackness had mainly been superseded c 1680, by Borrowstounness (Bo'ness), which, on account of possessing higher advantages of situation, was then made the port for Linlithgow (Groome 1882; The Gazetteer for Scotland 2021). Groome stated that it had '*sunk into almost total decadence, insomuch that its harbour went to ruin, its custom house was converted into lodgings, and its only commerce became a trivial exportation of bricks and tiles, and as trivial an importation of lime and manure*' (1882, 163).

The wider landscape: Keepers or captains of the castle were remunerated with a proportion of the customs raised in the port, control over the local fishing and salt-manufacturing industries, and revenue raised from the royal rabbit-warrens and brewery, the latter under the management of the priest of St Ninian's Chapel (HES 2018). Outside the curtain wall, in addition to St Ninans, Castle Hill and the south field appear to have been used for food production.

In 1503, James IV actively encouraged lords and ladies to create '*Parkes with Deare, stanks (for fish) cunningareas (rabbit warrens) dowecattes…*' for the benefit of the country (OED 1933). In 1617 James VI restricted the use of dovecotes to owners with adjacent lands, on the basis that pigeons would tend to feed on neighbouring crops (Robertson 1988). The Dictionarium Rusticum and Urbanicum definition of 'pigeon' from 1704 states that: '*tho it be a Fowl that bring great advantage to its owners, yet it proves a far greater annoyance and devourer of Grain to all the rest of the Neighbourhood*' (cited. Robertson 1988).

Figure 2.2.10 The ruinous dovecote (OA21) facing east.

Most dovecotes in Scotland were built in the central and southern zone particularly in the well-endowed counties of Fife the Lothians, owned by gentlemen in the lands of mansions and castles (Robertson 1988). Although they occur in various shapes, like that at Blackness, they tend to be strongly built stone structures with one or more walls carried up over the level of the roof to give protection from the worst of the winds to the birds roosting on the roof (ibid) (*Figure 2.2.10).*

A plan of Blackness drawn by Theodore Dury who was active 1670-1742 is estimated to date to the 1690s and was copied in 1741 (Board of Ordnance Register of Plans 1700-1800, MS1647.Z.02/75b). Held by the National Library of Scotland, the plan (like the later Board of Ordnance plan (ms.1650 Z.46/61a) labels buildings on the site and provides brief descriptions of their functions (*Figure 2.2.11*). At this time, almost all of the buildings lay within the castle's curtain wall. The plan of the castle and its surroundings also includes an expanse of water to the south-east of the castle, labelled '*this water is always laying here, even at the lowest ebb*'. This was the remains of a defensive ditch (OA1) cutting off the neck of the ness south of the castle. A significantly sized blocked doorway high up the eastern curtain wall is believed to be the original entrance, accessed via a drawbridge crossing the ditch. This entrance was superseded in the 1543 rebuild, when the entrance was moved to the Spur. The ditch has been infilled apart from a sub-surface water tank (OA2) used in the nineteenth century.

Figure 2.2.11 Plan of the castle of Blackness, c 1690 (NLS MS.1647.Z.02/75a).

Figure 2.2.12 The east bay of Blackness dated 1775 (Unattributed artist, © British Library King George III topographical collection).

South of the ditch and in the approximate location of the 1870s barracks (OA15) were the remains of former houses belonging to a brewer and a gardener, noted as '*all fall'n down and gone for want of repair*'. North of these was a large rectangular green space quartered by paths, labelled the Governor's Gardens (OA13). At the extremity of the plan, with its south end partly truncated (perhaps signalling the area's lack of functioning buildings) on Castle Hill is written 'at this place is the remains of a Redoute, built by the English, when they were masters of Scotland'. Roads are marked either side of the promontory, that to the west going to Queensferry and that to the east to Bo'ness.

Beyond the area covered by the 1690 plan, both Lidar coverage and geophysical survey south of Castle Hill show what may be gardens or allotments focussed on the ruinous dovecote (OA21) on its south-eastern slopes (OA30). Formerly incorporating a datestone of 1591 (Sweet 2021), although the dovecote was reportedly destroyed by Cromwell's forces in the seventeenth century (HES 2018), it appears to be extant in a pair of watercolours dated 1755.

The painting of the east bay (*Figure 2.2.12*) illustrates the presence of west-to-east-running field boundaries or ridges (OA29, OA42) in the field south of Castle Hill, and the former road which followed the coast of Blackness' eastern bay (*Figure 2.2.11*).

Figure 2.2.13 Blackness Castle, harbour and custom house, 1775. Unattributed artist, © British Library King George III topographical collection.

The painting from the west (*Figure 2.2.13*) shows the port's custom house and some small ancillary single storey stores to its north. No built harbour, piers or breakwater structures are shown in either painting, which show the area at or close to high tide.

2.2.4 The Nineteenth and Early Twentieth Centuries

Following its demise in the eighteenth century following the Act of Union, Blackness Castle in 1870-74 became the central ammunition depot for Scotland. This was moved from Leith fort following concerns about the risks of storing so much powder in the middle of a densely-inhabited area (Barclay and Morris 2017, 2019).

Figure 2.2.14 Blackness Castle from Blackness Bay showing the nineteenth-century pier and Officers Quarters.

Blackness remained in use until shortly after World War I, principally supplying munitions to Rosyth Naval Dockyard (HES 2018). The works associated with the foundation of the ammunition depot were considerable and extensive: '*These works were considerably more than £10,000 and they comprise a powder magazine, with two compartments, each about 42 feet by 18, a light iron-girder pier, a sea wall 1000 feet long, storage places for heavy guns and other munitions of war, barracks 124 feet long, for 30 soldiers, and a two-story building in the Scottish Baronial style for military officers*' (Groome 1882, 163; *Figure 2.2.14*). The castle 'before and after' its late nineteenth-century remodeling can be described and illustrated with reference to published Ordnance Survey mapping.

Where they appear true to the site and not depictions in the 'romantic' style, several drawings and paintings exist which provide additional detail. However, several romanticised images change architectural proportions and depict imaginary ruinous structures. From the eighteenth century, in addition to the unattributed watercolours of the King George topographical collection (*Figures 2.2.12 & 2.2.13*), which appear to incorporate realistic detail, Alexandar Runciman's (1736-85) image (National Gallery of Scotland) is heavily romantic, depicting a darkly atmospheric castle with a high southern tower and a ruinous archway. An artist influenced by and friend of Turner, Hugh William Williams' version (1773-1829; National Gallery of Scotland) depicts an almost unrecognisable scene, including large ruinous background buildings. Turner's 1818 pencil drawing (Tate Galleries) from the west bay contains insufficient detail to make out specific details. Similarly a sketch by Mary Hope Johnstone (1818-1851) from Hopetoun House, depicts the castle as almost a minor detail within an expansive Firth of Forth landscape (Watercolour World 2022). Similarly, J. Farrington's (1792) *View of the Forth including the Queens-Ferry; Hopetoun House; Blackness Castle; Garvie Island and a*

distant View of the Grampian Mountains depicts the castle at a very small scale.

First edition 25" Ordnance Survey 1856: Surveyed and published in the same year this map is the first to depict the castle and its surrounding landscape in any detail, most earlier plans focusing on the buildings of the castle itself (*Figure 2.2.15*). Of the castle itself this shows the ship-shaped curtain wall and wall walk, within which the Tower Barracks (OA3), Spur Battery (OA6), and Guard House (OA11) are labelled with One Gun Battery and Magazine in the Stem end (OA4).

Figure 2.2.15 Excerpt from first edition 25" Ordnance Survey map of 1856.

The west wall of the south part of the Spur continues southwards from its present position to encircle the south end of the South tower (OA5). South-west of the castle is a trackway from the site's entrance to the Spur entrance, skirting the edge of a hollow which appears to be the remains of the ditch indicated on the eighteenth-century plan (OA1). The eastern part of the site is extensive compared to present, with several irregularly-shaped areas of land seemingly reclaimed from the sea, creating a small bay in the rocky outcrops immediate east of the eastern curtain wall. On the eighteenth-century Board of Ordnance Plan this is labelled as the high water mark (NLS ms.1650 Z.46/61a).

West of the main entrance into the castle, the shape and remains of the governor's garden (OA13) are extant, with pathways through its centre and around the edges. Around its eastern edge is a pathway which continues south along the landward edge of the beach, east of the Castle Hill outcrop and past the ruins of the Dovecot (OA21) and the Dovecot Well (OA22).

Figure 2.2.16 Excerpt from Queensferry to Stirling 1860 Scotland Coastal Chart.

On the west side of the promontory is a pathway in the location of the present entrance road. Castle Hill itself is shown much as today: a rough area of ground defined by fields or grassland around its edges. To the south east of the present-day PiC is shown East Well (and its springline) to the south of which is labelled the site of St Ninian's Chapel. The remainder of the PiC is open fields or grassland, with areas rougher heathland to the coastline of the eastern bay, defined at its southern extent by the line of the Black Burn.

The OS Coastal map of 1860 (*Figure 2.2.16*) shows the outline of the castle on the Blackness promontory, and the reclaimed area of land to its east shown as enclosed allotments. The remains of an old pier are shown to the west, in Blackness village harbour, and old stores are also marked; the harbour was clearly not in large scale use by this time. Also shown are the Firth channel, an area of salmon stakes to the north-east of the castle, and generalised shoreline/bedrock formations.

Figure 2.2.17 Excerpt from the second edition 25" OS map of 1896.

Second edition 25" Ordnance Survey 1896: revised in 1895 and published in 1896 this map illustrates the castle and its surroundings following the establishment of the ammunition store and the construction of associated buildings and structures (*Figure 2.2.17*). The present day pier (OA20) has been built, extending from the drawbridge in the west wall. Inside the curtain wall a large structure (OA10) is shown taking up almost the whole of the area south of the Stem Tower (a new powder magazine (Noble and Barclay 2017)), with smaller buildings (possibly sheds or lean-tos) in several locations.

A further two buildings have been erected against the outside of the castle's eastern curtain wall (visible in *Figure 2.2.18*, from architects' MacGibbon and Ross Castellated and Domestic Architecture of Scotland (1887)). One of these (OA8) is large and of two

Figure 2.2.18 Depiction of Blackness Castle from MacGibbon and Ross (1887, 225).

storeys, positioned over the former entrance to the castle high in the east wall, and in a similar Baronial style to the Officers' quarters. Two smaller structures (OA18) are sat at the corner of what is now the north-east corner of the east lawn wall (OA39), which appears to have been built around the same time. These seems to have been accessed via a doorway through the narrow northern part of the castle's eastern curtain wall, leading to the courtyard (also visible in *Figure 2.2.18*). South of the castle itself, the officer's quarters (OA12) and the barrack block (OA13) have been built, the latter over the Governor's Gardens (OA15). A smaller set of buildings in the entranceway are likely to have been a guarded gatehouse (OA14). In the barracks' courtyard, the present-day eastern lawn area has been established, albeit separated by several bounded areas and two smaller buildings (OA16 and OA17) which also remain extant. The present-day drying area (OA41) is shown, east and north of which are the remains of reclaimed land illustrated on the 1856 map. The remains of the former water-filled ditch are no longer present, having been replaced with a tank (OA2) whose location is marked on this map but not labelled. South of the barrack block (OA13) the landscape remains unchanged but for the loss of some shoreline east of the ruined dovecote (OA21), and the formalisation of field boundaries at the southern extent of the south field.

25" Ordnance Survey 1915: revised and published the same year, the 1915 map (*Figure B3*, Appendix B) shows that relatively little had changed on the site since 1896. Within the east lawn area, three buildings (OA19) had been built up against the retaining wall (OA39). Against the castle's eastern curtain wall (OA37) the northernmost of the two buildings shown in 1896 (OA9) is no longer present. In the east bay the sea wall (OA36) is illustrated (although not labelled as a structure) with a build up of shingle on its landward side.

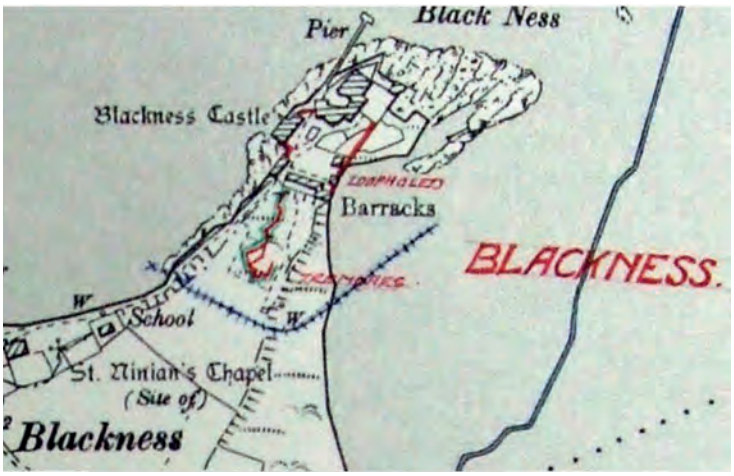


Figure 2.2.19 First World War defences of Blackness Castle, annotated on the 6" OS map of 1897, from Barclay and Morris 2019 (TNA WO 78/4396 1916).

Blackness Castle was reoccupied by the army during World War One, possibly as the expanded need for ammunition storage necessitated the re-opening of the store (Barclay and Morris 2019). Whatever function it held, it was defended, as shown on an annotated 1896 OS map derived from War Office files entitled 'Scottish Field Defenses' at the National Archives in Kew, dated 1916 (ibid; TNA WO/4396 1916; *Figure 2.2.19*). This shows that the peninsula was cut off by barbed wire, crossing the southern field just south of the dovecote wall and extending into the east bay, probably to meet the nineteenth-century sea wall (OA36). A complex of trenches and walls (OA25, 27, 34) occupied the Castle Hill promontory and extending to the castle's entrance. Parts of the castle courtyard were also improved defensively, with loopholes added to the eastern boundary wall (OA39).

Following the First World War, Blackness Castle was taken over once more by the Office of Works, and clearance of the site began in earnest; reversing most of the nineteenth century interventions within the castle, removing roofs, blocking the entrance through the east wall and 'restoring' the upper parts of the towers. During the work, a macabre discovery is made in the pit-prison in the 'Stem' Tower – an iron manacle clasped around

the wrist-bones of a long-perished prisoner (HES 2018). The RCAHMS visited in 1928, and it was opened to the public shortly after. It seems likely it was again occupied by the army during World War Two, as suggesting by a sunken circular feature (OA28) in the southern part of Castle Field which may have functioned as a gun emplacement (West Lothian Archaeology Group 2010). In the 1950s the Admiralty deliberately beached a nineteenth- or early twentieth-century barge (no longer visible) c 1.5km south-east of Blackness Castle (Canmore ID 263558) to use as target practice.

2.3 The Context & Character of the Wider Landscape

The following section will consider the character of the wider landscape outwith the PiC boundary at Blackness Castle, which provides the wider setting and context for the landscape.

2.3.1 What is Landscape

The landscape is a resource in its own right. The European Landscape Convention (ELC), designed to achieve improved approaches to the planning, management and protection of landscapes throughout Europe, defines landscape as:

> *'an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors'.* (Council of Europe, 2000)

This definition was expanded in 2002 to illustrate how all landscapes are special and valuable, even if they are not recognised with a statutory designation.

> *"Landscape is about the relationship between people and place. It provides the setting for our day-to-day lives. The term does not mean just special or designated landscapes and it does not only apply to the countryside. Landscape can mean a small patch of urban wasteland as much as a mountain range, and an urban park as much as an expanse of lowland plain. It results from the way that different components of our environment – both natural (the influences of geology, soils, climate, flora and fauna) and cultural (the historic and current impact of land use, settlement, enclosure and other human interventions) – interact together and perceived by us. People's perceptions turn land into the concept of landscape."* (Swanwick,C and Land Use Consultants (2002) Landscape Character Assessment Guidance. Countryside Agency & Scottish Natural Heritage).

2.3.2 Landscape Character Assessment

Landscape Character Assessment (LCA) is the process of identifying and describing variation in character of the landscape. LCAs identify and explain the combination of elements and features that make landscapes distinct from one another by mapping and describing landscape character types and areas. They also show how the landscape is perceived, experienced and valued by people. Landscape character seen at different scales, from the regional, down to the county, district and site specific.

2.3.3 Nature Scot National Landscape Character Assessment, Landscape Character Type 390 Coastal Farmland - Central

Scottish Natural Heritage (now branded as NatureScot) undertook an assessment of landscape character between 1994 and 1998 and published a digital map-based national LCA in 2019 to illustrate the landscape character types.

The landscape within which the PiC boundary at Blackness Castle predominantly lies is defined as falling on the eastern boundary of landscape character type *390 Coastal Farmland - Central* the landform and landcover are described as "*a series of rolling, coastal hills which rise to about 100 -150 metres. They gently slope down to the Firth of Forth to the north and the River Avon, in its sinuous well-wooded channel, to the south..... The landcover is predominantly open, ley grassland with some arable in medium to large fields on the Bo'ness Hills. Some are bounded by beech and hawthorn hedges, many of which are gappy. Others are bounded by post and wire fences. Large woodlands and policies are rare but there are some lines of trees along roadsides and in narrow shelterbelts. The landscape has a well-managed appearance..... In the easternmost part of the Coastal Farmland – Central the landscape is smaller scale, divided into small rectilinear fields with a grid pattern of minor roads and numerous regularly-spaced single storey small-holdings alongside roads, as well as large farm estates".* See *Figure 2.3.1*.

Figure 2.3.1 Landscape Character Types (Source: NatureScot).

The key characteristics typical of *390 Coastal Farmland - Central* include:

- *Series of large scale, open, east-west rolling hill landforms, gently sloping down to the Forth to the north and the River Avon to the south.*
- *Beech and hawthorn hedges and shelterbelts and avenues.*
- *Settlement consists of hill top steadings and also the town of Bo'ness nestled at the coast.*
- *Network of busy main roads, as well as quieter minor roads.*
- *Many historical and archaeological features and strong cultural associations.*
- *Simple, well-tended landscape.*
- *Extensive views across the Forth and a strong coastal character.*

2.3.4 Nature Scot National Landscape Character Assessment, Landscape Character Type 280 Coastal Farmland - Lothians.

The landscape at the south eastern corner of the PiC area and the landscape beyond to the south which forms a part of the wider landscape setting of Blackness Castle is defined as falling within landscape character type *280 Coastal Farmland - Lothians*. The landform and landcover are described as "*Extending along the coast from the western edge of Edinburgh and inland towards Linlithgow, the gently rolling lowland terrain of the Coastal Farmland - Lothians is interrupted by higher hills and ridges where igneous rocks have outcropped through the sedimentary bedrock. ....The coastline west of the Forth Bridges is fringed with mudflats, backed by wooded slopes with areas of raised beach above, as well as some steep, rocky scarp edges in places..... Clipped or overgrown hedgerows and lines of oak, ash and sycamore trees are common boundaries to the intensively farmed fields, occasionally giving way to fences or, less usually, stone walls. The predominant land cover of arable ground merges with smaller areas of improved pasture on higher ground or along parts of the coast. Several extensive wooded estates, notably Dalmeny, Hopetoun, Dundas Castle and the Binns, have a major influence on the landscape character, through an abundance of deciduous and mixed woodlands, shelterbelts, and mature parkland trees.* See *Figure 2.3.1*.

The key characteristics typical of landscape area include:

- *Open, sweeping and gently rolling agricultural area of mostly intensively managed arable farmland on the fertile soil of underlying Carboniferous rock.*
- *Some prominent igneous rock outcrops.*
- *Generally north-facing towards the coast.*
- *Drained by inconspicuous burns falling to the Firth of Forth.*
- *Significant policy and shelterbelt woodland associated with farm estates*
- *Significant gardens and designed landscapes associated with historic houses.*
- *Generally medium scale fields but in areas smaller or larger scale, defined by hedgerows, hedgerow trees, stone dykes or wire boundaries.*
- *An even scatter of farm steadings, estates and cottages, with a limited number of other settlements.*
- *Distinctive grid pattern of major transport corridors of the M9, A904, the Edinburgh to Glasgow/Perthshire railway and the Union Canal passing through the area in a west-east direction and linked by a series of minor roads running north-south.*
- *Highly distinctive and differing designs of the three Forth bridges and their approaches.*
- *Often extensive views northwards across the Firth of Forth and its bridges to the Ochil Hills and beyond, and to the south to the Bathgate Hills and Pentland Hills beyond.*

2.4 Occupancy & Management

2.4.1 Ownership & Occupancy

Blackness Castle, including the castle cottage; car park; recreation ground; officer's quarters; shop/ticket office and depot came into state care in 1905 and was disponed to Scottish Ministers from The Crown Estate Commissioners in 1999. HES manage and care for the property on behalf of Scottish Ministers.

The foreshore is leased to Scottish Ministers from The Crown Estate Commissioners for a 50-year period until July 2050 (*Figure 2.4.1 Area of Foreshore Regulating Lease (Source: Historic Environment Scotland)).*

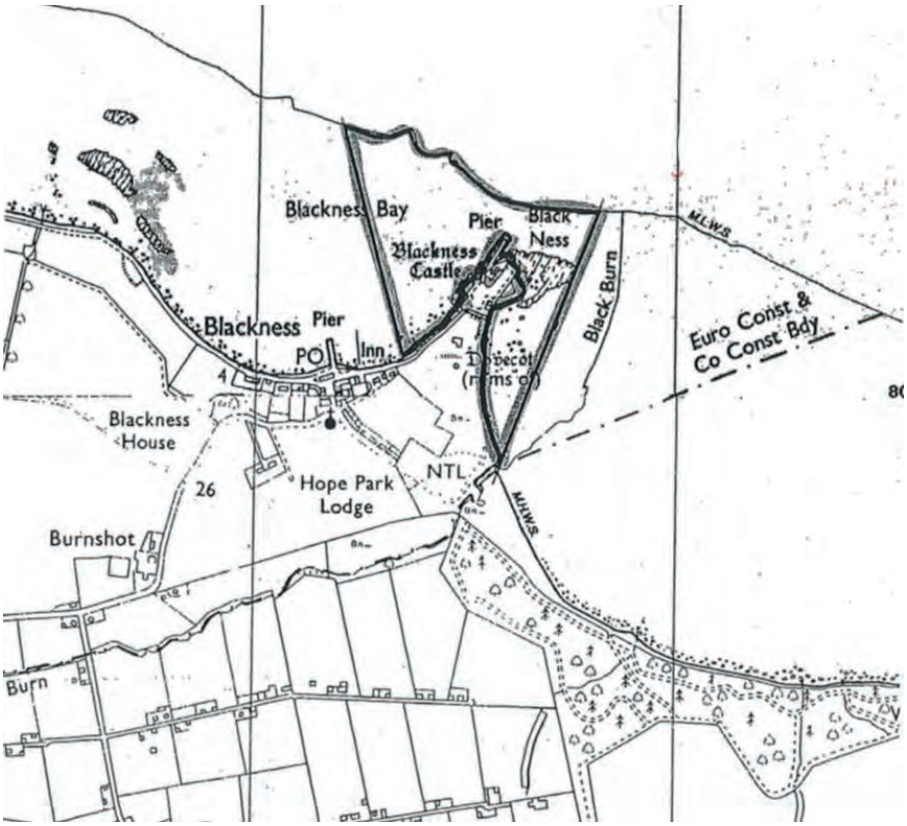


Figure 2.4.1 Extract from the plan of the Area of Foreshore Regulating Lease (Source: Historic Environment Scotland).

