

Penpont to Thornhill Active Travel Route: Archaeological Mitigation

Written Scheme of Investigation

By Thomas Rees

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on behalf of Transport Planning & Engineering



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Introduction

1. This archaeological Written Scheme of Investigation has been prepared in support of the construction of Phase 1B2 of the Penpont to Thornhill Active Travel Route, Dumfries & Galloway. This phase of the 3km route is a section of work over Nith Bridge, and land to the east of the bridge, on the A702 to the immediate west of Thornhill. These archaeological works are designed to mitigate any adverse impact on the archaeological remains within the development area.
2. The planning consent issued by the Planning Authority (Dumfries & Galloway Council) will be conditioned for archaeology (24/2620/FUL, Conditions 2 and 3). This archaeological Written Scheme of Investigation has been designed to detail the mitigation of all aspects of the construction works inherent in such consent. Dumfries & Galloway Council Archaeology Service has provided guidance on the appropriate structure of this Written Scheme of Investigation. Once agreed upon with Dumfries & Galloway Council, this document will satisfy Condition 2 of the consent; the successful implementation of the programme of works detailed within this document will satisfy Condition 3 of the consent.
3. Rathmell Archaeology Limited has been appointed by Transport Planning & Engineering, the agents for the applicant, to undertake the development and implementation of archaeological mitigation works for the project.
4. This archaeological Written Scheme of Investigation provides the detail of the works (monitoring, exclusion, excavation, post-excavation analyses and publication) for all groundbreaking works for construction (general reduction, foundations, service tracks etc), that is, those works which will have a direct physical impact on buried sediments.
5. The identified structure of appropriate mitigation works is those necessary to ensure that the development can proceed while dealing appropriately with the identified adverse impact on the archaeological resource.
6. A suggestive consideration of the possible post-excavation and reporting structure for these works is also presented. Inevitably, as works proceed, the character of the later stages of this Written Scheme of Investigation will be subject to review and enhancement.

Background

7. The development is along a stretch of the A702 between Penpont and Thornhill that has as its core the Nith Bridge (NGR: NX 8708 9548) to the immediate west of Thornhill (Figure 1).
8. The category A Listed Building known as Nith Bridge (HES: LB17286; NRHE: 87888; HER: MDG9803/18705) is a red ashlar road bridge formed by two segmental arches. Construction of the bridge began c.1774, the bridge collapsed in 1776 and it was rebuilt in 1778. The bridge was subsequently strengthened in 1930-31.
9. The only other known asset within the Historic Environment Record is an undesignated early Medieval cross of pink sandstone (NRHE: 65198; HER: MDG5654) that stands some 200m west of the Nith Bridge and 20m south of the A702. Its shaft is richly carved on all sides with zoomorphic and foliaceous interlaced work. First recorded in 1793, the cross is apparently still in its original base and in its original location. The cross is ascribed to the Anglian tradition with an 8th or 9th century date suggested.
10. There are no previous archaeological works recorded in the Historic Environment Record within the development area.

Historical and Archaeological Background

11. The development area is first shown in detail in Roy's *Military Survey of Scotland*, Lowlands (1752-55; Figure 2a), which depicts the land on either bank of the River Nith under arable cultivation. The settlement of Thornhill is shown to the east of the river, and an unnamed settlement is depicted to the west (most likely a precursor of Burnhead). There is no suggestion of a road, bridge, ford or other line of communication between these settlements.





Figure 2a: Roy's 1752-55 *Military Survey of Scotland* (Lowlands)



