

# Dykedale

*Kippendavie Estate, Dunblane*

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*Archaeological Evaluation and Metal Detecting Survey*

for

The Kippendavie Group Trust

*April 2015*



**Addyman Archaeology**

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Archaeological Evaluation and Metal Detecting Survey : April 2015

Data Structure Report

AA 1935

by Kenneth Macfadyen and Andrew Morrison

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# Dykedale

## *Kippendavie Estate, Dunblane*

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### Archaeological Evaluation and Metal Detecting Survey : April 2015

#### *Executive Summary*

Addyman Archaeology was contacted by Ristol Consulting Ltd (contact Mark Richardson) to undertake a metal detecting survey and archaeological evaluation on a plot of land to the east of Dunblane prior to development (planning consent was granted 03/11/14- ref.14/00553/FUL). Known as Dykedale, the site is located within the boundary of the Sheriffmuir Battlefield as defined and protected by Historic Scotland. Due to the sensitive location of the site, Stirling Council placed an archaeological condition on the development and also agreed on the WSI.

A total of forty-two metal artefacts were recovered during the metal detecting survey. For the most part, the assemblage was comprised of 19<sup>th</sup> and 20<sup>th</sup> century domestic and agricultural debris of limited archaeological significance. Of the artefacts recovered, only three are of particular interest and have been submitted to Treasure Trove; these include a Copper Alloy buckle, an Iron Knife blade repurposed as a file, and a Lead musket ball which may relate to the Battle of Sheriffmuir fought in 1715.

A domestic midden, likely late 19<sup>th</sup> century in date, was uncovered through metal detecting within what was probably a garden plot adjoining south gable of Dykedal cottage. The presence of the midden was recorded but unexcavated as it will remain unaffected by the proposed development.

The subsequent archaeological evaluation that took place on site uncovered no additional finds or features. The site was mostly made up of cultivated farmland planted with turnips, with a thin layer of ploughsoil overlying the natural sandy clay.

A record of the evaluation and metal detecting survey has been deposited with the Online Access to the Index of Archaeological Investigations (OASIS) website hosted by the Archaeological Data Service (OASIS ID - addyman1-210287) and with Discovery and Excavation in Scotland (DES), the annual publication of fieldwork by Archaeology Scotland. A summary of the findings will also be submitted to the Annual Review of Post-Medieval Fieldwork in Britain and Northern Ireland as published by the Society for Post-Medieval Archaeology.

## 1. Introduction

### i. General

Addyman Archaeology was contacted by Mark Richardson of Ristol Consulting Ltd. on behalf of the Kippendavie Estate to undertake a programme of archaeological investigation prior to the development of a cottage to the E of Dunblane. Through planning application 14/00553/FUL/ML, the developer intends to alter and extend an existing dwelling with a new access road on land N of Dykedale Farm.

The site lies inside of an area of known archaeological sensitivity within the Battle of Sheriffmuir designated *Battlefield Inventory* boundary, as outlined by Historic Scotland. Here, in 1715, the Jacobites under the Earl of Mar fought against the Government forces of the Duke of Argyll. Although the battle proved indecisive, it has been interpreted as the crucial battle of the 1715 Jacobite Rising. The Battle of Sheriffmuir is regarded as of national importance and thus one of the 17 battlefields included in the first publication of Historic Scotland Inventory in 2011.

A Desk Based Assessment undertaken as part of the Written Scheme of Investigation (WSI) showed the site to lie on the route taken by the Government troops prior to the battle. Following the initial engagement, the Jacobite right wing routed the Government left and the pursuit of the fleeing Government soldiers would have taken them across the development site.

The archaeological investigation is a condition of the planning consent as stipulated by Stirling Council and states that;

*No works shall take place within the development site until the developer has secured the implementation of a programme of archaeological works in accordance with a written scheme of investigation which has been submitted by the applicant, agreed by the Stirling Council Planning Officer (Archaeology), and approved by the Planning Authority. Thereafter the developer shall ensure that the programme of archaeological works is fully implemented and that all recording and recovery of archaeological resources within the development site is undertaken to the satisfaction of the Planning Authority in agreement with the Stirling Council Planning Officer (Archaeology). Such a programme of works could include some or all of the following historical research, excavation, post-excavation assessment and analysis, publication in an appropriate academic journal and archiving.*

The metal detecting portion of the fieldwork was undertaken by Alastair Hacket and Rolf Whyte, and overseen by Andrew Morrison on the 16<sup>th</sup> of April 2015. The evaluation trenching was undertaken by K. Macfadyen on the 28<sup>th</sup> of April 2015 on a day of variable weather ranging from overcast skies to rain sleet and freezing hail.

This document contains several maps reproduced by kind permission of the Trustees of the National Library of Scotland (NLS). To view these maps online, see [www.nls.uk](http://www.nls.uk).

*ii. Setting*

The development lies to the east of the historic burgh of Dunblane within an area of undeveloped farmland, but adjacent to existing archaeological structures. Measuring roughly 100m in length by 45m wide in the centre and tapering at the northern and southern extents, the development at Dykedale is centred on NN 79694 01444 and lies north of Dykedale Farmhouse within a series of fertile fields bounded by irregular forestry plantations. The historic road from Dunblane to Sheriffmuir, now disused, runs west-east to the south of the development.

The underlying geology of the site is uncomplicated. Dykedale overlies sedimentary bedrock formed 391 to 417 million years ago in the Devonian Period, in an environment previously dominated by rivers. At Dykedale this is specifically sandstone and mudstone of the Buttergask Flagstone; the overlying superficial deposits comprise till of Devensian to Diamicton. These deposits were formed up to 2 million years ago in the present Quaternary Period in a local environment characterised by ice age conditions and glaciers.<sup>1</sup>

*iii. The Historic Scotland Battlefield Inventory*

The proposal lies within the area designated and protected by Historic Scotland as the site of the Battle of Sheriffmuir. For further detail please refer to Addyman Archaeology 2012.

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<sup>1</sup> <http://mapapps.bgs.ac.uk/geologyofbritain/home> - 22/11/12



