

Ayr Grammar Project – Demolition Works: Archaeological Watching Brief

Data Structure Report



by Jack Portwood

issued 28th February 2019

on behalf of Morrison Construction Scotland

RATHMELL 
ARCHAEOLOGY LTD

Quality Assurance

This report covers works which have been undertaken in keeping with the issued brief as modified by the agreed programme of works. The report has been prepared in keeping with the guidance of Rathmell Archaeology Limited on the preparation of reports. All works reported on within this document have been undertaken in keeping with the Chartered Institute for Archaeologists' Standards and Policy Statements and Code of Conduct.

Signed *S. Portwood* Date 28th February 2019.....

In keeping with the procedure of Rathmell Archaeology Limited this document and its findings have been reviewed and agreed by an appropriate colleague:

Checked *Louise Turner* Date 28th February 2019.....

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Quality Assurance Data

Author(s)	Jack Portwood		
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Commissioning	Morrison Construction Scotland		
Event Name	Ayr Grammar Project - Demolition Works		
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Location	United Kingdom : Scotland : South Ayrshire		
NGR	NS 3353 2213 (centred)	Parish:	Ayr
Designation(s)	None		
Canmore IDs	200777		

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Introduction

1. This Data Structure Report has been prepared on behalf of Morrison Construction Scotland as part of the Ayr Grammar Project, in support of demolition work at the Old Ayr Academy Site, Ayr (centred on NGR: NS 3353 2213) (Figure 1). These archaeological works are designed to mitigate any adverse impact on the archaeological remains within the development area.
2. South Ayrshire Council requires a programme of archaeological works to be undertaken in support of the demolition work (LBC consent 17/01111, Condition 3). A separate programme of archaeological works to support the construction work (Planning Ref 18/00306/APP, Condition 6) will be undertaken at a later phase and will be reported separately.
3. The West of Scotland Archaeology Service, who advise South Ayrshire Council on archaeology matters, has provided guidance on the structure of archaeological works required to mitigate any adverse impact on the archaeological remains within the development area. Rathmell Archaeology Limited has been appointed by the applicant to undertake the development and implementation of archaeological mitigation works for the project.

Historical and Archaeological Background

4. A full historical and archaeological baseline for the development area is presented within the agreed Archaeological Impact Assessment (McKinstry & Rees 2017). Cognisance of this document is assumed within this report.

Project Works

5. The works at Ayr Academy were undertaken in three phases between the 20th August 2018 and the 5th February 2019. They were carried out in keeping with the methods detail in the Written Scheme of Investigation (Rees 2018) and the supporting Risk Assessment (Williamson 2018).
6. The program of works scheduled for the 20th August 2018 comprised a series of test pits (TP A, B and C) located within the area of the Harbour Playground in order to investigate the foundations of abutting structures (Figure 2). Two core samples were then taken, from the retaining wall to the rear of the Academy, in works scheduled for the 22nd August 2018 (Figure 2).
7. Additional works took place on the 17th January 2019, and then from the 30th January to the 5th February 2019. These comprised archaeological monitoring of the removal of three areas of concrete foundations from the 20th century extension of the school which had potentially extended into the citadel moat (Figure 2).
8. All works complied with West of Scotland Archaeology Service Standard Conditions, the Chartered Institute for Archaeologists' Standards and Policy Statements and Code of Conduct and Historic Environment Scotland Policy Statements.