Figure 2b: Crawford's 1804 *Map of Dumfriesshire*

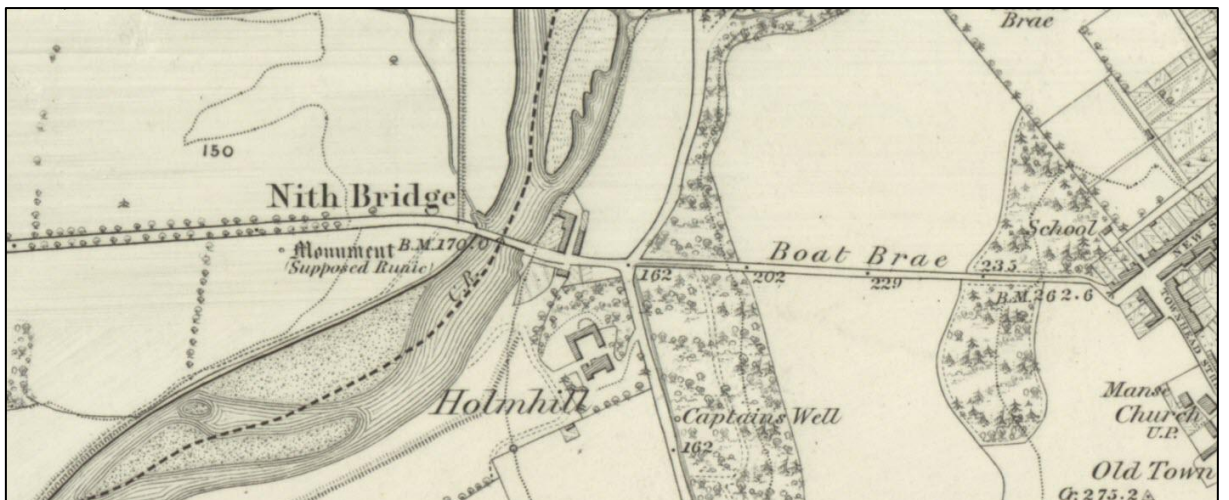


Figure 2c: Ordnance Survey 1st edition (1861)



Figure 3a: Crawford & Crawford (1820) *Plan of farms belonging to the Duke of Buccleuch*



Figure 3b: McCallum & Dundas (1851) *Holmhill, with parts of Kirkbog and Morton Holm in the Parish of Morton*

12. With the Nith Bridge erected in the 1770s, Crawford's 1804 *Map of Dumfriesshire* (Figure 2b) depicts a very different rural landscape. A road now runs from Thornhill to Penpont (on the line of the modern A704) carried by a bridge over the River Nith. On the eastern bank, the farm of Holmhill is to the south of the road while another structure is shown to the north. 'Boatford' lying to the south of the road on the western bank is shown as a notable house, with the nearby village of Burnhead. The form of that village, a linear spread running north to south on a road running up the valley, indicates its development prior to the bridging of the river. While no patterns of land use or enclosure are shown on this map, the inference is that the farmland is now enclosed.
13. The 1820 *Plan of farms belonging to the Duke of Buccleuch* by Crawford & Crawford (Figure 3a) shows the c.1770s road and the Nith Bridge, the latter through an elevation. The land on the west bank is identified as 'Lands of Boatford' while the road on this bank is tree-lined. The freestanding cross is not marked. On the east bank, Holmhill is shown set back from the road and a building is shown to the north of the road, with its gable towards the road. Holmhill is a category B Listed Building (HES: LB17379; NRHE: 212523; HER: MDG18750/23340) that, based on the listing was built in the c.1820s; however, the site was clearly occupied from at least the 1800s.
14. By 1851, the estate map by McCallum & Dundas of *Holmhill, with parts of Kirkbog and Morton Holm in the Parish of Morton* (Figure 3b) shows the eastern bank of the river in great detail as well as the form of the bridge. The farm of Holmhill, with its enclosed lands, is shown set well back to the south of the road approaching the bridge. Though unnamed, Holmhill Cottage is now shown adjacent to the road as it approaches the bridge. On the northern side of the road are two ranges of buildings, gable ends to the road, labelled as Thornhill Brewery.
15. The ground on both sides of the bridge is shown in detail in the 1st edition Ordnance Survey of 1861 (Figure 2c). The farm of Holmhill is depicted and named, and while the cottage and brewery are unnamed, they remain present. For the first time, the early Christian freestanding cross is depicted to the south of the road on the western bank, with the road still shown as tree-lined on this side. The road approaching the Nith Bridge from the east is named 'Boat Brae' on the map.
16. The Ordnance Survey Name Book (1848-58) describes Boat Brae as '*A steep brae leading from Thornhill to Nith Bridge. The name had originated at the period when there was a ferry where the Bridge now stands*'. This may tie into the placename on the other bank of 'Boatford', which may also link to this ferry point or the ability to ford the river.
17. The form of the bridge and connecting roads remain relatively stable through the 2nd edition and into the 3rd edition Ordnance Survey maps (1899 and 1957 respectively), as do Holmhill and Holmhill Cottage. During the early to mid 20th century, the Thornhill Brewery is demolished and does not appear on the 3rd edition Ordnance Survey map. The operation of the brewery was not untroubled, with bankruptcy proceedings in 1895 against James McCaig, the then brewer at Thornhill (Glasgow Herald, 18 May 1895). James McCaig must have survived this setback as he reappears in the newspapers in 1914, appealing his removal from the occupancy of Thornhill Brewery by the Duke of Buccleuch (Dumfries and Galloway Standard, 25 February 1914).