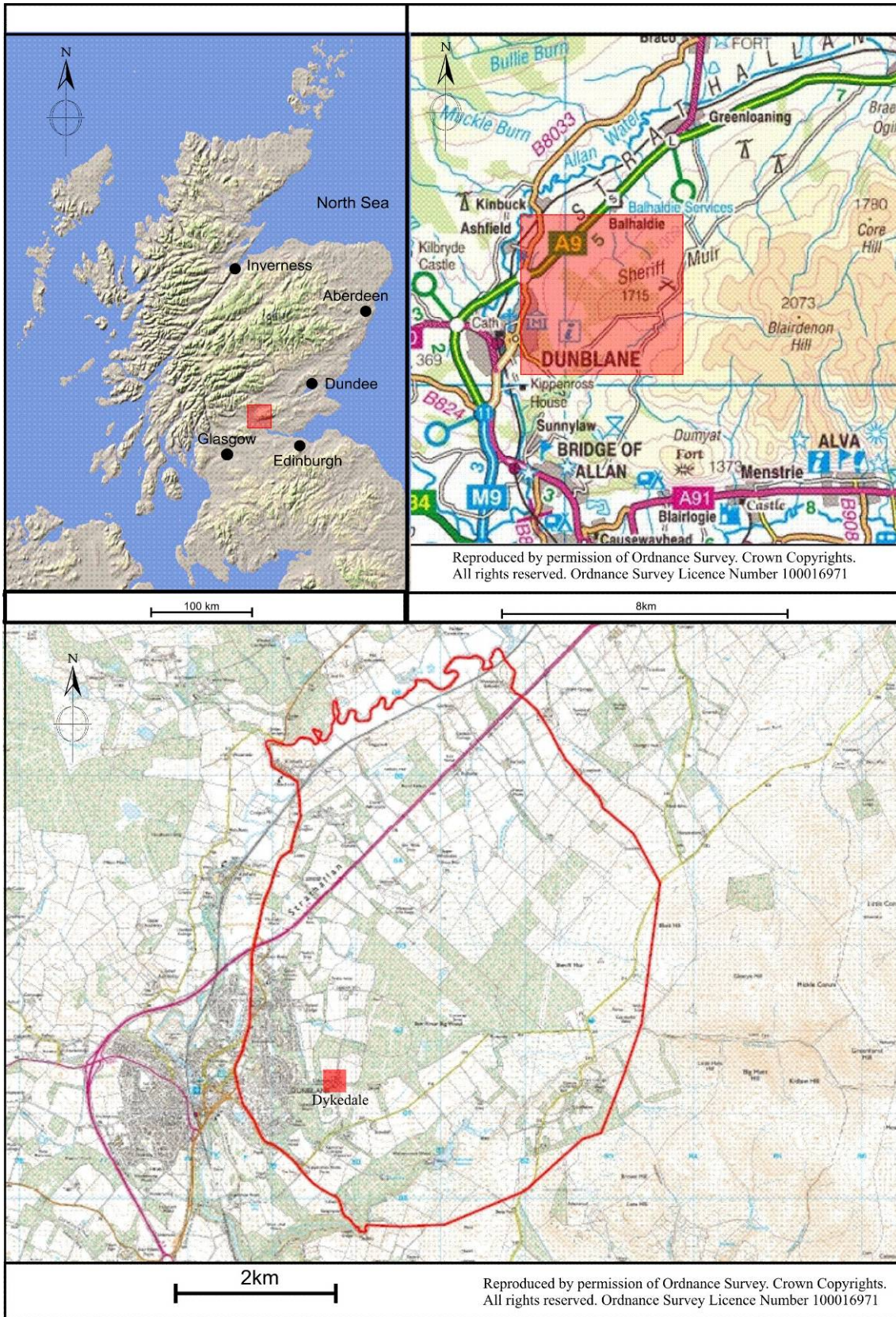


Figure 1 General site location plan showing the locations of the proposed development areas within the Battlefield boundary as established by Historic Scotland in the Battlefield Inventory (Addyman Archaeology after Historic Scotland)



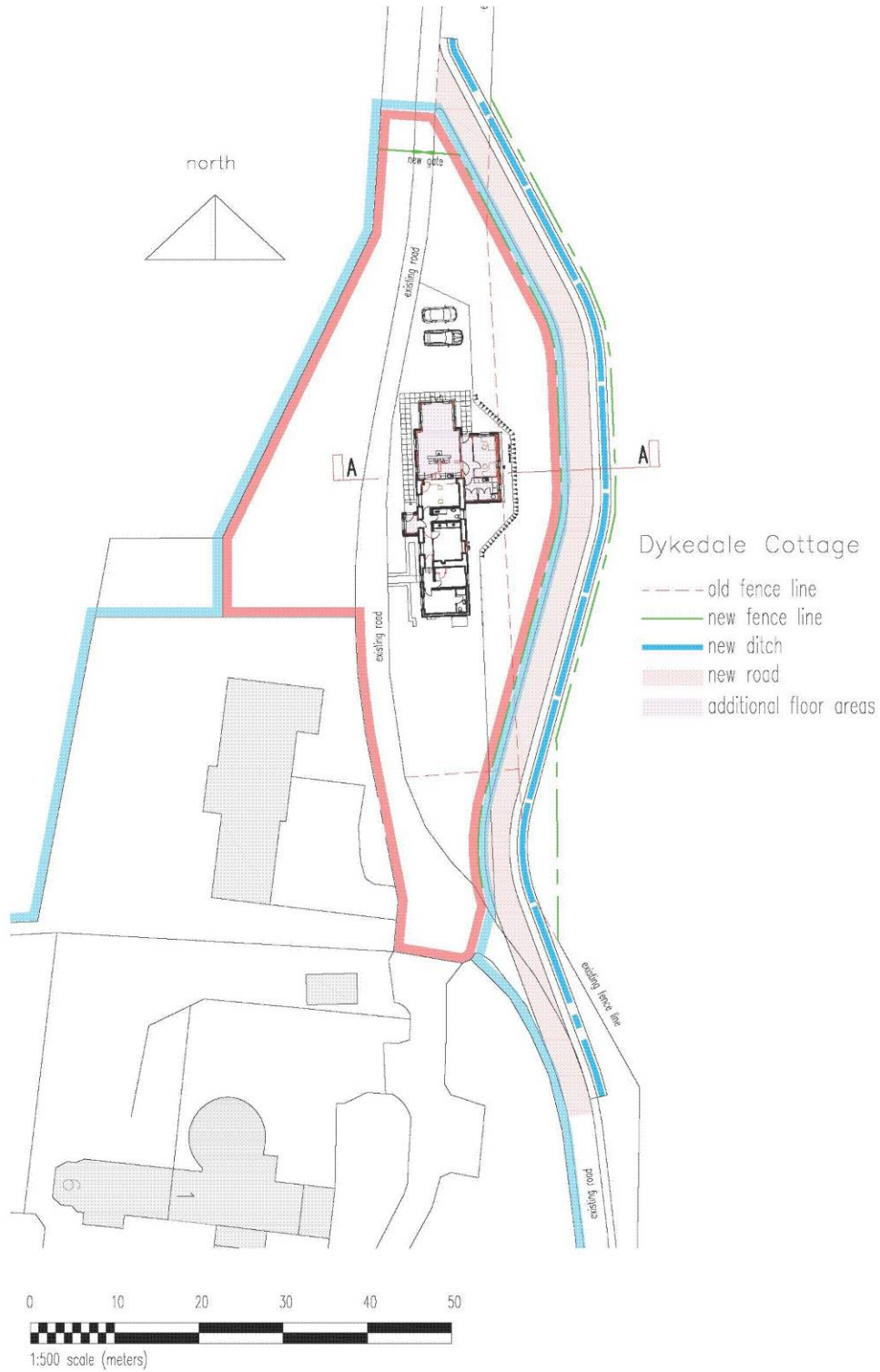


Figure 2 Detailed location of the proposed development site N of Dykedale (courtesy of Ristol Consulting Ltd.)



## 2. *Brief Historical Summary*

### i. *General*

The archaeological condition was placed upon the proposed development as a result of its proximity to the Battle of Sheriffmuir and its location within the limits of the battlefield as defined by Historic Scotland in 2011 (*Figure 2*). As a result, the history and location of the Battle of Sheriffmuir will form much of the brief historical analysis of the WSI, but it is important that this is not to the detriment of other known historical or archaeological features relevant to the sites. In addition to the historical assessment, a brief map regression charts the development of the general area surrounding Dykedale Farm. For a more in-depth historical summary and map regression, please see Addyman Archaeology 2011, and 2012.

### ii. *The Battle of Sheriffmuir*

#### a. *Historical summary*

Fought on November 13<sup>th</sup>, 1715 on the upland moor east of Dunblane, the Battle of Sheriffmuir is recognised as being the decisive battle of the 1715 Jacobite Rising, and the only major action in Scotland during the conflict.

Following the deposition of the Catholic King James the VII and II in 1688, and the later crowning of a Protestant King- in the Elector of Hanover as George I in 1714, supporters of the Catholic heir James Francis Edward Stuart ‘The Old Pretender’ (whom they viewed as the rightful heir to the throne) launched a campaign to regain the throne from the House of Hanover.