The landscape beyond the castle environs is largely leased from Scottish Ministers to Falkirk Council. The lease of the landscape, which covers character areas 2, 3 4 and 5 by Falkirk Council is for "*a plot or area of ground adjoining Blackness Castle, Falkirk as a recreation park....*" (Source: Minute of Variation of Agreement and Extension Between the Scottish Ministers and Falkirk Council).

The Lease of 6 acres, which commenced in April 2001, was due to expire on 31 March 2021, but will now continue under the same terms, on tacit relocation (year to year) from 1 April 2021 until either party serves a year's notice. (*Figure 2.4.2 Falkirk Council Tenancy Area (Source: Historic Environment Scotland)).*

Castle Cottage was previously used for residential accommodation for staff but has been vacant since 2011.

2.4.2 Landscape Management

As the majority of the landscape beyond the castle environs is managed by Falkirk Council, HES have little influence over management decisions, other than anything specifically set out within the lease agreement. The Minute of Variation of Agreement and Extension Between the Scottish Ministers and Falkirk Council states that:

For grass cutting purposes; the Tenant shall ensure that the area designated as a Site or Special Scientific Interest and coloured blue on the Plan annexed hereto should be cut as follows:

- *Grassland should be cut twice per year - once in spring (around April) and then again once seed has set in (August/September). The cutting regime should include the removal of arisings and it should not be cut too low.*
- *Existing scrub has been in-situ for some time and it is reasonable to leave it but regeneration be controlled.*

It is not clear what if anything is agreed for the remainder of the grassland within the lease agreement however the appearance and condition of the grassland within character areas 2, 4 and 5 suggests that it is routinely maintained as close mown.

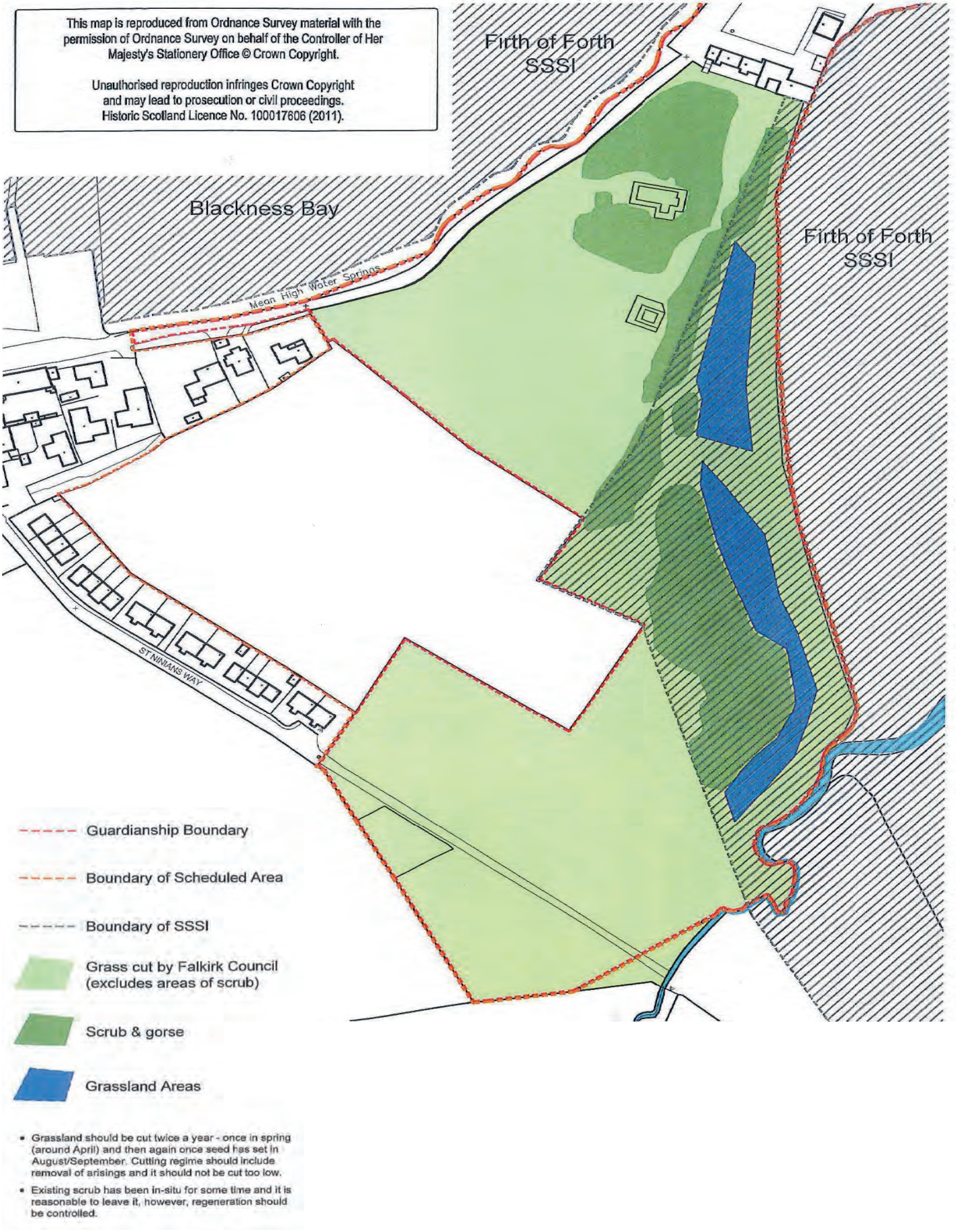


Figure 2.4.2 Falkirk Council Tenancy Area (Source: Historic Environment Scotland).

The landscape within the castle courtyard is maintained by the 'MCU and volunteers on occasion, with regular grass cutting throughout the season. The flower border to the east of the castle lawn, which was recently replanted, is maintained by volunteers.

The Drying Green, to the east of the castle has been previously used by the tenant of Castle Cottage, however as the cottage has stood empty for some time, management of the Drying Green is currently being carried out by the MCU.

It is understood that Falkirk Council are responsible for emptying all the bins across the landscape beyond the castle environs and within the environs, all waste is sorted into general waste or recyclable waste.

Any necessary repairs to the fabric of the landscape, such as paths, steps and retaining walls, are carried out by the MCU team.

2.4.3 Arboricultural Management

In respect of the arboricultural resource within the PiC boundary, responsibility for any day to day management issues lies with the MCU team, however all remedial work and tree surgery is sub-contracted to a suitable arboricultural contractor. A formal assessment and inspection of the trees within the PiC boundary was carried out in March 2021 by Informed Tree Services Ltd, on behalf of HES. The resulting report carried a recommendation that the formal inspection process should be "*supplemented with a twelve monthly "walk-over" inspection, by a suitably qualified member of staff; someone with a working knowledge of trees*".


CRICHTON'S CASTLE
Admiral George Crichton built Blackness in the 1400s after the 8th Earl of Douglas destroyed his tower-house at Barnton.
HISTORIC SCOTLAND
ALBA ALAINNIDH

2.5 Access & Visitors

Blackness Castle is becoming an ever increasingly popular visitor attraction, located within easy reach of the regions motorway network and close to Edinburgh.

Visitor numbers pre-2020 were over 80,000 and with a number of notable films and television series filmed at the castle, visitor numbers before the covid pandemic were rising swiftly.

The covid pandemic resulted in the closure of the castle for a period of time and once re-opened, reduced visitor numbers were managed to adhere to social distancing guidelines. Visitor numbers for the 2020 to 2021 season were 3376, rising to 18460 in 2021-2022.

A staff of 6 currently look after the visitors to the castle, although not all the staff at the time of writing this report were based at the castle and it is understood that pre-covid pandemic there was a staff of 3.

2.5.1 Visitor Access

The courtyard of Blackness Castle and the landscape setting are open to the public for 365 days a year, with no charge and no limit to access. The castle is open daily between 10am and 5pm, from the 1st April to the 30th September. Between the 1st of October and 31st March, the castle is open from 10am to 4pm. There is no car parking charge.

The main access route, for visitors arriving by car or coach is via the gated esplanade from Blackness village, with a small car park, holding c 40 no. cars located within the courtyard. The esplanade is narrow and congestion is a regular occurrence. When the castle car park is full, visitors attempt to park in the village, where there are a limited number of parking spaces. Whenever possible the staff monitor the car park and advise visitors to limit their stay to 75 minutes due to capacity challenges.

The car park has a rough gravel surface spaces are currently marked. There are currently no accessible spaces identified.

A number of coaches and mini buses arrive at the castle daily. With no formal booking system in place for coaches and mini buses, their arrival can add to increased congestion within the courtyard. Cars are parked on the grass when parking space is full, which can lead to conflicts with pedestrian visitors and increases the health and safety risk. Parking on the grass can also lead to damage to the sward and soil compaction, which may cause future flooding issues and potential damage to above and below ground archaeology. Vehicles parked on the grass also present a visual conflict which is detrimental to the landscape setting of the castle and built environs.

Whilst there is a gate across the esplanade whilst the castle is closed to visitors, there is still pedestrian access into the courtyard area, through a pedestrian gate, with visitors arriving out of hours often parking in the village.

The John Muir Way passes to the south of the castle and provides another route for access, via the Hopetoun Estate or along St Ninian's Way from Blackness village. The National Cycle Route (NCN) 76 runs along the southern edge of the PiC along the John Muir Way and circumnavigates the Firth of Forth, linking communities along the way. A number of external cycling websites such as bikemap.net identify facilities within the castle, such as toilets as being for users of the NCN76, rather than facilities located within the village.

The courtyard area has a level gravel and grass surface, however within the castle, the surfaces are less even, with cobbles, uneven rock stairs cut into the bedrock and rubble, which becomes slippery in adverse weather conditions. The pier is planked wood and has an anti-slip surface.

2.5.2 Visitor Facilities

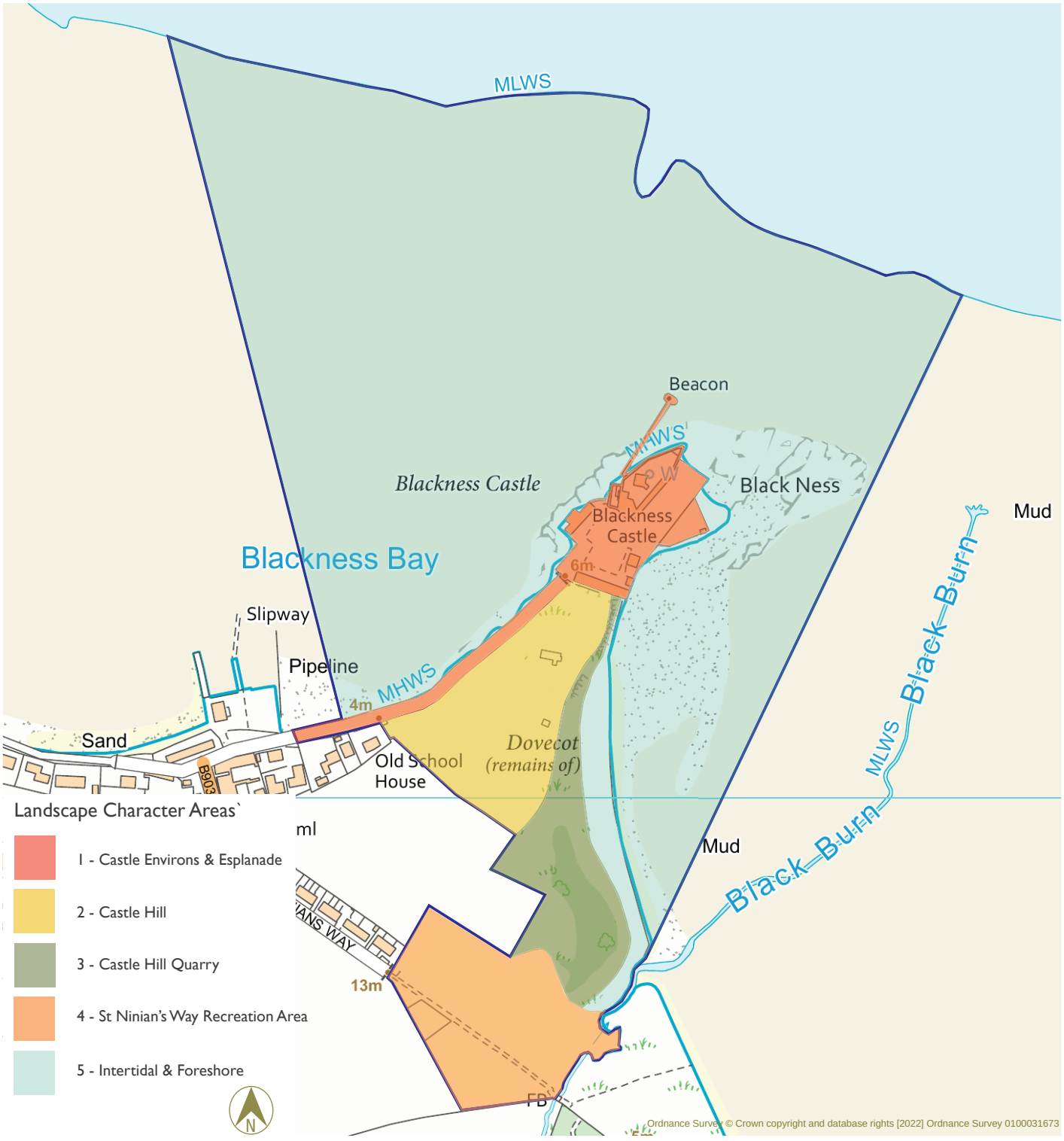
There are picnic tables and benches on the grass area of the courtyard and well placed information boards, which give visitors key information about the history and use of the castle, however these boards are primarily focused upon the built fabric of the castle, rather than the landscape.

Infrastructure for cyclists has recently been installed close to the shop within the courtyard.

2.6 Landscape Character Areas

The following section provides an overarching description of the landscape setting of Blackness Castle, within the PiC boundary and, for ease of understanding, the study area has been divided into character areas.

Each character area has a set of unique elements and special qualities, which distinguish that area from its neighbour and when combined, give rise to the landscape that we see today. The study area has been divided into five distinct character areas, which are illustrated at *Figure 2.6.1: Character Areas*.



2.6.1 Character Area 1 - Castle Environs & Esplanade

The main approach to the castle is via Blackness village, along a narrow esplanade to the south of Blackness Bay, on the Firth of Forth (*Figure 2.6.2*). The castle and associated buildings and curtain walls present a dramatic focal point seen against the skyline. The ever-changing tides in the bay create a dynamic landscape, sometimes tranquil and calm, often windswept and rugged. The juxtaposition of the solid built form of the castle set against the dynamic intertidal bay and wider Firth of Forth creates a very special character which is unique to Blackness Castle.

Visitors to the castle approach through the village along a narrow and winding minor road. A steel gate denotes the entrance to the castle, which is locked overnight. The lack of built form along the esplanade combined with the enclosure created by the adjacent Castle Hill, creates the impression that the approach to the castle starts at the gate and the esplanade is an important element within the character area. The black macadam surfaced esplanade is defined by a bay-side low stone seawall to the north and post and wire railings to the south, beyond which is the rising ground of Castle Hill (character area 2). Pedestrian access is however open 24 hours a day. To the east of the esplanade, a change in surface to loose gravel denotes entry into the castle courtyard, a largely grassed area, with loose gravel linking Blackness Castle, Officer's Quarters, Barrack Block and Cottage (*Figure 2.6.3*).

Much of the gravelled area is given over to parking cars (*Figure 2.6.4*) and at busy times, it is understood that temporary parking on the grass is necessary to accommodate visitor access to the castle. The first impression of the castle, as visitors progress along the esplanade and cross the threshold into the gravelled area, is often one of a car park, with parked cars highly visible within the courtyard. The dramatic visual effects of the

Figure 2.6.2

Figure 2.6.3

approach to the castle and the significance of the embayment area are compromised. The visitor arrival experience reduces significantly from one end of the esplanade to the other as the Blackness Story (in terms of built structures) is acting as a car park.

The grassed area to the south and east of the castle is maintained close mown (*Figure 2.6.5*) and was remodelled from a former embayment in the 1870s. A number of wooden picnic benches are set out adjacent to the castle on the lawn, however these are the only seating opportunities available in the courtyard. Buildings which are no longer extant, associated with the 1870s ammunition store, were located along the eastern sea-wall, however today, a recently planted perennial garden occupies a narrow border along the wall and provides seasonal interest. The high curtain walls of the castle restrict visual access into the internal castle courtyard, however there are

Figure 2.6.4

expansive views out across the Firth of Forth from the outer walls to the Ochill Hills to the north and north west, and to the three bridges which cross the Firth of Forth; the Queensferry Crossing, the Forth Road Bridge and the Forth Rail Bridge, to the east. The inner courtyard of the castle comprises uneven surfaces with cobbles, stone paving slabs, open stepped rock and compressed soil.

This character area contains few trees. A solitary mature goat willow (*Salix capera*) grows to the north of the Cottage and had been recently pollarded at the time of survey. A small Drying Green to the east is located beyond an outer wall and perhaps on reclaimed ground, has a series of mature and semi-mature hawthorn (*Crataegus monogyna*) and plum trees (*Prunus cersifera*) growing along the eastern edge of the garden above the eastern sea-wall (*Figure 2.6.6*).

Figure 2.6.6

Figure 2.6.7

The Black Ness – a rock formation which forms the backbone of the spit of land into the Firth of Forth, upon which the castle is built, is visible at low tide to the north east of the courtyard.

The Pier which extends from Blackness Castle into the Firth of Forth, comprises a series of steel stanchions set into the sea bed with wooden decking on top of steel girders, which extend north to the concrete pier head (*Figure 2.6.7*). The Pier enables access out into the intertidal zone of the Firth of Forth and provides a dramatic viewpoint, especially at high tide, for visitors to appreciate the unique tidal position of the castle and landscape setting. Below the Pier and to the east are the footings of a former pier or jerry which are visible at low tide and extend out into the Firth of Forth.

2.6.2 Character Area 2 - Castle Hill

Castle Hill forms the landscape setting to the south of the castle (*Figure 2.6.8*) and is the most archaeologically complex character area within the PiC boundary. There is evidence for Bronze Age burials, possibly pre-Christian inhumations, a Medieval (or earlier) chapel, probably sixteenth century dovecote, gardens/enclosure and field boundaries; a Civil War redoubt (not identified but possibly represented by OA26 and twentieth-century defences and gun emplacement (See *Appendix B* for further details). Whilst the footprints of the building thought to be St Ninians chapel and the dovecote are clearly visible in the landscape today, the twentieth-century usage of the hilltop has probably destroyed any surviving evidence for earlier features.

Castle Hill rises to the south of the castle on bedrock which outcrops frequently across the landscape (*Figure 2.6.9*) and forms an exposed face to the north west of the character area adjacent to the esplanade. At approximately 14m AOD, the highest point of Castle Hill has open views of the castle to the north and beyond to the Ochill Hills beyond the Firth of Forth (*Figure 2.6.10*). From this highest point, the landscape dips gently to the south west towards Blackness village. Defined to the north west by a steel post and wire fence, which creates a boundary feature with the esplanade and a wooden post and wire fence to the south west. The boundary with character area 3 to the east is open.

Castle Hill is an open grassed area, fully accessible year-round for the public to enjoy, which connects character areas 1 and 3. From a rough and herb-rich grassland on the higher ground to a short mown amenity grass to the south west, this is a soft and green landscape. There are few scattered trees, predominantly windswept hawthorn, which are confined to the south western boundary and the highest ground to the north of the

Figure 2.6.8

character area. The tree's windswept appearance atop the hill adds to the drama of the landscape and denotes the exposed nature of the landscape at Blackness.

Visitors to the character area ascend the hill to see the footprints of the building thought to be St Ninians chapel. The building's footings, with a gravelled inner surface, are visible and accessible (*Figure 2.6.11*) To the south, the extant remains of the dovecote is visible as rubble walls with a visible doorway to the north west (*Figure 2.6.12*).

Figure 2.6.9

Figure 2.6.10

Figure 2.6.11

Figure 2.6.12

2.6.3 *Character Area 3 - Castle Hill Quarry*

Castle Hill Quarry, named as it was the likely source of building stone, quarried at various phases of the castle and built environs development, is a narrow character area running north to south from the castle to character area 4. Defined to the east by the intertidal and foreshore habitats of the Firth of Forth and to the east by Castle Hill and an open grassed field, which is outwith the PiC boundary, this character area mirrors the rough vegetation shown in OS 1895 (*Figure 2.2.17*) and today still largely comprises an area of rich scrub habitat, mostly covered by the SSSI designation (*Figure 2.6.13*).

There are several 'desire line' paths which have been cut through the character area from Castle Hill and St Ninian's Way meadow to the south, some of which are badly eroding the ground.

Exposed bedrock and former rock quarried rock faces form the northern extent of the character area, however dense scrub and trees, predominantly hawthorn with holly (*Ilex aquifolium*) and ash (*Fraxinus excelsior)*, have predominantly grown to obscure the rockface with a well-developed ground flora, dominated by green alkanet, common nettle and common ivy (*Hedera helix*).

The SSSI designation for Blackness Bay (1987), extends beyond the intertidal zone into the character area due to the small areas of salt marsh and diverse coastal grassland, which is supporting habitat for feeding and roosting birds of importance, in particular curlew, dunlin, golden plover, knot and redshank. To the south of the character area, the scrub vegetation extends into a sheltered hollow, with scattered gorse (*Ulex europaeus*) interspersed with hawthorn (*Figure 2.6.14*). An area of wet, marshy grassland which

Figure 2.6.13

Figure 2.6.14

Figure 2.6.15

is dominated by rushes (*Juncaceae* spp.) is located within the scrub and tall ruderal habitats and a simple wooden deck bridge enables access through the hollow (*Figure 2.6.15*).

2.6.4 Character Area 4 - St Ninian's Way Recreation Area

The southernmost character area within the PiC boundary is St Ninian's Way Recreation Area and comprises an area of open grassland, defined by native hedgerows with hedgerow trees and occasional tree groups. This character area adjoins the residential properties at St Ninian's Way and has a municipal character, mostly arising from its current management (*Figure 2.6.16*).

The perennial rye-grass (*Lolium perenne*) dominated character area contains the route of the John Muir Way – a long distance coastal path which crosses the country from Helensburgh in the west to Dunbar in the east and the NCN76 that circumnavigates the Firth of Forth. Throughout the length of the path within the character area, a hard surfaced macadam surface, with concrete edges is incongruous with the character of the historic landscape. To the south east, a modern, blue painted metal bridge crosses the Black Burn and leads the path off into the Hopetoun Estate (*Figure 2.6.17*).

A small play area is located to the south west of the character area and has been fenced for the security of users.

Tree and hedgerow cover within the character area is predominantly hawthorn, however there is occasional sycamore (*Acer pseudoplatanus*) and elder (*Sambucus nigra*). This is the only character area where hedgerows define the PiC boundary (*Figure 2.6.18*).

