

# Kippendavie Estate Woodland Creation Scheme, *Dunblane, Perthshire*

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*Archaeological Survey and Assessment*

for  
UPM Tilhill Ltd.

*January 2015*



*Site view looking south (photo 004)*



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# Kippendavie Estate Woodland Creation Scheme

## *Dunblane, Perthshire*

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Archaeological Survey and Assessment: October 2014

Data Structure Report

AA 2102

by Andrew Morrison

Contributions from Ross Cameron

Edited by Tom Addyman

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# **Kippendavie Estate Woodland Creation Scheme**

## ***Dunblane, Perthshire***

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### **Archaeological Survey and Assessment: October 2014**

#### ***Executive Summary***

Addyman Archaeology was contacted by UPM Tillhill Ltd. in order to undertake an archaeological survey and Desk Based Assessment (DBA) of an area on the Kippendavie Estate to the south of Linns and west of Glentye Cottage, within the Inventory Battlefield of the 1715 Battle of Sheriffmuir. It is proposed to plant the area with forestry.

The DBA and associated research identified six potential sites within the boundaries of the proposed development area, two of which were located during the walkover, where a further four previously unknown sites were also recorded. This brings the overall total to six identified cultural heritage sites within the boundaries of the Kippendavie Woodland Creation Scheme development area. These sites were of varying cultural heritage significance and the vast majority will be impacted by the development to some degree.

It is recommended that the planting avoids all visible, above ground sites recorded during the walkover. All sites identified during the walkover should be marked out on the ground by the archaeological team prior to the site works commencing. A full metal-detecting survey is also recommended prior to planting activities taking place in order to recover any information available pertaining to the 1715 Battle of Sheriffmuir.

A record of the evaluation has been deposited with the Online Access to the Index of Archaeological Investigations (OASIS) website hosted by the Archaeological Data Service (OASIS ID addymanal-187336) and with Discovery and Excavation in Scotland (DES), the annual publication of fieldwork by Archaeology Scotland.

## ***1. Introduction***

### ***i. General***

Addyman Archaeology was contracted by UPM Tilhill Ltd. (contacts Graham Newport and John Gallacher) to undertake a Desk-Based Assessment (DBA) and walkover survey in advance of a proposed woodland creation scheme on the Kippendavie Estate to the east of Dunblane. The results of the DBA and walkover will act as a baseline survey, forming part of a heritage assessment within a wider Environmental Impact Assessment (EIA).

The DBA was undertaken prior to the walkover survey in order to identify any known archaeological sites or other features of cultural heritage interest within, or directly adjacent to, the proposed development area. The development is notable for its position within the boundaries of the Sheriffmuir battlefield. The Battle of Sheriffmuir was fought between the Jacobites and Government forces, and was the main engagement of the 1715 Jacobite Rising. Historical research was undertaken in order to ascertain the importance of the role of the Kippendavie site in the development of the battle. The DBA also included consultation of historic maps and aerial photographs. The DBA was completed by assessing known cultural heritage sites immediately beyond the proposed development boundary, which are detailed in *Table 3* below.

A one day walkover survey of the proposed development area was undertaken on the 13th of August 2014 by Ross Cameron and Andrew Morrison. Weather conditions were excellent; bright and sunny throughout. Vegetation across the site was varied. The site south of the Wharry Burn and west of the Linns farmstead was comprised of improved pasture land and grazing; this was easily traversed, with vegetation sufficiently low to ensure that excellent survey coverage was maintained. In contrast, the vegetation in the land north of the Wharry Burn and east of Linns was very high, with limited ground improvements. Although the entire site was assessed, vegetation in this area made it impossible to say with certainty that no archaeological features were present.

The walkover survey aimed to assess the character, extent and condition of any sites, monuments and landscape features identified by the DBA. The survey also aimed to identify any other features of cultural heritage interest not originally detected by the desk-based study.

All of the findings and conclusions in this report adhere to, and take into account, the UK Forestry Standard as laid out by the Forestry Commission.

This report contains several maps reproduced by permission of the Trustees of the National Library of Scotland (NLS). To view these maps online, see [www.nls.uk](http://www.nls.uk). This report is prepared in accordance with standard Addyman Archaeology procedures and in line with guidelines as established by the Institute for Archaeologists (*IfA*).

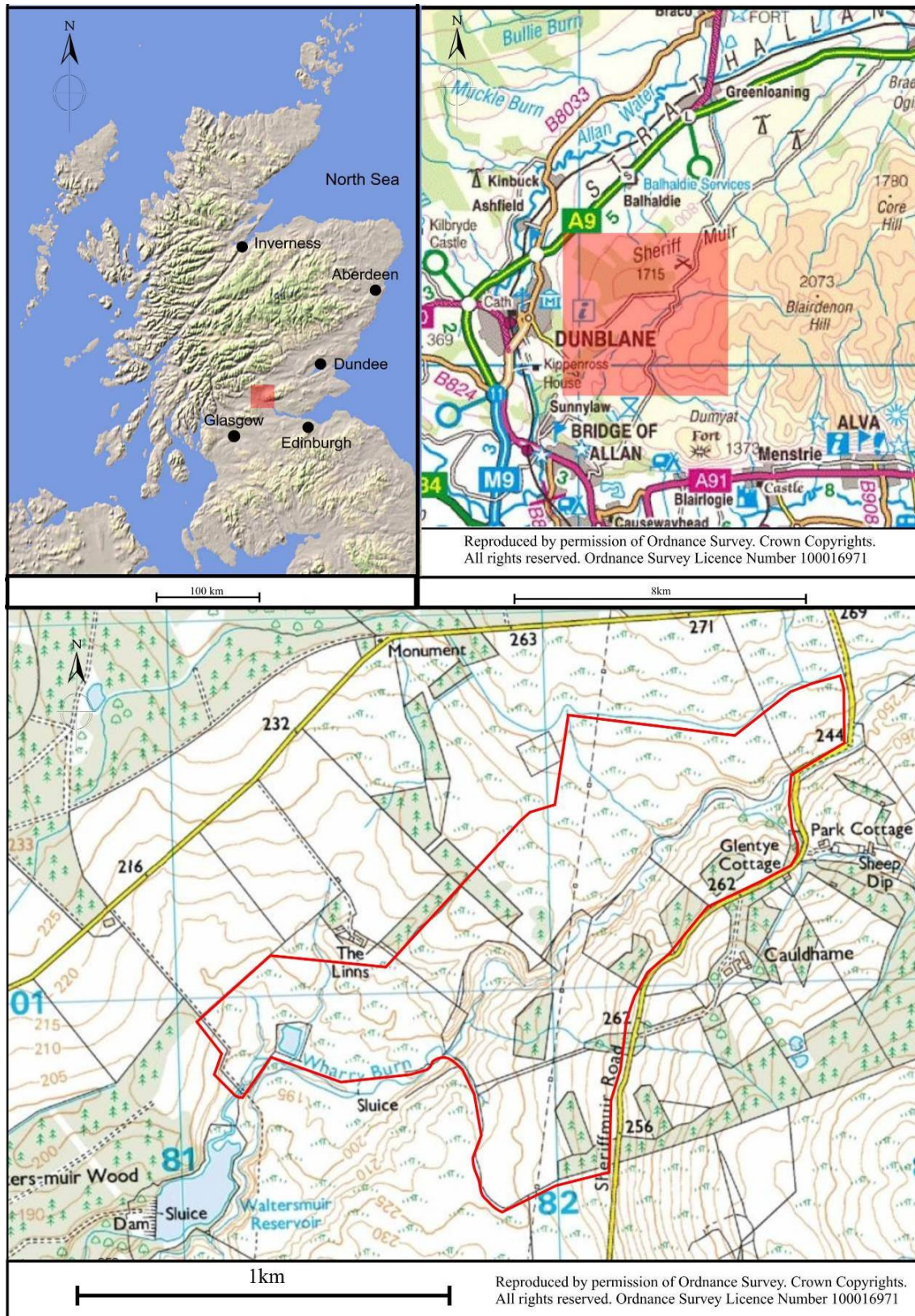


Figure 1 Site location



*ii. Setting*

Roughly centred on NN 82155 01324, the proposed Kippendavie Estate Woodland Creation Scheme lies to the east of Dunblane on an upland area spanning the Sheriff Muir to the north and the foot of the Ochil Hills to the south. The proposed development area is irregular in shape and covers around 71 hectares.

The site is split by the Wharry Burn, a substantial body of water that runs south westwards across the site. The area to the south of the burn is made up of improved farmland and pasture. This is also true to an extent of the western arm of the site to the south of the farmstead at Linns. The northern portion of the site contains deep vegetation and high grasses.



*Plate 1 View westwards across the development area towards Stonehill (photo 003)*

The site today is dotted with a series of small 19<sup>th</sup> and 20<sup>th</sup> century forestry plantations, specifically south of the Wharry Burn. A forestry plantation to the north of the burn has recently been felled. An existing line of electricity pylons runs in a north-south direction across the centre of the site. These are in the process of being replaced by a much larger and more powerful set of pylons, known as the Beauly to Denny pylon line. Some of these pylons have already been constructed, with access tracks and a site compound already in place.

The underlying geology across the site is very mixed. To the north of the Wharry Burn the bedrock geology is predominantly Sheriffmuir Sandstone— sedimentary bedrock formed approximately 398 to 416 million years ago in the Devonian Period and is characteristic of a local environment previously dominated by rivers. South of the Wharry Burn the site is crossed by three bands of the Ochil Volcanic Formation, two of Conglomerate and one of Olivine-basalt. These bands are an igneous bedrock formed approximately 398 to 416 million years ago (the Devonian Period) in a local environment previously dominated by eruptions of silica-poor magma.

The overlying superficial geology is predominantly Devensian – Diamicton till. These deposits were formed up to 2 million years ago in the Quaternary Period in an environment previously dominated by ice age conditions. In this environment, glaciers scoured the landscape depositing moraines, with seasonal meltwaters leaving sand and gravel outwash.

Alluvium deposits of clay, silt, sand and gravel can be found along the Wharry Burn dating from 2 million years ago in the Quaternary Period. These deposits sit alongside older undifferentiated River Terrace Deposits of gravel, sand, silt and clay, which are up to 3 million years old; there are also isolated patches of Glaciofluvial Sheet Deposits - gravel, sand and silt. These superficial deposits formed up to 3 million years ago in the Quaternary Period in a local environment previously dominated by ice age conditions.<sup>1</sup>

### iii. *United Kingdom Forestry Standard*<sup>2</sup>

The United Kingdom Forestry Standard (UKFS) defines a series of established standards and guidelines to ensure that forests and woodlands in the United Kingdom are properly and sustainably planned and managed. Written and developed by the Forestry Commission in Great Britain and the Forest Service within Northern Ireland, the UKFS cover the Historic Environment by providing a series of requirements or standards which must be met when planning or maintaining woodland. These are complimented by a set of guidelines which set out how the requirements can be met and point to sources of practical guidance.

The UKFS identifies the following requirements and legislation which must legally be covered and adhered to by any forestry or woodland scheme:

<b><i>UKFS Reference</i></b>	<b><i>Level of Requirement</i></b>	<b><i>Relevant Legislation</i></b>	<b><i>Standard</i></b>
1	Legal Requirement	The Ancient Monuments and Archaeological Areas Act 1979	Scheduled Monuments must not be damaged and consent must be obtained from the relevant historic environment authority for any works that have the potential to damage the monument
2	Legal Requirement	Treasure Trove system. All treasure trove - which comprises any portable antiquity and not just those incorporating precious metals - are the property of the Crown at Scots common law.	The historic environment authority must be informed if objects are found that come within the scope of the law covering archaeological finds. Metal detectors must not be used where legally restricted or on a Scheduled Monument site.

<sup>1</sup> <http://mapapps.bgs.ac.uk/geologyofbritain/home.html> - 11/08/14

<sup>2</sup> The Forestry Commission 2011, *The UK Forestry Standard: The Government's approach to sustainable forestry*

<b><i>UKFS Reference</i></b>	<b><i>Level of Requirement</i></b>	<b><i>Relevant Legislation</i></b>	<b><i>Standard</i></b>
3	Legal Requirement	Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997	Listed building consent must be obtained from the local authority or relevant historic environment authority to demolish a listed building or structure or any part of it, or to alter it in any way which would affect its character, inside or out.

*Table 1 UKFS requirements covered by legislation*

In addition to those legal requirements covered by legislation outlined in *Table 1*, the UKFS also provides a list of required standards as justified by 'good forestry practice'. These are outlined in *Table 2* as follows:

<b><i>UKFS Reference</i></b>	<b><i>Level of Requirement</i></b>	<b><i>Standard</i></b>
1	Good forestry practice requirement	Forest should be designed and managed to take account of the historical character and cultural values of the landscape.
2	Good forestry practice requirement	Forests should be designed and managed to take account of policies associated with historic landscapes, battlefield sites, historic parks and gardens, and designed landscapes of historic interest.
3	Good forestry practice requirement	Steps should be taken to ensure that historic features, which may be adversely affected by forestry, are known and evaluated on an individual site basis, taking advice from the local historic environment services

*Table 2 Relevant UKFS requirements as required by good forestry practice*

This archaeological survey and assessment incorporates and factors in all the relevant UKFS guidelines.

## **2. Desk-Based Assessment**

### **i. General**

An analysis of readily available sources was undertaken to identify sites of cultural heritage significance. These included:

- The Stirling Council Sites and Monuments Record (SMR)
- The National Monuments Record of Scotland (NMRS)
- Historic Scotland Database of Listed Buildings
- Historic Scotland database of Scheduled Monuments
- The Inventory of Gardens and Designed Landscapes in Scotland
- The Inventory of Historic Battlefields in Scotland
- Aerial imagery as held by the National Collection of Aerial Photography (NCAP) and online platforms
- Map resources available from the NLS including all available Ordnance Survey (OS) maps
- [www.parksandgardens.org](http://www.parksandgardens.org) – this website is the largest online repository for facts and information relating to historic parks and gardens
- [www.aircrashsites-scotland.co.uk](http://www.aircrashsites-scotland.co.uk) – this website is working towards providing comprehensive coverage of air-crash sites in Scotland
- Archaeological assessments completed for other projects in the vicinity and elsewhere across the Sheriffmuir Battlefield
- Archive material as held by the Kippendavie Estate

All sources consulted were the most up to date available.

The following Desk Based Assessment extensively covers all the known cultural heritage sites within the boundaries of, and thus directly affected by, the proposed woodland development. Due to the extensive nature of the site it is possible that the proposed woodland creation scheme may have an indirect impact on the setting of other monuments in the immediate vicinity of the site boundaries.

### **ii. Statutory Designations**

The following section outlines how the assessment meets the legal requirements and standards as outlined by the UKFS.

#### **a. Scheduled Monuments**

A Scheduled Monument is a monument that has been categorised as of national importance and is legally protected under the Ancient Monuments and Archaeological Areas Act 1979.

There are no Scheduled Monuments recorded within the boundaries of the proposed Kippendavie Estate Woodland Creation Scheme. However, a short distance to the north east of the site, the Lairhill Standing Stone Alignment is protected as a Scheduled Monument. A series of five stones running south west to north east, this feature will not be directly impacted by the development, though there may be indirect impacts upon the setting of the monument.

*b. Listed Buildings*

Listing is the recognition through the Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997 that a building or structure is of 'special' interest whether architecturally or historically.

There are no Listed Buildings within the boundaries of the proposed development.

The Category B Listed, The MacRae Memorial (Ref: 3926) lies a short distance to the north of the site boundary. Category B Listed Buildings are those considered by Historic Scotland to be of regional importance. Also to the north of the site, and to the east of the MacRae memorial, The Sheriffmuir Inn is considered of local importance and is protected as a Category C Listed Building (Ref: 3925).