The following description of the battle is an excerpt from Addyman Archaeology 2012:

*The Jacobite cause was championed in Scotland by the Earl of Mar, whose army met the Government forces on high ground east of Dunblane. Mar had numerical superiority, but the Battle of Sheriffmuir did not result in the decisive victory either side sought. The opposing armies met on ground neither was fully familiar with, nor prepared for. In the ensuing action, the Jacobite Right under Mar, routed the Government Left and set off in pursuit. This left the Jacobite Left 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 were 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 Right wings of both armies returned to Sheriffmuir only than to discover what had befallen their comrades. With evening drawing on, neither side re-engaged; hostilities did not resume.*

The Battle of Sheriffmuir is regarded as a strategic defeat for the Jacobites due to their failure to overcome the numerically inferior Government forces, and their loss of momentum on their march southwards. The Jacobite forces suffered a further defeat in Preston the following day, which essentially ended the Rising.

Historic Scotland have identified the battle as being of national significance as it saw one of the largest Jacobite armies to take the field engaged in battle. The Battlefield Inventory documentation by Historic Scotland estimates that 7,000 Jacobites faced over 3,000 Government soldiers. The number of casualties is open to much debate, although the same document puts a conservative estimate at 300-400 killed on either side.<sup>2</sup>

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<sup>2</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

*b. The nature of the Battle of Sheriffmuir*

The Battle of Sheriffmuir was not a traditional set-piece battle; it did not take place on ground of either side's choosing and as such could be viewed more 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 this point. The battle then 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.

The physical evidence of the battle in the form of the archaeological evidence of the actual engagement and 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. For information, we must rely on the results of metal detector surveys and the assessment of the documentary resource in conjunction with a landscape assessment.

*c. Previous archaeological works on the battlefield*

Previous archaeological works within the boundaries of the Sheriffmuir Battlefield have been well documented in previous reports and need not be restated here<sup>3</sup>. A large metal detecting survey was undertaken by GUARD in 2006 in advance of the Beaully-Denny power lines that uncovered a wealth of information relating to the battle and avenues of advancement and retreat. A small-scale metal detecting survey was undertaken by Addyman Archaeology in 2012 to the west of the battlefield at Dairyman's and at an adjacent plot to the current development area at Dykedale. Two musket balls were uncovered at Dairyman's, with nothing of significance shown at Dykedale.

*d. Archaeological significance of the western edge of the battlefield area*

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). The Government forces under the Duke of Argyle, however, were located within Dunblane itself and marched eastwards from Dunblane along a former road whose line skirts the southern boundary of Kippendavie (the present access road to Dykedale Farm), to the battle site in order to counter what was perceived to be a Jacobite flanking movement.

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. The western edge of the Battlefield Inventory boundary comprises rich, improved agricultural land, at odds with the battlefield as encountered in 1715. The agricultural use of the area will have impacted upon any archaeological remains, which are most likely to be surface bound, as due to the nature of the battle no earthfast archaeological remains are to be expected.

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<sup>3</sup> See: Addyman Archaeology, 2014, Kippendavie Estate Woodland Creation Scheme- archaeological survey and assessment. Addyman Archaeology, 2012, Dykedale and Dairyman's- metal detecting survey. Guard, 2006, Sheriffmuir Battlefield DSR.

iii. *General Historical Analysis*

From the NMRS and Stirling Council HER sites were assessed within a 1km radius of Dykedale Farm (figure 3). All these sites were numbered and can be viewed in Table 1.

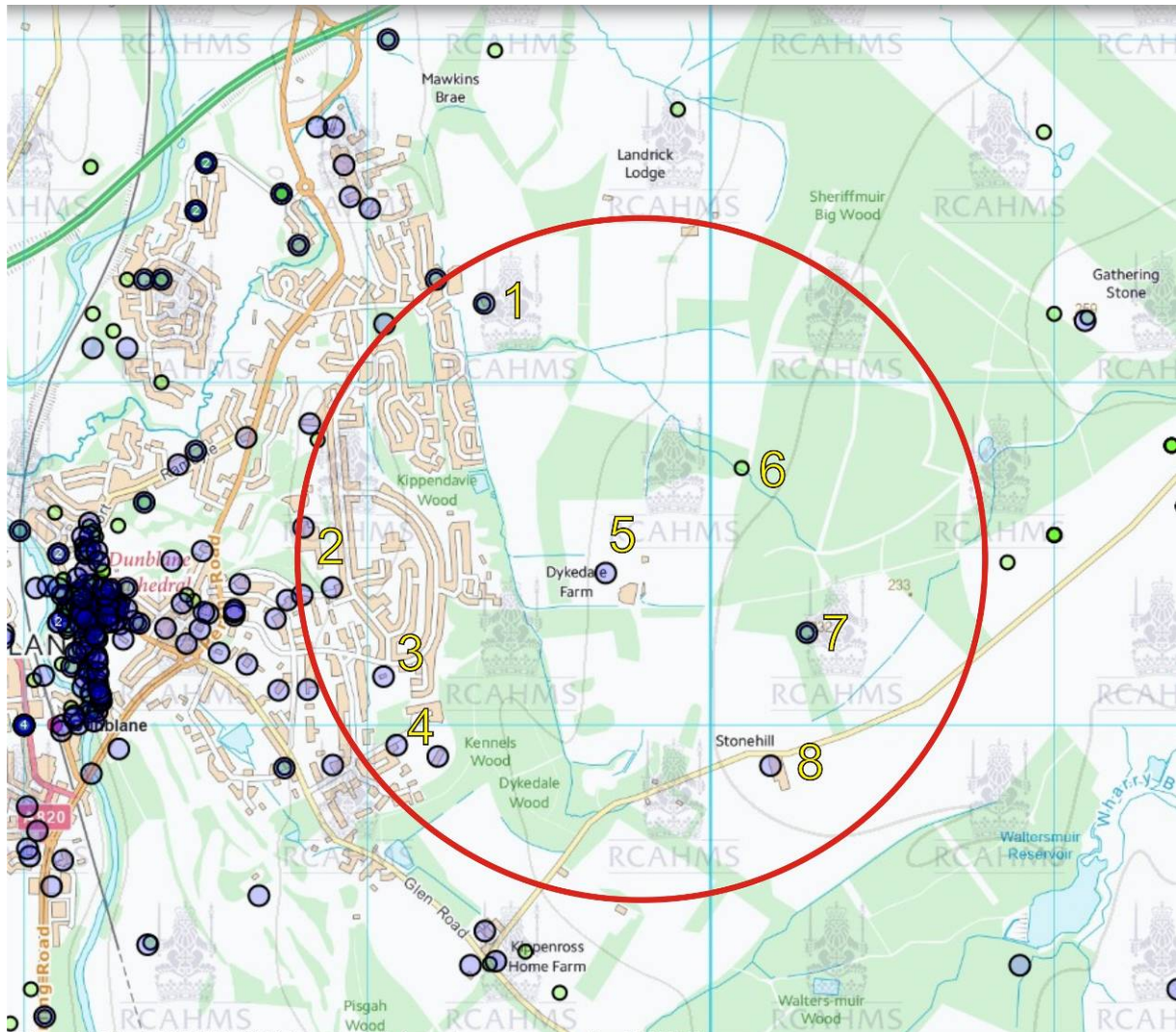


Figure 3 Sites from the SMRS and Stirling Council HER within 1km of Dykedale (after PASTMAP)

No archaeological finds or features have been recorded in the immediate vicinity of Dykedale Farm, though it is situated within a region of known archaeological activity. A prehistoric enclosure (*Site 7*) is located to the ESE of the farm, suggesting that further prehistoric remains may survive in the area though no features have been identified on the ground.

