

8 Effects on Cultural Heritage

The Existing Baseline Conditions

Aims and Objectives

- 8.1 The aim of this chapter is to identify the cultural heritage value of the area to be affected by the development of an M8/A8 junction south of Bishopton. The evidence presented and the conclusions offered will provide a comprehensive basis for further discussion and decisions regarding the future of this site and the formulation of a mitigation strategy. It is based on research and assessments undertaken by AOC Archaeology Group and takes cognisance of comments made by both Statutory and Non-Statutory Consultees during the formulation of the development scheme (See Sections 4.1 to 4.6).
- 8.2 The objectives to be pursued will be focused on assessing the archaeological and cultural sensitivity of the site, by examining a variety of evidence for buried and upstanding remains in and around it. Based upon the sensitivity thus identified, the nature and scale of the proposed development and the significance of impact, recommendations for a mitigation strategy compliant with national and local planning policies will be offered.
- 8.3 This assessment forms part of a suite of cultural heritage assessments each addressing individual elements of the overall BAE Systems Bishopton regeneration project. To ensure consistency the chapter conforms to the same structure, methodology and format as the other cultural heritage assessments within the Bishopton suite rather than the road specific guidance on Cultural Heritage Environmental Impact Assessment contained within Volume 11, Part 2 of the Design Manual for Roads and Bridges (Highways Agency 2009).
- 8.4 The scope of this assessment meets the requirements of current planning regulations set out in Scottish Planning Policy (SPP) (Scottish Government 2010), SHEP (Historic Scotland 2011) and *PAN2/2011* (Scottish Government 2011). AOC Archaeology Group conforms to the standards of professional conduct outlined in the Institute for Archaeologists' Code of Conduct, the IfA Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology, the IfA Standards and Guidance for Desk Based Assessments, Field Evaluations etc., and the British Archaeologists and Developers Liaison Group Code of Practice. AOC Archaeology Group is a *Registered Archaeological Organisation* of the IfA. This status ensures that there is regular monitoring and approval by external peers of our internal systems, standards and skills development. AOC is also ISO 9001:2008 accredited, in recognition of the company's quality management system.

Data Collection

- 8.5 A desk-based survey was undertaken to review the information held within accessible public archives. This information allowed the compilation of a catalogue of known sites of archaeological and cultural heritage interest within and around the development area, and the reconstruction of the recent history of land use in the area. The following data sources were consulted during the assessment:
- (a) National Monuments Record for Scotland (NMRS), (Royal Commission on the Ancient and Historical Monuments of Scotland, Bernard Terrace, Edinburgh):

For NMRS data, archaeological and architectural photographs, aerial photographs NMRS maps, unpublished archaeological reports, various architectural and historical publications and Historic Land Use Assessment Data;
 - (b) National Map Library (National Library of Scotland, Causewayside, Edinburgh):

For old Ordnance Survey maps (1st & 2nd Edition, small- and large-scale) and pre-Ordnance Survey historical maps;
 - (c) Historic Scotland (Longmore House, Salisbury Place, Edinburgh):

For data on Scheduled Monuments and listed buildings;

(d) West of Scotland Archaeological Service (WoSAS) for sites and monuments data not available in the National Monuments record.

8.6 The assessment includes all known archaeological remains (sites and monuments) and historic standing structures within 1 km of the proposed development area. 'Known' remains and historic buildings implies those whose existence is recorded in the national archives and/or in various other published and unpublished sources. The assessment also includes all protected cultural heritage (i.e. Scheduled Monuments, Listed Buildings and *Inventory* historic designed landscapes) located within 5 km of the proposed development site, for the purpose of assessing the visual impact the development could potentially have on their protected settings.

8.7 Sites and monuments of archaeological interest within this defined study area have each been assigned a Site No. unique to this assessment. The Site Gazetteer in Appendix 8.1 lists these in numerical order, along with other basic data about their location and status, with some descriptive information. Each Site No. is also plotted on a basemap (Figure 8.2), which shows the proposed development site and the rest of the assessment area around it respectively. All relevant sites recorded in the NMRS and HER have automatically been assigned a Site No. in this assessment; however other sites not in the NMRS/HER were also identified by consulting historical maps and aerial photographs.

Planning policies and constraints

National Planning Policies

8.8 The statutory framework for heritage in Scotland is outlined in the Town and Country Planning (Scotland) Act 1997, as amended in the Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997 and modified by the Historic Environment (Amendment) (Scotland) Act 2011.

8.9 The implications of the Ancient Monuments and Archaeological Areas Act 1979 with regard to local government planning policy are described within Scottish Planning Policy (SPP) (Scottish Government 2010) and its latest draft revision (Scottish Government 2013), Scottish Historic Environment Policy (Historic Scotland 2011) and Planning Advice Notes (PAN) for Scotland. SPP, SHEP '*Scottish Historic Environment Policy*' and PAN 2/2011 '*Archaeology and Planning*' (Scottish Government 2011) deal specifically with planning policy in relation to heritage. The planning guidance expresses a general presumption in favour of preserving heritage remains *in situ*. Their 'preservation by record' (i.e. through excavation and recording, followed by analysis and publication, by qualified archaeologists) is a less desirable alternative. SPP notes that with the exception of archaeology the historic environment can generally accommodate change that is '*informed and sensitively managed, and [that it] can be adapted to accommodate new uses whilst retaining its special character*' (Scottish Government 2010, Para 111). SHEP (Historic Scotland 2011) sets out the Scottish Government's policy for the sustainable management of the historic environment. Key principles of the policy note that '*there should be a presumption in favour of preservation of individual historic assets and also the pattern of the wider historic environment; no historic asset should be lost or radically changed without adequate consideration of its significance and of all the means available to manage and conserve it*' (1.14.b).

Structure Plan

8.10 The *Glasgow and the Clyde Valley Strategic Development Plan* replaced the *Glasgow and Clyde Valley Joint Structure Plan* (2000) on the 29th of May 2012 and covers the council areas of North Lanarkshire, South Lanarkshire, Renfrewshire, Inverclyde, East Dunbartonshire, East Renfrewshire, West Dunbartonshire and the City of Glasgow. While detailed Historic Environment matters fall outside the remit of the Strategic Development Plan, it clearly respects Scottish Planning Policy, which contains policies for the protection and enhancement of environmental resources including archaeological remains.

Local Plan

- 8.11 Local Planning Policy is currently provided by the *Renfrewshire Local Plan* of 2006, although its replacement, the Renfrewshire Local Development Plan is scheduled for adoption during 2014. The policies included in the current *Renfrewshire Local Plan* (2006) that address heritage conservation are cited below:

'The Council seeks to protect and enhance listed buildings within Renfrewshire. Any applications received for development proposals relating to listed buildings and their settings will require to be of a high standard and require to meet the following criteria;

- (a) Use of sympathetic and appropriate materials and finishes.*
- (b) Extensions/alterations should not detract from the character of the building.*
- (c) The massing, scale and form of the development should be appropriate.*
- (d) Landscaping and boundary enclosures should enhance the setting of the listed building and important structural planting should be reinforced or re-established.*
- (e) Conformity with the Memorandum of Guidance on Listed Buildings and Conservation Areas.' Policy ENV 15.*

'The Council will safeguard Scheduled Ancient Monuments. Development proposals which will have a detrimental effect on Scheduled Ancient Monuments or their settings will not be permitted'. Policy ENV 19

'The Council will seek to protect and where appropriate enhance unscheduled sites of archaeological significance and their settings, including sites of importance for industrial archaeology. When considering development proposals affecting a location that is known to, or considered likely to contain an archaeological interest, the Council will require to be satisfied that;

- (a) The overall benefit of the development will outweigh the benefits of preserving the archaeological resource.*
- (b) That there is no suitable alternative location for the development.*
- (c) The siting and design of the proposal will minimise the damage to the archaeological resource.*
- (d) Where approval is given and preservation cannot be achieved, adequate provision should be made by the developer for the excavation and recording of site remains (prior to and during development), and*
- (e) Where an archaeological interest becomes apparent during development, provision should be made by the developer for appropriate recording of the site remains.' (Policy ENV 20).*

Protective designations

Scheduled Monuments

- 8.12 A new development must not physically impact upon a Scheduled Monument without the prior formal consent of Historic Scotland. Indirect impacts that can be caused to a Scheduled Monument by a development include visual impacts, i.e. where the setting of a monument is disturbed by an inappropriate or unsympathetic design or layout. This principle is described in Scottish Planning Policy:

'Scheduled monuments are archaeological sites, buildings or structures of national or international importance. The purpose of scheduling is to secure the long term legal protection of the monument in the national interest, in-situ and as far as possible in its existing state and within an appropriate setting. Scheduled monument consent is required for any works that would demolish, destroy, damage, remove, repair, alter or add to the monument. Where works requiring planning permission affect a scheduled monument, the protection of the

monument and its setting are important considerations. Development which will have an adverse effect on a scheduled monument or the integrity of its setting should not be permitted unless there are exceptional circumstances.' (SPP 2010 Paragraph 118).

Listed Buildings

- 8.13 Any works that affect the fabric of a Listed Building can only be undertaken once Listed Building consent has been granted by the local planning authority. Note that the impacts upon the settings of Listed Buildings are also a competent planning matter. The construction of new buildings on the proposed development site could have visual impacts upon the setting of the surrounding protected buildings and monuments. The policy which indicates that the setting of Listed Buildings should be an issue in development control is outlined in Scottish Historic Environment Policy:

'in assessing an application for listed building consent, the planning authority is required to have special regard to the desirability of preserving the building, or its setting, or any features of special architectural or historic interest which it possesses' (SHEP, Historic Scotland 2011, Section 3.32).

- 8.14 Protective designations are generally assigned based upon consideration of factors such as age, rarity, condition, site context, architectural design and historical associations. Note that in some cases a monument that does not have a protective designation assigned to it could nonetheless still be rated in this assessment as having the same sensitivity as another monument which is protected. This is because the selection of buildings and sites/monuments for Listing and Scheduling is an ongoing activity. Criteria for judging archaeological sensitivity are gradually evolving, with an increasing trend towards including more recent types of structures. In some cases, important buildings or monuments may have been accidentally overlooked during Listing/Scheduling, or could now be judged worthy of protecting, whereas previously they were not.

Sites of archaeological or cultural heritage interest

- 8.15 The archaeological and cultural heritage remains identified in the assessment area (including the proposed development site) have each been assigned a Site No. and these are listed in a Site Gazetteer in Appendix 8.1. They are presented in numerical order along with some background information to show the remains in their context. The site numbers also correlate to Figure 8.2 where they have been plotted to show their relationship to the development site and one another.

Scheduled Monuments

- 8.16 There are **no** Scheduled Monuments located within the proposed development site itself. However, there are nine Scheduled Monuments situated up to 5 km away, in the broader assessment area.

Table 8.1: Scheduled Monuments

Site No	Name	Location	Type
10	Barochan Hill	NS 4135 6904	Roman Fort
16	Inchinnan, Old Parish Church and Graveyard	NS 4904 6803	Funerary; Religion / Church; Burial-Ground
27	Inchinnan, Old Greenock Road New Parish Church	NS 4793 6891	Religion/ Church
51	Forth And Clyde Canal, Bowling Basin, Canal House Basin	NS 4503 7352	Transport And Communications/ Canals/ Canal Basin
60	Bishopton, Whitemoss	NS 4182 7208	Roman Fort
73	Old Kilpatrick	NS 4600 7315	Roman Fort
74	Antonine Wall: Old Kilpatrick - Mount Pleasant – Duntocher	NS 4610 7330	Roman Wall
75	Barochan Cross	NS 4058 6937 – Removed to NS 4855 6395	Cross
76	Bishopton, Aqueduct	NS 4241 7246	Public Services/ Water Supply/ Aqueduct

Listed Buildings

8.17 There are **no** Listed Building located within the proposed development site itself. However, there are 59 listed buildings in the broader assessment area, up to 5 km beyond this.