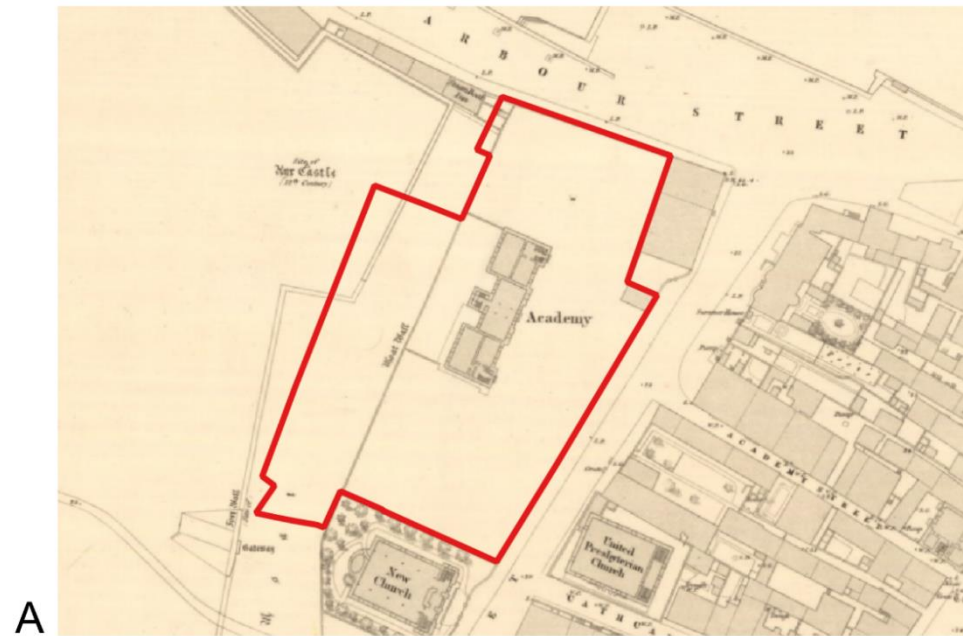
Findings

Test Pits

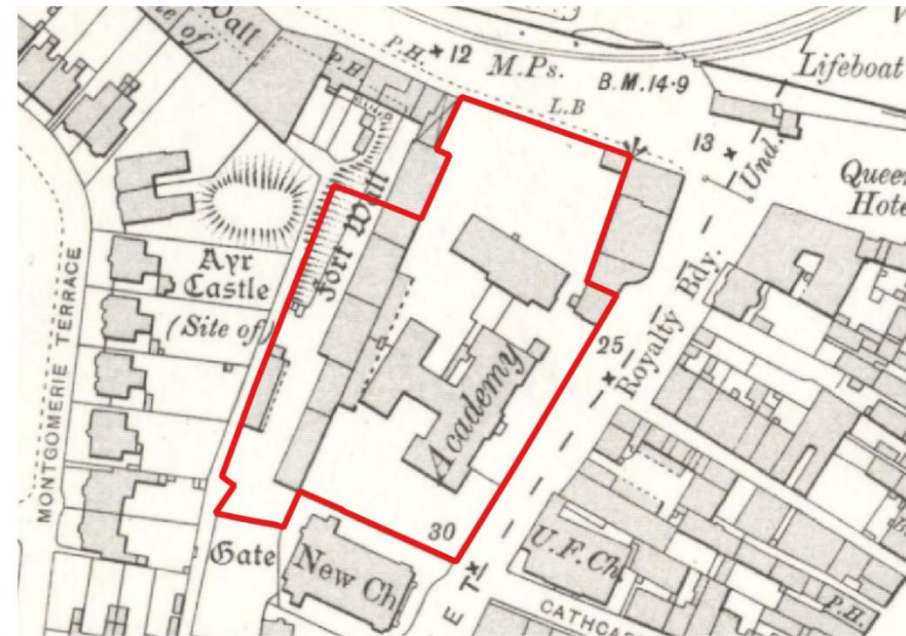
9. TP A sat directly against the northern wall of the main building. The current carpark surface was tarmac (006) measuring 70mm thick, below which was a brick and sandstone rubble layer within a sandy matrix (008) which measured 500mm deep. Beneath (008) was (009), a loose, light to mid- brown silty sand with gravel, brick, sandstone and pipe inclusions, which measured approximately 3m in depth. TP A exposed the blond sandstone face of the wall, continuing down to a depth of 400mm. The wall then changed to red sandstone foundations that continued to a depth of 3.6m below the surface.
10. TP B, which measured 4.19m deep, exhibited the same stratigraphy as TP A, while TP C exposed (007) - a moderately compact, dark brown clay sand, with frequent gravel, brick, sandstone, red clay drain pipe, salt-glazed pipe, metal pipe and tarmac inclusions - below