Standards and Terminology

18. This specification conforms to the requirements of PAN 2/2011 Planning and Archaeology. It has been designed following current best archaeological practice and the appropriate national and regional standards and guidelines including:
 - ❖ Code of Conduct (Chartered Institute for Archaeologists 2000);
 - ❖ Standard and Universal Guidance for an Archaeological Excavation (Chartered Institute for Archaeologists 2023);
 - ❖ Standard and Universal Guidance for an Archaeological Monitoring & Recording (Chartered Institute for Archaeologists 2023);
 - ❖ Standard and Guidance for the Collection, Documentation, Conservation and

Research of Archaeological Materials (Chartered Institute for Archaeologists 2014); and

- ❖ Treasure Trove in Scotland: A code of Practice (Scottish Government 2014)

19. The following key terms are recognised within this Written Scheme of Investigation:

- ❖ The Applicant – Transport Planning & Engineering;
- ❖ The Planning Authority – Dumfries & Galloway Council
- ❖ The Archaeological Curator – Dumfries & Galloway Council Archaeology Service;
- ❖ The Archaeological Contractor – Rathmell Archaeology Limited

Objectives

20. From the adjacent historic environment sites, it is possible that the development on the eastern bank will impact the site of the Thornhill Brewery, while on the western bank activity associated with the early Christian cross may be encountered. However, despite these indications, the character of the archaeological resource within the development is uncertain. Necessarily, therefore, the following objectives must remain quite general:

- ❖ to determine the nature, form and extent of the archaeological resource within those areas adversely impacted upon by the development;
- ❖ to establish, wherever significant archaeological features are exposed, a programme of preservation *in situ* to protect the archaeological resource;
- ❖ where preservation is not feasible, to institute a programme of managed excavation of the archaeological resource to recover artefactual, palaeo-environmental and structural evidence;
- ❖ to undertake a programme of analysis of archaeological materials (artefacts, ecofacts, sediment samples and records); and
- ❖ to disseminate the findings of the works through reports to the local planning authority, an academic publication and public lecture.

21. The objectives defined above within the works area are to be achieved through the programme of works detailed within this Written Scheme of Investigation.

Project Works

22. A staged programme of works that are anticipated to satisfy the requirements of the Applicant will be undertaken. The first stage of these works is outlined below, including:

- ❖ undertake a continuous archaeological watching brief on appropriate groundbreaking works in a manner that will expose any significant archaeological horizons with care;
- ❖ advise on micro-siting of build elements to retain significant archaeological horizons where appropriate;
- ❖ hand excavation to sample archaeological features exposed by the works which would be subsequently impacted on by the construction works;
- ❖ production of a technical report which integrates the findings of the works, detailing the nature, form and extent of the archaeological features;
- ❖ the submission of an OASIS form; and
- ❖ in the event of significant archaeology being identified and recovered an additional report will be prepared to design appropriate post-excavation analyses and reporting, including publication where appropriate.