Neither the MacRae Memorial nor the Sheriffmuir Inn will be directly impacted by the development, although it is possible their setting may be adversely affected.

*c. Designed Gardens and landscapes*

The Historic Scotland Inventory of Gardens and Designed Landscapes lists a series of sites that have been considered as of national importance in accordance with the criteria outlined in the Scottish Historic Environment Policy 2011.

There are no Gardens or Designed Landscapes recorded by Historic Scotland either within, or directly adjacent to the proposed site area.

*d. Inventory of Battlefields*

The Inventory of Battlefields held by Historic Scotland is a list of nationally important historic battle sites that have been selected as meeting the criteria as outlined in the Scottish Historic Environment Policy 2011. Battles selected are considered of national importance in contributing to the understanding and history of the nation as a whole. Inclusion in the Inventory means the importance of a site will be highlighted and that planning authorities will consider any potential impacts upon them.

The proposed planting area lies within the boundaries of the Battle of Sherrifmuir as protected by Historic Scotland in the Battlefield Inventory.

*e. Treasure Trove*

Any artefacts or objects recovered either during mitigation work associated with the development, or during the groundworks associated with the planting, will be reported to the Queen's and Lord Treasurer's Remembrancer through the Treasure Trove process.



iii. *The History of the development area*

a. *General*

Following initial consultation, Forestry Commission Scotland requested that an Environmental Impact Assessment be undertaken for the proposed Kippendavie Woodland Creation Scheme. This was partly as a result of the location of the site within the limits of the Battle of Sheriffmuir as defined by Historic Scotland in the Battlefields Inventory. Subsequently, the history and location of the Battle of Sheriffmuir will form much of the historical analysis of the site, but it is important that this is not to the detriment of other possible historical or archaeological features. An EIA must provide comprehensive coverage of both the known and unknown history and archaeology of a development site.

b. *Prehistoric*

There are currently no known sites within the boundaries of the proposed development area that are protected by statutory legislation, or that are recorded in the National Monuments Record Scotland (NMRS) or the Historic Environment Record (HER) of Stirlingshire Council.



*Plate 2 View of the Gathering Stone in its present state (Photo 037)*

The site does, however, lie within an area relatively rich in prehistoric activity with many nearby sites and find-spots dotting the landscape. The gathering stone (Canmore ID: 25277), to the north and west of the proposed development area, is known for its association with the Battle of Sheriffmuir as a possible location for the placement of Jacobite colours. It is also important to note that the stone is thought to be a toppled standing stone, with origins likely stretching back to the Bronze Age (c.2200BC-800BC), or as early as the Neolithic (2500-3800BC) (*Plate 2*).



*Plate 3 View of the Cupmarked Stone in the Lairhill Alignment, looking towards the northeast (Photo 058)*

The Lairhill Stone Alignment (Canmore ID 25274) is located along the southeast-facing slope of the Sheriff Muir, immediately to the northeast of the proposed development area. Orientated roughly northwest / southeast, this alignment of five stones faces towards the Ochil Hills and overlooks the Wharry burn below. The Lairhill alignment (Scheduled Monument 4539) ranges from National Grid Reference NN 8307 0214 to NN 8330 0232, and incorporates a now prostrate cup-marked stone with over twenty cup-marks (*Plate 3*), and what is known as Wallace's stone- the only stone in the alignment still standing upright.

The ascribed folk-history of Wallace's Stone describes it as marking the site of a battle between William Wallace and the English, with the stone being placed in its location by Wallace himself to commemorate the event<sup>3</sup>. The Lairhill alignment clearly pre-dates the 13<sup>th</sup> century, though the possibility does exist that a battle (not necessarily between Wallace and the English) could have taken place in the vicinity around that time.

It is most likely that the placement of the Lairhill stone alignment dates from the Neolithic or Bronze Age (c. 3800-800BC), and it is thought that it could possibly mark an astronomical alignment. The stones set out an area likely to be of religious importance for the prehistoric peoples of the area; they are set into the hillside overlooking the confluence of the Glen Tye and Wharry Burns (a landscape setting of known significance), and are likely to include burials placed nearby.

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<sup>3</sup> <http://canmore.rcahms.gov.uk/en/site/25274/details/wallace+s+stone/&biblio=more#books>

Local folk history also describes the presence of a stone circle in the vicinity of NGR NN 83 02, though no evidence of extant remains have yet been uncovered. The Sheriff Muir stone circle (Canmore ID 25276) was last mentioned in the late 18<sup>th</sup> century<sup>4</sup>, while recent site visits and enquiries have not been able to quantify the claims of its existence. It is possible that the Sheriff Muir stone circle is simply a misinterpretation of the Lairhill stone alignment mentioned above, or it could be that the stones remain buried, or have been moved or destroyed.

The Stirling Museum holds in its collections a carved stone ball (Canmore ID 25279), which is said to have been found on Sheriffmuir although the exact location in which it was found remains unknown<sup>5</sup>. Carved stone balls pertain to the Late Neolithic period (3100-2600BC), and are one of the most enigmatic of artefact types. In total, 400 carved stone balls are known to exist, with 90% of these originating in the northeast of Scotland. Their purpose and function remains unknown, though it is speculated that they may represent symbols of power<sup>6</sup>, with their shape and decoration resulting from an elaboration of a form of weaponry in use at that time.

In addition to the prehistoric sites mentioned above, numerous other standing stones and burial cairns can be found in the immediate vicinity of the proposed development area. To the south of the site, along Sheriffmuir Road at Pendreich, three burial cairns and a standing stone lie along the hillside (Canmore ID 47119, 47124, 47134). Like the sites above, these monuments likely date to the Neolithic or Bronze Age, and together serve to strengthen the fact that the landscape in which the Kippendavie Woodland Creation Scheme is set was clearly one of great importance for the prehistoric peoples of the area.

*c. Medieval*

There are currently no known sites within the boundaries of the proposed development area that are protected by statutory legislation, or that are recorded in the National Monuments Record Scotland (NMRS) or the Historic Environment Record (HER) of Stirlingshire Council.

Outwith the site boundaries, there are a number of sites whose foundations may be traced to the Medieval period. The courses of roads, drove roads, and trackways, the settings of fieldwalls and boundaries, and the foundation of some of the local farmsteads could potentially be of Medieval origin.

The remains of structures, huts, enclosures, trackways, and field systems of the Ashentrool Farmsteads (Canmore ID: 144980, 145097, 145098, 145099) located along the western and south-western slope of Ashentrool (adjacent to the southern-most extent of the development area across Sheriffmuir Road) are shown as ruinous in the first edition OS map of 1843, and could possibly have roots in the Medieval period. Likewise, the field systems and mining operations at Waltersmuir, between the Waltersmuir Reservoir and Sheriffmuir Road (Canmore ID 300762), and the ruined Sheiling Huts known as the Balloch (Canmore ID 144981) at Brown Hill may also date to the Medieval period.

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<sup>4</sup> <http://canmore.rcahms.gov.uk/en/site/25276/details/sheriff+muir/>

<sup>5</sup> <http://canmore.rcahms.gov.uk/en/site/25279/details/sheriffmuir/>

<sup>6</sup> <http://www.scottishheritagehub.com/content/524-%E2%80%99special%E2%80%99-stone-artefacts-eg-carved-stone-balls-and-maceheads>

*d. Post-medieval*

There are currently no known sites within the boundaries of the proposed development area that are protected by statutory legislation, or that are recorded in the National Monuments Record Scotland (NMRS) or the Historic Environment Record (HER) of Stirlingshire Council, apart from the Battle of Sheriffmuir, which will be discussed below in *section e*.

There are a great number of sites in the lands adjacent to the proposed development area dating to the post-Medieval period, specifically to the 18<sup>th</sup> and 19<sup>th</sup> centuries and to the land-use relating to the Kippendavie Estate.

Bordering the site boundary to the west, and with associated lands situated within the proposed development area, is the farmstead known as The Linns (NGR NN 81403 01140). Still inhabited today, this farmstead appears on 18<sup>th</sup> and 19<sup>th</sup> century maps, and is also mentioned in historical accounts of the 1715 Battle of Sheriffmuir.

The farmstead of Pendreichmill (Canmore ID 111994), lies directly across the Wharry Burn from the Linns, and is centred on NGR NN 8149 0068. The site is no longer extant, and as the name suggests, is thought to have been a mill. It is possible that lands historically associated with Pendreichmill may lie within the site boundaries of the proposed development area.

Numerous houses dot the landscape around the site boundary, and include: the country house of Cauldhame (Canmore ID 226668)- southeast of the site across the Sheriffmuir Road, Sheriffmuir House (Canmore ID 233689), and the category C listed Sheriffmuir Inn (Canmore ID 25268, ref. 3925)- dating to around the mid 19<sup>th</sup> century in its present form<sup>7</sup>.

As Dunblane grew to the west of the site, the lands surrounding the proposed development area saw an increase in industrial as well as agricultural activity. The Kippendavie Lade (Canmore ID 25272), which forms the north-eastern site boundary, diverts water from the Wharry Burn towards a number of small mills to the west. Also in the same area as the head of the lade, are the Sheriff Muir Lime Kilns (Canmore ID 25273) which were integral in the production of lime for use locally in mainly agricultural applications.

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<sup>7</sup> <http://data.historic-scotland.gov.uk/pls/htmldb/f?p=2200:15:0::::BUILDING:3925>

*e. The Battle of Sheriffmuir*

*Historical Summary, by Ross Cameron*

On November 13<sup>th</sup>, 1715 a bleak upland moor east of Dunblane played host to what would be the decisive battle of the 1715 Jacobite Rising. The Battle of Sheriffmuir was the only major action in Scotland during the conflict and occurred against a background of dynastic struggle between the deposed House of Stuart and the newly crowned Hanoverian King George I.

The Catholic James VII and II had been deposed as King of Scotland, England and Ireland in 1688 although his bloodline initially continued in the person of his daughters Mary, and subsequently Anne. When Queen Anne died childless in 1714, her half brother James Francis Edward Stuart, known as 'The Old Pretender', was overlooked for the throne due to his Catholicism, despite being her nearest living relative. Instead, the closest living relative of the Protestant faith, The Elector of Hanover, was crowned King, as George I, in 1714. The supporters of 'The Old Pretender' seized upon the uncertainty caused by the accession of the House of Hanover and launched a campaign to regain the throne.

The Jacobite cause was championed in Scotland by the Earl of Mar who raised the Jacobite standard at Braemar in September and marched south at the head of a predominantly Highland host. Mar's army met the Government forces on high ground east of Dunblane; he had numerical superiority, but the Battle of Sheriffmuir did not result in the decisive victory either side had sought. Neither of the opposing armies met on ground they were fully familiar with, nor were they prepared for the terrain.

In the ensuing action, the Jacobite Right under Mar, routed the Government Left and set off in pursuit. This left the Jacobite Left wing exposed to the advance of Government dragoons, and subsequently they too were routed and chased from the field. Neither the victorious Jacobite Right wing, nor the Government Left was aware of the fate that had befallen the rest of their army and the site of the initial engagement was essentially abandoned. Upon breaking off their pursuit, the victorious Rights of both armies returned to Sheriffmuir only then to discover what had befallen their comrades. With evening drawing on, neither side re-engaged in hostilities.

Whilst the Battle of Sheriffmuir showed no clear outcome, it was perceived as a strategic defeat for the Jacobites. They had failed to overcome a numerically inferior Government force and lost impetus on their march south. The Battle of Sheriffmuir, taken together with the Jacobite defeat at Preston the following day, sounded the death knell for the rising; even the arrival in Scotland of 'the Old Pretender' the following month was unable to arrest the decline.

*Significance of the Battle of Sheriffmuir*

By including the Battle of Sheriffmuir in the Battlefield Inventory, Historic Scotland has identified the battle as being of national significance. The Battle is important for a number of reasons, but it is specifically notable for seeing one of the largest Jacobite armies to take the field. The only other occasion when so many fought was at the Battle of Falkirk in January 1746.

Evaluations of the number of combatants vary, but the Battlefield Inventory documentation by Historic Scotland estimates that 7,000 Jacobites faced over 3,000 Government soldiers. The number of casualties is also open to much debate, although the same document puts a conservative estimate at 300-400 killed on either side.<sup>8</sup>

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<sup>8</sup> [http://data.historic-scotland.gov.uk/data/docs/battlefields/sheriffmuir\\_full.pdf](http://data.historic-scotland.gov.uk/data/docs/battlefields/sheriffmuir_full.pdf), P.3



### *The nature of the Battle of Sheriffmuir*

As touched upon in the brief synopsis above, the Battle of Sheriffmuir was not a traditional set-piece battle in the manner many would envisage. The engagement did not take place on ground of either side's choosing and as such could be viewed as an 'encounter action'. Both the Jacobites and the Government forces appear to have misunderstood the other's intentions and seem to have become involved in a race for the high ground. The Jacobites reached this first and the battle appears to have developed organically from that point.

Very quickly the battle of Sheriffmuir developed into a series of running battles with the Jacobite Right pursuing the Government Left from the field while the Dragoons on the Government Right routed the Jacobite Left wing. The resulting fighting retreats, routs and pursuits were far and wide-ranging with the Jacobite troops being pursued as far north as the Allan Water and their comrades in turn pursuing the remnants of the Government southwards, where refugees made it as far as Stirling.

Thus the archaeological evidence of the battle in the form of physical remains from the initial engagement, and from the individual battles associated with the retreat, will be widely dispersed across a large area. The nature of such a battle makes it very difficult to ascertain where the limits of such an engagement are to be found.

As an encounter action, the Battle of Sheriffmuir will provide no archaeological evidence in the form of breastworks, earthworks or fortifications to pinpoint the location of the initial confrontation. We have to rely on the results of metal detector surveys and an assessment of the documentary resource in conjunction with a landscape assessment.

### *Previous Archaeological Work on the battlefield*

Historic Scotland summarises the archaeological findings in relation to the battlefield as follows:

*19th century accounts mention a variety of finds from the moor, including pistols and swords but no artefacts are extant and their provenance is unproven. Local traditions say that bodies were encountered by soldiers digging latrine pits during World War II on the banks of the Wharry Burn to the south of the farm at The Linns.<sup>9</sup>*

There is no official record of any bodies or artefacts associated with the Battle of Sheriffmuir being found within the development area. While such local tradition cannot be discounted as false, this statement must be considered with a great deal of caution. From this local tradition it is not possible to define the exact location of the discovery, however it is generally accepted that there are remains to be found, and that the remains were those of soldiers who died in the battle and were buried along the sandy banks of the Wharry Burn. Neither the NMRS or Stirling Council's SMR make any mention of this discovery.

*The 'Gathering Stone' is a prehistoric standing stone located within Sheriffmuir Big Wood. It is said to have marked the spot where the Jacobite army raised its standard prior to commencement of the battle. Following the recent archaeological survey the stone's location may indeed coincide with the approximate position of the Jacobite right. Surrounding the stone are linear trenches and circular depressions which are likely to relate to the military training exercises which took place on Sheriffmuir during WWI and WWII. The linear features have been visually identified from their typical characteristics by archaeologists as practice trenches*

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<sup>9</sup> <http://data.historic-scotland.gov.uk/pls/htmldb/f?p=2500:15:0::::BATTLEFIELD:sheriffmuir>

*with possible collapsed dugouts attached and the deep, circular depressions as probable shell holes.*

*The location of the initial encounter is largely obscured by coniferous tree plantations, which in some cases date back to the 19th century. It is uncertain what impact this forestry will have had on buried archaeological remains; other battlefields in Scotland similarly covered with forestry have yielded very few artefacts from modern archaeological survey*

*The battlefield was subject to a limited archaeological survey in 2006, during which a number of battle related artefacts, including musket balls, horseshoes and other debris, were recovered from the fields around The Linns and to the west of the MacRae monument, while more finds were made in the paddocks to the west of the Sheriffmuir Inn.<sup>10</sup>*

The limited archaeological survey, undertaken in April/May 2006 by Glasgow University Archaeological Research Division (GUARD), was designed to pinpoint the exact location of the battle by employing the evidence generated by new metal-detector survey work.<sup>11</sup> Prior to the archaeological work commencing on site, a detailed and thorough analysis was undertaken of the contemporary eye-witness accounts of the battle and the cartographic resource which showed the site as it would have appeared in the 18<sup>th</sup> century. It was concluded that the initial meeting of the armies had taken place immediately east of the Macrae Monument and southeast of the 'Gathering Stone' (centred on NN 8190 0200).