Key:

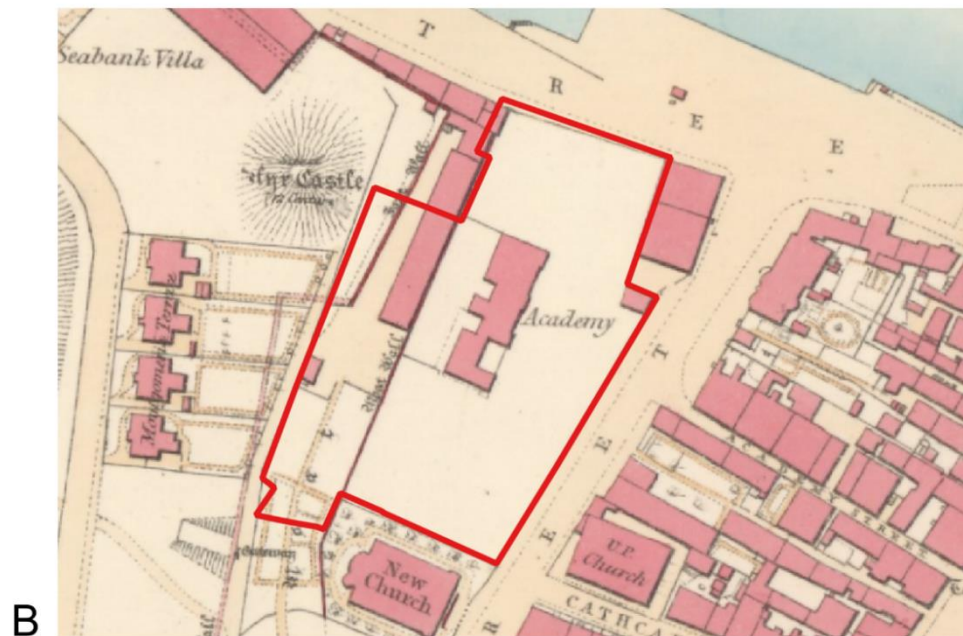
- A 1855 Ordnance Survey
- B 1860 Ordnance Survey
- C 1909 Ordnance Survey
- D 1937 Ordnance Survey



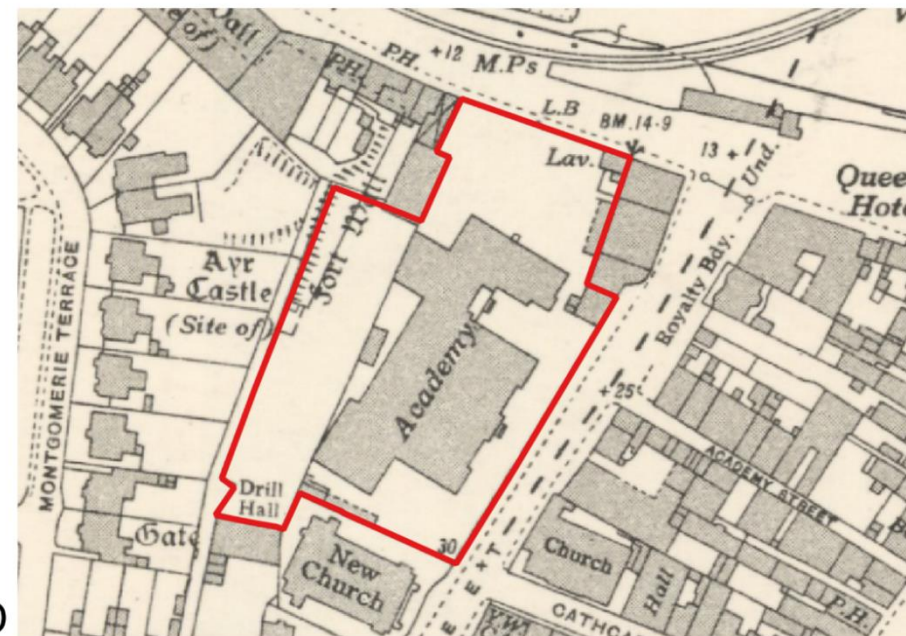
A



C



B



D

Client
Morrison Construction

Project Name
Ayr Grammar PS

Title
Map Sequence

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Drawn: LMcK Date: 15/09/17
Checked: TR Sheet:

Reference No.
RA17079/AIA/2

Figure 1: Historic Ordnance Survey sequence

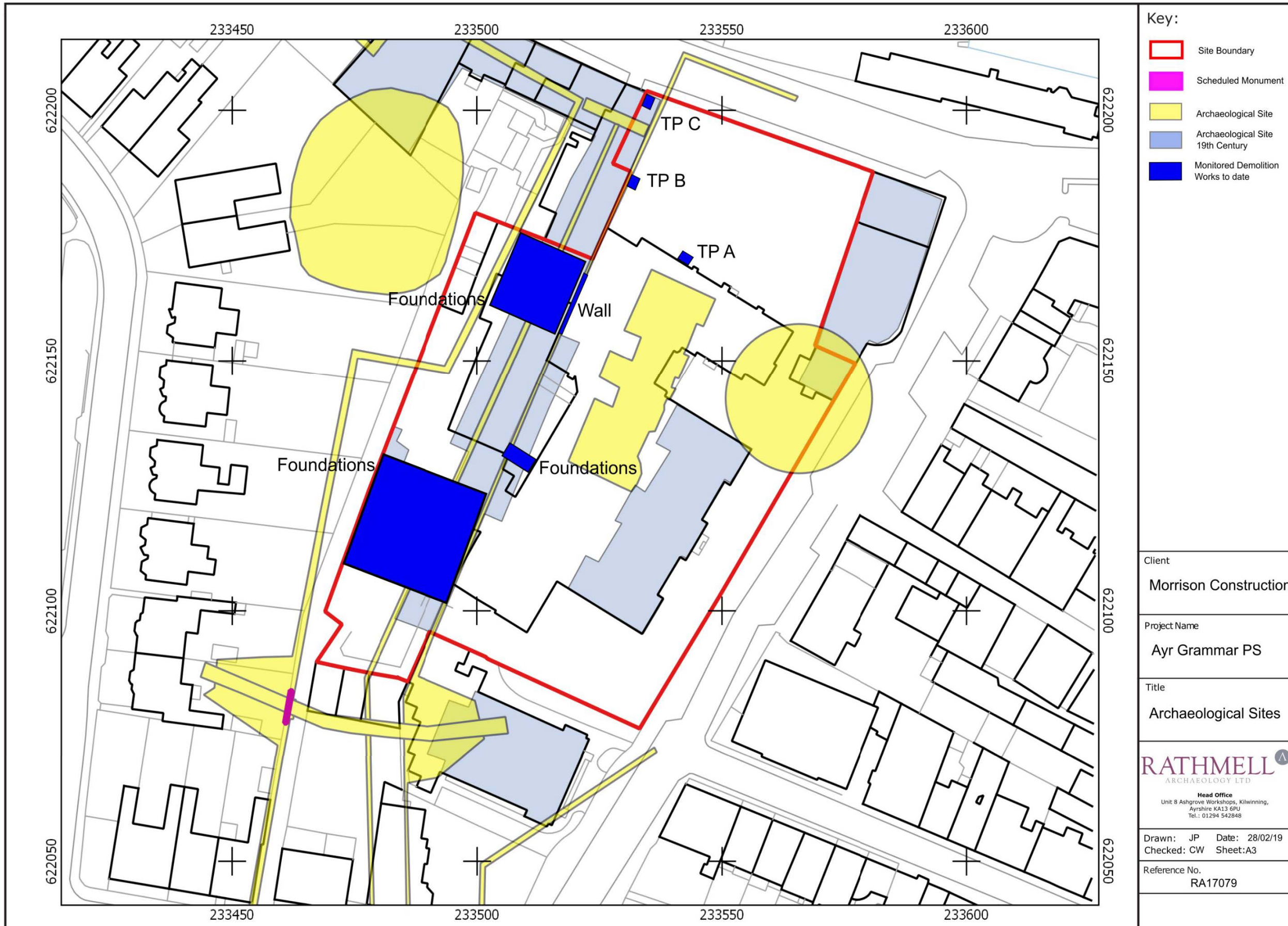


Figure 2: Location Map showing monitored areas during demolition works

(006). TP B and TP C sat directly against the eastern walls of the buildings which bounded the western side of the playground, and revealed that the wall faces of these buildings continued to the full depth of the trial pits, that is 4.19m and 3.95m respectively. These were mostly constructed of blond sandstone, but occasional red sandstone and whinstone blocks were also visible within the fabric.

