

Environmental Impact Assessment Report

Appendix C13 Cultural Heritage

Grangemouth Flood Protection Scheme 2024
Falkirk Council



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Environmental Impact Assessment Report

Appendix C13.1 Desk Based Survey

Grangemouth Flood Protection Scheme 2024
Falkirk Council



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1. Introduction

This Appendix presents the results of the desk-based survey (DBS) for the Grangemouth Flood Protection Scheme. A gazetteer of the cultural heritage assets is provided in Annex A. The results of the assessment of the effects on the Scheme on cultural heritage are presented in the EIA Report: Cultural Heritage Chapter 13.

2. Approach and Methods

2.1 Introduction

Part of the Scheme and its study area fall within the boundary of the Antonine Wall World Heritage Site. In order to fully assess the value of the World Heritage Site and its setting this assessment has been undertaken in accordance with 2011 ICOMOS Guidance and 2022 Guidance and Toolkit, the concept of which underpins the World Heritage Convention and all activities associated with properties inscribed on the List. In order to have a standardised approach, this methodology has been applied to all areas of the project for the cultural heritage topic.

In addition to ICOMOS guidance, other policy documents and published guidelines considered in the preparation of this chapter include:

- Planning Advice Note 2/2011: Planning and Archaeology (PAN2/2011) (Scottish Government, 2011);
- Historic Environment Circular 1 (HES, 2016a);
- Managing Change in the Historic Environment: Setting (HES, 2016b);
- Managing Change in the Historic Environment: World Heritage (HES, 2016c);
- Standards and guidance for historic environment desk-based assessment (Chartered Institute for Archaeologists, 2017);
- Environmental Impact Assessment Handbook: Guidance for competent authorities, consultation bodies, and others involved in the Environmental Impact Assessment process in Scotland (Scottish Natural Heritage and HES, 2018); and
- Historic Environment Policy for Scotland (HES, 2019a).
- Supplementary Planning Guidance 11 Frontiers of the Roman Empire (Antonine Wall) World Heritage Site

2.2 Study Area

The study area for all four sub-topics comprised the footprint of the proposed flood defences plus an area which extended 300m in all directions from each of the flood defences. The study area was further subdivided into the six proposed flood cells and those areas that were outwith the flood cells. The locations of the study areas are shown on Figures B13.1 (a-f) and B13.2 (a-f) in Appendix B.

2.3 Baseline Conditions

To establish the cultural heritage baseline, the following sources of information were consulted:

- National Record of the Historic Environment (NRHE) (HES, 2019b);
- Historic Land use Assessment (HES, 2019c);
- Falkirk Community Trust for information on non-designated cultural heritage assets recorded within the Falkirk Sites and Monuments Record (SMR) (received July 2019); and
- review of online historic mapping held by the National Library of Scotland (National Library of Scotland, 2019).

A walkover survey was undertaken between the 29th and 31st of July 2019.

3. Limitations to Assessment

No intrusive archaeological investigations have been undertaken, which is considered appropriate for the purposes of the DBS.

4. Baseline Conditions

4.1 Summary

From sources identified above, a total of 156 cultural heritage assets have been identified within the study areas. Of these, 90 are archaeological remains, 49 are historic buildings and there are 17 historic landscape types (HLTs), as summarised in the Total column of Table 4-1. Further information on each cultural heritage asset is detailed in the accompanying gazetteer (see Appendix A) and these are shown on Figures B13.1 (a-f) and B13.2 (a-f) in Appendix B.

Table 4-1 Summary of Cultural Heritage Asset Values within the Study Areas

Sub-topic	Unknown	Negligible	Low	Medium	High	Very High	Total
Archaeological Remains	0	64	12	1	7 (4 Scheduled Monuments)	6 (2 x World Heritage Sites, 4 x Scheduled Monuments)	90
Historic Buildings	0	0	30 (9 Category C Listed Buildings)	18 (10 Category B Listed Buildings)	1 (1 Category A Listed Building)	0	49
Historic Landscape Types	0	8	7	2	0	0	17

Sub-topic	Unknown	Negligible	Low	Medium	High	Very High	Total
TOTAL	0	72	49	21	11	2	156

4.2 Flood Cell 1

4.2.1 Archaeological Remains

4.2.1.1 Archaeological Remains of High Value

A total of two archaeological remains have been assessed to be of high value within the study area for Flood Cell 1, both of which are Scheduled Monuments.

Lochlands Roman camps (Asset 4) comprises the remains of ten to twelve Roman temporary camps located to the west, south and east of the Lochlands Industrial Estate. The camps are known from aerial photography and excavation. The overlapping nature of some of the camps and the re-cutting of camp ditches indicates that they were subject to re-use over many years. Camelon, Roman Forts (Asset 9) comprises the remains of an Agricola and an Antonine Fort that have been subject to successive investigations at the beginning of the 20th century, in advance of quarrying operations in the 1960s and in advance of development in the 1970s.

The setting of the Lochlands Roman camps and the Roman fort at Camelon give a positive contribution to the significance of the assets. The Roman camps are currently located within rural farmland on the outskirts of Grangemouth and west, south and east of the Lochlands Industrial Estate and between the Glasgow/Stirling/Falkirk railway lines of Larbert Junction and the Roman fort at Camelon is located in Falkirk Golf Course. The historical setting has been modified heavily with post medieval and modern changes in the landscape such as the railway line and industrial estate. The main contribution to the significance of the assets is the group value of the cluster of camps and fort in close proximity to each other and the Antonine Wall to the south.

In consideration of their potential contribution to research agendas concerned with the excavation of large areas of the interior of forts (ScARF, 2012a) and their Scheduled status, these cultural heritage assets have been assessed to be of high value.

4.2.1.2 Archaeological Remains of Medium Value

There are no archaeological remains of medium value within the study area for Flood Cell 1.

4.2.1.3 Archaeological Remains of Low Value

A total of four archaeological remains have been assessed to be of low value within the study area for Flood Cell 1.

Of these three are associated with transport (Assets 34, 40 and 143). Carron Canal (Asset 34) was constructed in the 1770s for the Carron Company between their works and the Carronshore. The Carronshore Logboat (Asset 40) was discovered in 2007 on the north bank of the River Carron. Radiocarbon dated to c. 1730 it may have been connected to Jacobite incidents in 1745/6 rising. The Carronshore Ferry (Asset 143) comprises stone steps that are visible on the east bank of the River Carron. In consideration of their potential contribution to research agendas

interpreting and contesting the varied nature of social and economic change in the modern past (ScARF, 2012b) these cultural heritage assets have been assessed to be of low value.

Carron House Walled Garden (Asset 44) comprises the remains of a walled garden associated with Carron House (Asset 15) that was maintained until 1910. In consideration that it is a well-known type but also its potential contribution to research agendas interpreting environmental and economic change in the modern past (ScARF, 2012b) it has been assessed to be of low value.

4.2.1.4 Archaeological Remains of Negligible Value

A total of 18 archaeological remains (Assets 33, 35-39, 42, 43, 45-48, 142, 144 – 148) have been assessed to be of negligible value within the study area for Flood Cell 1 and comprise the sites of bridges, dry docks, distilleries, ropeworks, limekilns, watermills, a harbour, a school, an iron foundry, a church, an office and a public park that are no longer extant having been removed by demolition, redevelopment or backfilled. Given that these are well known and understood types and that any surviving archaeological remains are likely to have been removed or severely truncated these cultural heritage assets have been assessed to be of negligible value.

4.2.2 Built Heritage or Historic Urban Landscape

4.2.2.1 Built Heritage or Historic Urban Landscape of High Value

There are no historic buildings or historic urban landscapes of high value within the study area for Flood Cell 1.

4.2.2.2 Built Heritage or Historic Urban Landscape of Medium Value

A total of five historic buildings have been assessed to be of medium value within the study area for Flood Cell 1. All five of which are Category B Listed Buildings.

Carron House (Asset 15) comprises a ruined wall section with pediment of a late 18th century 2 storey mansion. It was built in the 1770s from stone quarried at Kinnaird. Its setting has a positive contribution to its significance. Carron House is nestled within tree covered grounds with the River Carron to its west. It's secluded and quiet environs contribute to the stately nature of the house. In consideration of its historic interest as a partial survival of the higher status domestic buildings of the period, its pediment and its Listed status, Carron House has been assessed to be of medium value.

Dovecot, Carron House (Asset 11) is an octagonal Georgian structure that dates to the late 18th century and is associated with Carron House (Asset 15). It is brick built with freestone dressings and contains 1016 nests. Its setting gives a positive contribution to its significance as its location within the wider grounds of Carron House in quiet rural countryside. It does have graffiti on its base (see Photograph 13.1). In consideration of its historic interest as a Georgian Dovecot, as a good example of its type and its Listed status Asset 11 has been assessed to be of medium value.



Photograph 13.1 - Dovecot, Carron House (Asset 11)

Weir Carron Iron Works (Asset 18) is thought to date to 1749. It is a gravity weir across the River Carron (Photograph 13.2) and has a bullnosed ashlar shallow-sloped face on the downstream side, its central section was removed to allow salmon up river destroying its structural integrity. In consideration of its historic interest as one of a few surviving remnants of Scotland's first major smelting works and its Listed status Asset 17 has been assessed to be of medium value.



Photograph 13.2 - Weir Carron Iron Works (Asset 18)

The Former Railway Bridge Across River Carron Iron Works (Asset 19; Photograph 13.3) is thought to date to 1860 and comprises a 2-span segmental arched masonry bridge. It has channelled bullnosed ashlar voussoirs with dressed margins and snecked rubble spandrels. Its setting gives a positive contribution to its significance with its location over the River unaltered and its association with surviving elements of Carron Iron Works. It is one of the few substantial survivors from the Carron Iron Works, Scotland's first major iron smelting works, in consideration of this and its Listed status it has been assessed to be of medium value.



Photograph 13.3 - Former Railway Bridge Across River Carron Iron Works (Asset 19)

The Grahamston Cast-Iron Gate (Asset 20; Photograph 13.4) dates to 1886 and was made by the Grahamston Iron Company in Falkirk for the Edinburgh International Festival Exhibition of the same year at which it won a Diploma of Honour. It weighs 20 tons and is amongst the largest cast iron arches in the United Kingdom. It was refurbished in 2002 and relocated a kilometre or so to the north of its original location. Its setting gives a neutral contribution to its significance due to its relocation. In consideration of its historic interest as one of the largest cast iron arches in the United Kingdom and its Listed status Asset 20 has been assessed to be of medium value.



Photograph 13.4 - Grahamstown Cast-Iron Gate (Asset 20)

4.2.2.3 Built Heritage or Historic Urban Landscape of Low Value

A total of seven historic buildings have been assessed to be of low value within the study area for Flood Cell 1, of which one is a Category C Listed Building and the remaining six are undesignated.

Carron Company, Clock Tower Remnant of Former Office Block (Asset 16; Photograph 13.5), a Category C Listed Building, was constructed between 1874 and 1875 and is attributed to Robert Baldie. It comprises a crow-step gabled, clock tower remnant of the Stirling-School Baronial style offices of the Carron Company Ironworks that was retained when the rest of the building was demolished in 1990. Its setting gives a positive contribution to its significance with its location unaltered and its association with surviving elements of Carron Iron Works. In consideration of its historic interest as an interesting local landmark and as an example of the Stirling-School Baronial style and its Listed status this historic clock tower has been assessed to be of low value.



Photograph 13.5 - Carron Company, Clock Tower Remnant of Former Office Block (Asset 16)

Of the remaining six historic buildings; two are associated with road transport and comprise a tram depot (Asset 127) and a bus depot (Asset 128), three are bridges (Assets 131, 132 and 149) and one is a former mill (Asset 129). In consideration of their historic interest as good examples of their types these historic buildings have been assessed to be of low value.

4.2.3 Historic Landscape Types

4.2.3.1 Historic Landscape Types of Medium Value

17th-20th Century Designed Landscape (HLT13) comprises the grounds or 'policies' associated with Carron House (Asset 15), in consideration of its historic interest as a coherent example of the parklands associated with the houses of the Gentry this type has been assessed to be of medium value.

4.2.3.2 Historic Landscape Types of Low Value

The 19th Century-Present Recreation Area (HLT4) comprises a vast range of recreational facilities that have been largely created in the last 200 years. While this type reflects its historic interest relating to the increase in leisure time since the industrial revolution it is not rare and has been assessed to be of low value. 18th Century-Present Rectilinear Fields and Farms (HLT8) reflect the field systems created as a deliberate response to the implementation of ideas of agricultural improvements in the 18th and 19th centuries that resulted in the rectilinear field boundaries of today. In consideration of its historic interest as evidence of the improvement era and as a common landscape type HLT8 has been assessed to be of low value. The 19th Century-Present Golf Course (HLT11) dates to 1922 and prior to its development as Falkirk Golf Club formed part of the estate associated with Callender House, this type is not rare and has been assessed to be of low value. The 19th Century-Present Cultivated Former Parkland (HLT12) comprises land formerly part of the designed landscape HLT13 associated with Carron House (Asset 15) that was converted to arable agriculture during the 19th and 20th centuries as a result of financial pressure and the intensification of farming following the improvement era. In consideration of its historic interest reflecting post-improvement era farming but recognising it is a common type HLT12 has been assessed to be of low value.

4.2.3.3 Historic Landscape Types of Negligible Value

Six HLTs of negligible value have been identified within the study area for Flood Cell 1: Late 20th Century-Present Landfill Site (HLT1); Late 20th Century-Present Industrial-Scale Farming Unit (HLT3); Late 20th Century-Present Rough Grazing (HLT6); 19th Century-Present Urban Area (HLT7), 19th Century-Present Industrial or Commercial Area (HLT9) and 20th Century-Present Plantation (HLT10). These HLTs are not rare and have largely been developed or redeveloped in the recent past and therefore they have been assessed to be of negligible value.

4.2.4 ICHA

No intangible heritage was identified in Flood Cell 1.

4.3 Flood Cell 2

4.3.1 Archaeological Remains

4.3.1.1 Archaeological Remains of High and Medium Value

There are no archaeological remains of high or medium value within the study area for Flood Cell 2.

4.3.1.2 Archaeological Remains of Low Value

One archaeological remains of low value has been identified within the study area for Flood Cell 2. Grangemouth West Church – stained glass (Asset 99) comprises four stained glass windows recovered from Grangemouth West Church (Asset 106) prior to its demolition in the 1980s. Three are held by the Grangemouth Heritage Trust and one is held by Falkirk Museum. In consideration of their potential contribution to research agendas that construct material histories of the social relationships through which people are formed (ScARF, 2012b) Asset 99 has been assessed to be of low value.

4.3.1.3 Archaeological Remains of Negligible Value

A total of 14 archaeological remains (Assets 55-58, 69-73, 84, 86-88 and 106) have been assessed to be of negligible value within the study area for Flood Cell 2 and comprise the sites of buildings, canal structures, boatyards and harbours that have been demolished or filled in. Given that these are well known and understood types and that any surviving archaeological remains are likely to have been removed or severely truncated these cultural heritage assets have been assessed to be of negligible value.

4.3.2 Built Heritage or Historic Urban Landscape

4.3.2.1 Built Heritage or Historic Urban Landscape of High and Medium Value

There are no historic buildings or historic urban landscapes of high or medium value within the study area for Flood Cell 2.

4.3.2.2 Built Heritage or Historic Urban Landscape of Low Value

Three historic buildings have been assessed to be of low value within the study area for Flood Cell 2, of which one is a Category C Listed Building and two are undesignated.

Grangemouth Dock, Former Workshop Building (Asset 27), a Category C Listed Building, dates to the late 19th century and is unattributed. It is of Scotch-bonded red brick construction with ashlar windowsills and copes and comprises a symmetrical, 11 bay rectangular plan workshop with 2-storey 3-bay pedimented-gable block to centre with flanking 4-bay wings with end gables. Its special interest is due to this former smithy/workshop being one of the very few surviving examples of 19th industrial building within the Grangemouth dock area. It is located between the former principal lock entrance to the Forth and Clyde canal, the "Old Dock", built in 1838-43 but now disused, and the banks of the River Carron. The Forth and Clyde canal was the world's first sea-to-sea ship canal. Its setting gives a positive contribution to its significance as an industrial area which is still in consideration of its historic interest as a former dock workshop building and its Listed status, Asset 27 has been assessed to be of low value.

The two remaining historic buildings of low value comprise a house and a former manse. 51 Dalgrain Road (Asset 80) is an exuberant Scottish Baronial style house. West Church Manse (Asset 91) is an L-shaped 2-storey dressed stone dwelling. In consideration of their historic interest as good examples of their types these historic buildings have been assessed to be of low value.

4.3.3 Historic Landscape Types

4.3.3.1 Historic Landscape Types of Low Value

The 19th Century-Present Recreation Area (HLT4) comprises a vast range of recreational facilities that have largely been created in the last 200 years. While this type reflects its historic interest relating to the increase in leisure time since the industrial revolution it is not rare and has been assessed to be of low value.

4.3.3.2 Historic Landscape Types of Negligible Value

Three HLTs of negligible value have been identified within the study area for Flood Cell 2: 19th Century-Present Maritime Installation (HLT5), 19th Century-Present Urban Area (HLT7) and 19th Century-Present Industrial or Commercial Area (HLT9). As these types are not rare and have been subject to ongoing development they have been assessed to be of negligible value.

4.3.4 ICHA

No intangible heritage was identified in Flood Cell 2.

4.4 Flood Cell 3

4.4.1 Archaeological Remains

4.4.1.1 Archaeological Remains of High, Medium or Low Value

There are no archaeological remains of high, medium or low value within the study area for Flood Cell 3.

4.4.1.2 Archaeological Remains of Negligible Value

A total of two archaeological remains have been assessed to be of negligible value within the study area for Flood Cell 3.

Carron Lighthouse (Asset 64) was built c. 1820 to aid navigation on the River Carron, it currently comprises a battered stump. In consideration of its limited surviving archaeological interest it has been assessed to be of negligible value.

Forth Sawmills (Asset 75) is recorded by the Falkirk SMR, however, there is no description for the entry. A review of google maps (image capture: Nov 2015 © 2019 Google) showed that the sawmill was no longer extant, and its location had been redeveloped as a grassed area, this was confirmed during the walkover survey. Given that the sawmills demolition is likely to have removed or severely truncated any associated archaeological remains and it is a well-known and understood type, this cultural heritage asset has also been assessed to be of negligible value.

4.4.2 Built Heritage or Historic Urban Landscape

4.4.2.1 Built Heritage or Historic Urban Landscape of High and Low Value

There are no historic buildings or historic urban landscapes of high or low value within the study area for Flood Cell 3.

4.4.2.2 Built Heritage or Historic Urban Landscape of Medium Value

Swing Bridge, Western Channel and Carron Dock, Grangemouth Docks (Asset 26), a Category B Listed Building, opened in 1906 for the Caledonian Railway. It is attributed to the engineer D.A. Mathieson and comprises a single-

span bowed steel, hydraulically operated Pratt truss bridge. In consideration of its association with a well-known engineer, as a good example of its type and its Listed status Asset 26 has been assessed to be of medium value.

4.4.3 Historic Landscape Types

4.4.3.1 Historic Landscape Types of Negligible Value

Three HLTs of negligible value have been identified within the study area for Flood Cell 3: Late 20th Century-Present Landfill Site (HLT1), 19th Century-Present Maritime Installation (HLT5) and 19th Century-Present Industrial or Commercial Area (HLT9). As these types are not rare, have been developed in the recent past or have been subject to ongoing development they have been assessed to be of negligible value.

4.4.4 ICHA

No intangible heritage was identified in Flood Cell 3.

4.5 Flood Cell 4

4.5.1 Archaeological Remains

4.5.1.1 Archaeological Remains of Very High Value

There are two archaeological remains of very high value within the study area for Flood Cell 4, the Antonine Wall WHS (Asset 1) and its buffer zone (Asset 2) and Antonine Wall and Mumrills fort, Sandy Loan to A905, Falkirk (Asset 6).

The Antonine Wall WHS (Asset 1; Photograph 13.6) comprises the most northerly frontier of the Roman Empire that was constructed approximately 2,000 years ago. 40 Roman miles in length (60km) it runs between Bo'ness on the Firth of Forth and Old Kilpatrick on the River Clyde. When constructed it was the most complex frontier ever created by the Roman army. It was built on the orders of the Emperor Antoninus Pius around 140AD and was both a barrier and a physical manifestation of the power and control of the Roman Empire. Forts and fortlets along the wall acted as secure crossing points controlling movement to the north and south as well as housing the frontier troops. In consideration of its potential contribution to research agendas questioning the issues of identity and social space on the frontier and on the purpose and function of frontiers (ScARF, 2012a) and its WHS status Asset 1 has been assessed to be of very high value.



Photograph 13.6 - Antonine Wall WHS (Asset 1) visible as the high ground to the centre of the photograph

The Antonine Wall WHS Buffer Zone (Asset 2) comprises an area totaling 5299ha surrounding the wall that gives an added layer of protection to the WHS. 14 separate areas have been defined and they are fragmented by existing settlements, roads and areas marked for urban expansion. The areas protect the immediate setting of the Antonine Wall WHS (Asset 1) and the adjacent environment that contributes to the character, significance and understanding of the wall. In consideration of the contribution the Buffer Zone makes to the protection, character, significance and understanding of the Antonine Wall WHS (Asset 1), it too has been assessed to be of very high value.

Despite the absence of any surviving above-ground elements within the vicinity of the Site, HES have identified that this section of the WHS is significant due to its topography.

In their consultation response to the proposed FSA, and following a similar argument to that presented in their objection to the Falkirk Distillery development c.100m to the east of the Site, it is stated that:

The topographical relationship between the high ground at Mumrills and Inchyra and the lower carse ground between them is key to understanding and appreciating how the Romans dealt with the problem of laying out the line of their defences. Their military engineers wanted to utilise the northernmost line of ground overlooking the low carse around the Forth, so as to maximise control of and views towards the north. Instead of logically turning

the line of the Wall southwards to keep it on higher ground, they accepted that the Wall would have to cross the low boggy ground around the two burns. This is the only location on the entire length of the Antonine Wall where the Romans deviated from higher ground to such an extent. Therefore, the ability to appreciate the topography of the Wall in this area is a key element in the cultural significance of the scheduled monument and the Outstanding Universal Value (OUV) of the World Heritage Site.

The topography of the Beancross area, the Site and the Antonine Wall are summarised by the Reporter (Shiel 2010) appointed by the Scottish Minister to examine the adjacent Falkirk Distillery planning application as follows:

A particular characteristic of the setting of the Antonine Wall in this area is its relationship to the surrounding topography. The line of the Wall drops down from the higher land around the Mumrills fort onto the low-lying floodplain which it crosses for some distance before rising back onto higher land to the east of the M9. It is assumed that in Roman times this low-lying area was poorly drained and marshy and that this would have created difficulties for the construction of the Wall. When viewed from the eastern edge of the ridge at Mumrills it is evident that the Wall would have had to cross the valleys of the Westquarter and Polmont Burns at some point but that, had it followed a line further to the south, it could have crossed at a narrower point and then regained the ridge of higher ground where the new cemetery and Weedingshall are now located. On the face of it, this would appear to have been the militarily preferable option and one that would not have been ignored for other than significant reasons. The line of the Antonine Wall in this area is unique and it is this relationship between its line and the higher land to the south that Historic Scotland considers to be a particularly important part of the setting of the WHS.

In respect of the absence of above ground elements, and in accordance with the current objection presented by Historic Scotland, he concluded:

I acknowledge that the relationship of the line of the Wall at this point to the higher land to the south is not readily apparent to the layman, even one who is reasonably well informed, without some explanation; a matter to which I will return. However, that does not alter the intrinsic value of that relationship in terms of the integrity, authenticity and Outstanding Universal Value of the WHS. The Antonine Wall is a single linear monument which must be looked at in its entirety.

As such, the OUV of this section of the WHS (Mumrills Fort to Polmont Burn) is conveyed by the low-lying ground between Mumrills Fort and Inchyra Hill to the east and includes the Site. This use of lower ground is unique, and while the reasons for this are not known, it provides some insight into the mindset and choices made by the Roman military engineers.

In addition, the authenticity of the archaeological remains of this section of the WHS have been proven through previous archaeological investigation.

The immediate setting of the WHS within the buffer zone was defined in a report by Land Use Consultants (2006) to Historic Scotland. The definition of the buffer zone was based on an analysis of the intervisibility of the WHS with the surrounding landscape. Its boundaries were drawn to be defensible and to coincide where possible with those of other protection areas, such as green belt, in order to provide additional policy support.