Figure 2.6.16

Figure 2.6.17

Figure 2.6.18

2.6.5 Character Area 5 - Intertidal & Foreshore

The Black Ness – an outcrop of bedrock which extends out into the Firth of Forth which, onside the Pier, punctuates the Intertidal & Foreshore character area, which is the largest of the character areas within the PiC boundary. The intertidal zone, extending north into the Firth of Forth up to the Low Mean Spring Tide Line, is a highly significant area, representing a part of the Firth of Forth SSSI, Ramsar and SPA (*Figure 2.6.19*).

At low tide, the intertidal habitats comprise mud-rich sediments band surrounded by rocky shores and shell material (*Figure 2.6.20 & 2.6.21*). A total of 5548 records of birds were returned during the 2 km data search with the majority of relating to the Firth of Forth SPA, Ramsar and SSSI. The intertidal zone is significant for wintering and migratory birds, with many, such as curlew (Numenius arquata), oyster catcher (Haematopus ostralegus) and grebes (Podiceps auritus), observed resting on rocks to the east of the castle during high tide and/or foraging within the mudflats during low tide.

The foreshore which defines the western edge of the East Bay is formed by a modern sea wall of stone construction, which retains the foreshore (*Figure 2.6.22*). This is a sparely vegetated area. The former shoreline which corresponds to the shoreline shown on the 1896 map is visible several meters inland, with foreshore land to its east having been reclaimed. The foreshore is managed as close mown amenity grassland and is popular with visitors to the castle as it offers excellent access into the bay. The sea wall which lies to the south of Blackness Bay and defines the south western extent of

Figure 2.6.19

the character area, is of a squared rubble construction with a castellated coping. The curtain wall to the west of the castle is a 3m squared rubble construction which protects the castle and courtyard from the Firth of Forth at high tide (*Figure 2.6.23*).

The historic landscape survey confirmed the footings of a former pier or jerry which are visible at low tide the north of the Black Ness and a previously identified sea wall within the eastern bay, which is the ruin of a boulder wall and possibly represents part of the 1000ft sea wall, associated with the castle's use as an ammunition store.

Figure 2.6.20

Figure 2.6.21

Figure 2.6.22

Figure 2.6.23

2.7 A Review of the Landscape Resource

The landscape resource can be broadly divided into natural and man-made fabric. The natural fabric of the landscape comprises all the living elements such as the trees, grassland etc, which are supported by the underlying geology and soils. The man-made fabric broadly comprises the built features across the PiC boundary, such as the fences and walls, furniture and sculpture. The natural and man-made elements combine, to create the unique landscape character setting of Blackness Castle and the special qualities of place. The following section describes the natural and man-made fabric within the study area and should be read in conjunction with:

- Appendix A - Designations & Listing Information
- Appendix B - Historic Landscape Survey & Gazetteer
- Appendix C - Preliminary Ecological Appraisal (PEA)

The landscape comprises a holistically connected mosaic of habitats, with man-made elements, a land-use and management regime which combine to the characteristic and unique setting of Blackness Castle. The castle and associated buildings within the PiC boundary are included within the man-made fabric and are considered in terms of their relationship and contribution to the landscape setting. The following section describes the natural and man-made fabric within the PiC boundary.

2.7.1 Natural Fabric

Trees & Shrubs

The *Tree Management Report, Relating to Blackness Castle* (2021) Informed Tree Services Ltd was prepared to "*carry out a visual inspection of all the trees located within the designated site.....with the aim of assessing the trees' short to medium term health prospects and the trees' future suitability for the site*".

Carried out in March 2021, 168 trees and shrubs were individually recorded and a number of trees identified as requiring remedial works. The following summary of the arboricultural resource should be read in conjunction with the *Tree Management Report, Relating to Blackness Castle*.

10 species are present within the PiC boundary, across 9 genera, which consist of:

Species	Common Name	No.
Acer pseudoplatanus	sycamore	5
Crataegus monogyna	hawthorn	125
Fraxinus excelsior	common ash	3
Ilex aquifolium	holly	4
Prunus avium	gean	7
Prunus cersifera	myrobalan plum	5
Salix caprea	goat willow	1
Sambucus nigra	elderberry	16
Sorbus aucuparia	rowan	1
Ulmus glabra	wych elm	1

The survey found that of the 168 trees and shrubs recorded, there are few large-scale trees within the PiC boundary and those present are largely scrub and hedgerow species consisting predominantly of hawthorn (*Figure 2.7.1*). Tree stock is therefore predominantly native with only occasional naturalised sycamore within the PiC boundary, however outwith the boundary there are sycamore present in the landscape.

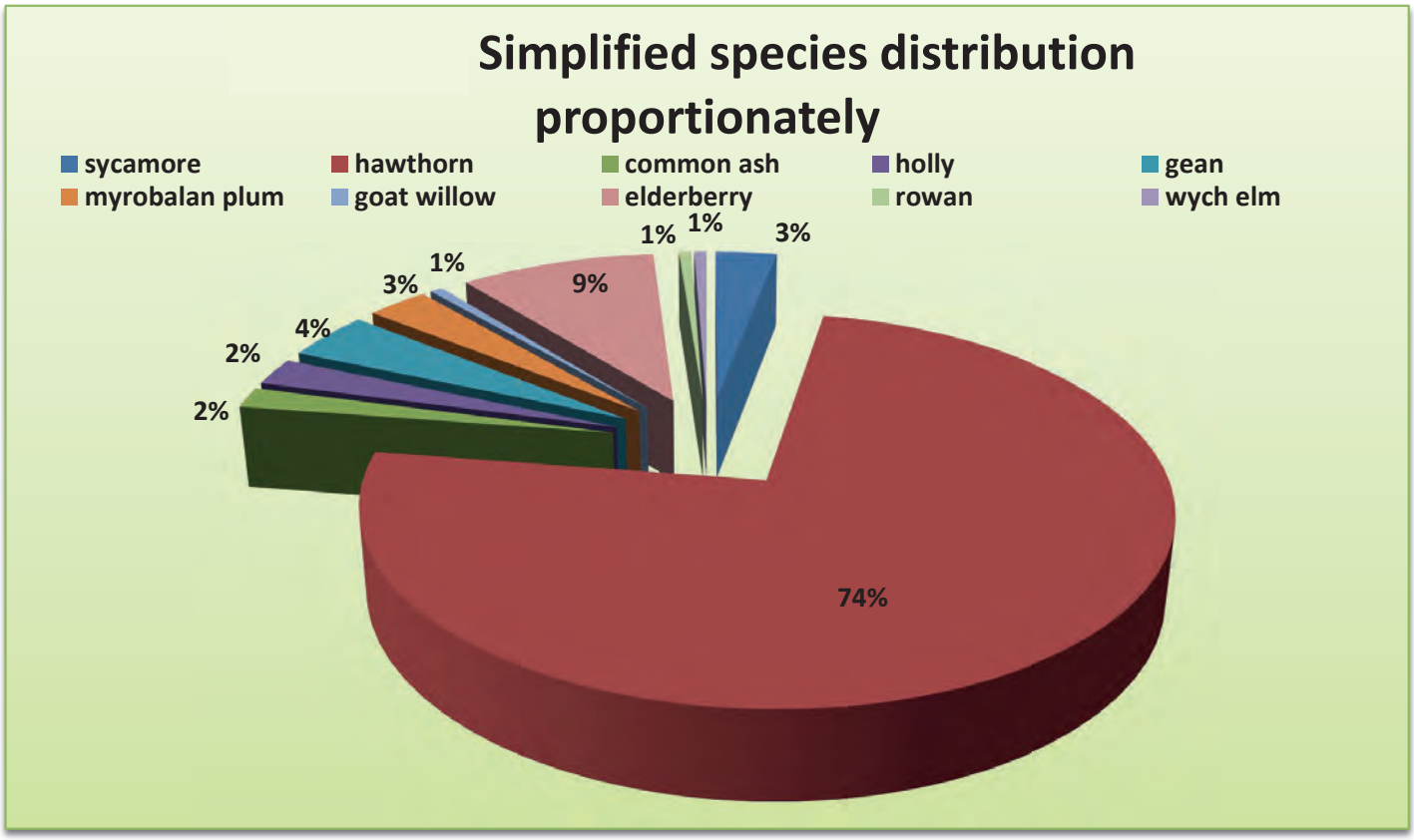


Figure 2.7.1 Simplified Species Distribution Proportionately.
(Source: Tree Management Report, Relating to Blackness Castle (2021) Informed Tree Services Ltd.

Figure 2.7.2

Figure 2.7.3

It was noted that the PiC boundary is largely exposed to the effects of the wind, regardless of wind direction, which has led to the unbalanced development of many of the hawthorn, resulting in *"low asymmetrical canopies that commonly display desiccated edges, The trees are squat wind-swept specimens"* (*Figure 2.7.2*).

The trees and shrubs are largely located in isolated positions and are not located close to any of the buildings or structures within the PiC boundary, with the exception of a goat willow (No.4299) growing adjacent to the cottage and a hawthorn (No.4431) growing lose to an oil-fuel storage tank and private garden.

There are limited hedgerows within the PiC boundary and are largely restricted to character area 5. The report found that hedgerows have been gapped up recently with hawthorn, ash and beech (*Fagus sylvatica*). It should be noted that the young beech were observed during the landscape survey to have small DBH measurements and so would have been excluded from the tree survey as only trees above 80mm DBH were recorded.

Tree No.4299 is a mature goat willow. It is the only mature tree found within the courtyard and tree No.4317 is a mature common ash (*Figure 2.7.3*). It is the largest tree found in the PiC boundary. The tree survey notes that the ash "*displays reasonable*

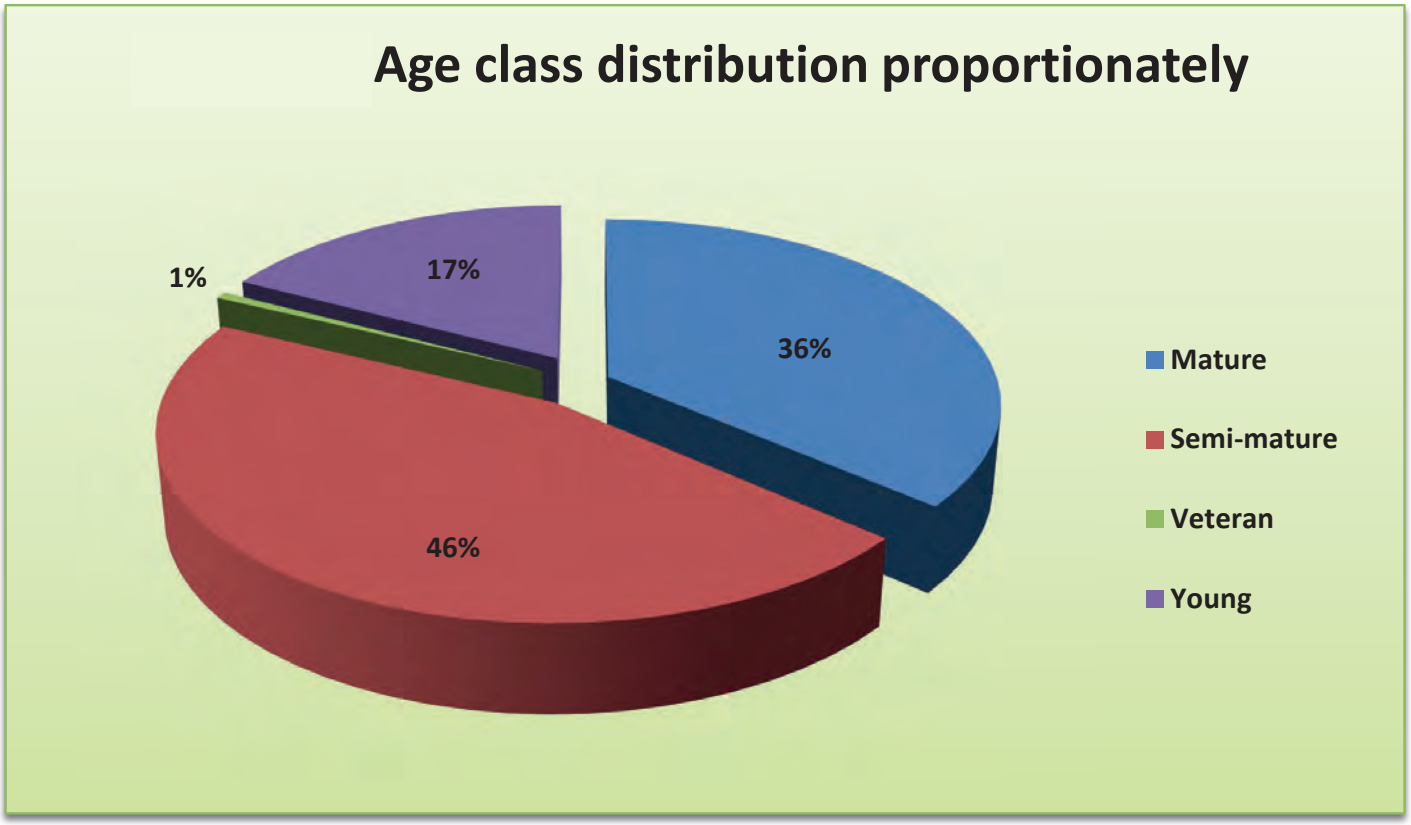


Figure 2.7.4 Age Class Distribution Proportionately.
(Source: Tree Management Report, Relating to Blackness Castle (2021) Informed Tree Services Ltd.

vitality and is largely defect free, though it is clad in dense ivy. Rope swings have been attached to its lower laterals".

No significant arboricultural pest, disease or wood decay fungi were noted within the tree survey.

With respect to the age of the arboricultural resource at Blackness Castle, the report notes that "*Blackness Castle's extended grounds are home to stands of dense mature scrub. It is difficult to age multi-stemmed, wind-exposed hawthorns that are clad in ivy with any accuracy. But most recorded shrubs are semi-mature to mature*" (*Figure 2.7.4)*.

Scrub

A band of dense scrub, which is visually prominent, is located within the centre of the site in character area 3 and contains scattered broadleaved trees. To the north of the PiC boundary, the scrub vegetation has colonised the exposed bedrock.


Figure 2.7.5

The scrub is dominated by hawthorn with scattered gorse (*Ulex europaeus*), holly (*Ilex aquifolium*), dog-rose (*Rosa canina*) and ash (*Fraxinus excelsior*). The ground flora was dominated by green alkanet, common nettle and common ivy (*Hedera helix*) (*Figure 2.7.5)*. It is noted that Ivy extends into the canopies of many of the hawthorn shrubs. Much of the area of scrub is covered by the SSSI designation.

Improved Grassland

The majority of the site is comprised of improved grassland fields used for recreational purposes (*Figure 2.7.6*). It is dominated by perennial rye-grass (*Lolium perenne*) with occasional shepherd's purse (*Capsella bursa-pastoris*), common mugwort (*Artemisia vulgaris*), common daisy (*Bellis perennis*), white clover (*Trifolium repens*), ground elder (*Aegopodium podagraria*), cock's foot (*Dactylis glomerata*), Yorkshire fog (*Holcus lanatus*), creeping thistle (*Cirsium arvense*), yarrow (*Achillea millefolium*), common dandelion (*Taraxacum officinale*), greater plantain (*Plantago major*) and common nettle (*Urtica dioica*).

Semi-improved Neutral Grassland

Scattered parcels of neutral semi-improved grassland are located within the improved amenity grassland fields and scrub (*Figure 2.7.7*). These areas appeared to have limited management and are tussocky in character.

Figure 2.7.6

Figure 2.7.7

Similar species identified within the improved grassland were observed with the addition of common chickweed (*Stellaria media*), ribwort plantain (*Plantago lanceolata*), green alkanet (*Pentaglottis sempervirens*), rough meadow grassland (*Poa trivialis*), reed canary grass (*Phalaris arundinacea*), creeping buttercup (*Ranunculus repens*), fescue grass (*Festuca* sp.), cuckoo flower (*Cardamine pratensis*), creeping bent (*Agrostis stolonifera*), sorrel (*Rumex acetosa*), lesser knapweed (*Centaurea nigra*), common mullein (*Verbascum thapsus*), scentless mayweed (*Tripleurospermum inodorum*), ragwort (*Jacobaea vulgaris*), bird's foot trefoil (*Lotus corniculatus*), silverweed (*Potentilla anserina*) and white dead-nettle (*Lamium album*).

Amenity Grassland

Amenity grassland is found within the courtyard at Blackness Castle and is maintained to a short sward height. It is dominated by perennial rye-grass with occasional shepherd's purse, common daisy, white clover, cock's foot and common dandelion.

Marshy Grassland

An area of marshy grassland dominated by rushes (*Juncaceae* spp.) is located within the scrub and tall ruderal habitats of character area 3. It is anticipated this area will often hold water due to the presence of a wooden bridge and the vegetation present.

Tall Ruderal

Tall ruderal habitats are scattered around the edges of scrub and grassland habitats. Largely unmanaged, these habitats comprise creeping thistle, willowherb species (*Chamaenerion* sp.), broadleaved dock (*Rumex obtusifolius*), common hogweed (*Heracleum sphondylium*) and common nettle.

Hedgerows

Multiple hedgerows are present to the south of the site in character area 4 and are of

Figure 2.7.8

similar composition and management (*Figure 2.7.8*). The hedgerows are dominated by hawthorn (*Crataegus monogyna*) with occasional elder (*Sambucus nigra*) and blackthorn (*Prunus spinosa*). The ground flora comprised common nettle, common cleavers (*Galium aparine*), common ivy, common chickweed and wood avens (*Geum urbanum*).

In addition, an unmanaged hedgerow was present to the north of the character area, comprising hawthorn and hazel (*Corylus avellana*) with occasional dogrose (*Rosa canina*). The ground flora comprised common nettle and scentless mayweed.

Intertidal

Character area 5 comprises the Firth of Forth SPA, Ramsar and SSSI. At low tide it is an intertidal habitat with mud-rich sediment band surrounded by rocky shores and shell material (*Figure 2.7.9*). A pier was located to the north of the castle, leading to the intertidal habitats.

Running Water

The Black Burn (*Figure 2.7.10*) is located on the south-eastern boundary of character area 4 and issues into the east bay in character area 5. At the time of survey, the Black Burn was approximately 1m wide, with a stone/shingle bed. The banks varied in height, due to the meandering nature of the burn, with some aspects approximately 1m tall and steep and other shallows. Limited aquatic vegetation was present, with grasses observed.

Figure 2.7.9

Figure 2.7.10

2.7.3 Species Supported by the Habitats at Blackness Castle

The habitats within and outwith the PiC boundary support a diverse range of species, which have been identified throughout the desk based assessment and the ecological assessment survey.

Flora

The data search returned multiple records of notable vascular plants within the local area relating to coastal and terrestrial habitat. The majority of the PiC boundary comprised improved with limited floristic diversity. It is anticipated that the managed habitats are unlikely to support any notable plant species. Whilst the intertidal mudflats are not anticipated to be of importance to flora.

The unmanaged areas comprised a mosaic of species. Due to the survey being completed

in November it is anticipated additional flowering species within the unmanaged habitats are present but could not be identified during the survey. It is noted, within the Firth of Forth SSSI citation (NatureScot, undated), it references natural semi-improved grassland found at Blackness Bay forms the most diverse coastal grassland in West Lothian and Falkirk, though does not outline the location. It also states inclusion of high number of vascular plants which are nationally or locally rare. It is possible the citation relates to the semi-improved grassland within the site and nationally and/or locally rare vascular plants exist on site.

Invertebrates

The data search returned a total of 221 records of notable invertebrates within the local area, including the site. Species included (not limited to); cinnabar (*Tyria jacobaeae*), brick (*Agrochola circellaris*), small phoenix (*Ecliptopera silaceata*), white ermine (*Spilosoma lubricipeda*), mother of pearl (*Pleuroptya ruralis*), and gothic (*Naenia typica*).

The semi-improved grassland, marshy grassland, and scrub are anticipated to be of value, providing a variation of habitats for invertebrate lifecycles. Ragwort, creeping thistle, bird's foot trefoil and clover species will provide suitable food resources. Additional flowering species may also be present to attract particularly species to the site. However, limited flowering species were observed across the improved and amenity grassland area. The intertidal mudflats are not anticipated to be of particular importance for its invertebrate population.

Overall, notable invertebrates may utilise the site for foraging but are not thought to utilise the site in significant numbers.

Amphibians

The data search returned no records of great crested newt (*Triturus cristatus*). Common amphibian species such as smooth newt (*Lissotriton vulgaris*), palmate newt (*Lissotriton helveticus*) and common frog (*Rana temporaria*) were recorded within the House of the Binns. In addition, consultation with www.magic.defra.gov.uk indicates that no Great Crested Newt Mitigation Licences are observed within 1km of the PiC boundary.

No ponds were located onsite or within 250m of the PiC boundary. As great crested newts' upper dispersal limit is generally considered to be up to 500m from a waterbody (NatureScot), however great crested newts are not anticipated to be present on site. The site comprised a mosaic of unmanaged habitats which may provide suitable foraging resources and cover for common amphibians such as common toads (*Bufo bufo*). Ornamental water bodies may be located within nearby residential gardens which may provide suitable conditions for breeding common amphibians.

The presence of great crested newts within the site is reasonably discounted, though common amphibians may occur on site.

Reptiles

The data search returned no records of reptile species within the local area. The site provides limited value for reptiles, given the majority of the site comprised improved grassland, which lack the structure and habitat quality to support the species group. Whilst no records relating to the species were returned during the data search,

Reptiles are not anticipated to be on site and are not considered further.

Birds

A total of 5548 records of birds were returned during the 2 km data search. The majority of which related to the Firth of Forth SPA, Ramsar and SSSI, within the

addition of the site and House of the Binns. Records relevant to the site included (not limited to); yellowhammer (*Emberiza citrinella*), wigeon (*Mareca penelope*), whooper swan (*Cygnus cygnus*), whimbrel (*Numenius phaeopus*), tree sparrow (*Passer montanus*), peregrine (*Falco peregrinus*), oyster catcher (*Haematopus ostralegus*) and mistle thrush (*Turdus viscivorus*).

The site provides a range of potential breeding habitats for a variety of birds in association with the hedgerows, scattered trees and scrub habitats. These include the extent of the habitats recorded on site, providing a mosaic of dense scrub, scattered trees and hedgerows. During the survey a flock of goldfinch (*Carduelis carduelis*) was present within the hedgerow to the north, with the addition of tree sparrow, blackbird (*Turdus merula*), jackdaw (*Corvus monedula*) and robin (*Erithacus rubecula*) within the scrub and buildings. It is understood swifts (*Apus apus*) are present in the summer.

Ground nesting birds are not anticipated to be on site due to the sites use for recreational purposes. Barn owl returned in the data search, dated 2013. Semi-mature trees are present across the extent of the site. No suitable cavities were observed for nesting barn owl. However, it is understood that barn owl have been present within the main castle building, though not for breeding purposes. No field signs of the species were observed within the castle during the survey. Peregrine falcon has also been recorded in relation to the site in 2014. No observations of the species were recorded during the survey, however, the towers may provide suitable breeding opportunities with no taller structures observed within the locality of the site.