This conclusion was then tested by the implementation of a metal detector survey which returned a number of artefacts related to the Battle. Whilst ambiguity remains about the orientation of the armies, the study clearly indicated that the area east of the Macrae monument was the location of the initial hostilities. The survey also identifies the area around The Linns and southward towards the Wharry Burn as being a main avenue of retreat for Government forces, and an area which also saw individual battles separate from the initial conflict.

#### *Archaeological significance of the development area to the battlefield*

From an assessment of the Battle of Sheriffmuir it seems unlikely that on November 13<sup>th</sup> 1715, any action of any significance was undertaken to the west of the 'Gathering Stone' (NN 8109 0218). A surviving early map indicates the dispositions of both the Government and Jacobite forces on the eve of the battle. This confirms the Jacobite army to have been bivouacked to the north of Sheriffmuir, on the low-lying ground adjacent to the Allan Water. The Government forces under the Duke of Argyle, however, were located within Dunblane itself and marched eastwards to the battle site in order to counter what was perceived to be a Jacobite flanking movement.

The movements prior to battle and the events of the initial confrontation are unlikely to have taken place within the site boundaries. Given the running nature of the battle, with skirmishes and fighting retreats taking place over a wide area, it is highly likely that physical archaeological remains relating to the battle could be found throughout the proposed development area.

As mentioned above, the 2006 metal detecting survey identified the fields around the Linns to be of particular significance in the battle as it represents an area where fighting is known to have taken place, and as an area of retreat for the Government forces. Here, the Government's route south towards the Bridge of Allan would likely have brought them past the Linns and along the Wharry Burn heading in southwest direction. It is accepted that the sandy soil along the banks of the Wharry

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<sup>10</sup> *Ibid.*

<sup>11</sup> *Sheriffmuir Battlefield : Data Structure Report : Project 2214, GUARD 2006.*

Burn may contain numerous war graves relating to the battle, as those fallen on the field were accorded their proper burial; this relates to the verbal history of the site with the account of WWII soldiers coming across human remains in the area whilst digging latrine pits. With the Wharry Burn likely playing a significant role in the battle, the banks and lands to the south of the burn may also contain evidence of battle and subsequent retreat.

### *Landscape*

As discussed above, the Battle of Sheriffmuir was fought over an upland moor with areas of bog only made passable by the extreme cold weather. In this regard, the field where so many men lost their lives may be likened to Culloden, the battle which ended the 1745 Jacobite Rising 30 years later. Culloden is today a major tourist attraction and much of the battlefield survives in a form akin to how it was in 1745, a form that can be appreciated in its wide extent by the thousands who visit every year.

Although Sheriffmuir can be interpreted as a comparably decisive battle, it is today very difficult to achieve a similar landscape appreciation and view lines of the Sheriffmuir Battlefield as compared with Culloden- primarily due to the modern forestry plantations within its core area. The characteristic open landscape of the battlefield does survive to an extent, in particular to the south of the roads that cross the site, an area which revealed traces of the battle in the metal detecting survey undertaken by GUARD. A terrain arguably more akin to the conditions as encountered in 1715 survives to the east of the forestry plantation, in the area marked on Ordnance Survey maps as being the location of the battle, and also to the southeast amongst the outpasture at the northeast extent of the proposed development area. The landscape on which the battle was fought was most likely open, boggy moorland, with the occasional small farmstead dotting the hillside. The maintenance of this landscape is important in facilitating an understanding the conditions and circumstances of how and where the battle was fought.

### *Commemoration*

The battle is commemorated by the Macrae Memorial (Listed Building Ref: 3926), a category B listed building deemed to be of regional importance. Located at NN 81569 01934, the monument was erected in 1915, and commemorates the members of the clan Macrae who fell on the battlefield in 1715. This is one of the main stopping-off points for visitors to the battlefield, and presents them with a view similar to that of 1715, overlooking unimproved outpasture lands and grazing lands southwards, towards the Linns and Wharry Burn beyond (*Plate 4*). Though the main elements of the battle took place to the north and east of the Macrae Monument, modern forestry obscures the battlefield, presenting the area to the south as the best remaining example of how the landscape appeared in the early 18<sup>th</sup> century.





*Plate 4 View southwards from the Macrae Monument (Photos 063, 064)*

<b>Site No.</b>	<b>Name, feature</b>	<b>OS Grid Reference</b>	<b>N</b>	<b>E</b>	<b>Canmore ID / Listed Building Ref.</b>	<b>Designation</b>	<b>Period</b>
<i>Table 3: Cultural heritage sites adjacent to the development area</i>							
n/a	Sheriffmuir Findspot, carved stone ball	NN 83 02	02	83	25279	NMRS	Prehistoric: Neolithic
n/a	Lairhill / Wallace's Stone, stone alignment	NN 8324 0226	0226	8324	25274 / 4539	Scheduled Monument NMRS, HER	Prehistoric: Neolithic/Bronze Age
n/a	Sheriff Muir, stone circle (possible)	NN 83 02	02	83	25276	NMRS, HER	Prehistoric: Neolithic/Bronze Age
n/a	Gathering Stone, standing stone	NN 8109 0218	0218	8109	25277	NMRS, HER	Prehistoric: Neolithic/Bronze Age
n/a	Sheriffmuir Road Pendreich, cairn	NS 8123 9939	9939	8123	47119 / 2537	Scheduled Monument NMRS, HER	Prehistoric: Neolithic/Bronze Age
n/a	Sheriffmuir Road Pendreich, standing stone	NS 8137 9967	9967	8137	47124 / 2545	Scheduled Monument NMRS, HER	Prehistoric: Neolithic/Bronze Age
n/a	Sheriffmuir Road Pendreich, cairns	NS 8125 9922	9922	8125	47134 / 2522	Scheduled Monument NMRS, HER	Prehistoric: Neolithic/Bronze Age
n/a	Ashentrool, farmsteads	NN 8218 0009 NS 8230 9983 NS 8217 9972 NS 8221 9954	0009 9983 9972 9954	8218 8230 8217 8221	144980 145097 145098 145099	NMRS, HER	?Medieval / Post-Medieval
n/a	The Balloch, sheiling huts	NN 8309 0074	0074	8309	144981	NMRS, HER	?Medieval / Post-Medieval
n/a	Waltersmuir, field system / mine	NN 8136 0023	0023	8136	300762	NMRS	?Medieval / Post-Medieval
n/a	Pendreichmill, farmstead	NN 8149 0068	0068	8149	111994	NMRS, HER	Post-Medieval
n/a	Cauldhame, country house	NN 82468 01033	01033	82468	226668	NMRS	Post-Medieval

<b>Site No.</b>	<b>Name, feature</b>	<b>OS Grid Reference</b>	<b>N</b>	<b>E</b>	<b>Canmore ID / Listed Building Ref.</b>	<b>Designation</b>	<b>Period</b>
<i>n/a</i>	Sheriffmuir House	NN 8254 0209	0209	8254	233689	NMRS	Post-Medieval
<i>n/a</i>	Kippendavie Lade	NN 8345 0214	0214	8345	25272	NMRS, HER	Post-Medieval
<i>n/a</i>	Sheriff Muir Lime Kilns	NN 8352 0228	0228	8352	25273	NMRS, HER	Post-Medieval
<i>n/a</i>	Battle of Sheriffmuir, battle site	NN 8140 0200	0200	8140	25267	Inventory Battlefield NMRS, HER	Post-Medieval: Jacobite
<i>n/a</i>	Pendreich Farm Findspot, materials related to the Battle of Sheriffmuir	NN 80900 00300	00300	80900	320525	NMRS	Post-Medieval: Jacobite
<i>n/a</i>	Sheriffmuir Inn	NN 82704 02128	02128	82704	25268 / 3925	Category C NMRS	Post-Medieval: 18 <sup>th</sup> /19 <sup>th</sup> century
<i>n/a</i>	Sheriffmuir MacRae Memorial	NN 81569 01934	01934	81569	79661 / 3926	Category B NMRS, HER	Post-Medieval: 20 <sup>th</sup> century

Table 3 Cultural Heritage Sites adjacent to the proposed woodland creation scheme

### 3. Map Regression

#### i. General

A large number of maps were consulted in order to assess the development of the site itself and pinpoint any features that may previously have gone unrecorded. A summary of maps consulted can be viewed in *Appendix A*. Where new sites were located that had not been previously noted in the earlier desk based research, these were assigned a new letter, continuing alphabetically from the last recorded site in the DBA. Where sites were seen to be the same as those already recorded, the original letters were used. A list of all sites recorded can be viewed in the Gazetteer, *Section 6*.

#### ii. Pre-Ordnance Survey maps of the area

Maps produced before the first Ordnance Survey of the area in the mid 19<sup>th</sup> century are by their very nature extremely varied with regards to accuracy, scale and level of detail presented. Maps of this age were produced by diverse groups of individuals who often possessed differing skill-sets and held specific goals that their maps were meant to achieve. The proposed Woodland Creation Scheme at Kippendavie Linns is small in comparison to the scale that many of the consulted maps represent; as a result of this, although all available maps were consulted, many of them do not show the area in sufficient detail to prove particularly useful in this instance.

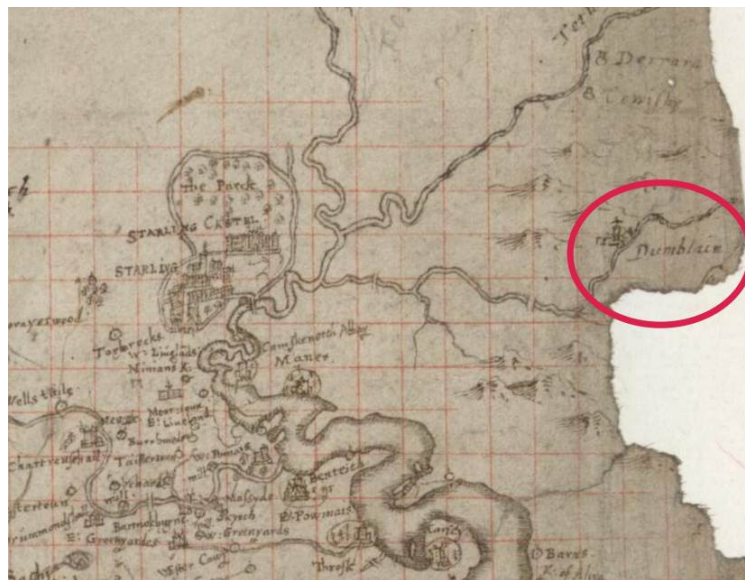


Figure 2 Extract from 'The East Central Lowlands (Stirling, Falkirk and Kilsyth #32)' by Timothy Pont c.1583-96. NLS

The earliest detailed maps of Scotland and the Dunblane area were drawn by Timothy Pont who lived from the 1560s until c.1615. Pont's map: 'The East Central Lowlands (Stirling, Falkirk and Kilsyth)', dateable to around 1596 (Figure 2), is the first to highlight the location of 'Dumblain' (Dunblane) and shows it as being largely surrounded by hills. The problem with this particular map is that it seems to lose its orientation around Stirling; it shows the Forth River flowing from the north where it should be coming from the west, and likewise, Dunblane is shown to the east of Stirling when it should be located to the north. Also, Dunblane is shown as being situated on the western bank of the River Allan, when at the time this map was drafted, Dunblane would have been located largely along the river's eastern bank.

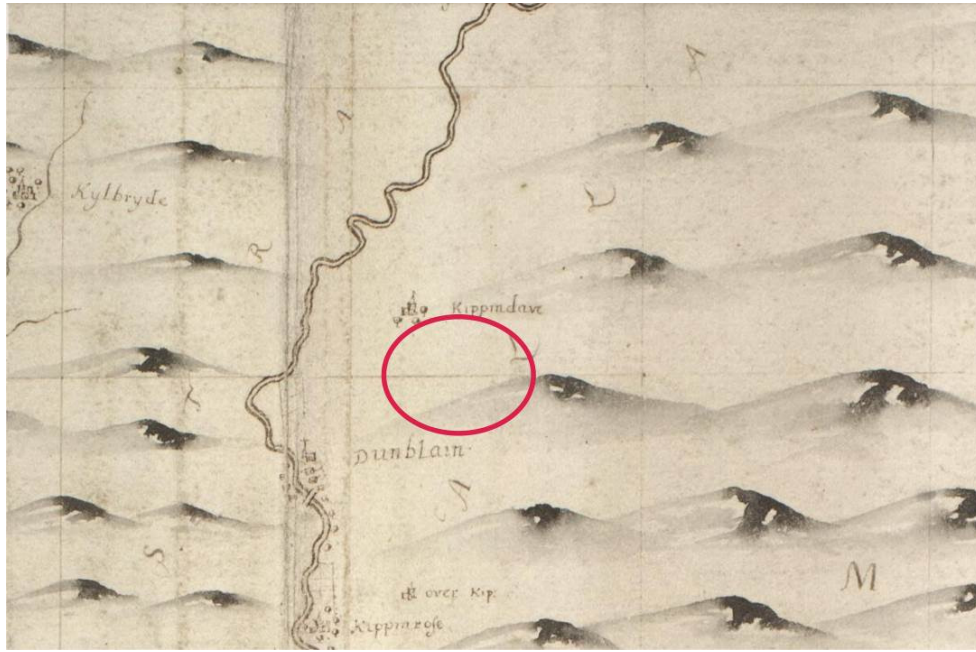


Figure 3 Extract from 'A mape of the countries about Stirling' by John Adair 1682. NLS

'A mape of the countries about Stirling' by John Adair 1682 (Figure 3), improves upon the Pont map in that it places 'Dunblain' (Dunblane) to the north of Stirling rather than to the east. The course of the River Allan is reproduced accurately, and shows the growth of Dunblane over both banks of the river, with a bridge over the Allan to the south of the town. This map is the first to list the houses of 'Kippinrose' (Kippenross) and 'Kippindave' (Kippendavie), and shows them in relatively accurate locations. The proposed development area lies at the foot of the hills illustrated to the east of Strathallan, though the scale of the map is not sufficient to gain any insight into the area's general terrain, occupation, or land-use.

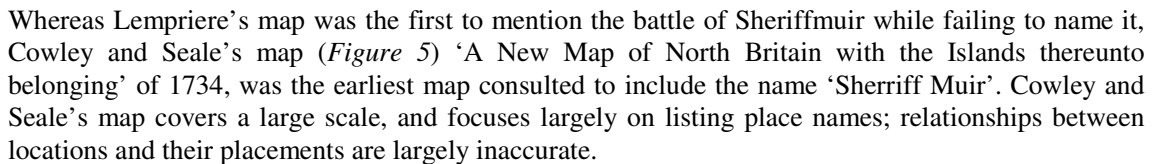
The earliest mention of the Battle of Sheriffmuir in cartographic form comes from a map drafted in 1719 by Thomas Lascelles (not shown). This map provides a description of the battle, its staging, and its outcome, with accompanying illustrations. It shows where the Rebels lodged (N of Kinbuck) on the night of the 12<sup>th</sup> before the battle, and where they formed the next morning (Muir of Kinbuck at Whitestone) on-march towards Dunblane. Unfortunately, only the part of the map which shows the events the night before the battle and its staging survives; the portion showing the confrontation and the battlefield sadly has been lost.