Another site within relative proximity to Dykedale, (*Site 6*) was recorded on the HER and located to the NE of the site. However, no information was available other than the term ‘indeterminate remains’.

A metal detecting survey was undertaken in the grounds immediately adjacent to the proposed development area (*Site 5*); no archaeologically significant finds were recovered (see Addyman Archaeology 2012).

## Sites within a 1km boundary of Dykedale Farm:

<b>Site No.</b>	<b>Name, Feature</b>	<b>OS Grid Ref. (Canmore)</b>	<b>NMRS/HER No.</b>	<b>SMR No.</b>	<b>Designation</b>	<b>Period</b>
01	Ryland (formerly Kippendavie) Lodge	NN 79340 02230	NN70SE 72	367	Listed Building Category C	1617 datestone on porch, c.1820 current house
02	Perth Road, Dunblane Hydro Hotel including Hydro Lodge, Newton Cottage, gatepiers and boundary wall	NN 78814 01577 NN 78897 01402	NN70SE 98 NN70SE 98.01		Listed Building Category B	1875-6 with later additions
03	Newton Crescent, Provan including boundary wall	NN 79047 01142	NN70SE 194		Listed Building Category B	1906
04	Leewood Road, Ault Wharrie, Masonic home and associated buildings	NN 79205 00909	NN70SE 115		Listed Building Category A	1900
05	Dunblane, Dykedale Farm	NN 79694 01444	NN70SE 207		Metal detecting survey	Event
06	Dykedale, indeterminate remains			2205		
07	Stonehill, enclosure	NN 8028 0127	NN80SW 11	2862		Pre-historic
08	Stonehill, farmhouse	NN 80174 00882	NN80SW 9		Listed Building Category C	18 <sup>th</sup> century

Table 1 Sites from the SMRS and Stirling Council HER within 1km of Dykedale (after PASTMAP)



iv. *Brief Map Regression*

The proposed development area at Dykedale is of too small a scale to be identifiable on any of the early cartographic depictions of the Dunblane area. The first map which can be considered as providing a close to accurate representation of the area around Dunblane is William Roy's Military Survey of Scotland, produced between 1747 and 1750 (*Figure 4*).



*Figure 4* General Roy's military map of 1747 showing the location of Dykedale Farm as indicated red  
 © The British Library Board. All Rights Reserved (Roy Military Survey of Scotland)

Roy's map shows the area now occupied by Dykedale Farm to sit within or near the boundary of a formal forestry plantation. It is possible that the depiction of the area east of Dunblane on Roy's map is not a spatially accurate reproduction, but rather a representation of the general features to be found in the area.

In John Blackadder's charting of the Kippendavie Estates, surveyed in 1817 (*Figure 5*), Dykedale Farm is listed as 'Dykedales' and is shown as a series of three structures arranged in a rough 'U' formation. The course of the road from Dunblane to Sheriffmuir can be seen to the immediate south of the farm, running west-east, and a formal subrectangular field system adjoins the farm at its northwest corner. The cottage proposed for extension has not yet been built, and the land on which it is later erected is represented as a boggy area adjacent to a north-south field boundary.

The first truly accurate map of the area east of Dunblane comes with the publication of the 1<sup>st</sup> Edition 25 inch to 1 mile series by the Ordnance Survey in 1866. This map (not depicted) shows the continued evolution of Dykedale Farm, and shows that the structure proposed for extension had not yet been built at this time.

The Ordnance Survey 1<sup>st</sup> edition revision, surveyed in 1899 (*Figure 6*), is the first to depict the structure proposed for extension. An informal trackway is shown extending from the Dunblane - Sheriffmuir road, past Dykedale Farm, and leading northwards. The OS 1<sup>st</sup> edition and 1<sup>st</sup> edition revision show the structure within the proposed development area to have been built in the years between 1866 and 1899.



### 3. Metal Detecting Survey

#### i. General

Metal detecting surveys will not successfully source all metal objects over the entirety of a site, but instead can provide an indication of what *may* be recovered. As bioturbation and human interference such as ploughing alter the locations of objects in the soil, artefacts are brought closer to the surface and become more readily detected by any survey. The development will remove this area of the battlefield from any further assessment and as such it is important to retrieve as much archaeological information as possible prior to development.

A metal detecting survey at Dykedale was previously undertaken in 2012 by Addyman Archaeology in a plot of land immediately adjacent to the current development area. No archaeological materials were uncovered during the course of this exercise, and it was found that the ground on which the survey took place had been levelled using imported materials.

The 2015 metal detecting survey took place in a plot of land immediately north of Dykedale Farmhouse, along the verge of the farm road, and within the adjacent field to the east (*Figure 7*). The survey was conducted over the course of a single day on the 16<sup>th</sup> of April, in sunny and clear conditions. Ground vegetation was deemed suitable though not ideal; soils were relatively dry and unwater-logged, with recently strimmed turf along the verges, exposed soils and planted turnips within the field.

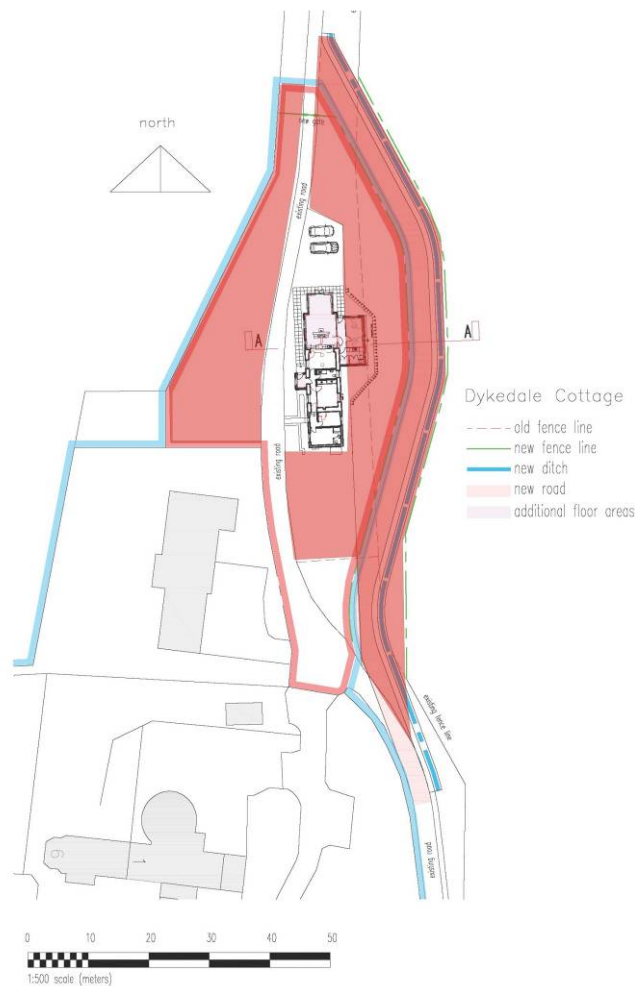


Figure 7 Metal detecting survey area, highlighted in red (Addyman Archaeology after Ristol Consulting Ltd.)