23. The most efficient way to manage the works would be for the main contractor to strip, under archaeological supervision, substantial areas to which they will in due course need access. This will suppress the duration of archaeological presence on-site and allow the

identification of any archaeological features, enabling their excavation or managed retention, in advance of the main contractor needing access for their build.

Monitoring

24. The default approach will be that all appropriate groundbreaking works within the works area will be monitored by an archaeologist as they occur. This would encompass all groundbreaking works for construction (general reduction, foundations, service tracks etc); that is, those works which will have a direct physical impact on buried sediments. This will ensure that any significant archaeology is identified and safeguarded until an appropriate response can be agreed.
25. Excluded from this regime are:
 - a. all works within the existing road carriageway;
 - b. all works on the Nith Bridge, being the area bounded by the solid parapet walls; and
 - c. minor works such as driving of fenceposts, erection of road signs, boreholes etc.
26. The monitoring archaeologist should be consulted to confirm which tasks meet the category of 'minor works' where the task is not already listed above.
27. The monitoring process will be that:
 - a. one archaeologist will monitor each excavator (mechanical or hand dig team) that is working to reduce an area;
 - b. any monitored mechanical excavator will use a drawn toothless bucket wherever reasonably possible. No plant should track over any stripped surface until cleared to do so by the archaeologist;
 - c. excavations should be undertaken in natural light, although if the programme dictates working outside of daylight hours, lighting should be deployed to the satisfaction of the archaeologist;
 - d. the archaeologist will have the authority to halt the excavator should an archaeologically significant horizon be met. The archaeologist will continue to monitor the excavator until the underlying natural subsoil has been exposed or, failing that, until the maximum working depth is reached;
 - e. when access to the excavation area is required, the excavator will cease operations and, if necessary, relocate to allow safe access for the archaeologist. Subject to safe access, the site archaeologist may enter the working area to carry out a close inspection;
 - f. minor or isolated archaeological features identified during works will be hand excavated (in keeping with Stage 1b Excavation protocols below) to enable excavation work to continue; and
 - g. more extensive or significant archaeological features will be assessed, delimited and secured by temporary fencing (erected by the main contractor) pending the determination of how the material should be dealt with (see Stage 1b Excavation). The excavator can continue groundbreaking outwith the fenced area.
28. Should the exposed archaeological features include funerary deposits (containing human skeletal material) then the site investigation works at that location will be halted and the local constabulary and the Archaeological Curator notified.
29. A site-specific response will be needed for any extensive or significant potential archaeological features exposed, undertaken with the advice of the Archaeological Curator.

Exclusion and preservation in situ

30. In keeping with planning guidance, the preferred option for significant archaeology that is identified will be preserved *in situ*. As noted above any consideration of preservation *in situ* will cover the entire construction and likely management regime to ensure that

preservation is credible.

31. Specific preservation mitigation will be prepared for each site and incorporated into the Written Scheme of Investigation initially as an agreed addendum.
32. The default character of the preservation process where trench reduction has taken place will be:
 - a. covering the exposed archaeologically significant horizon with a geotextile (e.g. terram); and
 - b. reintroduction of overburden (e.g. topsoil) of sufficient depth that any future works (e.g. ploughing) does not reach the geotextile.
33. The main contractor will be responsible, under archaeological guidance, for undertaking preservation *in situ* tasks.