The earliest surviving map consulted that mentions the Battle of Sheriffmuir comes from a Military map drafted by Clement Lempriere in 1731, a full 16 years after the battle was fought. Lempriere's map (Figure 4, below) entitled: 'A Description of the Highlands of Scotland the situation of the several Clans and the number of men able to bear arms as also the forts lately erected and roads of communication or Military Ways carried on by his Majesty's Command with the seats of ye most Considerable Nobility in the Low Country', does not set out to reproduce the landscape and settlements therein with exacting detail; its purpose is to outline and illustrate the current state of the military as it was at that time.





Lempriere's map (*Figure 4*) places the battle of Sheriffmuir within its appropriate landscape, though it does appear unnamed. Crossed swords mark the battle's approximate location and it is described as such: 'In 1715 The Duke of Argyll defeated the Rebels under the E. of Marr.'. No precise location is given for the battle, though it is correctly positioned in the Moorlands west of the hills, east of Dunblane and of the supply roads leading from Stirling to Crieff, and to the Roman Camp at Ardoch.



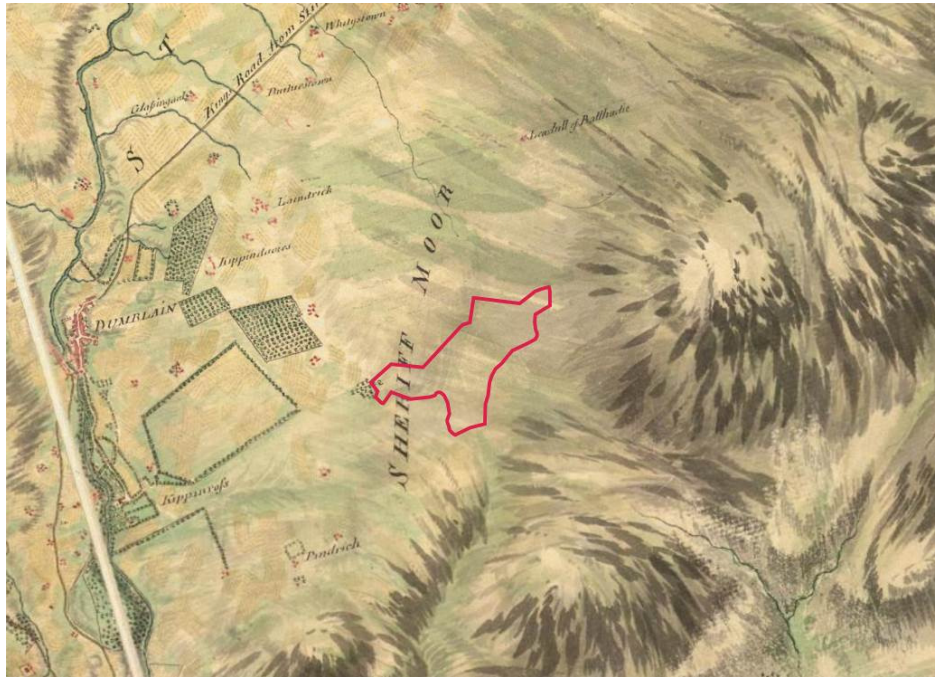


Figure 6 Extract from 'Military Survey of Scotland. Lowland Scotland' by William Roy 1747-55 with approximate site boundaries depicted in red. © The British Library Board. All Rights Reserved (Roy Military Survey of Scotland)

William Roy's 'Military Survey of Scotland' conducted between 1747 and 1755 (Figure 6) revolutionised map making in Scotland, providing a superior level of terrain detail than had been previously seen. Roy's map was the result of 'rapid reconnaissance rather than a measured topographic survey'<sup>12</sup>; the various inaccuracies the map contains can be forgiven, as it provides us with the first cartographic view of Scotland with any real level of detail, giving us a snapshot of mid 18<sup>th</sup> century Scotland.

Roy's map of the area east of Dunblane is interesting in that it does not show the location of The Battle of Sheriffmuir, fought just over thirty years earlier. What it does show, however, in the general development area are a small number of farmsteads and planned tree plantations. The Sheriff Moor, where the proposed site is located, appears largely uninhabited and unimproved, with no evidence of cultivation or indication of land-use. There is a greater level of detail to the west of the development area; it is possible that Roy's survey focused largely on the environs closest to the River Allan, with the moorlands not being thoroughly documented. Absence of information in Roy's map does not necessarily suggest that the area was unoccupied at this time.

An estate map called 'A Plan of Sheriffmuir: Conform to the proof for a Division of the Common Grounds thereof' produced in 1766 (not reproduced here) provides excellent levels of detail. This map shows the Battle location as being to the north of the MacRae monument and slightly south of the Gathering Stone, an area covered today by the Sheriffmuir Big Wood. A lade labelled 'Mullins new water lead to Kippendavies mills' is recorded running close to the proposed site boundary. The map also shows a series of tracks and routeways crossing the area, but none of these seem to be within or directly adjacent to the site.

<sup>12</sup> Fleet C., Wilkes M. & Withers, C. 2011 *Scotland – Mapping the Nation*, 88



‘The Counties of Perth and Clackmannan’ by James Stobie was imprinted in 1783 and is the first map to show named dwellings and settlements on the land to the east of Dunblane and bordering the ‘Sherif Moor’ (Figure 7). Although the view of the site is complicated by the fact it straddles the boundary between two map sheets, sites named ‘Linns’ and ‘Park’ are shown. These correspond with the modern farm of Linns and Park Cottage respectively, both of which border the proposed development area. The Sherrifmuir Road is also shown, on the same route as the modern roads runs today. The map also includes the course of the Wharry Burn, making it possible to correctly locate the site boundaries. The battle of ‘Sheriff Moor’ is depicted with crossed swords and the year 1715, as being located to the north of the site and to the northeast of the Shank farmstead. Stobie’s map of 1783 is noted as representing the most accurate depiction to date, though the scale is not small enough to establish a detailed record of the development area.



Figure 7 ‘The Counties of Perth and Clackmannan’ by James Stobie 1783, with the area of the site indicated in red. Note the site straddles two map sheets. NLS

A revised map by James Stobie, published in 1805 (not depicted), shows the proposed development area on a slightly larger scale than the 1783 edition. The map shows the course of the Wharry Burn, making it possible to accurately locate the site. The boundaries of the site are shown here to straddle two parishes, with the Wharry Burn acting as the boundary line. Stobie’s 1805 map is also the first to show the lands of Kippendavie as being held by a Mr Stirling Esq<sup>r</sup>.

The map below (Figure 8), ‘Plan of the Kippendavie Estates lying in the Parish of Dunblane and the County of Perth...’ was surveyed in 1817 by John Blackadder, and is part of the private collections of the Kippendavie Estate. Blackadder’s estate map is one of the earliest to show the proposed development area at a high level of detail, making it possible to both accurately locate the site boundaries, and to assess the landscape’s make-up and features.

The site boundary is shown to encompass parts of three separate land divisions: the western portion extends over the lands of Caldron Lynns, the north-eastern portion covers unnamed outpasture, and the south-eastern portion extends over the lands of Caldham, which lies outwith the Parish boundary, and are not included in the estate plans. Blackadder’s map shows a small trackway in the southwest corner of Caldron Lynns with a ford crossing the Wharry Burn- listed as going to Stirling. Also, immediately south of the site, across the burn from Caldron Lynns lies the farmstead/ mill of Pandrieck (no longer extant). Within the outpasture, along the north-eastern site boundary, the lade is shown bringing water from the Rovers burn to the mills further west.



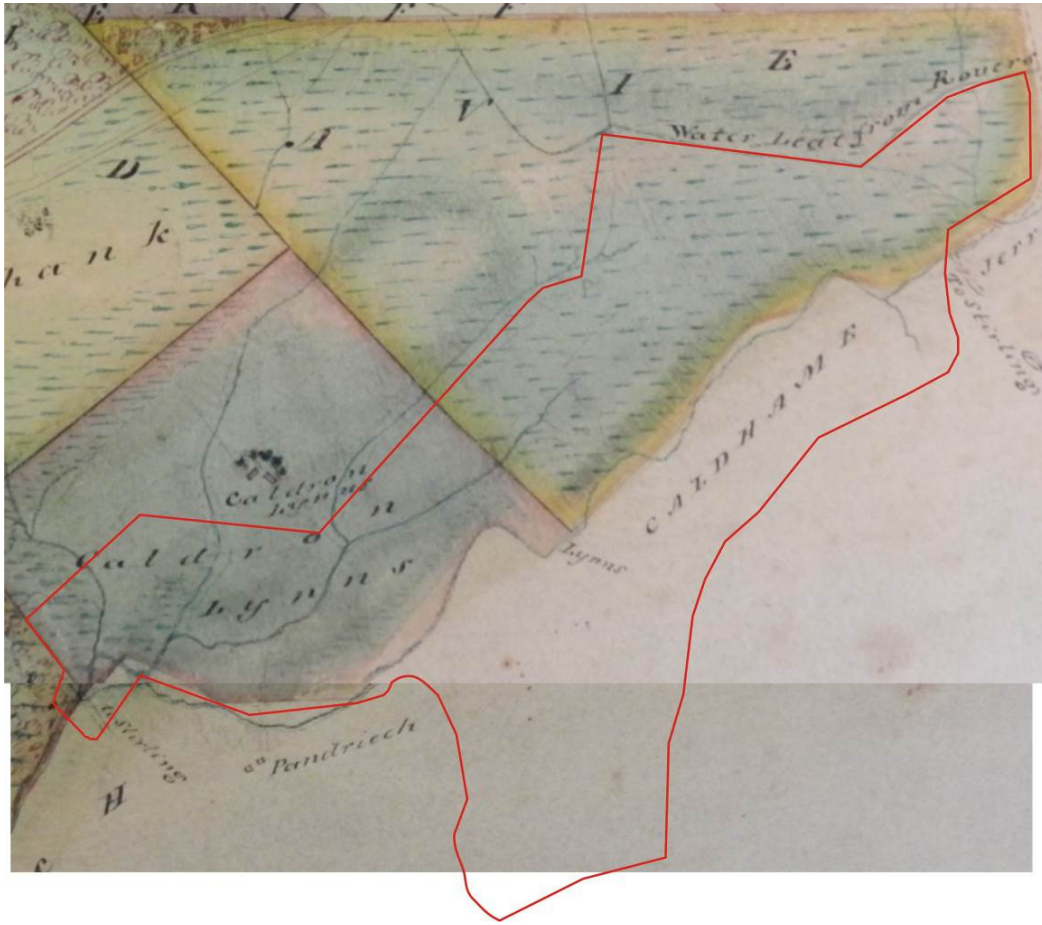


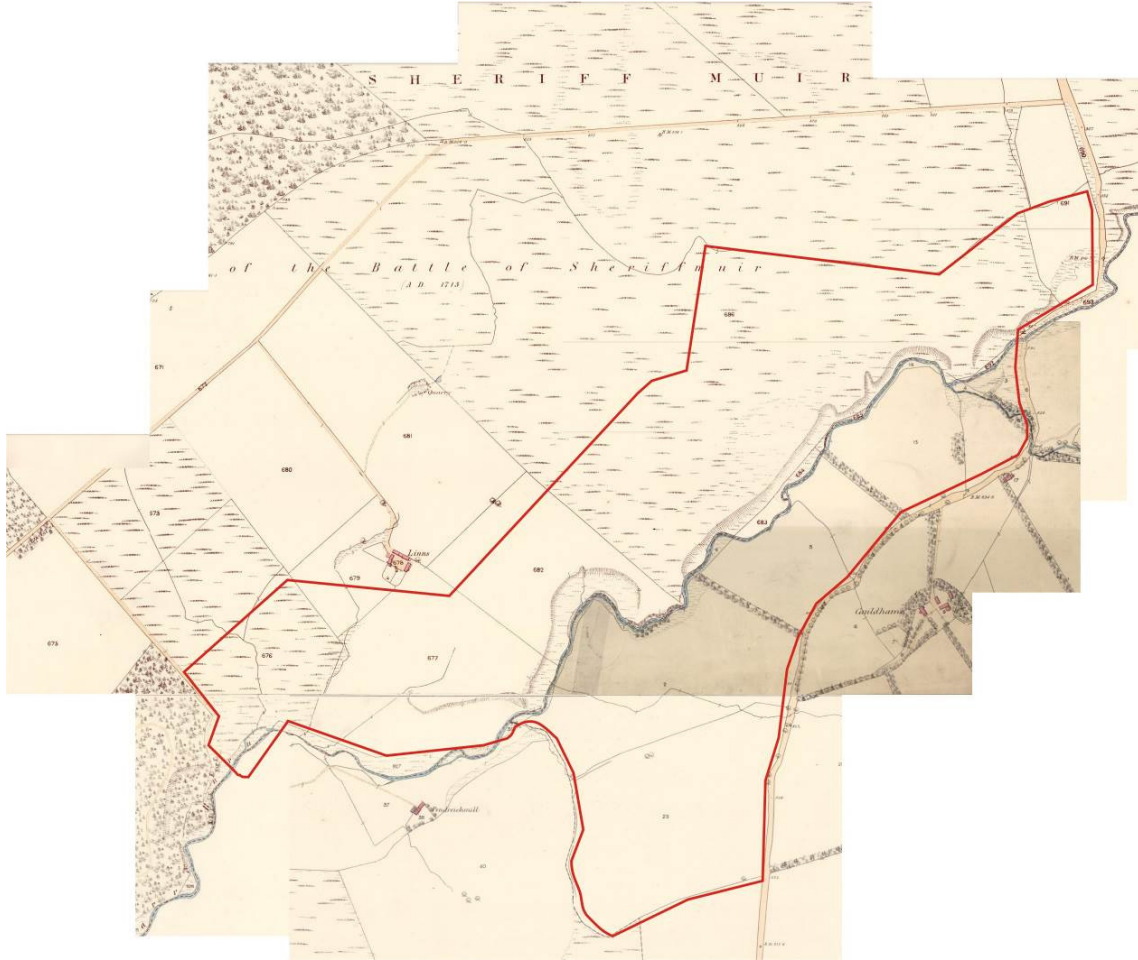
Figure 8 'Plan of Kippendavie Estates lying in the Parish of Dunblane and County of Perth, the property of John Stirling Esq.' by John Blackadder 1817, with the area of the site indicated in red. Addyman Archaeology and Kippendavie Estate.

Additional maps of the Kippendavie estate produced by Blackadder in 1817 were consulted. These maps (not shown) were published in book-form, and showed each land division in great detail, hand-drawn on individual sheets. What is interesting here is that the lands of Caldron Lynns, Shank to the northwest, and Sheriff Moor to the north were each given their own individual pages, while the land bordering Sheriff Moor to the south, and Shank and Caldron Lynns to the northeast was not; in this edition, the land was included only on the larger scale fold-out at the front of the folio, and listed only as outpasture. This is a possible indicator that this outpasture did not warrant enough importance in the ranks of the Kippendavie Estate to warrant its own page, and is a likely indicator that there was nothing within these lands (apart from the lade) that was worth mapping.

Like Blackadder's overall map, the folio did not cover the lands to the south of the Wharry Burn, and did not show any additional archaeological features in the landscape in need of further investigation.