Plate 1 Metal detecting survey, showing ground conditions (photo 016)

## ii. Methodology

The metal detecting survey was completed by a competent metal detecting team of two detectorists proficient in the use of metal detecting equipment and as recommended by Stirling Council Archaeology Officer. The metal detecting team was made up of Alastair Hackett (Secretary of the Scottish Detector Club) and Rolf Whyte (National Council for Metal Detecting member), and was overseen archaeologically by Andrew Morrison. Both Alastair Hackett and Rolf Whyte had been a part of the metal detecting surveys conducted by Addyman Archaeology at Dykedale and Dairymans in 2012.

In order to increase the potential for discovering artefacts of various ferrous and non-ferrous metals, and as per Stirling Council requirements, the detectorists used metal detectors of different specifications to one-another; Alastair was equipped with a Fisher F70, while Rolf used a C-Scope 6MX. Both detectorists dug all clear two way signals received.

The site was scanned by both detectorists traversing the site in narrow transects with their machines set to detect all types of metals. Each signal received was investigated using a small hand trowel, with the recovered object placed in a finds bag and marked with a flag for the archaeologist to identify. Where the finds were retained, those finds locations were plotted using a hand held GPS. Each artefact was individually bagged and assigned a unique find number and recorded on Addyman Archaeology *pro forma* Finds Sheets. The bag was also be marked with its National Grid Reference, denoting its findspot.

The metal detecting work was accompanied by a general photographic survey to document the landscape setting and the locations of detected finds across the area.



### iii. Results

The metal detecting survey revealed a large number of both ferrous and non-ferrous objects, with 42 metal artefacts recovered in total. The entire assemblage was assessed and photographed by the archaeologist on-site (*see Appendix D*), with the majority of the objects determined to be modern domestic and agricultural debris. Of the total objects recovered, eight were assigned small finds numbers, and only six of those were retained (*see Appendix B*).

Five of the six artefacts were sent to a specialist at the National Museum of Scotland for further assessment; these included: a Copper Alloy buckle (*SF001*), a Lead musket ball (*SF003*), an Iron knife blade (*SF006*), and two further Lead objects (*SF004*, *SF005*). A modern Iron horse shoe (*SF008*), likely from a plough horse, was omitted from the specialist assessment.

The assessment determined the assemblage to be mostly “typical ploughsoil finds, chronologically undiagnostic or post medieval/ modern in date”<sup>4</sup>. The annular Copper Alloy buckle (*Plate 2*) is of a common type, post-medieval in date, and would have been associated with a leather strap- likely as part of a horse harness.



*Plate 2 SF001, CuA Buckle*



*Plate 3 SF003, Pb Musket Ball*

The only assessed find which may have an association with the Battle of Sheriffmuir is the Lead musket ball (*SF003*) (*Plate 3*). Analysis of the musket ball indicated that it is consistent with 18<sup>th</sup> century weaponry, and showed possible evidence of having been fired with an impact on a soft target (*see Appendix A*). There is no way to know for certain if this object is battle related; it is of the correct period, but was found along the route towards the battle, in an area that is not known to have had fighting take place.

The Iron knife blade (*Plate 4*) is thought to be relatively recent in date, but is interesting in that it displays the hallmarks of having been used both as a knife and as a metal file. The shape of the blade and position of the tang are indicative of its use as a knife, however the length of the tang and the presence of small diagonal teeth point towards its possible repurposing as a file<sup>5</sup>.

<sup>4</sup> Gemma Cruikshanks- National Museum of Scotland 21/05/15 (Appendix A).

<sup>5</sup> *Ibid.*



*Plate 4 SF006, Fe Knife Blade / File*



*Plate 5 Location of midden (photo 023)*



*Plate 6 Midden detail shot (photo 028)*

To the south of the cottage, and extensive midden within what was likely the garden plot associated with Dykedale cottage was encountered. Located through metal detecting, the midden contained mostly domestic refuse including extensive ceramic, glass, and metal finds likely dating to the late 19<sup>th</sup> century (Plates 5 and 6). The presence of the midden was recorded but not excavated, as this plot of land will be unaffected by the proposed development.

#### *iv. Summary and Discussion*

The artefacts recovered at Dykedale varied in date, function, and material, but mostly fall into the category of 19<sup>th</sup> and 20<sup>th</sup> century farming and domestic debris. The majority of finds were made within the cultivated field to the east of the cottage, with additional finds made along the eastern edge of the roadside and within the small plot next to the cottage to the south. The site is located near to the old military road connecting Dunblane to Sheriffmuir, and would have seen considerable military traffic, particularly en-route to the battlefield in 1715. The survey area has likely been subject to intensive ploughing over an extended period, and the majority of the artefacts recovered reflect this use. The Lead musket ball (SF003) was the only artefact recovered which may potentially date to the Battle of Sheriffmuir, though its provenience can not be proved.

Addyman Archaeology does not recommend any further archaeological mitigation or artefactual analysis prior to development at Dykedale. The limited archaeological significance and potential of the metallic artefacts recovered (with the exception of SF001, SF003, and SF006) leads Addyman Archaeology to further recommend that these are discarded and not submitted to Treasure Trove. SF001, SF003, and SF006 will be submitted to Treasure Trove in keeping with normal standards and procedures.

#### 4. Archaeological Evaluation

##### i. General

The existing Cottage dates to the late 19<sup>th</sup> C, and as part of this planning application the cottage is intended to be extended to the north and east. The current access road running N-S to the west of the cottage is also planned to be realigned to pass to the east side of the building. these extensions to the cottage will involve deep cutting into the slope of the hill to the east destroying any potential in situ archaeology .the new road alignment would similarly destroy any archaeology along its length

Trenching was located to provide an 8% sample of the area to be affected to assess the potential of any surviving in situ archaeology in order to inform the construction phase

Trenches 1 and 2 were located within the footprint of the new extension and trenches 3-6 were placed along the line of the new road

Within the trenches no finds and only 1 feature, a soakaway was noted this was considered relatively recent and of no real interest.

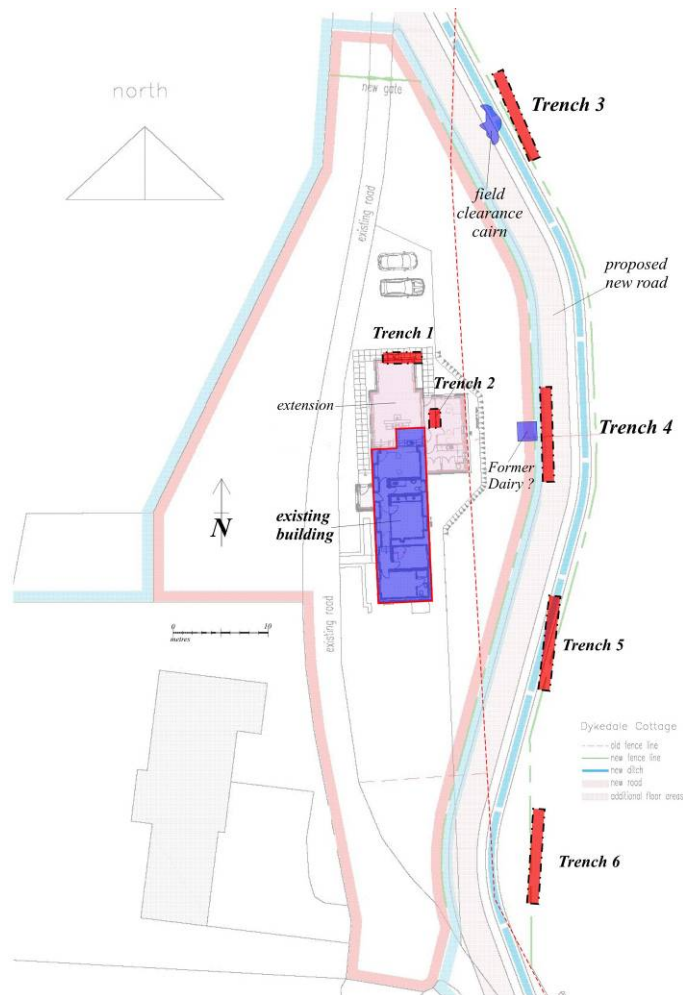


Figure 8 Evaluation trench location plan



The surrounding field was full of turnips grown for sheep fodder (as well as sheep) but an area to the east of the cottage had been left clear of the crop, at first this was thought to be related to the new road as the area left clear roughly related to the new road line. But it was quickly apparent this area was left uncultivated due to the survival of a concrete base for a structure, now reduced to ground level. This small structure was only partially exposed but was seen to be floored in concrete with an apparent sloping /drainage channel formed in the floor. The walls, where some evidence for them survived, were of 20thC brick cement bonded. Estate contact Drew thought this related to a former dairy building.