Table 8.2: Listed Buildings

Site No	Site Name	Location	Listing Category
9	Dargavel House	NS 4331 6924	B
11	Houston, St Peter's Well	NS 4076 6750	B
12	Houston, North Street, Houston Cottage	NS 4075 6711	B
13	Houston Parish Church And Churchyard	NS 4100 6707	B
14	Houston Parish Church	NS 4100 6707	A
15	Houston House	NS 4114 6716	B
17	Renfrew, Greenock Road, Inchinnan Bridge	NS 4924 6790	A
18	Renfrew, 'Argyll Stone' & 'St Conval's Chariot	NS 4947 6783	B
19	Renfrew, Inchinnan Road, White Cart Bridge	NS 4930 6785	A
20	Renfrew, Inchinnan Road, Rolling Lift Bridge Over White Cart	NS 4936 6783	A
21	Fulwood Bridge	NS 4396 6685	B
22	Houston, Ardgyrfe House	NS 4232 6659	B

23	Houston, Ardgyfe House, Lodge	NS 4227 6660	C
24	Houston, Houston Road, Woodend	NS 4136 6671	B
25	Linwood, Clippens Road, Clippens House	NS 4327 6485	B
26	Inchinnan, Greenock Road, India Tyre Factory	NS 4747 6860	A
27	Inchinnan, Old Greenock Road New Parish Church	NS 4793 6891	B
28	Town Of Inchinnan	NS 4805 6859	C
29	Clydebank, Killbowie, John Brown's Shipyard	NS 497 698	A
30	Clydebank, Clyde Street, Clydebank Riverside Station	NS 4996 6959	B
31	Clydebank, 11 Hume Street	NS 4978 7004	B
32	Inchinnan, Northbar House	NS 4808 6927	A
33	Inchinnan, Old Greenock Road, Church Hall	NS 4758 6917	C
34	Formakin House	NS 4098 7097	House Listed Category A, Gate piers Listed Category B
35	Formakin Mill	NS 4096 7064	B
37	Bishopton, Newton Road, Church Centre	NS 4306 7139	C
38	Richieston Cottages, No.1, No.2, No.3	NS 4364 7190	C
39	Bishopton, 133 Old Greenock Road	NS 4401 7117	C
40	Blantyre Monument	NS 4410 7199	B
41	Erskine Home Farm, Farmhouse	NS 4421 7224	Category C
42	Freeland House	NS 4417 7240	B
43	Freeland House, Offices	NS 4417 7237	C
44	Erskine House, Cottage At Walled Garden	NS 4451 7205	B
45	Erskine Hospital, South Lodge	NS 4451 7205	B
46	1 Kirkton Cottages	NS 4461 7188	B
47	2 Kirkton Cottages	NS 4460 7186	B
48	Old Erskine Parish Church	NS 4466 7201	B
49	Erskine Parish Church, Manse	NS 4475 7195	C
50	Old Kilpatrick, Old Secession Church	NS 4660 7270	B
52	Old Kilpatrick, Lisset Road, Lisset House	NS 4681 7282	B
53	Erskine House, Ferry Lodge	NS 4624 7209	B
54	Erskine House	NS 4519 7253	A
55	Erskine Hospital, House At Kennels	NS 4537 7219	B
56	Erskine Hospital	NS 4532 7232	B
57	Erskine House, Kennels	NS 4535 7218	B
58	Erskine House, Piggery	NS 4535 7228	B
59	Longhaugh Lodge	NS 4354 7247	B

61	Old Bishopton	NS 4194 7257	B
62	Dunglass Castle	NS 4374 7353	B
63	Dunglass Castle, Obelisk Memorial To Henry Bell	NS 4377 7353	B
64	Bowling, Littlemill Distillery, Maltings And Kilns	NS 4410 7370	C
65	Bowling Dumbarton Road, Littlemill Whiskey Distillery, Exciseman's House	NS 4417 7376	B
66	Forth And Clyde Canal, Bowling Basin, Drawbridge	NS 4513 7355	B
67	Forth And Clyde Canal, Railway Swing Bridge And Viaducts	NS 4511 7355	B
68	Forth And Clyde Canal, Bowling Basin, Upper Basin	NS 4519 7354	B
69	Forth And Clyde Canal, (Original) Canal Entrance	NS 4499 7347	B
70	Forth And Clyde Canal, Bowling Lock-Keepers' Cottages	NS 4525 7354	B
71	Glenarbuck House	NS 4532 7377	B
72	Old Kilpatrick, Great Western Road, Gavinburn Farm	NS 4585 7349	C

Other Designations

- 8.18 There is one Inventoried Historic Garden and Designed Landscape, Formakin (**Site No. 36**) located within a 5 km radius of the proposed development area. There are no Conservation Areas within 3.5km or Inventoried Historic Battlefields within 5km of the site.

Short history of the proposed development area and surrounding countryside

- 8.19 The Historic Land Use Assessment for Scotland (Historic Scotland/RCAHMS) categorises the present landscape and land use of the development area as 'Fields and Farms', comprising rectilinear fields of 18th or 19th century date. However it needs to be acknowledged that at this point the field systems are bisected by the M8 Motorway and a considerable proportion of the proposed land take for the development lies within the existing verges of both the M8 and the A8 Greenock Road. At this point the A8 crosses the motorway over a bridge approached on an elevated earthen embankment, which further erodes the historic character of the landscape.

Prehistoric (pre-AD 43)

- 8.20 Known prehistoric activity in the area, within 1 km of the site is limited to a single enclosure located to the east of the proposed development site at Southbar (**Site No. 6**). The site was noted in 1969 by Newell and Clarkson and described as a shallow depression measuring 88 feet in diameter. No finds have been recorded in association with this feature and period from which it dates is, as yet, unknown.

Roman (AD 43-410)

- 8.21 Roman activity in this part of Scotland is particularly rich in comparison to other areas, due to the close proximity of Bishopton to the western terminus of the Antonine Wall (**Site No. 74**). Indeed, until 1913 the site of the western terminal fort of the Antonine Wall was thought to have been at or near Chapel Hill. However excavations in 1931 at Old Kilpatrick (**Site No. 73**), northeast of the proposed development site, confirmed the outline of the fort, its defences, and their relationship to the Antonine Wall. A study of utilitarian pottery from the Antonine Wall has distinguished small numbers of locally-made vessels with North African affinities at nine or ten forts.

8.22 Several other Roman forts exist within the 5 km assessment area. Barochan Hill (**Site No. 10**), for example, is located to the west of the proposed development site. The remains of this fort are situated on the summit of Barochan Hill and are rectangular in plan. Trial excavations at the site revealed two pits close to the southern rampart, one for puddling clay and the other a slow oven for firing bricks. A number of Roman artefacts have also been discovered in and around the fort including a glass bead, Agricola pottery and a Samian bowl (Steer 1951). An additional fort existed at Whitemoss Farm, Bishopton (**Site No. 60**). This fort was built on 4.5 acres of land around AD80. Around 500 soldiers were based at Whitemoss to patrol the River Clyde as far as Old Kilpatrick and to guard the Dumbuck crossing. A major archaeological excavation took place at Whitemoss between 1951 and 1954 (Newall 1957). The barracks which were excavated were found to have held the horsemen during the Roman occupation.

Medieval (AD 410-1600)

8.23 Several medieval sites exist within the 5 km assessment area. These include funerary, ecclesiastical and building remains. Houston Parish Church and Churchyard (**Site No. 13**), to the southwest of the proposed development site, was originally constructed in the 13th century and dedicated to St. Peter. While a new church was constructed in 1875 portions of the medieval church were incorporated into the east wing of the Session House. A tomb within the church (**Site No. 14**) featuring the effigies of a knight and lady on separate plinths dates to the mid-15th century.

8.24 Similarly, a medieval church and graveyard were present in Inchinnan (**Site No. 16**). While the original church, which dated from at least 1153, was demolished and replaced in 1828, several early Christian stones remain in the vicinity. Additionally, several medieval artefacts have been recovered from the area; these have included a cross-marked nodule of quartz, green glazed pottery and a pewter disc depicting a lion and a unicorn. Furthermore, the Argyll Stone and St. Conval's Chariot (**Site No. 18**), two stones, are said to have been recovered from Inchinnan and have been said to be of possible 7th century date. These stones, removed to Blythswood sometime before 1836, are the pediment and base of a cross and are said to commemorate St. Conval, a disciple of St Kentigern who is reputed to have founded Inchinnan in the late 6th century. The base stone is known as St Conval's Chariot on which the saint is reputed to have crossed the sea from Ireland. The pediment stone has become known as the Argyle Stone, as it is said that the 9th Earl of Argyle rested here after his capture in 1685 (Dunn 1971; McClelland 1905).

8.25 Thirteen early gravestones and three Class III sculptured stones were recovered from Old Greenock Road, New Parish Church in Inchinnan (**Site No. 27**). The early gravestones include three Celtic stones dating between the 9th and 11th centuries and four 'Templar' stones. The sculptured stones date from between the 10th and 12th centuries and include a shafted cross, the lower portion of the head of a monolithic cross and a shrine cover (Allen 1903). These stones were moved when Abbotsinch airport was extended (Radford 1967). A similar cross, Barochan Cross (**Site No. 75**), was removed from Barochan and erected within Paisley Abbey. While not securely dated it is thought that the cross, which features an interlace motif with panels depicting humans and animals, dates to as early as the 8th century.

8.26 Dunglass Castle (**Site No. 62**) to the north of the proposed development site dates from circa 1400 though much of what is present today is of a post-medieval date. The remains of the castle itself are fragmentary and portions of the medieval structures have been built into more modern features. Portions of a high wall enclosing the top of the cliff and a dwelling house in the northwest corner are thought to date to between 1400 and 1542. The majority of the other structures on site, including a tower, dwelling house and dovecot, are of 17th and 18th century date with some modern repairs.

8.27 Additionally, Dargavel House (**Site No. 9**), to the west of the development area, originally dates from the late 16th century, containing a renewed panel dating to 1584. It is a tower house of Z-shaped plan, which has been much altered and added to in modern times, though these alterations have been in keeping with the original style of architecture.

Post-Medieval (AD 1600-1900)

- 8.28 The Blantyre monument (**Site No. 40**) is situated in a field adjacent to the Old Greenock Road on the way to Erskine. It commemorates Robert Walter Stewart, the 11th Lord Blantyre, who lived at nearby Erskine House (**Site No. 54**). A Major-General in the British Army, Lord Blantyre served with the Duke of Wellington in the Napoleonic Wars. Because of the high esteem in which he was held, his friends and colleagues erected the towering monument at Bishopton in his memory.
- 8.29 Early historic maps depicting the proposed development area (Gordon 1636 and Blaeu 1654) (Figures 8.3 – 8.4) are rather small in scale and thus do not show the proposed development area in any detail. However, each of these maps clearly marks Bishopton located slightly north of its current location, suggesting that the main body of the village today grew outwards from the location of the railway station, which is a typical pattern of urban expansion across Britain from the 1840s onwards. The early maps also show Dargavel (**Site No. 9**), thus indicating its importance at this time.
- 8.30 The 1st *Statistical Account* makes reference to a decreasing population in this parish in the late 18th century. It is probable that this population decline was partially caused by the clearance of large tracts of land for grazing livestock, thus as the leases of small farms and cottages expired they were converted into larger grazing pastures (Young 1799). It is quite probable that this process affected the area surrounding the proposed development site and the decreasing number of farmsteads marked on historical maps, up until the time when the ordnance factory was established, are a testament to this. A number of other farmsteads which were located in the assessment area provide further indication of the former extent of small-scale farming, for example, North Commonside (**Site No. 5**), Barrangary (**Site No. 3**) and Lin Burn (**Site No. 4**). Lin Burn is the only known archaeological site to exist within the boundaries of the proposed development area. It was identified on the first edition Ordnance Survey map, 1854 (Figure 8.8) and depicts a farmstead comprising two unroofed buildings annotated *Maxwellfield (Ruin)*.
- 8.31 Following the decline in the 18th century, the population remained stable in the early 19th century. Indeed, between 1821 and 1831 Erskine was the only parish in Scotland to sustain no population change.
- 8.32 Dargavel House (**Site No. 9**) was reconstructed and extended in 1849 by the laird, John Hall-Maxwell, from designs by the architect David Bryce. The architectural character of the original late sixteenth century building was preserved during this restoration and thus Dargavel house still presents all the characteristic features of a French chateau, which was the prevailing style in Scotland at the period of its erection. The stag's head which is the crest of the Maxwell's, still appears on sculptured stones built onto the older part of the structure.
- 8.33 Bishopton Parish Church was known as the Erskine Parish Church (**Site No. 48**) up until the end of 1998. A plaque on the northern wall of the church records the end of the line of the Maxwells of Dargavel. During the First World War three sons and two grandsons of the last laird were killed in action. The Maxwells of Dargavel faded from history when their lands were absorbed into the Royal Ordnance Factory.
- 8.34 Industrial activity in the parish increased steadily throughout the post-medieval period. Formakin Mill (**Site No. 35**), a two storey meal mill was founded in the 17th century. Additionally, Littlemill Whisky Distillery (**Site No. 64**) located on the north bank of the Clyde was founded in 1772. Littlemill used triple distillation until the 1930s, and had two stills and a modified Saladin malting in 1980. Two groups of buildings (**Site No.'s 64 & 65**) are listed as examples of the structures associated with this distilling process.
- 8.35 Glasgow and Greenock railway (**Site No. 2**) brought a great influx of newcomers to the parish including an increase in the Irish Catholic population. The tunnels and cuttings involved in creating the Glasgow to Greenock line involved the employment of hundreds of workmen for several years. The railway line was officially opened on 1st June 1889.