### iii. Ordnance Survey maps of Kippendavie

The earliest Ordnance Survey maps of this area were surveyed in 1862 and provide the first truly accurate cartographic evidence for the development of the site. The 1<sup>st</sup> edition 25 inch to 1 mile maps published in 1866 are the most useful in gaining an accurate, detailed view of the area (*Figure 9*).



*Figure 9 Composite view of four 25 inch to 1 mile 1<sup>st</sup> edition OS maps showing the rough area of the development as indicated red. Addyman Archaeology after NLS*

The first edition displays an area split between upland marsh to the north east, and to the west, with a series of regular fields around the Wharry Burn. The fields around the farm of Cauldhame to the east of the site are bordered by a series of shelter belts.

The 1<sup>st</sup> edition marks 'The Site of the Battle of Sheriffmuir' straddling the northern part of the site. The map also depicts an irregular linear feature running along the northern boundary of the site (*Figure 10*). Although not specifically marked as such, this is almost certainly the Lade shown in the estate map of 1766. Other than the lade and the Battle site, a detailed assessment of the OS maps revealed no further sites of interest within the boundaries of the proposed woodland creation scheme.

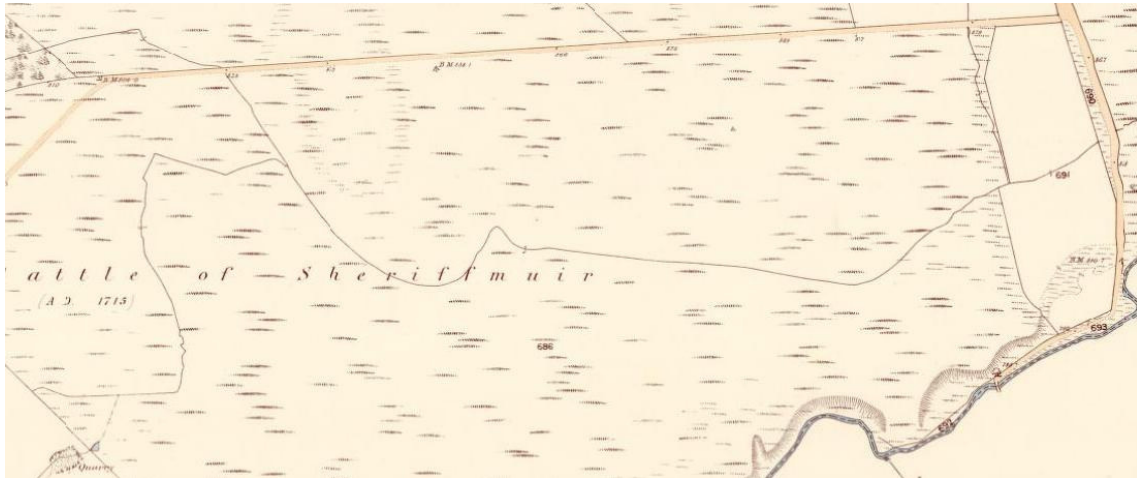


Figure 10 Detailed view of the 1<sup>st</sup> edition Perth and Clackmannan Sheet CXXVI.13 (Dunblane) showing the line of the Lade. NLS



Figure 11 Detail from the 1<sup>st</sup> edition showing Pendreichmill. NLS

To the south of the Wharry Burn and the site boundary at the western edge of the site, a group of small buildings is recorded as 'Pendreichmill' (Figure 11). Shown on the 1817 maps as 'Pandreich', this grouping of buildings also appears on the OS editions from 1903-1912. By 1921-1930, the buildings were no longer included on the OS maps, and now are no longer extant. It would seem likely that, whatever their function (as farmstead or mill etc.), that they were demolished sometime between 1912 and 1921. It is unclear how much of Pendreichmill survives as upstanding archaeology as the remains lay outside of the site boundary and were not surveyed. It is possible though that features relating to Pendreichmill, such as field systems and trackways, may survive within the boundaries of the proposed development area.

*iv. Summary*

The cartographic research into the proposed Kippendavie Woodland Creation Scheme area is shown to be well documented in maps from the 17<sup>th</sup> century onwards. Although many of the early maps cannot be considered reliable and are often drawn at a scale which precludes small settlement or features, it seems clear that no significant structures existed on the proposed site of the Kippendavie Woodland Creation Scheme from the 17<sup>th</sup> to the 19<sup>th</sup> centuries.

The earliest mention of the Battle of Sheriffmuir in cartographic form comes from a map drafted in 1719 by Thomas Lascelles, though unfortunately the portion of the map that depicts the location of the battle no longer survives. The battle's location was first recorded by Clement Lempriere in 1731 as occurring in the moorland east of Dunblane, while Stobie's map of 1783 clearly places the field of battle directly to the north of the site. The nature of the battle, as occurring on multiple fronts over a wide area, has meant that the interpretation of the battle site shifts from cartographer to cartographer, as evidenced by the 1<sup>st</sup> edition OS map which shows the battle as having taken place within the development area's site boundaries.

The detailed analysis of the ordnance survey data, from the 25 inch to 1 mile 1<sup>st</sup> edition- up to the modern OS maps, reveals a site relatively devoid of archaeological features within the site boundaries requiring further investigation. This information will either be confirmed or refuted through the analysis of twentieth and twenty-first century aerial photography and through the undertaking of a walk-over survey.

#### 4. Aerial Photographs

##### i. General

Aerial photographs of the proposed development area were consulted in order to assess the potential for previously unrecorded archaeological features to survive within the boundary. The photographic coverage of the site was extensive, with each available image requiring detailed analysis in order to assess for archaeological survival.

A wide variety of vertical aerial photographs were consulted with varying degrees of usefulness. A number of factors are important in revealing features on the ground in aerial photographs. The weather, cloud cover, time of day, time of year and height of the flight are all important factors affecting the usefulness of the picture, making it very important to view and assess as many images as possible. In addition the image itself may not be of great quality or sharpness, perhaps due to issues when the picture was taken or due to the conditions in which the photograph was subsequently stored.

From the National Collection of Aerial Photography (NCAP) held by the Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS), Addyman Archaeology consulted the following aerial images:

Sortie	Date	Frames	Scale
106G_DY-0036	30/10/44	6029-6031	1:30,000
106G_UK_0120	20/06/46	4198-4201	1:9,960
CPE_UK_0240	15/07/47	5092	1:7,000
58_A_0380	18/05/48	5072-5074	1:16,000
541_A_0522	12/05/50	4081-4083	1:10,500
540_1525	04/02/55	0430-0433	1:10,000
OS_59_095	21/06/59	036-037	1:27,000
543_0840	24/03/60	0106-0111	1:10,000
543_0840	24/03/60	0020	1:60,000
58_3544	16/05/60	0092-0094	1:24,000
58_3813	12/09/60	0090-0092	1:9,960
OS_60_81	25/09/60	076-078	1:26,000
OS_61_051	18/04/61	023-024	1:24,000
OS_61_014	27/05/61	020-022	1:24,000
OS_61_030	24/08/61	027-028	1:24,000
OS_69_232	09/06/69	002-004, 050-053, 050A	1:7,500
OS_73_470	03/10/73	130-132	1:27,000
ASS_512_88	10/06/88	085-087, 118-119	1:24,000

*Table 4 Aerial Photographs Consulted. National Collection of Aerial Photography, RCAHMS.*

In addition, readily available aerial views online were also analysed from both [www.bing.com](http://www.bing.com), and [www.google.co.uk](http://www.google.co.uk). Google Earth also provided aerial views dated from May 2006 and March 2013.



## ii. Sites located

The earliest flown sortie recorded across Kippendavie was undertaken in 1944. The site has been photographed extensively from the mid 1940's right through until 1988 as the Royal Air Force and later Ordnance Survey sought to gain comprehensive coverage of the area. The satellite images available on the internet bring the aerial coverage to the present day. The detailed investigation of aerial images revealed six possible sites (*Figure 12*) which were deemed worthy of further investigation.

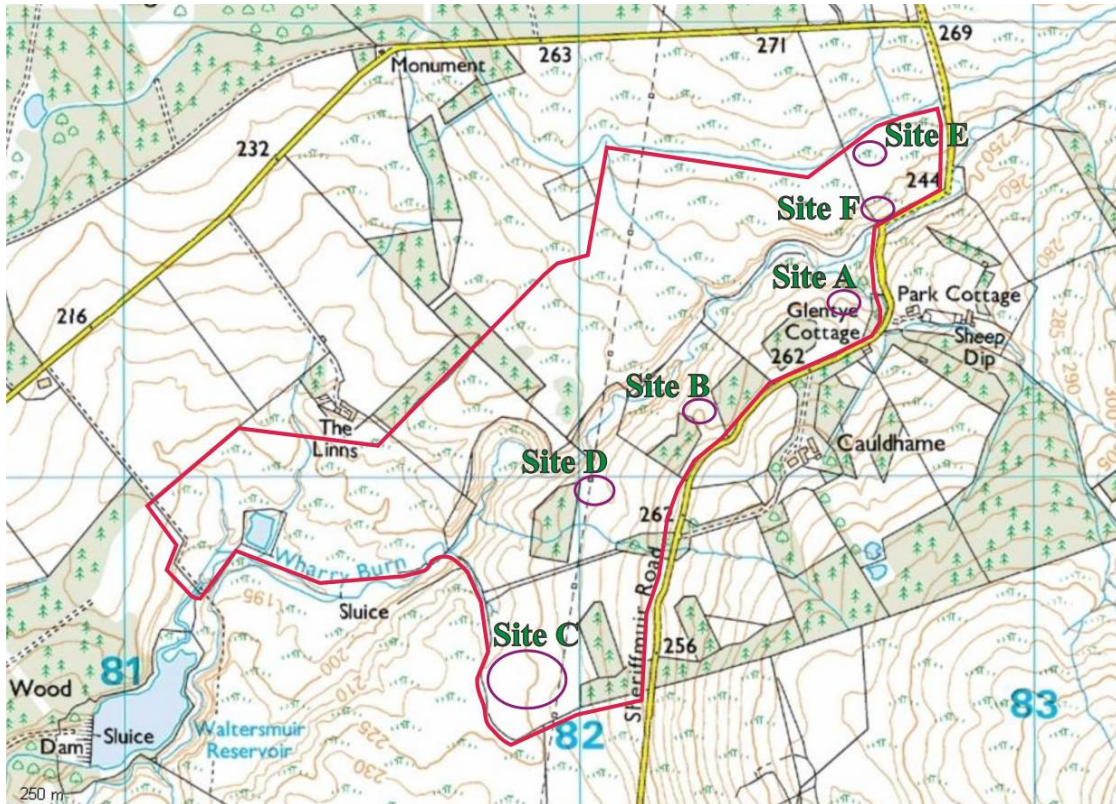


Figure 12 Indicative plan of sites newly identified by aerial photography (Addyman Archaeology after Ordnance Survey © Crown copyright. All rights reserved. Licence number 1000 06772)

### a. Site A

Site A was identified as a possible linear feature on an area of high ground just north of Glentye Cottage. The site appears as being very ephemeral on sortie 106G\_UK\_0120 flown in 1946, and is not identifiable on any of the other images until a faint trace of it appears on an image from sortie ASS\_512\_88 flown in 1988.

### b. Site B

Site B is thought to be a possible structure located on an outcropping of high ground between tree plantings to the northwest of Cauldham (*Figure 13*). The site appears on images from eight different sorties ranging from 1944 up to 1988, as well as Bing Maps, increasing the likelihood that Site B will be identifiable on the ground. Upon close inspection of Bing Maps, the site appears more as a quarry than a structure, though this will be confirmed during the walkover survey.



Figure 13 Site B, northwest of Cauldhame. Addyman Archaeology from [www.bing.com/maps](http://www.bing.com/maps)

c. Site C

Site C was identified on four different reconnaissance sorties: 106G\_DY\_0036 flown in 1944, 106G\_UK\_0120 from 1946, 540\_1525 flown in 1955, and 543\_0840 from 1960. The site appears as an irregular circular anomaly with linear features/ ditches radiating outwards (*Figure 14*). It is thought to represent either ploughing or a drainage system curving to a low point in the landscape. The site appears to be surrounded by an extensive field system of irregular rig and furrow. The site was also identifiable on Bing Maps, Google Maps, and Google Earth.



Figure 14 Site C, southern extent of site boundary. Addyman Archaeology from [www.bing.com/maps](http://www.bing.com/maps)



d. *Site D*

Site D appears as a series of five possible linear features south of the Wharry Burn, which may represent heavy ploughing or drainage activity. The site was identified on sorties 106G\_DY\_0036 from 1944, 106G\_UK\_0120 from 1946, and 543\_0840 flown in 1960. The feature is possibly new or slightly ephemeral as it does not appear on the sortie flown in 1950.

e. *Site E*

Site E was identified on Bing Maps as a large diameter circular feature immediately south of the Lade in the northeast corner of the proposed development area. The shadows cast in the aerial images suggest the possibility of an upstanding feature, something that will have to be confirmed during the walkover survey. Site E can not be seen clearly in either Google Maps or Google Earth as the majority of the development area is obscured due to the Google fly-over taking place at night.

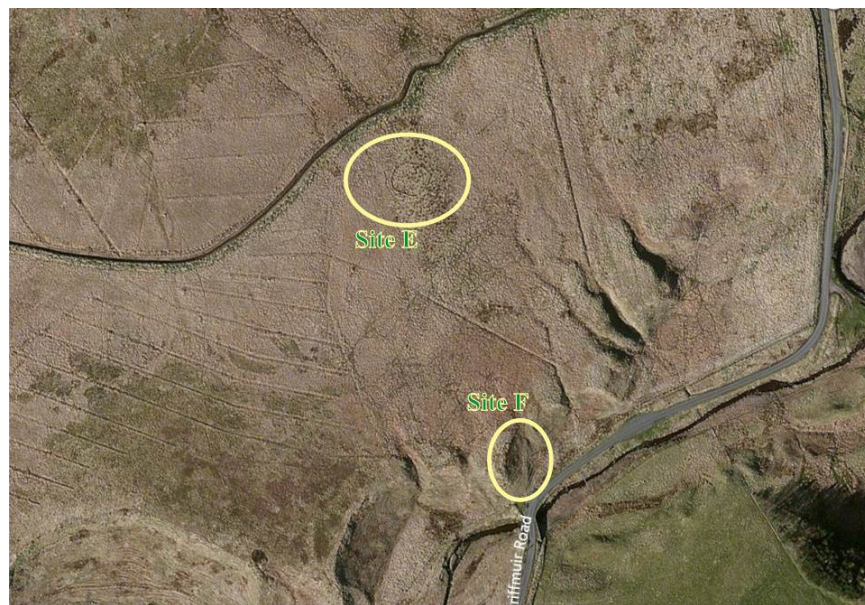


Figure 15 Sites E and F, eastern extent of site boundary. Addyman Archaeology from [www.bing.com/maps](http://www.bing.com/maps)

f. *Site F*

Site F is thought to be a possible extension of the trackway or section of drove road from the north side of the Sheriffmuir Road crossing over the Wharry Burn, up over the hill in the northeast corner of the site. The feature appears only on Bing Maps, and fades as it reaches the top of the hill slope. This site will require further investigation as historically, drove roads are known to have extensively criss-crossed the surrounding moorland.

iii. *Summary*

The aerial images confirmed that there appear to be relatively few sites of interest within the proposed development area. Of the six sites identified, Sites A, D, E, and F are potentially quite ephemeral, while Sites B and C are much more apparent and solid features in the landscape. Site B seems to represent a structure or quarry, while Site C appears as a series of plough-marks or drainage channels.