*Plate 7 Cottage terraced into the natural slope, shows uncultivated patch to east of cottage*



*Plate 8 Concrete base for small 20th C dairy building (to left of photo)*

To the north of the evaluated area some small piles of large field stones had accumulated within this uncultivated area, these were not thought to be of any great antiquity.



ii. *Trench 1*

Trench 1 was planned as a 4 x 1.2 m trench aligned north-south across the footprint of the northern extension. A large concrete slab sat across much of this area and so the trench was rotated to align east-west to avoid this.



Plate 9 Trench 1 pre-excitation looking east, and post-excitation looking west

The slope of the area to the north of the cottage had historically been deeply cut into to form a level car parking area (as well as the cottage construction) and it was suspected that the area had been truncated deeply into the underlying natural. This was rapidly confirmed once the modern hardcore and underlying membrane was removed. 10-15 cm of the hardcore overlay solid insitu natural packed stony sand/silts and clays.

Noted cutting into the natural was a neat rectangular cut pit infilled with rounded stones, this was waterlogged and clearly a soakaway of 20/21<sup>st</sup> C date.

iii. *Trench 2*

Trench 2 was also planned as a 4 x 1.2m trench beneath the eastern extension to the cottage. The footprint to this eastern extension largely straddled the batter between the natural slope to the east and the reduced ground around the cottage. It was considered almost certain that this was all disturbed / truncated historically and this was proved within the trench. The deposits exposed were truncated natural clay silts possibly in part redeposited to form the batter of the slope. A clay drainage pipe was noted running north-south but was not disturbed.





Plate 10 Trench 2 pre-excavation looking south and mid-excavation looking east, services exposed

iv. Trench 3

Trench 3 was 10 m long by 1.2 m wide aligned northwest-southeast at the northern end of the proposed new road where it returned to the west and joined into the existing road.

The stratigraphy was very simple, an up to 0.30 m deep homogenous plough soil overlying a packed sandy /stony silt natural sloping down to the west mirroring the general slope of the field. No finds or archaeological features were noted.

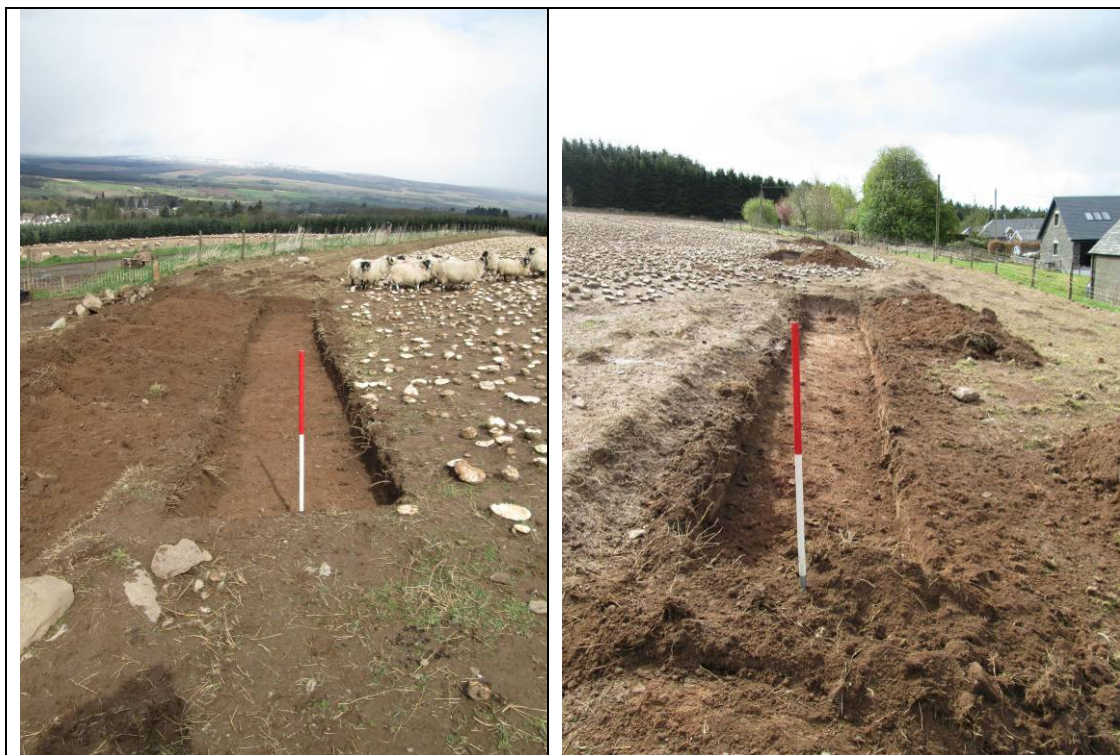


Plate 11 Trench 3 post-excavation (left), and trench 4 post-excavation (right)

v. *Trench 4*

Trench 4 (10x1.2 m) was excavated some 10 m to the south of trench 3 and was found to have unsurprisingly a near identical stratigraphy of up to 0.30 m plough soil over natural. No finds or archaeological features were noted.

vi. *Trench 5*

Trench 5 (10x 1.2 m ) excavated 12 m south of trench 4 also showed the same stratigraphy of plough soil over natural and no archaeological features or finds. At the north end of the trench a clay field drain was noted. this field drain was completely silted up. A deeper sondage into the natural was excavated, within this the natural continued beyond the LOE.

vii. *Trench 6*

Trench 6 (10 x 1.2m) followed the same stratigraphy as in trenches 3, 4, and 5- plough soil overlying natural.

## 5. *Summary and Recommendations*

The archaeological evaluation of the proposed footprint of the cottage extension and the realigned road has not found any archaeologically significant finds or features. The terraced area around the cottage has been historically cut deeply into the natural and no further in situ archaeology is likely to survive in the footprint of the extension.

Along the line of the proposed road the deposits encountered relate to long term ploughing with any potential former archaeology ploughed out, the rest of the deposits on the line of the road are clearly identical to those exposed, being in the same ploughed field and with no hints of negatively cut features cut into the natural below the topsoil the field is likely to be archaeologically sterile.

The concrete base for a 20<sup>th</sup> C structure is of limited interest and the associated boulder clearance cairns are likely to have accumulated following its construction with this part of the field no longer ploughed and a handy place to dump boulders pulled up by the plough

Addyman Archaeology do not recommend any further archaeological mitigation prior to development at Dykedale.