The Land Use Consultants report (2006) identifies that the line of the Antonine Wall has a particularly strong presence in the Beancross area as it follows the distinctive topographic ridge (on which Mumrills Fort is situated) and is revealed by a line of mature trees.

The Site forms a small part of immediate setting of this section of the WHS and is bounded to the north and west by Mumrills Fort, to the east by Grandsable Cemetery and the Falkirk Distillery development, and to the south by Polmont Road and residential dwellings.

The Antonine Wall and Mumrills fort, Sandy Loan to A905, Falkirk (Asset 6), Scheduled Monument, comprises part of Mumrills fort, the Military Way and a range of other features identified from aerial photographs and excavation. There are no remains visible above ground. The monument has been subject to several phases of excavation between 1923 and 1928, in 1958 and again in 1960. Finds of 1st century coins and pottery are indicative of possible Roman occupation prior to the construction of the wall and fort, however, to date no earlier structural remains have been identified. In consideration of its contribution to the OUV of the World Heritage Site, potential contribution to research agendas regarding occupation sequences at sites (ScARF, 2012a) and its Scheduled status Asset 6 has been assessed to be of very high value.

The immediate setting of the fort comprises its elevated position on a topographically distinct plateau overlooking the carse ground to the north. The asset is bounded to the north by Mumrills Road, to the east by the Site, Grandsable Cemetery and the Falkirk Distillery development, and to the south and west by residential dwellings. The extent of this immediate setting is defined by the WHS buffer zone which terminates at the M9 motorway to the north, the western limit of Polmont village to the east, Polmont Road to the south, and Sandy Loan to the west.

This asset is considered be part of the WHS OUV through: the understanding of the layout, form and function of the fort (it is the largest on the Antonine Wall) derived from the previous archaeological investigations undertaken; and its strategic position on a topographically prominent plateau, that would have enabled it to dominate the immediate landscape to the north, which allows for an appreciation of the mindset of the Roman military engineers. This despite the absence of any surviving above-ground elements and part of the fort having been built over.

The Site lies to the south and east of the asset within the low-lying ground within the Westquarter Burn and it is considered that the Site forms part of the immediate setting of this asset. The setting makes a positive contribution to the overall significance of the asset.

4.5.1.2 Archaeological Remains of High Value

A total of four archaeological remains have been assessed to be of high value within the study area for Flood Cell 4, two of which are Scheduled Monuments.

Mumrills, enclosure 250m E of (Asset 3) is the site of a prehistoric enclosed settlement identified on aerial photographs. It comprises a roughly circular enclosure that is approximately 30m in diameter defined by a ditch some 4m in width. The immediate setting of this asset comprises its position on a north-west facing slope which forms part of the elevated ground overlooking the carse ground to the north. It is of particular interest because of its proximity to the Antonine Wall WHS (Asset 1). In consideration of this, its potential contribution to research agendas regarding regionally-structured reviews of the classification and social context of enclosed spaces (ScARF, 2012c) and its Scheduled status, this cultural heritage asset has been assessed to be of high value.

Bowhouse, circular enclosure, Polmont (Asset 5), Scheduled Monument, comprises the cropmarks of a probable prehistoric domestic and defensive enclosure. It is located within Rannoch Park next to playing fields. Its setting gives a neutral contribution to its significance as its significance is in its below ground remains and its location

within the park doesn't contribute to our understanding of it. In consideration of its potential contribution to research agendas regarding regionally-structured reviews of the classification and social context of enclosed spaces (ScARF, 2012c) and its Scheduled status this cultural heritage asset has been assessed to be of high value.



Photograph 13.7 - Bowhouse, circular enclosure, Polmont (Asset 5), Scheduled Monument to the right of the playing field

Mumrills Shell Midden (Asset 134) is large measuring 43m east to west and 35m north to south. The southern margin of the midden is buried under 1.2m of colluvium and topsoil. It was noted that the north west corner of the midden contained an area of burnt stones 3.5m in diameter and there were ephemeral indications of a structure surrounding this area. The maximum depth of the midden was 0.65m. In consideration of its potential contribution to research agendas studying the impact of the human presence upon Scotland's environment, vegetation and animal population during the late glacial/early Holocene (ScARF, 2012e) this cultural heritage asset has been assessed to be of high value.

Weedingshall Shell Midden (Asset 136) comprises a site where oyster shells have been noted on the soil surface following ploughing. It is located at the foot of a raised beach. Again, in consideration of its potential contribution to research agendas studying the impact of the human presence upon Scotland's environment, vegetation and

animal population during the late glacial/early Holocene (ScARF, 2012e) this cultural heritage asset has been assessed to be of high value.

4.5.1.3 Archaeological Remains of Medium Value

Weedingshall Ring Ditch (Asset 135) comprises the possible remains of a prehistoric roundhouse identified on aerial photographs that has not been subject to archaeological investigation. Nevertheless, in consideration of its potential contribution to research questions regarding the factors that lay behind the variation in house size and construction techniques and whether clear patterns in space and in time are discernible (ScARF, 2012c) this cultural heritage asset is currently being assessed to be of medium value.

4.5.1.4 Archaeological Remains of Low Value

A total of four archaeological remains have been assessed to be of low value within the study area for Flood Cell 4.

The Abbots Grange (Asset 104) comprises the site of a ditched enclosure with a 'drawbridge' that is depicted on the 1st edition of the Ordnance Survey map in what is now Zetland Park (Asset 59). The interior of the enclosure was said to have been higher than the surrounding area until it was raised during the creation of the park. It is thought to be the location of the site of the principal building of the Medieval Grange of Holyrood Abbey. In consideration of its potential contribution to research agendas pertaining to advancing the understanding of the influence of Monastic Granges on Medieval agriculture and industry in Scotland (ScARF, 2012d) but recognising the likely loss of remains during the development of the park, Abbots Grange has been assessed to be of low value.

Grandsable Cemetery (Asset 122) was opened by Grangemouth Parish Council in 1901 and is also recorded as an HLT (see Historic Landscape Types below). In consideration of its potential contribution to research themes exploring the modern person by researching changing perceptions of the body and the changing nature of embodied experience (ScARF, 2012b) this cultural heritage asset has been assessed to be of low value.

Mumrills Enclosure (Asset 125) is recorded as being seen on aerial photographs in the Falkirk SMR, there is no further information. However, a review of the NRHE suggests that this feature may be cognate with West Beancross Farm (Canmore id, 47876) a sub-rectangular ditch identified on aerial photographs that measures 25m x 23m with a substantial ditch up to 6m in width that has not been subject to archaeological investigation. In consideration of its potential contribution to research agendas regarding regionally-structured reviews of the classification and social context of enclosed spaces (ScARF, 2012c) but also in recognition that it has not been investigated and therefore its value is unknown, this cultural heritage asset is currently being assessed to be of low value.

Cadgers Brae Shell Midden (Asset 153) comprise a possible shell midden (Asset 153). In consideration of its possible contributions to research agendas concerning the comprehensive survey of data for all aspects of the environment and biotope through the Late glacial and early Holocene (ScARF, 2012e) but also recognising that these remains have not been subject to archaeological investigation and are therefore of unknown value they are currently being assessed to be of low value.

4.5.1.5 Archaeological Remains of Negligible Value

A total of 15 archaeological remains have been assessed to be of negligible value within the study area for Flood Cell 4.

Of these 12 (Assets 50, 51, 62, 68, 85, 93, 94, 97, 98, 102, 115 and 120) comprise the sites of buildings or structures that have been demolished due to redevelopment. Given that their demolition is likely to have removed or severely truncated any associated archaeological remains these cultural heritage assets have been assessed to be of negligible value.

Oswald Saltcoats (Asset 82) is the site of a salt pan. In consideration that it is a well-known and understood type and its locations redevelopment will have removed or severely truncated any associated archaeological remains Asset 82 has been assessed to be of negligible value.

Weedingshall Neolithic roundhouse (Asset 150) is recorded by the Falkirk SMR as the site of a Neolithic Roundhouse, there are no further details. The location given for this roundhouse is within New Grandsable Cemetery and it is presumed that any surviving remains will have been removed or severely truncated by subsequent burials. Therefore, this cultural heritage asset has been assessed to be of negligible value.

West Beancross Enclosure (Asset 126) is the site of an enclosure recorded by aerial photography. Given that there is no further information recorded in the HER and that this cultural heritage asset has not been subject to archaeological investigation it is currently being assessed as being of negligible value.

4.5.2 Built Heritage or Historic Urban Landscape

4.5.2.1 Built Heritage or Historic Urban Landscape of High Value

There is one historic building of high value within the study area for Flood Cell 4. Dundas Church, Bo'ness Road (Asset 22; Photograph 13.8), a Category A Listed Building, dates to 1894 and is attributed to Sir J. J. Burnett. It is in the Romanesque style and is rectangular in plan with a central arcade and an M shaped slate roof. Its setting gives a positive contribution to its significance with 19th / early 20th century houses across the road. In consideration of its association with a well-known architect and its Listed status Dundas Church has been assessed to be of high value.



Photograph 13.8 - Dundas Church, Bo'ness Road (Asset 22), Category A Listed Building

4.5.2.2 Built Heritage or Historic Urban Landscape of Medium Value

A total of five historic buildings have been assessed to be of medium value within the study area for Flood Cell 4, four of which are Category B Listed Buildings and one is undesignated.

Of the Category B Listed Buildings two are associated with worship (Assets 24 and 25). Ronaldshay Crescent and Park Road Grange Church and Church Hall (Asset 24) was constructed between 1900 and 1903 and is attributed to John Benie Wilson. It is of red bull-faced sandstone in the Arts and Crafts style. The church tower forms an important skyline element of the new town as laid out under the patronage of the Zetland family and has views to the west across Grange Burn and its setting gives a positive contribution to its significance. In consideration its association with a well-known architect and its Listed status this historic building has been assessed to be of medium value. Ronaldshay Crescent Zetland Parish Church (Old Parish Church) (Asset 25) dates to 1910 and is unattributed. It is a large cruciform-plan church, correctly oriented with a single south aisle, transepts and with church halls to the east. Its setting give a positive contribution with its location on Ronaldshay Crescent with 19th

/ early 20th century housing across the road. In consideration of its historic interest as an early 20th century church and its Listed status it has been assessed to be of medium value.

Two historic buildings (Assets 29 and 67) are associated with commemoration and comprise a war memorial and a set of stained-glass windows respectively. The Zetland Park War Memorial and Park Gates, Grangemouth (Asset 29; Photograph 13.9), a Category B Listed Building, were designed by Sir J. J. Burnet and were officially opened to the public in 1923. The memorial is of sandstone construction and comprises a hollow central cenotaph with flanking pillars to the east and west dated 1914 and 1919 respectively. Its special interest lies in its unusual decorative features including the central lion and eagle sculpture which is an overtly visceral and militaristic depiction of the defeat of Germany and also the 1919 date rather than the more usual 1918. The Dundas Church – stained glass (Asset 67) dates to 1923 and comprises three chancel windows that commemorate those members of the congregation that were killed during WWI. In consideration of their historic interest as testimony to the impact of world events on the local community these cultural heritage assets have been assessed to be of medium value.



Photograph 13.9 - The Zetland Park War Memorial and Park gates, Grangemouth (Asset 29)

Carronflats Road, Abbotsgrange Middle School (Asset 23), a Category B Listed Building, is unattributed and dates to 1908. The former Grangemouth High School is of red sandstone ashlar construction and is 2-storeys high. It is classically detailed. The sculptural details are unusually good especially the central figure group. In consideration of this and its Listed status this historic building has been assessed to be of medium value.

4.5.2.3 Built Heritage or Historic Urban Landscape of Low Value

A total of 15 historic buildings have been assessed to be of low value within the study area for Flood Cell 4. Of these three are Category C Listed Buildings.

The Sacred Heart Rc Church Dalratho Road and Drummond Place (Asset 21), a Category C Listed Building, dates to 1927 and is attributed to Archibald Macpherson. It is of snecked rubble construction in the Gothic Revival style with a tiled roof. In consideration of its association with a well-known architect and its Listed status the Sacred Heart Church has been assessed to be of low value.

Grangemouth Station Road, Former La Scala Cinema (Asset 28), a Category C Listed Building, dates to 1913 and may be the work of Alistair G MacDonald the son of the Prime Minister Ramsay MacDonald. It is a rare survivor of an early purpose-built cinema. It is in the Scottish Renaissance style which is unusual in Scottish cinema design and is of Scotch-bond red brick with sandstone ashlar dressings. In consideration of its historic interest as possibly the work of a well-known architect, rarity, unusual design and its Listed status this historic building has been assessed to be of low value.

The Fountain, Zetland Park, Dalratho Road, Grangemouth (Asset 32), a Category C Listed Building, was designed and erected in 1882 and was relocated within the park in 1923. It is a highly unusual design and there is nothing similar in the Scottish Ironwork database. It is a good early example of its type. In consideration of this, its unique design and its Listed status this cultural heritage asset has been assessed to be of low value.

Two of the historic buildings (Assets 111 and 121) are associated with commemoration. Grandsable Cemetery War Memorial (Asset 111) is an Imperial War Graves Commission cross and comprises a hexagonal cross on a stepped pedestal, with the cross carrying a sword. The Polmont War Memorial (Asset 121) is in the form of an obelisk and is incorrectly located in the Falkirk SMR as being Asset 111. In consideration of their historic interest as testimony to the impact of world events on the local communities these cultural heritage assets have been assessed to be of low value.

Beancross Farm (Asset 117) comprises farm buildings that were converted into a restaurant in the 1990s. An arched entrance keystone bears the inscription "1802/RM", this has been augmented by an inscription on a neighboring stone that reads "1997/KGF". In consideration of its historic interest as an early 19th century farm but also in consideration of its loss of historic fabric during its conversion Beancross Farm has been assessed to be of low value.

Weedingshall (Asset 138) is a late Georgian mansion, with Victorian and recent modifications. It sits within extensively landscaped grounds and has an associated gate lodge house. The driveway to the mansion is tree lined and is flanked by ha-ha walls. Latterly the building was in use as a Children's Home. In consideration of its historic interest as a good example of its type but in recognition of the loss of historic fabric during its conversion to a Children's Home Weedingshall has been assessed to be of low value.

Of the remaining eight historic buildings of low value two (Assets 63 and 89; Photograph 13.10) are residential properties and comprise a neat Georgian House and a dwelling house respectively. One (Asset 59) is a public park that dates to 1880. Asset 76 Abbots Grange Sundial dates to the 17th century and comprises a rectangular block surmounted by a respond capital carrying a bronze dial-plate. The Grangemouth Municipal Buildings (Asset 77) date to the late 1930s and are in the Neo-Classical style. St Mary's Episcopalian Church, Grangemouth (Asset 79) is of dressed random rubble construction with a slate roof. The Wallace St Co-op (Asset 90) dates to 1929 and comprises a single storey shop unit in the art deco style. Finally, Grangemouth Town Hall (Asset 109) is of sandstone ashlar construction in the Classical style. In consideration of their historic interest as good examples of their types these historic buildings have been assessed to be of low value.



Photograph 13.10 - Madison Place (21 Abbots Rd) (Asset 89), Category C Listed Building

4.5.3 Historic Landscape Types

4.5.3.1 Historic Landscape Types of Medium Value

The Grangemouth Area of Townscape Value (HLT17) comprises an area centered on Zetland Park roughly bounded to the north by the Bo'ness Road, to the east by Victoria Road, to the south by Kingseat Avenue and to the west by Abbot's Road. This area of townscape value contains several Listed Buildings (Assets 21-25, 29 and 32); a Draft Character Appraisal was carried out in 2021, to assess whether it could be designated a Conservation Area, in the future; the recommendations of the Draft Character Appraisal are still under consideration. On this basis, the designation of this area remains unchanged, as an Area of Townscape Value. In consideration of this, it is currently being assessed to be of medium value.

4.5.3.2 Historic Landscape Types of Low Value

18th Century-Present Cemetery (HLT2) comprises Grandsable Cemetery that is also recorded as Asset 122 (see Archaeological Remains above) while this type reflects its historic interest as a 20th century cemetery it is not rare and therefore it has been assessed to be of low value. 19th Century-Present Recreation Area (HLT4) comprises a vast range of recreational facilities that have been largely created in the last 200 years. While this type reflects its historic interest relating to the increase in leisure time since the industrial revolution it is not rare and has been assessed to be of low value. 18th Century-Present Rectilinear Fields and Farms (HLT8) reflect the field systems created as a deliberate response to the implementation of ideas of agricultural improvements in the 18th and 19th centuries that resulted in the rectilinear field boundaries of today. In consideration of its historic interest as evidence of the improvement era but in recognition that it is a common landscape type, HLT8 has been assessed to be of low value.

4.5.3.3 Historic Landscape Types of Negligible Value

Six HLTs of negligible value have been identified within the study area for Flood Cell 4: Late 20th Century-Present Landfill Site (HLT1); Late 20th Century-Present Industrial-Scale Farming Unit (HLT3); 19th Century-Present Maritime Installation (HLT5); 19th Century-Present Urban Area (HLT7); 19th Century-Present Industrial or Commercial Area (HLT9), Late 20th Century-Present Motorway (HLT15) and Water Body (HLT16). As these types are not rare, have been developed in the recent past or have been subject to ongoing development they have been assessed to be of negligible value.

4.5.4 ICHA

No intangible heritage was identified in Flood Cell 4.

4.5.5 OUV of the WHS

4.5.5.1 The Antonine Wall WHS (Asset 1) Outstanding Universal Value

The following Statement of Outstanding Universal Value (SOUV) was adopted for the WHS in 2008:

The Antonine Wall fully illustrates the effort of building the Limes on the frontiers of the Roman Empire, at the time of its apogee and greatest extension in the British Isles and worldwide (middle of the 2nd century AD). It embodies a high degree of expertise in the technical mastery of earthen defensive constructions, in the construction of a strategic system of forts and camps, and in the general military organisation of the Limes. The Antonine Wall also demonstrates the diffusion of the military and civil engineering of the Roman civilisation to the whole of Europe and the Mediterranean world.

Criterion (ii): The Antonine Wall is one of the significant elements of the Roman Limes present in Europe, the Middle East and North Africa. It exhibits important interchanges of human and cultural values at the apogee of the Roman Empire.

Criterion (iii): The Antonine Wall bears testimony to the maximum extension of the power of the Roman Empire, by the consolidation of its frontiers in the north of the British Isles, in the middle of the 2nd century AD. The

property illustrates the Roman Empire's ambition to dominate the world in order to establish its law and way of life there in a long-term perspective.

Criterion (iv): The Antonine Wall is an outstanding example of the technological development of Roman military architecture and frontier defense.

4.5.5.2 Authenticity

The authenticity of the WHS is defined in the current Management Plan 2014-19 as:

The property has a high level of authenticity. All remains of the property are known and proven through archaeological investigations as authentic Roman constructions, erected during the reign of Antoninus Pius. It is visible as a sometimes-impressive feature in the modern landscape for over one-third of its total length, while archaeological excavations undertaken over the last 100 years, have demonstrated that the rest survives well as buried archaeology beneath both fields and urban areas.

Given the short duration of the frontier system, the materials are highly authentic to the primary use of the monument in the mid to late second century AD. Currently displayed elements of the frontier have been undertaken on the basis of full documentation through modern excavation. Recent interventions are conservation-orientated and kept to a minimum.

4.5.5.3 Integrity

The integrity of the WHS is defined in the current Management Plan 2014-19 as:

The property includes all the upstanding and buried remains necessary for understanding its outstanding universal value and to demonstrate why it is an exceptional example of the use of artificial barriers as an aspect of the overall military frontier system of the Roman Empire. As a primarily earthen monument, environmental concerns and potential impacts of development offer a particular challenge to managing the Site, and balancing access and conservation is addressed within the Management Plan.

The property is of adequate size to ensure the complete representation of the features and process which convey the significance of the property; all the archaeological remains of the monument, within present understanding of the Site, are contained within the property. The Buffer Zone of the property provides protection for the setting of the monument. Although the monument sits in a highly varied modern urban and rural landscape, the setting of the monument has been largely retained across the length of the Wall allowing the mindset of the Roman engineers to be envisaged and its scale and setting appreciated.

4.6 Flood Cell 5

4.6.1 Archaeological Remains

4.6.1.1 Archaeological Remains of Very High Value

There are five archaeological remains of very high value within the study area for Flood Cell 5.

The Antonine Wall WHS (Asset 1) comprises the most northerly frontier of the Roman Empire that was constructed approximately 2,000 years ago. 40 Roman miles in length (60km) it runs between Bo'ness on the Firth of Forth and Old Kilpatrick on the River Clyde. When constructed it was the most complex frontier ever created by the Roman army. It was built on the orders of the Emperor Antoninus Pius around 140AD and was both a barrier and a physical manifestation of the power and control of the Roman Empire. Forts and fortlets along the wall acted as secure crossing points controlling movement to the north and south as well as housing the frontier troops. In consideration of its potential contribution to research agendas questioning the issues of identity and social space on the frontier and on the purpose and function of frontiers (ScARF, 2012a) and its WHS status Asset 1 has been assessed to be of very high value.

The Antonine Wall WHS Buffer Zone (Asset 2) comprises an area totaling 5299ha surrounding the wall that gives an added layer of protection to the WHS. 14 separate areas have been defined and they are fragmented by existing settlements, roads and areas marked for urban expansion. The areas protect the immediate setting of the WHS and the adjacent environment that contributes to the character, significance and understanding of the wall. In consideration of the contribution the Buffer Zone makes to the protection, character, significance and understanding of the Antonine Wall WHS (Asset 1), it too has been assessed to be of very high value.

The Antonine Wall, Millhall Burn to River Avon (Asset 7; Photograph 13.11) comprises a section of the Antonine Wall that runs from Millhall Burn in the west through Polmont Woods, Grangemouth Golf Course and past the Polmont dry ski slope to the River Avon in the east. This section of the wall is unusual because it has the remains of at least three temporary camps in close proximity. In consideration of this and its potential contribution to research agendas questioning the issues of identity and social space on the frontier and on the purpose and function of frontiers (ScARF, 2012a) and its Scheduled status, this cultural heritage asset has been assessed to be of very high value.



Photograph 13.11 - The Antonine Wall, Millhall Burn to River Avon (Asset 7) the line of the ditch can be seen to the left of the sign

Antonine Wall, Nether Kinneil-Inveravon, rampart and ditch (Asset 8) comprises a section of the wall to the east of Asset 7 of which there are no upstanding remains and no further details are recorded by the NRHE. Nevertheless, as it forms part of the World Heritage Site and in consideration of its potential contribution to research agendas questioning the purpose and function of frontiers (ScARF, 2012a) and its Scheduled status, this cultural heritage asset has been assessed to be of very high value.

The Antonine Wall, fort and shell middens 240m WSW of The Tower, Inver (Asset 10) comprises a stretch of the wall, an associated fort and an enigmatic structure known as an expansion that survive as buried remains. The monument also contains a large cluster of Mesolithic shell middens. As it forms part of the World Heritage Site and in consideration of its potential contribution to research agendas studying the impact of the human presence upon Scotland's environment, vegetation and animal population during the late glacial/early Holocene and with research agendas concerned with the excavation of large areas of the interior of Forts (ScARF, 2012a and 2012e) and its Scheduled status, this cultural heritage asset has been assessed to be of very high value.

4.6.1.2 Archaeological Remains of High, Medium or Low Value

There are no archaeological remains of high, medium, or low value within the study area for Flood Cell 5.

4.6.1.3 Archaeological Remains of Negligible Value

Two sites that are associated with transport that have been demolished due to redevelopment (Assets 54 and 60) and comprise a canal and a ford or bridge respectively. Jinkabout Mill (Asset 61) was a large corn mill on the northern side of the River Avon at Inveravon. Avon Bridge Toll House (Asset 156) was a toll house west of Avon Bridge. Given that their demolition will have removed or severely truncated any associated archaeological remains and that they are well known types, these cultural heritage assets have been assessed to be of negligible value.

4.6.2 Built Heritage or Historic Urban Landscape

There are two built heritage assets within Flood Cell 5, both of which are Category C Listed Buildings.

Grangemouth Road, Avon Bridge (Asset 12), a Category C Listed Building, dates to the mid-19th century and comprises 5 semi-circular arches of droved ashlar construction with prominent rounded cut-waters. The bridge is considered to be a handsome example of its type and is known to have been built after the publication of Fredrick Carrington's map of the Forth Basin in 1846. In consideration of this and its Listed status it has been assessed to be of low value.