- 8.36 The construction of Bowling Harbour (**Site No. 68**) and its adjoining lock (**Site No. 69**) was authorised by an Act of August 1846, the work being completed by 1849. The Caledonian Swing bridge (**Site No. 67**) carries the railway line over the Forth and Clyde Canal. The puffers and coastal cargo vessels using Bowling Harbour were supplied with coal brought by this railway, while timber was transported back by this route.
- 8.37 John Brown's Shipyard (**Site No. 29**) was founded in 1870 and was originally owned by J & G Thomson. A walkover survey in 2003 confirmed that some of the original features associated with ship building on site did or were likely to remain intact. The Forth and Cart Canal, c. 1840, was visible running along the eastern boundary of the shipyard. Additionally it was thought that infilled slipways where Cunard liners were constructed were preserved (Baker 2004). Two cranes, a Scotch Derrick and a giant cantilever crane, survived on site until at least 1986. The cantilever crane was the first of its kind and was associated with the construction of ocean liners such as the Two Queens and the Empress of Britain (Hume 1976; Moss & Hume 1986).
- 8.38 The farmers of this region had an excellent reputation as breeders of horses and cattle and were well known for the high quality of their dairy products. The Bishopton-Houston area was known as one of the finest agricultural areas in Scotland.

Modern (post-1900)

- 8.39 Formakin Estate (**Site No.'s 34-36**), probably Bishopton's most notable estate, is located to the west of Bishopton village. Often thought to date from the 17th century, due to a style typical of that period and a date stone on the main house which reads 1694 D.L., the house and associated buildings were actually constructed in the early 20th century by Lorimer and Holmes. Work began on the estate in 1908 when the two gate houses were built. Subsequently, the old mill (**Site No. 35**) on the estate was restored and the stables and courtyard built. As a joke Lorimer and Holmes had a stone tablet set over the courtyard entrance with the date 1694 and the letters DL inscribed, the letters meaning 'Damned Lie'. Holmes was an expert horticulturalist and created elaborate gardens within the estate. The garden, the fountain, oriental and walled gardens were joined by paths set with heart shaped stones. The gardens contained a vast array of species from sunflowers to snowdrops and the more exotic blue Himalayan poppy. In 1908 the meal mill was restored and local farmers were able to use the facility to grind oats. The buildings of Formakin have been sympathetically converted into flats and the public continues to enjoy access to the grounds. The various buildings which now make-up the Formakin estate are listed and the gardens are recorded in Historic Scotland's *Inventory of Gardens and Designed Landscapes* (1987).
- 8.40 The Scottish Filling Factory (for ammunition filling) was established at Bishopton in 1916. It made cordite cartridges and by 1917 employed over 10,000 workers. In 1937, the Government acquired many of the farms around the proposed development area through a compulsory purchase order to make room for the construction of the Royal Ordnance Factory (**Site No. 1**). It is recorded that the following families were evicted: the Gibbs of Gladstone; the Lyles of Ditch; the Lyles of Brangary; Young of Crooks; and the Paisleys of Newton and Glenshinnoch. While the factory was being built the chief engineers and architect lived at Dargavel. The factory began producing explosives for use in missiles and shells in 1939. The facility was conceived as three self-sufficient 'chemical factories' each having its own boiler house, and nitro-glycerine, nitrocellulose and acids production sections. At the height of its production just after the war, the Royal Ordnance site employed 20,000 people. For much of the 20th century the site supported the country's defence effort through the manufacture of munitions components.
- 8.41 In addition to the Royal Ordnance Factory, Bishopton also lies in close proximity to the former India Tyre Factory at **Site No. 26**. The India Tyre Factory is a Grade A Listed Building due to its art deco style. The India Tyre Company instructed their architects to design offices modelled on the Firestone factory in Twickenham, London. The subsequent demolition of the Firestone building has enhanced the importance of this inter-war building.

- 8.42 Following the closure of the Forth and Clyde canal (**Site No. 51**) in 1963 the lakes and basins (**Site Nos. 68-69**) at Bowling were maintained as part of a small section of working canal in order that fresh water moorings could be supplied for boats on the Clyde. New and more efficient transport links to Paisley and Glasgow, including the extension of the M8 motorway, have led to the expansion of communities such as Bishopton and Erskine, into a large commuter settlement.

Potential and Predicted Effects

Indirect Effects

Indirect effects upon the settings of designated heritage assets can be caused to buried or upstanding remains by temporary plant access routes, site offices, topsoiling, and the diversion of existing services. Equally, any further construction compounds or access roads required will be designated as indirect effects and will be subject to mitigation strategies in the event that the areas have not been subjected to previous mitigation.

- 8.43 Other indirect effects to culturally sensitive sites include visual effects upon the settings of designated heritage assets. Only visual impacts upon the settings of Listed Buildings and Scheduled Monuments are highlighted in this assessment, since their curtilage and amenity (in addition to their physical remains) are protected by legislation. Searches made during this assessment confirm that there are 59 Listed Buildings located within 5 km of the proposed development. Only one Listed Building Dargavel House (**Site No. 9**) may be subject to direct views to and from the proposed development area.
- 8.44 While nine Scheduled Monuments have been identified within the assessment area, it is not predicted that any will suffer an indirect effect as a result of the proposed development; the visual impact on the monuments being mitigated by their great inter-visible distance and development of population centres, such as Bishopton and Erskine, between the proposed developments site and monuments.

Direct Effects

- 8.45 It is proposed that a motorway junction, including the construction of slip roads, two roundabouts and the diversion of drainage, will be undertaken at the site in question. Any known or unknown below ground archaeology, within the total area of the proposed development site may be directly affected upon by this development.
- 8.46 Predicted effects on known buried archaeological remains, in the case of this development proposal, relate to the possibility of disturbing, removing or destroying *in-situ* remains and artefacts during ground-breaking works on the site. At least one post-medieval agricultural site is known to have existed within the proposed development site; a farmstead existed at Lin Burn (**Site No. 4**) up to around 1854. Several other agricultural and industrial sites remain in the immediate vicinity of the proposed development area in addition to the prehistoric enclosure at Southbar (**Site No. 6**) to the east. Furthermore, several Roman sites are known to exist in the wider 5 km study area. All of these constitute cultural heritage remains and it is possible that unknown associated or similar features could be destroyed by the development. While, much of the site may have been previously disturbed by the construction of both the M8 and the A8, it is possible that archaeological features remain undisturbed beneath the current roads.

Potential Effects

- 8.47 A farmstead at Lin Burn (**Site No. 4**) is the only known archaeological site within the development site. While no above ground physical evidence for this site survives, there is a high possibility that remains associated with the farmstead could survive underground. Additionally given the proximity of the site to the prehistoric enclosure at Southbar (**Site No. 6**) and the known Roman activity in the area (**Site Nos. 10, 60, & 73-74**), there is a possibility of encountering hitherto unknown remains from these periods. It is possible that previous disturbances on site related to the construction of the A8 and M8 have already removed some archaeological remains. However, the

risk of unknown buried archaeology prevails in much of the area proposed for development, and it cannot ultimately be confirmed whether such remains survive until ground-breaking work takes place.

Method of assessing sensitivity

- 8.48 In rating the archaeological sensitivity of the assessment area we have been guided by criteria used by Historic Scotland for scheduling Monuments and classifying Listed Buildings. Monuments are generally considered for scheduling based upon factors such as age, rarity, condition and archaeological context, while Listed Buildings are designated and categorised based upon similar criteria as well as technical innovation/virtuosity, architectural design and associations with well-known architects, historical persons or events. Note that in some cases a site or building which does not have a protective designation assigned to it could nonetheless still be rated as having the same significance as another one which *is* protected. This is because the selection of items for listing and scheduling is an ongoing national activity. Generally, the criteria for judging archaeological significance are gradually evolving, with an increasing trend towards including more recent types of structures. In some cases, important buildings or monuments may have been overlooked during listing, or could now be judged worthy of listing, whereas they were not previously.

8.49 The criteria used to rate archaeological and cultural heritage sensitivity in the proposed development area are presented in Table 8.3 below.

Table 8.3: Criteria for Rating Archaeological Sensitivity

Archaeological sensitivity	Criteria
High	Scheduled Monuments; <i>or</i> Category A Listed Buildings; <i>or</i> Remains of national or international importance, or fine, little-altered examples of some particular period, style or type
Moderate-High	Category B Listed Buildings; <i>or</i> Remains of regional or more than local importance, or major examples of some period, style or type, which may have been altered. Remains of national importance that have been partially damaged
Moderate	Category C Listed Buildings; <i>or</i> Remains of local importance, lesser examples of any period, style or type, as originally constructed or altered, and simple, traditional sites, which group well with other significant remains, or are part of a planned group such as an estate or an industrial complex; cropmarks of indeterminate origin. Remains of regional importance that have been partially damaged or remains of national importance that have been largely damaged.
Low-Moderate	Relatively numerous types of remains, of some local importance; findspots of artefacts that have no definite archaeological remains known in their context. Remains of local importance that have been partially damaged or remains of regional importance that have been largely damaged.
Low	Ubiquitous archaeological or cultural heritage remains; remains lacking unique and/or original features. Remains of local importance that have been largely damaged.

Method of assessing magnitude of effect

8.50 The magnitude of the physical effect upon monuments caused by the development has been rated using the classifications and criteria outlined in Table 8.4 below.

Table 8.4: Criteria for Rating Archaeological Sensitivity

Physical Effect	Criteria
High	Land take or physical damage would result in the loss of an area, features or evidence fundamental to the historic character and integrity of the site. Severance would result in the complete loss of physical integrity.
Medium	Land take or physical damage would result in the loss of an important part of the site or some important features and evidence, but not areas or features fundamental to its historic character and integrity. Severance, which may be at a secondary or peripheral level, would affect the integrity of the site. Key physical relationships would not be lost.
Low	Land take, severance or physical damage would be peripheral and/or secondary and would not affect the key features of the site. The historic integrity of the site would not be significantly affected.
Marginal	Land take, severance or physical damage confined to a relatively small, peripheral and/or unimportant part of the cultural feature, and would not affect its historic integrity, or the quality of the surviving evidence.
Visual only ²⁷	The monument will not be physically effected upon by the proposed development, but there may be a visual effect on its setting (only visual effects on listed buildings and scheduled monuments are considered in this assessment).
None	No physical or visual effect anticipated.

²⁷ Assessment of potential effects upon setting of designated assets takes cognisance of Historic Scotland's setting guidance which is included in their Managing Change in the Historic Environment series of guidance notes.

Method of assessing significance of effect

8.51 The predicted significance of effect upon each monument was determined by considering its sensitivity in conjunction with the magnitude of effect predicted on it. Each designated site was also visited to assess the potential visual effects that the proposed development would have upon their setting. The method of deriving the significance of impact classifications is shown in Table 8.5 below.

Table 8.5: Method of Rating Significance of Impact on Archaeology / Cultural Heritage Sites by the Proposed Development.

	Archaeological sensitivity				
Magnitude of impact	Low	Low-Moderate	Moderate	Moderate-High	High
High	Low-Moderate	Moderate	Moderate-Major	Major	Extreme
Moderate	Low	Low-Moderate	Moderate	Moderate-Major	Major
Low	Negligible	Low	Low-Moderate	Moderate	Moderate-Major
Marginal	Negligible	Negligible	Low	Low-Moderate	Moderate
None	None	None	None	None	None

Highlighted cells indicate impacts which are considered to be significant in terms of EIA Regulations (Scotland) 2011

Evaluation of Predicted Effects

Archaeological and cultural heritage sensitivity

8.52 The archaeological and cultural heritage sensitivity of remains known in the assessment area has been classified according to the method shown in Table 8.3, and the results are presented in Table 8.6 below:

Table 8.6: Sensitivity of Archaeological / Cultural Heritage Remains

Site No	Site Name	Protective designation	Archaeological sensitivity
1	Bishopton, Royal Ordnance Factory	None	Moderate
2	Glasgow/Greenock Railway	None	Low
3	Barrangary	None	Low
4	Lin Burn	None	Low
5	North Commonsides	None	Low

6	Southbar	None	Low
7	Southbar House	None	Low
8	Linburn	None	Low
9	Dargavel House	Category B Listed	Moderate-Hi
10	Barochan Hill	Scheduled Monument	High
11	Houston, St Peter's Well	Category B Listed	Moderate-High
12	Houston, North Street, Houston Cottage	Category B Listed	Moderate-High
13	Houston Parish Church & Churchyard	Category B Listed	Moderate-High
14	Houston Parish Church	Category A Listed	High
15	Houston House	Category B Listed	Moderate-High
16	Inchinnan, Old Parish Church And Graveyard	Scheduled Monument	High
17	Renfrew, Greenock Road, Inchinnan Bridge	Category A Listed	High
18	Renfrew, 'Argyll Stone' & 'St Conval's Chariot	Category B Listed	Moderate-High
19	Renfrew, Inchinnan Road, White Cart Bridge	Category A Listed	High
20	Renfrew, Inchinnan Road, Rolling Lift Bridge Over White Cart	Category A Listed	High
21	Fulwood Bridge	Category B Listed	Moderate-High
22	Houston, Ardgyfe House	Category B Listed	Moderate-High
23	Houston, Ardgyfe House, Lodge	Category C Listed	Moderate
24	Houston, Houston Road, Woodend	Category B Listed	Moderate-High
25	Linwood, Clippens Road, Clippens House	Category B Listed	Moderate-High
26	Inchinnan, Greenock Road, India Tyre Factory	Category A Listed	High
27	Inchinnan, Old Greenock Road New Parish Church	Category B Listed, Scheduled Monument	High
28	Town Of Inchinnan	Category C Listed	Moderate
29	Clydebank, Killbowie, John Brown's Shipyard	Category A Listed	High
30	Clydebank, Clyde Street, Clydebank Riverside Station	Category B Listed	Moderate-High
31	Clydebank, 11 Hume Street	Category B Listed	Moderate-High
32	Inchinnan, Northbar House	Category A Listed	High