## 6. *Acknowledgements*

Addyman Archaeology was contacted by Mark Richardson of Ristol Consulting Ltd. on behalf of the Kippendavie Estate to undertake archaeological mitigation in order to satisfy the planning conditions placed on development at Dykedale. Both organisations deserve our gratitude for their commitment to the archaeological process and their flexibility in ensuring the metal detecting survey and evaluation was completed quickly and efficiently. The surveys were completed by Alastair Hacket and Rolf Whyte. Their knowledge and enthusiasm were greatly appreciated and are a credit to their craft. Thanks are also due to Stirling Council Archaeology Officer Murray Cook, to Bryony Wallace of Ristol Consulting Ltd, and also to Drew of the Kippendavie Estate for his assistance with the on-site works.

*Appendix A: Finds Assessment;  
Dykedale Metal Detecting Survey- Gemma Cruickshanks, National Museum of Scotland*

**Dykedale, Kippendavie Metalwork Assessment**

Gemma Cruickshanks  
National Museum of Scotland

**Summary**

Five metal artefacts collected during a metal detecting survey of Dykedale were submitted for assessment (table 1). They are all typical ploughsoil finds and are chronologically undiagnostic or post-medieval/ modern in date. The musket ball is the only find which could potentially be related to the Battle of Sherrifmuir.

Material	Find	Preliminary Identification
Copper alloy	001	Undiagnostic post-medieval buckle, probably from a horse-harness. Pin missing.
Iron	006	Knife and metalworking file. Relatively recent.
Lead	003	Musket ball.
	004	Repair patch or working debris.
	005	Offcut.

*Table 1: summary of preliminary object identifications*

**Discussion**

The knife (006) is worthy of mention, as fine diagonal teeth can be seen on one side of the blade where some of the corrosion has flaked away, indicating it was also a file. Such fine teeth are indicative of use on a hard material, probably metal. The off-set tang is more typical of a knife than a file but is short for such a long knife, suggesting it was trimmed down or recut when it was refashioned. The shape suggests it was originally a knife, though turning a knife into a file would be far more technically challenging than making a knife from a file; further cleaning and X-radiography would be required to clarify the sequence of functions. Recycling and reuse of metal objects is likely to have been common throughout the past, but the fineness and good condition of the teeth suggest this is a relatively recent knife/ file.

Simple annular copper alloy buckles like (001) would have been used on leather straps for a variety of functions. Buckles are common ploughsoil finds as they were easily lost when leather straps broke, for example on horse harnesses.

The lead ball (003) is consistent in diameter (17mm) and weight (25.7g/ 0.91oz) with being a musket ball and is typical of 18<sup>th</sup> century weapons (Natasha Ferguson pers.comm). Minor surface distortion indicates it had been fired and hit a relatively soft surface such as soil. Two other fragments of lead are offcuts (005) or working debris (004), though the curved shape of (004) suggests it may also have been used as a repair patch.

**Recommendations**

This is a typical ploughsoil assemblage comprising common artefacts and does not merit full publication or illustration. The knife/ file is interesting and further X-radiography and conservation could clarify its form but as it is recent in date and unstratified there would be little research value in doing so.



**Appendix B:  
Finds Register;**

<i>Finds No.</i>	<i>NGR</i>	<i>Quantity</i>	<i>Material</i>	<i>Description</i>	<i>Comments</i>	<i>Date</i>	<i>Initials</i>
001	NN 79822E 01508N	1	CuA	Buckle, Annular double loop.		16/04/2015	AH
002	NN 79822E 01503N	1	Fe	Nail	Not retained	16/04/2015	AH
003	NN 79820E 01495N	1	Pb	Musket Ball		16/04/2015	AH
004	NN 79823E 01480N	1	Metal	Unknown Trapezoidal object		16/04/2015	AH
005	NN 79814E 01477N	1	Pb	Lump		16/04/2015	RW
006	NN 79802E 01502N	1	Fe	Knife Blade		16/04/2015	AH
007	NN 79804E 01499N	1	Fe	Blade?	Not retained	16/04/2015	AH
008	NN 79804E 01462N	1	Fe	Horse Shoe		16/04/2015	RW

**Appendix C:  
Photographic Register;**

<i>Image No.</i>	<i>Direction Facing</i>	<i>Date</i>	<i>Description</i>	<i>Taken By</i>	<i>Portrait / Landscape</i>
001	SE	16/04/2015	Site Overall, Looking towards E boundary	AJLM	L
002	SW	16/04/2015	Site Overall, Looking towards W boundary	AJLM	L
003	W	16/04/2015	Site Overall, N gable and W boundary	AJLM	L
004	N	16/04/2015	Site Overall, Looking towards N boundary	AJLM	L
005	S	16/04/2015	Site Overall, S end, Land S of cottage	AJLM	L
006	S	16/04/2015	Site Overall, S end, Land S of cottage	AJLM	L
007	S	16/04/2015	Site Overall, S end of Turnip patch	AJLM	L
008	N	16/04/2015	Working shot, Alastair hacket and Rolf Whyte to N	AJLM	L
009	N	16/04/2015	Working shot, Alastair hacket and Rolf Whyte to N	AJLM	L
010	W	16/04/2015	View from site looking over Dunblane	AJLM	L
011	SW	16/04/2015	View from site looking over Dunblane	AJLM	L
012		16/04/2015	SF.001, CuA Buckle	AJLM	L
013		16/04/2015	SF.001, CuA Buckle	AJLM	L
014	E	16/04/2015	SF.001, CuA Buckle, Find location	AJLM	L
015	S	16/04/2015	SF.001, CuA Buckle, Find location, Working shot	AJLM	L
016	S	16/04/2015	SF.001, CuA Buckle, Find location, Working shot	AJLM	L
017	E	16/04/2015	SF.003, Pb Musket Ball, Find location	AJLM	L
018	SW	16/04/2015	SF.003, Pb Musket Ball, Find location	AJLM	L
019	SW	16/04/2015	SF.003, Pb Musket Ball, Find location	AJLM	L
020	SE	16/04/2015	SF.006, Fe Blade, Find location	AJLM	L
021	SE	16/04/2015	SF.007, Fe Blade?, Find location	AJLM	L
022	S	16/04/2015	Lawn S of cottage, Pit showing midden?	AJLM	L
023	N	16/04/2015	Lawn S of cottage, Pit showing midden?	AJLM	L
024	V/E	16/04/2015	Lawn S of cottage, Pit showing midden?, Detail with finds	AJLM	L