Wildfowl, Waders & Wintering Birds

The PiC boundary partially falls within the Firth of Forth SPA and the sites qualifying species include a variation of wintering and migratory birds. During the surveys a number of the qualifying species were observed resting on rocks to the east of the castle during high tide and/or foraging within the mudflats during low tide. Species observed included curlew, oyster catcher (*Haematopus ostralegus*) (*Figure 2.7.11*), great crested grebe (*Podiceps cristatus*), godwit (*Limosa* sp.) (*Figure 2.7.12*), ringed plover (*Charadrius hiaticula*), knot (*Calidris canutus*), dunlin (*Calidris alpina alpina*), redshank (*Tringa totanus*), shelduck (*Tadorna tadorna*) and eider duck (*Somateria mollissima*). It is also anticipated cormorants will utilise the pier for perching purposes, however the pier is frequently disturbed by tourists limiting its value.

Bats

A total of 19 records of bats were returned within 2 km of the site boundary, all of which related to activity and do not include roost. Species included soprano pipistrelle (*Pipistrellus pygmaeus*), unidentified pipistrelle (*Pipistrellus* sp.), and common pipistrelle


Figure 2.7.11


Figure 2.7.12

(*Pipistrellus pipistrellus*).

The habitats on site are anticipated to provide value for foraging bats due to comprising mosaic of unmanaged habitats which will attract invertebrate prey. Whilst the hedgerows and running water may be utilised for commuting. Extensive broadleaved woodland is located adjacent to the southeast of the site and is anticipated to be of importance for the local bat population. The site has the potential to support roosting bats whilst the habitats were assessed as having moderate value.

Badger

A total of 30 records of badgers were returned during the data search and their location is to remain confidential. No signs of badger presence were recorded within the site or the surrounding 30m during the site visit. There site provides suitable conditions for sett building within the scrub habitats, however it is anticipated due to the presence of dogwalkers, it may deter badger presence on site.

Other Terrestrial Mammals

Eight records of brown hare (*Lepus europaeus*) were recorded in relation to the House of the Binns, approximately 1 km south of the site. The site is anticipated to have limited value for the species due to the sites use for recreational purposes and are not considered present.

Eight records of marine mammals were returned including white-beaked dolphin (*Lagenorhynchus albirostris*), killer whale (*Orcinus orca*), humpback whale (*Megaptera novaeangliae*) and common porpoise (*Phocoena phocoena*). The records related to Blackness Bay.

2.7.3 Man-made Fabric

The man-made fabric comprises buildings and structures, boundary features, sea walls, furniture and former agricultural or industrial features. When combined, these man-made fabric elements create the unique character of the landscape setting of Blackness Castle.

BUILDINGS & STRUCTURES

The buildings within the PiC boundary make a significant contribution to the character of the landscape and represent the stages of use of the scheduled site. These buildings create strong focal points within the landscape and a visual clue to the development of the historic landscape over time. The built fabric of Blackness Castle, the Officer's Quarters, Barrack Block and Cottage, extant remains of the Dovecote and Chapel are not covered within the scope of this LCMP.

The Sea Pier (*Figure 2.7.13*) extends out into Blackness Bay from the castle. Stunning views of the castle are afforded from the end of the pier. With the ever changing tides and visiting migratory birds, the viewing experience from the pier is dynamic, especially at high tide.

Figure 2.7.14

BOUNDARIES & GATES

Boundaries - Sea Walls

The sea walls are a highly significant feature at Blackness Castle, protecting the structure not only from historical intruders but against centuries of tidal action from the Firth of Forth. Constructed from squared rubble, these walls are integral to the landscape setting, providing a strong focal point in views towards the castle (*Figure 2.7.14*). Extending to the west, north and east of the castle, these structures are routinely monitored for structural integrity and condition by HES.

At Blackness Bay, the esplanade is retained by a low, squared rubble stone wall, with a castellated coping, forming an impressive feature running along the length of the esplanade and leading the eye towards the castle (*Figure 2.7.15*).

To the east, there is a low retaining sea wall which, according to the *Blackness Castle Condition Survey And Conservation Strategy* (2003) HES, was built in the 1960s with an extension south to the burn in the 1970s. An entry in the Conservation History section notes that in 1973 "*Eighty lorry loads soil levelled off at back shore. Approximately same again required to complete it*", suggesting that the ground to the west of the retaining sea wall was made up.

Figure 2.7.16

The construction and materials used differ along the length of this sea wall, with large squared rubble stone to the north and smaller stone to the south (*Figure 2.7.16*). Where repairs have been made, the materials are not always consistent with the original stone.

This low level wall extends around the perimeter of the Drying Garden, although this section is in poor condition and the visual evidence of burrowing rabbits has no doubt reduced its structural integrity.

Boundaries - Iron Post and Wire Fencing

The approach to Blackness Castle is fenced to the south alongside the esplanade by iron post and wire fencing. The black painted posts look smart and well maintained and add to the character of the setting and approach to the castle (*Figure 2.7.17*). The effect of the open wire is to allow visual permeability, which enhances the open and windswept character of Castle Hill and enables views from the esplanade.


Figure 2.7.17


Figure 2.7.18

Boundaries - Wooden Post & Wire Fencing

Boundaries to the wider PiC area are largely formed by post and wire stock fencing. Whilst the PiC area is not currently grazed, the land outwith the PiC is grazed and so a robust stock proof fence is required. Whilst the fence is open and visually permeable at the southern edge of Castle Hill, the wooden posts do create strong visual lines within the landscape (*Figure 2.7.18*).

An entry in the Conservation History section notes that in 1985 "*Stock proof fence erected around free-standing gable (Dovecot?) on the Castle Hill*" suggesting that the grassland of Castle Hill was grazed rather than mown.

Boundaries - Gates

There are few gates within the PiC area. There is a gated entrance to the esplanade, which is open for vehicles throughout opening hours. There is also a gap to the side


Figure 2.7.19


Figure 2.7.20


Figure 2.7.21


Figure 2.7.22

of the gate which enables open access for pedestrians and cyclists at all times (*Figure 2.7.19*). The green painted metal, five-bar gate is functional and is set within green painted steel posts.

Access from the esplanade onto Castle Hill is via a pair of black iron kissing gates. One gate is located midway along the esplanade, enabling access on the grassland (*Figure 2.7.20*) and the second is located adjacent to the castle courtyard, enabling access via a flight of steps up onto the highest elevations of the character area. Access onto Castle Hill for vehicles is via a black iron six-bar gate, in the same style as the kissing gates (*Figure 2.7.21*).

To the south of the PiC area, the gates entrance to the St Ninian's Way Meadow character area is via a steel seven-bar pedestrian gate, with a pair of similar gates adjacent to enable vehicular access. There are similar gates located within the fence line allowing access into the adjacent grazed fields outwith the PiC boundary (*Figure 2.7.22*).

ACCESS ROADS, TRACKS & PATHS

The hard surfaced roads and paths within the PiC area are largely found within and leading to the castle environs.

Roads & Paths

The esplanade approach to Blackness Castle is surfaced with tarmac and at the time of assessment, appeared to be in good condition. As the road approaches the castle environs, there are double yellow lines to dissuade parking, however these lines do create an urban character, which is detrimental to the setting of the castle (*Figure 2.7.23*).


Figure 2.7.23


Figure 2.7.24

There is one hard surfaced path which connects St Ninian's Way to the entrance to the Hopetoun Estate, via St Ninian's Way Meadow (*Figure 2.7.24*). The tarmac path has a functional, urban character, with little thought in terms of material and detailing to its rural setting, however, as the path forms a part of the NCR 76, the route is very well used and highly valued.

To the immediate south of the Barrack Block wall is an informal, dirt path which connects the kissing gate access off the esplanade with the steps up to the highest elevation of Castle Hill and the eastern foreshore area. Exposed rubble stones create an uneven surface to the path and it is eroding in places. All other paths within the PiC area have evolved as 'desire lines' through the landscape and are either mown through the grassland areas or exist as dirt tracks through the grass. Several paths have been

created through the Castle Hill Quarry vegetation to access the eastern foreshore area and these paths are noted to be badly eroded.

Courtyard Surfaces

Within the castle environs, surfaces are either loose gravel, cobbles, exposed rock or grass. Whilst the majority of the outer courtyard is grass, which is close mown, a large area of gravel provides parking space (*Figure 2.7.25*). There are no demarcations of parking spaces, however the visitor team at the castle direct visitors to ensure parking is orderly.

Exposed rock and rubble within the castle courtyard is difficult to negotiate for some visitors and can be slippery when wet, however the rock greatly enhances the character of the courtyard.


Figure 2.7.25


Figure 2.7.26

Stone steps are located to the south of the Barrack Block wall and enable access up the exposed rock. The steps, which form a part of the John Muir Way, are steep in places and are eroded, however they add to the character of the setting (*Figure 2.7.26*). Within the castle courtyard, the south Stern Tower is reached via rough cut rock steps, however a photograph within the Canmore Blackness Castle collection (c1920) shows a previous set of stone steps at this location (See *Figure 2.8.2* at Section 2.8).

Bridges

There are two bridges within the landscape which enable access over the Black Burn and across the wet grassland of the SSSI. The bridge across the Black Burn is relatively new in construction and disappointingly urban in character. The bridge enables the continuation of the tarmac path along the John Muir Way, however the blue steel handrails are an incongruous feature.

A simple wooded bridge has been constructed to enable access across the wet grassland of the SSSI within the Castle Hill Quarry. The vegetation here is dense and overgrowing the bridge.

FURNITURE

There are very few benches located throughout the PiC area. A simple steel bench with an urban character is located to the north of the Castle Hill character area, positioned to enable views out across Blackness Bay, although there is a steel light located within the viewline (*Figure 2.7.27*).

There are two wooden picnic style benches located to the north east of St Ninian's Way Meadow (*Figure 2.7.28*) and a single wooden bench within the play area. There are also wooden picnic style benches within the outer courtyard of the castle.


Figure 2.7.27


Figure 2.7.28

There are a number of rubbish bins located throughout the PiC area, which are emptied and maintained by Falkirk Council. The bins have an urban character and at the time of assessment, many were covered in visible graffiti.

Information

Information boards are abundant, sensitively located and contain extremely useful and easily accessed information regarding the history of the castle and the ecology of the foreshore and intertidal areas (*Figure 2.7.29*).

Play Area

There is a small play area to the south of St Ninian's Way Meadow, which contains a few pieces of dated equipment (*Figure 2.7.30*). together with some newer elements, all fenced off from the main character area with a wooden fence, with gated access. Outwith the fenced play area is a zip wire located adjacent to the hedgeline (*Figure 2.7.31*).

Figure 2.7.29


Figure 2.7.30


Figure 2.7.31

2.8 Landscape Change

The following section summarises current issues, vulnerabilities and opportunities connected with the management and conservation taking place within the PiC area at Blackness Castle. There are challenges and conflicts for the management of any landscape, let alone one of great historical significance such as the setting of Blackness Castle. The following section sets out the key issues and vulnerabilities which have been identified through consideration of previous surveys, a review of the changes in the landscape over time, an assessment of the current condition of the elements which combine to create the unique landscape at Blackness Castle and from an understanding of the current landscape management which is being carried out.

By reviewing the imagery collection held in the NRHE and accessible through Canmore, it is possible to see how much change has occurred in the landscape setting at Blackness Castle.

Figure 2.8.1

Figure 2.8.2

The majority of the collection relates to the built form of the castle and environs, however there are a few useful images which illustrate the evolution of the landscape over time.

Canmore Image SC01166987 (1929), despite being taken from the south eastern edge of the eastern bay, is useful as it shows how the landscape at the drying green has changed (*Figure 2.8.1*). A building can be seen standing to the east of the Stern Tower adjacent to the wall and appear to be in the position of the former entrance on the eastern wall. There are also a collection of buildings extending out onto the drying green and no trees or scrub vegetation is visible. Vegetation is however visible to the left of the view where the exposed rock face of the quarry can be seen just below the brow of the hill.

The remains of the possible former pier can be seen in front of the castle, extending across the image.

Canmore Image SC00957764 (c1920) illustrates how the castle courtyard was being used and especially the location of a flight of stone steps leading to the Stern Tower (*Figure 2.8.2*). The surface of the courtyard appears to have been made up above the current exposed rock.

Canmore Image SC01166353 (c1940) is a little blurry however it does illustrate how the additional buildings have been removed, leaving the drying green open apart from the small building to the eastern corner (*Figure 2.8.3*). There is a line of scrub developing along the edge of the drying green.

At this point, the sea wall in the east bay has not been built and the vegetation growing at Castle Hill Quarry and atop Castle Hill appears to be similar in character to that seen today. The site of the former chapel appears to be more extensively enclosed by vegetation however and the grassland of Castle Hill appears rough and tussocky, suggesting that it is grazed by cattle or sheep.

Figure 2.8.3

Figure 2.8.4

To the north of Castle Hill, the esplanade has not yet been built. Within the castle courtyard, the grass and gravel which is present today can be clearly seen.

The remains of the possible former pier can be seen in front of the castle, extending towards the Black Ness.

Compare Figure 4.3 with Canmore Image SC01569935 (1971) and there are no major changes in the landscape (*Figure 2.8.4*). The east bay sea wall has been constructed and the adjacent scrub vegetation has developed to cover more of Castle Hill Quarry. The image doesn't extend to the south to see the extent of vegetation atop Castle Hill, however it appears that there is still abundant vegetation present. The grass and gravel in the courtyard appears well maintained and the scrub vegetation along the eastern edge of the drying green appears to have been largely removed. There is no sign of the small building to the eastern corner.

This is a slightly confusing image as Blackness Bay appears to be at high tide, with water lapping close to the short however the former pier in the east bay is fully exposed and the bay and the rocks of the Black Ness appears dry. A possible explanation for this could be that construction work or repair work on the sea wall was taking place at that time and a cofferdam, a watertight enclosure built across the bay from which water would be pumped to expose the intertidal zone, may have been in place out of view, in order to permit the construction work to be carried out without the effects of the tides.

3

3.1 Introduction

Key points of in the HES Statement of Significance (2018) relate to the function of Blackness Castle's role as a political prison through the 'stirring times' of the sixteenth and seventeenth centuries; alterations to its fortifications in line with developments in artillery firepower (particularly the caponier) and as an example of how heavily fortified sites were re-used for military operations in the modern period.

The following update to the existing statement is guided by HES documentation, which includes the Historic Environment Policy Scotland (HEPS) HEPS 1 (P13), which considers the cultural significance of the historic environment (see Section 5.3.1) and *Conservation Plans. A Guide to the Preparation of Conservation Plans*. Historic Scotland (2000). The approach established in *Conservation Principles, Policy and Guidance* (English Heritage 2008; Historic England 2017; chapter 2) has also been used for further guidance. Significance is considered in terms of features' historical, archaeological and architectural and artistic interest.

Historical Interest derives from the way in which past people, events, and aspects of life can be connected through a place to the present. This includes associative, illustrative and representational value, and one or all of these can become enmeshed with the identity of a community. The historical interest of a building or landscape also encompasses, among other things, its rarity, whether it has associated archival documentation, whether it can be seen to characterise a particular period or periods, and its relationship with other monuments, locally or at a national scale.

Archaeological Interest derives from the potential of the site to provide evidence of past human activity, which itself is likely to feed into the historical interest of a site or landscape. Archaeological interest includes above-ground standing structures as well as earthworks and the buried remains more commonly associated archaeological excavation. Any activity that impairs the prospects of a future archaeological investigation harms the research value of a heritage asset and expert advice will often be needed to identify those sensitivities and assess how they can be worked around or how harm may be minimised.

Architectural and Artistic Interest derives from the way in which people draw sensory and intellectual stimulation from a place, building or landscape (or a juxtaposition). This includes not only formal visual and aesthetic qualities arising from architectural design for a particular purpose but more fortuitous relationships of architectural and visual elements arising from the development of a place through time, and aesthetic and emotional values associated with the actions of nature (either real or perceived). Some emotionally-driven reactions to architecture and nature (such as ivy charmingly rooting in ruinous masonry) in causing physical damage may detract from a site's architectural and archaeological significance. Sustaining architectural interest tends to depend on appropriate stewardship to maintain the integrity of a designed concept, be it landscape, architecture, or structure. While artistic or aesthetic values may be related to the age of a place, they may also be amenable to restoration and enhancement.

In line with English Heritage (2008) the following degrees of significance have been adopted, which can be equated with the significance values summarised in *Table 3.1*:

- Outstanding: elements of the place that are of key national or international significance, being among the best or only surviving examples of an important type of monument, or being outstanding representatives of important social or cultural

phenomena (equates with international in *Table 3.1*)

- Considerable: elements that constitute good and representative examples of an important class of monument (or the only example locally), or that have a particular significance through association (although surviving examples may be relatively common on a national scale) or that make major contributions to the overall significance of the monument (equates with national in *Table 3.1*).
- Moderate: elements that contribute to the character and understanding of the place, or that provide a historical or cultural context for features of individually greater significance (equations to regional in *Table 3.1*).
- Low: elements that are of low value in general terms, or have little or no significance in promoting understanding or appreciation of the place, without being actually intrusive (equates to local in *Table 3.1*).
- Uncertain: elements that have potential to be significant (e.g. buried archaeological remains) but where it is not possible to be certain on the basis of the evidence currently available.
- Intrusive: items that detract visually from or that obscure understanding of more significant elements. Recommendations may be made on their removal or on other methods of mitigation.

Importance	Examples of Site Type
International	World Heritage Sites, sites considered to be or nominated for WHS status.
National	Scheduled Monuments (SMs), Grade I, II* and II Listed Buildings (Scottish Categories A, B, C).
Regional/Local Authority	Conservation Areas, Registered Parks and Gardens (Statutory Designated Sites). Canmore/Sites and Monuments Record/Historic Environment Record with or having the potential to contribute to regional research objectives. Note: A site listed on Canmore/SMR/HER does not necessarily reflect that it is of Regional importance.
Local	Sites with a local archaeological value or interest (including Canmore/ Sites and Monuments Record/Historic Environment Record sites of lesser significance) Sites that are so badly damaged that too little remains to justify inclusion into a higher grade.
Low Local	Sites with a low local archaeological value. Sites that are so badly damaged that too little remains to justify inclusion into a higher grade.
Negligible	Sites or features with no significant archaeological value or interest.

Table B3.1 Significance of Heritage Assets

3.2 Assessment of Values

3.2.1 Historical Interest

Considerable: The relationship between Blackness and Linlithgow Palace is of considerable significance, as Blackness was its port from at least the thirteenth century and probably played a role in King Edward I of England's invasion of Scotland. Into the fifteenth and sixteenth centuries, Blackness was established and became a royal castle due in part to the intrigues between the Douglases and Crichtons during and following the minority of James II (Section 6.3). Blackness Castle's use as a political prison during and after this period reflects its proximity to Linlithgow and Edinburgh. There are

several instances when prisoners retained in the castle would have been personally known to the keeper, who was often the Sheriff of Linlithgow and close to the centre of contemporary political power.

The history of Blackness Castle as a fortress is of considerable significance, particularly (and although) it has seen so many phases of re-modelling. Its most significant period in terms of defensive improvements was under James Hamilton of Finniart which was suitable for the new era of gunpowder artillery. These included the unusual caponier in the Spur, of which that at Blackness is one of only two known examples. This was substantially heightened to further defend the castles' entrance during the reign of Mary Queen of Scots.

Moderate: By far the most significant remodelling of Blackness Castle was during the 1870s when site was converted for use as the central ammunition depot for Scotland. This is of moderate historic interest, particularly when considered from the perspective of shipping and naval interests and associated sites on the Firth of Forth. Into the early twentieth century, although the conditions of its re-use during World War One are not known, that the site was clearly defended from both land and sea indicates its importance as a fortification, again within a wider, regional concern with Edinburgh and the Firth of Forth.

3.2.2 Archaeological/Evidential Interest

The potential archaeological significance of Blackness Castle is difficult to establish. Whilst the fact that is has seen so many phases of remodelling are of historical interest, particularly during the late nineteenth and early twentieth centuries, these works were extensive and have destroyed archaeological evidence of earlier phases of use. Despite this, there are areas which may retain important archaeological deposits.

Considerable: several burials have been recorded from the PiC and its environs, seemingly focussed on Castle Hill. One dates to the Early Bronze Age, another to the sixth or seventh century AD with the remainder undated but possibly buried on a pre-Christian orientation. Given this, it is possible that St Ninians, situated on a ness projecting into the Forth estuary, may be an early Chapel site, possibly associated with the Southern Picts. Whilst the Chapel Hill promontory has been substantially disturbed by Civil War and World War One fortifications, it is possible that archaeological evidence of early activity (including burials) may remain. It is possible that the enclosure identified by geophysical survey (OA43), which is not visible on the ground or Lidar, could derive from this period.

Also of potentially considerable archaeological interest is the structure (OA44) identified by geophysical survey (Rose Geophysics 2022), which appears to underly the nineteenth-century building (OA8) against the castle's eastern curtain wall. This sits directly below the original entrance to the castle (superseded by the Spur entrance in the sixteenth century) and may represent the piers of a former drawbridged entrance across the original ditch (OA2).

Moderate: of moderate archaeological interest is upstanding evidence of World War One fortifications on the Castle Hill promontory. The configuration of walls, hollows and earthworks (OA25, 27, 34) surrounding the exposed remains of St Ninian's (whilst often referred to as a Civil War redoubt), correspond closely to plans on an annotated map dated 1916. A quarry, earthwork features and a building platform (OA24, 26, 33). on the east side of the promontory may or may not be associated. Further south are

what may be sub-surface remains of World War One or Two fortifications and a gun emplacement (OA28) These are represented on the ground and geophysical survey as a large circular depression in the southern field, from where there are extensive views east and west along the Forth estuary. There is also evidence for a possible small building visible on Lidar and as an earthwork (OA21) to the south of the dovecote overlooking the eastern bay. Also of moderate archaeological interest are the possible gardens or allotments (OA20) seemingly centred on the dovecote in the southern field; these are clearly identifiable on Lidar and the 2010 geophysical survey and some boundaries are visible on the ground. These partly overlie a seemingly earlier enclosure (OA43) identified by the 2022 geophysical survey which is not visible on Lidar.

Moderate: of moderate potential significance are the subsurface remains of the ammunition depot/military buildings on the east lawn. Although nothing is discernible on the ground, the footings of the buildings, apparently thoroughly dismantled, have been identified by the geophysical survey (Rose Geophysics 2022). One of these (OA8) appears to have been a very substantial building.

Uncertain: Within and in the immediate environs of the Medieval castle, extensive landscaping works have taken place. In many areas these works have reduced ground levels to bedrock. Limited archaeological investigations have taken place within the castle walls which have revealed few deposits of archaeological value. Outside the castle walls the rock cut ditch (OA1) was infilled in the late nineteenth century but may contain deposits of archaeological value. Landscaping works of the same period to create the east lawn may contain evidence for earlier periods of the castle's use. Extensive landscaping works seem also to have been undertaken by the Office of Works' including site clearance and the demolition of nineteenth century buildings. All of these phases of large-scale remodelling would have created significant demolition deposits, the location of which is not known but could have been used to backfill existing features, or added to coastal defences.