## 5. Walkover Survey

### i. General

The walkover survey was designed to provide comprehensive cover of the site whilst specifically targeting those areas identified from earlier research as being of potential archaeological significance. The majority of the proposed development area is currently used for livestock grazing, especially within the Lynns and south of the Wharry burn; these areas are also dotted with small-scale tree plantations. Livestock grazing in these parts of the site has helped to ensure that vegetation is kept to a minimum, making for excellent ground visibility during the survey.

The north and eastern sections of the site (north of the Wharry Burn) are predominantly outpasture, with tall grasses and thick vegetation blanketing the moorland. The tall, often thick vegetation in this area meant that the ground visibility was poor, increasing the likelihood of the non-identification of archaeological features.

The walkover survey was unable to locate a small number of sites identified during the Desk Based Assessment, even when the co-ordinates of the site were known and pinpointed on GPS. This could be due to the site deteriorating and becoming overgrown or invisible in the time since it was recorded or the natural features being misinterpreted in the initial survey of aerial photographs.



Plate 5 The south western end of the site, from the Linns towards the Wharry Burn (Photo 004)

Undertaken during the course of a day, the locations of sites identified in the walkover were plotted to within 3m accuracy by hand-held GPS and their dimensions recorded along with any other relevant impressions. Each site recorded was digitally photographed.

Where sites recorded during the Desk-Based Assessment (DBA), analysis of aerial photographs and map regression were allocated a letter, those noted during the walkover were assigned a number. Where a site recorded in the DBA, aerial photography or map regression was noted in the walkover, the two are combined, i.e. Site 6F.

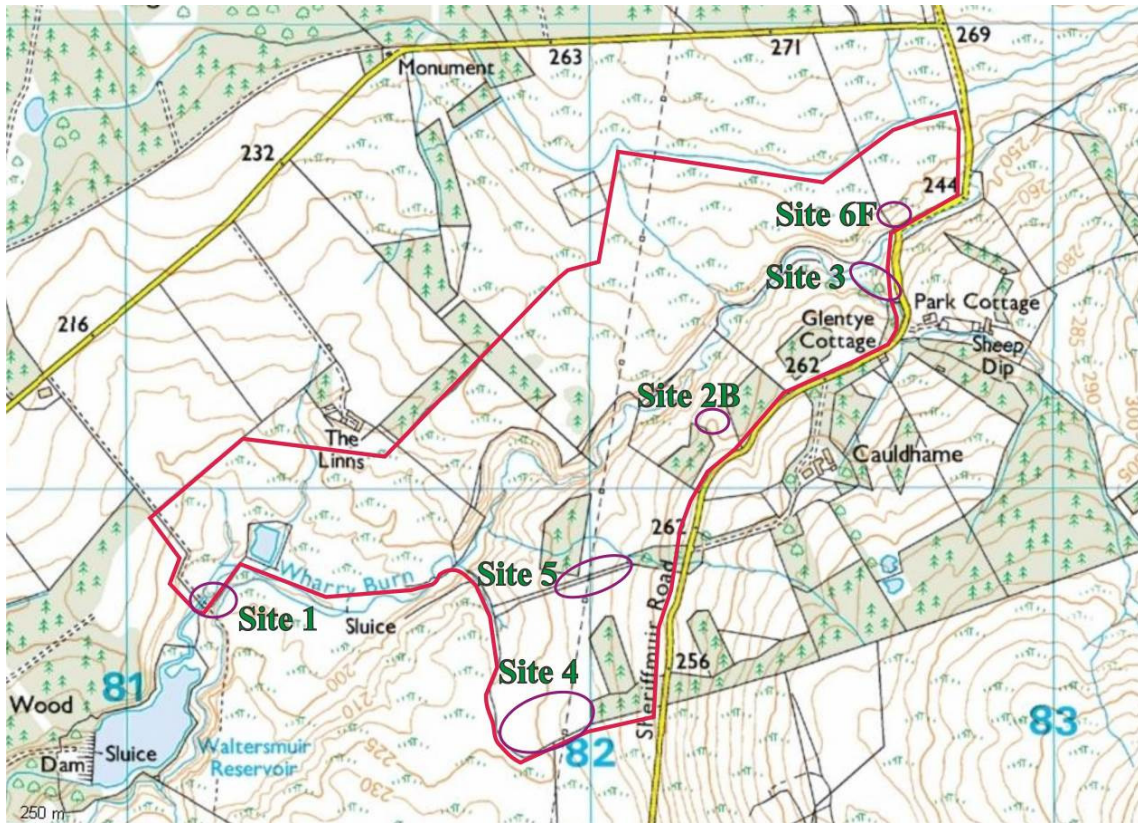


Figure 16 Map showing indicative locations of sites from the walkover survey (Addyman Archaeology after Ordnance Survey © Crown copyright. All rights reserved. Licence number 1000 06772)

A detailed record of each site and additional images can be viewed as part of the Gazetteer included as Section 7 within this report.

ii. *Sites recorded*

a. *Site 1*

The first site encountered during the walkover survey lay at the south western limit of the site. Site 1 (*Plate 6*) was formed by a re-routing of the Wharry Burn through a concrete lined channel or lade. Initially this was thought to be related to the site of Pendreichmill seen on the 1<sup>st</sup> edition a short distance to the south, it seems more likely that the feature is related in some way to the Waltersmuir Reservoir, or a redirecting of the Lade back into the Wharry Burn (*Figure 11*).

The lade diverts water from the Wharry Burn to the south, feeding it in a concrete lined channel of c.3m width back into the burn towards the east. Midway along the length of the feature, there is another divergence (*Plate 7*) with a smaller channel splitting off towards the north east. A short distance from its origin, this channel becomes subterranean. Two concrete features covered over by large Fe panels can be seen a short distance north east of this point. Water moving beneath these panels indicates that the channel continues to function, but the final route and length of the offshoot could not be discerned as it exited the site.





*Plate 6 View of Site 1 looking south east (Photo 008)*



*Plate 7 Detailed view of Site 1 looking west (Photo 010)*





*Plate 8 Composite view of Site 2B looking southeast (Photo 025)*

*b. Site 2B*

Site 2 was located in the area in which Site B was identified during the assessment of aerial photographs. That assessment had noticed a consistent anomaly in this area, which had been interpreted as a possible small structure. The walkover located a small quarry (*Plate 8*) in this location which is almost certainly the anomaly noted.

The quarry is comprised of a small depression cut into an area of high ground on the northwest facing slope above the Wharry Burn. This feature measured around 10m north east to south west by c.6m northwest to southeast. It had a depth of up to 1m and rough uneven base littered with occasional medium sized irregular boulders.

The existence of other small outcrops of bedrock in the area indicates that this spot may have been ideal for quarrying purposes. The rock quarried from this site likely went into the construction and maintenance of the surrounding field boundaries.



Plate 9 Looking along the linear feature Site 3 from the southeast (Photo 028)

c. *Site 3*

Site 3 is a degraded drystone wall at the east end of the site that runs parallel to the Burniepark Burn (a tributary of the Wharry), and likely forms the north eastern land boundary for Glentye Cottage from Sheriffmuir Road down to the Wharry Burn below (*Plate 9*). Orientated roughly northeast to southwest as a turf covered bank, the feature represents an old land boundary which is visible on the OS 25 inch 1<sup>st</sup> edition map, but does not appear on more modern maps. A stretch of wall face is visible, surviving to two courses, but on the whole the wall is overgrown and slumped, with an average width of up to 1m.

d. *Site 4*

Site 4 is an area of rig and furrow immediately to the south of what was identified as Site C during the Desk Based Assessment. A series of four to five rigs were noted orientated roughly northeast-southwest, and were confined to the southernmost extent of the site, west of the tree plantation and electricity pylon (*Plate 10*).

The rig and furrow measured roughly 6m rig to rig, with an approximate height from rig to furrow of less than 0.10m. The site covers an area of roughly 30m in length by 20m in width and appears to be bounded by the field boundary, though it is possible that it extends beyond the limits of the proposed development area. Initially thought to perhaps be the remnants of the tree plantation extended to the southwest, research has suggested that the plantation never reached this region of the site.





*Plate 10 Rig and Furrow of Site 4, southwest corner of site,  
Sheriffmuir road in the background (Photo 013)*

*e. Site 5*

Site 5 represents a degraded drystone field boundary with an associated possible trackway abutting it to the north (*Plate 11*). Located in the southern portion of the site, south of the Wharry Burn and west of Sheriffmuir road, Site 5 is visible on the OS first edition maps and modern aerial images. The drystone wall measures approximately 0.75m in width by 0.50m in height, with the track measuring roughly 3.0m in width with less than 0.10m upstanding. Overall, the length of Site 5 is near to 325m from plantation to the east to field boundary to the west.

The field boundary / trackway emerges from a small tree plantation west of Sheriffmuir road, continuing along the same line as the main access road to Cauldhame up the hill, and runs due southwest towards the field boundary nearest to Pendreichmill. It is possible that this represents a trackway leading across the field from Cauldhame to Pendreichmill and possibly Caldron Lynns to the north, though the extent was not investigated as it lay beyond site boundaries.

It should be noted that since the walk-over survey was undertaken on the 13<sup>th</sup> of August 2014, a haul road associated with the Beaulay-Deny power lines has been built directly through Site 5, effectively bisecting it. As the watching brief for the installation of the power lines and haul road lies with another archaeological company, it is currently unknown if Site 5 was noted and/or properly recorded.



*Plate 11 Site 5, Remnants of a field boundary and possible trackway, facing southwest (Photo 018)*



*Plate 12 Site 6F, Possible Drove track, north of Sheriffmuir Road bridge (Photo 069)*

*f. Site 6F*

Site 6 was located where Site F was seen in the assessment of aerial images. The images showed a linear anomaly extending from Sheriffmuir road, along the hill slope, up to the outpasture above. The walkover located what is thought to be a possible stretch of drove road, existing as a flattened area or terrace along the slope of the hill, likely used for the transportation of livestock from the road up to the fields above. Site 6F measured roughly 1.5m in width, and disappeared towards the top; it did not appear wide enough for the transit of carts or other wheeled traffic (*Plate 12*).

**6. *Potential for survival of unknown buried heritage assets within the development area***

The desk based research, map regression and analysis of aerial photographs has revealed remarkably little of archaeological interest within the boundaries of the site.

A prehistoric stone alignment survives to the east of the site (Lairhill Standing Stone Alignment) while the Gathering Stone a short distance to the north has been interpreted as a collapsed prehistoric standing stone. There are also a small number of cairns and a standing stone a short distance to the south around Pendreich. A carved stone ball is also recorded as having come from Sheriffmuir. Although no such features have been discovered within the boundaries of the development, the existence of such a large number of prehistoric features in the area is unusual. As such there is the possibility that prehistoric occupation may have taken place in and around the site.

There is little evidence for medieval use of the area, although a small settlement at Balloch to the south of the site, as well as the various drove roads in the area, and the ruined farmsteads at Ashentrool, may be related to this period.

Post-medieval usage of the area is attested by a series of small farms, lime kilns to the east of the site and mills to the west of the site. The Sheriffmuir Inn was constructed in the early 19<sup>th</sup> century.

That previously undiscovered archaeological features may survive cannot be discounted, but the evidence presented would suggest this is unlikely.

The exception to this is in regards to the Battle of Sheriffmuir and other military related artefacts. The Battle of Sheriffmuir fought in November 1715 involved over 10,000 combatants, and archaeological evidence points to the fact that the initial engagement began just north of the Kippendavie Woodland Creation Scheme. The fighting very quickly spread over a wide area, with anecdotal evidence describing fighting taking place near the Linns.

The name Sheriffmuir relates to the long usage of the site as a muster point for soldiers and militia which continued well into the 20<sup>th</sup> century. Metal detecting across the immediate north of the development area has revealed large quantities of military material and ordnance.

Any groundbreaking activities related to the proposed woodland development scheme would have a detrimental impact on buried and upstanding features.



## 7. Gazetteer – Baseline Survey

### i. Introduction

The following table provides an overview of the cultural heritage sites identified in the various exercises as part of the desk based assessment and the walkover survey. It also assesses the significance of each of these sites and their possible sensitivity to development impacts together with an assessment of the type and magnitude of the proposed impact.

The categories of assessing the significance of the site are:

- Negligible
- Low
- Moderate
- High

Where the significance could not be assessed due to lack of information, this was identified as:

- Unknown (in combination with the most likely assessment)

The categories of assessing the magnitude of the proposed impact are shown in *Table 5*.

Magnitude of impact	Guideline criteria used to assess monument
<b>High</b>	Substantial visual impact. The development affects a change in most or all key elements of setting. The development affects substantial landscape elements relevant to the site's setting. The relationship between the site and setting is compromised.
<b>Moderate</b>	Some visual impact. Visual impact to a number of key components of setting. The development makes a notable change to the landscape elements relevant to the setting of the site, but these can still be viewed and appreciated.
<b>Low</b>	Slight change in visual impact on site. Changes to one, or a small number of key factors relating to setting. The development makes a slight change on the landscape elements of the site in relation to setting, but this does not detract from the interpretation of the site or appreciation of its place in the landscape.
<b>Negligible</b>	Minimal or no change in the visual impact on site. The development either has a very minimal affect on the setting of a site, or none at all. Any affects do not detract from the understanding and appreciation of the site.

*Table 5 Categories used to assess magnitude of impact alongside the criteria used to assign these to a monument*

The sites are discussed in the following order:

- Sites with numbers as identified on the ground during the walkover survey
- Sites with letters as identified during the desk based assessment (including the map regression and aerial imagery assessment)

Where the two site types overlap, i.e. when a site identified in the walkover survey corresponds with a site identified during the desk based assessment, the site has been labelled with a walkover number and the corresponding letter code from the DBA added, e.g. Site 1A. To avoid duplication in the assessment, these sites are discussed within the walkover survey section of the table only.

Whilst it is recommended that all sites recorded in the DBA and the walkover survey are avoided during the planting process, and that these are identified are marked out by a qualified archaeologist prior to site works commencing, it is also recognised that planting has significant potential to disrupt sites located within these areas. As a result the impact on such sites has been assessed as High.