Core Samples

11. The line of the moat wall in the southwest of the site from the Citadel Lane playground appears as a shuttered concrete retaining structure underneath the pedestrian ramp and to the rear of the garages. Two cores were drilled through this retaining structure: these showed it to comprise shuttered, reinforced concrete to a thickness of 230mm to 300mm (the variation reflecting the kickout of the lower section of the concrete face). Behind the concrete had to be some 400mm to 515mm of lime-mortared wall composed of blond sandstone, red sandstone and whinstone (Figures 3a and 3b).
12. On the same visit, inspection of the soft strip underway within the main school buildings identified a fragment of 19th century fabric on the line of the moat wall. The western wall of the Boys Gymnasium proved to be of mixed construction, with one storey of predominantly coursed sandstone rubble surmounted by regular brick construction. Rybats and lintels for two openings were identified within this sandstone fabric, which was interpreted as the east facing upper storey wall of the 19th century warehouses running along the moat.

Removal of Foundations

13. The area subject to the watching brief comprised the footprint of the demolished 20th century extension to Ayr Academy. The extension was built into the citadel moat **S2.2**, which lay to the rear of the 19th century Academy (Figures 1 and 2). The upstanding structural elements of the extension had been removed before the archaeological watching brief described here took place.
14. The first area of foundations lay to the rear of the Academy on the same raised level on which the earlier, main school building still stands. This was the only area of foundation to be removed that sat outwith the moat. The foundation was overlain by demolition layer (001), a loose, dark grey-brown sand with very frequent medium to large inclusions of brick, concrete and re-bar. Underlying (001) was concrete slab foundation [002], measuring approximately 5m by 1m in extent by 200mm thick, which in turn overlay made ground (003): a loose, dark grey brown yellow sand with dark sand inclusions.
15. The second area of foundations was located within the footprint of moat **S2.2**, to the rear of the main Ayr Academy building. The foundation was a remnant of the extension, representing the most southerly part of the structure. The foundations were overlain by demolition layer (001), a loose, dark grey brown sand with very frequent medium to large sized inclusions of demolition material such as brick, concrete and re-bar. Underlying (001) was [004], which comprised concrete ground beam foundations running NNE-SSW by WNW-ESE in a grid pattern. These abutted the most westerly limit of the site and the retaining wall for the Academy, covering an area that measured approximately 21m by 18m in extent and which reached a depth of 800mm below the previous floor level of the extension. [004] overlay subsoil (005), a loose, mid-brown yellow sand with small to medium sized stone inclusions (Figures 4a and 4b).
16. The final area of foundations were located within the footprint of the moat and represented the northernmost part of the extension which abuts the 19th century warehouse to the north. The foundations were overlain by (001) a loose, dark grey brown sand with very frequent inclusions of medium to large sized demolition materials such as brick, concrete and re-bar. Underlying (001) was another section of [004], which comprised concrete ground beam foundations running NNE-SSW by WNW-ESE in a grid pattern, covering an area measuring approximately 10m by 11m in extent, and reaching a depth of 800mm below the previous internal floor level of the extension. [004] in turn overlay deposit (005): a loose, mid-brown yellow sand with small to medium sized stone inclusions (Figures 5a and 5b).