Grangemouth, Inveravon Tower (Asset 13), a Category C Listed Building, comprises the dilapidated remains of a round tower that was part of Inveravon Castle which was destroyed in 1455 by James II during his campaign to wipe out the Black Douglas family. The original form of the castle is unknown as the architectural details of the extant remains of the tower have decayed over time offering little evidence. In consideration of its historic interest as the surviving remains of a 15th century castle but recognising its poor surviving fabric and its Listed status this historic building has been assessed to be of low value.

4.6.3 Historic Landscape Types

4.6.3.1 Historic Landscape Types of Low Value

18th Century-Present Rectilinear Fields and Farms (HLT8) reflect the field systems created as a deliberate response to the implementation of ideas of agricultural improvements in the 18th and 19th centuries that resulted in the rectilinear field boundaries of today. In consideration of its historic interest as evidence of the improvement era and in recognition that it is a common landscape type HLT8 has been assessed to be of low value. 18th-20th Century Managed Woodland (HLT14) comprises areas of Woodland that have evolved to their extents today through a process of gradual erosion because of clearance, development and enclosure. As a common landscape type but reflecting its historic interest as evidence of woodland that was intensively managed for the long-term production of timber to supply rural crafts and industries, HLT14 has been assessed to be of low value.

4.6.3.2 Historic Landscape Types of Negligible Value

There is one HLT of negligible value within the study area for Flood Cell 5, 19th Century-Present industrial or Commercial Area (HLT9), as this type is not rare and has been subject to ongoing development it has been assessed to be of negligible value.

4.6.4 ICHA

No intangible heritage was identified in Flood Cell 5.

4.7 Flood Cell 6

4.7.1 Archaeological Remains

4.7.1.1 Archaeological Remains of Very High Value

There is one archaeological remains of very high value within the study area for Flood Cell 6.

The Antonine Wall WHS Buffer Zone (Asset 2) comprises an area totaling 5299ha surrounding the wall that gives an added layer of protection to the WHS. 14 separate areas have been defined and they are fragmented by existing settlements, roads and areas marked for urban expansion. The areas protect the immediate setting of the WHS and the adjacent environment that contributes to the character, significance and understanding of the wall. In consideration of the contribution the Buffer Zone makes to the protection, character, significance and understanding of the Antonine Wall WHS (Asset 1), it too has been assessed to be of very high value.

4.7.1.2 Archaeological Remains of High, Medium and Low Value

There are no archaeological remains of high, medium or low value within the study area for Flood Cell 6.

4.7.1.3 Archaeological Remains of Negligible Value

Kinneil Kerse Shell Midden (Asset 49) was reported in 1928. It was described as being mainly composed of Oyster shells and that it also contained antler fragments. However, research undertaken in 1985 noted that the site was not a shell midden and was actually a natural oyster bed. Considering this cultural heritage asset is a natural feature and therefore of no archaeological interest it has been assessed to be of negligible value.

4.7.2 Built Heritage or Historic Urban Landscape

There are no historic buildings or historic urban landscapes within the study area for Flood Cell 6.

4.7.3 Historic Landscape Types

4.7.3.1 Historic Landscape Types of Low Value

18th Century-Present Rectilinear Fields and Farms (HLT8) reflect the field systems created as a deliberate response to the implementation of ideas of agricultural improvements in the 18th and 19th centuries that resulted in the rectilinear field boundaries of today. In consideration of its historic interest as evidence of the improvement era and in recognition that it is a common landscape type HLT8 has been assessed to be of low value. 18th-20th Century Managed Woodland (HLT14) comprises areas of Woodland that have evolved to their extents today through a process of gradual erosion because of clearance, development and enclosure. As a common landscape type but reflecting its historic interest as evidence of woodland that was intensively managed for the long-term production of timber to supply rural crafts and industries, HLT14 has been assessed to be of low value.

4.7.3.2 Historic Landscape Types of Negligible Value

There is three HLTs of negligible value within the study area for Flood Cell 5, 19th Century-Present industrial or Commercial Area (HLT9), Late 20th Century-Present Landfill Site (HLT1) and Water Body (HLT16). As these types are not rare, have been developed in the recent past or have been subject to ongoing development they have been assessed to be of negligible value.

4.7.4 ICHA

No intangible heritage was identified in Flood Cell 6.

4.8 Outwith Flood Cells

4.8.1 Archaeological Remains

4.8.1.1 Archaeological Remains of Very High, High and Medium Value

There are no archaeological remains of very high, high and medium Value within the study area outwith the flood cells.

4.8.1.2 Archaeological Remains of Low Value

There are a total of three archaeological remains that have been assessed to be of low value within the study area outwith the flood cells.

Carronshore Village (Asset 41) is the location given for the small hamlet of Quarrelshore that was greatly expanded in the 1760s by the Carron Company. The location is currently occupied by modern residential units. In consideration of its contribution to research agendas concerned with developing the understanding of all stages of the life history of modern places (ScARF, 2012b) this cultural heritage asset has been assessed to be of low value.

Polmonthill Shell Midden (Asset 154) is a shell midden that was possibly destroyed in 1940. In consideration of its possible contributions to research agendas concerning the comprehensive survey of data for all aspects of the environment and biotope through the Late glacial and early Holocene (ScARF, 2012e) but also recognising that these remains have not been subject to archaeological investigation and are therefore of unknown value they are currently being assessed to be of low value.

Polmont Park Enclosure (Asset 137) is recorded by the Falkirk SMR as being two ditches of a possible enclosure that were recorded during the excavation of a drain. Following a review of the NRHE this feature would appear to be cognate with Cadger's Brae, Polmont (Canmore id, 47877) that describes the feature as being circular and visible as two concentrations of tightly packed stones that were recorded in a trench section some 25m apart. Again, in consideration of its potential contribution to research agendas regarding a regionally-structured review of the classification and social context of enclosed spaces (ScARF, 2012c) but also recognising the unknown nature of the feature and therefore its value, it is currently being assessed to be of low value.

4.8.1.3 Archaeological Remains of Negligible Value

A total of eight archaeological remains have been assessed to be of negligible value within the study area outwith the flood cells.

Of these two consist of sites that are associated with transport that have been demolished due to redevelopment (Assets 92 and 103) and comprise a boatyard slipway and a dockyard respectively. Two are associated with industry and comprise the sites of a mill (Assets 74) and a foundry (Asset 133) that were demolished in advance of redevelopment. Asset 93 is the site of a saltpan demolished when the Grangemouth Oil Refinery was built. Kerse House Dooct (Asset 101) is the site of a pigeon house that was mentioned in the Caledonian Mercury of the 28th May 1741 the location of which is currently occupied by an industrial estate. North Foot Shell Midden (Asset 118) was removed during the construction of a golf course and appears to be cognate with the NRHE Northfoot (Canmore id, 47886). Given that their demolition will have removed or severely truncated any associated archaeological remains and that they are well known types, these cultural heritage assets have been assessed to be of negligible value.

The Grangemouth coin hoard (Asset 157) is the location of the findspot of twelve to thirteen hundred silver coins of Russian, British, Spanish, Italian, Swedish and Roman origin found during the diverting of the Grange Burn in 1899. The collection weighed 38lbs. Given that this cultural heritage asset has been removed from and is no longer associated with its original context it has been assessed to be of negligible value.

4.8.2 Built Heritage or Historic Urban Landscapes

4.8.2.1 Built Heritage or Historic Urban Landscapes of High, Medium and Negligible Value

There are no historic buildings or historic urban landscapes of high, medium and negligible value within the study area outwith the flood cells.

4.8.2.2 Built Heritage or Historic Urban Landscapes of Low Value

One historic building has been assessed to be of low value within the study area outwith the flood cells.

Westerton Farmhouse (Asset 139), a Category C Listed Building, dates to the late 18th century and comprises a single storey with cream painted stonework. The historic building incorporates a ruined wall section and there are extensive associated farm buildings. In consideration of its historic interest as a good example of a farmhouse of the period and its Listed status, Westerton Farmhouse has been assessed to be of low value.

4.8.3 Historic Landscape Types

4.8.3.1 Historic Landscape Types of Medium Value

17th-20th Century Designed Landscape (HLT13) are the grounds or 'policies' formerly associated with Parkhill House (Canmore id 47903) that now comprise the Grey Buchanan public park. In consideration of its historic interest as a coherent example of the policies associated with the houses of the Gentry this type has been assessed to be of medium value.

4.8.3.2 Historic Landscape Types of Low Value

18th Century-Present Cemetery (HLT2) comprises Grandsable Cemetery that is also recorded as Asset 122. While this type reflects its historic interest as a 20th century cemetery it is not rare and therefore it has been assessed to be of low value. 19th Century-Present Recreation Area (HLT4) comprises a vast range of recreational facilities that have been largely created in the last 200 years. While this type reflects its historic interest relating to the increase in leisure time since the industrial revolution it is not rare and has consequently been assessed to be of low value. 18th Century-Present Rectilinear Fields and Farms (HLT8) reflect the field systems created as a deliberate response to the implementation of ideas of agricultural improvements in the 18th and 19th centuries that resulted in the rectilinear field boundaries of today. In consideration of its historic interest as evidence of the improvement era but in recognition that it is a common landscape type, HLT8 has been assessed to be of low value. The 19th Century-Present Golf Course (HLT11) represents two courses, Falkirk Golf Club that opened in 1922 and prior to its development formed part of the estate associated with Callender House (Canmore id 46768) and Grangemouth Golf club that opened in 1974 making it one of the youngest courses in Scotland, this type is not rare so consequently it has been assessed to be of low value. The 19th Century-Present Cultivated Former Parkland (HLT12) comprises land formerly part of the designed landscape associated with Parkhill House (Canmore id 47903) that was converted to agriculture during the 19th and 20th centuries as a result of financial pressure and the intensification of farming following the improvement era. In consideration of its historic interest reflecting post-improvement era farming but recognising it is a common type HLT12 has been assessed to be of low value. 18th -20th Century Managed Woodland (HLT14) comprises areas of Woodland that have evolved to their extents today through a process of gradual erosion because of clearance, development and enclosure. As a common landscape type but reflecting its historic interest as evidence of woodland that was intensively managed for the long-term production of timber to supply rural crafts and industries HLT14 has been assessed to be of low value.

4.8.3.3 Historic Landscape Types of Negligible Value

Seven HLTs of negligible value have been identified within the study area outwith the flood cells: Late 20th Century-Present Landfill Site (HLT1); Late 20th Century-Present Industrial-Scale Farming Unit (HLT3); Late 20th Century-Present Rough Grazing (HLT6); 19th Century-Present Urban Area (HLT7); 19th Century-Present Industrial or Commercial Area (HLT9), 20th Century-Present Plantation (HLT10) and Late 20th Century-Present Motorway (HLT15). As these types are not rare, have been developed in the recent past or have been subject to ongoing development they have been assessed to be of negligible value.

4.8.4 ICHA

No intangible heritage was identified outwith the environs of the study area.

4.9 Map Regression

It is noted in the Old Statistical Account for Falkirk that Grangemouth dates to 1777 and was built on the orders of Lord Dundas, by the time of the Account in 1797 Grangemouth was a considerable size and was active in the Baltic trade and the costal trade with Scotland and England and that the Carron Shipping Company was trading with London.

The earliest depiction of the study area is Timothy Pont's maps of Scotland no.32 ca. 1583-1601 which depicts the town of Falkirk and Calendar Castle and Park and notes Abbots Grange, however, the map is not comprehensive enough to describe the study area in any detail. The Blaeu Atlas of Scotland 1654 is the first to depict the Antonine Wall where it is named the Valli Adriani and while larger settlements such as Falkirk and Sterlin [sic] are noted the map is not detailed. Clement Lempriere's military map of 1731 in some ways foreshadows the work of William Roy in that he depicts Roman antiquities including the wall this time named Grahams Dyke and five of the western forts including Barrhill, also depicted is the Roman camp at Ardoch and the Roman road north from Carlisle. The line of the wall is depicted terminating at Blackness Castle in the east and Old Kirkpatrick in the west.

William Roy's military survey of 1747-1755 is the first to depict the study area in some detail and includes the farm of Mumrills an enclosure at Weedings, Polmont Kirk and the then township of Inveravon from which a stretch of the wall is depicted heading east to the estate of Kinneil House. At this time the study area is largely depicted as cultivated ground interspersed with farms and hamlets and a mill is depicted in the rough location of the site of Blackmill (Skaithmuir Nether Mill) (Asset 147).

By the time of the first edition Ordnance Survey map the study area is a little more recognisable and the industrialisation of the study area is well under way, the Carron Iron Works are depicted and so for the first time is Grangemouth with the residential area bounded to the north by the River Carron and to the south by Timber Basins now filled in and the Wet Docks that are still extant and bisected by the Forth and Clyde Canal. By the time of the second edition Ordnance Survey Larbet Mill (Asset 129) is depicted and the expansion of Grangemouth to the south in the area of Carron flats is portrayed. The second edition is also the first depiction of Zetland Park (Asset 59).

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Annex A. Gazetteer

Asset Number	1	Asset Name	Antonine Wall World Heritage Site
Legal Status	World Heritage Site	NGR	
Value	Very High	Condition	
Asset Type	Earthwork	Period	Roman
NMR ref	WH1	HER ref	
Description			
<p>The Antonine Wall was the most northerly frontier of the Roman Empire nearly 2,000 years ago. It ran for 40 Roman miles (60km) from modern Bo'ness on the Firth of Forth to Old Kilpatrick on the River Clyde. At the time it was built, the wall was the most complex frontier ever constructed by the Roman army. Built on the orders of the Emperor Antoninus Pius in the years following AD 140, the wall was both a physical barrier and a symbol of the Roman Empire's power and control. It was never a stone wall. The Antonine Wall was a turf rampart fronted by a wide and deep ditch. Forts and fortlets along the wall housed the troops stationed at the frontier. They also acted as secure crossing points to control movement north and south. A road known as the Military Way ran behind the rampart, linking the forts. The Antonine Wall was the last linear frontier built by the Romans. It was only occupied for about a generation before being abandoned in the AD 160s. The line of the wall crosses five modern local authorities: East Dunbartonshire, Falkirk, Glasgow, North Lanarkshire, West Dunbartonshire. There are a number of sites and museums in each of these areas. The Antonine Wall was inscribed by UNESCO in 2008, to become part of the Frontiers of the Roman Empire World Heritage Site. This already included Hadrian's Wall (inscribed in 1987) and the German Limes (inscribed in 2005). The Outstanding Universal Value of the World Heritage Site lies in the survival of the 2nd-century Roman frontier system across Europe, North Africa and the Middle East. This reflects the development and breadth of Roman military architecture and power. The Antonine Wall: incorporates many technical and design elements not seen in earlier frontiers represents a physical manifestation of a change in Roman imperial foreign policy illustrates the technological skill of the army in frontier areas. The Antonine Wall World Heritage Site: Statement of Outstanding Universal Value is currently in development [1].</p>			
Sources			
[1] Historic Environment Scotland			

Asset Number	2	Asset Name	Antonine Wall World Heritage Site Buffer Zone
Legal Status	World Heritage Site	NGR	
Value	Very High	Condition	
Asset Type	Earthwork	Period	Roman
NMR ref	WHB1	HER ref	
Description			
<p>The Antonine Wall World Heritage Site Buffer Zone has been defined to protect the immediate setting of the WHS; the adjacent environment that is part of, and contributes to the character, significance and understanding of the Wall. The buffer zone measures 5,229 ha and is defined as a series of zones along the Wall, up to approximately 1-1.5 km from the Wall to the north and south. These areas are fragmented by existing settlements, roads and areas marked for urban expansion.</p>			

The relationship of the Wall, forts and camps with the surrounding topography affects the extent and characteristic of the buffer zone and the landscape along the World Heritage Site changes along its length.

The buffer zone protects the landscape setting of the World Heritage Site and is not part of the inscribed site, but defines an area around it that helps protect its OUV.

Sources

[1] Antonine Wall: Frontiers of the Roman Empire website

Asset Number	3	Asset Name	Mumrills, enclosure 250m E of
Legal Status	Scheduled Monument	NGR	
Value	High	Condition	
Asset Type	Cropmark	Period	Prehistoric
NMR ref	SM6416	HER ref	

Description

The monument comprises the remains of an enclosed settlement of prehistoric date represented by cropmarks visible on oblique aerial photographs. The monument lies in arable farmland at around 20m OD. It comprises the remains of a roughly circular enclosure some 30m in diameter. It is defined by a ditch which measures up to about 4m across. The enclosure is located close to the line of the Antonine Wall and Mumrills Roman fort. The area to be scheduled encompasses the cropmarks and an area around them in which traces of associated activity may be expected to survive. It is circular with a diameter of 50m as marked in red on the accompanying map. The monument is of national importance because of its potential to contribute to our understanding of prehistoric settlement and economy. It is of particular interest because of its proximity to the Antonine Wall [1].

Sources

[1] Historic Environment Scotland

Asset Number	4	Asset Name	Lochlands Roman camps
Legal Status	Scheduled Monument	NGR	
Value	High	Condition	
Asset Type	Cropmark	Period	Roman
NMR ref	SM4259	HER ref	

Description

The monument comprises the remains of a series of at least 10-12 Roman temporary camps which are sited in the area now immediately west, south and east of the Lochlands Industrial Estate, Larbert, and in the triangular area between the Glasgow/Stirling/Falkirk railway lines of Larbert Junction. This proposal forms part of a programme which is intended to update the scheduling of the Antonine Wall and associated Roman military monuments in the Falkirk area. It adjusts the protected area to exclude areas known to have been quarried, built over or otherwise no longer meeting the criteria of national importance, as well as to include areas where new evidence of archaeological features has come to light. The camps are known from aerial photography and excavation. The overlapping of some of the camps and the re-cutting of camp ditches indicates that they were re-used and revisited over many successive years. There are no other complexes of this kind

in Scotland, as the camps were built and used at intervals throughout the Roman occupation of Scotland, from at least the 1st to the 3rd centuries AD. The date range is indicated by structural features of the camps, such as distinctive gateways, and by finds of pottery and occasional coins. The Lochlands area was an important strategic point where Roman troops were marshalled at the beginning of each campaigning season before marching north to attempt to conquer and subdue the tribes north of the Forth-Clyde isthmus. The first-century AD forts of Camelton lie close by (SAM 1746), now within Falkirk Golf Course. Further camps to either side of the Glasgow Road and part of the fort complex at Camelton have been built over, and during quarrying close to the Camelton forts, a Roman burial and a native settlement were discovered and salvaged by excavation. The scheduled area is irregular in shape and is in five different portions. The largest part lies to the W and SW of the main Lochlands industrial estate complex, and extends south to cover part of a single discrete camp now crossed by the modern Lochlands Loan road. Two triangular parts (the larger measuring a maximum of 593m along its long axis by a maximum of 146m wide; the smaller measuring 210m by 165m by 139m) are sited in the area between Lochlands Loan and the N-S running railway line. A fourth small area, measuring a maximum of 170m by 70m, lies to the E of the N-S running railway line, and the fifth, measuring a maximum of 394m N-S by a maximum of 343m E-W, lies within the triangular area formed by the junction of the Glasgow-Stirling-Edinburgh railway lines. The scheduled areas are based on modern transcriptions of oblique aerial photographs and do not match with all of the Ordnance Survey's depictions of the camps, which are purely indicative. The above ground portions of modern structures such as pylons and disused railway embankments are excluded from the scheduling [1].

Sources

[1] Historic Environment Scotland

Asset Number	5	Asset Name	Bowhouse,circular enclosure,Polmont
Legal Status	Scheduled Monument	NGR	
Value	High	Condition	
Asset Type	Cropmark	Period	Prehistoric
NMR ref	SM2207	HER ref	
Description			
Prehistoric domestic and defensive: enclosure (domestic or defensive, rather than ritual or funerary) [1]. Seen on APs in the W side of Rannoch Park [2].			
Sources			
[1] Historic Environment Scotland			

Asset Number	6	Asset Name	Antonine Wall and Mumrills fort, Sandy Loan to A905, Falkirk
Legal Status	Scheduled Monument	NGR	
Value	Very High	Condition	
Asset Type	Sub-surface Remains	Period	Roman
NMR ref	SM8832	HER ref	
Description			

This monument is a section of the Antonine Wall which runs from Sandy Loan in the west to the A905 in the east, and includes part of Mumrills fort, the Military Way and various other features known from aerial photography and excavation. The Wall and fort are sited on the eastern end of a ridge which slopes steeply down to the low lying carse land and the Westquarter Burn to the east.

This proposal forms part of a programme which is intended to update the scheduling of the Antonine Wall, and adjusts the protected area along this part of the line of the Wall.

There are no remains visible above the ground surface in this section, but the line of the Antonine Wall and Military Way, the layout of the fort and the location of other features such as a kiln and enclosures to the east of the fort have been confirmed by archaeological excavation. There have been several phases of excavation on the site, in 1923-28, 1958 and 1960. The western annexe of the fort and its western ditches lie to the west of Sandy Loan beyond the scheduled area, and were excavated in advance of being built upon. The eastern and greater part of the fort itself lies immediately to the east of Sandy Loan, and the site and layout of buildings such as the headquarters building, granaries, the bathhouse and the commanding officer's house (complete with its own bath suite) are known from excavation. To the east of the fort, a series of cropmarks visible in aerial photographs indicate the presence of what may be another annexe attached to the Wall, and a separate rectilinear enclosure towards the eastern edge of the plateau, which may have been some kind of temporary structure. A Roman tile or brick kiln was also found to the east of the fort in 1913, set close to the rear of the Antonine Wall rampart. Finds of first century coins and pottery indicate that there had been Roman occupation of some kind on the site prior to the construction of the Antonine Wall and fort, possibly an earlier fort of the Agricola period, although no structural remains have yet been located of this date.

The area to be scheduled includes the Antonine Wall rampart, berm, ditch and upcast mound, the fort and its associated ditches, the Military Way, the area to the east of the fort where archaeological features are known from aerial photography and excavation, and an area to the E and S where traces of activities associated with the construction and use of the monument may survive, as shown in red on the accompanying map extract. The scheduled area measure a maximum of about 655m E-W by between 250m and 100m N-S [1].

Sources

[1] Historic Environment Scotland

Asset Number	7	Asset Name	Antonine Wall, Millhall Burn to River Avon
Legal Status	Scheduled Monument	NGR	
Value	Very High	Condition	
Asset Type	Earthwork	Period	Roman
NMR ref	SM9728	HER ref	

Description

This monument comprises a section of the Antonine Wall which runs from Millhall Burn in the west, through Polmont Woods, Grangemouth Golf Course, and past the Polmont dry ski slope to terminate at the River Avon in the east.

This proposal forms part of a programme which is intended to review and update the scheduling of the entire Antonine Wall, and rationalises the scheduling by descheduling areas where development has destroyed the remains of the Wall.

The Antonine Wall at this location consists of the rampart, the ditch, the berm (area between rampart and ditch), and the upcast mound. The ditch and upcast mound are clearly visible for much of the length of this section, and even where the line has been flattened out, substantial traces are likely to remain below ground level. There are the remains of at least three temporary camps sited between 200-400m to the south of the wall, which probably housed troops employed on construction of the frontier. These are scheduled separately.

The scheduling is divided into three sections. The first, running up the steep slope from the Millhall Burn, through Polmont Woods, is a well-preserved and upstanding section of the Wall, despite being wooded. This section has its eastern boundary at the water pumping station built directly on top of the Wall.

The second, longer section, runs from the reservoir immediately east of the pumping station, which has partially removed an area south of the Wall, through Grangemouth Golf course, and down the hill past the Polmont dry ski slope, to terminate at the minor road to the west of the ski slope. The Wall has been flattened in the area through the golf course, but the ditch remains visible immediately to the north of the dry ski slope. The third section is a small triangular area between the minor road and the River Avon.

The scheduled area is divided into three sections as described above, measuring a maximum of approximately (1) 364m in length by 69m in width; (2) 703m in length by 69m in width; and (3) 75m by 54m at its widest points, as shown in red on the accompanying map.

The scheduled area extends 25m north of the north lip of the ditch, and 20m south of the southern edge of the rampart, except where modern development has removed archaeological deposits (such as the pumping station and reservoir). The top 50cm of the surface of the paths within the scheduled area is excluded from the scheduling to enable minor repair and alterations to these areas without the need for scheduled monument consent [1].