3.2.3 Aesthetic/Artistic Interest

Moderate: Blackness Castle is of moderate aesthetic and artistic interest. Its immediate setting within a rocky estuarine landscape and Blackness Bay are pleasant and rural. Views to the Forth Bridge and the remainder of the Forth estuary are dominated by industrialised vistas. Whilst this sets the castle within a modern landscape appropriate to its more recent history, its setting lacks, the often rugged mountainous scenery in which many Scottish Castles are, or are perceived to be set.

The oft-cited 'ship that never sailed' epithet is frequently used to describe Blackness Castle and as described in the SOS (HES 2018), this is instantly understandable when viewed from its down-river seaward side. Its defensive and military aspect, and its continued use and remodelling has however meant it there was less eighteenth and nineteenth century artistic interest than in the than some of the more romantically ruinous Scottish Medieval castles. Indeed, some depictions of this date added ruinous buildings to the castle's landscape. The Office of Works' clearance activity post World War One was specifically designed to re-instate the 'medieval' monument; whilst these works were far and above what may be deemed appropriate in the present day, they have left the site in an aesthetically presentable (albeit sanitised) condition.

The nineteenth-century barrack buildings, in addition to the concrete and cast iron pier are also of moderate aesthetic and artistic interest. The austere military feel of the Baronial-style Officer's Quarters, barracks and east lawn parade ground, set in

conjunction with the medieval castle, are reminiscent of Edinburgh Castle, with which although lacking in scale and complexity, Blackness has an intriguing, shared history.

3.2.4 Communal Interest

The communal value of the landscape at Blackness Castle is highly significant. The landscape is valued as a recreational resource, with visitors and local families enjoying the combination of open rolling grassland and the accessible foreshore areas. The John Muir Way passes through the PiC area, providing both visual and physical access to the historical and natural resource for the longer distance path users.

The use of Blackness Castle as a filming location is well known and this alone attracts many visitors. Blackness Castle is associated with the 1990 film Hamlet, the 1996 film The Bruce, the 2019 film Mary Queen of Scots and the television series Outlander.

3.2.5 Ecological & Arboricultural Interest

The landscape within the PiC area supports a range of habitats of regionally, nationally and internationally significant species.

A series of common and widespread bat species were recorded during the data search. The buildings provide roosting potential and could support roosts of high conservation significance (i.e. maternity/ hibernation roosts or roosts of rare species.) The site is assessed as providing metropolitan/county significance for bats.

The site provides value for a number of red and amber listed birds on the BoCC list and is of high value for wintering and breeding birds. The presence of the adjacent intertidal habitats makes this site of high value. The site is assessed as providing potential national/international significance for notable birds.

The site provides sett building opportunities for badger and the species are anticipated to be present locally.

The intertidal habitats associated with the site are potentially important to marine mammals. The adjacent SSSI and Blackness Bay are of known value to marine mammals, and the intertidal habitat could have linked value. No detailed surveys have been undertaken and therefore the significance is unknown.

European Hedgehog are anticipated to be present within the site and are a Species of Principal Importance.

The habitats within the site may support notable vascular plants, including nationally and locally scarce species. The significance is unknown until detailed vegetation surveys are undertaken. The habitats within the site may support notable invertebrate assemblages, notably mature trees and species-rich grasslands.

The significance of the arboricultural resource is limited at Blackness Castle. The scrub and hedgerow vegetation provide valuable habitat for wildlife, however aesthetically the appeal to visitors for this type of habitat is low. Mature trees are largely absent and the landscape is characterised by wind blown hawthorn. The one mature tree of significance is an ash which stands atop the Castle Hill Quarry.

4

4.1 Introduction

The following section summarises current issues, vulnerabilities and opportunities connected with the management and conservation taking place within the PiC area at Blackness Castle. There are challenges and conflicts for the management of any landscape, let alone one of great historical significance such as the setting of Blackness Castle. The following section sets out the key issues and vulnerabilities which have been identified through consideration of previous surveys, a review of the changes in the landscape over time, an assessment of the current condition of the elements which combine to create the unique landscape at Blackness Castle and from an understanding of the current landscape management which is being carried out.

4.2 Ecological Considerations

Following the review of habitats & species across the PiC area, the following observations have been made regarding current and future issues which may have an impact upon the ecology of the landscape and opportunities for future management and enhancement are considered.

Feature/Habitat/Species	Current Issues & Opportunities for Management
DESIGNATED SITES	
Firth of Forth SPA, Ramsar and SSSI	Current Issues: The 2003 site condition monitoring assessment of the designated site found the feature to be in an unfavourable condition, with bird numbers declining. However, it is understood that there may be multiple reasons for the decline in numbers.
	Opportunities for Management: It is recommended that consultation is sought with the management officer of the designated site to understand the Conservation Objectives and main threats of the wider designated site and discuss opportunities to assist in achieving the objectives. Discussions should also include recommended long-term management of intertidal habitat.
	Current Issues: As the site is often used for recreational purposes, including dog walkers, there is a risk of current activities negatively impacting sensitive wintering birds. Currently footpaths are adjacent to the shore line and people will walk on the mud flats at low tide
	Opportunities for Management: It is recommended that local walkers are encouraged to not allow their dogs of the lead and avoid walking on the mud flats/adjacent to the shore line during certain periods over winter to minimise disturbance.
GRASSLAND	
Neutral Semi Improved Grassland	Current Issues: In the absence of a detailed species list, grassland within the site is considered to be neutral semi-improved grassland. It is likely that areas of the grassland on site will qualify as the UK Priority habitat 'Lowland Meadow'.
	Opportunities for Management: As evidence of species-richness was identified and referenced, it is recommended that a detailed botanical survey is undertaken at the appropriate time of year (May-August) to highlight areas of the site which would benefit from further management. As a minimum all grassland within the site should be subject to a NVC survey at the appropriate time of year.
	Current Issues: All the grassland within the landscape setting is outwith the management control of HES and is currently maintained with a 'one size fits all' mowing regime for a 'recreational' grassland.
	Opportunities for Management: It is recommended that a Grassland Management Plan is produced in consultation with Falkirk Council, to provide a holistic approach to the management of all grassland areas, according to species type, character area location,below ground archaeology, land-use and to explore the potential to create

Feature/Habitat/Species	Current Issues & Opportunities for Management
	and protect connective habitat to enhance biodiversity within the area.
Marshy Grassland	Current Issues: The area of marshy grassland in is not considered to qualify as UK Priority Habitat 'Purple Moor Grass and Rush Pasture', as such it is recommended that this habitat is retained and enhanced.
	Opportunities for Management: Further botanical survey, comprising an NVC survey, at the appropriate time of year, will detail further management recommendations for this habitat. This habitat is managed by Falkirk Council and any further botanical survey, which will outline opportunities and detailed management, should be undertaken in consultation with the council. It is recommended that periodical (5 years) removal of bramble scrub encroaching on this habitat should be undertaken.
SPECIES	
Bats	Current Issues: The majority of buildings were assessed as having bat roosting potential. It is understood that no bat surveys have been completed at the site to determine presence or absence of the species.
	Opportunities for Management: It is recommended that further surveys in the form of both summer and hibernation are completed to understand the sites usage for roosting bats within the buildings and the sites value. The habitats of highest potential value for commuting and foraging bats include the unmanaged habitats which are anticipated to attach a range of invertebrate prey. The habitat management should aim to minimise use of insecticides and increase the invertebrate population which in turn will benefit bats.
Birds - Wintering	Current Issues: The PiC area falls within a statutory designated site.
	Opportunities for Management: It is recommended that further wintering bird surveys are completed to assess the sites importance for wintering birds and inform long-term management and habitat creation.
Birds - Breeding	Current Issues: Nesting birds are anticipated to utilise the unmanaged grassland, scrub and hedgerows.
	Opportunities for Management: It is recommended that further breeding bird surveys are completed (see Section 5) to assess the site importance to the local bird population to inform long-term management and habitat creation. Notably, buildings and trees within the site may provide opportunities for nesting birds notably swift, swallows, owls, peregrine and corvid. As such building and vegetation management should be undertaken with consideration to nesting birds. A general recommendation for nesting birds is to provide more sheltered areas of dense vegetation with access by the public and dogs restricted. Any vegetation management should be undertaken outside of the breeding bird season (March to September, inclusive). If this is not possible, a suitably qualified ecologist should undertake a nesting bird check no more than 48 hours prior to removal. If nesting activity is observed, the nest(s) should be left in situ until the young have fledged. A suitable buffer will be maintained and determined by the ecologist.
Amphibians	Current Issues: Great crested newts were deemed unlikely to be present on site and no further consideration for the species is required. However, there is a possibility that common amphibians such as common toad may be present on site.
	Opportunities for Management: It is recommended that consideration of amphibian presence during habitat management is considered. Any debris is to be cleared by hand, and any common amphibians located moved carefully, by hand, to outside of the impacted area.

Feature/Habitat/Species	Current Issues & Opportunities for Management
	Creating a pond specifically for ecology will provide an important resource for flora and fauna. This includes amphibians, bats, bird, and invertebrates. Shallow pools should be included within the design to be of benefit for basking invertebrates and tadpoles. Proposed planting should include a variation of native species, including emergent, submerged and marginal vegetation. Hibernacula could also be created to provide a shelter for varying species, and somewhere to hibernate. The design of the features should follow guidance within the *Protected Species Advice For Developers Great Crested Newt* (NatureScot) and *The Great Crested Newt Mitigation Guidelines* (English Nature 2001). The management should include the long-term management of the pond and hibernacula.
Terrestrial Mammals	Current Issues: European Hedgehog are anticipated to be present within the site and are a Species of Principal Importance.
	Opportunities for Management: During habitat management, any areas of dense vegetation should first be carefully hand searched to check for the species. If identified during management, should be relocated carefully by hand to a location away from the working area. If any injured either species are located they should be taken to a local vets.
Invertebrates	Current Issues: The habitats within the site may support notable invertebrate assemblages, notably mature trees and species-rich grasslands. Invertebrate species can be very sensitive to management changes.
	Opportunities for Management: The recommended NVC survey will assist in identifying in what suitable foodplants are present and inform relevant management practices.

4.3 Future Issues & Vulnerabilities

Issues may affect the landscape at Blackness Castle as we see it today and vulnerabilities which may occur, through a cessation or change of a management practice in the future, are considered in the following section. It should be noted that whilst the appropriate management of these elements is predominantly taking place at this time, the cessation of this practice in the future, may be considered to be a vulnerability for the landscape.

The landscape setting is an important historic asset, popular for visitors for both the outstanding views towards the castle and the Forth Bridges to the east, but also for the extensive green open space.

The condition of the elements which combine to create the landscape setting requires regular monitoring – both in terms of the condition of the grassland, trees, shrubs and woodland, the historic buildings and structures and the archaeological resource. Landscapes are in a constant state of evolution, constantly changing and can rapidly deteriorate if not frequently maintained. High standards are vitally important and should be evident at all times, indicating the status and significance of the landscape, whilst low standards of maintenance can reflect badly on the custodian of the landscape.

- Any future changes in the ownership, entrusted care boundary or management responsibility, that could lead to a change in the recommended management philosophy, which could have a detrimental effect upon the character of the landscape setting of Blackness Castle;
- Climate change and predicted rising sea levels which may cause vulnerability to the built fabric of the castle and the delicate habitats and species within the intertidal

and foreshore zone;

- The landscape setting to the south of Blackness Castle is subservient to the built fabric of the castle and perhaps due to the management lease with Falkirk Council, is an almost forgotten resource within the PiC boundary.
- A failure to understand and manage the sensitivity and significance of any above and below-ground archaeology may compromise their long term survival and state of preservation;
- Maintenance responsibility has implications for resources and long-term programming and economy of scale have cost benefits for any maintenance scheme. It is essential that adequate capital provision is made for appropriate repair and maintenance of all elements which combine to create the landscape and is planned for repair, enhancement and conservation projects each year;
- A decline in the condition and health of trees, scrub and hedgerow species, due to a cessation of a management practice or any decline attributed to pests and diseases, such as Chalara ash dieback. If disease becomes firmly established, it could significantly impact upon the character of the PiC area and reduce the significance of the arboricultural and ecological resource;
- A failure to recruit the next generation of trees and maintain a varied age structure, which represents all stages in the life cycle of trees, will result in a decline in the quality and character of the landscape;
- A decline in the condition of the built fabric would have a significant impact upon the character and quality of the landscape setting;
- Repair programmes should follow best practice guidance and be undertaken by appropriately qualified specialists. Inappropriate specification or poor workmanship can damage sensitive historic fabric and accelerate rather than prevent decay;
- Protected species - it is understood that several of the buildings, built features and trees provide habitats for wildlife, bats in particular. The presence of any protected species has the potential to affect the timing or nature of any proposed repair or restoration works; and
- Use of chemicals – herbicides, pesticides and fertilisers should be carefully controlled and used strictly in accordance with a site specific pesticide and chemical policy. If this is not available, the *Herbicide Handbook. Guidance on the use of Herbicides on Nature Conservation Sites* (2003) English Nature, should be used as a default guidance document. There is currently no similar guidance published by NatureScot. Application of chemicals should always be undertaken by staff or contractors with current certification of competence and with particular care taken close to the streams and any other water features.

4.4 Key Issues & Vulnerabilities

The following observations have been made on the current issues and vulnerabilities for the landscape setting, which may have an impact upon the significance of the asset or could affect the significance in the future.

4.4.1 Visitor Access & Parking

Visitor access and parking is currently having an impact upon the landscape setting. The high number of vehicles passing through Blackness Village is having an impact upon local residents. Parking within the castle's outer courtyard has a visual impact upon the character of the historic resource and overflow parking upon the courtyard grass has long term implications for ground compaction in an area with potential below ground archaeology.

4.4.2 Intertidal & Foreshore Zone

The intertidal & foreshore character area is rarely acknowledged as being a part of the PiC boundary and the management of the character area appears to be overlooked.

The balance of the conservation needs of the intertidal and foreshore zone versus visitor needs and expectations is currently compromised. The condition of this zone is in decline and wintering bird populations are at risk as high numbers of visitors continue to enjoy the PiC.

4.4.3 Landscape Management Guardianship

Control of the day to day management and maintenance of the landscape does not lie wholly with HES due to the current lease with Falkirk Council, leading to a management philosophy which is centred upon land-use priorities and maintaining an amenity recreational grassland. The character of the landscape within these areas is one of creeping 'urbanisation', which is eroding the landscape character, in terms of poor design, use of materials and 'amenity' style maintenance.

4.4.4 Archaeological Resource

From an archaeological perspective, considerable damage was done to most archaeologically-sensitive areas of the Blackness Castle PiC during the late nineteenth and early twentieth centuries. The 1870s remodelling of the site cleaned out and infilled the Medieval ditch (only barely perceptible on the 2022 geophysical survey), and any remaining Medieval and Post-medieval features (such as the remains of the Governor's Gardens and ancillary buildings). The east lawn, upon which many buildings were constructed, was created from an embayment, the reclaimed land retained by the present east wall. Geophysical survey of this area has suggested, however, that evidence for the medieval drawbridge piers (OA44) may survive below a nineteenth-century building (OA8). Within the castle's curtain walls, in addition to alterations to the buildings, the creation of the Powder Store seems to have involved cleaning internal surfaces of the inner courtyard down to bedrock. Following the First World War, the clearance activities undertaken by the Ministry of Works cleared most of the ammunition depot buildings and remodelled some of the structural additions to the castle; the scale of these works has not been recorded in detail, although is perceptible in the building fabric and through small-scale excavations (eg CSG 2014; HES 2018). Given the level of disturbance it is possible that finds from all periods may be mixed into spoil and backfill of later features.

A similar set of circumstances exists on Castle Hill and in its environs. The archaeological evidence suggests that the hill has been significant since prehistory and into the medieval and later periods, as a spiritual place but one also as a defensible one. Although there remains some confusion as regards its location on the historic mapping, the present-day building remains on Castle Hill have been interpreted as the medieval St Ninian's Chapel (OA23), which may itself have been built on an earlier sacred site. The building is thought to have been destroyed in the seventeenth century during an attack on the castle, from land and sea, by the English. Into the twentieth century Castle Hill was again used defensively, with a complex of walls and trenches used as a gun emplacement, excavations thereof revealing multi-period human burial remains. Whilst the defences which appear on the War Office maps of 1916 can be attributed to this period, the complex of walls and earthworks on the hilltop (OA25, 26, 27, 34), all under rough vegetation cover, could relate to any, and all, periods of its use.

Given the known history of Castle Hill, it is likely that previously undisturbed areas exist, possibly beneath earthworks and constructed features. Any such areas, particularly on top and at the margins of Castle Hill, have a reasonable likelihood of encountering human burials. Appended to the lower, south end of the hill, the enclosure (OA43) identified by the 2022 geophysical survey (Fig 5) seems an obvious candidate. It is also possible that burials have been identified during previous works, remained unreported

and been re-interred in the same location. Given the level of disturbance it is possible that finds from all periods may be mixed into spoil and backfill of later features.
Additional and continuing disturbance of parts of the Castle Hill promontory and southern field is being caused by the burrowing of rabbits and moles. Footpath erosion also appears to be a continuing issue, particularly on the promontory where there are numerous grass-covered wall foundations and earthworks (OA25, 26, 27, 34) adjacent to St Ninian's (OA23).

The scheduling encompasses the castle and its grounds and Castle Hill to immediately south of the promontory, including the ruinous dovecote but not the recently identified enclosures (OA30 and 43). As per scheduling legislation, all sub-surface interventions should be undertaken under appropriate archaeological supervision. The scheduled area specifically excludes the listed officer's quarters (OA12) and barracks block (OA13) which are subject to listed buildings legislation. The unlisted ancillary buildings (OA16) and the above-ground elements of modern boundaries, railings and walkways and services are also exempt.

Whilst the Medieval/Post-medieval pier (OA35) to the east of the present example and the nineteenth century sea wall (OA36) in the east bay are outside the presently scheduled area, they are of equivalent significance and should be treated as if scheduled. That said, both are inter-tidal and subject to continuous water erosion.

Outside the scheduled area, sites of unknown significance have been recorded to the south of the Castle Hill promontory, most clearly visible on Lidar and discerned by geophysical survey (eg OA28, 29, 30, 31, 42, 43; Appendix A). Damage to these features should be avoided and their significance should be taken into consideration in future conservation management planning. Damage can be caused by everyday wear and tear, including foot erosion, agriculture and minor works not requiring planning permission. The Cultural Resources Team (CRT) should be consulted on all works within the PiC that involve any ground-breaking and they will make an assessment of the potential impacts of the proposed works.

Tree rooting can cause damage to subsurface archaeological features, and alongside the growth of ivy and other climbers, can be detrimental to extant structures, and should be regularly monitored. Erosion scars (including footpaths, burrowing and water run-off) should be regularly monitored, and if necessary, fenced off to allow vegetation to be re-established. Good relations should be maintained with all stakeholders, including the local community, to ensure conservation controls are maintained and any chance finds/erosion issues reported.

4.5 Issues, & Vulnerabilities by Character Area

The following issues, constraints and vulnerabilities have been identified for each of the character areas.

Issues and Vulnerabilities
Castle Environs and Esplanade
• Car parking dominates the castle courtyard area with the parked vehicles visible from the esplanade and Castle Hill. At busy times, parking cars on the mown grass can cause health and safety issues and parked vehicles may lead to excessive compaction of the grass, leading to loss of sward and drainage issues. Visitors often choose to park outwith the PiC boundary,

Issues and Vulnerabilities
leading to greater congestion in Blackness Village; • Access for visitors arriving by vehicle is via the narrow lanes of Blackness Village, which become congested at peak periods of the day. There is no turning circle so any vehicles arriving once the main gate is closed have to reverse back into the village to turn around; • The surface of the castle's inner courtyard comprises exposed rock and cobbles, presenting an uneven surface that is difficult to access and not accessible for all; • Vulnerabilities to the above and below ground archaeological resource; • There are no longer steps to access the Stern Tower, instead visitors have to climb a 'rock staircase' which is uneven; • There are visible signs that visitors to the castle are climbing over the eastern sea wall to access the Black Ness and the foreshore area, causing wear and tear of the ground beneath the wall; • The low sea wall which defines the edge of the Drying Green is in a poor condition, due to coastal erosion and the effects of burrowing rabbits beneath the canopy of the shrubs which grown along the wall. In places the wall has lost all structural integrity and is falling onto the intertidal and foreshore character area; • A significant proportion of the shrubs and trees growing along the eastern edge of the Drying Green display browsing damage at lower levels, most likely caused by rabbits; • The Drying Green is an under used space which is not currently accessible for visitors to the castle; • Tree 4299 is a mature goat willow. It is the only mature tree found within the courtyard. This multi-stemmed specimen displays significant basal decay.
Castle Hill
• Landscape managed by Falkirk Council; • Vulnerabilities to the above and below ground archaeological resource; • Excessive burrowing by rabbits may compromise any below ground archaeology; • Evidence of browsing damage on the trees and shrubs, most likely caused by rabbits; • Wear and tear on dirt paths and stone steps; • No recruitment of the next generation of trees; • Few seating opportunities;
Castle Hill Quarry
• Landscape managed by Falkirk Council; • Vulnerabilities to the above and below ground archaeological resource; • Desire line paths between the Castle Hill character area and the Intertidal & Foreshore character area are wearing away the surface; • Rope swing attached to the mature ash tree will compromise the structural integrity of the branch and put the long term health and longevity of the ash, which is otherwise in good health, in jeopardy; • Little strategic management of the scrub vegetation which may affect the health and condition of the SSSI; • No seating opportunities; • No information provided about the status & management of the SSSI; • The wooden footbridge is in poor condition and largely overgrown with vegetation;
St Ninian's Way Recreation Area
• Landscape managed by Falkirk Council; • Vulnerabilities to the above and below ground archaeological resource; • The hedgerows which define this character area are largely species poor, with limited unmanaged field margin. • The young, mostly newly planted, common ash specimens are rapidly succumbing to the effects of ash die-back disease (*Hymenoscyphus fraxineus*); • Predominantly urban park in character, which is gradually changing the character and ultimately the setting of the castle;

Issues and Vulnerabilities
• Play area contains some dated equipment with few seating opportunities; • Boundary hedgerows are becoming gappy and grown out in places; • Tree shelters are still in-situ past their useful lifespan; • Few seating opportunities; • Municipal character to the bridge over the Black Burn; • Grass is wearing away at the corner edges of the tarmac path as path users cut corners;
Intertidal and Foreshore
• Threat of rising sea levels which may affect the viability of the intertidal habitats; • Disturbance of wintering birds by dog walkers and visitors to the foreshore; • Foreshore grassland managed by Falkirk Council; • Grassland damaged by picnicking and BBQs; • No seating opportunities on the foreshore;

4.6 Key Opportunities

The key opportunities have been identified during the desktop research and site assessment and are presented below for consideration.

4.5.1 Parking

The access and parking of vehicles should be reviewed as an urgent priority, with vehicles moved from the immediate curtilage of the castle, to ensure a more meaningful visitor arrival experience to the site. By relocating parked vehicles away from the castle environs, the landscape setting and below ground archaeology will be conserved and visitor health and safety improved.