33	Inchinnan, Old Greenock Road, Church Hall	Category C Listed	Moderate
34	Formakin House	House Listed Category A, Gate piers Listed Category B	High
35	Formakin Mill	Category B Listed	Moderate-High
36	Formakin Garden	Historic Garden and Designed Landscape (Inventory No. 226)	Moderate-High
37	Bishopton, Newton Road, Church Centre	Category C Listed	Moderate
38	Richieston Cottages, No.1, No.2, No.3	Category C Listed	Moderate
39	Bishopton, 133 Old Greenock Road	Category C Listed	Moderate
40	Blantyre Monument	Category B Listed	Moderate-High
41	Erskine Home Farm, Farmhouse	Category C Listed	Moderate
42	Freeland House	Category B Listed	Moderate-High
43	Freeland House, Offices	Category C Listed	Moderate
44	Erskine House, Cottage At Walled Garden	Category B Listed	Moderate-High
45	Erskine Hospital, South Lodge	Category B Listed	Moderate-High
46	1 Kirkton Cottages	Category B Listed	Moderate-High
47	2 Kirkton Cottages	Category B Listed	Moderate-High
48	Old Erskine Parish Church	Category B Listed	Moderate-High
49	Erskine Parish Church, Manse	Category C Listed	Moderate
50	Old Kilpatrick, Old Secession Church	Category B Listed	Moderate-High
51	Forth And Clyde Canal, Bowling Basin, Canal House Basin	Scheduled Monument	High
52	Old Kilpatrick, Lusset Road, Lusset House	Category B Listed	Moderate-High
53	Erskine House, Ferry Lodge	Category B Listed	Moderate-High
54	Erskine House	Category A Listed	High
55	Erskine Hospital, House At Kennels	Category B Listed	Moderate-High
56	Erskine Hospital	Category B Listed	Moderate-High
57	Erskine House, Kennels	Category B Listed	Moderate-High
58	Erskine House, Piggery	Category B Listed	Moderate-High

59	Longhaugh Lodge	Category B Listed	Moderate-High
60	Bishopton, Whitemoss	Scheduled Monument	High
61	Old Bishopton	Category B Listed	Moderate-High
62	Dunglass Castle	Category B Listed	Moderate-High
63	Dunglass Castle, Obelisk Memorial To Henry Bell	Category B Listed	Moderate-High
64	Bowling, Littlemill Distillery, Maltings And Kilns	Category C Listed	Moderate
65	Bowling, Dumbarton Road, Littlemill Whiskey Distillery, Exciseman's House	Category B Listed	Moderate-High
66	Forth And Clyde Canal, Bowling Basin, Drawbridge	Category B Listed	Moderate-High
67	Forth And Clyde Canal, Railway Swing Bridge And Viaducts	Category B Listed	Moderate-High
68	Forth And Clyde Canal, Bowling Basin, Upper Basin	Category B Listed	Moderate-High
69	Forth And Clyde Canal, (Original) Canal Entrance	Category B Listed	Moderate-High
70	Forth And Clyde Canal, Bowling Lock-Keeper's Cottages	Category B Listed	Moderate-High
71	Glenarbuck House	Category B Listed	Moderate-High
72	Old Kilpatrick, Great Western Road, Gavinburn Farm	Category C Listed	Moderate
73	Old Kilpatrick	Scheduled Monument	High
74	Antonine Wall	Scheduled Monument	High
75	Barochan Cross	Scheduled Monument	High
76	Bishopton, Aqueduct	Scheduled Monument	High

8.53 The results of the significance of effect assessment are laid out in Table 8.7 below.

Table 8.7: Predicted Significance of Effect by the Development upon the Remains

Site No	Site name	Archaeological Sensitivity	Magnitude of direct effect from proposed development	Significance of effect
1	Bishopton, Royal Ordnance	Moderate	None	None

	Factory			
2	Glasgow/Greenock Railway	Low	None	None
3	Barrangary	Low	None	None
4	Lin Burn/Maxwellfield	Low	High	Low
5	North Commonsides	Low	None	None
6	Southbar	Low	None	None
7	Southbar House	Low	None	None
8	Linburn	Low	None	None
9	Dargavel House	Moderate-High	None	None
10	Barochan Hill	High	None	None
11	Houston, St Peter's Well	Moderate-High	None	None
12	Houston, North Street, Houston Cottage	Moderate-High	None	None
13	Houston Parish Church And Churchyard	Moderate-High	None	None
14	Houston Parish Church	High	None	None
15	Houston House	Moderate-High	None	None
16	Inchinnan, Old Parish Church And Graveyard	High	None	None
17	Renfrew, Greenock Road, Inchinnan Bridge	High	None	None
18	Renfrew, 'Argyll Stone' & 'St Conval's Chariot	Moderate-High	None	None
19	Renfrew, Inchinnan Road, White Cart Bridge	High	None	None
20	Renfrew, Inchinnan Road, Rolling Lift Bridge Over White Cart	High	None	None
21	Fulwood Bridge	Moderate-High	None	None
22	Houston, Ardgyfe House	Moderate-High	None	None
23	Houston, Ardgyfe House, Lodge	Moderate	None	None
24	Houston, Houston Road, Woodend	Moderate-High	None	None

25	Linwood, Clippens Road, Clippens House	Moderate-High	None	None
26	Inchinnan, Greenock Road, India Tyre Factory	High	None	None
27	Inchinnan, Old Greenock Road New Parish Church	High	None	None
28	Town Of Inchinnan	Moderate	None	None
29	Clydebank, Kilbowie, John Brown's Shipyard	High	None	None
30	Clydebank, Clyde Street, Clydebank Riverside Station	Moderate-High	None	None
31	Clydebank, 11 Hume Street	Moderate-High	None	None
32	Inchinnan, Northbar House	High	None	None
33	Inchinnan, Old Greenock Road, Church Hall	Moderate	None	None
34	Formakin House	High	None	None
35	Formakin Mill	Moderate-High	None	None
36	Formakin Garden	Moderate-High	None	None
37	Bishopton, Newton Road, Church Centre	Moderate	None	None
38	Richieston Cottages, No.1, No.2, No.3	Moderate	None	None
39	Bishopton, 133 Old Greenock Road	Moderate	None	None
40	Blantyre Monument	Moderate-High	None	None
41	Erskine Home Farm, Farmhouse	Moderate-High	None	None
42	Freeland House	Moderate-High	None	None
43	Freeland House, Offices	Moderate	None	None
44	Erskine House, Cottage At Walled Garden	Moderate-High	None	None
45	Erskine Hospital, South Lodge	Moderate-High	None	None
46	1 Kirkton Cottages	Moderate-High	None	None
47	2 Kirkton Cottages	Moderate-High	None	None

48	Old Erskine Parish Church	Moderate-High	None	None
49	Erskine Parish Church, Manse	Moderate	None	None
50	Old Kilpatrick, Old Secession Church	Moderate-High	None	None
51	Forth And Clyde Canal, Bowling Basin, Canal House Basin	High	None	None
52	Old Kilpatrick, Lusset Road, Lusset House	Moderate-High	None	None
53	Erskine House, Ferry Lodge	Moderate-High	None	None
54	Erskine House	High	None	None
55	Erskine Hospital, House At Kennels	Moderate-High	None	None
56	Erskine Hospital	Moderate-High	None	None
57	Erskine House, Kennels	Moderate-High	None	None
58	Erskine House, Piggery	Moderate-High	None	None
59	Longhaugh Lodge	Moderate-High	None	None
60	Bishopton, Whitemoss	High	None	None
61	Old Bishopton	Moderate-High	None	None
62	Dunglass Castle	Moderate-High	None	None
63	Dunglass Castle, Obelisk Memorial To Henry Bell	Moderate-High	None	None
64	Bowling, Littlemill Distillery, Maltings And Kilns	Moderate	None	None
65	Bowling, Dumbarton Road, Littlemill Whiskey Distillery, Exciseman's House	Moderate-High	None	None
66	Forth And Clyde Canal, Bowling Basin, Drawbridge	Moderate-High	None	None
67	Forth And Clyde Canal, Railway Swing Bridge And Viaducts	Moderate-High	None	None
68	Forth And Clyde Canal, Bowling Basin, Upper Basin	Moderate-High	None	None
69	Forth And Clyde Canal, (Original) Canal Entrance	Moderate-High	None	None
70	Forth And Clyde Canal, Bowling	Moderate-High	None	None

	Lock-Keepers' Cottages			
71	Glenarbuck House	Moderate-High	None	None
72	Old Kilpatrick, Great Western Road, Gavinburn Farm	Moderate	None	None
73	Old Kilpatrick	High	None	None
74	Antonine Wall	High	None	None
75	Barochan Cross	High	None	None
76	Bishopton, Aqueduct	High	None	None

Evaluation of Predicted Effects

8.54 It is predicted that there will be a direct effect upon the Maxwellfield post-medieval farmstead at Lin Burn (**Site No. 4**). It is known that at least two unroofed buildings survived in this location as late as 1854, and the 1st edition Ordnance Survey Map (Figure 8) indicates that the site was, at this date, in ruins, indicating that earlier remains must exist. While the construction of the M8 and A8 in this area may have resulted in the loss of some features associated with the farmstead it is possible that archaeological remains survive below ground within the proposed development site. While National Monuments Record Point Data places the site within the development boundaries, detailed analysis of the 1st Edition 6 inch Ordnance Survey suggests that the structures of the farmstead lie slightly to the north of the land take for the proposed junction improvements (see Figure 9.10). There remains the potential for earlier cultural heritage remains such as those of prehistoric, Roman and medieval date to survive undetected beneath previously undisturbed portions of the development site..

Mitigation of Adverse Effects

8.55 This desk-based assessment has identified known and suspected archaeological and cultural heritage remains in the vicinity of the proposed development area. Only one archaeological site, Lin Burn (**Site No. 4**), is known to exist within the proposed development area. This site has been judged to be of low cultural heritage value, given its unknown extent of survival and the fact that any remains may have been disturbed by works associated with the construction of the M8 and A8. Preservation *in-situ* is, therefore, not judged to be appropriate in this instance.

8.56 National planning policies and planning guidance, SPP (Scottish Government 2010), SHEP (Historic Scotland 2011) and PAN 2/2011 (Scottish Government 2011), as well as the regional and local planning policies outlined in Paragraphs 8.10 and 8.11 of this report, require a mitigation response that is designed to investigate the potential for archaeological sites within the proposed development area and hence allow the recording of any significant remains. Given the possibility of encountering archaeological remains it is recommended that in order to accord with the above policies an archaeological evaluation be carried out prior to any ground breaking works associated with the development. Trial trenching should target those areas that have been least disturbed and particular attention should be given to identifying any remains associated with the known Maxwellfield farmstead at Lin Burn (**Site No.4**) and/or any prehistoric remains associated with the enclosure at Southbar (**Site No. 6**) immediately east of the proposed development site.

8.57 Further mitigation will be dependent on the results of the trial trenching although it could involve an archaeological watching brief or, if significant remains are encountered during the trial trenching, an archaeological excavation followed by appropriate post-excavation analysis, reporting and dissemination. All mitigation measures, including the trial trenching will be monitored by the West of Scotland Archaeology Service (WoSAS), archaeological advisors to Renfrewshire Council, who would also be responsible for monitoring its implementation.

- 8.58 The effect of the visual setting of one Listed Building, Dargavel House (**Site No. 9**), to the west of the proposed development site was considered, although as topographic and vegetative conditions prevent intervisibility between Dargavel and the proposed development area no potential for a visual effect on setting was found. Also, it should be noted that the visual setting of Dargavel House has already been compromised by the construction of the Royal Ordnance Factory (**Site No. 1**) and other modern developments in the surrounding area. Visual effects upon a further 59 Listed Buildings and nine Scheduled Monuments in the assessment area up to 5 km away were assessed, however once again topographic conditions and modern buildings and populations centres prevent direct views between the proposed development site and protected cultural heritage assets and consequently no potential for an indirect visual effect on setting was found.
- 8.59 Although the potential for residual effects, that is to say those which extend beyond the construction phase of the development, was considered none are predicted as direct impacts will be limited to the disturbance of archaeological remains during groundworks for the development. Similarly the lack of intervisibility with designated heritage assets means that their visual settings will not be impacted by the proposed junction.