Sources

[1] Historic Environment Scotland

Asset Number	8	Asset Name	Antonine Wall, Nether Kinneil-Inveravon,rampart & ditch
Legal Status	Scheduled Monument	NGR	
Value	Very High	Condition	
Asset Type	Sub-surface Remains	Period	Roman
NMR ref	SM3211	HER ref	

Description

Section of the Antonine Wall [1].

Sources

[1] Historic Environment Scotland

Asset Number	9	Asset Name	Camelon, Roman forts
Legal Status	Scheduled Monument	NGR	
Value	High	Condition	
Asset Type	Sub-surface Remains	Period	Roman
NMR ref	SM1746	HER ref	

Description

Roman Forts [1]. The Roman forts at Camelon have suffered from the construction of a railway, foundries and cultivation so that virtually no remains may be seen on the surface. They were extensively excavated in 1899-1900, the excavators (D Christison 1901; M Buchanan 1901) calling the two adjacent enclosures "North Camp" and "South Camp". The "North Camp" was an auxiliary fort, measuring internally 530' E-W by 490', of Antonine date. The "South Camp", which was only partially

excavated in 1899-1900, has now been largely destroyed. The published plan of this enclosure is not reliable, as may be seen when it is compared with the original survey, now in Falkirk Museum. The lines of the defences were not as thoroughly investigated as may be supposed from the plan, which does not record another series of ditches, of earlier date, running in a different direction from those surrounding the enclosure. The RCAHMS deduce that the remains uncovered here represent (i) an early work, probably an Agricola fort, denoted by the ditches, (ii) a Flavian fort, having the general annexe to the Antonine fort, within which was a bath-house and a possible mansio. There was also an annexe N of the Antonine fort. This was excavated in 1961-2 under the auspices of the DoE, ahead of quarrying. Pre-Roman occupation was found in the form of two hut circles, thought to be associated with the settlement to the NE (NS88SE 24). The annexe had contained timber buildings of non-military type, some of which were Antonine, but some were possibly pre- Antonine; the logical explanation appears to be a defended civil settlement associated with the fort, though very little datable evidence was found. Among the many relics from the site are a great deal of Flavian and Antonine pottery, several enamelled fibulae and a fragment of a votive lantern. The latest of the 56 identified coins found on the site is a first brass of Faustina II. A building stone of the Twentieth Legion reading XX V(aleria) V(ictrix) F(ecit) was found in the bath-house. In 1967 an altar (see NS88SE 38) inscribed (P)RO SE ET SUI: V S L L M was found at NS 852 812 in a wall on Bogton farm. It is now in Falkirk Museum. A stone (allegedly found at NS 8686 8048), described by Ross, is a modern forgery (see NS88SE 40). Price notes remains of Roman buildings and streets revealed during building operations and his excavations in the "South Camp", also numerous finds made by him during a re-excavation of the N annexe. (Information from G S Maxwell, RCAHMS; E J Price MS plans). RCAHMS 1963, visited 1958; N McCord 1962; R P Wright 1968; T Ross 1902; E J Price and G J Price 1972; 1973; E J Price 1974. When visited in 1957, the North fort lay mainly in a ploughed field; the only feature visible was the much spread rampart, appearing as an unsurveyable swelling in the ground, about 1.0m high. Nothing else could be seen. Excavations in advance of development in 1975, 1976 and 1977 were confined to the northeast, southeast and assumed west gate area of the 'south' fort. A well-constructed 2nd century east-west road approximately bisecting the fort was located just south of its projected 19th century position. South of this road was an industrial area with 4 substantial furnaces and numerous rubbish pits, and further south, a stone-built building, c.6.5 x 3.2m. surrounded by an area of cobbling. Traces of Flavian occupation were found beneath these levels but no coherent structural plans emerged. On the west side, three periods of ditches were found, with an innermost v-shaped ditch ending c.4m. north of the postulated (2a) west entrance, and being separated by a c.3m wide berm found deposited clay remnants of a rampart. Three large post-holes of the gate structure were revealed, and also a cobbled east-west road that ran out through the gateway to where another road ran south from it. These features were Antonine and represent a reduction in the size of the annexe in its final phase, for they overlaid 2nd century timber buildings. The area just inside the west defences had simple timber buildings with no trace of industrial activity. The many finds included a spear and arrowheads, a bronze belt buckle, two silver rings, and several brooches, a bronze dish and part of a lava quernstone. A bronze zoomorphic ornament is in the NMAS (Proc Soc Antiq Scot 1979) as are several sherds of two face-mask Roman jars from earlier trenching operations in the south fort in 1972 (T Robertson 1075). V A Maxfield 1975; 1976; 1977 Forts photographed by the RCAHMS in 1977. Roman and other material found by Mr E J Price, from the N and S forts and annexe ditches are now in the NMAS. NMAS 1979; NS 862 807. Continued excavation in April 1979 in advance of development within the south fort produced further evidence of both the Flavian and Antonine defences. The inner and central ditches of the triple ditched Flavian enclosure identified (but not planned) in 1900-1 were located. The central ditch was overlaid by the south rampart of the 2nd century annexe, the rampart surviving to a maximum height of 1.1m and width of over 3.0m. A 5.0m wide road ran parallel to end north of the rampart, and further north a post built timber building at least 5.4m long (or wide) was located. R Goodburn 1979. An adze-hammer was discovered during construction work in the S camp in 1979. L J F Keppie et al 1995. The much spread, W, N and E Ramparts of the North fort are still clearly visible in a field of young crop, but no internal detail is discernible. The area of the annexe to the north has been largely removed by old quarrying although a spread c.40m length of probable rampart extends from the northwest angle of the fort. The area of the recent excavations within the south fort is now being re-developed. North fort revised at 1:1250. Visited by OS (JRL), 15 April 1980. c NS 835 840 - NS 841 832 Cropmark and physical evidence has been found for the path of the Roman road from Camelon to Ardoch, shown on the 1st edition OS map of 1861 [2].

Sources

[1] Historic Environment Scotland

Asset Number	10	Asset Name	Antonine Wall, fort and shell middens 240m WSW of The Tower, Inveravon
Legal Status	Scheduled Monument	NGR	
Value	Very High	Condition	
Asset Type	Sub-surface Remains	Period	Roman
NMR ref	SM3209	HER ref	

Description

The monument comprises a stretch of the Antonine Wall and a Roman fort surviving as buried remains. The monument also includes part of a large cluster of mesolithic shell middens. The line of the Antonine Wall ditch appears as a linear cropmark on aerial photographs while the buried remains of the fort have been located through excavation. Approximately 230m in length, this stretch of the Antonine Wall runs from a point approximately 140m west of The Tower to a point 110m north of Polmonthill Cottage. The shell middens appear as light-coloured spreads of shells visible on aerial photographs. The monument was first scheduled in 1972, but an inadequate area was included to protect the full extent of the archaeological remains; the present rescheduling rectifies this. Dating to the mid- to late second century AD, the Antonine Wall comprised five elements: an outer mound, a broad V-shaped ditch, an open area of ground, the rampart and an associated road known as the military way. In general the Wall ditch was a broad and V-profiled earthwork, measuring approximately 12m in width and around 3.6m in depth, with a rectangular slot cut into its base. The outer mound was formed with upcast on the N lip of the ditch that created an additional obstacle and heightened the N slope of the ditch. An open area of ground, known as the berm, separated the ditch from the rampart. The rampart was constructed of turf blocks standing on a stone base around 4.3m in width. From Falkirk to Bo'ness, the rampart was composed of an earth core faced with clay cheeks. Generally, the stone base comprised roughly squared outer kerbs with a rubble core and incorporated culverts, box-like stone-lined channels that allowed water to drain through the rampart more efficiently. At this location, the Antonine Wall, the fort, the military way and a structure known as an expansion survive as buried remains beneath the topsoil. The Antonine Wall has been located partly through geophysical survey, aerial photography and excavation, while the fort, military way and the expansion do not appear as cropmarks and are known only through excavation. Cropmarks represent negative or buried archaeological features that retain different levels of moisture than the surrounding subsoil resulting in the variant growth of the crops above. At this site cropmarks reveal the Antonine Wall ditch as it descends from the high ground of the raised beach overlooking the River Forth towards the low-lying site of the presumed crossing over the River Avon. Running in a generally NE-SW direction, the cropmark of the ditch is around 8m in width and around 195m in length. The fort, first located in 1914 and partially excavated in 1967 and in 1991, is attached to the S face of the Antonine Wall. It is likely to have been one of the smallest on the frontier as its N-S axis was around 34m and it is likely to have measured around 35m E-W. Internally, excavations have revealed stone building foundations and stretches of cobbled streets and part of its S ditch. The expansion survives as a stone foundation, around 7.8m in width, attached to the S face of the Antonine Wall. Expansions were turf platforms on a stone base that were built against the southern side of the Antonine Wall rampart and which appear to occur in pairs close to forts. There is a second expansion 300m to the east, and a second pair to the east of Rough Castle. Expansions are thought to have been used as watchtowers, beacons or signal posts. The shell middens were created thousands of years beforehand by some of the earliest inhabitants of Scotland. They are part of a wider group found along a raised beach marking a former shoreline of the Forth estuary. Hearths have been found within excavated shell middens in this group indicating that the middens may have been temporary camps as well as cooking places. The area to be scheduled is irregular on plan, to include the remains described and an area around them within which related material may be expected to be found, as shown in red on the accompanying map. The scheduling specifically excludes all post-and-wire fences, chain-link fences and field-gates to allow for their maintenance. The scheduling boundary goes up to but does not

include the metal fence around the gas governor. The monument's cultural significance can be expressed as follows: Intrinsic characteristics - The monument comprises a well-preserved stretch of the Antonine Wall, excavated on several occasions, and a cluster of shell middens that have been partially excavated. Only the Antonine Wall ditch appears as a cropmark on aerial photographs of the site. However, although no longer visible as earthworks, the ditch, as well as remains of the berm, rampart, military way, expansion and the fort, all survive beneath the topsoil in particularly good condition despite centuries of intensive cultivation. The monument is a good illustration of the way the frontier functioned and how it developed over its operational lifetime. The expansion is of particular interest as only another six are known on the whole frontier, with four in the vicinity of Rough Castle fort and two on Croy Hill. However, the Inveravon expansion may not have functioned in the same manner as the other known examples as its size and shape are considerably different. The Inveravon expansion occupies a poor position for signalling, its only views being of the River Forth and of Fife and Clackmannan (areas where there are no known Roman military installations of the Antonine period). Inveravon fort, whose existence has been suspected since the 18th century, is interpreted as one of the smaller forts on the Antonine Wall. The 1991 excavations show that the fort was added after the construction of the frontier and probably later in its operational life, perhaps as a means of guarding the nearby river crossing. The shell middens are readily visible as a spread of light-coloured shells mixed into the soil. They are clearest after the field has been ploughed. The shells are a mixture of oysters, mussels, winkles, whelks and cockles. Radiocarbon dates from these middens range from 4060 +/- 180 BC to 2250 +/- 120 BC, indicating the extensive middens accumulated over a long period of time commencing in the mesolithic period. The monument possesses excellent potential to provide high-quality archaeological evidence relating to the date, construction, maintenance and subsequent abandonment of the Antonine Wall and Roman frontier systems in general. There is good potential for the recovery of environmental samples as the rampart of the Antonine Wall and the fort will overlie ancient ground surfaces, while the fills of the frontier's ditch and those of the fort will contain similar evidence. Such information can improve our knowledge of the local landscape when the Antonine Wall was built and in use. The fort has excellent potential for the recovery of evidence that can enhance our understanding of the everyday lives of the soldiers garrisoned at the fort. The shell-middens have excellent potential for the recovery of artefacts and environmental samples relating to their use. Organic remains offer potential for dating that can inform our understanding of the development of the shell middens. Contextual characteristics - The Antonine Wall, established in the early 140s AD, represents Scotland's most significant Roman antiquity. Measuring 60km in length, the Wall spans the narrow neck of land between Bo'ness on the River Forth and Old Kilpatrick on the River Clyde. Incorporating a continuous system of wall and ditch, the Wall is accompanied at regular intervals by forts and fortlets linked by a road system. Archaeologists believe the layout of the frontier underwent alteration either during or immediately after construction with more forts being added, reducing the distance between garrisons. The Wall is one of only three linear barriers to be found along the 2000km European frontier of the Roman Empire, the other examples being Hadrian's Wall and the Rhine limes, and these are unique to Germany and Britain. However, the Antonine Wall is unique in the disposition of its forts at such close intervals and in the use of a turf superstructure on a stone foundation, an adaptation unparalleled elsewhere in the Roman Empire. Like other Roman frontiers, the Antonine Wall was intended to control and monitor cross-border movement into Roman-controlled territory rather than acting as a fortification to halt massed attack. However, it is likely that the frontier's physical presence in the landscape, a continuous barrier spanning central Scotland, discouraged small-scale local raiding. The Antonine Wall has a close relationship with the topography of central Scotland. Much of the frontier occupies the southern edge of the valley formed by the Rivers Kelvin and Carron, a position that offered the Antonine Wall wide-ranging views over the Kilsyth Hills, the Campsie Fells and Kilpatrick Hills, and meant that it was widely visible in the landscape. The route of the Antonine Wall also has commanding views over natural communication routes. The Antonine Wall formed part of the wider Roman reoccupation of Scotland. This comprises a web of roads interconnecting the forts and fortlets controlling the area to the south of the Wall. To the north of the frontier a chain of outpost forts, linked by a road, extended from Camelon on the outskirts of Falkirk to Bertha on the outskirts of Perth. Shell middens often represent long-lived settlements or campsites used in the exploitation of coastal resources. Examples with associated artefactual assemblages often date to the mesolithic or the very early neolithic periods (around 4500-3500 BC). They were created through the gradual deposition of domestic refuse and are composed primarily of shells and bone, giving detailed insight into the diet of mesolithic communities in Scotland. Associative characteristics - The Antonine Wall was established by the Emperor Antoninus Pius (AD 138-61) after successful campaigning in AD 139-42 by the Governor of Britain, Quintus Lollius

Urbicus. It replaced Hadrian's Wall as the Empire's most northerly frontier. The Wall remained in use until it was abandoned, possibly after AD 165, when the Roman army withdrew from Scotland and the frontier line shifted again to Hadrian's Wall. The construction and purpose of the Antonine Wall exemplifies the wider system of military frontier management, termed limes, which stretched over the whole of the Roman Empire. The Antonine Wall forms an extension to the existing transnational 'Frontiers of the Roman Empire' World Heritage Site that includes the German limes and Hadrian's Wall. UNESCO approved the addition of the Antonine Wall on 7 July 2008. The 2nd edition of the Ordnance Survey 1:2500 map, published around 1900, depicts a short stretch of the Antonine Wall ditch as a visible earthwork. Earlier maps of the area, notably General William Roy's Military Antiquities of the Romans in North Britain, show no remains between the tower at Inveravon and the River Avon. The earthworks do not appear on the 3rd edition Ordnance Survey map of the same field, suggesting they had been removed or ploughed down. Inveravon has long been suspected as the site of a Roman fort. Several writers and antiquarians of the 17th- 19th centuries considered the ruined medieval tower (part of SM 3211) to be remains of the Roman fort; others (such as William Roy) considered that the site of the fort had been washed away by the River Avon. Sir George Macdonald's 1914 excavations by the E bank of the River Avon provided the first suggestion that the fort may not have occupied the high ground but may have lain in the floodplain, close to the frontier's river crossing. This was subsequently confirmed by Prof Anne Robertson's 1967 excavations where building foundations and cobbled streets were uncovered. Numerous box-flue tiles have been recovered from the area of the riverbank, suggesting a building containing a hypocaust system, such as a bathhouse. National Importance - The monument is of national importance because it has an inherent potential to contribute to our understanding of the past, in particular mesolithic shell-middens and the Antonine Wall, its forts, and their garrisons as well as the character of Roman frontier systems more generally. The monument has high potential to add to our understanding of the dating, construction, maintenance and subsequent abandonment of the Antonine Wall. There is good potential for the recovery of dateable remains and environmental samples from the fills of the frontier's ditches and the fort, as well as from ancient ground surfaces sealed by the Antonine Wall's rampart and those of the fort. Such information has excellent potential to enhance our understanding of the character of the local landscape when the Antonine Wall was occupied. Aerial photography, geophysical survey and excavation demonstrate that the monument is particularly well-preserved. It represents an important survival in an arable landscape where the land has undergone several centuries of intensive cultivation. The loss of the monument would significantly impede our ability to understand the frontier and would erode the overall importance of the Antonine Wall as a single linear monument spanning central Scotland [1].

Sources

[1] Historic Environment Scotland

Asset Number	11	Asset Name	Dovecot, Carron House
Legal Status	Category B Listed Building	NGR	
Value	Medium	Condition	
Asset Type	Dovecote	Period	Post-Medieval
NMR ref	LB8314	HER ref	SMR 19

Description

The dovecote is a brick structure dating from the late 18th century and is associated with Carron House (LB8313). The structure was also a Scheduled Monument, but this designation was removed during the Dual Designation review, where it was decided that the structure's significance was appropriately recognised through its designation as a B listed building and that the Scheduling was unnecessary [1]. The doocot stands 300 yards SE of the house. It is octagonal Georgian structure of red brick with freestone dressings, measuring 18 ft in diameter over walls 2 ft thick. The door has an ogival pediment, and an oval window above it. At half height there is a string-course, with a range of oval windows above it, blind except in the

side containing the door. The wall finished in a moulded cornice, with a perching course and eight entries for the birds on each face, some of them blind, below it. Fragments of this cornice now litter the ground around the doocot, and the upper part of the brickwork is suffering from exposure to the weather. The Royal Commission suggested that it had originally been surmounted by a plain parapet-course, and that the roof behind this may have been pyramidal or virtually flat. The nests are brick built, arranged in 24 tiers of 6 nests on all sides but that with the entrance. There were 1016 nests in all. The doocot is owned by the Dawson Trust [2].

Sources

- [1] Historic Environment Scotland
[2] Falkirk Historic Environment Record

Asset Number	12	Asset Name	Grangemouth Road, Avon Bridge
Legal Status	Category C Listed Building	NGR	
Value	Low	Condition	
Asset Type	Bridge	Period	Post-Medieval
NMR ref	LB4145	HER ref	

Description

Mid 19th century. 5 semi-circular arches. Dressed ashlar. String course; slab-copings. Prominent rounded cutwaters. Carries pipeline on south side. A handsome mid 19th century road bridge situated on the A904 between Bo'ness and Grangemouth. The bridge was built after the publication, in 1846, of Frederick Carrington's map of the Forth Basin [1]. 5 arched bridge with narrow rounded cutwaters. Boring by BP showed that there is a larger amount of clay and rubble between the stonework and the present carriageway than is usual - due to the original design being for the canal. Parapets raised 2003 by the Roads Dept [2].

Sources

- [1] Historic Environment Scotland
[2] Falkirk Historic Environment Record

Asset Number	13	Asset Name	Grangemouth, Inveravon Tower
Legal Status	Category C Listed Building	NGR	
Value	Low	Condition	
Asset Type	Ruin	Period	Medieval
NMR ref	LB4146	HER ref	

Description

15th century. Dilapidated remains of round, 3.65m wide tower, formerly part of Inveravon Castle (destroyed 1455). Coursed, squared rubble exterior walls (1.52m thick). E side of tower collapsed. Some remains of vaulted ceiling to ground floor W. Some openings remain in W side. Inveravon Tower is all that remains of a 15th century castle that once existed on this site. Belonging to the Hamilton family, Inveravon was besieged and destroyed by James II in 1455, reportedly as part of the King's campaign to wipe out the Black Douglas family. The original form of the Castle is unknown with the remaining tower offering very few clues, as most of the architectural features have since decayed through time. However, the castle may have

continued to be inhabited in some way after this destruction, as it is found marked on Blaeu's 1654 map of the region as 'INNEREIJN' together with a small castle symbol. A branch of the Hamilton family were later to be found further E at the nearby Kinneil House (see separate listing) dating from the late 15th century onwards; although it is unknown whether these were the same family that earlier owned Inveravon. Inveravon Tower sits within the scheduling boundary for the Antonine Wall (SCHEDULED ANCIENT MONUMENT), but is not included in the schedule. The line of the wall approaches from the SE, and arcs over the N side of the Tower before heading W towards Kinneil. Inveravon Tower lies within the amenity zone for the Antonine Wall recommended in D N Skinner The Countryside of the Antonine Wall (1973), and which will form the basis of the buffer zone, yet to be defined, for the proposed Antonine Wall World Heritage Site [1].

Sources

[1] Historic Environment Scotland

Asset Number	15	Asset Name	Carron House
Legal Status	Category B Listed Building	NGR	
Value	Medium	Condition	
Asset Type	Mansion	Period	Post-Medieval
NMR ref	LB8313	HER ref	SMR 256

Description

Late 18th century mansion. Ruined wall section of 2 storey house with pediment [1]. Built for Charles Gascoigne in the 1770s from stone quarried at Kinnaird. It was sequestered in 1779 due to his debts and subsequently sold to John Ogilvie, Dunmore. He was succeeded by John Walker Ogilvie. In 1838 it came into the possession of Henry Stainton and by 1859 was in the ownership of William Dawson of Powfoulis. In the 1880s a new house existed within the remains of the old one and was owned by Thomas Dawson Brodie [2].

Sources

[1] Historic Environment Scotland

[2] Falkirk Historic Environment Record

Asset Number	16	Asset Name	Carron Company, Clock Tower Remnant Of Former Office Block
Legal Status	Category C Listed Building	NGR	
Value	Low	Condition	
Asset Type	Clock tower	Period	Post-Medieval
NMR ref	LB10504	HER ref	

Description

1874-75, Robert Baldie. Crow-step gabled, clock-tower remnant of the Baronial style offices of the Carron Company Ironworks. Bull-faced, snecked sandstone with moulded ashlar dressings. Deep roll-moulded segmental-arched pend; triple-light window above; company crest and date panel with monogram to gable apex. Square clock turret with black and gold faces, dentiled cornice and canon-mouldings to corners. Bell-cast pyramidal roof with weathervane finial. 18th century iron remnants inserted into stonework to either side of pend. Cement render to sides and rear. Later (circa 1992) single-storey additions flanking.

4-pane glazing in timber sash and case windows. Graded grey Scottish slate.

When originally listed in 1988, the building comprised a substantial, 53 bay office block in the Stirling-School Scottish Baronial style. It was Stirling born architect Robert Baldie's largest commission. The central gabled clock-tower bay was retained following demolition of the rest of the building in 1990. Isolated from its former architectural context, this remnant is now an unusual local landmark. It retains its listed status primarily for its special historic interest and serves as a reminder of the major role the company played during the 18th and 19th century industrial revolution, both from a local and international perspective. Interest is added by an iron lintel from the first blast furnace on the site, dated 1760, which has been inlaid into the stonework beside the pend. On the opposite side is part of a cylinder cast in 1766 for James Watt, the steam engine designer. The panel above contains the company's crest with its crossed canons and phoenix rising from the flames with the company motto above, 'Esto Perpetua' (Let it Endure Forever). Established in 1759, the Carron Company ironworks was hugely significant in the fortunes of Falkirk, underpinning its rapid development. By 1810, it was the largest ironworks in Europe, employing over 2,000 workers. The company's prosperity grew with the mass-production of the hugely successful 'Carronade' short-barrel canon, produced continuously between 1778 and 1850 and used to great effect in numerous naval and military campaigns. Carron continued to produce munitions in both World Wars, diversifying into plastics and steel in the later 20th century. The company went into receivership in 1982 [1].

Sources

[1] Historic Environment Scotland

Asset Number	18	Asset Name	Weir Carron Iron Works
Legal Status	Category B Listed Building	NGR	
Value	Medium	Condition	
Asset Type	Weir	Period	Post-Medieval
NMR ref	LB13305, LB31249	HER ref	SMR 240

Description

Probably circa 1749, built for Carron Company. Gravity weir across the River Carron with bullnosed ashlar shallow-sloped face on downstream side. One of few substantial surviving remains of Scotland's first major iron-smelting works [1]. This weir lies to the SW of the Ironworks. It is arranged with the outer face of the arc facing upstream, and with a shallow-sloped face on the downstream side. Straight weir about 90ft long. The local angling association have removed the centre to allow salmon up river, and in so doing have destroyed the structural integrity of the monument. Built for Carron Co c1812. Gravity weir across the River Carron with bullnosed ashlar shallow sloped face oin downstream side [2].