In line with UKFS, as the assessment is primarily concerned with sites that survive above ground, on the whole those identified in the preliminary research but not noted during the walkover are assigned low significance.



ii. *Gazetteer of sites located during the assessment*

Table 6: Gazetteer of sites located during the assessment

Site No.	Site name	NGR	Located	Canmore ID	Site type	Description	Significance	Type of Impact	Magnitude of Impact
1	Pendreich mill	NN 81207 00828	Walkover Survey	N/A	Lade	Re-routing of tributaries and a new channel from the Wharry Burn. Likely associated with the Pendreich mill to the southeast.	Low	Proposed tree planting	Low
2B	Unknown.	NN 82270 01143	Aerial Photo Walkover Survey	N/A	Quarry	Small quarry cut into area of high ground on the northwest facing slope above the Wharry Burn. Measures around 10m north east to south west by c.6m northwest to southeast, with a depth of up to 1m. Rough uneven base with occasional medium sized irregular boulders.	Low	Proposed tree planting	Low
3	Unknown.	NN 82601 01430  NN 82663 01395	Walkover Survey	N/A	Drystone Field Boundary	Degraded drystone wall running parallel to the Burniepark Burn. Likely forms the north eastern land boundary for Glentye Cottage from Sheriffmuir Road down to the Wharry Burn below. Appears as turf-covered bank, roughly orientated northeast-southwest. Stretch of wall face visible, surviving to two courses. Wall is overgrown and slumped, with an average width of up to 1m.	Low	Proposed tree planting	Low
4	Unknown.	NN 81901 00456	Walkover Survey	N/A	Rig and Furrow	Series of four-five rigs orientated roughly northeast-southwest. Confined to southern most extent of the site, west of the tree plantation and electricity pylon. Measured roughly 6m rig to rig, with approx. height from rig to furrow of less than 0.10m. The site covers an area of roughly 30m in length by 20m in width and appears to be bounded by the field boundary.	Low/Moderate	Proposed tree planting	High

Site No.	Site name	NGR	Located	Canmore ID	Site type	Description	Significance	Type of Impact	Magnitude of Impact
5	Unknown.	NN 81997 00828  NN 81784 00756	Walkover Survey	N/A	Field Boundary / Trackway	Degraded drystone field boundary with trackway abutting to north. Wall measures approx. 0.75m in width by 0.50m in height, with track measuring 3.0m in width and less than 0.10m in height. Overall length near to 325m. Emerges from small tree plantation west of Sheriffmuir road, runs along same line as main access road to Cauldhame, southwest to field boundary near Pendreichmill.	Low/Moderate	Proposed tree planting	High
6F	Unknown.	NN 82578 01565	Aerial Photo  Walkover Survey	N/A	Drove Track	Possible Drove track extending from Sheriffmuir road, along the hill slope, up to the outpasture above. Seen as a flattened area or terrace along the slope of the hill, likely used for the transportation of livestock from the road up into the fields; measures 1.5m width, disappears towards the top.	Low	Proposed tree planting	Low
A	Unknown.	NN 82505 01315	Aerial Photo	N/A	Linear Feature	Ephemeral Linear Feature on high ground just north of Glentye Cottage. Appeared only on two aerial images. Not located during walkover survey.	Unknown	Proposed tree planting	Negligible
C	Unknown.	NN 81769 00574	Aerial Photo	N/A	Circular Feature with linear elements	Irregular circular feature with associated linear features curving outwards. Likely drainage or ploughing running to a low point in the landscape. Possibly associated with Site 4. May be the remains of field systems with drainage running into the Wharry Burn below. May be associated with the Pendreichmill to the west.	Low/Moderate	Proposed tree planting	Negligible

Site No.	Site name	NGR	Located	Canmore ID	Site type	Description	Significance	Type of Impact	Magnitude of Impact
D	Unknown.	NN 81931 00941	Aerial Photo	N/A	Rig and Furrow	Area of possible rig and furrow south of the Wharry burn. Likely the remnants of the adjacent tree plantation, felled prior to the installation of the current power lines. Nonextant.	Negligible	Proposed tree planting	Negligible
E	Unknown.	NN 82526 01698	Aerial Photo	N/A	Circular Feature	Possible circular feature south of the mill lade east of Sheriffmuir Road. Anomalous appearance in aerials, not apparent on walkover survey.	Negligible	Proposed tree planting	Negligible
N/A	Sheriffmuir Battlefield	NN 811 031	DBA	25267	Inventory Battlefield	Site of the 1715 Battle of Sheriffmuir between Jacobite and Government forces.	Major	Proposed tree planting	Major

Table 6: Gazetteer of sites located during the assessment

iii. *Assessment of Significance and development impacts - Conclusion*

Assessment of the cultural heritage sites identified in the comprehensive desk based assessment and walkover survey has shown the majority of these to be of negligible or low significance, apart from the Sheriffmuir Battlefield site which is deemed to be of high significance. In line with UKFS, the landowner is required to take into account all *upstanding* remains within the boundaries of the site and the buried remains relating to the Battle of Sheriffmuir. This emphasis will not be to the detriment of identified, buried archaeological remains, but as a result those sites not identified during the walkover survey and thus not visible on the ground have on the whole been assessed as of unknown or low significance.

The landscape is one dominated mainly by rough outpasture, with other lands currently used for seasonal grazing. Amongst these, some potentially more significant sites survive, including areas of remnant cultivation and disused field boundaries; these have been assessed as a low / moderate significance, while the other sites identified are of low significance. The main area of importance is in the site itself as the location of the Battle of Sheriffmuir, which has been assessed as being of high significance.

Accurate grid references could not be provided for those sites identified only by map regression, or through aerial photographs.

Further details on the development impact and recommended archaeological mitigation are detailed in *Table 7* in the 'Impact Assessment and Mitigation' section of the cultural heritage report.



8. Impact Assessment and Mitigation

i. Impacts within the development area

The magnitude of development impacts on the sites of heritage value has been assessed according to their degree of sensitivity as outlined below.

		Magnitude of Impact			
		High	Moderate	Low	Negligible
Significance	High	Major	Major	Moderate	Negligible
	Moderate	Major	Moderate	Minor	Negligible
	Low	Moderate	Minor	Minor	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible

This is summarised using this format in the table below. The assessment of the impact on the site includes consideration of the impact upon the setting of the site. Any development impact that had already been identified as of negligible magnitude has not been included below. Those sites that could not be accurately located during the walkover survey have also been omitted from the table as locating such sites may be problematic. It is accepted that all archaeological sites should be avoided when planting trees.

For the sites assessed as receiving development impact the following additional mitigations are recommended:

Table 7: Summary of Impacts on sites within the development area					
		(Significance / Magnitude of Impact)		Mitigation to achieve minor or negligible adverse effect	Significance of residual impact
Cultural Heritage and Archaeology	Impact/ planting	Assessment / Categorisation of Impact			
1	Pendreichmill Lade	Proposed tree planting	Low/Moderate  Low	As a waterway, will not be adversely affected by planting. Standard buffer-zones in place.	Negligible
2B	Unknown. Quarry	Proposed tree planting	Low/Moderate  Low	Identified and marked out by qualified archaeologists avoidance during planting with suitable buffer around the monument	Negligible
3	Unknown. Drystone Field Boundary	Proposed tree planting	Low/Moderate  Low	Identified and marked out by qualified archaeologists avoidance during planting with suitable buffer around the monument	Negligible
4	Unknown. Rig and Furrow	Proposed tree planting	Low/High  Moderate	Further measured survey is required to determine the age and significance of the rig and furrow prior to planting taking place in the area.	Negligible
5	Unknown. Field Boundary/Trackway	Proposed tree planting	Low/High  Moderate	Identified and marked out by qualified archaeologists avoidance during planting with suitable buffer around the monument	Negligible
6F	Unknown. Possible Drove Track	Proposed tree planting	Low/Moderate  Low	Identified and marked out by qualified archaeologists avoidance during planting with suitable buffer around the monument	Negligible
N/A	Sheriffmuir Battlefield	Proposed tree planting	High  Major	Full metal-detecting survey required over entirety of proposed planting area except for areas which have been previously planted. Additional field-walking over areas of upcast soil along Wharry Burn during tree-planting excavation, with adequate buffer-zone along both banks.	Minor

*ii. Summary of impact assessment and mitigation*

It is recommended that all sites are avoided during the planting process, and that these are identified and marked out on the ground by a qualified archaeologist prior to work commencing. This will be easier in areas where open ground or even mixed broadleaf are planned as part of the proposal, but a buffer of 5m around each monument should be sufficient to protect it from any damage. A further measured survey of the rig and furrow is required prior to planting in order to better understand its age and significance.

Although a number of the sites will have a high magnitude direct impact as a result of the proposed planting, the significance of these sites is on the whole categorised as low. Avoiding these sites during the planting process will be sufficient to reduce the impact on these monuments to a negligible one.

The Sheriffmuir Battlefield, whose impact is categorised as high by the scheme, is deemed to be of national significance as it saw one of the largest Jacobite armies to take the field in what proved to be the only major battle to take place on Scottish soil during the Risings. The ploughing, associated groundworks, and likely future tree-root activity will have a detrimental impact on the battlefield, and would likely obscure any latent information pertaining to the battle which may still survive beneath the surface.

Due to the invasive nature of the groundworks, and after consultations with Stirling Council Archaeologist Murray Cook, a full metal-detecting survey across the entirety of the proposed development area is recommended, covering the areas to be planted using the ploughing method of cultivation, but excluding the buffer zones and areas recently felled. The methodology governing such an exercise can be settled upon at a later date, with the detecting either occurring in advance of ploughing or taking place in conjunction with the ploughing- prior to the plantings.

Additional field-surveying and metal-detecting will also be required along both banks of the Wharry Burn in areas to be planted with native broadleaf requiring hinge mounds. The Wharry is a known avenue of retreat of the Government armies under pursuit from the Jacobite forces. The banks of the river also likely saw pockets of fighting and individual clashes as the forces caught up with one another.

Historical evidence exists of human remains having been encountered buried along the banks of the burn, which may represent fallen soldiers buried in the sandy soils. This specific survey is intended to mitigate the discovery of human remains, where, if found, would be recorded and re-buried, with the immediate area then roped-off and avoided. Sufficient buffer zones of 2-5m along the banks of the Wharry Burn will also need to be established.

With the three-hundred year anniversary of the battle taking place November the 13<sup>th</sup> 2015, the comprehensive metal-detecting survey could present an excellent opportunity for a significant program of community education and involvement. Public participation would be an ideal way for them to learn about the history of their community and of the battle of Sheriffmuir through the exploration, investigation, and handling of the actual physical remains of the battle in their original context. An opportunity such as this on the anniversary of the Battle, could prove to be a major event for the surrounding community; it also presents the opportunity to inform the wider public, including school groups, on the importance of sustainable forestry, history, archaeology, and heritage management.

A further approach to mitigation that was explored with Stirling Council and is part of the intention in relation to the proposed scheme is to provide improved public access and interpretation specifically within the area of the existing proposal. This may take the form of better path access along the

Wharry Burn, the lade and by routes that may provide a connection leading to the Sheriffmuir Inn.

## **9. Overall Conclusion and Recommendations**

The DBA and associated research identified six potential sites within the boundaries of the proposed development area, two of which were located during the walkover, where a further four previously unknown sites were also recorded. This brings the overall total to six identified cultural heritage sites within the boundaries of the Kippendavie Woodland Creation Scheme development area. These sites were of varying cultural heritage significance and the vast majority will be impacted by the development to some degree. The site is mainly used for pastoral grazing, while the majority remains uncultivated outpasture.

It is recommended that the planting avoids all visible, above ground sites recorded during the walkover. All sites identified during the walkover should be marked out on the ground by the archaeological team prior to the site works commencing, with an additional measured survey required for the rig and furrow identified at the southern extent of the development area. A full metal-detecting survey is also recommended prior to planting activities taking place in order to recover any information available pertaining to the 1715 Battle of Sheriffmuir, as well as a further walk-over, surveying the upcast along the banks of the Wharry Burn.



## 10. Archiving

Both a hard copy and a digital copy of this report in its final draft form will be submitted to the NMRS as held by the RCAHMS. This will be accompanied by the project archive including select email correspondence, site records and digital copies of all site photographs.

A copy of the report will also be submitted to Stirling Council for inclusion on their SMR.

An entry has been created on the online OASIS platform to ensure public access to the research and an entry will be submitted to *Discovery and Excavation in Scotland*, the annual journal produced by Archaeology Scotland charting fieldwork completed across Scotland.

## Acknowledgements

Addyman Archaeology was commissioned to complete the project by Graham Newport and John Gallacher of UPM Tilhill. Both Graham and John deserve our gratitude for their organisation and commitment to ensuring the archaeological resource is adequately protected.

Our gratitude also goes to Dr. Murray Cook of Stirling Council for his help and guidance during the research phase.

Thanks are also due to Richard Stirling-Aird of the Kippendavie Estate for his enthusiasm and knowledge, and also for his accommodation in allowing us access to the Estate records.

## Abbreviations

ALGAO	Association of Local Government Archaeology Officers
DBA	Desk based assessment
DES	Discovery and Excavation Scotland
EIA	Environmental Impact Assessments
GUARD	Glasgow University Archaeological Research Division
HER	Historic Environment Record
HS	Historic Scotland
LB	Listed Buildings
NAS	National Archive of Scotland
NMRS	National Monuments Record Scotland
OASIS	Online Access to the Index of Archaeological Investigations
OS	Ordnance Survey
RCAHMS	Royal Commission on the Ancient and Historical Monuments of Scotland
SM	Scheduled Monument
UKFS	United Kingdom Forestry Standard

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[www.google.co.uk/maps/](http://www.google.co.uk/maps/)

[www.historic-scotland.gov.uk](http://www.historic-scotland.gov.uk)

[www.nls.uk](http://www.nls.uk)

[www.parksandgardens.org](http://www.parksandgardens.org)

[www.rcahms.gov.uk](http://www.rcahms.gov.uk)

***Appendix A: Maps consulted; Kippendavie Estate Woodland Creation Scheme - Archaeological Survey and Assessment***

Maps consulted include:

Timothy Pont (c.1560-c.1614)

- ‘The East Central Lowlands (Stirling, Falkirk and Kilsyth)’. Imprint c.1596

Robert Gordon (1580-1661)

- ‘A map of Eastern Scotland, including basins of Rivers Don, Dee, Tay, Forth, and Tweed’. Imprint c.1636-1652
- ‘A map of Scotland, north of Glenmore in detail, and outline of the east coast to Dunbar, showing the courses of the chief rivers, and the positions of a few places’. Imprint c.1636-52
- ‘Loch Lomond’. Imprint c.1636-52
- ‘Lennox, Argyle’. Imprint c.1636-52

John Adair (c.1650-1722)

- ‘A map of Strath Devon and the district between the Ochils and the Forth’. Imprint 1681
- ‘A mape of the countries about Stirling / authore John Adair’. Imprint 1682
- ‘The Mappe of Straithern, Stormont, and Cars of Gourie with the rivers Tay and Ern / surveighed and designed John Adair’. Imprint 1683

Thomas Lascelles (1719)

- ‘Plan of the Battle of Sheriffmuir, fought 13 Nov. 1715’. Drafted 1719

Clement Lempriere (fl.c. 1720-1746)

- ‘A Description of the Highlands of Scotland: the situation of the several Clans and the number of men able to bear arms as also the forts lately erected and roads of communication or Military Ways carried on by his Majesty’s Command with the seats of ye most Considerable Nobility in the Low Country’ Published 1731

John Cowley, RW Seale (fl.1734)

- ‘A New Map of North Britain with the Islands thereunto belonging’ Published 1734

Hermann Moll (d.1732)

- ‘The North P. of Perth Shire containing Athol and Broadalbin’. Published 1745
- ‘The Shires of Stirling and Clackmannan & c’. Published 1745
- ‘The South Part of Perth Shire containing Perth, Strathern, Stormount and Cars of Gourie & c’. Published 1745

William Edgar (1717-c.1746)

- ‘Description of the River Forth above Stirling’. Imprint 1746

William Roy (1726-1790)

- ‘Military Survey of Scotland. Lowland of Scotland’ 1752-1755

John Lefoly, John Farquharson

- ‘A Plan of Sherrifmuir’. Surveyed 1771

John Farquharson

- ‘A Plan of the Lands of Kippendavie’. Surveyed 1775

James Stobie (1775-c.1804)

- ‘The Counties of Perth and Clackmannan’. Imprint 1783

James Stobie (1775-c.1804)

- ‘The Counties of Perth and Clackmannan’. Imprint 1805

John Thomson (1777-c.1840) & William Johnson (1806-1840)