Bibliographic References

- Alcock L 1974 Dumbarton, Castle Rock, *Discovery Excav Scot*, 1974, 32-3
- Alcock L 1975 'Civitas Brettonum Munitissima: excavations at Castle Rock, Dumbarton' *Glasgow Univ Gazette*
- Alexander D 1992 'Barochan cross fort (Houston parish): medieval pottery' *Discovery Excav Scot*
- Allen J R and Anderson J 1903 *The early Christian monuments of Scotland: a classified illustrated descriptive list of the monuments with an analysis of their symbolism and ornamentation* Edinburgh
- Anon 199-? 'Haunt of monkeys, but never a ghost [Formakin House, newscutting]'
- Aslet, C 1986 'Formakin, Renfrewshire', *Country Life*, 180, 4643, (14 August 1986), 490-4
- Baker, F 2004 'Queen's Quay, Clydebank (Old Kilpatrick parish), survey', *Discovery Excav Scot*, 5, 2004, 131
- Biddle & Nock 1983 *The Railway Heritage of Britain*
- Breeze, D J 1982 *The northern frontiers of Roman Britain*, London, 110,
- Brown C J, Shipley B M and Bibby J 1982 *South-West Scotland. Soil Survey of Scotland*. The Macaulay Institute for Soil Research. Aberdeen
- Butt, R V J 1995 *The directory of railway stations: details every public and private passenger station, halt, platform and stopping place, past and present*, Sparkford, nr Yeovil, 64
- Clough and Cummins, T H McK and W A (1988) *Lists of identifications Clough, T H McK and Cummins, W A, Stone axe studies, volume 2: the petrology of prehistoric stone implements from the British Isles*, Council for British Archaeology research report no. 67, London
- Connolly, D (2002) 'Barochan House, Renfrewshire (Houston parish), late 16th-century castle' *Discovery Excav Scot*, 3, 2002, 97,
- Coventry, M 2001 *The castles of Scotland* Musselburgh, 87, 3rd
- Cowan and Easson, I B and D E 1976 *Medieval religious houses, Scotland: with an appendix on the houses in the Isle of Man*, London, 158, 2nd
- Dunn, J A 1971 *History of Renfrew*, 115-16
- Dunwell, Bailey, Leslie and Smith, A, G, A and A 2002 'Excavations along the Antonine Wall, 1994-2001', *Proc Soc Antiq Scot*, 132, 2002,
- Formakin, Bishopton 1938 *Formakin, Bishopton: catalogue of the Holms Collection*, Glasgow
- Formakin House 1994 'Monkey House' to lose funding [Formakin House, newscutting], *The Herald*, 27 January 1994
- FPD Savills 2004 *The Mansion House, Formakin Estate, Renfrewshire*: [sale particulars], Glasgow
- Frere S S 1989 'Roman Britain in 1988. I Sites explored' *Britannia*, 20, 270
- Gordon, A 1726 *Itinerarium septentrionale: or a journey thro' most of the counties of Scotland and those in the north of England*, London, 51,
- Grew, F O 1981 'Roman Britain in 1980. I. Sites explored', *Britannia*, 12, 1981, 321
- Guy, J 2001 NMRS MS 810/11, Part 2, 177-8

- Guy, J 2001 NMRS MS 810/11, Part 3, 198-9
- Hallifax-Crawford A 1967 'Barbeg near Langbank' *Discovery Excav Scot*, 1967
- Hanson and Maxwell, W S and G S 1983 *Rome's north west frontier: The Antonine Wall*, Edinburgh, 100, 170,
- Hartley, B R 1972 'The Roman occupations of Scotland: the evidence of samian ware', *Britannia*, 3, 1972, 22
- Hartley, K F 1976 'Were mortaria made in Scotland?' *Glasgow Archaeol J*, 4, 1976, 85, 89
- Historic Scotland 1987 Inventory of Gardens and Designed Landscapes
- Horsley, J 1732 *Britannia Romana or the Roman antiquities of Britain*, London, 164
- Hume, J R 1976 *The industrial archaeology of Scotland, 1, Lowlands and Borders*, London, 226
- Hussey, C 1931 *The work of Sir Robert Lorimer*, London
- Hutton G 1993 *A Forth and Clyde Canal*, Ochiltree, Ayrshire
- Keppie and Walker, L J F and J 1980 'Duntocher (Old Kilpatrick p), search for Roman fortlet', *Discovery Excav Scot*, 1980, 33,
- Keppie F and Newall L J F 1984 Barochan Hill *Discovery Excavation Scotland* 1984
- Keppie and Curtis, L J F and N 1987 'Mount Pleasant, (Old Kilpatrick parish), Antonine Wall and ditch', *Discovery Excav Scot*, 1987
- Keppie L J F 1988 'Old Kilpatrick (old Kilpatrick parish), roman fort, defensive ditches' *Discovery Excav Scot*, 1988
- Keppie, Bailey, Dunwell, McBrien and Speller, L, B, A, J and K 1995 'Some excavations on the line of the Antonine Wall, 1985-93', *Proc Soc Antiq Scot*, 125, 1995, 657
- Keppie, L 2003 'A walk along the Antonine Wall in 1825: the travel journal of the Rev John Skinner', *Proc Soc Antiq Scot*, 133, 2003, 205-244
- Lindsay J 1968 *The canals of Scotland*, Newton Abbot
- Macdonald, G 1915 'Some recent discoveries on the line of the Antonine Wall', *Proc Soc Antiq Scot*, 49, 1914-15, 97, 98, 100
- Macdonald, G 1932 'Notes on the Roman forts at Old Kilpatrick and Croy Hill and a relief of Jupiter Dolichenus', *Proc Soc Antiq Scot*, 66, 1931-2, 2-3
- Macdonald, G 1934 *The Roman wall in Scotland*, Oxford, 99, 176, 2nd
- Macfarlane W 1906-8 in Mitchell, A and Clark, J T, 3v, *Geographical collections relating to Scotland* Edinburgh, Vol.2, 203
- MacGibbon and Ross, D and T 1887-92 *The castellated and domestic architecture of Scotland from the twelfth to the eighteenth centuries*, 5v, Edinburgh, Vol.3, 489-90

- MacGibbon & Ross 1889 *Domestic architecture in Scotland* Edinburgh Vol 4 21-3
- Mackie and Davis, E W and A 1991 'New light on Neolithic rock carving. The petroglyphs at Greenland (Auchentorlie), Dumbartonshire', *Glasgow Archaeol J*, 15, 1988-89, 129
- Mays, D 1990 'Lorimer in perspective', *Roy Inst Brit Architect J*, 1990, December 1990, 36
- McClelland, R 1905 *The church and parish of Inchinnan: a brief history*, Paisley, 179
- Millar A H 1889 *The castles and mansions of Renfrewshire and Buteshire: illustrated in sixty-five views with historical and descriptive accounts*. Glasgow
- Miller S N 1928 *The Roman fort at Old Kilpatrick: being an account of the excavations conducted on behalf of the Glasgow Archaeological Society*, Glasgow
- Ministry of Defence 1998 *Security of Supply and the Future of Royal Ordnance Factory Bishopton* Fifth Report
- Name Book (County) 1863 *Original Name Books of the Ordnance Survey*
Book No. 10
- Newall, F 1950 *J Roman Stud*, 40, 93-4,
- Newall, F 1952 'Roman fort, Whitemoss', *Discovery Excav Scot*, 1952, 12-13
- Newall, F 1953 'Whitemoss Farm', *Discovery Excav Scot*, 1953, 14-15
- Newall, F 1953 *J Roman Stud*, 105-6
- Newall, F 1954 'Renfrewshire', *Discovery Excav Scot*, 1954, 12-13,
- Newall, F 1954 *J Roman Stud*, 86,
- Newall, F 1955 *J Roman Stud*, 123,
- Newall, F 1957 'Whitemoss Farm, Bishopton', *Discovery Excav Scot*, 1957, 26-27
- Newall and Clarkson, F and A 1969 'South Barr', *Discovery Excav Scot*, 1969
- NSA 1845 *The new statistical account of Scotland by the ministers of the respective parishes under the superintendence of a committee of the society for the benefit of the sons and daughters of the clergy*, 15v, Edinburgh, Vol.7 (Renfrew), 17-18
- Ordnance Survey 1969 *The Antonine Wall*, Southampton
- OSA 1791-9 *The statistical account of Scotland, drawn up from the communications of the ministers of the different parishes*, Sinclair, J (Sir), Edinburgh, Vol.1, 315
- Piggott, S 1957 'Whitemoss Farm, Bishopton', *Discovery Excav Scot*, 1957, 25-26
- Price and Price, E J and J 1971 'Carleith, Antonine Wall', *Discovery Excav Scot*, 1971, 18
- Price and Price, E J and J 1971 'Carleith, Bye-pass Road', *Discovery Excav Scot*, 1971, 18
- Radford C A R 1967 'The early christian monuments at Govan and Inchinnan'
Trans Glasgow Archaeol Soc, 15, 4, 181-3
- Robertson, A S 1957 *An Antonine fort: Golden Hill, Duntocher: an account of the excavations carried out on the Antonine Wall and fort on Golden Hill, Duntocher under the auspices of the University of Glasgow*, Edinburgh,

- Robertson A S 1963 'Roman coins found in Scotland, 1951-60' *Proc Soc Antiq Scot*, 94
- Robertson, A S 1966 'Miscellanea Romano-Caledonica', *Proc Soc Antiq Scot*, 97, 1963-4, 188-193
- Robertson and Keppie, A S and L J F 1969 'Callendar Park (Falkirk p), Antonine Wall', *Discovery Excav Scot*, 1969, 22-3,
- Robertson, A S 1973 *The Antonine Wall: a handbook to the Roman wall between Forth and Clyde and a guide to its surviving remains, Revision*, {Glasgow}, 88
- Robertson, A S 1979 *The Antonine Wall: a handbook to the Roman wall between Forth and Clyde and a guide to its surviving remains*, {Glasgow}, 85
- Robertson A S 1984 'Roman coins found in Scotland, 1971-1982' *Proc Soc Antiq Scot*, 113
- Royal Commission in Ancient Historic Monuments of Scotland 1996 *Explosives in the Service of Man: Ardeer and the Nobel Heritage* RCAHMS, Edinburgh
- Savage, P 1977 'Lorimer and the garden heritage of Scotland', *J Garden Hist Soc*, 5, 2, (Summer 1977), 39, No.2.
- SDD 1960 *List of Buildings of Architectural or Historical Interest*, (Lists held in Architectural Department of RCAHMS) Scottish Development Department, 2, no.10, no.6
- Sinclair, F 1984 *Scotstyle: 150 Years of Scottish architecture*, Edinburgh, 73-4
- Sir William Arrol and Company Limited 1909 *Bridges, Structural Steel Work, and Mechanical Engineering Productions* partly reprinted from 'Engineering', London, 146, 148
- Smith, R 2001 *The Making of Scotland*. Canongate, Edinburgh.
- Speller and Leslie, K and A 2002 'Work in 1994', *Proc Soc Antiq Scot*, 132, 2002,
- Sproat, D 2002 'Duntocher Primary School, West Dunbartonshire (Old Kilpatrick parish), watching brief', *Discovery Excav Scot*, 3, 2002, 116
- Spon, E & F FN 2002 *Guidelines for Landscape and Visual Impact Assessment*. Landscape Institute, Institute of Environmental Assessment.
- St Joseph, J K 1958 'Air reconnaissance in Britain, 1955-7', *J Roman Stud*, 48, 1958, 90
- St Joseph, J K S 1976 'Air reconnaissance of Roman Scotland, 1939-75', *Glasgow Archaeol J*, 4, 1976, 2-3
- Steer, K A 1949 'Whitemoss, Renfrewshire', *Discovery Excav Scot*, 1949, 10,
- Steer, K A 1951 'The Roman fort at Whitemoss, Renfrewshire', *Proc Soc Antiq Scot*, 83, 1948-9, 28-32
- Stewart, R W 1845 'Parish of Erskine' *New Statistical Account of Scotland*. Presbytery of Greenock, Synod of Glasgow and Ayr. William Blackwood and Sons, Edinburgh
- The Scottish Executive 1999. *Environmental Impact Assessment Planning Advice Note PAN 58*. September 1999.
- The Scottish Office Environment Department 1994. *Archaeology - the Planning Process and Scheduled Monument Procedures. Planning Advice Note PAN42*. January 1994.
- The Scottish Office Development Department 1994. *National Planning Policy Guideline NPPG5. Archaeology and Planning*. January 1994.

The Scottish Office Development Department 1999. *National Planning Policy Guideline NPPG18. Planning and the Historic Environment*. April 1999.