Sources

[1] Historic Environment Scotland

[2] Falkirk Historic Environment Record

Asset Number	19	Asset Name	Former Railway Bridge Across River Carron Carron Iron Works
Legal Status	Category B Listed Building	NGR	
Value	Medium	Condition	
Asset Type	Bridge	Period	Post-Medieval
NMR ref	LB13306, LB31250	HER ref	SMR 241
Description			
<p>Circa 1860, for Carron Company. 2-span segmental arched masonry bridge, with channelled bullnosed ashlar voussoirs with dressed margins, and snecked rubble spandrels and wing walls spandrels strengthened with old rails, arranged radially. Road span to N removed. Built for internal railway to new canal basin at Bainsford, Falkirk. One of few substantial survivors from Carron Iron Works, Scotland's first major iron-smelting works [1]. This bridge joined the Carron Works to the main railway network. It entered the works at a high level, the large arch over the river and the smaller one over the road to W Carron being continued as a series of arches within the compound. The river arch is the only one remaining. It has channelled bullnosed ashlar voussoirs with dressed margins, and snecked rubble spandrels and wing walls spandrels strengthened with old rails, arranged radially. Road span to N removed. The springer stone for the small arch on the north and south ends has the date 1860 carved on it. 2 span segmental arched masonry bridge. The pier on line with the boundary wall of the Carron Iron works was removed in 1998 to widen the road into Carron Phoenix [2].</p>			
Sources			
<p>[1] Historic Environment Scotland [2] Falkirk Historic Environment Record</p>			

Asset Number	20	Asset Name	The Grahamston Cast-Iron Gate
Legal Status	Category B Listed Building	NGR	
Value	Medium	Condition	
Asset Type	Gate	Period	Post-Medieval
NMR ref	LB31230	HER ref	
Description			
<p>1886. Cast iron, semicircular arch on consoled corbels, plastered with ornamental panels, urns, scrolled top ornament with draped flags. Painted blue. This ornamental triumphal cast-iron arch was made by Grahamston Iron Company in Falkirk for the Edinburgh International Festival Exhibition of 1886, at which it won a Diploma of Honour. The structure weighs 20 tons and is among the largest cast iron arches in the UK. The arch was subsequently erected at the Grahamston Works entrance in Gowan Avenue, Falkirk in the same year. The arch was refurbished in 2002 and moved a kilometre or so North to its new location beside the boundary wall of the former Carron Company Iron Works [1].</p>			
Sources			
<p>[1] Historic Environment Scotland</p>			

Asset Number	21	Asset Name	Sacred Heart Rc Church Dalratho Road And Drummond Place
Legal Status	Category C Listed Building	NGR	
Value	Low	Condition	
Asset Type	Church	Period	Modern
NMR ref	LB34040	HER ref	
Description			
1927. Archibald Macpherson, architect. Gothic Revival. Snecked rubble. Tiled roof. Round-headed window in pairs. Salient buttresses. Five-sided open porch at W end, figure of Christ in niche over. Interior is aisled. Internal walls and arcades are of brick. Open timber ceiling. Gallery at W end. Sanctuary arch at E. In ecclesiastical use [1].			
Sources			
[1] Historic Environment Scotland			

Asset Number	22	Asset Name	Dundas Church Bo'Ness Road
Legal Status	Category A Listed Building	NGR	
Value	High	Condition	
Asset Type	Church	Period	Post-Medieval
NMR ref	LB34041	HER ref	
Description			
J J Burnet. 1894. Romanesque. Rectangular plan church with central arcade and M roof. Snecked rubble with ashlar dressings. 3 bays with paired lancets in each. Large square-plan tower attached at north with chamfered angles, paired round headed louvres in upper stage, corbelled parapet and pyramidal roof. Porch extends west from tower with boldly detailed door and flanking cusped windows; timber braces and posts support dentilled tie beam, applied timber framing in gable head, with barge-boards; deeply projecting eaves. Hall extends to west with projection angled, semi-octagonal room. Slate roof [1].			
Sources			
[1] Historic Environment Scotland			

Asset Number	23	Asset Name	Carronflats Road, Abbotsgrange Middle School
Legal Status	Category B Listed Building	NGR	
Value	Medium	Condition	
Asset Type	School	Period	Modern
NMR ref	LB34045	HER ref	
Description			

1908. Former Grangemouth High School. Classically detailed, 2-storey school. Red sandstone ashlar, channelled at ground with good sculpture detail. All windows single light with top hoppers. LONG S ELEVATION: 15 bays in blocks of 3. Central and end blocks shallow advanced, outer pedimented, inner with blocking course and date - stone plinth for handsome sculpture group. Outer bays, ground storey forming channelled plinth above broad channelled angle piers, 2 paired Ionic columns in antis flank central 1st floor windows. Centre bay to centre block simplified with piers not columns. E AND W ELEVATIONS: 7 bays (3-1-3) each with boys/girls entrance in wider central bay. This bay with broad channelled angle piers, open pediment over door and crowning segmental pediment. W elevation now with modern link corridor connecting to modern buildings of no special architectural merit. The sculpture detail on this building is unusually good, particularly the central figure group [1].

Sources

[1] Historic Environment Scotland

Asset Number	24	Asset Name	Ronaldshay Crescent And Park Road Grange Church And Church Hall
Legal Status	Category B Listed Building	NGR	
Value	Medium	Condition	
Asset Type	Church	Period	Modern
NMR ref	LB34046	HER ref	

Description

John Benie Wilson. 1900-1903. Red bull-faced sandstone Arts and Crafts church, built for UP congregation. Galleried, simple rectangle on plan, oriented N-S. Early English (lancet or plate-traceried) windows, 3-light rectangular windows lighting nave at lower and upper gallery levels. Rubble plinth; square-gridded leaded obscured (clear) glass. Grey slated steeply-pitched slated roof with shallow catslide skylights to W and E, red clay ridge tiles, and masonry Celtic cross finials. Prominent, slightly battered, square-plan entrance TOWER at NW with octagonal NE angle turret: pointed arched entrance to W from Park Road, single lancet over at middle stage, string course over marking belfry upper stage, wall buttresses clasping at belfry-stage angles, single pointed-arched belfry openings with Y-tracery to each face, wall buttresses rising above wallhead and coped, as crenellations, red-tiled bellcast pyramid roof, eaves swept down between crenellations; leaded apex and finial. W ELEVATION: tower to left, 2 nave bays set-back at centre, taller transeptal gabled bay slightly projecting to right, with large overarched stepped triple lancets at upper level, as at S (liturgical E), and E, lighting chancel. Entrance porch slightly set-back to right in front of short chancel projection, leading to church (left) and vestry and hall (right). N (RONALDSHAY CRESCENT) FRONTAGE: tall nave gable front, 2 windows wide, tower slightly set-back to right, polygonal 2-stage staircase projection in front of tower. Entrance bay set-back to left, segmental-arched entrance with original 2-leaf doors, upper sections glazed and multi-paned. INTERIOR: slightly polychrome effect with cream polished ashlar to main wall planes, and red polished ashlar voussoirs to pointed arcades over galleries. Canted gallery fronts pierced with simple cusped trefoils, clock in N gallery front removed, galleries supported on cast-iron columns, raked seats; chancel screen only in chancel arch, organ, as well as most other furniture, removed (1992), chancel recess stencilled with gold stars on blue, circa 1950; original pews, stripped (pitched pine). Timber barrel-vaulted roof with diagonally-boarded panels, and tie-braces with cusped decoration. Single-storey CHURCH HALL linked to S, lit by bipartite windows, with grey slated pitched roof and ornate ridge fleche, with timber louvres decorated with cusping, and tall slated pyramid roof. HALL, W ELEVATION: single-storey, with gable, left, linked to asymmetrical wallhead stack, tripartite window to right. Interior (hall): with deep straight-coved boarded roof and timber arched braces; single stained glass window to S at church hall, coloured glass floral swag motif set in clear leaded glass. Congregation of Grange church uniting with that of Zetland parish church, adjacent,

1992. Important in townscape terms, the church tower especially an important skyscape element of the new town, as laid out under the auspices of the Zetland family. Feu disposition taken out in October, 1900, church formally opened 29 October, 1903 (Porteous); the UP congregation had previously worshipped in a church (built 1859) in Grange Street (demolished) [1].

Sources

[1] Historic Environment Scotland

Asset Number	25	Asset Name	Ronaldsay Crescent Zetland Parish Church (Old Parish Church)
Legal Status	Category B Listed Building	NGR	
Value	Medium	Condition	
Asset Type	Church	Period	Modern
NMR ref	LB34047	HER ref	

Description

Foundation stone laid 1910. Large, cruciform-plan church, built for the Established Church, correctly oriented with single (S) aisle, transepts, and church halls to E. Decorated tracery. Asymmetrically-placed square-plan entrance TOWER at NW, with tall lower stage, pointed entrance portal to N with square billet-moulding; open belfry stage with pair tall, shallow-arched openings with trefoil cusped tracery to each elevation, shaped crenellated parapet with crocketed pinnacle asymmetrically placed over NE angle. Steep-pitched grey-slatted roof with red ridge tiles, swept down low (bellcast) at S over low S aisle. N (RONALDSHAY CRESCENT) ELEVATION: entrance tower, right, 2 windows of nave set-back at centre, with curvilinear Dec tracery, slim transept gable projecting to left, deep chancel set back behind subsidiary single-storey entrance, left. W GABLE: 2 2-light curvilinear windows at upper level divided by central buttress and canopied niche, square headed 2 lights below. E-facing windows of church halls replaced in unsympathetic fashion with aluminium framed windows. INTERIOR: timber pointed barrel roofs to nave, chancel and transepts, joining as elaborate groin vault in front of pointed chancel arch, which has round billet moulding; polished ashlar octagonal shafts to nave arcades; single (S) aisle, with mono-pitched roof with latticed cross-braces. Window tracery: E chancel window Perp/Dec transitional tracery, with stained glass; transepts Flamboyant/Curvilinear, with clear leaded glass; 3-light cusped S aisle windows with stained glass, detached arcaded screens in front, free-standing shafts rising from sloping cills. Ecclesiastical building in use as such. The previous established church at Zetland Place, built in 1865 by Alexander Black, architect, and enlarged 1879, was abandoned (and demolished) to allow the railway company to develop on the site [1].

Sources

[1] Historic Environment Scotland

Asset Number	26	Asset Name	Swing Bridge, Western Channel And Carron Dock, Grangemouth Docks
Legal Status	Category B Listed Building	NGR	
Value	Medium	Condition	
Asset Type	Bridge	Period	Modern
NMR ref	LB34048	HER ref	

Description

Opened 1906 by the Caledonian Railway, D A Mathieson, engineer, Motherwell Bridge & Engineering Co Ltd, contractors. Single-span bowed steel Pratt truss bridge, hydraulically operated, with timber deck and inset railway track. Trusses linked at top by three light lattice girders. Wooden control tower with extensive glazing and external stair, in railway signal box style, and lattice-post signal controlling approach to bridge [1].

Sources

[1] Historic Environment Scotland

Asset Number	27	Asset Name	Grangemouth Dock, Former Workshop Building
Legal Status	Category C Listed Building	NGR	
Value	Low	Condition	
Asset Type	Workshop	Period	Post-Medieval
NMR ref	LB50868	HER ref	

Description

Late 19th Century. Symmetrical, 11-bay rectangular-plan workshop with 2-storey 3-bay pedimented-gabled block to centre and flanking 4-bay wings with end gables. Scotch-bonded red brick with ashlar window cills and copes. Corbelled brick eaves course and banding to pediment. Round-arched windows and doors; shallow brick pilasters dividing bays to wings; oculi windows to apexes of end gables. FURTHER DESCRIPTION: raised brick architrave to centre with timber door; clock face to centre of pediment. 2-leaf timber-boarded doors to vehicle entrance to W elevation. Some openings to rear elevation partially infilled; segmental-arched hoist door at first floor to centre. INTERIOR: simple cornicing and ceiling roses visible through upper floor openings. Some surviving small-pane glazing in timber-framed fixed-pane windows. Grey Scottish slate. Ashlar skews and skewputs [1].

Sources

[1] Historic Environment Scotland

Asset Number	28	Asset Name	Grangemouth Station Road, Former La Scala Cinema
Legal Status	Category C Listed Building	NGR	
Value	Low	Condition	
Asset Type	Cinema	Period	Modern
NMR ref	LB50873	HER ref	

Description

1913 with later alterations. Early, purpose-built cinema fronted by near symmetrical, 7-bay Scots Renaissance style vestibule block with 2-storey ogee-roofed outer pavilions. Scotch-bond red brick with sandstone ashlar dressings; rendered brick auditorium. Base course; moulded cornice; blocking course. Tripartite openings with moulded margins and cills. Moulded pilasters dividing bays with obelisk-finials above parapet. Giant, Composite-order corner pilasters to pavilions. FURTHER DESCRIPTION: S (PRINCIPAL) ELEVATION: principal opening to centre bay; panel above inscribed 'Empire Electric Theatre' surmounted by ornate 17th century Scots Renaissance style scrolled and finialled swan-neck pediment. Moulded doorpieces to pavilions with broken segmental-arched pediments containing tablet-stones; tripartite windows at eaves level. Plain auditorium block behind vestibule steps down slightly in height from left to right with bays marked out by brick

pilasters. 1930s addition to East with cantilevered projection booth at upper level; irregular fenestration. Fixed-pane timber-framed windows to principal elevation; metal-framed windows to W elevation. Grey slate to pavilion roofs. Clay cans. Cast-iron rainwater goods. INTERIOR: Plain auditorium, probably the result of remodelling after fires in 1952 and 1962. Further alterations following change of use to bingo hall in 1971. Curved rear balcony; segmental-arched ribbed ceiling; proscenium with cartouche detail. Void behind stage with evidence of rigging and elevated gantrys. Part of the first wave of purpose-built cinemas constructed in Scotland following the introduction of the Cinematograph Act in 1910. Opened as the Empire Electric Theatre in December 1913 and renamed the La Scala three years later, it is a rare survivor of its type in Scotland. The earliest remaining example is the listed Hippodrome in nearby Bo'ness, which opened in March 1912 (see separate listing). The La Scala occupies a prominent central location beside the Grangemouth Town Hall. The pavilioned vestibule section with its combination of red brick and Renaissance detailing is of particular note, providing considerable streetscape interest. The use of the Renaissance style is unusual in Scottish cinema design. It is likely the interior has undergone at least one major set of alterations. The auditorium was partially rebuilt for sound in 1930 following the introduction of talking pictures. Richard Jaques suggests that this work may have been by architect Alistair G Macdonald, son of the Prime Minister Ramsay Macdonald. The void behind the stage suggests that the building may have originally been intended to also function as a traditional theatre. The auditorium held 655 seats at the height of the cinema's popularity during the 1940's. Part of the first wave of purpose-built cinemas constructed in Scotland following the introduction of the Cinematograph Act in 1910. Opened as the Empire Electric Theatre in December 1913 and renamed the La Scala three years later, it is a rare survivor of its type in Scotland. The earliest remaining example is the listed Hippodrome in nearby Bo'ness, which opened in March 1912 (see separate listing). The La Scala occupies a prominent central location beside the Grangemouth Town Hall. The pavilioned vestibule section with its combination of red brick and Renaissance detailing is of particular note, providing considerable streetscape interest. The use of the Renaissance style is unusual in Scottish cinema design. It is likely the interior has undergone at least one major set of alterations. The auditorium was partially rebuilt for sound in 1930 following the introduction of talking pictures. Richard Jaques suggests that this work may have been by architect Alistair G Macdonald, son of the Prime Minister Ramsay Macdonald. The void behind the stage suggests that the building may have originally been intended to also function as a traditional theatre. The auditorium held 655 seats at the height of the cinema's popularity during the 1940's [1].

Sources

[1] Historic Environment Scotland

Asset Number	29	Asset Name	Zetland Park War Memorial And Park Gates, Grangemouth
Legal Status	Category B Listed Building	NGR	
Value	Medium	Condition	
Asset Type	War memorial	Period	Modern
NMR ref	LB52398	HER ref	

Description

The Zetland Park war memorial and park gates, were designed by Sir John James Burnet in 1921 and officially unveiled in 1923. It is a sandstone structure comprising a hollow central cenotaph as the main memorial, with flanking pillars to the east and west dated 1914 (east) and 1919 (west) respectively, with the gates themselves at the extreme east and west ends of the structure. The cenotaph stands 8.2m tall, with openings on the east and west side into the hollow interior. On top of the cenotaph is an elaborate sculpture of a lion, representing the British Empire, devouring a stricken Eagle, representing Germany. On the north (front) face of the memorial is a carved sandstone cross, above a statement in lead lettering, reading "In proud and grateful memory / of / the Men from Grangemouth / who went forth during these years of War / to fight for God and the Right. / The names of / those who returned not again / are here inscribed", with a further inscription carved

into the stone at the base of the north face, reading "To you with failing hands we throw / The torch: be yours to hold it high". On the east, north and west faces of the memorial are the lists of casualties of the First World War, also in lead lettering. To the rear of the cenotaph is a low sandstone wall, originally part of the encircling wall removed during renovations in 1948. Into the south face of this wall were added three new plaques with lead lettering listing the casualties of the Second World War, and below this is a fourth smaller plaque into which is carved the name of a single casualty of the Korean War. To the east and west of the war memorial, on the edge of the paved area surrounding it, are a pair of square pillars. The eastern example has the date 1914 carved into its north face and the western example has the date 1919 carved on it. Originally these pillars were connected by a low wall and railings to the memorial itself, but this was removed in the 1948 alterations, although evidence of the fence can still be seen on the pillars themselves. From each pillar, a low wall topped with iron railings extend further out to the east and west, where it meets the two ornamental gates to the park. The four gate piers are square sandstone pillars, with a simple decoration on the capitals, and a decorative urn on the top of each pillar. Beyond the gates, a further short section of low wall and railings forms the east and west ends of the structure. The war memorial in Zetland Park is a notable example of a commemorative monument erected following the First World War. It has some unusual decorative features, including the finely executed lion and eagle sculpture on top of the main cenotaph which is an overtly visceral and militaristic depiction of Britain defeating Germany. It is also unusual that the flanking pillars giving the dates as 1914 to 1919, rather than the more common 1914 to 1918, and the inclusion of a female casualty from the local area. The whole is designed as set piece within the park setting. The memorial was designed by Sir John James Burnet, a major architect in the early 20th century and one of the leading architects of the Imperial War Graves Commission in the aftermath of the First World War, with sculpture by Alexander Proudfoot, a significant Glasgow sculptor and the Head of Sculpture at the Glasgow School of Art. Age and Rarity - The Zetland Park war memorial was unveiled on 22 September 1923 by General Sir George Ian Hamilton, in memory of the war dead of Grangemouth. The memorial was built at the northern end of Zetland Park, and was also designed to serve as a formal entrance to the park, with the two flanking gates at the east and west ends of the structure. Several other sites were proposed for a memorial in the town, but Burnet ultimately favoured Zetland Park as the location. There are a total of 276 casualties from the First World War on the memorial, including 1 woman, Annie Campbell Reid, a nurse who died of peritonitis while serving in Egypt, and who is buried in the Commonwealth War Graves Commission cemetery in Cairo, also designed by Sir John James Burnet. The addition of Second World War casualties adds another 136 names, and a single casualty of the Korean War is also present. Although there are some memorials to commemorate those who died in war in the late 19th century and earlier, it was particularly after the First World War that the majority of war memorials were erected. The government at the time encouraged communities to erect memorials to commemorate the local people who had died in the conflict, and it did not place any restrictions on the design of the memorials. Consequently, there are a wide variety of styles, from elaborately carved large monumental structures to simple crosses. Designs include Celtic crosses (particularly in Scotland), obelisks, statues, plaques and stained glass windows amongst others. First World War memorials are not rare with most communities having at least one. The war memorial in Grangemouth is a particularly impressive design, and incorporating it as a part of the formal park entrance has given it a dual public function. The presence of a female casualty is a rare inclusion on an official memorial, as is the dates of the conflict being listed as 1914-1919, as the Armistice in 1918 is more commonly considered the end date of the war for memorial purposes. Technological excellence or innovation, material or design quality - In terms of the design, the memorial is relatively simple, although with some impressive decorative features, such as the "lion and eagle" sculpture on top of the main cenotaph and the ornamental finials of the gate piers. The addition of a striking sculpture is characteristic of Burnet's interest in architectural sculpture and his wishes to portray such a visceral representation of Britain's victory over Germany was the subject of local controversy. The narrative group was not included in the architect's original sketches and the depiction of a brutal conquest was not considered to be in keeping with the prevailing spirit of reconciliation. Nevertheless the architect's new design was accepted as was his wish to locate the memorial in Zetland Park which was expressly extended for this purpose. The arrangement of the cenotaph is also reminiscent of the architect's larger memorials abroad, where a simple monumental composition was the most important feature of the memorial, such as the centrally positioned obelisk as the dominant feature of the composition for Burnet's impressive and highly important memorial at Cape Helles, Gallipoli in Turkey. However, the overall scale of the Zetland Park memorial, encompassing the sculpted pier, gate piers and connecting walls, fences and gates, is more substantial than other examples in Scotland marking similar

numbers of casualties. Sir John James Burnet (1857–1938) is regarded as one of Scotland's most significant architects of the early 20th century, leading two offices – in Glasgow and London – which produced some of the UK's most important buildings of the period, including the Edward the VII galleries, a substantial extension to British Museum and arguably the best Beaux Arts building in the country. Burnet, was among a select group of British architects, including Robert Lorimer and Reginald Blomfield, chosen to design and erect war memorials in the United Kingdom and in areas of conflict abroad at the close of the First World War. Burnet was allocated sites Palestine, Turkey, Egypt and Mesopotamia (present day Iraq) and Egypt. Setting - The memorial stands at the northern end of Zetland Park, a public park close to Grangemouth town centre. The park was purposely extended to accommodate the memorial which now resides within the angle formed by the junctions of Abbots Road, Dalratho Road and Drummond Place. Today the park is within a residential area of Grangemouth, and contemporary photographs indicate a similar setting at the time the memorial was built. Regional variations - There are no known regional variations. Close Historical Associations - The memorial is associated with nationally important events, namely the First World War, with later alterations to also mark the Second World War and the Korean War, and with both a prominent architect and sculptor of the period [1].