Excavation

34. Where excavation is agreed as the appropriate response the areas will be cleaned using hand tools to define surviving archaeology. The exposed archaeology will then be excavated and recorded.
35. The site grid will be established at the cleaning stage. The grid will be based on 20m spacing and related to the National Grid. A temporary benchmark related to Ordnance Datum will be established.
36. After the cleaning and planning of the excavation area, the sampling strategy will be finalised. This will take into account the project aims (which may need modifying at this stage) and the type, quality and quantity of remains revealed. The excavation sampling strategy will seek to maintain the following levels, but the Archaeological Curator will advise on the appropriate levels of sampling to be applied in any single case and may insist on 100% excavation of any archaeological features to be destroyed by the development proposals:
 - a. all structures and all zones of specialized activity (e.g. funerary, ceremonial, industrial, agricultural processing) will be fully excavated and all relationships recorded;
 - b. ditches and gullies will have all relationships defined, investigated and recorded. All terminals will be excavated. Sufficient lengths of the feature will be excavated to determine the character of the feature over its entire course; the possibility of re-cuts of parts of the feature, and not the whole, will be considered. This will be achieved by a minimum 10% sample of each feature (usually a 1m section every 10m);
 - c. sufficient artefact assemblages will be recovered (where possible) to assist in dating the stratigraphic sequence and for obtaining ample ceramic groups for comparison with other sites;
 - d. all pits, as a minimum, will be half-sectioned. Usually at least 50% (by number) of the pits will be fully excavated. Decisions as to which pits will be fully excavated will be taken in the light of information gained in the half-sectioning taking into consideration, amongst other things; pit function, artefact content and location;
 - e. for post and stake holes where they are clearly not forming part of a structure (see above) 50% (by number) will be half-sectioned ensuring that all relationships are investigated. Where deemed necessary, by artefact content, a number may demand full excavation;
 - f. for other types of feature such as working hollows, quarry pits, etc the basic requirement will be that all relationships are ascertained. Further investigation will be a matter of on-site judgment, but will seek to establish as a minimum their extent, date and function; and
 - g. for layers, an on-site decision will be made as to the limits of their excavation. The

factors governing the judgment will include the possibility that they mask earlier remains the need to understand the function and depositional processes, and the necessity to recover sufficient artefacts to date the deposit and to meet the project aims.

Treatment of Human Remains

37. Should the potential archaeological features to be intersected by the construction works include funerary deposits (i.e. human skeletal material) then all works on that area will be halted and the local constabulary, the Applicant and the Archaeological Curator notified.
38. Sites with buried human skeletal material are protected. The removal of a body from the grave is not considered theft; rather Scots common law recognises the offence of *crimen violati sepulchre* (violation of sepulchre). In essence, the crime is the disturbance of the corpse without permission. Care must be taken to ensure that no works are undertaken that conflict with this law.

Recording

39. All recording will be by Rathmell Archaeology Limited standard method. In summary: all contexts, small finds and environmental samples will be given unique numbers; bulk finds will be collected by context; digital images (≥ 10 megapixel) will be taken, and all recording will be undertaken on *pro forma* record cards. An overall site plan will be recorded at 1:100, with significant individual features planned at 1:20 and sections drawn at 1:10.
40. Any artefacts retrieved will be catalogued and subject to standard Treasure Trove procedures. Archaeological deposits will be sampled systematically in accordance with Rathmell Archaeology Limited standard environmental sampling practice. All investigated features believed to be significant and man-made will be sampled along with a selection of natural features and topsoil to provide control samples. Bulk samples, a minimum of 10 litres but up to 30 litres if possible, will be taken for wet sieving and flotation.

Liaison

41. At all points during the ongoing works the Applicant or their representative shall be kept informed of progress and significant developments. Similarly, the Archaeological Curator shall be kept informed progress of works and significant developments.

Technical Reporting

42. The products of the excavation stage of the works will be as follows:
 - ❖ Data Structure Report presenting the results of the works and incorporating detailed listing of the materials (artefacts, sediments; written record) recovered; in addition, a narrative would explain the character of the archaeology investigated;
 - ❖ Completion of an *OASIS* entry; and
 - ❖ Project archive, to be deposited in the National Record of the Historic Environment.
43. A full draft of the Data Structure Report will be circulated to the Applicant. An appropriate number of copies of each finalised report will be supplied to the Archaeological Curator.
44. Finds will be declared to the Treasure Trove Unit in keeping with their *Practice Guide*. The deposition of the finds will be compliant with *Guidance on the Transfer of Archaeological Assemblages to Museums in Scotland from Commercial/ Developer-Funded Projects* (2025).