Discussion

17. The presence of a wall face continuing to such a depth within TP B (Figure 2), a location that had the potential to encounter the original moat wall **S2.4**, suggests that there may have been more disruption from 19th century building work in this area than had previously been suspected. While it is uncertain what form the original mid-17th century wall would have taken, it seems unlikely that there would have been any need for a finished wall face here, on the side of the wall which sat directly against the retained material to the outside of the moat. The fabric of the wall face itself was also not inconsistent with 19th century construction, and was of similar character to the fabric of surviving 19th century walls located elsewhere upon the site. The presence of the wall face at this depth might therefore imply that, at one time, this represented a freestanding structure, the remains of which have since been obscured by the raising of the ground level for the playground. Further supporting this was the fact that all three pits identified that the deposits underlying the playground represented made ground for their full depth, indicating an infilling of this area to raise it to its current level (Figures 6a and 6b).
18. The later phases of the watching brief centred on the removal of foundations [002] and [004], both of 20th century date. The upper layer covering the site at the start of the watching brief, (001), consisted of debris from the building's recent demolition, though this may have been mixed with earlier layers of material from the 19th or 20th century, linked to the construction of the extension into the moat, to the rear of the 19th century school building.
19. The layers identified beneath the foundations were (003) and (005). (003) represented made ground most likely related to the construction of the extension. Due to the nature of the works undertaken very little of (005) was uncovered, as the focus was on removing the foundation. As such, the exact nature of this deposit was unclear. It is unlikely to be natural subsoil at this depth and could potentially represent some form of redeposited material. The fact that no significant features or artefacts were identified within the monitored area suggests that the works had little impact on any surviving archaeological layers.

Recommendations

20. This Data Structure Report covers archaeological monitoring works carried out on behalf of Morrison Construction Scotland as a requirement of the granted planning consent (LBC consent 17/01111, Condition 3). This consent covered the demolition works to be undertaken within the development area.
21. The groundbreaking works covered by this phase identified no significant archaeological features or artefacts within the development area. As such it is recommended that no further archaeological works are required in association with the above condition and that it can now be discharged.
22. Further monitoring works are required during the construction works to be undertaken as part of this development (Planning Ref 18/00306/APP, Condition 6) for which a separate Written Scheme of Investigation (Rees & Williamson 2018) has been prepared. The construction works are to be more extensive and affect areas of the site untouched by the smaller scale demolition works; areas which still have a high potential to meet significant archaeological deposits. As such, we would recommend at this stage that this condition continues to be appropriate and proportionate to this development.
23. The appropriateness and acceptability of our recommendations rest with South Ayrshire Council and their advisors, the West of Scotland Archaeology Service.

Conclusion

24. Archaeological monitoring work was carried out for Morrison Construction Scotland as a requirement of the granted planning consent (LBC consent 17/01111, Condition 3). These archaeological works were designed to mitigate any adverse impact on the archaeological remains within the development area.



Figure 3a: Coring through shuttered concrete finish in garages on line of Moat Wall.



Figure 3b: Two full depth cores through retaining structure, existing surface left of image.



Figure 4a: Northern area post excavation.



Figure 4b: Removal of foundation to the north of the development area.



Figure 5a: Removal of foundation to the south of the development area.



Figure 5b: Southern area post-excitation.



Figure 6a: TP B from the south showing east facing wall face.



Figure 6b: Relict one-storey 19th century wall on Moat Wall line in Boys Gymnasium.

25. These works covered the digging of a series of test pits, coupled with core sampling and the removal of foundations from the demolished 20th century extension at Ayr Academy. They were carried out between the 20th August 2018 and the 5th February 2019. Some of the building's structural remains dated to the 19th century, with later 20th century alterations made in the form of an extension to the rear of the 19th century building. Much of the site was covered by the recently demolished remains of the extension. The foundations themselves, where excavated, were found to overlie layers of made ground. No earlier significant archaeological features or artefacts were identified within the monitored area.

Acknowledgements

26. The author would like to thank the client Morrison Construction Scotland for allowing this work to be undertaken and for their support throughout the project. The author would also like to thank Ian Black and the Dem-Master team for their on-site assistance. Thanks should also go to Claire Williamson, Thomas Rees and Sarah Krischer who all participated and contributed to the completion of this project. Finally, thanks should also go to Dr Louise Tuner and Claire Williamson for their time and help editing the report.