Sources

[1] Historic Environment Scotland

Asset Number	32	Asset Name	Fountain, Zetland Park, Dalratho Road, Grangemouth
Legal Status	Category C Listed Building	NGR	
Value	Low	Condition	
Asset Type	Fountain	Period	Post-Medieval
NMR ref	LB52399	HER ref	

Description

The fountain was designed and erected in 1882 and is located in Zetland Park. Alterations were made about 1923 when the fountain was relocated within the public park. There were further alterations after the 1930s. The fountain takes the form of a large circular cast iron basin set on a four-course, ashlar masonry sandstone base. The basin has two outer cast iron side bowls for drinking water on fretted arched panels and a central pedestal surrounded by four kneeling cast iron winged angels. This supports a shallow, open bowl with beaded rim and eight water spouts. The fountain in Zetland Park dating from 1882 is a good surviving example of a cast iron drinking fountain with some unusual surviving features, including the fretted panels on the side basins and the angels supporting the second basin. It is a relatively early example of its type following the advent of the Temperance Movement in the UK in 1859. Although it bears no maker's mark, it is likely to have been cast in a local foundry, probably the Falkirk Foundry or the Carron Ironworks who provided the seats, railings and flagpole at the time the park was opened. The fountain was gifted to the town by the Lord Provost Hugh Macpherson who was deeply concerned with the welfare of the townspeople and was a committed supporter of local industry which would seem to confirm that the fountain was cast locally. Age and Rarity - In 1880 the Earl of Zetland offered an area of ground for a public park in Grangemouth. This was accepted by the Town Council and the Park was opened on 3 June 1882. The fountain was gifted by the Lord Provost of Grangemouth, Hugh Macpherson. The fountain was in place when the park was opened and the water was turned on by the Provost's wife, Mrs Elizabeth Macpherson, at the opening ceremony. The opening of the park coincided with that of the new Carron Dock and the ceremonies were conducted on one day. A commemorative medal which shows the appearance of the fountain at that date (with a further cast iron superstructure) was struck on the occasion of the opening of the park. The reverse side the medal commemorates the presentation of the public park by the Earl of Zetland and the opening of the new docks. The fountain was originally located at the northernmost end of the park. The fountain was relocated 1923 when the War Memorial was constructed in this northern position and the fountain moved to its current position further south. An image of the 1930s indicates that the fountain had been raised from its original 3-

course base to four courses and also with the insertion of a concrete surround and concrete steps on either side replacing the single sandstone step, presumably when it was moved, but its superstructure was visibly in place at this date. Part of the superstructure of the fountain was removed at some point since then (see below) but the exact date is unknown. However the fountain still retains many elements dating from its date of construction. There were many drinking fountains erected during the second half of the 19th century in towns over the United Kingdom to provide a ready supply of clean drinking water before running water in households was universally available. The London fountain movement was launched on 12th April 1859 and was an association formed by Samuel Gurney. Drinking fresh water was encouraged as a better option than beer or other alcoholic beverages and so fountains were usually erected close to pubs. At the same time the Temperance Movement initiated philanthropic donations for memorial fountains, which would ensure that many received elaborate decorative treatment. With the advent of readily available fresh water drinking fountains lost their original purpose and remained simply as decorative features in the streetscape. Many have fallen into disrepair or been extensively altered. They are therefore a relatively rare type of structure with only 18 iron drinking fountains presently listed in Scotland. Of those listed iron fountains only four are earlier than that at Grangemouth. In this context, the Zetland Park fountain is considered to be a relatively early example of the type in Scotland. While it has been moved to a new location in the 1920s and has since lost some of its early fabric, the design is known to be uncommon for its type and retains good decorative features such as its drinking bowls and the cast angels (see below). Technological excellence or innovation, material or design quality

- The maker of this fountain has not yet been identified. Unusually there is no evidence of a maker's mark. However it is possible this was lost when the fountain was moved and reconstructed. The side basins with fretted panels and the angels supporting the basin are relatively unusual design motifs and their survival is of interest and is not found elsewhere in Scotland. It is almost certain that one of the local foundries made the fountain. Newspapers document that the layout of the park was funded by public subscription and two local iron companies, the Falkirk Iron Company and the Carron Company supplied (presumably free of charge) chairs, the flagstaff which was surmounted by a model ship, and railings. It is possible that one of these two foundries was therefore responsible. However there is a further reason for believing that the fountain was made locally. It was commissioned at the expense of the Lord Provost Hugh Macpherson. Macpherson (1833-1899) was wholly committed to supporting the community and was involved with the Falkirk United Christian Fellowship, the Town Mission, the YMCA, the Coast Mission and the Foundry Boys Meeting as well as the local Free Church. He served as a Police Commissioner and on the School Board. He was also an advocate of temperance and in his position as Lord Provost was reluctant to grant new licenses for public houses. It is clear that he would have supported the local foundries by employing them to cast the fountain. He may however have supplied ideas for the design. Macpherson was a self-made man who established the Forth Saw Mills in 1867 and is described as a timber merchant in census records. He imported foreign timber and there is evidence that he had business interests on the Continent. At the time of his death he relinquished his interest in a Feldspar mine in Christiansund in Norway. Grangemouth Town Council Minutes do not give details of the designer of the fountain but from these minutes it is clear that the construction of the park was dealt with by a Parks Sub-Committee. No records of this survive. However it is recorded (Buildings of Scotland) that the architectural practice A & W Black of Falkirk was responsible for the design and layout of Zetland Park. The uncatalogued papers of Hugh Macpherson in Falkirk Archives show that William Black undertook work for Macpherson privately including the construction of a workshop in 1882 and the procurement of lairs in Falkirk Cemetery on his behalf in 1889. It is very likely that Black made a design for the fountain which was then cast by one of the local firms. The fountain, as noted above, has been altered. The upper basin was formerly surmounted by a fluted column supporting another basin on which a sculpted figure holding an urn on her head from which water poured, filling the top bowl which in turn filled the middle bowl and flowed from eight spouts into the base bowl. It has been suggested that by comparison with other drinking fountains (for example those illustrated in the catalogues of Walter Macfarlane & Co) that there may have been chains with cups attached on the side bowls. Some alterations have been made to the fountain but the design is highly unusual. Nothing similar is recorded in the Scottish Ironwork database.
- Setting
- The fountain is located in open ground at the intersection of a number of paths in Zetland Park. Along with the war memorial, the fountain is a significant visual focal point in the park which in this area is largely open lawns.
- Regional variations
- There are no known regional variations.
- Close Historical Associations
- There are no known associations with a person or event of national importance at present (2016). There is a locally significant association with foundry industries nearby at Falkirk. The fountain was gifted to the town by the Lord Provost Hugh Macpherson who was deeply concerned

with the welfare of the townspeople and was a committed supporter of local industry which would seem to confirm that the fountain was cast locally [1].

Sources

[1] Historic Environment Scotland

Asset Number	33	Asset Name	Carron Iron Bridge
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; bridge	Period	Post-Medieval
NMR ref		HER ref	SMR 1000

Description

Cast iron bridge attached to the W side of Carron road bridge in 1810. Erected in 1811 to link the Carron Works with the canal basin at Bainsford by means of a waggonway. The road bridge was arched and too steep. Demolished 1906 [1].

Sources

[1] Falkirk Historic Environment Record

Asset Number	34	Asset Name	Carron Canal
Legal Status	None	NGR	
Value	Low	Condition	
Asset Type	Site; canal structure	Period	Post-Medieval
NMR ref		HER ref	SMR 1064

Description

A private canal built for the Carron Co in the 1770s from their works towards Carronshore [1].

Sources

[1] Falkirk Historic Environment Record

Asset Number	35	Asset Name	Graving Dock, Carronshore
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; dry dock	Period	Post-Medieval
NMR ref		HER ref	SMR 1106
Description			
Stone lined dry dock, now backfilled. Built c1840 in the former Quarrole Pow. Backfilled in the 20th century. It was used to build and repair ships [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	36	Asset Name	Coble Brae Distillery
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; distillery	Period	Post-Medieval
NMR ref		HER ref	SMR 1322
Description			
"Mr Wyse's Distillery" is shown on Ainslie's plan of 1797 at Coble Brae. It may be assumed that the buildings from the distillery were later subsumed into the farm complex [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	37	Asset Name	Carronshore Ropework
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; ropework	Period	Post-Medieval
NMR ref		HER ref	SMR 1323
Description			
Nothing now remains of this rope work. Shown on various maps of the 1780s and 1790s to the west of the village of Carronshore [1].			
Sources			

[1] Falkirk Historic Environment Record

Asset Number	38	Asset Name	Fulderhaugh
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; distillery; rope walk; chemical works	Period	Post-Medieval
NMR ref		HER ref	SMR 1324
Description			
The site of a pitch house, rope work and distillery are now marked by a doocot. The distillery is mentioned in legal disputes involving Charles Gascoigne. The rope works and pitch house were established by Francis Garbett & Co in the 1770s [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	39	Asset Name	Fulderhaugh Boatyard
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; dry dock	Period	Post-Medieval
NMR ref		HER ref	SMR 1325
Description			
Nothing can be seen on the ground. This dry dock was formed in the 1760s by Francis Garbett & Co to service the vessels used by the Carron Co. By 1797 it is shown as "Remains of Dry Dock" [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	40	Asset Name	Carronshore Logboat
Legal Status	None	NGR	
Value	Low	Condition	
Asset Type	Find Spot; logboat	Period	Post-Medieval
NMR ref		HER ref	SMR 1404
Description			

Discovered in 2007 on the north bank of the River Carron. Radiocarbon dates suggest a date of c1730 AD and it may be connected with the Jacobite incidents in 1745/6 [1].

Sources

[1] Falkirk Historic Environment Record

Asset Number	41	Asset Name	Carronshore Village
Legal Status	None	NGR	
Value	Low	Condition	
Asset Type	Site	Period	Post-Medieval
NMR ref		HER ref	

Description

The small hamlet of Quarrelshore was greatly extend in the 1760s by the Carron Company [1].

Sources

[1] Falkirk Historic Environment Record

Asset Number	42	Asset Name	Carronshore (Coal Shore) Harbour
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; harbour	Period	Post-Medieval
NMR ref		HER ref	SMR 1795

Description

Site of harbour built for the Carron Company [1].

Sources

[1] Falkirk Historic Environment Record

Asset Number	43	Asset Name	Carronshore School
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; school	Period	Post-Medieval
NMR ref		HER ref	SMR 1937

Description

Structure now demolished [1].

Sources	
[1] Falkirk Historic Environment Record	

Asset Number	44	Asset Name	Carron House Walled Garden
Legal Status	None	NGR	
Value	Low	Condition	
Asset Type	building; walled garden	Period	Post-Medieval
NMR ref		HER ref	SMR 658

Description	
Large brick built walled garden with a stone summer house incorporated into the N wall. Decorative stone gate piers. Said to have been constructed in 1876, the year that Anne Dawson married Thomas Brodie. The Dawson sisters liked the gardens and hothouses were maintained here until at least 1910 [1].	
Sources	
[1] Falkirk Historic Environment Record	

Asset Number	45	Asset Name	Carron Iron Works
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; iron foundry	Period	Post-Medieval
NMR ref		HER ref	SMR 659

Description	
Founded in 1759 by Samuel Garbett, Dr John Roebuck and William Cadell. Went into liquidation in 1981 [1].	
Sources	
[1] Falkirk Historic Environment Record	

Asset Number	46	Asset Name	Carronshore Limekiln
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; limekiln	Period	Post-Medieval
NMR ref		HER ref	SMR 80

Description	
Shown on a plan of 1797. This must have been supplied with limestone from the adjacent wharf. Coal could have been brought in by waggonway from the local collieries (RHP 242) [1].	

Sources	
[1] Falkirk Historic Environment Record	

Asset Number	47	Asset Name	Cobblebrae Limekiln
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; limekiln	Period	Post-Medieval
NMR ref		HER ref	SMR 84

Description	
On a Carron Co map of 1797. The kiln is shown to the east of Coble Brae Distillery. It presumably stood at the top of a bank overlooking the old course of the River Carron [1].	

Sources	
[1] Falkirk Historic Environment Record	

Asset Number	48	Asset Name	Carron Bridge, Carron
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; bridge; mason's mark	Period	Post-Medieval
NMR ref		HER ref	SMR 999

Description	
A narrow hump-backed bridge built in 1775 at Stenhouse Dam Ford. It had 2 arches. A stone from this bridge was built into its replacement, it bears the initials and date "W.G. I.M. 1775". Access across the river at this point was by means of a dangerous ford or by a ferry. In 1773 a charity play was performed in Edinburgh to raise money for a bridge, and the following year local landowners subscribed some money. The bridge erected in 1775 cost c £3,000, of which the Carron contributed a third. This old bridge was replaced in 1906 due to the advent of the tramway system. The new bridge was designed by David Ronald and cost £3715 [1].	

Sources	
[1] Falkirk Historic Environment Record	

Asset Number	49	Asset Name	Kinneil Kerse Shell Midden
Legal Status	None	NGR	
Value	Low	Condition	
Asset Type	Site; shell midden	Period	Undated
NMR ref		HER ref	SMR 175
Description			
Discovered 1928. Mainly composed of Oyster shells, although contained a number of antler fragments. Discovery and Excavation 1985 p7-8 notes this site as not being a shell midden, but part of a natural oyster bed [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	50	Asset Name	Grangemouth Swimming Pool
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; swimming pool	Period	Modern
NMR ref		HER ref	SMR 2109
Description			
The open air swimming pool was constructed in 1924 and enhanced in the 1930s. It was demolished in 1972 and nothing remains to be seen of it, the site having been used as a cycling course. When opened in July 1924 the pool was 150ft by 45ft with a depth of 6ft at one end and 3ft at the other. It was edged by a raised kerb and surrounded by a fence, within which were steps and handrails to assist the swimmers. Dressing rooms were provided in the form of disused railway vans. The complex was upgraded in the 1930s and the pool was surrounded by single storey rooms along three sides and an enclosing wall on the south. Facing the pool these rooms were for changing, with offices in the corners. The flat roof above them served as a balcony, having a brick parapet wall to the outer side and concrete post and tubular rails inwards. The finish was in good engineering brick with harled panels. On the north side of the pool two steel girder flights of steps met at a central diving platform on a level with the balcony, to which they also provided access. The parapet rose to a shallow gablet behind the diving platform and supported a flagstaff [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	51	Asset Name	Grangemouth Bandstand, Zetland Park
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; bandstand	Period	Modern
NMR ref		HER ref	SMR 2110
Description			
<p>The bandstand stood in the centre of the Orchard in Zetland Park. It was removed in the early 1970s. The cast iron bandstand stood in the centre of the Orchard in Zetland Park, with the perimeter trees providing shelter for the audience when needed. It was officially opened on 11 July 1925 - the 7th Queen's Own Hussars playing military music. Bands featured largely in its use. The octagonal plinth was built on brick retaining walls c1.4m high, with steps projecting from these on the WSW side. Access to the underfloor area was provided by a wooden door. An iron railing ran around the wallhead. Within this eight plain iron columns supported the roof. The gently pitched canopy was covered with segmented sheets of metal upon which sat an inverse funnel-shaped wrought iron cupola. This extended up to an ogival lead dome topped by a fretted vase finial. A fretwork railing at the base of the cupola and brackets at the top of the columns provided further ornamentation. The ceiling was of panelled wood. According to one historian the bandstand was sold in 1973 and removed for export abroad [1].</p>			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	54	Asset Name	Bo'ness Canal
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; canal structure	Period	Post-Medieval
NMR ref		HER ref	SMR 796
Description			
<p>The development of a port at Grangemouth at the eastern terminus of the Forth & Clyde Canal threatened maritime trade at Bo'ness. To appease the traders there the Act of Parliament authorising the Great Canal in 1768 made provision for a branch to Bo'ness. In August 1771 James Watt surveyed the ground and in the following January submitted a report. The canal was to start just above the first lock of the Forth & Clyde Canal and end adjacent to the harbour at Bo'ness. There were two options for crossing the River Avon. The first involved a wooden aqueduct (see Avon Aqueduct) and the second a dam allowing barges to cross on the 18ft contour. The canal was to be 16ft wide at the base and 5ft deep. The cost was put at £3,210 via Jinkabouts or £2,932 by Bearcrofts. Some construction work was undertaken and the aqueduct constructed. A new survey was made in 1789, by Robert Whitworth, and it was estimated that the scheme would cost £17,000 to complete. It was abandoned in 1796 and never completed [1].</p>			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	55	Asset Name	Graving Dock, Grangemouth
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; dry dock	Period	Post-Medieval
NMR ref		HER ref	
Description			
Built by the Earl of Zetland in 1811. Dry dock with stepped stone sides. The site was filled in, but the basin is still there [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	56	Asset Name	Grangemouth Dockyard
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; dockyard/ boatyard	Period	Post-Medieval
NMR ref		HER ref	
Description			
No description [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	57	Asset Name	Granary, North Charlotte St
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; building; warehouse	Period	Post-Medieval
NMR ref		HER ref	SMR 1433
Description			
Large 5-storey stone granary adjacent to Swan Quay in North Charlotte St, latterly used as a hosiery. Now demolished [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	58	Asset Name	Grangemouth Old Town Hall
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; hall	Period	Post-Medieval
NMR ref		HER ref	SMR 1305
Description			
The site lay on the south side of Grange Street, a little north of its junction with West Bridge Street. Used until 1879 as the town hall. It was then sold and converted into shops and flats. The building has been demolished and now stands on the corner of Grange Lane [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	59	Asset Name	Zetland Park
Legal Status	None	NGR	
Value	Low	Condition	
Asset Type	Site; public park; bandstand; swimming pool	Period	Post-Medieval
NMR ref		HER ref	SMR 1435
Description			
8.5 acres of land was offered the the burgh in 1880 by the Earl of Zetland for use as a public park. The Burgh then spent £350, raised by subscription, on laying it out. Seats and a flagpole were donated by local firms and on 3 June 1882 the Public Park was officially opened. An ornamental drinking fountain was placed near the entrance. Up to 1900 the park was used for flower shows by the Grangemouth Horticultural Society, at which time the park was closed to the public and admission charges raised. The Zetland Brass Band performed promenade concerts. Two football pitches were laid out for use by Grange Rovers and Forth Rangers; but were closed for the summer period. After the First World War a large war memorial and entrance gates were constructed and subsequently the park was extended. 19 acres were acquired from the Blair Drummond Estate and 6.5 acres (including the Orchard) from Kerse Estate; the latter being the site of the medieval grange [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	60	Asset Name	Jinkabout Ford & Bridge
Legal Status	None	NGR	
Value	Low	Condition	
Asset Type	Site; ford; bridge; ferry	Period	Modern
NMR ref		HER ref	SMR 1946
Description			
<p>The crossing of the River Avon at Jinkabout was the main access route between Falkirk and Bo'ness. Initially it took the form of a ford and in the late 17th century the people of Bo'ness petitioned parliament to be allowed to construct a bridge. After the Battle of Falkirk in January 1746 many of the fleeing Government troops were drowned here as the river was in spate. An estate map of 1810 shows a "Boat passage" near Step Mill, but no bridge. The bridge was built between the ford and the ferry and appears on the first edition OS of 1860. This was probably a timber structure, but by 1920 had been replaced by the present steel girder bridge, which appears on early postcards [1].</p>			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	61	Asset Name	Jinkabout Mill
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; mill; water	Period	Post-Medieval
NMR ref		HER ref	SMR 820
Description			
<p>Large corn mill on the N side of the River Avon at Inveravon. Part of the Duke of Hamilton's estates [1].</p>			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	62	Asset Name	Avonside (Grangemouth) Fever Hospital
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; hospital	Period	Modern
NMR ref		HER ref	SMR 1824
Description			

The remote 5 acre site was purchased by Grangemouth Town Council in 1901 for £1900 and a fever hospital built and equipped for a further £4,600. In the 1930s the staff consisted of a matron, 3 qualified nurses, 2 maids and a washer-woman. However, the council found it hard to retain staff due to the remoteness of the site and the wards were too small to make conversion into a children's hospital impracticable. Consequently a decision was made to close the hospital in September 1937. Site largely demolished in the 1990s [1].

Sources

[1] Falkirk Historic Environment Record

Asset Number	63	Asset Name	Avonside House
Legal Status	None	NGR	
Value	Low	Condition	
Asset Type	building; dwelling house	Period	Post-Medieval
NMR ref		HER ref	SMR 821

Description

Neat little Georgian house with pediment on the facade, and two single-storey wings with hipped roofs. Stone staircase with cast iron balustrade. Originally known as Polmont Neuk [1].

Sources

[1] Falkirk Historic Environment Record

Asset Number	64	Asset Name	Carron Lighthouse
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Lighthouse; coastal installation	Period	Post-Medieval
NMR ref		HER ref	SMR 1147

Description

Built c1820 to aid navigation up the River Carron and into the Forth & Clyde Canal. Only the battered stump of the lighthouse now survives [1].

Sources

[1] Falkirk Historic Environment Record

Asset Number	67	Asset Name	Dundas Church - stained glass
Legal Status	None	NGR	
Value	Medium	Condition	
Asset Type	Stained glass (scenic)	Period	Modern
NMR ref		HER ref	SMR 100
Description			
<p>1923: Memorial chancel windows of stained glass were erected in memory of those of the congregation who fell in the war and these were unveiled in March 1923. At the ceremony the anthem "What are these" was sung by the choir, after which Mrs McGill and Mrs Blair pulled the cords that caused the Union flags which had covered them to slip to the floor. Rev Robert McMillan then read the names of the fallen, followed by the Last Post played by Harry Wadsworth, formerly of the Coldstream Guards Band. Rev. Blair suggested the themes, which were: left window "Our Lord's devoting Himself to the supreme mission of His Life, turning his back on all the world's allurements, resisting all temptation." In the centre window – "What this devotion cost, the sacrifice of Calvary, the dismay of His disciples"; and the right-hand window – "Through Death to Victory, manifested by the empty tomb, but more in the living Christ's presence with the disciples, in their joy and courage [1].</p>			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	68	Asset Name	Grangemouth Christian Institute
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; hall; roller skating rink	Period	Modern
NMR ref		HER ref	SMR 1860
Description			
<p>The Institute, now demolished, was situated on Abbots Road. It was designed by George Deas Page in the Renaissance style with a large hall, a lesser hall, kitchen, social parlour and cloakrooms. Opened in February 1901. During the First World War it was occupied by WRNs. Demolished c1999 [1].</p>			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	69	Asset Name	Zetland School
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; school	Period	Post-Medieval
NMR ref		HER ref	
Description			
Demolished 2010 [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	70	Asset Name	Grangemouth Gas Works
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; gas works	Period	Post-Medieval
NMR ref		HER ref	
Description			
No Description [1]. No visible on current satellite imagery [2].			
Sources			
[1] Falkirk Historic Environment Record			
[2] Google Maps 2018			

Asset Number	71	Asset Name	Grangemouth Masonic Hall
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; Masonic lodge	Period	Post-Medieval
NMR ref		HER ref	SMR 1735
Description			
No Description [1]. Site has been built over by modern industrial warehousing [2]. Assumed to be the Lodge that was "situated in Grange Street (now demolished) was consecrated on the 18th of October 1859 by the R.W.M of Lodge Ancient Stirling No30." as described in [3].			
Sources			
[1] Falkirk Historic Environment Record			
[2] Google Maps 2019			

Asset Number	72	Asset Name	Grangemouth Public Institute (Town Clock)
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; clock	Period	Undated
NMR ref		HER ref	SMR1857
Description			
Demolished c1999 and the stone placed in storage [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	73	Asset Name	Grangemouth Custom House
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; custom house	Period	Undated
NMR ref		HER ref	SMR1859
Description			
Large and imposing three-storey stone building with slate roof overlooking the old harbour at Grangemouth. The ground floor had channelled ashlar masonry with a large central arch flanked by smaller ones and two windows providing symmetry. The first and second floors had seven windows each. Demolished [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	74	Asset Name	Bowhouse Mill
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; mill; water	Period	Undated
NMR ref		HER ref	SMR 1077
Description			
No Description [1]. Site not present on current satellite imagery [2].			
Sources			
[1] Falkirk Historic Environment Record			
[2] Google Maps 2018			

Asset Number	75	Asset Name	Forth Sawmills
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; saw mill/ timber yard	Period	Undated
NMR ref		HER ref	SMR 1346
Description			
No Description [1]. Site not present on current satellite imagery [2].			
Sources			
[1] Falkirk Historic Environment Record [2] Google Maps 2018			

Asset Number	76	Asset Name	Abbots Grange Sundial
Legal Status	None	NGR	
Value	Low	Condition	
Asset Type	Sundial	Period	Post-Medieval
NMR ref		HER ref	SMR 1377
Description			
Sundial in the form of a rectangular block with an ansate panel bearing the inscription "BK/ VB" and date 16-18. This is surmounted by a respond capital carrying a bronze dial-plate [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	77	Asset Name	Grangemouth Municipal Buildings
Legal Status	None	NGR	
Value	Low	Condition	
Asset Type	Building	Period	Modern
NMR ref		HER ref	SMR 1410
Description			
Late 1930s municipal building in Neo-classical style. I carved stone owl at the entrance symbolised wisdom. In the entrance hall a bronze plaque was unveiled at the opening, listing the officials of the time. Set into the wall behind it was a time capsule containing the usual items such as coins of the realm, A marble staircase led from the entrance to the Committee			

and Council Rooms on the first floor. The staircase window houses an image of the "Sea of Ships", reflecting the maritime contacts of the town. Most of the building was taken up with offices, with different coloured paint schemes to reflect the different departments. The design allowed for future expansion to create a quadrangle [1].