Tranter, N 1962 *The fortified house in Scotland* Edinburgh Vol 3 153-4

TSA 1962 *The third statistical account of Scotland: the county of Renfrew and the county of Bute*, Moislely, H A and Thain, A G, Somerville, A C and Stevenson, W, Glasgow, 230

Walker, J R 1883 "'Holy Wells" in Scotland', *Proc Soc Antiq Scot*, 17, 1882-3, 164-7

Wilson, D R 1970 'Roman Britain in 1969. I. Sites explored', *Britannia*, 1, 1970, 274

Wilson, D R 1972 'Roman Britain in 1971. I. Sites explored', *Britannia*, 3, 1972, 303

Wilson, D R 1976 'Air-reconnaissance and Roman military antiquities in Britain', *Scot Archaeol Forum*, 7, 1975, 14, 15,

Wilson, John 1812 *Agriculture of Renfrewshire*

Wilson, J 1882 *The Gazetteer of Scotland*

Young, W 1799 'Parish of Erskine' *Statistical Account of Scotland Vol V: County of Renfrew, Synod of Glasgow and Ayr Presbytery of Paisley*

Cartographic References

1583-96, Pont, T Pont 33 *Renfrewshire*

1636-52, Gordon, R *Barony of Renfrew*

1654, Blaeu, J *The Baronie of Renfrew*

1745 Moll, H *The Shire of Renfrew with Cuningham*

1796 Ainslie, J *Map of the County of Renfrew*

1820 Thomson, J *Renfrew Shire*

1821 Ainslie, J *Ainslie's map of the southern part of Scotland*

1863 Ordnance Survey *Renfrewshire* Sheet VII

1864 Ordnance Survey *Renfrewshire* Sheet III

1864 Ordnance Survey *Renfrewshire* Sheet VIII

1898 Ordnance Survey *Renfrewshire* Sheet VII N.E

1898 Ordnance Survey *Renfrewshire* Sheet III.SE *Dumbartonshire* part of Sheet XXII

1898 Ordnance Survey *Renfrewshire* Sheets VIII N.W

1898 Ordnance Survey *Renfrewshire* Sheets VIII S.W

1898 Ordnance Survey *Dumbartonshire* Parts of Sheets XXIII and XXV

1898 Ordnance Survey *Renfrewshire* Sheet VII S.E

1914 Ordnance Survey *Renfrewshire* Sheet VIII S.W

1915 Ordnance Survey *Renfrewshire* Sheet VII S.E
 1916 Ordnance Survey *Renfrewshire* Sheet VII N.E
 1919 Ordnance Survey *Renfrewshire* Sheet VIII N.W
 1919 Ordnance Survey *Dumbartonshire* Parts of Sheets XXIII and XXV
 1920 Ordnance Survey *Dumbartonshire* Parts of Sheet XXII
 1951 Ordnance Survey *Renfrewshire* Sheet VIII N.W
 1951 Ordnance Survey *Renfrewshire* Sheet VIII S.W
 1951 Ordnance Survey *Renfrewshire* Sheet VII N.E
 1951 Ordnance Survey *Dumbartonshire* Parts of Sheets XXIII and XXV
 1951 Ordnance Survey *Dumbartonshire* Parts of Sheet XXII

Photographic references

Vertical aerial photographs

Sortie	Frames	Date	Scale	Lib
CPE/Scot/UK269	5275-5273	15/08/1947	1:10000	B191
58/RAF/3544	0263-0262	16/05/1960	1:10666	B483
Meridian 80/70	056-055	08/10/1970	1:24000	C302
51588	100-099	10/06/1988	1:24000	C275