References

Documentary

McKinstry, L. & Rees, T. 2017 *Ayr Academy, Ayr, South Ayrshire: Archaeological Assessment, Archaeological Impact Assessment*, unpublished report by Rathmell Archaeology Ltd

Rees, T. 2018 *Ayr Grammar Project, Old Ayr Academy Site, Ayr: Archaeological Mitigation, Written Scheme of Investigation*, unpublished report by Rathmell Archaeology Ltd

Rees, T. & Williamson, C. 2018 *Ayr Grammar Project, Old Ayr Academy Site, Ayr – Construction Works: Archaeological Mitigation, Written Scheme of Investigation*, unpublished report by Rathmell Archaeology Ltd

Williamson, C. 2018 *Ayr Grammar Project, Ayr, Risk Assessment*, unpublished report by Rathmell Archaeology Ltd

Cartographic

Ordnance Survey, 1855, *Ayr, Sheet VI (Large scale Scottish town plans)*

Ordnance Survey, 1858, *25 inch, 1st edition, Ayrshire XXXIII.6 (Ayr)*

Ordnance Survey, 1909, *25 inch, 2^{dt} edition, Ayrshire XXXIII.6 (Ayr)*

Ordnance Survey, 1937, *25 inch, 2^{dt} edition, Ayrshire XXXIII.6 (Ayr)*

Appendix 1: Registers

Within this appendix are all registers pertaining to works on-site during the watching brief.

Context Register

Context No.	Area/ Trench	Type	Description	Interpretation
001		Deposit	Loose, dark grey brown sand with very frequent medium to large demolition materials	Demolition rubble layer
002		Structure	Concrete slab foundation 0.2m thick	Concrete foundation
003		Deposit	Loose, dark grey brown yellow sand with dark sand inclusions	Made ground
004		Structure	Concrete and rebar ground beam foundations	Concrete foundations
005		Deposit	Loose, mid brown yellow sand with small to medium stone inclusions.	Possible redeposited material
006	TP A, B, C	Deposit	Tarmac 0.07m thick	Car Park Surface
007	TP C	Deposit	Moderately compact, dark brown clay sand, with frequent gravel, brick, sandstone, red clay drain pipe, salt-glazed pipe, metal pipe and tarmac inclusions	Made ground
008	TP A, B	Deposit	Sandstone and brick rubble in a sandy matrix 0.5m deep	Rubble layer under Tarmac
009	TP A, B	Deposit	Loose, light to mid brown silty sand with gravel, brick, sand stone and pipe inclusions	Made ground

Photographic Register

Image No.	Digital	Description	From	Date
001	0221	Working shot of the removal of foundation	SW	17/01/19
002	0222	Post excavation shot of removed foundation	E	17/01/19
003	0223	Post excavation shot of removed foundation	W	17/01/19

Image No.	Digital	Description	From	Date
004	0224	Post excavation shot of removed foundation	SE	17/01/19
005	0225	Post excavation shot of removed foundation	E	17/01/19
006	0226	Post excavation shot of removed foundation	SW	17/01/19
007	0227	Post excavation shot of removed foundation	S	17/01/19
008	0228	Post excavation shot of removed foundation	N	17/01/19
009	0229	Post excavation shot of removed foundation	E	17/01/19
010	5166	General shot of site	SW	30/01/19
011	5167	General shot of site	SW	30/01/19
012	5168	General shot of rebar	SE	30/01/19
013	5169	Working shot	SW	30/01/19
014	5170	General shot of site	N	30/01/19
015	5171	General shot	N	30/01/19
016	5172	Breaking out of foundations	SW	30/01/19
017	5173	Slot down the side of warehouse	E	30/01/19
018	5174	Slot down the side of warehouse	NE	30/01/19
019	5175	Slot down the side of warehouse	E	30/01/19
020	5176	Slot down the side of warehouse	NE	30/01/19
021	5177	Slot down the side of warehouse	N	30/01/19
022	5178	Working shot of machine grubbing out foundation	SW	31/01/19
023	5179	Working shot of machine grubbing out foundation	SW	31/01/19
024	5180	Foundations being removed by hand	NE	31/01/19