All visitor traffic should be directed from outwith the congested esplanade and centre village area to a more favourable location. A traffic management plan and an options appraisal would need to be undertaken, taking into account the significances noted within this LCMP, such as the landscape setting of the castle, proximity to national and international nature designations and provision of recreation and community value.

4.5.2 Landscape Maintenance for Biodiversity Gain

Having less intensive landscape maintenance, such as grass cutting, in key areas would have positive impacts upon the ecological and biological resource, both within and outwith the PiC area. By using the maintenance resource in key areas identified in a maintenance zoning plan, which require more intensive interventions, positive benefits may be realised elsewhere for ecosystem services such as the extension and protection of ecological habitat networks, carbon capture and increase species diversity etc. A grassland management strategy, written in consultation with Falkirk Council, is a first phase of understanding the potential for the grassland resource to be improved for biodiversity.

The John Muir Way Greening Study, written by RaeburnFarquharBowen in December 2021, which was commissioned by the Green Action Trust on behalf of John Muir Way partners, had the aims "*to explore the potential for ecological and placemaking improvements to magnify the impact of the trail, particularly where this can also address environmental inequities in communities along the route*". By enhancing biodiversity and habitat connectivity, the quality and functionality of greenspaces will also increase. Opportunities identified in the greening study developed by the green action trust.

The extent and quality of the green corridor along the John Muir Way was assessed. The route within the PiC area was considered to be an Underperforming Green Route,

which has existing greenspace, with potential for significant improvement in biodiversity and character or Not Green Route, with no scope for greening and/or no adequate segregation from traffic.

The report identified the diversification of grassland as a key opportunity, with the potential to extend meadow areas and reduced the mowing routine.

4.5.3 The Firth of Forth SSSI, SPA and Ramsar within the PiC Boundary

Undertake consultation with NatureScot regarding the optimum management of the SSSI and undertake regular monitoring and recording of habitats and species. Consider removing the SSSI area from the lease with Falkirk Council.

4.5.4 Detailed Measured Survey

In order to facilitate analysis of the walls and earthworks on Castle Hill, it is recommended that detailed measured survey of the upstanding remains take place. This could establish the layout of the World War One emplacement and provide interpretation of the likelihood that any of these earthworks or stone-built structures pre-date the twentieth century. It may also be possible, through a combination of archaeology and archival and/or oral history to establish whether the site was used during World War Two.

4.5.5 Small-scale Excavation of Castle Hill

On the grassland immediately south of Castle Hill are what appear to be two enclosures, the larger (OA30) is visible on Lidar and appears to overlay a smaller example (OA43) only identified by the 2022 geophysical survey (Fig 5). The larger example may be related to the sixteenth-century dovecote (OA21) which appears central to its eastern end. It has been suggested that the smaller, probably earlier example could be a burial ground associated with St Ninian's (Rose Geophysics 2022). The character, condition and stratigraphy of the earthwork/boundary elements of these features could be tested by small-scale excavation.

4.5.6 The Drying Green

Consider allowing access for visitors to the Drying Green, primarily for bird watching opportunities. Investigate the possibility of building a bird hide, focused upon the Black Ness, to take enable visitors to observe the range of wintering birds using the Intertidal zone.

4.5.7 The Drawbridge

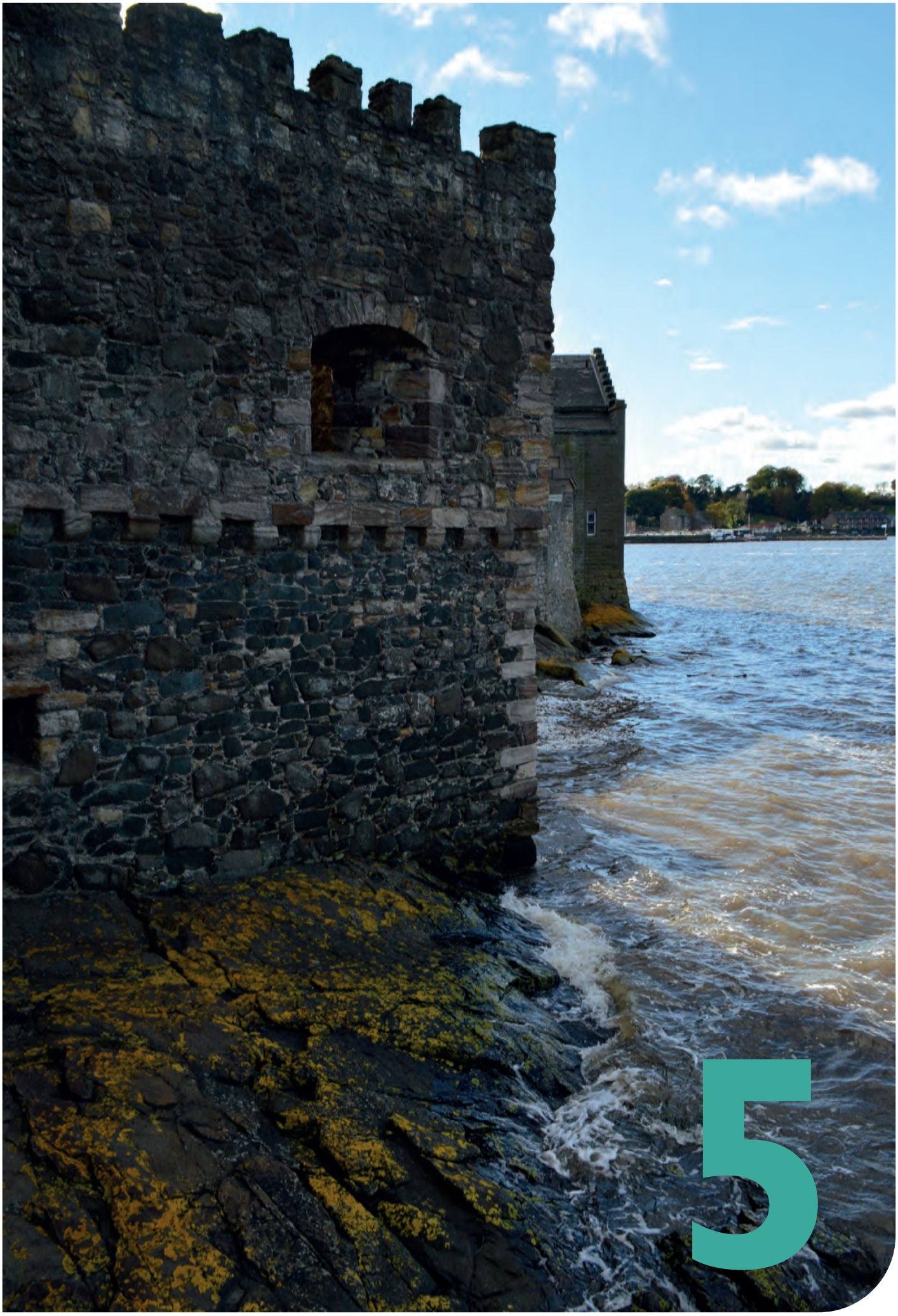
Although situated in the scheduled area to the east of the castle walls, the possible drawbridge pier elements (OA44) of its former medieval entrance could be examined by excavation. These were identified by the 2022 geophysical survey as high-resistance features within and smaller than the footprint of the nineteenth century building (OA8).

4.5.8 Photogrammetric survey & Analysis

Photogrammetric survey and analysis of the castle walls and to provide a baseline condition survey for future maintenance. Photogrammetric survey from a UAV could be considered as this technology also has the capability to creating 3D models which could be used in interpretation and display; the use of digital media could help to increase accessibility to the castle.

4.5.9 Community Engagement

Establish and maintain links with the local community through regular engagement and consultation. Any Community Activity Plans which are developed should always be used to inform future management decisions, wherever possible.



5

5.1 Future Management Approach

With a thorough understanding of the uniquely inherent qualities and characteristics of the landscape resource at Blackness Castle, together with an assessment of the significance of the landscape and the subsequent consideration of issues, vulnerabilities and opportunities which may affect the landscape in the future, a series of policies and objectives have emerged and are presented in the following section.

5.2 Vision

With an understanding of the value and significance of the landscape resource at Blackness Castle, it is recommended that a 'spirit of place' inspired vision, helps to inform and guide the future restoration, management and conservation of the unique landscape at Blackness. The vision has the overarching aim of protecting, conserving and enhancing the unique qualities and character of the landscape setting so that it may be enjoyed by current and future generations.

Key Aims and Objectives

Taking into consideration the significance of the landscape, and an understanding of the current management and conservation of the landscape, consultation with the teams at HES, it is suggested that the overarching approach to the future protection, restoration, conservation and management is:

To manage and conserve the landscape resource based upon a comprehensive understanding of the development and significance of the historic landscape, so that features are revealed and studied, protected, restored, conserved and celebrated for current and future generations to enjoy;

To conserve and maintain the setting of Blackness Castle as a significant historic landscape, in which the elements such as foreshore setting, trees, vernacular buildings and structures etc are of particular merit in their own right, as well as combining to form a superb historic landscape;

To protect, and manage the landscape with a philosophy which is appropriate for the setting and beneficial to the overall quality and character of such an important historic landscape;

To sensitively enhance the visitor experience and engage with visitors about the landscape setting, encouraging wider exploration of the landscape beyond the castle;

To protect, manage and conserve the arboricultural resource and to instigate the recruitment of the next generation of trees in specific areas, along with the replacement of any lost, significant tree as necessary;

Ensure that current and future management teams have an understanding of the significance and importance of the landscape setting and are aware of the key aims and objectives established to guide current and future management, restoration and conservation; and

To use, wherever possible, environmentally sustainable methods of repair and maintenance and minimising environmental impacts by sourcing local materials. Investigate the use of renewable energy sources.

5.3 Underpinning Management

The following underpinning principles address the aims and objectives for the future management of the PiC landscape and are based upon a thorough understanding of place; of the uniquely inherent qualities and characteristics of the landscape setting of Doune Castle, an assessment of the significance of the heritage asset and the identification of the issues and vulnerabilities which may affect the landscape in the future.

The underpinning principles are presented under five strategic headings, which are then expanded to provide specific and targeted management principles as necessary:

A PROTECT
B CONSERVE
C FABRIC
D PRESENT
E PARTNERSHIP

Conservation Principles

Conservation Principles for the Properties in the care of Scottish Ministers (September 2015) sets out the approach that Historic Environment Scotland will take in conserving properties in care and states that:

> *"These principles should be clearly regarded as a standard for the work that Historic Environment Scotland carries out at its own hand rather than conservation principles for the wider historic environment".*

The Conservation Principles set out a framework for the sustainable management of the properties in care and put conservation at the heart of all operations.

1. *The purpose of conservation is to perpetuate cultural significance.*
2. *The cultural significance and the history of the monument's evolution will be understood before interventions are considered.*
3. *Our approach to dealing with climate change will be pragmatic and informed.*
4. *We will respect context and authenticity and avoid dislocation of historic fabric from its setting.*
5. *Conservation takes precedence.*
6. *We will ensure the availability of the appropriate knowledge, skills and materials to fulfil our conservation purpose.*
7. *Our approach will be respectful of those who have gone before and retain that authenticity.*
8. *Conservation interventions will be recorded and archived to help those who come after us, and we will share our experiences.*

It is with a thorough understanding of the landscape and with the Conservation Principles, providing a 'golden thread', which underpins best practice management, the following underpinning principles have been developed.

People, Place and Landscape
A position statement from Scottish Natural Heritage and Historic Environment Scotland

People, Place and Landscape (September 2019) sets out the vision and approach of Scottish Natural Heritage (SNH) and HES for managing change in Scotland's landscapes in response to climate change. The position statement sets out a series of five principles, which represent the approach:

1. ***All landscapes*** – *Every landscape is important because everyone has a right to live in and enjoy the benefits of vibrant surroundings.*
2. ***Shared landscapes*** – *Scotland's landscapes are a common asset and everyone has rights and responsibilities for looking after them.*
3. ***Your landscapes*** – *People and communities should always be involved in decisions that shape their landscapes.*
4. ***Understanding landscapes*** – *Decisions need to be based on understanding and awareness of both the cultural and natural dimensions of our landscapes.*
5. ***Dynamic landscapes*** – *Landscapes will continue to change, but change needs to be informed and managed to ensure they remain resilient.*

The shared vision is:

> *"All Scotland's landscapes are vibrant and resilient. They realise their potential to inspire and benefit everyone. They are positively managed as a vital asset in tackling climate change. They continue to provide a strong sense of place and identity, connecting the past with the present and people with nature, and fostering wellbeing and prosperity".*

With a commitment to update annually, the accompanying two-year Action Plan sets out the main areas of work required to deliver the vision through:

- *Talking about landscape and its range of benefits.*
- *Engaging more local communities and stakeholders to help shape future landscape change.*
- *Strengthening the role of landscape approaches in planning management and design of built development and land uses.*

Climate Action Plan, Historic Environment Scotland

Climate Action Plan (February 2020) sets out HES's approach as the Scottish Government declared a climate emergency in April 2019. Set out over a five year period, the action plan sets out a programme of work, including how HES will change operations and transforming the way that PiC are protected. The plan proposes action across seven themes, identified as key areas for the work on climate change, that span the operations and responsibilities of HES, with work is centred on four core activity strands - Innovation, Partnerships, People and Training, which underpin all seven of the main themes and facilitate delivery.

- *Climate Impacts and Adaptation*
- *Energy and Carbon Management*
- *Circular Economy*
- *Sustainable Tourism*
- *Sustainable Procurement*
- *Biodiversity and Landscape*
- *Sustainable Travel*

With the approach set out in People, Place and Landscape, the Climate Action Plan sets out a series of actions to support and improve biodiversity and landscape, including:

- *Develop Landscape Management Plans for HES Properties in Care*

PROTECTION

5.3.1 The Historic Environment Policy for Scotland (HEPS)

All plans, programmes, polices and strategies prepared for Scotland should be considered through the lens of the Historic Environment Policy for Scotland (HEPS). This policy sets out a series of principles and policies for the recognition, care and sustainable management of the historic environment, and promotes a greater understanding and enjoyment of the historic environment. It supports the delivery of the vision and aims of Our Place in Time and takes into account principles that the Scottish and UK Governments have agreed to in international conventions on cultural heritage and landscape.

HEP1 Decisions affecting any part of the historic environment should be informed by an inclusive understanding of its breadth and cultural significance.

HEP2 Decisions affecting the historic environment should ensure that its understanding and enjoyment as well as its benefits are secured for present and future generations.

HEP3 Plans, programmes, policies and strategies, and the allocation of resources, should be approached in a way that protects and promotes the historic environment. If detrimental impact on the historic environment is unavoidable, it should be minimised. Steps should be taken to demonstrate that alternatives have been explored, and mitigation measures should be put in place

HEP4 Changes to specific assets and their context should be managed in a way that protects the historic environment. Opportunities for enhancement should be identified where appropriate. If detrimental impact on the historic environment is unavoidable, it should be minimised. Steps should be taken to demonstrate that alternatives have been explored, and mitigation measures should be put in place.

HEP5 Decisions affecting the historic environment should contribute to the sustainable development of communities and places.

HEP6 Decisions affecting the historic environment should be informed by an inclusive understanding of the potential consequences for people and communities. Decision-making processes should be collaborative, open, transparent and easy to understand.

National planning policy for the management of the historic assets and places is provided by Scottish Planning Policy and the National Planning Framework. These highlight that the planning system should:

- promote the care and protection of the designated and non-designated historic environment (including individual assets, related settings and the wider cultural landscape) and its contribution to sense of place, cultural identity, social well-being, economic growth, civic participation and lifelong learning; and

- enable positive change in the historic environment which is informed by a clear understanding of the importance of the heritage assets affected and ensure their future use. Change should be sensitively managed to avoid or minimise adverse impacts on the fabric and setting of the asset, and ensure that its special characteristics are protected, conserved or enhanced.

National Planning Policy also identifies various policy objectives for the management of different historic assets and places. Interpretation and application of these policies

is supported by *Managing Change Guidance Notes* published by Historic Environment Scotland.

Planning policy for the historic environment is implemented by Local Development Plans as outlined below.

Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997

The Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997 provides the legislative framework for managing heritage assets. Listing is the process that identifies, designates and provides statutory protection for buildings of 'special architectural or historic interest', as set out in the 1997 and listed buildings are managed through the planning system, through listed building consent. The protection of trees in Doune is only offered under Conservations area legislation and there are no specific of group Tree Protection Orders (TPOs) designated on site.

Local Policy

Formally adopted in August 2020, the Falkirk Local Development Plan 2 (LDP2) is the statutory document which guides future development in the Falkirk Council area for the period 2020-2040. Of relevance to the landscape within the PiC at Blackness Castle is:

Historic Environment

PE06 Archaeological Sites

1. Scheduled Monuments and other identified nationally important archaeological resources will be preserved in situ, and within an appropriate setting. Developments which have an adverse effect on scheduled monuments or the integrity of their setting will not be permitted unless there are exceptional circumstances;

2. All other archaeological resources will be preserved in situ wherever feasible. The Council will weigh the significance of any impacts on archaeological resources and their settings against other economic, social and environmental merits of the development proposals in the determination of planning applications; and

3. Developers may be requested to supply a report of an archaeological evaluation prior to determination of the planning application. Where the case for preservation does not prevail, the developer shall be required to make appropriate and satisfactory provision for archaeological excavation, recording, analysis and publication, in advance of development.

PE07 Listed Buildings

The Council supports the sustainable re-use and management of the historic built environment. Accordingly:

1. The sensitive restoration and re-use of listed buildings will be supported;

2. Proposals to alter or extend a listed building should not adversely affect the character, appearance, or special architectural or historic interest of the building;

3. Development proposals within the curtilage or affecting the setting of a listed building should not adversely affect the character, appearance, special architectural or historic interest of the building, or its setting;

4. Proposals for the total or substantial demolition of a listed building will only be supported in exceptional circumstances where it is demonstrated beyond reasonable doubt that:

- *The existing building is no longer of special interest;*
- *The existing building is incapable of physical repair and re-use, as shown by the submission and verification of a thorough structural condition report;*
- *The costs of repair and re-use are such that it is not economically viable; or*
- *The demolition of the building is essential for the delivery of significant economic benefits for the local or wider community.*

5. Proposals affecting listed buildings or their setting should conform with SG12 'Listed Buildings and Unlisted Properties in Conservation Areas'.

PE13 Green and Blue Network

1.The Council will support the delivery of the Central Scotland Green Network in the Falkirk area, and Falkirk Greenspace: A Strategy for Our Green Network, through the development and enhancement of a multi-functional network of green and blue components and corridors as set out in the Spatial Strategy;
2.Within the green and blue network the key priorities of biodiversity, outdoor access, landscape character enhancement, climate change, placemaking and serving disadvantaged communities will be promoted, with particular reference to the opportunities detailed in the Proposals and Opportunities Schedule; and
3.New development should contribute to the green and blue network, where appropriate, through the integration of green infrastructure into masterplans or through enabling opportunities for green and blue network improvement on adjacent land, in accordance with SG05 'Green Infrastructure and New Development'.

PE16 Protection of Open Space

1. Development which will result in the loss of open space will only be permitted where:

- *There is no adverse effect on the character or appearance of the area, particularly through the loss of amenity space planned as an integral part of a development;*
- *There will be no significant adverse effect on the overall recreational provision in the local area, taking account of the Council's open space standards (as defined within the Open Space Strategy), or the loss will be compensated for by qualitative improvements to other open space in the local area commensurate with its recreational value. Guidance on how loss of open space should be compensated is set out in Supplementary Guidance SG05 'Green Infrastructure and New Development';*
- *The area is not of significant ecological value; and*
- *Connectivity within, and functionality of, the wider green network is not threatened and public access routes in or adjacent to the open space will be safeguarded.*

PE18 Landscape

1.The Council will seek to protect and enhance landscape character and enhance landscape quality throughout the Council area in accordance with Supplementary Guidance SG09 'Landscape Character Assessment and Landscape Designations';
2.Development within Local Landscape Areas should be designed to minimise any adverse effects on the landscape character and scenic interest for which the area is designated ; and
3.Development proposals which are likely to have significant landscape and visual effects must be accompanied by a landscape and visual assessment demonstrating that, with appropriate mitigation, a satisfactory landscape fit will be achieved.

PE19 Biodiversity and Geodiversity

The Council will protect and enhance habitats and species of importance, and will promote biodiversity and geodiversity through the planning process. Accordingly:
1. Development likely to have a significant effect on Natura 2000 sites (including Special Protection Areas, Special Areas of Conservation, and Ramsar Sites) will be subject to an appropriate assessment. Qualifying interests of a Natura 2000 site may not be confined to the boundary of a designated site. Where an assessment is unable to conclude that a development will not adversely affect the integrity of the site, development will only be permitted where there are no alternative solutions, there are imperative reasons of overriding public interest, including of a social or economic nature and compensatory measures are provided to ensure that the overall coherence of the Natura network is protected. Where the site has been designated for a European priority habitat or species, consent can only be issued in such cases where the reasons for overriding public interest relate to human health, public safety, beneficial consequences of primary importance for the environment or for other reasons subject to the opinion of the European Commission (via Scottish Ministers);
2.Development affecting Sites of Special Scientific Interest will not be permitted unless it can be demonstrated that the overall objectives of the designation and the overall integrity of the

designated area would not be compromised, or any significant adverse effects are clearly outweighed by social, environmental or economic benefits of national importance;
3.Development likely to have an adverse effect on European protected species; a species listed in Schedules 5, 5A, and 8 of the Wildlife and Countryside Act 1981 (as amended); or badgers as per section 10 of the Protection of Badgers Act 1992, will only be permitted where the applicant can demonstrate that a species licence is likely to be granted;
4.Development affecting Local Nature Reserves, Wildlife Sites, Sites of Importance for Nature Conservation and Geodiversity Sites (as identified on the Proposals Map and in Supplementary Guidance SG08 'Local Nature Conservation and Geodiversity Sites'), and national and local priority habitats and species (as identified in the Falkirk Local Biodiversity Action Plan) will not be permitted unless it can be demonstrated that the overall integrity of the site, local habitat or local species population will not be compromised, or any adverse effects are clearly outweighed by social or economic benefits of substantial local importance;
5.Where development is to be approved which could adversely affect any site, habitat or species of significant local nature conservation value, the Council will require appropriate mitigating meas-ures to conserve and secure future management of the relevant natural heritage interest. Where habitat loss or fragmentation is unavoidable, the creation of replacement habitat to compensate for any negative impacts will be required, along with provision for its future management. Where adverse impacts on locally important species are unavoidable, measures to protect and enhance the wider local population of that species will be required; and
6.All development proposals should conform to Supplementary Guidance SG07 'Biodiversity and Development'.