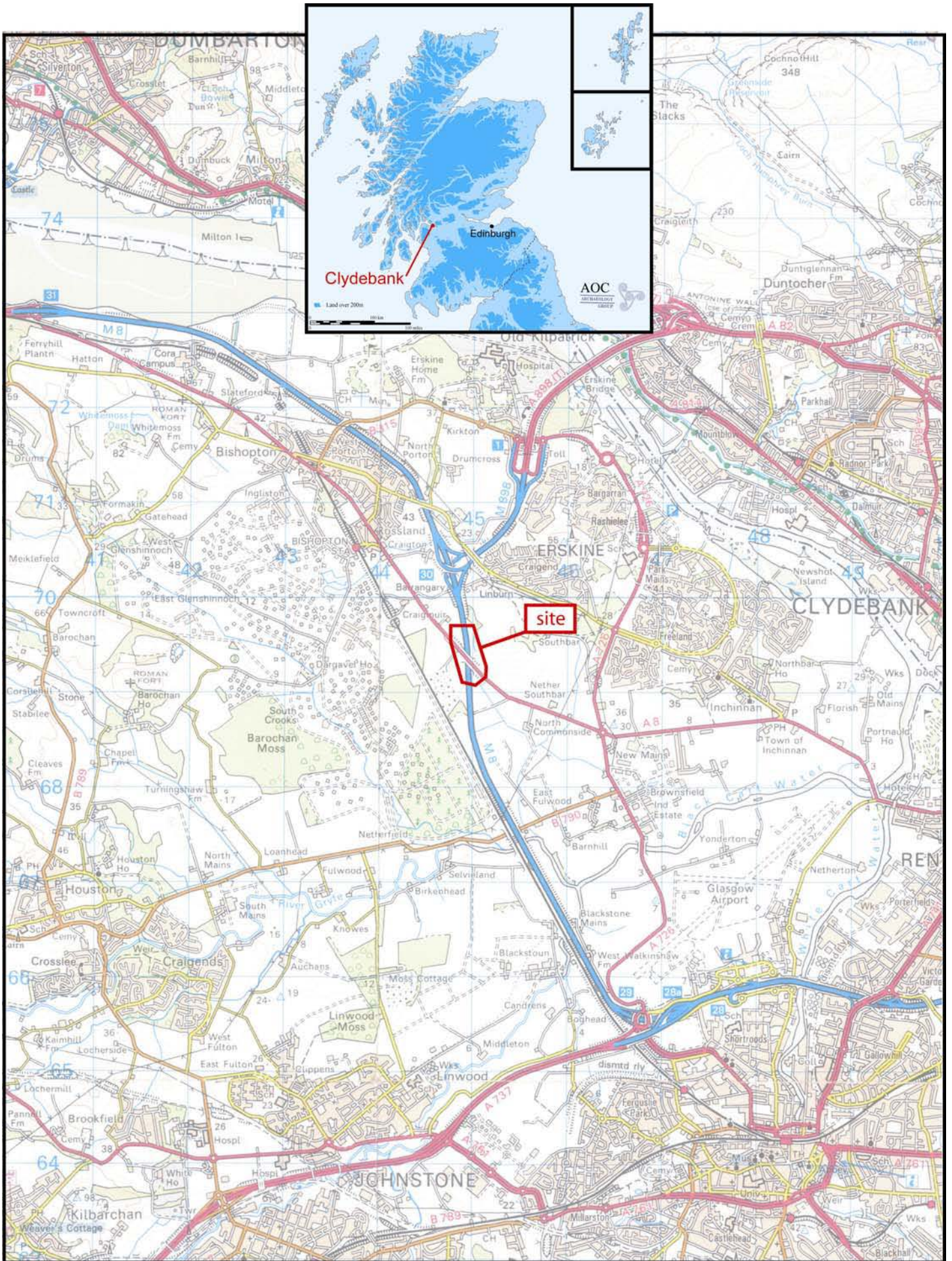


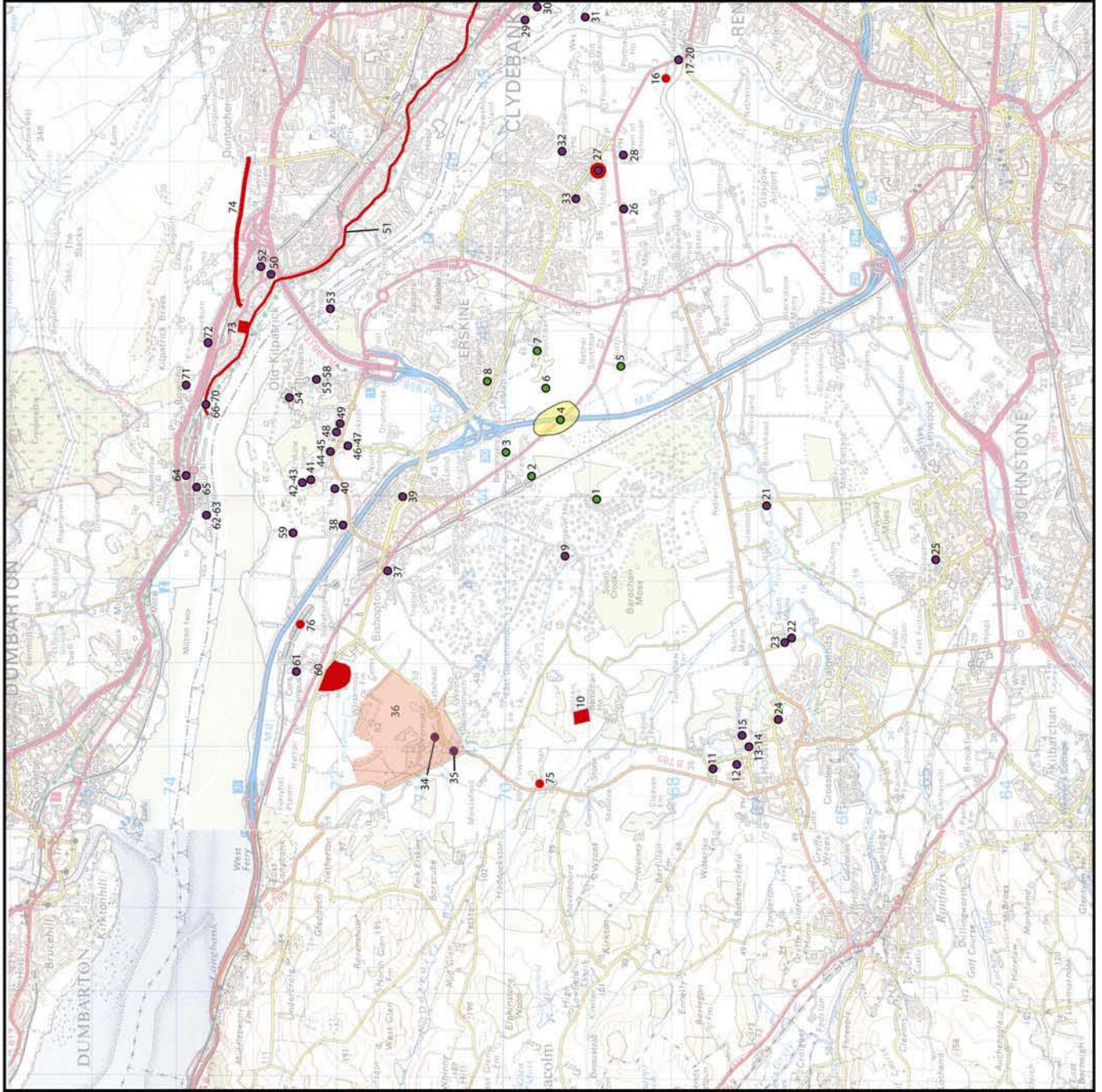
FIGURE 8.1: SITE LOCATION

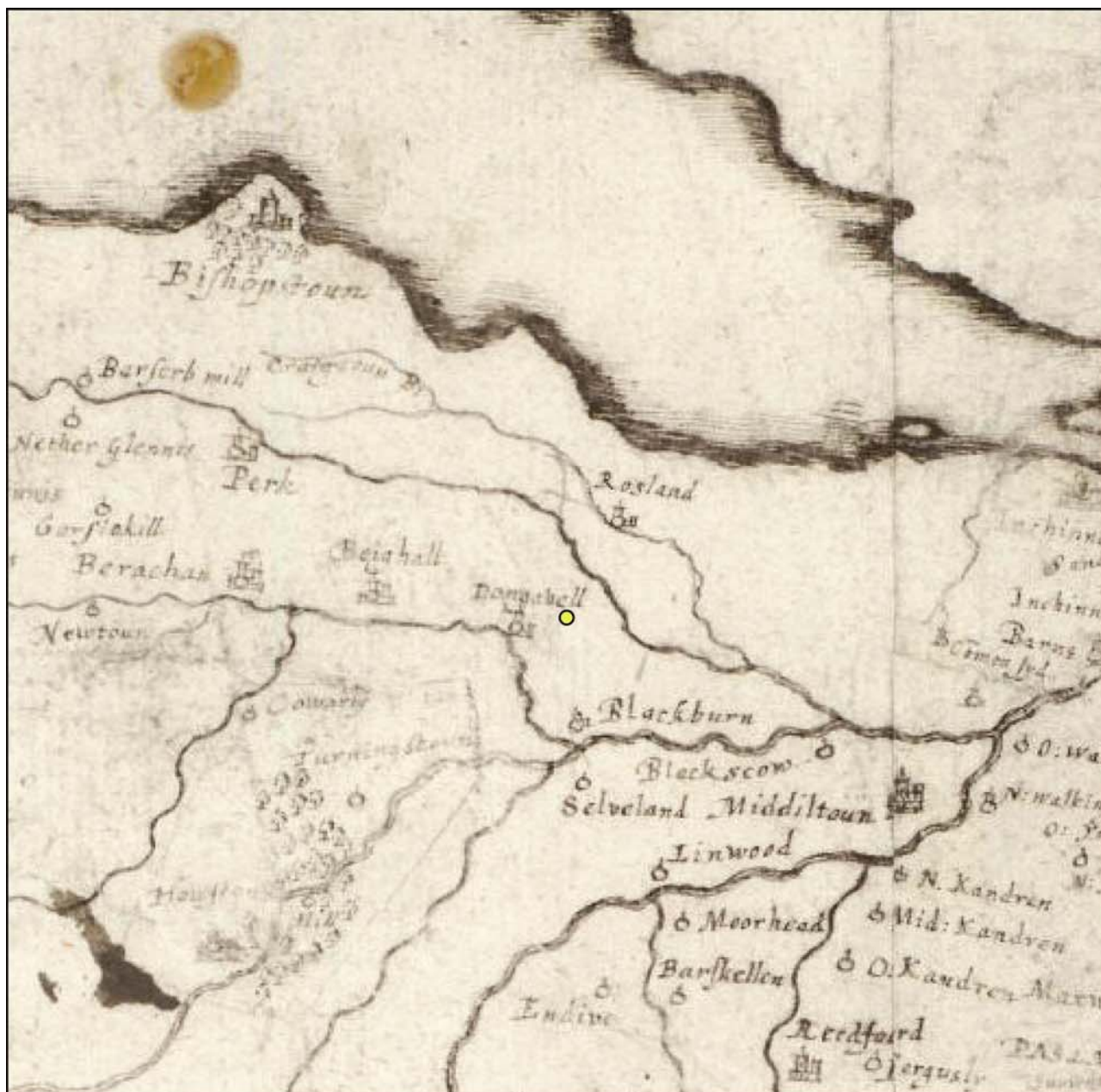
FIGURE 8.2

Site location plan showing sites of cultural heritage interest

KEY

- Sites of cultural heritage interest
- Listed buildings
- Scheduled ancient monuments
- Proposed development area
- Historic Garden