Image No.	Digital	Description	From	Date
025	5181	Foundations being removed by hand	NE	31/01/19
026	5182	Working shot of machine removing foundations	SW	31/01/19
027	5183	Working shot of machine removing foundations	SW	31/01/19
028	5184	Working shot of machine removing foundations	SW	31/01/19
029	5185	Working shot of machine removing foundations	SW	31/01/19
030	5186	Working shot of machine removing foundations	SW	31/01/19
031	5187	Working shot of machine removing foundations	SW	31/01/19
032	5188	End of day	SW	31/01/19
033	5189	End of day	SW	31/01/19
034	5190	End of day	SW	31/01/19
035	5191	Post excavation shot of northeast area near warehouse	NW	01/02/19
036	5192	Post excavation shot of northeast area near warehouse	NW	01/02/19
037	5193	Working shot of machine removing foundations	NW	01/02/19
038	5194	Working shot of machine removing foundations	SW	01/02/19
039	5195	Working shot of machine removing foundations	SW	01/02/19
040	5196	Working shot of machine removing foundations	SW	01/02/19
041	5197	Working shot of machine removing foundations	SW	01/02/19
042	5198	Working shot of machine removing foundations	SW	01/02/19
043	5199	Working shot of machine removing foundations	SW	01/02/19
044	5200	Working shot of machine removing foundations	SW	01/02/19
045	5201	Post excavation shot of southwest area at the foot of the ramp	SW	01/02/19

Image No.	Digital	Description	From	Date
057	5213	Working shot of machine removing foundations	NE	05/0219
058	5214	Working shot of machine removing foundations	NE	05/0219
059	5215	Working shot of machine removing foundations	NE	05/0219
060	5216	Working shot of machine removing foundations	NE	05/0219
061	5217	Post excavation shot of southwest area at the foot of the ramp	NE	05/0219
062	5218	Post excavation shot of southwest area at the foot of the ramp	NE	05/0219

Appendix 2: Discovery & Excavation in Scotland

LOCAL AUTHORITY:	South Ayrshire
PROJECT TITLE/SITE NAME:	Ayr Academy, Demolition
PROJECT CODE:	RA17079
PARISH:	Ayr
NAME OF CONTRIBUTOR:	Jack Portwood
NAME OF ORGANISATION:	Rathmell Archaeology Limited
TYPE(S) OF PROJECT:	Watching brief; Test pitting; Core Samples
NMRS NO(S):	None
SITE/MONUMENT TYPE(S):	Listed Building
SIGNIFICANT FINDS:	None
NGR (2 letters, 8 or 10 figures)	NS 3353 2213 (centred)
START DATE (this season)	20 th August 2018
END DATE (this season)	5 th February 2019
PREVIOUS WORK (incl. DES ref.)	None
MAIN (NARRATIVE) DESCRIPTION: (may include information from other fields)	<p>Archaeological monitoring was carried out on behalf of Morrison Construction Scotland as part of the Ayr Grammar Project in support of demolition work at the Old Ayr Academy Site.</p> <p>The works included test pitting, core sampling and the removal of foundations from the demolished 20th century extension at Ayr Academy. Much of the site was covered by the remains of the recently-demolished extension: the foundations themselves, where excavated, were found to overlay layers of naturally occurring subsoil and made ground. The structural remains encountered were all of 19th century date, with later 19th and/or 20th century alterations. The latter took the form of an extension to the rear of the 19th century building. No earlier significant archaeological features or artefacts were identified within the monitored area.</p>
PROPOSED FUTURE WORK:	None
CAPTION(S) FOR ILLUSTRS:	None
SPONSOR OR FUNDING BODY:	Morrison Construction Scotland
ADDRESS OF MAIN CONTRIBUTOR:	Unit 8 Ashgrove Workshops, Kilwinning, Ayrshire KA13 6PU
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ARCHIVE LOCATION (intended/deposited)	Report to West of Scotland Archaeology Service and archive to the National Record of the Historic Environment

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