Sources

[1] Falkirk Historic Environment Record

Asset Number	79	Asset Name	St Mary's Episcopalian Church, Grangemouth
Legal Status	None	NGR	
Value	Low	Condition	
Asset Type	Building; church	Period	Undated
NMR ref		HER ref	SMR 1472
Description			
No description [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	80	Asset Name	51 Dalgrain Road
Legal Status	None	NGR	
Value	Low	Condition	
Asset Type	Building; dwelling house	Period	Undated
NMR ref		HER ref	SMR 1528
Description			
Exuberant Scottish Baronial house on the corner of Clyde Street and Dalgrain Road [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	82	Asset Name	Oswald Saltcoats
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; salt-pan	Period	Undated
NMR ref		HER ref	
Description			
Site of a salt pan [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	84	Asset Name	Grangemouth Old Harbour
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; harbour	Period	Post-Medieval
NMR ref		HER ref	SMR 1626
Description			
The original harbour outside the Sealock at the termination of the Forth & Clyde Canal. C1777 [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	85	Asset Name	Grangemouth Drill Hall
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; drill hall	Period	Undated
NMR ref		HER ref	
Description			
No description [1]. Site now occupied by a car park [2].			
Sources			
[1] Falkirk Historic Environment Record			
[2] Google Maps 2018			

Asset Number	86	Asset Name	Grangemouth United Presbyterian Church
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; church	Period	Undated
NMR ref		HER ref	SMR 1854
Description			
Church now demolished [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	87	Asset Name	Grangemouth Police Station
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; police station	Period	Post-Medieval
NMR ref		HER ref	
Description			
Demolished c 2001 [1]. Visible on OS map surveyed in 1896, and published in 1899 [2].			
Sources			
[1] Falkirk Historic Environment Record			
[2] Stirlingshire Sheet XXV.SW, Surveyed: 1896, Published: 1899			

Asset Number	88	Asset Name	The Basin
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; canal structure	Period	Post-Medieval
NMR ref		HER ref	
Description			
Filled in [1]. Visible on OS map surveyed in 1896, and published in 1899 [2].			
Sources			
[1] Falkirk Historic Environment Record			
[2] Stirlingshire Sheet XXV.SW, Surveyed: 1896, Published: 1899			

Asset Number	89	Asset Name	Madison Place (21 Abbots Rd)
Legal Status	None	NGR	
Value	Low	Condition	
Asset Type	Building; dwelling house	Period	Modern
NMR ref		HER ref	SMR 1865
Description			
Dwelling house built in 1909 on the corner of Wallace St and Abbots Rd, Grangemouth. The ground floor is of red ashlar with 4 bay windows facing Abbots Rd and a prominent blank bay facing Wallace Street. This bay has "MADISON PLACE" carved in relief and gives the building its distinctive character. The upper storey is harled with two slightly projecting half-timbered pediments [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	90	Asset Name	Wallace St Co-op
Legal Status	None	NGR	
Value	Low	Condition	
Asset Type	Building; shop	Period	Modern
NMR ref		HER ref	SMR 1866
Description			
Art deco style single storey shop unit built on the corner of Jackson Ave and Wallace St in 1929 by the Grangemouth Co-op Society. The chamfered corner is surmounted by a carving of a beehive. There are four bays facing Jackson Ave divided by ashlar pilasters. Only one of the bays now (2011) retains the original leaded glass facade [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	91	Asset Name	West Church Manse
Legal Status	None	NGR	
Value	Low	Condition	
Asset Type	Building; dwelling house	Period	Undated
NMR ref		HER ref	SMR 1871
Description			
L-shaped two-storey dressed stone dwelling with a bay window facing Dalgrain Road to the south and the main arched entrance set in a fretwork bargeboarded gable on the west, facing the now demolished church [1].			

Sources	
[1] Falkirk Historic Environment Record	

Asset Number	92	Asset Name	McGill's Slip
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; dockyard/ boatyard; slip	Period	Undated
NMR ref		HER ref	

Description	
Dockyard/ boatyard slip [1].	
Sources	
[1] Falkirk Historic Environment Record	

Asset Number	93	Asset Name	Grangemouth Custom House (Mandal House)
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; custom house	Period	Undated
NMR ref		HER ref	SMR 1890

Description	
Situated on the corner of Bo'ness Road and Abbots Road [1]. Site not present on current satellite mapping [2].	
Sources	
[1] Falkirk Historic Environment Record	
[2] Google Maps 2018	

Asset Number	94	Asset Name	Grangemouth Infant School
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; school	Period	Modern
NMR ref		HER ref	SMR 1926

Description	
Demolished. Single storey stone school erected in 1904 on the corner of Abbots Road and Kerse Road [1].	
Sources	

[1] Falkirk Historic Environment Record

Asset Number	95	Asset Name	Easter Saltcoats
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; salt-pan	Period	Undated
NMR ref		HER ref	SMR 1998
Description			
Also known as Nether Saltcoats or Monteith Saltcoats [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	97	Asset Name	Baltic Chambers
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; First World War feature	Period	Modern
NMR ref		HER ref	SMR 2105
Description			
No description [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	98	Asset Name	Grangemouth RC Chapel
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; church	Period	Undated
NMR ref		HER ref	SMR 2113
Description			
The site is now occupied by a hotel [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	99	Asset Name	Grangemouth West Church - stained glass
Legal Status	None	NGR	
Value	Low	Condition	
Asset Type	Stained glass (scenic)	Period	Undated
NMR ref		HER ref	SMR 880
Description			
<p>Three windows are now on display at the Grangemouth Heritage Trust and one is held by Falkirk Museum. GHT 1: Modern style. A bare-footed man stands on the right wearing a yellow cloak fastened across the upper chest by a red band bearing the Greek letters alpha and omega. The holes in his left hand and foot show him to be the resurrected Jesus. He has yellow hair and his right hand hovers over the head of a kneeling man wearing a blue cloak. At their feet is a broken sword. To either side are trees with a castle in the background and purple mountains beyond. A ribbon below reads "Saul, Saul, why persuesthest thou me?" and a square panel states "To the Glory of God and in Affectionate remembrance/ of the Rev. Samuel Murdoch Riddick M.A. Faithful and/ Beloved Minister of this Church 1885-1931/ Erected by the Members of the Congregation." In the arch of the window are winged souls in the form of heads. These extend down the thick border to either side. GHT 2: A man walks to the left [1].</p>			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	101	Asset Name	Kerse House Doocot
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; doocot	Period	Post-Medieval
NMR ref		HER ref	SMR 30
Description			
<p>The Caledonian Mercury of 28th May 1741 mentions a pigeon house belonging to Sir Alexander Hope. It was presumably replaced by one in the new offices [1].</p>			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	102	Asset Name	Powdrake Farm Doocot
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; doocot	Period	Undated
NMR ref		HER ref	SMR 48
Description			
A photograph taken in 1923 for Scottish Oils shows a tall outbuilding to the W of this farm, with a small entrance at the top. This appears to have been a doocot. Both farm and doocot have long since been demolished [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	103	Asset Name	Grangemouth Docks
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; harbour	Period	Undated
NMR ref		HER ref	SMR 795
Description			
No description [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	104	Asset Name	Abbots Grange
Legal Status	None	NGR	
Value	Low	Condition	
Asset Type	Site; dwelling house; sundial; grange; tower-house	Period	Medieval; Post-Medieval
NMR ref		HER ref	SMR 878
Description			
The earlier versions of the OS map show a ditched enclosure with a 'drawbridge' in the area of what is now Zetland Park. The interior is said to have been higher than the surrounding area until the level of the park was raised using rubbish. It is presumably the site of the medieval grange of Holyrood Abbey. The main buildings would have been of stone. Given the richness of the estate it is possible that the principal building took the form of a small tower house. A sundial which used to			

stand in this vicinity was stored in Falkirk Museum until 1998, when it was erected at the north end of Lumley Street in a metal cage [1].

Sources

[1] Falkirk Historic Environment Record

Asset Number	106	Asset Name	Grangemouth West Church
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; church; war memorial; stained glass - see separate entry	Period	Post-Medieval
NMR ref		HER ref	SMR 880

Description

Cruciform plan, round headed windows. Small belfry over entry. There was a coat-of-arms and a flattened arch over the doorway, panel now in Falkirk Museum together with one of the small stained glass windows. Now demolished [1].

Sources

[1] Falkirk Historic Environment Record

Asset Number	109	Asset Name	Grangemouth Town Hall
Legal Status	None	NGR	
Value	Low	Condition	
Asset Type	Building; hall	Period	Undated
NMR ref		HER ref	SMR 887

Description

No description. GIS point in wrong location [1].

Sources

[1] Falkirk Historic Environment Record

Asset Number	111	Asset Name	Grandsable Cemetery War Memorial
Legal Status	None	NGR	
Value	Low	Condition	
Asset Type	War memorial	Period	Modern
NMR ref		HER ref	
Description			
Imperial War Graves Commission cross [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	115	Asset Name	Beancross Toll House
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; toll house	Period	Undated
NMR ref		HER ref	SMR 1840
Description			
The toll house stood at the junction of Salmon Inn Brae and Cadger's Brae with bars across both roads. It is now under the Laurieston Bypass [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	117	Asset Name	Beancross Farm
Legal Status	None	NGR	
Value	Low	Condition	
Asset Type	Building; farmstead; mill; gin	Period	Post-Medieval
NMR ref		HER ref	SMR 1868
Description			
Farm buildings converted into a restaurant in the late 1990s. The gin mill was demolished and rebuilt. An arched entrance on the road bears the simple inscription "1802/RM" on its keystone. This has been augmented on the neighbouring stone by "1997/KGF" [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	118	Asset Name	North Foot Shell Midden
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; shell midden	Period	Undated
NMR ref		HER ref	SMR 213
Description			
Shell midden material was observed in a section of a quarry, confirming a verbal report made in 1979 at the Nether Kinneil site excavation [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	120	Asset Name	Kersiebank House Doocot
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; doocot	Period	Post-Medieval
NMR ref		HER ref	SMR 31
Description			
On 2nd February 1760 the Caledonian Mercury noted a pigeon house in connection with Kersiebank House. The doocot is shown at the E end of the drive from Inchyra House on the 1860 OS map. It was rectangular in shape [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	121	Asset Name	Polmont War Memorial
Legal Status	None	NGR	
Value	Low	Condition	
Asset Type	Building; war memorial	Period	Modern
NMR ref		HER ref	SMR 595
Description			
Situating in Grandsable Cemetery. It is an hexagonal cross on a stepped pedestal. The cross carries a sword. The design is repeated on a smaller scale in Camelon cemetery [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	122	Asset Name	Grandsable Cemetery
Legal Status	None	NGR	
Value	Low	Condition	
Asset Type	Site; burial	Period	Modern
NMR ref		HER ref	SMR 727
Description			
Located at the junction of the Falkirk-Polmont road and Salmon Inn Brae. Opened by Grangemouth Parish Council in 1901 [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	125	Asset Name	Mumrills Enclosure?
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; palisaded enclosure	Period	Undated
NMR ref		HER ref	SMR 818
Description			
Seen on APs [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	126	Asset Name	West Beancross Enclosure
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; enclosure	Period	Undated
NMR ref		HER ref	SMR 918
Description			
AP site [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	127	Asset Name	Falkirk Tram Depot
Legal Status	None	NGR	
Value	Low	Condition	
Asset Type	Building	Period	Modern
NMR ref		HER ref	
Description			
The second tram depot, built c1920 [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	128	Asset Name	Stirling Road Bus Depot
Legal Status	None	NGR	
Value	Low	Condition	
Asset Type	Building	Period	Modern
NMR ref		HER ref	
Description			
Large cavernous transport sheds built of red engineering brick in the 1930s facing Stirling Road on the site of the 1905 tram depot [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	129	Asset Name	Larbert Mill
Legal Status	None	NGR	
Value	Low	Condition	
Asset Type	Building; mill; water	Period	Post-Medieval
NMR ref		HER ref	SMR 1031
Description			
3 storey building lying parallel to the River Carron just to the east of Larbert Bridge. It was fed from a pond created by damming the Lightwater Burn - and not by the River Carron as might be expected [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	131	Asset Name	Larbert New Bridge
Legal Status	None	NGR	
Value	Low	Condition	
Asset Type	Bridge	Period	Modern
NMR ref		HER ref	SMR 1624
Description			
<p>Ferro-concrete bridge built over the River Carron in 1925 to replace the stone bridge of 1681. It had a single span of 98 feet and a carriageway width of 30 feet and a pavement of 5 feet on either side. The parapets were of concrete balustrading, which quickly crumbled. There are 3 arched beams of concrete spanning the river, which each have 8 vertical square beams reaching up to the passageway [1].</p>			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	132	Asset Name	Lightwater Burn Bridge
Legal Status	None	NGR	
Value	Low	Condition	
Asset Type	Building; bridge	Period	Post-Medieval
NMR ref		HER ref	SMR 1638
Description			
<p>Small single arched bridge over the Lightwater Burn on the main road from Camelon to Larbert Cross. The arch stones are plain, with vertical droving. No mason's marked were noticed, but a close inspection of the under-arch has not been conducted. On the outer side of the north parapet is an inscribed stone, rectangular with the top corners chamfered, and with a simple moulding. It is very worn: "ALEX SC----R--SON/ built this bridge/ l--- -- ----- ---sw/ 74---- ----- 1795". The date is not clear. The stream has been diverted and canalised to enter the River Carron to the east of its natural course, presumably at the time of the construction of the turnpike road. The bridge was therefore probably built on dry land and the water diverted under it upon completion [1].</p>			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	133	Asset Name	Mungal Foundry
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; iron foundry	Period	Post-Medieval
NMR ref		HER ref	SMR 660
Description			
Part of the modernisation of the Carron Co in the late 1890s [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	134	Asset Name	Mumrills Shell Midden
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; shell midden	Period	Undated
NMR ref		HER ref	SMR 180
Description			
Part of a line of Shell middens. The midden spread is extensive, lying between 11m and 15m OD and was 43m long east to west by 35m broad north to south. The southern margin is buried under 1.2m of hillwash and topsoil. The maximum depth of oyster shell was 0.65m, although it seldom exceeded 0.4m. On the north west corner was a zone of burnt stones, 3.5m in diameter. There were also ephemeral indications of a structure surrounding the area [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	135	Asset Name	Weedingshall Ring Ditch
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; ring ditch	Period	Prehistoric
NMR ref		HER ref	SMR 814
Description			
Seen on APs immediately to the E of the present childrens home [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	136	Asset Name	Weedingshall Shell Midden
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; shell midden	Period	Undated
NMR ref		HER ref	SMR 816
Description			
Oyster shells are visible on the surface after ploughing at this location. It sits at the foot of the raised beach [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	137	Asset Name	Polmont Park Enclosure
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; ring ditch	Period	Prehistoric
NMR ref		HER ref	SMR 819
Description			
Two ditches of a possible enclosure were noted during the excavation of a drain [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	138	Asset Name	Weedingshall
Legal Status	None	NGR	
Value	Low	Condition	
Asset Type	Building; dwelling house; ha-ha	Period	Post-Medieval
NMR ref		HER ref	SMR 824
Description			
Late Georgian mansion, with Victorian and recent additions. The grounds have been extensively landscaped. The entrance gateway has a lodge on its west side and the drive then sweeps in gentle tree-lined curves with ha-has to left and right [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	139	Asset Name	Westerton Farm House
Legal Status	Category C Listed Building	NGR	
Value	Low	Condition	
Asset Type	Farmhouse	Period	Post-Medieval
NMR ref	LB8312	HER ref	SMR 255
Description			
Late 18th century, single storey cream painted stonework. Incorporates ruined wall section. Extensive farm buildings [1].			
Sources			
[1] Historic Environment Scotland			

Asset Number	142	Asset Name	Carronshore Parish Church
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; church	Period	Post-Medieval
NMR ref		HER ref	SMR 129
Description			
Built in 1883 this building was demolished c2006 for housing. In 1883 the old Carronshore Public School was converted into a church building according to plans by A & W Black. Part of the old building was cleared away and new walls built. The building was aligned NW/SE parallel with the road, which soon become known as Church Street. The Gothic front of the church faced onto the road to the N with an entrance at the NW corner utilising one of the school's porches. This porch had a plain parapet over the Gothic arch and projected from the main block. The previous door was converted to a window. The large windows on the north facade were rectangular with returned hood mouldings. On the opposite end of the building to the porch a projection was added to provide some symmetry. It terminated in a high gable topped by a slightly corbelled belfry surmounted by an iron finial. A panel below the belfry bore the date 1882 on the face. The gable carried two large windows and an external egress [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	143	Asset Name	Carronshore Ferry
Legal Status	None	NGR	
Value	Low	Condition	
Asset Type	Site; ferry	Period	Post-Medieval
NMR ref		HER ref	
Description			

Stone steps can be seen on the east bank of the River Carron [1].

Sources

[1] Falkirk Historic Environment Record

Asset Number	144	Asset Name	Carron Co Office Block
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; office	Period	Post-Medieval
NMR ref		HER ref	SMR 101

Description

A large office block in Scottish Baronial style fronting Carron Road - it was demolished 1990. As part of the wholesale re-organisation of the ironworks a new office block was constructed along the north side of Carron Road to act as an imposing facade for the works and to screen the industrial buildings behind. The two-storey building was 53 bays long, measuring c190m by 13m. The overall design was a weak Scottish Baronial of the Stirling School with five slightly advanced crowstepped gables, a central pyramid spired tower and rock-faced sneaked sandstone rubble used on the front face. The tower hung over a segmental pend arch. It was designed by Robert Baldie of Glasgow, 1874-1876. The 2 storey facade, with attic, had a slated roof with continuous roof-lights and piended ends. It was imposing by its sheer mass and had a greater degree of ornamentation in the centre. The central 19 bays possessed moulded string courses, plain parapets and 5 slightly advanced crowstepped gables [1].

Sources

[1] Falkirk Historic Environment Record

Asset Number	145	Asset Name	Mungal Mill
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; mill; water	Period	Post-Medieval
NMR ref		HER ref	SMR 662

Description

The mill lay just to the N of the Mungal Foundry [1].

Sources

[1] Falkirk Historic Environment Record

Asset Number	146	Asset Name	Stenhouse Mill
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; mill; water	Period	Post-Medieval
NMR ref		HER ref	SMR 1032
Description			
Nothing remains of this feudal mill which stood where the roundabout lies at the NE corner of the Carron Works [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	147	Asset Name	Blackmill (Skaithmuir Nether Mill)
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; mill; water; public house	Period	Post-Medieval
NMR ref		HER ref	SMR 1227
Description			
The site is now occupied by the Blackmill public house (changed to "The Shore" in 2006) [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	148	Asset Name	Burder Park
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Site; public park	Period	Post-Medieval
NMR ref		HER ref	
Description			
No description [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	149	Asset Name	Dorrator Bridge (Carronvale or Swing Bridge) (SMR 1640)
Legal Status	None	NGR	
Value	Low	Condition	
Asset Type	Building; bridge	Period	Post-Medieval
NMR ref		HER ref	SMR 1640
Description			
Foot bridge over the River Carron at Dorrator Ford, known locally as the "Swing Bridge" because of the ability of children to make it sway from side to side. It is occasionally referred to as the Carronvale Suspension Bridge. It is a wire rope suspension bridge some 90ft in span by 4ft wide. The rope is anchored at either end in a 35 tone concrete block. The two vertical poles at either end are plain and support a simple panel with cut loops and the inscription "LOUIS HARPER, C.E./ MAKER/ ABERDEEN" [1].			
Sources			
[1] Falkirk Historic Environment Record			

Asset Number	HLT1	Asset Name	Late 20 th Century-Present Landfill Site
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Landscape	Period	Modern
NMR ref		HER ref	
Description			
Before the mid-20th century domestic, commercial and building waste was not of the volume it is today. Much was burnt, some was dumped, all was disposed of locally. However, increasing amounts of waste are produced nowadays and while recycling has been introduced for some resources, others have to be disposed of in large landfill sites, or 'tips'. Once filled, these sites are usually landscaped and may be used as recreation areas. Some by-products are disposed of in specific ways, such as the ash from the Longannet coal-fired power station, which is dumped in coastal lagoons built specially for the purpose [1].			
Sources			
[1] HLAMap			

Asset Number	HLT2	Asset Name	18 th Century-Present Cemetery
Legal Status	None	NGR	
Value	Low	Condition	
Asset Type	Landscape	Period	Post-Medieval
NMR ref		HER ref	
Description			
<p>Since the 18th century burial areas have been set aside for urban and rural populations either around an existing church and graveyard, or close to a new one, or on land purchased by a local authority. The first crematorium was built in Glasgow's Western Necropolis in 1895 but it wasn't until the late 1930s that others started to appear in Scotland's largest cities, providing an alternative to burial. All such sites are enclosed by obvious boundaries, such as mortared stone walls and impressive gateways. Occasionally graveyards are abandoned; they become overgrown and eventually tombstones tip and fall [1].</p>			
Sources			
[1] HLAMap			

Asset Number	HLT3	Asset Name	Late 20 th Century-Present Industrial-scale Farming Unit
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Landscape	Period	Modern
NMR ref		HER ref	
Description			
<p>Since the 1960s intensive farming has expanded into industrial-scale units, with the use of vast sheds for poultry and egg production, as well as acres of polytunnels for market gardening, growing soft fruit or producing plants for garden centres. Industrial farming also includes fish hatcheries, where huge tanks of freshwater provide a suitable environment for the early stages of salmon or trout production. The smolts (young fish) have to be transported to off-shore fish farms to grow to full size before they can be harvested [1].</p>			
Sources			
[1] HLAMap			

Asset Number	HLT4	Asset Name	19 th Century-Present Recreation Area
Legal Status	None	NGR	
Value	Low	Condition	
Asset Type	Landscape	Period	Post-Medieval
NMR ref		HER ref	
Description			
<p>A vast range of recreational facilities have been created during the last 200 years, as leisure time has gradually increased. They include race-courses and sports grounds, camping and caravanning sites, public parks, council allotments and marinas, visitor centres and historic sites open to the public. HLA data records more extensive areas separately, such as golf courses and ski centres. With an increasing urban population, land used for recreation is increasingly being redeveloped, for housing and other uses [1].</p>			
Sources			
[1] HLAMap			

Asset Number	HLT5	Asset Name	19 th Century-Present Maritime Installation
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Landscape	Period	Post-Medieval
NMR ref		HER ref	
Description			
<p>With agricultural improvements and the industrial revolution, transport by sea increased dramatically from around 1800AD. Fishing too developed, providing food for urban areas. Harbours and ports, piers and quays, breakwaters and warehouses were built. To enhance safety at sea lighthouses were constructed around the coast, commissioned by the Northern Lighthouse Board and overseen by several generations of Stephensons - the famous lighthouse engineers. New facilities continue to be built, both for commercial and recreational purposes. Some of the harbours no longer used for trade have been redeveloped as marinas, the old warehouses being transformed for housing [1].</p>			
Sources			
[1] HLAMap			

Asset Number	HLT6	Asset Name	Late 20 th Century-Present Rough Grazing
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Landscape	Period	Modern
NMR ref		HER ref	
Description			
Rough grazing lands have evolved to their present extent as a result of woodland clearance, grazing and episodes of farming over some 6,000 years. However, in this case the land is associated with a restored former quarry [1].			
Sources			
[1] HLAMap			

Asset Number	HLT7	Asset Name	19 th Century-Present Urban Area
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Landscape	Period	Post-Medieval
NMR ref		HER ref	
Description			
Villages, towns and cities cover extensive areas of Scotland, and include housing, schools, shops, hotels and churches, as well as prisons, hospitals, universities and various other municipal buildings. Some extend around planned villages or crofting townships, others are satellite urban developments beyond the edge of larger centres. This name has also been applied to quite small clusters of houses which nowadays have little or no specific link to rural land use, although they are sited in the countryside. Some 'urban areas' have grown since the early 1800s, others have been created quite recently. In some instances suburban street plans reflect the previous pattern of field boundaries, while 'urban' Victorian hospitals that were originally out of town have been closed and redeveloped [1].			
Sources			
[1] HLAMap			

Asset Number	HLT8	Asset Name	18 th Century-Present Rectilinear Fields and Farms
Legal Status	None	NGR	
Value	Low	Condition	
Asset Type	Landscape	Period	Post-Medieval
NMR ref		HER ref	
Description			

Agricultural improvements in the 18th and 19th centuries involved the enclosure of arable land as well as the building of slate roofed farm steadings and associated buildings. Field boundaries were designed to be rectilinear wherever possible, because it improved the efficiency of agriculture, tending to reduce unworkable corners. Recent amalgamation of these fields is common [1].

Sources

[1] HLAMap

Asset Number	HLT9	Asset Name	19 th Century-Present Industrial or Commercial Area
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Landscape	Period	Post-Medieval
NMR ref		HER ref	

Description

Districts with sprawling buildings, storage areas, extensive car-parks, yards and access roads can be extensive. Mainly built since the beginning of the 19th century, they can include large office developments, shopping centres and open-air markets, as well as factories, mills, and industrial estates. Such sites tend to be located in and around urban areas. In some instances factories and mills have closed down, and have either been demolished or refurbished to provide housing or recreational facilities [1].