Agreement of Post-Excavation strategy

45. The Costed Post-Excavation Research Design will be prepared after the agreement of the Data Structure Report. This will identify the recommended analyses for the recovered material and the structure for the publication and dissemination of results. This design will be subsequently discussed with the Archaeological Curator.
46. The agreed design must incorporate a finalised timetable of all remaining works and be

integrated into the current version of this Written Scheme of Investigation.

Post-excavation Analyses

47. Should archaeologically significant material be recovered during the archaeologically led reduction and excavation then a programme of post-excavation analysis of this material will be required and will be undertaken. Until the on-site works are complete the exact nature and size of any post-excavation works will be unknown.
48. To some degree, the examination will be led by the nature of the materials recovered. However, any work is likely to focus on artefact analysis, palaeoenvironmental analysis, radiometric dating and stratigraphic interpretation.
49. The works will also incorporate conservation work on any artefacts recovered to ensure their suitability for disposal.

Dissemination

50. The results of the project will be published in an appropriate archaeological journal or monograph should the fieldwork results warrant this. The Archaeological Curator will be consulted on the appropriateness of publication. The suitable level of publication will be dependent on the significance of the project results. Meeting the publication costs will be a costed element of the project to be met by the Applicant.
51. The project archive originally prepared during the initial site reporting will be expanded during reporting to cover all new materials generated by the post-excavation and reporting works. The finalised archive would be submitted to the National Record of the Historic Environment at the conclusion of the project.
52. The lists of finds submitted to the Treasure Trove Unit will be renewed at the conclusion of the project will. The finds will be retained until they can be collected by, or delivered to, the institution awarded the collection by the Treasure Trove Unit. The deposition of the finds will be compliant with *Guidance on the Transfer of Archaeological Assemblages to Museums in Scotland from Commercial/ Developer-Funded Projects* (2025).

Public Benefit

53. Where significant discoveries are made, the Archaeological Curator is entitled to call a joint press call to promote these findings. Further, the Client will facilitate public talks and open days to promote significant discoveries and enable the local community to benefit from the works.
54. For extensive significant archaeological assets, this may also include the delivery of accessible leaflets, web-based resources and a school visiting programme.
55. The location of public benefit works within the phased programme will be agreed upon with the Archaeological Curator as discoveries emerge. They will be confirmed through an addendum to this archaeological Written Scheme of Investigation.

Project details

Timetable

56. Rathmell Archaeology Ltd could start when required.
57. The duration of works on-site will depend on the archaeological features encountered and the work programme of the main contractor. The initial reporting would be completed within four weeks of the completion of all on-site works.
58. In the event of a substantial break in the on-site works (i.e. greater than 4 months) then an interim report would be issued to ensure all parties are aware of the stage the archaeological works have reached.

Health & Safety

59. Rathmell Archaeology maintains high Health & Safety standards on-site and a copy of our Health & Safety policy is available. The Lead Archaeologist will liaise with the Main

Contractor before coming on-site to ensure that works are conducted in a safe manner.

Project team

60. The Lead Archaeologist for the excavation will be an experienced field archaeologist who has an experience comparable to at least the PCIfA grade of the Chartered Institute for Archaeologists.
61. Additional archaeologists can be provided if necessary, and with the agreement of the Applicant, to monitor either additional pieces of excavation plant or to excavate archaeological features exposed to facilitate the progress of the works.

Insurance

62. Rathmell Archaeology is fully indemnified and all necessary insurances can be presented on request. A summary of insurances held is presented below:
 - ❖ *Public Liability Insurance* - A policy with a limit of indemnity of £5,000,000 is held;
 - ❖ *Employer's Liability Insurance* - A policy with a limit of indemnity of £10,000,000 is held; and
 - ❖ *Professional Indemnity Insurance* - A policy with a limit of indemnity of £2,000,000 is held.

Contact Details

63. Rathmell Archaeology can be contacted at our Registered Office or through the web:

Rathmell Archaeology Ltd	www.rathmell-arch.co.uk
Unit 8 Ashgrove Workshops	
Kilwinning	t.: 01294 542848
Ayrshire	f.: 01294 542849
KA13 6PU	e.: contact@rathmell-arch.co.uk

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