- ‘Perthshire with Clackmannan’. Imprint 1827

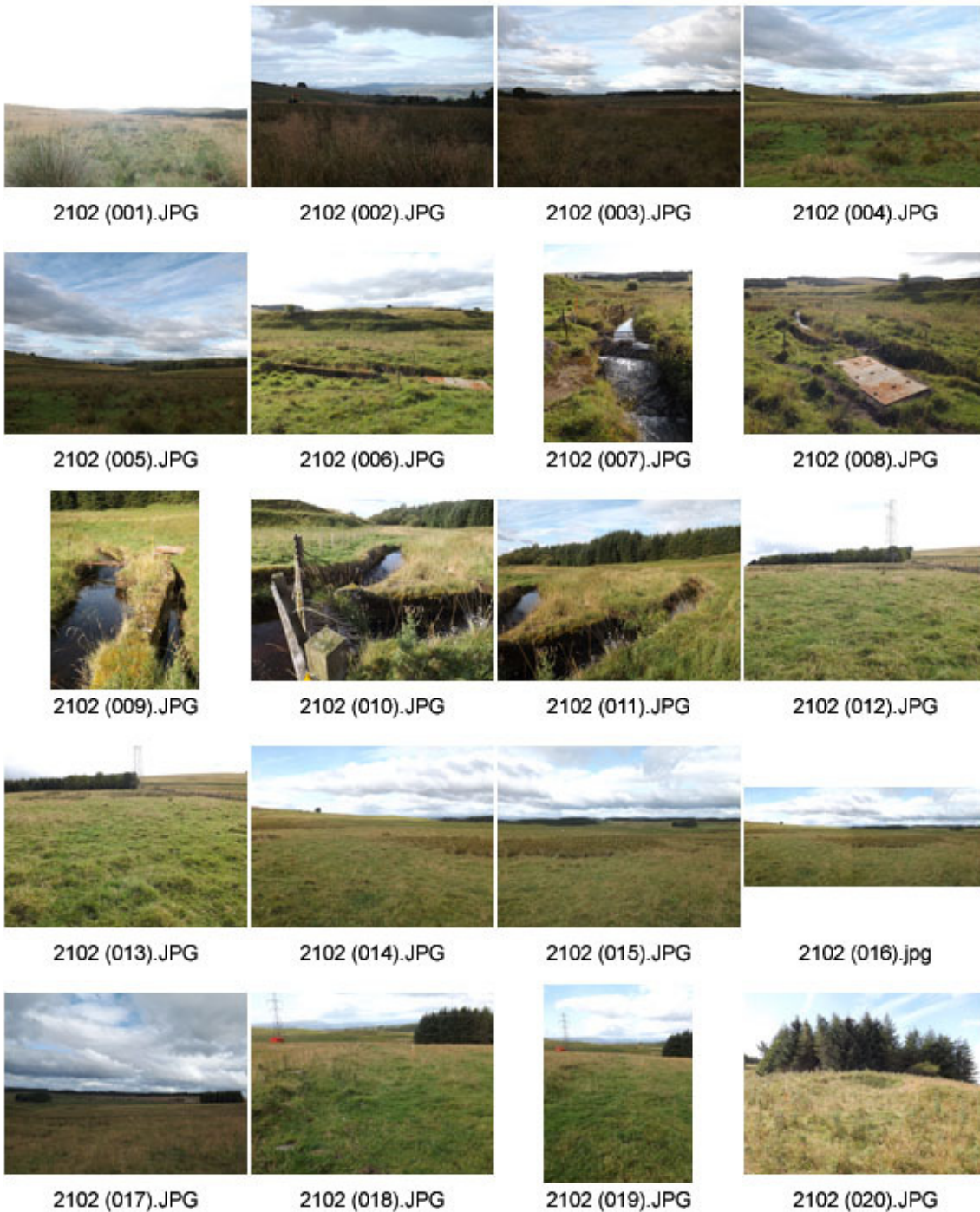
Ordnance Survey (1857 – present)

- 25 inch to 1 mile, Perth and Clackmannan, Sheet CXXV.13 (Logie). Surveyed 1862. Published 1866
- 25 inch to 1 mile, Roxburgh, Sheet CXXVI.13 (Dunblane). Surveyed 1862. Published 1866
- 25 inch to 1 mile, Stirlingshire, Sheet 010A.16. Surveyed 1896. Published 1898
- 25 inch to 1 mile, Stirlingshire, Sheet 011A.13. Surveyed 1896. Published 1898
- 25 inch to 1 mile, Perth and Clackmannanshire 126.13. Surveyed 1899. Published 1900
- 25 inch to 1 mile, Perth and Clackmannanshire 133.01. Surveyed 1899. Published 1900
- 25 inch to 1 mile, Perth and Clackmannanshire, Sheet 133.01. Revised 1899. Published 1900
- 25 inch to 1 mile, Stirlingshire, Sheet 010A.16. Surveyed 1913. Published 1915
- 25 inch to 1 mile, Stirlingshire, Sheet n011.04. Revised 1913. Published 1915
- 6 inch to 1 mile, Perthshire Sheet CXXVI. Surveyed 1862-3. Published 1866
- 6 inch to 1 mile, Perthshire Sheet CXXVI. Surveyed 1862. Published 1866
- 6 inch to 1 mile, Stirlingshire Sheet Xa.SE. Surveyed 1896. Published 1899
- 6 inch to 1 mile, Perth and Clackmannan Sheet CXXVI.SW. Surveyed 1899. Published 1901
- 6 inch to 1 mile, Perth and Clackmannan Sheet CXXVI.NW. Surveyed 1899. Published 1901
- 6 inch to 1 mile, Perth and Clackmannan Sheet CXXIII. Surveyed 1911. Published 1924
- 6 inch to 1 mile, Stirlingshire Sheet n XI. Surveyed 1913. Published 1923
- 6 inch to 1 mile, Stirlingshire Sheet n Xla. Surveyed 1913. Published 1925
- 6 inch to 1 mile, Stirlingshire Sheet n XI.NE. Surveyed 1914. Published 1923
- 6 inch to 1 mile, Stirlingshire Sheet n XI.NE. Surveyed 1938. Published 1947
- 6 inch to 1 mile, Stirlingshire Sheet n Xla. Surveyed 1946. Published 1952
- 6 inch to 1 mile, Perth and Clackmannan Sheet CXXXIII. Surveyed 1947. Published 1950
- 6 inch to 1 mile, Stirlingshire Sheet n XI.NE. Surveyed 1948. Published 1951
- 6 inch to 1 mile, Perth and Clackmannan Sheet nCXXVI.SW. Surveyed 1948. Published 1950



**Appendix B:**

**Photographic Thumbnails; Kippendavie Estate Woodland Creation Scheme - Archaeological Survey and Assessment**





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2102 (024).JPG



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**Appendix C:****Photographic Register; Kippendavie Estate Woodland Creation Scheme - Archaeological Survey and Assessment**

<i>Image #</i>	<i>Frame</i>	<i>Facing</i>	<i>Date</i>	<i>Description</i>	<i>Taken By</i>
001	4905	SE	13/08/2014	Site, General area shot	AJLM
002	4906	SW	13/08/2014	Site, General area shot	AJLM
003	4907	W	13/08/2014	Site, General area shot	AJLM
004	4908	SW	13/08/2014	Site, General area shot	AJLM
005	4909	SW	13/08/2014	Site, General area shot	AJLM
006	4910	SW	13/08/2014	Site 1, General, Looking across Wharry Burn	AJLM
007	4911	SE	13/08/2014	Site 1, General, Looking up Wharry Burn	AJLM
008	4912	S	13/08/2014	Site 1, General view across fence line	AJLM
009	4913	NW	13/08/2014	Site 1, General, Looking down burn	AJLM
010	4914	W	13/08/2014	Site 1, General, Towards Reservoir	AJLM
011	4915	NW	13/08/2014	Site 1, General shot	AJLM
012	4916	S	13/08/2014	Site 4, Area of Rig + Furrow, SW corner of site	AJLM
013	4917	S	13/08/2014	Site 4, Area of Rig + Furrow, SW corner of site	AJLM
014	4918	W	13/08/2014	View of development area from Site 4: 1	AJLM
015	4919	NW	13/08/2014	View of development area from Site 4: 2	AJLM
016			13/08/2014	Composite of photos 014, 015	AJLM
017	4920	N	13/08/2014	View of development area from Site 4: 3	AJLM
018	4921	SW	13/08/2014	Site 5, Trackway/ field boundary	AJLM
019	4922	SW	13/08/2014	Site 5, Trackway/ field boundary	AJLM
020	4923	S	13/08/2014	Site 2, Quarry, Through mouth to S	AJLM
021	4924	W	13/08/2014	Site 2, Quarry, Overall	AJLM
022	4925	W	13/08/2014	Site 2, Quarry, N half	AJLM
023	4926	SW	13/08/2014	Site 2, Quarry, Mid	AJLM
024	4927	S	13/08/2014	Site 2, Quarry, S half	AJLM
025			13/08/2014	Composite of photos 022, 023, 024	AJLM
026	4928	SSE	13/08/2014	Site 2, Quarry, SW portion	AJLM
027	4929	N	13/08/2014	Site 3, Fieldwall, Looking N	AJLM
028	4930	N	13/08/2014	Site 3, Fieldwall, Looking N	AJLM
029	4931	S	13/08/2014	Site 3, Fieldwall, N end	AJLM
030	4932	S	13/08/2014	Site 3, Fieldwall, N end w/ burn	AJLM
031	4934	ENE	13/08/2014	Sherrifmuir Road bridge from Wharry Burn	AJLM
032	4935	E	13/08/2014	Sherrifmuir Road bridge from Wharry Burn, Location of mortared and worked stones	AJLM
033	4936	V	13/08/2014	Detail of mortared and worked stones along Wharry Burn	AJLM
034	4937	W	13/08/2014	Gathering Stone, Overall	RC
035	4938	W	13/08/2014	Gathering Stone, Overall	RC
036	4939	W	13/08/2014	Gathering Stone, Inscription	RC
037	4940	E	13/08/2014	Gathering Stone, Overall	RC
038	4941	N	13/08/2014	Gathering Stone, Overall	RC
039	4942	S	13/08/2014	Gathering Stone, Overall	RC
040	4943	S	13/08/2014	Gathering Stone, Overall	RC
041	4944	SW	13/08/2014	Gathering Stone, Overall	RC
042	4945	W	13/08/2014	Stones on S slope of Black Hill, NE most	RC
043	4946	SW	13/08/2014	Stones on S slope of Black Hill, NE most, Towards Wallace Stone	RC
044	4947	SW	13/08/2014	Stones on S slope of Black Hill, NE most, Towards Wallace Stone	RC

045	4948	SW	13/08/2014	Stones on S slope of Black Hill, NE most, Towards Wallace Stone	RC
046	4949	WSW	13/08/2014	Stones on S slope of Black Hill, 2nd NE most, Wallace Stone	RC
047	4950	WSW	13/08/2014	Stones on S slope of Black Hill, 2nd NE most, Wallace Stone	RC
048	4951	SW	13/08/2014	Stones on S slope of Black Hill, 2nd NE most, Wallace Stone	RC
049	4952	SW	13/08/2014	Stones on S slope of Black Hill, 2nd NE most, Wallace Stone, Showing distance to central of 5 stones	RC
050	4953	SW	13/08/2014	Stones on S slope of Black Hill, 2nd NE most, Wallace Stone, Showing distance to central of 5 stones	RC
051	4954	SE	13/08/2014	Stones on S slope of Black Hill, Central of 5, Overgrown	RC
052	4955	SW	13/08/2014	Stones on S slope of Black Hill, Central of 5, Overgrown	RC
053	4956	SW	13/08/2014	Stones on S slope of Black Hill, Central of 5, Overgrown	RC
054	4957	SW	13/08/2014	Stones on S slope of Black Hill, 2nd most to SW, Split	RC
055	4958	SW	13/08/2014	Stones on S slope of Black Hill, 2nd most to SW, Split	RC
056	4959	SW	13/08/2014	Stones on S slope of Black Hill, SW most, Cupmarked	RC
057	4960	SW	13/08/2014	Stones on S slope of Black Hill, SW most, Cupmarked	RC
058	4961	NE	13/08/2014	Stones on S slope of Black Hill, SW most, Cupmarked	RC
059	4962	SE	13/08/2014	Stones on S slope of Black Hill, SW most, Cupmarked	RC
060	4963	NW	13/08/2014	Stones on S slope of Black Hill, SW most, Cupmarked face	RC
061	4964	N	13/08/2014	Monument to Battle, Clan MacRae	RC
062	4965	NE	13/08/2014	Monument to Battle, Clan MacRae	RC
063	4966	S	13/08/2014	Monument to Battle, Clan MacRae, View S from W side	RC
064	4967	S	13/08/2014	Monument to Battle, Clan MacRae, View S from E side	RC
065	5033	E	04/09/2014	Lade, E extent of site at Sherrifmuir Road	AJLM
066	5035	NE	04/09/2014	Showing Lade with Wallace Stone in the distance	AJLM
067	5036	W	04/09/2014	Lade, with general shot of site looking W	AJLM
068		N	23/09/2014	Site F, from Sheriffmuir Road bridge, looking uphill	AJLM
069		N	23/09/2014	Site F, from Sheriffmuir Road bridge, looking uphill	AJLM
070		N	23/09/2014	Site F, from Sheriffmuir Road bridge, looking uphill	AJLM
071		S	23/09/2014	Site F, from Sheriffmuir Road bridge, looking Downhill	AJLM

**Appendix D:****Provisional Discovery and Excavation Scotland (DES) entry; Kippendavie Estate Woodland Creation Scheme – Archaeological Survey and Assessment**

<b>LOCAL AUTHORITY:</b>	Stirling Council
<b>PROJECT TITLE/SITE NAME:</b>	Kippendavie Estate Woodland Creation Scheme – Archaeological Survey and Assessment
<b>PROJECT CODE:</b>	AA 2102
<b>PARISH:</b>	Dunblane and Lecropt
<b>NAME OF CONTRIBUTOR:</b>	Andrew Morrison and Ross Cameron
<b>NAME OF ORGANISATION:</b>	Addyman Archaeology
<b>TYPE(S) OF PROJECT:</b>	Archaeological Desk Based Assessment and walkover survey
<b>NMRS NO(S):</b>	NN80SW 1
<b>SITE/MONUMENT TYPE(S):</b>	Battle Site
<b>SIGNIFICANT FINDS:</b>	None
<b>NGR</b> (2 letters, 8 or 10 figures)	NN 82155 01324
<b>START DATE</b> (this season)	13/08/14
<b>END DATE</b> (this season)	13/08/14
<b>PREVIOUS WORK</b> (incl. <i>DES</i> ref.)	
<b>MAIN (NARRATIVE) DESCRIPTION:</b> (May include information from other fields)	<p>Addyman Archaeology was contacted by UPM Tillhill Ltd. in order to undertake an archaeological survey and Desk Based Assessment (DBA) of an area on the Kippendavie Estate to the south of Linns and west of Glentye Cottage. It is proposed to plant the area with forestry. The area lies within the known battleground of the 1715 Battle of Sheriffmuir.</p> <p>The DBA and associated research identified six potential sites within the boundaries of the proposed development area, two of which were located during the walkover, where a further four previously unknown sites were also recorded. This brings the overall total to six identified cultural heritage sites within the boundaries of the Kippendavie Woodland Creation Scheme development area. These sites were of varying cultural heritage significance and the vast majority will be impacted by the development to some degree.</p> <p>It is recommended that the planting avoids all visible, above ground sites recorded during the walkover. All sites identified during the walkover should be marked out on the ground by the archaeological team prior to the site works commencing. A full metal-detecting survey is also recommended prior to planting activities taking place in order to recover any information available pertaining to the 1715 Battle of Sheriffmuir.</p>
<b>PROPOSED FUTURE WORK:</b>	Fieldwalking Survey, Metal-Detecting Survey
<b>CAPTION(S) FOR ILLUSTRS:</b>	-
<b>SPONSOR OR FUNDING BODY:</b>	UPM Tilhill Ltd.
<b>ADDRESS OF MAIN CONTRIBUTOR:</b>	St. Ninian's Manse, Quayside Street, Edinburgh, EH6 6EJ
<b>EMAIL ADDRESS:</b>	admin@addyman-archaeology.co.uk

<b>ARCHIVE LOCATION</b> (intended/deposited)	Archive and report to be deposited with RCAHMS and Scottish Borders HER.
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