025	V/E	16/04/2015	Lawn S of cottage, Pit showing midden?, Detail with finds, Poor lighting	AJLM	L
026	V/E	16/04/2015	Lawn S of cottage, Pit showing midden?, Detail with finds, Poor lighting	AJLM	L
027	V/SE	16/04/2015	Lawn S of cottage, Pit showing midden?, Detail with finds, Poor lighting	AJLM	L
028	V/SE	16/04/2015	Lawn S of cottage, Pit showing midden?, Detail with finds, Poor lighting	AJLM	L
029		16/04/2015	Detail of midden finds, Late 19thC, Not retained	AJLM	L
030	V/E	16/04/2015	Fe finds, Not retained	AJLM	L
031	V/E	16/04/2015	Fe finds, Not retained, Detail L	AJLM	L
032	V/E	16/04/2015	Fe finds, Not retained, Detail R	AJLM	L
033	V/E	16/04/2015	Pb / Al finds, Not retained	AJLM	L
034	V/E	16/04/2015	Pb / Al finds, Not retained, Detail	AJLM	L
035	V/E	16/04/2015	20thC finds, not retained	AJLM	L
036	V/E	16/04/2015	20thC finds, not retained	AJLM	L
037	V/E	16/04/2015	20thC finds, not retained	AJLM	L
038	V/E	16/04/2015	20thC finds, not retained	AJLM	L
039	N	28/04/2015	Evaluation pre excavation trench 1, shows deep cut into bank	Kmacf	
040	S	28/04/2015	Evaluation pre excavation trench 1	Kmacf	
041	SE	28/04/2015	Evaluation, pre excavation general view into field	Kmacf	
042	S	28/04/2015	Evaluation, pre excavation view down proposed road	Kmacf	
043	S	28/04/2015	Evaluation, pre excavation ,general view of trench 1 and 2	Kmacf	
044	S	28/04/2015	Evaluation, pre excavation view down proposed road	Kmacf	
045	N	28/04/2015	Evaluation, pre excavation view down proposed road	Kmacf	
046	N	28/04/2015	Evaluation, pre excavation view down proposed road	Kmacf	
047	N	28/04/2015	Evaluation, pre excavation view down proposed road	Kmacf	
048	E	28/04/2015	Evaluation , sheep in trench 6	Kmacf	
049	N	28/04/2015	Evaluation , sheep in trench 6	Kmacf	
050	N	28/04/2015	Evaluation, general location view of trenches 3-6	Kmacf	
051	N	28/04/2015	Evaluation, trench 6 at LOE	Kmacf	
052	N	28/04/2015	Evaluation, trench 6 at LOE	Kmacf	
053	N	28/04/2015	Evaluation, more sheep in trenches	Kmacf	
054	N	28/04/2015	Evaluation, trench 5 deeper sondage into the natural	Kmacf	
055	N	28/04/2015	Evaluation, trench 4	Kmacf	
056	S	28/04/2015	Evaluation, trench 4	Kmacf	
057	N	28/04/2015	Evaluation, trench 3	Kmacf	
058	S	28/04/2015	Evaluation, trench 3	Kmacf	
059	S	28/04/2015	Evaluation, trench 2 pre excavation	Kmacf	
060	E	28/04/2015	Evaluation, trench 1 pre excavation	Kmacf	
061	E	28/04/2015	Evaluation, trench 2 mid excavation shows natural and services	Kmacf	
062	E	28/04/2015	Evaluation, trench 2 mid excavation shows natural and services	Kmacf	
063	W	28/04/2015	Evaluation, trench 1at loe ,shows stone filled pit/soakaway	Kmacf	

064	W	28/04/2015	Evaluation, trench 1 at loe ,shows stone filled pit/soakaway	Kmacf	
065	S	28/04/2015	Evaluation,trench 1 location to building	Kmacf	
066	-	10/06/2015	SF001 CuA Buckle, Obverse, with scale	AJLM	
067	-	10/06/2015	SF001 CuA Buckle, Obverse, with scale	AJLM	
068	-	10/06/2015	SF001 CuA Buckle, Obverse, with scale	AJLM	
069	-	10/06/2015	SF001 CuA Buckle, Reverse, with scale	AJLM	
070	-	10/06/2015	SF001 CuA Buckle, Reverse, no scale	AJLM	
071	-	10/06/2015	SF001 CuA Buckle, Obverse, no scale	AJLM	
072	-	10/06/2015	SF003 Pb Musket Ball, with scale	AJLM	
073	-	10/06/2015	SF003 Pb Musket Ball, with scale	AJLM	
074	-	10/06/2015	SF003 Pb Musket Ball, no scale	AJLM	
075	-	10/06/2015	SF003 Pb Musket Ball, with scale	AJLM	
076	-	10/06/2015	SF006 Fe Knife/File, with scale	AJLM	
077	-	10/06/2015	SF006 Fe Knife/File, tooth detail	AJLM	

**Appendix D:**  
**Photographic Thumbnails;**



1935 (001).JPG

1935 (002).JPG

1935 (003).JPG

1935 (004).JPG

1935 (005).JPG



1935 (006).JPG

1935 (007).JPG

1935 (008).JPG

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1935 (030).JPG







1935 (061).JPG



1935 (062).JPG



1935 (063).JPG



1935 (064).JPG



1935 (065).JPG



1935 (066).JPG



1935 (067).JPG



1935 (068).JPG



1935 (069).JPG



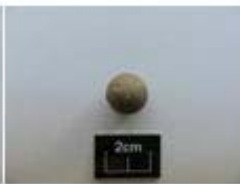
1935 (070).JPG



1935 (071).JPG



1935 (072).JPG



1935 (073).JPG



1935 (074).JPG



1935 (075).JPG



1935 (076).JPG



1935 (077).JPG

**Appendix E:**  
**Provisional DES Entry;**

<b>LOCAL AUTHORITY:</b>	Stirling Council
<b>PROJECT TITLE/SITE NAME:</b>	Dykedale, Kippendavie
<b>PROJECT CODE:</b>	AA 1935
<b>PARISH:</b>	Dunblane and Lecropt
<b>NAME OF CONTRIBUTOR:</b>	Andrew Morrison, Kenneth Macfadyen
<b>NAME OF ORGANISATION:</b>	Addyman Archaeology
<b>TYPE(S) OF PROJECT:</b>	Archaeological Evaluation and metal detecting Survey
<b>NMRS NO(S):</b>	NN80SW 1
<b>SITE/MONUMENT TYPE(S):</b>	Battlefield
<b>SIGNIFICANT FINDS:</b>	Pistol Ball, Buckle
<b>NGR (2 letters, 8 or 10 figures)</b>	NN 79822E 01508N
<b>START DATE (this season)</b>	16/04/15
<b>END DATE (this season)</b>	28/04/15
<b>PREVIOUS WORK (incl. DES ref.)</b>	N/A
<b>MAIN (NARRATIVE) DESCRIPTION:</b> (May include information from other fields)	<p>In April of 2015, Addyman Archaeology undertook an archaeological evaluation and metal detecting survey on a plot of land east of Dunblane, within the Kippendavie Estate in an area known as Dykedale. The project area is located within the boundary of the Sheriffmuir Battlefield as defined and protected by Historic Scotland and because of this sensitive location, an archaeological condition was placed upon the development by Stirling Council.</p> <p>A total of forty-two metal artefacts were recovered during the metal detecting survey. For the most part, the assemblage was comprised of 19<sup>th</sup> and 20<sup>th</sup> century domestic and agricultural debris of limited archaeological significance. Of the artefacts recovered, only three are of particular interest and have been submitted to Treasure Trove; these include a Copper Alloy buckle, an Iron Knife blade repurposed as a file, and a Lead musket ball which may relate to the Battle of Sheriffmuir fought in 1715.</p> <p>A domestic midden, likely late 19<sup>th</sup> century in date, was uncovered through metal detecting within what was probably a garden plot adjoining south gable of Dykedal cottage. The presence of the midden was recorded but left unexcavated as it will not be affected by the proposed development.</p> <p>The subsequent archaeological evaluation that took place on site uncovered no additional finds or features. The site was mostly cultivated farmland planted with turnips, with a thin layer of ploughsoil overlying natural.</p> <p>A record of the evaluation and metal detecting survey has been deposited with the Online Access to the Index of Archaeological Investigations (OASIS) website hosted by the Archaeological Data Service (OASIS ID - addyman1-210287) and with Discovery and Excavation in Scotland (DES), the annual publication of fieldwork by Archaeology Scotland. A summary of the findings will also be submitted to the Annual Review of Post-Medieval Fieldwork in Britain and Northern Ireland as published by the Society for Post-Medieval Archaeology.</p>
<b>PROPOSED FUTURE WORK:</b>	None
<b>CAPTION(S) FOR ILLUSTRS:</b>	-



<b>SPONSOR OR FUNDING BODY:</b>	Kippendavie Group Trust
<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)	RCAHMS (intended)