PE20 Trees, Woodland and Hedgerows

1.There will be a presumption against the removal of safe and healthy trees, non-commercial woodlands or hedgerows, where such removal would be detrimental to landscape, local amenity, nature conservation, recreation or historic environment interests, or erosion and natural flood management. Criteria in the Scottish Government's policy on Control of Woodland Removal will be used to determine the acceptability of woodland removal;
4.Development which is likely to affect trees should comply with Supplementary Guidance SG10 'Trees and Development'. A Tree Survey and Tree Constraints Plan will be required to inform the design, together with a Tree Protection Plan. Where development is permitted which will involve the loss of trees or hedgerows of amenity value, the Council will normally require replacement planting on site comprising similar species and numbers to the trees and hedgerows removed;
7.There will be a preference for the use of locally native species in new and replacement planting schemes, or other species where these are integral to an historic landscape.

PE22 The Water Environment

The Council recognises the importance of the water environment within the Council area in terms of its landscape, ecological, recreational and land drainage functions. Accordingly:

1.The Council will support the development of measures identified within the Forth Area River Basin Management Plan designed to improve the ecological status of the water environment;
2.Opportunities to improve the water environment by: opening out previously culverted watercourses; removing redundant water engineering installations; and restoring the natural course of watercourses should be exploited where possible;
3.There will be a general presumption against development which would have a detrimental effect on the integrity and water quality of aquatic and riparian ecosystems, or the recreational amenity of the water environment, or which would lead to deterioration of the ecological status of any element of the water environment. Development proposals adjacent to a waterbody should provide for an appropriate undeveloped and suitably landscaped riparian corridor to avoid such impacts;

4.There will be a general presumption against any unnecessary engineering works in the water environment including new culverts, bridges, watercourse diversions, bank modifications or dams; and

5.The water environment will be promoted as a recreational resource, (subject to the requirements of Policy PE19 (1) for Natura 2000 Sites), with existing riparian access safeguarded and additional opportunities for ecological enhancement, access and recreation encouraged where compatible with nature conservation objectives.

PE23 Marine Planning and the Coastal Zone

In assessing proposals affecting the coastal zone, the Council will seek to:

1.Support the policies of the National Marine Plan and the Regional Marine Plan, when prepared;

2.Protect designated nature conservation sites in accordance with Policy PE19;

3.Protect and enhance the water environment and promote its recreational potential in accordance with Policy PE22; and

4.Take account of flood risk in accordance with Policy PE24.

The Climate Change (Scotland) Act 2009

The Climate Change (Scotland) Act 2009 committed Scotland to a 42% reduction in greenhouse gases by 2020 and 80% reduction by 2050. The Act requires Local Authorities to act sustainably, contribute to carbon emissions reduction targets and to climate change adaptation. Recently this target has been further strengthened to committing Scotland to have net zero emissions by 2045.

In August 2019, Falkirk Council declared a Climate Emergency and "*agreed to push towards increasing our efforts to reduce our carbon emissions to net zero by 2030 while making Grangemouth our first carbon neutral town*".....*The council is currently looking at all the ways it can respond meaningfully to this challenge and working with Scottish Government and local partners we hope to devise a strategic approach which sees emissions from all stakeholders within our area reduce, including rivals individuals and large businesses to help make Falkirk climate resilient and a 'greener' place to live and play*".

5.3.2 Consents

Ensure that Scheduled Monument Consent (SMC) and other statutory consents are obtained prior to any repair, restoration or consolidation works carried out either as part of routine maintenance or specific conservation projects, on the buildings, structures, the landscape setting, infrastructure and furniture. Repair programmes should follow best practice guidelines, as inappropriate specification or poor workmanship can damage sensitive historic buildings and accelerate rather than prevent decay.

Listed Building Consent

Alterations to listed buildings, carried out during repair, restoration or consolidation work, must be agreed with the relevant authorities and statutory bodies, prior to submitting an application for statutory approval. Listed Building Consent may also be required for alterations to buildings listed by virtue of their curtilage, if they physically attach to or physically impact upon the building.

Felling Licence

Tree felling on non-residential land is controlled by the need to obtain a Felling Licence from Scottish Forestry before felling more than five cubic metres of timber (or two cubic metres if the timber is sold) per three month period, subject to various exemptions. Certain exemptions may exist and checks should be made with Scottish Forestry Central Conservancy..

European Protected Species

Trees and woodland, scrub and some buildings and structures may provide habitat for a wide range of species, some of which are protected. Most nesting birds and their nests

are protected by the Wildlife and Countryside Act 1981 (as amended).

All bats and their roosts are protected by the Wildlife and Countryside Act 1981 (as amended) and gain additional protection under the Conservation of Habitats and Species Regulations 2010.

Birds listed under Schedule 1 of the Wildlife and Countryside Act 1981 and all bat species are also protected from disturbance when using nesting or roosting sites. The castle and other buildings are know to support bats.

Prior to repair, restoration or conservation work being carried out where there is a known population of a protected species, a suitably qualified ecological consultant should be appointed to confirm the presence of the protected species and offer guidance on the precautions which should be taken to minimise any disruption or disturbance.

5.3.3 Ownership and Boundary

In the event of a change to the ownership/PiC boundary, in whole or part, the suitability of the future owners/managers should be governed by a sympathetic understanding of the importance of the historic assets and the conservation needs of the assets and their settings. Necessary funds for routine maintenance and longer term conservation should be secured.

5.3.4 Security

Review security arrangements and access to the landscape and its built structures on a regular basis and investigate measures to deter unwanted access and engage with the community if anti-social situations arise.

CONSERVE

5.3.5 Historic Landscape and Fabric

The following sections set out the key policies and objectives for the principal elements in the landscape. These key policies and objectives will form an overarching framework for future management and will inform the subsequent practices. Management of the landscape should recognise and be informed by a thorough understanding of the importance and significance of the chronology of its development, its setting, the individual elements which combine to create its character and the landscape context.

Conserve and maintain the PiC study area as a historic landscape, in which the elements which create the natural and man-made fabric are of particular merit in their own right, as well as combining to form a superb landscape.

Conserve and enhance the landscape in order to provide an appropriate setting for the listed and non-listed buildings and structures.

5.3.6 Landscape Character and Land Use

Recognise, celebrate and illustrate the importance and significance of the historic landscape and how it relates to the wider landscape character of the coastal farmland of the firth of Forth.

5.3.7 Archaeological Resource

The overriding policy is to conserve and protect archaeological features insitu. Ensure that the CRT are involved in all works from early planning phases through to project delivery.

Management operations and visitor access should respect the importance and sensitivity of the archaeology where visible and buried features occur.

Ensure that the below ground monument is maintained and enhanced through sensitive sward management and to avoid erosion of buried archaeology through restricting visitor access where necessary and managing burrowing animals, especially in sensitive area and areas prone to coastal erosion. Damage can be caused by everyday wear and tear, including foot erosion, maintenance and minor works not requiring planning permission or scheduled monument consent. Erosion scars (including footpaths, burrowing, water runoff) should be regularly monitored, and if necessary, fenced off to allow vegetation to be re-established.

Interventions within the scheduled area require Scheduled Monument Consent (SMC) unless subject to Section 17. Good relations should be maintained with all stakeholders, including the local community, to ensure conservation controls are maintained and any chance finds/erosion issues reported.

5.3.8 Ecological Resource

Recommendations for further survey to inform an Ecological Baseline for the PiC landscape at Blackness Castle and/or potential management objectives to enhance the ecological resource are outlined below, and based on the PEA.

Invertebrates

The habitats within the site may support notable invertebrate assemblages, notably mature trees and species-rich grasslands. Invertebrate species can be very sensitive to management changes. An NVC survey is recommended, which will assist in identifying in what suitable food plants are present and inform relevant management practices.

Amphibians

Great crested newts were deemed unlikely to be present on site and no further consideration for the species is required. However, there is a possibility that common amphibians such as common toad may be present on site. It is recommended that consideration of amphibian presence during habitat management is considered. Any debris is to be cleared by hand, and any common amphibians located moved carefully, by hand, to outside of the impacted area.

Breeding Birds

Nesting birds are anticipated to utilise the unmanaged grassland, scrub and hedgerows .Any vegetation management should be undertaken outside of the breeding bird season (March to September, inclusive). If this is not possible, a suitably qualified ecologist should undertake a nesting bird check no more than 48 hours prior to removal. If nesting activity is observed, the nest(s) should be left in situ until the young have fledged. A suitable buffer will be maintained and determined by the ecologist.

Wildfowl, Waders & Wintering Birds

As the sites falls within a statutory designated site, designated due to the presence of wintering bird species, it is recommended that further wintering bird surveys are completed to assess the sites importance for wintering birds, ascertain if locations within the PiC landscape are being used by these species for resting, foraging and nesting opportunities and subsequently inform long-term management and habitat creation.

The PiC landscape is often used for recreational purposes, including dog walkers, there is a risk of current activities negatively impacting sensitive wintering birds, especially within the intertidal zone. Currently footpaths are adjacent to the shore line and people will walk on the mud flats at low tide. It is recommended that local walkers are encouraged to not allow their dogs of the lead and avoid walking on the mud flats/ adjacent to the shore line during certain periods over winter to minimise disturbance.

Bats

The majority of buildings were assessed as having bat roosting potential and habitats provide opportunities for roosting, foraging and commuting bats. It is recommended that further surveys in the form of both summer and hibernation are completed to understand the sites usage for roosting bats within the buildings and the PiC landscape's value as a suitable habitat to support bat species.

Slow-flying species such as brown long-eared, which are known to be in the local area, are sensitive to lighting. Any lighting around the buildings, either existing or proposed and including temporary lighting for exhibition or event use, should follow the guidance outlined in the Institute for Lighting Engineers document "*Guidance for the Reduction of Obtrusive Lighting*" (2005) and BCT's "*Bats and Artificial Lighting in the UK*" (2018).

The following recommendations should be considered, to minimise impacts of lighting. The recommendations are as follows:

- Keep site lighting to minimum levels;
- Luminaries should lack UV elements and preferably LED lighting with a warm white light should be used over cool white light (ideally <2700Kelvin);
- Lighting should feature peak wavelengths greater than 550nm;
- Light placement should be downward facing to prevent excess horizontal or vertical light spill;
- The use of integrated fittings such as cowls, shields, louvres and hoods, that effectively contain light spill from unintended areas;
- The use of hard landscaping features to block light and create dark corridors;
- Avoid illuminating habitats of value;
- Use of timed security lights should be set on motion-sensors and using short, 1-minute timers, to minimise light use;
- Column heights of lighting can be considered to minimise light spill.

Terrestrial Mammals

European Hedgehog are anticipated to be present within the site and are a Species of Principal Importance. During habitat management, any areas of dense vegetation should first be carefully hand searched to check for the species. If identified during management, should be relocated carefully by hand to a location away from the working area. If any injured either species are located they should be taken to a local vets.

Non-Native Invasive Species

No non-native invasive species were identified during the survey. However multiple records were recorded within the area and it is possible specimens may have not been recorded during the survey. The recommended NVC survey will confirm absence or presence of non-native invasive species and inform relevant mitigation and long-term management.

It is recommended that should non-native invasive species be identified, a management plan should be prepared for the eradication of these species on the site, or control where this is not possible. The plan should include a method statement for chemical control which should include precautions for use of herbicides near watercourses. The risk of spread of these species further within or beyond the site should be prevented, and is at increased risk due to access by public and dogs.

"The responsibility for NNS lies with the landowner or land manager. There is no legal requirement for a landowner to control established non-native species but they are expected to take reasonable steps to prevent non-native species from escaping or spreading into the wild"

(SEPA - https://www.sepa.org.uk/environment/biodiversity/invasive-non-native-species/invasive-non-native-species).

5.3.9 Standards of Repair, Restoration and Conservation

The PiC landscape contains a scheduled monument and listed buildings, set within their landscape settings. As such, all restoration, repair and management work should be of an exemplar standard. High standards for repair, restoration and maintenance are recommended, by which is meant that works should comply with expert advice (where appropriate), use contractors with the necessary experience and skills, follow recognised standards of workmanship and use the most appropriate materials in the correct way. Repair, restoration, conservation and development work should be carried out in accordance with the most appropriate style and technique, so that the integrity, character and significance of the historic landscape is retained and enhanced. All interventions within the scheduled area require Scheduled Monument Consent. (SMC).

Ensure that adequate capital provision is allocated to ensure the correct standards of restoration, repair and conservation within the gardens and pleasure grounds.

FABRIC

5.3.10 Arboricultural Resource Management

The *Tree Management Report relating to Blackness Castle* (March 2021) by Informed Tree Services Ltd, which was carried out as a visual tree assessment (VTA Stage 1, Mattheck and Breloer 94) has been used to inform an understanding of the arboricultural resource and the appropriate management required to maintain it.

The PiC landscape contains very few large mature trees and the arboricultural resource largely comprises scrub and hedgerows, of which hawthorn is the predominant species.

'*The open site is well frequented by walkers but few trees display a stature that would pose a significant risk of harm, even should they fail*'. HES has a duty of care to inspect the trees, determine the risk and manage the trees. The risk needs to be balanced against the many benefits that they provide to the setting of the historic site, the wider landscape and biodiversity. It is recommended that a tree risk policy is developed for the site unless HES already has a corporate policy for this. The policy would set out requirements for tree inspection and management, and describe how the tension between tree risk and benefits would be balanced. Advice is present in the National Tree Safety Group document '*Common sense risk management of trees*'.

The Informed Tree Services report recommends that the site is subject to inspection by a professional arboriculturist. *"Assuming retention, re-inspection on a regular basis, by a competent person, would help meet the landowner's duty of care, (Occupier's Liability (Scotland) Act 1960). Again, assuming retention, all trees should be re-inspected within 60 months; on or before the 11th March 2026. This should be supplemented by "walk-over" inspections by staff members every 12 months and after significant weather events; mainly after high winds and heavy falls of snow"*[1]. This recommendation for tree inspection is considered appropriate.

Courses and certification on basic tree inspection are provided by LANTRA and it is recommended that staff carrying out non-professional walkover inspections hold this qualification and keep a log of the inspections.

1- *Tree Management Report, Relating To: Blackness Castle*, (March 2021) Informed Tree Services Ltd. Ref: Hes/Ts/11.03.21

The majority of tree failures occur during storms, although not exclusively so. It is recommended that HES investigate developing a policy to close access to areas of

higher risk during periods above a threshold wind speed. Where works are required, it is recommended that they are carried out in accordance with BS3998:2010 '*Tree Work – Recommendations*'. It is recommended that wherever possible works are carried out between September and February in order to avoid impacting on nesting birds. Advice should be sought

from an ecologist before carrying out works to mature trees containing cavities and splits that may support roosting bats.

Several trees have significant potential to provide habitat for protected species, birds and bats, for example. Should the removal of any trees with predictable habitat potential be required, expert advice should be sought from a suitably qualified conservationist. Destruction of wildlife habitat may be a contravention of "The Nature Conservation (Scotland) Act 2004".

No active birds' nest must be removed or disturbed without an appropriate licence issued by NatureScot. The reckless destruction of birds' nests may be a criminal offence.

Residues should be removed from site and ideally recycled/utilised. Wood-chips should not be piled at the base of retained trees. All derelict tree guards and stakes should be removed from site as soon as practicable'[2].

Management of Trees in Grassland

Manage trees in grassland areas to enhance the historic landscape and ecological resource, to the highest standards. The protection and management of the trees alongside the requirements of the PiC users should be carefully balanced to ensure that the sward is maintained and any damage caused to the trees by browsing animals such as deer and rabbits is minimized. It was noted that there is a significant population of rabbits, with burrows and evidence of bark stripping in many younger tree & shrub species. It is essential that tree and stock guards are used effectively to protect young trees from soil compaction, browsing damage and bark stripping.

Tree Planting

There are limited opportunities for tree planting across the PiC landscape. Replacement planting, where trees and shrubs have failed, is recommended and alternative species should be considered for the failing ash trees across the site. Gean, blackthorn, hawthorn, elderberry, guelder rose and beech should be considered a possible species for establishment at Blackness Castle.

It should not be assumed, however, that tree planting, within the scheduled area, will be acceptable. Any tree planting proposals would need to be carefully considered, with significant archaeological input, even within areas previously planted within the scheduled areas.

Chalara ash dieback disease

Chalara ash dieback disease established within the PiC landscape. The disease has only been known to be present in the UK from 2012 and the impacts cannot be accurately predicted, but it is likely to kill or seriously damage a large number of ash trees. Younger trees appear more vulnerable and it is likely that some of the planted semi-mature trees will require removal and replacement in the next ten years. This

2- *Tree Management Report, Relating To: Blackness Castle*, (March 2021) Informed Tree Services Ltd. Ref: Hes/Ts/11.03.21

should be monitored.

Some of these trees with the disease will be at risk of dropping major deadwood as the disease progresses. The progress of *chalara* on the site and its implications for tree health and safety should be monitored as part of the tree inspection programme. Where the disease is present, it is recommended that infected trees are retained (where compatible with public safety and landscape objectives) as there is likely to be genetic variation in disease resistance, and some infected trees may show greater resistance to the disease which will allow them to survive in the long term and produce regeneration with increased resistance to the disease.

Deadwood Strategy

Deadwood should be retained across the PiC study area and it is recommended that a zoning strategy is developed so that deadwood is removed from areas where there is a high visitor footfall to less visually accessible areas. The benefits of deadwood retention across the landscape are:

Invertebrates	Keep habitat for Saproxylic invertebrates, which rely on deadwood for their survival. Deadwood is important for the larval stages of many insects.
Great Crested Newt	Utilise deadwood for hibernacula and invertebrates as a food source.
Bats (standing deadwood)	Utilise rot holes etc for roosts.
Mammals	Feed on invertebrates/larvae within deadwood. Provision of deadwood habitat along riverbank can encourage otter.
Reptiles	Use as hibernacula.
Birds	Feeding on invertebrates.
Soil Composition	Soil layer is built up with decaying wood, biomass.
Pollinators	Several pollinators are able to overwinter in deadwood.
Pest Control	Invertebrates can act as a natural pest control.
Fungi	Rare and scarce deadwood fungi.

5.3.11 Ecological Habitat Resource

Opportunities to conserve, enhance and effectively manage the existing and future ecological habitat network across the PiC landscape should be given management priority, wherever possible. Management priorities should aim to maintain and enhance a rich mosaic of habitats to encourage species diversity and longevity. Enhancement of habitats for invertebrates and pollinating insects will have the long term benefits of increasing habitat value for birds, which in turn, help to keep pests under control. Ensure that the requirements of protected and notable species such as bats are met during any maintenance and restoration work.

Neutral Semi-Improved & Marshy Grassland

Grassland is a major habitat across the PiC landscape, varying in composition and management. Management of the neutral, semi-improved grassland areas should be carried out primarily to maximise biodiversity values and also to ensure that the fabric and aesthetic appeal of the landscape is maintained.

It is likely that areas of the grassland on site will qualify as the UK Priority habitat 'Lowland Meadow'. As evidence of species-richness was identified and referenced, it is recommended that a detailed botanical survey is undertaken at the appropriate time of year (May-August) to highlight areas of the site which would benefit from further

management. As a minimum all grassland within the site should be subject to a NVC survey at the appropriate time of year and a Grassland Management Plan produced to inform management priorities and objectives.
Further botanical survey of the marshy grassland areas will outline opportunities and detailed management prescriptions; however, it is recommended that periodical (5 years) removal of bramble scrub encroaching on this habitat should be undertaken.

The use of fertilizers, pesticide and/or herbicide on all areas of grassland is discouraged.

Improved Grassland

Improved grassland is predominantly found around the Blackness Castle courtyard and is maintained as close mown. Beyond the courtyard, in character area 2 - Castle Hill, character area 4 - St Ninian's Way Recreation Area and character area 5 - Intertidal and Foreshore, the grassland is regularly mown by Falkirk Council. Whilst these areas are considered to be open green space and valued for recreation, the grassland is largely species poor and the benefits to biodiversity are missed.

Where possible, areas of improved and species-poor grassland should be allowed to develop a more diverse, herb-rich sward. Plant native grassland herbs to provide a higher nectar and pollen resource for invertebrates.

The Site Management Statement for the Firth of Forth SSSI (2011) notes that "*Botanically rich grasslands containing both nationally and locally rare plant species can be found all around the Forth. These grasslands vary from those on and behind sand dunes to those found on clifftops and between neutral and calcium-rich soil types. Maritime cliff grassland and lowland neutral grassland are notified features; both are currently considered to be in unfavourable condition, as is the vascular plant assemblage feature. These grasslands are in poor condition for a number of reasons, including lack of grazing, scrub encroachment, and a lack of certain desirable indicator species present*".

By reducing mowing regimes and allowing a more her-rich sward to develop, the grassland at Blackness Castle could make a significant contribution to the overall condition of grassland along the Firth of Forth.

Consideration should be given to working in partnership with Falkirk Council to develop a mowing strategy, which identifies areas where potential low intensity maintenance could be carried out; leaving the grass longer and allowing natural processes to change the character and composition of the grass over time. The mowing method should be determined according to the ecological interest for each area. A zoning plan, to show the hierarchy of importance for mowing could help reduce mowing regimes. Areas of high amenity grassland, should have a low input management, with herbicides and fertilisers avoided, and grass cuttings removed, to reduce nutrients in the soil to allow for a more diverse mix of herbs to develop within the sward.

Where possible, ensure that natural, uncut corridors are maintained within the grassland, as refuges for invertebrates and amphibians in the ornamental garden areas. Where heavy visitor footfall is likely, sensitively mown paths through the grassland can help to direct wayfinding and avoid excessive trampling over vulnerable areas.

Grassland Event Management

Ensure that the repair of damaged grassed area, from visitor footfall or following events, has prompt attention, with soil decompaction techniques and reseeding carried out where necessary. If there is a need to import topsoil, the quality of the topsoil should

be in accordance with industry standards and of local provenance. The use of a sterile topsoil should be used in any archaeologically sensitive areas.

When Blackness Castle and the PiC study area is used for filming, a comprehensive specification for the repair and reinstatement of the grassland should be provided to the film company prior to commencement of filming operations. Regular inspection and recording of any damage should be carried out and any repair and reinstatement works on the scheduled monument must be carried out under an archaeological watching brief.

5.3.12 Intertidal & Foreshore Zone

The intertidal and foreshore zone comprises invertebrate-rich intertidal mud, sand and shingle and the dramatic rocky outcrops of the Blackness, which provide feeding grounds for nationally and internationally important numbers of wintering and migratory birds. There are easy access points for the public out onto this zone and the Blackness Sailing Club use Blackness Bay for the mooring of dinghies.

The Site Management Statement for the Firth of Forth SSSI (2011) notes that "*Informal recreation such as bait digging, dog walking and birdwatching take place, with heavier recreational use of areas such as John Muir Country Park, Aberlady Bay and Torry Bay Local Nature Reserves and coastal footpaths (e.g. Fife Coastal Footpath). Most informal recreation on the mudflats is fairly low-key since the substrates are unsuitable, but recreational pressure is higher on the rocky and sandy shores and on the grasslands, particularly in the outer Firth. Recreational use of the Firth itself takes place, for example sailing, sight-seeing cruises and jet skiing.*"

Objectives for Management of the Firth of Forth SSSI include:

1. To maintain the populations of birds for which the Firth of Forth is internationally and/or nationally important;
2. To maintain the area in a favourable condition to allow for the continued feeding, resting, roosting and breeding of all the key bird species which use the area;
3. To maintain and enhance the habitat, botanical and invertebrate interest along the Forth;
4. To maintain the geological features of interest and access to them; and
5. Encourage recreational enjoyment around the Firth of Forth whilst recognising the need to protect the nature conservation interest

Intertidal habitats at Blackness Castle may potentially be lost in the future through "coastal squeeze", if rising sea levels are restricted by the stone retaining walls which will prevent the intertidal habitat formation inward. Pollution is also a threat to the habitat so future car parking within the PiC study area should be carefully considered to avoid any polluted run off entering the bay.