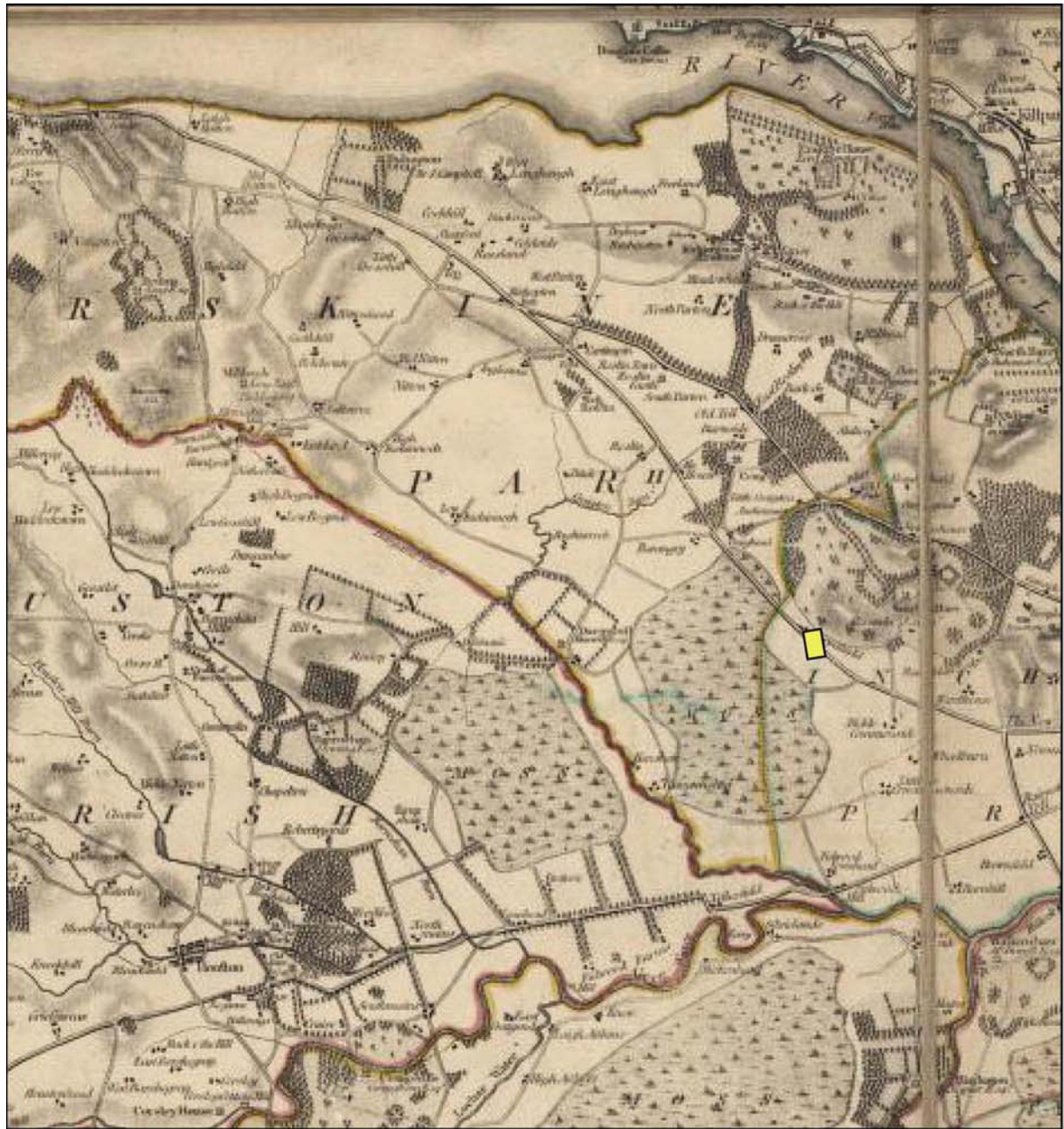
● approximate location of site

FIGURE 8.3
Extract from map by Gordon, 1636-52



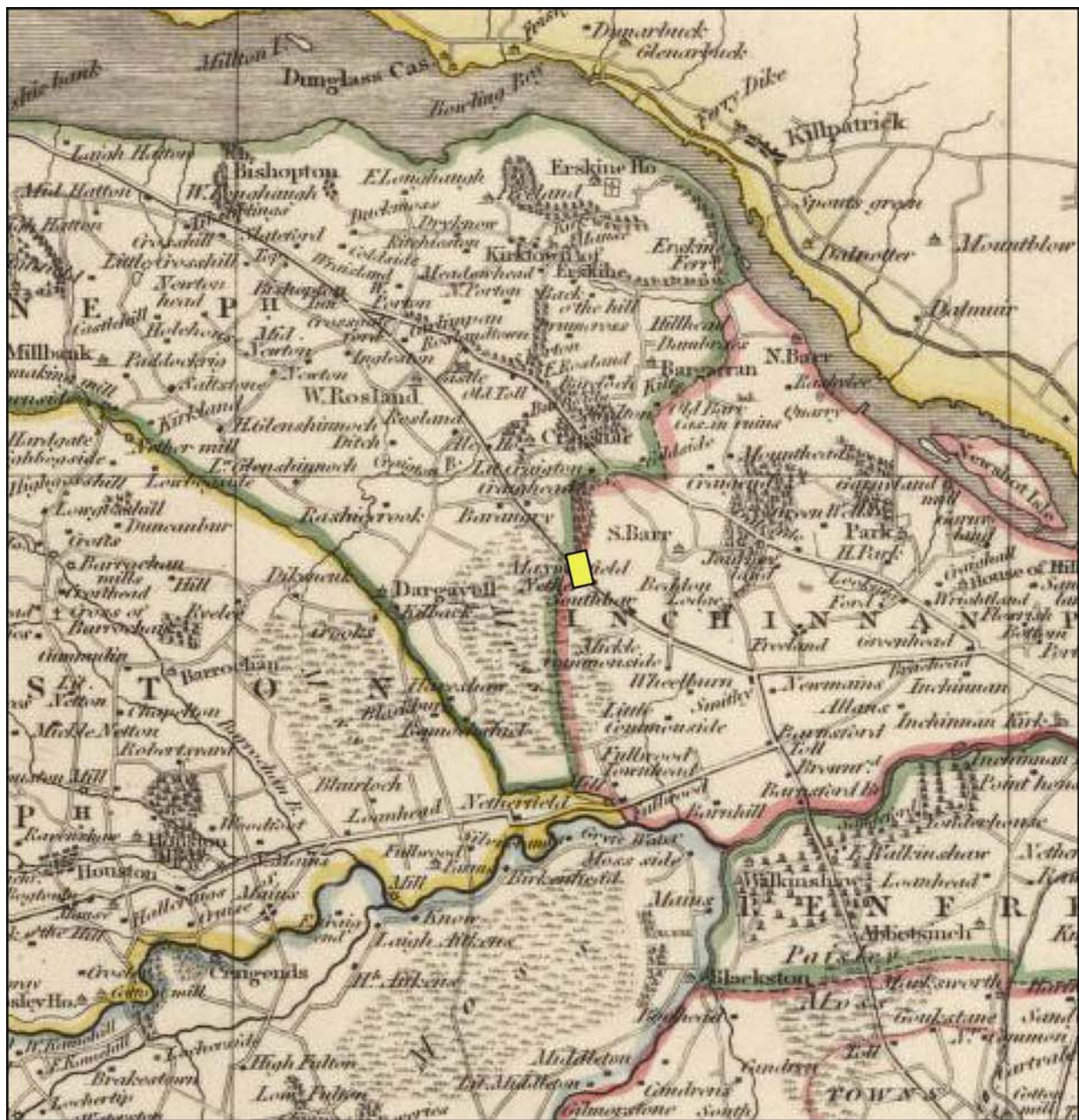
● approximate location of site

FIGURE 8.4
Extract from map by Blaeu, 1654



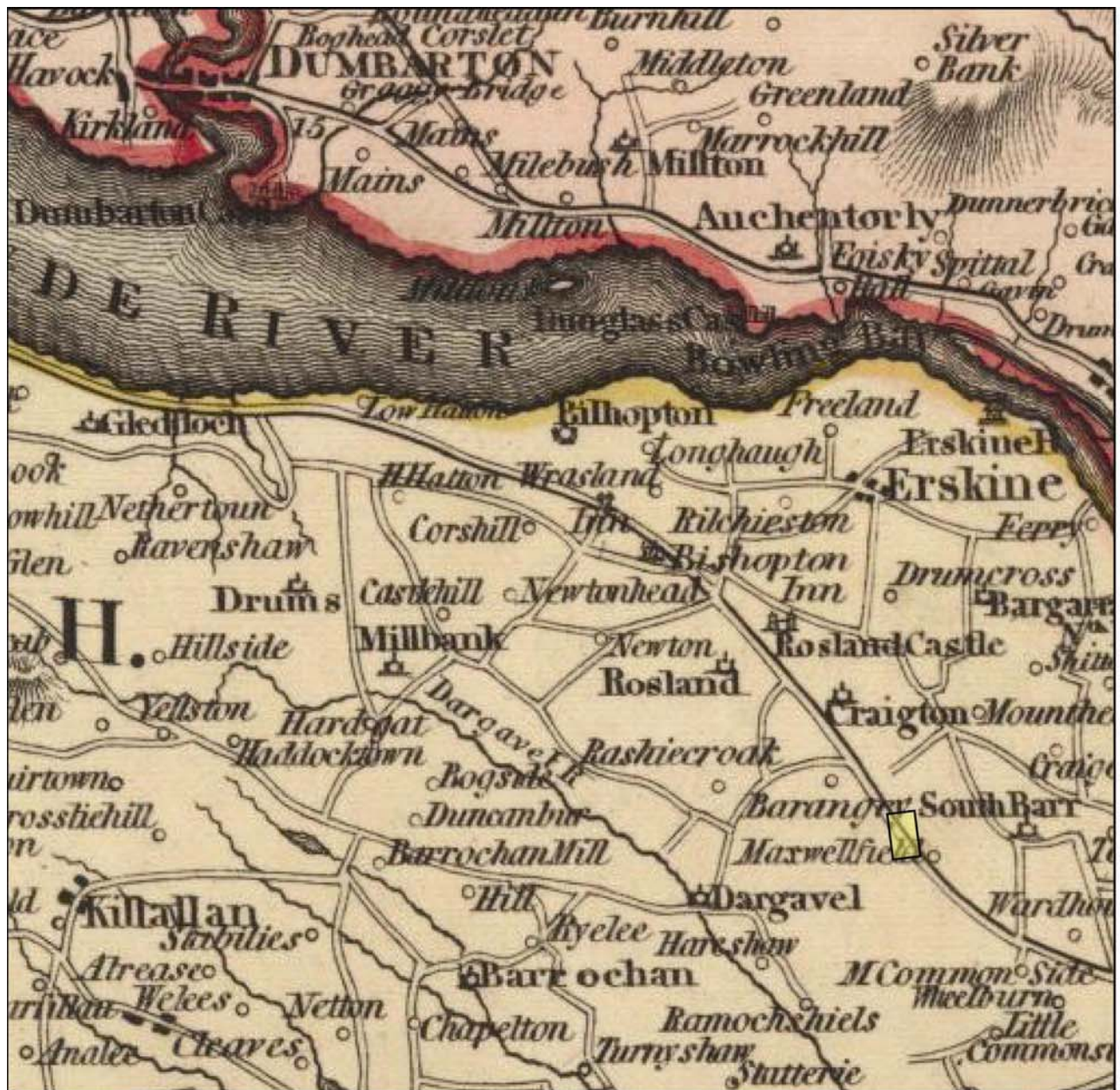
● approximate location of site

FIGURE 8.5
Extract from map by Ainslie, 1796



● approximate location of site

FIGURE 8.6
 Extract from map by Thomson, 1820



● approximate location of site

FIGURE 8.7
Extract from map by Ainslie, 1821

FIGURE 8.8
Extract from map by
Ordnance Survey, 1854



● approximate location of site

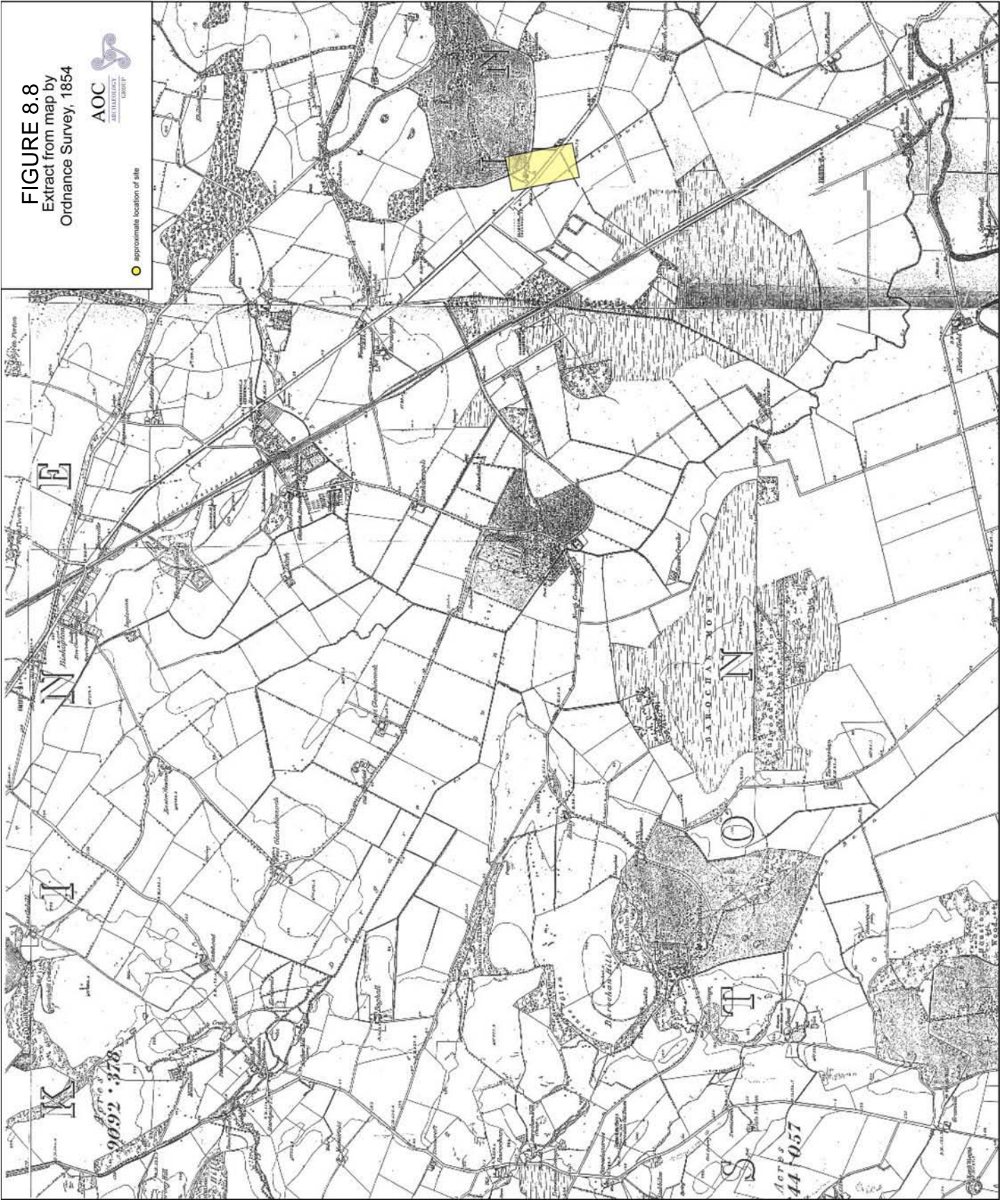
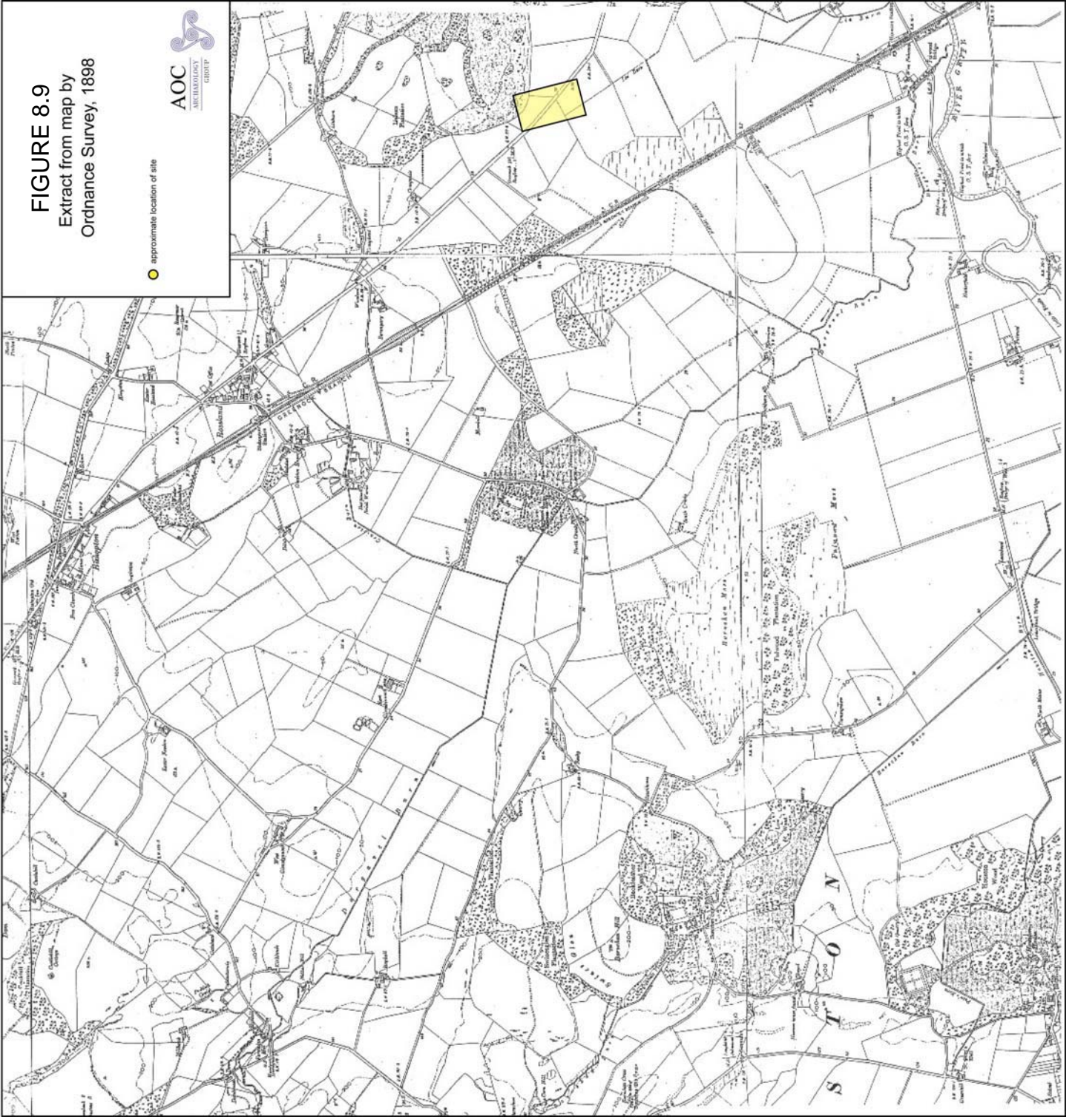


FIGURE 8.9
Extract from map by
Ordnance Survey, 1898

● approximate location of site



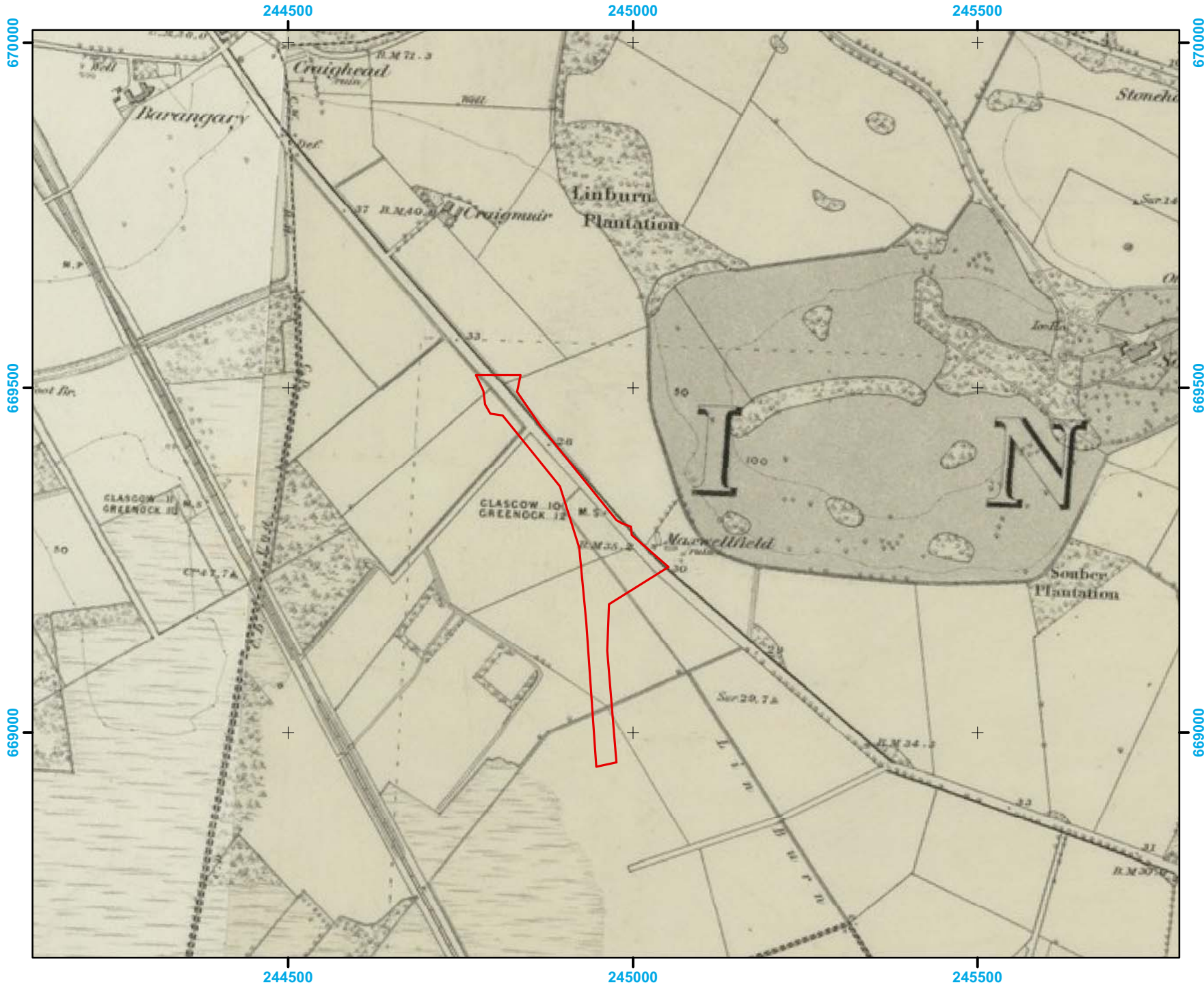




Figure 8.10 Detail from 1855 Ordnance Survey showing Site 4 Maxwellfield (Lin Burn)


Legend
 Proposed Development

0 75 150 Meters



Cartographic data derived from OS OpenData, Crown Copyright

Project No.:	22695
Date:	13.03.2014
Scale at A4:	1:7,500



(c) AOC Archaeology 2014