Sources

[1] HLAMap

Asset Number	HLT10	Asset Name	20 th Century-Present Plantation
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Landscape	Period	Modern
NMR ref		HER ref	

Description

Modern plantations have been a feature of Scotland's landscapes since the establishment of the nation's Forestry Commission in 1919. Some have their origins in private estate plantings of the 18th and 19th centuries, such as those of the Dukes of Atholl who concentrated on the creation of extensive plantations of larch. Densely planted, single age, coniferous species, within clearly defined straight boundaries, with regular, linear firebreaks, are characteristic of commercial forestry. However, some plantations are now being restructured, leaving larger clearings and encouraging the planting of native species. Since 1989 woodland plantings have become increasingly common, with sinuous edges and more open spaces [1].

Sources

[1] HLAMap

Asset Number	HLT11	Asset Name	19 th Century-Present Golf Course
Legal Status	None	NGR	
Value	Low	Condition	
Asset Type	Landscape	Period	Post-Medieval
NMR ref		HER ref	
Description			
<p>Golf has been played in Scotland for over 500 years, but it wasn't until the late 1700s that a few clubs were formally established. Designed golf courses started to become a feature of the landscape after the mid-19th century. Created for private or public use, they are located around urban fringes, along sandy coastlines, or in the grounds of large country house hotels. Courses can be very extensive, with their tees and greens, bunkers and water hazards, tree plantings, woodland and rough ground. Some golf courses have been abandoned, while others have been redeveloped for alternative land uses, including housing [1].</p>			
Sources			
[1] HLAMap			

Asset Number	HLT12	Asset Name	19 th Century-Present Cultivated Former Parkland
Legal Status	None	NGR	
Value	Low	Condition	
Asset Type	Landscape	Period	Post-Medieval
NMR ref		HER ref	
Description			
<p>Designed landscapes were created during the 17th and 18th centuries around castles and large country houses of the landowning elite. Not all have survived. In some instances the inherent value of aesthetic pleasure gave way in the 19th and 20th centuries to financial pressures, with fields being created from former parkland. Nowadays these are usually used as arable land. [1]</p>			
Sources			
[1] HLAMap			

Asset Number	HLT13	Asset Name	17 th -20 th Century Designed Landscape
Legal Status	None	NGR	
Value	Medium	Condition	
Asset Type	Landscape	Period	Post-Medieval
NMR ref		HER ref	
Description			

Formal landscaping, creating gardens, parklands and woods around 17th-20th century castles and country houses can be extensive. Elements can include formal avenues, plantations, water features and walled gardens [1].

Sources

[1] HLAMap

Asset Number	HLT14	Asset Name	18 th -20 th Century Managed Woodland
Legal Status	None	NGR	
Value	Low	Condition	
Asset Type	Landscape	Period	Post-Medieval
NMR ref		HER ref	

Description

Managing deciduous woodlands used to be a traditional craft. Poles were taken, as well as lengths of wood for charcoal burning and large branches for roofing timbers. Trees weren't felled; they were coppiced or pollarded so that they would recover and throw up new growth. Trees did, however, have to be felled for long lengths of timber for floorboards, panelling, carpentry and ship-building. Nowadays woodlands are managed for the long term production of fine timber as well as for recreation. Many of these woodlands are classed as ancient, and consist of a range of broad-leaved species or native pine woods. There is a variety in age and height, texture and colour in these woods. The trees have not been planted in ploughed ridges but by hand or by mounding [1].

Sources

[1] HLAMap

Asset Number	HLT15	Asset Name	Late 20 th Century-Present Motorway
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Landscape	Period	Modern
NMR ref		HER ref	

Description

Modern transport systems have focussed on the construction and extension of multi-laned motorways, with their associated service stations. Providing links between major cities, they cover considerable areas of land. Dual carriageways, major junctions and associated park-and-rides are also recorded as HLA data but other roads are excluded because they are too small and narrow [1].

Sources

[1] HLAMap

Asset Number	HLT16	Asset Name	Water Body
Legal Status	None	NGR	
Value	Negligible	Condition	
Asset Type	Landscape	Period	Undated
NMR ref		HER ref	
Description			
Lochs or rivers over 50m wide are recorded as HLA data so that the map coverage is complete. Reservoirs are recorded separately [1].			
Sources			
[1] HLAMap			

Asset Number	HLT17	Asset Name	Grangemouth Area of Townscape Value
Legal Status	None	NGR	
Value	Medium	Condition	
Asset Type	Landscape	Period	Post-Medieval
NMR ref		HER ref	
Description			
This comprises an area based on Zetland Park that is currently being assessed for designation as a Conservation Area [1].			
Sources			
[1] Falkirk Community Trust Heritage Engagement Officer			

Environmental Impact Assessment Report

Appendix C13.2: Westquarter Burn Flood Storage Area Record of
Outline Design Development

Grangemouth Flood Protection Scheme 2024
Falkirk Council



GRANGEMOUTH
Flood Protection Scheme
Protecting the heart of our communities

Record of Design Development

Project No: 665532CH
Document Title: Record of Design Development
Date: March 2019
Client Name: Falkirk Council
Project Manager: Alan McGowan
Author: John Ramsay
File Name: GFPS_Westquarter Burn FSA Design Final

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1. Introduction

The Grangemouth Flood Protection Scheme necessitates a method of limiting potential inundation of Grangemouth due to flood waters flowing down the Westquarter Burn.

Initial proposals to prevent these generated impacts on the setting of the Antonine Wall World Heritage Site (WHS) and the Scheduled Monument of Mumrills Fort. Following initial discussions with Historic Environment Scotland (HES), it was agreed that a collaborative design approach would be undertaken taken to develop proposals that would address the issues relating to heritage assets.

This report sets out the progress of that design approach.

2. Background

The Westquarter Burn flows from Shieldhill joining the Polmont Burn just south of the M9. To reduce the height and extent of flood defences in Grangemouth, water levels in the Westquarter and Polmont Burns need to be reduced by means of flow controls and online storage areas. A dam or flood wall needs to be constructed to retain the water and create an upstream Flood Storage Area (FSA). The site at Mumrills is the optimal location for this FSA.

The Antonine Wall was the north-west frontier of the Roman Empire from 142 to about 165 AD, running for 60 km from Bo'ness on the Firth of Forth to Old Kilpatrick on the Clyde. It consisted of a turf bank originally at least 3 meters high on a stone base 4.4 meters wide. It was fronted by a wide, deep ditch, the material from which was placed on the north side to form a low mound. It has several unique design and construction features which distinguish it from Hadrian's Wall and the Antonine limes in Germany, which were surveyed and planned in different ways. It is a single linear monument. Only about 2 km of its total length has been destroyed. About one third is visible above ground, but the remaining two thirds survives well below ground level and would be visible if excavated. About two-thirds of the Wall lie in the countryside. It remains possible to view the Wall in its landscape and observe the line taken in relation to the topography, thereby gaining an understanding of the purpose of the frontier. It is therefore essential that not only its archaeological components are protected but that the whole of the Wall, which is essentially a single monument, survives in its setting.

The buffer zone is an important component of the WHS as it protects the important landscape setting of the Wall. It allows the Antonine Wall to be seen and understood within its landscape, and an appreciation to be gained of the reasons why the Roman surveyors took a particular line. For example, there are several places where the Wall does not follow what would appear to be the most advantageous line from a military point of view; the area including the application site being a case in point. It might be expected that had the line of the Wall been governed by military considerations alone it would have followed higher ground to the south, crossing the Westquarter and Polmont Burns at narrower points; rather than dropping into the low ground beside the two burns and cutting straight across from near the Mumrills fort to the high ground near Polmont Old Parish Church. This situation is unique along the whole line of the Antonine Wall. Local topography affected the line of the Wall, which often related to naturally occurring north-facing edges. There must, therefore, be significance when such features are ignored, and the Wall takes an apparently anomalous line into the valley floor. None of these features could be observed if land to either side of the monument were to be developed up to the very edge of the known archaeology. The survival of the buffer zone is an essential element in aiding understanding of the nature and purpose of the frontier works and as an insight into the mind of the Roman engineers.

A particular characteristic of the setting of the Antonine Wall in this area is its relationship to the surrounding local topography which can be seen in **Figure 1**,

Figure 2, Figure 3, Figure 4 and Figure 5. The line of the Wall drops down from the higher land around the Mumrills fort onto the low-lying floodplain (carse) which it crosses for some distance before rising back onto higher land to the east of the M9. It is assumed that in Roman times this low-lying area was poorly drained and marshy and that this would have created difficulties for the construction of the Wall. When viewed from the eastern edge of the ridge at Mumrills it is evident that the Wall would have had to cross the valleys of the Westquarter and Polmont Burns at some point but that, had it followed a line further to the south, it could have crossed at a narrower point and then regained the ridge of higher ground where the new cemetery is now located. On the face of it, this would appear to have been the militarily preferable option and one that would not have been ignored for other than significant reasons. The line of the Antonine Wall in this area is unique and it is this relationship between its line, the higher land to the south and the flat valley floor is particularly important.



Figure 1: View to bluff



Figure 2: View from walking route to carse landscape



Figure 3: View from walking route to bluff



Figure 4: View from walking route to bluff



Figure 5: View from bluff to Grandsable cemetery

3. World Heritage Site Inscription

The Antonine Wall became an extension of the Frontiers of the Roman Empire (FRE) World Heritage Site (WHS) in 2008. The FREW HS also includes Hadrian's wall and the Upper Raetian German Limes as the northwestern limits of the Roman Empire.

The following Statement of Outstanding Universal Value (SOUV) was adopted for the WHS in 2008:

The Antonine Wall fully illustrates the effort of building the Limes on the frontiers of the Roman Empire, at the time of its apogee and greatest extension in the British Isles and worldwide (middle of the 2nd century AD). It embodies a high degree of expertise in the technical mastery of earthen defensive constructions, in the construction of a strategic system of forts and camps, and in the general military organisation of the Limes. The Antonine Wall also demonstrates the diffusion of the military and civil engineering of the Roman civilisation to the whole of Europe and the Mediterranean world.

Criterion (ii): The Antonine Wall is one of the significant elements of the Roman Limes present in Europe, the Middle East and North Africa. It exhibits important interchanges of human and cultural values at the apogee of the Roman Empire.

Criterion (iii): The Antonine Wall bears testimony to the maximum extension of the power of the Roman Empire, by the consolidation of its frontiers in the north of the British Isles, in the middle of the 2nd century AD. The property illustrates the Roman Empire's ambition to dominate the world in order to establish its law and way of life there in a long-term perspective.

Criterion (iv): The Antonine Wall is an outstanding example of the technological development of Roman military architecture and frontier defense.

The authenticity of the WHS is defined in the current Management Plan 2014-19 as:

The property has a high level of authenticity. All remains of the property are known and proven through archaeological investigations as authentic Roman constructions, erected during the reign of Antonius Pius. It is visible as a sometimes-impressive feature in the modern landscape for over one-third of its total length, while archaeological excavations undertaken over the last 100 years, have demonstrated that the rest survives well as buried archaeology beneath both fields and urban areas.

Given the short duration of the frontier system, the materials are highly authentic to the primary use of the monument in the mid to late second century AD. Currently displayed elements of the frontier have been undertaken based on full documentation through modern excavation. Recent interventions are conservation-orientated and kept to a minimum.

The integrity of the WHS is defined in the current Management Plan 2014-19 as:

The property includes all the upstanding and buried remains necessary for understanding its outstanding universal value and to demonstrate why it is an exceptional example of the use of artificial barriers as an aspect of the overall military frontier system of the Roman Empire. As a primarily earthen monument, environmental concerns and potential impacts of development offer a challenge to managing the Site, and balancing access and conservation is addressed within the Management Plan.

The property is of adequate size to ensure the complete representation of the features and process which convey the significance of the property; all the archaeological remains of the monument, within present understanding of

the Site, are contained within the property. The Buffer Zone of the property provides protection for the setting of the monument. Although the monument sits in a highly varied modern urban and rural landscape, the setting of the monument has been largely retained across the length of the Wall allowing the mindset of the Roman engineers to be envisaged and its scale and setting appreciated.

4. Design Evolution

There has been extensive design development and consultation undertaken regarding the Flood Storage Area at Westquarter Burn. The initial proposal is shown in **Figure 6**. The proposal was for an 8m high dam structure incorporating a flow control structure such as a hydrobrake. The dam would retain floodwaters against the existing valley slopes.



Figure 6: Option 1

This option involved part of the dam structure being constructed within the Mumrills Fort (scheduled monument), and within the setting of the World Heritage Site – close to the line of the wall itself. The proposal was shared with HES.

The response received by email from HES (23 August 2017) stated:

*'...In summary, we consider that the scale and design of the dam structure would give rise to significant and detrimental effects on the Outstanding Universal Value (OUV) of the World Heritage Site and the setting of the scheduled monument such that we would have no option but to **object** to the proposals...'* (HES, 2017)

In response, a second option was developed. This altered the geometry of the dam structure to avoid encroachment of the scheduled monument, however, it did not address the adverse effect on the WHS OUV and its setting nor of the issue of the proximity to the WHS this is shown in **Figure 7**.



Figure 7: Option 2

An initial site walkover with Falkirk Council and HES was held in July 2017 to explore the issues associated with initial options.

Table 1: Meeting Attendees

Attendee	Position	Company
Richard Meeson	Project Engineer	Jacobs
John Ramsay	Principal Landscape Architect	Jacobs
Sharon Agnew	Senior Flooding Officer	Falkirk Council
Geoff Bailey	Heritage Engagement Officer	Falkirk Community Trust
George Findlater	Deputy Head of Casework	Historic Environment Scotland
Alison Baisden	Caseworker	Historic Environment Scotland



Figure 8: View from bluff to Carse

The walk over was an extremely productive session. HES clarified their concerns and set out how the relationship of the carse to the bluff was particularly important as the route of the wall left the high ground to cross the valley. They felt that the introduction of a large earthen structure across the valley in the position proposed would mask this relationship and diminish the understanding of the rationale for the routing of the wall. It would adversely impact on the OUV of the WHS by bisecting the valley through which the Roman engineers decided to locate the wall and therefore the insight into the mindset of the Roman engineers would be lessened.

It was agreed that Jacobs would review the design and explore options for mitigating potential impacts on the OUV and on the setting of the WHS.

4.1 January 2018

The first of the design by mitigation workshops was held at the Falkirk Council offices in Falkirk. Attendees are listed in Table 2 below.

Table 2: Meeting Attendees

Attendee	Position	Company
Aisling Mulcahy	Lead Archaeologist	Jacobs
Richard Meeson	Project Engineer	Jacobs
Alan McGowan	Project Manager	Jacobs
John Ramsay	Principal Landscape Architect	Jacobs

Rebecca Heatlie	Project Landscape Architect	Jacobs
Steven Beales	Roads, Bridges and Flooding Co-Ordinator	Falkirk Council
Sharon Agnew	Senior Flooding Officer	Falkirk Council
Catherine Devlin	Planning Development Officer	Falkirk Council
Alex Lewis	Planning Development Officer	Falkirk Council
Geoff Bailey	Heritage Engagement Officer	Falkirk Community Trust
John Malcolm	Caseworker	Historic Environment Scotland
Alison Baisden	Caseworker	Historic Environment Scotland

The place centered design approach was tabled, and the design development was discussed. The Outstanding Universal Values (OUV) of the wall were explored and a detailed review of potential impacts on the OUV, integrity and authenticity of the wall was undertaken. and how the proposals might impact these qualities.

It was not felt that the proposed dam would directly affect the integrity or authenticity of the wall however there were issues with impacting on the WHS' OUV by disrupting the relationship of the wall with the surrounding topography. The local landscape character of the site was explored together with connectivity with the local green network

Figure 6 Options 1 and **Figure 7** Option 2 were discussed, and a new option was presented:

A remodeling of the flood storage requirements at Westquarter had enabled a redesign of the dam structure.

Figure 9 Option 3 has a smaller, 6m high, structure, located further away from the line of the Antonine Wall.



Figure 9: Option 3

Whilst the fact that the location of the proposed structure was now further away from the line of the wall was welcomed, HES still had concerns regarding the impact on the OUV due to the loss of the Carse valley and the disruption of the relationship between the high ground and the valley floor when viewed from the bluff. It was agreed that Jacobs would continue their interrogation of this relationship and refine the proposals to further mitigate potential impacts.

4.2 March 2018

The second of the design by mitigation workshops was held at the Falkirk Council offices (Table 3).

Table 3: Meeting Attendees

Attendee	Position	Company
Richard Meeson	Project Engineer	Jacobs
Alan McGowan	Project Manager	Jacobs
John Ramsay	Principal Landscape Architect	Jacobs

Attendee	Position	Company
Rebecca Heatlie	Project Landscape Architect	Jacobs
Sharon Agnew	Senior Flooding Officer	Falkirk Council
Andrew McNair	Planning Development Officer	Falkirk Council
Alex Lewis	Planning Development Officer	Falkirk Council
Phillip Harris	Landscape Architect	Falkirk Council
John Malcolm	Caseworker	Historic Environment Scotland
George Findlater	Deputy Head of Casework	Historic Environment Scotland
Geoff Bailey	Heritage Engagement Officer	Falkirk Community Trust

A further design development was presented together with a series of photomontages illustrating the potential impacts of the dam on the WHS' OUV.

Figure 9 Option 3 had been further developed to create a sinuous shape and to integrate the structure with the adjoining landform and vegetation.



Figure 10: Option 4

Discussions lead to the realization there was a conflict between the landscape and heritage aims as options to minimise landscape impacts could lead to proposals that could affect the authenticity of the WHS by creating an earthen bank structure that could be confused with the Antonine Wall. In addition, the valley was still being bisected by the dam, and therefore the dam would adversely impact on the WHS’ OUV, although the impact would be less than the previous options. HES suggested a further interrogation of the potential conflict between landscape and heritage aims using a matrix approach.

4.3 June 2018

The third of the design by mitigation workshops was held at 13th June at Abbotsford House (Table 4).

Table 4: Meeting Attendees

Attendee	Position	Company
Richard Meeson	Project Engineer	Jacobs
Alan McGowan	Project Manager	Jacobs

John Ramsay	Principal Landscape Architect	Jacobs
Andrew McNair	Planning Development Officer	Falkirk Council
Alex Lewis	Planning Development Officer	Falkirk Council
Phillip Harris	Landscape Architect	Falkirk Council
Adele Shaw	Deputy Head of Casework	Historic Environment Scotland
George Findlater	Deputy Head of Casework	Historic Environment Scotland
Geoff Bailey	Heritage Engagement Officer	Falkirk Community Trust

The design issue matrix was presented – together with an exposition of the issues involved (Table 5).

Table 5: Design Issue Matrix

Issue	Landscape response	Cultural Heritage response
Shape	As naturalistic as possible - following the sinuous curve of the burn	A naturalistic form - not straight. A serpentine, organic, non-linear and place responsive shape would minimize impact on the authenticity of the wall
Cross section	Slackened slopes with feathered edges. A rounded profile.	Non-Antonine section – A modern engineered shape. Angular sharp arrises
Landscape fit	Maximise integration with the adjoining slopes. Feathered abutments. Minimise existing tree loss.	Non-integrated relationship to context. Avoiding crests and prominent landform features. Abrupt junction with existing landform. Should not lead anywhere. Non-continuum
Texture/Finish	Soft but relatively uniform – replicate existing carse texture	Non- natural e.g. concrete, stone facing. Proprietary block finish. Mosaic/patchwork appearance.
Architectural style	Minimise built elements	Any clearly non-roman features to be encouraged [baronial turrets etc.]
Colour	Green - to tie-in with existing	Mosaic
Vegetation	Marsh grass	Partial - non-naturalistic

Issue	Landscape response	Cultural Heritage response
Meaning	An extension of the existing flood prevention bund next to burn	Non-Antonine structure not impinging on the authenticity of the wall
Key views	Various points in cemetery and on informal footpath routes	Single view from line of wall
Screening [general]	Partially screen	Totally screen if possible, [without losing Carse]

A series of photomontages for a range of viewpoints were also presented showing the current proposals with a range of finishes and varying extents of screening planting.

Additional viewpoints were requested by Falkirk Council and HES and greater consideration of the potential impacts on the informal walking route on the west side of the valley was requested.



Figure 11: Option 4 summer photomontage

4.4 January 2019

The final design workshop was held 10th January 2019 Historic Environment Scotland, Longmore House, Salisbury Place, Edinburgh, EH9 1SH, 2 – 4pm.

Table 6: Meeting Attendees

Attendee	Position	Company
Richard Meeson	Project Engineer	Jacobs
John Ramsay	Principal Landscape Architect	Jacobs
Katie Born	Associate Director	Jacobs
Alistair Dawson	Roads, Bridges and Flooding Co-ordinator	Falkirk Council
Adele Shaw	Deputy Head of Casework	Historic Environment Scotland
James Bruhn	Deputy Head of Casework	Historic Environment Scotland
Alison Baisden	Caseworker	Historic Environment Scotland

Additional photomontages were presented and the potential effects on the informal walking route along the edge of the Mumrills field set out.

Remodeling of the flood storage requirements had identified a new option. A new floodwall along the line of the existing A9 and Grandsable Road would retain enough water to obviate the need for a dam structure.

This flood wall would need to be up to 1.8m high (above existing ground level), with the majority of the wall approximately 1m high.



Figure 12: Option 4ai



Figure 13: Option 4ai elevation

The wall could have a much-reduced impact on the WHS' OUV as it would form part of the modern infrastructure of the road and wouldn't bisect the valley as the previous options had. It would also have less visual impact.

However, it would cross the WHS itself as well as the scheduled monument and would impact on the integrity of the WHS as a small portion of the wall and military way may be removed if remains exist within the wall footprint. The Dam would have much greater impact on the WHS' OUV, but this would not and remote from both the wall and scheduled monument.

Following discussion around the relative merits it was agreed that a site visit to compare the options in situ would be an appropriate next step. A site visit was held on 30th Jan 2019.

Table 7: Meeting attendees

Attendee	Position	Company
Richard Meeson	Project Engineer	Jacobs
John Ramsay	Principal Landscape Architect	Jacobs
Alistair Dawson	Roads, Bridges and Flooding Co-ordinator	Falkirk Council
Sharon Agnew	Senior Flooding Officer	Falkirk Council
Ann McSween	Head of Casework	Historic Environment Scotland
Adele Shaw	Deputy Head of Casework	Historic Environment Scotland
James Bruhn	Deputy Head of Casework	Historic Environment Scotland
Alison Baisden	Caseworker	Historic Environment Scotland



Figure 14: Site meeting

The position of the dam and wall was set out on site with individual masts with high vis flags being held in the appropriate positions, so that attendees could envisage the dam impacts.

The position of the flood wall was set out with his-vis flags. The design of the flood wall had been reviewed and had been possible reduced the design to 1m in height above the existing pavement. This is lower than the existing roadside fence and so would have limited visual effect.



Figure 15: Masts with hi-vis flags showing the height of the dam structure



Figure 16: Masts with hi-vis flags showing dam structure



Figure 17: Masts before implementation



Figure 18: Masts in-situ

HES responded that the site visit was extremely useful and thanked Jacobs and Falkirk Council for arranging it.

5. Outcome

The outcome of design development can be seen in an email received from Historic Environment Scotland March 2019, anonymised and quoted below:

'Dear

Thank you for your email and revised plans and illustrations. We welcome the work which has taken place on the scheme options to date and as noted in my previous email, the recent site visit was extremely helpful in terms of understanding the overall impact of what is proposed on the Frontiers of the Roman Empire (Antonine Wall) world heritage site and on Antonine Wall and Mumrills fort, Sandy Loan to A905, Falkirk (SM8832) in particular.

Having considered the two options as they currently stand and on the basis of the information which we have seen to date, we have a preference for the 'wall – no flood storage' option. This is on the basis that any walls required would appear as part of existing infrastructure which associated with the road network in this area. It is particularly helpful that the height of the walls along the A9 and Grandsable Road have been reduced as part of the recent design iteration.

As noted above, our comments here are based on the information which we have on the proposals as they currently stand. If there are any changes to the proposals we would wish to be consulted as part of the on going design process.

I appreciate that this is a brief response at this stage but I hope this still is helpful to you. We would be happy to discuss the proposals for other aspects of the scheme as they develop as we are aware from the information provided in the scoping report that there may be other impacts on the historic environment as a result of the proposals in other flood cells.

Kind regards,'

The flood wall option will be taken forward into the next design stage.

Further engagement with HES will take place as the design is developed and as part of the overall scheme Environmental Assessment.