Disturbance of the overwintering species should be avoided and the use of the bay for recreation may cause conflicts. Seasonally timed interpretation and the use of specials knowledgeable guides at peak times may encourage visitor interest in the overwintering special and promote a sense of stewardship, value and protection from the public. Where necessary, consider directing the public to less sensitive areas of the intertidal and foreshore zone.

5.3.13 Built Features

Built features, such as retaining walls, are an important element of man-made fabric and

make a significant contribution both to the landscape setting at Blackness Castle and to the structural integrity of the castle environs. The policy should be to maintain all built features to the highest standard of physical repair and visual quality, with appropriate uses relating to visitor enjoyment and engagement and management requirements. There should be a presumption against the erection of new, modern buildings, especially to house equipment and the use should always be made of redundant buildings and spaces.

Programme a formal regime of condition and/or structural inspections, for built features and structures within the landscape and action the recommendations in order of priority.

5.3.14 Boundaries and Gates

The presence of retaining walls, estate railings and decorative iron gates defines the quality and character of the landscape and sets the standard for the sense of arrival along the esplanade for visitors. All boundary fences and gates should be maintained to a consistent highest standard, reflecting a positive visual image of care and attention to detail. Routine inspections of the estate railing, post and wire fencing and gates should occur on a regular basis, with checks to ensure structural integrity is maintained. Any defects or damage should be repaired as soon as possible, as part of the regular maintenance regime.

Where damage to decorative iron gates or estate railing occurs, repair and restoration work should be undertaken by a suitably qualified craftsman and should be like for like to preserve the historic character and appearance. Where new gates are installed, consideration should be given to commissioning new and bespoke gates which assimilate with the existing character of on-site ironwork.

Gateway surfaces should be monitored for signs of wear and surface repairs carried out as a part of the regular maintenance regime, to ensure that each gateway is presented to a high standard.

5.3.15 Roads and Paths

The condition of the path network reflects the quality and character of the landscape. All paths, however informal, should be maintained to the highest standards of repair to ensure that areas are accessible for everyone throughout the year. Routine maintenance of path surfaces to the highest standards of repair will ensure that visitors are less likely to stray from the paths in order to proceed with a clear footing.

5.3.16 Furniture and Signage

Ensure that sufficient benches and seating opportunities are provided in areas furthers from the castle environs, so that opportunities for resting are available, yet visitors feel able to explore further into the landscape. However ensue that key views towards the castle do not become cluttered by benches.

All benches should be to a 'house style' and be consistently maintained to the highest standards of repair so that a positive visual contribution is made to the character of the landscape. Ensure that the surface beneath each bench is well maintained, free from slip and trip hazards.

Ensure that sufficient, yet discreet signage is provided, to facilitate visitor enjoyment, understanding and exploration, without compromising significant elements of landscape. All signage should be to the 'house style'.

Where rubbish bins are provided, review their location and consider whether viewlines are impeded. Relocate any rubbish bins found to be located in key viewlines.

PRESENT

5.3.17 Visitor Access and Facilities

The PiC landscape at Blackness Castle should be welcoming, accessible and safe for all visitors, ensuring that the landscape setting of the castle is maintained to the highest standards, to enhance the character and quality of the setting and sense of arrival for visitors. Visitors should be able to see and appreciate the landscape, as a legible and dramatic setting for the castle. Whilst the landscape should appear subservient to the castle, the position of the castle upon the Blackness should be visible from both land and water.

Visitor facilities should be provided where necessary, however they should be sympathetic to and subservient to the character of the historic landscape and its component elements. There should be a general presumption against the introduction of additional built facilities within the landscape of the PiC and immediate surrounds, which may compromise the landscape setting or affect the peaceful enjoyment of historic asset. Existing buildings and structures should however be used wherever possible, to enhance the visitor experience.

5.3.18 Interpretation and Engagement

The importance and significance of the PiC landscape, which includes the intertidal and foreshore zones, should be interpreted to visitors, so that their experience and understanding of the landscape is enhanced.

Interpretation can take the form of a variety of methods, appealing to a wide range of audiences and can be designed to engage with visitors as required, rather than a wholesale installation of signage. For instance, seasonally targeted information about wintering migratory birds could perhaps be removed throughout the summer months and replaced once the birds return to Blackness.

Consider the use of low level, age appropriate information, accessible for children. All signage and information should be to a 'house style'. Investigate the use of downloadable, smart phone friendly information for visitors to access both on and off site, opportunities may include the use of digital/social media.

A seasonal, part-time winter ranger service, or guided walks along the foreshore at low tides would also be a suggestion.

PARTNERSHIP

5.3.19 Skills and Resource

Ensure that there are sufficient team members to rotate throughout the PiC landscape as well as the castle, to disseminate information and engage with visitors. Ensure that all team members have a thorough understanding and appreciation of the importance of the landscape, both in terms of the historic development in association with the castle and the rich arboricultural and ecological resource.

5.3.20 Funding

Ensure that there is a cyclical budget, with funds dedicated for the routine review and maintenance of the natural and man-made fabric, with adequate funding made available for the inspection, repair and conservation of the estate railing and decorative ironwork.

5.3.21 Accountability, Monitoring and Review

The results of all surveys carried out within the PiC boundary should be analysed and recorded in the PiC archives in digital formats. Any plans for management or restoration works, including method statements, detailed design, plans and condition

surveys should also be stored in the archives.

All archaeological and building condition reports should be deposited with the local Historic Environment Record. Original documents and fieldwork reports should also be archived to the appropriate standards.

The Preliminary Ecological Appraisal Report carried out as a part of this study, should be seen as the foundation for ecological monitoring for the landscape and should be built upon with further baseline studies. Such baseline information should be used as a basis for future management and should be regularly updated by suitability qualified professionals, to ensure that a full record of the ecological resource is maintained.

It is recommended that a regular programme of review of the proposals contained in the action plan is undertaken, with new management priorities set out and updated on a regular basis. This will be especially important when any new survey is carried out.

5.3.22 Sustainability

Management and maintenance of the landscape should strive to achieve the highest standards of environmentally sustainable management. Consider innovative opportunities for recycling and energy saving initiatives at all times.

All chemicals, such as insecticides, molluscicides, and herbicides should be used in compliance with good horticultural standards and requirements for public health and safety. The use of chemicals should be kept to a minimum.

Sustainable planting and management should be carried out wherever possible. Reuse and recycle all redundant fence posts, tree guards and other hard materials, wherever possible and recycle others than cannot be re-used.

6

6.1 Introduction

The preceding section set out the overarching management principles for the future conservation and maintenance of the landscape. The underpinning management principles should be used to guide day to day operations and inform any long-term projects.

The following action plan sets out a series of specific management actions and recommendations, however the management principles and action plan are not 'set in stone' and should be seen as a dynamic and adaptive, responding to changes in the evolving qualities and character of the landscape.

Therefore the management principles and action plan should be updated and revised, with new project priorities, time-scales and community aspirations added where and when necessary.

Whenever new survey information is available, it is strongly recommended that the corresponding management principles and actions are reviewed and revised, as necessary, to ensure that the most appropriate management of the landscape is carried out. Where any management principles and actions are not wholly successful, or fail, for any number of reasons, it is recommended that discussions are held promptly with key stakeholders and suitably qualified professionals, so that appropriate steps can be taken to ensure that management prescriptions are adapted and revised, to continue to achieve the desired outcomes.

6.1.1 The Overarching Management Principle

The overarching principle for the landscape within the PiC boundary at Blackness Castle is to manage and maintain, to the highest standards, so that the elements of the landscape, both as features in their own right and when combined to create the landscape setting of the castle and environs are maintained, repaired, restored, enhanced and conserved, so that they may be enjoyed by current and future generations.

Work priorities are set out as high, medium and low:

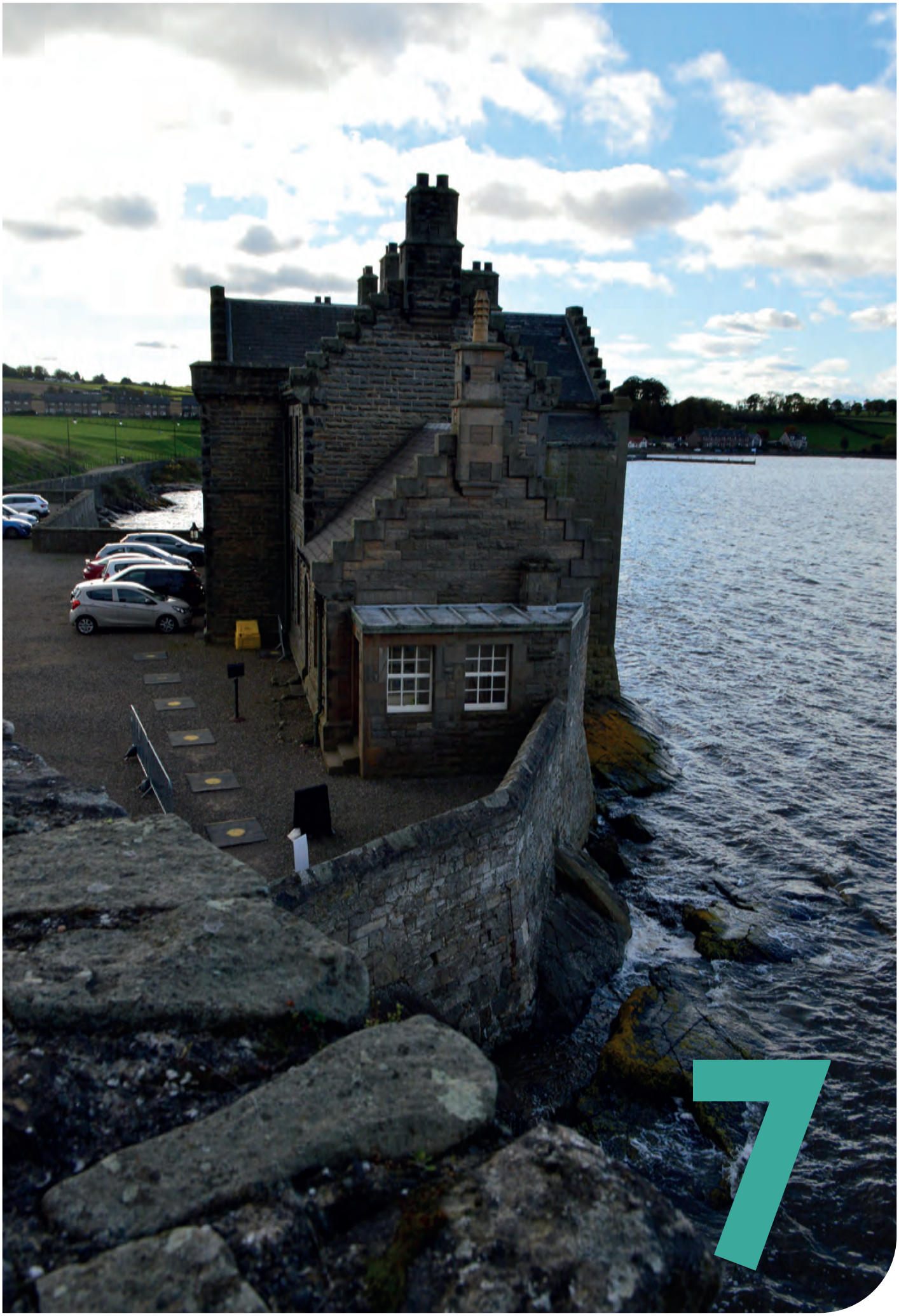
Work Priority		Time-scale
H	High	1 - 3 years
M	Medium	4 - 6 years
L	Low	7 - 10 years
O	Ongoing	

Ref	Work Recommendation	Priority		
		H	M	L
Site-wide Recommendations				
Priority Recommendations				
1	Review current parking arrangements within the courtyard with an aim of relocating the parking area outwith the courtyard. Care must be taken to locate a new parking area so that key views from the wider landscape, towards Blackness Castle, are not adversely effected by the negative views of parked cars within the landscape setting and/or the suns reflections upon car windscreens.	H		
2	Develop a Design Guide to establish a palette of materials and finishes to establish a 'house style' for all furniture, fencing and surfaces across the PiC area.	H		
3	Commission a Grassland Management Plan, to include a botanical survey of the grassland areas within the PiC area. Use the results of the grassland management plan to inform a holistic strategy for management and maintenance of all grassland areas, according to species type, character area location, sensitivity to above and below ground archaeology and land-use and work with Falkirk Council to seek to retain species-rich areas of grassland through sensitive management and enhance the floristic diversity of less species-rich grassland wherever possible.	H		
Ecology				
4	The site partially lies within the Firth of Forth SPA, Ramsar and SSSI. The 2003 site condition monitoring assessment of the designated site found the feature to be in an unfavourable condition, with bird numbers declining. However, it is understood that there may be multiple reasons for the decline in numbers. It is recommended that consultation is sought with the NatureScot management officer of the designated site to understand the conservation objectives and main threats of the wider designated site and discuss opportunities to assist in achieving the objectives within the PiC area, prioritising the grassland habitats . Discussions should also include recommended long-term management of intertidal habitat.		M	
5	As the PiC area is often used for recreational purposes, including dog walkers, there is a risk of current activities negatively impacting sensitive wintering birds using the intertidal and foreshore zones. Currently footpaths are adjacent to the shore line and people will walk on the mud flats at low tide. This could be achieved through community consultation and information provided to visitors. It is recommended that local walkers are encouraged to not allow their dogs of the lead and avoid walking on the mud flats/adjacent to the shore line during certain periods over winter to minimise disturbance.	H		
6	It is recommended that a detailed botanical survey is undertaken at the appropriate time of year (May-August) to highlight areas of the site which would benefit from further management. The vegetation should be surveyed by a suitably qualified and experienced botanical surveyor using the NVC scheme (Rodwell, 1991-2000; 5 volumes) and in accordance with NVC survey guidelines (Rodwell, 2006). The NVC scheme provides a standardised system for classifying and mapping semi-natural habitats and ensures that surveys are carried out to a consistent level of detail and accuracy. The survey should be completed between in the Spring/Summer months.	H		
7	Protected Species Survey - At an early stage in any future development proposal or fabric repair works, a survey to establish the potential for the presence of protected species should be carried out and the results of the survey used to inform the nature and timing of the work.	H		
8	The majority of buildings were assessed as having bat roosting potential. It is understood that no bat surveys have been completed at the site to determine presence or absence of the species. It is recommended that further surveys in the form of both summer and hibernation are completed to understand the sites usage for roosting bats within the buildings and the sites value.	H		
9	Nesting birds are anticipated to utilise the unmanaged grassland, scrub and hedgerows. It is recommended that, working with the wider Forth bodies and NatureScot, further breeding bird surveys are completed to assess the site importance to the local bird population to inform long-term management and habitat creation.		M	
10	Numerous trees and buildings within the site provide features which may support roosting bats. It is recommended that a site wide bat survey is carried out, including a ground-level roost assessment of trees	H		

Ref	Work Recommendation	Priority		
		H	M	L
	within the site and/or nocturnal bat survey. Where any vegetation clearance, notably tree-felling or pruning, is to be undertaken, the tree should be subject to a ground-level roost assessment to determine the suitability for roosting bats.			
11	The habitats within the PiC area may support notable vascular plants, including nationally and locally scarce species. As the initial survey was completed in November, a sub-optimal period to identify flowering species, it is recommended that further surveys are considered to inform the impact of management changes and opportunities for enhancement for nationally scare and/or locally scarce species. The surveys would inform management practices.		M	
12	The habitats within the site may support notable invertebrate assemblages, notably mature trees and species-rich grasslands. Invertebrate species can be very sensitive to management changes. The recommended NVC survey will assist in identifying in what suitable foodplants are present and inform relevant management practices.		M	
13	It is recommended that consideration of amphibian presence during habitat management is considered. Any debris is to be cleared by hand, and any common amphibians located moved carefully, by hand, to outside of the impacted area. As there are currently no areas of standing water within the site, it is recommended that a pond should be created, sensitively located away from any known above or below ground archaeology. It should be created within an existing area of improved grassland. It should be designed to be of benefit for ecology, following guidance set out in the *Great Crested Newt Conservation Handbook* (Langton et al., 2001). Creating a pond specifically for ecology will provide an important resource for flora and fauna. This includes amphibians, bats, bird, and invertebrates. Shallow pools should be included within the design to be of benefit for basking invertebrates and tadpoles. Proposed planting should include a variation of native species, including emergent, submerged and marginal vegetation.		M	
Archaeology				
14	All sub-surface work actions, outwith the scheduled area, should have archaeological consultation prior to commencement of work and may require an archaeological watching brief throughout operations.	H		
15	Damage to above and below-ground archaeology can be caused by everyday wear and tear, including the parking of vehicles in the courtyard and on sensitive archaeological areas, foot erosion, burrowing animals and minor works not requiring planning permission or SMC. Erosion scars (including footpaths, burrowing, water runoff) should be regularly monitored, and if necessary, temporarily fenced off to allow vegetation to be re-established.	H		
16	Develop an Archaeological Activity Plan and maintain good relationships with all stakeholders, including the local community, to ensure conservation controls are maintained and any chance finds/erosion issues reported.		M	
Trees & Woodlands				
17	Ensure that all remedial work which was recommended in the Tree Survey Report (ITS, 2021) has been completed and to help meet a duty of care, retained trees within the PiC area should be inspected by a competent person within 60 months; on or before the 11th March 2026. This formal inspection should be supplemented with a twelve monthly "walk-over" inspection, by a suitably qualified member of staff with a working knowledge of trees (see Tree Report for further details).		O	
15	All derelict tree guards and stakes should be removed from site as soon as practicable.	H		
16	Consider potential locations for future tree planting to perpetuate the arboricultural resource and provide the next generation of trees. Planting must be clear of any above or below ground archaeology.		M	
Character Area 1 - Castle Environs & Esplanade				
17	Ensure the continuity of surface treatments and hard materials, with any new surface laid to compliment the existing natural & vernacular material of the castle & environs.	H		
18	The surface of the castle's inner courtyard comprises exposed rock and cobbles, presenting an uneven surface that is difficult to access and not accessible for al. Consider if areas of the courtyard could be sensitively surfaced, possibly with a suspended walkway, to allow greater access for all, yet retain any sensitive archaeology.		M	

Ref	Work Recommendation	Priority		
		H	M	L
19	Promote the use of sustainable transport.	H		
20	Consider a small-scale excavation of the drawbridge pier elements of its former medieval entrance.			L
21	Consider a Photogrammetric survey and analysis of the castle walls and to provide a baseline condition survey for future maintenance.		M	
22	It is understood that bird watchers will frequently visit the site and it is recommended that the proposed site encourages visitors to the site through introducing viewing platforms/Hyde and potentially other measures such as daily/weekly counts of species observed surrounding the site. There is an opportunity for the building in the Drying Green to be converted to a bird Hyde or create a bespoke structure.		M	
23	The buildings within the character area were found to provide bat roosting potential, and therefore, in accordance with Best Practice guidance (Collins, 2016) further nocturnal emergence/ re- entry surveys are recommended to be undertaken between May-September (inclusive) to determine usage by roosting bats.	H		
Character Area 2 - Castle Hill				
24	Consider carrying out a detailed measured survey of the upstanding remains in order to facilitate analysis of the walls and earthworks on Castle Hill.	H		
25	Consider a small-scale excavation on the grassland immediately south of Castle Hill to further investigate the two enclosures which appear in Lidar data.			L
26	Install more seating opportunities, to the 'house style' within the character area.		M	
27	Monitor the burrowing effects of rabbits and repair and damage as soon as practically possible. Investigate methods to discourage the rabbit population from burrowing where sensitive archaeology is present or has the potential to be present.	H		
Character Area 3 - Castle Hill Quarry				
28	The unmanaged habitats within this character area hold the highest potential value for commuting and foraging bats as these habitats are anticipated to attach a range of invertebrate prey. Any future habitat management should aim to cease use of pesticides and increase the invertebrate population which in turn will benefit bats.	H		
29	Remove the rope swing from the mature ash and ensure any future swings are swiftly removed, to ensure that the health and longevity of this healthy ash is protected.	H		
30	With the prior approval of NatureScot and with due consideration of the management aims of the SSSI, the arisings of vegetation management, notably timber and brash, should be collected and habitat piles should be formed which will provide refuge for amphibians.	H		
31	The area of marshy grassland in is not considered to qualify as UK Priority Habitat 'Purple Moor Grass and Rush Pasture', as such it is recommended that this habitat is retained and enhanced. Further botanical survey, comprising an NVC survey at the appropriate time of year will detail further management recommendations for this habitat. Further botanical survey will outline opportunities and detailed management; however, it is recommended that periodical (5 years) removal of bramble scrub encroaching on this habitat should be undertaken.		M	
32	The hawthorn canopies that obstruct the boardwalk should be regularly trimmed back to aid pedestrian access. Consider whether the boardwalk should be repaired or replaced.	H		
Character Area 4 - St Ninian's Way Recreation Area				
33	The Tree Survey Report (ITS, 2021) outlines recommendations for management for trees and hedgerows within the character area. Recommendation includes the replacement planting of native tree stock within the hedgerows as the ash resource is anticipated to die, the continuous enhancement planting of native species in relation to the hedgerows, with a recommendation for the inclusion of seeding ground flora mix. The hedgerow margin should be wider to allow native, flowering species to establish and remove undesirable species in the long term. Tree shelters which have outlived their useful life should be removed to remove risk of non-biodegradable shelters affecting ecology		M	

Ref	Work Recommendation	Priority		
		H	M	L
34	Ensure the continuity of surface treatments and hard materials, with any new surface laid to compliment the existing natural & vernacular material of the castle & environs. Commission a Design Guide, in consultation with Falkirk Council, to ensure all furniture and infrastructure is to a 'house style' to enhance the quality and character of the area.	H		
35	Install more seating opportunities, to the 'house style' (see above) within the character area.	H		
36	The arisings of vegetation management, notably timber and brash, should be collected and habitat piles should be formed which will provide refuge for amphibians.	H		
Character Area 5 - Intertidal & Foreshore				
37	Review grassland management within the character area to enhance species diversity.	H		
38	Install seating opportunities to the 'house style' along the foreshore, however ensure that key views towards the castle and Forth Bridges are not cluttered by furniture.		M	
39	As the PiC are falls within a statutory designated site, designated due to the presence of wintering bird species, it is recommended that further wintering bird surveys are completed, in partnership with other stakeholders, to assess the sites importance for wintering birds and inform long-term management and habitat creation. Wintering bird surveys should follow guidance set out in "*Recommended bird survey methods to inform impact assessment of onshore wind farms*" (Scottish Heritage, 2014). It should include two surveys a month, between October to March with the aim to identify bird assemblage in relation to designated sites qualifying features.		M	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